Appendix E
Traffic and Transport Impact Assessment

9. Intersection analysis

Summary of changes from the Environmental Impact Statement Traffic and Transport Assessment:

– Additional intersection assessment for the wider road network has been completed for 2015, 2016, 2019, 2023, 2025, 2028 and 2030 based upon revised traffic generation, distribution and heavy vehicle peak hour percentages of daily traffic generation.
– Mitigation measures have been proposed for intersection upgrades and/or changes to signal timings to return the intersection to base year operation (condition) shall the intersection fail under background traffic alone.
– Proposed intersection upgrades and modifications and the timing for implementation are included at the end of this section.

The following tasks have been undertaken to analyse intersection performance:

1. Apply the annual growth to the 2010 and 2014 AM and PM intersection counts to calculate future year background traffic volumes.
2. Analyse the intersections in SIDRA for the future interim years and the ultimate year without the generated traffic from the Project site. Intersection phasing and cycle times were based on the IDM SCATS data provided by RMS.
3. Add traffic generated by the Moorebank IMT (construction, IMEX and IS staff, heavy vehicles and warehouse generators) for all future year assessment.
4. Analysis of the intersections in SIDRA for all future year assessment with Moorebank IMT traffic.

9.1 Intersection performance

9.1.1 I-01 – Hume Highway/Orange Grove Road

Table 9.1 I-01 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.88	31	C	220	0.96	44	D	269
	2015 Base	0.88	31	C	224	0.96	45	D	271
	2015 with Moorebank IMT	0.88	31	C	226	0.96	45	D	272
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	0.88	31	C	230	0.96	45	D	272
	2016 with Moorebank IMT	0.89	31	C	242	0.98	47	D	290
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 2a	2019 Base	0.89	31	C	241	0.98	49	D	291
	2019 with Moorebank IMT	0.89	32	C	249	1.00	53	D	330
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2020 Cum. C1	0.94	33	C	283	1.04	59	E	376
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	1.00	56	D	322
Scenario 2b	2023 Base	0.91	32	C	255	0.99	54	D	329
	2023 with Moorebank IMT	0.93	33	C	274	1.05	62	E	386
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	1.00	60	E	361
	2025 Base	0.92	33	C	257	1.01	56	E	335
	2025 with Moorebank IMT	1.02	39	C	309	1.07	64	E	410
	2025 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	1.02	62	E	369
	2028 Base	0.94	34	C	270	1.03	61	E	362
	2028 with Moorebank IMT	1.06	43	D	357	1.11	73	F	472
	2028 Moorebank IMT with intersection upgrades/modifications	1.04	40	C	341	0.98	59	E	440
Scenario 3	2030 Base	0.94	35	C	288	1.04	63	E	372
	2030 with Moorebank IMT	1.07	44	D	375	1.11	76	F	488
	2030 Moorebank IMT with intersection upgrades/modifications	1.07	44	D	378	1.00	62	E	448
Cumulative Scenario A	2030 Cumulative A	1.10	49	D	420	1.14	82	F	528
	2030 Cum. A with intersection upgrades/ modifications	1.10	49	D	420	1.03	68	E	479
Cumulative Scenario B	2030 Cumulative B	1.11	50	D	425	1.11	78	F	479
	2030 Cum. B with intersection upgrades/ modifications	1.11	49	D	429	1.00	67	E	499
Cumulative Scenario C2	2030 Cum. C2	1.10	49	D	417	1.13	80	F	502
	2020 Cum. C2 with intersection upgrades/ modifications	1.10	48	D	421	1.01	64	E	445

9.1.1.1 Performance summary and impacts

The Hume Highway and Orange Grove Road intersection would operate at worse at a LoS D in future years with Moorebank IMT in the AM peak. The DoS will exceed 1.00 from year 2025 in the AM peak. This intersection would operate with a poor LoS E from year 2023 with Moorebank IMT in the PM peak. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.2.

9.1.1.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and additional short approach and departure lanes of 60 m length on the Hume Highway in the northbound direction. Refer to Figures 9.1 and 9.2.

Table 9.2 I-01 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-01 – Hume Highway/Orange Grove Road					
2020 Cum C1	N/A	59 (E)	Phase timing adjusted.	N/A	56 (D)
2023	N/A	62 (E)		N/A	60 (E)
2025	N/A	64 (E)		N/A	62 (E)
2028	43 (D)	73 (F)	Provide additional approach and departure lanes of 60 m on Hume Highway in the northbound direction. Phase timing adjusted.	40 (C)	59 (E)
2030	44 (D)	76 (F)		44 (D)	62 (E)
2030 Cum A	49 (D)	82 (F)		49 (D)	68 (E)
2030 Cum B	50 (D)	78 (F)		49 (D)	67 (E)
2030 Cum C2	49 (D)	80 (F)		48 (D)	64 (E)

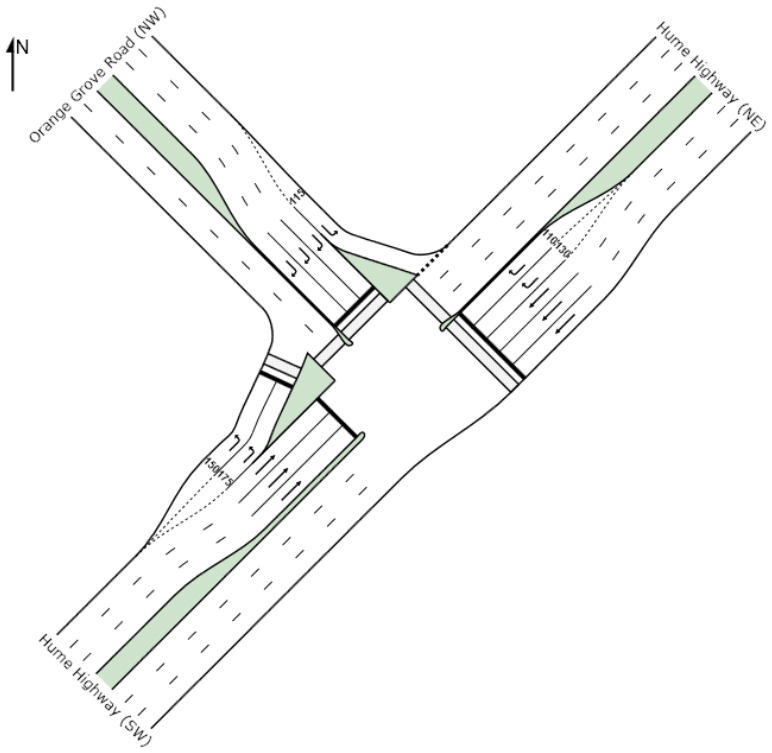


Figure 9.1 Existing intersection layout – I-01

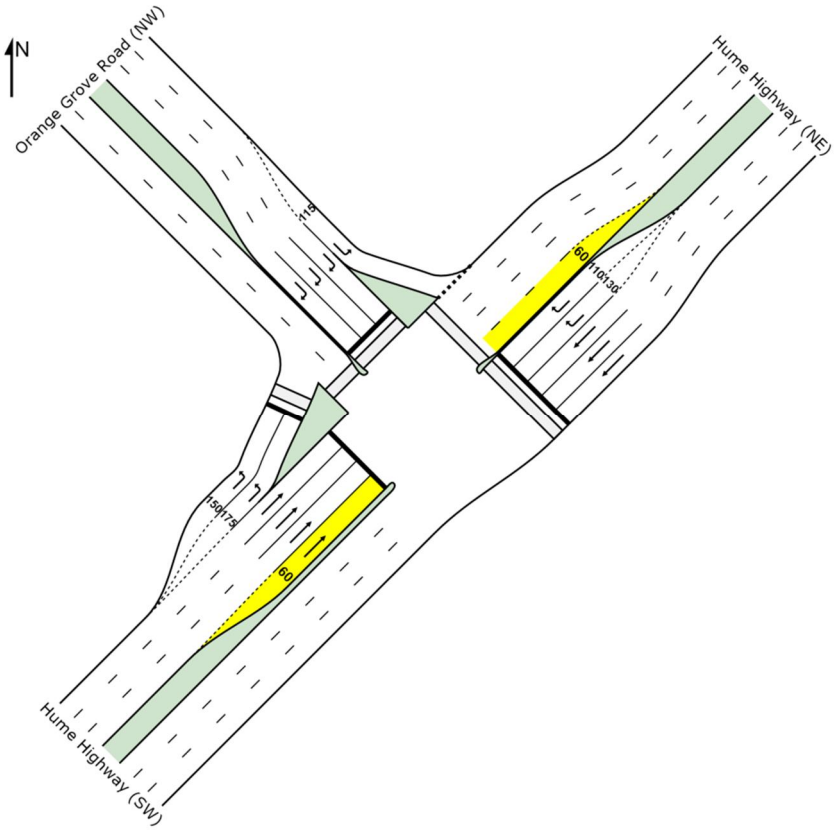


Figure 9.2 Proposed intersection layout – I-01

9.1.2 I-02 – Hume Highway/Elizabeth Drive

Table 9.3 I-02 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	1.10	58	E	313	0.99	47	D	235
	2015 Base	1.11	59	E	318	0.99	47	D	239
	2015 with Moorebank IMT	1.11	59	E	318	0.99	47	D	237
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	1.12	60	E	323	1.00	47	D	239
	2016 with Moorebank IMT	1.12	61	E	323	1.00	48	D	259
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	1.16	65	E	340	1.03	48	D	257
	2019 with Moorebank IMT	1.16	66	E	340	1.03	49	D	281
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2020 Cum. C1	1.16	66	E	343	1.03	53	D	358
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	1.19	72	F	381	1.07	51	D	267
	2023 with Moorebank IMT	1.19	73	F	381	1.07	53	D	313
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2025 Base	1.20	77	F	412	1.09	53	D	268
	2025 with Moorebank IMT	1.20	79	F	412	1.09	55	D	317
	2025 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2028 Base	1.23	90	F	471	1.13	56	D	277
	2028 with Moorebank IMT	1.23	93	F	471	1.13	61	E	351
	2028 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	1.27	100	F	515	1.16	59	E	286
	2030 with Moorebank IMT	1.27	104	F	515	1.16	63	E	356
	2030 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario A	2030 Cumulative A	1.27	105	F	518	1.16	62	E	341
	2030 Cum. A with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario B	2030 Cumulative B	1.27	104	F	515	1.16	63	E	359
	2030 Cum. B with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C2	2030 Cum. C2	1.27	104	F	515	1.16	70	E	434
	2030 Cum. C2 with intersection upgrades/ modifications	1.27	104	F	515	1.16	63	E	385

9.1.2.1 Performance summary and impacts

The Hume Highway and Elizabeth Drive intersection operates at worse at a LoS E under existing conditions and at a LoS F from 2023 in the AM peak. In the PM peak, this intersection operates at a LoS D under existing conditions and at a LoS E from 2030. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.4.

9.1.2.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and additional short right turn of 70 m length on Elizabeth Drive in the westbound direction for 2030 Cumulative C2 scenario. Refer to Figures 9.3 to 9.4.

Table 9.4 I-02 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-02 – Hume Highway/Elizabeth Drive					
2030 Cum C2	104 (F)	70 (E)	Additional right turn lane on Elizabeth Drive. E of 70 m length. Assumed northern footpath reduced. Phase timings adjusted.	104 (F)	63 (E)

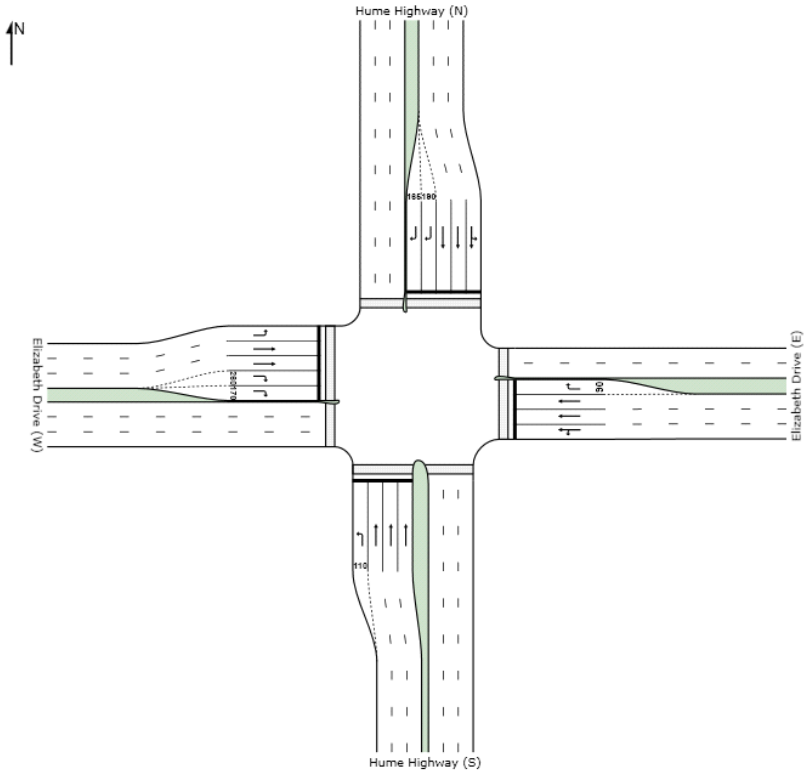


Figure 9.3 Existing intersection layout – I-02

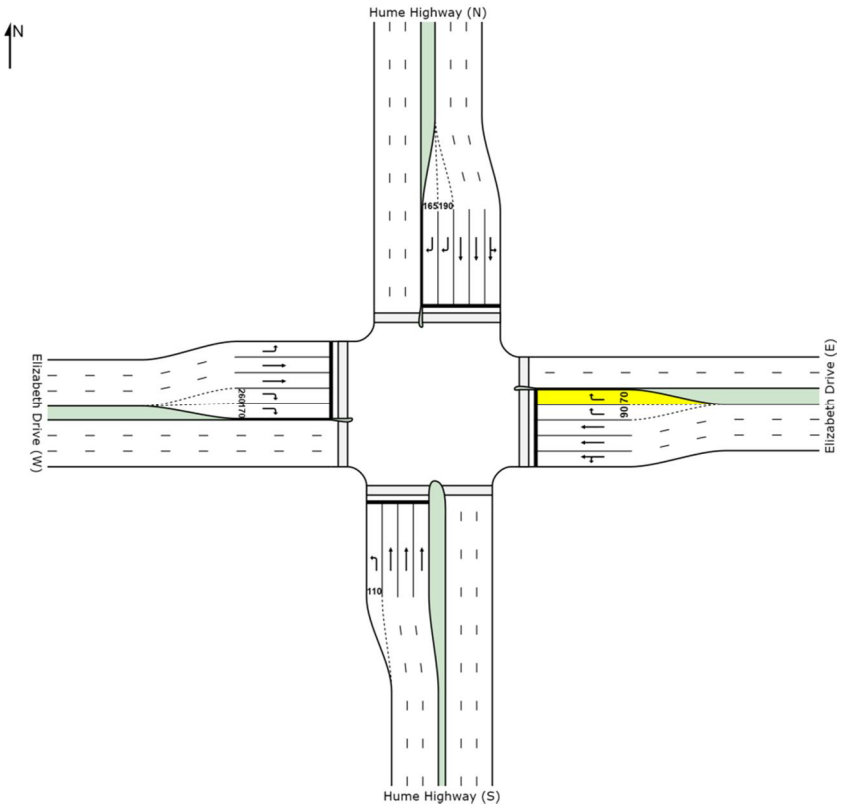


Figure 9.4 Proposed intersection layout (cumulative scenario C2 only) – I-02

9.1.3 I-03 – Hume Highway/Memorial Avenue

Table 9.5 I-03 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	1.00	51	D	314	1.18	45	D	258
	2015 Base	1.01	52	D	319	1.19	45	D	266
	2015 with Moorebank IMT	1.01	52	D	319	1.19	45	D	266
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	1.02	54	D	324	1.20	46	D	273
	2016 with Moorebank IMT	1.03	54	D	334	1.20	46	D	280
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	1.05	58	E	339	1.24	49	D	296
	2019 with Moorebank IMT	1.05	59	E	357	1.24	50	D	314
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2020 Cum. C1	1.06	60	E	381	1.24	50	D	338
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	1.09	67	E	372	1.28	54	D	330
	2023 with Moorebank IMT	1.10	68	E	403	1.28	55	D	370
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2025 Base	1.11	72	F	395	1.30	57	E	348
	2025 with Moorebank IMT	1.12	74	F	435	1.31	58	E	401
	2025 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2028 Base	1.15	82	F	451	1.35	61	E	373
	2028 with Moorebank IMT	1.15	86	F	525	1.35	64	E	461
	2028 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	1.18	92	F	504	1.39	66	E	404
	2030 with Moorebank IMT	1.26	102	F	583	1.38	68	E	472
	2030 Moorebank IMT with intersection upgrades/modifications	1.26	89	F	503	1.30	59	E	425
Cumulative Scenario A	2030 Cumulative A	1.26	105	F	610	1.38	69	E	503
	2030 Cum. A with intersection upgrades/ modifications	1.26	91	F	526	1.30	60	E	452
Cumulative Scenario B	2030 Cumulative B	1.26	104	F	591	1.38	68	E	456
	2030 Cum. B with intersection upgrades/ modifications	1.26	91	F	510	1.30	59	E	410
Cumulative Scenario C2	2030 Cum. C2	1.26	104	F	603	1.38	68	E	477
	2030 Cum. C2 with intersection upgrades/ modifications	1.26	91	F	520	1.30	60	E	428

9.1.3.1 Performance summary and impacts

The Hume Highway and Memorial Drive intersection operates at worse at a LoS D under existing conditions and at a LoS E from 2019 in the AM peak. In the PM peak, this intersection operates at a LoS D under existing conditions and at a LoS E from 2025. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.6.

9.1.3.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and additional short right turn of 60 m length on the Hume Highway in the northbound direction for 2030 with Moorebank IMT scenario. Refer to Figures 9.5 and 9.6.

Table 9.6 I-03 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-03 – Hume Highway/Memorial Drive					
2030	102 (F)	68 (E)	Additional 60 m right turn on Hume Highway South. Phase timings adjusted.	89 (F)	59 (E)
2030 Cum A	105 (F)	69 (E)		91 (F)	60 (E)
2030 Cum B	104 (F)	68 (E)		91 (F)	59 (E)
2030 Cum C2	104 (F)	68 (E)		91 (F)	60 (E)

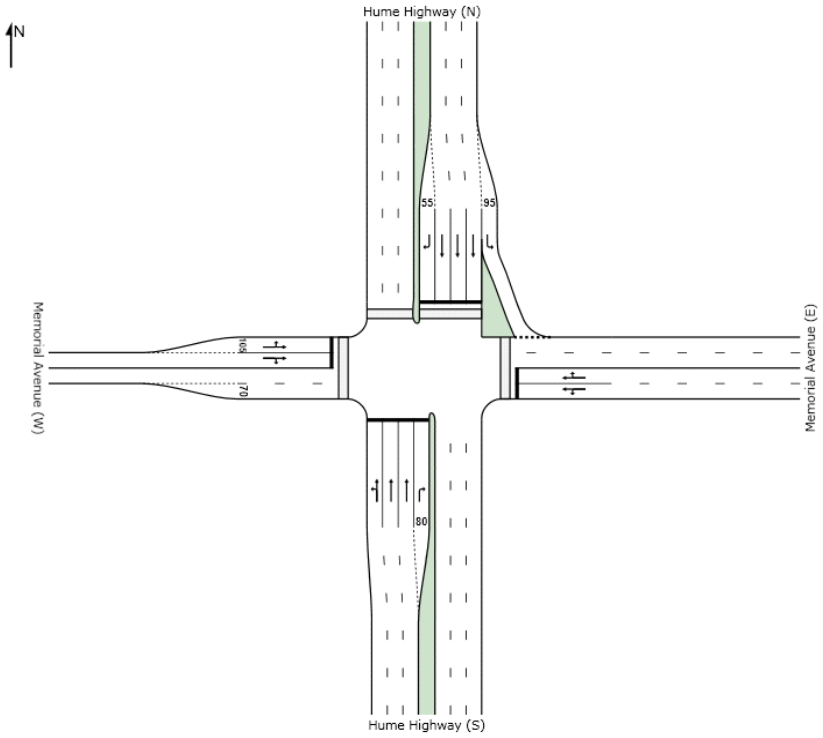


Figure 9.5 Existing intersection layout – I-03

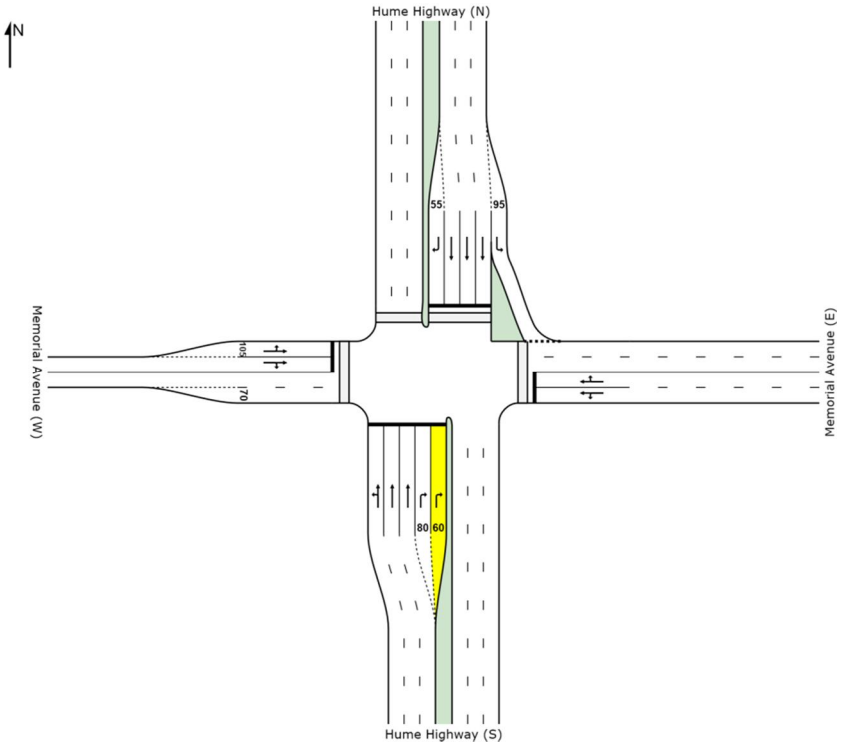


Figure 9.6 Proposed intersection layout – I-03

9.1.4 I-04 – Hume Highway/Hoxton Park Road/Macquarie Street

Table 9.7 I-04 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.94	48	D	268	1.16	45	D	298
	2015 Base	0.95	49	D	272	1.19	47	D	300
	2015 with Moorebank IMT	0.95	49	D	275	1.19	47	D	301
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	0.96	50	D	277	1.22	48	D	310
	2016 with Moorebank IMT	0.96	51	D	292	1.22	48	D	327
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	1.00	56	D	288	1.33	53	D	349
	2019 with Moorebank IMT	1.01	57	E	310	1.33	54	D	374
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2020 Cum. C1	1.05	60	E	360	1.33	55	D	402
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	1.10	76	F	347	1.42	61	E	403
	2023 with Moorebank IMT	1.10	78	F	348	1.42	63	E	427
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2025 Base	1.16	85	F	379	1.44	66	E	413
	2025 with Moorebank IMT	1.16	88	F	380	1.44	69	E	442
	2025 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2028 Base	1.21	98	F	447	1.47	79	F	435
	2028 with Moorebank IMT	1.21	102	F	447	1.47	82	F	503
	2028 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	1.27	117	F	522	1.50	84	F	469
	2030 with Moorebank IMT	1.26	124	F	539	1.49	90	F	580
	2030 Moorebank IMT with intersection upgrades/modifications	1.13	115	F	503	1.41	88	F	580
Cumulative Scenario A	2030 Cumulative A	1.26	127	F	540	1.49	91	F	615
	2030 Cum. A with intersection upgrades/ modifications	1.18	110	F	502	1.32	71	F	536
Cumulative Scenario B	2030 Cumulative B	1.26	131	F	540	1.49	88	F	560
	2030 Cum. B with intersection upgrades/ modifications	1.20	114	F	541	1.29	69	E	491
Cumulative Scenario C2	2030 Cum. C2	1.26	126	F	540	1.49	90	F	584
	2030 Cum. C2 with intersection upgrades/ modifications	1.19	111	F	505	1.30	70	E	510

9.1.4.1 Performance summary and impacts

The Hume Highway and Hoxton Park Road intersection operate at worse at a LoS D under existing conditions and at a LoS E or worse from 2023 in both the AM and PM peaks. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.8.

9.1.4.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and additional short right turn of 75 m length on the Hume Highway in the southbound direction for 2030 with Moorebank IMT scenario. Refer to Figures 9.7 and 9.8.

Table 9.8 I-04 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-04 – Hume Highway/Hoxton Park Road/Macquarie Street					
2030	124 (F)	90 (F)	Phase timings adjusted.	115 (F)	88 (F)
2030 Cum A	127 (F)	91 (F)	Additional right turn lane (75 m) on Hume Highway north. Phase timings adjusted.	110 (F)	71 (F)
2030 Cum B	131 (F)	88 (F)		114 (F)	69 (E)
2030 Cum C2	126 (F)	90 (F)		111 (F)	70 (F)

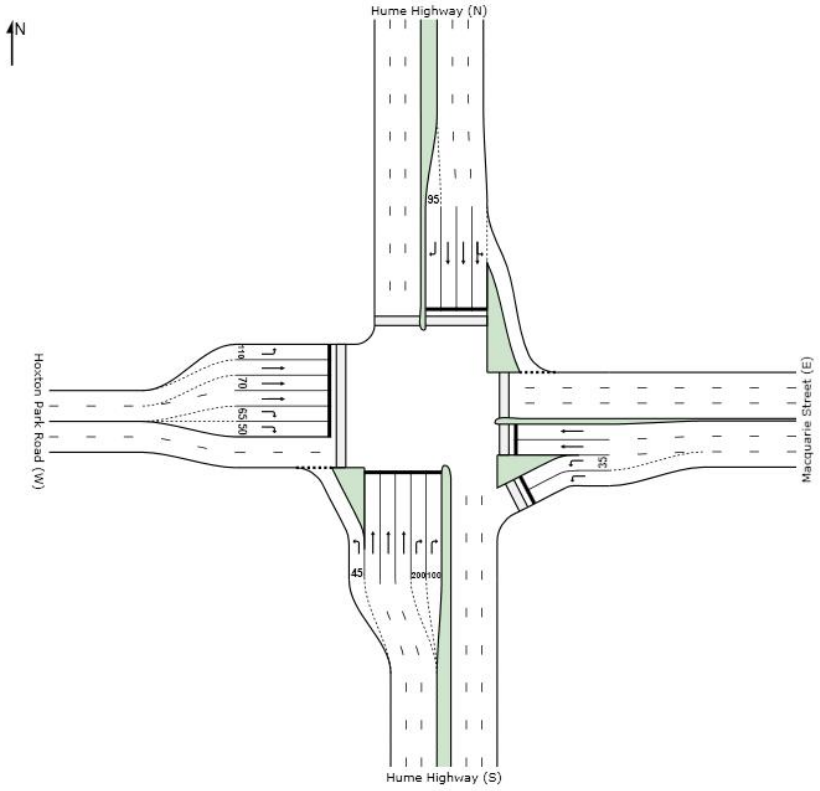


Figure 9.7 Existing intersection layout – I-04

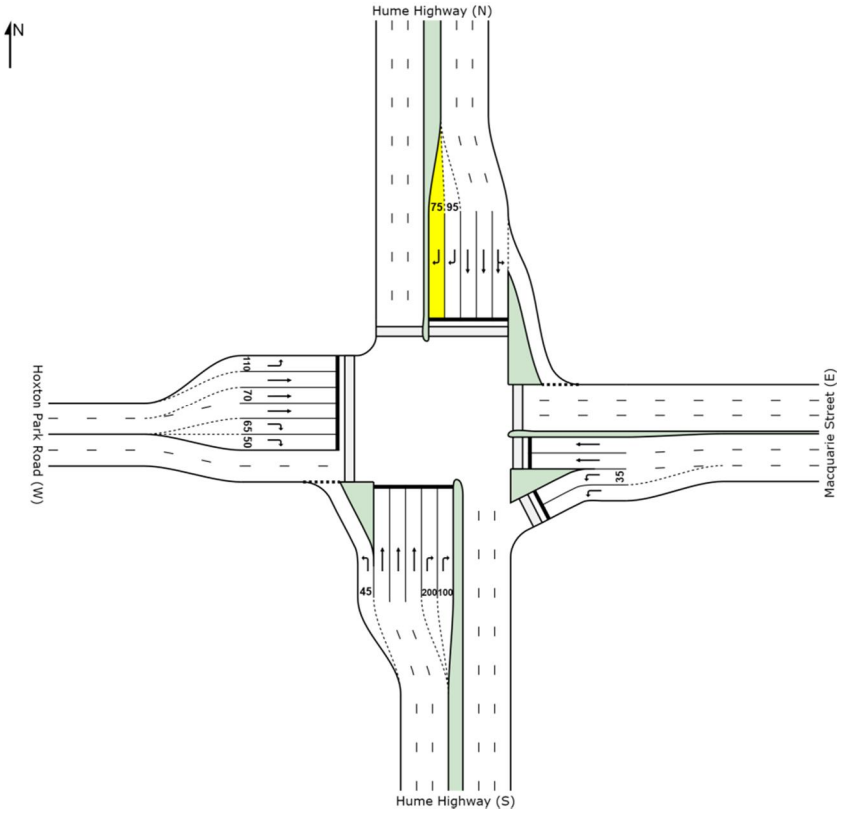


Figure 9.8 Proposed intersection layout – I-04

9.1.5 I-05 – Hume Highway/Reilly Street

Table 9.9 I-05 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.89	17	B	273	0.93	16	B	280
	2015 Base	0.90	17	B	274	0.94	16	B	296
	2015 with Moorebank IMT	0.90	17	B	274	0.94	17	B	299
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	0.91	17	B	275	0.94	17	B	312
	2016 with Moorebank IMT	0.91	17	B	283	0.94	19	B	362
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	0.94	18	B	291	0.97	20	B	368
	2019 with Moorebank IMT	0.91	18	B	307	0.97	24	B	468
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Cumulative Scenario C1	2020 Cum. C1	0.97	18	B	328	0.97	28	B	578
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	0.99	20	B	349	0.98	26	B	519
	2023 with Moorebank IMT	0.97	21	B	397	0.98	32	C	685
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2025 Base	1.01	22	B	378	1.00	31	C	642
	2025 with Moorebank IMT	1.02	24	B	441	1.00	38	C	876
	2025 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2028 Base	1.04	24	B	414	1.03	36	C	787
	2028 with Moorebank IMT	1.04	29	C	524	1.03	47	D	1010
	2028 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 3	2030 Base	1.06	27	B	462	1.06	42	C	941
	2030 with Moorebank IMT	1.06	31	C	572	1.06	53	D	1060
	2030 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario A	2030 Cumulative A	1.07	34	C	615	1.06	56	D	1093
	2030 Cum. A with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario B	2030 Cumulative B	1.09	34	C	596	1.06	51	D	1041
	2030 Cum. B with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C2	2030 Cum. C2	1.08	34	C	607	1.06	54	D	1065
	2030 Cum. C2 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

9.1.5.1 Performance summary and impacts

The Hume Highway and Reilly Street intersection operates at worse at a LoS D under future conditions in 2030. No upgrades are proposed at this intersection.

9.1.6 I-06 – Newbridge Road/Moorebank Avenue

Table 9.10 I-06 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.90	26	B	186	0.90	31	C	196
	2015 Base	0.93	28	B	200	0.92	32	C	200
	2015 with Moorebank IMT	0.93	28	B	200	0.93	32	C	200
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	0.96	30	C	216	0.95	32	C	205
	2016 with Moorebank IMT	1.01	32	C	216	0.97	34	C	211
	2016 Moorebank IMT with intersection upgrades/modifications	1.00	31	C	216	0.97	34	C	211
Scenario 2a	2019 Base	1.12	44	D	287	1.01	38	C	239
	2019 with Moorebank IMT	1.10	47	D	287	1.04	48	D	278
	2019 Moorebank IMT with intersection upgrades/modifications	1.07	44	D	287	1.05	49	D	278
Cumulative Scenario C1	2020 Cumulative C1	1.20	57	E	341	1.11	64	E	300
	2020 Cum. C1 with intersection upgrades/ modifications	1.17	54	D	315	1.14	54	D	405
Scenario 2b	2023 Base	1.29	73	F	409	1.07	56	D	317
	2023 with Moorebank IMT	1.29	80	F	410	1.12	81	F	441
	2023 Moorebank IMT with intersection upgrades/modifications	1.26	76	F	405	1.20	64	E	480
	2025 Base	1.38	89	F	480	1.10	73	F	392
	2025 with Moorebank IMT	1.38	97	F	475	1.14	96	F	522
	2025 Moorebank IMT with intersection upgrades/modifications	1.34	91	F	467	1.29	85	F	586
	2028 Base	1.50	110	F	585	1.15	87	F	458
	2028 with Moorebank IMT	1.55	125	F	625	1.17	115	F	637
	2028 Moorebank IMT with intersection upgrades/modifications	1.51	120	F	591	1.36	112	F	679

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	1.58	134	F	650	1.19	99	F	520
	2030 with Moorebank IMT	1.70	151	F	759	1.21	127	F	688
	2030 Moorebank IMT with intersection upgrades/modifications	1.60	139	F	706	1.29	123	F	643
Cumulative Scenario A	2030 Cumulative A	1.85	173	F	892	1.22	139	F	739
	2030 Cum. A with intersection upgrades/ modifications	1.66	154	F	720	1.43	124	F	743
Cumulative Scenario B	2030 Cumulative B	1.93	184	F	967	1.20	125	F	631
	2030 Cum. B with intersection upgrades/ modifications	1.51	156	F	667	1.33	110	F	658
Cumulative Scenario C2	2030 Cumulative C2	1.86	173	F	896	1.21	131	F	678
	2030 Cum. C2 with intersection upgrades/ modifications	1.42	144	F	598	1.36	116	F	689

9.1.6.1 Performance summary and impacts

The Moorebank Avenue and Newbridge Road intersection would operate satisfactorily until 2023. From 2023, this intersection would perform at LoS F. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.11.

9.1.6.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and increased left turn of 150 m length on Newbridge Road in the westbound direction in 2030. Refer to Figures 9.9 and 9.10.

Table 9.11 I-06 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-06 – Newbridge Road/Heathcote Road					
2016	32 (C)	34 (C)	Phase timing adjusted.	31 (C)	34 (C)
2019	47 (D)	48 (D)		44 (D)	49 (D)
2020 Cum C1	57 (E)	64 (E)		54 (D)	54 (D)
2023	80 (F)	81 (F)		76 (F)	64 (E)
2025	97 (F)	96 (F)		91 (F)	85 (F)
2028	125 (F)	115 (F)		120 (F)	112 (F)
2030	151 (F)	127 (F)		139 (F)	123 (F)

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-06 – Newbridge Road/Heathcote Road					
2030 Cum A	173 (F)	139 (F)	Extend left turn lane on Newbridge Road east to 150 m in length. Phase timing adjusted.	154 (F)	124 (F)
2030 Cum B	184 (F)	125 (F)		156 (F)	110 (F)
2030 Cum C2	173 (F)	131 (F)		144 (F)	116 (F)

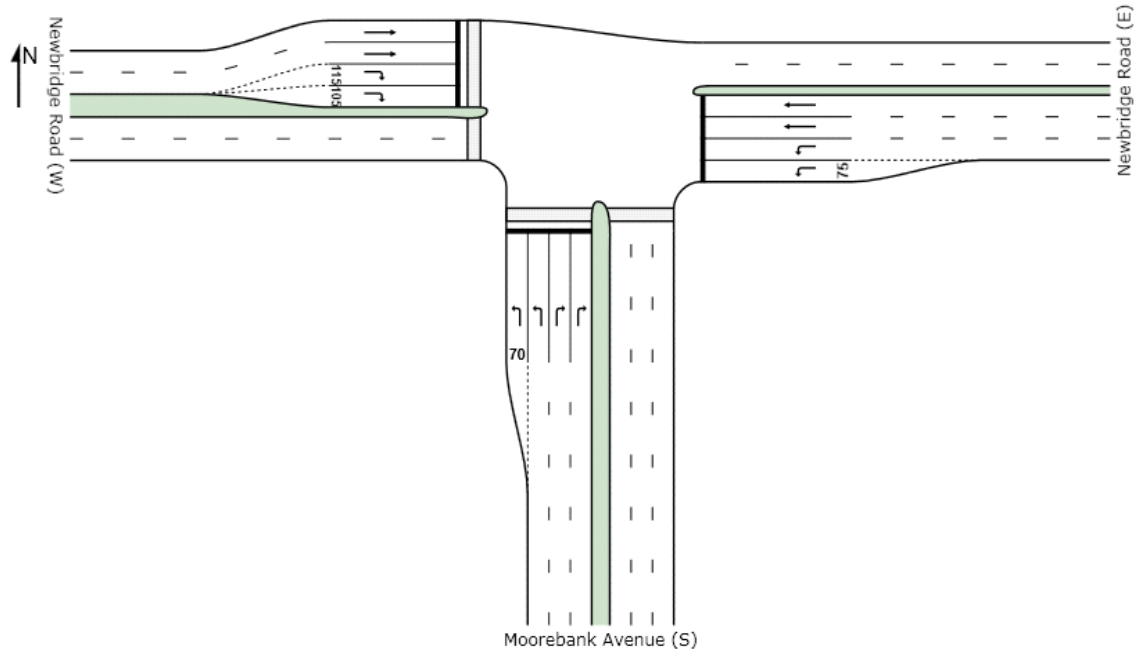


Figure 9.9 Existing intersection layout – I-06

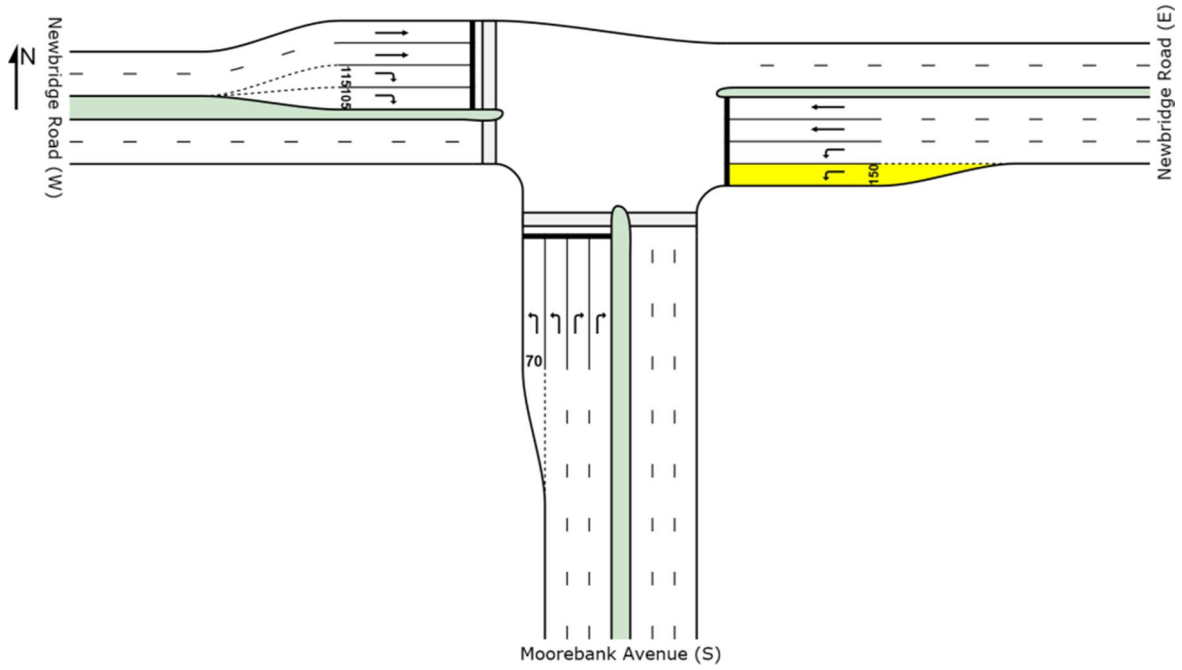


Figure 9.10 Proposed intersection layout – I-06

9.1.7 I-07 – Heathcote Road/Moorebank Avenue

Table 9.12 I-07 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.93	27	B	239	0.89	16	B	176
	2015 Base	1.00	36	C	311	0.91	16	B	189
	2015 with Moorebank IMT	1.01	36	C	317	0.91	16	B	189
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	1.06	50	D	441	0.94	17	B	203
	2016 with Moorebank IMT	1.11	66	E	441	0.94	17	B	205
	2016 Moorebank IMT with intersection upgrades/modifications	1.03	55	D	441	0.87	16	B	144
Scenario 2a	2019 Base	1.16	82	F	452	1.07	27	B	320
	2019 with Moorebank IMT	1.23	118	F	525	1.07	27	B	325
	2019 Moorebank IMT with intersection upgrades/modifications	1.10	87	F	441	1.01	24	B	171
Cumulative Scenario C1	2020 Cumulative C1	1.26	135	F	560	1.12	34	C	363
	2020 Cum. C1 with intersection upgrades/ modifications	1.12	107	F	441	1.03	27	B	197
Scenario 2b	2023 Base	1.34	170	F	645	1.30	58	E	581
	2023 with Moorebank IMT	1.37	178	F	697	1.31	61	E	587
	2023 Moorebank IMT with intersection upgrades/modifications	1.23	173	F	441	1.18	46	D	293
	2025 Base	1.37	182	F	685	1.30	80	F	572
	2025 with Moorebank IMT	1.42	179	F	751	1.43	88	F	729
	2025 Moorebank IMT with intersection upgrades/modifications	1.30	176	F	441	1.29	65	E	371
	2028 Base	1.37	178	F	704	1.36	93	F	646
	2028 with Moorebank IMT	1.44	172	F	795	1.50	106	F	816
	2028 Moorebank IMT with intersection upgrades/modifications	1.30	157	F	441	1.35	80	F	423

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	1.39	207	F	706	1.42	107	F	690
	2030 with Moorebank IMT	1.45	205	F	785	1.42	115	F	692
	2030 Moorebank IMT with intersection upgrades/modifications	1.30	206	F	473	1.28	85	F	364
Cumulative Scenario A	2030 Cumulative A	1.46	203	F	795	1.46	136	F	717
	2030 Cum. A with intersection upgrades/ modifications	1.30	200	F	472	1.28	89	F	441
Cumulative Scenario B	2030 Cumulative B	1.44	208	F	768	1.50	147	F	736
	2030 Cum. B with intersection upgrades/ modifications	1.30	204	F	473	1.28	91	F	441
Cumulative Scenario C2	2030 Cumulative C2	1.45	205	F	781	1.49	144	F	730
	2030 Cum. C2 with intersection upgrades/ modifications	1.30	202	F	473	1.28	89	F	441

9.1.7.1 Performance summary and impacts

The Moorebank Avenue and Heathcote Road intersection would operate satisfactorily until 2016 in the AM peak and 2023 in the PM peak. From 2019 in the AM peak and 2025 in the PM peak, this intersection would perform at a LoS F. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.13.

9.1.7.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and the removal of the short bus lane on Heathcote Road and replacing with a combined left and right turn lane it its location and the second lane becoming a dedicated right turn lane. Refer to Figures 9.11 and 9.12.

Table 9.13 I-07 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-07 – Heathcote Road/Moorebank Avenue					
2016	66 (E)	17 (B)	Change Bus lane on Heathcote Road east approach to general traffic (left/right). Phase timing adjusted.	55 (D)	16 (B)
2019	118 (F)	27 (B)		87 (F)	24 (B)
2020 Cum C1	135 (F)	34 (C)		107 (F)	27 (B)
2023	178 (F)	61 (E)		173 (F)	46 (D)
2025	179 (F)	88 (F)		176 (F)	65 (E)
2028	172 (F)	106 (F)		157 (F)	80 (F)
2030	205 (F)	115 (F)		206 (F)	85 (F)

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-07 – Heathcote Road/Moorebank Avenue					
2030 Cum A	203 (F)	136 (F)		200 (F)	89 (F)
2030 Cum B	208 (F)	147 (F)		204 (F)	91 (F)
2020 Cum C2	205 (F)	144 (F)		202 (F)	89 (F)

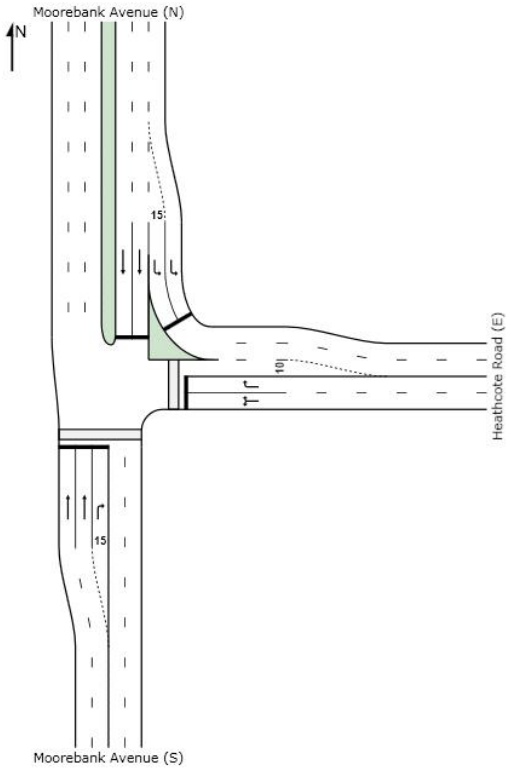


Figure 9.11 Existing intersection layout – I-07

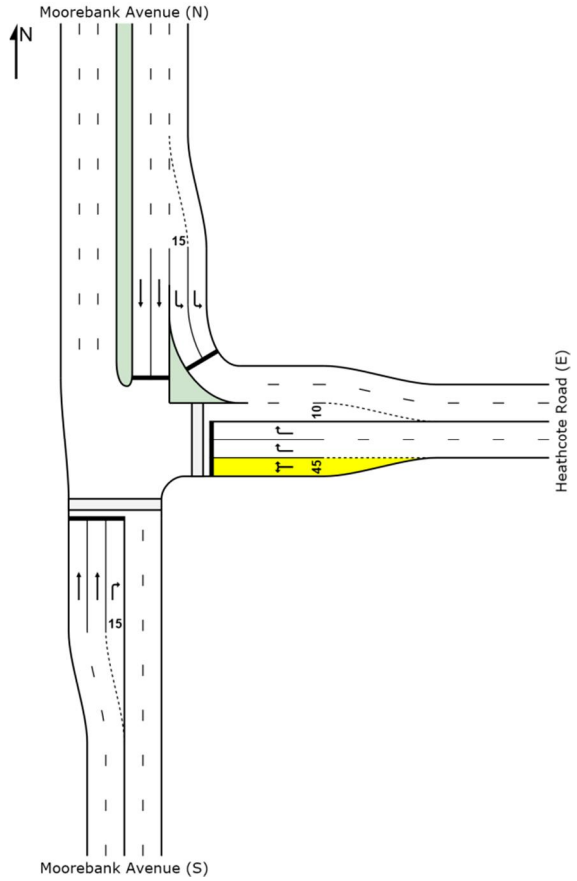


Figure 9.12 Proposed intersection layout – I-07

9.1.8 I-08 – Moorebank Avenue/Industrial Park Access

Table 9.14 I-08 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.48	4	A	90	0.49	7	A	68
	2015 Base	0.49	4	A	95	0.49	7	A	69
	2015 with Moorebank IMT	0.50	4	A	96	0.49	7	A	69
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	0.64	5	A	145	0.49	7	A	69
	2016 with Moorebank IMT	0.86	12	A	266	0.50	7	A	71
	2016 Moorebank IMT with intersection upgrades/modifications	0.85	10	A	249	0.50	7	A	71

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 2a	2019 Base	1.16	82	F	452	0.49	7	A	71
	2019 with Moorebank IMT	1.14	136	F	943	0.45	8	A	90
	2019 Moorebank IMT with intersection upgrades/modifications	1.14	135	F	942	0.45	8	A	91
Cumulative Scenario C1	2020 Cumulative C1	1.16	150	F	1018	0.46	8	A	93
	2020 Cum. C1 with intersection upgrades/ modifications	1.16	150	F	1018	0.44	8	A	88
Scenario 2b	2023 Base	1.14	140	F	979	0.51	7	A	73
	2023 with Moorebank IMT	1.21	180	F	1133	0.46	8	A	93
	2023 Moorebank IMT with intersection upgrades/modifications	1.21	180	F	1133	0.45	8	A	89
	2025 Base	1.15	148	F	1012	0.52	7	A	75
	2025 with Moorebank IMT	1.24	200	F	1220	0.46	8	A	92
	2025 Moorebank IMT with intersection upgrades/modifications	1.24	200	F	1220	0.46	8	A	91
	2028 Base	1.17	159	F	1063	0.52	7	A	74
	2028 with Moorebank IMT	1.28	227	F	1340	0.48	8	A	93
	2028 Moorebank IMT with intersection upgrades/modifications	1.28	226	F	1340	0.48	8	A	92
Scenario 3	2030 Base	1.22	187	F	1144	0.52	7	A	75
	2030 with Moorebank IMT	1.28	226	F	1335	0.50	8	A	94
	2030 Moorebank IMT with intersection upgrades/modifications	1.22	189	F	1241	0.50	8	A	95
Cumulative Scenario A	2030 Cumulative A	1.29	232	F	1375	0.70	9	A	147
	2030 Cum. A with intersection upgrades/ modifications	1.24	193	F	1280	0.57	8	A	119
Cumulative Scenario B	2030 Cumulative B	1.26	209	F	1276	0.79	11	A	177
	2030 Cum. B with intersection upgrades/ modifications	1.21	170	F	1182	0.63	9	A	132
Cumulative Scenario C2	2030 Cumulative C2	1.27	220	F	1319	0.79	10	A	171
	2030 Cum. C2 with intersection upgrades/ modifications	1.22	180	F	1226	0.61	9	A	127

9.1.8.1 Performance summary and impacts

The Moorebank Avenue and Industrial Parl Access intersection would operate satisfactorily until 2019 in the AM peak and 2030 in the PM peak. From 2019 in the AM peak, this intersection would perform at a LoS F. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.15.

9.1.8.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes.

Table 9.15 I-08 proposed intersection upgrades

Year	Existing Delay (LoS)		Proposed upgrades and/or signal changes	Resulting Delay (LoS)	
	AM	PM		AM	PM
I-08 – Moorebank Avenue/Industrial Park Access					
2016	12 (A)	7 (A)	Phase timing adjusted.	10 (A)	7 (A)
2019	136 (F)	8 (A)		135 (F)	8 (A)
2020 Cum C1	150 (F)	8 (A)		150 (F)	8 (A)
2023	180 (F)	8 (A)		150 (F)	8 (A)
2025	200 (F)	8 (A)		200 (F)	8 (A)
2028	227 (F)	8 (A)		226 (F)	8 (A)
2030	226 (F)	7 (A)		189 (F)	8 (A)
2030 Cum A	232 (F)	9 (A)		193 (F)	8 (A)
2030 Cum B	209 (F)	11 (A)		170 (F)	9 (A)
2030 Cum C2	220 (F)	10 (A)		180 (F)	9 (A)

9.1.9 I-09 – Moorebank Avenue/Church Road

Table 9.16 I-09 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.69	67	E	60	0.91	92	F	183
	2015 Base	0.71	78	F	60	0.93	98	F	192
	2015 with Moorebank IMT	0.71	80	F	60	0.93	99	F	193
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 1	2016 Base	0.72	91	F	61	0.94	105	F	203
	2016 with Moorebank IMT	0.74	114	F	63	0.96	117	F	217
	2016 Moorebank IMT with intersection upgrades/modifications	0.74	17	B	63	0.96	101	F	216
Scenario 2a	2019 Base	0.77	163	F	67	0.99	131	F	241
	2019 with Moorebank IMT	0.80	252	F	70	1.03	160	F	278
	2019 Moorebank IMT with intersection upgrades/modifications	0.80	19	B	70	1.03	135	F	277
Cumulative Scenario C1	2020 Cumulative C1	0.84	501	F	73	1.07	235	F	312
	2020 Cum. C1 with intersection upgrades/ modifications	0.84	22	B	73	1.07	155	F	310
Scenario 2b	2023 Base	0.84	443	F	74	1.01	203	F	331
	2023 with Moorebank IMT	0.88	773	F	81	1.12	286	F	407
	2023 Moorebank IMT with intersection upgrades/modifications	0.88	43	B	81	1.15	215	F	405
	2025 Base	0.87	779	F	77	1.14	266	F	394
	2025 with Moorebank IMT	0.93	763	F	87	1.23	406	F	495
	2025 Moorebank IMT with intersection upgrades/modifications	0.93	26	B	87	1.23	278	F	493
	2028 Base	0.90	768	F	80	1.22	333	F	483
	2028 with Moorebank IMT	0.99	778	F	96	1.36	743	F	636
	2028 Moorebank IMT with intersection upgrades/modifications	0.99	31	C	96	1.36	384	F	635
Scenario 3	2030 Base	0.95	845	F	83	1.29	374	F	567
	2030 with Moorebank IMT	1.00	768	F	97	1.45	736	F	729
	2030 Moorebank IMT with intersection upgrades/modifications	1.00	32	C	13	1.45	457	F	728
Cumulative Scenario A	2030 Cumulative A	1.06	653	F	101	1.49	1257	F	766
	2030 Cum. A with intersection upgrades/ modifications	1.06	37	C	101	1.48	490	F	765

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Cumulative Scenario B	2030 Cumulative B	1.05	654	F	91	1.40	1144	F	679
	2030 Cum. B with intersection upgrades/ modifications	1.05	36	C	91	1.40	413	F	676
Cumulative Scenario C2	2030 Cumulative C2	1.03	652	F	94	1.44	1269	F	716
	2030 Cum. C2 with intersection upgrades/ modifications	1.03	35	C	94	1.43	446	F	715

9.1.9.1 Performance summary and impacts

The Moorebank Avenue and Church Road intersection operates at unsatisfactory levels of service under existing conditions. This intersection is a priority controlled T junction. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.17.

9.1.9.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes the implementation of right turn bans out of Church Road. Refer to Figures 9.13 and 9.14.

Table 9.17 I-09 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-09 – Moorebank Avenue/Church Road					
2016	114 (F)	117 (F)	Ban right turn out of Church Road.	17 (B)	101 (F)
2019	252 (F)	160 (F)		19 (B)	135 (F)
2020 Cum C1	501 (F)	235 (F)		22 (B)	155 (F)
2023	773 (F)	286 (F)		43 (B)	215 (F)
2025	763 (F)	406 (F)		26 (B)	278 (F)
2028	778 (F)	743 (F)		31 (C)	384 (F)
2030	768 (right turn out of Church) (F)	735 (right turn out of Church) (F)		32 (right turn into Church) (C)	457 (left out of Church) (F)
2030 Cum A	653 (right turn out of Church) (F)	1257 (right turn out of Church) (F)		37 (right turn into Church) (C)	490 (left turn out of Church) (F)
2030 Cum B	654 (right turn out of Church) (F)	1144 (right turn out of Church) (F)		36 (right turn into Church) (C)	413 (left turn out of Church) (F)

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-09 – Moorebank Avenue/Church Road					
2030 Cum C2	652 (right turn out of Church) (F)	1269 (right turn out of Church) (F)		35 (right turn into Church) (C)	446 (left turn out of Church) (F)

It should be noted the banning of the right turn would not impact of trip routes given that there are alternate routes to access Moorebank Avenue via Heathcote Road.

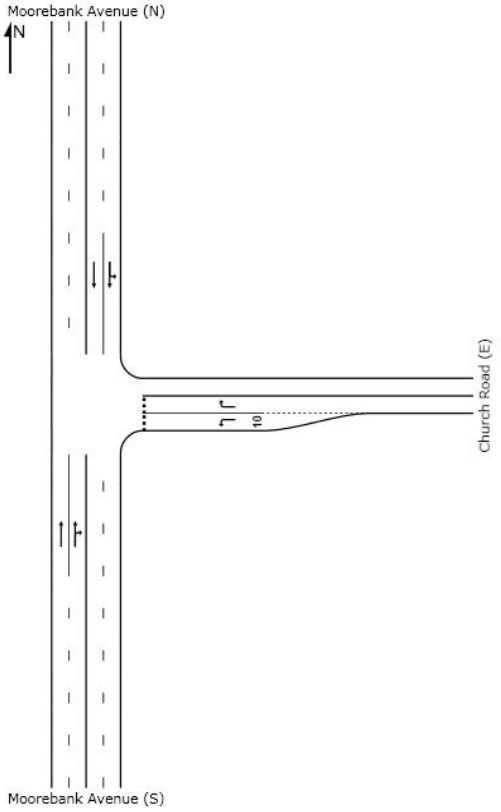


Figure 9.13 Existing intersection layout – I-09

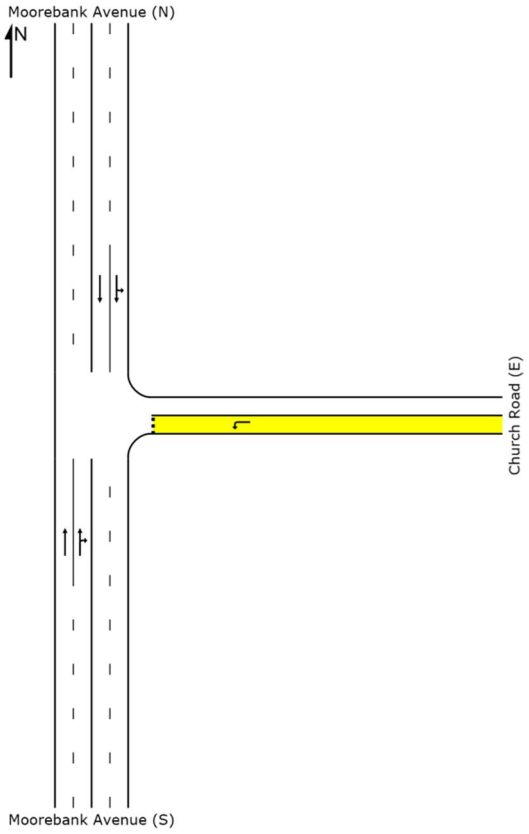


Figure 9.14 Proposed intersection layout – I-09

9.1.10 I-10 – Heathcote Road/Nuwarra Road

Table 9.18 I-10 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	1.04	50	D	260	0.97	54	D	327
	2015 Base	1.05	51	D	270	0.99	56	D	343
	2015 with Moorebank IMT	1.05	51	D	270	1.00	56	D	343
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	1.08	53	D	282	1.00	57	E	360
	2016 with Moorebank IMT	1.08	53	D	282	1.03	59	E	360
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	1.13	60	E	334	1.04	65	E	425
	2019 with Moorebank IMT	1.13	60	E	335	1.06	66	E	426
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Cumulative Scenario C1	2020 Cum. C1	1.13	60	E	335	1.11	68	E	426
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	1.23	92	F	602	1.14	90	F	608
	2023 with Moorebank IMT	1.23	93	F	608	1.17	92	F	609
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2025 Base	1.32	126	F	835	1.21	111	F	718
	2025 with Moorebank IMT	1.32	126	F	838	1.22	111	F	719
	2025 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2028 Base	1.40	157	F	1012	1.28	134	F	838
	2028 with Moorebank IMT	1.40	157	F	1021	1.32	136	F	840
	2028 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 3	2030 Base	1.44	178	F	1182	1.32	148	F	920
	2030 with Moorebank IMT	1.44	178	F	1183	1.34	150	F	922
	2030 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario A	2030 Cumulative A	1.44	178	F	1190	1.37	152	F	922
	2030 Cum. A with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario B	2030 Cumulative B	1.44	179	F	1202	1.43	155	F	921
	2030 Cum. B with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C2	2030 Cum. C2	1.44	178	F	1191	1.39	153	F	921
	2030 Cum. C2 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

9.1.10.1 Performance summary and impacts

The Heathcote Road and Nuwarra Road intersection operates unsatisfactorily from 2019 in the AM peak and 2016 in the PM peak The with Moorebank IMT or cumulative scenarios will not alter the performance of this intersection much when compared to the base conditions and therefore no upgrades are proposed at this intersection.

9.1.11 I-11 – Newbridge Road/Nuwarra Road

Table 9.19 I-11 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.99	48	D	320	0.96	27	B	178
	2015 Base	1.02	53	D	352	0.97	27	B	182
	2015 with Moorebank IMT	1.02	53	D	354	0.97	27	B	182
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	1.04	57	E	391	0.99	28	B	186
	2016 with Moorebank IMT	1.04	58	E	416	0.99	28	B	189
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	1.11	77	F	550	1.03	30	C	198
	2019 with Moorebank IMT	1.11	82	F	595	1.03	30	C	205
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2020 Cum. C1	1.11	87	F	635	1.03	31	C	211
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	1.16	116	F	790	1.09	35	C	224
	2023 with Moorebank IMT	1.16	126	F	867	1.09	35	C	232
	2023 Moorebank IMT with intersection upgrades/modifications	1.20	119	F	808	N/A	N/A	N/A	N/A
	2025 Base	1.16	129	F	872	1.12	37	C	242
	2025 with Moorebank IMT	1.18	141	F	966	1.12	37	C	249
	2025 Moorebank IMT with intersection upgrades/modifications	1.21	133	F	904	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
	2028 Base	1.18	143	F	957	1.15	40	C	267
	2028 with Moorebank IMT	1.23	162	F	1093	1.15	41	C	275
	2028 Moorebank IMT with intersection upgrades/modifications	1.22	153	F	1030	N/A	N/A	N/A	N/A
Scenario 3	2030 Base	1.25	168	F	1038	1.17	43	D	281
	2030 with Moorebank IMT	1.25	178	F	1143	1.18	44	D	291
	2030 Moorebank IMT with intersection upgrades/modifications	1.28	172	F	1079	N/A	N/A	N/A	N/A
Cumulative Scenario A	2030 Cumulative A	1.26	183	F	1167	1.18	45	D	291
	2030 Cum. A with intersection upgrades/ modifications	1.33	172	F	1040	N/A	N/A	N/A	N/A
Cumulative Scenario B	2030 Cumulative B	1.28	175	F	1104	1.18	46	D	291
	2030 Cum. B with intersection upgrades/ modifications	1.28	168	F	1041	N/A	N/A	N/A	N/A
Cumulative Scenario C2	2030 Cum. C2	1.25	179	F	1133	1.18	45	D	291
	2030 Cum. C2 with intersection upgrades/ modifications	1.28	171	F	1070	N/A	N/A	N/A	N/A

9.1.11.1 Performance summary and impacts

The Newbridge Road and Nuwarra Road intersection would operate satisfactorily until 2016 in the AM peak and 2030 in the PM peak. From 2016 in the AM peak, this intersection would perform at a LoS E and gradually worsen to a LoS F. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.20.

9.1.11.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes.

Table 9.20 I-11 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-11 – Newbridge Road / Nuwarra Road					
2023	126 (F)	N/A	Phase timing adjusted in the AM peak times. No changes to PM peak times.	119 (F)	N/A
2025	141 (F)	N/A		133 (F)	N/A
2028	162 (F)	N/A		153 (F)	N/A
2030	178 (F)	N/A		172 (F)	N/A
2030 Cum A	183 (F)	N/A		172 (F)	N/A
2030 Cum B	175 (F)	N/A		168 (F)	N/A
2030 Cum C2	179 (F)	N/A		171 (F)	N/A

9.1.12 I-12 – Newbridge Road/Brickmans Drive/Governor Macquarie Drive

Table 9.21 I-12 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.98	49	D	400	1.02	40	C	264
	2015 Base	1.00	52	D	440	1.04	41	C	270
	2015 with Moorebank IMT	1.00	52	D	442	1.04	41	C	271
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	1.02	56	D	490	1.06	43	D	278
	2016 with Moorebank IMT	1.02	58	E	515	1.06	43	D	281
	2016 Moorebank IMT with intersection upgrades/modifications	1.02	56	D	486	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	1.07	76	F	661	1.09	46	D	312
	2019 with Moorebank IMT	1.07	81	F	704	1.09	47	D	312
	2019 Moorebank IMT with intersection upgrades/modifications	1.07	77	F	673	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Cumulative Scenario C1	2020 Cum. C1	1.07	85	F	745	1.09	47	D	312
	2020 Cum. C1 with intersection upgrades/ modifications	1.07	81	F	712	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	1.15	115	F	921	1.14	52	D	358
	2023 with Moorebank IMT	1.15	123	F	997	1.14	53	D	358
	2023 Moorebank IMT with intersection upgrades/modifications	1.15	118	F	958	N/A	N/A	N/A	N/A
	2025 Base	1.18	131	F	1020	1.16	56	D	384
	2025 with Moorebank IMT	1.18	141	F	1110	1.16	57	E	384
	2025 Moorebank IMT with intersection upgrades/modifications	1.16	127	F	1070	1.03	47	D	390
	2028 Base	1.21	144	F	1073	1.20	62	E	421
	2028 with Moorebank IMT	1.21	159	F	1205	1.20	65	E	421
	2028 Moorebank IMT with intersection upgrades/modifications	1.19	142	F	1164	1.07	55	D	494
Scenario 3	2030 Base	1.24	161	F	1180	1.22	67	E	446
	2030 with Moorebank IMT	1.24	170	F	1278	1.62	85	F	658
	2030 Moorebank IMT with intersection upgrades/modifications	1.22	153	F	1236	1.09	69	E	548
Cumulative Scenario A	2030 Cumulative A	1.24	173	F	1303	1.62	85	F	658
	2030 Cum. A with intersection upgrades/ modifications	1.22	156	F	1262	1.09	70	E	570
Cumulative Scenario B	2030 Cumulative B	1.24	166	F	1245	1.60	83	F	643
	2030 Cum. B with intersection upgrades/ modifications	1.21	149	F	1204	1.09	68	E	524
Cumulative Scenario C2	2030 Cum. C2	1.24	169	F	1270	1.61	84	F	651
	2030 Cum. C2 with intersection upgrades/ modifications	1.21	152	F	1229	1.09	69	E	545

9.1.12.1 Performance summary and impacts

The Newbridge Road, Brickmans Drive and Governor Macquarie Drive intersection would operate satisfactorily until 2016 in the AM peak and 2028 in the PM peak. From 2016 in the AM peak, this intersection would perform at a LoS E and gradually worsen to a LoS F. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT. This is detailed in Table 9.22.

9.1.12.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and an extended combined through and right turn lane, and right turn lane, both of 200 m length on Governor Macquarie Drive in 2030. Refer to Figures 9.15 and 9.16.

Table 9.22 I-12 proposed intersection upgrades

Year	Existing Delay (LoS)		Proposed upgrades and/or signal changes	Resulting Delay (LoS)	
	AM	PM		AM	PM
I-11 – Newbridge Road/Nuwarra Road					
2016	58 (E)	N/A	Phase timing adjusted in the AM peak times.	56 (D)	N/A
2019	81 (F)	N/A		77 (F)	N/A
2020 CUM C1	85 (F)	N/A		81 (F)	N/A
2023	123 (F)	N/A		118 (F)	N/A
2025	141 (F)	57 (E)	Change layout of Governor Macquarie Drive approach to include a combined through and right turn lane, and dedicated right turn lane of 200 m lengths. Phase timing adjusted.	127 (F)	47 (D)
2028	159 (F)	65 (E)		142 (F)	55 (D)
2030	170 (F)	85 (F)		153 (F)	69 (E)
2030 Cum A	173 (F)	85 (F)		156 (F)	70 (E)
2030 Cum B	166 (F)	83 (F)		149 (F)	68 (E)
2030 CUM C2	169 (F)	84 (F)		152 (F)	69 (E)

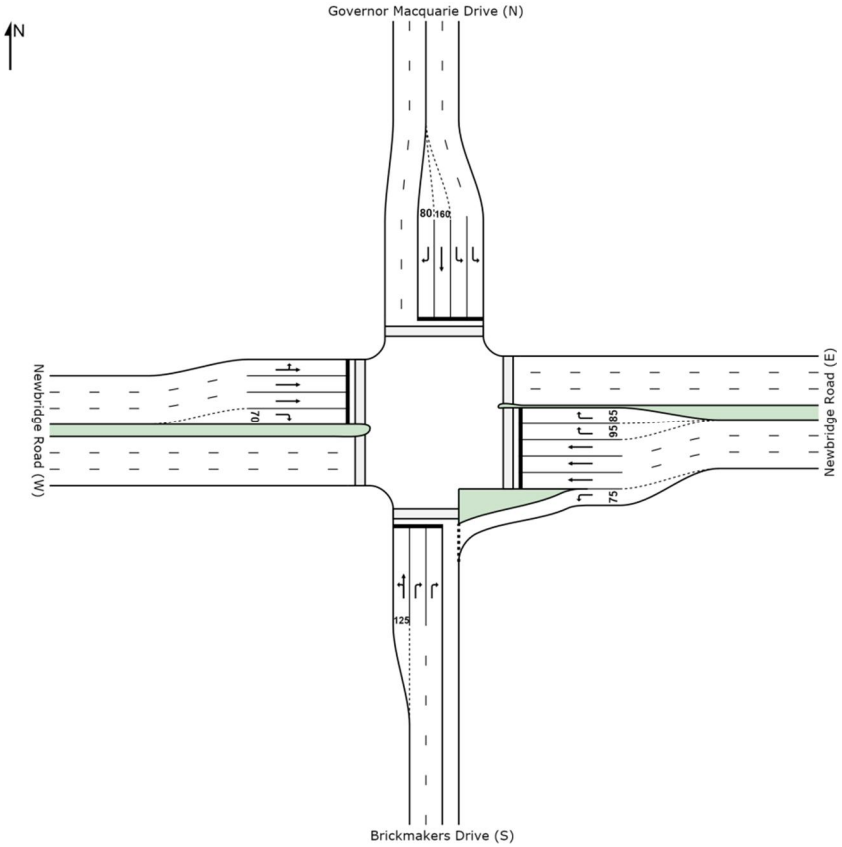


Figure 9.15 Existing intersection layout – I-12

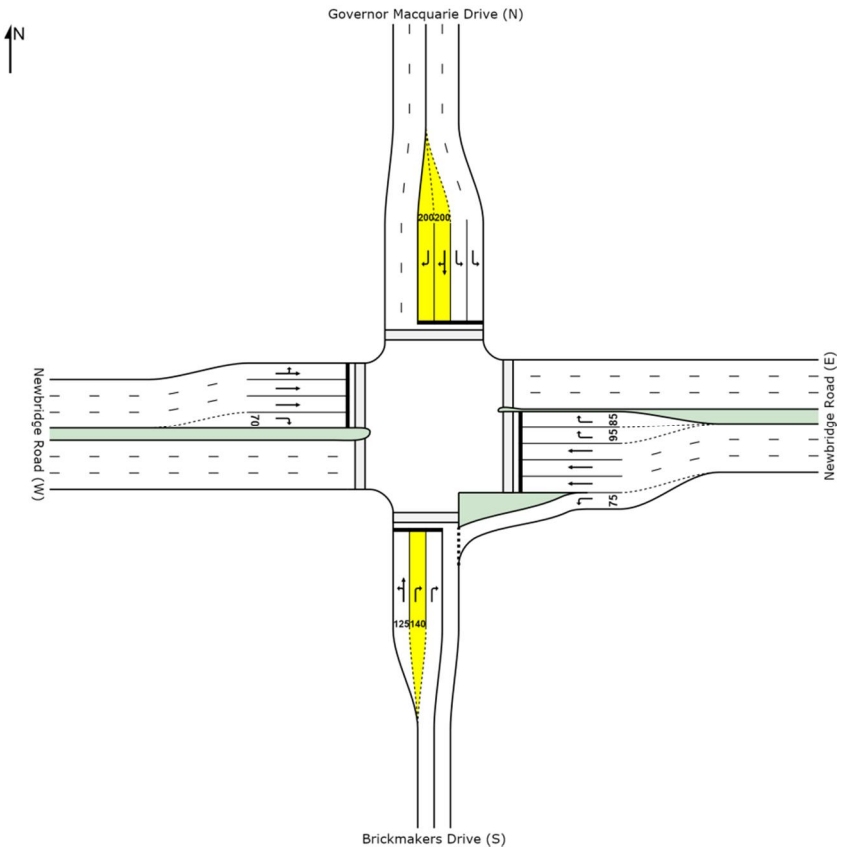


Figure 9.16 Proposed intersection layout – I-12

9.1.13 I-13 – Moorebank Avenue/M5

Table 9.23 I-13 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.83	19	B	73	0.88	28	B	212
	2015 Base	0.85	19	B	74	0.89	29	C	218
	2015 with Moorebank IMT	0.85	19	B	74	0.89	29	C	218
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	0.86	19	B	74	0.89	29	C	225
	2016 with Moorebank IMT	0.86	19	B	80	0.89	30	C	225
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	0.91	19	B	81	0.92	31	C	249
	2019 with Moorebank IMT	0.91	20	B	95	0.92	32	C	249
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2020 Cum. C1	0.91	24	B	157	1.05	47	D	562
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	0.96	20	B	93	0.95	34	C	288
	2023 with Moorebank IMT	0.96	22	B	120	0.95	36	C	288
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2025 Base	0.97	20	B	88	0.96	36	C	312
	2025 with Moorebank IMT	0.97	21	B	117	0.96	39	C	312
	2025 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2028 Base	0.98	20	B	89	0.98	40	C	347
	2028 with Moorebank IMT	0.98	24	B	140	1.06	58	E	347
	2028 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	1.06	55	D	342

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	0.99	21	B	90	1.00	43	D	373
	2030 with Moorebank IMT	0.98	24	B	142	1.09	63	E	360
	2030 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	1.09	56	D	342
Cumulative Scenario A	2030 Cumulative A	1.05	40	C	307	1.25	112	F	1068
	2030 Cum. A with intersection upgrades/ modifications	1.05	40	C	307	0.99	51	D	340
Cumulative Scenario B	2030 Cumulative B	1.21	78	F	533	1.29	90	F	1168
	2030 Cum. B with intersection upgrades/ modifications	0.98	31	C	251	1.01	48	D	340
Cumulative Scenario C2	2030 Cumulative C2	1.06	40	C	312	1.28	98	F	1145
	2030 Cum. C2 with intersection upgrades/ modifications	0.98	29	C	186	1.00	49	D	340

9.1.13.1 Performance summary and impacts

The Moorebank Avenue and M5 intersection operates at worse at a LoS E under future conditions in 2028 with Moorebank IMT in the PM peak. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT for the cumulative scenarios only. This is detailed in Table 9.24.

9.1.13.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and additional signalised short left turn of 100 m length on the Moorebank Avenue westbound slip lane entry onto to the M5 on-ramp for 2030 cumulative scenarios. Refer to Figures 9.17 and 9.18.

Table 9.24 I-13 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-13 – Moorebank Avenue/M5					
2028	N/A	58 (E)	Phase timing adjusted.	N/A	55 (D)
2030	N/A	63 (E)		N/A	56 (D)
2030 Cum A	40 (C)	112 (F)	Short left turn lane of 100 m added to Moorebank Avenue south and signalised to cater for high demand in the PM peak. Cycle timing increased from 74 seconds to 100 seconds in AM peak and from 94 seconds to 120 seconds in PM peak.	40 (C)	51 (D)
2030 Cum B	78 (F)	90 (F)		31 (C)	48 (D)
2030 Cum C2	40 (C)	98 (F)		29 (C)	49 (D)

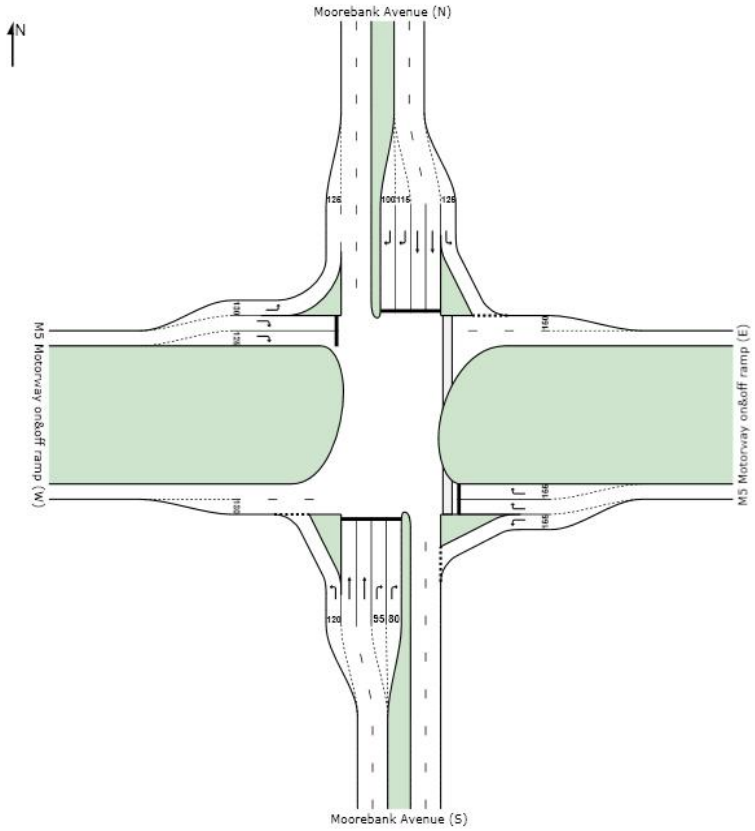


Figure 9.17 Existing intersection layout – I-13

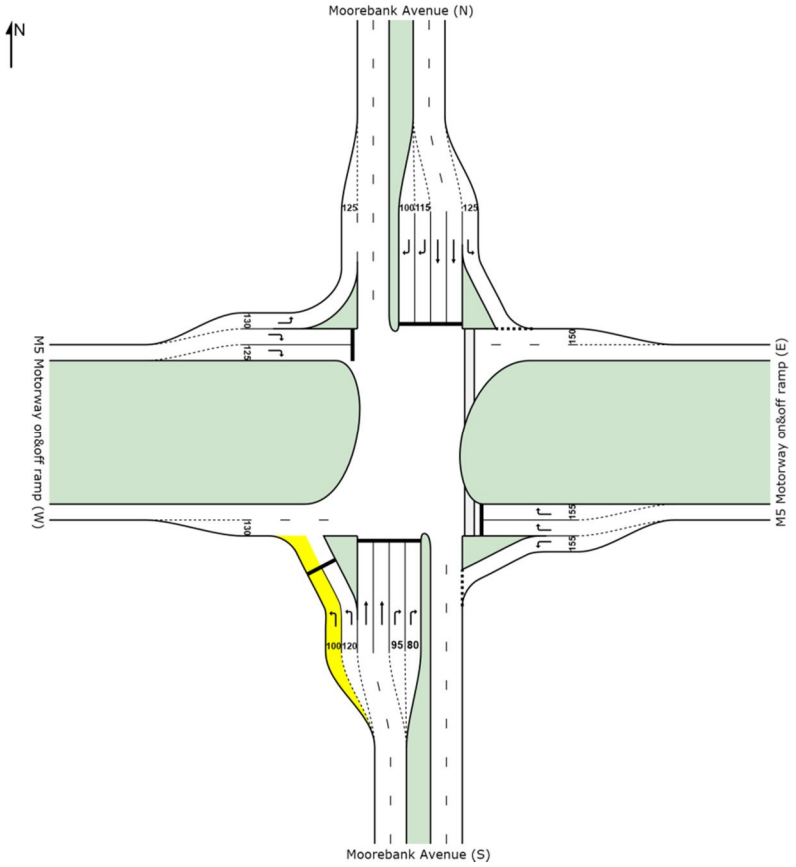


Figure 9.18 Proposed intersection layout – I-13

9.1.14 I-14 – Hume Highway/M5

Table 9.25 I-14 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	1.03	30	C	276	0.89	29	C	295
	2015 Base	1.03	30	C	279	0.90	30	C	297
	2015 with Moorebank IMT	1.04	31	C	281	0.91	31	C	300
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	1.04	31	C	282	0.92	31	C	314
	2016 with Moorebank IMT	1.06	34	C	309	0.98	35	C	325
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	1.04	32	C	290	0.99	39	C	391
	2019 with Moorebank IMT	1.09	37	C	335	1.06	46	D	406
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2020 Cum. C1	1.16	46	D	419	1.21	78	F	538
	2020 Cum. C1 with intersection upgrades/ modifications	1.10	39	C	363	1.03	48	D	450
Scenario 2b	2023 Base	1.06	36	C	307	1.07	59	E	521
	2023 with Moorebank IMT	1.13	44	D	377	1.16	71	F	515
	2023 Moorebank IMT with intersection upgrades/modifications	1.07	39	C	356	1.01	53	D	489
	2025 Base	1.07	44	D	501	1.09	66	E	569
	2025 with Moorebank IMT	1.15	53	D	501	1.19	77	F	576
	2025 Moorebank IMT with intersection upgrades/modifications	1.12	50	D	501	1.03	62	E	533
	2028 Base	1.14	64	E	1017	1.12	73	F	618
	2028 with Moorebank IMT	1.25	78	F	1017	1.27	92	F	643
	2028 Moorebank IMT with intersection upgrades/modifications	1.22	74	F	1017	1.14	78	F	622

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	1.21	81	F	1101	1.15	79	F	641
	2030 with Moorebank IMT	1.32	95	F	1109	1.29	95	F	646
	2030 Moorebank IMT with intersection upgrades/modifications	1.29	91	F	1109	1.16	86	F	626
Cumulative Scenario A	2030 Cumulative A	1.35	111	F	1109	1.39	118	F	745
	2030 Cum. A with intersection upgrades/ modifications	1.32	97	F	1109	1.25	107	F	723
Cumulative Scenario B	2030 Cumulative B	1.33	103	F	1109	1.39	129	F	839
	2030 Cum. B with intersection upgrades/ modifications	1.30	99	F	1109	1.26	117	F	816
Cumulative Scenario C2	2030 Cumulative C2	1.34	100	F	1109	1.40	125	F	803
	2030 Cum. C2 with intersection upgrades/ modifications	1.31	96	F	1109	1.26	114	F	780

9.1.14.1 Performance summary and impacts

The Hume Highway and M5 intersection operates unsatisfactorily from 2023 in the PM peak hour. Upgrades to the intersection have been proposed to return the intersection back to the base year level performance parameters without Moorebank IMT from 2023 onwards. This is detailed in Table 9.26.

9.1.14.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes signal timing changes and additional short right turn of 230 m length on the M5 westbound off-ramp. Refer to Figures 9.19 and 9.20.

Table 9.26 I-14 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-14 – Hume Highway/M5					
2020 Cum C1	46 (D)	78 (F)	Extend right turn lane on M5 east to maximum (about 230 m) Phase timing adjusted.	39 (C)	48 (D)
2023	44 (D)	71 (F)		39 (C)	48 (D)
2025	53 (D)	77 (F)		50 (D)	62 (E)
2028	78 (F)	92 (F)		74 (F)	78 (F)
2030	95 (F)	95 (F)		91 (F)	86 (F)
2030 Cum A	111 (F)	118 (F)		97 (F)	107 (F)
2030 Cum B	103 (F)	129 (F)		99 (F)	117 (F)
2030 Cum C2	100 (F)	125 (F)		96 (F)	114 (F)

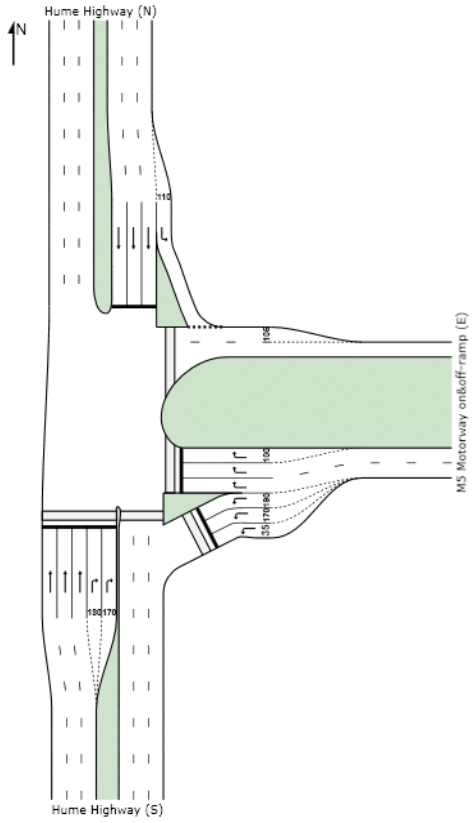


Figure 9.19 Existing intersection layout – I-14

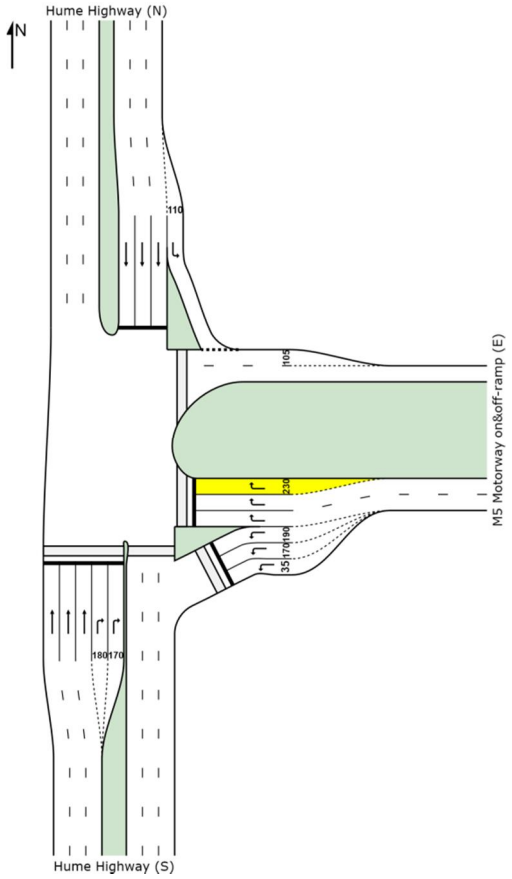


Figure 9.20 Proposed intersection layout – I-14

9.1.15 I-15 – Cambridge Avenue/Canterbury Road

Table 9.27 I-15 intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base	0.62	17	B	34	0.48	11	A	15
	2015 Base	0.63	18	B	35	0.48	12	A	15
	2015 with Moorebank IMT	0.63	18	B	37	0.49	12	A	15
	2015 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base	0.63	18	B	37	0.49	12	A	15
	2016 with Moorebank IMT	0.66	20	B	41	0.50	12	A	15
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base	0.66	21	B	44	0.50	12	A	16
	2019 with Moorebank IMT	0.68	22	B	49	0.51	12	A	16
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2020 Cum. C1	0.70	24	B	53	0.53	12	A	16
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base	0.76	30	C	72	0.53	12	A	19
	2023 with Moorebank IMT	0.82	38	C	91	0.55	12	A	19
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2025 Base	0.90	51	D	129	0.56	13	A	22
	2025 with Moorebank IMT	0.92	59	E	147	0.56	13	A	22
	2025 Moorebank IMT with intersection upgrades/modifications	0.61	18	B	34	0.56	13	A	21
	2028 Base	1.05	120	F	300	0.58	13	A	26
	2028 with Moorebank IMT	1.18	216	F	501	0.60	14	A	27
	2028 Moorebank IMT with intersection upgrades/modifications	0.70	20	B	44	0.60	13	A	24

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	1.14	180	F	441	0.59	14	A	28
	2030 with Moorebank IMT	1.19	223	F	538	0.60	14	A	28
	2030 Moorebank IMT with intersection upgrades/modifications	0.72	19	B	48	0.60	14	A	25
Cumulative Scenario A	2030 Cumulative A	1.25	273	F	634	0.61	14	A	28
	2030 Cum. A with intersection upgrades/ modifications	0.74	20	B	50	0.61	14	A	25
Cumulative Scenario B	2030 Cumulative B	1.47	467	F	941	0.63	14	A	29
	2030 Cum. B with intersection upgrades/ modifications	0.78	22	B	56	0.63	14	A	27
Cumulative Scenario C2	2030 Cumulative C2	1.23	262	F	612	0.61	14	A	28
	2030 Cum. C2 with intersection upgrades/ modifications	0.73	20	B	49	0.61	14	A	25

9.1.15.1 Performance summary and impacts

The Cambridge Avenue and Canterbury Road intersection operates at a LoS F for the worst performing movement under future conditions in the 2028 AM peak. Overall this intersection would perform at a LoS F in the 2028 and 2030 AM peak with Moorebank IMT and for cumulative scenarios A, B and C2. Mitigations are proposed at this intersection to recover the level of service.

9.1.15.2 Mitigation measures

The following mitigation measures are proposed to improve the intersections performance back to similar base level performance. This includes lane marking change on Canterbury Road to a single left, through and right lane and separate right turn lane from the southern approach. Refer to Figures 9.21 and 9.22.

Table 9.28 I-15 proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-15 – Cambridge Avenue / Canterbury Road					
2025	59 (E)	13 (A)	Left, through and right lane and separate right turn lane	18 (B)	13 (A)
2028	216 (F)	14 (A)		20 (B)	13 (A)
2030	223 (F)	14 (A)		19 (B)	14 (A)
2030 Cum A	273 (F)	14 (A)		20 (B)	14 (A)
2030 Cum B	467 (F)	14 (A)		22 (B)	14 (A)
2030 Cum C2	262 (F)	14 (A)		20 (B)	14 (A)

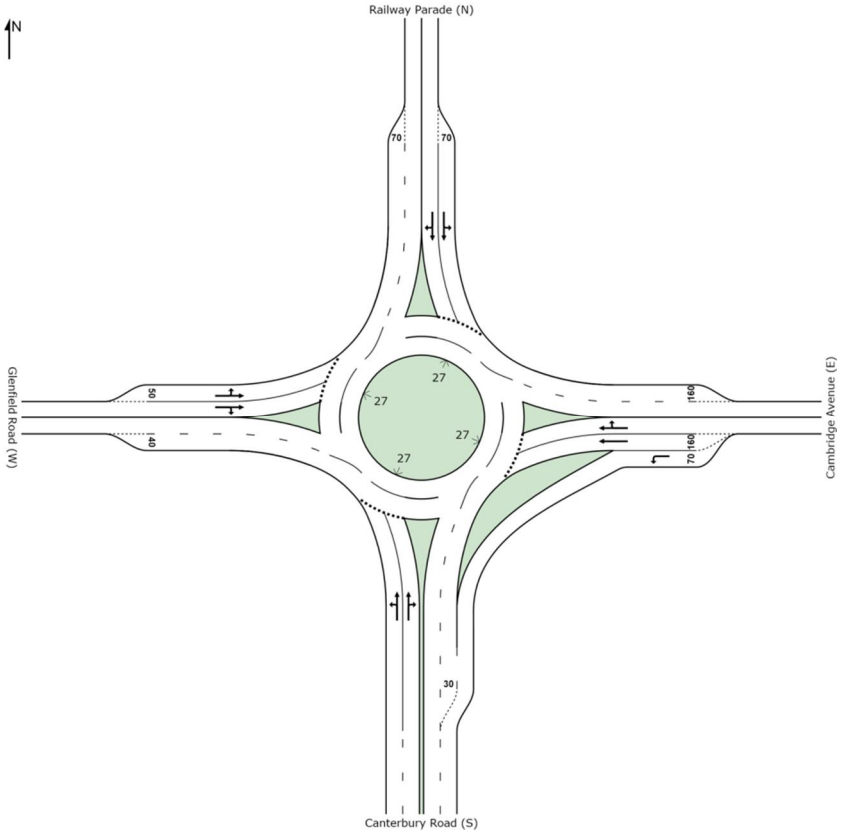


Figure 9.21 Existing intersection layout – I-15

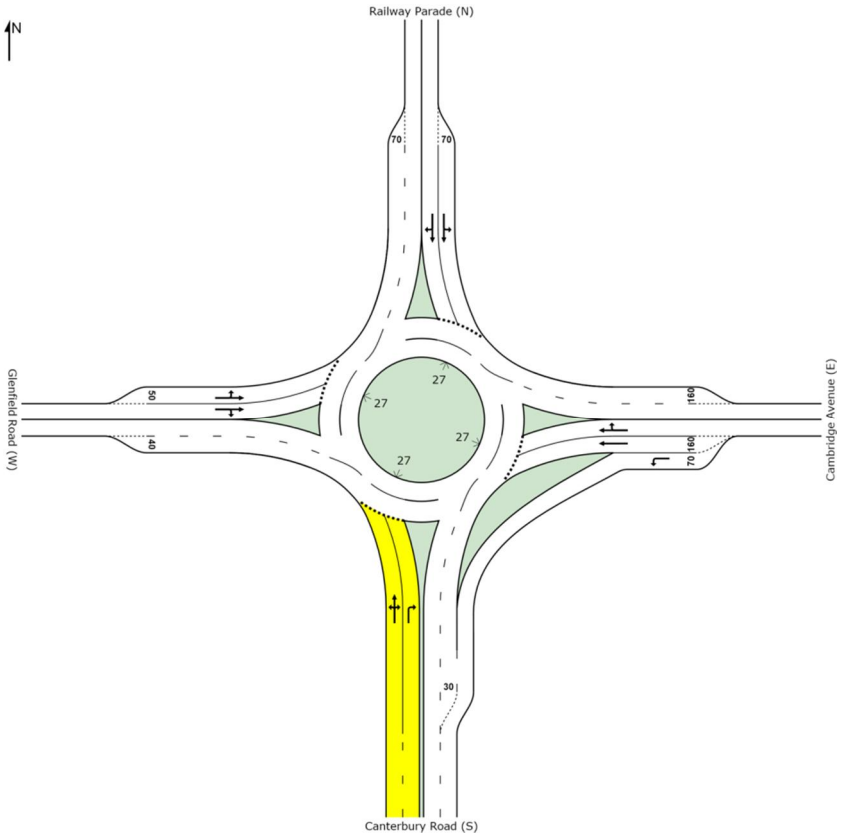


Figure 9.22 Proposed intersection layout – I-15

9.1.16 I-0A – Moorebank Avenue/Anzac Road

Table 9.29 I-0A intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Early Works	2014 Base#	0.73	19	B	181	0.84	27	B	290
	2015 Base#	0.73	19	B	188	0.85	28	B	296
	2015 with Moorebank IMT#	0.73	19	B	191	0.85	28	B	303
	2015 Moorebank IMT with intersection upgrades/modifications #	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 1	2016 Base#	0.74	19	B	194	0.85	29	C	302
	2016 with Moorebank IMT	0.64	33	C	132	0.79	28	C	191
	2016 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2a	2019 Base#	0.74	20	B	210	0.87	30	C	324
	2019 with Moorebank IMT	0.71	33	C	140	0.82	30	C	212
	2019 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario C1	2030 Cumulative C1	0.98	47	D	365	0.93	33	C	283
	2030 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 2b	2023 Base#	0.90	24	B	306	0.96	35	C	387
	2023 with Moorebank IMT	0.79	35	C	159	0.88	33	C	250
	2023 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2025 Base#	1.02	49	D	674	1.06	41	C	447
	2025 with Moorebank IMT	0.82	35	C	174	0.94	36	C	288
	2025 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2028 Base#	1.04	54	D	732	1.18	54	D	522
	2028 with Moorebank IMT	1.04	47	D	276	0.99	44	D	357
	2028 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base#	1.04	56	D	752	1.21	59	E	577
	2030 with Moorebank IMT	0.88	39	C	198	1.00	48	D	385
	2030 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario A	2030 Cumulative A	1.13	89	F	661	1.05	61	E	572
	2030 Cum. A with intersection upgrades/ modifications	0.94	42	C	246	1.01	44	D	295
Cumulative Scenario B	2030 Cumulative B	1.44	197	F	1354	1.10	62	E	538
	2030 Cum. B with intersection upgrades/ modifications	0.97	42	C	343	0.96	46	D	337
Cumulative Scenario C2	2030 Cumulative C2	1.25	128	F	931	1.10	62	E	559
	2030 Cum. C2 with intersection upgrades/ modifications	1.00	55	D	381	1.00	47	D	335

– this is based on the existing signalised T junction layout.

9.1.16.1 Performance summary and impacts

The Moorebank Avenue and Anzac Road intersection would operate at LoS B under existing conditions. It was assumed that this intersection would be upgraded in 2016 (as shown in Figure 3.2) which provides an access road into the Moorebank IMT site on the western approach. This intersection wold operates at LoS C in 2016 and at LoS D from 2030 in the PM peak hour. Upgrades to the intersection have been proposed to achieve a satisfactory level of service with the cumulative traffic scenarios in 2030. This is detailed in Table 9.30.

9.1.16.2 Mitigation measures

The following mitigation measures are proposed to achieve a satisfactory intersections performance back to similar base level performance. This includes signal timing changes and provides a short left slip turn lane of 50 m length in the southbound direction and an additional right turn lane in the northbound direction on Moorebank Avenue for 2030 cumulative scenarios. Refer to Figures 9.23 and 9.25.

Table 9.30 I-0A proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-0A –Moorebank Avenue/Anzac Road/Moorebank IMT Access					
2030 Cum A	89 (F)	124 (F)	Provide a dedicated left turn lane (50 m) on Moorebank Avenue north Signal timing change in PM peak hour.	42 (C)	44 (D)
2030 Cum C2	128 (F)	82 (F)		55 (D)	47 (D)
2030 Cum B	197 (F)	74 (F)	Provide an additional right turn lane on Moorebank Avenue south.	42 (C)	46 (D)

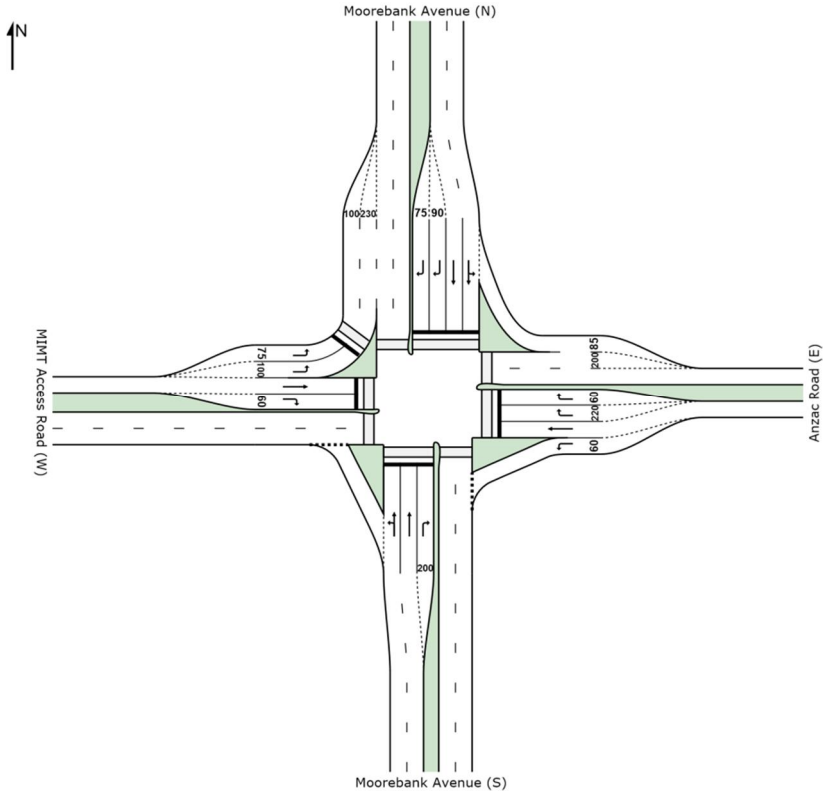


Figure 9.23 Proposed intersection layout – I-0A

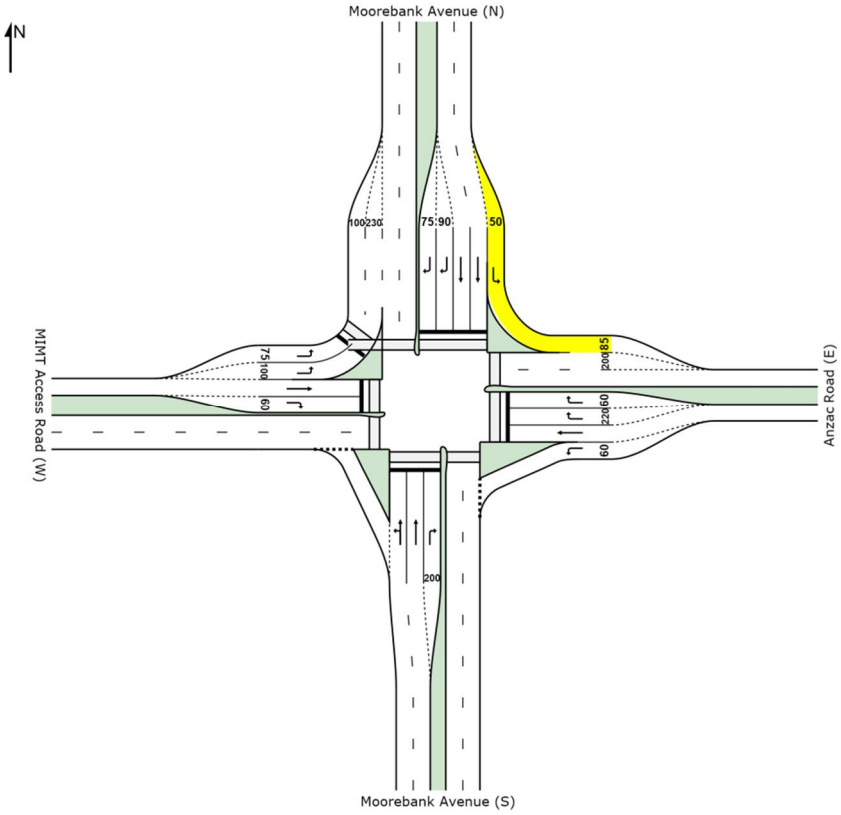


Figure 9.24 Upgraded intersection layout – I-0A (For Cumulative Scenario A and C2)

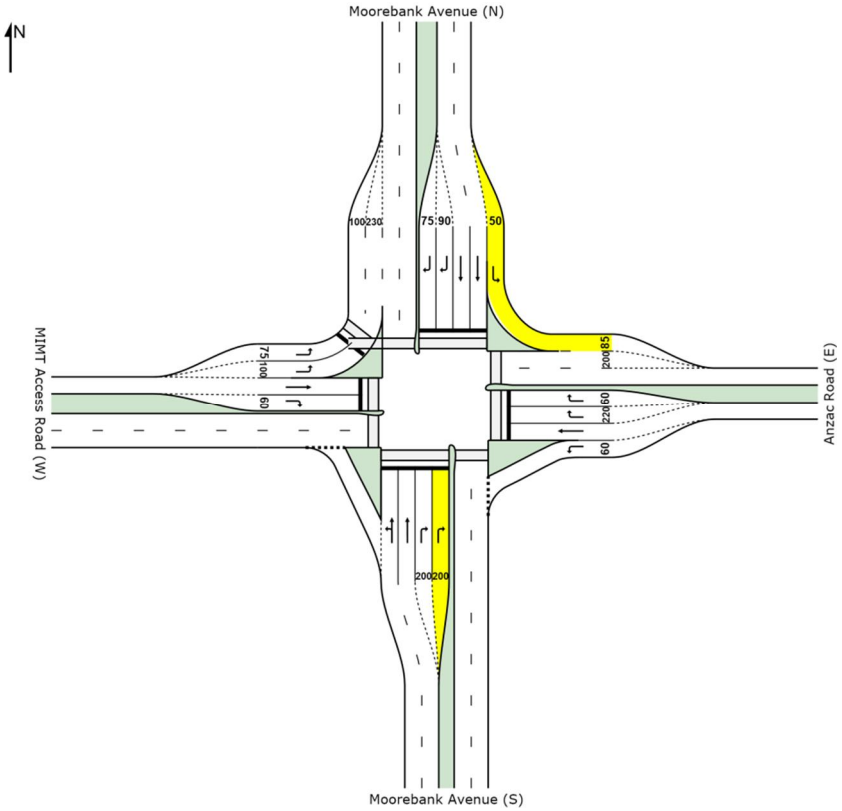


Figure 9.25 Upgraded intersection layout – I-0A (For Cumulative Scenario B)

9.1.17 I-0B – Moorebank Avenue/New DNSDC Access (SIMTA Northern Access)

Table 9.31 I-0B intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Cumulative Scenario C1	2020 Cumulative C1	0.53	2	A	36	0.71	9	A	106
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 3	2030 Base	0.53	1	A	15	0.64	1	A	18
	2030 with Moorebank IMT	0.56	1	A	15	0.65	1	A	19
	2030 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario A	2030 Cumulative A	0.58	3	A	54	0.80	9	A	128
	2030 Cum. A with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario B	2030 Cumulative B	0.64	3	A	101	0.91	21	B	334
	2030 Cum. B with intersection upgrades/ modifications	0.64	4	A	101	0.86	11	A	165

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Cumulative Scenario C2	2030 Cumulative C2	0.62	2	A	59	0.85	14	A	225
	2030 Cum. C2 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

9.1.17.1 Performance summary and impacts

The Moorebank Avenue and New DNSDC Access (SIMTA Northern Access) intersection would operate at a satisfactory level (LoS B or better) under all future scenarios in 2030 in both the AM and PM peaks. Although this intersection would operate satisfactorily with the proposed layout, dual right turn lanes on DNSDC Access Road has been proposed as a upgraded layout for the cumulative B scenario as the queue on DNSDC Access Road would exceed 160 m which would not ideal for the internal traffic movement within the DNSDC and SIMTA site. This is detailed in Table 9.32.

9.1.17.2 Mitigation measures

The following mitigation measure is proposed to reduce the queuing on the side road during the PM peak hour. This includes signal timing changes and dual right turn lanes on the eastern approach which would not require any geometric upgrade. Refer to Figures 9.26 and 9.27.

Table 9.32 I-0B proposed intersection upgrades

Year	Existing Delay (LoS)		Proposed upgrades and/or signal changes	Resulting Delay (LoS)	
	AM	PM		AM	PM
I-0B – Moorebank Avenue/New DNSDC Access					
2030 Cum B	3 (A)	21 (B)	Dual right turn lanes on the DNSDC Access. Phase timing adjusted.	4 (A)	11 (A)

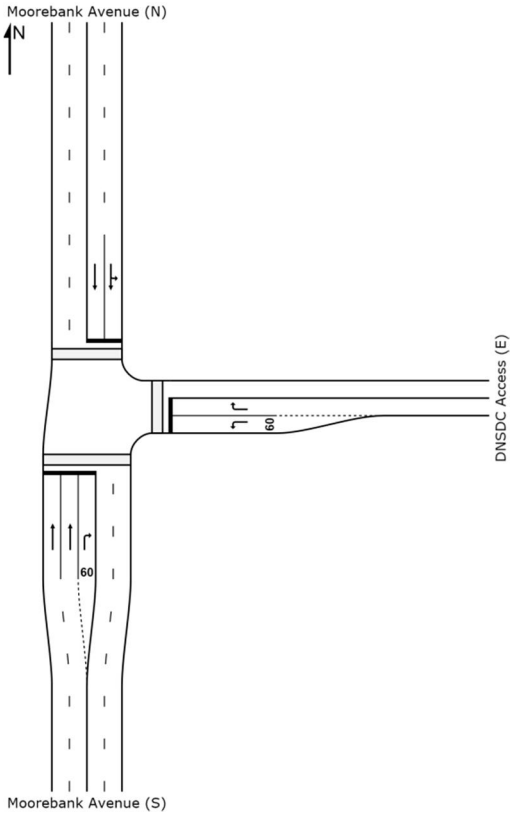


Figure 9.26 Proposed intersection layout – I-0B

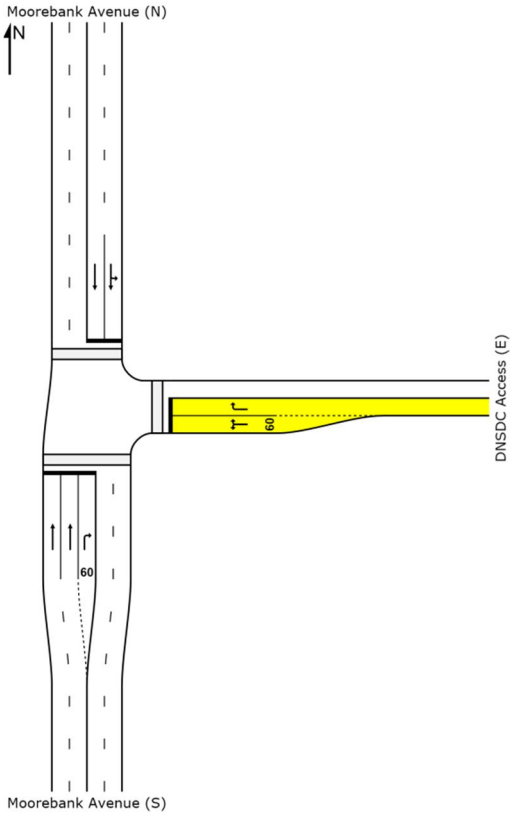


Figure 9.27 Upgraded intersection layout – I-0B

9.1.18 I-0C – Moorebank Avenue/SIMTA Central Access

Table 9.33 I-0C intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Cumulative Scenario C1	2020 Cumulative C1	0.62	3	A	49	0.77	13	A	158
	2020 Cum. C1 with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Scenario 3	2030 Base	0.56	1	A	12	0.64	1	A	17
	2030 with Moorebank IMT	0.57	1	A	13	0.65	1	A	18
	2030 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario A	2030 Cumulative A	0.58	2	A	30	0.77	8	A	103
	2030 Cum. A with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario B	2030 Cumulative B	0.63	3	A	62	0.87	17	B	245
	2030 Cum. B with intersection upgrades/ modifications	0.63	3	A	62	0.80	11	A	138
Cumulative Scenario C2	2030 Cumulative C2	0.93	5	A	103	1.03	32	C	336
	2030 Cum. C2 with intersection upgrades/ modifications	0.85	4	A	61	0.85	16	B	206

9.1.18.1 Performance summary and impacts

The Moorebank Avenue and SIMTA Central Access intersection would operate at a satisfactory level (LoS B or better) under all future scenarios in 2030 in both the AM and PM peaks. Although this intersection would operate satisfactorily with the proposed layout, dual right turn lanes on SIMTA Central Access has been proposed as a upgraded layout for the cumulative B scenario as the queue on DNSDC Access Road would exceed 300m which would not ideal for the internal traffic movement within the SIMTA site. This is detailed in Table 9.34.

9.1.18.2 Mitigation measures

The following mitigation measure is proposed to reduce the queuing on the side road during the PM peak hour. This includes signal timing changes and dual right turn lanes on the eastern approach which would not require any geometric upgrade. Refer to Figures 9.28 and 9.29.

Table 9.34 I-0C proposed intersection upgrades

Year	Existing delay (LoS)		Proposed upgrades and/or signal changes	Resulting delay (LoS)	
	AM	PM		AM	PM
I-0C – Moorebank Avenue/SIMTA Central Access					
2030 Cum B	3 (A)	17 (B)	Dual right turn lanes on SIMTA Central Access	3 (A)	11 (A)

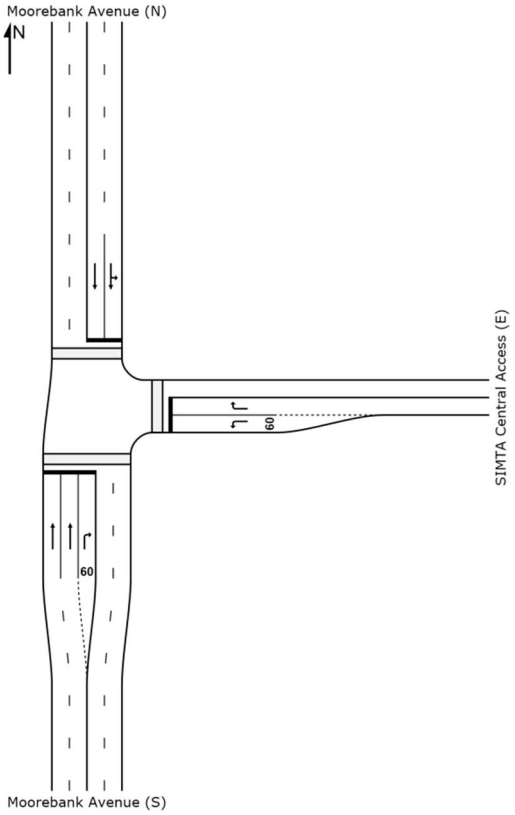


Figure 9.28 Proposed intersection layout – I-0C

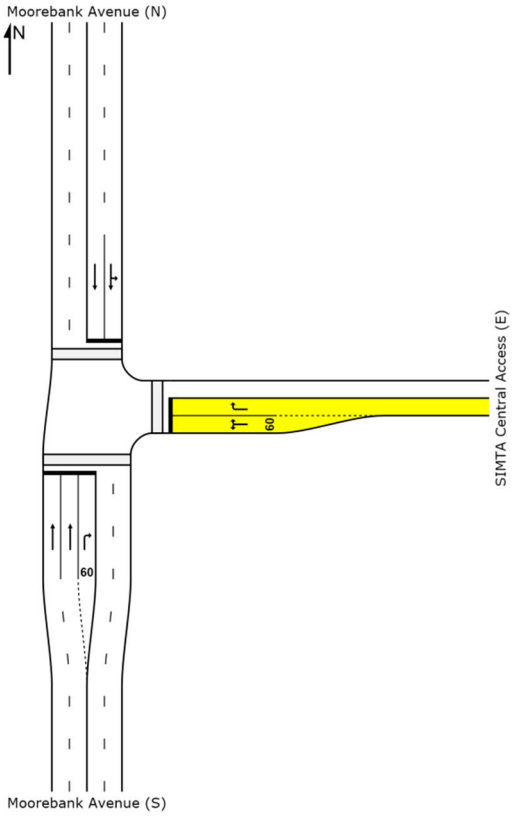


Figure 9.29 Upgraded intersection layout – I-0C

9.1.19 I-0D – Moorebank Avenue/SIMTA Southern Access

Table 9.35 I-0D intersection performance results

Scenario	Year	AM peak				PM peak			
		DoS	Delay	LoS	Queue	DoS	Delay	LoS	Queue
Scenario 3	2030 Base	0.56	1	A	12	0.72	1	A	24
	2030 with Moorebank IMT	0.57	1	A	13	0.73	1	A	25
	2030 Moorebank IMT with intersection upgrades/modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario A	2030 Cumulative A	0.57	4	A	121	0.74	2	A	26
	2030 Cum. A with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cumulative Scenario B	2030 Cumulative B	0.60	6	A	136	0.77	2	A	33
	2030 Cum. B with intersection upgrades/ modifications	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

9.1.19.1 Performance summary and impacts

The Moorebank Avenue and SIMTA Southern Access intersection operates at LoS A under all future scenarios in 2030. No upgrades are proposed at this intersection.

9.2 Comparison of 2030 intersection performance

A comparison of intersection level of service, average vehicle delays and queue lengths for 2030 with and without Moorebank IMT are presented in Figures 9.30 to 9.33. This clearly shows the changes in intersection operation with the introduction of Moorebank IMT traffic on the road network.

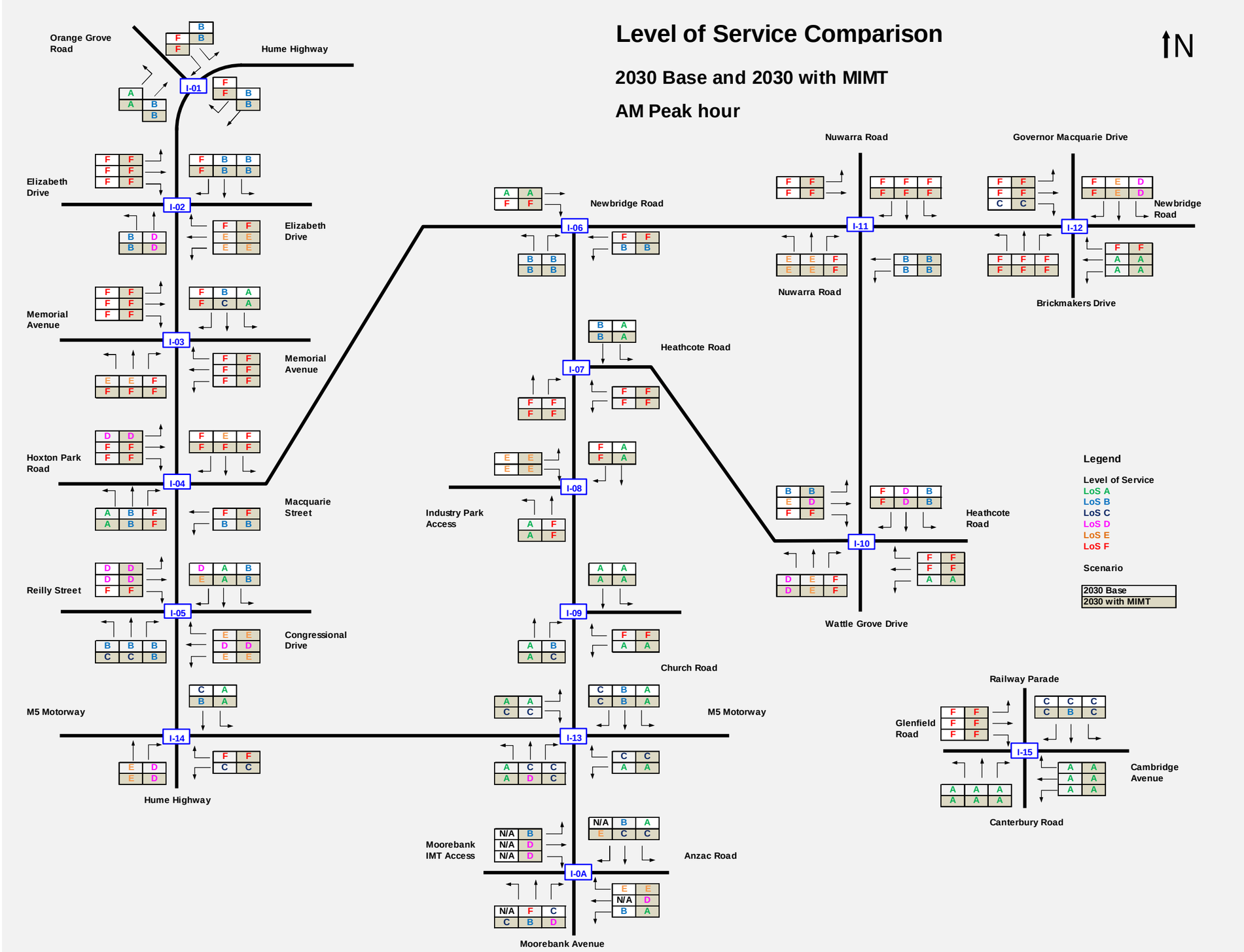


Figure 9.30 Intersection LoS Comparison 2030 weekday AM peak

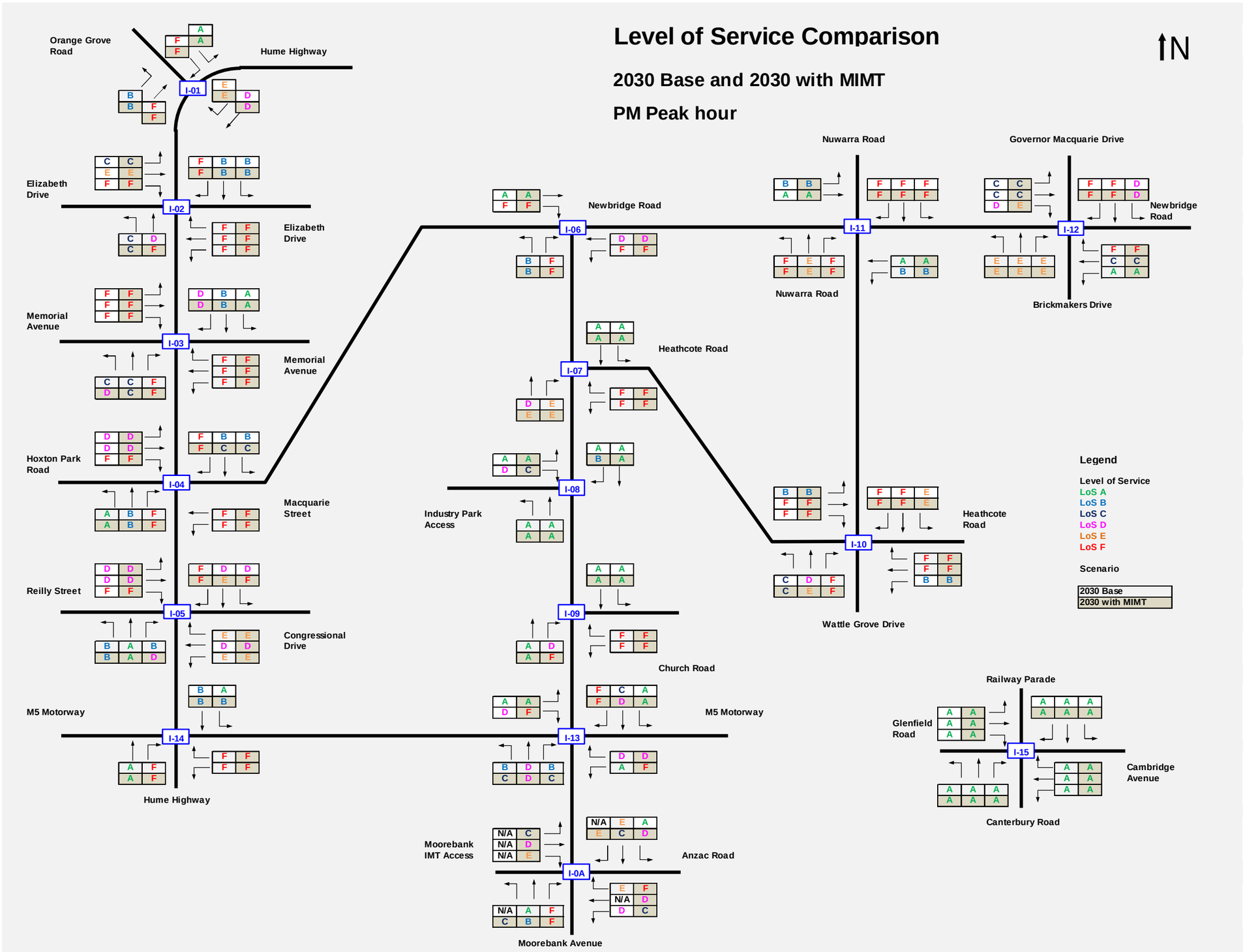


Figure 9.31 Intersection LoS Comparison 2030 weekday PM peak

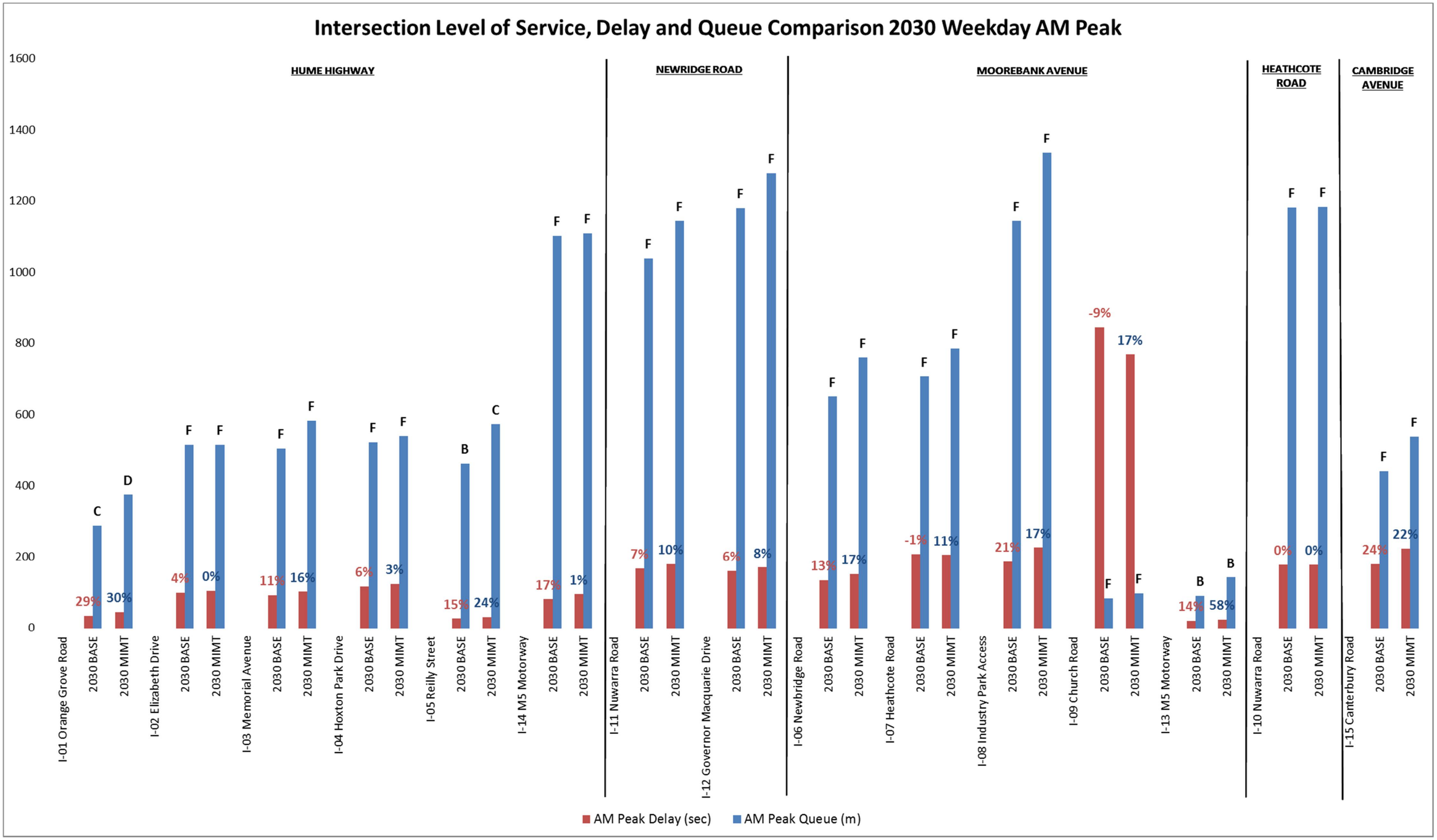


Figure 9.32 Intersection LoS, Delay and Queue Comparison 2030 weekday AM peak

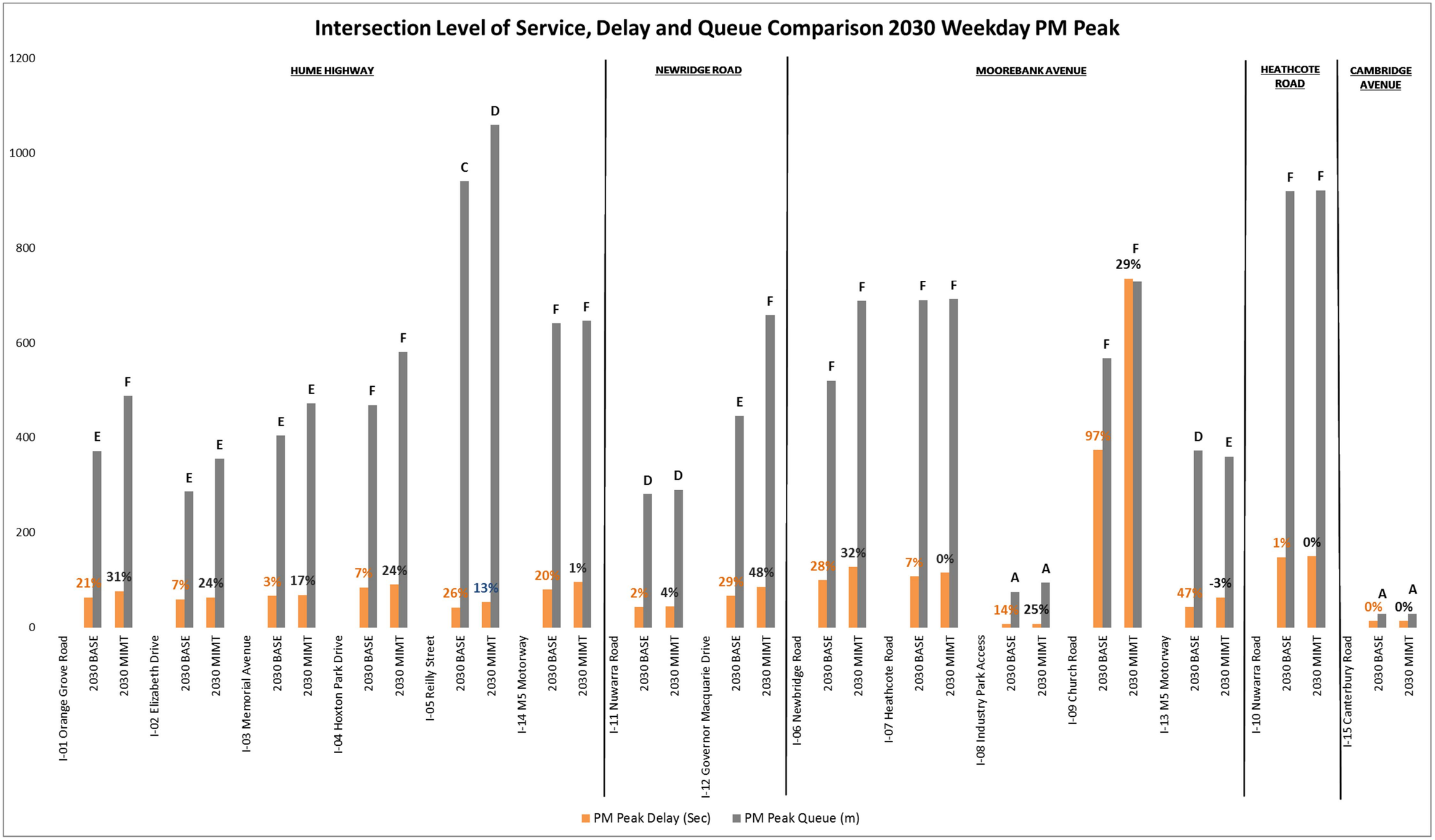


Figure 9.33 Intersection LoS, Delay and Queue Comparison 2030 weekday PM peak

9.3 Intersection upgrade and timing requirements

Table 9.36 below identifies the treatments that would be required, and by what date, for affected intersections (IMT project only). Mitigation treatments would only be applied if an intersection is operating at level of Service (LoS) E or worse as a result of the Project traffic above the background growth and cumulative impacts by others. Treatments would not be recommended where the resulting LoS of D or above is achieved, even where performance has deteriorated as a result of the Project.

Indicative timing of these upgrades is provided in Table 9.36, based on current projections for background traffic growth and anticipated increases in container throughput (or 'ramp up') over time for the IMT. However, in recognition of the uncertainties over actual throughput increases (due to factors such as future economic growth rates), any funding contribution of the IMT towards these upgrades would be based on the following circumstances:

- That certain throughput levels at the terminal had been achieved. These throughputs are outlined in column 1 of Table 9.36.

That it can be further demonstrated (as part of any subsequent planning approval stage) that the intersection performance would have deteriorated to a level of service E or worse (where previously operating at a LoS D or above) were it not for the implementation of the upgrades outlined in Table 9.36. Table 9.37 below presents the same approach as outlined in Table 9.36, but examines the treatments that would be required, and by what date, under cumulative Scenarios A, B and C (C1 and C2). The same provisions apply (including the circumstances by which funding from the IMT is provided) as for the IMT-only scenarios documented in Table 9.36.

Table 9.36 Intersection upgrade and timing requirements – IMT only

Throughputs triggering IMT contributions to upgrades	Upgrade description	Intersections	Indicative upgrade year
Construction of Phase A (no operational throughput)	Signal timing changes, change bus lane on Heathcote Road to general traffic lane (combined left and right turn lane) and second lane to right turn lane.	I-07 – Heathcote Road/Moorebank Avenue	2016
	Ban right turn on Church Road	I-09 – Moorebank Avenue/Church Road	
	Signal timing changes	I-12 – Newbridge Road/Governor Macquarie Drive	
Operation of 250,000 TEU	Signal timing changes	I-08 – Moorebank Avenue/Industrial Access	2019
Operation of 750,000 TEU	Signal timing changes	I-01 – Hume Highway/Orange Grove Road I-06 – Newbridge Road/Moorebank Avenue I-11 – Newbridge Road/Nuwarra Road	2023
	Signal timing changes, extend short right turn lane on M5 East to 230 m in length.	I-14 – Hume Highway/M5 Motorway	
Operation of 1 million TEU	Signal timing changes, changed layout on Governor Macquarie Drive to include a combined through and right turn lane, and dedicated right turn lane of 200 m lengths.	I-12 – Newbridge Road/Governor Macquarie Drive	2025

Throughputs triggering IMT contributions to upgrades	Upgrade description	Intersections	Indicative upgrade year
	Provide a left, through and right lane and dedicated right turn lane on Canterbury Road.	I-15 – Cambridge Avenue/Canterbury Road	
Operation of 1.3 million TEU	Signal timing changes	I-13 – Moorebank Avenue/M5 Motorway	2028
Operation of 1.55 million TEU	Signal timing changes, 60 m approach and 60 m departure lanes on Hume Highway in the northbound direction.	I-01 – Hume Highway/Orange Grove Road	2030
	Signal timing changes, additional 60 m right turn lane on the Hume Highway in the northbound direction.	I-03 – Hume Highway/Memorial Avenue	
	Signal timing changes	I-04 – Hume Highway/Hoxton Park Road	

Table 9.37 Intersection upgrade and timing requirements – cumulative scenarios

Throughputs triggering IMT contributions to upgrades	Cumulative Scenario	Upgrade description	Intersections	Upgrade year
375,000 TEU	C1	Signal timing changes (brought forward from 2023 for IMT-only)	I-01 – Hume Highway/ Orange Grove Road I-06 – Newbridge Road/ Moorebank Avenue	2020
		Signal timing changes, extend short right turn lane on M5 east Motorway to 230 m (brought forward from 2023 for IMT-only).	I-14 – Hume Highway/M5 Motorway	
1.55 million TEU	C2	Signal timing changes, additional 70 m right turn lane on Elizabeth Drive in the westbound direction.	I-02 – Hume Highway /Elizabeth Drive	2030
	A, B and C2	Signal timing changes for an additional 75 m right turn lane on the Hume Highway in the southbound direction.	I-04 – Hume Highway/ Hoxton Park Road	
	A, B and C2	Signal timing changes, extend left turn lane on Newbridge Road to 150 m in the westbound direction.	I-06 – Newbridge Road/ Moorebank Avenue	
	A, B and C2	Signal timing changes, short left turn lane of 100 m to Moorebank Avenue slip lane (dual signalised slip lane westbound).	I-13 – Moorebank Avenue/ M5 Motorway	

Throughputs triggering IMT contributions to upgrades	Cumulative Scenario	Upgrade description	Intersections	Upgrade year
	A and C2	Signal timing changes; provide a dedicated left turn lane on Moorebank Avenue north.	I-0A – Moorebank Avenue/ Anzac Road	
	B	As for A and C2 plus additional right turn lane on Moorebank Avenue south.		
	B	Provide dual right-turn lanes on SIMTA central access.	I-0B – Moorebank Avenue new DNSDC access/ SIMTA northern access.	
	B	Provide dual right-turn lanes on SIMTA southern access.	I-0C – Moorebank Avenue/ SIMTA central access.	

9.4 Summary of potential road network capacity issues in 2030

Capacity issues are reflected through the presence of congestion during peak periods. The analysis of the traffic generated by Moorebank IMT compared to the congestion forecast to be present on the road infrastructure is summarised in Table 9.38.

Table 9.38 The impact of Moorebank IMT traffic on road infrastructure congestion

Road Infrastructure	Peak hour congestion in 2030	Contribution of Moorebank IMT traffic to congestion issue	Mitigation Measure and Impact
Moorebank Avenue (Anzac Road to M5)	Some	Significant adverse impact	Project includes widening of Moorebank Avenue to four lanes and provision of new intersections which reduces congestion to 2015 levels
Moorebank Avenue north of M5	Yes	Minor adverse impact	Minor Intersection modifications may be required
Cambridge Avenue	Yes	Insignificant impact	None required
M5 Westbound between Moorebank Avenue & Hume Highway	Yes	The M5 is heavily congested without Moorebank IMT traffic	TfNSW to explore how to resolve congestion issue on M5 caused by inadequate weave distance as this is not a direct Project impact.
M5 Eastbound between Moorebank Avenue & Hume Highway	Yes	The M5 is heavily congested without Moorebank IMT traffic	TfNSW to explore how to resolve congestion issue on M5 caused by inadequate weave distance as this is not a direct Project impact.
Hume Highway north of M5	Yes	Insignificant impact	None required
M7	Yes	Insignificant impact	None required
M2 Motorway	Yes	Insignificant impact	None required
M1 Pacific Motorway	Yes	Insignificant impact	None required

The influence of the Moorebank IMT traffic on the surrounding road network can be further mitigated by managing the arrival and departure of trucks through the terminal gate during peak periods of congestion.

The localised impact on congestion around Moorebank is offset by the broader network benefits:

- a saving of 56,125 truck vehicle kilometres travelled (VKT) per day.
- a saving of 1,265 truck vehicle hours travelled (VHT) per day.

The potential contribution of Moorebank IMT traffic to the congestion around Moorebank and at a regional level will be revisited as part of the next stage (Stage 2 SSD) development application process. At this later stage, several elements will be more defined allowing many of the issues discussed in this report to be analysed in more detail.

9.5 Potential crash reduction

The impact of the Moorebank Avenue upgrade on accidents was assessed in accordance with the RMS *Accident Reduction Guide, Version 1.1, TD2004/RS01 (August 2005)*. The proposed treatments and their potential individual impact on the type of accidents that occur within the study area are shown in Table 9.39.

Table 9.39 Potential crash reduction

Treatment location	Accident type		
Intersections	**Vehicles from opposing direction**	**Vehicles from one direction**	**Off path on straight**
Fully control right turn with arrows	80%	–	–
Upgrade signal display (mast arm/additional lanterns	10%	25%	–
Protected right turn lane	40%	60%	–
Separated left turn deceleration lane	15%	60%	–
Midblock			
Install street lighting	20%	25%	25%
RRPM's on Centre and Edge lines	–	15%	15%
Limit access to roadside developments	–	50%	–
Duplicate road	–	30%	–
New signing	–	–	10%
Non–skid surfacing	–	50%	5%

Source – RMS Accident Reduction Guide, Version 1.1

The percentage reduction indicates that the upgrade of Moorebank Avenue within the study area is predicted to have a positive result on reducing accidents. The combinations of some of these treatments at certain locations are also likely to reduce the severity of accidents.

The Moorebank IMT reduces truck VKT on the network (section 8.1) and would lead to a potential reduction in heavy vehicle related crashes. The reduction of heavy vehicle numbers on the road network would also assist in reducing the number of potential conflicts along existing travel routes between light and heavy vehicles.

9.5.1 Other safety benefits

Whilst there are no recorded instances over the five year period between 2008 and 2013 of accidents involving pedestrians or cyclists on Moorebank Avenue, the proposed enhancements include footpaths/shared use paths. This would provide an improved and safer environment for pedestrian and cyclists.

10. Mid-block capacity analysis

Summary of changes from the Environmental Impact Statement Traffic and Transport Assessment:

- Mid-block capacities have been revised based on the new traffic generation, distribution and heavy vehicle peak hour proportions.

A mid-block capacity assessment has been undertaken to analyse mid-block road capacity on wider road network based on Austroads *Guide to Traffic Management part 3: Traffic Studies and Analysis, Table 5.1*. The mid-block road capacity determines volume-to-capacity (V/C) ratios and this ration indicates the flow and road performance at each location. The typical mid-block capacities for various types of urban road with interrupted flow, with unflared major intersections and with interruptions form cross and turning traffic at minor intersections are shown in Table 10.1.

Table 10.1 Typical mid-block capacities for urban roads with interrupted flow

Type of lane	One-way mid-block capacity (pc/hr)
Median or inner lane	
Divided road	1,000
Undivided road	900
Middle lane (of a three lane carriageway)	
Divided road	900
Undivided road	1,000
Kerb lane	
Adjacent to parking lane	900
Occasional parked vehicle	600
Clearway conditions	900

Source: Austroads *Guide to Traffic Management Part 3: Traffic Studies and Analysis, Section 5.2.1, Table 5.1*

The modelled traffic volumes were compared with the following nominal lane capacity of the subject road:

- divided three lane road (e.g. Hume Highway and Newbridge Road): 2,800 vehicles/three lanes/h
- divided two lane road (e.g. Heathcote Road, south of Nuwarra Road): 1,900 vehicles/two lanes/h
- undivided two lane road (e.g. Moorebank Avenue): 1,800 vehicles/two lanes/h
- divided one lane road (e.g. Nuwarra Road): 1,000 vehicles/lane/h
- undivided one lane road (e.g. Cambridge Road): 900 vehicles/lane/h.

The peak hour directional traffic flows for the key mid-block sections on the wider road network and the results of volume-to-capacity (V/C) ratios assessments are presented in Table 10.2. A V/C ratio greater than 1.00 indicates the section of roadway is over capacity and will not operate efficiently.

Table 10.2 shows that there are several mid-block road sections that are currently performing near capacity (V/C between 0.90 and 1.00) or over capacity (V/C greater than 1.00). Much of the road network is or will be experiencing congestion without the Project and the addition of Project traffic would have a negligible contribution to that congestion.

Table 10.2 Mid-block capacity analysis on the wider road network

Road section	Peak hour	Available capacity (veh/hr)	2014 Existing				2030 Background				2030 with Moorebank IMT				(%) Difference with Moorebank IMT	
			Peak hour traffic volume (veh/hr)		V/C		Peak hour traffic volume (veh/hr)		V/C		Peak hour traffic volume (veh/hr)		V/C			
			NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB
Hume Highway, east of Orange Grove Road	AM	2800	2338	1169	0.84	0.42	2651	1275	0.95	0.46	2649	1278	0.95	0.46	-0.08%	0.27%
	PM	2800	1325	2241	0.47	0.80	1402	2449	0.50	0.87	1409	2454	0.50	0.88	0.47%	0.20%
Hume Highway, south of Orange Grove Road	AM	2800	2902	1938	1.04	0.69	3267	2151	1.17	0.77	3300	2191	1.18	0.78	1.01%	1.85%
	PM	2800	2126	2714	0.76	0.97	2245	2964	0.80	1.06	2293	3010	0.82	1.08	2.15%	1.56%
Hume Highway, north of Elizabeth Drive	AM	2800	2606	1861	0.93	0.66	2979	2042	1.06	0.73	3016	2082	1.08	0.74	1.24%	1.95%
	PM	2800	1779	3007	0.64	1.07	1895	3298	0.68	1.18	1942	3344	0.69	1.19	2.50%	1.40%
Hume Highway, south of Elizabeth Drive	AM	2800	2073	1945	0.74	0.69	2364	2152	0.84	0.77	2402	2196	0.86	0.78	1.60%	2.03%
	PM	2800	1620	2512	0.58	0.90	1721	2739	0.61	0.98	1776	2784	0.63	0.99	3.21%	1.65%
Hume Highway, north of Memorial Avenue	AM	2800	1962	1647	0.70	0.59	2240	1840	0.80	0.66	2278	1887	0.81	0.67	1.69%	2.54%
	PM	2800	1684	2881	0.60	1.03	1803	3133	0.64	1.12	1851	3172	0.66	1.13	2.67%	1.25%
Hume Highway, north of Hoxton Park Road	AM	2800	2075	1603	0.74	0.57	2341	1816	0.84	0.65	2380	1860	0.85	0.66	1.66%	2.43%
	PM	2800	1644	2753	0.59	0.98	1710	3038	0.61	1.09	1768	3079	0.63	1.10	3.37%	1.36%
Hume Highway, south of Hoxton Park Road	AM	2800	2887	1840	1.03	0.66	3269	2065	1.17	0.74	3309	2116	1.18	0.76	1.21%	2.49%
	PM	2800	1967	3432	0.70	1.23	2084	3779	0.74	1.35	2145	3832	0.77	1.37	2.94%	1.40%
Hume Highway, south of Reilly Street	AM	2800	2772	1805	0.99	0.64	3077	1989	1.10	0.71	3113	2041	1.11	0.73	1.16%	2.62%
	PM	2800	2085	3453	0.74	1.23	2139	3771	0.76	1.35	2201	3821	0.79	1.36	2.89%	1.32%
Newbridge Road, west of Moorebank Avenue	AM	1800	1608	1798	0.89	1.00	2324	2376	1.29	1.32	2332	2375	1.30	1.32	0.36%	-0.05%
	PM	1800	1772	1740	0.98	0.97	2133	2253	1.19	1.25	2137	2255	1.19	1.25	0.19%	0.11%
Newbridge Road, east of Moorebank Avenue	AM	2800	2072	1086	0.74	0.39	2797	1571	1.00	0.56	2843	1594	1.02	0.57	1.65%	1.45%
	PM	2800	1534	2071	0.55	0.74	1976	2483	0.71	0.89	1999	2528	0.71	0.90	1.16%	1.83%
Moorebank Avenue, south of Newbridge Road	AM	3800	2149	973	0.57	0.35	2755	1477	0.73	0.53	2799	1507	0.74	0.54	1.59%	2.03%
	PM	2800	1327	1896	0.35	0.68	1856	2243	0.49	0.80	1877	2288	0.49	0.82	1.15%	2.02%
Moorebank Avenue, south of Heathcote Road	AM	1800	1467	534	0.82	0.30	1847	772	1.03	0.43	1884	806	1.05	0.45	2.00%	4.38%
	PM	1800	851	1234	0.47	0.69	1151	1453	0.64	0.81	1180	1496	0.66	0.83	2.55%	2.99%
Moorebank Avenue, north of Church Road	AM	1800	1625	537	0.90	0.30	2003	716	1.11	0.40	2043	757	1.14	0.42	2.00%	5.75%
	PM	1800	873	1355	0.49	0.75	1119	1616	0.62	0.90	1142	1663	0.63	0.92	2.05%	2.92%
Moorebank Avenue, south of Church Road	AM	1800	1836	673	1.02	0.37	2264	871	1.26	0.48	2307	917	1.28	0.51	1.91%	5.24%
	PM	1800	952	1687	0.53	0.94	1221	2006	0.68	1.11	1248	2058	0.69	1.14	2.22%	2.57%
Heathcote Road, north of Nuwarra Road	AM	1900	1182	2149	0.62	1.13	1461	3060	0.77	1.61	1456	3059	0.77	1.61	-0.37%	-0.02%
	PM	1900	1810	1726	0.95	0.91	2305	2078	1.21	1.09	2306	2083	1.21	1.10	0.02%	0.23%
Heathcote Road, south of Nuwarra Road	AM	1900	1316	1990	0.69	1.05	1640	2822	0.86	1.49	1637	2825	0.86	1.49	-0.21%	0.11%
	PM	1900	1986	1687	1.05	0.89	2567	2031	1.35	1.07	2573	2031	1.35	1.07	0.24%	-0.01%

Road section	Peak hour	Available capacity (veh/hr)	2014 Existing				2030 Background				2030 with Moorebank IMT				(%) Difference with Moorebank IMT	
			Peak hour traffic volume (veh/hr)		V/C		Peak hour traffic volume (veh/hr)		V/C		Peak hour traffic volume (veh/hr)		V/C			
			NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB	NB or EB	SB or WB
Nuwarra Road, north of Heathcote Road	AM	1000	1095	868	1.10	0.87	1373	1112	1.37	1.11	1372	1117	1.37	1.12	-0.07%	0.45%
	PM	1000	838	1445	0.84	1.45	1000	1724	1.00	1.72	1005	1732	1.00	1.73	0.50%	0.46%
Newbridge Road, west of Nuwarra Road	AM	2800	1807	954	0.65	0.34	2461	1386	0.88	0.50	2491	1401	0.89	0.50	1.21%	1.05%
	PM	2800	1285	1961	0.46	0.70	1687	2369	0.60	0.85	1709	2393	0.61	0.85	1.28%	1.00%
Newbridge Road, west of Governor Macquarie Drive	AM	2800	2240	1094	0.80	0.39	2971	1576	1.06	0.56	2999	1585	1.07	0.57	0.93%	0.56%
	PM	2800	1646	2360	0.59	0.84	2133	2853	0.76	1.02	2138	2942	0.76	1.05	0.22%	3.11%
Newbridge Road, east of Governor Macquarie Drive	AM	2800	3252	1681	1.16	0.60	4258	2268	1.52	0.81	4279	2282	1.53	0.81	0.49%	0.60%
	PM	2800	2157	3317	0.77	1.18	2775	3982	0.99	1.42	2807	4001	1.00	1.43	1.16%	0.48%
Cambridge Avenue, west of Moorebank Avenue	AM	900	1110	323	1.23	0.36	1442	420	1.60	0.47	1463	420	1.63	0.47	1.45%	0.00%
	PM	900	340	1293	0.38	1.44	487	1638	0.54	1.82	487	1663	0.54	1.85	0.00%	1.52%
Orange Grove Road, north of Hume Highway	AM	1900	1399	1604	0.74	0.57	1559	1819	0.82	0.65	1593	1854	0.84	0.66	2.18%	1.94%
	PM	2800	1864	1536	0.98	0.55	1989	1661	1.05	0.59	2031	1702	1.07	0.61	2.10%	2.49%
Elizabeth Drive, west of Hume Highway	AM	2800	1814	791	0.65	0.28	2119	943	0.76	0.34	2121	942	0.76	0.34	0.09%	-0.11%
	PM	2800	1033	1977	0.37	0.71	1111	2242	0.40	0.80	1106	2247	0.40	0.80	-0.45%	0.22%
Hoxton Park Road, west of Hume Highway	AM	1800	1509	617	0.84	0.34	1981	850	1.10	0.47	2002	857	1.11	0.48	1.07%	0.78%
	PM	1800	1091	932	0.61	0.52	1277	1127	0.71	0.63	1292	1131	0.72	0.63	1.14%	0.32%
Heathcote Road, east of Moorebank Avenue	AM	1800	719	506	0.40	0.28	933	777	0.52	0.43	932	777	0.52	0.43	-0.11%	0.00%
	PM	1800	578	758	0.32	0.42	842	885	0.47	0.49	843	886	0.47	0.49	0.12%	0.11%

V/C ratio greater than 1.00

V/C ration between 0.90 and 1.00

V/C ratio less than 0.90

Table 10.2 shows that the volume to capacity (V/C) ratios for all mid-block road sections would continue to perform at similar levels to the base condition with the addition of Moorebank IMT traffic.

11. Traffic weaving on the M5 at the Georges River Crossing

Summary of changes from the Environmental Impact Statement Traffic and Transport Assessment:

– The weaving assessment has been completed utilising the HCM 2020 Highway Capacity Manual with the latest heavy vehicle distributions from the STM and FMM models and includes the latest road upgrade configurations on the M5.

The HCM 2010 Highway Capacity Manual – Transportation Research Board defines weaving as follows:

'Weaving is generally defined as the crossing of two or more traffic streams travelling in the same direction along a significant length of highway without the aid of traffic control devices. Thus, weaving segments are formed when merge segments are closely followed by diverge segments. 'Closely' implies that there is not sufficient distance between the merge and diverge segments for them to operate independently.'

At the M5 crossing of the Georges River the Hume Highway and Moorebank Avenue Interchanges are located nearby on either side of the river. The proximity of the interchanges results in the easterly oriented ramps of the Hume Highway interchange to be close to the westerly oriented ramps from the Moorebank Avenue interchange.

In the westbound direction, traffic from the M5 destined for the Hume Highway must weave over a distance of 453 m through the traffic coming from Moorebank Avenue destined for the M5. Similarly, in the eastbound direction, traffic from the Hume Highway and destined for the M5, must weave over a distance of 361 m through traffic from the M5 destined for Moorebank Avenue. This section of M5 must also cater for through traffic on the main carriageways and traffic moving directly between the entry and exit ramps.

Due to the proximity of the two interchanges the resultant traffic weaving tends to control operation during the peak hours rather than the individual exits and entries.

In order to establish the expected levels of service and hence the spare capacity available for Moorebank IMT traffic, a weaving analysis was undertaken using the HCM 2010 Highway Capacity Manual – Transportation Research Board. Traffic data for the design years was extracted from the Strategic Travel Model (STM, information provided by the Bureau of Transport Statistics). This model presented the projected background traffic and did not include any Moorebank IMT or Sydney Intermodal Terminal Alliance (SIMTA) related background traffic.

The following inputs were included in the assessment:

- M5 configuration eastbound between Hume Highway and Moorebank Avenue (with widening):
  - three dedicated through travel lanes
  - one combined Hume Highway on-ramp and Moorebank Avenue off-ramp (this requires vehicles to exit the lane to join motorway)
  - total number of lanes in this segment is four
  - the length between these two ramps is approximately 361 metres (1,184 feet).

- M5 configuration westbound between Moorebank Avenue and Hume Highway (with widening):
  - three dedicated through travel lanes
  - one combined Moorebank Avenue on-ramp and Hume Highway off-ramp (this requires vehicles to exit the lane to join motorway) with the second lane a combined left and through lane, with one lane splitting to become the off-ramp to the Hume Highway and the other lane splitting continuing through on the motorway (allowing vehicles to exit the motorway without lane change)
  - total number of lanes in this segment is four
  - the length between these two ramps is approximately 453 metres (1,486 feet).

The following assumptions were applied to the assessment:

- free flow speed on M5 of 65 mph which equates to 104 km/h (the posted speed is 110 km/h)
- freeway maximum capacity of 2350 vehicles per lane
- peak hour flow factor of 0.94
- level terrain conditions.

The Level of Service (LoS) ranges for freeway conditions is calculated in terms of vehicle density (pcu) per mile per lane. LoS densities are provided in Table 11.1.

Table 11.1 Freeway weaving levels of service

LoS	Density (pcu/mi/ln)
A	0-10
B	>10-20
C	>20-28
D	>28-35
E	>35
F	

Source: Highway Capacity Manual (2010)

The analysis indicates that the M5 at this location will be at and/or nearing capacity in future years as a result of the weaving manoeuvres between the two interchanges. The weaving assessment results from the HCS program are shown in the Table 11.2.

Table 11.2 Expected Levels of Service for Weaving at the M5 Georges River Crossing in 2030 with and without Moorebank IMT

Scenario	Density (pcu/mi/ln) (LoS)	
	2030 AM peak	2031 PM peak
Eastbound		
Base	LoS F	31.4 (LoS D)
With Moorebank IMT	LoS F	31.8 (LoS D)
Westbound		
Base	26.3 (LoS C)	45.9 (LoS E)
With Moorebank IMT	26.7 (LoS C)	46.1 (LoS E)

The assessment indicates the section of the M5 between Moorebank Avenue and Hume Highway in both east and west bound directions will operate with only minimal increase in density due to the inclusion of the Moorebank IMT. As a result, the Level of Service with Moorebank IMT does not deviate from the respective base scenario for both AM and PM peak periods.

However, besides the westbound AM peak scenario, all over scenarios produce undesirable LoS with 2030 traffic volumes, with the eastbound AM peak scenario operating at a poor LoS F.

The volume to capacity ratios for the weaving segment is provided in Table 11.3.

Table 11.3 Expected V/C Ratios at the M5 Georges River Crossing in 2030 with and without Moorebank IMT

Scenario	V/C Ratio	
	2030 AM peak	2030 PM peak
Eastbound		
Base	1.515	0.889
With Moorebank IMT	1.516	0.913
Westbound		
Base	0.651	0.988
With Moorebank IMT	0.659	0.991

A V/C ratio less than 0.90 indicates that the section of road is performing within capacity. A V/C ratio between 0.90 and 1.00 indicates it is nearing capacity and over 1.00, over capacity (operating at a LoS F).

The analysis indicates that the eastbound 2030 AM peak for both base and with Moorebank IMT will be over capacity. For the 2030 PM peak, both eastbound and westbound will operate nearing capacity with only westbound AM peak operating within capacity.

It can be inferred from the above that by 2030 the background traffic growth alone would have resumed all spare capacity on M5 in both directions in the PM peak and all spare capacity in the eastbound direction in the AM peak. Consequently any Moorebank IMT traffic would experience considerable congestion during these times.

The introduction of Moorebank IMT traffic would result in a minimal change in the volume of the M5 between Moorebank Avenue and Hume Highway in both directions. For both the weekday AM and PM peak periods, the densities determined with the addition of the Moorebank IMT closely mimic those of the base case for each time scenario. As such, LoS classifications are unchanged for all scenarios.

It is recognised that Moorebank IMT traffic will add to the weaving traffic on the M5 and the potential contribution of Moorebank IMT traffic to the weaving impact will be analysed in more detail at the next stage of more detailed planning including microsimulation modelling.

12. M5

Summary of changes from the Environmental Impact Statement Traffic and Transport Assessment:

– Changes to the percentage of Project traffic and cumulative scenario traffic on the M5 have been revised based on the new traffic generation, distribution and heavy vehicle peak hour proportions.

To assess the impact of the Moorebank IMT on the M5, the following was undertaken:

- Observed traffic volumes from the 2010 counts were factored to future year values based on growth rates taken from the STM.
- This was then compared to the traffic generated by the Moorebank IMT to calculate the percentage increase. The traffic generated by the IMEX and interstate facilities would already be present on the road network as it would have been mostly generated at Port Botany, therefore some of the additional traffic is double counted using this approach. These percentage increases are therefore likely to represent a slight over estimate of the increase. The percentage increase is provided in Table 12.1.

Table 12.1 Moorebank IMT percentage increase on M5 during 2030 peak periods

	Direction	2030		
		LV	HV	ALL
AM peak hour				
M5 west of Moorebank Avenue	EB	0.47%	17.09%	2.26%
	WB	0.00%	24.63%	2.63%
M5 east of Moorebank Avenue	EB	0.00%	2.23%	0.27%
	WB	0.20%	6.51%	0.82%
PM peak hour				
M5 west of Moorebank Avenue	EB	0.00%	57.72%	3.31%
	WB	0.42%	21.82%	2.35%
M5 east of Moorebank Avenue	EB	0.23%	16.19%	1.30%
	WB	0.00%	9.79%	0.48%

EB – Eastbound, WB – Westbound
LV – Light vehicle, HV – Heavy vehicle, ALL – All vehicles

The percentage increase from the traffic generated by Moorebank IMT on the M5 is under 3.3% of total M5 traffic during the 2030 AM and PM peak hours. The increase in the heavy vehicle proportion is an overestimate as no allowance has been made for heavy vehicles that would have been on the network anyway.

An assessment of the trips generated by Moorebank IMT and SIMTA (under the cumulative scenarios) on the M5 east and west of Moorebank Avenue has been undertaken for both directions of travel during the AM and PM peak periods. The percentage increase in overall traffic volumes is provided in Table 12.2.

Table 12.2 Cumulative traffic percentage increase to the M5 from Moorebank IMT and SIMTA during weekday peak periods in 2030

		Moorebank IMT only	Cumulative scenario A	Cumulative scenario B	Cumulative scenario C2
AM peak hour					
M5 west of Moorebank Avenue	EB	2.26%	5.30%	7.79%	5.56%
	WB	2.63%	3.51%	2.94%	3.19%
M5 east of Moorebank Avenue	EB	0.27%	0.31%	0.20%	0.25%
	WB	0.82%	2.79%	4.44%	3.04%
PM peak hour					
M5 west of Moorebank Avenue	EB	3.31%	4.37%	2.95%	3.56%
	WB	2.35%	5.24%	6.69%	6.07%
M5 east of Moorebank Avenue	EB	1.30%	3.61%	5.03%	4.71%
	WB	0.48%	0.51%	0.29%	0.39%

EB – Eastbound, WB – Westbound

These results suggest that the combined development of Moorebank IMT and SIMTA is not likely to have a substantial impact on the operation of the M5 with the following percentage increases in total traffic volumes:

- up to a 5% increase in total traffic volumes under cumulative scenario A
- up to a 8% increase in total traffic volumes under cumulative scenario B
- up to a 6% increase in total traffic volumes under cumulative scenario C2.

13. Mitigation measures for detailed design and operations

Summary of changes from the Environmental Impact Statement Traffic and Transport Assessment:

No change.

13.1 General detailed design considerations

The operation of the Project site would be supported by the upgrade of Moorebank Avenue and its associated intersections. Moorebank Avenue would be increased to a four-lane two-way road with two lanes in both directions between the M5 and Anzac Road. In association with the increase in lanes, access locations into the Project site would be signalised and all intersections and have designated turn bays on Moorebank Avenue.

The upgrade to Moorebank Avenue and the staged construction of Moorebank IMT would be coordinated to minimise the impact on Moorebank Avenue traffic.

The following mitigation measures are to be considered during detailed design stage to improve the operation of the Moorebank IMT and reduce its impacts:

- IMEX, Interstate and the warehouse developments provide storage and shower areas for cyclists to promote cycling as mode of transport.
- Consider the potential for increased bus services between the Moorebank IMT and nearby public transport interchange hubs to reduce the volume of light vehicles generated by staff. There is potential for buses to service the Project site. It is the responsibility of the Moorebank IMT operators to negotiate the services changes provided by bus operators.
- Undertake inspections and monitoring of traffic congestion on Moorebank Avenue at Full Build in 2030 and report on any project specific impacts to Moorebank Avenue operation.
- Creation of a working subgroup of the Moorebank IMT facility, whereby the subgroup work closely with the LCC traffic committee to ensure that a best practice approach is taken to future bus (and rail link) provision for workers and visitors to both the sites and the operation of Moorebank Avenue.
- Facilitated discussion with Transdev and TfNSW regarding future bus servicing the Project site.

The *Integrated Land Use and Transport Package* (DUAP, 2001) should be consulted during the detailed design stage to achieve the identified ‘best practice’ for the different planning principles.

13.2 Detailed design of Project Development Phasing

During the respective detailed design and subsequent approvals and assessment processes for the development phasing, refining traffic, transport and access impact assessment would be undertaken to confirm forecasts and the required mitigation measures on the local network and for the vehicle distribution impacts on the wider road network.

13.3 Outside the study area – M5

The Moorebank IMT would facilitate the distribution of freight to western Sydney by transferring the origin of road vehicles from Port Botany to Moorebank.

Some of the traffic generated by the IMEX and Interstate facilities would have been on the M5 anyway – but originating at Port Botany.

The Project traffic would not have a significant impact on the operation of the M5.

13.4 Travel demand management

For forecasting, a mode split was used for the Moorebank Intermodal Terminal, as discussed in section 4, of 90% of staff travelling to and from the Project site by car and 10% travelling by public transport, car share, walking, cycling or other alternative transport modes. This is considered a reasonable future target for the project as the currently limited public transport access to and from the Project site with only two bus services near the Project site during the peak hours, and the closest train stations more than a 40 minute walk.

Up to approximately 2,200 staff are estimated to work at the terminal each day during full operation. There is potential to reduce the reliance on private car travel, through implementation of initiatives to maximise employee access to public transport in the local area. A number of opportunities to improve employee access to public transport are identified in the following sections.

Reduced reliance on private car travel could also reduce the amount of car parking required on site, freeing up land for other uses. Increased walking and cycling has the potential for improving employee health and fitness levels and employee travel by alternative modes would reduce car ownership costs.

The health aspects of promoting greater use of walking and cycling both as sole and feeder modes should be considered as part of the Project site workplace travel plan.

13.4.1 Buses

Access to nearby train stations with frequent service is currently facilitated by the 901 (Transdev) bus service between Liverpool and Holsworthy. Options to improve bus service to the Project site and access to these train stations might include:

- Increased peak period bus service that coordinate with train services at Liverpool and Holsworthy.
- Extension of the 901 route to the main terminal access points on Moorebank Avenue.
- A review and upgrade of bus stops on Moorebank Avenue to include shelter, seating and bus timetabling information.
- An employee shuttle bus to Liverpool train station for the peak periods and before/after staff shifts.
- Bus access into the Project site should a shuttle service or public bus service operate from the Project site.

- Increased bus services in the local area or an express bus between Liverpool and Holsworthy Stations and the Moorebank IMT.
- Bus priority at key intersections should the need arise.

13.4.2 Walking and cycling links

Improved access to public transport and alternative transport modes would be further supported through provision of accessible and safe walking and cycling links to the Project site. The current concept plan includes provision for a shared path along Moorebank Avenue, which would connect with pedestrian and bicycle infrastructure in the local area. In addition the proposed upgrades to Moorebank Avenue and future intersections include provision of signalised pedestrian crossings.

Pedestrian and cyclist connections could be further supported through:

- Footpath upgrades along Anzac Road with a continuous footpath link to Wattle Grove.
- A pedestrian and cyclist link along Cambridge Avenue.
- Improved pedestrian and cyclist connections to Newbridge Road and Liverpool.
- Walkways and cycleways from Moorebank Avenue to on-site facilities, and through the Project site as necessary.

There may also be potential for a pedestrian/cyclist link from the Project site to Casula Powerhouse and Casula Station. This would require detailed investigation should there be demand for the link.

13.4.3 Employee focussed programs

Other initiatives which MIC could explore as part of the Project site management plan to offer travel choice and be responsible environmental managers include:

- Reduction of the supply of car parking to terminal employees as availability of viable transport choices increases.
- Travel behaviour change program for terminal employees, including programs and campaigns to increase employee awareness of public transport services and local walking/cycling links.
- Staff carpooling program.
- Car share scheme, funded by tenants or site management.
- End of trip facilities including bicycle parking, change rooms, showers and lockers.

14. Construction traffic management

Summary of changes from the Environmental Impact Statement Traffic and Transport Assessment:

– Changes to construction workforce due to revised Project staging and revised construction site accesses.

This section outlines some of the concepts which would need to be included in the construction management plan of the Project site to mitigate likely construction impacts to road users during the proposed upgrade of Moorebank Avenue. This plan would evolve as construction methods become more certain.

14.1 Scope of construction works

The proposed indicative construction timeline is as follows:

- Early works: from 2015.
- Phase A: from 2016 to 2018 with construction traffic peaking in 2016.
- Proposed upgrade on Moorebank Avenue: from 2016.
- Phase B: from 2018 to 2021 with construction traffic peaking in 2020.
- Phase C: from 2021 to 2030 with construction peaking in 2023.

14.2 Project construction footprint

The construction footprint represents the area within which construction activities would occur. For the purposes of assessment, the construction footprint for each Project phase has been assumed to be entirely cleared of vegetation, providing for the construction of buildings, hard surfaces and infrastructure.

The construction footprint includes:

- the entire Project site for the development of the Moorebank IMT, with the exception of most of the conservation zone and some additional areas within which vegetation would be retained;
- a section of the Georges River and its banks for construction of the rail bridge and for construction access;
- areas to accommodate drainage channels across the conservation area between the Moorebank IMT and the Georges River; and
- The entire Moorebank Avenue for the upgrade to four lanes.

All rail access options are likely to be constructed using access for labour, plant and materials predominantly from the Project site on the eastern bank of the Georges River.

For construction of the southern rail access, approximately 90% of the rail bridge and approach viaduct structures would utilise access from the eastern bank (Project site) and 10% from the western bank, on the Glenfield Landfill site.

14.2.1 Moorebank Avenue upgrades

Moorebank Avenue is proposed to be upgraded to a four lane divided roadway from the M5 interchange to the Anzac Road intersection. All intersections will be traffic signal controlled with indented right and left turn lanes as required. Generally pedestrian footpaths are proposed on both sides of the road with signalised pedestrian crossings at the intersections.

The existing Moorebank Avenue is a two lane two-way road. It is proposed that this will become the ultimate southbound carriageway and a new northbound carriageway would be constructed on the west side of the existing road. Traffic would remain on the existing road whilst the new northbound carriageway is constructed clear of traffic.

Upon completion of the northbound carriageway, the two way traffic would be transferred from the existing Moorebank Avenue to the new carriageway. The existing Moorebank Avenue would then be reconstructed clear of traffic to form the new southbound carriageway. Construction related traffic for both the Moorebank Avenue upgrades and Project site would, as far as is possible, be confined to off peak hours to minimise the impact of the works. During construction existing accesses, public transport and pedestrian facilities would be retained at all times.

14.3 Construction workforce

The construction workforce would vary depending on the phase of construction and associated activities. Anticipated peak in construction workforce numbers by phase of project are shown in Table 14.1.

Table 14.1 Indicative peak daily construction workforce

Project Stage	Peak daily workforce
Early Works	300
Phase A	850
Phase B	550
Phase C	770

14.4 Haulage routes and Project site access

The haulage routes during construction are to remain on state and national roads where possible. As the Project site is close to the M5, it has been assumed that construction vehicles will travel between the construction vehicle access (on Moorebank Avenue) and the M5 interchange.

Light vehicles associated with construction activities, including construction staff, are assumed to have the same distribution as assumed for the operational phase traffic distribution.

Depending on the scheduling of the upgrade to Moorebank Avenue, the access locations into the Project construction site would vary. However, due to the volume of spoil to be removed and material to be imported to the Project site, it would likely require multiple locations to improve the efficiency of construction logistics. This will require coordination between the two construction activities.

Likely access points for construction vehicles have been identified in Figures 14.1 and 14.2 during the Early Works and Project phases respectively. Access to the Project site would predominately be via the M5 and Moorebank Avenue. Moorebank Avenue south of the East Hills Railway Line would not be utilised by construction traffic other than for light vehicles only.

Haulage routes for the southern rail access to and from Cambridge Avenue would be via Moorebank Avenue or Glenfield Road.

All required car parking would be provided on-site. Access would be maintained for ABB throughout the Project and road construction.

Some partial and full road closures may be required during construction. Where possible, these would occur at night during quieter traffic periods. Road closures would occur in consultation with the RMS and Liverpool City Council.

Moorebank Avenue between the M5 and the Anzac Road intersection would be upgraded as part of the Project, with the majority of works assumed to occur around 2016. Prior to the full upgrade of Moorebank Avenue and during the Early Works development phase and part of Phase A, the existing Project site access points would be used.

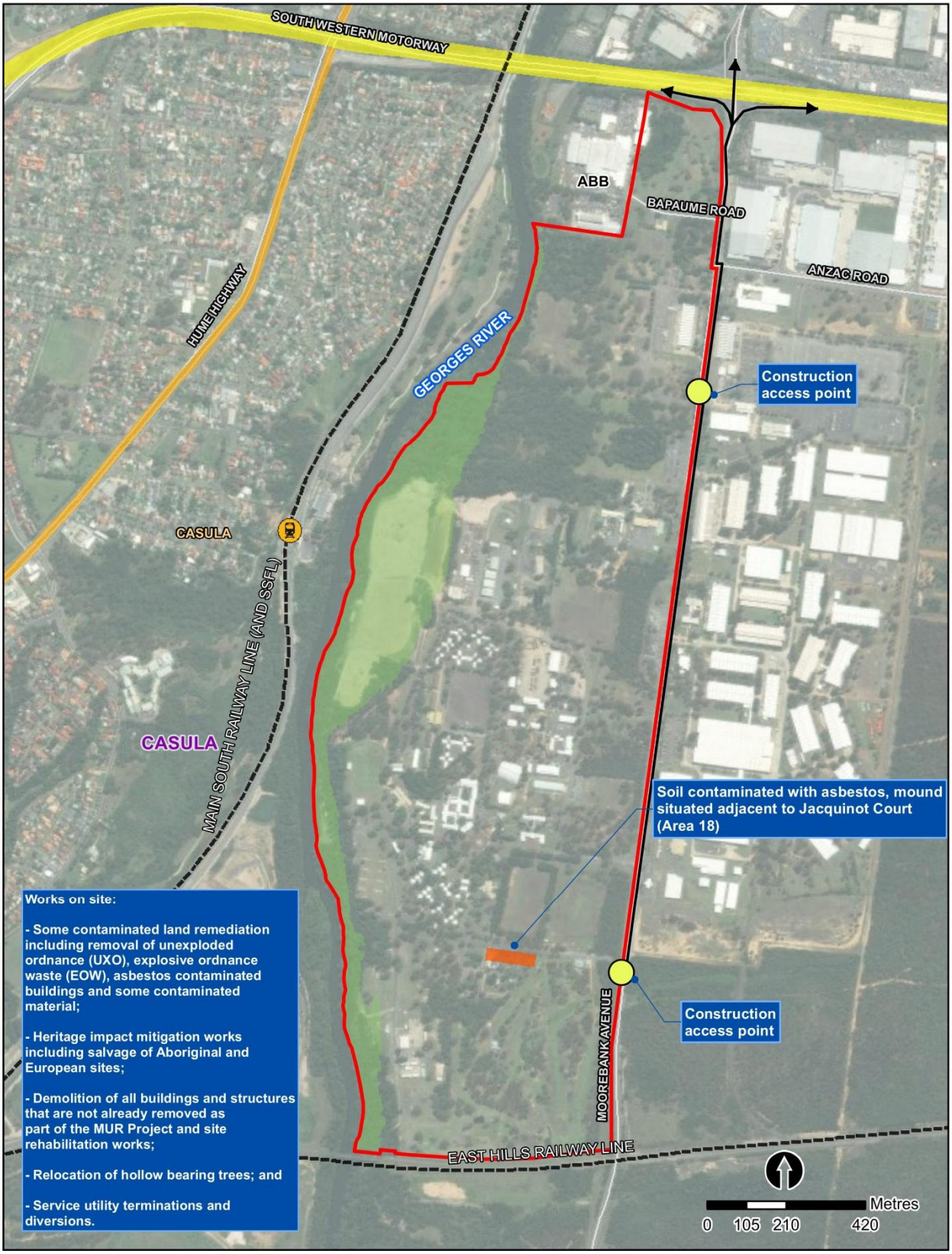


Figure 14.1 Early works development phase - construction footprint, access and haulage

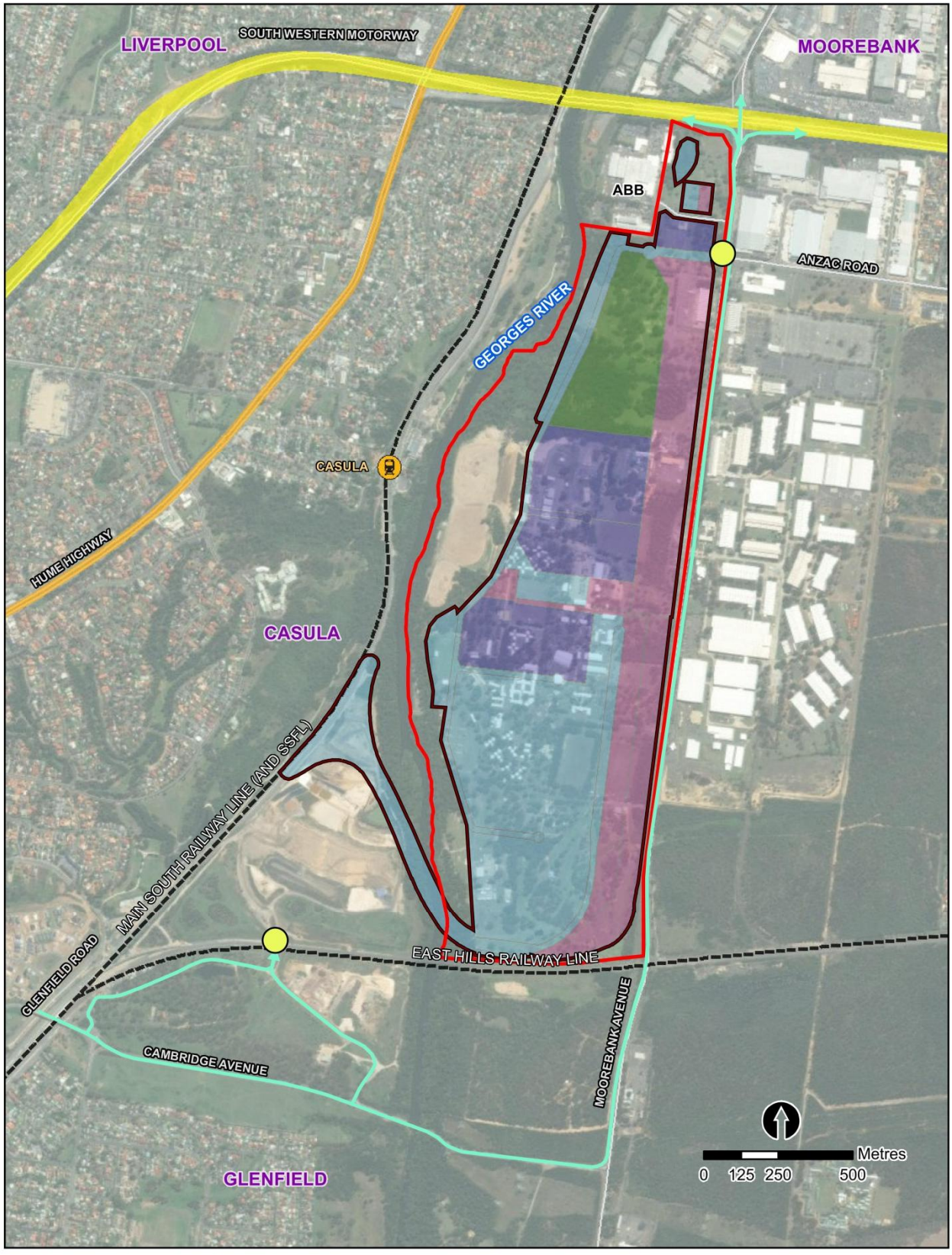


Figure 14.2 Indicative Construction Footprint, Access and Haulage

14.5 Parking

All construction workers would park within the Project site where possible. It is anticipated that there will be a number of access points along Moorebank Avenue that will allow construction staff in light vehicles to enter and leave the site compound at safe locations in 2015 and a single access from 2016. It is anticipated that these parking locations would change over the course of construction. Depending on the different stages of construction, formal access may be provided from either the existing or proposed intersections.

14.6 Pedestrian and cyclist impacts

Pedestrian and cyclist impacts are expected to be minimal during the Early Works stage. Pedestrian movements generated by the public bus service would be catered for by providing a safe corridor for movement to and from the bus stop throughout the construction phase. It may be necessary to temporarily relocate bus stops during the construction phase of Moorebank Avenue. The volume of passengers using the bus service is likely to reduce during the Early Works stage with the relocation of SME.

During Phases B and C and Project Full Build, the volume of pedestrians and cyclists are expected to be equal or greater than the existing situation. This is due to the operation of the Moorebank IMT and the improvement in facilities along Moorebank Avenue that will be constructed during the Early works and Phase A stages.

14.7 Construction mitigation measures

The greatest traffic impacts created by the Moorebank IMT would occur during Phase A construction. During this period there would be a high volume of heavy vehicles travelling to and from the Project site combined with the disruption to traffic from the upgrade of Moorebank Avenue in Phase A.

Construction Traffic Management Plans (CTMP) would be developed for each development phase to provide additional information for the construction planning of the Moorebank IMT and the upgrade of Moorebank Avenue. Numerous CTMPs are potentially required to address the traffic impacts of individual components of the different stages.

The following mitigation measures to provide additional information during the construction stages should be considered in developing the CTMPs:

- Modify access locations in response to the development of the Moorebank Avenue upgrade. During this stage numerous access locations may be required for the transportation of spoil and material.
- Reducing the volumes of construction vehicles travelling during peak periods, especially if the increase in traffic generated by construction activities impedes on the operation of Moorebank Avenue.
- Maintain access to neighbouring properties. It is particularly important that the ABB site has access throughout the construction stages as the proposed works have potential to affect its operation.
- Provision of alternate suitable pedestrian, cycle and public transport facilities during the construction of Moorebank Avenue upgrades retaining well defined and well signed routes, paths and bus stop locations.
- Develop a communication plan to provide information to the relevant authorities, bus operators and local community. This is particularly important as there is potential for multiple contractors to be present on Project site at any one time. The communication plan will need to incorporate a contact list with the chain of command.

- The implementation of Traffic Control Plans (TCP) to inform drivers of the construction activities and locations of heavy vehicle access locations. Variable Message Signs (VMS) and advertisements in local papers may be required to provide advanced warning of the proposed works.
- Obtain Road occupancy licences (ROL) for the upgrade of Moorebank Avenue. A TCP and potentially a Speed Zone Authorisation (SZA) application will need to be prepared for the ROL applications.
- Develop an emergency response plan for the upgrade of Moorebank Avenue during Phase A. During this stage, emergency vehicles using Moorebank Avenue as a transport route will need to be considered, as well as emergency access to adjoining properties.

15. Conclusion

The following conclusions are reached:

- The impact of traffic from the Moorebank IMT represent less than 3.3% of the total traffic already on the M5, the Project would therefore not have a substantial impact on the motorway operation.
- The trucks from the IMEX development would have been on the highway network anyway – but associated with Port Botany.
- The proposed modifications to Moorebank Avenue include:
  - widening Moorebank Avenue to a dual carriageway, four-lane road (two lanes in each direction), between the M5 intersection and Anzac Road; and
  - the expansion of the Moorebank Avenue/Anzac Road intersection.
- Several intersection upgrades are proposed due to background traffic growth alone in future years. These intersection upgrades are proposed to return the intersection back to base level performance for each particular future year should the intersection be performing unsatisfactorily.
- There are sufficient parking spaces to cater for the forecast staff numbers both during construction and operation.
- There are opportunities to provide enhanced public transport services in the form of more regular bus services or an employee shuttle bus to service the Project site. The increased workforce may make such operations viable.

The combined traffic associated with the Moorebank IMT and an adjacent SIMTA operation could be accommodated within the proposed upgrades to Moorebank Avenue for cumulative scenarios A, B, C1 and C2. Modifications to the Moorebank Avenue and Anzac Road intersection would be required to accommodate cumulative scenario traffic.

The cumulative scenarios are not likely to have a substantial impact on the operation of the M5 or the regional road network.

16. References

The following documents were referenced in preparation of this report:

- Austroads, Guide to Road Design Part 3: Geometric Design (November 2009).
- Austroads, Guide to Traffic Management Part 3: Traffic Studies and Analysis (November 2009).
- Bureau of Transport Statistics, Freight Movements in Sydney (July 2010).
- Bureau of Transport Statistics, Sydney Freight Movement Model (2006).
- Bureau of Transport Statistics, Sydney Light Commercial Vehicle Model (2006).
- Bureau of Transport Statistics, Sydney Strategic Travel Model (2006).
- Deloitte, Moorebank Intermodal Terminal Demand Estimate Summary – Trip Generation Modelling (January 2015).
- Deloitte, Staff numbers based on Moorebank IMT Staffing Requirements – Version 4 (August 2001).
- Deloitte, Moorebank Intermodal Company, EIS – Supporting Information, Final Report (February 2015).
- Department of Urban Affairs and Planning, Integrated Land Use and Transport Package (August 2001).
- Fremantle Ports, Truck Productivity Study (July 2014).
- Halcrow, M5 West Widening Project Traffic and Transport Report (September 2010).
- Hyder Consulting, Sydney Intermodal Terminal Alliance Part 3A Concept Plan Application Traffic and Transport, Traffic and Accessibility Impact Assessment (August 2011).
- Landcom, Residential Density Guide for Landcom Project Teams (May 2011).
- Liverpool City Council, Bike Plan 2009 (2009).
- Liverpool City Council, Development Control Plan 2008 Part 1.2 Additional General Controls for Development (April 2012).
- New South Wales Government, The Sydney Metropolitan Strategy (December 2010).
- New South Wales Government, Port Botany and Sydney Airport Transport Improvement Program (2011).
- Roads and Maritime Services, Accident Reduction Guide, Version 1.1, TD2004/RS01 (August 2005).
- Roads and Maritime Services, Background Traffic Annual Growth Rates 2016 to 2031 for a 2hr AM and PM peak period Moorebank Area – email 2/5/2014, 6/5/2014, 21/7/2014 and 15/9/2014.
- Roads and Maritime Services, Crash id dataset 4434 - Selected crashes along Moorebank Avenue between Cambridge Avenue and Church Road intersections. 2006–2010 (November 2011).
- Roads and Maritime Services, Crash id dataset 4434 - Selected crashes along South Western Motorway (M5) between Hume Highway and Heathcote Road intersections. 2006–2010 (November 2011).
- Roads and Maritime Services, Guide to Traffic Generating Developments, Version 2.2 (October 2002).
- Roads and Maritime Services, Guide to Traffic Generating Developments, Updated Traffic Surveys TDT 2013/04 (May 2013).
- Roads and Maritime Services, NSW Black Spot Program, How to apply for funding.
- Transport Research Board, Highway Capacity Manual (HCM) (2010).
- Urbis, SIMTA Environmental Assessment (EA) - Part 3A Concept Application (March 2012).

- Urbis, Sydney Intermodal Terminal Alliance (SIMTA) Submissions Report (December 2013).
- URS, Port Botany Expansion Environmental Impact Statement (November 2003).

Appendix A

Traffic surveys

Intersection of Moorebank Avenue and Bapaume Road

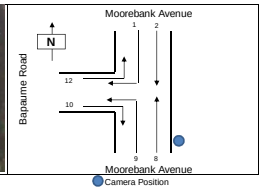
Tuesday, 7 December 2010

Austraffic

Survey Start 6:00 AM 16:00 PM
Intersection Type T Junction
Intersection No. 10
North Approach Moorebank Avenue
East Approach
South Approach Moorebank Avenue
West Approach Bapaume Road

Date 7/12/10

Classification Light Heavy



TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	13	0	13	56	3	59																185	4	189	0	0	0	1	0	1				1	0	1	256	7	263
6:15 - 6:30	3	1	4	73	6	79																190	12	202	3	0	3	0	0	0				0	0	0	269	20	289
6:30 - 6:45	17	1	18	97	8	105																233	11	244	3	0	3	0	0	0				0	0	0	350	20	370
6:45 - 7:00	33	0	33	161	8	169																219	8	227	6	0	6	0	0	0				1	0	1	420	16	436
7:00 - 7:15	15	0	15	209	15	224																209	11	220	4	0	4	0	0	0				1	0	1	438	26	464
7:15 - 7:30	11	0	11	185	10	195																264	15	279	5	0	5	0	0	0				0	0	0	465	25	490
7:30 - 7:45	13	1	14	138	6	144																225	17	242	2	0	2	0	0	0				0	1	1	378	25	403
7:45 - 8:00	21	0	21	127	11	138																262	11	273	3	0	3	2	0	2				3	0	3	418	22	440
8:00 - 8:15	17	0	17	118	8	126																264	17	281	8	0	8	1	0	1				3	0	3	411	25	436
8:15 - 8:30	22	2	24	111	8	119																262	12	274	8	0	8	0	0	0				4	1	5	407	23	430
8:30 - 8:45	31	0	31	109	10	119																212	12	224	7	1	8	1	0	1				2	1	3	362	24	386
8:45 - 9:00	20	0	20	86	8	94																152	9	161	2	0	2	0	0	0				3	1	4	263	18	281
Σ	216	5	221	1470	101	1571																2677	139	2816	51	1	52	5	1	6				18	4	22	4437	251	4688

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	5	0	5	219	9	228																264	13	277	0	0	0	3	1	4				19	0	19	510	23	533
16:15 - 16:30	4	0	4	212	11	223																145	4	149	1	1	2	6	0	6				18	0	18	386	16	402
16:30 - 16:45	3	0	3	252	4	256																127	4	131	0	0	0	10	0	10				27	0	27	419	8	427
16:45 - 17:00	3	0	3	236	6	242																122	2	124	0	0	0	2	0	2				15	1	16	378	9	387
17:00 - 17:15	2	0	2	303	13	316																133	7	140	0	0	0	5	0	5				31	0	31	474	20	494
17:15 - 17:30	4	1	5	306	5	311																112	6	118	0	0	0	3	0	3				20	1	21	445	13	458
17:30 - 17:45	3	0	3	313	7	320																102	4	106	0	0	0	3	0	3				14	0	14	435	11	446
17:45 - 18:00	6	1	7	325	11	336																90	3	93	0	0	0	1	0	1				13	2	15	435	17	452
18:00 - 18:15	5	1	6	306	11	317																87	1	88	0	0	0	1	0	1				16	1	17	415	14	429
18:15 - 18:30	5	0	5	228	6	234																111	3	114	1	0	1	2	0	2				5	0	5	352	9	361
18:30 - 18:45	2	0	2	264	5	269																81	2	83	1	0	1	3	0	3				4	0	4	355	7	362
18:45 - 19:00	0	0	0	166	1	167																68	2	70	1	0	1	0	0	0				3	0	3	238	3	241
Σ	42	3	45	3130	89	3219																1442	51	1493	4	1	5	39	1	40				185	5	190	4842	150	4992

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	66	2	68	387	25	412																827	35	862	12	0	12	1	1	2				2	0	2	1295	63	1358	
6:15 - 7:15	68	2	70	540	37	577																851	42	893	16	0	16	0	1	1				2	0	2	1477	82	1559	
6:30 - 7:30	76	1	77	652	41	693																925	45	970	18	0	18	0	0	0				2	0	2	1673	87	1760	
6:45 - 7:45	72	1	73	693	39	732																917	51	968	17	0	17	0	0	0				2	1	3	1701	92	1793	
7:00 - 8:00	**60**	**1**	**61**	**659**	**42**	**701**																**960**	**54**	**1014**	**14**	**0**	**14**	**2**	**0**	**2**				**4**	**1**	**5**	**1699**	**98**	**1797**	**Peak**
7:15 - 8:15	62	1	63	568	35	603																1015	60	1075	18	0	18	3	0	3				6	1	7	1672	97	1769	
7:30 - 8:30	73	3	76	494	33	527																1013	57	1070	21	0	21	3	0	3				10	2	12	1614	95	1709	
7:45 - 8:45	91	2	93	466	37	502																1000	52	1052	26	1	27	4	0	4				12	2	14	1598	94	1692	
8:00 - 9:00	90	2	92	424	34	458																890	50	940	25	1	26	2	0	2				12	3	15	1443	90	1533	

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	15	0	15	919	30	949																658	23	681	1	1	2	21	1	22				79	1	80	1693	56	1749	
16:15 - 17:15	12	0	12	1003	34	1037																527	17	544	1	1	2	23	0	23				91	1	92	1657	53	1710	
16:30 - 17:30	12	1	13	1097	28	1125																494	19	513	0	0	0	20	0	20				93	2	95	1716	50	1766	
16:45 - 17:45	12	1	13	1158	31	1189																469	19	488	0	0	0	13	0	13				80	2	82	1732	53	1785	
17:00 - 18:00	**15**	**2**	**17**	**1247**	**36**	**1283**																**437**	**20**	**457**	**0**	**0**	**0**	**12**	**0**	**12**				**78**	**3**	**81**	**1789**	**61**	**1850**	**Peak**
17:15 - 18:15	18	3	21	1250	34	1284																391	14	405	0	0	0	8	0	8				63	4	67	1730	55	1785	
17:30 - 18:30	19	2	21	1172	35	1207																390	11	401	1	0	1	7	0	7				48	3	51	1637	51	1688	
17:45 - 18:45	18	2	20	1123	33	1156																369	9	378	2	0	2	7	0	7				38	3	41	1557	47	1604	
18:00 - 19:00	12	1	13	964	23	987																347	8	355	3	0	3	6	0	6				28	1	29	1360	33	1393	

Intersection of Moorebank Avenue and Anzac Road

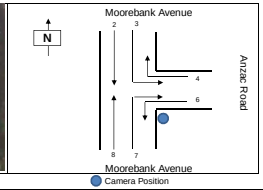
Tuesday, 7 December 2010

Austraffic

Survey Start 6:00 AM 16:00 PM
Intersection Type T Junction
Intersection No. 1
North Approach Moorebank Avenue
East Approach Anzac Road
South Approach Moorebank Avenue
West Approach

Date 7/12/10

Classification Light Heavy



TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15				36	0	36	21	3	24	17	0	17				11	0	11	79	5	84	169	4	173														333	12	345
6:15 - 6:30				51	4	55	22	3	25	14	2	16				18	0	18	83	2	85	176	10	186														364	21	385
6:30 - 6:45				69	3	72	28	5	33	33	3	36				36	0	36	74	3	77	200	8	208														440	22	462
6:45 - 7:00				118	4	122	43	4	47	35	0	35				54	1	55	82	1	83	185	8	193														517	18	535
7:00 - 7:15				163	7	170	46	8	54	23	6	29				46	1	47	51	2	53	187	5	192														516	29	545
7:15 - 7:30				129	5	134	56	5	61	50	7	57				53	0	53	53	3	56	214	8	222														555	28	583
7:30 - 7:45				84	1	85	54	5	59	47	12	59				44	5	49	69	3	72	178	6	184														476	32	508
7:45 - 8:00				73	5	78	56	6	62	53	7	60				37	2	39	58	4	62	212	4	216														489	28	517
8:00 - 8:15				60	2	62	59	6	65	74	10	84				41	1	42	66	2	68	193	7	200														493	28	521
8:15 - 8:30				55	4	59	56	4	60	59	9	68				30	3	33	49	1	50	207	4	211														456	25	481
8:30 - 8:45				55	5	60	55	5	60	49	4	53				32	1	33	54	2	56	165	9	174														410	26	436
8:45 - 9:00				39	4	43	47	4	51	27	3	30				23	1	24	49	1	50	128	7	135														313	20	333
Σ				932	44	976	543	58	601	481	63	544				425	15	440	767	29	796	2214	80	2294														5362	289	5651

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15				179	3	182	43	7	50	73	9	82				87	1	88	83	1	84	180	4	184														645	25	670
16:15 - 16:30				177	7	184	41	4	45	43	2	45				72	4	76	51	0	51	110	2	112														494	19	513
16:30 - 16:45				209	2	211	53	2	55	49	4	53				88	1	89	31	0	31	85	0	85														515	9	524
16:45 - 17:00				180	3	183	58	3	61	49	2	51				93	3	96	28	1	29	78	1	79														486	13	499
17:00 - 17:15				247	7	254	61	6	67	81	5	86				88	3	91	35	0	35	73	2	75														585	23	608
17:15 - 17:30				234	3	237	75	2	77	54	5	59				82	3	85	41	1	42	58	2	60														544	16	560
17:30 - 17:45				253	7	260	63	0	63	42	2	44				76	1	77	38	1	39	64	2	66														536	13	549
17:45 - 18:00				266	8	274	60	3	63	39	1	40				99	1	100	42	0	42	54	4	58														560	17	577
18:00 - 18:15				254	11	265	53	0	53	37	0	37				97	5	102	29	1	30	56	2	58														526	19	545
18:15 - 18:30				186	5	191	44	1	45	43	0	43				132	1	133	27	0	27	73	3	76														505	10	515
18:30 - 18:45				225	4	229	42	1	43	39	2	41				100	3	103	16	0	16	46	0	46														468	10	478
18:45 - 19:00				122	1	123	44	0	44	31	1	32				53	1	54	19	0	19	40	1	41														309	4	313
Σ				2532	61	2593	637	29	666	580	33	613				1067	27	1094	440	5	445	917	23	940														6173	178	6351

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00				274	11	285	114	15	129	99	5	104				119	1	120	318	11	329	730	30	760														1654	73	1727	
6:15 - 7:15				401	18	419	139	20	159	105	11	116				154	2	156	290	8	298	748	31	779														1837	90	1927	
6:30 - 7:30				479	19	498	173	22	195	141	16	157				189	2	191	260	9	269	786	29	815														2028	97	2125	
6:45 - 7:45				494	17	511	199	22	221	155	25	180				197	7	204	255	9	264	764	27	791														2064	107	2171	Peak
7:00 - 8:00				449	18	467	212	24	236	173	32	205				180	8	188	231	12	243	791	23	814														2036	117	2153	
7:15 - 8:15				346	13	359	225	22	247	224	36	260				175	8	183	246	12	258	797	25	822														2013	116	2129	
7:30 - 8:30				272	12	284	225	21	246	233	38	271				152	11	163	242	10	252	790	21	811														1914	113	2027	
7:45 - 8:45				243	16	259	226	21	247	235	30	265				140	7	147	227	9	236	777	24	801														1848	107	1955	
8:00 - 9:00				209	15	224	217	19	236	209	26	235				126	6	132	218	6	224	693	27	720														1672	99	1771	

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00				745	15	760	195	16	211	214	17	231				340	9	349	193	2	195	453	7	460														2140	86	2206	
16:15 - 17:15				813	19	832	213	15	228	222	13	235				341	11	352	145	1	146	346	5	351														2080	64	2144	
16:30 - 17:30				870	15	885	247	13	260	233	16	249				351	10	361	135	2	137	294	5	299														2130	61	2191	
16:45 - 17:45				914	20	934	257	11	268	226	14	240				339	10	349	142	3	145	273	7	280														2151	65	2216	
17:00 - 18:00				1000	25	1025	259	11	270	216	13	229				345	8	353	156	2	158	249	10	259														2225	69	2294	Peak
17:15 - 18:15				1007	29	1036	251	5	256	172	8	180				354	10	364	150	3	153	232	10	242														2166	65	2231	
17:30 - 18:30				959	31	990	220	3	224	161	3	164				404	8	412	136	2	138	247	11	258														2127	59	2186	
17:45 - 18:45				931	28	959	199	5	204	158	3	161				428	10	438	114	1	115	229	9	238														2059	56	2115	
18:00 - 19:00				787	21	808	183	2	185	150	3	153				382	10	392	91	1	92	215	6	221														1808	43	1851	

Intersection of Moorebank Avenue and Defence Support Access

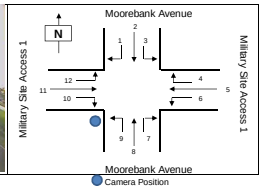
Tuesday, 7 December 2010

Austraffic

Survey Start **6:00 AM 16:00 PM**
Intersection Type Cross Junction
Intersection No. **11**
North Approach **Moorebank Avenue**
East Approach **Military Site Access 1**
South Approach **Moorebank Avenue**
West Approach **Military Site Access 1**

Date **7/12/10**

Classification **Light Heavy**



TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	1	0	1	44	0	44	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	71	2	73	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	115	6	121	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	157	4	161	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 7:15	3	0	3	174	7	181	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	6	0	6	178	7	185	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	5	0	5	137	7	144	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	2	0	2	110	8	118	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	6	0	6	103	5	108	0	0	0	0	0	0	0	0	0	0	0	0
8:15 - 8:30	4	0	4	77	7	84	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 8:45	1	0	1	95	6	101	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	1	0	1	62	5	67	0	0	0	0	0	0	0	0	0	0	0	0
Σ	29	0	29	1323	64	1387	0	0	0	0	0	0	0	0	0	0	0	0

TIME PERIOD	VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	0	0	0	260	9	269	1	0	1	0	0	0	0	0	0	1	0	1	307	9	316
6:15 - 6:30	0	0	0	264	13	277	1	0	1	1	0	1	0	0	0	0	0	0	337	15	352
6:30 - 6:45	0	0	0	277	10	287	2	0	2	0	0	0	0	0	0	0	0	0	394	16	410
6:45 - 7:00	0	0	0	268	9	275	2	0	2	0	0	0	0	0	0	0	0	0	425	13	438
7:00 - 7:15	0	0	0	261	5	266	3	0	3	0	0	0	0	0	0	0	0	0	441	12	453
7:15 - 7:30	0	0	0	265	10	275	3	0	3	1	0	1	0	0	0	1	0	1	454	17	471
7:30 - 7:45	0	0	0	255	9	264	6	0	6	0	0	0	0	0	0	1	0	1	404	16	420
7:45 - 8:00	0	0	0	268	8	276	2	0	2	5	0	5	0	0	0	2	0	2	389	16	405
8:00 - 8:15	0	0	0	261	8	269	2	0	2	0	0	0	0	0	0	3	0	3	375	13	388
8:15 - 8:30	0	0	0	257	7	264	2	0	2	2	0	2	0	0	0	1	0	1	343	14	357
8:30 - 8:45	0	0	0	213	12	225	2	0	2	1	0	1	0	0	0	0	0	0	312	18	330
8:45 - 9:00	0	0	0	171	9	180	0	0	0	1	0	1	0	0	0	0	0	0	235	14	249
Σ	0	0	0	3018	109	3127	26	0	26	11	0	11	0	0	0	9	0	9	4416	173	4589

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	0	0	0	251	2	253	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 16:30	1	0	1	264	12	276	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	2	0	2	286	4	290	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	1	0	1	285	6	291	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	325	13	338	0	0	0	0	0	0	0	0	0	0	0	0
17:15 - 17:30	0	0	0	314	6	320	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	316	8	324	0	0	0	0	0	0	0	0	0	0	0	0
17:45 - 18:00	0	0	0	372	7	379	0	0	0	0	0	0	0	0	0	0	0	0
18:00 - 18:15	0	0	0	324	15	339	0	0	0	0	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	0	327	10	337	0	0	0	0	0	0	0	0	0	0	0	0
18:30 - 18:45	0	0	0	321	6	327	0	0	0	0	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	0	183	3	186	0	0	0	0	0	0	0	0	0	0	0	0
Σ	4	0	4	3568	92	3660	0	0	0	0	0	0	0	0	0	0	0	0

TIME PERIOD	VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	0	0	0	227	3	230	0	0	0	21	0	21	0	0	0	8	0	8	507	5	512
16:15 - 16:30	0	0	0	142	2	144	1	0	1	5	0	5	0	0	0	6	0	6	419	14	433
16:30 - 16:45	0	0	0	113	1	114	1	0	1	1	0	1	0	0	0	3	0	3	406	5	411
16:45 - 17:00	0	0	0	98	2	100	0	0	0	2	0	2	0	0	0	1	0	1	387	8	395
17:00 - 17:15	0	0	0	105	2	107	0	0	0	0	0	0	0	0	0	6	0	6	436	15	451
17:15 - 17:30	0	0	0	98	3	101	0	0	0	1	0	1	0	0	0	1	0	1	414	9	423
17:30 - 17:45	0	0	0	104	3	107	0	0	0	2	0	2	0	0	0	2	0	2	424	11	435
17:45 - 18:00	0	0	0	90	2	92	1	0	1	1	0	1	0	0	0	0	0	0	464	9	473
18:00 - 18:15	0	0	0	91	3	94	1	0	1	2	0	2	0	0	0	3	0	3	421	18	439
18:15 - 18:30	0	0	0	84	1	85	1	0	1	0	0	0	0	0	0	3	0	3	415	11	426
18:30 - 18:45	0	0	0	64	1	65	0	0	0	0	0	0	0	0	0	0	0	0	385	7	392
18:45 - 19:00	0	0	0	58	1	59	0	0	0	1	0	1	0	0	0	0	0	0	242	4	246
Σ	0	0	0	1274	24	1298	5	0	5	36	0	36	0	0	0	33	0	33	4920	116	5036

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 7:00	1	0	1	387	12	399	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 7:15	3	0	3	517	19	536	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 7:30	9	0	9	624	24	648	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:45	14	0	14	646	25	671	0	0	0	0	0	0	0	0	0	0	0	0
7:00 - 8:00	16	0	16	599	29	628	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 8:15	19	0	19	528	27	555	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 8:30	17	0	17	427	27	454	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:45	13	0	13	385	26	411	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 9:00	12	0	12	337	23	360	0	0	0	0	0	0	0	0	0	0	0	0

TIME PERIOD	VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	0	0	0	1067	41	1108	6	0	6	1	0	1	0	0	0	1	0	1	1463	53	1516	
6:15 - 7:15	0	0	0	1068	37	1105	8	0	8	1	0	1	0	0	0	0	0	0	1597	56	1653	
6:30 - 7:30	0	0	0	1069	34	1103	10	0	10	1	0	1	0	0	0	1	0	1	1714	58	1772	
6:45 - 7:45	0	0	0	1047	33	1080	14	0	14	1	0	1	0	0	0	2	0	2	1724	58	1782	Peak
7:00 - 8:00	0	0	0	1049	32	1081	14	0	14	5	0	5	0	0	0	4	0	4	1688	61	1749	
7:15 - 8:15	0	0	0	1049	35	1084	13	0	13	6	0	6	0	0	0	7	0	7	1622	62	1684	
7:30 - 8:30	0	0	0	1041	32	1073	12	0	12	7	0	7	0	0	0	7	0	7	1511	59	1570	
7:45 - 8:45	0	0	0	999	35	1034	8	0	8	9	0	9	0	0	0	6	0	6	1419	61	1480	
8:00 - 9:00	0	0	0	902	36	938	6	0	6	4	0	4	0	0	0	4	0	4	1265	59	1324	

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 17:00	4	0	4	1086	24	1110	0	0	0	0	0	0	0	0	0	0	0	0
16:15 - 17:15	4	0	4	1160	35	1195	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 17:30	3	0	3	1210	29	1239	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:45	1	0	1	1240	33	1273	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 18:00	0	0	0	1327	34	1361	0	0	0	0	0	0	0	0	0	0	0	0
17:15 - 18:15	0	0	0	1326	36	1362	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 18:30	0	0	0	1339	40	1379	0	0	0	0	0	0	0	0	0	0	0	0
17:45 - 18:45	0	0	0	1344	38	1382	0	0	0	0	0	0	0	0	0	0	0	0
18:00 - 19:00	0	0	0	1155	34	1189	0	0	0	0	0	0	0	0	0	0	0	0

TIME PERIOD	VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	0	0	0	580	8	588	2	0	2	29	0	29	0	0	0	18	0	18	1719	32	1751	
16:15 - 17:15	0	0	0	458	7	465	2	0	2	8	0	8	0	0	0	16	0	16	1648	42	1690	
16:30 - 17:30	0	0	0	414	8	422	1	0	1	4	0	4	0	0	0	11	0	11	1643	37	1680	
16:45 - 17:45	0	0	0	405	10	415	0	0	0	5	0	5	0	0	0	10	0	10	1661	43	1704	
17:00 - 18:00	0	0	0	397	10	407	1	0	1	4	0	4	0	0	0	9	0	9	1738	44	1782	Peak
17:15 - 18:15	0	0	0	383	11	394	2	0	2	6	0	6	0	0	0	6	0	6	1723	47	1770	
17:30 - 18:30	0	0	0	369	9	378	3	0	3	5	0	5	0	0	0	8	0	8	1724	49	1773	
17:45 - 18:45	0	0	0	329	7	336	3	0	3	3	0	3	0	0	0	6	0	6	1685	45	1730	
18:00 - 19:00	0	0	0	297	6	303	2	0	2	3	0	3	0	0	0	6	0	6	1463	40	1503	

Intersection of Morebank Avenue and Military Site Access 2

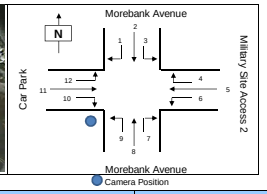
Tuesday, 7 December 2010

Austraffic

Survey Start **6:00 AM** **16:00 PM**
Intersection Type Cross Junction
Intersection No. **13**
North Approach **Morebank Avenue**
East Approach **Military Site Access 2**
South Approach **Morebank Avenue**
West Approach **Car Park**

Date **7/12/10**

Classification **Light Heavy**



TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL		
	1			2			3			4			5			6			7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	0	0	0	36	0	36	6	0	6	2	0	2	0	0	0	1	0	1	4	0	4	265	9	274	0	0	0	0	0	0	0	0	0	0	0	0	314	9	323
6:15 - 6:30	0	0	0	65	1	66	10	1	11	1	0	1	0	0	0	0	0	0	5	0	5	266	12	278	0	0	0	0	0	0	0	0	0	0	0	0	347	14	361
6:30 - 6:45	0	0	0	98	4	102	13	1	14	0	0	0	0	0	0	0	0	0	2	0	2	297	12	309	0	0	0	0	0	0	0	0	0	0	0	0	410	17	427
6:45 - 7:00	0	0	0	130	4	134	21	0	21	1	0	1	0	0	0	0	0	0	5	0	5	271	8	279	0	0	0	0	0	0	0	0	0	0	0	0	428	12	440
7:00 - 7:15	0	0	0	144	5	149	22	1	23	1	1	2	0	0	0	0	0	0	6	0	6	271	4	275	0	0	0	0	0	0	0	0	0	0	0	0	444	11	455
7:15 - 7:30	0	0	0	146	5	151	23	3	26	4	0	4	0	0	0	2	0	2	7	0	7	285	8	293	0	0	0	0	0	0	0	0	0	0	0	0	467	16	483
7:30 - 7:45	0	0	0	112	5	117	13	2	15	0	0	0	0	0	0	2	1	3	2	0	2	263	9	272	0	0	0	0	0	0	1	0	1	0	1	1	393	17	410
7:45 - 8:00	0	0	0	95	7	102	12	1	13	2	1	3	0	0	0	1	0	1	4	0	4	277	5	282	0	0	0	0	0	0	0	0	0	0	0	0	391	14	405
8:00 - 8:15	0	0	0	86	4	90	9	0	9	4	1	5	0	0	0	2	0	2	5	0	5	251	7	258	0	0	0	0	0	0	0	0	0	0	0	0	357	12	369
8:15 - 8:30	0	0	0	71	6	77	10	1	11	7	2	9	0	0	0	3	0	3	5	0	5	253	6	259	0	0	0	0	0	0	0	0	0	0	0	0	349	15	364
8:30 - 8:45	0	0	0	93	2	95	4	4	8	2	1	3	0	0	0	4	0	4	4	1	5	223	10	233	0	0	0	0	0	0	0	0	0	1	0	1	331	18	349
8:45 - 9:00	0	0	0	59	1	60	1	3	4	0	3	3	0	0	0	3	0	3	3	1	4	170	4	174	0	0	0	0	0	0	0	0	0	0	0	0	236	12	248
Σ	0	0	0	1135	44	1179	144	17	161	24	9	33	0	0	0	18	1	19	52	2	54	3092	94	3186	0	0	0	0	0	0	0	0	0	2	0	2	4467	167	4634

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL		
	1			2			3			4			5			6			7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	0	0	0	243	3	246	3	0	3	16	1	17	0	0	0	7	0	7	1	0	1	161	2	163	0	0	0	35	0	35	0	0	0	49	0	49	515	6	521
16:15 - 16:30	0	0	0	281	12	293	2	0	2	9	0	9	0	0	0	5	1	6	0	0	0	124	2	126	0	0	0	4	0	4	0	0	0	7	0	7	432	15	447
16:30 - 16:45	0	0	0	290	4	294	1	0	1	11	0	11	0	0	0	1	0	1	0	1	1	95	1	96	0	0	0	4	0	4	0	0	0	6	0	6	408	6	414
16:45 - 17:00	0	0	0	295	4	299	2	1	3	4	0	4	0	0	0	5	0	5	1	0	1	86	3	89	0	0	0	2	0	2	0	0	0	5	0	5	400	8	408
17:00 - 17:15	0	0	0	312	10	322	1	0	1	5	0	5	0	0	0	0	0	0	0	0	0	96	2	98	0	0	0	0	0	0	0	0	0	3	0	3	417	12	429
17:15 - 17:30	0	0	0	324	6	330	1	1	2	5	0	5	0	0	0	1	0	1	0	0	0	93	3	96	0	0	0	1	0	1	0	0	0	0	0	0	425	10	435
17:30 - 17:45	0	0	0	313	6	319	3	0	3	3	2	5	0	0	0	1	0	1	0	0	0	96	1	97	0	0	0	1	0	1	0	0	0	2	0	2	419	9	428
17:45 - 18:00	0	0	0	357	8	365	0	0	0	5	0	5	0	0	0	2	0	2	0	0	0	84	2	86	0	0	0	1	0	1	0	0	0	1	0	1	450	10	460
18:00 - 18:15	0	0	0	332	16	348	0	0	0	1	0	1	0	0	0	1	0	1	1	0	1	84	3	87	0	0	0	2	0	2	0	0	0	6	0	6	427	19	446
18:15 - 18:30	0	0	0	341	9	350	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	79	0	79	0	0	0	1	0	1	1	0	1	3	0	3	426	10	436
18:30 - 18:45	1	0	1	319	4	323	2	0	2	1	0	1	0	0	0	1	0	1	0	0	0	61	1	62	0	0	0	0	0	0	1	0	1	0	0	0	386	5	391
18:45 - 19:00	0	0	0	192	5	197	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	61	1	62	0	0	0	0	0	0	0	0	0	0	0	0	255	6	261
Σ	1	0	1	3599	87	3686	16	2	18	62	4	66	0	0	0	24	1	25	3	1	4	1120	21	1141	0	0	0	51	0	51	2	0	2	82	0	82	4960	116	5076

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL			
	1			2			3			4			5			6			7			8			9			10			11			12						
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	0	0	0	329	9	338	50	2	52	4	0	4	0	0	0	1	0	1	16	0	16	1099	41	1140	0	0	0	0	0	0	0	0	0	0	0	0	1499	52	1551	
6:15 - 7:15	0	0	0	437	14	451	66	3	69	3	1	4	0	0	0	0	0	0	18	0	18	1105	36	1141	0	0	0	0	0	0	0	0	0	0	0	0	1629	54	1683	
6:30 - 7:30	**0**	**0**	**0**	**518**	**18**	**536**	**79**	**5**	**84**	**6**	**1**	**7**	**0**	**0**	**0**	**2**	**0**	**2**	**20**	**0**	**20**	**1124**	**32**	**1156**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1749**	**56**	**1805**	**Peak**
6:45 - 7:45	0	0	0	532	19	551	79	6	85	6	1	7	0	0	0	4	1	5	20	0	20	1090	29	1119	0	0	0	0	0	0	0	0	0	1	0	1	1732	56	1788	
7:00 - 8:00	0	0	0	497	22	519	70	7	77	7	2	9	0	0	0	5	1	6	19	0	19	1096	26	1122	0	0	0	0	0	0	1	0	1	0	1	1	1695	58	1753	
7:15 - 8:15	0	0	0	439	21	460	57	6	63	10	2	12	0	0	0	7	1	8	18	0	18	1076	29	1105	0	0	0	0	0	0	0	0	0	1	0	1	1608	59	1667	
7:30 - 8:30	0	0	0	364	22	386	44	4	48	13	4	17	0	0	0	8	1	9	16	0	16	1044	27	1071	0	0	0	0	0	0	0	0	0	1	0	1	1490	58	1548	
7:45 - 8:45	0	0	0	345	19	364	35	6	41	15	5	20	0	0	0	10	0	10	16	1	17	1004	28	1032	0	0	0	0	0	0	0	0	0	1	0	1	1428	59	1487	
8:00 - 9:00	0	0	0	309	13	322	24	8	32	13	7	20	0	0	0	12	0	12	17	2	19	897	27	924	0	0	0	0	0	0	0	0	0	1	0	1	1273	57	1330	

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL			
	1			2			3			4			5			6			7			8			9			10			11			12						
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	**0**	**0**	**0**	**1108**	**23**	**1132**	**8**	**1**	**9**	**40**	**1**	**41**	**0**	**0**	**0**	**18**	**1**	**19**	**2**	**1**	**3**	**466**	**8**	**474**	**0**	**0**	**0**	**45**	**0**	**45**	**0**	**0**	**0**	**67**	**0**	**67**	**1755**	**35**	**1790**	**Peak**
16:15 - 17:15	0	0	0	1178	30	1208	6	1	7	29	0	29	0	0	0	11	1	12	1	1	2	401	8	409	0	0	0	10	0	10	0	0	0	21	0	21	1657	41	1698	
16:30 - 17:30	0	0	0	1221	24	1245	5	2	7	25	0	25	0	0	0	7	0	7	1	0	1	370	9	379	0	0	0	7	0	7	0	0	0	14	0	14	1650	36	1686	
16:45 - 17:45	0	0	0	1244	26	1270	7	2	9	17	2	19	0	0	0	7	0	7	1	0	1	371	9	380	0	0	0	4	0	4	0	0	0	10	0	10	1661	39	1700	
17:00 - 18:00	0	0	0	1206	30	1236	5	1	6	18	2	20	0	0	0	4	0	4	0	0	0	369	8	377	0	0	0	3	0	3	0	0	0	6	0	6	1711	41	1752	
17:15 - 18:15	0	0	0	1326	36	1362	4	1	5	14	2	16	0	0	0	5	0	5	1	0	1	357	9	366	0	0	0	5	0	5	0	0	0	9	0	9	1721	48	1769	
17:30 - 18:30	0	0	0	1343	39	1382	3	0	3	10	3	13	0	0	0	4	0	4	1	0	1	343	6	349	0	0	0	5	0	5	1	0	1	12	0	12	1722	48	1770	
17:45 - 18:45	1	0	1	1349	37	1386	2	0	2	8	1	9	0	0	0	4	0	4	1	0	1	308	6	314	0	0	0	4	0	4	2	0	2	10	0	10	1689	44	1733	
18:00 - 19:00	1	0	1	1184	34	1218	3	0	3	4	1	5	0	0	0	2	0	2	1	0	1	285	5	290	0	0	0	3	0	3	2	0	2	9	0	9	1494	40	1534	

Intersection of Moorebank Avenue and Chatham Avenue

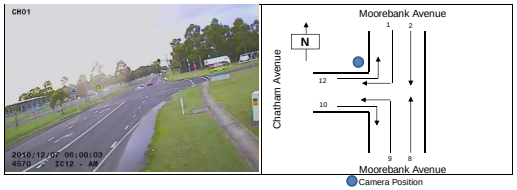
Tuesday, 7 December 2010

Austraffic

Survey Start **6:00 AM 16:00 PM**
Intersection Type T Junction
Intersection No. **12**
North Approach **Moorebank Avenue**
East Approach
South Approach **Moorebank Avenue**
West Approach **Chatham Avenue**

Date **7/12/10**

Classification **Light Heavy**



TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL		
	1			2			3			4			5			6			7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	11	0	11	26	0	26																272	10	282	2	0	2	0	0	0				2	0	2	313	10	323
6:15 - 6:30	19	0	19	40	1	41																260	11	271	4	0	4	0	0	0				2	0	2	325	12	337
6:30 - 6:45	14	1	15	75	2	77																305	13	318	6	0	6	0	0	0				3	0	3	403	16	419
6:45 - 7:00	20	0	20	99	4	103																281	7	288	10	0	10	0	0	0				1	0	1	411	11	422
7:00 - 7:15	35	0	35	101	5	106																267	5	272	14	0	14	1	1	2				7	0	7	425	11	436
7:15 - 7:30	42	1	43	91	5	96																281	8	289	10	0	10	1	1	2				3	0	3	428	15	443
7:30 - 7:45	22	0	22	97	5	102																268	8	276	5	0	5	6	1	7				3	1	4	401	15	416
7:45 - 8:00	13	0	13	85	6	91																266	5	271	3	0	3	3	0	3				7	0	7	377	11	388
8:00 - 8:15	15	0	15	67	5	72																256	8	264	8	0	8	9	0	9				4	0	4	359	13	372
8:15 - 8:30	5	1	6	73	6	79																256	5	261	2	2	4	3	0	3				8	1	9	347	15	362
8:30 - 8:45	10	0	10	84	3	87																213	7	220	6	0	6	3	0	3				6	2	8	322	12	334
8:45 - 9:00	8	0	8	55	1	56																170	3	173	7	0	7	5	0	5				8	0	8	253	4	257
Σ	214	3	217	893	43	936																3095	90	3185	77	2	79	31	3	34				54	4	58	4364	145	4509

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL		
	1			2			3			4			5			6			7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	7	0	7	280	4	284																112	2	114	2	0	2	18	0	18				49	0	49	468	6	474
16:15 - 16:30	3	0	3	300	13	313																106	2	108	2	0	2	4	0	4				17	0	17	432	15	447
16:30 - 16:45	3	0	3	290	4	294																81	2	83	1	0	1	7	0	7				13	0	13	395	6	401
16:45 - 17:00	4	0	4	297	5	302																73	3	76	2	0	2	4	0	4				12	0	12	392	8	400
17:00 - 17:15	8	0	8	302	7	309																82	3	85	0	0	0	3	0	3				14	1	15	409	11	420
17:15 - 17:30	3	0	3	328	8	336																87	1	88	5	0	5	2	0	2				12	0	12	437	9	446
17:30 - 17:45	7	0	7	306	6	312																83	1	84	4	0	4	0	0	0				6	0	6	406	7	413
17:45 - 18:00	6	0	6	349	8	357																79	2	81	0	0	0	4	0	4				4	0	4	442	10	452
18:00 - 18:15	9	0	9	324	15	339																85	3	88	1	0	1	2	0	2				3	0	3	424	18	442
18:15 - 18:30	8	0	8	339	10	349																72	0	72	1	0	1	0	0	0				5	0	5	425	10	435
18:30 - 18:45	2	0	2	321	4	325																55	1	56	1	0	1	0	0	0				3	0	3	382	5	387
18:45 - 19:00	1	0	1	194	5	199																54	1	55	1	0	1	2	0	2				7	0	7	259	6	265
Σ	61	0	61	3630	89	3719																969	21	990	20	0	20	46	0	46				145	1	146	4871	111	4982

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL		
	1			2			3			4			5			6			7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 7:00	64	1	65	240	7	247																1118	41	1159	22	0	22	0	0	0				8	0	8	1452	49	1501
6:15 - 7:15	88	1	89	315	12	327																1113	36	1149	34	0	34	1	1	2				13	0	13	1564	50	1614
6:30 - 7:30	**111**	**2**	**113**	**366**	**16**	**382**																**1134**	**33**	**1167**	**40**	**0**	**40**	**2**	**2**	**4**				**14**	**0**	**14**	**1667**	**53**	**1720**	**Peak**
6:45 - 7:45	119	1	120	388	19	407																1097	28	1125	39	0	39	8	3	11				14	1	15	1665	52	1717
7:00 - 8:00	112	1	113	374	21	395																1082	26	1108	32	0	32	11	3	14				20	1	21	1631	52	1683
7:15 - 8:15	92	1	93	340	21	361																1071	29	1100	26	0	26	19	2	21				17	1	18	1565	54	1619
7:30 - 8:30	55	1	56	322	22	344																1046	26	1072	18	2	20	21	1	22				22	2	24	1484	54	1538
7:45 - 8:45	43	1	44	309	20	329																991	25	1016	19	2	21	16	0	16				25	3	28	1405	51	1456
8:00 - 9:00	38	1	39	279	15	294																895	23	918	23	2	25	20	0	20				26	3	29	1281	44	1325

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL		
	1			2			3			4			5			6			7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 17:00	17	0	17	1167	26	1193																372	9	381	7	0	7	33	0	33				91	0	91	1687	35	1722
16:15 - 17:15	18	0	18	1189	29	1218																342	10	352	5	0	5	18	0	18				56	1	57	1628	40	1668
16:30 - 17:30	18	0	18	1217	24	1241																323	9	332	8	0	8	15	0	15				51	1	52	1633	34	1667
16:45 - 17:45	22	0	22	1233	26	1259																325	8	333	11	0	11	9	0	9				44	1	45	1644	35	1679
17:00 - 18:00	24	0	24	1285	29	1314																331	7	338	9	0	9	9	0	9				36	1	37	1694	37	1731
17:15 - 18:15	**25**	**0**	**25**	**1307**	**37**	**1344**																**334**	**7**	**341**	**10**	**0**	**10**	**8**	**0**	**8**				**25**	**0**	**25**	**1709**	**44**	**1753**	**Peak**
17:30 - 18:30	30	0	30	1318	39	1357																319	6	325	6	0	6	6	0	6				18	0	18	1697	45	1742
17:45 - 18:45	25	0	25	1333	37	1370																291	6	297	3	0	3	6	0	6				15	0	15	1673	43	1716
18:00 - 19:00	20	0	20	1178	34	1212																266	5	271	4	0	4	4	0	4				18	0	18	1490	39	1529

Intersection of South Western Motorway (M5) and Morebank Avenue

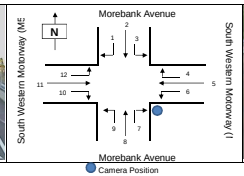
Tuesday, 7 December 2010

Austraffic

Survey Start 6:00 AM 16:00 PM
Intersection Type Cross Junction
Intersection No. 2
North Approach Morebank Avenue
East Approach South Western Motorway (M5)
South Approach Morebank Avenue
West Approach South Western Motorway (M5)

Date 7/12/10

Classification Light Heavy



TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	45	12	57	15	1	16	2	1	3	12	2	14	405	52	457	16	0	16	57	4	61	113	2	115	20	0	20	56	3	59	728	121	849	302	37	339	1771	236	2006
6:15 - 6:30	46	19	65	17	4	21	1	2	3	18	4	22	590	84	674	13	0	13	54	5	59	137	11	148	14	0	14	55	7	62	743	122	865	323	28	351	2011	286	2297
6:30 - 6:45	59	26	85	24	3	27	0	1	1	25	3	28	687	90	777	27	2	29	57	5	62	130	5	135	28	3	31	68	3	71	740	120	860	309	33	342	2154	294	2448
6:45 - 7:00	64	29	93	31	4	35	3	1	4	32	1	33	646	83	729	39	3	42	68	4	72	126	2	128	28	0	28	109	2	111	830	117	947	291	38	329	2267	284	2551
7:00 - 7:15	46	13	59	38	4	42	3	4	7	39	2	41	678	72	750	46	4	50	75	3	78	135	4	139	22	6	28	126	0	126	828	109	937	280	28	308	2316	249	2565
7:15 - 7:30	59	28	87	28	2	30	1	2	3	51	2	53	821	98	919	58	3	61	66	3	69	140	2	142	39	9	48	107	5	112	816	69	885	340	29	369	2526	252	2778
7:30 - 7:45	74	26	100	19	3	22	0	3	3	56	1	57	834	100	934	42	3	45	69	3	72	161	8	169	37	7	44	92	4	96	814	74	888	354	30	384	2552	262	2814
7:45 - 8:00	66	35	101	40	6	46	4	5	9	45	3	48	926	88	1014	52	3	55	68	1	69	141	6	147	57	5	62	72	4	76	763	79	842	380	34	414	2604	269	2873
8:00 - 8:15	71	25	96	32	3	35	0	0	0	51	3	54	970	91	1061	43	4	47	72	2	74	155	6	161	58	9	67	88	4	92	736	93	829	349	30	379	2619	277	2896
8:15 - 8:30	80	17	97	23	2	25	7	2	9	61	4	65	921	100	1021	49	4	53	56	3	59	120	5	125	55	9	64	61	2	63	740	96	836	316	27	343	2489	271	2760
8:30 - 8:45	70	25	95	34	6	40	10	6	16	43	3	46	826	121	947	49	4	53	51	1	52	108	6	114	45	4	49	76	3	79	702	114	816	230	23	253	2244	316	2560
8:45 - 9:00	81	23	104	21	2	23	6	6	12	53	2	55	800	89	889	39	2	41	43	3	46	85	3	88	31	5	36	41	2	43	647	113	760	299	36	335	2146	286	2432
Σ	761	278	1039	312	40	352	37	40	77	486	30	516	9104	1068	10172	473	32	505	726	37	763	1551	60	1611	434	57	491	949	39	988	9087	1227	10314	3773	373	4146	27693	3281	30974

U TURNS

TIME PERIOD	VEHICLE MOVEMENT NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	0	0	0	0	0	0	0	0	0	4	0	4
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	2	0	2
6:45 - 7:00	0	0	0	0	0	0	0	0	0	2	0	2
7:00 - 7:15	0	0	0	0	0	0	0	0	0	2	2	4
7:15 - 7:30	0	0	0	0	0	0	0	0	0	1	0	1
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	2	2	4
8:00 - 8:15	0	0	0	0	0	0	0	0	0	3	0	3
8:15 - 8:30	0	0	0	0	0	0	0	0	0	4	1	5
8:30 - 8:45	0	0	0	0	0	0	0	0	0	3	0	3
8:45 - 9:00	0	0	0	0	0	0	0	0	0	5	0	5
Σ	0	0	0	0	0	0	0	0	0	28	5	33

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	290	29	319	103	4	107	13	3	16	18	1	19	904	121	1025	74	0	74	67	1	68	46	5	51	133	4	137	57	0	57	823	61	884	114	21	135	2642	250	2892
16:15 - 16:30	241	26	267	115	2	117	11	2	13	7	4	11	1000	98	1098	80	4	84	35	2	37	32	2	34	64	2	66	42	4	46	887	59	946	108	21	129	2622	226	2848
16:30 - 16:45	282	23	305	115	10	125	14	1	15	18	5	23	1027	82	1109	77	0	77	50	1	51	35	1	36	70	0	70	45	2	47	824	66	890	114	13	127	2671	204	2875
16:45 - 17:00	281	28	309	137	4	141	19	3	22	15	1	16	960	76	1036	74	5	79	54	0	54	30	4	34	44	4	48	52	2	54	863	41	904	105	26	131	2634	194	2828
17:00 - 17:15	277	24	301	164	3	167	36	1	37	11	6	17	967	93	1060	83	3	86	61	3	64	29	4	33	83	5	88	45	3	48	951	83	1034	104	14	118	2801	198	2999
17:15 - 17:30	322	18	340	152	4	156	28	2	30	10	3	13	1023	65	1088	72	1	73	52	1	53	38	2	40	52	3	55	60	1	61	930	54	984	117	26	143	2856	180	3036
17:30 - 17:45	265	32	297	141	1	142	13	3	16	6	5	11	486	33	519	78	2	80	48	0	48	25	3	28	49	1	50	69	1	70	707	33	740	124	17	141	2011	131	2142
17:45 - 18:00	215	16	231	121	2	123	9	1	10	7	4	11	450	35	485	82	2	84	29	0	29	33	1	34	29	3	32	90	1	91	687	36	723	161	25	186	1913	126	2039
18:00 - 18:15	210	13	223	120	0	120	14	0	14	11	9	20	330	32	362	80	1	81	36	0	36	44	0	44	59	2	61	81	3	84	722	35	757	159	28	187	1866	123	1989
18:15 - 18:30	185	14	199	83	2	85	8	1	9	18	8	26	498	30	528	83	2	85	27	1	28	34	0	34	38	2	40	70	0	70	728	36	764	168	19	187	1940	115	2055
18:30 - 18:45	170	14	184	82	1	83	10	0	10	8	9	17	856	59	915	80	2	82	23	0	23	25	0	25	31	0	31	61	0	61	737	41	778	76	12	88	2158	136	2294
18:45 - 19:00	130	16	146	60	0	60	5	1	6	15	5	20	667	43	710	71	1	72	30	1	31	33	1	34	30	0	30	43	0	43	574	62	7	69	1702	93	1795
Σ	2868	253	3121	1383	33	1416	180	18	198	144	60	204	9168	767	9935	934	23	957	512	10	522	404	23	427	682	22	704	715	17	732	9415	523	9938	1412	229	1641	27817	1978	29795

TIME PERIOD	VEHICLE MOVEMENT NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	0	0	0	0	0	0	0	0	0	5	0	5
16:15 - 16:30	0	0	0	0	0	0	0	0	0	6	0	6
16:30 - 16:45	0	0	0	1	0	1	0	0	0	11	1	12
16:45 - 17:00	0	0	0	1	0	1	0	0	0	2	0	2
17:00 - 17:15	0	0	0	0	0	0	0	0	0	6	3	9
17:15 - 17:30	0	0	0	1	0	1	0	0	0	5	0	5
17:30 - 17:45	0	0	0	1	1	2	0	0	0	4	0	4
17:45 - 18:00	0	0	0	0	0	0	0	0	0	1	0	1
18:00 - 18:15	0	0	0	0	0	0	0	0	0	1	0	1
18:15 - 18:30	0	0	0	0	0	0	0	0	0	4	0	4
18:30 - 18:45	0	0	0	0	0	0	0	0	0	3	0	3
18:45 - 19:00	0	0	0	0	0	0	0	0	0	1	0	1
Σ	0	0	0	2	2	4	0	0	0	49	4	53

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 7:00	214	86	300	87	12	99	6	5	11	87	10	97	2328	309	2637	95	5	100	236	18	254	506	20	526	90	3	93	288	15	303	3041	480	3521	1225	136	1361	8203	1099	9302
6:15 - 7:15	215	87	302	110	16	126	7	8	15	114	10	124	2601	329	2930	126	8	134	254	17	271	528	22	550	92	9	101	358	12	370	3141	468	3609	1203	127	1330	8748	1113	9861
6:30 - 7:30	228	96	324	113	13	126	7	8	15	127	8	135	2832	343	3175	170	12	182	266	15	281	591	13	604	117	19	136	410	10	420	3214	415	3629	1220	128	1348	9263	1079	10342
6:45 - 7:45	243	96	339	116	13	129	7	10	17	178	6	184	2979	353	3332	185	13	198	278	13	291	562	16	578	126	22	148	434	11	445	3288	369	3657	1265	125	1390	9661	1047	10708
7:00 - 8:00	245	102	347	125	14	139	8	14	22	191	8	199	3259	358	3617	196	15	211	288	17	305	578	20	598	155	27	182	397	13	410	3231	311	3542	1304	121	1425	9898	1032	10930
7:15 - 8:15	270	114	384	109	14	123	5	17	22	203	9	212	3351	377	3728	195	13	208	265	9	274	597	22	619	191	30	221	357	17	374	3129	315	3444	1423	123	1546	10296	1060	11356
7:30 - 8:30	291	103	394	104	14	118	11	17	28	213	11	224	3651	379	4030	186	14	200	255	9	264	577	25	602	207	30	237	311	14	325	3053	342	3395	1399	121	1520	10258	1079	11337
7:45 - 8:45	287	102	389	119	17	136	21	20	41	200	13	213	3643	400	4043	193	15	208	237	7	244	524	23	547	215	27	242	295	13	308	2941	382	3323	1275	114	1389	9950	1133	11083
8:00 - 9:00	302	90	392	100	13	113	23	21	44	208	12	220	3517	401	3918	180	14	194	222	9	231	468	20	488	189	27	216	264	11	275	2825	416	3241	1194	116	1310	9492	1150	10642

TIME PERIOD	VEHICLE MOVEMENT NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 7:00	0	0	0	0	0	0	0	0	0	8	0	8
6:15 - 7:15	0	0	0	0	0	0	0	0	0	6	2	8
6:30 - 7:30	0	0	0	0	0	0	0	0	0	7	2	9
6:45 - 7:45	0	0	0	0	0	0	0	0	0	5	2	7
7:00 - 8:00	0	0	0	0	0	0	0	0	0	7	3	10
7:15 - 8:15	0	0	0	0	0	0	0	0	0	6	2	8
7:30 - 8:30	0	0	0	0	0	0	0	0	0	9	3	12
7:45 - 8:45	0	0	0	0	0	0	0	0	0	12	3	15
8:00 - 9:00	0	0	0	0	0	0	0	0	0	15	1	16

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 17:00	1094	106	1200	470	20	490	57	9	66	58	11	69	3891	377	4268	305	9	314	206	4	210	143	12	155	311	10	321	196	8	204	3397	227	3624	441	81	522	10569	874	11443
16:15 - 17:15	1081	101	1182	521	19	540	80	7	87	51	16	67	3954	349	4303	314	12	326	200	6	206	126	11	137	261	7	268	184	11	195	3525	209	3734	431	74	505	10728	822	11550
16:30 - 17:30	1162	93	1255	558	21	579	97	7	104	54	15	69	3977	316	4293	306	9	315	217	5	222	132	11	143	249	8	257	202	8	210	3566	204	3772	440	79	519	10962	776	11738
16:45 - 17:45	1145	102	1247	584	12	596	96	9	105	42	15	57	3436	267	3703	307	11	318	215	4	219	122	13	135	226	7	233	226	7	233	3451	171	3622	450	83	533	10302	703	11005
17:00 - 18:00	1079	90	1168	568	10	578	86	7	93	34	18	52	2926	226	3152	316	7	323	190	4	194	125	10	135	213	8	221	264	6	270	3275	166	3441	506	82	588	9647	626	10273
17:15 - 18:15	1012	79	1091	534	7	541	64	6	70	34	21	55	2389	165	2454	312	6	318	165	1	166	140	6	146	189	9	198	300	6	306	3046	158	3204	561	96	657	8646	560	9206
17:30 - 18:30	975	75	1050	465	5	470	44	5	49	42	26	68	1764	130	1894	323	7	330	140	1	141	136	4	140	175	8	183	310	5	315	2844	140	2984	512	89	701	7780	485	8265
17:45 - 18:45	780	57	837	406	5	411	41	2	43	44	30	74	2134	156	2290	325	7	332	135	1	136	136	1	137	157	7	164	302	4	306	2874	148	3022	564	84	648	7878	502	8380
18:00 - 19:00	695	57	752	345	3	348	37	2	39	52	31	83	2351	164	2515	314	6	320	116	2	118	136	1	137	158	4	162	255	3	258	2743	130	2873	465	66	531	7867	469	8136

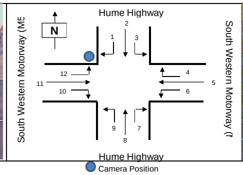
TIME PERIOD	VEHICLE MOVEMENT NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 17:00	0	0	0	1	1	2	0	0	0	24	1	25
16:15 - 17:15	0	0	0	1	1	2	0	0	0	25	4	29
16:30 - 17:30	0	0	0	2	1	3	0	0	0	24	4	28
16:45 - 17:45	0	0	0	2	1	3	0	0	0	17	3	20
17:00 - 18:00	0	0	0	1	1	2	0	0	0	18	2	19
17:15 - 18:15	0	0	0	1	1	2	0	0	0	11	0	11
17:30 - 18:30	0	0	0	0	1	1	0	0	0	10	0	10
17:45 - 18:45	0	0	0	0	0	0	0	0	0	8	0	8
18:00 - 19:00	0	0	0	0	0	0	0	0	0	9	0	9

Intersection of South Western Motorway (M5) and Hume Highway

Tuesday, 7 December 2010

Austraffic

Survey Start	6:00 AM	16:00 PM
Intersection Type	Cross Junction	
Intersection No.	1	
North Approach	Hume Highway	
East Approach	South Western Motorway (M5)	
South Approach	Hume Highway	
West Approach	South Western Motorway (M5)	
Date	7/12/10	
Classification	Light	Heavy



TIME PERIOD	VEHICLE MOVEMENT																	
	1			2			3			4			5			6		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	0	0	0	121	18	139	124	6	130	100	8	108	342	52	394	26	3	29
6:15 - 6:30	0	0	0	191	12	203	127	11	138	114	6	120	494	97	591	20	2	22
6:30 - 6:45	0	0	0	219	18	237	157	9	166	148	11	159	617	101	718	47	2	49
6:45 - 7:00	0	0	0	209	25	234	202	10	212	133	7	140	601	95	696	31	3	34
7:00 - 7:15	0	0	0	208	29	237	187	16	203	106	19	125	589	94	683	26	2	28
7:15 - 7:30	0	0	0	184	23	207	165	6	171	164	16	180	705	114	819	42	2	44
7:30 - 7:45	0	0	0	272	24	296	143	7	150	188	11	199	765	127	892	62	5	67
7:45 - 8:00	0	0	0	242	30	272	146	12	158	263	8	271	758	118	876	61	4	65
8:00 - 8:15	0	0	0	232	16	248	127	9	136	271	8	279	797	110	907	71	4	75
8:15 - 8:30	0	0	0	256	20	276	144	5	149	178	7	185	785	105	890	68	4	72
8:30 - 8:45	0	0	0	277	10	287	123	8	131	202	14	216	746	130	876	56	6	62
8:45 - 9:00	0	0	0	244	14	258	108	12	120	206	10	216	675	108	783	83	4	87
Σ	0	0	0	2655	239	2894	1753	111	1864	2073	125	2198	7874	1251	9125	593	41	634

TIME PERIOD	VEHICLE MOVEMENT																	GRAND TOTAL		
	7			8			9			10			11			12				
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	163	7	170	639	37	676	0	0	0	0	0	0	740	128	868	0	0	0	2255	259	2514
6:15 - 6:30	134	11	145	808	53	861	0	0	0	0	0	0	802	134	936	0	0	0	2690	326	3016
6:30 - 6:45	150	7	157	757	43	800	0	0	0	0	0	0	780	140	920	0	0	0	2875	331	3206
6:45 - 7:00	165	5	170	744	33	777	0	0	0	0	0	0	891	127	1018	0	0	0	2976	305	3281
7:00 - 7:15	140	8	148	841	52	893	0	0	0	0	0	0	898	125	1023	0	0	0	2995	345	3340
7:15 - 7:30	161	4	165	841	44	885	0	0	0	0	0	0	885	85	970	0	0	0	3147	294	3441
7:30 - 7:45	146	4	150	886	37	923	0	0	0	0	0	0	966	94	1060	0	0	0	3428	309	3737
7:45 - 8:00	131	6	137	907	41	948	0	0	0	0	0	0	923	90	1013	0	0	0	3431	309	3740
8:00 - 8:15	124	4	128	875	39	914	0	0	0	0	0	0	868	122	990	0	0	0	3365	312	3677
8:15 - 8:30	130	6	136	847	39	886	0	0	0	0	0	0	838	114	952	0	0	0	3246	300	3546
8:30 - 8:45	118	6	124	704	38	742	0	0	0	0	0	0	792	131	923	0	0	0	3018	343	3361
8:45 - 9:00	102	6	108	728	33	761	0	0	0	0	0	0	768	133	901	0	0	0	2914	320	3234
Σ	1664	74	1738	9577	489	10066	0	0	0	0	0	0	10151	1423	11574	0	0	0	36340	3753	40093

U TURNS

TIME PERIOD	VEHICLE MOVEMENT											
	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	0	0	0	0	0	0	0	0	0	0	0	0
6:15 - 6:30	0	0	0	0	0	0	0	0	0	0	0	0
6:30 - 6:45	0	0	0	0	0	0	0	0	0	0	0	0
6:45 - 7:00	0	0	0	1	0	1	0	0	0	0	0	0
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	3	0	3	0	0	0	0	0	0
7:45 - 8:00	0	0	0	2	1	3	0	0	0	0	0	0
8:00 - 8:15	0	0	0	1	0	1	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0
Σ	0	0	0	7	1	8	0	0	0	0	0	0

TIME PERIOD	VEHICLE MOVEMENT																	
	1			2			3			4			5			6		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	0	0	0	636	22	658	186	12	198	247	10	257	880	131	1011	205	3	208
16:15 - 16:30	0	0	0	620	16	636	179	5	184	226	12	238	867	101	968	230	10	240
16:30 - 16:45	0	0	0	544	23	567	180	5	185	247	11	258	901	100	1001	266	11	277
16:45 - 17:00	0	0	0	618	16	634	168	3	171	178	5	183	926	85	1011	204	12	216
17:00 - 17:15	0	0	0	618	15	633	183	4	187	223	7	230	798	100	898	274	6	280
17:15 - 17:30	0	0	0	635	13	648	160	3	163	209	9	218	862	84	946	325	11	336
17:30 - 17:45	0	0	0	705	17	722	175	4	179	166	11	177	303	19	322	268	17	285
17:45 - 18:00	0	0	0	667	14	681	171	4	175	149	13	162	157	9	166	338	12	350
18:00 - 18:15	0	0	0	637	11	648	149	4	153	120	10	130	168	20	188	325	16	341
18:15 - 18:30	0	0	0	606	20	626	142	5	147	155	8	163	249	36	285	364	13	377
18:30 - 18:45	0	0	0	455	19	474	139	4	143	198	6	204	481	56	537	366	9	375
18:45 - 19:00	0	0	0	546	15	561	131	4	135	147	7	154	536	48	584	226	8	234
Σ	0	0	0	7287	201	7488	1963	57	2020	2265	109	2374	7128	789	7917	3391	128	3519

TIME PERIOD	VEHICLE MOVEMENT																	GRAND TOTAL		
	7			8			9			10			11			12				
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	75	5	80	537	26	563	0	0	0	0	0	0	684	73	757	0	0	0	3450	282	3732
16:15 - 16:30	81	4	85	585	24	609	0	0	0	0	0	0	743	71	814	0	0	0	3531	243	3774
16:30 - 16:45	71	2	73	563	28	591	0	0	0	0	0	0	695	81	776	0	0	0	3467	261	3728
16:45 - 17:00	57	1	58	564	16	580	0	0	0	0	0	0	772	63	835	0	0	0	3487	201	3688
17:00 - 17:15	97	0	97	489	20	509	0	0	0	0	0	0	828	60	888	0	0	0	3510	212	3722
17:15 - 17:30	101	3	104	510	19	529	0	0	0	0	0	0	883	62	945	0	0	0	3685	204	3889
17:30 - 17:45	74	3	77	485	23	508	0	0	0	0	0	0	636	38	674	0	0	0	2812	132	2944
17:45 - 18:00	83	4	87	466	27	493	0	0	0	0	0	0	608	37	645	0	0	0	2639	120	2759
18:00 - 18:15	97	6	103	461	26	487	0	0	0	0	0	0	638	49	687	0	0	0	2595	142	2737
18:15 - 18:30	87	1	88	454	12	466	0	0	0	0	0	0	678	41	719	0	0	0	2735	136	2871
18:30 - 18:45	76	0	76	504	16	520	0	0	0	0	0	0	683	56	739	0	0	0	2902	166	3068
18:45 - 19:00	61	0	61	397	12	409	0	0	0	0	0	0	467	29	496	0	0	0	2511	123	2634
Σ	960	29	989	6015	249	6264	0	0	0	0	0	0	8315	660	8975	0	0	0	37324	2222	39546

TIME PERIOD	VEHICLE MOVEMENT											
	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	0	0	0	1	0	1	0	0	0	0	0	0
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0
16:30 - 16:45	0	0	0	0	0	0	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0
17:00 - 17:15	0	0	0	1	0	1	0	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0	0	0	0	0	0	0
17:30 - 17:45	0	0	0	1	0	1	0	0	0	0	0	0
17:45 - 18:00	0	0	0	2	0	2	0	0	0	0	0	0
18:00 - 18:15	0	0	0	0	0	0	0	0	0	0	0	0
18:15 - 18:30	0	0	0	1	0	1	0	0	0	0	0	0
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0
18:45 - 19:00	0	0	0	0	0	0	0	0	0	0	0	0
Σ	0	0	0	6	0	6	0	0	0	0	0	0

TIME PERIOD	VEHICLE MOVEMENT																	
	1			2			3			4			5			6		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 7:00	0	0	0	740	73	813	610	36	646	495	32	527	2054	345	2399	124	10	134
6:15 - 7:15	0	0	0	827	84	911	673	46	719	501	43	544	2301	387	2688	124	9	133
6:30 - 7:30	0	0	0	820	95	915	711	41	752	551	53	604	2512	404	2916	146	9	155
6:45 - 7:45	0	0	0	873	101	974	697	39	736	591	53	644	2660	430	3090	161	12	173
7:00 - 8:00	0	0	0	906	106	1012	641	41	682	721	54	775	2817	453	3270	191	13	204
7:15 - 8:15	0	0	0	930	93	1023	581	34	615	886	43	929	3025	469	3494	236	15	251
7:30 - 8:30	**0**	**0**	**0**	**1002**	**90**	**1092**	**560**	**33**	**593**	**900**	**34**	**934**	**3105**	**460**	**3565**	**262**	**17**	**279**
7:45 - 8:45	0	0	0	1007	76	1083	540	34	574	914	37	951	3086	463	3549	256	18	274
8:00 - 9:00	0	0	0	1009	60	1069	502	34	536	857	39	896	3003	453	3456	278	18	296

TIME PERIOD	VEHICLE MOVEMENT																	GRAND TOTAL			
	7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	612	30	642	2948	166	3114	0	0	0	0	0	0	3213	529	3742	0	0	0	10796	1221	12017	
6:15 - 7:15	589	31	620	3150	181	3331	0	0	0	0	0	0	3371	526	3897	0	0	0	11536	1307	12843	
6:30 - 7:30	616	24	640	3183	172	3355	0	0	0	0	0	0	3454	477	3931	0	0	0	11993	1275	13268	
6:45 - 7:45	612	21	633	3312	166	3478	0	0	0	0	0	0	3640	431	4071	0	0	0	12546	1253	13799	
7:00 - 8:00	578	22	600	3475	174	3649	0	0	0	0	0	0	3672	394	4066	0	0	0	13001	1257	14258	
7:15 - 8:15	562	18	580	3509	161	3670	0	0	0	0	0	0	3642	391	4033	0	0	0	13371	1224	14595	
7:30 - 8:30	**531**	**20**	**551**	**3515**	**156**	**3671**	**0**	**0**	**0**	**0**	**0**	**0**	**3595**	**420**	**4015**	**0**	**0**	**0**	**13470**	**1230**	**14700**	**Peak**
7:45 - 8:45	503	22	525	3333	157	3490	0	0	0	0	0	0	3421	457	3878	0	0	0	13060	1264	14324	
8:00 - 9:00	474	22	496	3154	149	3303	0	0	0	0	0	0	3266	500	3766	0	0	0	12543	1275	13818	

TIME PERIOD	VEHICLE MOVEMENT											
	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 7:00	0	0	0	1	0	1	0	0	0	0	0	0
6:15 - 7:15	0	0	0	1	0	1	0	0	0	0	0	0
6:30 - 7:30	0	0	0	1	0	1	0	0	0	0	0	0
6:45 - 7:45	0	0	0	4	0	4	0	0	0	0	0	0
7:00 - 8:00	0	0	0	5	1	6	0	0	0	0	0	0
7:15 - 8:15	0	0	0	6	1	7	0	0	0	0	0	0
7:30 - 8:30	0	0	0	6	1	7	0	0	0	0	0	0
7:45 - 8:45	0	0	0	3	1	4	0	0	0	0	0	0
8:00 - 9:00	0	0	0	1	0	1	0	0	0	0	0	0

TIME PERIOD	VEHICLE MOVEMENT																	
	1			2			3			4			5			6		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 17:00	0	0	0	2418	77	2495	713	25	738	898	38	936	3574	417	3991	905	36	941
16:15 - 17:15	0	0	0	2400	70	2470	710	17	727	874	35	909	3492	386	3878	974	39	1013
16:30 - 17:30	**0**	**0**	**0**	**2415**	**67**	**2482**	**691**	**15**	**706**	**857**	**32**	**889**	**3487**	**369**	**3856**	**1069**	**40**	**1109**
16:45 - 17:45	0	0	0	2576	61	2637	686	14	700	776	32	808	2889	288	3177	1071	46	1117
17:00 - 18:00	0	0	0	2625	59	2684	689	15	704	747	40	787	2120	212	2332	1205	46	1251
17:15 - 18:15	0	0	0	2644	55	2699	655	15	670	644	43	687	1490	132	1622	1256	56	1312
17:30 - 18:30	0	0	0	2615	62	2677	637	17	654	590	42	632	877	84	961	1295	58	1353
17:45 - 18:45	0	0	0	2365	64	2429	601	17	618	622	37	659	1055	121	1176	1393	50	1443
18:00 - 19:00	0	0	0	2244	65	2309	561	17	578	620	31	651	1434	160	1594	1281	46	1327

TIME PERIOD	VEHICLE MOVEMENT																	GRAND TOTAL			
	7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	284	12	296	2249	94	2343	0	0	0	0	0	0	2894	288	3182	0	0	0	13935	987	14922	
16:15 - 17:15	306	7	313	2201	88	2289	0	0	0	0	0	0	3038	275	3313	0	0	0	13995	917	14912	
16:30 - 17:30	**326**	**6**	**332**	**2126**	**83**	**2209**	**0**	**0**	**0**	**0**	**0**	**0**	**3178**	**266**	**3444**	**0**	**0**	**0**	**14149**	**878**	**15027**	**Peak**
16:45 - 17:45	329	7	336	2048	78	2126	0	0	0	0	0	0	3119	223	3342	0	0	0	13494	749	14243	
17:00 - 18:00	355	10	365	1950	89	2039	0	0	0	0	0	0	2955	197	3152	0	0	0	12646	668	13314	
17:15 - 18:15	355	16	371	1922	95	2017	0	0	0	0	0	0	2765	186	2951	0	0	0	11731	598	12329	
17:30 - 18:30	341	14	355	1866	88	1954	0	0	0	0	0	0	2560	165	2725	0	0	0	10781	530	11311	
17:45 - 18:45	343	11	354	1885	81	1966	0	0	0	0	0	0	2607	183	2790	0	0	0	10871	564	11435	
18:00 - 19:00	321	7	328	1816	66	1882	0	0	0	0	0	0	2466	175	2641	0	0	0	10743	567	11310	

TIME PERIOD	VEHICLE MOVEMENT											
	NORTHBOUND			EASTBOUND			SOUTHBOUND			WESTBOUND		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 17:00	0	0	0	1	0	1	0	0	0	0	0	0
16:15 - 17:15	0	0	0	1	0	1	0	0	0	0	0	0
16:30 - 17:30	0	0	0	1	0	1	0	0	0	0	0	0
16:45 - 17:45	0	0	0	2	0	2	0	0	0	0	0	0
17:00 - 18:00	0	0	0	4	0	4	0	0	0	0	0	0
17:15 - 18:15	0	0	0	3	0	3	0	0	0	0	0	0
17:30 - 18:30	0	0	0	4	0	4	0	0	0	0	0	0
17:45 - 18:45	0	0	0	3	0	3	0	0	0	0	0	0
18:00 - 19:00	0	0	0	1	0	1	0	0	0	0	0	0

Intersection of Hume Highway and Orange Grove Road

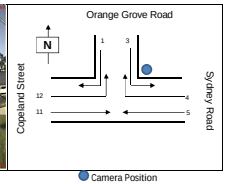
Tuesday, 18 March 2014

Austraffic

Survey Start **6:00 AM 16:00 PM**
Intersection Type T Junction
Intersection No. **1**
North Approach **Orange Grove Road**
East Approach **Sydney Road**
South Approach
West Approach **Copeland Street**

Date **18/03/14**

Classification **Light Heavy**



TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	157	9	166				64	6	70	34	5	39	103	10	113																428	26	454	232	18	250	1018	74	1092
6:15 - 6:30	198	13	211				67	4	71	44	7	51	166	11	177																426	23	449	214	18	232	1115	76	1191
6:30 - 6:45	195	20	215				96	6	102	49	7	56	159	13	172																445	27	472	259	16	275	1203	89	1292
6:45 - 7:00	183	28	211				132	7	139	48	5	53	139	14	153																483	22	505	209	12	221	1194	88	1282
7:00 - 7:15	162	20	182				112	5	117	61	2	63	152	11	163																518	26	544	244	17	261	1249	81	1330
7:15 - 7:30	210	18	228				113	5	118	70	6	76	151	11	162																491	29	520	224	24	248	1259	93	1352
7:30 - 7:45	189	14	203				135	6	141	82	6	88	192	15	207																432	24	456	247	12	259	1277	77	1354
7:45 - 8:00	187	17	204				101	5	106	73	7	80	194	15	209																519	21	540	273	17	290	1347	82	1429
8:00 - 8:15	224	16	240				114	13	127	69	7	76	195	25	220																397	18	415	275	16	291	1274	95	1369
8:15 - 8:30	239	18	257				131	10	141	80	10	90	183	23	206																474	23	497	217	16	233	1324	100	1424
8:30 - 8:45	382	22	404				120	5	125	80	10	90	167	31	198																358	29	387	229	20	249	1336	117	1453
8:45 - 9:00	273	27	300				121	8	129	101	13	114	156	16	172																333	21	354	241	19	260	1225	104	1329
Σ	2599	222	2821				1306	80	1386	791	85	876	1957	195	2152																5304	289	5593	2864	205	3069	14821	1076	15897

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	288	12	300				73	6	79	183	8	191	354	19	373																212	12	224	245	17	262	1355	74	1429
16:15 - 16:30	318	9	327				95	5	100	160	6	166	364	16	380																222	16	238	273	14	287	1432	66	1498
16:30 - 16:45	292	15	307				85	1	86	176	7	183	393	16	409																244	11	255	263	13	276	1453	63	1516
16:45 - 17:00	321	5	326				83	5	88	154	4	158	360	16	376																253	16	269	289	7	296	1460	53	1513
17:00 - 17:15	254	9	263				70	6	76	197	2	199	384	12	396																173	12	185	246	5	251	1324	46	1370
17:15 - 17:30	285	8	293				94	3	97	169	7	176	336	8	344																256	13	269	316	9	325	1456	48	1504
17:30 - 17:45	277	13	290				71	4	75	161	2	163	321	6	327																211	8	219	300	9	309	1341	42	1383
17:45 - 18:00	229	9	238				88	4	92	114	7	121	363	10	373																226	16	242	251	5	256	1271	51	1322
18:00 - 18:15	258	4	262				67	8	75	129	5	134	355	10	365																171	8	179	257	7	264	1237	42	1279
18:15 - 18:30	244	4	248				79	3	82	123	2	125	384	11	395																208	8	216	252	7	259	1290	35	1325
18:30 - 18:45	211	13	224				56	4	60	110	2	112	318	9	327																176	6	182	210	6	216	1081	40	1121
18:45 - 19:00	238	6	244				54	1	55	81	0	81	251	5	256																163	3	166	169	7	176	956	22	978
Σ	3215	107	3322				915	50	965	1757	52	1809	4185	136	4321																2515	129	2644	3071	106	3177	15658	580	16238

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	733	70	803				359	23	382	175	24	199	567	48	615																1792	88	1880	914	64	978	4530	327	4857	
6:15 - 7:15	738	81	819				407	22	429	202	21	223	616	49	665																1872	86	1970	926	63	989	4761	334	5095	
6:30 - 7:30	750	86	836				453	23	476	228	20	248	601	49	650																1937	104	2041	936	69	1005	4905	351	5256	
6:45 - 7:45	744	80	824				492	23	515	261	19	280	634	51	685																1924	101	2025	924	65	989	4979	339	5318	
7:00 - 8:00	748	69	817				461	21	482	286	21	307	689	52	741																1960	100	2060	948	70	1018	5132	333	5465	
7:15 - 8:15	810	65	875				463	29	492	294	26	320	732	66	798																1839	92	1931	1019	69	1088	5157	347	5504	
7:30 - 8:30	839	65	904				481	34	515	304	30	334	764	78	842																1822	86	1908	1002	71	1073	5222	354	5576	
7:45 - 8:45	**1032**	**73**	**1105**				**466**	**33**	**499**	**302**	**34**	**336**	**739**	**94**	**833**																**1748**	**91**	**1839**	**994**	**69**	**1063**	**5281**	**394**	**5675**	**Peak**
8:00 - 9:00	1118	83	1201				486	36	522	330	40	370	701	95	796																1562	91	1653	962	71	1033	5159	416	5575	

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	**1219**	**41**	**1260**				**336**	**17**	**353**	**673**	**25**	**698**	**1471**	**67**	**1538**																**931**	**55**	**986**	**1070**	**51**	**1121**	**5700**	**256**	**5956**	**Peak**
16:15 - 17:15	1185	38	1223				333	17	350	687	19	706	1501	60	1561																892	55	947	1071	39	1110	5669	228	5897	
16:30 - 17:30	1152	37	1189				332	15	347	696	20	716	1475	50	1525																926	52	978	1114	34	1148	5695	208	5903	
16:45 - 17:45	1107	35	1142				318	18	336	661	15	676	1403	40	1443																893	49	942	1151	30	1181	5593	187	5770	
17:00 - 18:00	1045	39	1084				323	17	340	641	18	659	1406	34	1440																866	49	915	1113	28	1141	5394	185	5579	
17:15 - 18:15	1049	34	1083				320	19	339	573	21	594	1377	32	1409																864	45	909	1124	30	1154	5807	181	5988	
17:30 - 18:30	1008	30	1038				305	19	324	527	16	543	1423	37	1460																816	40	856	1060	28	1088	5139	170	5309	
17:45 - 18:45	942	30	972				290	19	309	476	16	492	1420	40	1460																781	38	819	970	25	995	4879	168	5047	
18:00 - 19:00	951	27	978				256	16	272	443	9	452	1308	35	1343																718	25	743	888	27	915	4564	139	4703	

Intersection of Hume Highway and Elizabeth Drive

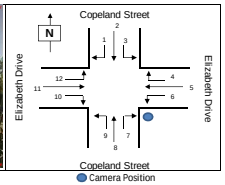
Tuesday, 18 March 2014

Austraffic

Survey Start **6:00 AM 16:00 PM**
Intersection Type Cross Junction
Intersection No. **2**
North Approach **Copeland Street**
East Approach **Elizabeth Drive**
South Approach **Copeland Street**
West Approach **Elizabeth Drive**

Date **18/03/14**

Classification **Light Heavy**



TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	26	4	30	225	13	238	1	0	1	11	1	12	26	3	29	1	0	1	0	0	0	475	38	513	30	1	31	91	4	95	74	2	76	93	5	98	1053	71	1124
6:15 - 6:30	37	5	42	336	26	362	3	0	3	21	1	22	19	5	24	0	1	1	0	0	0	512	34	546	38	0	38	105	6	111	90	7	97	103	8	111	1264	93	1357
6:30 - 6:45	45	4	49	335	27	362	6	3	9	16	0	16	27	3	30	0	2	2	0	0	0	557	35	592	29	2	31	86	3	89	112	2	114	96	7	103	1309	88	1397
6:45 - 7:00	39	4	43	276	32	308	9	1	10	15	1	16	35	4	39	3	1	4	0	0	0	513	21	534	28	3	31	107	7	114	182	3	185	145	10	155	1352	87	1439
7:00 - 7:15	38	2	40	278	29	307	9	0	9	19	0	19	36	7	43	4	0	4	0	0	0	597	36	633	23	6	29	91	7	98	144	3	147	122	9	131	1361	99	1460
7:15 - 7:30	59	7	66	305	27	332	11	0	11	16	5	21	63	9	72	1	1	2	0	0	0	525	39	564	14	3	17	70	6	76	175	7	182	127	10	137	1366	114	1480
7:30 - 7:45	58	7	65	327	26	353	12	0	12	24	3	27	73	5	78	1	1	2	1	0	1	559	21	580	27	1	28	79	7	86	167	4	171	99	10	109	1427	85	1512
7:45 - 8:00	54	6	60	297	23	320	13	0	13	29	2	31	83	10	93	6	0	6	0	0	0	512	24	536	27	1	28	72	5	77	210	8	218	127	10	137	1430	89	1519
8:00 - 8:15	79	6	85	350	34	384	15	1	16	34	0	34	87	5	92	5	2	7	0	0	0	508	30	538	29	1	30	101	5	106	175	5	180	106	5	111	1489	94	1583
8:15 - 8:30	60	7	67	322	35	357	15	1	16	24	0	24	102	5	107	10	0	10	0	0	0	454	33	487	31	1	32	105	7	112	224	5	229	127	5	132	1474	99	1573
8:30 - 8:45	69	9	78	399	39	438	27	0	27	36	1	37	96	3	99	9	0	9	0	0	0	366	36	402	17	3	20	109	10	119	247	9	256	129	8	137	1504	118	1622
8:45 - 9:00	82	7	89	373	43	416	34	0	34	29	1	30	107	6	113	9	0	9	0	0	0	368	33	401	24	6	30	140	3	143	237	7	244	138	9	147	1541	115	1656
Σ	646	68	714	3823	354	4177	155	6	161	274	15	289	754	65	819	49	8	57	1	0	1	5946	380	6326	317	28	345	1156	70	1226	2037	62	2099	1412	96	1508	16570	1152	17722

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	134	8	142	473	20	493	18	0	18	36	1	37	236	7	243	21	0	21	0	0	0	294	26	320	69	3	72	80	0	80	130	7	137	56	3	59	1547	75	1622
16:15 - 16:30	203	4	207	508	25	533	15	0	15	41	2	43	198	4	202	22	1	23	0	0	0	322	27	349	67	7	74	85	3	88	129	5	134	67	4	71	1657	82	1739
16:30 - 16:45	204	11	215	528	20	548	17	1	18	31	0	31	209	5	214	27	0	27	0	0	0	325	17	342	60	4	64	54	1	55	117	6	123	73	4	77	1645	69	1714
16:45 - 17:00	169	3	172	529	18	547	15	0	15	37	0	37	210	7	217	32	1	33	0	0	0	324	18	342	76	3	79	73	1	74	126	4	130	73	7	80	1664	62	1726
17:00 - 17:15	188	4	192	515	15	530	12	1	13	40	0	40	220	6	226	21	0	21	0	0	0	284	17	301	55	2	57	74	4	78	97	5	102	55	5	60	1561	59	1620
17:15 - 17:30	229	6	235	501	9	510	11	1	12	31	0	31	230	4	234	23	0	23	0	0	0	350	13	363	69	3	72	65	1	66	106	7	113	72	3	75	1697	47	1744
17:30 - 17:45	188	7	195	495	12	507	9	2	11	26	1	27	208	4	212	22	0	22	0	0	0	309	14	323	65	1	66	71	0	71	106	4	110	47	1	48	1546	46	1592
17:45 - 18:00	173	3	176	473	15	488	14	0	14	34	1	35	265	14	279	22	0	22	0	0	0	287	11	298	85	0	85	77	2	79	120	4	124	65	7	72	1615	57	1672
18:00 - 18:15	194	4	198	490	13	503	6	0	6	39	0	39	182	4	186	19	0	19	0	0	0	289	9	298	66	1	67	82	3	85	96	3	99	69	6	75	1532	43	1575
18:15 - 18:30	169	2	171	479	10	489	15	0	15	14	0	14	135	6	141	16	0	16	0	0	0	303	10	313	67	2	69	75	0	75	99	5	104	56	4	60	1448	39	1487
18:30 - 18:45	159	4	163	434	19	453	10	1	11	18	0	18	131	3	134	12	0	12	0	0	0	260	7	267	65	3	68	65	0	65	90	3	93	64	3	67	1308	43	1351
18:45 - 19:00	126	3	129	366	10	376	9	0	9	21	1	22	98	5	103	12	0	12	0	0	0	227	4	231	63	0	63	73	0	73	75	3	78	63	4	67	1133	30	1163
Σ	2136	59	2195	5791	186	5977	151	6	157	368	6	374	2322	69	2391	249	2	251	0	0	0	3574	173	3747	827	29	856	874	15	889	1291	56	1347	760	51	811	18343	652	18995

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	147	17	164	1172	98	1270	19	4	23	63	3	66	107	15	122	4	4	8	0	0	0	2057	128	2185	125	6	131	369	20	409	458	14	472	437	30	467	4978	339	5317	
6:15 - 7:15	198	15	174	1225	114	1339	27	4	31	71	2	73	117	19	136	7	4	11	0	0	0	2178	126	2305	118	11	129	389	23	412	528	15	543	466	34	500	5286	367	5653	
6:30 - 7:30	181	17	198	1194	115	1309	36	4	39	66	6	72	161	23	184	8	4	12	0	0	0	2195	131	2323	94	14	108	354	23	377	613	15	628	490	36	526	5388	308	5716	
6:45 - 7:45	194	20	214	1186	114	1300	41	1	42	74	9	83	207	25	232	9	3	12	1	0	1	2194	117	2311	92	13	105	347	27	374	668	17	685	493	39	532	5506	385	5891	
7:00 - 8:00	200	22	222	1207	105	1312	45	0	45	86	10	96	255	31	286	12	2	14	1	0	1	2092	120	2213	91	11	102	312	22	334	690	22	712	475	39	514	5594	387	5981	
7:15 - 8:15	250	26	276	1279	110	1389	51	2	53	103	10	113	306	29	335	13	4	17	1	0	1	2104	114	2218	97	6	103	322	23	345	722	24	751	459	35	494	5712	382	6094	
7:30 - 8:30	251	26	277	1296	118	1414	55	2	57	111	5	116	345	25	370	22	3	25	1	0	1	2033	108	2141	114	4	118	357	24	381	778	22	790	459	30	488	5800	387	6187	
7:45 - 8:45	262	28	290	1368	131	1499	70	2	72	123	3	126	368	23	391	30	2	32	0	0	0	1840	123	1963	104	6	110	387	27	414	856	27	883	489	28	517	5897	400	6297	
8:00 - 9:00	**290**	**29**	**319**	**1444**	**151**	**1595**	**91**	**2**	**93**	**123**	**2**	**125**	**392**	**19**	**411**	**33**	**2**	**35**	**0**	**0**	**0**	**1696**	**132**	**1828**	**101**	**11**	**112**	**455**	**25**	**480**	**883**	**26**	**909**	**500**	**27**	**527**	**6008**	**426**	**6434**	**Peak**

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	**710**	**26**	**736**	**2038**	**83**	**2121**	**65**	**1**	**66**	**145**	**3**	**148**	**853**	**23**	**876**	**102**	**2**	**104**	**0**	**0**	**0**	**1265**	**88**	**1353**	**272**	**17**	**289**	**292**	**5**	**297**	**502**	**22**	**524**	**269**	**18**	**287**	**6513**	**288**	**6801**	**Peak**
16:15 - 17:15	764	22	786	2080	78	2158	59	2	61	149	2	151	897	22	919	102	2	104	0	0	0	1255	79	1334	258	16	274	286	9	295	469	20	489	268	20	288	6527	272	6799	
16:30 - 17:30	790	24	814	2073	62	2135	55	3	58	139	0	139	869	22	891	103	1	104	0	0	0	1263	65	1348	260	12	272	268	7	275	446	22	468	273	19	292	6557	237	6794	
16:45 - 17:45	774	20	794	2040	54	2094	47	4	51	104	1	105	868	21	889	98	1	99	0	0	0	1267	62	1329	266	5	271	283	6	289	435	20	455	247	16	263	6458	214	6672	
17:00 - 18:00	778	20	798	1984	51	2035	46	4	50	131	2	133	923	28	951	88	0	88	0	0	0	1230	55	1285	274	6	280	287	7	294	429	20	449	239	16	255	6409	209	6618	
17:15 - 18:15	784	20	804	1959	49	2008	40	3	43	130	2	132	885	26	911	86	0	86	0	0	0	1226	47	1282	265	5	270	295	6	301	428	18	446	253	17	270	6380	193	6573	
17:30 - 18:30	724	16	740	1937	50	1987	44	2	46	113	2	115	790	28	818	79	0	79	0	0	0	1188	44	1232	303	4	307	305	5	310	421	16	437	237	18	255	6141	185	6326	
17:45 - 18:45	695	13	708	1876	57	1933	45	1	46	105	1	106	713	27	740	69	0	69	0	0	0	1135	37	1172	303	6	309	299	5	304	405	15	420	254	20	274	5950	192	6085	
18:00 - 19:00	648	13	661	1769	52	1821	40	1	41	92	1	93	546	18	564	59	0	59	0	0	0	1079	30	1109	281	6	287	295	3	298	360	14	374	252	17	269	5421	155	5576	

Intersection of Hume Highway and Memorial Avenue

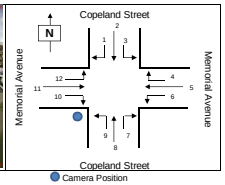
Tuesday, 18 March 2014

Austraffic

Survey Start **6:00 AM 16:00 PM**
Intersection Type Cross Junction
Intersection No. **3**
North Approach **Copeland Street**
East Approach **Memorial Avenue**
South Approach **Copeland Street**
West Approach **Memorial Avenue**

Date **18/03/14**

Classification **Light Heavy**



Camera Position

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	7	0	7	269	19	288	26	0	26	21	5	26	11	0	11	1	0	1	4	0	4	443	29	472	7	0	7	11	0	11	15	0	15	19	2	21	834	55	889
6:15 - 6:30	5	0	5	370	38	408	44	4	48	16	0	16	19	1	20	1	0	1	8	1	9	485	35	520	18	0	18	16	0	16	12	1	13	11	1	12	1005	91	1096
6:30 - 6:45	9	0	9	354	34	388	40	1	41	16	3	19	6	1	7	1	0	1	15	1	16	509	36	545	12	0	12	21	0	21	13	1	14	24	1	25	1020	78	1098
6:45 - 7:00	8	0	8	319	43	362	43	1	44	19	5	24	12	3	15	0	0	0	14	0	14	545	30	575	17	0	17	24	0	24	31	0	31	18	0	18	1050	82	1132
7:00 - 7:15	10	0	10	311	38	349	38	5	43	15	3	18	16	0	16	0	0	0	12	2	14	531	36	567	24	1	25	26	1	27	28	1	29	29	1	30	1040	88	1128
7:15 - 7:30	8	2	10	315	34	349	41	1	42	21	1	22	26	2	28	4	0	4	17	1	18	519	43	562	16	1	17	24	0	24	43	3	46	33	0	33	1067	88	1155
7:30 - 7:45	16	1	17	322	32	354	18	1	19	21	2	23	21	0	21	1	2	3	33	1	34	473	26	499	21	0	21	24	0	24	54	0	54	33	0	33	1037	65	1102
7:45 - 8:00	15	0	15	302	36	338	14	0	14	16	1	17	31	2	33	4	0	4	25	0	25	469	27	496	34	1	35	38	1	39	67	2	69	29	0	29	1044	70	1114
8:00 - 8:15	20	0	20	347	42	389	11	1	12	18	2	20	28	2	30	3	1	4	68	0	68	428	30	458	35	0	35	30	1	31	81	0	81	20	0	20	1089	79	1168
8:15 - 8:30	21	1	22	303	36	339	26	4	30	30	3	33	28	2	30	5	3	8	75	0	75	375	34	409	30	0	30	35	1	36	106	2	108	29	1	30	1053	97	1150
8:30 - 8:45	24	2	26	350	49	399	42	1	43	25	7	32	36	1	37	5	0	5	55	0	55	357	36	393	30	1	31	25	1	26	113	2	115	23	2	25	1095	102	1197
8:45 - 9:00	38	0	38	367	46	413	37	0	37	27	8	35	38	0	38	8	0	8	51	1	52	346	29	375	35	0	35	25	0	25	93	1	94	21	0	21	1086	85	1171
Σ	181	6	187	3929	447	4376	380	19	399	245	40	285	272	14	286	33	6	39	377	7	384	5480	391	5871	279	4	283	299	5	304	656	13	669	289	8	297	12420	960	13380

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	36	1	37	600	21	621	38	0	38	39	3	42	59	4	63	13	0	13	38	5	43	342	27	369	26	0	26	29	0	29	39	2	41	14	0	14	1273	63	1336
16:15 - 16:30	41	1	42	562	28	590	24	2	26	46	4	50	50	2	52	15	0	15	29	0	29	349	32	381	28	2	30	31	0	31	43	1	44	21	1	22	1239	73	1312
16:30 - 16:45	52	1	53	614	24	638	35	1	36	44	1	45	54	1	55	13	0	13	33	0	33	342	24	366	30	1	31	39	0	39	37	1	38	13	1	14	1306	55	1361
16:45 - 17:00	40	2	42	617	19	636	27	0	27	47	4	51	66	0	66	9	0	9	27	0	27	354	21	375	29	0	29	37	0	37	49	0	49	25	0	25	1327	46	1373
17:00 - 17:15	42	1	43	652	20	672	31	1	32	32	3	35	53	1	54	12	0	12	18	0	18	295	22	317	20	0	20	36	0	36	34	1	35	18	0	18	1243	49	1292
17:15 - 17:30	49	0	49	601	14	615	36	2	38	37	3	40	56	4	60	10	0	10	26	0	26	373	15	388	27	0	27	26	0	26	48	0	48	10	0	10	1299	38	1337
17:30 - 17:45	47	1	48	557	18	575	38	1	39	32	2	34	50	0	50	5	0	5	27	0	27	318	15	333	31	0	31	17	0	17	39	1	40	24	0	24	1185	38	1223
17:45 - 18:00	45	1	46	520	15	535	24	0	24	45	0	45	64	0	64	10	0	10	26	0	26	327	14	341	27	0	27	27	0	27	41	0	41	16	1	17	1172	31	1203
18:00 - 18:15	55	1	56	540	21	561	45	0	45	38	2	40	53	1	54	12	0	12	33	0	33	322	13	335	26	1	27	24	0	24	44	1	45	30	0	30	1220	40	1260
18:15 - 18:30	41	0	41	505	13	518	39	1	40	57	1	58	48	1	49	11	0	11	30	0	30	314	13	327	47	0	47	22	0	22	45	0	45	20	0	20	1179	29	1208
18:30 - 18:45	40	0	40	450	25	475	33	0	33	40	0	40	37	1	38	8	0	8	27	0	27	308	12	320	24	0	24	22	0	22	26	1	27	18	0	18	1033	39	1072
18:45 - 19:00	38	0	38	373	11	384	36	1	37	41	1	42	56	0	56	5	0	5	23	0	23	234	7	241	30	0	30	20	0	20	39	0	39	24	0	24	919	20	939
Σ	526	9	535	6591	229	6820	406	9	415	498	24	522	646	15	661	123	0	123	335	5	340	3878	215	4093	345	4	349	330	0	330	484	8	492	233	3	236	14395	521	14916

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 7:00	29	0	29	1312	134	1446	153	6	159	72	13	85	48	5	53	3	0	3	41	2	43	1982	130	2112	54	0	54	72	0	72	71	2	73	72	4	76	3909	296	4205
6:15 - 7:15	32	0	32	1354	153	1507	165	11	176	66	11	77	53	5	58	2	0	2	49	4	53	2070	137	2207	71	1	72	87	1	88	94	3	97	82	3	85	4115	329	4444
6:30 - 7:30	35	2	37	1299	149	1448	162	8	170	71	12	83	60	6	66	5	0	5	58	4	62	2104	145	2249	69	2	71	95	0	95	115	5	120	104	2	106	4177	336	4513
6:45 - 7:45	42	3	45	1267	147	1414	140	8	148	76	11	87	75	5	80	6	2	7	76	4	80	2068	135	2203	78	2	80	98	1	99	156	4	160	113	1	114	4194	323	4517
7:00 - 8:00	49	3	52	1259	140	1399	111	7	118	78	7	85	94	4	98	7	2	9	87	2	89	1992	132	2124	95	3	98	112	2	114	192	6	198	123	2	125	4198	311	4509
7:15 - 8:15	59	3	62	1286	144	1430	94	3	97	76	6	82	106	6	112	12	3	15	143	2	145	1889	126	2015	106	2	108	116	2	118	245	5	250	115	0	115	4237	302	4539
7:30 - 8:30	72	2	74	1273	146	1420	69	6	75	85	8	93	108	6	114	13	6	19	201	1	202	1745	117	1862	120	3	123	127	3	130	308	4	312	111	1	112	4230	301	4534
7:45 - 8:45	80	3	83	1302	163	1465	93	6	99	89	13	102	123	7	130	17	4	21	223	0	223	1629	127	1756	129	2	131	128	4	132	367	6	373	101	3	104	4281	338	4619
8:00 - 9:00	**103**	**3**	**106**	**1367**	**173**	**1540**	**116**	**6**	**122**	**100**	**20**	**120**	**130**	**5**	**135**	**21**	**4**	**25**	**249**	**1**	**250**	**1506**	**129**	**1635**	**130**	**1**	**131**	**115**	**3**	**118**	**393**	**5**	**398**	**93**	**3**	**96**	**4323**	**353**	**4676**	**Peak**

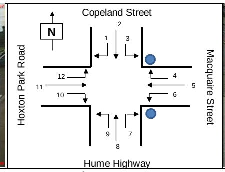
TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 17:00	**169**	**5**	**174**	**2393**	**92**	**2485**	**124**	**3**	**127**	**176**	**12**	**188**	**229**	**7**	**236**	**50**	**0**	**50**	**127**	**5**	**132**	**1387**	**104**	**1491**	**113**	**3**	**116**	**136**	**0**	**136**	**168**	**4**	**172**	**73**	**2**	**75**	**5145**	**237**	**5382**	**Peak**
16:15 - 17:15	175	5	180	2445	91	2536	117	4	121	169	12	181	223	4	227	49	0	49	107	0	107	1340	99	1439	107	3	110	143	0	143	163	3	166	77	2	79	5115	223	5338
16:30 - 17:30	183	4	187	2484	77	2561	129	4	133	160	11	171	229	6	235	44	0	44	104	0	104	1364	82	1446	108	1	107	138	0	138	168	2	170	66	1	67	5175	188	5363
16:45 - 17:45	178	4	182	2422	71	2493	132	4	136	148	12	160	225	5	230	36	0	36	98	0	98	1346	73	1413	107	0	107	116	0	116	170	2	172	77	0	77	5054	171	5225
17:00 - 18:00	183	3	186	2330	67	2397	129	4	133	146	8	154	223	5	228	37	0	37	97	0	97	1313	66	1379	105	0	105	106	0	106	162	2	164	68	1	69	4899	156	5055
17:15 - 18:15	196	3	199	2218	68	2286	143	3	146	152	7	159	223	5	228	37	0	37	110	0	110	1340	57	1397	111	1	112	94	0	94	172	2	174	80	1	81	4976	147	5123
17:30 - 18:30	188	3	191	2122	67	2189	146	2	148	172	5	177	215	2	217	38	0	38	114	0	114	1281	55	1336	131	1	132	90	0	90	169	2	171	90	1	91	4756	138	4894
17:45 - 18:45	181	2	183	2015	74	2089	141	1	142	186	2	188	202	3	205	41	0	41	114	0	114	1271	52	1323	124	1	125	95	0	95	156	2	158	84	1	85	4604	139	4743
18:00 - 19:00	174	1	175	1868	70	1938	153	2	155	176	4	180	194	3	197	36	0	36	111	0	111	1178	45	1223	127	1	128	88	0	88	154	2	156	92	0	92	4351	128	4479

Intersection of Hume Highway and Hoxton Park Road

Tuesday, 18 March 2014

Austraffic

Survey Start	6:00 AM	16:00 PM	
Intersection Type	Cross Junction		
Intersection No.	4		
North Approach	Copeland Street		
East Approach	Macquaire Street		
South Approach	Hume Highway		
West Approach	Hoxton Park Road		
Date	18/03/14		
Classification	Light	Heavy	



Camera Position

TIME PERIOD	1 Light	1 Heavy	1 Σ	2 Light	2 Heavy	2 Σ	3 Light	3 Heavy	3 Σ	4 Light	4 Heavy	4 Σ	5 Light	5 Heavy	5 Σ	6 Light	6 Heavy	6 Σ	7 Light	7 Heavy	7 Σ	8 Light	8 Heavy	8 Σ	9 Light	9 Heavy	9 Σ	10 Light	10 Heavy	10 Σ	11 Light	11 Heavy	11 Σ	12 Light	12 Heavy	12 Σ	GRAND TOTAL Light	GRAND TOTAL Heavy	GRAND TOTAL Σ
6:00 - 6:15	17	2	19	238	13	251	30	5	35	0	0	0	44	2	46	36	1	37	105	17	122	369	19	388	8	0	8	69	3	72	162	11	173	44	5	49	1122	78	1200
6:15 - 6:30	33	6	39	279	20	299	41	3	44	0	0	0	49	4	53	30	1	31	142	6	148	450	29	479	14	0	14	46	5	51	152	11	163	39	7	46	1275	92	1367
6:30 - 6:45	41	5	46	315	32	347	29	8	37	0	0	0	69	7	76	36	1	37	141	10	151	471	19	490	15	2	17	76	6	82	215	9	224	42	10	52	1450	109	1559
6:45 - 7:00	47	10	57	268	25	293	27	4	31	0	0	0	61	8	69	45	0	45	191	5	196	489	30	519	13	3	16	60	1	61	195	16	211	60	6	66	1456	108	1564
7:00 - 7:15	38	6	44	255	32	287	33	3	36	0	0	0	62	9	71	39	4	43	215	8	223	525	27	552	12	4	16	47	1	48	179	12	191	62	10	72	1467	116	1583
7:15 - 7:30	35	8	43	259	20	279	28	2	30	0	0	0	78	10	88	39	0	39	192	6	198	506	35	541	12	2	14	67	2	69	198	13	211	58	13	71	1472	111	1583
7:30 - 7:45	38	8	46	245	19	264	38	6	44	0	0	0	84	7	91	54	8	62	216	5	221	463	18	481	18	0	18	68	2	70	244	10	254	53	7	60	1521	90	1611
7:45 - 8:00	37	7	44	278	18	296	34	10	44	0	0	0	92	3	95	42	4	46	224	3	227	467	18	485	22	0	22	69	4	73	235	6	241	49	11	60	1549	84	1633
8:00 - 8:15	36	7	43	276	26	302	38	8	46	0	0	0	105	4	109	53	3	56	236	5	241	461	19	480	16	1	17	73	4	77	214	9	223	50	10	60	1558	96	1654
8:15 - 8:30	30	13	43	323	27	350	33	3	36	0	0	0	76	5	81	70	5	75	256	7	263	402	27	429	17	2	19	81	1	82	216	15	231	65	12	77	1569	117	1686
8:30 - 8:45	38	7	45	281	31	312	37	5	42	0	0	0	80	5	85	91	4	95	259	4	263	398	29	427	12	2	14	75	1	76	242	10	252	49	8	57	1562	106	1668
8:45 - 9:00	41	8	49	283	30	313	35	9	44	0	0	0	75	7	82	70	3	73	243	6	249	401	26	427	31	3	34	73	3	76	191	10	201	53	7	60	1496	112	1608
Σ	431	87	518	3300	293	3593	403	66	469	0	0	0	875	71	946	605	34	639	2420	82	2502	5402	296	5698	190	19	209	804	33	837	2443	132	2575	624	106	730	17497	1219	18716

TIME PERIOD	1 Light	1 Heavy	1 Σ	2 Light	2 Heavy	2 Σ	3 Light	3 Heavy	3 Σ	4 Light	4 Heavy	4 Σ	5 Light	5 Heavy	5 Σ	6 Light	6 Heavy	6 Σ	7 Light	7 Heavy	7 Σ	8 Light	8 Heavy	8 Σ	9 Light	9 Heavy	9 Σ	10 Light	10 Heavy	10 Σ	11 Light	11 Heavy	11 Σ	12 Light	12 Heavy	12 Σ	GRAND TOTAL Light	GRAND TOTAL Heavy	GRAND TOTAL Σ
16:00 - 16:15	50	4	54	558	18	576	28	1	29	0	0	0	142	13	155	139	3	142	105	3	108	325	24	349	20	2	22	75	2	77	127	2	129	63	4	67	1632	76	1708
16:15 - 16:30	42	4	46	525	20	545	25	1	26	0	0	0	146	7	153	143	1	144	100	1	101	351	27	378	27	5	32	51	1	52	113	2	115	43	6	49	1566	75	1641
16:30 - 16:45	48	4	52	584	20	604	29	3	32	0	0	0	136	7	143	164	2	166	111	3	114	340	24	364	43	3	46	78	2	80	128	7	135	56	2	58	1717	77	1794
16:45 - 17:00	40	3	43	619	20	639	27	0	27	0	0	0	138	6	144	156	2	158	95	0	95	332	16	348	32	2	34	72	2	74	144	6	150	54	3	57	1709	60	1769
17:00 - 17:15	39	4	43	606	14	620	15	2	17	0	0	0	155	1	156	140	3	143	92	1	93	298	21	319	27	0	27	74	1	75	128	3	131	44	1	45	1618	51	1669
17:15 - 17:30	67	3	70	582	11	593	13	0	13	0	0	0	133	5	138	195	3	198	92	1	93	385	13	398	33	3	36	82	0	82	143	6	149	53	2	55	1778	47	1825
17:30 - 17:45	45	2	47	600	13	613	26	2	28	0	0	0	136	7	143	128	1	129	87	0	87	323	13	336	47	1	48	89	1	90	118	3	121	43	1	44	1642	44	1686
17:45 - 18:00	61	1	62	536	12	548	29	3	32	1	0	1	152	2	154	171	2	173	105	0	105	324	9	333	44	0	44	80	1	81	115	2	117	38	3	41	1656	35	1691
18:00 - 18:15	64	1	65	531	19	550	14	1	15	0	0	0	151	4	155	141	2	143	104	0	104	351	11	362	44	1	45	60	1	61	108	1	109	41	2	43	1609	43	1652
18:15 - 18:30	52	2	54	509	13	522	14	0	14	0	0	0	143	3	146	97	3	100	105	1	106	320	14	334	39	1	40	64	0	64	111	2	113	51	2	53	1505	41	1546
18:30 - 18:45	64	4	68	411	15	426	23	1	24	0	0	0	133	4	137	105	1	106	97	0	97	298	12	310	31	2	33	71	1	72	104	2	106	44	2	46	1381	44	1425
18:45 - 19:00	68	1	69	308	13	321	17	0	17	0	0	0	127	4	131	95	1	96	87	1	88	257	6	263	36	0	36	57	1	58	116	1	117	42	0	42	1210	28	1238
Σ	640	33	673	6369	188	6557	260	14	274	1	0	1	1692	63	1755	1674	24	1698	1180	11	1191	3904	190	4094	423	20	443	853	13	866	1455	37	1492	572	28	600	19023	621	19644

TIME PERIOD	1 Light	1 Heavy	1 Σ	2 Light	2 Heavy	2 Σ	3 Light	3 Heavy	3 Σ	4 Light	4 Heavy	4 Σ	5 Light	5 Heavy	5 Σ	6 Light	6 Heavy	6 Σ	7 Light	7 Heavy	7 Σ	8 Light	8 Heavy	8 Σ	9 Light	9 Heavy	9 Σ	10 Light	10 Heavy	10 Σ	11 Light	11 Heavy	11 Σ	12 Light	12 Heavy	12 Σ	GRAND TOTAL Light	GRAND TOTAL Heavy	GRAND TOTAL Σ	
6:00 - 7:00	138	23	161	1100	90	1190	127	20	147	0	0	0	223	21	244	147	3	150	579	38	617	1779	97	1876	50	5	55	251	15	266	724	47	771	185	28	213	5303	387	5690	
6:15 - 7:15	159	27	186	1117	109	1226	130	18	148	0	0	0	241	28	269	150	6	156	689	29	718	1935	105	2040	54	9	63	229	13	242	741	48	789	203	33	236	5648	425	6073	
6:30 - 7:30	161	29	190	1097	109	1206	117	17	134	0	0	0	270	34	304	159	5	164	739	29	768	1991	111	2102	52	11	63	250	10	260	787	50	837	222	39	261	5845	444	6289	
6:45 - 7:45	158	32	190	1027	96	1123	126	15	141	0	0	0	285	34	319	177	12	189	814	24	838	1983	110	2093	55	9	64	242	6	248	816	51	867	233	36	269	5916	425	6341	
7:00 - 8:00	148	29	177	1037	89	1126	133	21	154	0	0	0	316	29	345	174	16	190	847	22	869	1961	98	2059	64	6	70	251	9	260	856	41	897	222	41	263	6009	401	6410	
7:15 - 8:15	146	30	176	1058	83	1141	138	26	164	0	0	0	359	24	383	188	15	203	868	19	887	1897	90	1987	68	3	71	277	12	289	891	38	929	210	41	251	6100	381	6481	
7:30 - 8:30	141	35	176	1122	90	1212	143	27	170	0	0	0	357	19	376	219	20	239	932	20	952	1793	82	1875	73	3	76	291	11	302	909	40	949	217	40	257	6197	387	6584	
7:45 - 8:45	**141**	**34**	**175**	**1158**	**102**	**1260**	**142**	**26**	**168**	**0**	**0**	**0**	**353**	**17**	**370**	**256**	**16**	**272**	**975**	**19**	**994**	**1728**	**93**	**1821**	**67**	**5**	**72**	**298**	**10**	**308**	**907**	**40**	**947**	**213**	**41**	**254**	**6238**	**403**	**6641**	**Peak**
8:00 - 9:00	145	35	180	1163	114	1277	143	25	168	0	0	0	336	21	357	284	15	299	994	22	1016	1662	101	1763	76	8	84	302	9	311	863	44	907	217	37	254	6185	431	6616	

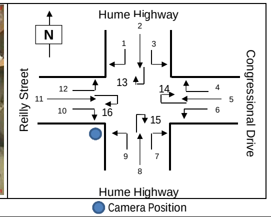
TIME PERIOD	1 Light	1 Heavy	1 Σ	2 Light	2 Heavy	2 Σ	3 Light	3 Heavy	3 Σ	4 Light	4 Heavy	4 Σ	5 Light	5 Heavy	5 Σ	6 Light	6 Heavy	6 Σ	7 Light	7 Heavy	7 Σ	8 Light	8 Heavy	8 Σ	9 Light	9 Heavy	9 Σ	10 Light	10 Heavy	10 Σ	11 Light	11 Heavy	11 Σ	12 Light	12 Heavy	12 Σ	GRAND TOTAL Light	GRAND TOTAL Heavy	GRAND TOTAL Σ	
16:00 - 17:00	180	15	195	2286	78	2364	109	5	114	0	0	0	562	33	595	602	8	610	411	7	418	1348	91	1439	122	12	134	276	7	283	512	17	529	216	15	231	6624	288	6912	
16:15 - 17:15	169	15	184	2334	74	2408	96	6	102	0	0	0	575	21	596	603	8	611	398	5	403	1321	88	1409	129	10	139	275	6	281	513	18	531	197	12	209	6610	263	6873	
16:30 - 17:30	**194**	**14**	**208**	**2391**	**65**	**2456**	**84**	**5**	**89**	**0**	**0**	**0**	**562**	**19**	**581**	**655**	**10**	**665**	**390**	**5**	**395**	**1355**	**74**	**1429**	**135**	**8**	**143**	**306**	**5**	**311**	**543**	**22**	**565**	**207**	**8**	**215**	**6822**	**235**	**7057**	**Peak**
16:45 - 17:45	191	12	203	2407	58	2465	81	4	85	0	0	0	562	19	581	619	9	628	366	2	368	1338	63	1401	139	6	145	317	4	321	533	18	551	194	7	201	6747	202	6949	
17:00 - 18:00	212	10	222	2324	50	2374	83	7	90	1	0	1	576	15	591	634	9	643	376	2	378	1330	56	1386	151	4	155	325	3	328	504	14	518	178	7	185	6694	177	6871	
17:15 - 18:15	237	7	244	2249	55	2304	82	6	88	1	0	1	572	18	590	635	8	643	388	1	389	1383	46	1429	168	5	173	311	3	314	484	12	496	175	8	183	6685	169	6854	
17:30 - 18:30	222	6	228	2176	57	2233	83	6	89	1	0	1	582	16	598	537	8	545	401	1	402	1318	47	1365	174	3	177	293	3	296	452	8	460	173	8	181	6412	163	6575	
17:45 - 18:45	241	8	249	1987	59	2046	80	5	85	1	0	1	579	13	592	514	8	522	411	1	412	1293	46	1339	158	4	162	275	3	278	438	7	445	174	9	183	6151	163	6314	
18:00 - 19:00	248	8	256	1759	60	1819	68	2	70	0	0	0	554	15	569	438	7	445	393	2	395	1226	43	1269	150	4	154	252	3	255	439	6	445	178	6	184	5705	156	5861	

Intersection of Hume Highway and Reilly Street

Tuesday, 18 March 2014

Austraffic

Survey Start	6:00 AM 16:00 PM
Intersection Type	Cross Junction
Intersection No.	5
North Approach	Hume Highway
East Approach	Congressional Drive
South Approach	Hume Highway
West Approach	Reilly Street
Date	18/03/14
Classification	Light Heavy



TIME PERIOD	1 Light	1 Heavy	1 Σ	2 Light	2 Heavy	2 Σ	3 Light	3 Heavy	3 Σ	4 Light	4 Heavy	4 Σ	5 Light	5 Heavy	5 Σ	6 Light	6 Heavy	6 Σ	7 Light	7 Heavy	7 Σ	8 Light	8 Heavy	8 Σ
6:00 - 6:15	4	0	4	282	12	294	2	0	2	12	0	12	1	0	1	2	0	2	3	0	3	476	19	495
6:15 - 6:30	6	0	6	354	28	382	0	0	0	9	0	9	2	0	2	7	0	7	2	0	2	642	36	678
6:30 - 6:45	8	1	9	405	37	442	1	1	2	16	0	16	1	0	1	4	1	5	0	0	0	653	27	680
6:45 - 7:00	12	0	12	367	27	394	2	1	3	11	0	11	2	0	2	5	0	5	1	0	1	716	32	748
7:00 - 7:15	2	0	2	314	38	352	2	0	2	19	0	19	1	0	1	5	1	6	1	0	1	745	40	785
7:15 - 7:30	7	0	7	353	21	374	2	0	2	15	0	15	1	0	1	8	1	9	1	0	1	745	30	775
7:30 - 7:45	14	0	14	345	28	373	0	0	0	10	0	10	3	0	3	6	1	7	4	0	4	677	22	699
7:45 - 8:00	10	0	10	325	25	350	6	0	6	18	2	20	7	0	7	7	1	8	1	1	2	622	11	633
8:00 - 8:15	15	1	16	354	28	382	4	0	4	15	1	16	13	1	14	14	0	14	2	0	2	697	27	724
8:15 - 8:30	32	0	32	393	30	423	7	0	7	17	0	17	8	0	8	11	0	11	3	0	3	628	30	658
8:30 - 8:45	26	0	26	380	30	410	9	1	10	20	0	20	8	1	9	7	0	7	5	0	5	646	30	676
8:45 - 9:00	28	0	28	370	29	399	12	3	15	10	1	11	6	2	8	6	0	6	7	0	7	627	36	663
Σ	164	2	166	4242	333	4575	47	6	53	172	4	176	53	4	57	82	5	87	30	1	31	7874	340	8214

TIME PERIOD	9 Light	9 Heavy	9 Σ	10 Light	10 Heavy	10 Σ	11 Light	11 Heavy	11 Σ	12 Light	12 Heavy	12 Σ	13 Light	13 Heavy	13 Σ	14 Light	14 Heavy	14 Σ	15 Light	15 Heavy	15 Σ	16 Light	16 Heavy	16 Σ	GRAND TOTAL Light	GRAND TOTAL Heavy	GRAND TOTAL Σ
6:00 - 6:15	11	0	11	37	0	37	1	0	1	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	843	31	874
6:15 - 6:30	12	0	12	31	1	32	0	0	0	9	1	10	0	0	0	0	0	0	0	0	0	0	0	0	1074	66	1140
6:30 - 6:45	9	0	9	57	3	60	0	0	0	9	0	9	0	0	0	0	0	0	0	0	0	0	0	0	1163	70	1233
6:45 - 7:00	15	1	16	34	4	38	1	0	1	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	1180	65	1245
7:00 - 7:15	12	1	13	50	0	50	0	0	0	10	1	11	0	0	0	0	0	0	1	0	1	0	0	0	1162	81	1243
7:15 - 7:30	15	1	16	51	1	52	1	0	1	15	2	17	0	0	0	0	0	0	1	0	1	0	0	0	1215	56	1271
7:30 - 7:45	13	0	13	49	1	50	1	0	1	16	0	16	0	0	0	0	0	0	2	0	2	0	0	0	1140	52	1192
7:45 - 8:00	12	0	12	50	0	50	3	0	3	20	1	21	0	0	0	0	0	0	0	0	0	0	0	0	1081	41	1122
8:00 - 8:15	19	1	20	43	1	44	1	1	2	18	1	19	0	0	0	0	0	0	0	0	0	0	0	0	1195	62	1257
8:15 - 8:30	10	1	11	56	3	59	4	0	4	31	2	33	0	0	0	0	0	0	0	0	0	0	0	0	1200	66	1266
8:30 - 8:45	26	0	26	47	0	47	2	0	2	21	0	21	0	0	0	0	0	0	0	0	0	0	0	0	1197	62	1259
8:45 - 9:00	15	0	15	54	3	57	6	0	6	23	0	23	0	0	0	0	0	0	0	0	0	0	0	0	1164	74	1238
Σ	169	5	174	559	17	576	20	1	21	198	8	206	0	0	0	0	0	0	4	0	4	0	0	0	13614	726	14340

TIME PERIOD	1 Light	1 Heavy	1 Σ	2 Light	2 Heavy	2 Σ	3 Light	3 Heavy	3 Σ	4 Light	4 Heavy	4 Σ	5 Light	5 Heavy	5 Σ	6 Light	6 Heavy	6 Σ	7 Light	7 Heavy	7 Σ	8 Light	8 Heavy	8 Σ
16:00 - 16:15	42	0	42	766	16	782	13	1	14	13	0	13	3	0	3	11	1	12	5	1	6	428	28	456
16:15 - 16:30	44	1	45	720	22	742	18	0	18	8	0	8	7	0	7	12	0	12	7	0	7	473	28	501
16:30 - 16:45	43	1	44	743	21	764	11	0	11	11	0	11	3	0	3	3	0	3	6	0	6	462	29	491
16:45 - 17:00	36	1	37	795	21	816	14	0	14	9	0	9	6	0	6	8	0	8	3	0	3	424	14	438
17:00 - 17:15	42	0	42	774	18	792	14	0	14	14	0	14	6	0	6	14	1	15	6	0	6	380	21	401
17:15 - 17:30	32	0	32	815	12	827	20	0	20	8	0	8	5	0	5	8	0	8	4	1	5	507	20	527
17:30 - 17:45	36	0	36	774	11	785	11	0	11	9	0	9	5	1	6	9	0	9	9	0	9	450	17	467
17:45 - 18:00	53	2	55	777	12	789	22	0	22	11	0	11	7	0	7	8	0	8	5	0	5	438	7	445
18:00 - 18:15	34	0	34	668	20	688	16	0	16	15	0	15	4	0	4	13	0	13	4	0	4	433	13	446
18:15 - 18:30	36	2	38	612	11	623	14	0	14	10	0	10	5	0	5	3	0	3	5	0	5	464	11	475
18:30 - 18:45	27	0	27	507	21	528	9	0	9	10	0	10	7	0	7	4	0	4	5	0	5	407	11	418
18:45 - 19:00	23	1	24	442	10	452	7	0	7	9	0	9	6	0	6	6	0	6	6	0	6	358	10	368
Σ	448	8	456	8393	195	8588	169	1	170	127	0	127	64	1	65	99	2	101	65	2	67	5224	209	5433

TIME PERIOD	9 Light	9 Heavy	9 Σ	10 Light	10 Heavy	10 Σ	11 Light	11 Heavy	11 Σ	12 Light	12 Heavy	12 Σ	13 Light	13 Heavy	13 Σ	14 Light	14 Heavy	14 Σ	15 Light	15 Heavy	15 Σ	16 Light	16 Heavy	16 Σ	GRAND TOTAL Light	GRAND TOTAL Heavy	GRAND TOTAL Σ
16:00 - 16:15	59	1	60	55	0	55	4	0	4	7	1	8	0	0	0	0	0	0	0	0	0	0	0	0	1406	49	1455
16:15 - 16:30	47	4	51	50	1	51	9	1	10	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	1403	57	1460
16:30 - 16:45	42	1	43	60	2	62	7	0	7	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	1401	54	1455
16:45 - 17:00	53	0	53	55	2	57	4	0	4	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0	1419	38	1457
17:00 - 17:15	54	0	54	46	0	46	8	0	8	15	0	15	1	0	1	0	0	0	0	0	0	0	0	0	1374	40	1414
17:15 - 17:30	58	0	58	55	0	55	7	0	7	16	0	16	0	0	0	0	0	0	1	0	1	0	0	0	1536	33	1569
17:30 - 17:45	50	0	50	60	0	60	2	0	2	8	0	8	0	0	0	0	0	0	1	0	1	0	0	0	1424	29	1453
17:45 - 18:00	47	1	48	48	0	48	6	0	6	10	0	10	1	0	1	0	0	0	0	0	0	0	0	0	1433	22	1455
18:00 - 18:15	57	0	57	38	1	39	10	0	10	14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	1306	34	1340
18:15 - 18:30	47	1	48	35	0	35	8	0	8	23	0	23	1	0	1	0	0	0	0	0	0	0	0	0	1263	25	1288
18:30 - 18:45	28	0	28	37	1	38	2	0	2	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1048	33	1081
18:45 - 19:00	23	0	23	29	0	29	4	0	4	5	0	5	1	0	1	0	0	0	0	0	0	0	0	0	919	21	940
Σ	565	8	573	568	7	575	71	1	72	133	1	134	4	0	4	0	0	0	2	0	2	0	0	0	15932	435	16367

TIME PERIOD	1 Light	1 Heavy	1 Σ	2 Light	2 Heavy	2 Σ	3 Light	3 Heavy	3 Σ	4 Light	4 Heavy	4 Σ	5 Light	5 Heavy	5 Σ	6 Light	6 Heavy	6 Σ	7 Light	7 Heavy	7 Σ	8 Light	8 Heavy	8 Σ
6:00 - 7:00	30	1	31	1408	104	1512	5	2	7	48	0	48	6	0	6	18	1	19	6	0	6	2487	114	2601
6:15 - 7:15	28	1	29	1440	130	1570	5	2	7	55	0	55	6	0	6	21	2	23	4	0	4	2756	135	2891
6:30 - 7:30	29	1	30	1439	123	1562	7	2	9	61	0	61	5	0	5	22	3	25	3	0	3	2859	129	2988
6:45 - 7:45	35	0	35	1379	114	1493	6	1	7	55	0	55	7	0	7	24	3	27	7	0	7	2883	124	3007
7:00 - 8:00	33	0	33	1337	112	1449	10	0	10	62	2	64	12	0	12	26	4	30	7	1	8	2789	103	2892
7:15 - 8:15	46	1	47	1377	102	1479	12	0	12	58	3	61	24	1	25	35	3	38	8	1	9	2741	90	2831
7:30 - 8:30	71	1	72	1417	111	1528	17	0	17	60	3	63	31	1	32	38	2	40	10	1	11	2624	90	2714
7:45 - 8:45	83	1	84	1452	113	1565	26	1	27	70	3	73	36	2	38	39	1	40	11	1	12	2593	98	2691
8:00 - 9:00	**101**	**1**	**102**	**1497**	**117**	**1614**	**32**	**4**	**36**	**62**	**2**	**64**	**35**	**4**	**39**	**38**	**0**	**38**	**17**	**0**	**17**	**2598**	**123**	**2721**

TIME PERIOD	9 Light	9 Heavy	9 Σ	10 Light	10 Heavy	10 Σ	11 Light	11 Heavy	11 Σ	12 Light	12 Heavy	12 Σ	13 Light	13 Heavy	13 Σ	14 Light	14 Heavy	14 Σ	15 Light	15 Heavy	15 Σ	16 Light	16 Heavy	16 Σ	GRAND TOTAL Light	GRAND TOTAL Heavy	GRAND TOTAL Σ	
6:00 - 7:00	47	1	48	159	8	167	2	0	2	44	1	45	0	0	0	0	0	0	0	0	0	0	0	0	4260	232	4492	
6:15 - 7:15	48	2	50	172	8	180	1	0	1	42	2	44	0	0	0	0	0	0	1	0	1	0	0	0	4579	282	4861	
6:30 - 7:30	51	3	54	192	8	200	2	0	2	48	3	51	0	0	0	0	0	0	2	0	2	0	0	0	4720	272	4992	
6:45 - 7:45	55	3	58	184	6	190	3	0	3	55	3	58	0	0	0	0	0	0	4	0	4	0	0	0	4697	254	4951	
7:00 - 8:00	52	2	54	200	2	202	5	0	5	61	4	65	0	0	0	0	0	0	4	0	4	0	0	0	4598	230	4828	
7:15 - 8:15	59	2	61	193	3	196	6	1	7	69	4	73	0	0	0	0	0	0	3	0	3	0	0	0	4631	211	4842	
7:30 - 8:30	54	2	56	198	5	203	9	1	10	85	4	89	0	0	0	0	0	0	2	0	2	0	0	0	4616	221	4837	
7:45 - 8:45	67	2	69	196	4	200	10	1	11	90	4	94	0	0	0	0	0	0	0	0	0	0	0	0	4673	231	4904	
8:00 - 9:00	**70**	**2**	**72**	**200**	**7**	**207**	**13**	**1**	**14**	**93**	**3**	**96**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4756**	**264**	**5020**	**Peak**

TIME PERIOD	1 Light	1 Heavy	1 Σ	2 Light	2 Heavy	2 Σ	3 Light	3 Heavy	3 Σ	4 Light	4 Heavy	4 Σ	5 Light	5 Heavy	5 Σ	6 Light	6 Heavy	6 Σ	7 Light	7 Heavy	7 Σ	8 Light	8 Heavy	8 Σ
16:00 - 17:00	165	3	168	3024	80	3104	56	1	57	41	0	41	19	0	19	34	1	35	21	1	22	1787	99	1886
16:15 - 17:15	165	3	168	3032	82	3114	57	0	57	42	0	42	22	0	22	37	1	38	22	0	22	1739	92	1831
16:30 - 17:30	**153**	**2**	**155**	**3127**	**72**	**3199**	**59**	**0**	**59**	**42**	**0**	**42**	**20**	**0**	**20**	**33**	**1**	**34**	**19**	**1**	**20**	**1773**	**84**	**1857**
16:45 - 17:45	146	1	147	3158	62	3220	59	0	59	40	0	40	22	1	23	39	1	40	22	1	23	1761	72	1833
17:00 - 18:00	163	2	165	3140	53	3193	67	0	67	42	0	42	23	1	24	39	1	40	24	1	25	1775	65	1840
17:15 - 18:15	155	2	157	3034	55	3089	69	0	69	43	0	43	21	1	22	38	0	38	22	1	23	1828	57	1885
17:30 - 18:30	159	4	163	2831	54	2885	63	0	63	45	0	45	21	1	22	33	0	33	23	0	23	1785	48	1833
17:45 - 18:45	150	4	154	2564	64	2628	61	0	61	46	0	46	23	0	23	28	0	28	19	0	19	1742	42	1784
18:00 - 19:00	120	3	123	2229	62	2291	46	0	46	44	0	44	22	0	22	26	0	26	20	0	20	1662	45	1707

TIME PERIOD	9 Light	9 Heavy	9 Σ	10 Light	10 Heavy	10 Σ	11 Light	11 Heavy	11 Σ	12 Light	12 Heavy	12 Σ	13 Light	13 Heavy	13 Σ	14 Light	14 Heavy	14 Σ	15 Light	15 Heavy	15 Σ	16 Light	16 Heavy	16 Σ	GRAND TOTAL Light	GRAND TOTAL Heavy	GRAND TOTAL Σ	
16:00 - 17:00	201	6	207	220	5	225	24	1	25	37	1	38	0	0	0	0	0	0	0	0	0	0	0	0	5629	198	5827	
16:15 - 17:15	196	5	201	211	5	216	28	1	29	45	0	45	1	0	1	0	0	0	0	0	0	0	0	0	5597	189	5786	
16:30 - 17:30	**207**	**1**	**208**	**216**	**4**	**220**	**26**	**0**	**26**	**53**	**0**	**53**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**5730**	**165**	**5895**	**Peak**
16:45 - 17:45	215	0	215	216	2	218	21	0	21	51	0	51	1	0	1	0	0	0	2	0	2	0	0	0	5753	140	5893	
17:00 - 18:00	209	1	210	209	0	209	23	0	23	49	0	49	2	0	2	0	0	0	2	0	2	0	0	0	5767	124	5891	
17:15 - 18:15	212	1	213	201	1	202	25	0	25	48	0	48	1	0	1	0	0	0	2	0	2	0	0	0	5699	118	5817	
17:30 - 18:30	201	2	203	181	1	182	26	0	26	55	0	55	2	0	2	0	0	0	1	0	1	0	0	0	5426	110	5536	
17:45 - 18:45	179	2	181	158	2	160	26	0	26	52	0	52	2	0	2	0	0	0	0	0	0	0	0	0	5050	114	5164	
18:00 - 19:00	155	1	156	139	2	141	24	0	24	47	0	47	2	0	2	0	0	0	0	0	0	0	0	0	4536	113	4649	

Intersection of Moorebank Avenue and Newbridge Road

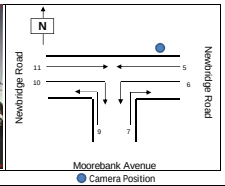
Tuesday, 18 March 2014

Austraffic

Survey Start **6:00 AM 16:00 PM**
Intersection Type T Junction
Intersection No. **6**
North Approach
East Approach **Newbridge Road**
South Approach **Moorebank Avenue**
West Approach **Newbridge Road**

Date **18/03/14**

Classification **Light Heavy**



Camera Position

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15													54	8	62	49	18	67	215	19	234				75	10	85	115	12	127	253	16	269				761	83	844
6:15 - 6:30													73	7	80	87	14	101	204	18	222				112	4	116	89	5	94	280	20	300				845	68	913
6:30 - 6:45													102	13	115	88	12	100	231	15	246				131	9	140	109	11	120	263	21	284				924	81	1005
6:45 - 7:00													96	9	105	67	14	81	236	18	254				146	15	161	144	6	150	299	17	316				988	79	1067
7:00 - 7:15													90	9	99	68	14	82	250	27	277				147	11	158	125	10	135	297	17	314				977	88	1065
7:15 - 7:30													129	16	145	70	13	83	247	24	271				213	16	229	123	5	128	269	16	285				1051	90	1141
7:30 - 7:45													150	14	164	103	13	116	214	16	230				224	12	236	153	15	168	291	15	306				1135	85	1220
7:45 - 8:00													141	8	149	98	18	116	261	27	288				280	7	287	149	8	157	255	11	266				1184	79	1263
8:00 - 8:15													190	7	197	87	20	107	219	29	248				269	15	284	122	14	136	256	14	270				1143	98	1242
8:15 - 8:30													164	7	171	77	25	102	228	23	251				278	6	284	109	7	116	242	16	258				1098	84	1182
8:30 - 8:45													127	12	139	83	22	105	208	12	220				279	8	287	123	11	134	244	27	271				1064	92	1156
8:45 - 9:00													177	20	197	87	16	103	152	20	172				208	10	218	106	12	118	223	16	239				953	94	1047
Σ													1493	130	1623	964	199	1163	2665	248	2913				2362	123	2485	1467	116	1583	3172	206	3378				12123	1022	13145

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15													236	18	254	251	12	263	129	18	147				205	11	216	174	3	177	194	8	202				1189	70	1259
16:15 - 16:30													260	9	269	234	22	256	120	17	137				154	5	159	180	6	186	175	7	182				1123	66	1189
16:30 - 16:45													281	22	303	216	18	234	113	25	138				189	7	196	211	5	216	191	8	199				1201	85	1286
16:45 - 17:00													246	7	253	245	13	258	141	13	154				132	8	140	203	6	209	196	11	207				1163	58	1221
17:00 - 17:15													227	12	239	238	8	246	153	16	169				172	3	175	230	4	234	225	7	232				1245	50	1295
17:15 - 17:30													271	9	280	246	12	258	184	17	201				150	4	154	232	9	241	222	7	234				1310	58	1368
17:30 - 17:45													237	16	253	233	6	239	166	14	180				147	2	149	239	4	243	212	4	216				1234	46	1280
17:45 - 18:00													148	11	159	192	22	214	115	9	124				134	3	137	220	6	226	184	4	188				993	55	1048
18:00 - 18:15													212	5	217	210	13	223	110	6	116				137	2	139	171	9	180	156	6	162				996	41	1037
18:15 - 18:30													189	12	201	168	11	179	85	12	97				122	3	125	110	6	116	152	8	160				826	52	878
18:30 - 18:45													186	7	193	147	10	157	55	8	63				109	4	113	118	7	125	120	2	122				735	38	773
18:45 - 19:00													173	9	182	111	2	113	78	9	87				108	5	113	98	4	102	108	2	110				676	31	707
Σ													2666	137	2803	2491	149	2640	1449	164	1613				1759	57	1816	2186	69	2255	2140	74	2214				12691	650	13341

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00													325	37	362	291	58	349	886	70	956				464	38	502	457	34	491	1095	74	1169				3518	311	3829	
6:15 - 7:15													361	38	399	310	54	364	921	78	999				536	39	575	467	32	499	1139	75	1214				3734	316	4050	
6:30 - 7:30													417	47	464	293	53	346	964	84	1048				637	51	688	501	32	533	1128	71	1199				3940	338	4278	
6:45 - 7:45													465	48	513	308	54	362	947	85	1032				730	54	784	545	36	581	1156	65	1221				4151	342	4493	
7:00 - 8:00													510	47	557	339	58	397	972	91	1062				864	46	910	550	38	588	1111	59	1171				4347	342	4689	
7:15 - 8:15													610	45	655	358	64	422	941	96	1037				986	50	1036	547	42	589	1071	56	1127				4513	353	4866	
7:30 - 8:30													**645**	**36**	**681**	**365**	**76**	**441**	**922**	**95**	**1017**				**1051**	**40**	**1091**	**533**	**44**	**577**	**1044**	**56**	**1100**				**4560**	**347**	**4907**	**Peak**
7:45 - 8:45													622	34	656	345	85	430	916	91	1007				1106	36	1142	503	40	543	997	68	1065				4489	354	4843	
8:00 - 9:00													658	46	704	334	83	417	807	84	891				1034	39	1073	460	44	504	965	73	1038				4258	369	4627	

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00													1023	56	1079	946	65	1011	503	73	576				680	31	711	768	20	788	756	34	790				4676	279	4955	
16:15 - 17:15													1014	50	1064	933	61	994	527	71	598				647	23	670	824	21	845	787	33	820				4732	259	4991	
16:30 - 17:30													**1025**	**50**	**1075**	**945**	**51**	**996**	**581**	**71**	**652**				**643**	**22**	**665**	**876**	**24**	**900**	**839**	**33**	**872**				**4919**	**251**	**5170**	**Peak**
16:45 - 17:45													981	44	1025	962	39	1001	644	60	704				601	17	618	904	23	927	860	29	889				4952	212	5164	
17:00 - 18:00													883	48	931	909	48	957	618	56	674				603	12	615	921	23	944	848	22	870				4782	209	4991	
17:15 - 18:15													868	41	909	881	53	934	575	46	621				568	11	579	862	28	890	779	21	800				4533	200	4733	
17:30 - 18:30													786	44	830	803	52	855	476	41	517				540	10	550	740	25	765	704	22	726				4049	194	4243	
17:45 - 18:45													735	35	770	717	56	773	365	35	400				592	12	604	619	28	647	612	20	632				3550	186	3736	
18:00 - 19:00													760	33	793	636	36	672	328	35	363				476	14	490	497	26	523	536	18	554				3233	162	3395	

Intersection of Moorebank Avenue and Heathcote Road

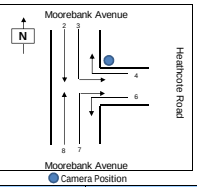
Tuesday, 18 March 2014

Austraffic

Survey Start **6:00 AM 16:00 PM**
Intersection Type T Junction
Intersection No. **7**
North Approach **Moorebank Avenue**
East Approach **Heathcote Road**
South Approach **Moorebank Avenue**
West Approach

Date **18/03/14**

Classification **Light Heavy**



TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15				72	21	93	90	5	95	54	5	59				1	0	1	2	1	3	244	20	264												463	52	515
6:15 - 6:30				92	13	105	92	6	98	56	6	62				3	1	4	3	2	5	243	17	260												489	45	534
6:30 - 6:45				101	16	117	85	7	92	80	6	86				2	4	6	3	0	3	301	17	318												572	50	622
6:45 - 7:00				115	15	130	96	7	103	86	12	98				2	3	5	1	3	4	300	27	327												600	67	667
7:00 - 7:15				106	10	116	91	14	105	100	17	117				2	8	10	3	2	5	278	18	296												580	69	649
7:15 - 7:30				83	11	94	110	4	114	150	13	163				4	3	7	8	1	9	301	24	325												656	56	712
7:30 - 7:45				121	15	136	143	15	158	149	11	160				5	2	7	1	1	2	315	22	337												734	66	800
7:45 - 8:00				114	18	132	143	8	151	168	10	178				2	4	6	6	2	8	356	20	376												791	62	853
8:00 - 8:15				108	26	134	101	10	111	145	16	161				1	1	2	1	0	1	353	28	381												709	91	790
8:15 - 8:30				105	18	123	92	11	103	184	10	194				4	3	7	2	2	4	326	18	344												713	62	775
8:30 - 8:45				99	25	124	113	9	122	159	6	165				2	4	6	6	0	6	329	16	345												708	60	768
8:45 - 9:00				91	13	104	107	13	120	132	13	145				0	2	2	4	1	5	240	18	258												574	60	634
Σ				1207	201	1408	1263	109	1372	1463	125	1588				28	35	63	40	15	55	3588	245	3833												7589	730	8319

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15				260	13	273	165	2	167	141	6	147				12	2	14	11	0	11	196	22	218												785	45	830
16:15 - 16:30				272	20	292	150	5	155	104	7	111				11	2	13	8	1	9	171	17	188												716	52	768
16:30 - 16:45				282	15	297	156	8	164	125	9	134				13	4	17	9	1	10	170	21	191												755	58	813
16:45 - 17:00				282	11	293	171	7	178	123	9	132				6	1	7	11	1	12	152	14	166												745	43	788
17:00 - 17:15				283	11	294	178	5	183	140	5	145				9	3	12	6	0	6	193	13	206												809	37	846
17:15 - 17:30				278	11	289	191	6	197	103	3	106				21	4	25	7	1	8	232	20	252												932	45	977
17:30 - 17:45				290	8	298	189	3	192	115	2	117				7	4	11	7	3	10	196	12	208												854	32	886
17:45 - 18:00				242	21	263	172	8	180	104	4	108				7	3	10	1	0	1	145	9	154												671	45	716
18:00 - 18:15				250	19	269	140	3	143	102	1	103				0	2	2	3	0	3	140	8	148												635	33	668
18:15 - 18:30				170	11	181	94	5	99	80	2	82				4	2	6	1	0	1	128	12	140												477	32	509
18:30 - 18:45				167	14	181	105	3	108	75	4	79				2	0	2	1	1	2	94	8	102												444	30	474
18:45 - 19:00				127	4	131	85	4	89	64	4	68				3	0	3	4	0	4	126	9	135												409	21	430
Σ				2903	158	3061	1796	59	1855	1276	56	1332				95	27	122	69	8	77	1943	165	2108												8082	473	8555

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00				380	65	445	363	25	388	276	29	305				8	8	16	9	6	15	1088	81	1169												2124	214	2338	
6:15 - 7:15				414	54	468	364	34	398	322	41	363				9	16	25	10	7	17	1122	79	1201												2241	231	2472	
6:30 - 7:30				405	52	457	380	32	414	416	48	464				10	18	28	15	6	21	1180	86	1266												2406	242	2650	
6:45 - 7:45				425	51	476	440	40	480	485	53	538				13	16	29	13	7	20	1194	91	1285												2570	258	2828	
7:00 - 8:00				424	54	478	487	41	528	567	51	618				13	17	30	18	5	23	1252	84	1336												2761	253	3014	
7:15 - 8:15				426	70	496	497	37	534	612	50	662				12	10	22	16	4	20	1327	94	1421												2890	265	3155	
7:30 - 8:30				**448**	**77**	**525**	**479**	**44**	**523**	**646**	**47**	**693**				**12**	**10**	**22**	**10**	**5**	**15**	**1352**	**89**	**1440**												**2947**	**271**	**3218**	**Peak**
7:45 - 8:45				426	87	513	449	38	487	656	42	698				9	12	21	15	4	19	1366	82	1448												2921	265	3186	
8:00 - 9:00				403	82	485	413	43	456	620	45	665				7	10	17	13	3	16	1248	80	1328												2704	263	2967	

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00				1096	59	1155	642	22	664	493	31	524				42	9	51	39	3	42	689	74	763												3001	198	3199	
16:15 - 17:15				1119	57	1176	655	25	680	492	30	522				39	10	49	34	3	37	686	65	751												3025	190	3215	
16:30 - 17:30				1125	48	1173	696	26	722	491	26	517				49	12	61	33	3	36	747	68	815												3141	183	3324	
16:45 - 17:45				**1133**	**41**	**1174**	**729**	**21**	**750**	**481**	**19**	**500**				**43**	**12**	**55**	**21**	**5**	**26**	**773**	**59**	**832**												**3180**	**157**	**3337**	**Peak**
17:00 - 18:00				1093	51	1144	730	22	752	462	14	476				44	14	58	21	4	25	766	54	820												3116	159	3275	
17:15 - 18:15				1060	59	1119	692	20	712	424	10	434				35	13	48	18	4	22	713	49	762												2942	155	3097	
17:30 - 18:30				952	59	1011	595	19	614	401	9	410				18	11	29	12	3	15	609	41	650												2587	142	2729	
17:45 - 18:45				829	65	894	531	19	550	361	11	372				13	7	20	5	1	6	507	37	544												2227	140	2367	
18:00 - 19:00				714	48	762	424	15	439	321	11	332				9	4	13	9	1	10	488	37	525												1965	116	2081	

Intersection of Moorebank Avenue and MFive Industry Park

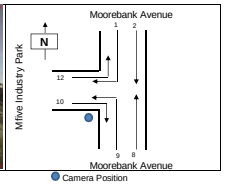
Tuesday, 18 March 2014

Austraffic

Survey Start **6:00 AM** **16:00 PM**
Intersection Type T Junction
Intersection No. **15**
North Approach **Moorebank Avenue**
East Approach
South Approach **Moorebank Avenue**
West Approach **MFive Industry Park**

Date **18/03/14**

Classification **Light Heavy**



Camera Position

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	3	1	4	65	21	86																256	16	272	3	2	5	12	2	14				0	2	2	339	44	383
6:15 - 6:30	6	0	6	90	13	103																242	14	256	2	0	2	3	2	5				0	3	3	343	32	375
6:30 - 6:45	6	1	7	94	20	114																268	18	286	5	0	5	0	6	6				4	1	5	377	46	423
6:45 - 7:00	15	0	15	99	17	116																318	27	345	7	0	7	0	11	11				1	1	2	440	56	496
7:00 - 7:15	8	1	9	106	18	124																275	17	292	8	2	10	1	4	5				2	3	5	400	45	445
7:15 - 7:30	9	7	16	85	8	93																317	21	338	6	0	6	6	9	15				0	5	5	423	50	473
7:30 - 7:45	8	2	10	124	15	139																320	25	345	7	0	7	2	5	7				2	0	2	463	47	510
7:45 - 8:00	5	3	8	115	19	134																364	16	380	12	0	12	1	6	7				1	4	5	498	48	546
8:00 - 8:15	7	6	13	103	21	124																348	26	374	8	1	9	4	6	10				1	2	3	471	60	531
8:15 - 8:30	13	6	19	95	15	110																343	18	361	26	0	26	5	9	14				3	2	5	485	50	535
8:30 - 8:45	5	4	9	102	25	127																336	12	348	25	0	25	3	11	14				2	4	6	473	56	529
8:45 - 9:00	5	2	7	91	13	104																247	14	261	14	0	14	2	6	8				3	3	6	362	38	400
Σ	90	33	123	1169	205	1374																3634	224	3858	123	5	128	39	77	116				19	30	49	5074	574	5648

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	1	0	1	257	16	273																206	17	223	3	2	5	17	5	22				7	1	8	491	41	532
16:15 - 16:30	7	2	9	290	18	308																165	21	186	1	0	1	16	4	20				7	0	7	486	45	531
16:30 - 16:45	4	2	6	283	17	300																180	23	203	2	0	2	23	3	26				6	0	6	498	45	543
16:45 - 17:00	1	1	2	282	10	292																155	10	165	0	1	1	20	5	25				8	2	10	466	29	495
17:00 - 17:15	2	3	5	294	11	305																187	15	202	3	0	3	58	4	62				7	0	7	551	33	584
17:15 - 17:30	1	2	3	311	9	320																253	16	269	1	0	1	37	2	39				2	2	4	605	36	641
17:30 - 17:45	2	2	4	285	11	296																191	13	204	1	1	2	34	4	38				7	2	9	530	33	563
17:45 - 18:00	0	7	7	236	18	254																128	6	134	0	0	0	19	7	26				4	2	6	387	40	427
18:00 - 18:15	2	5	7	245	15	260																140	8	148	1	0	1	43	2	45				7	2	9	438	32	470
18:15 - 18:30	2	8	10	175	5	180																121	7	128	0	1	1	19	1	20				1	5	6	318	27	345
18:30 - 18:45	0	5	5	165	8	173																90	2	92	0	0	0	15	2	17				1	5	6	271	22	293
18:45 - 19:00	0	2	2	135	2	137																114	6	120	0	0	0	14	2	16				6	8	14	269	20	289
Σ	22	44	66	2958	140	3098																1930	144	2074	12	5	17	315	41	356				63	29	92	5300	403	5703

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	30	2	32	348	71	419																1084	75	1159	17	2	19	15	21	36				5	7	12	1499	178	1677	
6:15 - 7:15	35	2	37	389	68	457																1103	76	1179	22	2	24	4	23	27				7	8	15	1960	179	1739	
6:30 - 7:30	39	8	47	384	63	447																1176	83	1261	28	2	28	7	30	37				7	10	17	1640	197	1837	
6:45 - 7:45	40	10	50	414	58	472																1230	90	1320	28	2	30	8	29	38				5	9	14	1726	198	1924	
7:00 - 8:00	30	13	43	430	60	490																1276	79	1355	33	2	35	10	22	32				5	12	17	1784	190	1974	
7:15 - 8:15	29	18	47	427	63	490																1349	86	1437	33	1	34	13	26	39				4	11	15	1855	207	2062	
7:30 - 8:30	33	17	50	437	70	507																1375	85	1460	59	1	54	12	26	38				7	8	15	1917	207	2124	
7:45 - 8:45	**30**	**19**	**49**	**415**	**80**	**495**																**1391**	**72**	**1463**	**71**	**1**	**72**	**13**	**32**	**45**				**7**	**12**	**19**	**1927**	**216**	**2143**	**Peak**
8:00 - 9:00	30	18	48	391	74	465																1274	70	1344	73	1	74	14	32	46				9	11	20	1791	206	1997	

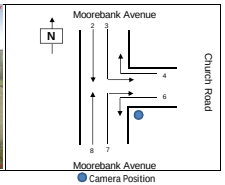
TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			VEHICLE MOVEMENT 7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	13	5	18	1112	61	1173																706	71	777	6	3	9	76	17	93				28	3	31	1941	160	2101	
16:15 - 17:15	14	8	22	1149	56	1205																687	69	756	6	1	7	117	16	133				28	2	30	2001	152	2153	
16:30 - 17:30	8	13	21	1170	47	1217																775	64	839	6	1	7	138	14	152				23	4	27	2120	143	2263	
16:45 - 17:45	**6**	**13**	**19**	**1172**	**41**	**1213**																**786**	**54**	**840**	**5**	**2**	**7**	**149**	**15**	**164**				**24**	**6**	**30**	**2142**	**131**	**2273**	**Peak**
17:00 - 18:00	5	19	24	1126	49	1175																759	50	809	5	1	6	148	17	165				20	6	26	2063	142	2205	
17:15 - 18:15	5	21	26	1077	53	1130																712	43	755	3	1	4	133	15	148				20	8	28	1950	141	2091	
17:30 - 18:30	6	22	28	941	49	990																580	34	614	2	2	4	115	14	129				19	11	30	1663	132	1795	
17:45 - 18:45	4	25	29	821	46	867																479	23	502	1	1	2	96	12	108				13	14	27	1414	121	1535	
18:00 - 19:00	4	20	24	720	30	750																465	23	488	1	1	2	91	7	98				15	20	35	1296	101	1397	

Intersection of Moorebank Avenue and Church Road

Tuesday, 18 March 2014

Austraffic

Survey Start	**6:00 AM 16:00 PM**
Intersection Type	T Junction
Intersection No.	**14**
North Approach	**Moorebank Avenue**
East Approach	**Church Road**
South Approach	**Moorebank Avenue**
West Approach	
Date	**18/03/14**
Classification	**Light Heavy**



TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15				68	24	92	2	0	2	1	0	1				31	2	33	28	3	31	264	22	286												394	51	445
6:15 - 6:30				96	12	108	3	0	3	0	0	0				35	5	30	40	2	42	268	20	288												432	39	471
6:30 - 6:45				106	24	130	1	0	1	1	0	1				17	6	23	38	3	41	284	19	303												447	52	499
6:45 - 7:00				93	27	120	3	1	4	0	0	0				10	1	11	42	4	46	337	31	368												485	64	549
7:00 - 7:15				105	22	127	0	0	0	0	1	1				15	4	19	48	0	48	299	22	321												467	49	516
7:15 - 7:30				100	15	115	2	0	2	1	0	1				10	3	13	39	2	41	343	24	367												495	44	539
7:30 - 7:45				111	23	134	2	0	2	0	0	0				16	2	18	35	2	37	355	27	382												519	54	573
7:45 - 8:00				112	24	136	2	0	2	0	0	0				37	3	40	64	1	65	387	29	416												602	57	659
8:00 - 8:15				100	27	127	10	0	10	2	0	2				31	4	35	50	6	56	371	34	405												564	71	635
8:15 - 8:30				94	24	118	6	0	6	0	0	0				44	5	49	39	3	42	373	21	394												556	53	609
8:30 - 8:45				97	33	130	8	0	8	4	0	4				27	11	38	47	7	54	384	20	404												567	71	638
8:45 - 9:00				94	21	115	2	1	3	2	0	2				30	4	34	43	2	45	272	17	289												443	45	488
Σ				1176	276	1452	41	2	43	11	1	12				293	50	343	513	35	548	3937	286	4223												5971	650	6621

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15				284	21	305	2	0	2	2	0	2				100	6	106	18	2	20	203	28	231												609	57	666
16:15 - 16:30				320	25	345	2	0	2	0	0	0				55	5	60	13	0	13	165	21	186												555	51	606
16:30 - 16:45				281	18	299	3	0	3	1	0	1				94	4	98	19	2	21	175	26	201												573	50	623
16:45 - 17:00				328	19	347	5	1	6	0	0	0				71	3	74	14	2	16	160	20	180												578	45	623
17:00 - 17:15				301	11	312	1	0	1	0	0	0				101	4	105	14	5	19	193	27	220												610	47	657
17:15 - 17:30				373	13	386	1	0	1	0	0	0				62	4	66	24	0	24	240	31	271												700	48	748
17:30 - 17:45				320	12	332	2	0	2	0	0	0				76	4	80	13	1	14	197	34	231												608	51	659
17:45 - 18:00				257	22	279	2	1	3	0	0	0				57	5	62	11	1	12	133	25	158												460	54	514
18:00 - 18:15				285	19	304	1	0	1	0	0	0				51	2	53	9	0	9	132	31	163												478	52	530
18:15 - 18:30				212	5	217	2	0	2	0	0	0				26	0	26	17	0	17	127	18	145												384	23	407
18:30 - 18:45				186	11	197	1	0	1	2	0	2				26	0	26	4	0	4	92	15	107												311	26	337
18:45 - 19:00				137	4	141	3	0	3	1	0	1				29	0	29	6	0	6	113	14	127												289	18	307
Σ				3284	180	3464	25	2	27	6	0	6				748	37	785	162	13	175	1930	290	2220												6155	522	6677

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00				363	87	450	9	1	10	2	0	2				83	14	97	148	12	160	1153	92	1245												1758	206	1964	
6:15 - 7:15				400	85	485	7	1	8	1	1	2				67	16	83	168	9	177	1188	92	1280												1831	204	2035	
6:30 - 7:30				404	88	492	6	1	7	2	1	3				92	14	106	167	9	176	1261	96	1369												1894	209	2103	
6:45 - 7:45				409	87	496	7	1	8	1	1	2				51	10	61	164	8	172	1334	104	1438												1966	211	2177	
7:00 - 8:00				428	84	512	5	0	5	0	0	0				78	12	90	186	5	191	1356	102	1458												2053	203	2257	
7:15 - 8:15				423	89	512	16	0	16	3	0	3				94	12	106	186	11	199	1456	114	1570												2180	226	2406	
7:30 - 8:30				417	98	515	20	0	20	2	0	2				128	14	142	188	12	200	1486	111	1597												2241	235	2476	
7:45 - 8:45				**403**	**108**	**511**	**26**	**0**	**26**	**6**	**0**	**6**				**139**	**23**	**162**	**200**	**17**	**217**	**1515**	**104**	**1619**												**2289**	**252**	**2541**	**Peak**
8:00 - 9:00				385	105	490	26	1	27	8	0	8				132	24	156	179	18	197	1400	92	1492												2130	240	2370	

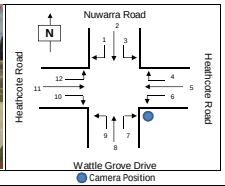
TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00				1213	83	1296	12	1	13	3	0	3				320	18	338	64	6	70	703	95	798												2315	203	2518	
16:15 - 17:15				1220	73	1293	11	1	12	1	0	1				321	16	337	60	9	69	693	94	787												2316	193	2509	
16:30 - 17:30				1283	61	1344	10	1	11	1	0	1				328	15	343	71	9	80	788	104	892												2481	190	2651	
16:45 - 17:45				**1322**	**58**	**1377**	**9**	**1**	**10**	**0**	**0**	**0**				**310**	**15**	**325**	**69**	**4**	**73**	**790**	**112**	**902**												**2496**	**191**	**2687**	**Peak**
17:00 - 18:00				1251	58	1309	6	1	7	0	0	0				296	17	313	62	7	69	763	117	880												2378	200	2578	
17:15 - 18:15				1235	66	1301	6	1	7	0	0	0				246	15	261	57	2	59	702	121	823												2246	205	2451	
17:30 - 18:30				1074	58	1132	7	1	8	0	0	0				210	11	221	50	2	52	589	108	697												1930	180	2110	
17:45 - 18:45				940	57	997	5	1	7	2	0	2				160	7	167	41	1	42	484	89	573												1633	155	1788	
18:00 - 19:00				820	39	859	7	0	7	3	0	3				132	2	134	36	0	36	464	78	542												1462	119	1581	

Intersection of Nuwarra Road and Heathcote Road

Tuesday, 18 March 2014

Austraffic

Survey Start	**6:00 AM 16:00 PM**
Intersection Type	Cross Junction
Intersection No.	**9**
North Approach	**Nuwarra Road**
East Approach	**Heathcote Road**
South Approach	**Wattle Grove Drive**
West Approach	**Heathcote Road**
Date	**18/03/14**
Classification	**Light Heavy**



Camera Position

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	41	7	48	22	0	22	77	4	81	70	1	71	171	16	187	15	0	15	35	2	37	70	3	73	36	3	39	11	0	11	223	18	241	36	3	39	807	57	864
6:15 - 6:30	42	19	61	28	1	29	87	4	91	52	4	56	215	10	225	27	2	29	41	4	45	108	1	109	63	1	64	27	0	27	294	30	324	57	12	69	1041	88	1129
6:30 - 6:45	59	11	70	51	2	53	64	5	69	79	1	80	208	8	216	28	0	28	27	0	27	99	3	102	61	2	63	28	1	29	263	19	282	45	7	52	1012	59	1071
6:45 - 7:00	42	11	53	54	2	56	67	4	71	66	4	70	177	15	192	38	1	39	30	3	33	100	2	102	74	2	76	35	1	36	160	21	181	53	12	65	896	78	974
7:00 - 7:15	68	16	84	42	2	44	63	7	70	74	5	79	208	13	221	39	0	39	38	2	40	121	7	128	65	1	66	31	1	32	156	19	175	47	9	56	952	82	1034
7:15 - 7:30	52	12	64	27	3	30	64	4	68	117	4	121	301	16	317	50	2	52	42	1	43	92	5	97	102	2	104	31	2	33	181	20	201	38	8	46	1097	79	1176
7:30 - 7:45	99	2	101	29	5	34	78	3	81	91	6	97	283	9	292	40	1	41	35	3	38	138	3	141	107	1	108	25	2	27	161	8	169	60	7	67	1146	50	1196
7:45 - 8:00	107	1	108	40	4	44	86	4	90	123	3	126	313	13	326	37	1	38	56	1	57	112	6	118	105	2	107	44	5	49	203	20	223	43	3	46	1269	63	1332
8:00 - 8:15	101	2	103	42	5	47	65	4	69	89	2	91	314	18	332	42	0	42	46	3	49	117	2	119	112	2	114	46	2	48	157	16	173	39	6	45	1170	62	1232
8:15 - 8:30	89	4	93	48	2	50	69	6	75	126	3	129	326	25	351	49	0	49	42	2	44	98	7	105	114	3	117	56	3	59	180	31	211	38	9	47	1236	95	1330
8:30 - 8:45	47	14	61	41	5	46	81	1	82	109	7	116	324	15	339	50	1	51	49	2	51	89	4	93	96	2	98	27	2	29	167	25	192	54	6	60	1134	84	1218
8:45 - 9:00	62	18	80	60	1	61	58	7	65	98	6	104	313	15	328	50	3	53	54	3	57	72	2	74	99	2	101	40	1	41	178	22	200	36	6	42	1120	86	1206
Σ	809	117	926	484	32	516	859	53	912	1094	46	1140	3153	173	3326	465	11	476	495	26	521	1216	45	1261	1034	23	1057	401	20	421	2323	249	2572	546	88	634	12879	883	13762

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	82	18	100	101	1	102	104	2	106	85	3	88	252	23	275	50	3	53	45	0	45	68	3	71	52	2	54	84	4	88	261	9	270	53	8	61	1237	76	1313
16:15 - 16:30	133	10	143	126	3	129	100	6	106	81	2	83	265	13	278	83	3	86	54	2	56	49	5	54	68	0	68	87	2	89	260	18	278	55	2	57	1361	66	1427
16:30 - 16:45	101	10	111	112	2	114	107	3	110	83	5	88	249	16	265	74	1	75	46	0	46	74	2	76	56	0	56	81	1	82	296	6	302	44	6	50	1323	52	1375
16:45 - 17:00	113	7	120	142	1	143	129	4	133	92	1	93	223	12	235	64	2	66	66	1	67	57	0	57	55	1	56	92	3	95	276	13	289	56	1	57	1365	46	1411
17:00 - 17:15	81	4	85	126	0	126	115	2	117	73	5	78	253	20	273	58	3	61	49	2	51	52	0	52	60	2	62	89	1	90	354	8	362	54	3	57	1364	50	1414
17:15 - 17:30	122	6	128	128	3	131	124	3	127	115	1	116	261	9	270	66	1	67	84	0	84	78	1	79	54	1	55	91	2	93	293	7	300	33	2	35	1457	36	1493
17:30 - 17:45	84	0	84	129	3	132	111	4	115	100	3	103	269	14	283	68	0	68	54	0	54	52	0	52	58	1	59	96	3	99	386	9	395	38	7	45	1445	44	1489
17:45 - 18:00	90	4	94	121	0	121	121	3	124	112	0	112	264	10	274	84	0	84	59	1	60	59	0	59	60	1	61	68	0	68	382	5	387	42	3	45	1462	27	1489
18:00 - 18:15	77	5	82	156	1	157	135	2	137	113	2	115	250	7	257	82	0	82	45	0	45	58	0	58	49	1	50	115	2	117	312	2	314	43	2	45	1435	24	1459
18:15 - 18:30	117	6	123	120	1	121	115	1	116	103	0	103	233	8	241	48	0	48	39	1	40	48	0	48	47	0	47	92	0	92	245	6	251	50	1	51	1257	24	1281
18:30 - 18:45	91	6	97	99	1	100	105	1	106	120	1	121	201	4	205	52	0	52	26	0	26	52	0	52	59	0	59	73	0	73	200	5	205	42	3	45	1120	21	1141
18:45 - 19:00	72	0	72	103	1	104	95	0	95	71	1	72	165	5	170	43	0	43	27	0	27	46	1	47	52	1	53	68	0	68	181	4	185	35	2	37	958	15	973
Σ	1163	76	1239	1463	17	1480	1361	31	1392	1148	24	1172	2885	141	3026	772	13	785	594	7	601	693	12	705	680	10	690	1036	18	1054	3444	92	3536	545	40	585	15784	481	16265

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	184	48	232	155	5	160	295	17	312	267	10	277	771	49	820	108	3	111	133	9	142	377	9	386	234	8	242	101	2	103	940	88	1028	191	34	225	3756	282	4038	
6:15 - 7:15	211	52	263	175	7	182	281	20	301	271	14	285	808	46	854	132	3	135	136	9	145	428	12	441	263	6	269	121	3	124	873	89	962	202	40	242	3901	307	4208	
6:30 - 7:30	221	50	271	174	9	183	258	20	278	336	14	350	994	52	946	156	3	159	137	9	146	410	17	427	302	5	307	125	3	130	760	79	839	183	36	219	3957	238	4195	
6:45 - 7:45	261	41	302	152	12	164	272	18	290	348	19	367	969	53	1022	167	4	171	145	9	154	451	17	468	348	6	354	122	6	128	658	68	726	198	36	234	4091	289	4380	
7:00 - 8:00	356	31	387	138	14	152	291	18	309	405	18	423	1165	51	1156	196	4	170	171	7	178	463	21	484	379	6	385	131	10	141	701	67	768	188	27	215	4464	274	4738	
7:15 - 8:15	356	17	376	138	17	155	293	15	308	420	15	435	1211	36	1267	169	4	173	179	8	187	459	16	475	426	5	433	146	11	157	702	64	766	180	24	204	4682	254	4936	
7:30 - 8:30	396	9	405	159	16	175	298	17	315	429	14	443	1236	65	1301	168	2	170	170	8	188	465	18	483	438	8	446	171	12	183	701	75	776	180	25	205	4600	270	5080	
7:45 - 8:45	**344**	**21**	**365**	**171**	**16**	**187**	**301**	**15**	**316**	**447**	**15**	**462**	**1277**	**71**	**1348**	**178**	**2**	**180**	**193**	**8**	**201**	**416**	**19**	**435**	**427**	**9**	**436**	**173**	**12**	**185**	**707**	**92**	**799**	**174**	**24**	**198**	**4808**	**304**	**5112**	**Peak**
8:00 - 9:00	299	38	337	191	13	204	273	18	291	422	18	440	1277	73	1350	191	4	195	191	10	201	376	15	391	421	9	430	169	8	177	682	94	776	167	27	194	4659	327	4986	

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	429	45	474	481	7	488	440	15	455	341	11	352	989	64	1053	271	9	280	211	3	214	248	10	258	231	3	234	344	10	354	1093	46	1139	208	17	225	5286	240	5526	
16:15 - 17:15	428	31	459	506	6	512	451	15	466	329	13	342	990	61	1051	279	9	288	215	5	220	232	7	239	229	3	232	349	7	356	1186	45	1231	209	12	221	5403	214	5617	
16:30 - 17:30	417	27	444	508	6	514	475	12	487	363	12	375	986	57	1043	282	7	289	245	3	248	261	3	264	235	4	239	353	7	360	1217	34	1251	187	12	199	5509	184	5693	
16:45 - 17:45	400	17	417	525	7	532	479	13	492	380	10	390	1006	55	1061	256	6	262	253	3	256	239	1	240	237	5	242	368	9	377	1307	37	1344	181	13	194	5631	176	5807	
17:00 - 18:00	377	14	391	504	6	510	471	12	483	400	9	409	1047	53	1100	276	4	280	246	3	249	241	1	242	242	5	247	344	6	350	1413	29	1442	167	15	182	5728	157	5885	
17:15 - 18:15	**374**	**15**	**388**	**534**	**7**	**541**	**491**	**12**	**503**	**440**	**6**	**446**	**1044**	**40**	**1084**	**300**	**1**	**301**	**242**	**1**	**243**	**247**	**1**	**248**	**231**	**4**	**235**	**370**	**7**	**377**	**1371**	**23**	**1394**	**156**	**14**	**170**	**5799**	**131**	**5930**	**Peak**
17:30 - 18:30	368	15	383	526	5	531	482	10	492	428	5	433	1016	39	1055	282	0	282	197	2	199	217	0	217	214	3	217	371	5	376	1325	22	1347	173	13	186	5599	119	5718	
17:45 - 18:45	376	22	398	496	3	499	476	7	483	448	3	451	948	29	977	266	0	266	169	2	171	217	0	217	215	2	217	348	2	350	1139	18	1157	177	9	186	5274	96	5370	
18:00 - 19:00	357	17	374	478	4	482	450	4	454	407	4	411	849	24	873	225	0	225	137	1	138	204	1	205	207	2	209	348	2	350	938	17	955	170	8	178	4770	84	4854	

Intersection of Newbridge Road and Nuwarra Road

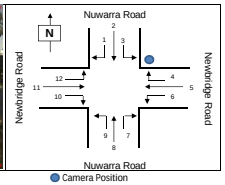
Tuesday, 18 March 2014

Austraffic

Survey Start **6:00 AM 16:00 PM**
Intersection Type Cross Junction
Intersection No. **8**
North Approach **Nuwarra Road**
East Approach **Newbridge Road**
South Approach **Nuwarra Road**
West Approach **Newbridge Road**

Date **18/03/14**

Classification **Light Heavy**



Camera Position

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	5	0	5	14	1	15	2	0	2	0	0	0	100	16	116	56	11	67	154	7	161	8	0	8	3	1	4	0	0	0	406	29	435	5	1	6	753	66	819
6:15 - 6:30	7	0	7	18	1	19	5	0	5	0	0	0	141	17	158	66	20	86	167	18	185	19	0	19	10	0	10	0	0	0	434	36	470	6	0	6	873	92	965
6:30 - 6:45	7	0	7	21	2	23	1	0	1	0	0	0	152	22	174	65	10	75	124	7	131	14	0	14	3	0	3	0	0	0	457	40	497	3	0	3	847	81	928
6:45 - 7:00	12	1	13	23	0	23	2	0	2	0	0	0	141	18	159	64	19	83	183	10	193	27	0	27	11	0	11	0	0	0	428	29	457	17	1	18	908	78	986
7:00 - 7:15	8	3	11	15	1	16	4	0	4	0	0	0	144	16	160	44	22	66	134	13	147	33	1	34	6	1	7	0	0	0	473	49	522	27	0	27	888	106	994
7:15 - 7:30	22	2	24	29	1	30	1	0	1	0	0	0	145	23	168	52	14	66	142	14	156	48	1	49	6	0	6	0	0	0	380	24	404	23	2	25	848	81	929
7:30 - 7:45	18	1	19	21	0	21	1	0	1	0	0	0	190	31	221	53	21	74	132	10	142	55	1	56	6	1	7	0	0	0	430	32	462	34	2	36	940	99	1039
7:45 - 8:00	22	2	24	31	0	31	1	0	1	0	0	0	177	21	198	58	6	64	152	6	158	49	0	49	8	1	9	0	0	0	372	32	404	29	3	32	898	71	970
8:00 - 8:15	9	1	10	24	0	24	1	0	1	0	0	0	213	26	239	55	10	65	168	9	177	66	3	69	6	0	6	0	0	0	403	34	437	36	1	37	981	84	1065
8:15 - 8:30	26	1	27	27	1	28	4	0	4	0	0	0	173	19	192	47	8	55	117	12	129	60	0	60	2	0	2	0	0	0	353	36	389	60	0	60	868	77	946
8:30 - 8:45	39	1	40	33	0	33	0	0	0	0	0	0	170	28	198	39	19	58	168	17	185	99	2	101	8	1	9	0	0	0	315	40	355	92	1	93	963	109	1072
8:45 - 9:00	50	3	53	51	0	51	5	0	5	0	0	0	140	30	170	60	17	77	104	13	117	72	2	74	9	0	9	0	0	0	254	30	284	52	0	52	797	95	892
Σ	225	15	240	307	7	314	27	0	27	0	0	0	1886	267	2153	659	177	836	1745	136	1881	550	10	560	78	5	83	0	0	0	4705	411	5116	384	11	395	10566	1039	11605

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	49	1	50	44	0	44	4	0	4	0	0	0	387	22	409	85	9	94	92	9	101	29	0	29	10	1	11	0	0	0	244	22	266	20	0	20	964	64	1028
16:15 - 16:30	42	0	42	55	0	55	4	0	4	0	0	0	394	30	424	123	14	137	116	7	123	49	0	49	10	1	11	0	0	0	225	23	248	21	0	21	1039	75	1114
16:30 - 16:45	42	1	43	54	0	54	3	0	3	0	0	0	433	33	466	143	12	155	105	10	115	34	0	34	10	1	11	0	0	0	255	30	285	21	0	21	1100	87	1187
16:45 - 17:00	48	0	48	49	1	50	4	0	4	0	0	0	385	23	408	147	4	151	105	4	109	29	0	29	11	1	12	0	0	0	224	22	246	15	0	15	1017	55	1072
17:00 - 17:15	34	1	35	71	0	71	5	0	5	0	0	0	411	33	444	149	7	156	90	9	99	26	0	26	10	1	11	0	0	0	321	15	336	27	0	27	1144	66	1210
17:15 - 17:30	43	0	43	69	1	70	2	0	2	0	0	0	416	12	428	155	5	160	107	4	111	37	1	38	12	0	12	0	0	0	313	27	340	15	0	15	1169	50	1219
17:30 - 17:45	25	1	26	43	1	44	6	1	7	0	0	0	424	24	448	172	6	178	107	5	112	48	0	48	11	0	11	0	0	0	305	14	319	25	0	25	1166	52	1218
17:45 - 18:00	28	0	28	65	1	66	4	0	4	0	0	0	368	26	394	151	5	156	104	5	109	41	0	41	15	1	16	0	0	0	276	16	292	9	0	9	1061	54	1115
18:00 - 18:15	23	1	24	44	0	44	0	0	0	0	0	0	345	17	362	124	5	129	101	2	103	46	0	46	17	0	17	0	0	0	201	12	213	15	0	15	916	37	953
18:15 - 18:30	27	1	28	39	0	39	8	0	8	0	0	0	344	25	369	146	7	153	84	0	84	42	0	42	9	0	9	0	0	0	197	19	216	18	0	18	914	52	966
18:30 - 18:45	26	1	27	39	0	39	5	0	5	0	0	0	287	14	301	110	6	116	65	9	74	38	0	38	7	0	7	0	0	0	136	10	146	17	0	17	730	40	770
18:45 - 19:00	16	0	16	45	0	45	3	1	4	0	0	0	241	11	252	93	2	95	68	2	70	21	0	21	9	0	9	0	0	0	132	10	142	18	0	18	646	26	672
Σ	403	7	410	617	4	621	48	2	50	0	0	0	4435	270	4705	1598	82	1680	1144	66	1210	440	1	441	131	6	137	0	0	0	2829	220	3049	221	0	221	11866	658	12524

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	31	1	32	76	4	80	10	0	10	0	0	0	534	73	607	251	60	311	626	42	670	68	0	68	27	1	28	0	0	0	1725	134	1859	31	2	33	3381	317	3698	
6:15 - 7:15	34	4	38	77	4	81	12	0	12	0	0	0	579	73	652	239	71	310	608	48	656	93	1	94	30	1	31	0	0	0	1792	154	1946	53	1	54	3516	357	3873	
6:30 - 7:30	49	6	55	88	4	92	8	0	8	0	0	0	662	79	741	255	65	320	583	44	627	122	2	124	28	1	29	0	0	0	1736	142	1878	70	3	73	3461	346	3807	
6:45 - 7:45	60	7	67	88	2	90	8	0	8	0	0	0	620	88	708	213	76	289	591	47	638	163	3	166	29	2	31	0	0	0	1711	134	1845	101	5	106	3584	364	3948	
7:00 - 8:00	70	8	78	96	2	98	4	0	4	0	0	0	656	91	747	207	63	270	590	43	633	185	3	188	26	2	28	0	0	0	1656	137	1793	113	7	120	3575	357	3932	
7:15 - 8:15	71	6	77	105	1	106	4	0	4	0	0	0	725	101	826	218	51	269	594	39	633	218	5	223	26	2	28	0	0	0	1586	122	1707	122	8	130	3698	335	4033	
7:30 - 8:30	75	5	80	103	1	104	7	0	7	0	0	0	753	97	850	213	45	258	593	33	626	230	4	234	22	2	24	0	0	0	1558	134	1692	159	6	165	3699	331	4030	
7:45 - 8:45	**96**	**5**	**101**	**115**	**1**	**116**	**6**	**0**	**6**	**0**	**0**	**0**	**733**	**94**	**827**	**199**	**43**	**242**	**605**	**44**	**649**	**274**	**5**	**279**	**24**	**2**	**26**	**0**	**0**	**0**	**1443**	**142**	**1585**	**217**	**5**	**222**	**3712**	**341**	**4053**	Peak
8:00 - 9:00	124	6	130	135	1	136	10	0	10	0	0	0	696	103	799	201	54	255	557	51	608	297	7	304	25	1	26	0	0	0	1325	140	1465	240	2	242	3610	365	3975	

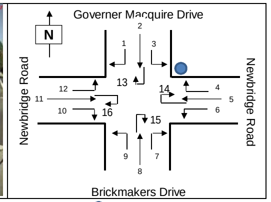
TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8			9			10			11			12			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	181	2	183	202	1	203	15	0	15	0	0	0	1599	108	1707	498	39	537	418	30	448	141	0	141	41	4	45	0	0	0	948	97	1045	77	0	77	4120	281	4401	
16:15 - 17:15	166	2	168	229	1	230	16	0	16	0	0	0	1623	119	1742	562	37	599	416	30	446	136	0	136	41	4	45	0	0	0	1025	90	1115	84	0	84	4300	283	4583	
16:30 - 17:30	167	2	169	243	2	245	14	0	14	0	0	0	1645	101	1746	594	28	622	407	27	434	126	1	127	43	3	46	0	0	0	1113	94	1207	78	0	78	4430	258	4688	
16:45 - 17:45	150	2	152	232	3	235	17	1	18	0	0	0	1636	92	1728	623	22	645	409	22	431	140	1	141	44	2	46	0	0	0	1163	78	1241	82	0	82	4496	223	4719	
17:00 - 18:00	**130**	**2**	**132**	**248**	**3**	**251**	**17**	**1**	**18**	**0**	**0**	**0**	**1619**	**95**	**1714**	**627**	**23**	**650**	**408**	**23**	**431**	**152**	**1**	**153**	**48**	**2**	**50**	**0**	**0**	**0**	**1215**	**72**	**1287**	**76**	**0**	**76**	**4540**	**222**	**4762**	Peak
17:15 - 18:15	119	2	121	221	3	224	12	1	13	0	0	0	1553	79	1632	602	21	623	419	16	435	172	1	173	55	1	56	0	0	0	1095	69	1164	64	0	64	4312	193	4505	
17:30 - 18:30	103	3	106	191	2	193	18	1	19	0	0	0	1481	92	1573	593	23	616	396	12	408	177	0	177	52	1	53	0	0	0	979	61	1040	67	0	67	4057	195	4252	
17:45 - 18:45	104	3	107	187	1	188	17	0	17	0	0	0	1344	82	1426	531	23	554	354	16	370	167	0	167	48	1	49	0	0	0	810	57	867	59	0	59	3621	183	3804	
18:00 - 19:00	92	3	95	167	0	167	16	1	17	0	0	0	1217	67	1284	473	20	493	318	13	331	147	0	147	42	0	42	0	0	0	666	51	717	68	0	68	3206	155	3361	

Intersection of Governor Macquarie Drive and Newbridge Road	Tuesday, 18 March 2014
	Austraffic

Survey Start 6:00 AM 16:00 PM
Intersection Type Cross Junction
Intersection No. 13
North Approach Governer Macquire Drive
East Approach Newbridge Road
South Approach Brickmakers Drive
West Approach Newbridge Road

Date 18/03/14

Classification Light Heavy



Camera Position

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	9	14	23	18	0	18	82	9	91	47	7	54	138	16	154	37	1	38	74	2	76	7	0	7
6:15 - 6:30	12	14	26	10	1	11	99	18	117	46	23	69	177	23	200	49	0	49	83	0	83	7	0	7
6:30 - 6:45	12	12	24	16	0	16	76	14	90	55	11	66	204	25	229	44	4	48	71	2	73	11	2	13
6:45 - 7:00	13	7	20	16	1	17	87	10	97	87	6	93	188	27	215	60	3	63	139	1	140	16	0	16
7:00 - 7:15	11	14	25	16	3	19	100	12	112	101	10	111	168	26	194	39	1	40	111	1	112	24	2	26
7:15 - 7:30	10	11	21	6	0	6	117	10	127	92	11	103	186	28	214	29	1	30	152	3	155	36	0	36
7:30 - 7:45	11	11	22	15	0	15	155	7	162	132	7	139	224	30	254	35	1	36	141	0	141	31	1	32
7:45 - 8:00	23	9	32	18	0	18	120	10	130	106	7	113	208	26	234	34	0	34	132	2	134	32	1	33
8:00 - 8:15	21	9	30	23	0	23	141	13	154	124	16	140	226	25	251	44	2	46	147	2	149	40	0	40
8:15 - 8:30	23	15	38	35	1	36	148	15	163	138	14	152	202	20	222	44	3	47	128	0	128	50	0	50
8:30 - 8:45	20	14	34	31	2	33	122	14	136	131	20	151	211	33	244	47	0	47	129	2	131	44	1	45
8:45 - 9:00	28	12	40	25	6	31	111	13	124	127	18	145	176	36	212	45	1	46	96	0	96	40	1	41
Σ	193	142	335	229	14	243	1358	145	1503	1186	150	1336	2308	315	2623	507	17	524	1403	15	1418	338	8	346

TIME PERIOD	VEHICLE MOVEMENT 9			10			11			12			13			14			15			16			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	0	0	0	0	0	0	548	33	581	22	8	30	0	0	0	1	0	1	0	0	0	0	0	0	983	90	1073
6:15 - 6:30	1	0	1	1	0	1	572	45	617	20	3	23	0	0	0	2	0	2	0	0	0	0	0	0	1079	127	1206
6:30 - 6:45	0	0	0	3	0	3	555	52	607	13	1	14	0	0	0	0	0	0	0	0	0	0	1	1	1060	124	1184
6:45 - 7:00	2	0	2	2	0	2	583	29	612	18	5	23	0	0	0	0	0	0	0	0	0	0	0	0	1211	89	1300
7:00 - 7:15	1	0	1	3	0	3	578	53	631	18	7	25	0	0	0	0	0	0	0	0	0	0	0	0	1170	129	1299
7:15 - 7:30	0	0	0	1	0	1	520	30	550	16	2	18	0	0	0	0	0	0	0	0	0	0	0	0	1165	96	1261
7:30 - 7:45	1	0	1	1	0	1	528	34	562	11	10	21	0	0	0	1	0	1	0	0	0	0	0	0	1286	101	1387
7:45 - 8:00	1	0	1	1	0	1	520	37	557	14	9	23	0	0	0	1	0	1	0	0	0	0	0	0	1210	101	1311
8:00 - 8:15	3	0	3	2	1	3	540	29	569	20	9	29	0	0	0	1	0	1	0	0	0	1	0	1	1333	106	1439
8:15 - 8:30	3	0	3	0	0	0	429	37	466	11	8	19	0	0	0	0	0	0	0	0	0	0	0	0	1211	113	1324
8:30 - 8:45	2	0	2	0	0	0	494	41	535	30	8	38	0	0	0	0	0	0	0	0	0	0	0	0	1261	135	1396
8:45 - 9:00	3	0	3	4	0	4	322	35	357	49	10	59	0	0	0	0	0	0	0	0	0	0	0	0	1026	132	1158
Σ	17	0	17	18	1	19	6189	455	6644	242	80	322	0	0	0	6	0	6	0	0	0	1	1	2	13995	1343	15338

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	20	10	30	40	0	40	76	4	80	142	19	161	434	17	451	113	0	113	56	3	59	18	1	19
16:15 - 16:30	36	6	42	53	1	54	94	10	104	150	11	161	490	38	528	135	0	135	42	2	44	15	0	15
16:30 - 16:45	33	6	39	39	0	39	91	5	96	111	23	134	523	39	562	124	2	126	61	0	61	11	1	12
16:45 - 17:00	39	17	56	62	0	62	99	4	103	153	14	167	491	17	508	125	2	127	48	0	48	29	1	30
17:00 - 17:15	39	8	47	73	0	73	111	5	116	134	12	146	521	28	549	158	3	161	51	2	53	17	1	18
17:15 - 17:30	45	6	51	76	2	78	132	2	134	143	19	162	528	12	540	134	1	135	46	0	46	17	1	18
17:30 - 17:45	39	4	43	33	0	33	80	2	82	147	14	161	551	22	573	138	0	138	39	1	40	15	0	15
17:45 - 18:00	34	3	37	34	0	34	85	3	88	132	14	146	490	19	509	126	1	127	36	0	36	11	0	11
18:00 - 18:15	34	1	35	32	0	32	81	2	83	171	11	182	447	23	470	148	3	151	46	0	46	16	0	16
18:15 - 18:30	25	5	30	32	0	32	62	4	66	145	11	156	453	23	476	143	3	146	37	0	37	15	2	17
18:30 - 18:45	14	1	15	22	2	24	39	5	44	140	16	156	363	19	382	103	0	103	32	0	32	19	0	19
18:45 - 19:00	29	3	32	30	1	31	57	0	57	98	3	101	292	12	304	91	0	91	34	0	34	19	0	19
Σ	387	70	457	526	6	532	1007	46	1053	1666	167	1833	5583	269	5852	1538	15	1553	528	8	536	202	7	209

TIME PERIOD	VEHICLE MOVEMENT 9			10			11			12			13			14			15			16			GRAND TOTAL		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	5	1	6	0	0	0	307	25	332	38	6	44	0	0	0	0	0	0	0	0	0	1	0	1	1250	86	1336
16:15 - 16:30	1	0	1	0	0	0	304	27	331	26	3	29	0	0	0	0	0	0	0	0	0	0	0	0	1346	98	1444
16:30 - 16:45	0	0	0	2	0	2	330	27	357	34	7	41	0	0	0	0	0	0	0	0	0	0	0	0	1359	110	1469
16:45 - 17:00	4	0	4	1	0	1	311	19	330	29	6	35	0	0	0	1	0	1	0	0	0	1	0	1	1393	80	1473
17:00 - 17:15	1	0	1	0	0	0	385	20	405	28	7	35	0	0	0	0	0	0	0	0	0	0	0	0	1518	86	1604
17:15 - 17:30	3	0	3	0	0	0	383	25	408	28	4	32	0	0	0	0	0	0	0	0	0	0	0	0	1535	72	1607
17:30 - 17:45	3	0	3	1	0	1	398	26	424	24	5	29	0	0	0	0	0	0	0	0	0	0	0	0	1468	74	1542
17:45 - 18:00	1	0	1	3	0	3	332	18	350	33	4	37	0	0	0	0	0	0	0	0	0	0	0	0	1317	62	1379
18:00 - 18:15	1	0	1	1	0	1	253	14	267	25	4	29	0	0	0	0	0	0	0	0	0	1	0	1	1256	58	1314
18:15 - 18:30	1	0	1	3	0	3	250	15	265	32	3	35	0	0	0	0	0	0	0	0	0	0	0	0	1198	66	1264
18:30 - 18:45	3	0	3	0	0	0	215	15	230	21	0	21	0	0	0	1	0	1	0	0	0	0	0	0	972	58	1030
18:45 - 19:00	0	0	0	2	0	2	185	6	191	23	2	25	0	0	0	0	0	0	0	0	0	1	0	1	861	27	888
Σ	23	1	24	13	0	13	3653	237	3890	341	51	392	0	0	0	2	0	2	0	0	0	4	0	4	15473	877	16350

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 7:00	46	47	93	60	2	62	344	51	395	235	47	282	707	91	798	190	8	198	367	5	372	41	2	43
6:15 - 7:15	48	47	95	58	5	63	362	54	416	289	50	339	737	101	838	192	8	200	404	4	408	58	4	62
6:30 - 7:30	46	44	90	54	4	58	380	46	426	335	38	373	746	106	852	172	9	181	473	7	480	87	4	91
6:45 - 7:45	45	43	88	53	4	57	459	39	498	412	34	446	766	111	877	163	6	169	543	5	548	107	3	110
7:00 - 8:00	55	45	100	55	3	58	492	39	531	431	35	466	786	110	896	137	3	140	536	6	542	123	4	127
7:15 - 8:15	65	40	105	62	0	62	533	40	573	454	41	495	844	109	953	142	4	146	572	7	579	139	2	141
7:30 - 8:30	78	44	122	91	1	92	564	45	609	500	44	544	860	101	961	157	6	163	548	4	552	153	2	155
7:45 - 8:45	**87**	**47**	**134**	**107**	**3**	**110**	**531**	**52**	**583**	**499**	**57**	**556**	**847**	**104**	**951**	**169**	**5**	**174**	**536**	**6**	**542**	**166**	**2**	**168**
8:00 - 9:00	92	50	142	114	9	123	522	55	577	520	68	588	815	114	929	180	6	186	500	4	504	174	2	176

TIME PERIOD	VEHICLE MOVEMENT 9			10			11			12			13			14			15			16			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	3	0	3	6	0	6	2258	159	2417	73	17	90	0	0	0	3	0	3	0	0	0	0	1	1	4333	430	4763	
6:15 - 7:15	4	0	4	9	0	9	2288	179	2467	69	16	85	0	0	0	2	0	2	0	0	0	0	1	1	4520	469	4989	
6:30 - 7:30	3	0	3	9	0	9	2236	164	2400	65	15	80	0	0	0	0	0	0	0	0	0	0	1	1	4606	438	5044	
6:45 - 7:45	4	0	4	7	0	7	2209	146	2355	63	24	87	0	0	0	1	0	1	0	0	0	0	0	0	4832	415	5247	
7:00 - 8:00	3	0	3	6	0	6	2146	154	2300	59	28	87	0	0	0	2	0	2	0	0	0	0	0	0	4831	427	5258	
7:15 - 8:15	5	0	5	5	1	6	2108	130	2238	61	30	91	0	0	0	3	0	3	0	0	0	1	0	1	4994	404	5398	
7:30 - 8:30	8	0	8	4	1	5	2017	137	2154	56	36	92	0	0	0	3	0	3	0	0	0	1	0	1	5040	421	5461	
7:45 - 8:45	**9**	**0**	**9**	**3**	**1**	**4**	**1983**	**144**	**2127**	**75**	**34**	**109**	**0**	**0**	**0**	**2**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**1**	**5015**	**455**	**5470**	**Peak**
8:00 - 9:00	11	0	11	6	1	7	1785	142	1927	110	35	145	0	0	0	1	0	1	0	0	0	1	0	1	4831	486	5317	

TIME PERIOD	VEHICLE MOVEMENT 1			2			3			4			5			6			7			8		
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 17:00	128	39	167	194	1	195	360	23	383	556	67	623	1938	111	2049	497	4	501	207	5	212	73	3	76
16:15 - 17:15	147	37	184	227	1	228	395	24	419	548	60	608	2025	122	2147	542	7	549	202	4	206	72	3	75
16:30 - 17:30	156	37	193	250	2	252	433	16	449	541	68	609	2063	96	2159	541	8	549	206	2	208	74	4	78
16:45 - 17:45	**162**	**35**	**197**	**244**	**2**	**246**	**422**	**13**	**435**	**577**	**59**	**636**	**2091**	**79**	**2170**	**555**	**6**	**561**	**184**	**3**	**187**	**78**	**3**	**81**
17:00 - 18:00	157	21	178	216	2	218	408	12	420	556	59	615	2090	81	2171	556	5	561	172	3	175	60	2	62
17:15 - 18:15	152	14	166	175	2	177	378	9	387	593	58	651	2016	76	2092	546	5	551	167	1	168	59	1	60
17:30 - 18:30	132	13	145	131	0	131	308	11	319	595	50	645	1941	87	2028	555	7	562	158	1	159	57	2	59
17:45 - 18:45	107	10	117	120	2	122	267	14	281	588	52	640	1753	84	1837	520	7	527	151	0	151	61	2	63
18:00 - 19:00	102	10	112	116	3	119	239	11	250	554	41	595	1555	77	1632	485	6	491	149	0	149	69	2	71

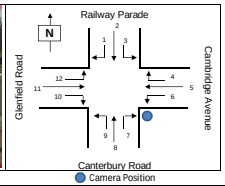
TIME PERIOD	VEHICLE MOVEMENT 9			10			11			12			13			14			15			16			GRAND TOTAL			
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	10	1	11	3	0	3	1252	98	1350	127	22	149	0	0	0	1	0	1	0	0	0	2	0	2	5348	374	5722	
16:15 - 17:15	6	0	6	3	0	3	1330	93	1423	117	23	140	0	0	0	1	0	1	0	0	0	1	0	1	5616	374	5990	
16:30 - 17:30	8	0	8	3	0	3	1409	91	1500	119	24	143	0	0	0	1	0	1	0	0	0	1	0	1	5805	348	6153	
16:45 - 17:45	**11**	**0**	**11**	**2**	**0**	**2**	**1477**	**90**	**1567**	**109**	**22**	**131**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**5914**	**312**	**6226**	**Peak**
17:00 - 18:00	8	0	8	4	0	4	1498	89	1587	113	20	133	0	0	0	0	0	0	0	0	0	0	0	0	5838	294	6132	
17:15 - 18:15	8	0	8	5	0	5	1366	83	1449	110	17	127	0	0	0	0	0	0	0	0	0	1	0	1	5576	266	5842	
17:30 - 18:30	6	0	6	8	0	8	1233	73	1306	114	16	130	0	0	0	0	0	0	0	0	0	1	0	1	5239	260	5499	
17:45 - 18:45	6	0	6	7	0	7	1050	62	1112	111	11	122	0	0	0	1	0	1	0	0	0	1	0	1	4743	244	4987	
18:00 - 19:00	5	0	5	6	0	6	903	50	953	101	9	110	0	0	0	1	0	1	0	0	0	2	0	2	4287	209	4496	

Intersection of Cambridge Avenue and Canterbury Road

Tuesday, 18 March 2014

Austraffic

Survey Start	**6:00 AM 16:00 PM**
Intersection Type	Cross Junction
Intersection No.	**16**
North Approach	**Railway Parade**
East Approach	**Cambridge Avenue**
South Approach	**Canterbury Road**
West Approach	**Glenfield Road**
Date	**18/03/14**
Classification	**Light Heavy**



TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL		
	1			2			3			4			5			6			7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
6:00 - 6:15	15	1	16	2	0	2	30	6	36	5	0	5	1	0	1	19	0	19	188	2	190	2	0	2	53	1	54	14	2	16	52	2	54	16	2	18	397	16	413
6:15 - 6:30	20	4	24	4	0	4	50	0	50	9	0	9	1	0	1	37	1	38	203	6	209	1	0	1	63	5	68	21	1	22	81	7	88	14	5	19	504	29	533
6:30 - 6:45	21	2	23	4	0	4	51	3	54	10	2	12	6	0	6	26	0	26	212	7	219	0	0	0	66	5	71	18	2	20	64	10	74	22	2	24	500	33	533
6:45 - 7:00	14	3	17	4	2	6	52	5	57	8	0	8	11	1	12	18	1	19	176	4	180	0	0	0	93	6	99	14	4	18	38	2	40	28	6	34	456	34	490
7:00 - 7:15	29	3	32	0	0	0	70	4	74	9	3	12	8	0	8	34	2	36	172	5	177	5	0	5	105	2	107	10	0	10	48	1	49	34	7	41	524	27	551
7:15 - 7:30	20	3	23	0	0	0	55	3	58	10	2	12	6	2	8	25	2	27	208	9	217	1	0	1	82	6	88	23	1	24	27	1	28	38	0	38	495	29	524
7:30 - 7:45	23	3	26	1	0	1	79	4	83	11	0	11	10	1	11	48	1	49	220	2	222	0	0	0	87	1	88	39	1	40	38	2	40	93	5	98	649	20	669
7:45 - 8:00	24	3	27	1	0	1	70	1	71	8	1	9	8	2	10	48	2	50	183	7	190	0	0	0	83	1	84	56	5	61	23	4	27	69	2	71	573	28	601
8:00 - 8:15	27	2	29	1	1	2	55	2	57	6	1	7	14	1	15	48	2	50	197	1	198	3	0	3	82	5	87	41	0	41	33	1	34	93	6	99	600	22	622
8:15 - 8:30	47	4	51	0	0	0	43	2	45	11	0	11	15	1	16	55	1	56	198	4	202	2	0	2	76	5	81	46	2	48	34	3	37	53	4	57	580	26	606
8:30 - 8:45	20	2	22	0	0	0	52	2	54	11	2	13	18	1	19	65	2	67	155	4	159	1	0	1	86	1	87	84	7	91	35	1	36	38	2	40	565	24	589
8:45 - 9:00	27	5	32	0	0	0	44	0	44	12	1	13	6	2	8	49	2	51	134	5	139	1	0	1	69	3	72	78	0	78	37	3	40	58	3	61	515	24	539
Σ	287	35	322	17	3	20	651	32	683	110	12	122	104	11	115	472	16	488	2246	56	2302	16	0	16	945	41	986	444	25	469	510	37	547	556	44	600	6358	312	6670

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL		
	1			2			3			4			5			6			7			8			9			10			11			12					
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ
16:00 - 16:15	25	4	29	0	0	0	19	0	19	44	0	44	69	2	71	182	2	184	66	0	66	3	0	3	65	1	66	58	1	59	9	0	9	46	2	48	586	12	598
16:15 - 16:30	23	4	27	1	0	1	17	1	18	53	5	58	49	1	50	215	5	220	46	2	48	1	0	1	43	1	44	79	3	82	15	0	15	49	5	54	591	27	618
16:30 - 16:45	28	2	30	0	0	0	19	0	19	58	0	58	38	0	38	223	5	228	57	0	57	1	0	1	44	1	45	80	5	85	11	0	11	51	2	53	610	15	625
16:45 - 17:00	36	2	38	0	0	0	21	0	21	61	0	61	36	9	45	191	5	196	56	1	57	0	0	0	44	1	45	78	3	81	7	0	7	38	4	42	568	25	593
17:00 - 17:15	26	4	30	0	0	0	21	1	22	58	0	58	47	5	52	207	2	209	60	2	62	2	0	2	75	2	77	81	3	84	13	0	13	46	2	48	636	21	657
17:15 - 17:30	43	4	47	0	0	0	15	0	15	60	2	62	55	1	56	222	8	230	53	0	53	2	0	2	57	1	58	89	2	91	4	0	4	51	1	52	650	19	669
17:30 - 17:45	41	1	42	0	0	0	17	0	17	65	0	65	32	3	35	232	5	237	63	0	63	1	0	1	65	0	65	70	0	70	6	0	6	40	3	43	637	15	652
17:45 - 18:00	33	3	36	0	0	0	14	0	14	53	0	53	36	0	36	222	5	227	58	0	58	1	0	1	69	0	69	110	5	115	3	0	3	55	2	57	654	15	669
18:00 - 18:15	70	4	74	0	0	0	13	0	13	52	0	52	10	1	11	198	3	201	62	0	62	1	0	1	75	0	75	67	1	68	5	0	5	36	2	38	586	11	600
18:15 - 18:30	37	1	38	0	0	0	19	0	19	47	0	47	11	0	11	160	3	163	56	1	57	0	0	0	62	0	62	71	1	72	2	0	2	36	2	38	501	8	509
18:30 - 18:45	53	3	56	1	0	1	18	1	19	33	0	33	6	0	6	125	2	127	57	1	58	0	0	0	60	3	63	62	0	62	11	0	11	25	2	27	451	12	463
18:45 - 19:00	57	2	59	0	0	0	14	0	14	25	2	27	5	0	5	108	1	109	37	0	37	0	0	0	44	0	44	47	2	49	4	0	4	69	0	69	410	7	417
Σ	472	34	506	2	0	2	207	3	210	609	9	618	394	22	416	2285	46	2331	670	7	677	12	0	12	703	10	713	892	26	918	90	0	90	542	27	569	6878	184	7062

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL			
	1			2			3			4			5			6			7			8			9			10			11			12						
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
6:00 - 7:00	70	10	80	14	2	16	183	14	197	32	2	34	19	1	20	100	2	102	779	19	798	3	0	3	275	17	292	67	9	76	235	21	256	80	15	95	1857	112	1969	
6:15 - 7:15	84	12	96	12	2	14	221	12	233	36	5	41	26	1	27	115	4	119	763	22	785	6	0	6	327	18	345	63	7	70	231	20	251	98	20	118	1984	123	2107	
6:30 - 7:30	84	12	96	8	2	10	208	15	223	37	7	44	33	3	36	103	5	108	788	25	813	6	0	6	346	19	365	85	7	92	177	14	191	122	15	137	1975	123	2098	
6:45 - 7:45	86	12	98	5	2	7	256	16	272	38	5	43	35	4	39	125	6	131	776	20	796	6	0	6	367	15	382	86	6	92	153	6	157	193	18	211	2124	110	2234	
7:00 - 8:00	96	12	108	2	0	2	274	12	286	36	6	42	32	1	33	155	7	162	763	23	786	6	0	6	357	10	367	128	7	135	136	8	144	234	14	248	2241	104	2345	
7:15 - 8:15	94	11	105	3	1	4	259	10	269	35	4	39	38	5	43	169	7	176	806	19	825	5	0	5	334	13	347	159	7	166	121	8	129	293	13	306	2317	99	2416	
7:30 - 8:30	**121**	**12**	**133**	**3**	**1**	**4**	**247**	**9**	**256**	**36**	**2**	**38**	**47**	**5**	**52**	**198**	**6**	**205**	**798**	**14**	**812**	**5**	**0**	**5**	**328**	**12**	**340**	**182**	**8**	**190**	**128**	**10**	**138**	**308**	**17**	**325**	**2402**	**96**	**2498**	**Peak**
7:45 - 8:45	118	11	129	2	1	3	220	7	227	36	4	40	55	5	60	216	7	223	733	16	749	6	0	6	327	12	339	227	14	241	125	9	134	253	14	267	2318	100	2418	
8:00 - 9:00	121	13	134	1	1	2	194	6	200	40	4	44	53	5	58	217	7	224	684	14	698	7	0	7	313	14	327	249	9	258	139	8	147	342	15	357	2260	96	2356	

TIME PERIOD	VEHICLE MOVEMENT																												GRAND TOTAL			
	1			2			3			4			5			6			7			8			9			10			11			12						
	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	Light	Heavy	Σ	
16:00 - 17:00	112	12	124	1	0	1	76	1	77	216	5	221	192	12	204	811	17	828	225	3	228	5	0	5	196	4	200	295	12	307	42	0	42	184	13	197	2355	79	2434	
16:15 - 17:15	113	12	125	1	0	1	78	2	80	230	5	235	170	15	185	836	17	853	219	5	224	4	0	4	206	5	211	318	14	332	46	0	46	194	13	197	2405	88	2493	
16:30 - 17:30	133	12	145	0	0	0	76	1	77	237	2	239	178	15	191	843	20	863	225	3	228	5	0	5	220	5	225	328	13	341	35	0	35	186	9	195	2464	80	2544	
16:45 - 17:45	146	11	157	0	0	0	74	1	75	244	2	246	170	18	188	852	20	872	231	3	234	5	0	5	241	4	245	318	8	326	30	0	30	176	10	186	2486	77	2563	
17:00 - 18:00	**143**	**12**	**155**	**0**	**0**	**0**	**67**	**1**	**68**	**236**	**2**	**238**	**170**	**9**	**179**	**883**	**20**	**903**	**233**	**2**	**235**	**6**	**0**	**6**	**266**	**3**	**269**	**350**	**10**	**360**	**26**	**0**	**26**	**192**	**8**	**200**	**2572**	**67**	**2639**	**Peak**
17:15 - 18:15	167	12	179	0	0	0	59	0	59	230	2	232	193	5	198	874	21	895	235	0	235	5	0	5	256	1	257	336	8	344	18	0	18	182	8	190	2525	67	2592	
17:30 - 18:30	181	9	190	0	0	0	63	0	63	217	0	217	89	4	93	812	16	828	239	1	240	3	0	3	271	0	271	318	7	325	16	0	16	167	8	176	2376	46	2422	
17:45 - 18:45	193	11	204	1	0	1	64	1	65	185	0	185	63	1	64	705	13	718	233	2	235	2	0	2	266	3	269	310	7	317	21	0	21	152	8	160	2195	46	2241	
18:00 - 19:00	217	10	227	1	0	1	64	1	65	157	2	159	32	1	33	591	9	600	212	2	214	1	0	1	241	3	244	247	4	251	22	0	22	166	6	172	1951	38	1989	

Appendix B

Intersection performance indicators

The operation of key intersections within was assessed using the SIDRA intersection modelling software. SIDRA calculates intersection performance measures including:

- level of service (LoS)
- degree of saturation (DoS)
- average delay
- queue length.

Level of Service (LoS)

Level of Service (Los) is a basic performance parameter used to describe the operation of an intersection. Levels of service range from A (indicating good intersection operation) to F (indicating over-saturated conditions with long delays and queues). At signalised intersections, the LoS criteria are related to average intersection delay (seconds per vehicle). At priority controlled (give-way and stop controlled) and roundabout intersections, the LoS is based on the modelled delay (seconds per vehicle) for the most delayed movement (refer to Table 1).

Degree of saturation (DoS)

The Degree of Saturation (DoS) is the ratio of demand flow to capacity, and therefore has no unit. As it approaches 1.0, extensive queues and delays could be expected. For a satisfactory situation, DoS should be less than the nominated practical degree of saturation, usually 0.9. The intersection DoS is based on the movement with the highest value.

Average vehicle delay

This is the difference between interrupted and uninterrupted travel times through the intersection and is measured in seconds per vehicle. At signalised intersections the average intersection delay is usually reported. At priority controlled intersections and roundabouts, the average delay for the most delayed movement is usually reported.

Queue length

Queue length is measured in metres reflecting the number of vehicles waiting at the stop line and is usually quoted as the 95th percentile back of queue, which is the value below which 95% of all observed queue lengths fall. It reflects the number of vehicles per traffic lane at the start of the green period, when traffic starts moving again after a red signal. The intersection queue length is usually taken from the movement with the longest queue length.

Table 1 Level of Service criteria for intersections

Level of Service	Average delay (seconds per vehicle)	Traffic signals, roundabout	Give Way and stop signs
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory, but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity. At signals, incidents would cause excessive delays. Roundabouts require other control mode.	At capacity; requires other control mode
F	Greater than 71	Unsatisfactory with excessive queuing	Unsatisfactory with excessive queuing; requires other control mode

Source: RMS *Guide to Traffic Generating Developments*, 2002