Appendix C
SIDRA Outputs

EXISTING CONDITIONS

PHASING SUMMARY

Site: DI-RD-06 [Victoria Road/ Maroondah Highway/ Mooroolbark Road - Existing AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 133 seconds (Site User-Given Phase Times)

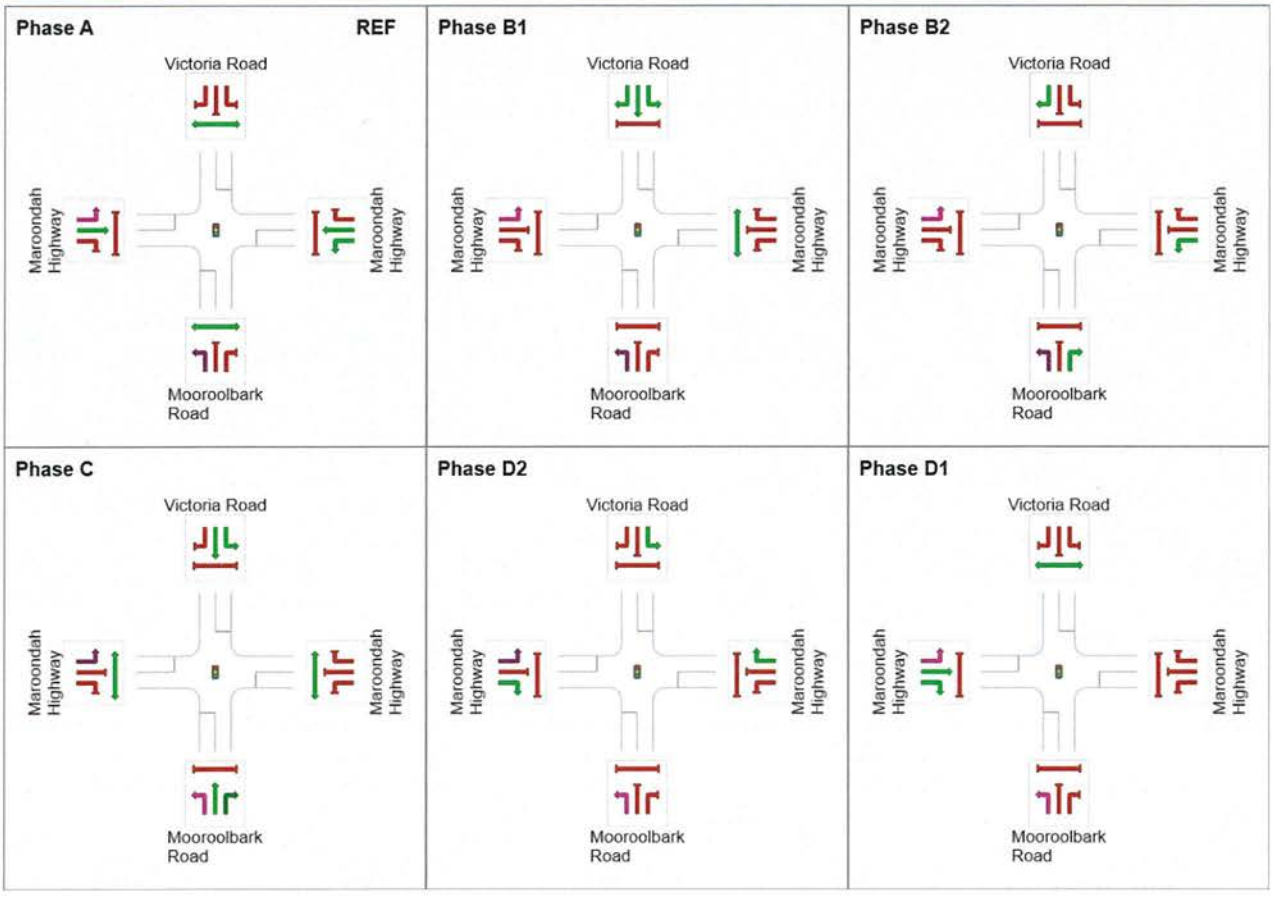
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B1, B2, C, D2, D1
Output Phase Sequence: A, B1, B2, C, D2, D1

Phase Timing Summary

Phase	A	B1	B2	C	D2	D1
Phase Change Time (sec)	0	57	66	87	115	125
Green Time (sec)	54	3	20	22	5	5
Phase Time (sec)	60	4	26	27	8	8
Phase Split	45%	3%	20%	20%	6%	6%

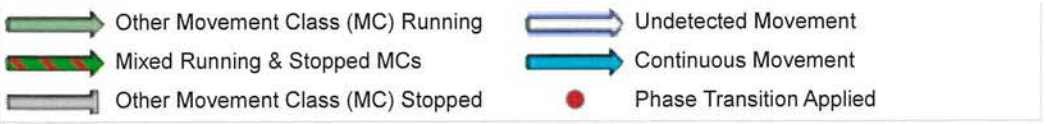
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency 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
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-06 [Victoria Road/ Maroondah Highway/ Mooroolbark Road - Existing AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 133 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Mooroolbark Road												
1	L2	175	5.0	0.185	13.5	LOS B	3.8	27.7	0.41	0.69	0.41	50.9
2	T1	213	5.0	0.632	56.4	LOS E	13.0	95.1	0.99	0.81	0.99	28.1
3	R2	305	5.0	0.742	45.3	LOS D	15.7	114.7	0.99	0.85	1.03	31.3
Approach		693	5.0	0.742	40.7	LOS D	15.7	114.7	0.84	0.80	0.86	33.4
East: Maroondah Highway												
4	L2	187	5.0	0.502	34.0	LOS C	17.6	128.5	0.79	0.76	0.83	38.8
5	T1	974	5.0	0.502	29.8	LOS C	17.8	129.7	0.78	0.70	0.79	48.2
6	R2	47	5.0	0.652	81.6	LOS F	3.3	24.2	1.00	0.77	1.14	27.3
Approach		1208	5.0	0.652	32.5	LOS C	17.8	129.7	0.79	0.71	0.81	45.5
North: Victoria Road												
7	L2	54	5.0	0.124	34.2	LOS C	2.2	16.0	0.81	0.72	0.81	41.6
8	T1	285	5.0	0.746	56.6	LOS E	15.1	110.2	1.00	0.98	1.52	28.1
9	R2	282	5.0	0.810	67.8	LOS E	18.8	137.0	1.00	0.89	1.13	30.4
Approach		621	5.0	0.810	59.7	LOS E	18.8	137.0	0.98	0.92	1.28	30.3
West: Maroondah Highway												
10	L2	296	5.0	0.203	9.9	LOS A	3.9	28.8	0.24	0.66	0.24	59.2
11	T1	1202	5.0	0.724	28.5	LOS C	29.4	214.8	0.82	0.73	0.82	49.5
12	R2	104	5.0	0.552	71.0	LOS E	6.7	48.7	1.00	0.79	1.00	24.6
Approach		1602	5.0	0.724	27.8	LOS C	29.4	214.8	0.72	0.72	0.72	48.6
All Vehicles		4124	5.0	0.810	36.2	LOS D	29.4	214.8	0.80	0.76	0.85	41.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	60.8	LOS F	0.2	0.2	0.96	0.96
P2	East Full Crossing	53	29.9	LOS C	0.1	0.1	0.91	0.91
P3	North Full Crossing	53	60.8	LOS F	0.2	0.2	0.96	0.96
P4	West Full Crossing	53	60.8	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		211	53.0	LOS E			0.95	0.95

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: DI-RD-06 [Victoria Road/ Maroondah Highway/ Mooroolbark Road - Existing PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 137 seconds (Site User-Given Phase Times)

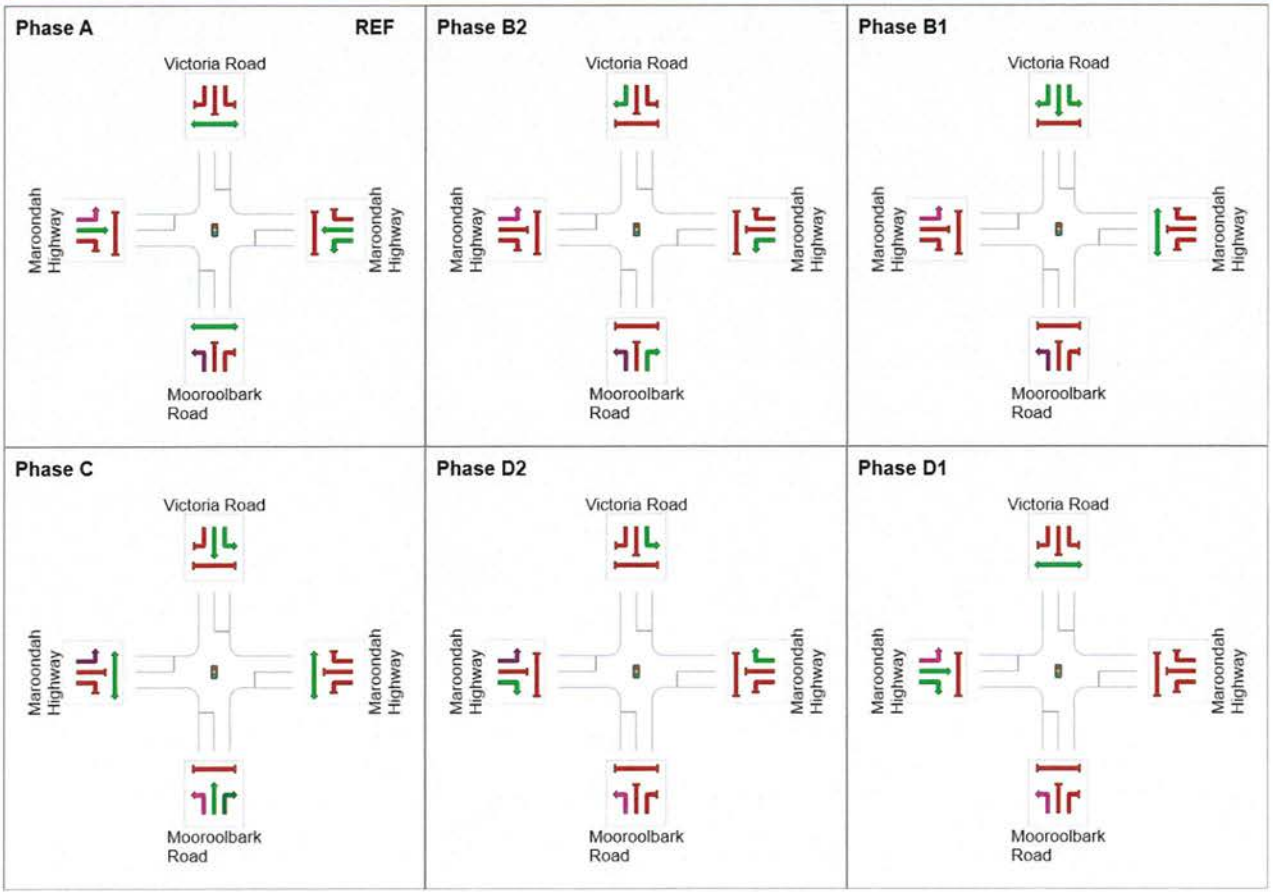
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B2, B1, C, D2, D1
Output Phase Sequence: A, B2, B1, C, D2, D1

Phase Timing Summary

Phase	A	B2	B1	C	D2	D1
Phase Change Time (sec)	0	53	78	85	113	122
Green Time (sec)	48	19	1	22	3	14
Phase Time (sec)	54	25	7	28	4	19
Phase Split	39%	18%	5%	20%	3%	14%

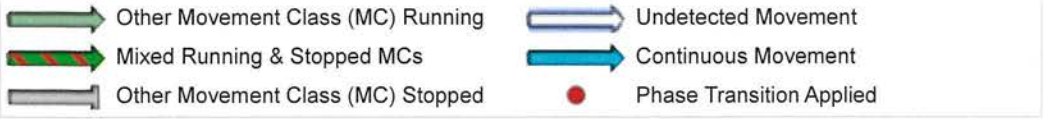
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency 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



MOVEMENT SUMMARY

Site: DI-RD-06 [Victoria Road/ Maroondah Highway/ Mooroolbark Road - Existing PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 137 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Mooroolbark Road												
1	L2	88	5.0	0.101	18.9	LOS B	2.5	18.4	0.49	0.69	0.49	46.1
2	T1	243	5.0	0.744	61.4	LOS E	16.0	117.2	1.00	0.87	1.06	26.7
3	R2	163	5.0	0.359	38.7	LOS D	7.4	53.7	0.87	0.79	0.87	34.0
Approach		495	5.0	0.744	46.3	LOS D	16.0	117.2	0.87	0.81	0.90	31.3
East: Maroondah Highway												
4	L2	183	5.0	0.688	44.7	LOS D	20.6	150.7	0.86	0.79	0.86	33.4
5	T1	1057	5.0	0.688	38.8	LOS D	25.7	187.6	0.88	0.77	0.88	43.2
6	R2	40	5.0	0.946	99.0	LOS F	3.2	23.6	1.00	0.89	1.75	24.1
Approach		1280	5.0	0.946	41.5	LOS D	25.7	187.6	0.88	0.78	0.90	40.9
North: Victoria Road												
7	L2	32	5.0	0.069	47.6	LOS D	1.6	11.5	0.79	0.72	0.79	36.1
8	T1	249	5.0	0.583	52.4	LOS D	15.0	109.8	0.95	0.80	0.95	29.4
9	R2	326	5.0	0.966	97.0	LOS F	27.7	202.3	1.00	1.03	1.46	24.5
Approach		607	5.0	0.966	76.1	LOS E	27.7	202.3	0.97	0.92	1.22	26.5
West: Maroondah Highway												
10	L2	402	5.0	0.273	10.5	LOS B	6.1	44.8	0.25	0.68	0.25	58.7
11	T1	1204	5.0	0.722	26.9	LOS C	31.7	231.1	0.79	0.70	0.79	50.5
12	R2	208	5.0	0.821	76.0	LOS E	14.7	107.1	1.00	0.89	1.18	23.5
Approach		1815	5.0	0.821	28.9	LOS C	31.7	231.1	0.69	0.72	0.71	47.4
All Vehicles		4197	5.0	0.966	41.6	LOS D	31.7	231.1	0.81	0.78	0.87	39.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	62.8	LOS F	0.2	0.2	0.96	0.96
P2	East Full Crossing	53	62.8	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	53	62.8	LOS F	0.2	0.2	0.96	0.96
P4	West Full Crossing	53	62.8	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		211	62.8	LOS F			0.96	0.96

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.

MOVEMENT SUMMARY

Site: DI-RD-07A [Mooroolbark Road/ Hull Road - Existing AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Hull Road												
25	T1	436	5.0	0.632	13.3	LOS B	11.0	80.4	0.66	0.58	0.66	49.2
26	R2	421	5.0	0.749	26.5	LOS C	12.6	92.1	0.95	0.88	1.06	40.5
Approach		857	5.0	0.749	19.8	LOS B	12.6	92.1	0.81	0.73	0.86	44.5
NorthWest: Mooroolbark Road												
27	L2	237	5.0	1.019	95.3	LOS F	43.2	315.6	1.00	1.24	1.88	23.0
29	R2	355	5.0	1.019	95.3	LOS F	43.2	315.6	1.00	1.24	1.88	23.0
Approach		592	5.0	1.019	95.3	LOS F	43.2	315.6	1.00	1.24	1.88	23.0
SouthWest: Hull Road												
30	L2	299	5.0	1.000	87.0	LOS F	19.4	141.6	1.00	1.22	1.92	24.4
31	T1	240	5.0	0.620	34.6	LOS C	9.3	67.8	0.97	0.80	0.97	38.2
Approach		539	5.0	1.000	63.6	LOS E	19.4	141.6	0.99	1.03	1.50	29.1
All Vehicles		1987	5.0	1.019	54.2	LOS D	43.2	315.6	0.91	0.96	1.34	31.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P6	NorthEast Full Crossing	53	23.7	LOS C	0.1	0.1	0.75	0.75
P7	NorthWest Full Crossing	53	32.7	LOS D	0.1	0.1	0.88	0.88
All Pedestrians		105	28.2	LOS C			0.82	0.82

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: DI-RD-07A [Mooroolbark Road/ Hull Road - Existing AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 84 seconds (Site User-Given Phase Times)

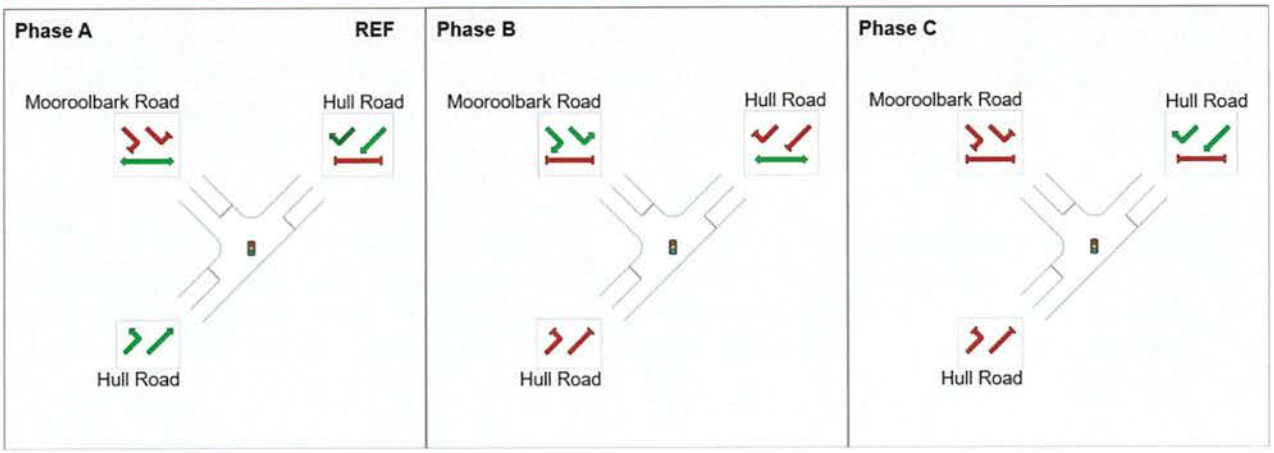
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op SHeet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	22	56
Green Time (sec)	16	28	22
Phase Time (sec)	22	34	28
Phase Split	26%	40%	33%

See the Phase Information section in the Detailed Output 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, 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: DI-RD-07A [Mooroolbark Road/ Hull Road - Existing PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Hull Road												
25	T1	260	5.0	0.275	17.2	LOS B	8.1	59.3	0.62	0.53	0.62	46.7
26	R2	282	5.0	0.883	45.1	LOS D	12.7	92.7	1.00	0.96	1.33	33.6
Approach		542	5.0	0.883	31.7	LOS C	12.7	92.7	0.82	0.75	0.99	38.8
NorthWest: Mooroolbark Road												
27	L2	372	0.0	0.848	44.9	LOS D	33.9	237.2	0.98	0.93	1.08	34.0
29	R2	247	0.0	0.848	44.8	LOS D	33.9	237.2	0.98	0.93	1.08	33.9
Approach		619	0.0	0.848	44.8	LOS D	33.9	237.2	0.98	0.93	1.08	34.0
SouthWest: Hull Road												
30	L2	353	5.0	0.575	36.9	LOS D	15.3	111.9	0.85	0.82	0.85	36.7
31	T1	443	5.0	0.805	36.8	LOS D	21.7	158.5	0.89	0.84	0.98	37.3
Approach		796	5.0	0.805	36.8	LOS D	21.7	158.5	0.87	0.83	0.92	37.0
All Vehicles		1957	3.4	0.883	38.0	LOS D	33.9	237.2	0.89	0.84	0.99	36.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P6	NorthEast Full Crossing	53	50.3	LOS E	0.2	0.2	0.95	0.95
P7	NorthWest Full Crossing	53	50.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		105	50.3	LOS E			0.95	0.95

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: DI-RD-07A [Mooroolbark Road/ Hull Road - Existing PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 112 seconds (Site User-Given Phase Times)

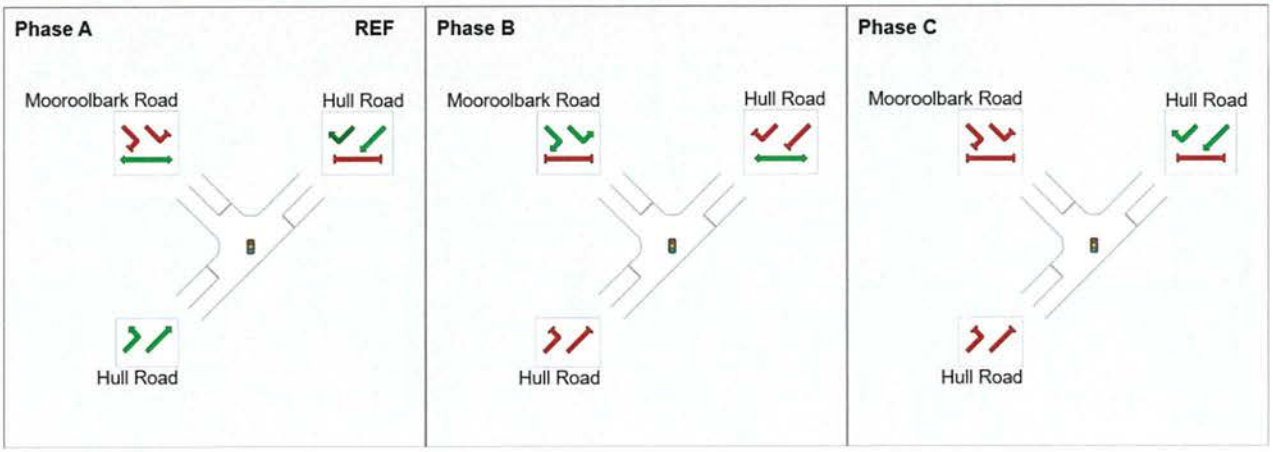
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

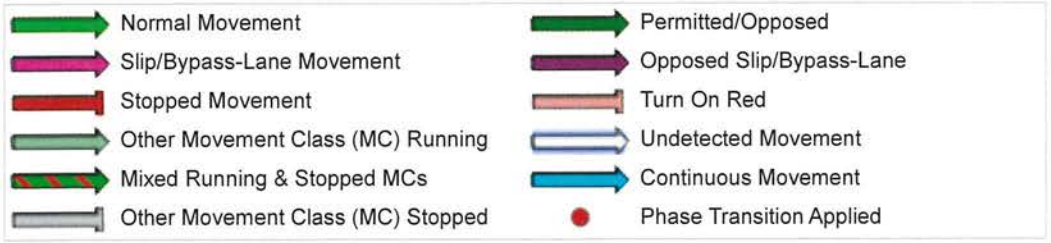
Phase	A	B	C
Phase Change Time (sec)	0	45	95
Green Time (sec)	39	44	11
Phase Time (sec)	45	50	17
Phase Split	40%	45%	15%

See the Phase Information section in the Detailed Output 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, 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: 102 [Anderson Street/ Maroondah Highway - Existing AM]

Network: N101 [Anderson/ Maroondah-AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 130 seconds (Site User-Given Phase Times)

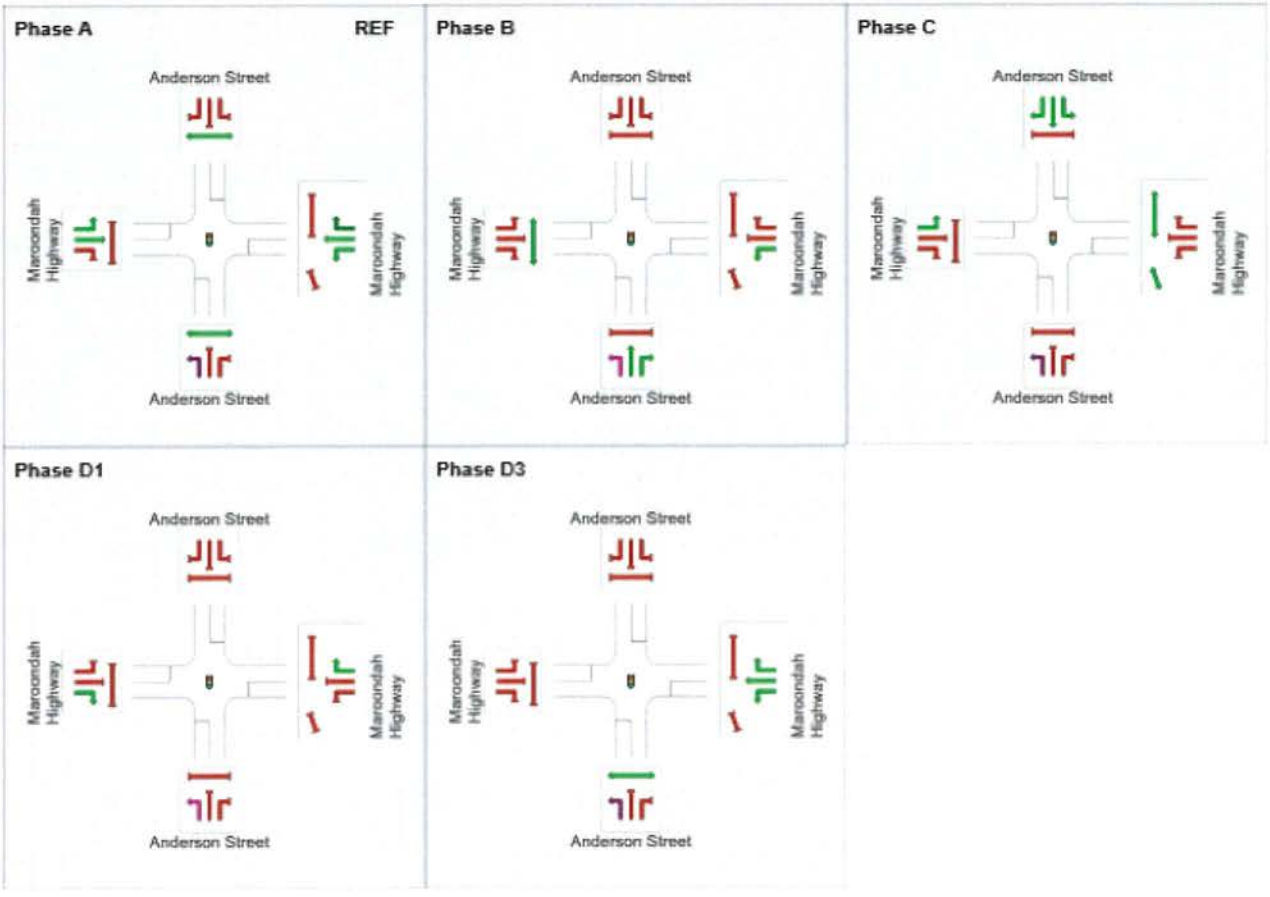
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D1, D3
Output Phase Sequence: A, B, C, D1, D3

Phase Timing Summary

Phase	A	B	C	D1	D3
Phase Change Time (sec)	0	47	83	106	122
Green Time (sec)	46	30	17	11	4
Phase Time (sec)	52	36	22	15	5
Phase Split	40%	28%	17%	12%	4%

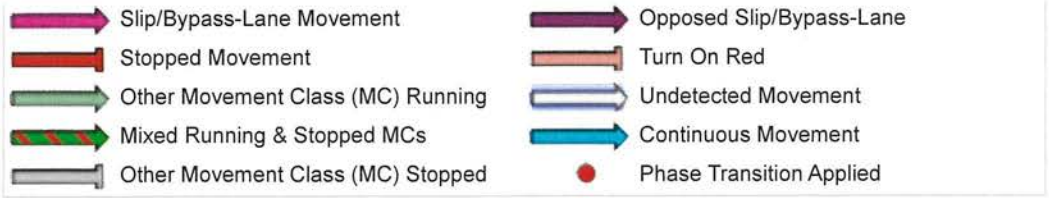
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

Normal Movement Permitted/Opposed



MOVEMENT SUMMARY

Site: 102 [Anderson Street/ Maroondah Highway - Existing AM]

Network: N101 [Anderson/ Maroondah-AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 130 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Anderson Street														
1	L2	287	5.0	287	5.0	0.340	16.3	LOS B	5.1	36.9	0.54	0.72	0.54	41.3
2	T1	417	5.0	417	5.0	0.785	50.4	LOS D	12.2	89.1	0.95	0.84	1.00	25.9
3	R2	400	5.0	400	5.0	0.785	59.1	LOS E	13.2	96.3	1.00	0.89	1.07	23.7
Approach		1104	5.0	1104	5.0	0.785	44.7	LOS D	13.2	96.3	0.86	0.83	0.91	27.6
East: Maroondah Highway														
4	L2	700	5.0	700	5.0	0.293	9.1	LOS A	1.9	14.2	0.16	0.60	0.16	46.5
5	T1	1240	5.0	1240	5.0	0.777	33.2	LOS C	19.2	140.0	0.87	0.78	0.87	38.9
6	R2	185	5.0	185	5.0	0.371	26.0	LOS C	4.0	29.2	0.73	0.76	0.73	41.1
Approach		2125	5.0	2125	5.0	0.777	24.7	LOS C	19.2	140.0	0.62	0.72	0.62	40.5
North: Anderson Street														
7	L2	43	5.0	43	5.0	0.650	65.3	LOS E	6.0	44.0	1.00	0.82	1.02	29.6
8	T1	185	5.0	185	5.0	0.650	59.7	LOS E	6.0	44.0	1.00	0.82	1.02	20.2
9	R2	85	5.0	85	5.0	0.650	65.4	LOS E	5.9	43.3	1.00	0.82	1.02	29.3
Approach		314	5.0	314	5.0	0.650	62.0	LOS E	6.0	44.0	1.00	0.82	1.02	24.6
West: Maroondah Highway														
10	L2	16	5.0	16	5.0	0.466	43.3	LOS D	8.1	59.0	0.72	0.65	1.05	36.3
11	T1	606	5.0	606	5.0	0.466	35.1	LOS D	8.1	59.3	0.72	0.64	0.88	38.1
12	R2	128	5.0	128	5.0	0.852	76.9	LOS E	5.4	39.5	1.00	0.91	1.26	17.4
Approach		751	5.0	751	5.0	0.852	42.4	LOS D	8.1	59.3	0.77	0.68	0.95	34.2
All Vehicles		4294	5.0	4294	5.0	0.852	35.6	LOS D	19.2	140.0	0.74	0.75	0.78	34.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	59.3	LOS E	0.2	0.2	0.96	0.96
P2	East Full Crossing	53	59.3	LOS E	0.2	0.2	0.96	0.96
P2B	East Slip/Bypass Lane Crossing	53	59.3	LOS E	0.2	0.2	0.96	0.96
P3	North Full Crossing	53	59.3	LOS E	0.2	0.2	0.96	0.96
P4	West Full Crossing	53	59.3	LOS E	0.2	0.2	0.96	0.96
All Pedestrians		263	59.3	LOS E			0.96	0.96

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 [Anderson Street/ Hardy Street - Existing AM]

Network: N101 [Anderson/ Maroondah-AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

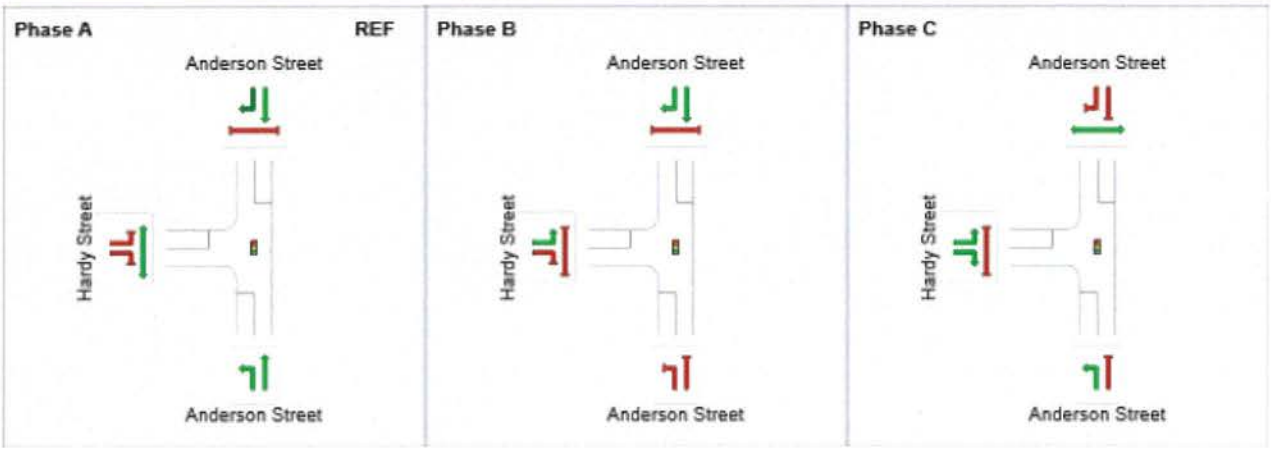
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: CARDNO
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

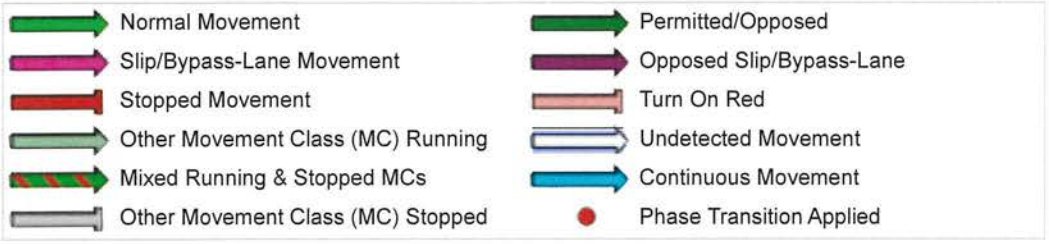
Phase	A	B	C
Phase Change Time (sec)	0	61	76
Green Time (sec)	56	9	18
Phase Time (sec)	62	15	23
Phase Split	62%	15%	23%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [Anderson Street/ Hardy Street - Existing AM]

Network: N101 [Anderson/ Maroondah-AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Anderson Street														
1	L2	593	2.0	593	2.0	0.815	29.2	LOS C	19.3	138.3	0.87	0.87	0.91	40.3
2	T1	940	5.0	940	5.0	0.815	24.8	LOS C	20.3	148.5	0.90	0.86	0.95	32.9
Approach		1533	3.8	1533	3.8	0.815	26.5	LOS C	20.3	148.5	0.89	0.87	0.93	36.6
North: Anderson Street														
8	T1	825	5.0	825	5.0	0.308	5.7	LOS A	4.5	32.8	0.40	0.35	0.40	52.2
9	R2	295	2.0	295	2.0	0.901	64.7	LOS E	10.6	75.3	1.00	1.17	1.72	22.0
Approach		1120	4.2	1120	4.2	0.901	21.2	LOS C	10.6	75.3	0.56	0.57	0.75	38.3
West: Hardy Street														
10	L2	216	2.0	216	2.0	0.757	47.3	LOS D	9.2	65.2	0.99	0.88	1.08	23.7
12	R2	342	2.0	342	2.0	0.757	50.0	LOS D	9.2	65.2	1.00	0.88	1.11	32.4
Approach		558	2.0	558	2.0	0.757	49.0	LOS D	9.2	65.2	0.99	0.88	1.10	29.8
All Vehicles		3211	3.6	3211	3.6	0.901	28.6	LOS C	20.3	148.5	0.79	0.77	0.90	35.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		105	44.3	LOS E			0.94	0.94

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: 102 [Anderson Street/ Maroondah Highway - Existing PM]

Network: N102 [Anderson/ Maroondah-PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 139 seconds (Site User-Given Phase Times)

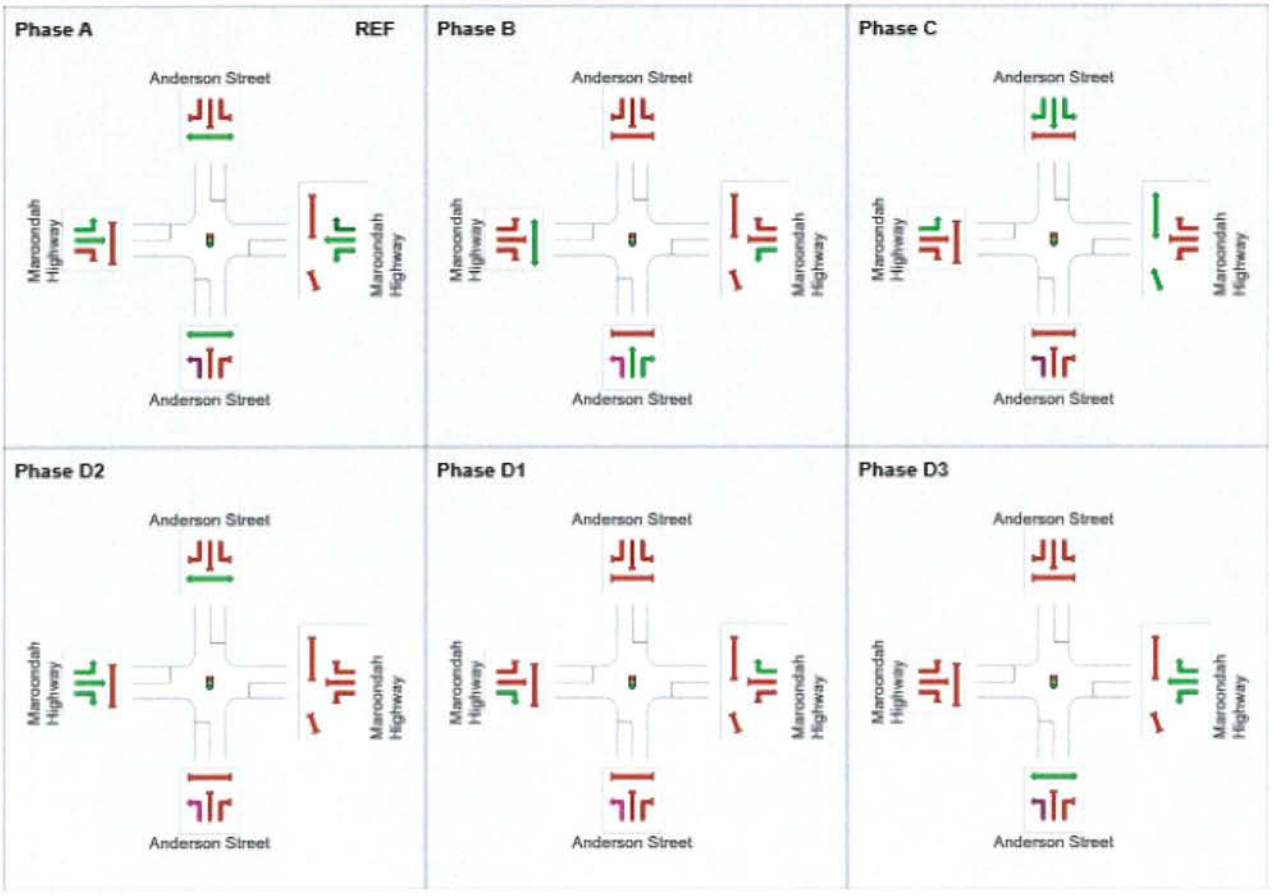
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D2, D1, D3
Output Phase Sequence: A, B, C, D2, D1, D3

Phase Timing Summary

Phase	A	B	C	D2	D1	D3
Phase Change Time (sec)	0	39	82	108	120	131
Green Time (sec)	37	37	20	6	9	6
Phase Time (sec)	43	43	26	8	11	8
Phase Split	31%	31%	19%	6%	8%	6%

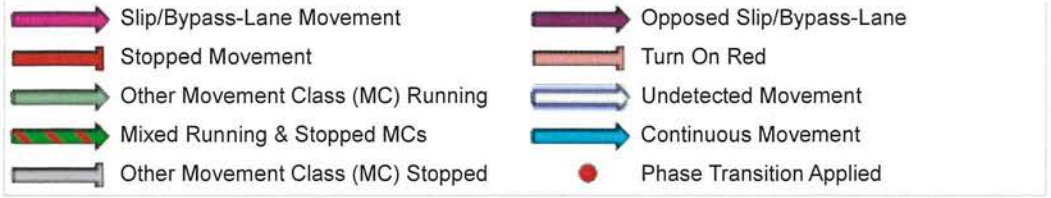
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

Normal Movement Permitted/Opposed



MOVEMENT SUMMARY

Site: 102 [Anderson Street/ Maroondah Highway - Existing PM]

Network: N102 [Anderson/ Maroondah-PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 139 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Anderson Street														
1	L2	183	5.0	183	5.0	0.185	14.8	LOS B	2.8	20.6	0.45	0.68	0.45	42.5
2	T1	337	5.0	336	5.0	0.943	58.0	LOS E	16.4	120.0	0.92	0.86	1.06	23.7
3	R2	615	5.0	614	5.0	0.943	84.3	LOS F	16.4	120.0	0.99	1.05	1.36	18.8
Approach		1135	5.0	1133[N1]	5.0	0.943	65.3	LOS E	16.4	120.0	0.88	0.94	1.12	22.2
East: Maroondah Highway														
4	L2	517	5.0	517	5.0	0.256	17.4	LOS B	5.2	37.7	0.47	0.70	0.47	38.6
5	T1	878	5.0	878	5.0	0.838	50.3	LOS D	22.3	163.0	0.95	0.90	1.04	33.0
6	R2	154	5.0	154	5.0	0.476	38.9	LOS D	4.2	31.0	0.92	0.79	0.92	35.9
Approach		1548	5.0	1548	5.0	0.838	38.2	LOS D	22.3	163.0	0.78	0.82	0.84	34.3
North: Anderson Street														
7	L2	67	5.0	67	5.0	0.718	70.1	LOS E	6.8	49.7	1.00	0.87	1.08	28.3
8	T1	220	5.0	220	5.0	0.718	64.1	LOS E	7.9	57.6	1.00	0.86	1.07	19.3
9	R2	67	5.0	67	5.0	0.718	69.3	LOS E	7.9	57.6	1.00	0.86	1.06	28.6
Approach		355	5.0	355	5.0	0.718	66.2	LOS E	7.9	57.6	1.00	0.86	1.07	23.4
West: Maroondah Highway														
10	L2	8	5.0	8	5.0	0.792	53.5	LOS D	14.7	107.4	0.98	1.03	1.42	33.1
11	T1	917	5.0	917	5.0	0.792	47.9	LOS D	14.7	107.4	0.98	1.03	1.42	33.7
12	R2	103	5.0	103	5.0	0.470	68.3	LOS E	4.1	29.9	0.98	0.79	0.98	18.9
Approach		1028	5.0	1028	5.0	0.792	50.0	LOS D	14.7	107.4	0.98	1.01	1.38	32.3
All Vehicles		4066	5.0	4065[N1]	5.0	0.943	51.2	LOS D	22.3	163.0	0.88	0.90	1.07	29.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
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.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	63.8	LOS F	0.2	0.2	0.96	0.96
P2	East Full Crossing	53	63.8	LOS F	0.2	0.2	0.96	0.96
P2B	East Slip/Bypass Lane Crossing	53	63.8	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	53	30.0	LOS D	0.1	0.1	0.92	0.92
P4	West Full Crossing	53	63.8	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		263	57.0	LOS E			0.95	0.95

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 [Anderson Street/ Hardy Street - Existing PM]

Network: N102 [Anderson/ Maroondah-PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 139 seconds (Site User-Given Phase Times)

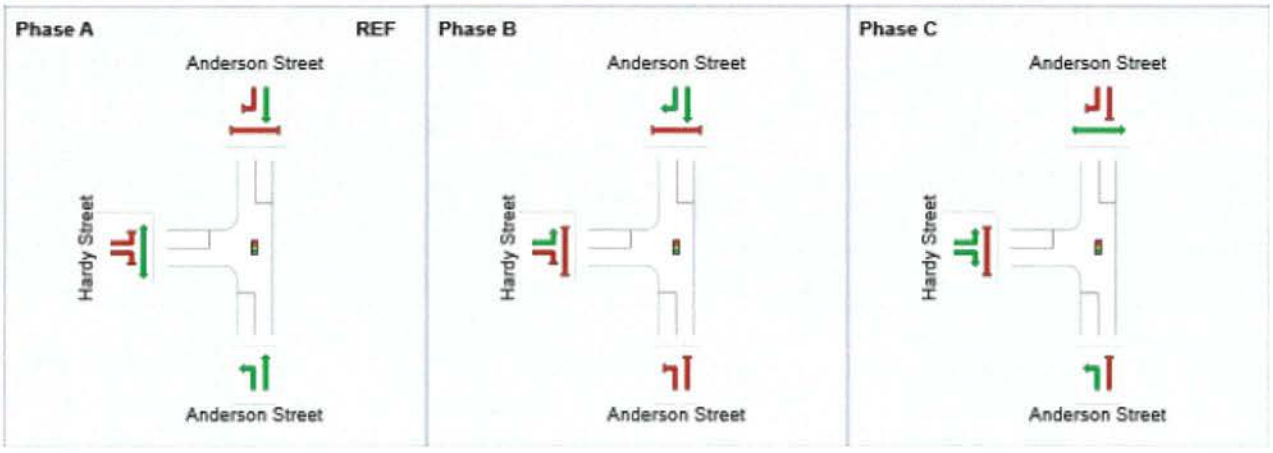
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: CARDNO
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

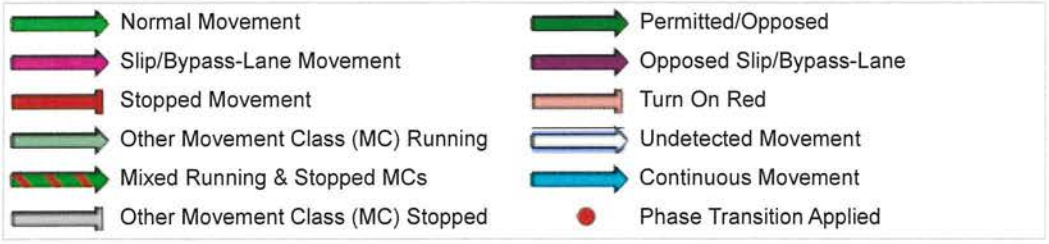
Phase	A	B	C
Phase Change Time (sec)	0	64	83
Green Time (sec)	58	13	50
Phase Time (sec)	64	19	56
Phase Split	46%	14%	40%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [Anderson Street/ Hardy Street - Existing PM]

Network: N102 [Anderson/ Maroondah-PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 139 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Anderson Street														
1	L2	325	2.0	325	2.0	0.702	40.3	LOS D	18.0	129.4	0.87	0.82	0.87	36.3
2	T1	771	5.0	771	5.0	0.702	35.3	LOS D	18.7	136.7	0.88	0.80	0.88	27.6
Approach		1096	4.1	1096	4.1	0.702	36.8	LOS D	18.7	136.7	0.88	0.81	0.88	31.0
North: Anderson Street														
8	T1	860	5.0	860	5.0	0.474	19.0	LOS B	12.2	89.1	0.63	0.56	0.63	40.0
9	R2	160	2.0	160	2.0	0.934	93.0	LOS F	7.9	56.3	1.00	1.01	1.48	17.3
Approach		1020	4.5	1020	4.5	0.934	30.6	LOS C	12.2	89.1	0.69	0.63	0.76	33.2
West: Hardy Street														
10	L2	386	2.0	386	2.0	1.005	111.8	LOS F	32.9	234.6	1.00	1.10	1.53	13.0
12	R2	604	2.0	604	2.0	1.005	113.9	LOS F	32.9	234.6	1.00	1.10	1.55	20.7
Approach		991	2.0	991	2.0	1.005	113.1	LOS F	32.9	234.6	1.00	1.10	1.54	18.1
All Vehicles		3106	3.6	3106	3.6	1.005	59.1	LOS E	32.9	234.6	0.85	0.84	1.05	24.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P3	North Full Crossing	53	63.8	LOS F	0.2	0.2	0.96	0.96
P4	West Full Crossing	53	63.8	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		105	63.8	LOS F			0.96	0.96

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: DI-RD-08 [Swansea Road/ Hull Road - Existing AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 80 seconds (Site User-Given Phase Times)

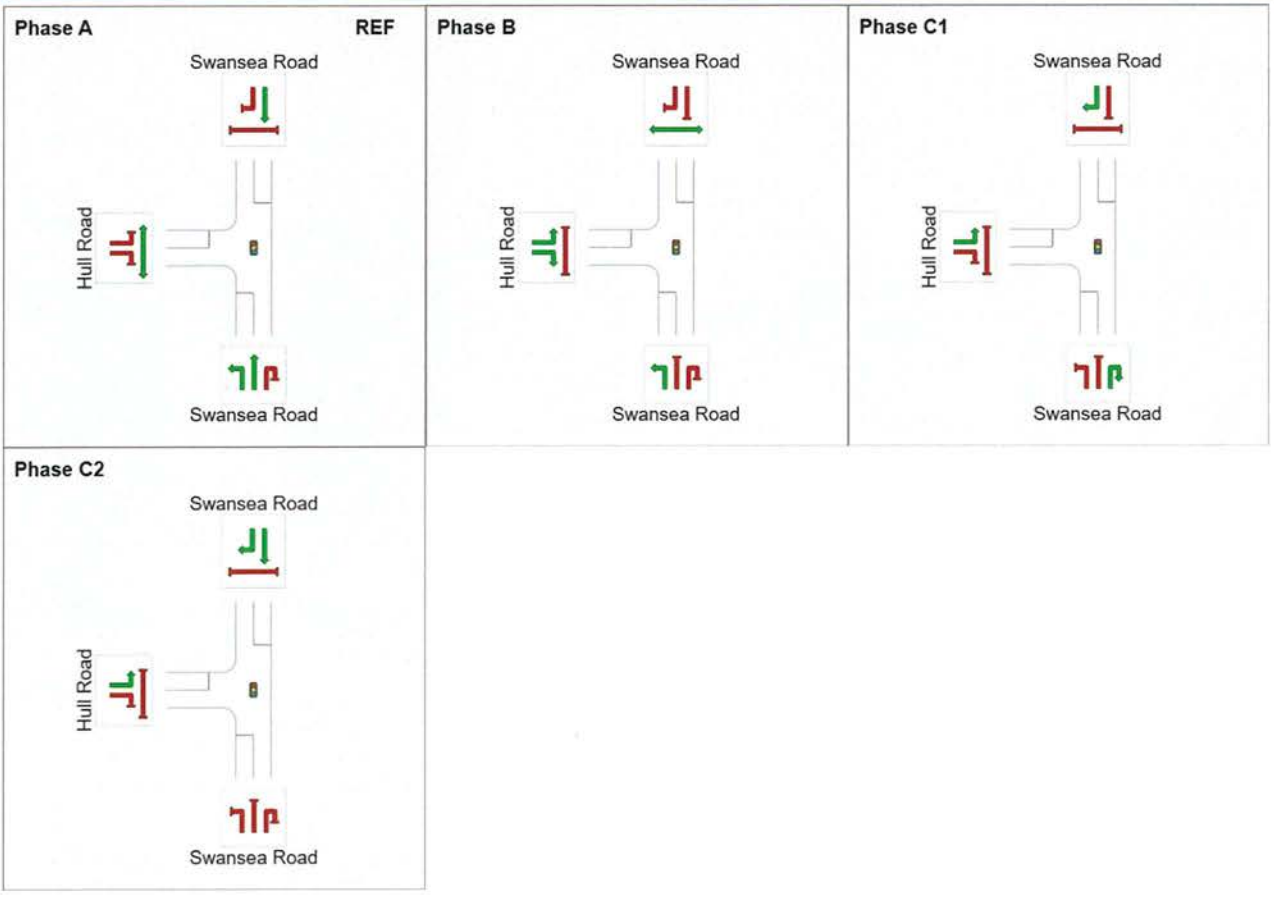
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C1, C2
Output Phase Sequence: A, B, C1, C2

Phase Timing Summary

Phase	A	B	C1	C2
Phase Change Time (sec)	0	37	57	63
Green Time (sec)	31	14	2	17
Phase Time (sec)	37	18	2	23
Phase Split	46%	23%	3%	29%

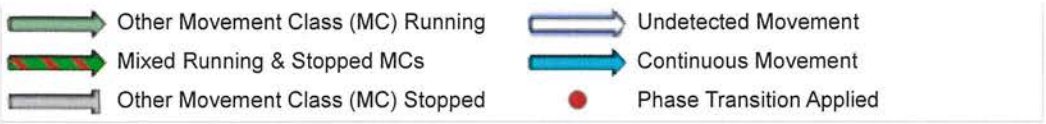
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency 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



MOVEMENT SUMMARY

Site: DI-RD-08 [Swansea Road/ Hull Road - Existing AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 80 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Swansea Road												
1	L2	140	5.0	0.779	28.1	LOS C	20.7	151.2	0.88	0.83	0.92	42.1
2	T1	1086	5.0	0.779	22.6	LOS C	20.7	151.2	0.87	0.81	0.92	43.5
3u	U	4	5.0	0.125	54.8	LOS D	0.2	1.4	1.00	0.63	1.00	30.9
Approach		1231	5.0	0.779	23.3	LOS C	20.7	151.2	0.87	0.81	0.92	43.2
North: Swansea Road												
8	T1	832	5.0	0.303	5.6	LOS A	6.5	47.7	0.44	0.38	0.44	54.9
9	R2	301	5.0	0.656	36.2	LOS D	11.0	80.0	0.96	0.84	0.97	36.9
Approach		1133	5.0	0.656	13.8	LOS B	11.0	80.0	0.58	0.50	0.58	48.6
West: Hull Road												
10	L2	363	5.0	0.438	21.2	LOS C	9.6	69.9	0.72	0.79	0.72	43.5
12	R2	286	5.0	0.847	47.6	LOS D	12.5	91.4	1.00	0.96	1.31	33.1
Approach		649	5.0	0.847	32.8	LOS C	12.5	91.4	0.84	0.86	0.98	38.2
All Vehicles		3013	5.0	0.847	21.8	LOS C	20.7	151.2	0.75	0.71	0.80	43.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P3	North Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
P4	West Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
All Pedestrians		105	34.3	LOS D			0.93	0.93

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: DI-RD-08 [Swansea Road/ Hull Road - Existing PM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 106 seconds (Site User-Given Phase Times)

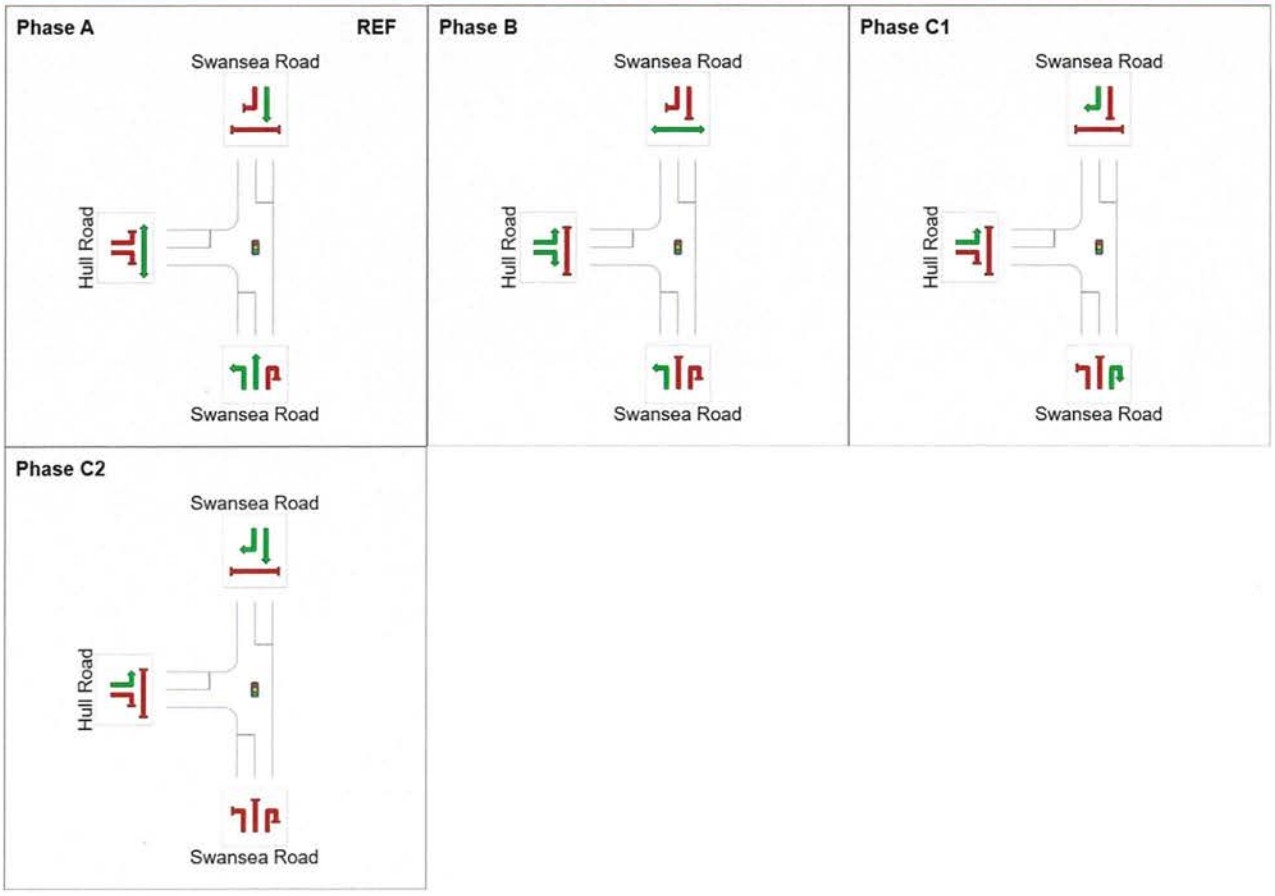
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: OP Sheet -TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C1, C2
Output Phase Sequence: A, B, C1, C2

Phase Timing Summary

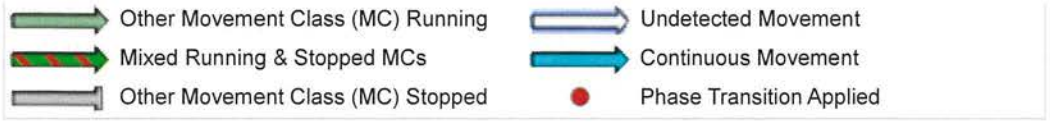
Phase	A	B	C1	C2
Phase Change Time (sec)	0	50	76	84
Green Time (sec)	44	20	2	22
Phase Time (sec)	50	26	2	28
Phase Split	47%	25%	2%	26%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: DI-RD-08 [Swansea Road/ Hull Road - Existing PM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 106 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Swansea Road												
1	L2	134	5.0	0.726	30.0	LOS C	23.9	174.3	0.82	0.75	0.82	41.3
2	T1	1087	5.0	0.726	24.3	LOS C	23.9	174.3	0.81	0.73	0.81	42.6
3u	U	3	5.0	0.124	70.8	LOS E	0.2	1.4	1.00	0.62	1.00	27.2
Approach		1224	5.0	0.726	25.1	LOS C	23.9	174.3	0.81	0.73	0.81	42.4
North: Swansea Road												
8	T1	816	5.0	0.295	7.2	LOS A	8.3	60.5	0.43	0.38	0.43	53.7
9	R2	292	5.0	0.718	48.2	LOS D	14.5	105.7	0.98	0.86	1.03	32.9
Approach		1107	5.0	0.718	18.0	LOS B	14.5	105.7	0.58	0.51	0.59	46.0
West: Hull Road												
10	L2	269	5.0	0.319	24.2	LOS C	8.6	62.7	0.66	0.76	0.66	42.0
12	R2	306	5.0	0.841	57.4	LOS E	17.0	124.4	1.00	0.93	1.21	30.4
Approach		576	5.0	0.841	41.8	LOS D	17.0	124.4	0.84	0.85	0.95	34.9
All Vehicles		2907	5.0	0.841	25.7	LOS C	23.9	174.3	0.73	0.67	0.75	41.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P3	North Full Crossing	53	47.3	LOS E	0.1	0.1	0.95	0.95
P4	West Full Crossing	53	47.3	LOS E	0.1	0.1	0.95	0.95
All Pedestrians		105	47.3	LOS E			0.95	0.95

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: DI-RD-05 [Hutchinson Street/ John Street - Existing AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 75 seconds (Site User-Given Phase Times)

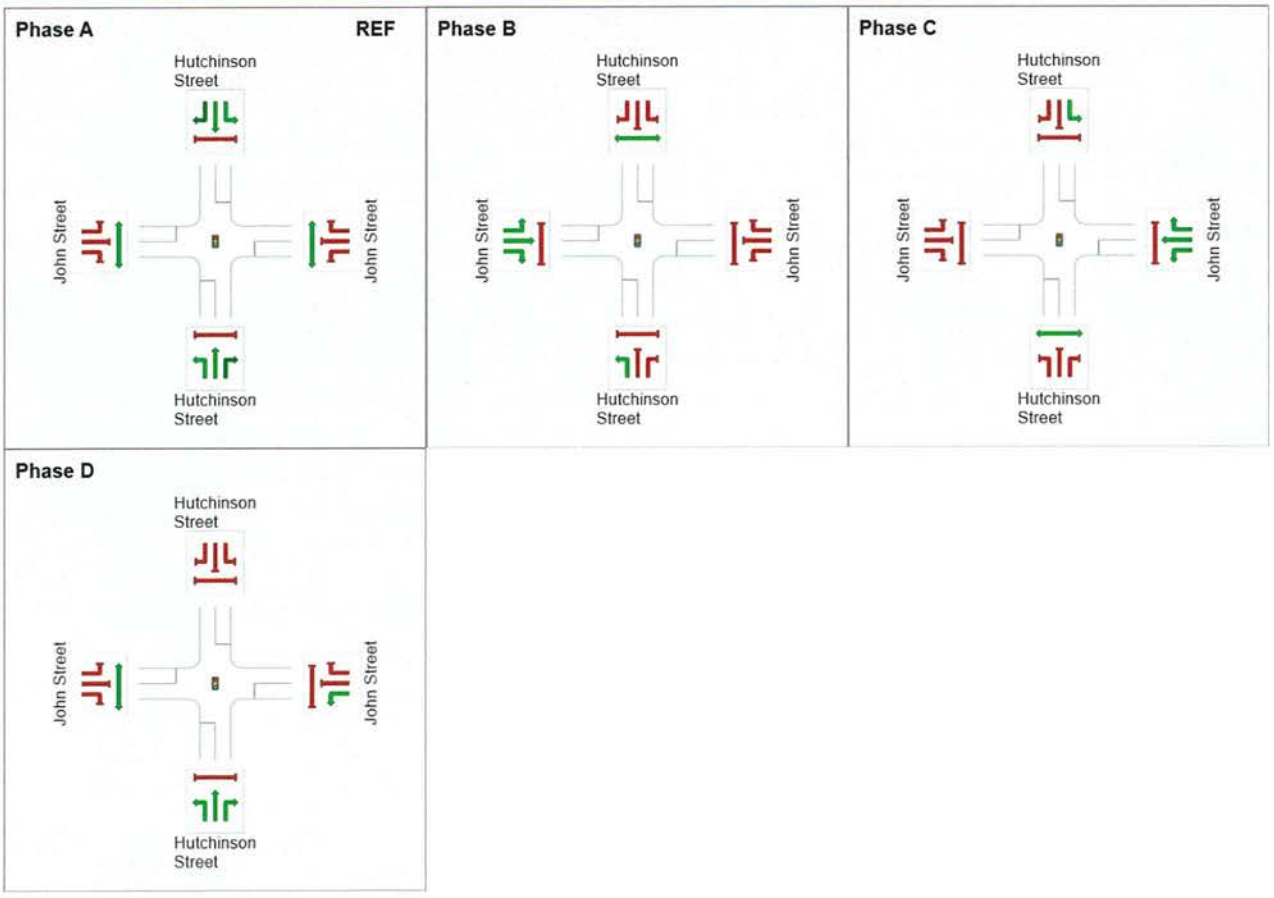
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

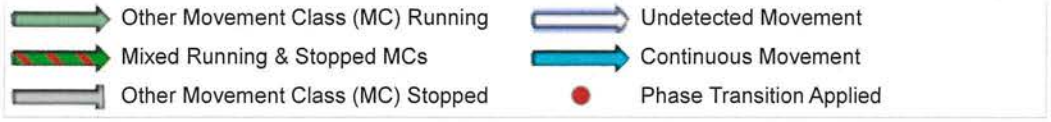
Phase	A	B	C	D
Phase Change Time (sec)	0	20	42	63
Green Time (sec)	15	17	15	6
Phase Time (sec)	20	23	21	11
Phase Split	27%	31%	28%	15%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-05 [Hutchinson Street/ John Street - Existing AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 75 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Hutchinson Street												
1	L2	117	2.0	0.220	20.9	LOS C	3.9	28.0	0.68	0.69	0.68	44.6
2	T1	49	2.0	0.220	15.3	LOS B	3.9	28.0	0.68	0.69	0.68	45.6
3	R2	197	2.0	0.566	27.7	LOS C	5.8	41.3	0.93	0.79	0.93	40.4
Approach		363	2.0	0.566	23.8	LOS C	5.8	41.3	0.82	0.75	0.82	42.4
East: John Street												
4	L2	324	2.0	0.492	25.9	LOS C	9.4	66.6	0.83	0.81	0.83	41.2
5	T1	207	2.0	0.602	30.4	LOS C	7.9	56.6	0.96	0.80	0.96	39.8
6	R2	23	2.0	0.602	35.9	LOS D	7.9	56.6	0.96	0.80	0.96	38.9
Approach		555	2.0	0.602	28.0	LOS C	9.4	66.6	0.88	0.80	0.88	40.6
North: Hutchinson Street												
7	L2	27	2.0	0.109	18.6	LOS B	0.8	5.5	0.81	0.67	0.81	46.3
8	T1	182	2.0	0.460	27.6	LOS C	5.8	41.6	0.92	0.75	0.92	40.9
9	R2	14	2.0	0.460	34.9	LOS C	5.8	41.6	0.93	0.76	0.93	39.3
Approach		223	2.0	0.460	26.9	LOS C	5.8	41.6	0.90	0.74	0.90	41.4
West: John Street												
10	L2	15	2.0	0.689	35.9	LOS D	10.6	75.5	0.97	0.85	1.03	39.2
11	T1	285	2.0	0.689	30.3	LOS C	10.6	75.5	0.97	0.85	1.03	40.0
12	R2	238	2.0	0.573	34.2	LOS C	8.0	56.9	0.94	0.82	0.94	37.6
Approach		538	2.0	0.689	32.2	LOS C	10.6	75.5	0.96	0.84	0.99	38.9
All Vehicles		1679	2.0	0.689	28.3	LOS C	10.6	75.5	0.90	0.79	0.90	40.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P2	East Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P3	North Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P4	West Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
All Pedestrians		211	31.8	LOS D			0.92	0.92

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: DI-RD-05 [Hutchinson Street/ John Street - Existing PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Cycle Time)

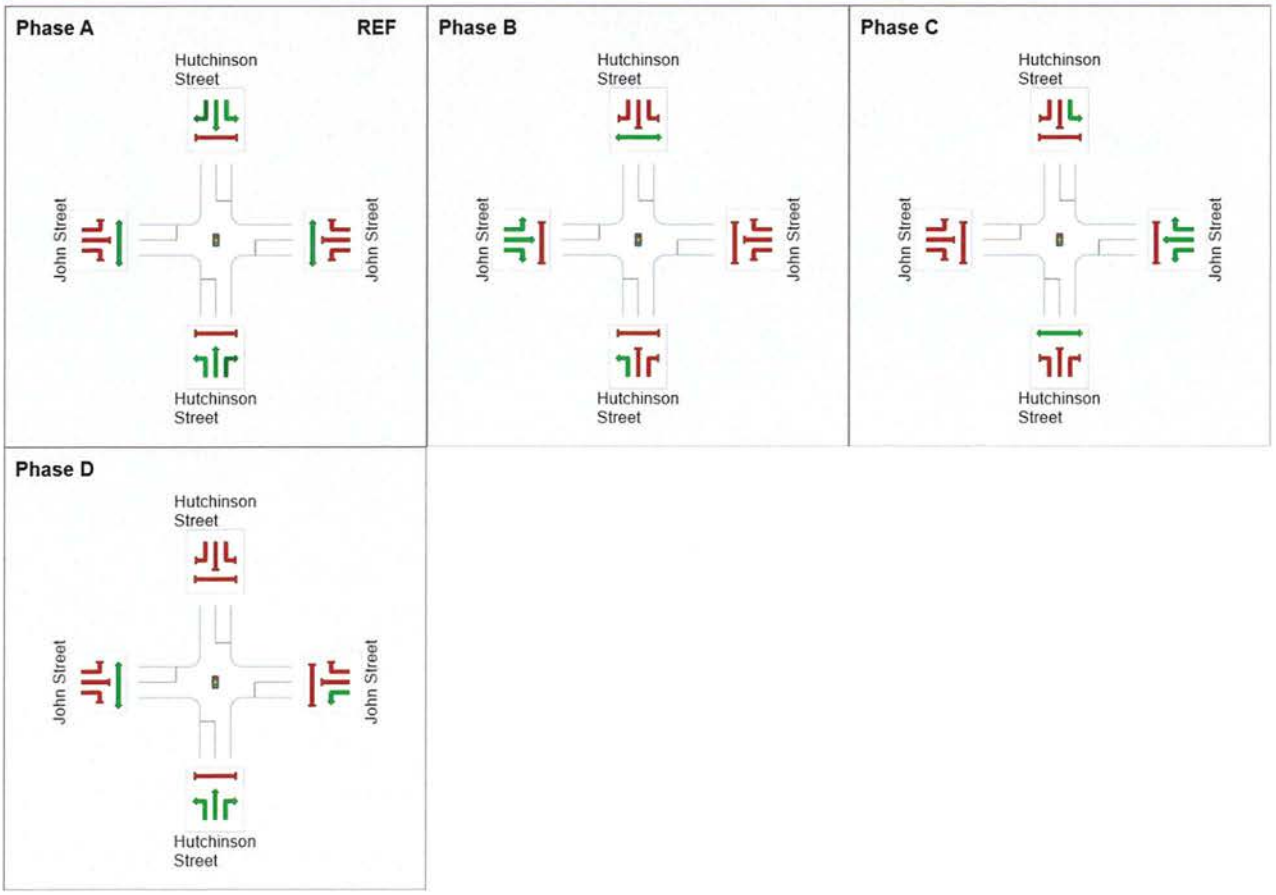
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Op SHeet TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	18	58	88
Green Time (sec)	12	34	24	16
Phase Time (sec)	18	40	30	22
Phase Split	16%	36%	27%	20%

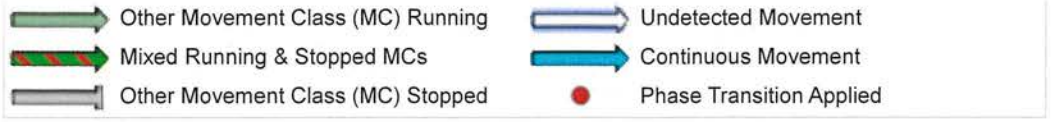
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-05 [Hutchinson Street/ John Street - Existing PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Hutchinson Street												
1	L2	174	2.0	0.309	31.1	LOS C	8.1	57.7	0.74	0.75	0.74	39.4
2	T1	43	2.0	0.309	25.5	LOS C	8.1	57.7	0.74	0.75	0.74	40.2
3	R2	166	2.0	0.417	38.1	LOS D	7.0	49.8	0.90	0.79	0.90	36.3
Approach		383	2.0	0.417	33.5	LOS C	8.1	57.7	0.81	0.76	0.81	38.1
East: John Street												
4	L2	64	2.0	0.084	26.0	LOS C	2.0	14.6	0.63	0.71	0.63	41.2
5	T1	234	2.0	0.622	42.5	LOS D	12.8	91.2	0.96	0.81	0.96	35.2
6	R2	26	2.0	0.622	48.0	LOS D	12.8	91.2	0.96	0.81	0.96	34.5
Approach		324	2.0	0.622	39.7	LOS D	12.8	91.2	0.89	0.79	0.89	36.2
North: Hutchinson Street												
7	L2	52	2.0	0.086	20.3	LOS C	1.2	8.5	0.72	0.71	0.72	44.0
8	T1	67	2.0	0.355	50.6	LOS D	3.8	27.0	0.97	0.75	0.97	32.6
9	R2	6	2.0	0.355	56.1	LOS E	3.8	27.0	0.97	0.75	0.97	32.0
Approach		125	2.0	0.355	38.4	LOS D	3.8	27.0	0.87	0.73	0.87	36.5
West: John Street												
10	L2	18	2.0	0.637	40.3	LOS D	16.1	114.4	0.90	0.78	0.90	37.4
11	T1	335	2.0	0.637	34.7	LOS C	16.1	114.4	0.90	0.78	0.90	38.1
12	R2	146	2.0	0.259	36.2	LOS D	5.9	41.9	0.79	0.77	0.79	36.8
Approach		499	2.0	0.637	35.3	LOS D	16.1	114.4	0.87	0.78	0.87	37.7
All Vehicles		1332	2.0	0.637	36.2	LOS D	16.1	114.4	0.86	0.77	0.86	37.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95
P2	East Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95
P3	North Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		211	49.3	LOS E			0.95	0.95

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.

MOVEMENT SUMMARY

▽ Site: 103 [Maroondah Highway/ John Street-Existing PM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: RoadName												
21	L2	349	2.0	0.397	8.8	LOS A	2.3	16.7	0.55	0.79	0.66	51.1
23	R2	1	2.0	0.060	188.2	LOS F	0.2	1.1	0.98	0.99	0.98	13.4
Approach		351	2.0	0.397	9.3	LOS A	2.3	16.7	0.55	0.79	0.66	50.7
NorthEast: Maroondah Highway												
24	L2	3	0.0	0.217	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	58.1
25	T1	842	0.0	0.217	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		845	0.0	0.217	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
SouthWest: Maroondah Highway												
31	T1	998	0.0	0.517	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
32	R2	511	0.0	0.607	12.7	LOS B	4.6	32.2	0.74	1.07	1.26	48.5
Approach		1508	0.0	0.607	4.4	NA	4.6	32.2	0.25	0.36	0.43	55.2
All Vehicles		2704	0.3	0.607	3.7	NA	4.6	32.2	0.21	0.31	0.32	55.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
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 movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 103 [Maroondah Highway/ John Street-Existing AM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: RoadName												
21	L2	292	2.0	0.321	8.0	LOS A	1.6	11.1	0.50	0.72	0.53	51.7
23	R2	1	2.0	0.033	108.7	LOS F	0.1	0.6	0.97	0.99	0.97	19.9
Approach		293	2.0	0.321	8.4	LOS A	1.6	11.1	0.51	0.72	0.53	51.4
NorthEast: Maroondah Highway												
24	L2	3	0.0	0.202	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	58.1
25	T1	786	0.0	0.202	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		789	0.0	0.202	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
SouthWest: Maroondah Highway												
31	T1	800	0.0	0.412	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
32	R2	598	0.0	0.670	13.1	LOS B	6.0	42.3	0.76	1.13	1.41	48.3
Approach		1398	0.0	0.670	5.6	NA	6.0	42.3	0.32	0.48	0.60	54.0
All Vehicles		2480	0.2	0.670	4.2	NA	6.0	42.3	0.24	0.36	0.40	55.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
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 movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 103 [Maroondah Highway/ Hutchinson Street-Existing AM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Hutchinson Street												
1	L2	59	2.0	0.395	14.5	LOS B	1.4	10.3	0.76	0.98	1.03	39.2
3	R2	14	2.0	0.395	100.3	LOS F	1.4	10.3	0.76	0.98	1.03	39.2
Approach		73	2.0	0.395	30.7	LOS D	1.4	10.3	0.76	0.98	1.03	39.2
East: Maroondah Highway												
4	L2	169	2.0	0.093	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.5
5	T1	889	5.0	0.235	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		1059	4.5	0.235	0.9	NA	0.0	0.0	0.00	0.09	0.00	58.8
West: Maroondah Highway												
11	T1	669	5.0	0.278	2.8	LOS A	2.5	18.1	0.15	0.05	0.18	56.9
12	R2	49	2.0	0.278	22.5	LOS C	2.5	18.1	0.72	0.24	0.85	46.6
Approach		719	4.8	0.278	4.2	NA	2.5	18.1	0.19	0.06	0.23	56.0
All Vehicles		1851	4.5	0.395	3.3	NA	2.5	18.1	0.10	0.12	0.13	56.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
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 movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 103 [Maroondah Highway/ Hutchinson Street-Existing PM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Hutchinson Street												
1	L2	48	2.0	0.524	30.4	LOS D	2.0	14.3	0.83	1.08	1.29	30.4
3	R2	13	2.0	0.524	161.9	LOS F	2.0	14.3	0.83	1.08	1.29	30.4
Approach		61	2.0	0.524	57.6	LOS F	2.0	14.3	0.83	1.08	1.29	30.4
East: Maroondah Highway												
4	L2	89	2.0	0.049	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	53.5
5	T1	872	5.0	0.231	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach		961	4.7	0.231	0.5	NA	0.0	0.0	0.00	0.05	0.00	59.3
West: Maroondah Highway												
11	T1	894	5.0	0.304	2.1	LOS A	2.4	17.2	0.14	0.03	0.18	57.4
12	R2	37	2.0	0.304	20.9	LOS C	2.4	17.2	0.40	0.08	0.50	51.8
Approach		931	4.9	0.304	2.9	NA	2.4	17.2	0.15	0.03	0.19	57.2
All Vehicles		1953	4.7	0.524	3.4	NA	2.4	17.2	0.10	0.08	0.13	56.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
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 movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

POST DEVELOPMENT

PHASING SUMMARY

Site: DI-RD-06 [Victoria Road/ Maroondah Highway/ Mooroolbark Road - Proposed+Treated AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 133 seconds (Site User-Given Phase Times)

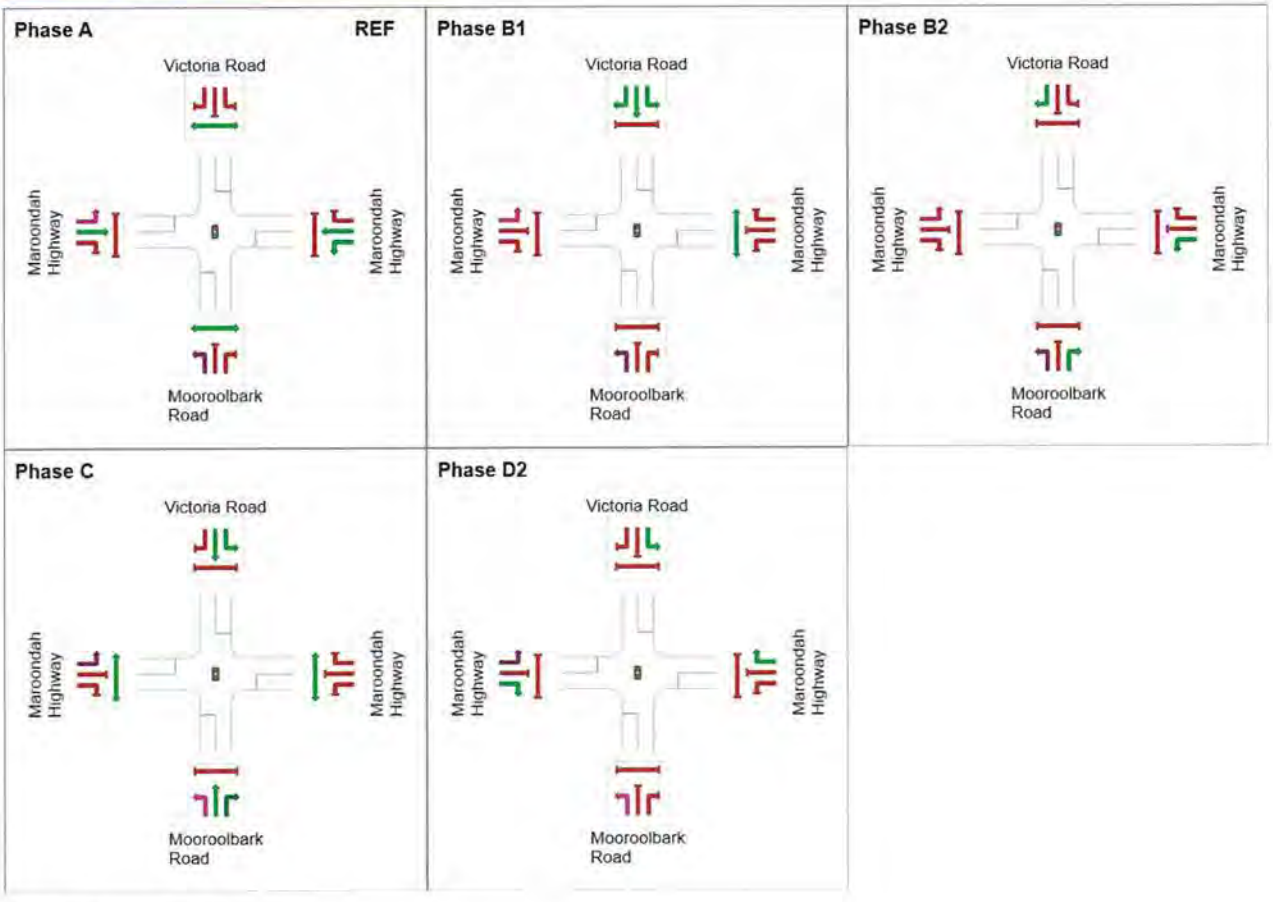
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B1, B2, C, D2
Output Phase Sequence: A, B1, B2, C, D2

Phase Timing Summary

Phase	A	B1	B2	C	D2
Phase Change Time (sec)	0	60	69	90	118
Green Time (sec)	54	3	20	22	10
Phase Time (sec)	60	4	26	27	16
Phase Split	45%	3%	20%	20%	12%

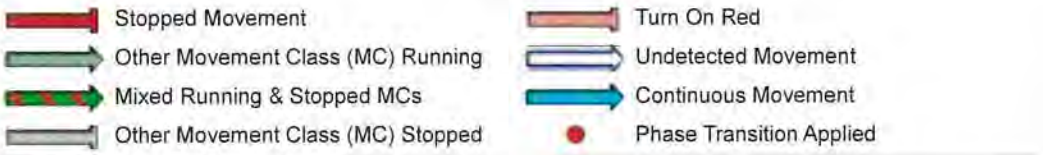
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency 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



MOVEMENT SUMMARY

Site: DI-RD-06 [Victoria Road/ Maroondah Highway/ Mooroolbark Road - Proposed+Treated AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 133 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Mooroolbark Road												
1	L2	366	5.0	0.455	24.3	LOS C	14.6	106.5	0.70	0.79	0.70	42.2
2	T1	247	5.0	0.735	58.9	LOS E	15.8	115.1	1.00	0.87	1.05	27.5
3	R2	354	5.0	0.783	47.1	LOS D	19.2	140.0	0.99	0.87	1.05	30.7
Approach		967	5.0	0.783	41.5	LOS D	19.2	140.0	0.88	0.84	0.92	33.1
East: Maroondah Highway												
4	L2	215	5.0	0.776	38.3	LOS D	24.2	176.5	0.85	0.81	0.91	36.6
5	T1	1306	5.0	0.776	33.6	LOS C	30.0	218.8	0.86	0.78	0.88	46.0
6	R2	101	5.0	0.696	76.0	LOS E	6.8	49.7	1.00	0.82	1.11	28.5
Approach		1622	5.0	0.776	36.9	LOS D	30.0	218.8	0.86	0.78	0.90	43.2
North: Victoria Road												
7	L2	78	5.0	0.521	55.8	LOS E	8.4	61.6	0.94	0.88	1.33	34.7
8	T1	302	5.0	0.521	49.9	LOS D	9.4	68.9	0.95	0.88	1.34	29.9
9	R2	282	5.0	0.810	67.9	LOS E	18.8	137.0	1.00	0.90	1.13	30.5
Approach		662	5.0	0.810	58.3	LOS E	18.8	137.0	0.97	0.89	1.25	30.8
West: Maroondah Highway												
10	L2	296	5.0	0.221	11.5	LOS B	5.0	36.7	0.32	0.69	0.32	57.6
11	T1	1352	5.0	0.935	59.9	LOS E	54.1	394.7	0.96	1.04	1.20	34.9
12	R2	197	5.0	0.678	75.8	LOS E	6.6	48.2	1.00	0.81	1.09	23.6
Approach		1844	5.0	0.935	53.8	LOS D	54.1	394.7	0.87	0.96	1.05	35.9
All Vehicles		5096	5.0	0.935	46.7	LOS D	54.1	394.7	0.88	0.87	1.00	36.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	60.8	LOS F	0.2	0.2	0.96	0.96
P2	East Full Crossing	53	29.9	LOS C	0.1	0.1	0.91	0.91
P3	North Full Crossing	53	60.8	LOS F	0.2	0.2	0.96	0.96
P4	West Full Crossing	53	60.8	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		211	53.0	LOS E			0.95	0.95

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: DI-RD-06 [Victoria Road/ Maroondah Highway/ Mooroolbark Road - Proposed+Treated PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 137 seconds (Site User-Given Phase Times)

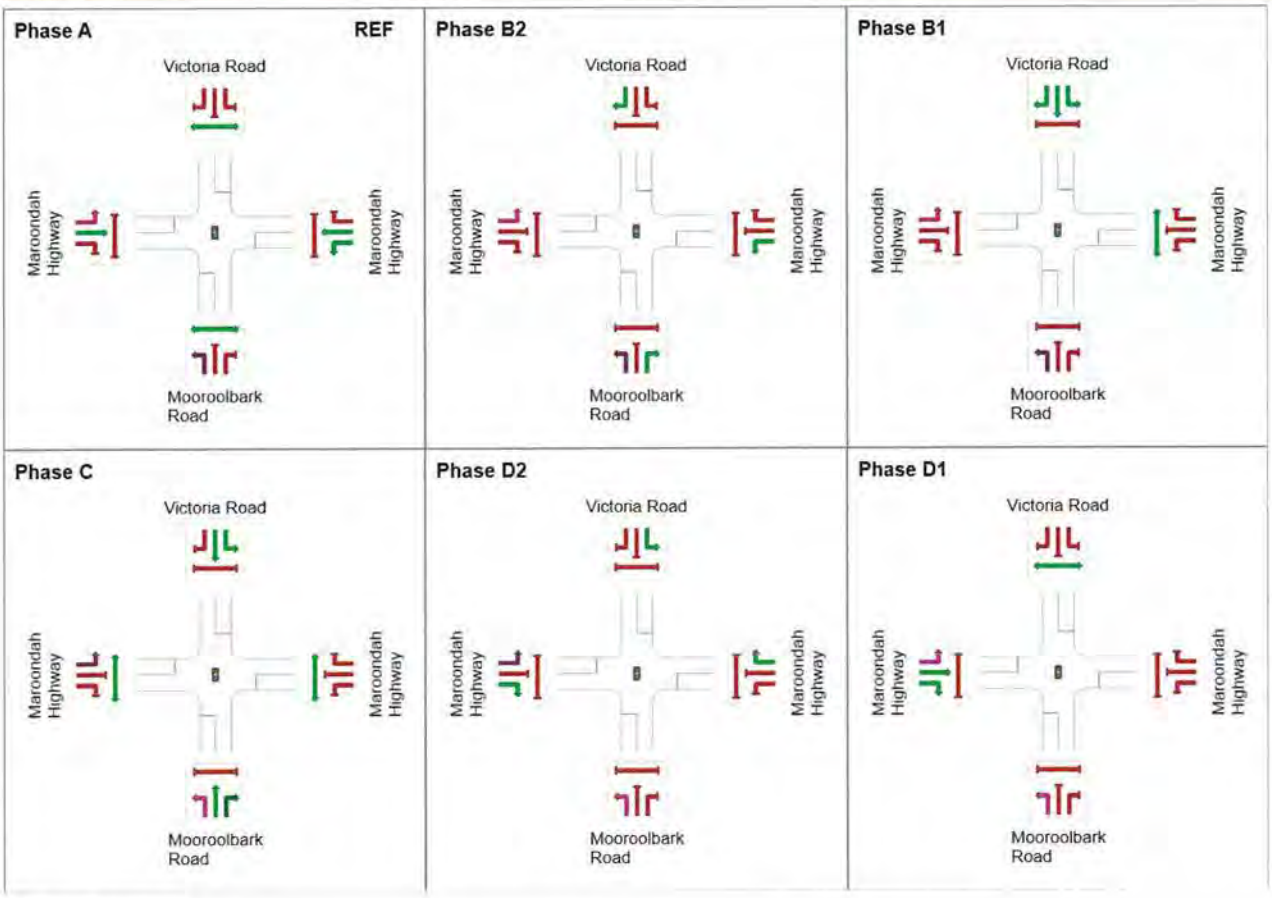
Timings based on settings in the Site Phasing & Timing dialog
Phase Times specified by the user
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B2, B1, C, D2, D1
Output Phase Sequence: A, B2, B1, C, D2, D1

Phase Timing Summary

Phase	A	B2	B1	C	D2	D1
Phase Change Time (sec)	0	56	81	89	114	126
Green Time (sec)	53	19	2	19	8	8
Phase Time (sec)	59	25	8	23	11	11
Phase Split	43%	18%	6%	17%	8%	8%

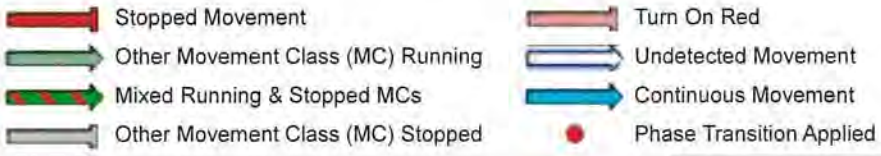
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency 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



MOVEMENT SUMMARY

Site: DI-RD-06 [Victoria Road/ Maroondah Highway/ Mooroolbark Road - Proposed+Treated PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 137 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Mooroolbark Road												
1	L2	228	5.0	0.291	26.1	LOS C	8.8	64.6	0.65	0.76	0.65	41.0
2	T1	261	5.0	0.925	80.4	LOS F	20.4	148.9	1.00	1.04	1.37	22.5
3	R2	216	5.0	0.453	40.6	LOS D	10.3	75.2	0.89	0.80	0.89	33.2
Approach		705	5.0	0.925	50.6	LOS D	20.4	148.9	0.85	0.88	0.99	29.8
East: Maroondah Highway												
4	L2	236	5.0	0.857	51.8	LOS D	28.4	207.4	0.86	0.87	0.99	30.6
5	T1	1322	5.0	0.857	45.1	LOS D	39.1	285.5	0.90	0.88	1.00	40.3
6	R2	76	5.0	0.672	80.1	LOS F	5.3	38.8	1.00	0.80	1.11	27.6
Approach		1634	5.0	0.857	47.7	LOS D	39.1	285.5	0.90	0.87	1.01	38.2
North: Victoria Road												
7	L2	71	5.0	0.445	58.2	LOS E	9.5	69.6	0.92	0.78	0.92	33.9
8	T1	269	5.0	0.445	52.1	LOS D	10.5	76.8	0.93	0.77	0.93	29.2
9	R2	326	5.0	0.900	77.9	LOS E	24.4	178.3	1.00	0.96	1.27	28.2
Approach		666	5.0	0.900	65.4	LOS E	24.4	178.3	0.96	0.87	1.10	29.1
West: Maroondah Highway												
10	L2	402	5.0	0.288	11.6	LOS B	7.4	54.4	0.30	0.68	0.30	57.6
11	T1	1500	5.0	0.951	61.2	LOS E	62.0	452.7	0.92	1.03	1.17	34.5
12	R2	360	5.0	0.672	69.3	LOS E	11.7	85.7	1.00	0.83	1.02	25.0
Approach		2262	5.0	0.951	53.7	LOS D	62.0	452.7	0.82	0.94	1.00	35.5
All Vehicles		5267	5.0	0.951	52.9	LOS D	62.0	452.7	0.87	0.90	1.01	34.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	62.8	LOS F	0.2	0.2	0.96	0.96
P2	East Full Crossing	53	62.8	LOS F	0.2	0.2	0.96	0.96
P3	North Full Crossing	53	62.8	LOS F	0.2	0.2	0.96	0.96
P4	West Full Crossing	53	62.8	LOS F	0.2	0.2	0.96	0.96
All Pedestrians		211	62.8	LOS F			0.96	0.96

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: DI-RD-07A [Mooroolbark Road/ Hull Road - Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site User-Given Cycle Time)

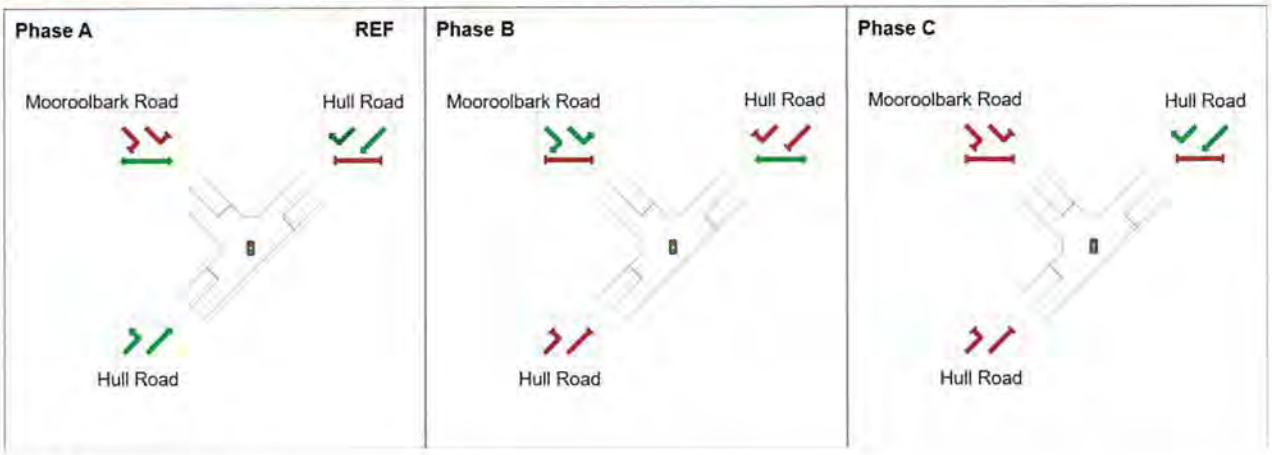
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Op SHeet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	25	58
Green Time (sec)	19	27	21
Phase Time (sec)	25	33	27
Phase Split	29%	39%	32%

See the Phase Information section in the Detailed Output 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, 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: DI-RD-07A [Mooroolbark Road/ Hull Road - Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Hull Road												
25	T1	883	5.0	0.698	14.5	LOS B	21.8	159.0	0.75	0.67	0.75	48.5
26	R2	482	5.0	0.902	43.0	LOS D	20.3	148.4	1.00	1.03	1.45	34.5
Approach		1365	5.0	0.902	24.5	LOS C	21.8	159.0	0.84	0.80	0.99	42.4
NorthWest: Mooroolbark Road												
27	L2	283	5.0	0.816	40.3	LOS D	11.5	84.2	0.89	0.91	1.13	35.4
29	R2	425	5.0	1.033	109.4	LOS F	33.5	244.3	1.00	1.28	2.07	21.0
Approach		708	5.0	1.033	81.8	LOS F	33.5	244.3	0.96	1.13	1.69	25.1
SouthWest: Hull Road												
30	L2	338	5.0	0.999	87.4	LOS F	24.2	176.6	1.00	1.23	1.87	24.4
31	T1	479	5.0	0.999	79.3	LOS E	29.9	218.0	1.00	1.37	1.81	26.0
Approach		817	5.0	0.999	82.7	LOS F	29.9	218.0	1.00	1.31	1.83	25.3
All Vehicles		2891	5.0	1.033	55.0	LOS E	33.5	244.3	0.91	1.02	1.40	31.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P6	NorthEast Full Crossing	53	29.7	LOS C	0.1	0.1	0.84	0.84
P7	NorthWest Full Crossing	53	33.2	LOS D	0.1	0.1	0.88	0.88
All Pedestrians		105	31.4	LOS D			0.86	0.86

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: DI-RD-07A [Mooroolbark Road/ Hull Road - Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Cycle Time)

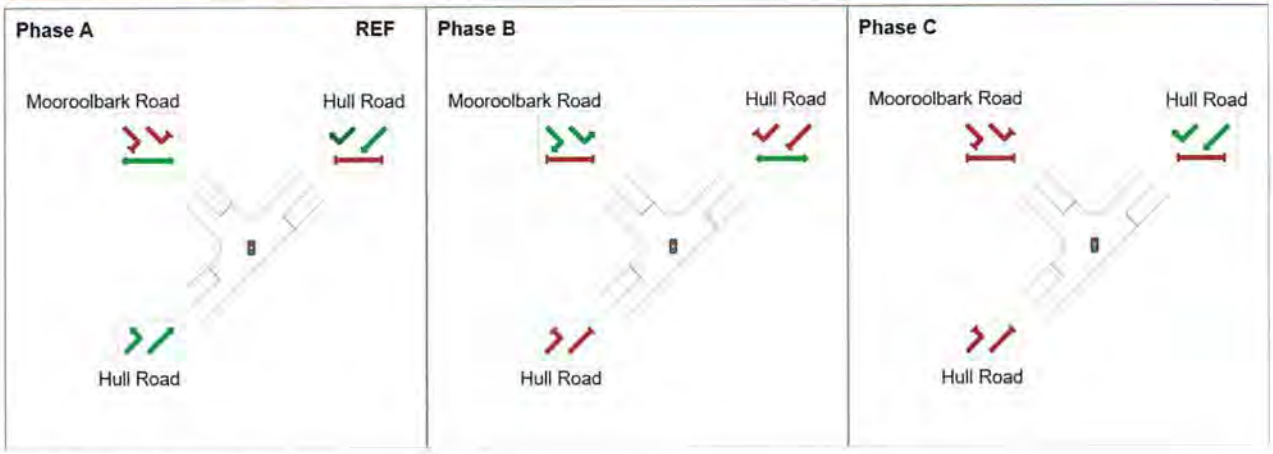
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	45	86
Green Time (sec)	39	35	18
Phase Time (sec)	45	41	24
Phase Split	41%	37%	22%

See the Phase Information section in the Detailed Output 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, 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: DI-RD-07A [Mooroolbark Road/ Hull Road - Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 110 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
NorthEast: Hull Road												
25	T1	645	5.0	0.482	14.1	LOS B	16.3	118.9	0.61	0.53	0.61	48.7
26	R2	326	5.0	0.896	54.9	LOS D	16.4	120.0	1.00	1.03	1.51	31.0
Approach		972	5.0	0.896	27.8	LOS C	16.4	120.0	0.74	0.70	0.91	40.9
NorthWest: Mooroolbark Road												
27	L2	426	0.0	1.049	131.4	LOS F	41.3	289.0	1.00	1.25	1.93	18.7
29	R2	296	0.0	0.857	50.9	LOS D	15.6	109.3	0.86	0.91	1.13	32.1
Approach		722	0.0	1.049	98.5	LOS F	41.3	289.0	0.94	1.11	1.60	22.5
SouthWest: Hull Road												
30	L2	401	5.0	1.056	130.3	LOS F	60.1	438.7	1.00	1.37	1.88	18.9
31	T1	844	5.0	1.056	124.4	LOS F	61.0	445.3	1.00	1.53	1.87	19.4
Approach		1245	5.0	1.056	126.3	LOS F	61.0	445.3	1.00	1.48	1.88	19.2
All Vehicles		2939	3.8	1.056	86.9	LOS F	61.0	445.3	0.90	1.13	1.49	24.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P6	NorthEast Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95
P7	NorthWest Full Crossing	53	49.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		105	49.3	LOS E			0.95	0.95

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: DI-RD-01 [Mooroolbark Rad/ Site Access/ Churchill Drive- Prop + Growth AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site Optimum Cycle Time - Minimum Delay)

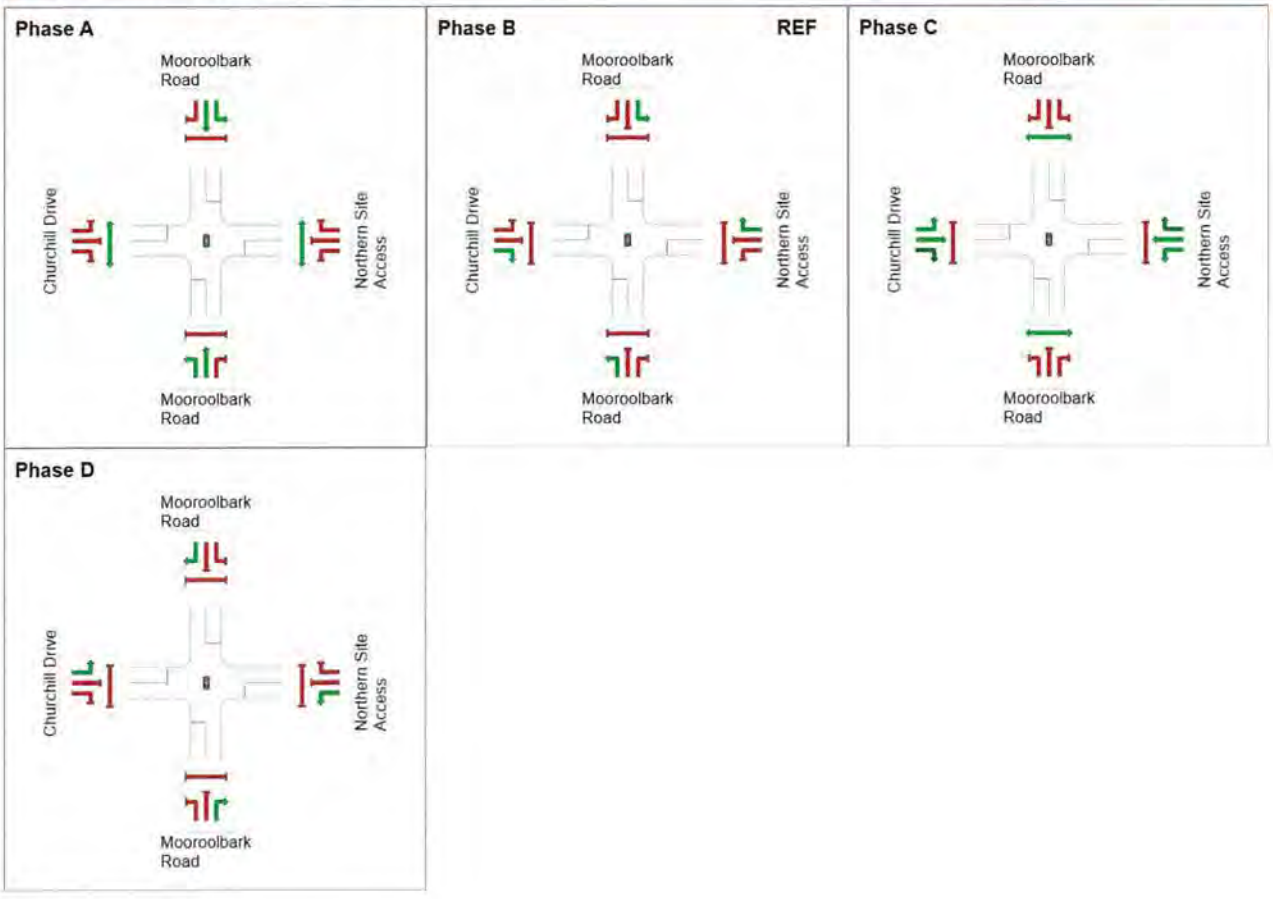
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: CARDNO
Reference Phase: Phase B
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	45	0	12	33
Green Time (sec)	39	6	15	6
Phase Time (sec)	45	12	21	12
Phase Split	50%	13%	23%	13%

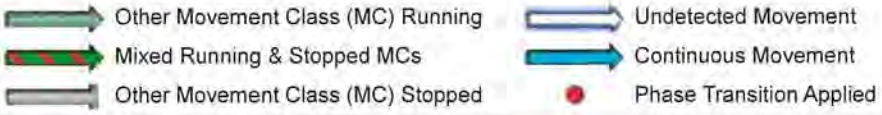
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-01 [Mooroolbark Rad/ Site Access/ Churchill Drive- Prop + Growth AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 90 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Mooroolbark Road												
1	L2	4	2.0	0.004	14.4	LOS B	0.1	0.6	0.45	0.62	0.45	47.4
2	T1	924	5.0	0.579	20.6	LOS C	15.7	114.5	0.80	0.71	0.80	40.7
3	R2	33	2.0	0.267	51.6	LOS D	1.5	10.4	0.98	0.72	0.98	32.1
Approach		961	4.9	0.579	21.6	LOS C	15.7	114.5	0.81	0.71	0.81	40.3
East: Northern Site Access												
4	L2	58	2.0	0.105	30.1	LOS C	1.8	13.1	0.76	0.72	0.76	39.4
5	T1	11	2.0	0.033	34.1	LOS C	0.4	2.8	0.86	0.59	0.86	38.6
6	R2	120	2.0	0.377	34.0	LOS C	4.3	30.7	0.91	0.76	0.91	33.1
Approach		188	2.0	0.377	32.8	LOS C	4.3	30.7	0.86	0.74	0.86	35.6
North: Mooroolbark Road												
7	L2	65	2.0	0.063	14.8	LOS B	1.3	9.0	0.47	0.68	0.47	43.4
8	T1	631	5.0	0.530	18.9	LOS B	12.2	89.1	0.74	0.63	0.74	41.9
9	R2	67	2.0	0.552	53.1	LOS D	3.1	22.2	1.00	0.77	1.04	26.5
Approach		763	4.5	0.552	21.6	LOS C	12.2	89.1	0.74	0.65	0.74	40.0
West: Churchill Drive												
10	L2	95	2.0	0.220	33.5	LOS C	3.6	25.9	0.82	0.75	0.82	33.3
11	T1	11	2.0	0.220	28.0	LOS C	3.6	25.9	0.82	0.75	0.82	39.0
12	R2	15	2.0	0.042	31.4	LOS C	0.5	3.4	0.82	0.67	0.82	39.1
Approach		120	2.0	0.220	32.8	LOS C	3.6	25.9	0.82	0.74	0.82	34.7
All Vehicles		2033	4.3	0.579	23.3	LOS C	15.7	114.5	0.79	0.69	0.79	39.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	39.3	LOS D	0.1	0.1	0.94	0.94
P2	East Full Crossing	53	20.7	LOS C	0.1	0.1	0.68	0.68
P3	North Full Crossing	53	39.3	LOS D	0.1	0.1	0.94	0.94
P4	West Full Crossing	53	18.7	LOS B	0.1	0.1	0.65	0.65
All Pedestrians		211	29.5	LOS C			0.80	0.80

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: DI-RD-01 [Mooroolbark Rad/ Site Access/ Churchill Drive-Prop + Growth PM]

New Site
Site Category: (None)
Signals - Fixed Time 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: CARDNO
Reference Phase: Phase B
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

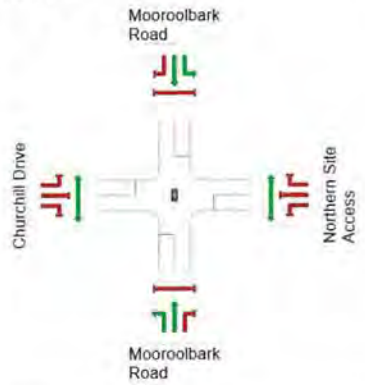
Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	46	0	12	34
Green Time (sec)	48	6	16	6
Phase Time (sec)	54	12	22	12
Phase Split	54%	12%	22%	12%

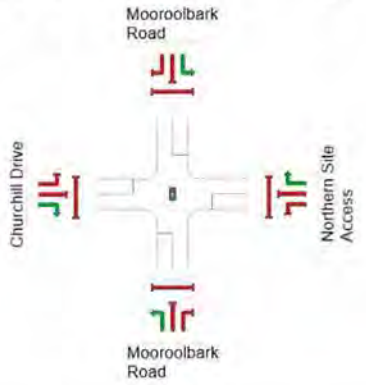
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence

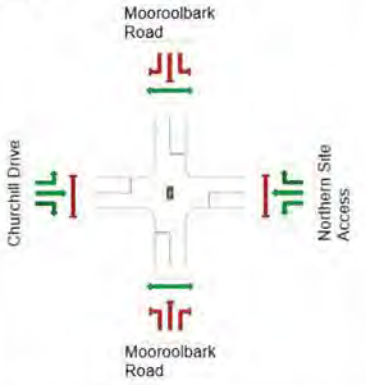
Phase A



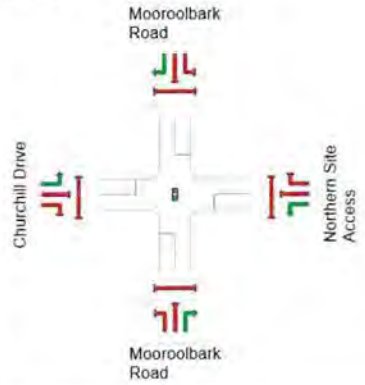
Phase B **REF**



Phase C

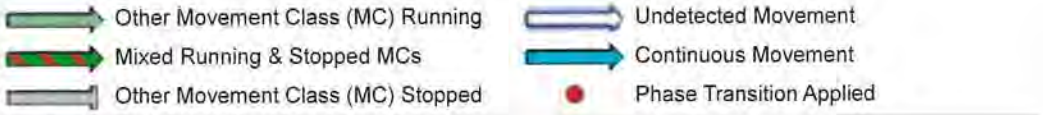


Phase D



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-01 [Mooroolbark Rad/ Site Access/ Churchill Drive-Prop + Growth PM]

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

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Mooroolbark Road												
1	L2	23	2.0	0.021	14.0	LOS B	0.4	3.2	0.42	0.65	0.42	47.6
2	T1	692	5.0	0.381	17.7	LOS B	10.6	77.7	0.68	0.59	0.68	42.7
3	R2	40	2.0	0.364	57.8	LOS E	2.0	14.3	1.00	0.73	1.00	30.4
Approach		755	4.7	0.381	19.7	LOS B	10.6	77.7	0.69	0.60	0.69	41.7
East: Northern Site Access												
4	L2	40	2.0	0.078	34.0	LOS C	1.4	10.2	0.77	0.71	0.77	37.8
5	T1	11	2.0	0.034	38.4	LOS D	0.4	3.1	0.87	0.60	0.87	36.9
6	R2	99	2.0	0.300	38.1	LOS D	4.0	28.5	0.88	0.75	0.88	31.5
Approach		149	2.0	0.300	37.0	LOS D	4.0	28.5	0.85	0.73	0.85	33.8
North: Mooroolbark Road												
7	L2	101	2.0	0.092	14.5	LOS B	2.0	14.6	0.45	0.68	0.45	43.7
8	T1	814	5.0	0.653	19.1	LOS B	19.2	140.0	0.74	0.65	0.74	41.7
9	R2	68	2.0	0.623	59.5	LOS E	3.6	25.3	1.00	0.79	1.10	24.9
Approach		983	4.5	0.653	21.5	LOS C	19.2	140.0	0.73	0.66	0.73	40.0
West: Churchill Drive												
10	L2	39	2.0	0.124	39.5	LOS D	1.9	13.9	0.84	0.71	0.84	31.2
11	T1	11	2.0	0.124	33.9	LOS C	1.9	13.9	0.84	0.71	0.84	36.9
12	R2	15	2.0	0.044	35.7	LOS D	0.6	3.9	0.82	0.67	0.82	37.4
Approach		64	2.0	0.124	37.7	LOS D	1.9	13.9	0.83	0.70	0.83	33.8
All Vehicles		1952	4.3	0.653	22.5	LOS C	19.2	140.0	0.73	0.64	0.73	39.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P2	East Full Crossing	53	19.3	LOS B	0.1	0.1	0.62	0.62
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	53	17.4	LOS B	0.1	0.1	0.59	0.59
All Pedestrians		211	31.3	LOS D			0.77	0.77

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: DI-RD-02 [Mooroolbark Rad/ Site Access/ Landscape Drive- Prop +Growth AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 85 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: CARDNO
Reference Phase: Phase B
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

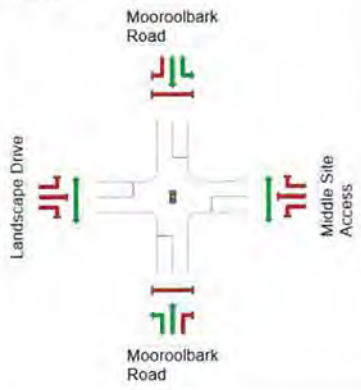
Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	44	0	12	32
Green Time (sec)	35	6	14	6
Phase Time (sec)	41	12	20	12
Phase Split	48%	14%	24%	14%

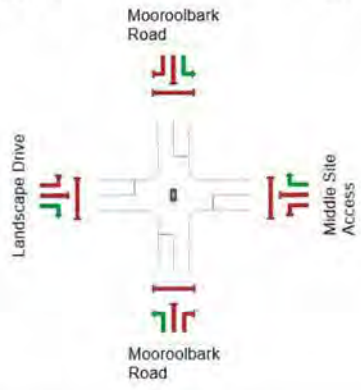
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence

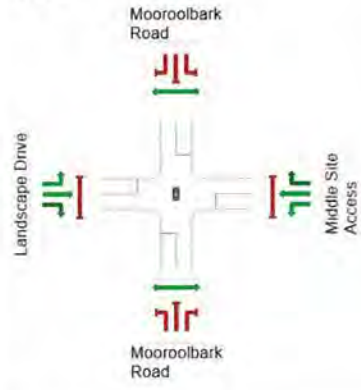
Phase A



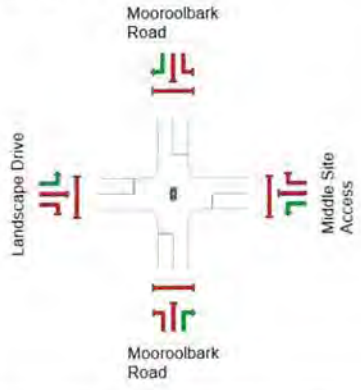
Phase B **REF**



Phase C

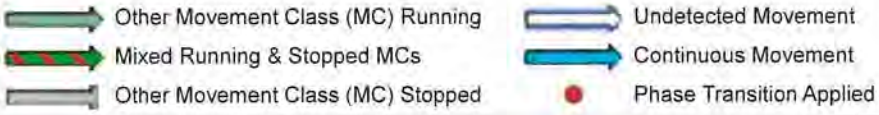


Phase D



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-02 [Mooroolbark Rad/ Site Access/ Landscape Drive- Prop +Growth AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Mooroolbark Road												
1	L2	56	2.0	0.055	14.8	LOS B	1.0	7.5	0.48	0.67	0.48	47.1
2	T1	807	5.0	0.704	20.9	LOS C	18.1	131.9	0.83	0.72	0.83	44.7
3	R2	27	2.0	0.212	48.5	LOS D	1.1	8.1	0.98	0.71	0.98	33.0
Approach		891	4.7	0.704	21.4	LOS C	18.1	131.9	0.81	0.72	0.81	44.3
East: Middle Site Access												
4	L2	48	2.0	0.086	28.2	LOS C	1.4	10.2	0.74	0.71	0.74	40.2
5	T1	11	2.0	0.033	32.4	LOS C	0.4	2.6	0.87	0.59	0.87	39.3
6	R2	114	2.0	0.319	31.7	LOS C	3.8	27.1	0.88	0.75	0.88	39.0
Approach		173	2.0	0.319	30.8	LOS C	3.8	27.1	0.84	0.73	0.84	39.3
North: Mooroolbark Road												
7	L2	61	2.0	0.060	14.9	LOS B	1.2	8.2	0.49	0.68	0.49	47.1
8	T1	575	5.0	0.460	18.9	LOS B	10.8	78.9	0.75	0.64	0.75	45.8
9	R2	56	2.0	0.432	49.5	LOS D	2.4	17.0	1.00	0.75	1.00	32.6
Approach		692	4.5	0.460	21.0	LOS C	10.8	78.9	0.75	0.65	0.75	44.4
West: Landscape Drive												
10	L2	48	2.0	0.134	32.7	LOS C	1.9	13.7	0.81	0.71	0.81	38.7
11	T1	11	2.0	0.134	27.1	LOS C	1.9	13.7	0.81	0.71	0.81	39.5
12	R2	58	2.0	0.158	30.5	LOS C	1.9	13.2	0.83	0.72	0.83	39.4
Approach		117	2.0	0.158	31.1	LOS C	1.9	13.7	0.82	0.72	0.82	39.2
All Vehicles		1872	4.2	0.704	22.7	LOS C	18.1	131.9	0.79	0.70	0.79	43.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	36.8	LOS D	0.1	0.1	0.93	0.93
P2	East Full Crossing	53	21.2	LOS C	0.1	0.1	0.71	0.71
P3	North Full Crossing	53	36.8	LOS D	0.1	0.1	0.93	0.93
P4	West Full Crossing	53	19.2	LOS B	0.1	0.1	0.67	0.67
All Pedestrians		211	28.5	LOS C			0.81	0.81

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: DI-RD-02 [Mooroolbark Rad/ Site Access/ Landscape Drive- Prop + Growth PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site Optimum Cycle Time - Minimum Delay)

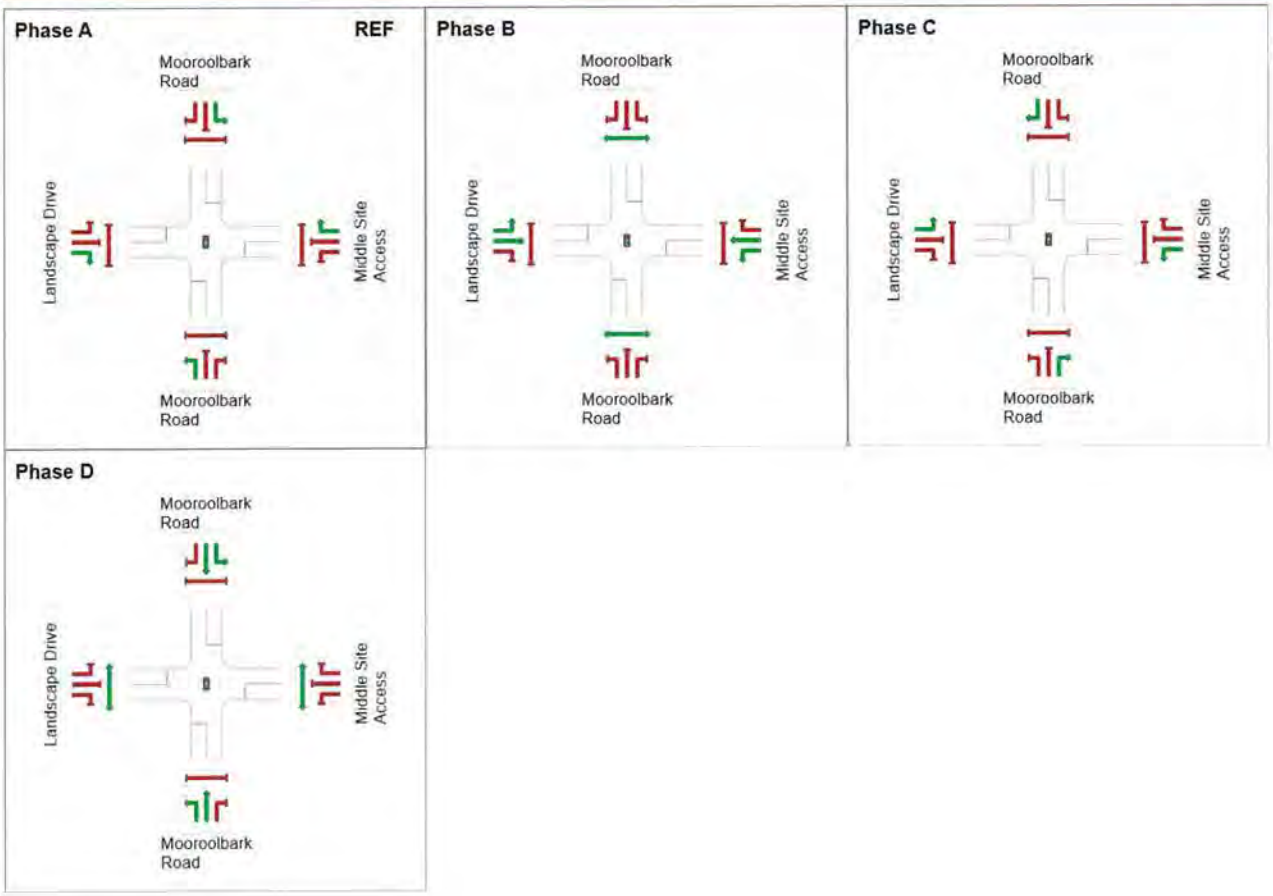
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: CARDNO
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	13	33	45
Green Time (sec)	7	14	6	34
Phase Time (sec)	13	20	12	40
Phase Split	15%	24%	14%	47%

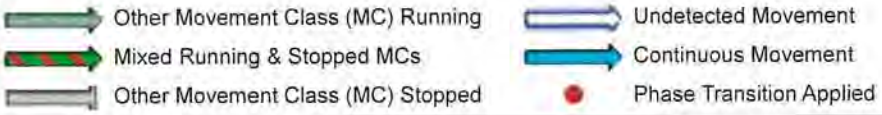
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-02 [Mooroolbark Rad/ Site Access/ Landscape Drive- Prop + Growth PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 85 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Mooroolbark Road												
1	L2	44	2.0	0.044	14.8	LOS B	0.8	5.9	0.48	0.67	0.48	47.2
2	T1	614	5.0	0.557	20.1	LOS C	12.7	92.7	0.78	0.67	0.78	45.1
3	R2	34	2.0	0.261	48.7	LOS D	1.4	10.1	0.98	0.72	0.98	32.9
Approach		692	4.7	0.557	21.2	LOS C	12.7	92.7	0.77	0.67	0.77	44.4
East: Middle Site Access												
4	L2	34	2.0	0.060	28.0	LOS C	1.0	7.0	0.74	0.70	0.74	40.3
5	T1	11	2.0	0.033	32.4	LOS C	0.4	2.6	0.87	0.59	0.87	39.3
6	R2	92	2.0	0.607	49.6	LOS D	4.0	28.3	1.00	0.80	1.08	32.7
Approach		136	2.0	0.607	42.9	LOS D	4.0	28.3	0.92	0.76	0.97	34.8
North: Mooroolbark Road												
7	L2	94	2.0	0.093	15.1	LOS B	1.8	12.8	0.50	0.69	0.50	47.0
8	T1	734	5.0	0.622	20.8	LOS C	14.7	107.6	0.81	0.70	0.81	44.7
9	R2	34	2.0	0.261	48.7	LOS D	1.4	10.1	0.98	0.72	0.98	32.8
Approach		861	4.6	0.622	21.3	LOS C	14.7	107.6	0.78	0.70	0.78	44.3
West: Landscape Drive												
10	L2	17	2.0	0.074	35.6	LOS D	0.9	6.6	0.84	0.67	0.84	38.0
11	T1	11	2.0	0.074	30.1	LOS C	0.9	6.6	0.84	0.67	0.84	38.8
12	R2	25	2.0	0.168	46.9	LOS D	1.0	7.3	0.96	0.71	0.96	33.6
Approach		53	2.0	0.168	39.9	LOS D	1.0	7.3	0.90	0.69	0.90	35.9
All Vehicles		1741	4.3	0.622	23.5	LOS C	14.7	107.6	0.79	0.69	0.80	43.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	36.8	LOS D	0.1	0.1	0.93	0.93
P2	East Full Crossing	53	21.9	LOS C	0.1	0.1	0.72	0.72
P3	North Full Crossing	53	36.8	LOS D	0.1	0.1	0.93	0.93
P4	West Full Crossing	53	19.8	LOS B	0.1	0.1	0.68	0.68
All Pedestrians		211	28.8	LOS C			0.82	0.82

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: 102 [Anderson Street/ Maroondah Highway - Prop AM] Network: N101 [Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Optimum Cycle Time - Minimum Delay)

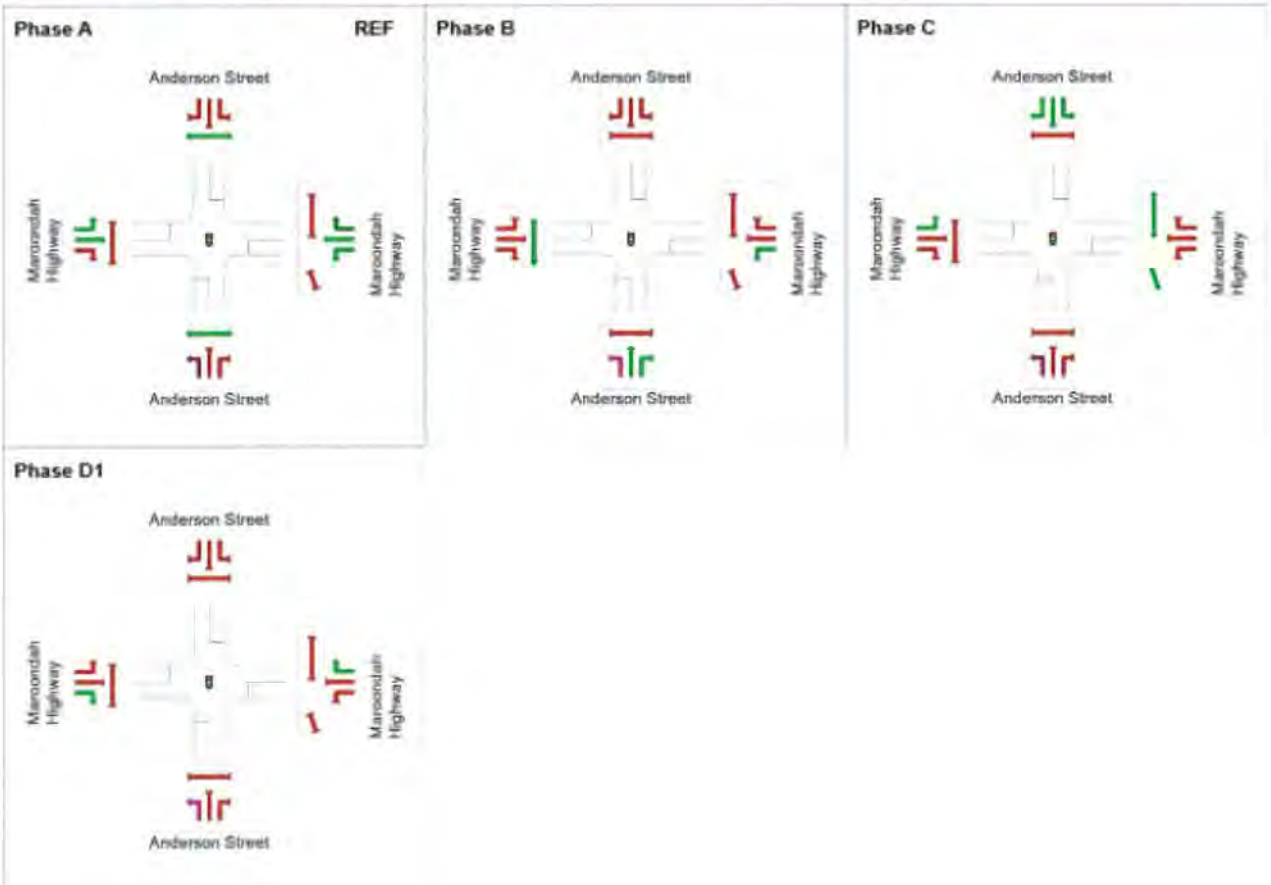
Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Op Sheet-TFX (phase reduction applied)
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D1, D3
Output Phase Sequence: A, B, C, D1

Phase Timing Summary

Phase	A	B	C	D1
Phase Change Time (sec)	0	48	80	102
Green Time (sec)	42	26	16	12
Phase Time (sec)	48	32	22	18
Phase Split	40%	27%	18%	15%

See the Phase Information section in the Detailed Output 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, 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

MOVEMENT SUMMARY

Site: 102 [Anderson Street/ Maroondah Highway - Prop AM] Network: N101 [Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Anderson Street														
1	L2	287	5.0	287	5.0	0.334	18.1	LOS B	4.5	32.6	0.51	0.71	0.51	40.1
2	T1	417	5.0	417	5.0	0.899	55.5	LOS E	14.7	107.5	0.99	0.95	1.15	24.4
3	R2	452	5.0	452	5.0	0.899	65.7	LOS E	14.7	107.5	1.00	0.98	1.24	22.2
Approach		1156	5.0	1156	5.0	0.899	50.2	LOS D	14.7	107.5	0.87	0.90	1.03	25.9
East: Maroondah Highway														
4	L2	722	5.0	722	5.0	0.327	11.9	LOS B	3.1	22.6	0.26	0.63	0.26	43.6
5	T1	1313	5.0	1313	5.0	0.922	51.1	LOS D	25.9	188.8	1.00	1.04	1.18	32.8
6	R2	185	5.0	185	5.0	0.510	27.5	LOS C	3.8	28.0	0.85	0.79	0.85	40.4
Approach		2220	5.0	2220	5.0	0.922	36.4	LOS D	25.9	188.8	0.75	0.89	0.86	35.1
North: Anderson Street														
7	L2	43	5.0	43	5.0	0.636	60.4	LOS E	5.6	40.5	1.00	0.82	1.01	30.8
8	T1	185	5.0	185	5.0	0.636	54.9	LOS D	5.6	40.5	1.00	0.82	1.02	21.3
9	R2	85	5.0	85	5.0	0.636	60.5	LOS E	5.5	40.0	1.00	0.82	1.02	30.4
Approach		314	5.0	314	5.0	0.636	57.2	LOS E	5.6	40.5	1.00	0.82	1.02	25.8
West: Maroondah Highway														
10	L2	16	5.0	16	5.0	0.583	42.4	LOS D	10.0	73.3	0.78	0.70	1.10	36.7
11	T1	755	5.0	755	5.0	0.583	34.5	LOS C	10.1	73.7	0.78	0.69	0.94	38.4
12	R2	128	5.0	128	5.0	0.716	65.7	LOS E	4.7	34.3	1.00	0.84	1.09	19.4
Approach		899	5.0	899	5.0	0.716	39.1	LOS D	10.1	73.7	0.81	0.71	0.96	35.6
All Vehicles		4588	5.0	4588	5.0	0.922	41.8	LOS D	25.9	188.8	0.81	0.85	0.93	32.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P2	East Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P2B	East Slip/Bypass Lane Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P3	North Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		263	54.3	LOS E			0.95	0.95

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 [Anderson Street/ Hardy Street - Prop AM]

Network: N101 [Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: CARDNO
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	67	95
Green Time (sec)	61	22	19
Phase Time (sec)	67	28	25
Phase Split	56%	23%	21%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence

REF: Reference Phase
VAR: Variable Phase

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

MOVEMENT SUMMARY

Site: 101 [Anderson Street/ Hardy Street - Prop AM]

Network: N101 [Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Anderson Street														
1	L2	593	2.0	593	2.0	0.896	48.0	LOS D	28.1	201.1	0.96	0.96	1.10	33.4
2	T1	940	5.0	940	5.0	0.896	43.1	LOS D	29.6	216.2	0.99	1.01	1.13	24.9
Approach		1533	3.8	1533	3.8	0.896	44.9	LOS D	29.6	216.2	0.98	0.99	1.12	29.0
North: Anderson Street														
8	T1	825	5.0	825	5.0	0.295	5.2	LOS A	4.8	34.9	0.35	0.31	0.35	52.8
9	R2	317	2.0	317	2.0	0.679	48.0	LOS D	9.8	69.6	0.99	1.01	1.34	26.2
Approach		1142	4.2	1142	4.2	0.679	17.1	LOS B	9.8	69.6	0.52	0.50	0.62	41.2
West: Hardy Street														
10	L2	267	2.0	267	2.0	0.902	69.7	LOS E	14.4	102.8	1.00	0.98	1.30	18.5
12	R2	342	2.0	342	2.0	0.902	72.5	LOS E	14.4	102.8	1.00	0.98	1.34	27.0
Approach		609	2.0	609	2.0	0.902	71.3	LOS E	14.4	102.8	1.00	0.98	1.32	23.9
All Vehicles		3284	3.6	3284	3.6	0.902	40.1	LOS D	29.6	216.2	0.82	0.82	0.98	30.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P3	North Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		105	54.3	LOS E			0.95	0.95

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: 102 [Anderson Street/ Maroondah Highway - Prop PM] Network: N101 [Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Optimum Cycle Time - Minimum Delay)

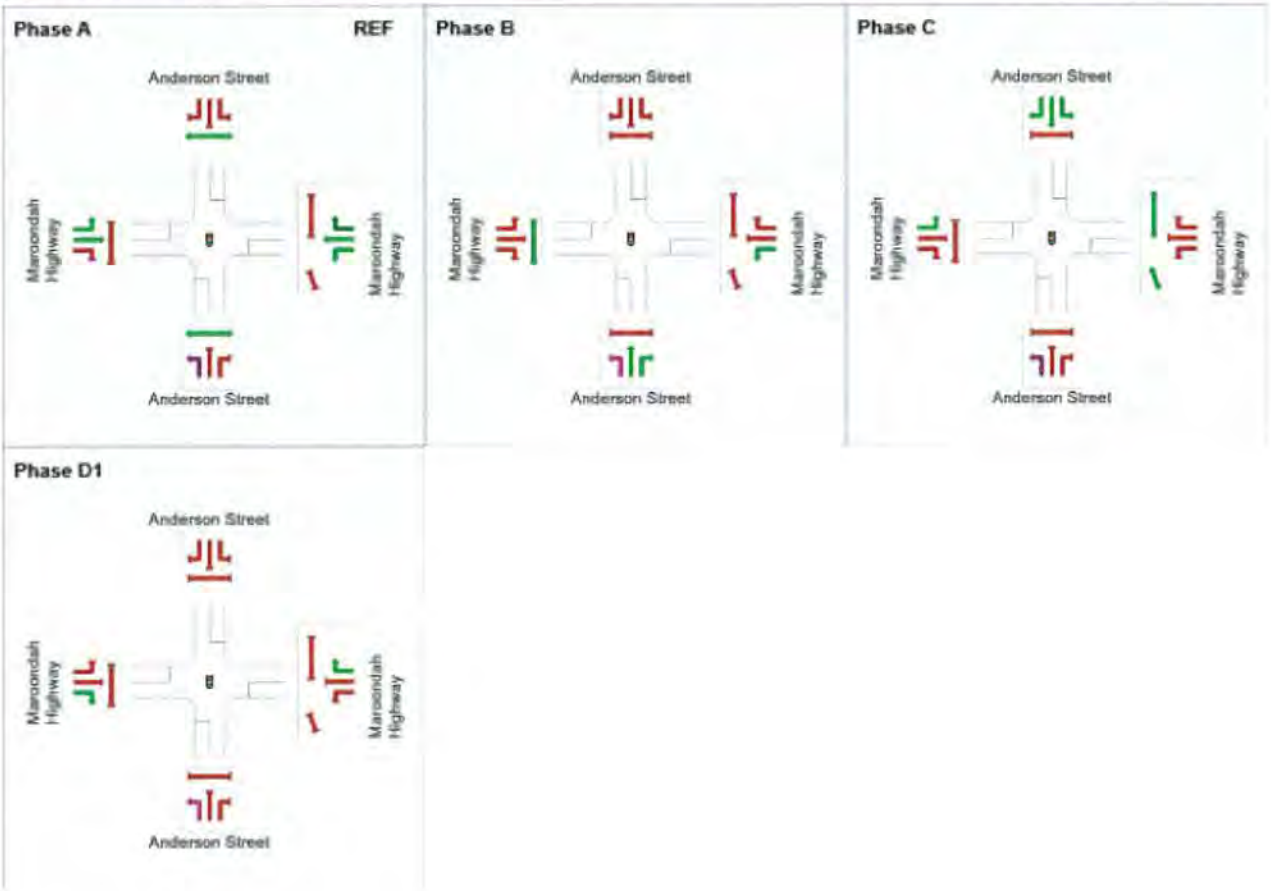
Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: Op Sheet (phase reduction applied)
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D1, D3
Output Phase Sequence: A, B, C, D1

Phase Timing Summary

Phase	A	B	C	D1
Phase Change Time (sec)	0	42	79	105
Green Time (sec)	36	31	20	9
Phase Time (sec)	42	37	26	15
Phase Split	35%	31%	22%	13%

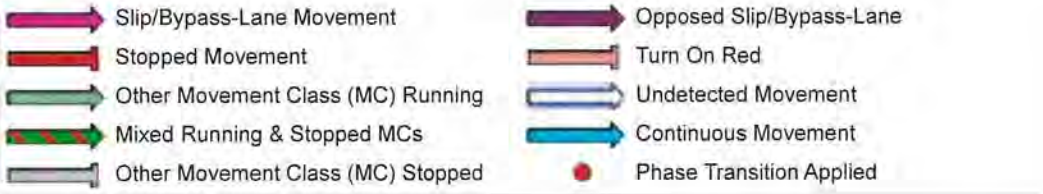
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

Normal Movement Permitted/Opposed



MOVEMENT SUMMARY

Site: 102 [Anderson Street/ Maroondah Highway - Prop PM] Network: N101 [Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Anderson Street														
1	L2	183	5.0	183	5.0	0.194	16.7	LOS B	3.3	24.1	0.61	0.72	0.61	41.0
2	T1	337	5.0	337	5.0	0.992	66.1	LOS E	16.4	120.0	1.00	0.95	1.18	21.9
3	R2	666	5.0	666	5.0	0.992	95.1	LOS F	16.4	120.0	1.00	1.12	1.50	17.3
Approach		1186	5.0	1186	5.0	0.992	74.8	LOS E	16.4	120.0	0.94	1.01	1.27	20.3
East: Maroondah Highway														
4	L2	576	5.0	576	5.0	0.270	17.3	LOS B	4.9	35.4	0.50	0.71	0.50	38.7
5	T1	1047	5.0	1047	5.0	0.933	63.9	LOS E	24.7	180.1	0.99	1.12	1.30	29.4
6	R2	154	5.0	154	5.0	0.733	39.9	LOS D	3.8	27.6	1.00	0.83	1.11	35.6
Approach		1777	5.0	1777	5.0	0.933	46.7	LOS D	24.7	180.1	0.83	0.96	1.03	31.5
North: Anderson Street														
7	L2	67	5.0	67	5.0	0.583	56.4	LOS E	5.9	43.2	0.97	0.80	0.97	31.7
8	T1	220	5.0	220	5.0	0.583	50.7	LOS D	6.1	44.4	0.97	0.80	0.97	22.3
9	R2	67	5.0	67	5.0	0.583	56.3	LOS E	6.1	44.4	0.97	0.80	0.97	31.8
Approach		355	5.0	355	5.0	0.583	52.9	LOS D	6.1	44.4	0.97	0.80	0.97	26.6
West: Maroondah Highway														
10	L2	8	5.0	8	5.0	0.999	106.8	LOS F	30.1	219.6	1.00	1.34	1.92	22.4
11	T1	1076	5.0	1076	5.0	0.999	97.8	LOS F	30.1	219.6	1.00	1.33	1.75	23.1
12	R2	103	5.0	103	5.0	0.767	70.4	LOS E	4.0	29.0	1.00	0.88	1.22	18.5
Approach		1187	5.0	1187	5.0	0.999	95.4	LOS F	30.1	219.6	1.00	1.29	1.71	22.9
All Vehicles		4505	5.0	4505	5.0	0.999	67.4	LOS E	30.1	219.6	0.92	1.05	1.27	25.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P2	East Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P2B	East Slip/Bypass Lane Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P3	North Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		263	54.3	LOS E			0.95	0.95

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 [Anderson Street/ Hardy Street - Prop PM]

Network: N101 [Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Optimum Cycle Time - Minimum Delay)

Timings based on settings in the Network Timing dialog
Phase Times determined by the program
Downstream lane blockage effects included in determining phase times
Phase Sequence: CARDNO
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	43	69
Green Time (sec)	37	20	45
Phase Time (sec)	43	26	51
Phase Split	36%	22%	43%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence

REF: Reference Phase
VAR: Variable Phase

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

MOVEMENT SUMMARY

Site: 101 [Anderson Street/ Hardy Street - Prop PM] **Network: N101 [Proposed PM]**

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Arrival Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	Aver. Back of Queue Vehicles veh	Aver. Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Anderson Street														
1	L2	325	2.0	325	2.0	0.950	75.0	LOS E	24.5	175.9	1.00	1.09	1.36	27.0
2	T1	771	5.0	771	5.0	0.950	69.8	LOS E	25.3	184.6	1.00	1.15	1.36	18.3
Approach		1096	4.1	1096	4.1	0.950	71.4	LOS E	25.3	184.6	1.00	1.13	1.36	21.4
North: Anderson Street														
8	T1	860	5.0	860	5.0	0.489	18.3	LOS B	10.0	73.1	0.62	0.55	0.62	40.6
9	R2	219	2.0	219	2.0	0.939	76.7	LOS E	9.3	66.5	1.00	1.01	1.43	19.7
Approach		1079	4.4	1079	4.4	0.939	30.1	LOS C	10.0	73.1	0.70	0.64	0.78	33.4
West: Hardy Street														
10	L2	438	2.0	438	2.0	0.957	71.8	LOS E	24.2	172.5	0.88	1.01	1.28	18.1
12	R2	604	2.0	604	2.0	0.957	74.9	LOS E	24.2	172.5	0.90	1.02	1.33	26.6
Approach		1042	2.0	1042	2.0	0.957	73.6	LOS E	24.2	172.5	0.89	1.02	1.31	23.6
All Vehicles		3217	3.5	3217	3.5	0.957	58.3	LOS E	25.3	184.6	0.86	0.93	1.15	25.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Network 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Average Back of Queue Distance m	Prop. Queued	Effective Stop Rate
P3	North Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	54.3	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		105	54.3	LOS E			0.95	0.95

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: DI-RD-08 [Swansea Road/ Hull Road - Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Site Optimum Cycle Time - Minimum Delay)

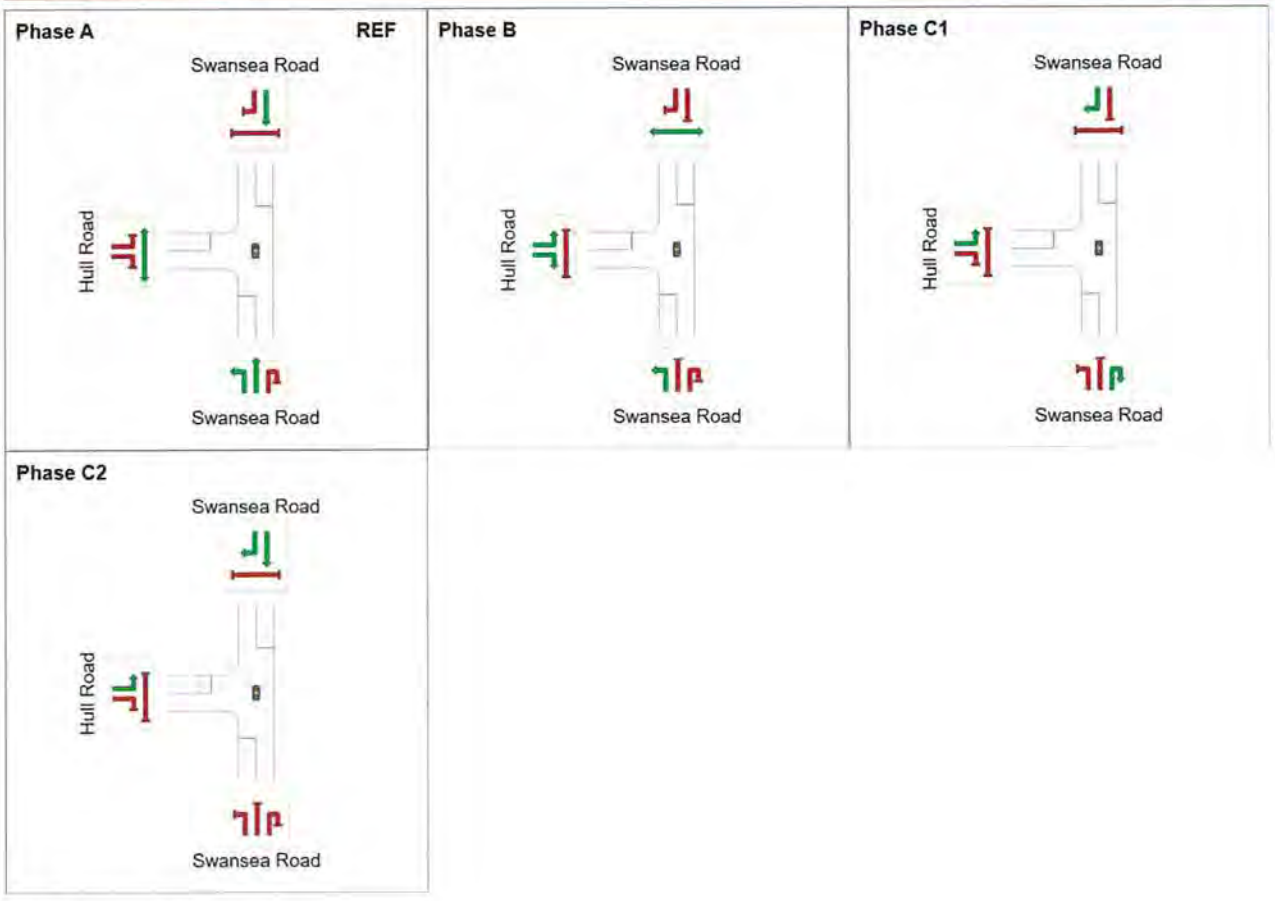
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Op Sheet-TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C1, C2
Output Phase Sequence: A, B, C1, C2

Phase Timing Summary

Phase	A	B	C1	C2
Phase Change Time (sec)	0	43	77	89
Green Time (sec)	37	28	6	5
Phase Time (sec)	43	34	12	11
Phase Split	43%	34%	12%	11%

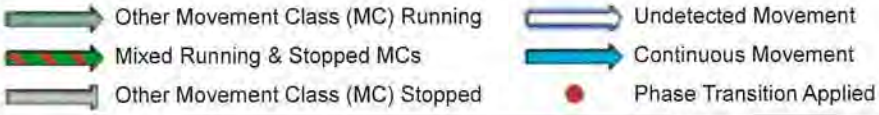
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-08 [Swansea Road/ Hull Road - Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Swansea Road												
1	L2	369	5.0	0.960	62.9	LOS E	47.7	347.9	1.00	1.13	1.37	27.3
2	T1	1086	5.0	0.960	55.2	LOS E	47.7	347.9	1.00	1.15	1.35	28.8
3u	U	4	5.0	0.052	57.7	LOS E	0.2	1.5	0.97	0.65	0.97	25.0
Approach		1460	5.0	0.960	57.2	LOS E	47.7	347.9	1.00	1.15	1.35	28.4
North: Swansea Road												
8	T1	832	5.0	0.426	18.1	LOS B	13.1	95.8	0.70	0.61	0.70	44.5
9	R2	301	5.0	0.921	66.2	LOS E	17.9	130.6	1.00	1.02	1.44	28.3
Approach		1133	5.0	0.921	30.9	LOS C	17.9	130.6	0.78	0.72	0.90	38.0
West: Hull Road												
10	L2	363	5.0	0.954	69.9	LOS E	36.1	263.7	1.00	1.07	1.45	27.5
12	R2	699	5.0	0.954	70.3	LOS E	36.1	263.7	1.00	1.07	1.46	25.1
Approach		1062	5.0	0.954	70.2	LOS E	36.1	263.7	1.00	1.07	1.45	26.0
All Vehicles		3655	5.0	0.960	52.8	LOS D	47.7	347.9	0.93	0.99	1.24	29.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		105	44.3	LOS E			0.94	0.94

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: DI-RD-08 [Swansea Road/ Hull Road - Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Site Optimum Cycle Time - Minimum Delay)

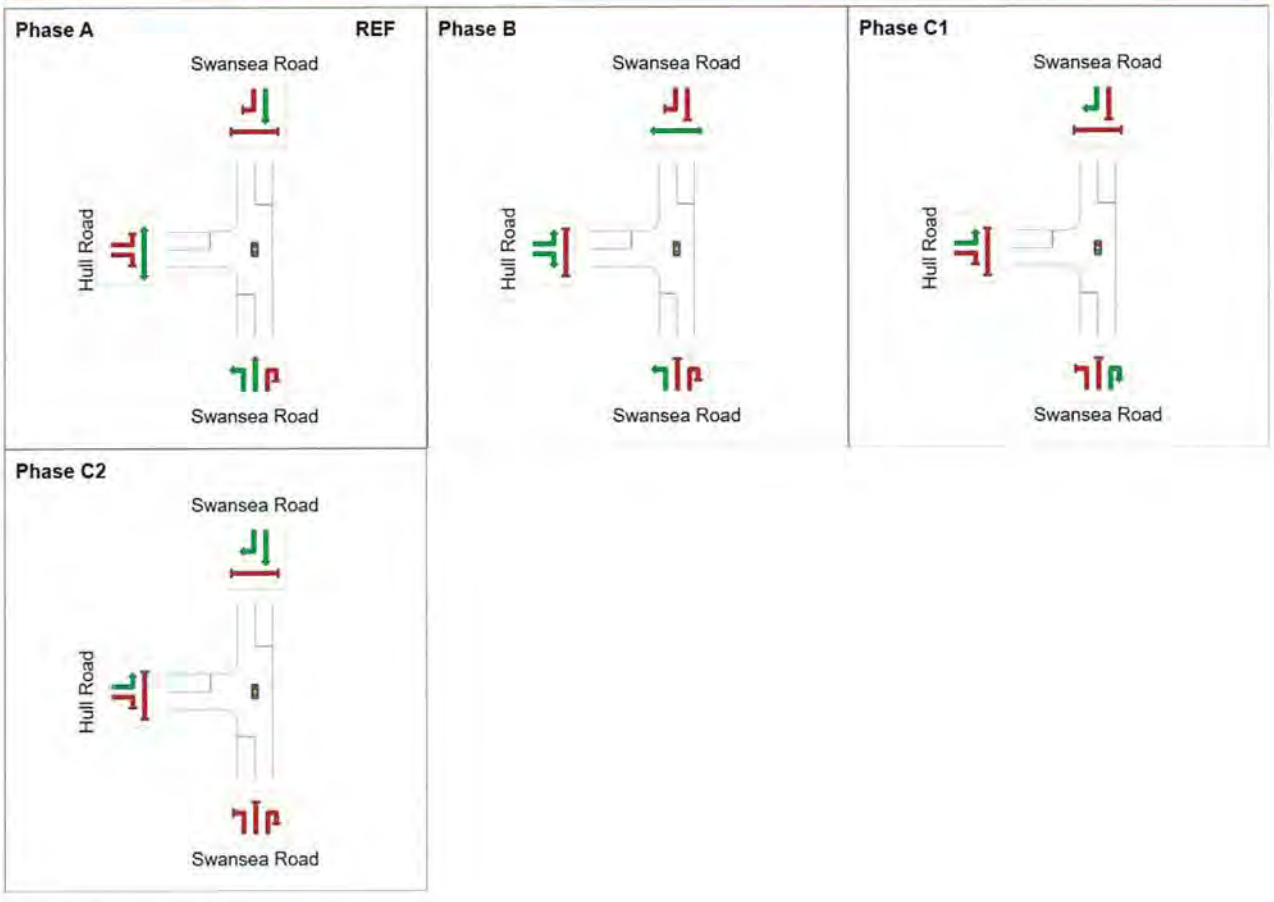
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: OP Sheet -TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C1, C2
Output Phase Sequence: A, B, C1, C2

Phase Timing Summary

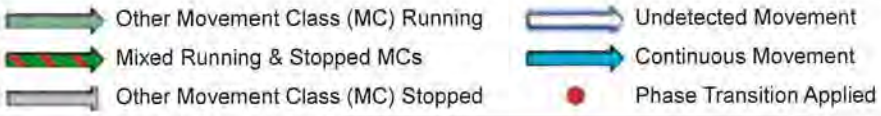
Phase	A	B	C1	C2
Phase Change Time (sec)	0	46	77	89
Green Time (sec)	40	25	6	5
Phase Time (sec)	46	31	12	11
Phase Split	46%	31%	12%	11%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-08 [Swansea Road/ Hull Road - Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 100 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Swansea Road												
1	L2	482	5.0	0.950	57.3	LOS E	50.0	365.0	1.00	1.09	1.32	28.6
2	T1	1087	5.0	0.950	49.2	LOS D	50.0	365.0	1.00	1.12	1.30	30.5
3u	U	3	5.0	0.039	57.5	LOS E	0.2	1.1	0.96	0.64	0.96	25.0
Approach		1573	5.0	0.950	51.7	LOS D	50.0	365.0	1.00	1.11	1.30	29.9
North: Swansea Road												
8	T1	816	5.0	0.393	16.0	LOS B	12.1	88.0	0.66	0.57	0.66	45.9
9	R2	292	5.0	0.956	76.6	LOS E	19.0	138.4	1.00	1.08	1.60	26.2
Approach		1107	5.0	0.956	31.9	LOS C	19.0	138.4	0.75	0.71	0.90	37.5
West: Hull Road												
10	L2	269	5.0	0.937	66.4	LOS E	29.4	214.5	1.00	1.05	1.42	28.3
12	R2	649	5.0	0.937	66.6	LOS E	29.4	214.5	1.00	1.04	1.42	25.9
Approach		919	5.0	0.937	66.5	LOS E	29.4	214.5	1.00	1.05	1.42	26.6
All Vehicles		3599	5.0	0.956	49.4	LOS D	50.0	365.0	0.92	0.97	1.21	30.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Pedestrian Back of Queue ped	Distance m	Prop. Queued	Effective Stop Rate
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
P4	West Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		105	44.3	LOS E			0.94	0.94

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: DI-RD-05 [Hutchinson Street/ John Street - Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 75 seconds (Site User-Given Cycle Time)

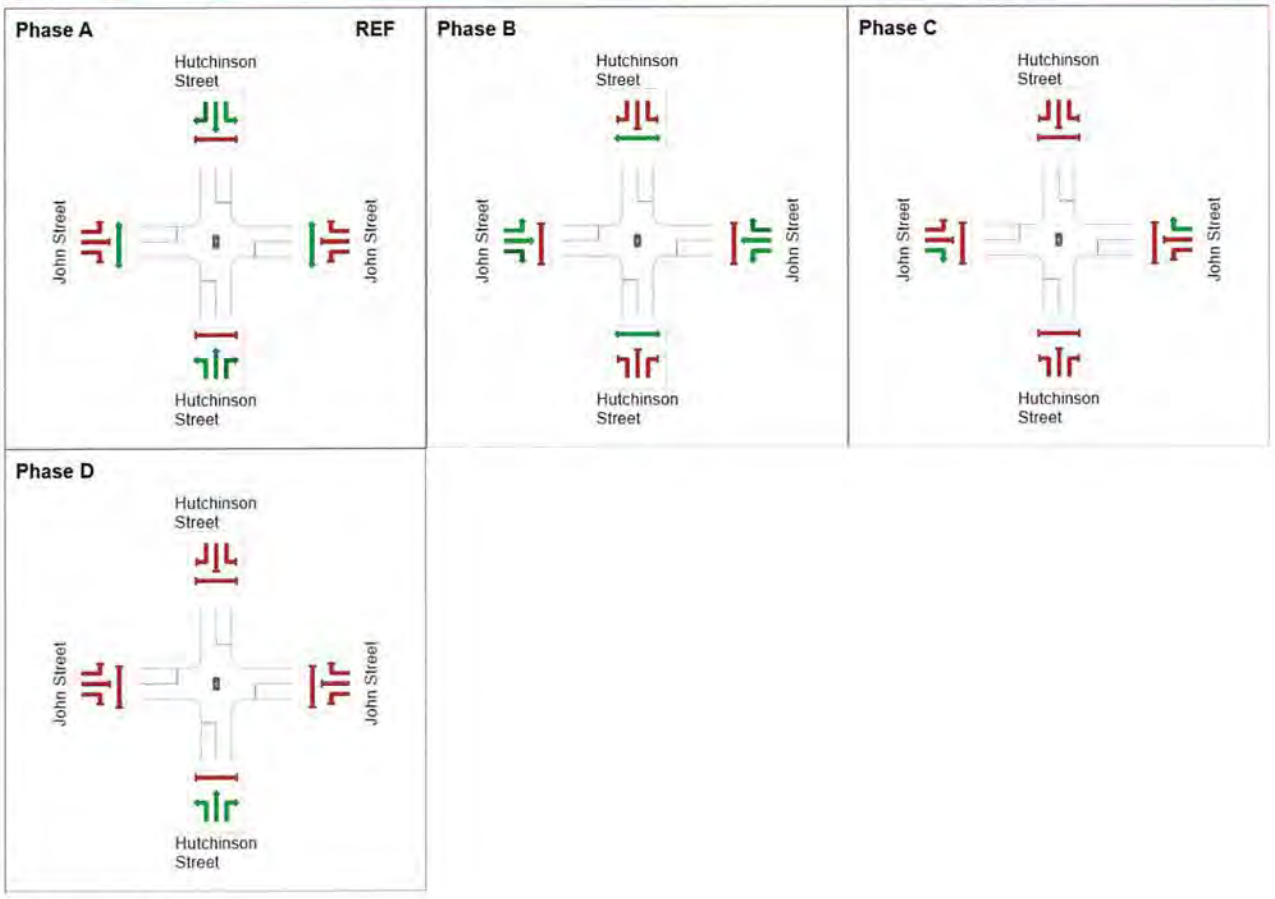
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Op Sheet TFX
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	19	40	58
Green Time (sec)	13	15	12	11
Phase Time (sec)	19	21	18	17
Phase Split	25%	28%	24%	23%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-05 [Hutchinson Street/ John Street - Proposed AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 75 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Hutchinson Street												
1	L2	374	2.0	0.950	55.3	LOS E	33.5	238.2	0.99	1.19	1.52	26.0
2	T1	278	2.0	0.950	49.7	LOS D	33.5	238.2	0.99	1.19	1.52	25.1
3	R2	248	2.0	0.656	25.9	LOS C	6.8	48.3	0.97	0.83	1.01	35.7
Approach		900	2.0	0.950	45.5	LOS D	33.5	238.2	0.98	1.09	1.38	27.8
East: John Street												
4	L2	346	2.0	0.946	59.7	LOS E	17.4	123.9	1.00	1.12	1.66	23.7
5	T1	207	2.0	0.539	29.9	LOS C	7.0	50.1	0.95	0.78	0.95	25.0
6	R2	23	2.0	0.057	27.8	LOS C	0.7	4.7	0.82	0.68	0.82	22.0
Approach		577	2.0	0.946	47.7	LOS D	17.4	123.9	0.97	0.98	1.37	24.0
North: Hutchinson Street												
7	L2	27	2.0	0.211	35.1	LOS D	2.2	15.9	0.90	0.71	0.90	20.5
8	T1	286	2.0	0.849	39.0	LOS D	10.8	77.0	0.98	0.97	1.29	29.5
9	R2	14	2.0	0.849	46.1	LOS D	10.8	77.0	1.00	1.01	1.35	18.5
Approach		327	2.0	0.849	38.9	LOS D	10.8	77.0	0.98	0.95	1.26	28.6
West: John Street												
10	L2	15	2.0	0.781	40.4	LOS D	11.5	82.0	1.00	0.94	1.18	20.6
11	T1	285	2.0	0.781	34.8	LOS C	11.5	82.0	1.00	0.94	1.18	22.7
12	R2	354	2.0	0.936	56.9	LOS E	15.1	107.8	1.00	1.20	2.12	24.9
Approach		654	2.0	0.936	46.9	LOS D	15.1	107.8	1.00	1.08	1.69	24.2
All Vehicles		2458	2.0	0.950	45.5	LOS D	33.5	238.2	0.99	1.04	1.44	26.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P2	East Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P3	North Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P4	West Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
All Pedestrians		211	31.8	LOS D			0.92	0.92

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: DI-RD-05 [Hutchinson Street/ John Street - Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 75 seconds (Site User-Given Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Op Sheet TFX
Reference Phase: Phase A
Input Phase Sequence: A, C, B, D
Output Phase Sequence: A, C, B, D

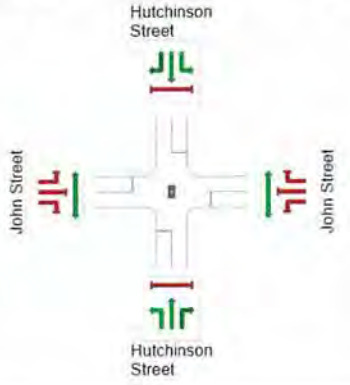
Phase Timing Summary

Phase	A	C	B	D
Phase Change Time (sec)	0	20	42	58
Green Time (sec)	14	16	10	11
Phase Time (sec)	20	22	16	17
Phase Split	27%	29%	21%	23%

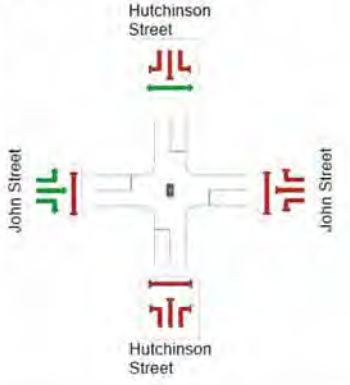
See the Phase Information section in the Detailed Output report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Phase Actuation and Phase Frequency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

Output Phase Sequence

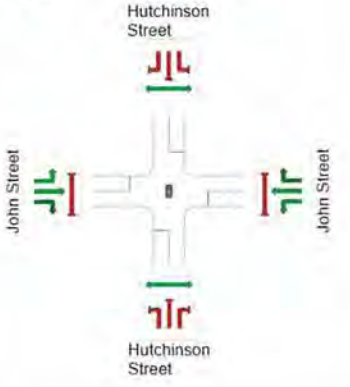
Phase A **REF**



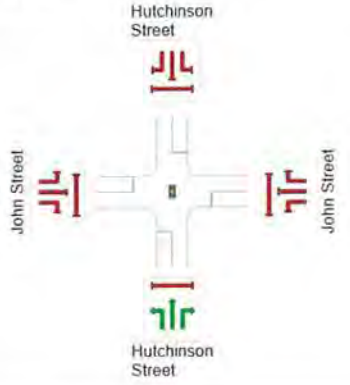
Phase C



Phase B

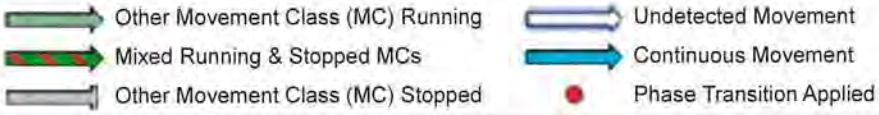


Phase D



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red


Other Movement Class (MC) Running
Mixed Running & Stopped MCs
Other Movement Class (MC) Stopped
Undetected Movement
Continuous Movement
Phase Transition Applied

MOVEMENT SUMMARY

Site: DI-RD-05 [Hutchinson Street/ John Street - Proposed PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 75 seconds (Site User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Hutchinson Street												
1	L2	375	2.0	0.877	37.5	LOS D	25.3	180.5	0.95	1.01	1.20	31.9
2	T1	248	2.0	0.877	31.9	LOS C	25.3	180.5	0.95	1.01	1.20	31.2
3	R2	213	2.0	0.557	24.5	LOS C	5.5	38.8	0.95	0.80	0.95	36.5
Approach		836	2.0	0.877	32.5	LOS C	25.3	180.5	0.95	0.95	1.14	32.7
East: John Street												
4	L2	115	2.0	0.470	39.7	LOS D	4.1	29.1	0.97	0.78	0.97	29.6
5	T1	234	2.0	0.910	47.9	LOS D	10.6	75.3	1.00	1.09	1.58	18.5
6	R2	26	2.0	0.136	38.0	LOS D	0.9	6.4	0.91	0.72	0.91	18.1
Approach		375	2.0	0.910	44.7	LOS D	10.6	75.3	0.98	0.97	1.35	22.3
North: Hutchinson Street												
7	L2	52	2.0	0.202	34.1	LOS C	2.2	15.8	0.88	0.73	0.88	20.2
8	T1	294	2.0	0.811	36.5	LOS D	11.2	79.8	0.99	0.95	1.22	30.5
9	R2	6	2.0	0.811	42.6	LOS D	11.2	79.8	1.00	0.97	1.24	19.7
Approach		352	2.0	0.811	36.3	LOS D	11.2	79.8	0.98	0.92	1.17	29.2
West: John Street												
10	L2	18	2.0	0.430	21.9	LOS C	9.1	64.9	0.75	0.65	0.75	30.7
11	T1	335	2.0	0.430	16.3	LOS B	9.1	64.9	0.75	0.65	0.75	33.8
12	R2	369	2.0	0.786	27.8	LOS C	11.0	78.6	0.99	0.89	1.14	35.0
Approach		722	2.0	0.786	22.3	LOS C	11.0	78.6	0.87	0.78	0.95	34.5
All Vehicles		2284	2.0	0.910	31.9	LOS C	25.3	180.5	0.93	0.89	1.12	30.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P2	East Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P3	North Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
P4	West Full Crossing	53	31.8	LOS D	0.1	0.1	0.92	0.92
All Pedestrians		211	31.8	LOS D			0.92	0.92

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: 104 [Maroondah Highway/ Hutchinson Street-Prop AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

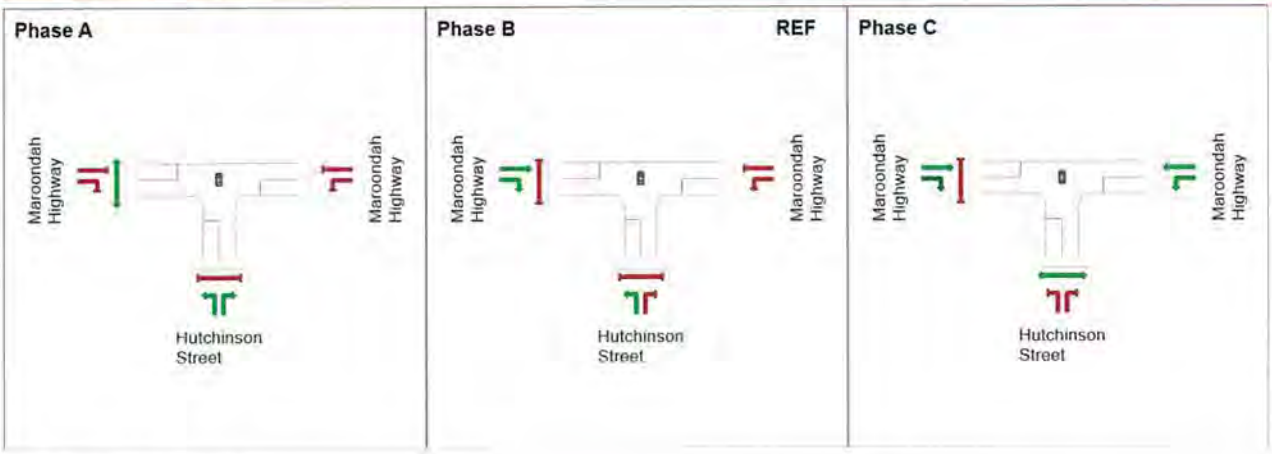
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase B
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	62	0	12
Green Time (sec)	12	6	44
Phase Time (sec)	18	12	50
Phase Split	23%	15%	63%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

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

MOVEMENT SUMMARY

Site: 104 [Maroondah Highway/ Hutchinson Street-Prop AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Hutchinson Street												
1	L2	187	2.0	0.341	29.4	LOS C	5.8	41.2	0.82	0.78	0.82	39.7
3	R2	114	2.0	0.414	40.2	LOS D	4.2	29.9	0.95	0.78	0.95	35.6
Approach		301	2.0	0.414	33.5	LOS C	5.8	41.2	0.87	0.78	0.87	38.0
East: Maroondah Highway												
4	L2	215	2.0	0.213	15.4	LOS B	4.2	30.2	0.54	0.72	0.54	46.8
5	T1	916	5.0	0.471	11.5	LOS B	11.6	84.5	0.64	0.56	0.64	50.5
Approach		1131	4.4	0.471	12.2	LOS B	11.6	84.5	0.62	0.59	0.62	49.7
West: Maroondah Highway												
11	T1	718	5.0	0.272	4.7	LOS A	5.1	37.4	0.40	0.35	0.40	55.7
12	R2	107	2.0	0.295	12.9	LOS B	1.5	10.4	0.63	0.72	0.63	48.3
Approach		825	4.6	0.295	5.8	LOS A	5.1	37.4	0.43	0.39	0.43	54.6
All Vehicles		2257	4.2	0.471	12.7	LOS B	11.6	84.5	0.58	0.54	0.58	49.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
P4	West Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
All Pedestrians		105	34.3	LOS D			0.93	0.93

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: 104 [Maroondah Highway/ Hutchinson Street-Prop PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

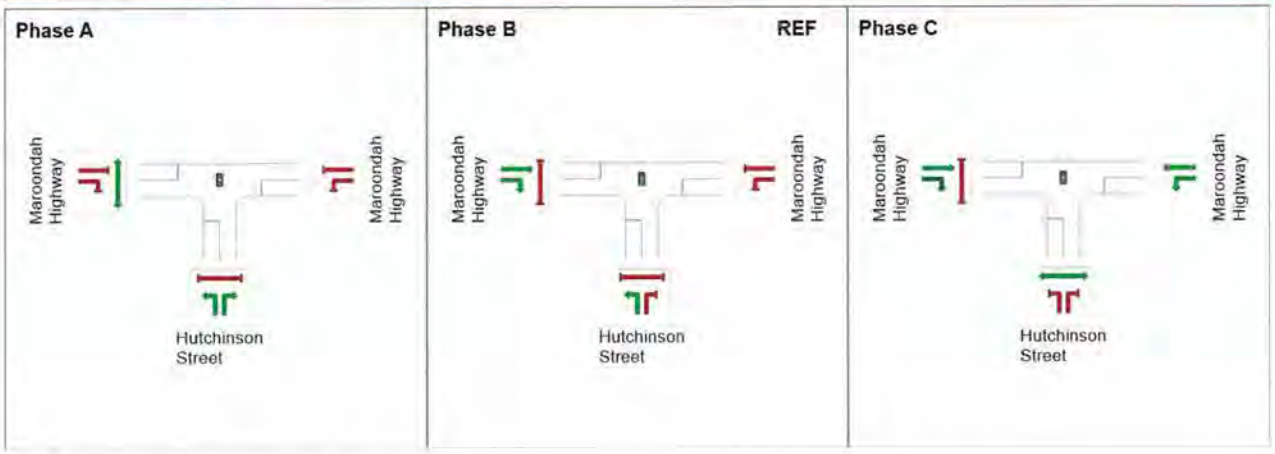
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase B
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

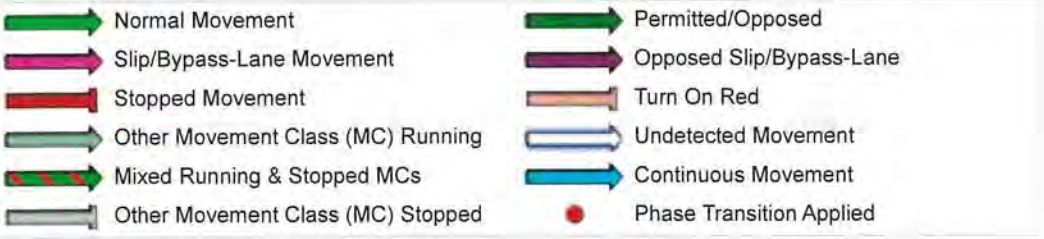
Phase	A	B	C
Phase Change Time (sec)	62	0	18
Green Time (sec)	12	12	38
Phase Time (sec)	18	18	44
Phase Split	23%	23%	55%

See the Phase Information section in the Detailed Output 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, Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 104 [Maroondah Highway/ Hutchinson Street-Prop PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Hutchinson Street												
1	L2	149	2.0	0.218	23.9	LOS C	4.0	28.4	0.72	0.75	0.72	42.2
3	R2	119	2.0	0.433	40.3	LOS D	4.4	31.4	0.95	0.78	0.95	35.5
Approach		268	2.0	0.433	31.2	LOS C	4.4	31.4	0.82	0.76	0.82	39.0
East: Maroondah Highway												
4	L2	206	2.0	0.237	18.9	LOS B	4.8	33.8	0.63	0.74	0.63	44.8
5	T1	924	5.0	0.561	15.8	LOS B	14.1	102.8	0.75	0.66	0.75	47.6
Approach		1131	4.5	0.561	16.4	LOS B	14.1	102.8	0.73	0.67	0.73	47.1
West: Maroondah Highway												
11	T1	946	2.0	0.351	5.1	LOS A	7.3	51.7	0.43	0.38	0.43	55.4
12	R2	148	5.0	0.328	14.2	LOS B	2.2	15.8	0.71	0.75	0.71	47.4
Approach		1095	2.4	0.351	6.3	LOS A	7.3	51.7	0.47	0.43	0.47	54.1
All Vehicles		2494	3.3	0.561	13.5	LOS B	14.1	102.8	0.62	0.57	0.62	48.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P1	South Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
P4	West Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
All Pedestrians		105	34.3	LOS D			0.93	0.93

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.

MOVEMENT SUMMARY

▽ Site: 103 [Maroondah Highway/ John Street- Prop AM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: RoadName												
21	L2	420	2.0	0.555	11.7	LOS B	4.2	29.8	0.68	1.01	1.08	49.1
23	R2	1	2.0	0.143	435.3	LOS F	0.3	2.4	0.99	1.00	1.00	6.7
Approach		421	2.0	0.555	12.8	LOS B	4.2	29.8	0.68	1.01	1.08	48.4
NorthEast: Maroondah Highway												
24	L2	3	2.0	0.284	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	58.0
25	T1	1071	5.0	0.284	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		1074	5.0	0.284	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
SouthWest: Maroondah Highway												
31	T1	964	5.0	0.923	8.0	LOS A	14.9	108.5	1.00	0.00	2.16	52.3
32	R2	656	2.0	1.070	98.4	LOS F	44.3	315.7	1.00	3.50	9.06	22.6
Approach		1620	3.8	1.070	44.6	NA	44.3	315.7	1.00	1.42	4.95	33.4
All Vehicles		3115	4.0	1.070	24.9	NA	44.3	315.7	0.61	0.87	2.72	41.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
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 movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

▽ Site: 103 [Maroondah Highway/ John Street-Prop PM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
SouthEast: RoadName												
21	L2	449	2.0	0.593	12.2	LOS B	4.8	34.3	0.70	1.04	1.17	48.8
23	R2	1	2.0	0.454	1833.7	LOS F	1.0	7.3	1.00	1.01	1.03	1.7
Approach		451	2.0	0.593	16.4	LOS C	4.8	34.3	0.70	1.04	1.17	46.2
NorthEast: Maroondah Highway												
24	L2	4	0.0	0.282	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	58.1
25	T1	1096	0.0	0.282	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach		1100	0.0	0.282	0.0	NA	0.0	0.0	0.00	0.00	0.00	59.9
SouthWest: Maroondah Highway												
31	T1	1274	0.0	1.072	68.2	LOS F	66.4	464.6	1.00	0.00	6.56	26.7
32	R2	622	0.0	0.994	52.7	LOS F	24.9	174.3	1.00	2.49	5.84	31.7
Approach		1896	0.0	1.072	63.1	NA	66.4	464.6	1.00	0.82	6.32	28.3
All Vehicles		3446	0.3	1.072	36.9	NA	66.4	464.6	0.64	0.59	3.63	36.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
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 movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

PHASING SUMMARY

Site: DI-RD-03 [Honour Avenue/ Hull Road- Prop + Growth AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

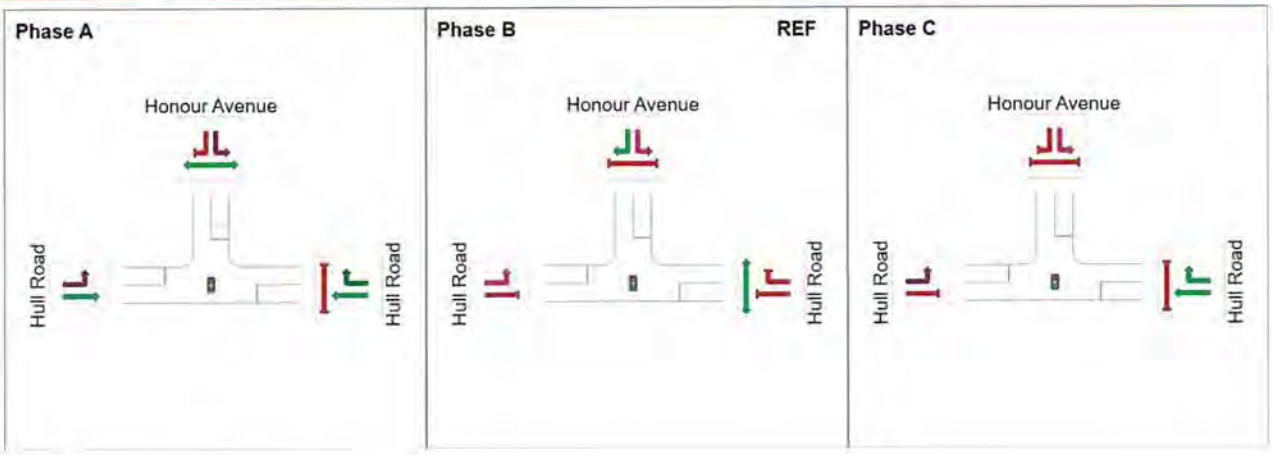
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase B
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	43	0	25
Green Time (sec)	31	19	12
Phase Time (sec)	37	25	18
Phase Split	46%	31%	23%

See the Phase Information section in the Detailed Output 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, 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: DI-RD-03 [Honour Avenue/ Hull Road- Prop + Growth AM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Hull Road												
5	T1	967	5.0	0.538	9.0	LOS A	13.9	101.8	0.58	0.52	0.58	52.3
6	R2	208	2.0	0.508	20.0	LOS B	3.8	26.9	0.90	0.80	0.90	44.4
Approach		1176	4.5	0.538	10.9	LOS B	13.9	101.8	0.64	0.57	0.64	50.7
North: Honour Avenue												
7	L2	376	2.0	0.374	14.0	LOS B	7.5	53.4	0.60	0.75	0.64	48.3
9	R2	488	2.0	0.752	37.1	LOS D	11.9	84.7	0.94	0.85	1.02	36.7
Approach		864	2.0	0.752	27.0	LOS C	11.9	84.7	0.80	0.81	0.86	41.0
West: Hull Road												
10	L2	249	2.0	0.201	7.4	LOS A	1.7	12.1	0.33	0.64	0.33	52.8
11	T1	918	5.0	0.781	23.6	LOS C	21.1	153.7	0.89	0.81	0.93	43.2
Approach		1167	4.4	0.781	20.2	LOS C	21.1	153.7	0.77	0.78	0.80	45.0
All Vehicles		3207	3.8	0.781	18.6	LOS B	21.1	153.7	0.73	0.71	0.76	45.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P2	East Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
P3	North Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
All Pedestrians		105	34.3	LOS D			0.93	0.93

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: DI-RD-03 [Honour Avenue/ Hull Road-Prop + Growth PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

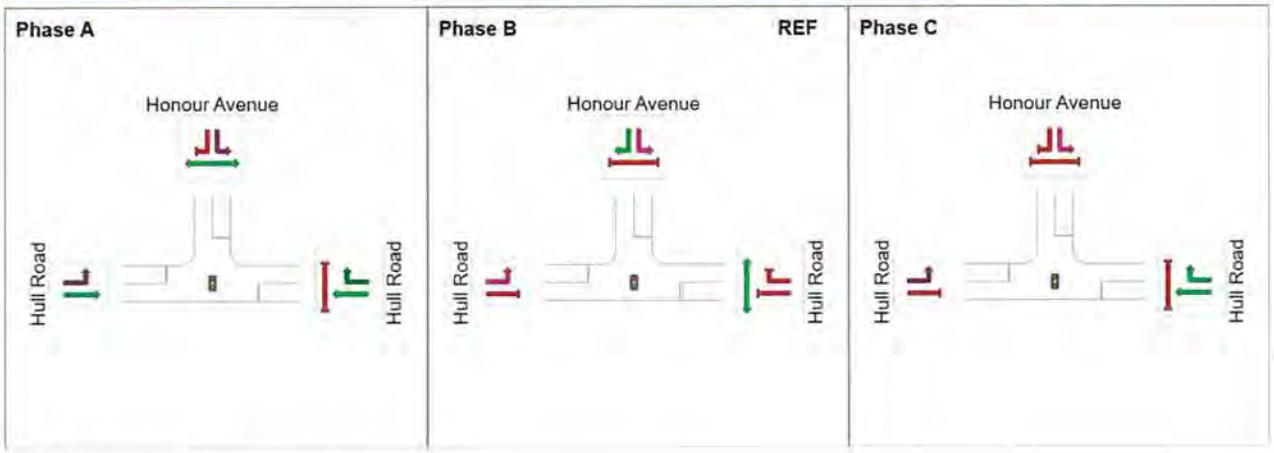
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase B
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	52	0	24
Green Time (sec)	22	18	22
Phase Time (sec)	28	24	28
Phase Split	35%	30%	35%

See the Phase Information section in the Detailed Output 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, 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: DI-RD-03 [Honour Avenue/ Hull Road-Prop + Growth PM]

New Site
Site Category: (None)
Signals - Fixed Time Isolated Cycle Time = 80 seconds (Site Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles

Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
East: Hull Road												
5	T1	582	5.0	0.317	7.2	LOS A	6.8	49.4	0.48	0.42	0.48	53.7
6	R2	323	2.0	0.488	16.3	LOS B	5.9	41.8	0.80	0.80	0.80	46.5
Approach		905	3.9	0.488	10.5	LOS B	6.8	49.4	0.60	0.55	0.60	50.8
North: Honour Avenue												
7	L2	317	2.0	0.257	9.0	LOS A	3.9	27.6	0.40	0.67	0.40	51.6
9	R2	404	2.0	0.631	35.9	LOS D	9.5	67.4	0.93	0.81	0.93	37.1
Approach		721	2.0	0.631	24.0	LOS C	9.5	67.4	0.70	0.75	0.70	42.4
West: Hull Road												
10	L2	429	2.0	0.386	8.4	LOS A	3.8	27.1	0.45	0.69	0.45	52.1
11	T1	544	5.0	0.653	27.3	LOS C	11.9	87.2	0.91	0.77	0.91	41.5
Approach		974	3.7	0.653	19.0	LOS B	11.9	87.2	0.70	0.73	0.71	45.6
All Vehicles		2600	3.3	0.653	17.4	LOS B	11.9	87.2	0.67	0.67	0.67	46.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site 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.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate
P2	East Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
P3	North Full Crossing	53	34.3	LOS D	0.1	0.1	0.93	0.93
All Pedestrians		105	34.3	LOS D			0.93	0.93

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.