Appendix N

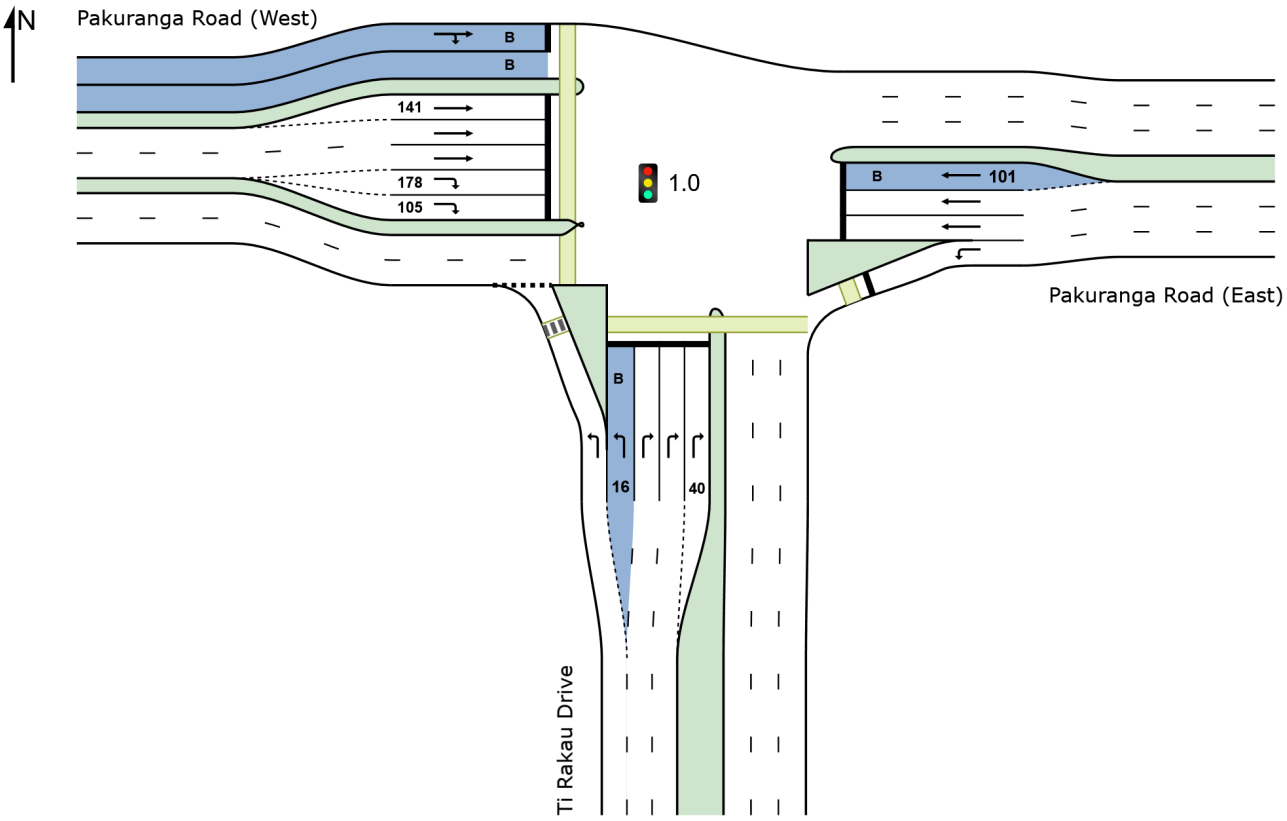
Construction Scenario 1.2 – Lane Performance Summaries

SITE LAYOUT

Site: 1.0 [1.0 Pakuranga Rd / Ti Rakau Rd (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 AM-V1.sip9

LANE SUMMARY

Site: 1.0 [1.0 Pakuranga Rd / Ti Rakau Rd (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 84 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Ti Rakau Drive															
Lane 1	579	8.6	567	8.5	896[1]	0.632	100	13.7	LOS B	13.8	103.8	Full	174	0.0	0.0
Lane 2 (B)	17	100.0	17	100.0	121	0.141	100	47.3	LOS D	0.7	9.1	Short	16	0.0	NA
Lane 3	191	4.0	187	4.0	342	0.546	100	38.7	LOS D	7.1	51.7	Full	174	0.0	0.0
Lane 4	191	4.0	187	4.0	342	0.546	100	38.7	LOS D	7.1	51.7	Full	174	0.0	0.0
Lane 5	191	4.0	187	4.0	342	0.546	100	38.7	LOS D	7.1	51.7	Short	40	0.0	NA
Approach	1168	7.7	1144[N1]	7.7		0.632		26.4	LOS C	13.8	103.8				
East: Pakuranga Road (East)															
Lane 1	832	4.8	812	4.8	1127	0.720	100	16.9	LOS B	22.4	163.4	Full	113	0.0	38.7
Lane 2	626	6.1	611	6.0	689	0.887	100	38.5	LOS D	25.0[N4]	184.4[N4]	Full	113	0.0	50.0
Lane 3	626	6.1	611	6.0	689	0.887	100	38.5	LOS D	25.0[N4]	184.4[N4]	Full	113	0.0	50.0
Lane 4 (B)	25	100.0	25	100.0	85	0.293	100	45.6	LOS D	1.1	14.0	Short	101	0.0	NA
Approach	2109	6.7	2059[N1]	6.7		0.887		30.0	LOS C	25.0	184.4				
West: Pakuranga Road (West)															
Lane 1 (B)	24	100.0	24	100.0	81	0.297	100	44.1	LOS D	1.0	12.7	Full	388	0.0	0.0
Lane 2	318	9.6	318	9.6	695	0.458	100	21.1	LOS C	9.8	74.6	Short	141	0.0	NA
Lane 3	318	9.6	318	9.6	695	0.458	100	21.1	LOS C	9.8	74.6	Full	388	0.0	0.0
Lane 4	318	9.6	318	9.6	695	0.458	100	21.1	LOS C	9.8	74.6	Full	388	0.0	0.0
Lane 5	126	7.9	126	7.9	146	0.865	100	56.2	LOS E	6.0	44.9	Short	178	0.0	NA
Lane 6	126	7.9	126	7.9	146	0.865	100	56.2	LOS E	6.0	44.9	Short	105	0.0	NA
Approach	1231	11.0	1231	11.0		0.865		28.7	LOS C	9.8	74.6				
Intersection	4508	8.1	4433[N1]	8.3		0.887		28.8	LOS C	25.0	184.4				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N4 Average back of queue has been restricted to the available queue storage space.

Approach Lane Flows (veh/h)

South: Ti Rakau Drive

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	567	-	567	8.5	896[1]	0.632	100	NA	NA
Lane 2	17	-	17	100.0	121	0.141	100	0.0	1
Lane 3	-	187	187	4.0	342	0.546	100	NA	NA

Lane 4	-	187	187	4.0	342	0.546	100	NA	NA
Lane 5	-	187	187	4.0	342	0.546	100	28.4	4
Approach	584	560	1144	7.7		0.632			

East: Pakuranga Road (East)

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	812	-	812	4.8	1127	0.720	100	NA	NA
Lane 2	-	611	611	6.0	689	0.887	100	NA	NA
Lane 3	-	611	611	6.0	689	0.887	100	NA	NA
Lane 4	-	25	25	100.0	85	0.293	100	0.0	3
Approach	812	1247	2059	6.7		0.887			

West: Pakuranga Road (West)

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	9	15	24	100.0	81	0.297	100	NA	NA
Lane 2	318	-	318	9.6	695	0.458	100	0.0	3
Lane 3	318	-	318	9.6	695	0.458	100	NA	NA
Lane 4	318	-	318	9.6	695	0.458	100	NA	NA
Lane 5	-	126	126	7.9	146	0.865	100	0.0	4
Lane 6	-	126	126	7.9	146	0.865	100	0.0	5
Approach	964	267	1231	11.0		0.865			

	Total	%HV	Deg.Satn (v/c)
Intersection	4433	8.3	0.887

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

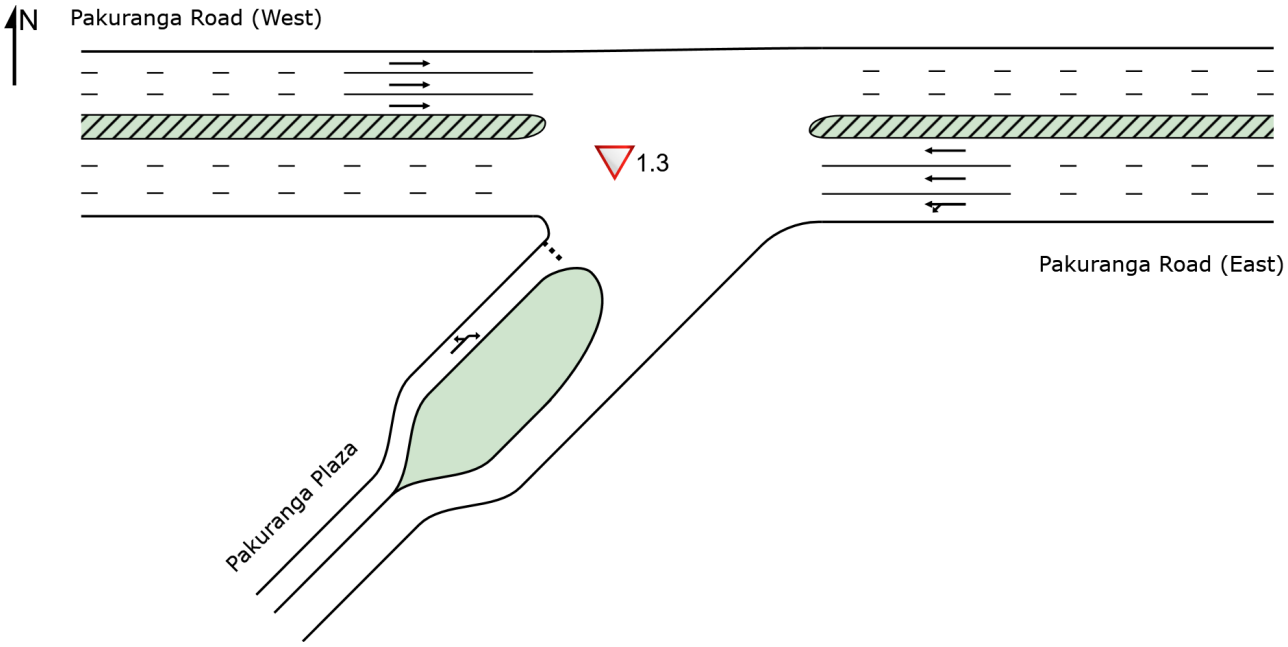
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Ti Rakau Drive Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
East Exit: Pakuranga Road (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
West Exit: Pakuranga Road (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										

SITE LAYOUT

Site: 1.3 [1.3 Mall/ Pakuranga Rd - PD (Site Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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LANE SUMMARY

Site: 1.3 [1.3 Mall/ Pakuranga Rd - PD (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Pakuranga Road (East)															
Lane 1	719	8.5	719	8.5	1844	0.390	100	1.4	LOS A	0.0	0.0	Full	152	0.0	0.0
Lane 2	737	5.6	737	5.6	1892	0.390	100	0.0	LOS A	0.0	0.0	Full	152	0.0	0.0
Lane 3	737	5.6	737	5.6	1892	0.390	100	0.0	LOS A	0.0	0.0	Full	152	0.0	0.0
Approach	2193	6.5	2193	6.5		0.390		0.5	NA	0.0	0.0				
West: Pakuranga Road (West)															
Lane 1	509	8.1	505	8.1	1785	0.283	100	0.0	LOS A	0.0	0.0	Full	108	0.0	0.0
Lane 2	509	8.1	505	8.1	1785	0.283	100	0.0	LOS A	0.0	0.0	Full	108	0.0	0.0
Lane 3	506	8.1	503	8.1	1775	0.283	100	0.0	LOS A	0.0	0.0	Full	108	0.0	0.0
Approach	1524	8.1	1514 N1	8.1		0.283		0.0	NA	0.0	0.0				
SouthWest: Pakuranga Plaza															
Lane 1	54	5.6	54	5.6	11	4.753	100	3585.9	LOS F	35.6	261.0	Full	196	-11.7 N7	14.2
Approach	54	5.6	54	5.6		4.753		3585.9	LOS F	35.6	261.0				
Intersection	3771	7.2	3761 N1	7.2		4.753		51.8	NA	35.6	261.0				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N7 The capacity reduction has been determined from the queue blockage probability of a Site further downstream due to intermediate continuous lanes.

Approach Lane Flows (veh/h)

East: Pakuranga Road (East)

Mov. From E To Exit:	L1 SW	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	180	539	719	8.5	1844	0.390	100	NA	NA
Lane 2	-	737	737	5.6	1892	0.390	100	NA	NA
Lane 3	-	737	737	5.6	1892	0.390	100	NA	NA
Approach	180	2013	2193	6.5		0.390			

West: Pakuranga Road (West)

Mov. From W To Exit:	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	505	505	8.1	1785	0.283	100	NA	NA
Lane 2	505	505	8.1	1785	0.283	100	NA	NA

Lane 3	503	503	8.1		1775	0.283	100	NA	NA
Approach	1514	1514	8.1			0.283			
SouthWest: Pakuranga Plaza									
Mov. From SW To Exit:	L3 W	R1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	29	25	54	5.6	11	4.753	100	NA	NA
Approach	29	25	54	5.6		4.753			
	Total	%HV	Deg.Satn (v/c)						
Intersection	3761	7.2		4.753					

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

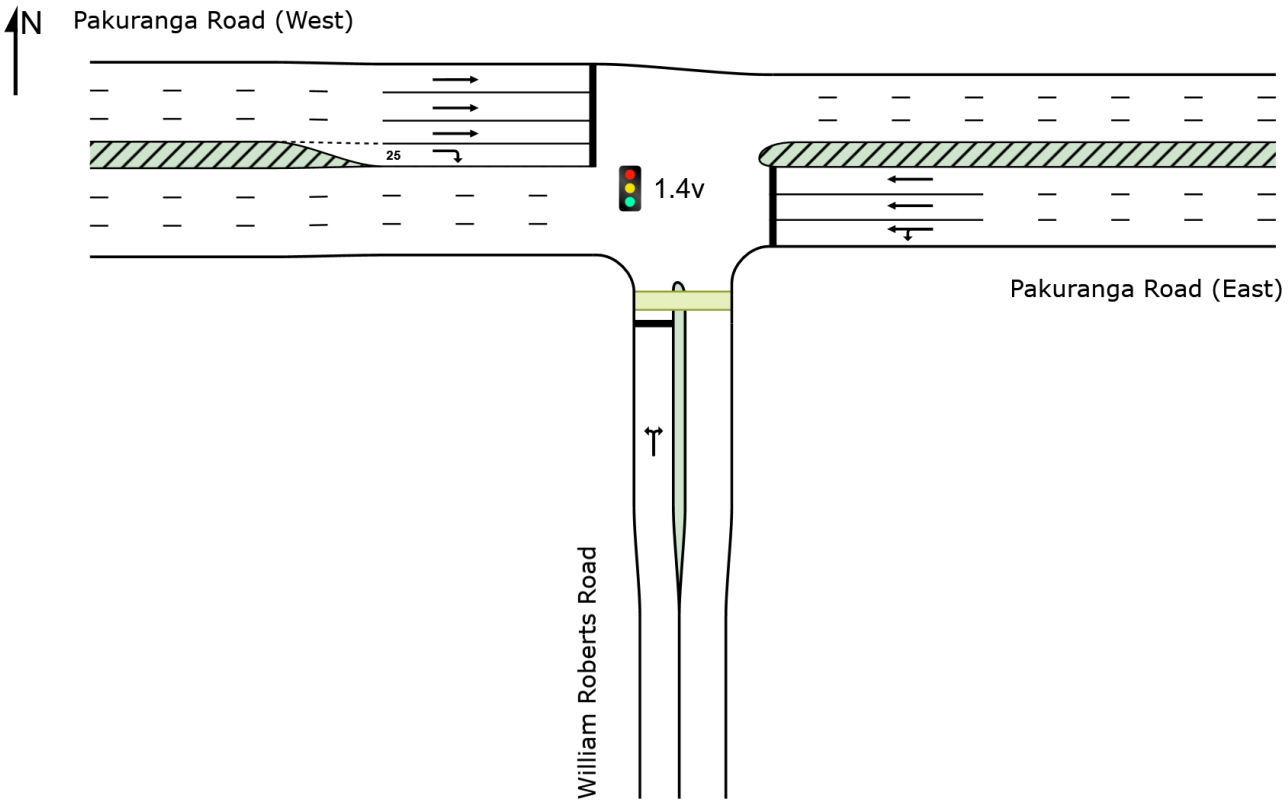
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
East Exit: Pakuranga Road (East) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
Full Length Lane	2	Merge Analysis not applied.									
Full Length Lane	3	Merge Analysis not applied.									
West Exit: Pakuranga Road (West) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
Full Length Lane	2	Merge Analysis not applied.									
Full Length Lane	3	Merge Analysis not applied.									
SouthWest Exit: Pakuranga Plaza Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									

SITE LAYOUT

Site: 1.4v [1.4 William Roberts/ Pakuranga Rd - PD - Conversion (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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LANE SUMMARY

Site: 1.4v [1.4 William Roberts/ Pakuranga Rd - PD - Conversion (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 61 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: William Roberts Road															
Lane 1	287	8.7	287	8.7	329	0.871	100	40.0	LOS D	10.3	77.1	Full	244	-0.7 N7	0.0
Approach	287	8.7	287	8.7		0.871		40.0	LOS D	10.3	77.1				
East: Pakuranga Road (East)															
Lane 1	699	6.0	699	6.0	790	0.885	100	29.7	LOS C	25.3	185.9	Full	184	0.0	5.9
Lane 2	688	6.2	688	6.2	778	0.885	100	28.9	LOS C	24.9	183.3	Full	184	0.0	4.6
Lane 3	696	6.2	696	6.2	786	0.885	100	28.8	LOS C	25.1	184.9	Full	184	0.0	5.4
Approach	2083	6.1	2083	6.1		0.885		29.1	LOS C	25.3	185.9				
West: Pakuranga Road (West)															
Lane 1	558	8.1	551	8.1	1142	0.483	100	6.7	LOS A	8.9	66.5	Full	152	0.0	0.0
Lane 2	527	8.1	520	8.1	1077	0.483	100	6.7	LOS A	8.4	62.9	Full	152	-5.7 N3	0.0
Lane 3	466	8.1	460	8.1	953 1	0.483	100	6.5	LOS A	7.2	53.7	Full	152	-5.7 N3	0.0
Lane 4	54	13.0	53	13.0	160	0.333	100	35.8	LOS D	1.6	12.5	Short	25	0.0	NA
Approach	1605	8.2	1585 N 1	8.3		0.483		7.6	LOS A	8.9	66.5				
Intersection	3975	7.2	3955 N 1	7.2		0.885		21.3	LOS C	25.3	185.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N7 The capacity reduction has been determined from the queue blockage probability of a Site further downstream due to intermediate continuous lanes.

Approach Lane Flows (veh/h)

South: William Roberts Road

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	253	34	287	8.7	329	0.871	100	NA	NA
Approach	253	34	287	8.7		0.871			

East: Pakuranga Road (East)

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	143	556	699	6.0	790	0.885	100	NA	NA
Lane 2	-	688	688	6.2	778	0.885	100	NA	NA

Lane 3	-	696	696	6.2	786	0.885	100	NA	NA
Approach	143	1940	2083	6.1		0.885			

West: Pakuranga Road (West)

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	551	-	551	8.1	1142	0.483	100	NA	NA
Lane 2	520	-	520	8.1	1077	0.483	100	NA	NA
Lane 3	460	-	460	8.1	953[1]	0.483	100	NA	NA
Lane 4	-	53	53	13.0	160	0.333	100	0.0	3
Approach	1532	53	1585	8.3		0.483			

	Total	%HV	Deg.Satn (v/c)
Intersection	3955	7.2	0.885

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

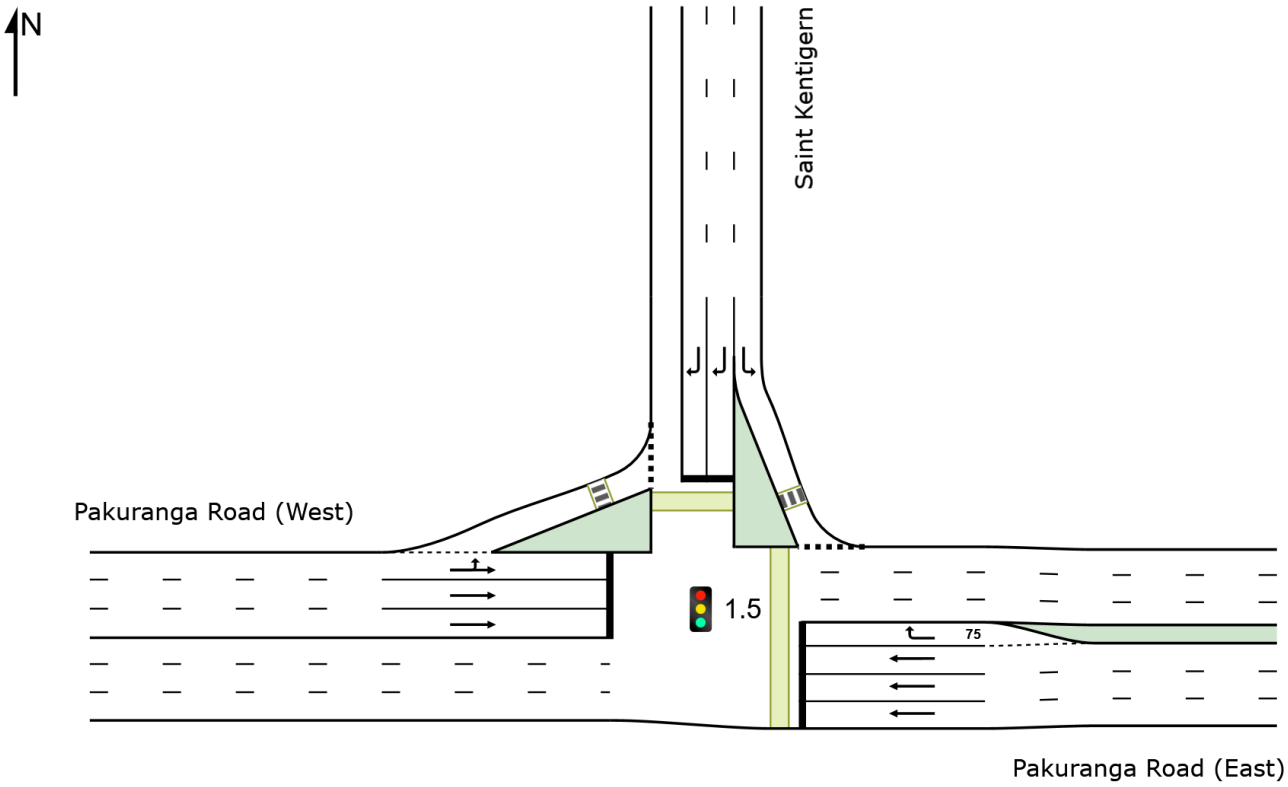
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate sec	Capacity veh/h	Deg. Satn veh/h	Min. Delay v/c	Merge Delay sec	sec
South Exit: William Roberts Road Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
East Exit: Pakuranga Road (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
West Exit: Pakuranga Road (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										

SITE LAYOUT

Site: 1.5 [1.5 Saint Kentigern/ Pakuranga Rd - PD (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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LANE SUMMARY

Site: 1.5 [1.5 Saint Kentigern/ Pakuranga Rd - PD (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 88 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Pakuranga Road (East)															
Lane 1	685	6.3	685	6.3	1065	0.644	100	11.6	LOS B	18.7	138.0	Full	87	-5.9 N3	47.3
Lane 2	695	6.3	695	6.3	1079	0.644	100	11.6	LOS B	18.9	139.8	Full	87	-4.6 N3	48.5
Lane 3	672	6.3	672	6.3	1045	0.644	100	11.4	LOS B	18.0	132.8	Full	87	-5.4 N3	43.7
Lane 4	72	2.8	72	2.8	239	0.301	100	26.0	LOS C	1.7	12.0	Short	75	0.0	NA
Approach	2124	6.2	2124	6.2		0.644		12.0	LOS B	18.9	139.8				
North: Saint Kentigern															
Lane 1	13	0.0	13	0.0	938	0.014	100	5.8	LOS A	0.2	1.3	Full	96	0.0	0.0
Lane 2	20	10.0	20	10.0	407	0.050	100	27.1	LOS C	0.7	5.0	Full	96	-4.6 N3	0.0
Lane 3	20	10.0	20	10.0	397	0.050	100	27.1	LOS C	0.6	4.9	Full	96	-5.4 N3	0.0
Approach	53	7.5	53	7.5		0.050		21.9	LOS C	0.7	5.0				
West: Pakuranga Road (West)															
Lane 1	505	7.2	499	7.3	586	0.853	100	33.1	LOS C	21.0	156.0	Full	184	0.0	0.0
Lane 2	541	8.4	535	8.4	627	0.853	100	36.8	LOS D	24.7	185.3	Full	184	0.0	5.7
Lane 3	541	8.4	535	8.4	627	0.853	100	36.8	LOS D	24.7	185.3	Full	184	0.0	5.7
Approach	1587	8.0	1569 N1	8.1		0.853		35.6	LOS D	24.7	185.3				
Intersection	3764	7.0	3746 N1	7.0		0.853		22.0	LOS C	24.7	185.3				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Approach Lane Flows (veh/h)

East: Pakuranga Road (East)

Mov. From E To Exit:	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	685	-	685	6.3	1065	0.644	100	NA	NA
Lane 2	695	-	695	6.3	1079	0.644	100	NA	NA
Lane 3	672	-	672	6.3	1045	0.644	100	NA	NA
Lane 4	-	72	72	2.8	239	0.301	100	0.0	3
Approach	2052	72	2124	6.2		0.644			

North: Saint Kentigern

Mov. From N To Exit:	L2 E	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	13	-	13	0.0	938	0.014	100	NA	NA

Lane 2	-	20	20	10.0	407	0.050	100	NA	NA
Lane 3	-	20	20	10.0	397	0.050	100	NA	NA
Approach	13	40	53	7.5		0.050			

West: Pakuranga Road (West)

Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	127	372	499	7.3	586	0.853	100	NA	NA
Lane 2	-	535	535	8.4	627	0.853	100	NA	NA
Lane 3	-	535	535	8.4	627	0.853	100	NA	NA
Approach	127	1441	1569	8.1		0.853			

	Total	%HV	Deg.Satn (v/c)
Intersection	3746	7.0	0.853

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

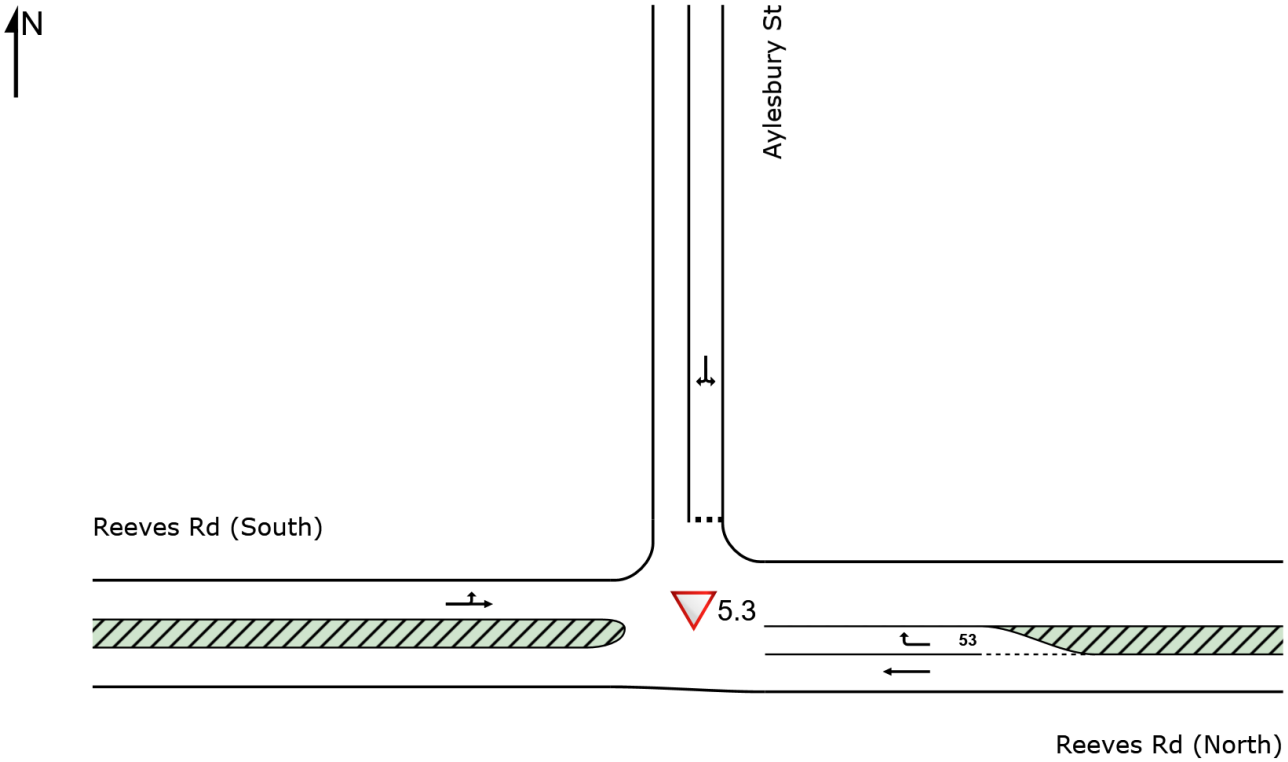
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
East Exit: Pakuranga Road (East) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
Full Length Lane	2	Merge Analysis not applied.									
Full Length Lane	3	Merge Analysis not applied.									
North Exit: Saint Kentigern Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
West Exit: Pakuranga Road (West) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
Full Length Lane	2	Merge Analysis not applied.									
Full Length Lane	3	Merge Analysis not applied.									

SITE LAYOUT

Site: 5.3 [5.3 Reeves Rd/ Aylesbury St (Site Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 5.3 [5.3 Reeves Rd/ Aylesbury St (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Reeves Rd (North)															
Lane 1	33	9.1	33	9.1	1894	0.017	100	0.0	LOS A	0.0	0.0	Full	60	0.0	0.0
Lane 2	16	6.3	16	6.3	1680	0.010	100	4.6	LOS A	0.0	0.3	Short	53	0.0	NA
Approach	49	8.2	49	8.2		0.017		1.5	NA	0.0	0.3				
North: Aylesbury St															
Lane 1	22	9.1	22	9.1	1243	0.018	100	0.4	LOS A	0.1	0.5	Full	193	0.0	0.0
Approach	22	9.1	22	9.1		0.018		0.4	LOS A	0.1	0.5				
West: Reeves Rd (South)															
Lane 1	42	9.5	42	9.5	1872	0.022	100	2.2	LOS A	0.0	0.0	Full	175	0.0	0.0
Approach	42	9.5	42	9.5		0.022		2.2	NA	0.0	0.0				
Intersection	113	8.8	113	8.9		0.022		1.6	NA	0.1	0.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Approach Lane Flows (veh/h)

East: Reeves Rd (North)

Mov. From E To Exit:	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	33	-	33	9.1	1894	0.017	100	NA	NA
Lane 2	-	16	16	6.3	1680	0.010	100	0.0	1
Approach	33	16	49	8.2		0.017			

North: Aylesbury St

Mov. From N To Exit:	L2 E	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	11	22	9.1	1243	0.018	100	NA	NA
Approach	11	11	22	9.1		0.018			

West: Reeves Rd (South)

Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	20	22	42	9.5	1872	0.022	100	NA	NA
Approach	20	22	42	9.5		0.022			

	Total	%HV	Deg.Satn (v/c)
Intersection	113	8.9	0.022

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

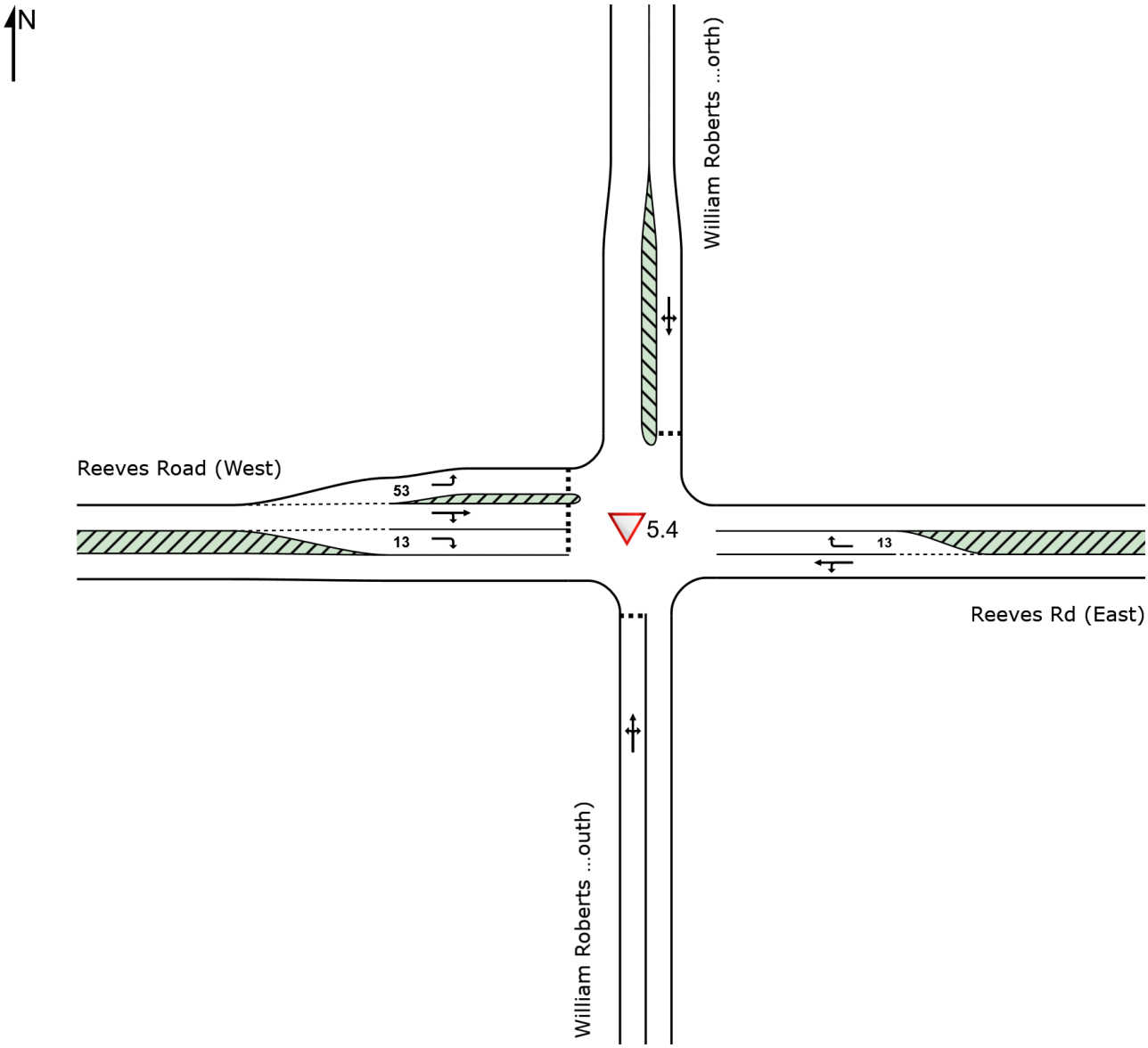
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
East Exit: Reeves Rd (North) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
North Exit: Aylesbury St Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
West Exit: Reeves Rd (South) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 5.4 [5.4 Reeves Rd / William Roberts Rd - Import (Site Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 5.4 [5.4 Reeves Rd / William Roberts Rd - Import (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: William Roberts Rd (South)															
Lane 1	214	8.9	213	8.9	851	0.251	100	4.2	LOS A	1.0	7.3	Full	243	0.0	0.0
Approach	214	8.9	213[N1]	8.9		0.251		4.2	LOS A	1.0	7.3				
East: Reeves Rd (East)															
Lane 1	142	7.2	142	7.2	1770	0.080	100	3.3	LOS A	0.0	0.0	Full	266	0.0	0.0
Lane 2	231	8.7	231	8.7	1722	0.134	100	4.7	LOS A	0.0	0.0	Short	13	0.0	NA
Approach	373	8.1	373	8.1		0.134		4.2	NA	0.0	0.0				
North: William Roberts Rd (North)															
Lane 1	107	4.7	106	4.7	1057	0.100	100	5.4	LOS A	0.3	2.3	Full	244	0.0	0.0
Approach	107	4.7	106[N1]	4.7		0.100		5.4	LOS A	0.3	2.3				
West: Reeves Road (West)															
Lane 1	23	9.1	23	9.1	1174	0.020	100	5.4	LOS A	0.1	0.6	Short	53	0.0	NA
Lane 2	23	9.1	23	9.1	1088	0.021	100	4.1	LOS A	0.1	0.6	Full	60	0.0	0.0
Lane 3	12	9.1	12	9.1	781	0.015	70[5]	6.2	LOS A	0.0	0.4	Short	13	0.0	NA
Approach	58	9.1	58	9.1		0.021		5.0	LOS A	0.1	0.6				
Intersection	751	7.9	751	7.9		0.251		4.4	NA	1.0	7.3				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

South: William Roberts Rd (South)

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	60	143	213	8.9	851	0.251	100	NA	NA
Approach	11	60	143	213	8.9		0.251			

East: Reeves Rd (East)

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	96	46	-	142	7.2	1770	0.080	100	NA	NA
Lane 2	-	-	231	231	8.7	1722	0.134	100	0.0	1

Approach	96	46	231	373	8.1		0.134				
North: William Roberts Rd (North)											
Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
Lane 1	21	75	10	106	4.7	1057	0.100	100	NA	NA	
Approach	21	75	10	106	4.7		0.100				
West: Reeves Road (West)											
Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
Lane 1	23	-	-	23	9.1	1174	0.020	100	0.0	2	
Lane 2	-	23	-	23	9.1	1088	0.021	100	NA	NA	
Lane 3	-	-	12	12	9.1	781	0.015	70[5]	0.0	2	
Approach	23	23	12	58	9.1		0.021				
	Total	%HV	Deg.Satn (v/c)								
Intersection	751	7.9		0.251							

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

5 Lane under-utilisation found by the program

Merge Analysis

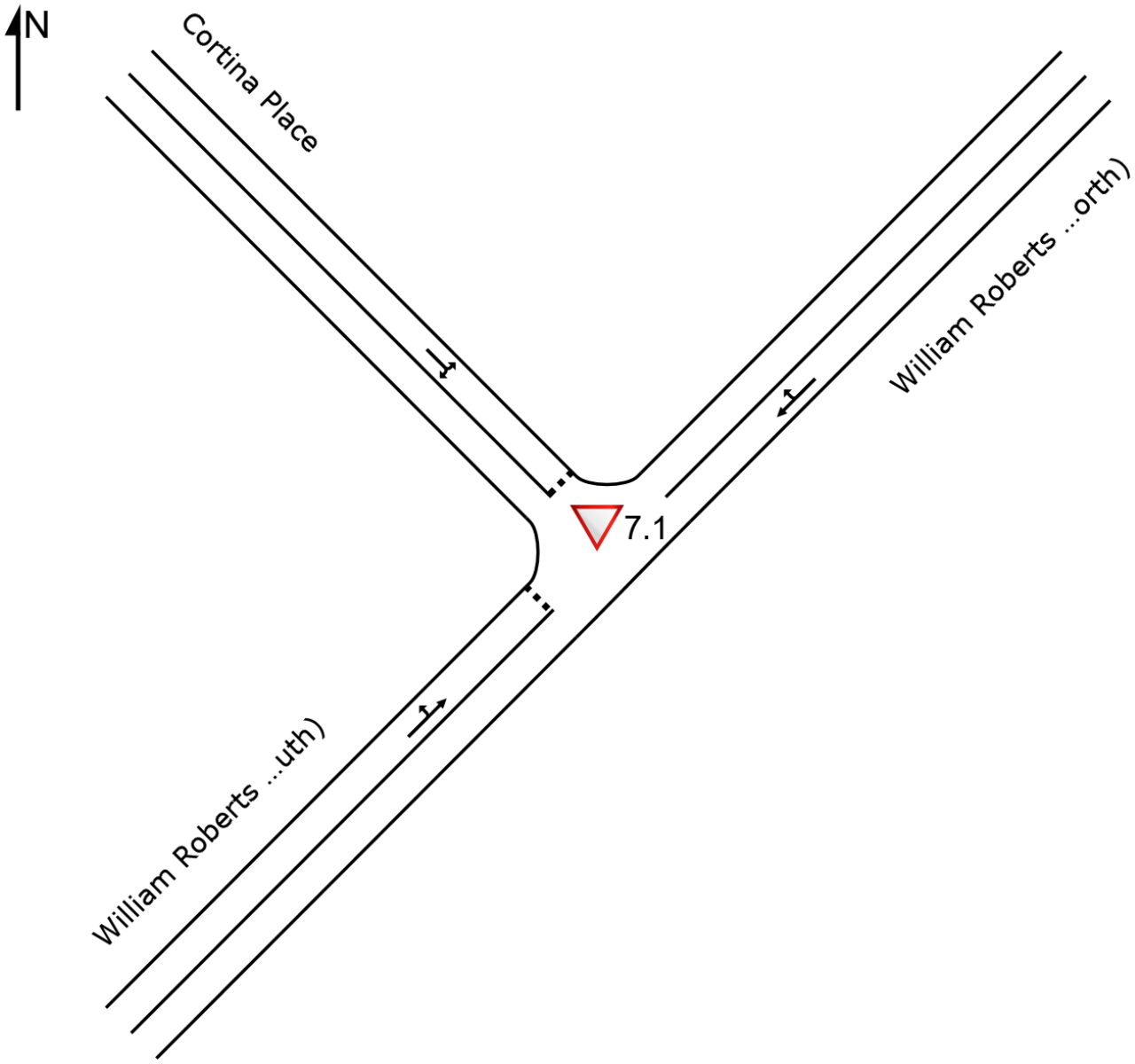
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: William Roberts Rd (South) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
East Exit: Reeves Rd (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
North Exit: William Roberts Rd (North) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
West Exit: Reeves Road (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 7.1 [7.1 William Roberts Rd / Cortina Pl - Import (Site Folder: General)]

Scheme Design
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:39:12 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 AM-V1.sip9

LANE SUMMARY

Site: 7.1 [7.1 William Roberts Rd / Cortina Pl - Import (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

Scheme Design
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
NorthEast: William Roberts Road (North)															
Lane 1	306	7.9	306	7.9	1834	0.167	100	0.5	LOS A	0.0	0.0	Full	243	0.0	0.0
Approach	306	7.9	306	7.9		0.167		0.5	NA	0.0	0.0				
NorthWest: Cortina Place															
Lane 1	32	6.5	32	6.5	990	0.032	100	4.4	LOS A	0.1	0.8	Full	140	0.0	0.0
Approach	32	6.5	32	6.5		0.032		4.4	LOS A	0.1	0.8				
SouthWest: William Roberts Road (South)															
Lane 1	215	8.8	214	8.8	1258	0.170	100	4.0	LOS A	0.7	5.1	Full	110	0.0	0.0
Approach	215	8.8	214[N1]	8.8		0.170		4.0	LOS A	0.7	5.1				
Intersection	553	8.2	552[N1]	8.2		0.170		2.1	NA	0.7	5.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

NorthEast: William Roberts Road (North)

Mov. From NE To Exit:	T1 SW	R2 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	269	37	306	7.9	1834	0.167	100	NA	NA
Approach	269	37	306	7.9		0.167			

NorthWest: Cortina Place

Mov. From NW To Exit:	L2 NE	R2 SW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	20	12	32	6.5	990	0.032	100	NA	NA
Approach	20	12	32	6.5		0.032			

SouthWest: William Roberts Road (South)

Mov. From SW To Exit:	L2 NW	T1 NE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	25	189	214	8.8	1258	0.170	100	NA	NA
Approach	25	189	214	8.8		0.170			

	Total	%HV	Deg.Satn (v/c)

Intersection	552	8.2	0.170

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

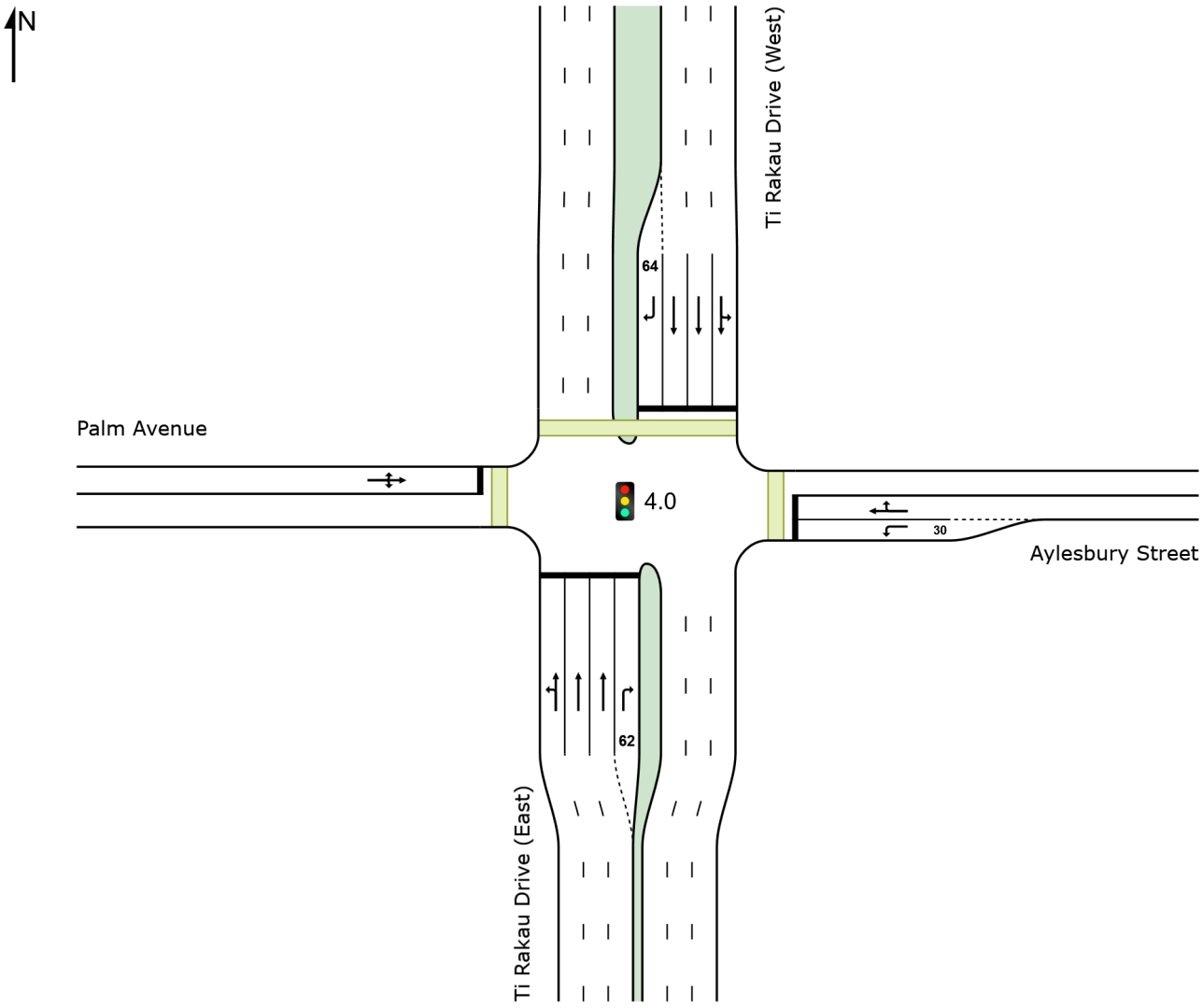
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
NorthEast Exit: William Roberts Road (North) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
NorthWest Exit: Cortina Place Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
SouthWest Exit: William Roberts Road (South) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 4.0 [4.0 Palm Ave / Aylesbury St - Import (Site Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 4.0 [4.0 Palm Ave / Aylesbury St - Import (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 80 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Ti Rakau Drive (East)															
Lane 1	368	7.5	352	7.3	466	0.756	100	36.7	LOS D	13.5	100.2	Full	110	0.0	0.0
Lane 2	383	7.9	366	7.8	484	0.756	100	34.8	LOS C	14.1	105.2	Full	110	0.0	1.0
Lane 3	383	7.9	366	7.8	484	0.756	100	34.8	LOS C	14.1	105.2	Full	110	0.0	1.0
Lane 4	23	4.3	22	4.3	128	0.171	100	43.7	LOS D	0.9	6.3	Short	62	0.0	NA
Approach	1157	7.7	1106[N1]	7.5		0.756		35.6	LOS D	14.1	105.2				
East: Aylesbury Street															
Lane 1	10	0.0	10	0.0	257	0.039	100	17.5	LOS B	0.2	1.2	Short	30	0.0	NA
Lane 2	20	0.0	20	0.0	135	0.148	100	40.8	LOS D	0.8	5.4	Full	40	0.0	0.0
Approach	30	0.0	30	0.0		0.148		33.0	LOS C	0.8	5.4				
North: Ti Rakau Drive (West)															
Lane 1	412	7.8	404	7.9	485	0.835	100	39.2	LOS D	17.1	128.1	Full	174	0.0	0.0
Lane 2	333	7.8	327	7.9	392	0.835	100	41.0	LOS D	14.2	106.1	Full	174	-19.1[N3]	0.0
Lane 3	341	7.8	335	7.9	402	0.835	100	40.8	LOS D	14.5	108.5	Full	174	-17.0[N3]	0.0
Lane 4	21	0.0	21	0.0	132	0.156	100	43.5	LOS D	0.8	5.6	Short	64	0.0	NA
Approach	1107	7.7	1087[N1]	7.7		0.835		40.3	LOS D	17.1	128.1				
West: Palm Avenue															
Lane 1	135	4.4	135	4.4	473	0.285	100	27.3	LOS C	4.1	29.9	Full	87	-8.6[N3]	0.0
Approach	135	4.4	135	4.4		0.285		27.3	LOS C	4.1	29.9				
Intersection	2429	7.4	2358[N1]	7.6		0.835		37.3	LOS D	17.1	128.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Approach Lane Flows (veh/h)

South: Ti Rakau Drive (East)

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	33	319	-	352	7.3	466	0.756	100	NA	NA
Lane 2	-	366	-	366	7.8	484	0.756	100	NA	NA
Lane 3	-	366	-	366	7.8	484	0.756	100	NA	NA
Lane 4	-	-	22	22	4.3	128	0.171	100	0.0	3
Approach	33	1051	22	1106	7.5		0.756			

East: Aylesbury Street										
Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	10	-	-	10	0.0	257	0.039	100	0.0	2
Lane 2	-	10	10	20	0.0	135	0.148	100	NA	NA
Approach	10	10	10	30	0.0		0.148			
North: Ti Rakau Drive (West)										
Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	394	-	404	7.9	485	0.835	100	NA	NA
Lane 2	-	327	-	327	7.9	392	0.835	100	NA	NA
Lane 3	-	335	-	335	7.9	402	0.835	100	NA	NA
Lane 4	-	-	21	21	0.0	132	0.156	100	0.0	3
Approach	11	1056	21	1087	7.7		0.835			
West: Palm Avenue										
Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	63	10	62	135	4.4	473	0.285	100	NA	NA
Approach	63	10	62	135	4.4		0.285			

	Total	%HV	Deg.Satn (v/c)
Intersection	2358	7.6	0.835

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

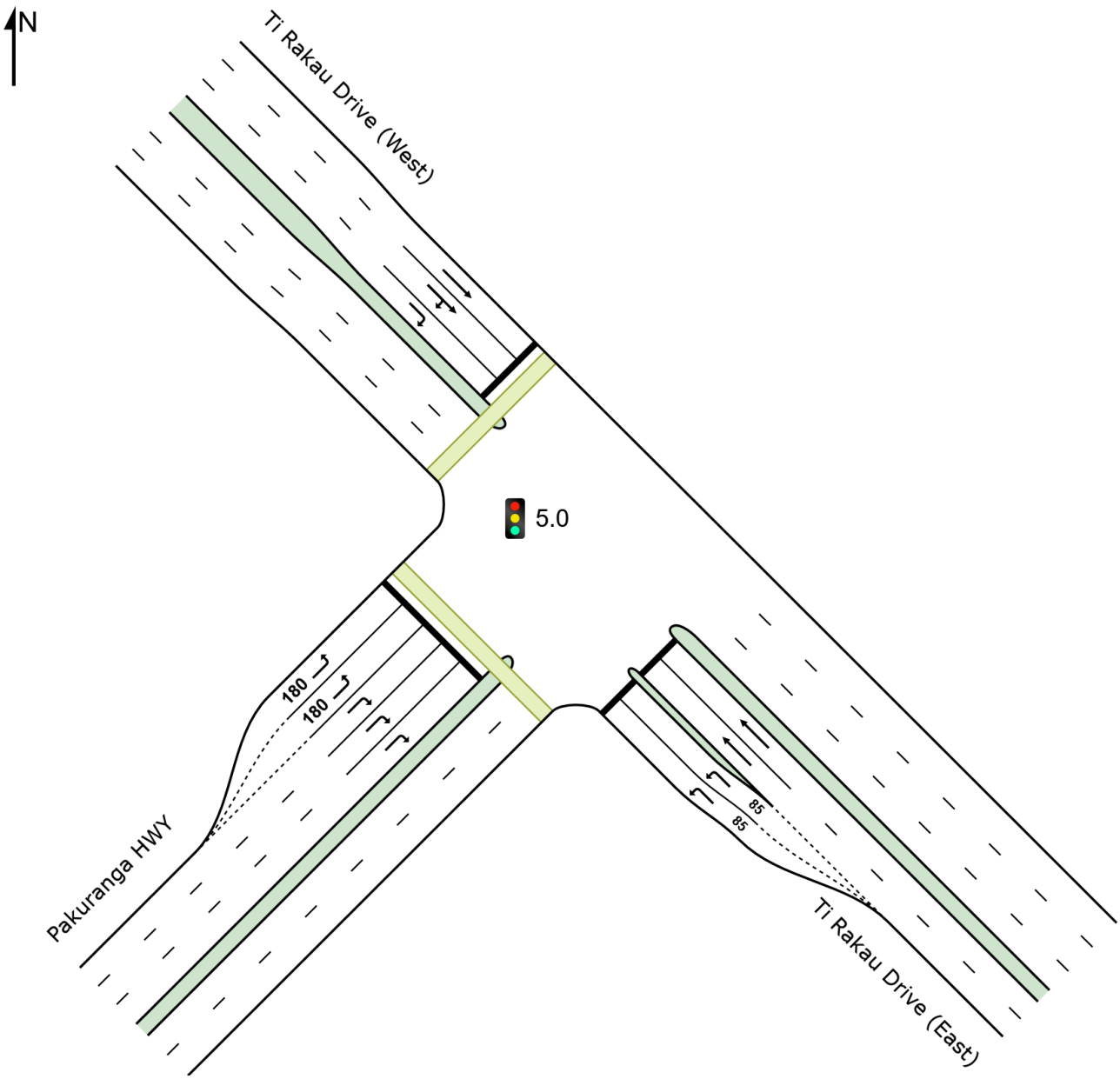
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
East Exit: Aylesbury Street Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
North Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
West Exit: Palm Avenue Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 5.0 [5.0 Pakuranga HWY/ Reeves Rd (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 5.0 [5.0 Pakuranga HWY/ Reeves Rd (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 61 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	786	9.6	706	9.5	838	0.842	100	26.4	LOS C	19.6[N4]	148.5[N4]	Short	85	0.0	NA
Lane 2	786	9.6	706	9.5	838	0.842	100	26.4	LOS C	19.6[N4]	148.5[N4]	Short	85	0.0	NA
Lane 3	258	11.3	232	11.3	383	0.605	100	24.6	LOS C	6.6	50.4	Full	91	0.0	50.0[8]
Lane 4	256	11.3	231	11.3	381	0.605	100	24.6	LOS C	6.5	50.2	Full	91	0.0	0.0
Approach	2086	10.0	1874[N1]	9.9		0.842		26.0	LOS C	19.6	148.5				
NorthWest: Ti Rakau Drive (West)															
Lane 1	154	24.0	152	24.2	519	0.292	33[5]	17.6	LOS B	3.5	29.7	Full	110	0.0	0.0
Lane 2	499	5.2	490	5.2	561	0.875	100	36.1	LOS D	17.6	128.5	Full	110	0.0	19.1
Lane 3	486	5.2	478	5.2	546	0.875	100	36.3	LOS D	17.2	125.7	Full	110	0.0	17.0
Approach	1139	7.7	1120[N1]	7.8		0.875		33.7	LOS C	17.6	128.5				
SouthWest: Pakuranga HWY															
Lane 1	324	4.9	324	4.9	568	0.571	100	26.5	LOS C	8.3	60.7	Short	180	0.0	NA
Lane 2	324	4.9	324	4.9	568	0.571	100	26.5	LOS C	8.3	60.7	Short	180	0.0	NA
Lane 3	287	9.3	287	9.3	313	0.917	100	48.9	LOS D	11.3	85.2	Full	1650	0.0	0.0
Lane 4	287	9.3	287	9.3	313	0.917	100	48.9	LOS D	11.3	85.2	Full	1650	0.0	0.0
Lane 5	290	9.3	290	9.3	316	0.917	100	48.9	LOS D	11.4	86.0	Full	1650	0.0	0.0
Approach	1511	7.4	1511	7.4		0.917		39.3	LOS D	11.4	86.0				
Intersection	4736	8.6	4504[N1]	9.1		0.917		32.4	LOS C	19.6	148.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N4 Average back of queue has been restricted to the available queue storage space.

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	L2 SW	T1 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	706	-	706	9.5	838	0.842	100	56.4	2
Lane 2	706	-	706	9.5	838	0.842	100	56.4	3
Lane 3	-	232	232	11.3	383	0.605	100	NA	NA
Lane 4	-	231	231	11.3	381	0.605	100	NA	NA
Approach	1411	462	1874	9.9		0.842			

NorthWest: Ti Rakau Drive (West)									
Mov. From NW To Exit:	T1 SE	R2 SW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	152	-	152	24.2	519	0.292	33[5]	NA	NA
Lane 2	-	490	490	5.2	561	0.875	100	NA	NA
Lane 3	-	478	478	5.2	546	0.875	100	NA	NA
Approach	152	968	1120	7.8		0.875			

SouthWest: Pakuranga HWY									
Mov. From SW To Exit:	L2 NW	R2 SE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	324	-	324	4.9	568	0.571	100	0.0	2
Lane 2	324	-	324	4.9	568	0.571	100	0.0	4
Lane 3	-	287	287	9.3	313	0.917	100	NA	NA
Lane 4	-	287	287	9.3	313	0.917	100	NA	NA
Lane 5	-	290	290	9.3	316	0.917	100	NA	NA
Approach	648	863	1511	7.4		0.917			

	Total	%HV	Deg.Satn (v/c)
Intersection	4504	9.1	0.917

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

5 Lane under-utilisation found by the program

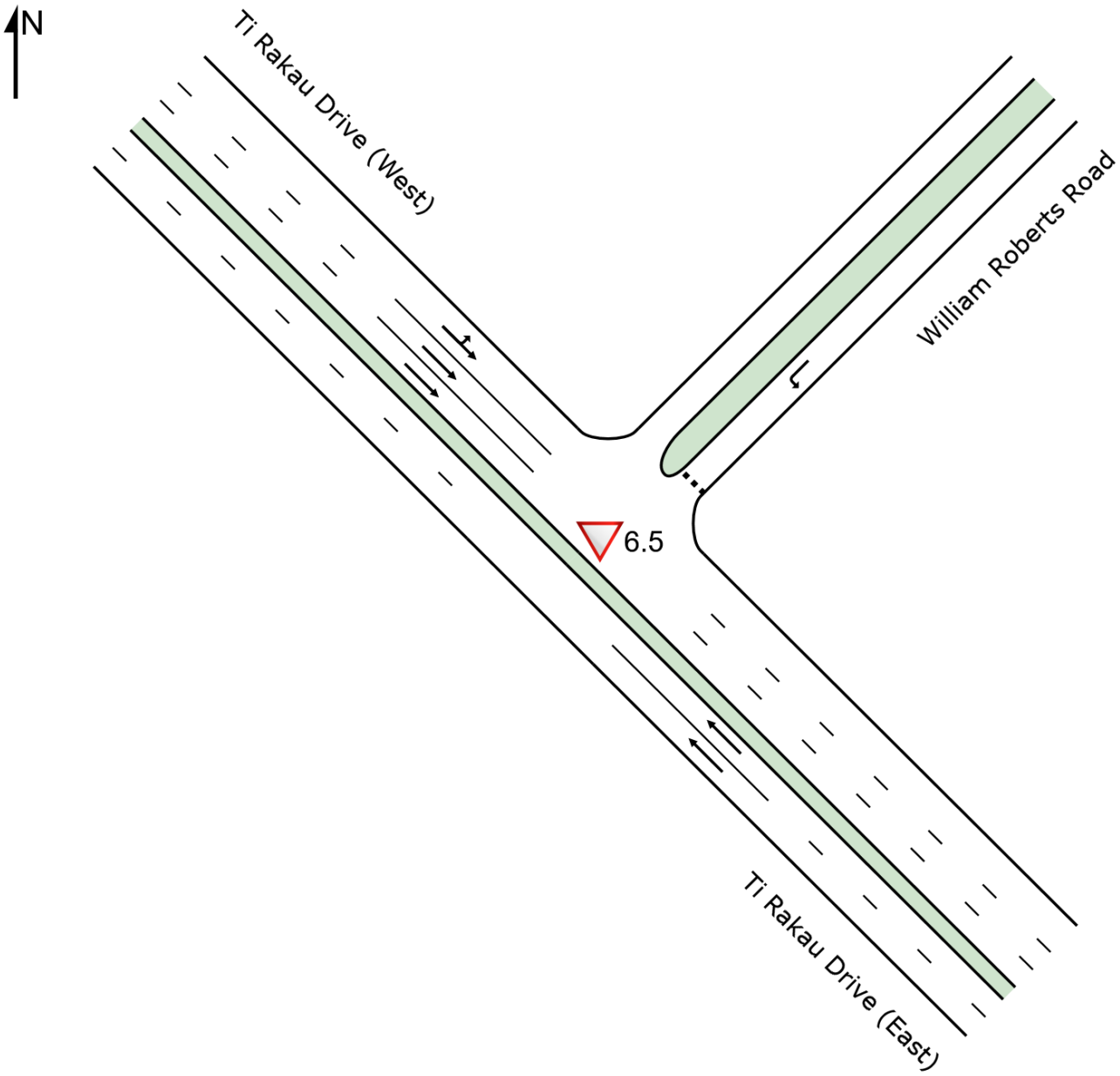
Merge Analysis											
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
SouthWest Exit: Pakuranga HWY Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										

SITE LAYOUT

Site: 6.5 [6.5 William Roberts Rd / Ti Rakau Dr - Import (Site Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 6.5 [6.5 William Roberts Rd / Ti Rakau Dr - Import (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	1002	10.1	894	10.0	1783	0.501	100	0.0	LOS A	0.0	0.0	Full	18	0.0	0.0
Lane 2	991	10.1	884	10.0	1764	0.501	100	0.0	LOS A	0.0	0.0	Full	18	0.0	0.0
Approach	1993	10.1	1778 N1	10.0		0.501		0.0	NA	0.0	0.0				
NorthEast: William Roberts Road															
Lane 1	263	8.0	263	8.0	541	0.486	100	3.3	LOS A	3.2 N5	24.0 N5	Full	110	-50.0 N3	0.0
Approach	263	8.0	263	8.0		0.486		3.3	LOS A	3.2	24.0				
NorthWest: Ti Rakau Drive (West)															
Lane 1	369	10.3	368	10.3	1829	0.201	100	2.6	LOS A	3.1 N5	23.3 N5	Full	97	0.0	14.1
Lane 2	352	12.1	351	12.1	1742	0.201	100	0.0	LOS A	4.7 N5	36.2 N5	Full	97	0.0	0.0
Lane 3	293	12.1	292	12.1	1450	0.201	100	0.0	LOS A	0.0	0.0	Full	97	-16.8 N3	0.0
Approach	1013	11.5	1011 N1	11.5		0.201		0.9	NA	4.7	36.2				
Intersection	3269	10.3	3051 N1	11.1		0.501		0.6	NA	4.7	36.2				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N5 Continuous Lane results determined by Back of Queue values of downstream lanes (proportional to lane movement flows).

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	T1 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	894	894	10.0	1783	0.501	100	NA	NA
Lane 2	884	884	10.0	1764	0.501	100	NA	NA
Approach	1778	1778	10.0		0.501			

NorthEast: William Roberts Road

Mov. From NE To Exit:	L2 SE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	263	263	8.0	541	0.486	100	NA	NA
Approach	263	263	8.0		0.486			

NorthWest: Ti Rakau Drive (West)

Mov. From NW To Exit:	L2 NE	T1 SE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	204	165	368	10.3	1829	0.201	100	NA	NA
Lane 2	-	351	351	12.1	1742	0.201	100	NA	NA
Lane 3	-	292	292	12.1	1450	0.201	100	NA	NA
Approach	204	807	1011	11.5		0.201			

	Total	%HV	Deg.Satn (v/c)
Intersection	3051	11.1	0.501

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

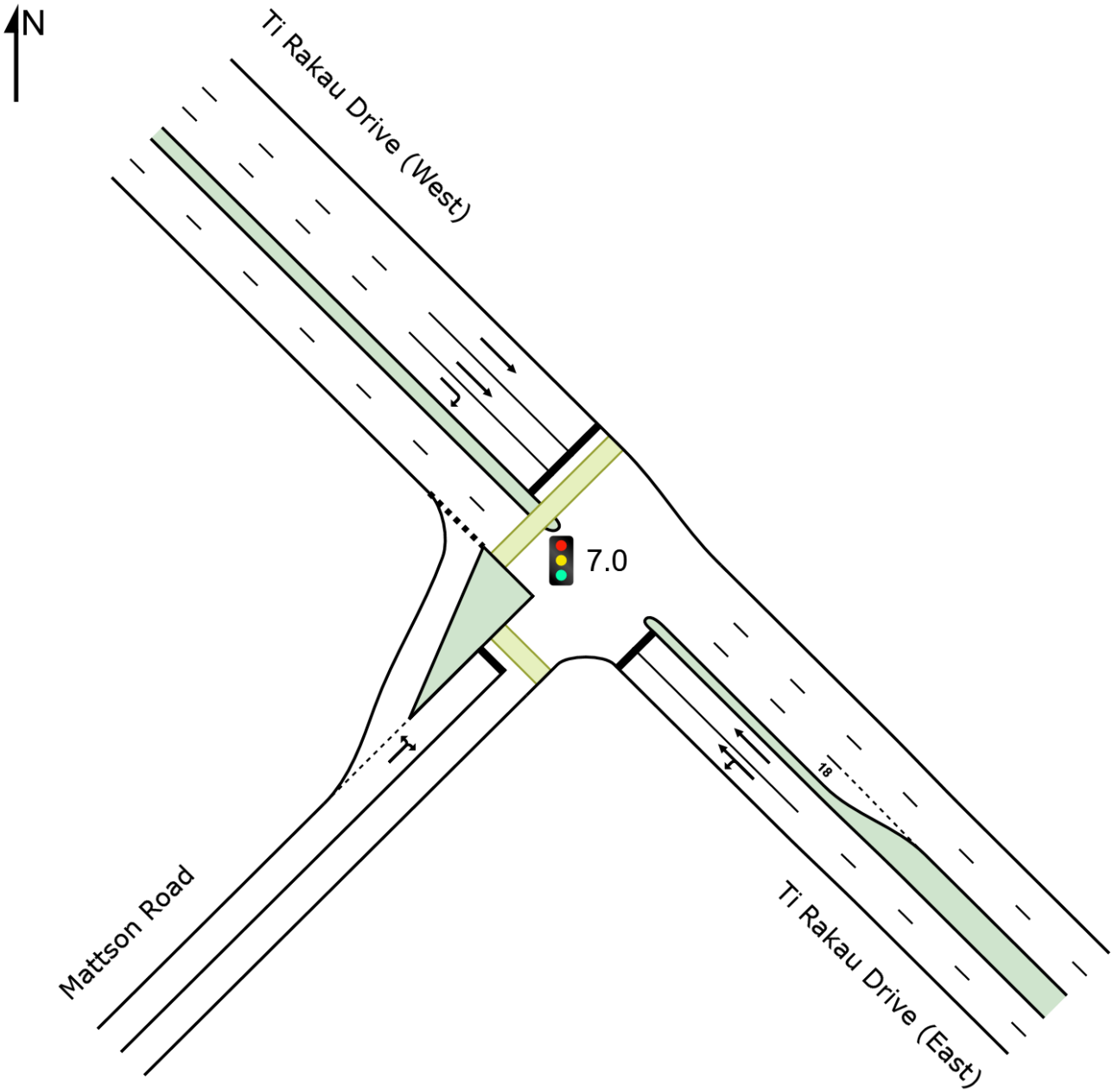
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
NorthEast Exit: William Roberts Road Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										

SITE LAYOUT

Site: 7.0 [7.0 Mattson Rd/ Ti Rakau Dr (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:39:36 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 AM-V1.sip9

LANE SUMMARY

Site: 7.0 [7.0 Mattson Rd/ Ti Rakau Dr (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	969	10.3	861	10.2	963	0.894	100	30.0	LOS C	38.3	291.8	Full	187	0.0	45.8
Lane 2	976	10.3	866	10.3	969	0.894	100	30.1	LOS C	38.5	293.4	Full	187	0.0	46.3
Approach	1945	10.3	1727[N1]	10.2		0.894		30.1	LOS C	38.5	293.4				
NorthWest: Ti Rakau Drive (West)															
Lane 1	525	11.3	524	11.3	1318	0.398	100	5.3	LOS A	3.8[N4]	29.4[N4]	Full	18	0.0	50.0
Lane 2	494	11.3	493	11.3	1239	0.398	100	5.3	LOS A	3.8[N4]	29.4[N4]	Full	18	0.0	50.0
Lane 3	52	7.7	52	7.7	129	0.401	100	43.5	LOS D	2.1	15.6	Full	18	0.0	0.0
Approach	1071	11.1	1069[N1]	11.1		0.401		7.2	LOS A	3.8	29.4				
SouthWest: Mattson Road															
Lane 1	136	4.4	136	4.4	515	0.264	100	25.0	LOS C	4.3	31.0	Full	282	0.0	0.0
Approach	136	4.4	136	4.4		0.264		25.0	LOS C	4.3	31.0				
Intersection	3152	10.3	2932[N1]	11.1		0.894		21.5	LOS C	38.5	293.4				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N4 Average back of queue has been restricted to the available queue storage space.

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	L2 SW	T1 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	21	839	861	10.2	963	0.894	100	NA	NA
Lane 2	-	866	866	10.3	969	0.894	100	NA	NA
Approach	21	1705	1727	10.2		0.894			

NorthWest: Ti Rakau Drive (West)

Mov. From NW To Exit:	T1 SE	R2 SW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	524	-	524	11.3	1318	0.398	100	NA	NA
Lane 2	493	-	493	11.3	1239	0.398	100	NA	NA
Lane 3	-	52	52	7.7	129	0.401	100	NA	NA
Approach	1017	52	1069	11.1		0.401			

SouthWest: Mattson Road

Mov.	L2	R2	Total	%HV		Deg.	Lane	Prob.	Ov.

From SW To Exit:	NW	SE			Cap. veh/h	Satn v/c	Util. %	SL Ov. %	Lane No.
Lane 1	72	64	136	4.4	515	0.264	100	NA	NA
Approach	72	64	136	4.4		0.264			

	Total	%HV	Deg.Satn (v/c)
Intersection	2932	11.1	0.894

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

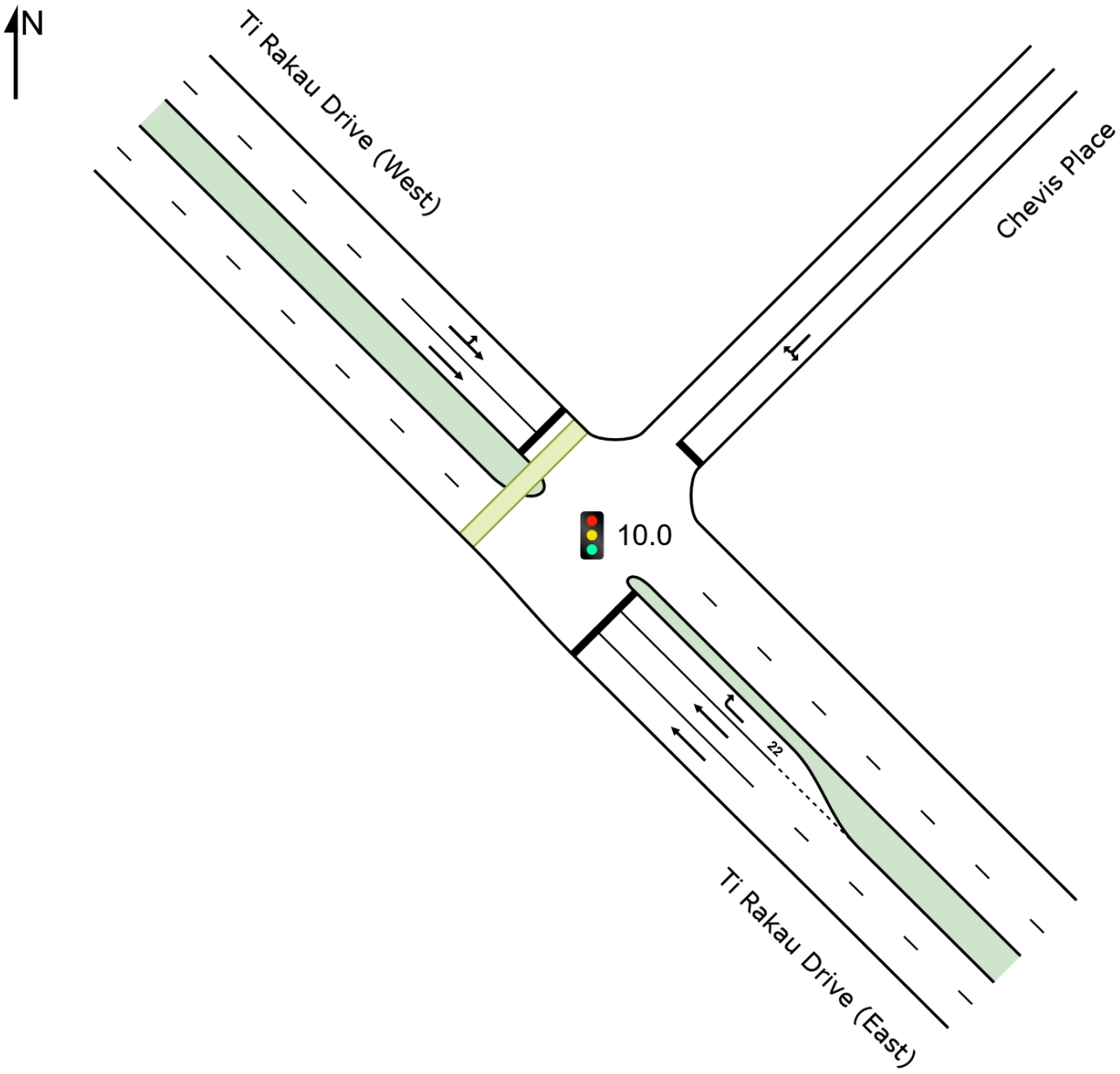
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Priority**												
Exit Short Lane	3	18	0.0	493	521	3.00	2.00	64	1265	0.051	0.9	1.1
Merge Lane	2	-	100.0	Merge Lane is not Opposed				493	1800	0.274	0.0	0.0
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
SouthWest Exit: Mattson Road Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 10.0 [10.0 Edgewater Dr (West) / Chevis Pl (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 10.0 [10.0 Edgewater Dr (West) / Chevis Pl (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	878	10.4	817	10.5	949	0.861	100	24.1	LOS C	29.7	226.8	Full	162	0.0	35.7
Lane 2	855	10.4	795	10.5	923[1]	0.861	100	24.2	LOS C	28.9	220.2	Full	162	0.0	33.0
Lane 3	11	9.1	10	9.1	239	0.043	100	33.4	LOS C	0.3	2.3	Short	22	0.0	NA
Approach	1744	10.4	1622[N1]	10.4		0.861		24.2	LOS C	29.7	226.8				
NorthEast: Chevis Place															
Lane 1	29	6.9	29	6.9	183	0.158	100	36.6	LOS D	0.9	7.0	Full	138	0.0	0.0
Approach	29	6.9	29	6.9		0.158		36.6	LOS D	0.9	7.0				
NorthWest: Ti Rakau Drive (West)															
Lane 1	466	11.6	448	11.6	956	0.469	100	11.9	LOS B	9.8	75.6	Full	68	0.0	14.6
Lane 2	440	11.6	423	11.6	903	0.469	100	11.8	LOS B	9.3	71.7	Full	68	0.0	9.7
Approach	906	11.6	871[N1]	11.6		0.469		11.8	LOS B	9.8	75.6				
Intersection	2679	10.8	2522[N1]	11.4		0.861		20.1	LOS C	29.7	226.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	T1 NW	R2 NE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	817	-	817	10.5	949	0.861	100	NA	NA
Lane 2	795	-	795	10.5	923[1]	0.861	100	NA	NA
Lane 3	-	10	10	9.1	239	0.043	100	0.0	2
Approach	1612	10	1622	10.4		0.861			

NorthEast: Chevis Place

Mov. From NE To Exit:	L2 SE	R2 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	18	29	6.9	183	0.158	100	NA	NA
Approach	11	18	29	6.9		0.158			

NorthWest: Ti Rakau Drive (West)

Mov.	L2	T1	Total	%HV		Deg.	Lane	Prob.	Ov.

From NW To Exit:	NE	SE			Cap. veh/h	Satn v/c	Util. %	SL Ov. %	Lane No.
Lane 1	11	437	448	11.6	956	0.469	100	NA	NA
Lane 2	-	423	423	11.6	903	0.469	100	NA	NA
Approach	11	861	871	11.6		0.469			
	Total	%HV	Deg.Satn (v/c)						
Intersection	2522	11.4		0.861					

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

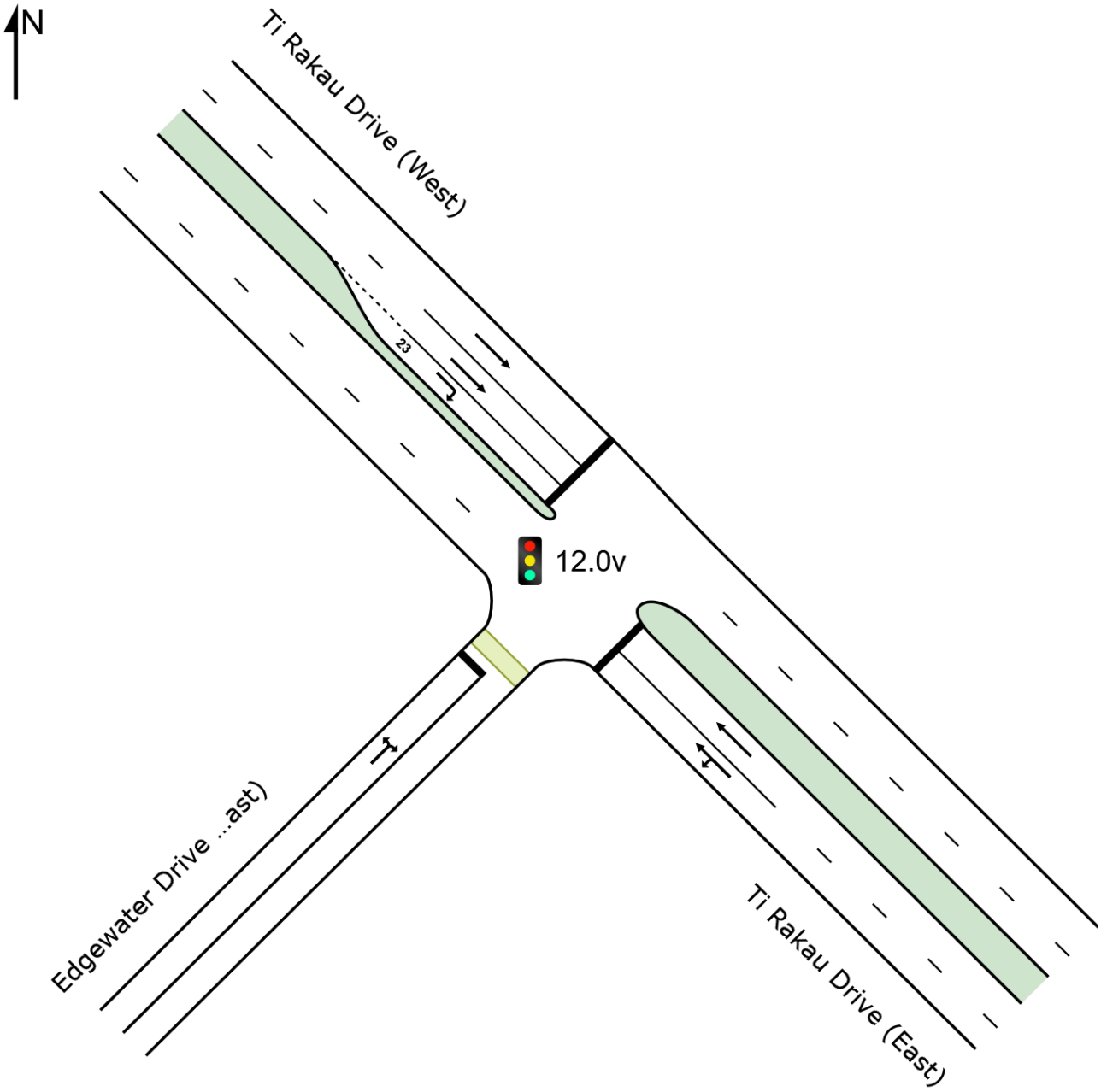
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate sec	Capacity veh/h	Deg. Satn veh/h	Min. Delay v/c	Merge Delay sec	sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
NorthEast Exit: Chevis Place Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										

SITE LAYOUT

Site: 12.0v [12.0 Edgewater Dr (East) / Ti Rakau Dr - Conversion (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 12.0v [12.0 Edgewater Dr (East) / Ti Rakau Dr - Conversion (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 67 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	955	9.3	887	9.3	997	0.890	100	27.3	LOS C	33.9	256.0	Full	479	0.0	0.0
Lane 2	977	10.1	908	10.2	1021	0.890	100	26.2	LOS C	34.5	262.5	Full	479	0.0	0.0
Approach	1932	9.7	1795 N 1	9.7		0.890		26.8	LOS C	34.5	262.5				
NorthWest: Ti Rakau Drive (West)															
Lane 1	474	11.3	456	11.4	1050	0.434	100	9.5	LOS A	8.8	67.5	Full	103	0.0	0.0
Lane 2	400	11.3	384	11.4	886 1	0.434	100	9.3	LOS A	7.2	55.4	Full	103	0.0	0.0
Lane 3	48	13.0	47	13.0	145	0.321	100	39.1	LOS D	1.6	12.1	Short	23	0.0	NA
Approach	922	11.4	887 N1	11.4		0.434		11.0	LOS B	8.8	67.5				
SouthWest: Edgewater Drive (East)															
Lane 1	191	8.3	191	8.3	263	0.724	100	37.9	LOS D	6.6	49.2	Full	500	0.0	0.0
Approach	191	8.3	191	8.3		0.724		37.9	LOS D	6.6	49.2				
Intersection	3045	10.1	2873 N 1	10.7		0.890		22.6	LOS C	34.5	262.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	L2 SW	T1 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	134	753	887	9.3	997	0.890	100	NA	NA
Lane 2	-	908	908	10.2	1021	0.890	100	NA	NA
Approach	134	1661	1795	9.7		0.890			

NorthWest: Ti Rakau Drive (West)

Mov. From NW To Exit:	T1 SE	R2 SW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	456	-	456	11.4	1050	0.434	100	NA	NA
Lane 2	384	-	384	11.4	886 1	0.434	100	NA	NA
Lane 3	-	47	47	13.0	145	0.321	100	0.0	2
Approach	840	47	887	11.4		0.434			

SouthWest: Edgewater Drive (East)

Mov. From SW To Exit:	L2 NW	R2 SE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	132	59	191	8.3	263	0.724	100	NA	NA
Approach	132	59	191	8.3		0.724			

	Total	%HV	Deg.Satn (v/c)
Intersection	2873	10.7	0.890

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

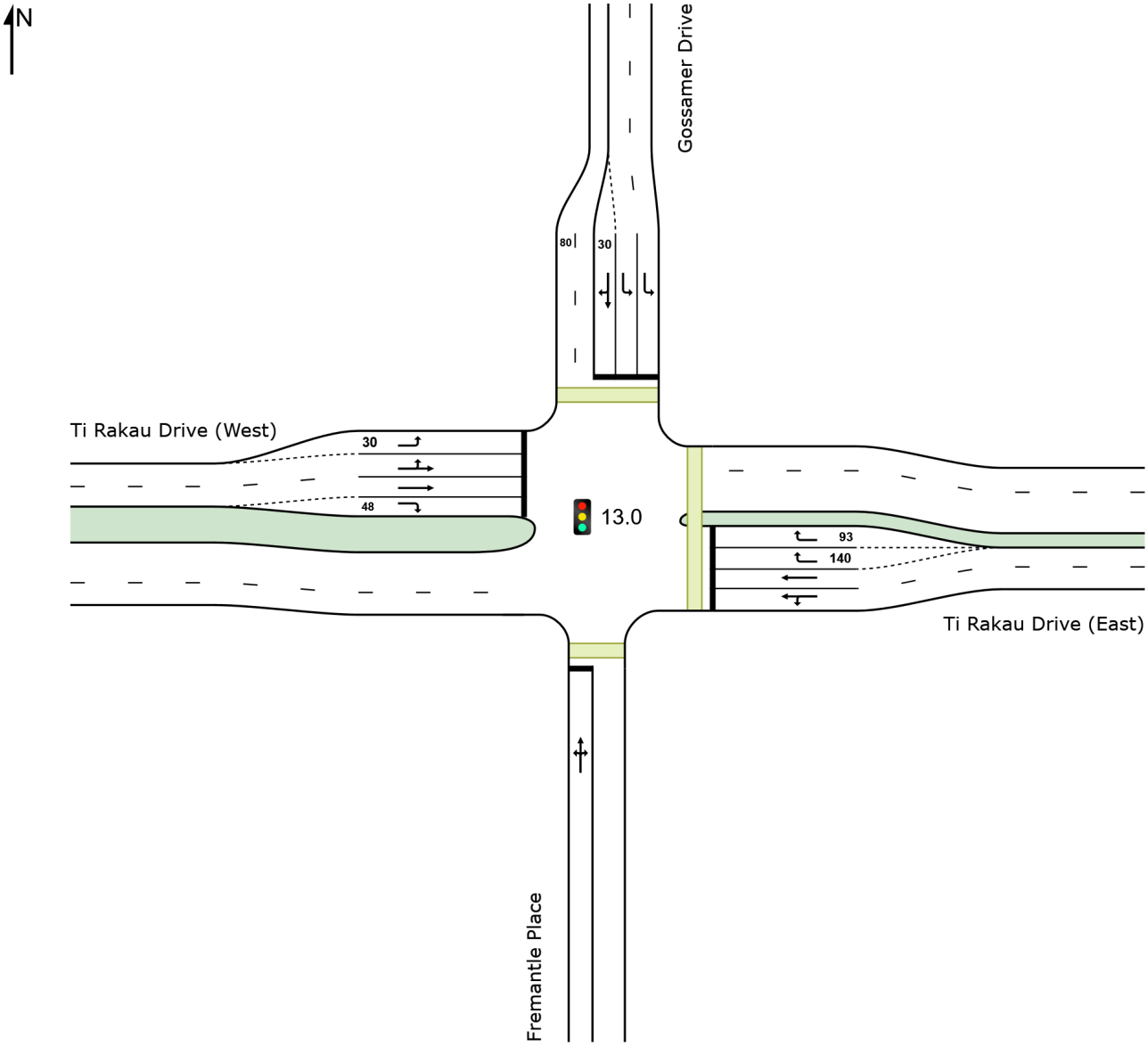
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate sec	Capacity veh/h	Deg. Satn veh/h	Min. Delay v/c	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
Full Length Lane	2	Merge Analysis not applied.									
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
Full Length Lane	2	Merge Analysis not applied.									
SouthWest Exit: Edgewater Drive (East) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									

SITE LAYOUT

Site: 13.0 [13.0 Gossamer Dr / Ti Rakau Dr (Site Folder: General)]

Scheme Design
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:39:53 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 AM-V1.sip9

LANE SUMMARY

Site: 13.0 [13.0 Gossamer Dr / Ti Rakau Dr (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

Scheme Design
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 160 seconds (Site User-Given Phase Times)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Fremantle Place															
Lane 1	51	7.8	51	7.8	67	0.764	100	94.5	LOS F	4.3	32.4	Full	285	0.0	0.0
Approach	51	7.8	51	7.8		0.764		94.5	LOS F	4.3	32.4				
East: Ti Rakau Drive (East)															
Lane 1	791	10.7	791	10.7	745	1.063	100	117.2	LOS F	79.4	607.0	Full	636	0.0	0.8
Lane 2	723	10.8	723	10.8	680[1]	1.063	100	144.9	LOS F	91.2	697.7	Full	636	0.0	13.4
Lane 3	128	7.8	128	7.8	357	0.358	47[6]	35.2	LOS D	4.6	34.6	Short	140	0.0	NA
Lane 4	271	7.8	271	7.8	357	0.759	100	51.0	LOS D	13.9	103.4	Short	93	0.0	NA
Approach	1913	10.1	1913	10.1		1.063		112.8	LOS F	91.2	697.7				
North: Gossamer Drive															
Lane 1	571	8.9	571	8.9	569	1.004	100	116.6	LOS F	62.3	469.6	Full	1010	0.0	0.0
Lane 2	359	8.9	359	8.9	357[1]	1.004	100	127.1	LOS F	40.8	307.1	Full	1010	0.0	0.0
Lane 3	291	5.8	291	5.8	241[1]	1.208	100	278.9	LOS F	48.1	353.3	Short	30	0.0	NA
Approach	1221	8.2	1221	8.2		1.208		158.3	LOS F	62.3	469.6				
West: Ti Rakau Drive (West)															
Lane 1	55	9.1	53	9.1	965	0.055	8[5]	14.9	LOS B	1.3	10.1	Short	30	0.0	NA
Lane 2	395	11.4	380	11.5	530[1]	0.718	100	49.3	LOS D	25.2	193.6	Full	479	0.0	0.0
Lane 3	419	11.4	405	11.5	564[1]	0.718	100	50.5	LOS D	27.4	210.9	Full	479	0.0	0.0
Lane 4	11	9.1	11	9.1	264	0.040	100	66.0	LOS E	0.7	5.3	Short	48	0.0	NA
Approach	880	11.3	849[N1]	11.3		0.718		47.9	LOS D	27.4	210.9				
Intersection	4065	9.8	4034[N1]	9.8		1.208		112.7	LOS F	91.2	697.7				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

South: Fremantle Place

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	23	11	17	51	7.8	67	0.764	100	NA	NA
Approach	23	11	17	51	7.8		0.764			
East: Ti Rakau Drive (East)										

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	18	773	-	791	10.7	745	1.063	100	NA	NA
Lane 2	-	723	-	723	10.8	680[1]	1.063	100	NA	NA
Lane 3	-	-	128	128	7.8	357	0.358	47[6]	0.0	2
Lane 4	-	-	271	271	7.8	357	0.759	100	14.6	3
Approach	18	1496	399	1913	10.1		1.063			

North: Gossamer Drive

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	571	-	-	571	8.9	569	1.004	100	NA	NA
Lane 2	359	-	-	359	8.9	357[1]	1.004	100	NA	NA
Lane 3	-	11	280	291	5.8	241[1]	1.208	100	100.0	2
Approach	930	11	280	1221	8.2		1.208			

West: Ti Rakau Drive (West)

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	53	-	-	53	9.1	965	0.055	8[5]	0.0	2
Lane 2	-	380	-	380	11.5	530[1]	0.718	100	NA	NA
Lane 3	-	405	-	405	11.5	564[1]	0.718	100	NA	NA
Lane 4	-	-	11	11	9.1	264	0.040	100	0.0	3
Approach	53	785	11	849	11.3		0.718			

	Total	%HV	Deg.Satn (v/c)
Intersection	4034	9.8	1.208

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects

Merge Analysis

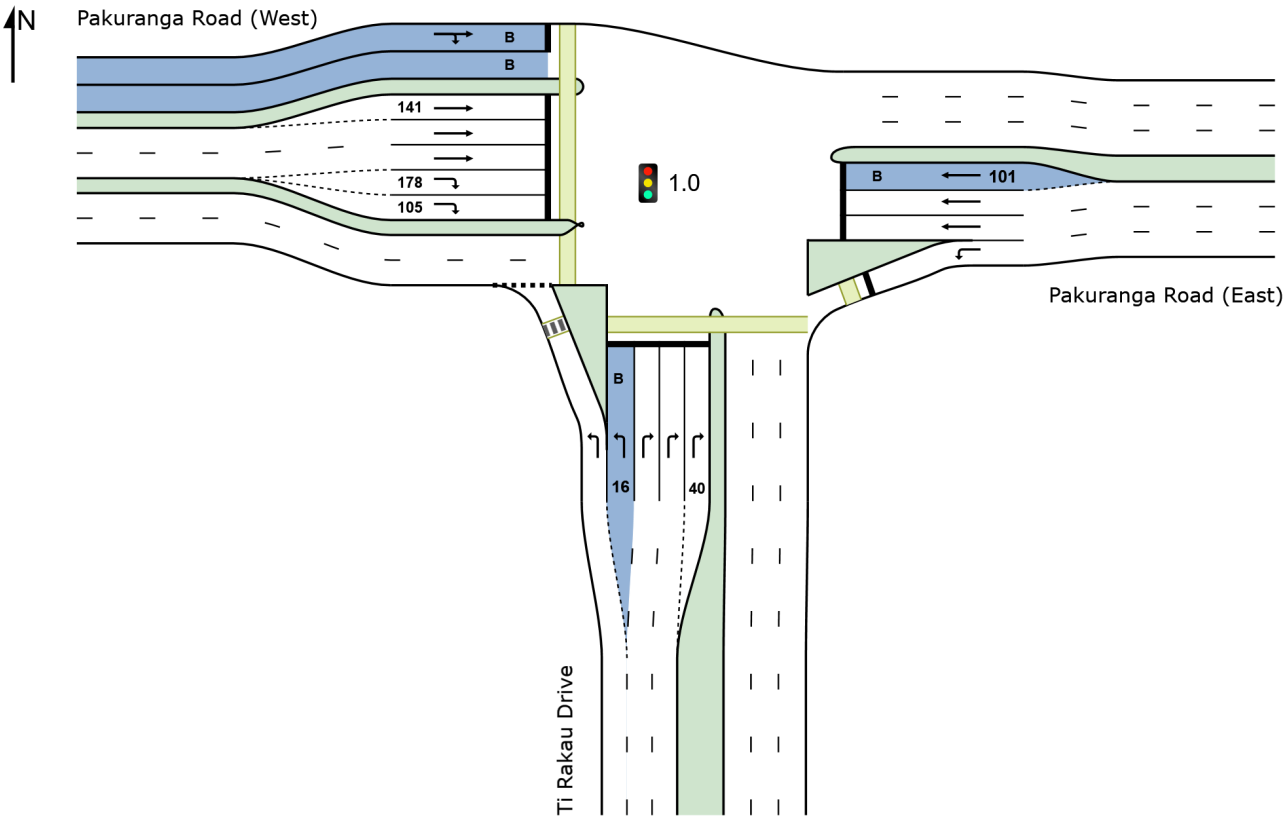
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Fremantle Place Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
East Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
North Exit: Gossamer Drive Merge Type: **Zipper**												
Exit Short Lane	1	80	50.0	141	147	2.50	2.00	181	1630	0.111	0.0	0.1
Merge Lane	2	-	50.0	90	94	2.50	2.00	282	1693	0.167	0.0	0.0
West Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										

SITE LAYOUT

Site: 1.0 [1.0 Pakuranga Rd / Ti Rakau Rd (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:42:38 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 PM -V1.sip9

LANE SUMMARY

Site: 1.0 [1.0 Pakuranga Rd / Ti Rakau Rd (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 77 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Ti Rakau Drive															
Lane 1	767	4.8	755	4.8	1144[1]	0.660	100	8.6	LOS A	11.0	80.4	Full	174	0.0	0.0
Lane 2 (B)	13	100.0	13	100.0	132	0.099	100	43.0	LOS D	0.4	5.6	Short	16	0.0	NA
Lane 3	380	4.1	375	4.0	420	0.892	100	47.9	LOS D	15.3	110.5	Full	174	0.0	0.0
Lane 4	325	4.1	320	4.0	359[1]	0.892	100	47.8	LOS D	12.8	92.8	Full	174	0.0	0.0
Lane 5	325	4.1	320	4.0	359[1]	0.892	100	47.8	LOS D	12.8	92.8	Short	40	0.0	NA
Approach	1811	5.1	1784[N1]	5.0		0.892		31.2	LOS C	15.3	110.5				
East: Pakuranga Road (East)															
Lane 1	787	4.7	723	4.7	975	0.742	100	20.3	LOS C	18.8	136.8	Full	113	0.0	32.5
Lane 2	406	10.2	373	10.3	425	0.877	100	41.2	LOS D	14.7	112.1	Full	113	0.0	14.3
Lane 3	406	10.2	373	10.3	425	0.877	100	41.2	LOS D	14.7	112.1	Full	113	0.0	14.3
Lane 4 (B)	11	100.0	11	100.0	93	0.118	100	40.4	LOS D	0.4	4.9	Short	101	0.0	NA
Approach	1609	8.1	1480[N1]	8.2		0.877		31.0	LOS C	18.8	136.8				
West: Pakuranga Road (West)															
Lane 1 (B)	42	100.0	42	100.0	89	0.472	100	40.2	LOS D	1.4	18.8	Full	388	0.0	0.0
Lane 2	450	7.1	450	7.1	554	0.813	100	32.0	LOS C	15.8	117.3	Short	141	0.0	NA
Lane 3	450	7.1	450	7.1	554	0.813	100	32.0	LOS C	15.8	117.3	Full	388	0.0	0.0
Lane 4	450	7.1	450	7.1	554	0.813	100	32.0	LOS C	15.8	117.3	Full	388	0.0	0.0
Lane 5	228	8.8	228	8.8	248	0.916	100	56.1	LOS E	9.7	72.7	Short	178	0.0	NA
Lane 6	228	8.8	228	8.8	248	0.916	100	56.1	LOS E	9.7	72.7	Short	105	0.0	NA
Approach	1847	9.6	1847	9.6		0.916		38.1	LOS D	15.8	117.3				
Intersection	5267	7.6	5111[N1]	7.8		0.916		33.6	LOS C	18.8	136.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

South: Ti Rakau Drive

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	755	-	755	4.8	1144[1]	0.660	100	NA	NA
Lane 2	13	-	13	100.0	132	0.099	100	0.0	1
Lane 3	-	375	375	4.0	420	0.892	100	NA	NA
Lane 4	-	320	320	4.0	359[1]	0.892	100	NA	NA

Lane 5	-	320	320	4.0	359[1]	0.892	100	94.8	4
Approach	768	1016	1784	5.0		0.892			

East: Pakuranga Road (East)

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	723	-	723	4.7	975	0.742	100	NA	NA
Lane 2	-	373	373	10.3	425	0.877	100	NA	NA
Lane 3	-	373	373	10.3	425	0.877	100	NA	NA
Lane 4	-	11	11	100.0	93	0.118	100	0.0	3
Approach	723	756	1480	8.2		0.877			

West: Pakuranga Road (West)

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	21	21	42	100.0	89	0.472	100	NA	NA
Lane 2	450	-	450	7.1	554	0.813	100	0.0	3
Lane 3	450	-	450	7.1	554	0.813	100	NA	NA
Lane 4	450	-	450	7.1	554	0.813	100	NA	NA
Lane 5	-	228	228	8.8	248	0.916	100	0.0	4
Lane 6	-	228	228	8.8	248	0.916	100	0.0	5
Approach	1371	476	1847	9.6		0.916			

	Total	%HV	Deg.Satn (v/c)
Intersection	5111	7.8	0.916

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

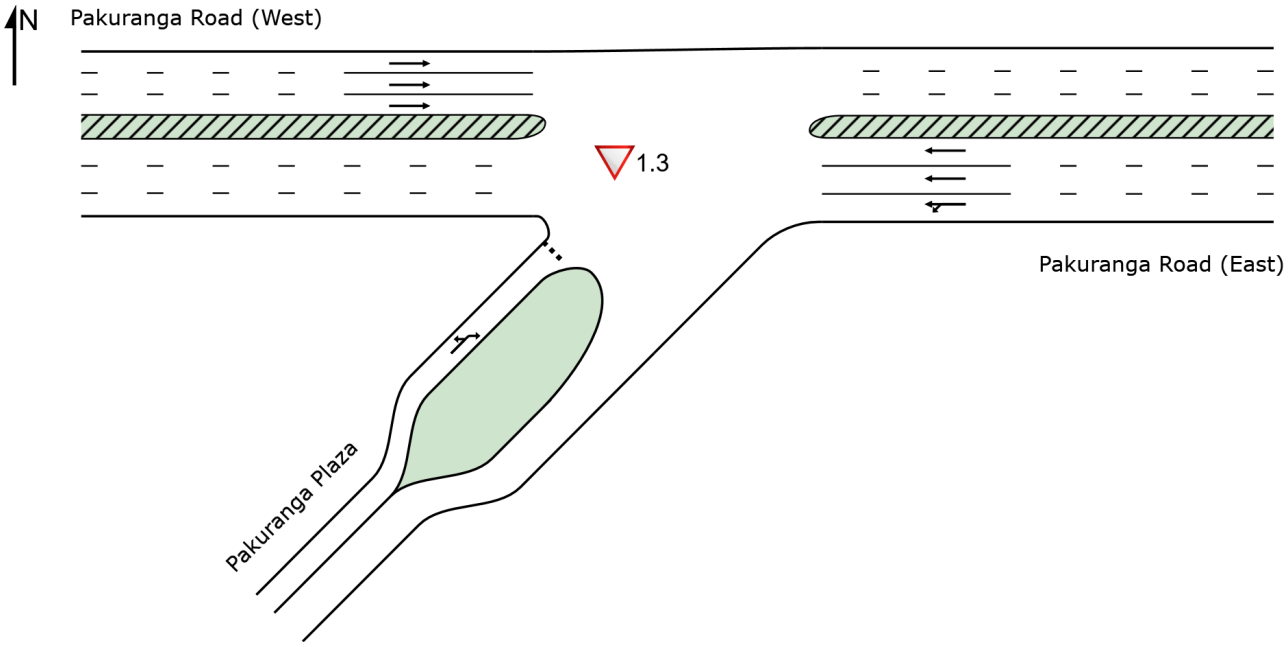
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Ti Rakau Drive Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
East Exit: Pakuranga Road (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
West Exit: Pakuranga Road (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										

SITE LAYOUT

Site: 1.3 [1.3 Mall/ Pakuranga Rd - PD (Site Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:42:43 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 PM -V1.sip9

LANE SUMMARY

Site: 1.3 [1.3 Mall/ Pakuranga Rd - PD (Site Folder: General)] Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Pakuranga Road (East)															
Lane 1	508	8.7	488	8.6	1847	0.264	100	1.0	LOS A	0.0	0.0	Full	152	0.0	0.0
Lane 2	515	7.3	494	7.2	1872	0.264	100	0.0	LOS A	0.0	0.0	Full	152	0.0	0.0
Lane 3	515	7.3	494	7.2	1872	0.264	100	0.0	LOS A	0.0	0.0	Full	152	0.0	0.0
Approach	1539	7.7	1476 N1	7.7		0.264		0.3	NA	0.0	0.0				
West: Pakuranga Road (West)															
Lane 1	797	6.6	792	6.6	1802	0.439	100	0.0	LOS A	0.0	0.0	Full	108	0.0	0.0
Lane 2	797	6.6	792	6.6	1802	0.439	100	0.0	LOS A	0.0	0.0	Full	108	0.0	0.0
Lane 3	792	6.6	787	6.6	1792	0.439	100	0.0	LOS A	0.0	0.0	Full	108	0.0	0.0
Approach	2386	6.6	2371 N1	6.6		0.439		0.0	NA	0.0	0.0				
SouthWest: Pakuranga Plaza															
Lane 1	108	6.5	108	6.5	58	1.875	100	917.1	LOS F	27.5	203.5	Full	196	-5.9 N7	16.4
Approach	108	6.5	108	6.5		1.875		917.1	LOS F	27.5	203.5				
Intersection	4033	7.0	3955 N1	7.2		1.875		25.2	NA	27.5	203.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N7 The capacity reduction has been determined from the queue blockage probability of a Site further downstream due to intermediate continuous lanes.

Approach Lane Flows (veh/h)

East: Pakuranga Road (East)

Mov. From E To Exit:	L1 SW	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	90	398	488	8.6	1847	0.264	100	NA	NA
Lane 2	-	494	494	7.2	1872	0.264	100	NA	NA
Lane 3	-	494	494	7.2	1872	0.264	100	NA	NA
Approach	90	1386	1476	7.7		0.264			

West: Pakuranga Road (West)

Mov. From W To Exit:	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	792	792	6.6	1802	0.439	100	NA	NA
Lane 2	792	792	6.6	1802	0.439	100	NA	NA

Lane 3	787	787	6.6		1792	0.439	100	NA	NA
Approach	2371	2371	6.6			0.439			
SouthWest: Pakuranga Plaza									
Mov. From SW To Exit:	L3 W	R1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	98	10	108	6.5	58	1.875	100	NA	NA
Approach	98	10	108	6.5		1.875			
	Total	%HV	Deg.Satn (v/c)						
Intersection	3955	7.2		1.875					

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

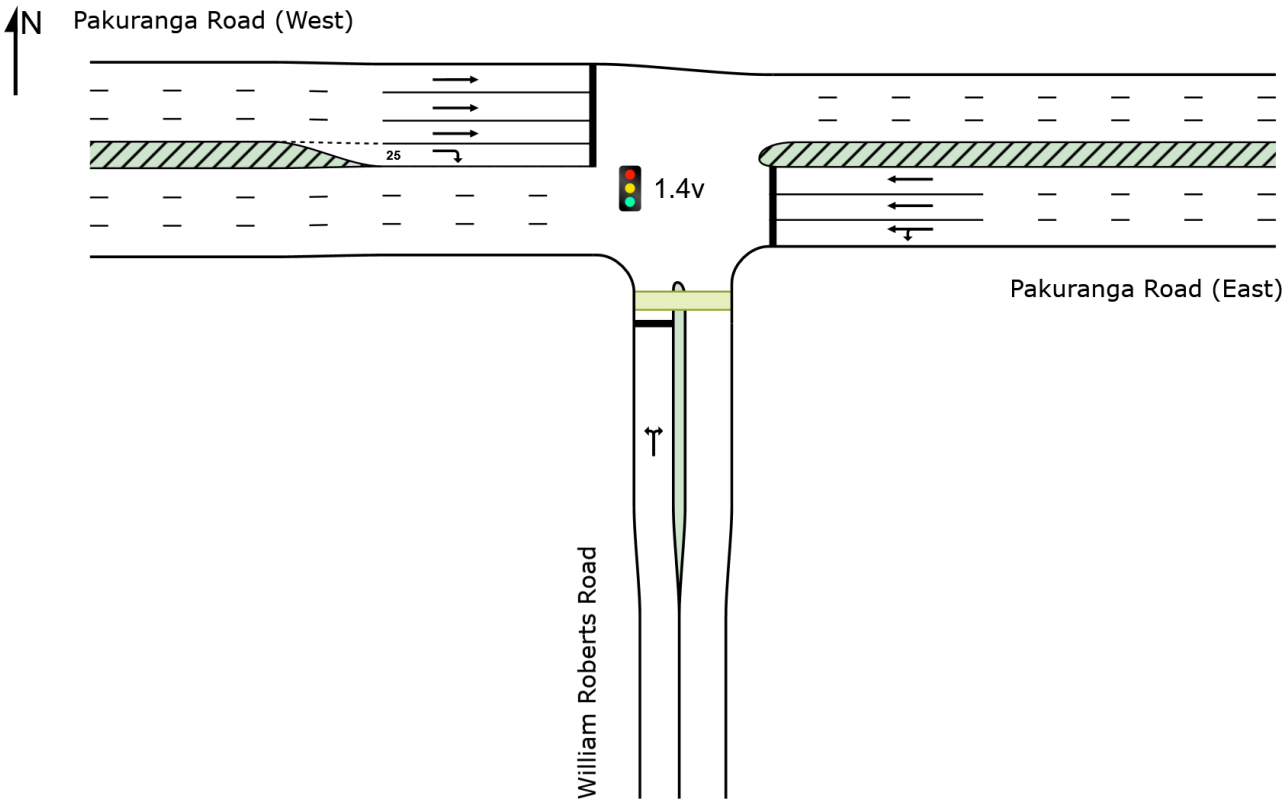
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
East Exit: Pakuranga Road (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
West Exit: Pakuranga Road (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
SouthWest Exit: Pakuranga Plaza Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 1.4v [1.4 William Roberts/ Pakuranga Rd - PD - Conversion (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:42:47 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 PM -V1.sip9

LANE SUMMARY

Site: 1.4v [1.4 William Roberts/ Pakuranga Rd - PD - Conversion (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: William Roberts Road															
Lane 1	236	7.2	236	7.2	124	1.905	100	873.9	LOS F	48.0[N4]	356.5[N4]	Full	244	-28.7[N7]	50.0
Approach	236	7.2	236	7.2		1.905		873.9	LOS F	48.0	356.5				
East: Pakuranga Road (East)															
Lane 1	489	7.3	489	7.3	1319	0.371	100	4.2	LOS A	4.8	35.5	Full	184	0.0	0.0
Lane 2	488	7.6	488	7.6	1315	0.371	100	6.3	LOS A	8.3	61.9	Full	184	0.0	0.0
Lane 3	493	7.6	493	7.6	1329	0.371	100	6.2	LOS A	8.3	62.1	Full	184	0.0	0.0
Approach	1471	7.5	1471	7.5		0.371		5.6	LOS A	8.3	62.1				
West: Pakuranga Road (West)															
Lane 1	1119	6.5	1116	6.6	1231	0.907	100	15.9	LOS B	30.0[N4]	222.1[N4]	Full	152	-19.6[N3]	50.0
Lane 2	695	6.5	694	6.6	765	0.907	100	33.1	LOS C	30.0[N4]	222.1[N4]	Full	152	-50.0[N3]	50.0
Lane 3	647	6.5	646	6.6	712[1]	0.907	100	34.5	LOS C	30.0[N4]	222.1[N4]	Full	152	-50.0[N3]	50.0
Lane 4	54	13.0	54	13.0	98	0.551	100	84.0	LOS F	3.6	28.3	Short	25	0.0	NA
Approach	2515	6.7	2510[N1]	6.7		0.907		26.9	LOS C	30.0	222.1				
Intersection	4222	7.0	4216[N1]	7.0		1.905		66.8	LOS E	48.0	356.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N4 Average back of queue has been restricted to the available queue storage space.
N7 The capacity reduction has been determined from the queue blockage probability of a Site further downstream due to intermediate continuous lanes.

Approach Lane Flows (veh/h)

South: William Roberts Road

Mov. From S To Exit:	L2 W	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	141	95	236	7.2	124	1.905	100	NA	NA
Approach	141	95	236	7.2		1.905			

East: Pakuranga Road (East)

Mov. From E To Exit:	L2 S	T1 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	73	416	489	7.3	1319	0.371	100	NA	NA

Lane 2	-	488	488	7.6	1315	0.371	100	NA	NA
Lane 3	-	493	493	7.6	1329	0.371	100	NA	NA
Approach	73	1398	1471	7.5		0.371			

West: Pakuranga Road (West)

Mov. From W To Exit:	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	1116	-	1116	6.6	1231	0.907	100	NA	NA
Lane 2	694	-	694	6.6	765	0.907	100	NA	NA
Lane 3	646	-	646	6.6	712[1]	0.907	100	NA	NA
Lane 4	-	54	54	13.0	98	0.551	100	26.5	3
Approach	2456	54	2510	6.7		0.907			

	Total	%HV	Deg.Satn (v/c)
Intersection	4216	7.0	1.905

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

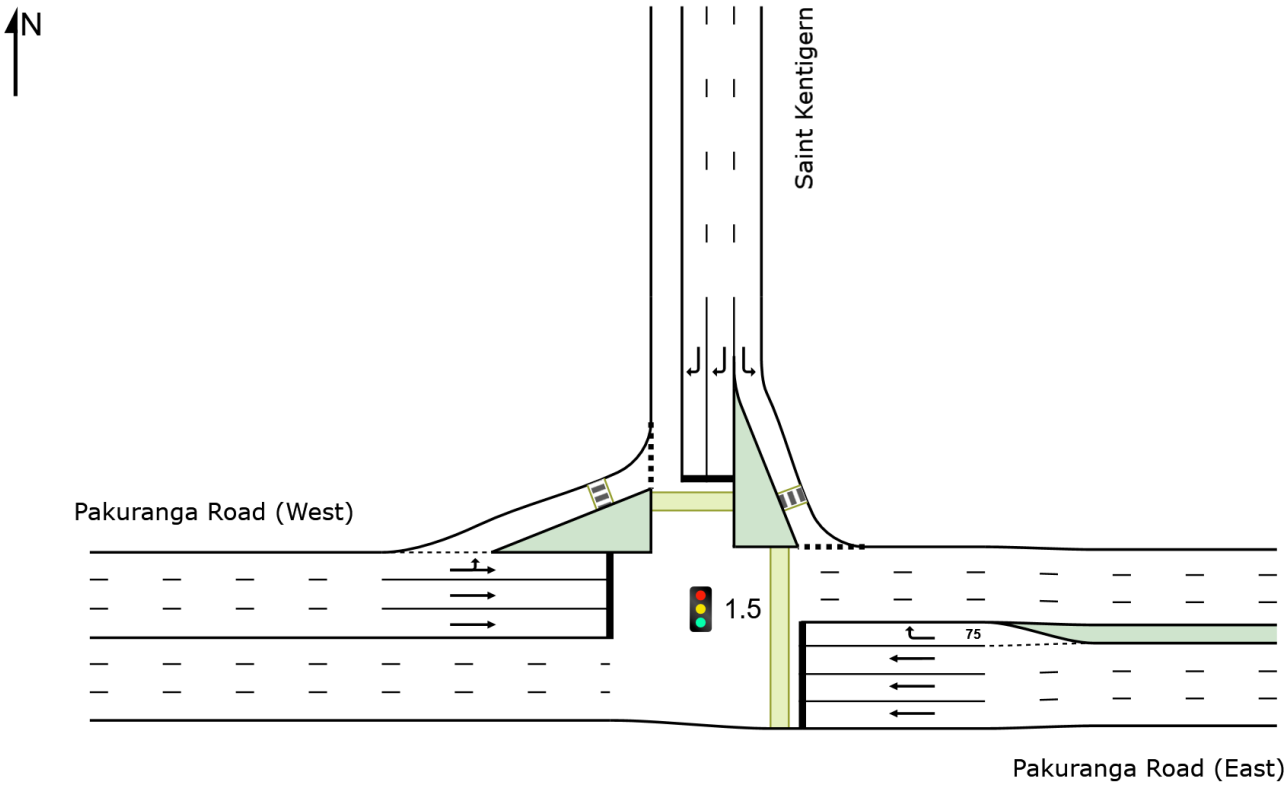
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: William Roberts Road Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
East Exit: Pakuranga Road (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
West Exit: Pakuranga Road (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										

SITE LAYOUT

Site: 1.5 [1.5 Saint Kentigern/ Pakuranga Rd - PD (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:42:52 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 PM -V1.sip9

LANE SUMMARY

Site: 1.5 [1.5 Saint Kentigern/ Pakuranga Rd - PD (Site Folder: General)] Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Pakuranga Road (East)															
Lane 1	458	7.6	458	7.6	1415	0.323	100	5.4	LOS A	8.8	65.6	Full	87	0.0	0.0
Lane 2	458	7.6	458	7.6	1415	0.323	100	5.4	LOS A	8.8	65.6	Full	87	0.0	0.0
Lane 3	460	7.6	460	7.6	1422	0.323	100	5.4	LOS A	8.8	65.9	Full	87	0.0	0.0
Lane 4	27	3.7	27	3.7	139	0.194	100	52.6	LOS D	1.3	9.7	Short	75	0.0	NA
Approach	1402	7.5	1402	7.5		0.323		6.3	LOS A	8.8	65.9				
North: Saint Kentigern															
Lane 1	57	3.5	57	3.5	544	0.105	100	15.9	LOS B	1.8	12.7	Full	96	0.0	0.0
Lane 2	47	7.5	47	7.5	254	0.184	100	60.9	LOS E	2.7	20.2	Full	96	0.0	0.0
Lane 3	46	7.5	46	7.5	250	0.184	100	61.0	LOS E	2.7	19.9	Full	96	0.0	0.0
Approach	150	6.0	150	6.0		0.184		43.8	LOS D	2.7	20.2				
West: Pakuranga Road (West)															
Lane 1	603	6.2	592	6.3	701	0.845	100	22.6	LOS C	26.2	193.5	Full	184	0.0	19.6
Lane 2	982	6.5	965	6.5	1141	0.845	100	16.9	LOS B	36.4[N4]	268.9[N4]	Full	184	0.0	50.0
Lane 3	982	6.5	965	6.5	1141	0.845	100	20.0	LOS C	36.4[N4]	268.9[N4]	Full	184	0.0	50.0
Approach	2568	6.4	2521[N1]	6.5		0.845		19.5	LOS B	36.4	268.9				
Intersection	4120	6.8	4073[N1]	6.8		0.845		15.8	LOS B	36.4	268.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N4 Average back of queue has been restricted to the available queue storage space.

Approach Lane Flows (veh/h)

East: Pakuranga Road (East)

Mov. From E To Exit:	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	458	-	458	7.6	1415	0.323	100	NA	NA
Lane 2	458	-	458	7.6	1415	0.323	100	NA	NA
Lane 3	460	-	460	7.6	1422	0.323	100	NA	NA
Lane 4	-	27	27	3.7	139	0.194	100	0.0	3
Approach	1375	27	1402	7.5		0.323			

North: Saint Kentigern

Mov. From N To Exit:	L2 E	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	57	-	57	3.5	544	0.105	100	NA	NA

Lane 2	-	47	47	7.5	254	0.184	100	NA	NA
Lane 3	-	46	46	7.5	250	0.184	100	NA	NA
Approach	57	93	150	6.0		0.184			

West: Pakuranga Road (West)

Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	53	539	592	6.3	701	0.845	100	NA	NA
Lane 2	-	965	965	6.5	1141	0.845	100	NA	NA
Lane 3	-	965	965	6.5	1141	0.845	100	NA	NA
Approach	53	2468	2521	6.5		0.845			

	Total	%HV	Deg.Satn (v/c)
Intersection	4073	6.8	0.845

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

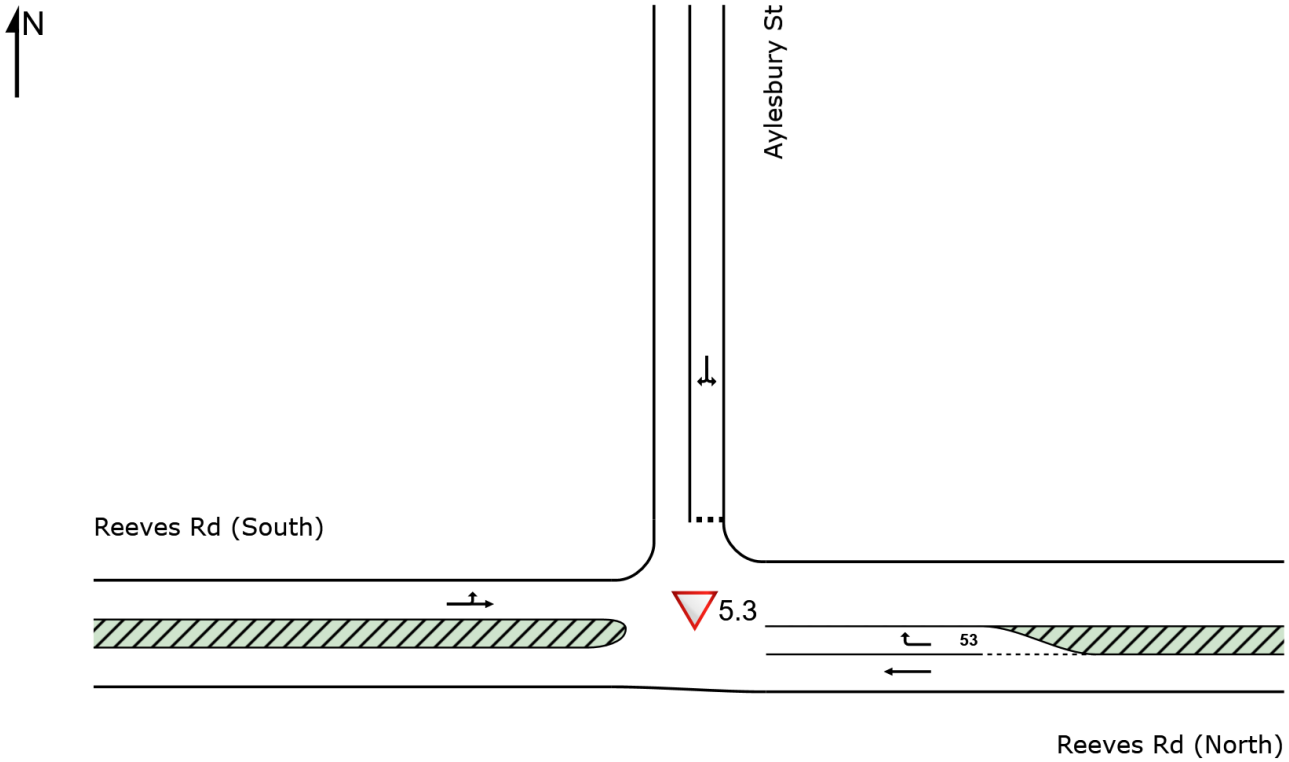
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate sec	Capacity veh/h	Deg. Satn veh/h	Min. Delay v/c	Merge Delay sec	sec
East Exit: Pakuranga Road (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
North Exit: Saint Kentigern Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
West Exit: Pakuranga Road (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										

SITE LAYOUT

Site: 5.3 [5.3 Reeves Rd/ Aylesbury St (Site Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 5.3 [5.3 Reeves Rd/ Aylesbury St (Site Folder: General)] Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
East: Reeves Rd (North)															
Lane 1	15	0.0	15	0.0	2021	0.007	100	0.0	LOS A	0.0	0.0	Full	60	0.0	0.0
Lane 2	10	0.0	10	0.0	1743	0.006	100	4.6	LOS A	0.0	0.1	Short	53	0.0	NA
Approach	25	0.0	25	0.0		0.007		1.8	NA	0.0	0.1				
North: Aylesbury St															
Lane 1	56	5.4	56	5.4	1284	0.044	100	0.3	LOS A	0.1	0.9	Full	193	0.0	0.0
Approach	56	5.4	56	5.4		0.044		0.3	LOS A	0.1	0.9				
West: Reeves Rd (South)															
Lane 1	38	2.6	38	2.6	1932	0.020	100	3.4	LOS A	0.0	0.0	Full	175	0.0	0.0
Approach	38	2.6	38	2.6		0.020		3.4	NA	0.0	0.0				
Intersection	119	3.4	119	3.4		0.044		1.6	NA	0.1	0.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Approach Lane Flows (veh/h)

East: Reeves Rd (North)

Mov. From E To Exit:	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	15	-	15	0.0	2021	0.007	100	NA	NA
Lane 2	-	10	10	0.0	1743	0.006	100	0.0	1
Approach	15	10	25	0.0		0.007			

North: Aylesbury St

Mov. From N To Exit:	L2 E	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	26	30	56	5.4	1284	0.044	100	NA	NA
Approach	26	30	56	5.4		0.044			

West: Reeves Rd (South)

Mov. From W To Exit:	L2 N	T1 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	28	10	38	2.6	1932	0.020	100	NA	NA
Approach	28	10	38	2.6		0.020			

	Total	%HV	Deg.Satn (v/c)
Intersection	119	3.4	0.044

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

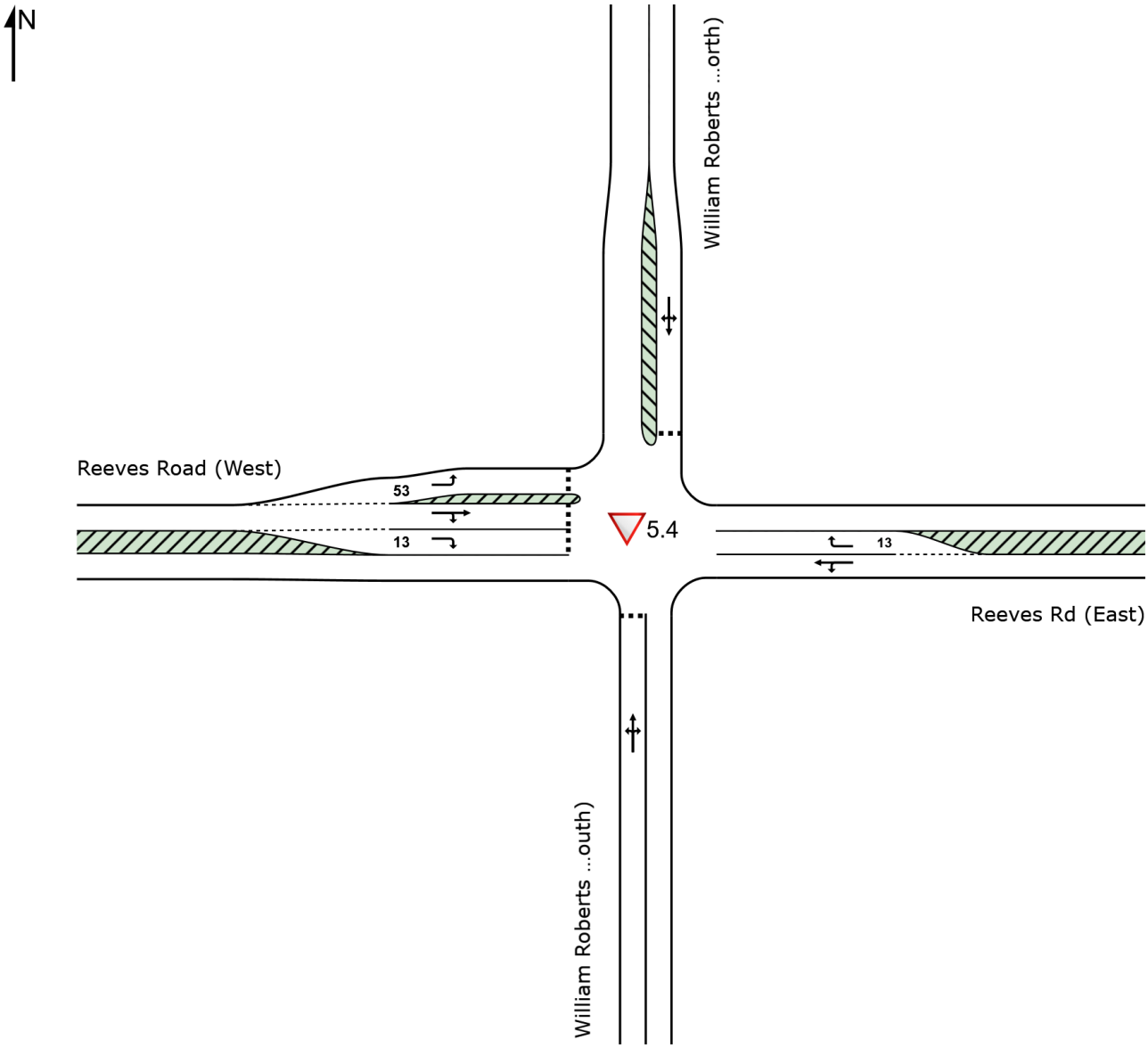
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
East Exit: Reeves Rd (North) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
North Exit: Aylesbury St Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
West Exit: Reeves Rd (South) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 5.4 [5.4 Reeves Rd / William Roberts Rd - Import (Site Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 5.4 [5.4 Reeves Rd / William Roberts Rd - Import (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: William Roberts Rd (South)															
Lane 1	105	9.7	104	9.8	728	0.142	100	2.4	LOS A	0.2	1.8	Full	243	-37.2 N7	0.0
Approach	105	9.7	104 N1	9.8		0.142		2.4	LOS A	0.2	1.8				
East: Reeves Rd (East)															
Lane 1	101	10.9	101	10.9	1704	0.059	100	4.3	LOS A	0.0	0.0	Full	266	0.0	0.0
Lane 2	90	18.9	90	18.9	1611	0.056	100	4.7	LOS A	0.0	0.0	Short	13	0.0	NA
Approach	191	14.7	191	14.7		0.059		4.5	NA	0.0	0.0				
North: William Roberts Rd (North)															
Lane 1	51	2.0	50	2.0	1231	0.041	100	4.8	LOS A	0.1	0.7	Full	244	0.0	0.0
Approach	51	2.0	50	2.0		0.041		4.8	LOS A	0.1	0.7				
West: Reeves Road (West)															
Lane 1	11	0.0	11	0.0	713	0.015	100	4.8	LOS A	0.0	0.1	Short	53	-50.0 N7	NA
Lane 2	17	6.3	17	6.3	1265	0.013	100	3.6	LOS A	0.0	0.3	Full	60	0.0	0.0
Lane 3	11	0.0	11	0.0	1004	0.010	79 5	5.1	LOS A	0.0	0.2	Short	13	0.0	NA
Approach	38	2.8	38	2.8		0.015		4.3	LOS A	0.0	0.3				
Intersection	384	10.5	383 N1	10.5		0.142		4.0	NA	0.2	1.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5 Lane under-utilisation found by the program
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N7 The capacity reduction has been determined from the queue blockage probability of a Site further downstream due to intermediate continuous lanes.

Approach Lane Flows (veh/h)

South: William Roberts Rd (South)

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	10	61	32	104	9.8	728	0.142	100	NA	NA
Approach	10	61	32	104	9.8		0.142			

East: Reeves Rd (East)

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	90	11	-	101	10.9	1704	0.059	100	NA	NA

Lane 2	-	-	90	90	18.9	1611	0.056	100	0.0	1
Approach	90	11	90	191	14.7		0.059			
North: William Roberts Rd (North)										
Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	10	30	11	50	2.0	1231	0.041	100	NA	NA
Approach	10	30	11	50	2.0		0.041			
West: Reeves Road (West)										
Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	11	-	-	11	0.0	713	0.015	100	0.0	2
Lane 2	-	17	-	17	6.3	1265	0.013	100	NA	NA
Lane 3	-	-	11	11	0.0	1004	0.010	79[5]	0.0	2
Approach	11	17	11	38	2.8		0.015			
	Total	%HV	Deg.Satn (v/c)							
Intersection	383	10.5	0.142							

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

5 Lane under-utilisation found by the program

Merge Analysis

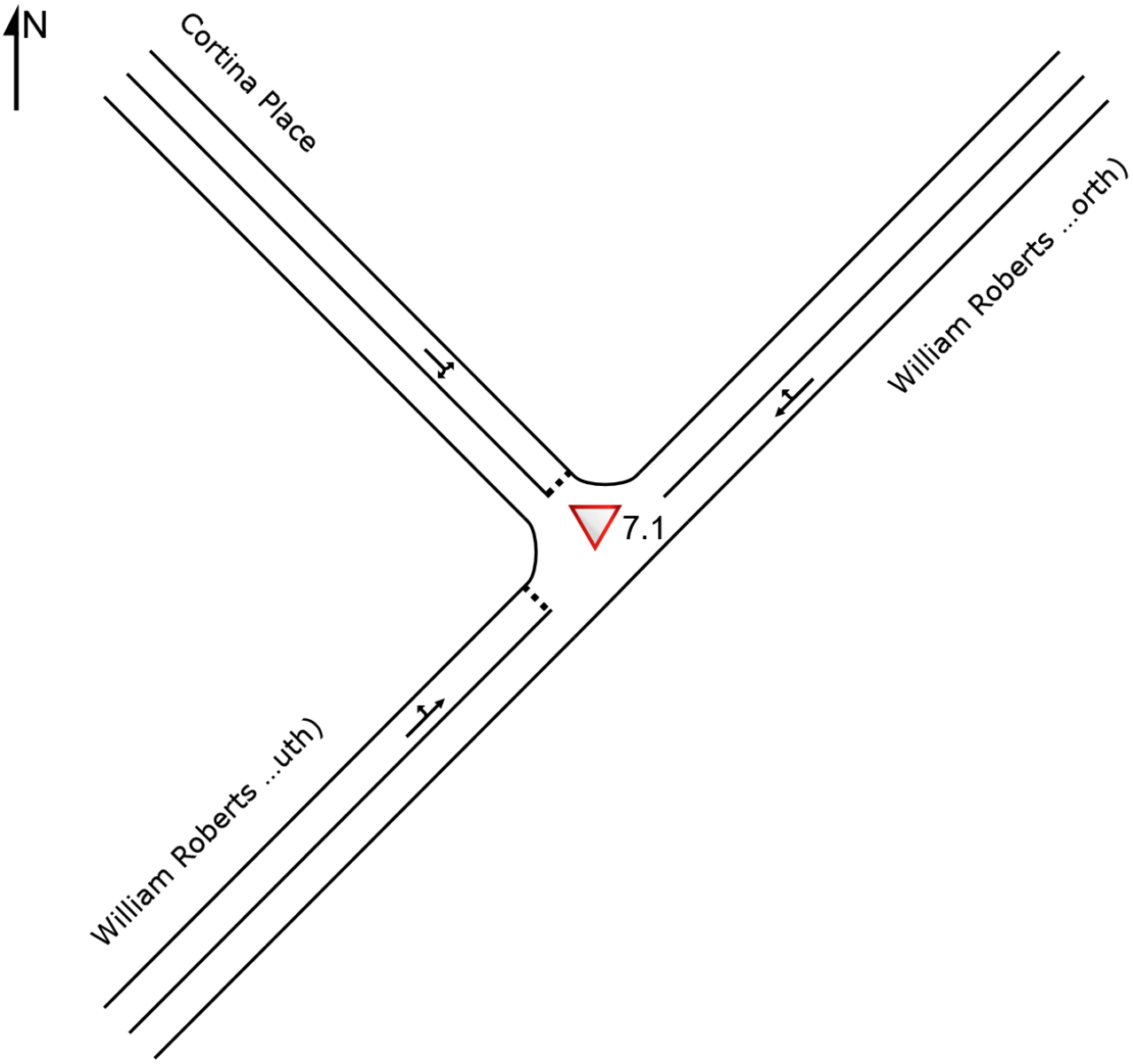
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: William Roberts Rd (South) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
East Exit: Reeves Rd (East) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
North Exit: William Roberts Rd (North) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
West Exit: Reeves Road (West) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									

SITE LAYOUT

Site: 7.1 [7.1 William Roberts Rd / Cortina Pl - Import (Site Folder: General)]

Scheme Design
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:43:18 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 PM -V1.sip9

LANE SUMMARY

Site: 7.1 [7.1 William Roberts Rd / Cortina Pl - Import (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

Scheme Design
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
NorthEast: William Roberts Road (North)															
Lane 1	116	5.2	116	5.2	1854	0.063	100	0.9	LOS A	0.0	0.0	Full	243	0.0	0.0
Approach	116	5.2	116	5.2		0.063		0.9	NA	0.0	0.0				
NorthWest: Cortina Place															
Lane 1	65	7.7	65	7.7	1072	0.061	100	4.0	LOS A	0.2	1.2	Full	140	0.0	0.0
Approach	65	7.7	65	7.7		0.061		4.0	LOS A	0.2	1.2				
SouthWest: William Roberts Road (South)															
Lane 1	276	8.4	273	8.4	1372	0.199	100	3.6	LOS A	0.6	4.6	Full	110	0.0	0.0
Approach	276	8.4	273[N1]	8.4		0.199		3.6	LOS A	0.6	4.6				
Intersection	457	7.5	453[N1]	7.5		0.199		3.0	NA	0.6	4.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

NorthEast: William Roberts Road (North)

Mov. From NE To Exit:	T1 SW	R2 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	91	25	116	5.2	1854	0.063	100	NA	NA
Approach	91	25	116	5.2		0.063			

NorthWest: Cortina Place

Mov. From NW To Exit:	L2 NE	R2 SW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	45	20	65	7.7	1072	0.061	100	NA	NA
Approach	45	20	65	7.7		0.061			

SouthWest: William Roberts Road (South)

Mov. From SW To Exit:	L2 NW	T1 NE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	29	244	273	8.4	1372	0.199	100	NA	NA
Approach	29	244	273	8.4		0.199			

	Total	%HV	Deg.Satn (v/c)

Intersection	453	7.5	0.199

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

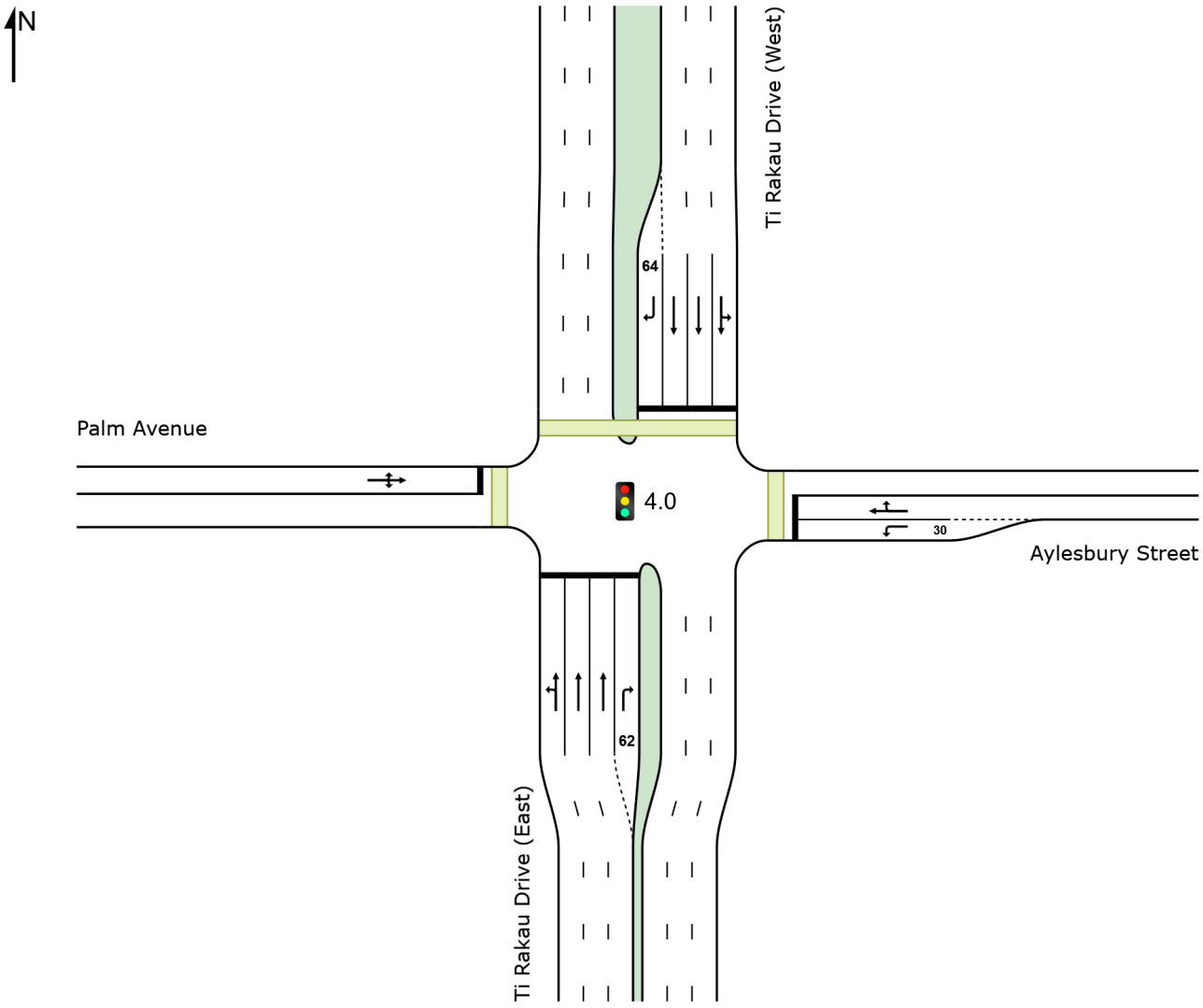
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
NorthEast Exit: William Roberts Road (North) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
NorthWest Exit: Cortina Place Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
SouthWest Exit: William Roberts Road (South) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 4.0 [4.0 Palm Ave / Aylesbury St - Import (Site Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 4.0 [4.0 Palm Ave / Aylesbury St - Import (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Site User-Given Phase Times)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Ti Rakau Drive (East)															
Lane 1	595	4.9	585	4.9	1112	0.526	100	20.4	LOS C	20.5	149.5	Full	110	0.0	43.2
Lane 2	620	5.1	609	5.1	1158	0.526	100	18.2	LOS B	20.7	151.5	Full	110	0.0	44.5
Lane 3	611	5.1	601	5.1	1143[1]	0.526	100	18.1	LOS B	20.3	148.4	Full	110	0.0	42.6
Lane 4	10	0.0	10	0.0	164	0.060	100	71.3	LOS E	0.6	4.2	Short	62	0.0	NA
Approach	1836	5.0	1805[N1]	5.0		0.526		19.2	LOS B	20.7	151.5				
East: Aylesbury Street															
Lane 1	27	3.7	27	3.7	111	0.242	100	53.4	LOS D	1.5	11.1	Short	30	-50.0[N3]	NA
Lane 2	21	4.8	21	4.8	69	0.303	100	81.6	LOS F	1.4	10.4	Full	40	0.0	0.0
Approach	48	4.2	48	4.2		0.303		65.8	LOS E	1.5	11.1				
North: Ti Rakau Drive (West)															
Lane 1	417	7.6	396	7.7	576	0.687	100	20.7	LOS C	16.0	119.8	Full	174	-49.4[N3]	0.0
Lane 2	411	7.7	391	7.9	569	0.687	100	21.2	LOS C	16.0	119.7	Full	174	-50.0[N3]	0.0
Lane 3	397	7.7	378	7.9	550[1]	0.687	100	20.7	LOS C	15.0	112.5	Full	174	-50.0[N3]	0.0
Lane 4	43	7.0	41	7.1	157	0.261	100	73.7	LOS E	2.6	19.0	Short	64	0.0	NA
Approach	1268	7.6	1205[N1]	7.8		0.687		22.7	LOS C	16.0	119.8				
West: Palm Avenue															
Lane 1	95	4.2	95	4.2	112	0.848	100	88.8	LOS F	7.0	50.7	Full	87	-30.1[N3]	0.0
Approach	95	4.2	95	4.2		0.848		88.8	LOS F	7.0	50.7				
Intersection	3247	6.0	3153[N1]	6.2		0.848		23.3	LOS C	20.7	151.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Approach Lane Flows (veh/h)

South: Ti Rakau Drive (East)

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	63	522	-	585	4.9	1112	0.526	100	NA	NA
Lane 2	-	609	-	609	5.1	1158	0.526	100	NA	NA
Lane 3	-	601	-	601	5.1	1143[1]	0.526	100	NA	NA
Lane 4	-	-	10	10	0.0	164	0.060	100	0.0	3

Approach	63	1732	10	1805	5.0		0.526			
East: Aylesbury Street										
Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	27	-	-	27	3.7	111	0.242	100	0.0	2
Lane 2	-	10	11	21	4.8	69	0.303	100	NA	NA
Approach	27	10	11	48	4.2		0.303			
North: Ti Rakau Drive (West)										
Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	9	386	-	396	7.7	576	0.687	100	NA	NA
Lane 2	-	391	-	391	7.9	569	0.687	100	NA	NA
Lane 3	-	378	-	378	7.9	550[1]	0.687	100	NA	NA
Lane 4	-	-	41	41	7.1	157	0.261	100	0.0	3
Approach	9	1155	41	1205	7.8		0.687			
West: Palm Avenue										
Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	44	10	41	95	4.2	112	0.848	100	NA	NA
Approach	44	10	41	95	4.2		0.848			
	Total	%HV	Deg.Satn (v/c)							
Intersection	3153	6.2		0.848						

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
East Exit: Aylesbury Street Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
North Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
West Exit: Palm Avenue Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

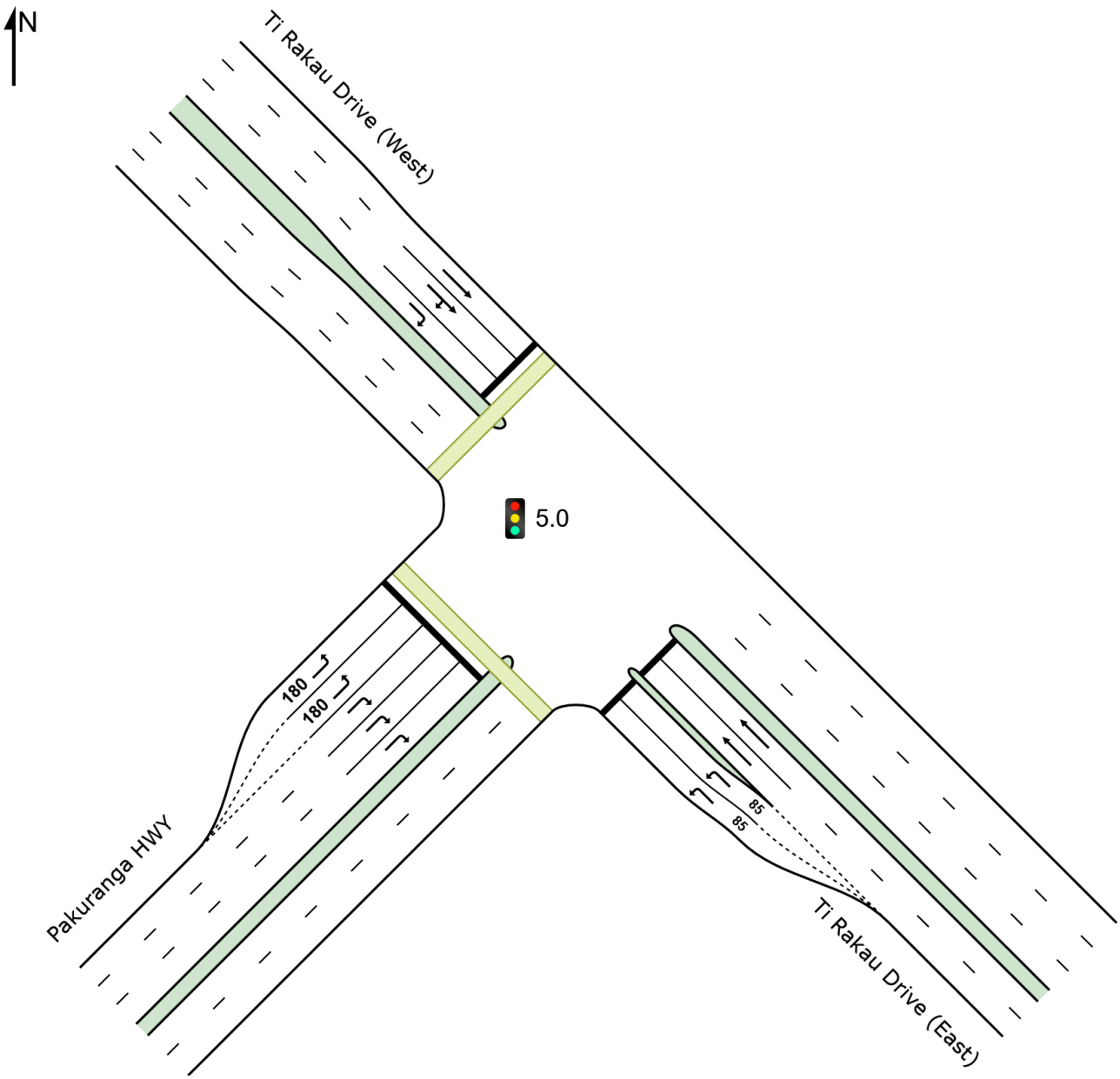
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 PM -V1.sip9

SITE LAYOUT

Site: 5.0 [5.0 Pakuranga HWY/ Reeves Rd (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 5.0 [5.0 Pakuranga HWY/ Reeves Rd (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Phase Times)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	420	7.7	402	7.5	1139	0.353	100	16.5	LOS B	11.4	84.9	Short	85	0.0	NA
Lane 2	420	7.7	402	7.5	1139	0.353	100	16.5	LOS B	11.4	84.9	Short	85	0.0	NA
Lane 3	360	5.7	345	5.6	350[1]	0.985	100	105.5	LOS F	18.1[N4]	133.0[N4]	Full	91	-43.2[N3]	50.0
Lane 4	401	5.7	385	5.6	391	0.985	100	106.6	LOS F	18.1[N4]	133.0[N4]	Full	91	-44.5[N3]	50.0
Approach	1601	6.7	1534[N1]	6.6		0.985		59.1	LOS E	18.1	133.0				
NorthWest: Ti Rakau Drive (West)															
Lane 1	441	9.0	421	9.2	473	0.890	100	69.7	LOS E	21.3[N4]	160.7[N4]	Full	110	0.0	50.0
Lane 2	433	6.9	413	7.0	464	0.890	100	74.1	LOS E	21.7[N4]	160.7[N4]	Full	110	0.0	50.0
Lane 3	420	6.7	401	6.8	451	0.890	100	74.9	LOS E	21.7[N4]	160.7[N4]	Full	110	0.0	50.0
Approach	1295	7.6	1236[N1]	7.7		0.890		72.8	LOS E	21.7	160.7				
SouthWest: Pakuranga HWY															
Lane 1	540	4.7	540	4.7	560	0.965	100	90.2	LOS F	48.4	352.6	Short	180	-43.2[N3]	NA
Lane 2	528	4.7	528	4.7	547	0.965	100	90.8	LOS F	47.5	345.9	Short	180	-44.5[N3]	NA
Lane 3	329	5.7	329	5.7	426	0.771	100	66.6	LOS E	20.7	151.6	Full	1650	0.0	0.0
Lane 4	329	5.7	329	5.7	426	0.771	100	66.6	LOS E	20.7	151.6	Full	1650	0.0	0.0
Lane 5	332	5.7	332	5.7	431	0.771	100	66.6	LOS E	20.9	153.0	Full	1650	0.0	0.0
Approach	2057	5.2	2057	5.2		0.965		79.0	LOS E	48.4	352.6				
Intersection	4953	6.3	4827[N1]	6.5		0.985		71.1	LOS E	48.4	352.6				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N4 Average back of queue has been restricted to the available queue storage space.

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	L2 SW	T1 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	402	-	402	7.5	1139	0.353	100	14.9	2
Lane 2	402	-	402	7.5	1139	0.353	100	14.9	3
Lane 3	-	345	345	5.6	350[1]	0.985	100	NA	NA
Lane 4	-	385	385	5.6	391	0.985	100	NA	NA

Approach	804	730	1534	6.6		0.985			
NorthWest: Ti Rakau Drive (West)									
Mov. From NW To Exit:	T1 SE	R2 SW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	421	-	421	9.2	473	0.890	100	NA	NA
Lane 2	37	376	413	7.0	464	0.890	100	NA	NA
Lane 3	-	401	401	6.8	451	0.890	100	NA	NA
Approach	459	778	1236	7.7		0.890			
SouthWest: Pakuranga HWY									
Mov. From SW To Exit:	L2 NW	R2 SE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	540	-	540	4.7	560	0.965	100	78.0	2
Lane 2	528	-	528	4.7	547	0.965	100	78.0	4
Lane 3	-	329	329	5.7	426	0.771	100	NA	NA
Lane 4	-	329	329	5.7	426	0.771	100	NA	NA
Lane 5	-	332	332	5.7	431	0.771	100	NA	NA
Approach	1068	989	2057	5.2		0.965			
	Total	%HV	Deg.Satn (v/c)						
Intersection	4827	6.5		0.985					

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

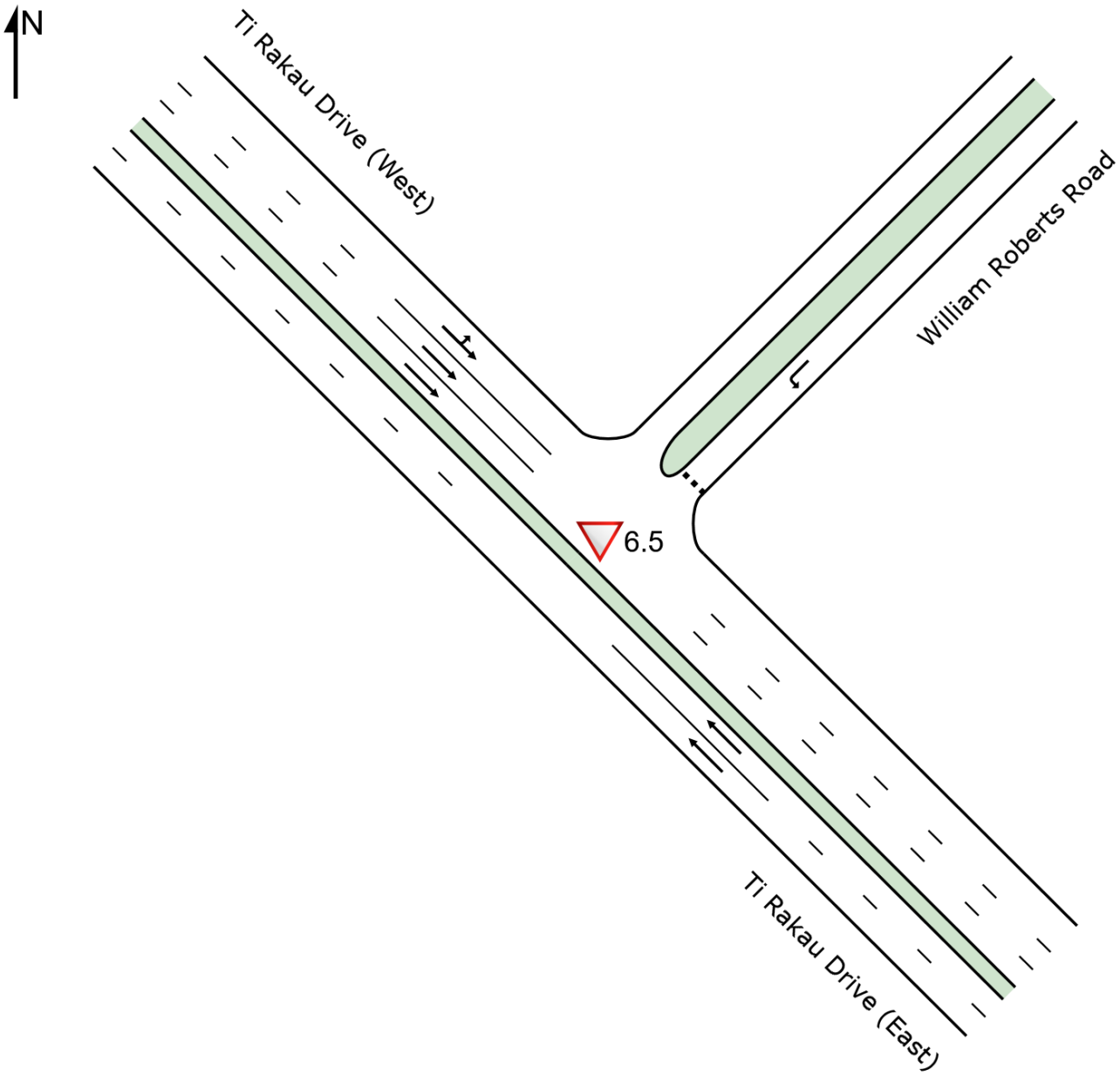
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
SouthWest Exit: Pakuranga HWY Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										

SITE LAYOUT

Site: 6.5 [6.5 William Roberts Rd / Ti Rakau Dr - Import (Site Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 6.5 [6.5 William Roberts Rd / Ti Rakau Dr - Import (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Give-Way (Two-Way)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	835	6.4	799	6.2	1826	0.437	100	0.0	LOS A	0.0	0.0	Full	18	0.0	0.0
Lane 2	826	6.4	790	6.2	1806	0.437	100	0.0	LOS A	0.0	0.0	Full	18	0.0	0.0
Approach	1661	6.4	1589 N1	6.2		0.437		0.0	NA	0.0	0.0				
NorthEast: William Roberts Road															
Lane 1	110	3.6	110	3.6	487	0.226	100	3.4	LOS A	1.4 N5	9.9 N5	Full	110	-50.0 N3	0.0
Approach	110	3.6	110	3.6		0.226		3.4	LOS A	1.4	9.9				
NorthWest: Ti Rakau Drive (West)															
Lane 1	567	7.3	559	7.3	1869	0.299	100	2.3	LOS A	4.5 N5	33.1 N5	Full	97	0.0	13.8
Lane 2	548	6.2	540	6.3	1805	0.299	100	0.0	LOS A	4.4 N5	32.7 N5	Full	97	0.0	0.0
Lane 3	347	6.2	342	6.3	1143	0.299	100	0.0	LOS A	0.0	0.0	Full	97	-36.7 N3	0.0
Approach	1461	6.7	1441 N1	6.7		0.299		0.9	NA	4.5	33.1				
Intersection	3232	6.4	3140 N1	6.6		0.437		0.5	NA	4.5	33.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Minor Road Approach LOS values are based on average delay for all lanes.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.
N5 Continuous Lane results determined by Back of Queue values of downstream lanes (proportional to lane movement flows).

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	T1 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	799	799	6.2	1826	0.437	100	NA	NA
Lane 2	790	790	6.2	1806	0.437	100	NA	NA
Approach	1589	1589	6.2		0.437			

NorthEast: William Roberts Road

Mov. From NE To Exit:	L2 SE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	110	110	3.6	487	0.226	100	NA	NA
Approach	110	110	3.6		0.226			

NorthWest: Ti Rakau Drive (West)

Mov. From NW To Exit:	L2 NE	T1 SE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	272	287	559	7.3	1869	0.299	100	NA	NA
Lane 2	-	540	540	6.3	1805	0.299	100	NA	NA
Lane 3	-	342	342	6.3	1143	0.299	100	NA	NA
Approach	272	1169	1441	6.7		0.299			
	Total	%HV	Deg.Satn (v/c)						
Intersection	3140	6.6		0.437					

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

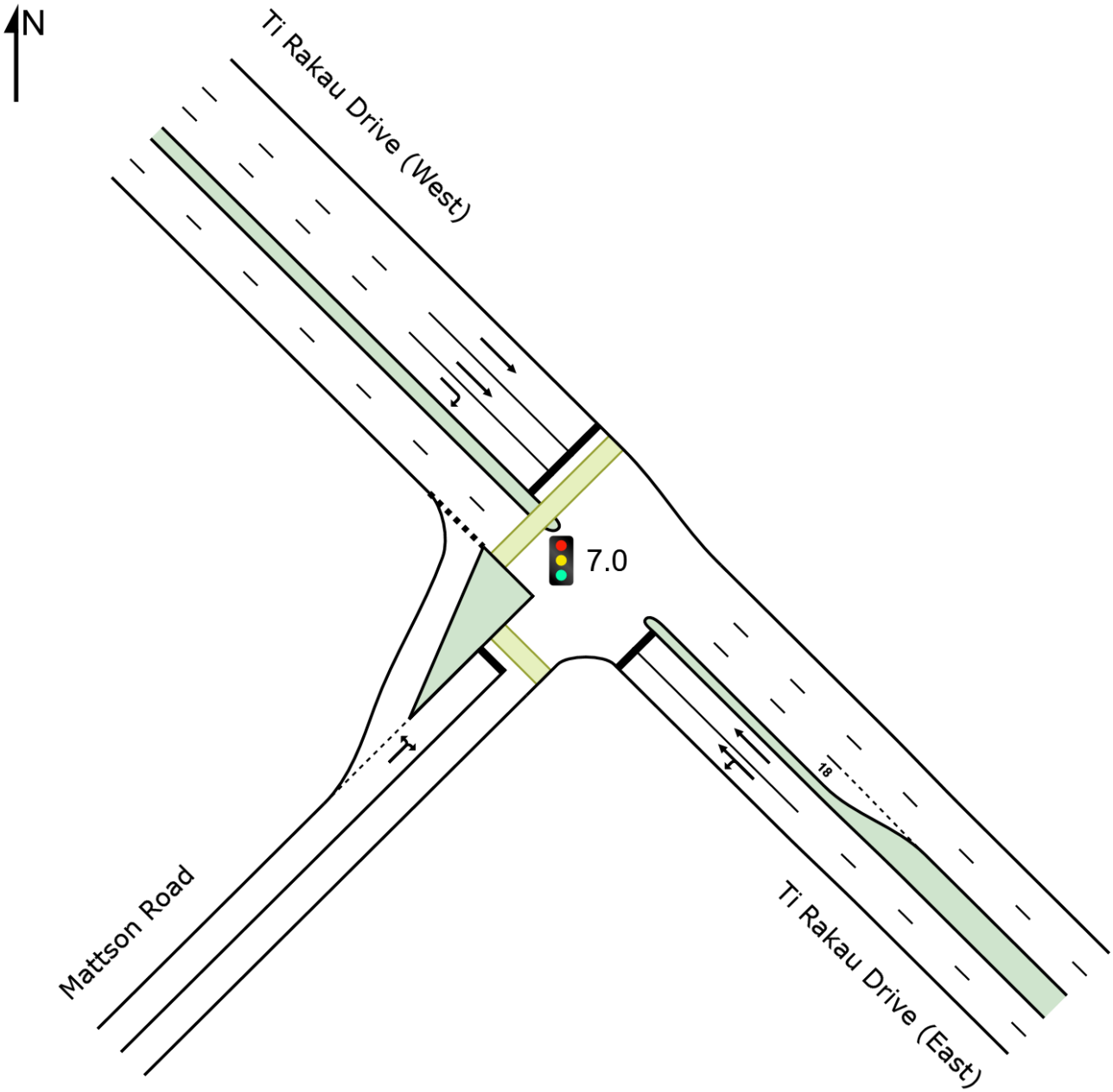
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
Full Length Lane	3	Merge Analysis not applied.										
NorthEast Exit: William Roberts Road Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										

SITE LAYOUT

Site: 7.0 [7.0 Mattson Rd/ Ti Rakau Dr (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:43:41 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 PM -V1.sip9

LANE SUMMARY

Site: 7.0 [7.0 Mattson Rd/ Ti Rakau Dr (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 69 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	837	6.6	800	6.4	908	0.881	100	27.5	LOS C	27.7	204.7	Full	187	0.0	23.2
Lane 2	845	6.5	807	6.3	916	0.881	100	27.4	LOS C	27.9	205.8	Full	187	0.0	23.7
Approach	1682	6.5	1607 N1	6.4		0.881		27.4	LOS C	27.9	205.8				
NorthWest: Ti Rakau Drive (West)															
Lane 1	618	6.0	610	6.0	1325	0.461	100	5.5	LOS A	3.6 N4	26.3 N4	Full	18	0.0	50.0
Lane 2	580	6.0	573	6.0	1245	0.461	100	5.5	LOS A	3.6 N4	26.3 N4	Full	18	0.0	50.0
Lane 3	97	6.2	96	6.2	151	0.633	100	38.7	LOS D	3.1	22.8	Full	18	0.0	36.7
Approach	1295	6.0	1280 N1	6.1		0.633		8.0	LOS A	3.6	26.3				
SouthWest: Mattson Road															
Lane 1	71	1.4	71	1.4	399	0.178	100	24.4	LOS C	1.7	12.3	Full	282	0.0	0.0
Approach	71	1.4	71	1.4		0.178		24.4	LOS C	1.7	12.3				
Intersection	3048	6.2	2958 N1	6.4		0.881		18.9	LOS B	27.9	205.8				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.
N4 Average back of queue has been restricted to the available queue storage space.

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	L2 SW	T1 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	42	758	800	6.4	908	0.881	100	NA	NA
Lane 2	-	807	807	6.3	916	0.881	100	NA	NA
Approach	42	1565	1607	6.4		0.881			

NorthWest: Ti Rakau Drive (West)

Mov. From NW To Exit:	T1 SE	R2 SW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	610	-	610	6.0	1325	0.461	100	NA	NA
Lane 2	573	-	573	6.0	1245	0.461	100	NA	NA
Lane 3	-	96	96	6.2	151	0.633	100	NA	NA
Approach	1184	96	1280	6.1		0.633			

SouthWest: Mattson Road

Mov.	L2	R2	Total	%HV		Deg.	Lane	Prob.	Ov.

From SW To Exit:	NW	SE			Cap. veh/h	Satn v/c	Util. %	SL Ov. %	Lane No.
Lane 1	23	48	71	1.4	399	0.178	100	NA	NA
Approach	23	48	71	1.4		0.178			

	Total	%HV	Deg.Satn (v/c)
Intersection	2958	6.4	0.881

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis

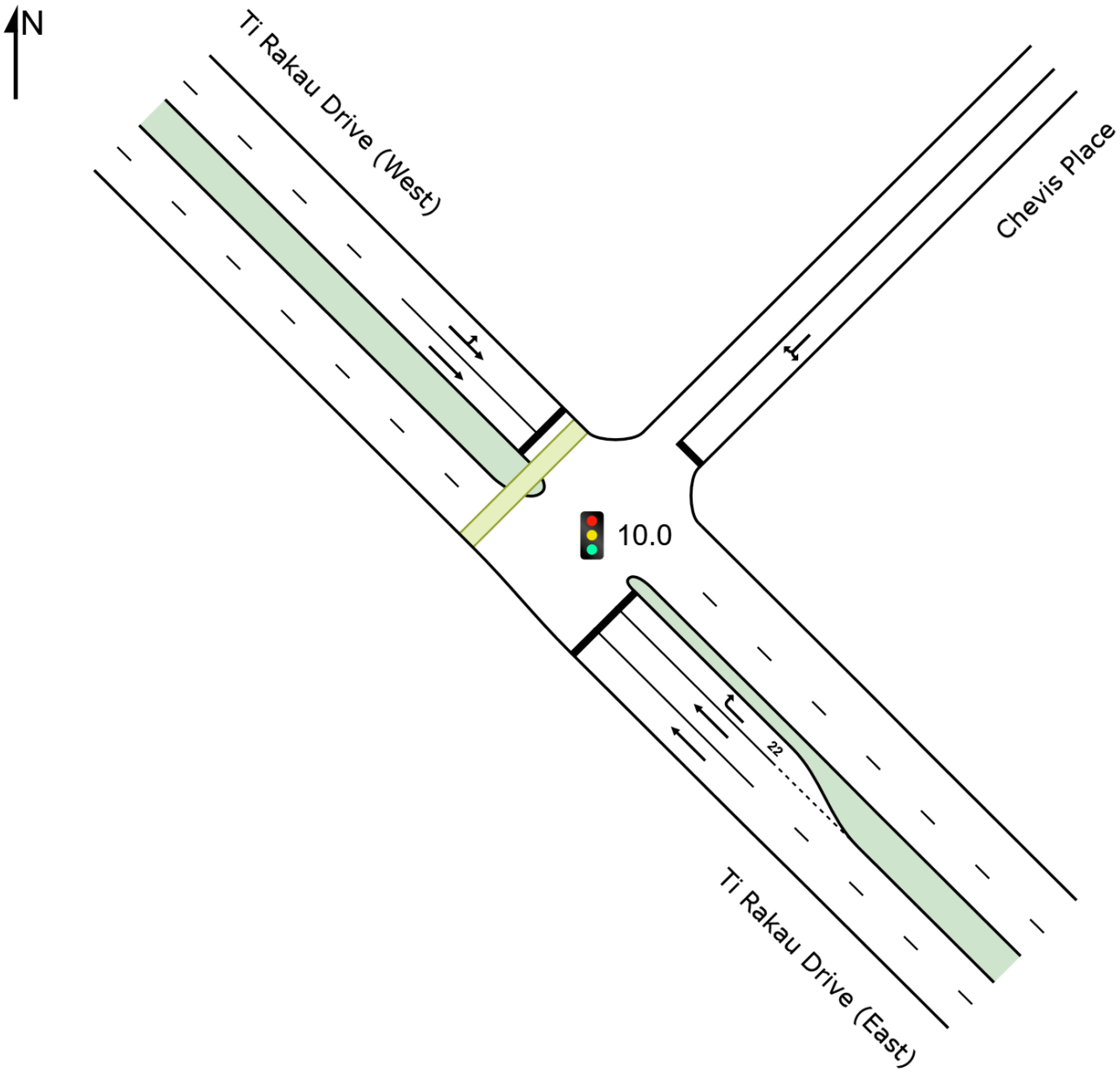
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Priority**												
Exit Short Lane	3	18	0.0	573	591	3.00	2.00	48	1191	0.040	1.1	1.2
Merge Lane	2	-	100.0	Merge Lane is not Opposed				573	1800	0.319	0.0	0.0
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
SouthWest Exit: Mattson Road Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										

SITE LAYOUT

Site: 10.0 [10.0 Edgewater Dr (West) / Chevis Pl (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 10.0 [10.0 Edgewater Dr (West) / Chevis Pl (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 64 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	814	6.4	810	6.4	916	0.884	100	27.0	LOS C	26.5	196.1	Full	162	0.0	32.5
Lane 2	793	6.4	789	6.4	893[1]	0.884	100	27.2	LOS C	25.8	190.7	Full	162	0.0	29.9
Lane 3	10	0.0	10	0.0	250	0.040	100	31.0	LOS C	0.2	1.7	Short	22	0.0	NA
Approach	1617	6.4	1608[N1]	6.4		0.884		27.1	LOS C	26.5	196.1				
NorthEast: Chevis Place															
Lane 1	20	0.0	20	0.0	230	0.087	100	32.5	LOS C	0.5	3.6	Full	138	0.0	0.0
Approach	20	0.0	20	0.0		0.087		32.5	LOS C	0.5	3.6				
NorthWest: Ti Rakau Drive (West)															
Lane 1	535	2.7	518	2.5	952	0.544	100	12.6	LOS B	10.2	73.1	Full	68	0.0	21.6
Lane 2	506	2.7	490	2.6	900	0.544	100	12.6	LOS B	9.7	69.3	Full	68	0.0	16.7
Approach	1041	2.7	1008[N1]	2.6		0.544		12.6	LOS B	10.2	73.1				
Intersection	2678	4.9	2636[N1]	5.0		0.884		21.6	LOS C	26.5	196.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	T1 NW	R2 NE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	810	-	810	6.4	916	0.884	100	NA	NA
Lane 2	789	-	789	6.4	893[1]	0.884	100	NA	NA
Lane 3	-	10	10	0.0	250	0.040	100	0.0	2
Approach	1598	10	1608	6.4		0.884			

NorthEast: Chevis Place

Mov. From NE To Exit:	L2 SE	R2 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	10	10	20	0.0	230	0.087	100	NA	NA
Approach	10	10	20	0.0		0.087			

NorthWest: Ti Rakau Drive (West)

Mov.	L2	T1	Total	%HV		Deg.	Lane	Prob.	Ov.

From NW To Exit:	NE	SE			Cap. veh/h	Satn v/c	Util. %	SL Ov. %	Lane No.
Lane 1	10	509	518	2.5	952	0.544	100	NA	NA
Lane 2	-	490	490	2.6	900	0.544	100	NA	NA
Approach	10	998	1008	2.6		0.544			
	Total	%HV	Deg.Satn (v/c)						
Intersection	2636	5.0	0.884						

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

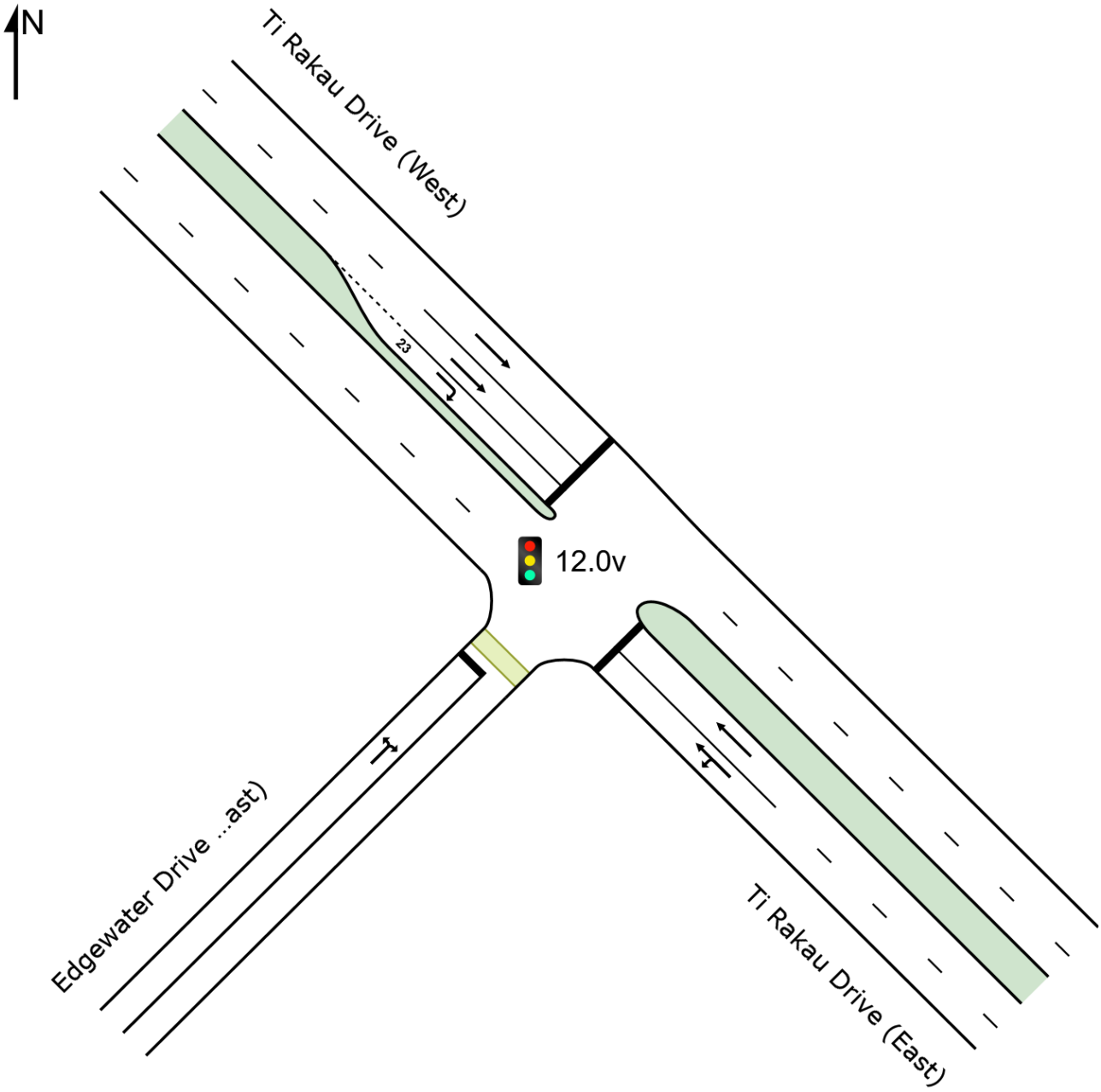
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
NorthEast Exit: Chevis Place Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										

SITE LAYOUT

Site: 12.0v [12.0 Edgewater Dr (East) / Ti Rakau Dr - Conversion (Site Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



LANE SUMMARY

Site: 12.0v [12.0 Edgewater Dr (East) / Ti Rakau Dr - Conversion (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 67 seconds (Site Practical Cycle Time)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
SouthEast: Ti Rakau Drive (East)															
Lane 1	908	6.5	904	6.5	1013	0.892	100	27.7	LOS C	31.1	229.8	Full	479	0.0	0.0
Lane 2	936	6.4	932	6.4	1044	0.892	100	26.4	LOS C	31.8	235.1	Full	479	0.0	0.0
Approach	1845	6.5	1836 N 1	6.5		0.892		27.1	LOS C	31.8	235.1				
NorthWest: Ti Rakau Drive (West)															
Lane 1	532	2.6	517	2.6	1109	0.466	100	9.7	LOS A	9.1	65.3	Full	103	0.0	0.0
Lane 2	421	2.6	410	2.6	878 1	0.466	100	9.3	LOS A	6.9	49.2	Full	103	0.0	0.0
Lane 3	86	7.3	83	6.4	152	0.549	100	40.1	LOS D	2.6	18.9	Short	23	0.0	NA
Approach	1039	3.0	1010 N 1	2.9		0.549		12.0	LOS B	9.1	65.3				
SouthWest: Edgewater Drive (East)															
Lane 1	157	6.7	157	6.7	251	0.624	100	36.7	LOS D	4.6	34.4	Full	500	0.0	0.0
Approach	157	6.7	157	6.7		0.624		36.7	LOS D	4.6	34.4				
Intersection	3041	5.3	3003 N 1	5.4		0.892		22.5	LOS C	31.8	235.1				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

SouthEast: Ti Rakau Drive (East)

Mov. From SE To Exit:	L2 SW	T1 NW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	153	751	904	6.5	1013	0.892	100	NA	NA
Lane 2	-	932	932	6.4	1044	0.892	100	NA	NA
Approach	153	1683	1836	6.5		0.892			

NorthWest: Ti Rakau Drive (West)

Mov. From NW To Exit:	T1 SE	R2 SW	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	517	-	517	2.6	1109	0.466	100	NA	NA
Lane 2	410	-	410	2.6	878 1	0.466	100	NA	NA
Lane 3	-	83	83	6.4	152	0.549	100	0.0	2
Approach	927	83	1010	2.9		0.549			

SouthWest: Edgewater Drive (East)

Mov. From SW To Exit:	L2 NW	R2 SE	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	102	55	157	6.7	251	0.624	100	NA	NA
Approach	102	55	157	6.7		0.624			

	Total	%HV	Deg.Satn (v/c)
Intersection	3003	5.4	0.892

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.

Merge Analysis

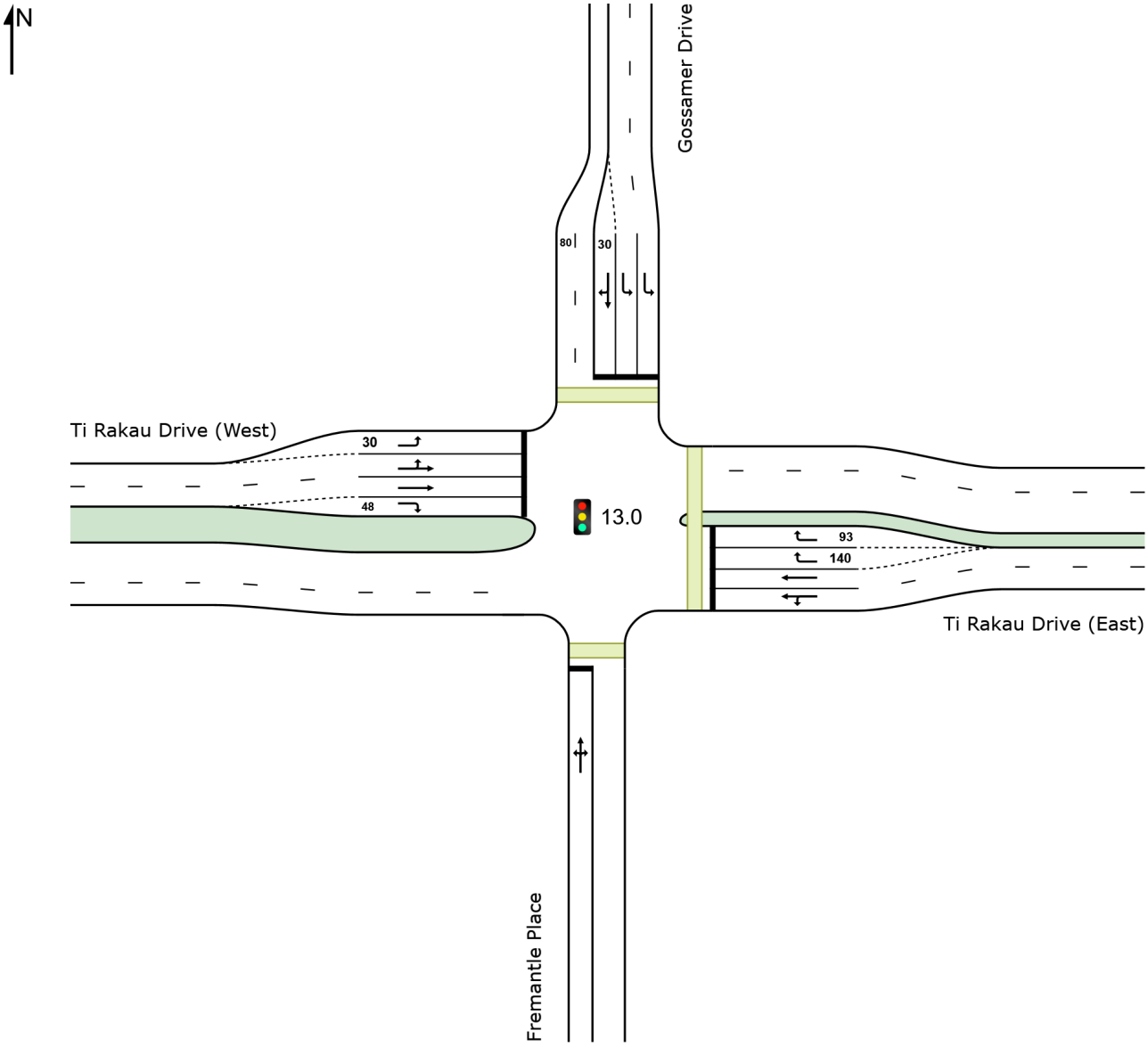
	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Critical Gap pcu/h	Follow-up Headway sec	Lane Flow Rate sec	Capacity veh/h	Deg. Satn veh/h	Min. Delay v/c	Merge Delay sec
SouthEast Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
Full Length Lane	2	Merge Analysis not applied.									
NorthWest Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									
Full Length Lane	2	Merge Analysis not applied.									
SouthWest Exit: Edgewater Drive (East) Merge Type: **Not Applied**											
Full Length Lane	1	Merge Analysis not applied.									

SITE LAYOUT

Site: 13.0 [13.0 Gossamer Dr / Ti Rakau Dr (Site Folder: General)]

Scheme Design
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: AECOM AUSTRALIA PTY LTD | Licence: NETWORK / Enterprise | Created: Wednesday, 15 February 2023 9:43:55 am
Project: C:\Users\jacques.vandenheever\Eastern Busway Alliance\PAA - 05 DESIGN MGMNT\12 Transport\3-3. Integrated Transport Assessment\ITA 2 - EB2,3R\Version 9 (Addendum)\AIMSUN and SIDRA\CS 1.2\CS 1.2 PM -V1.sip9

LANE SUMMARY

Site: 13.0 [13.0 Gossamer Dr / Ti Rakau Dr (Site Folder: General)]

Network: N101 [PM (Network Folder: General)]

Scheme Design
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Phase Times)

Lane Use and Performance

	DEMAND FLOWS [Total veh/h	HV] %	ARRIVAL FLOWS [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	85% BACK OF QUEUE [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Fremantle Place															
Lane 1	40	5.0	40	5.0	97	0.412	100	81.4	LOS F	2.7	19.5	Full	285	0.0	0.0
Approach	40	5.0	40	5.0		0.412		81.4	LOS F	2.7	19.5				
East: Ti Rakau Drive (East)															
Lane 1	906	6.5	906	6.5	901	1.005	100	77.9	LOS E	71.7	530.0	Full	636	0.0	0.0
Lane 2	775	6.6	775	6.6	771[1]	1.005	100	98.9	LOS F	73.5	543.3	Full	636	0.0	0.8
Lane 3	258	8.6	258	8.6	505	0.511	47[6]	29.7	LOS C	8.4	62.8	Short	140	0.0	NA
Lane 4	548	8.6	548	8.6	505	1.084	100	141.5	LOS F	45.1	338.5	Short	93	0.0	NA
Approach	2487	7.2	2487	7.2		1.084		93.5	LOS F	73.5	543.3				
North: Gossamer Drive															
Lane 1	269	17.8	269	17.8	476	0.566	100	53.0	LOS D	14.9	120.6	Full	1010	0.0	0.0
Lane 2	236	17.8	236	17.8	416[1]	0.566	100	51.8	LOS D	12.7	102.8	Full	1010	0.0	0.0
Lane 3	61	4.9	61	4.9	238	0.256	100	67.3	LOS E	3.6	26.5	Short	30	0.0	NA
Approach	566	16.4	566	16.4		0.566		54.0	LOS D	14.9	120.6				
West: Ti Rakau Drive (West)															
Lane 1	173	2.3	168	2.2	813	0.207	28[5]	19.4	LOS B	4.2	30.3	Short	30	0.0	NA
Lane 2	346	3.3	338	3.3	461[1]	0.732	100	44.4	LOS D	18.0	129.8	Full	479	0.0	0.0
Lane 3	447	3.3	435	3.3	594[1]	0.732	100	47.4	LOS D	24.9	179.1	Full	479	0.0	0.0
Lane 4	14	7.1	14	6.7	298	0.046	100	59.9	LOS E	0.7	5.5	Short	48	0.0	NA
Approach	980	3.2	955[N1]	3.1		0.732		41.6	LOS D	24.9	179.1				
Intersection	4073	7.5	4048[N1]	7.5		1.084		75.6	LOS E	73.5	543.3				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
Delay Model: SIDRA Standard (Geometric Delay is included).
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects
N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

Approach Lane Flows (veh/h)

South: Fremantle Place

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	12	11	17	40	5.0	97	0.412	100	NA	NA
Approach	12	11	17	40	5.0		0.412			
East: Ti Rakau Drive (East)										

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	23	883	-	906	6.5	901	1.005	100	NA	NA
Lane 2	-	775	-	775	6.6	771[1]	1.005	100	NA	NA
Lane 3	-	-	258	258	8.6	505	0.511	47[6]	98.9	2
Lane 4	-	-	548	548	8.6	505	1.084	100	100.0	3
Approach	23	1658	806	2487	7.2		1.084			

North: Gossamer Drive

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	269	-	-	269	17.8	476	0.566	100	NA	NA
Lane 2	236	-	-	236	17.8	416[1]	0.566	100	NA	NA
Lane 3	-	12	49	61	4.9	238	0.256	100	3.8	2
Approach	505	12	49	566	16.4		0.566			

West: Ti Rakau Drive (West)

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	168	-	-	168	2.2	813	0.207	28[5]	15.9	2
Lane 2	-	338	-	338	3.3	461[1]	0.732	100	NA	NA
Lane 3	-	435	-	435	3.3	594[1]	0.732	100	NA	NA
Lane 4	-	-	14	14	6.7	298	0.046	100	0.0	3
Approach	168	773	14	955	3.1		0.732			

	Total	%HV	Deg.Satn (v/c)
Intersection	4048	7.5	1.084

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Some upstream delays at entry to short lanes are not included.
5 Lane under-utilisation found by the program
6 Lane under-utilisation due to downstream effects

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Fremantle Place Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
East Exit: Ti Rakau Drive (East) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										
North Exit: Gossamer Drive Merge Type: **Zipper**												
Exit Short Lane	1	80	50.0	258	269	2.50	2.00	426	1473	0.289	0.0	0.2
Merge Lane	2	-	50.0	213	220	2.50	2.00	516	1539	0.336	0.0	0.1
West Exit: Ti Rakau Drive (West) Merge Type: **Not Applied**												
Full Length Lane	1	Merge Analysis not applied.										
Full Length Lane	2	Merge Analysis not applied.										

Appendix O

Construction Scenario 1.3 – Phasing Diagrams

PHASING SUMMARY

Site: 13.0 [13.0 Gossamer Dr / Ti Rakau Dr (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

Scheme Design
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 132 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D, E
Output Phase Sequence: A, B, C, D, E

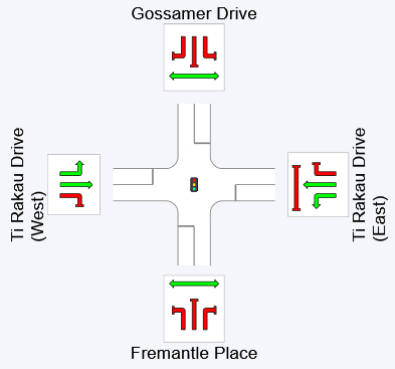
Phase Timing Summary

Phase	A	B	C	D	E
Phase Change Time (sec)	0	47	61	97	109
Green Time (sec)	41	8	30	6	17
Phase Time (sec)	47	14	36	12	23
Phase Split	36%	11%	27%	9%	17%

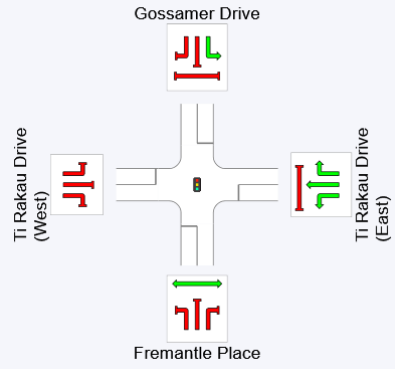
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence

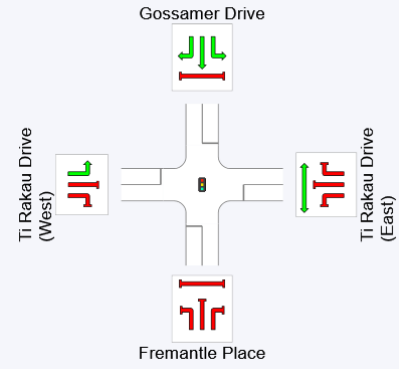
Phase A **REF**



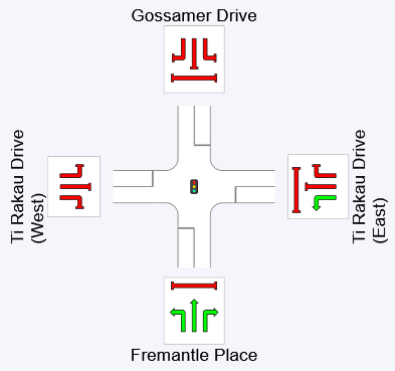
Phase B



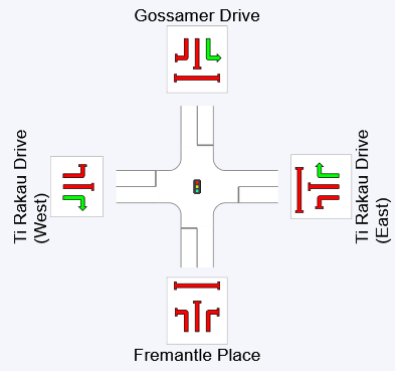
Phase C



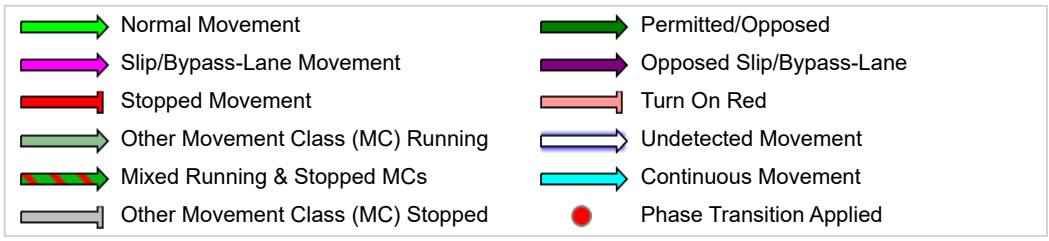
Phase D



Phase E



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 1.0 [1.0 Pakuranga Rd / Ti Rakau Rd (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 84 seconds (Site Practical Cycle Time)

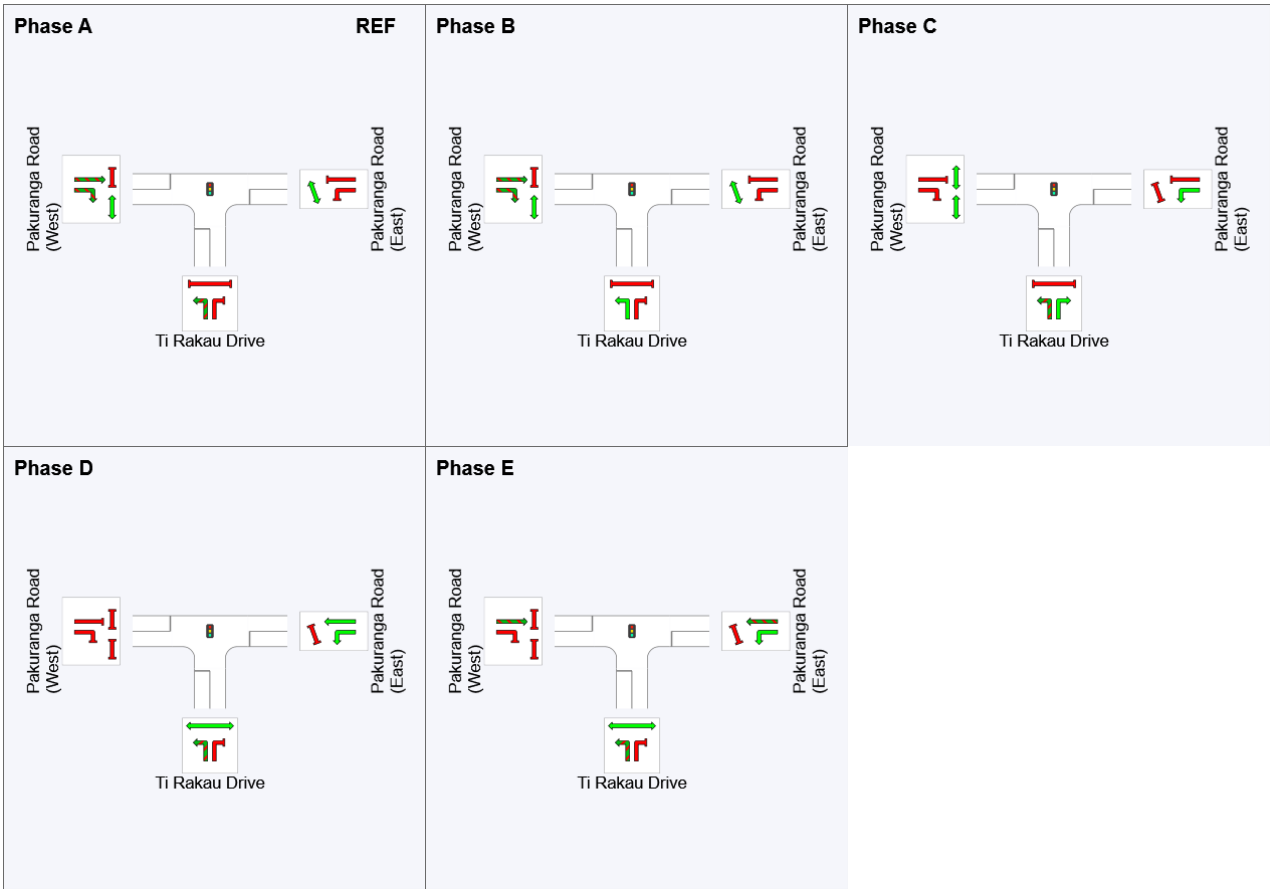
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Map Extract Default
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D, E
Output Phase Sequence: A, B, C, D, E

Phase Timing Summary

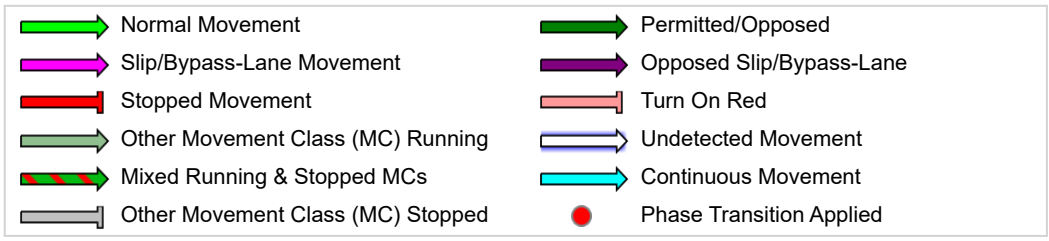
Phase	A	B	C	D	E
Phase Change Time (sec)	0	13	25	47	59
Green Time (sec)	7	6	16	6	19
Phase Time (sec)	13	12	22	12	25
Phase Split	15%	14%	26%	14%	30%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 1.4v [1.4 William Roberts/ Pakuranga Rd - PD - Conversion (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 61 seconds (Site Practical Cycle Time)

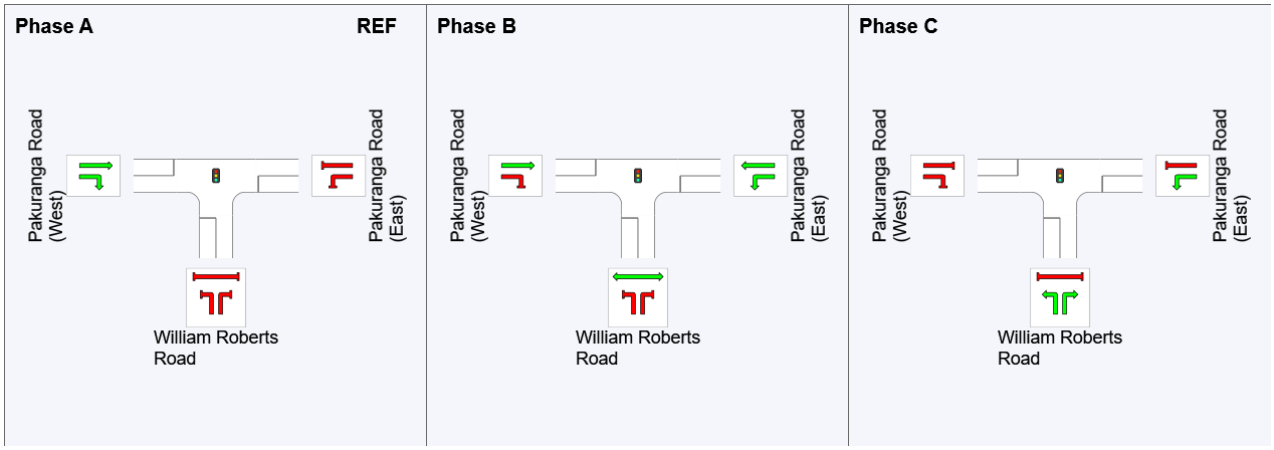
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Convert Function Default
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

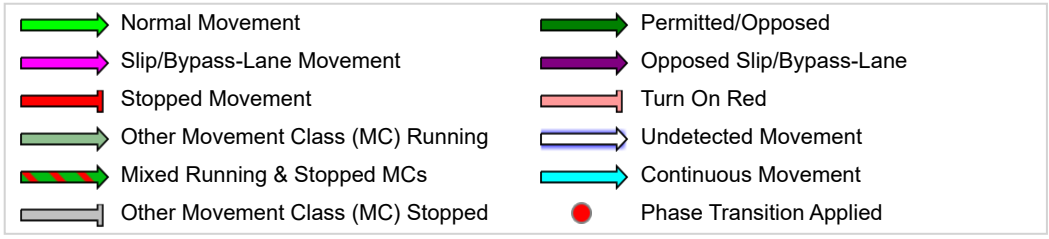
Phase	A	B	C
Phase Change Time (sec)	0	12	44
Green Time (sec)	6	26	11
Phase Time (sec)	12	32	17
Phase Split	20%	52%	28%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 1.5 [1.5 Saint Kentigern/ Pakuranga Rd - PD (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 88 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

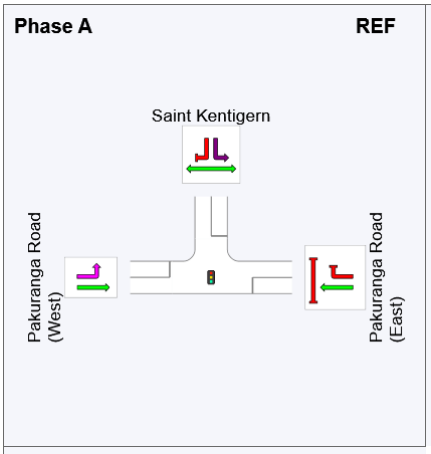
Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	36	48	76
Green Time (sec)	30	6	22	6
Phase Time (sec)	36	12	28	12
Phase Split	41%	14%	32%	14%

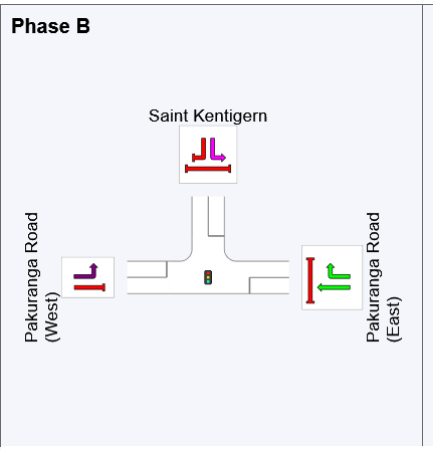
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence

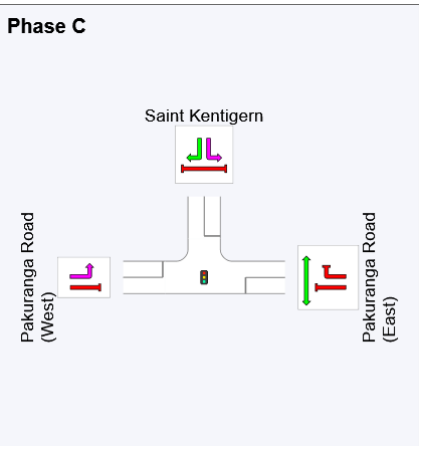
Phase A **REF**



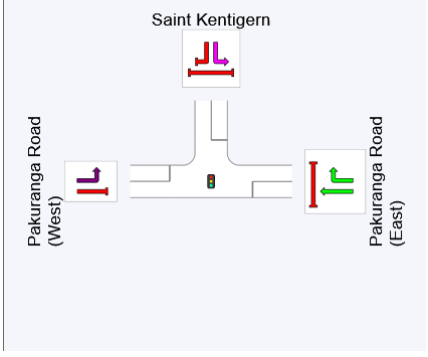
Phase B



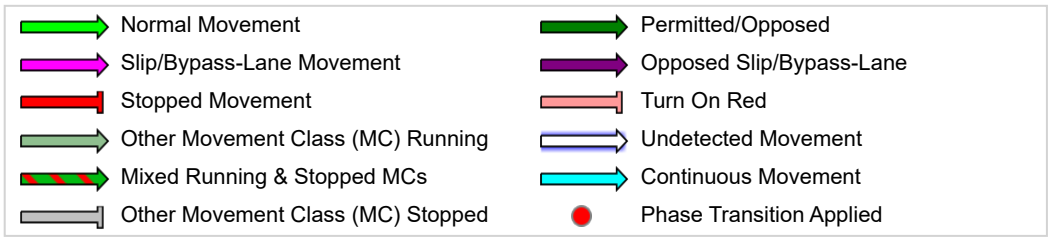
Phase C



Phase D



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 4.0 [4.0 Palm Ave / Aylesbury St - Import (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 137 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

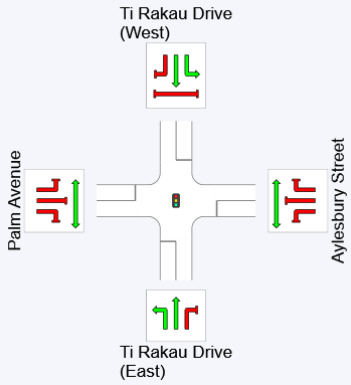
Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	72	96	116
Green Time (sec)	66	18	14	18
Phase Time (sec)	72	24	17	24
Phase Split	53%	18%	12%	18%

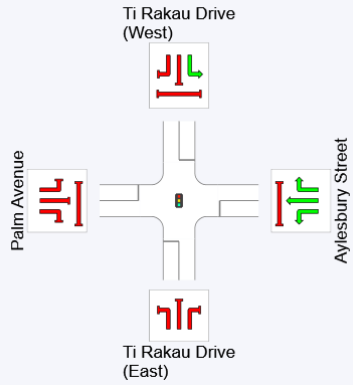
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence

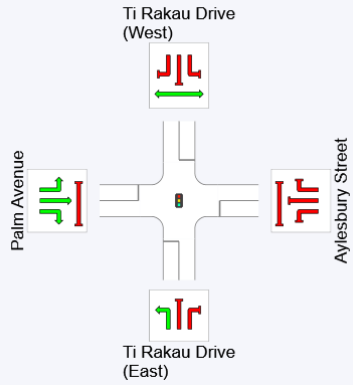
Phase A **REF**



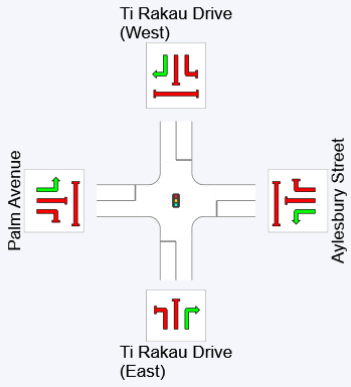
Phase B



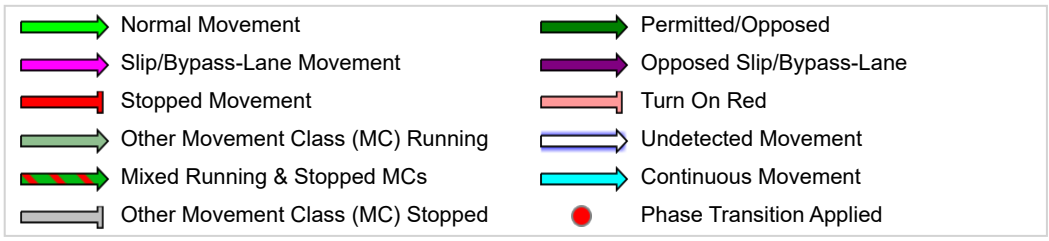
Phase C



Phase D



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 5.0 [5.0 Pakuranga HWY/ Reeves Rd (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 89 seconds (Site Practical Cycle Time)

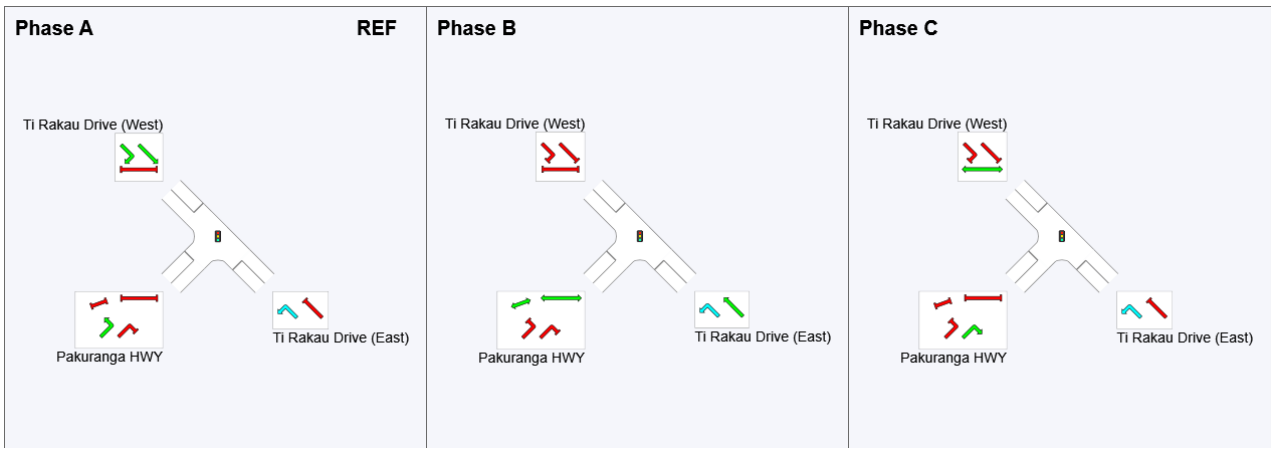
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Map Extract Default
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

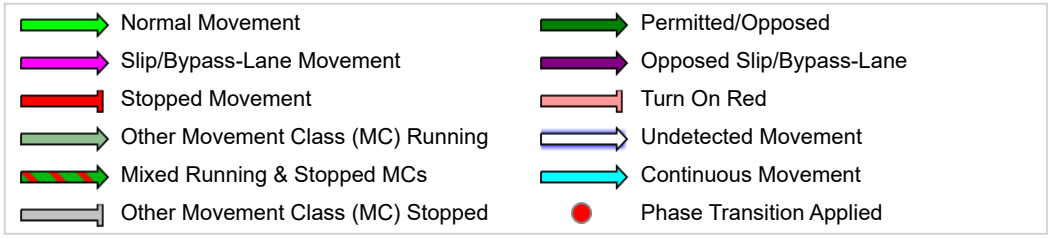
Phase	A	B	C
Phase Change Time (sec)	0	33	58
Green Time (sec)	27	19	25
Phase Time (sec)	33	25	31
Phase Split	37%	28%	35%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 7.0 [7.0 Mattson Rd/ Ti Rakau Dr (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)

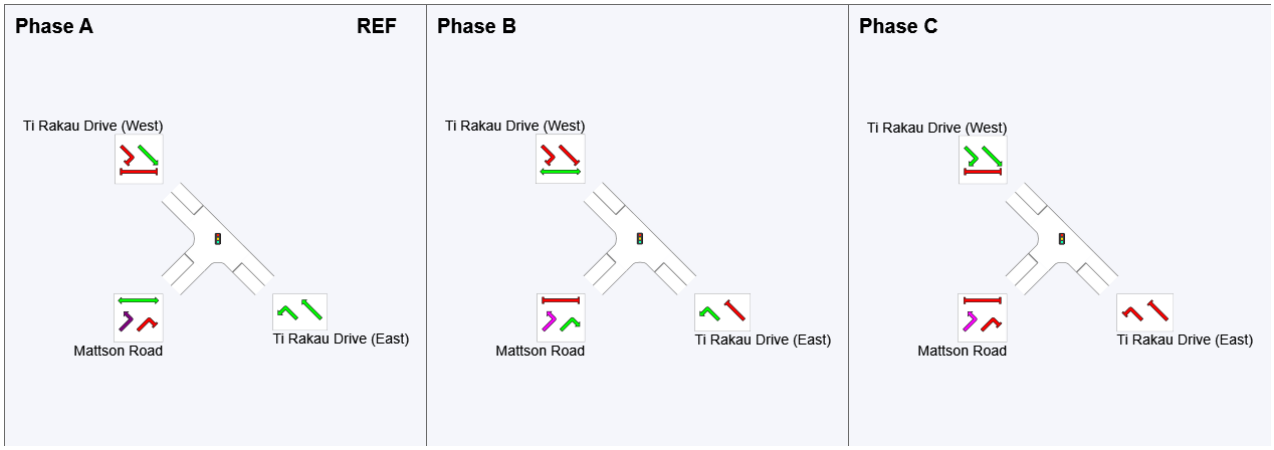
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Map Extract Default
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

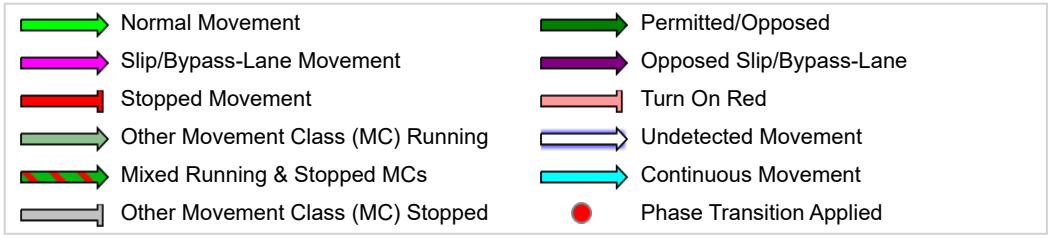
Phase	A	B	C
Phase Change Time (sec)	0	50	68
Green Time (sec)	44	12	6
Phase Time (sec)	50	18	12
Phase Split	63%	23%	15%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 10.0 [10.0 Edgewater Dr (West) / Chevis Pl (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 107 seconds (Site Practical Cycle Time)

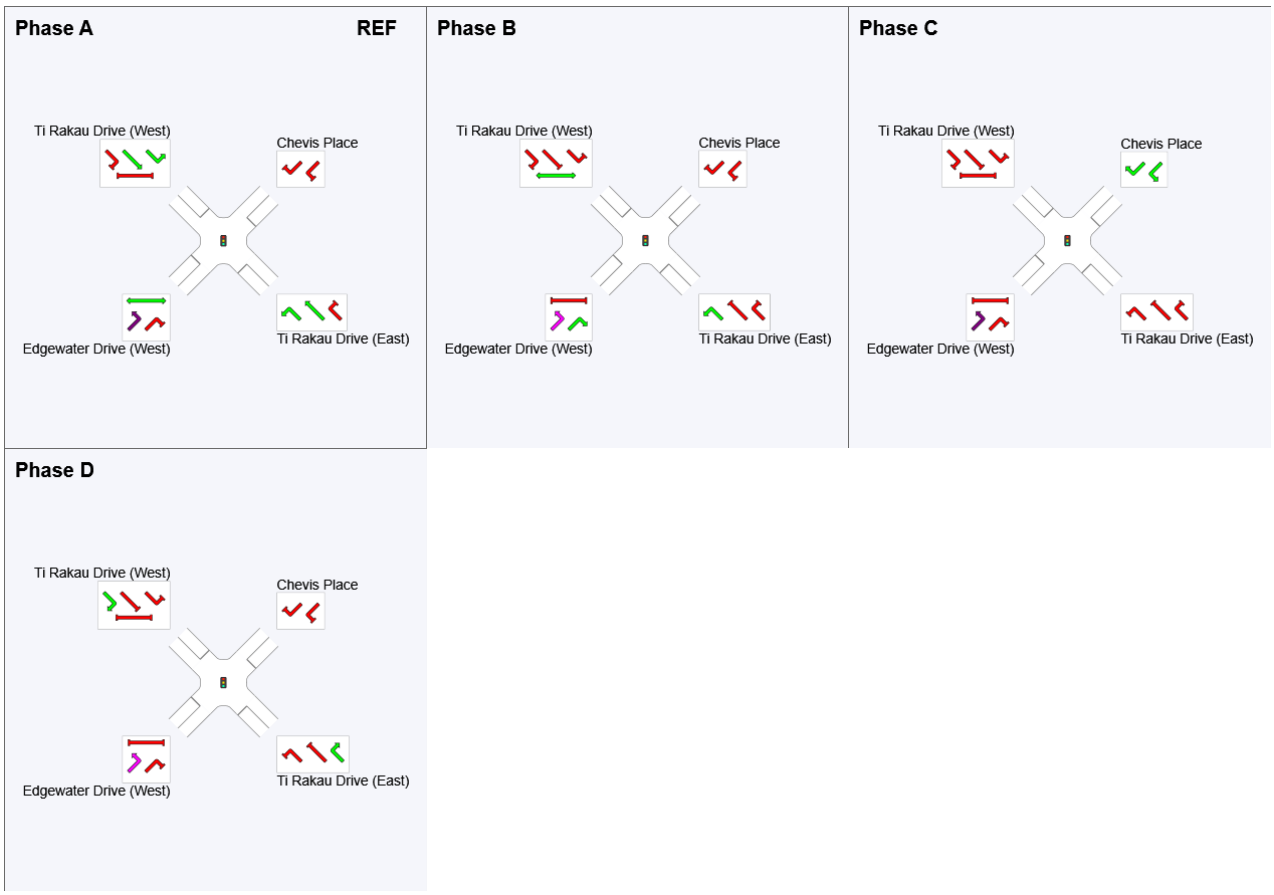
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

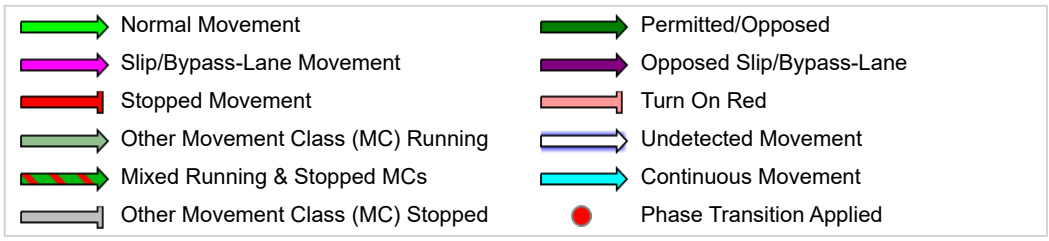
Phase	A	B	C	D
Phase Change Time (sec)	0	62	83	95
Green Time (sec)	56	15	6	6
Phase Time (sec)	62	21	12	12
Phase Split	58%	20%	11%	11%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 1.0 [1.0 Pakuranga Rd / Ti Rakau Rd (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 79 seconds (Site Practical Cycle Time)

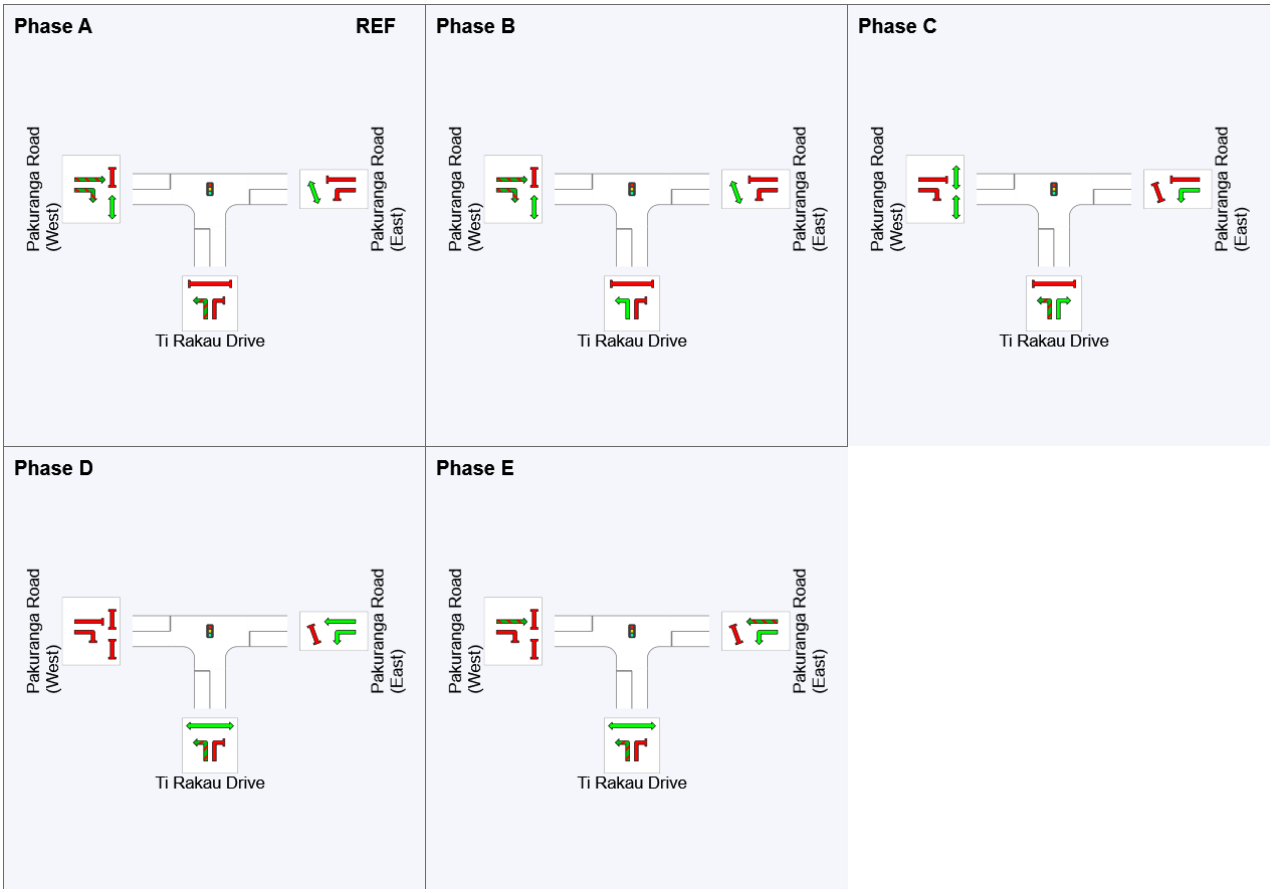
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Map Extract Default
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D, E
Output Phase Sequence: A, B, C, D, E

Phase Timing Summary

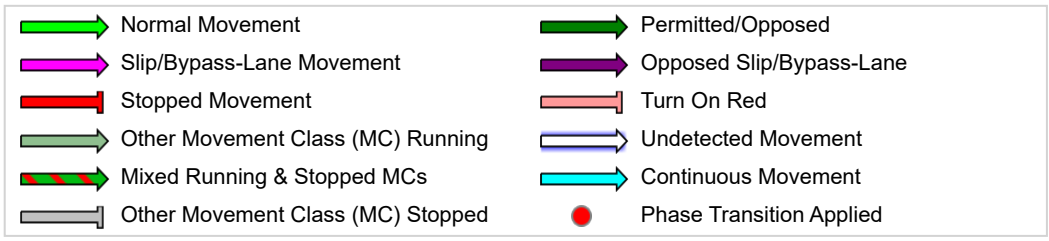
Phase	A	B	C	D	E
Phase Change Time (sec)	0	18	30	55	67
Green Time (sec)	12	6	19	6	6
Phase Time (sec)	18	12	25	12	12
Phase Split	23%	15%	32%	15%	15%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



TIME - DISTANCE DIAGRAM

Time – Distance Diagram for the Selected Route

Movement Class: Light Vehicles

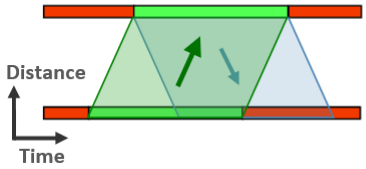
Route: R101 [Route1]

Network: N101 [AM (Network Folder: General)]

New Route
Network Category: (None)
Network Cycle Time = 150 seconds (Network User-Given Cycle Time)

Signal Offsets option used: User

Interactive Offsets



Main Route Direction: Up (Vertical)
Main Route
Reverse Route

PHASING SUMMARY

Site: 1.4v [1.4 William Roberts/ Pakuranga Rd - PD - Conversion (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

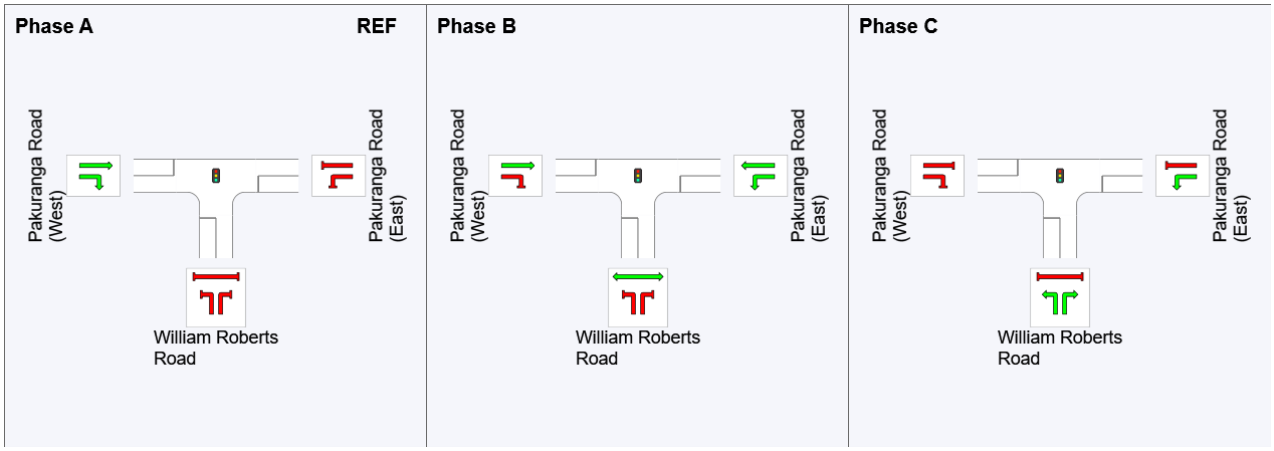
Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Green Split Priority has been specified
Phase Sequence: Convert Function Default
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

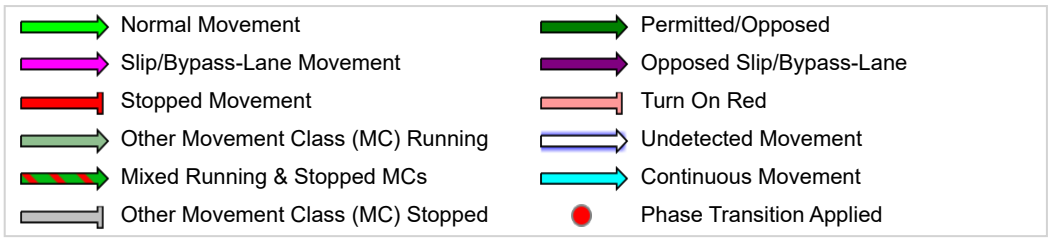
Phase	A	B	C
Phase Change Time (sec)	0	17	115
Green Time (sec)	11	92	29
Phase Time (sec)	17	98	35
Phase Split	11%	65%	23%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 1.5 [1.5 Saint Kentigern/ Pakuranga Rd - PD (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network User-Given Cycle Time)

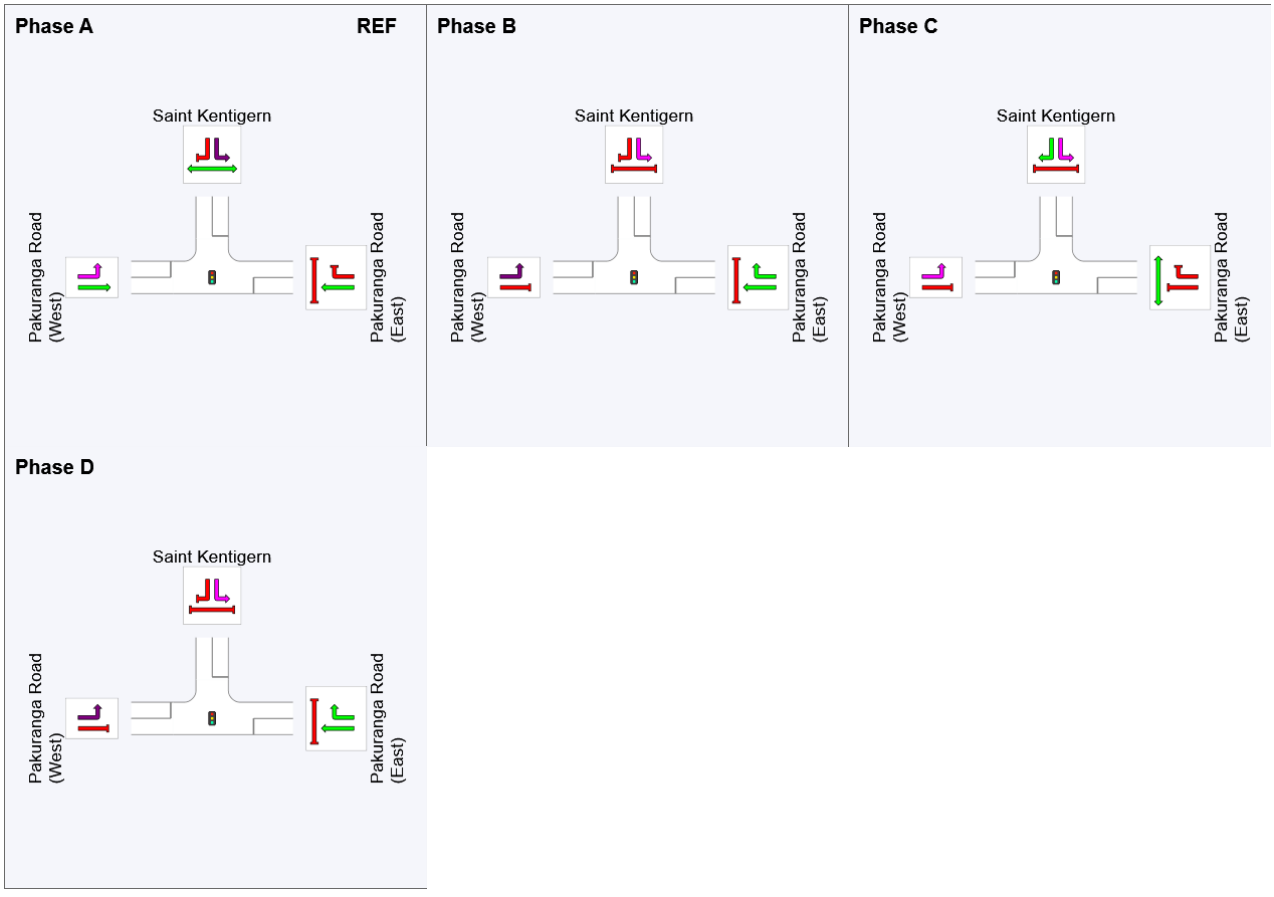
Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Green Split Priority has been specified
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

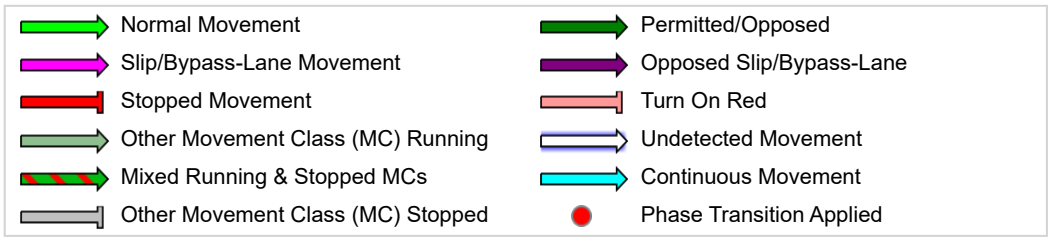
Phase	A	B	C	D
Phase Change Time (sec)	13	111	123	1
Green Time (sec)	92	6	22	6
Phase Time (sec)	98	12	28	12
Phase Split	65%	8%	19%	8%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 4.0 [4.0 Palm Ave / Aylesbury St - Import (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

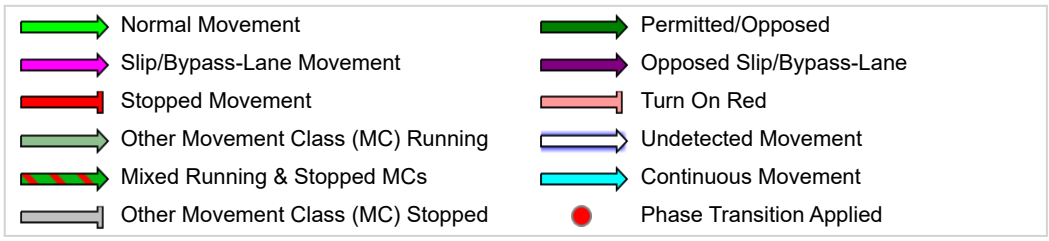
Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	111	123	141
Green Time (sec)	105	6	12	6
Phase Time (sec)	111	12	15	12
Phase Split	74%	8%	10%	8%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence

REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 5.0 [5.0 Pakuranga HWY/ Reeves Rd (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Phase Times)

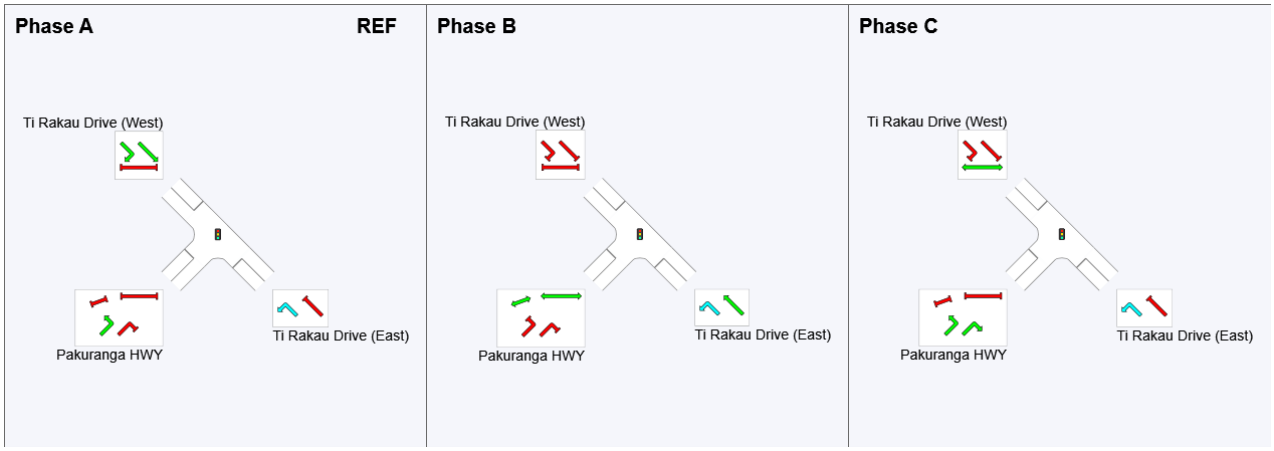
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Map Extract Default
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

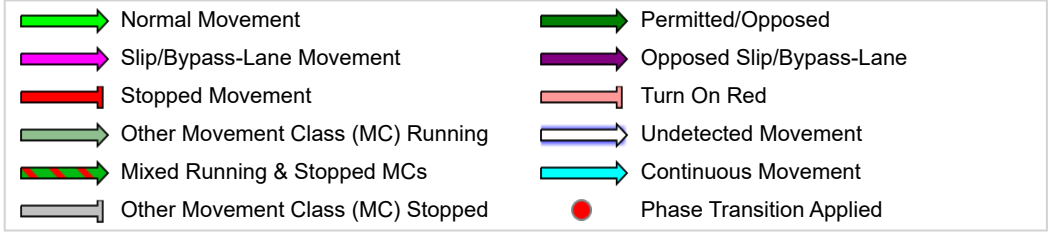
Phase	A	B	C
Phase Change Time (sec)	0	50	100
Green Time (sec)	44	44	44
Phase Time (sec)	50	50	50
Phase Split	33%	33%	33%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 7.0 [7.0 Mattson Rd/ Ti Rakau Dr (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 68 seconds (Site Practical Cycle Time)

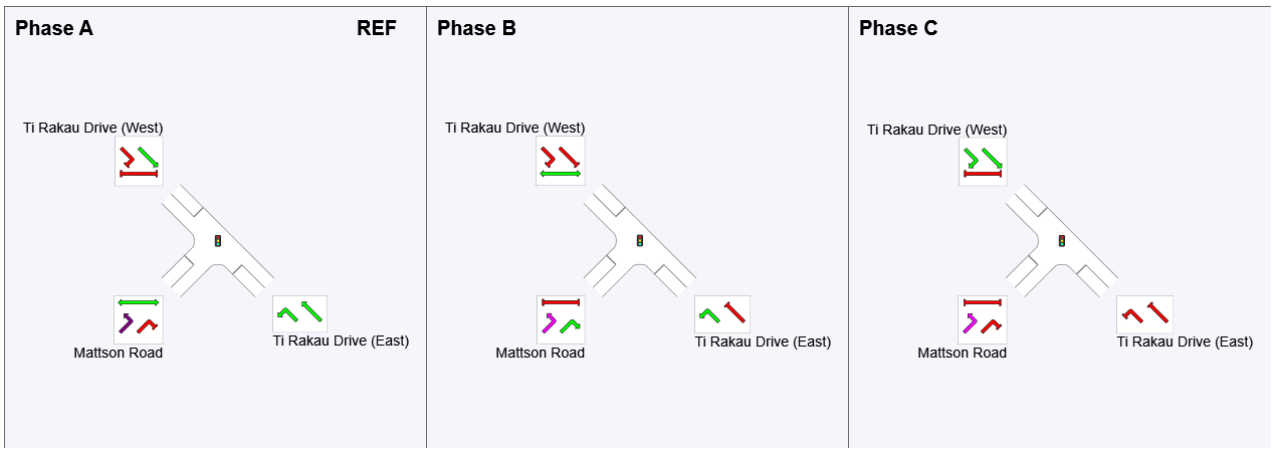
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Map Extract Default
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

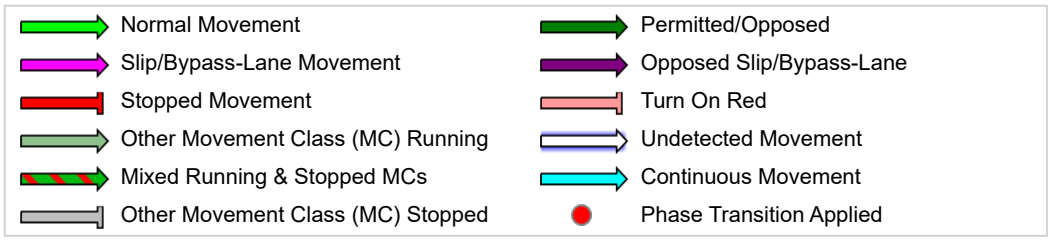
Phase	A	B	C
Phase Change Time (sec)	0	40	56
Green Time (sec)	34	10	6
Phase Time (sec)	40	16	12
Phase Split	59%	24%	18%

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 10.0 [10.0 Edgewater Dr (West) / Chevis Pl (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 105 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

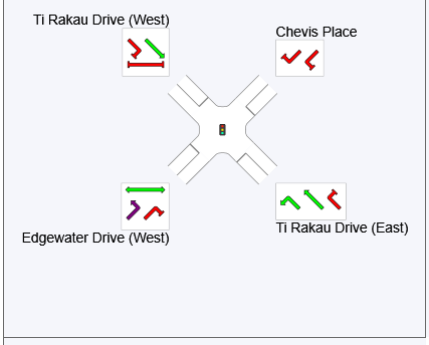
Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	60	81	93
Green Time (sec)	54	15	6	6
Phase Time (sec)	60	21	12	12
Phase Split	57%	20%	11%	11%

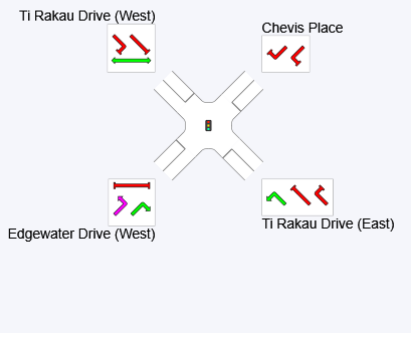
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence

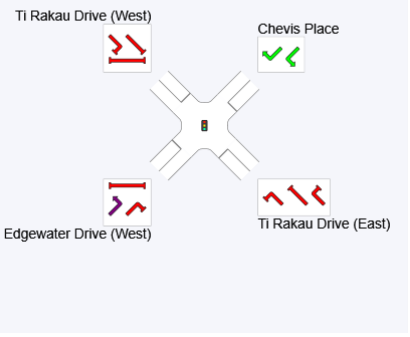
Phase A **REF**



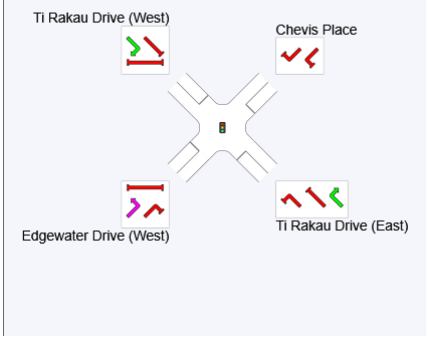
Phase B



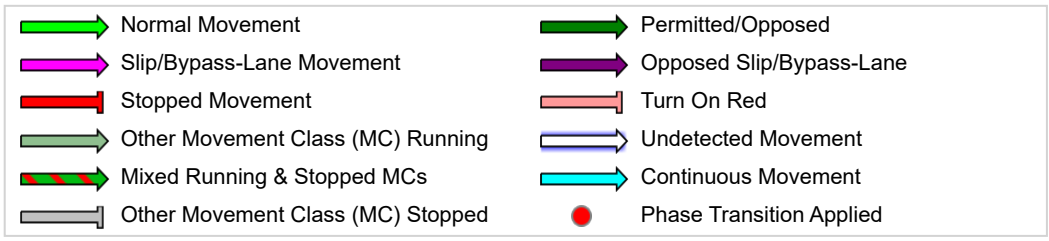
Phase C



Phase D



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 13.0 [13.0 Gossamer Dr / Ti Rakau Dr (Site Folder: General)]

Network: N101 [AM (Network Folder: General)]

Scheme Design
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 150 seconds (Site User-Given Phase Times)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Variable Phasing
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D, E
Output Phase Sequence: A, B, C, D, E

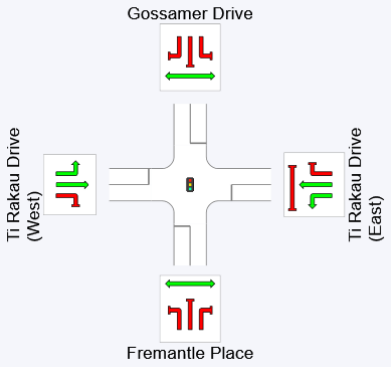
Phase Timing Summary

Phase	A	B	C	D	E
Phase Change Time (sec)	0	55	79	105	118
Green Time (sec)	49	18	20	8	26
Phase Time (sec)	55	24	25	14	32
Phase Split	37%	16%	17%	9%	21%

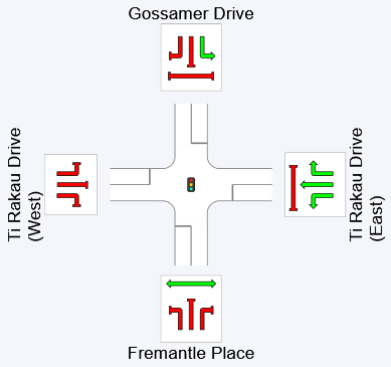
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence

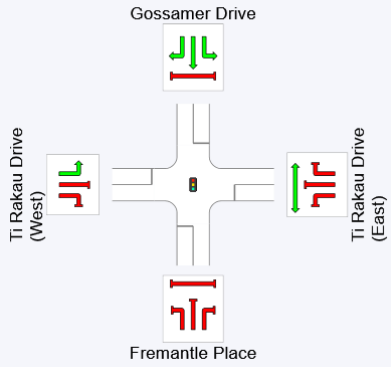
Phase A **REF**



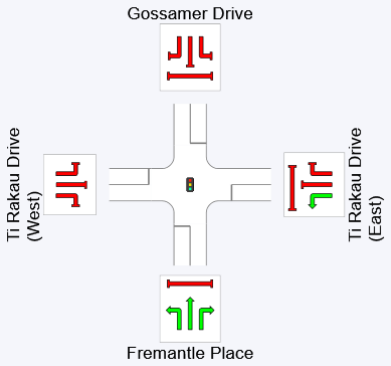
Phase B



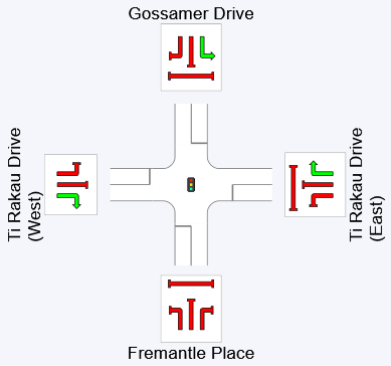
Phase C



Phase D



Phase E



REF: Reference Phase
VAR: Variable Phase