

SITE LAYOUT

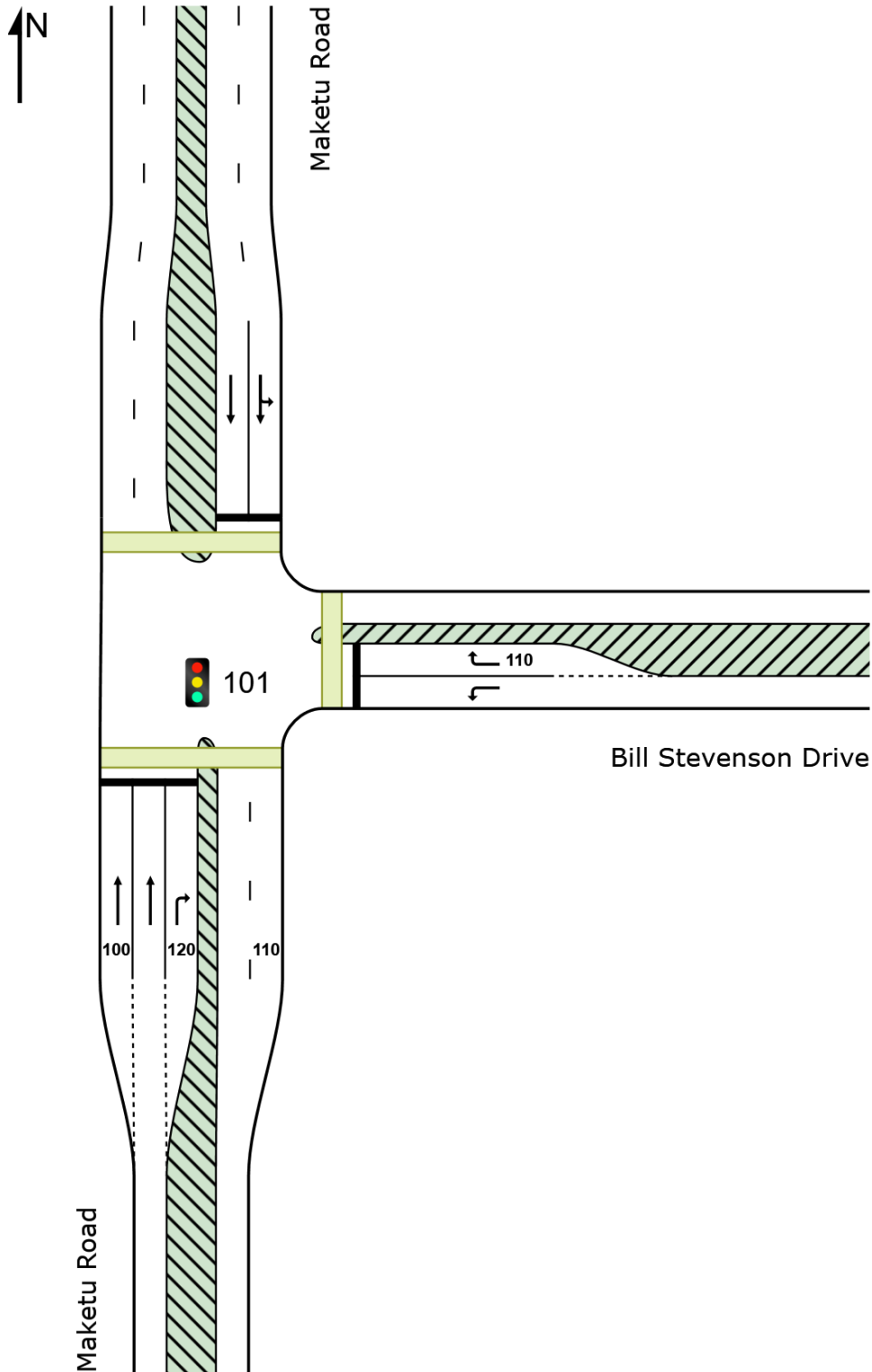
 **Site: 101 [Maketu_BStevenson_AM_ex (Site Folder: General)]**

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.



PHASING SUMMARY

 Site: 101 [Maketu_BStevenson_AM_ex (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Four-Phase Leading Right Turns

Input Phase Sequence: A*, B, C, D

Output Phase Sequence: B, C, D

Reference Phase: Phase B

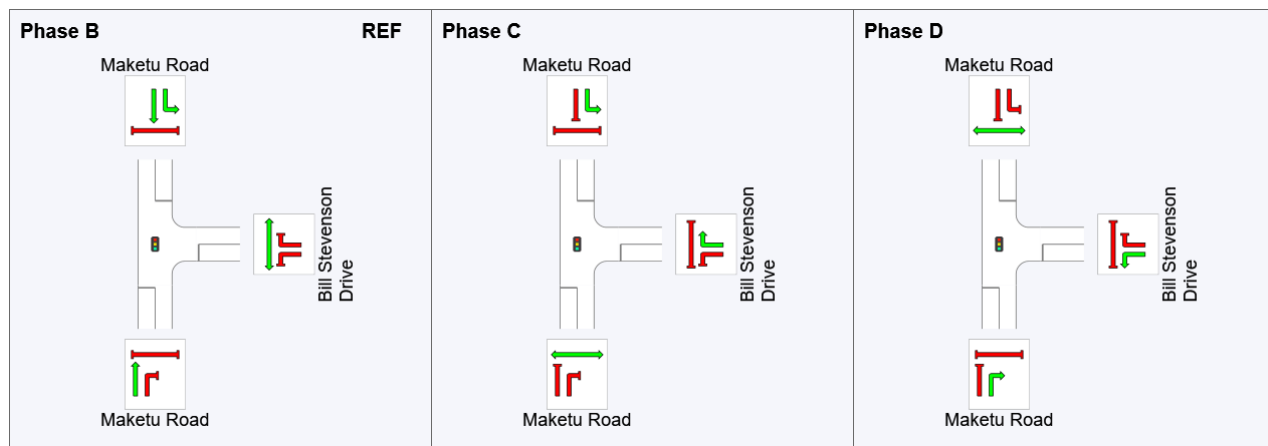
(* Variable Phase)

Phase Timing Summary

Phase	B	C	D
Phase Change Time (sec)	0	16	34
Green Time (sec)	10	12	20
Phase Time (sec)	16	18	26
Phase Split	27%	30%	43%
Phase Frequency (%)	100.0	100.0	100.0

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

 Normal Movement	 Permitted/Opposed
 Slip/Bypass-Lane Movement	 Opposed Slip/Bypass-Lane
 Stopped Movement	 Turn On Red
 Other Movement Class (MC) Running	 Undetected Movement
 Mixed Running & Stopped MCs	 Continuous Movement
 Other Movement Class (MC) Stopped	 Phase Transition Applied

MOVEMENT SUMMARY

 Site: 101 [Maketu_BStevenson_AM_ex (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	[Total HV]	[Total HV]	[Total HV]				[Veh. veh	Dist] m				km/h
			veh/h	%	veh/h	%	v/c	sec							
South: Maketu Road															
2	T1	All MCs	59	14.3	59	14.3	* 0.099	23.7	LOS C	0.8	6.0	0.88	0.64	0.88	37.8
3	R2	All MCs	120	34.2	120	34.2	* 0.241	20.9	LOS C	2.6	23.7	0.76	0.74	0.76	38.0
Approach			179	27.6	179	27.6	0.241	21.8	LOS C	2.6	23.7	0.80	0.70	0.80	37.9
East: Bill Stevenson Drive															
4	L2	All MCs	27	92.3	27	92.3	0.073	20.6	LOS C	0.6	7.1	0.71	0.68	0.71	37.7
6	R2	All MCs	44	59.5	44	59.5	* 0.170	27.6	LOS C	1.1	12.0	0.86	0.72	0.86	35.4
Approach			72	72.1	72	72.1	0.170	24.9	LOS C	1.1	12.0	0.80	0.70	0.80	36.3
North: Maketu Road															
7	L2	All MCs	40	65.8	40	65.8	0.068	14.8	LOS B	0.7	7.2	0.58	0.66	0.58	40.3
8	T1	All MCs	25	8.3	25	8.3	0.082	23.6	LOS C	0.6	4.9	0.87	0.63	0.87	37.8
Approach			65	43.5	65	43.5	0.082	18.2	LOS B	0.7	7.2	0.69	0.65	0.69	39.3
All Vehicles			316	41.0	316	41.0	0.241	21.8	LOS C	2.6	23.7	0.78	0.69	0.78	37.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped Dist]		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		ped	m			sec	m	m/sec
South: Maketu Road												
P1	Full	30	32	24.3	LOS C	0.0	0.0	0.90	0.90	178.2	200.0	1.12
East: Bill Stevenson Drive												
P2	Full	30	32	24.3	LOS C	0.0	0.0	0.90	0.90	178.2	200.0	1.12
North: Maketu Road												
P3	Full	30	32	24.3	LOS C	0.0	0.0	0.90	0.90	178.2	200.0	1.12
All Pedestrians		90	95	24.3	LOS C	0.0	0.0	0.90	0.90	178.2	200.0	1.12

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

PHASING SUMMARY

 **Site: 101 [Maketu_BStevenson_AM_800vph (Site Folder: General)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Optimum Cycle Time - Minimum Delay)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program
Phase Sequence: Four-Phase Leading Right Turns
Input Phase Sequence: A*, B, C, D
Output Phase Sequence: A*, B, C, D
Reference Phase: Phase B
(* Variable Phase)

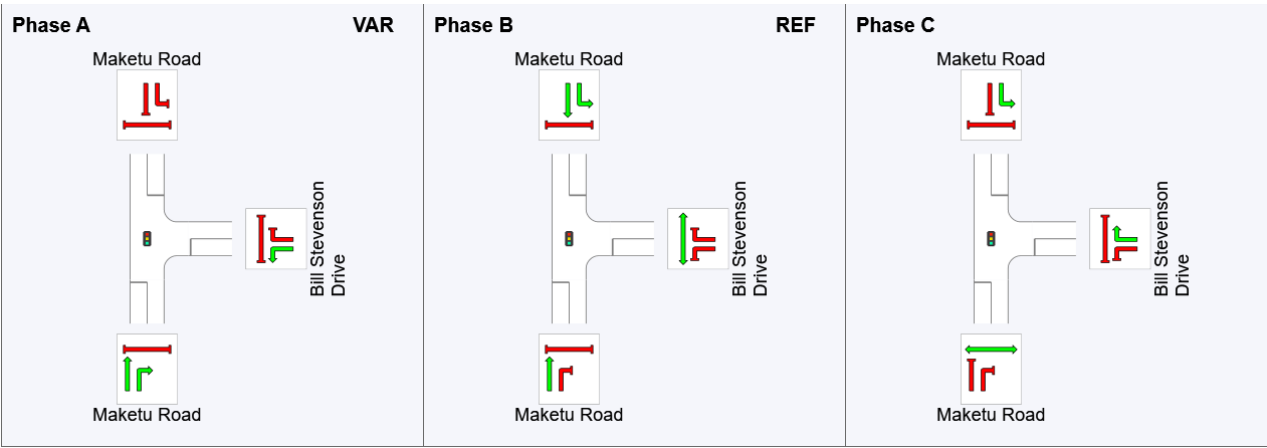
Phase Timing Summary

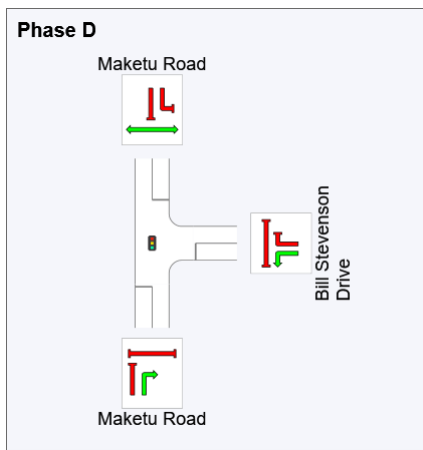
Phase	A	B	C	D
Phase Change Time (sec)	52	0	16	37
Green Time (sec)	15	10	15	9
Phase Time (sec)	21	16	21	12
Phase Split	30%	23%	30%	17%
Phase Frequency (%)	100.0	100.0	100.0	43.5 ³

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%.

³ Phase Frequency has been estimated from actuated movement movement probabilities.

Output Phase Sequence





REF: Reference Phase

VAR: Variable Phase



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Organisation: AJW | Licence: NETWORK / 1PC | Processed: Monday, 17 March 2025 5:38:34 pm

Project: C:\Users\annaj\OneDrive\AW Consulting\Projects\174 DMC Stevenson Quarry\Stevensons Drury.sip9

Site: 101 [BStevenson_Toiawaka_AM_800vph (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Optimum Cycle Time - Minimum Delay)

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Intersection and Approach LOS values are based on average delay for all vehicle movements.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Toiawaka Road												
P1	Full	30	32	44.2	LOS E	0.1	0.1	0.94	0.94	198.1	200.0	1.01
East: Bill Stevenson Road												

P2 Full	30	32	44.2	LOS E	0.1	0.1	0.94	0.94	198.1	200.0	1.01
North: Jack Stevenson Road											
P3 Full	30	32	44.2	LOS E	0.1	0.1	0.94	0.94	198.1	200.0	1.01
West: Bill Stevenson Road											
P4 Full	30	32	44.2	LOS E	0.1	0.1	0.94	0.94	198.1	200.0	1.01
All Pedestrians	120	126	44.2	LOS E	0.1	0.1	0.94	0.94	198.1	200.0	1.01

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

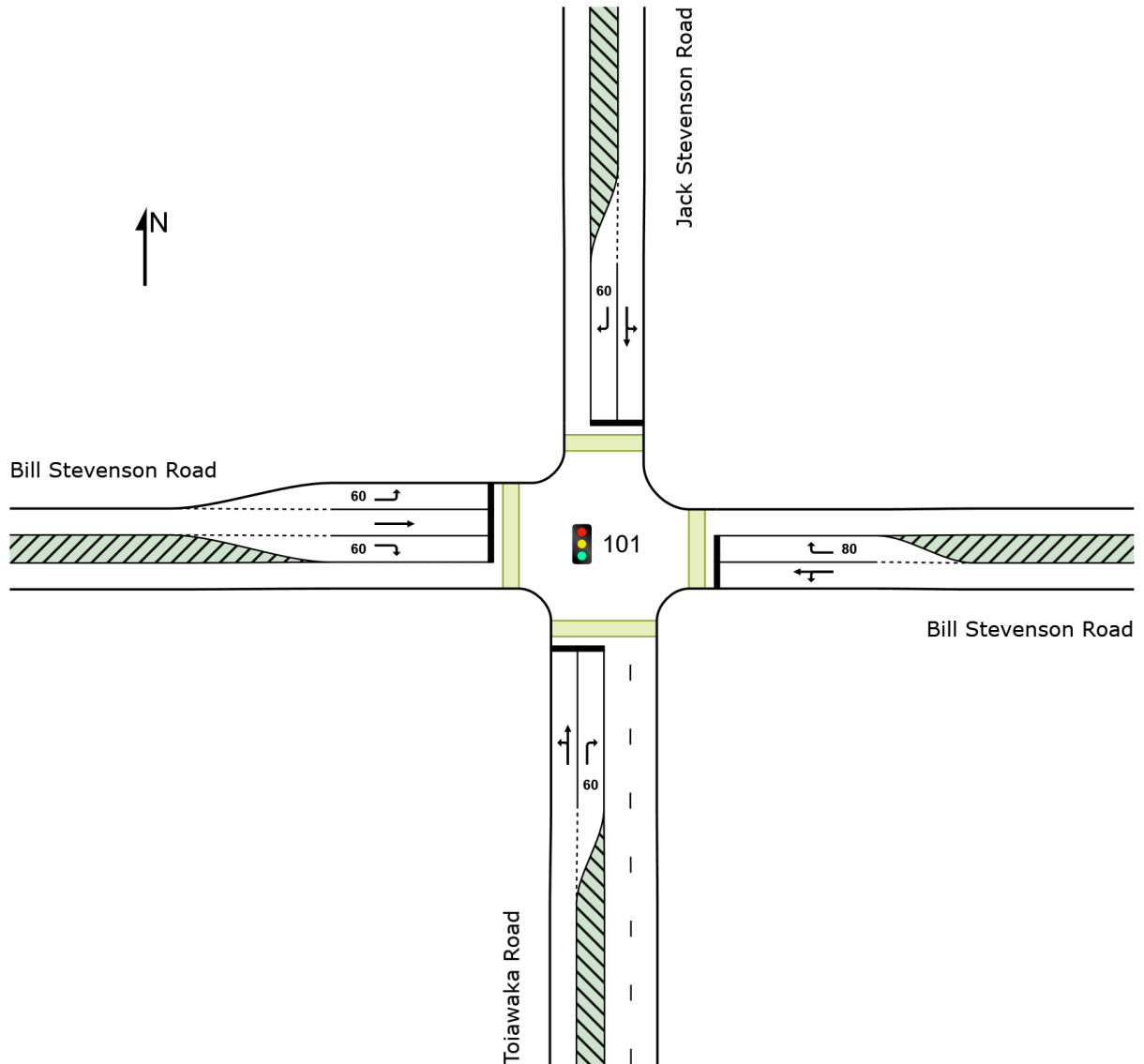
 Site: 101 [BStevenson_Toiawaka_AM_ex (Site Folder: General)]

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.



PHASING SUMMARY

 Site: 101 [BStevenson_Toiawaka_AM_ex (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Four-Phase Leading Right Turns
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase B

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	50	0	19	31
Green Time (sec)	6	13	6	13
Phase Time (sec)	12	19	12	19
Phase Split	19%	31%	19%	31%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

Site: 101 [BStevenson_Toiawaka_AM_ex (Site Folder: General)]

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 62 seconds (Site Optimum Cycle Time - Minimum Delay)

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
 Vehicle movement LOS values are based on average delay per movement.
 Intersection and Approach LOS values are based on average delay for all vehicle movements.
 Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
 Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.
 Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
 Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped	Dist] m			sec	m	m/sec
South: Toiawaka Road												
P1	Full	30	32	25.3	LOS C	0.1	0.1	0.90	0.90	179.2	200.0	1.12
East: Bill Stevenson Road												

P2 Full	30	32	25.3	LOS C	0.1	0.1	0.90	0.90	179.2	200.0	1.12
North: Jack Stevenson Road											
P3 Full	30	32	25.3	LOS C	0.1	0.1	0.90	0.90	179.2	200.0	1.12
West: Bill Stevenson Road											
P4 Full	30	32	25.3	LOS C	0.1	0.1	0.90	0.90	179.2	200.0	1.12
All Pedestrians	120	126	25.3	LOS C	0.1	0.1	0.90	0.90	179.2	200.0	1.12

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

PHASING SUMMARY

 Site: 101 [BStevenson_Toiawaka_AM_800vph (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Four-Phase Leading Right Turns
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase B

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	88	0	22	43
Green Time (sec)	6	16	15	39
Phase Time (sec)	12	22	21	45
Phase Split	12%	22%	21%	45%
Phase Frequency (%)	100.0	100.0	100.0	100.0

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Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

	Normal Movement		Permitted/Opposed
	Slip/Bypass-Lane Movement		Opposed Slip/Bypass-Lane
	Stopped Movement		Turn On Red
	Other Movement Class (MC) Running		Undetected Movement
	Mixed Running & Stopped MCs		Continuous Movement
	Other Movement Class (MC) Stopped		Phase Transition Applied

MOVEMENT SUMMARY

 Site: 101 [Maketu_BStevenson_AM_800vph (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site Optimum Cycle Time - Minimum Delay)

Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance													
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h	Arrival Flows [Total HV] veh/h	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh] [Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Maketu Road													
2	T1	All MCs	88 14.3	88 14.3	0.056	11.9	LOS B	0.9	6.7	0.60	0.45	0.60	43.0
3	R2	All MCs	372 69.1	372 69.1	* 0.774	30.3	LOS C	12.8	142.2	0.94	0.93	1.08	34.5
Approach			460 58.6	460 58.6	0.774	26.8	LOS C	12.8	142.2	0.87	0.83	0.99	35.9
East: Bill Stevenson Drive													
4	L2	All MCs	205 87.2	205 87.2	0.465	23.3	LOS C	5.4	66.5	0.79	0.78	0.79	36.7
6	R2	All MCs	175 98.2	175 98.2	* 0.746	38.4	LOS D	6.4	82.9	0.99	0.94	1.21	31.9
Approach			380 92.2	380 92.2	0.746	30.2	LOS C	6.4	82.9	0.88	0.85	0.98	34.3
North: Maketu Road													
7	L2	All MCs	118 83.0	118 83.0	0.228	18.6	LOS B	2.6	30.6	0.65	0.72	0.65	38.5
8	T1	All MCs	38 8.3	38 8.3	* 0.143	29.5	LOS C	1.2	8.8	0.91	0.67	0.91	35.7
Approach			156 64.9	156 64.9	0.228	21.2	LOS C	2.6	30.6	0.72	0.70	0.72	37.8
All Vehicles			996 72.4	996 72.4	0.774	27.2	LOS C	12.8	142.2	0.85	0.82	0.95	35.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Green.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped ped]	[Dist] m			sec	m	m/sec
South: Maketu Road												
P1	Full	30	32	29.3	LOS C	0.1	0.1	0.92	0.92	183.1	200.0	1.09
East: Bill Stevenson Drive												
P2	Full	30	32	29.3	LOS C	0.1	0.1	0.92	0.92	183.1	200.0	1.09
North: Maketu Road												
P3	Full	30	32	29.3	LOS C	0.1	0.1	0.92	0.92	183.1	200.0	1.09
All Pedestrians		90	95	29.3	LOS C	0.1	0.1	0.92	0.92	183.1	200.0	1.09

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

