Creamery Road Precinct Structure Plan

SIDRA Modelling Report

Prepared for: City of Greater Geelong

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Revision

Revision	Date	Comment	Prepared By	Approved By
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For and on behalf of

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Acknowledgment of Country

In the spirit of reconciliation, Stantec acknowledges the Traditional Custodians of country throughout Australia and their connections to land, sea and community. We pay our respect to their Elders past and present, and extend that respect to all Aboriginal and Torres Strait Islander peoples.

Limitations

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1. Introduction

1.1 Background

The Creamery Road Precinct Structure Plan (PSP) is located in the Western Geelong Growth Area (WGGA). The PSP is bordered by Midland Highway to the South, Geelong Ring Road to the east, Geelong-Ballarat Railway Line to the north and Geelong – Ballan Road to the west. The PSP will be the first in the WGGA and will have approximately 3,700 dwellings, associated local activity centre and education uses.

The PSP is currently being prepared by the City of Greater Geelong in consultation with authorities, landowners and major stakeholders.

1.2 Scope of Report

Stantec has been engaged by the City of Greater Geelong to prepare a Transport Movement and Access Assessment and transport modelling for the Creamery Road Precinct Structure Plan. This report presents the outcomes the SIDRA INTERSECTION modelling task which identifies the future interim and ultimate intersection layouts.

It is noted that Stantec has been engaged to provide broader transport planning advice on the Future Urban Structure prepared by Council, which includes analysis of the network. The outputs of the analysis have been used by Council to inform the number of road links and intersections within the Future Urban Structure.

The preparation of this report relies on inputs from strategic modelling completed in the Movement and Access Report, with the outputs of this report informing the intersection concept layout designs.

1.3 References

In preparing this report, reference has been made to the following:

- The Geelong Planning Scheme
- Creamery Road PSP Future Urban Structure
- Victorian Integrated Transport Model (updated version to reflect the Geelong Growth Areas)
- relevant Government policies and documents
- various technical data as referenced in this report.

2. The PSP

2.1 Background

Geelong is already well-known as a city that is growing quickly. The current rate of population growth is about 1.5% per year; through the G21 Regional Growth Plan and the Clever and Creative Vision, a growth rate of 2.5% per year is targeted.

The Northern and Western Geelong Growth Areas (NWGGA) Framework Plan is the largest greenfield planning project in regional Victoria with the capacity to accommodate 110,000 new Geelong residents. In combination with other areas, such as Armstrong Creek and in the City of Greater Geelong more broadly, a population of 650,000 people by 2051 in envisioned across the City as a whole. This Is more than double the existing population of around 260,000 people.

The framework will be delivered via 9 PSPs, comprising approximately 40,000 houses. The Creamery Road PSP is the first in the WGGA and will have approximately 3,700 dwellings, associated local activity centre and education uses.

The Clever and Creative Future document sets out a number of success measures for Geelong, including an aim for 50% of journeys to work to be made by public transport, walking or cycling by 2047 (compared to the current mode share of nearly 90% to car). The 50% target is municipality wide and whilst a higher mode share to private vehicle for the growth areas could be expected (circa 60%), this still represents a substantial mode shift away from private vehicles for a greenfield area such as WGGA.

2.2 Proposed Future Urban Structure

The proposed Future Urban Structure for the Creamery Road PSP has been prepared by the City of Greater Geelong, with input provided by the broader project team, and is shown in Figure 2.1. Stantec has tested the Future Urban Structure using strategic modelling as part of the Movement and Access Report.

Based on preliminary advice provided by Stantec, the proposed Future Urban Structure has been updated to rationalise (reduce) the number of road links (i.e. connector roads) and in turn the number of signalised intersections within the PSP area has been reduced from 12 to 8.

Figure 2.1 – Creamery Road PSP Future Urban Structure

The FUS generally aligns with the Framework Plan, noting the following key characteristics from a transport perspective:

- The Clever and Creative Corridor has shifted its alignment from the Geelong – Ballan Road to internal to the PSP. The relocation of the CCC to an internal alignment has been necessitated by a power line overlay limiting the type and intensity of land use that would be able to be delivered adjacent to the Geelong-Ballan Road corridor. By relocating the Clever and Creative Corridor to within the Creamery Road PSP, the vision of the corridor and the Framework plan is maintained.
- The Clever and Creative Corridor will include dedicated cycle and public transport lanes located within the median and pedestrian paths provided on the outside the carriageway.
- One signalised access point is proposed along the Midland Highway frontage of the site with the CCC. Additionally, the existing Midland Highway / Geelong-Ballan Road intersection is proposed to be signalised.
- Three signalised intersections are proposed along the Geelong – Ballan Road, including the intersection with the realigned Clever and Creative Corridor. These intersections will provide strong linkages to the Batesford North PSP to the west and are all located at spacings of greater than 400m.
- A series of left in / left out connections along the Clever and Creative Corridor will be provided to ensure that it maintains its priority for public transport and modes other than car.

A connector road network is proposed throughout the PSP, providing vehicle and pedestrian access to the various land use parcels.

3. Project Context

3.1 Transport Modelling

3.1.1 Overview

Strategic transport modelling uses future population, employment and land use data projections to model the change in demands and impacts on the road and public transport networks. The Victorian Integrated Transport Model (VITM) is developed by the Department of Transport and Planning (DTP) to assist in the planning of road and public transport infrastructure and contains all public transport corridors, major freeways, main arterials and connector roads within Victoria.

The key inputs in undertaking strategic transport modelling to inform precinct planning activities are the following:

- Population, employment and land use projections
- Proposed road and public transport networks, including:
  - Capacity and speed of road links
  - Public transport service capacity, frequency and speed

3.1.2 Strategic Model

Strategic transport modelling using the Victorian Integrated Transport Model (VITM) has informed the development of the street and road network for Creamery Road PSP. VITM modelling was undertaken for 2051 and interpolated to 2041 (refer below section), factoring in development of other NWGGA PSPs not only Creamery Road PSP.

To align with the strategic directions in the Framework Plan and the City's overall objective for sustainable transport mode shift, the model reflects a future scenario with greater focus on active and public transport investment rather than road capacity expansion. This scenario indicates traffic volumes are approximately 10 per cent lower than the business-as-usual scenario.

3.1.3 Interim vs Ultimate Traffic Volumes

The relationship between the 2051 and 2041 "base case" forecasts have been used to determine the 2041 or interim traffic volumes for the "do different" scenario. The difference between interim and ultimate intersection volumes from the "base case" scenario ranged from 63% to 81%, and is dependent on the location of the network.

Accordingly, we have factored the ultimate intersection volumes by 75% to determine the interim traffic volumes. The adoption of a 75% factor is consistent with other PSP modelling throughout Victoria.

3.2 Intersection Locations

The traffic assessment focuses on eight signalised intersections located along the Geelong-Ballan Road, Midland Highway and Clever and Creative Corridors. The location of these intersections in the context of the Creamery Road PSP is illustrated in Figure 3.1. It is noted that due to a reduction in signalised intersections (between versions of the Future Urban Structure) there is no longer an IN-04, CC-08, CC-10 or CC-11.

Figure 3.1 – Creamery Road PSP Intersections

4. Intersection Assessment

4.1 Introduction

This section focuses on the intersection performance in the interim and ultimate networks that are envisaged as part of the proposed PSP. The volumes adopted for the analysis were obtained from the sperate strategic transport modelling task.

4.2 Traffic Volumes

The traffic volumes that were used to analyse the interim and ultimate intersection models have been extracted from the "Do Different" scenario. The volumes extracted from strategic model are coarse in nature and as such, the extracted traffic volumes have been reviewed as follows:

- Scale up any left and right turning demands at individual intersections to a minimum 20 vehicles in a peak hour.
- Adopt a minimum through traffic volume at each intersection of 100 vehicles in a peak hour.
- Seek to balance turning movement demands at adjacent intersections where there are high demands at one intersection, but low demands at the adjacent intersection, despite both intersections servicing the same catchment / land uses.

The extracted turning movement volumes from the model, identified turning movement refinements and adopted intersection traffic volumes are presented in Appendix A.

4.3 Modelling Assumptions

In order to develop a consistent approach to the intersection analysis, a number of basic principles were adopted which are the same as those used for recent projects completed for Major Road Projects Victoria (MRPV). The key principles include:

The principles are:

- Traffic Volumes:
  - The AM and PM peak hour design traffic volumes have been inputted as specified in Appendix A (including any refinements as per Section 4.2).
  - The SIDRA parameter for Peak Flow Factor has been set to 95%.
- Pedestrian Demands:
  - Intersections which include pedestrian movements have been modelled with a pedestrian volume of 50 pedestrians per hour.
- Intersection Phasing:
  - Diamond right turn phasing is provided wherever simultaneous right turn movements are possible (including along the Clever and Creative Corridor).
  - A maximum cycle length of 120 seconds on arterial roads is desirable.
  - A maximum cycle length of 90 seconds on the Clever and Creative Corridor is desirable.
  - Left turn overlap phasing has been adopted.
- Intersection Geometry and Operation:
  - Short lane lengths have been modelled as the available storage length excluding taper.
  - If the modelling identified capacity constraints, alternative lane or operational arrangements have been investigated. These could include consideration of:
    - Providing additional lanes.
    - Extending storage lengths available in short lanes.
    - Extending cycle times beyond 120 seconds.
- Target Degree of Saturation and Level of Service:
  - Achieve a degree of saturation (DOS) of 0.95 and a level of service (LOS) D.
- Modelling Type:
  - Intersections have been modelled as isolated intersections using SIDRA INTERSECTION modelling software.

4.4 SIDRA Modelling Overview

The future operation of each of the proposed signalised intersection has been assessed using *SIDRA INTERSECTION*[1] (a computer based modelling package which calculates intersection performance).

The commonly used measure of intersection performance is referred to as the *Degree of Saturation (DOS)*. The DOS represents the flow-to-capacity ratio for the most critical movement on each leg of the intersection. For signalised intersections, a DOS of around 0.95 has been typically considered the 'ideal' limit, beyond which queues and delays increase disproportionately.

A summary of the 'Level of Services' criteria adopted by SIDRA INTERSECTION are presented in Table 4.1.

Table 4.1 – SIDRA Intersection – Level of Service Criteria

Level of Service		Intersection Degree of Saturation (DOS)		
		Unsignalised Intersection	Signalised Intersection	Roundabout
A	Excellent	<=0.60	<=0.60	<=0.60
B	Very Good	0.60-0.70	0.60-0.70	0.60-0.70
C	Good	0.70-0.80	0.70-0.90	0.70-0.85
D	Acceptable	0.80-0.90	0.90-0.95	0.85-0.95
E	Poor	0.90-1.00	0.95-1.00	0.95-1.00
F	Very Poor	>=1.0	>=1.0	>=1.0

4.5 Intersection Performance (Interim & Ultimate)

4.5.1 Summary

The identified intersection layouts and a summary of the SIDRA results for the interim and ultimate during the AM and PM peak hours is presented in the following sections. A summary of the forecast 95th percentile queue lengths and the proposed storage and taper length for the right turn movements is presented in Appendix C.

4.5.2 IN-01

The proposed interim and ultimate intersection layouts for IN-01 are presented in Figure 4.1 and Figure 4.2. The corresponding SIDRA Intersection results for the interim and ultimate scenarios are presented in Table 4.2.

[1] Program used under license from Akcelik & Associates Pty Ltd.

Figure 4.1 – Interim Intersection Layout

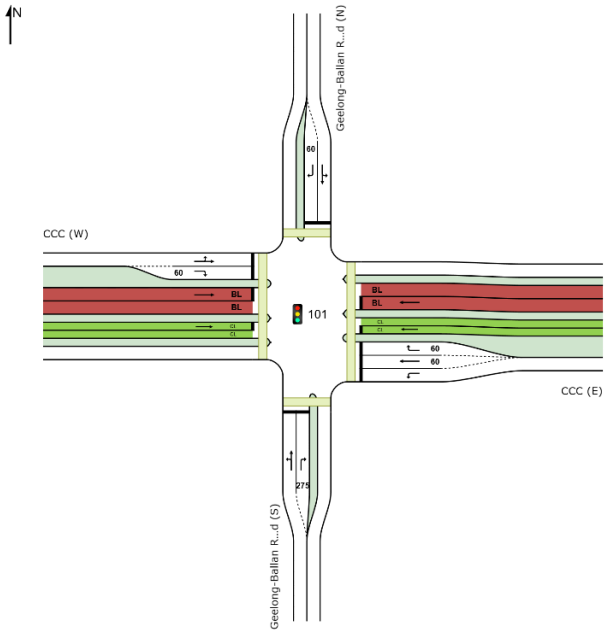


Figure 4.2 – Ultimate Intersection Layout

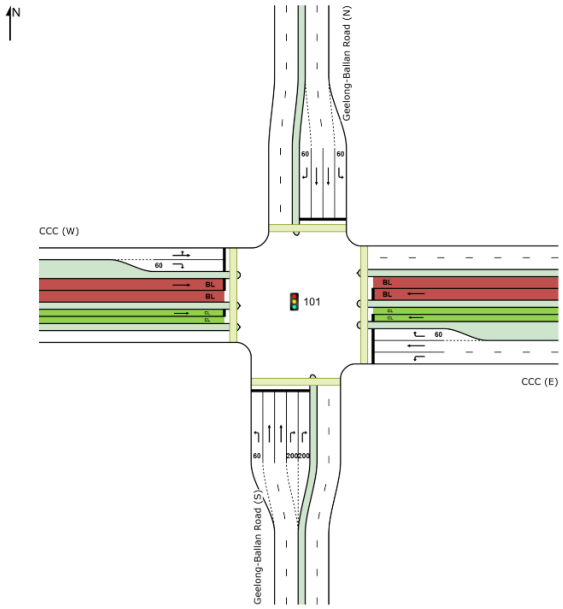


Table 4.2 – SIDRA Intersection Results – Interim & Ultimate

Scenario	**Approach**	AM Peak Hour			PM Peak Hour		
		DOS	Average Delays (secs)	95th Percentile Queue (m)	DOS	Average Delays (secs)	95th Percentile Queue (m)
Interim	Geelong-Ballan Road (South)	0.78	37	123	0.53	30	48
	CCC (East)	0.37	35	37	0.43	32	59
	Geelong-Ballan Road (North)	0.41	32	63	0.37	26	55
	CCC (West)	0.46	42	40	0.40	35	35
	Intersetion	**0.78**	**36**	**123**	**0.53**	**31**	**59**
Ultimate	Geelong-Ballan Road (South)	0.68	44	87	0.66	40	39
	CCC (East)	0.29	32	51	0.53	31	86
	Geelong-Ballan Road (North)	0.24	33	40	0.22	28	35
	CCC (West)	0.44	41	63	0.24	31	32
	Intersection	**0.68**	**39**	**87**	**0.66**	**33**	**86**

4.5.3 IN-02

The proposed interim and ultimate intersection layouts for IN-02 are presented in Figure 4.3 and Figure 4.4. The corresponding SIDRA Intersection results for the interim and ultimate scenarios are presented in Table 4.3.

Figure 4.3 – Interim Intersection Layout

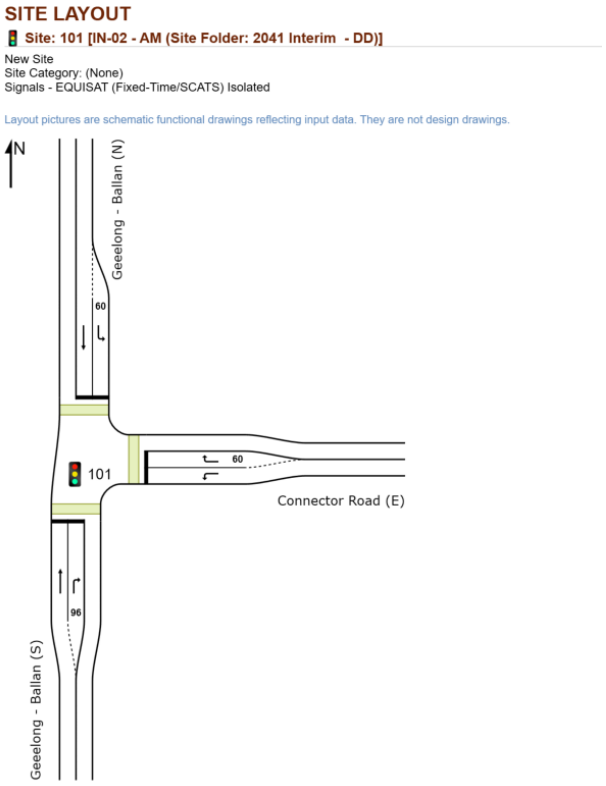


Figure 4.4 – Ultimate Intersection Layout

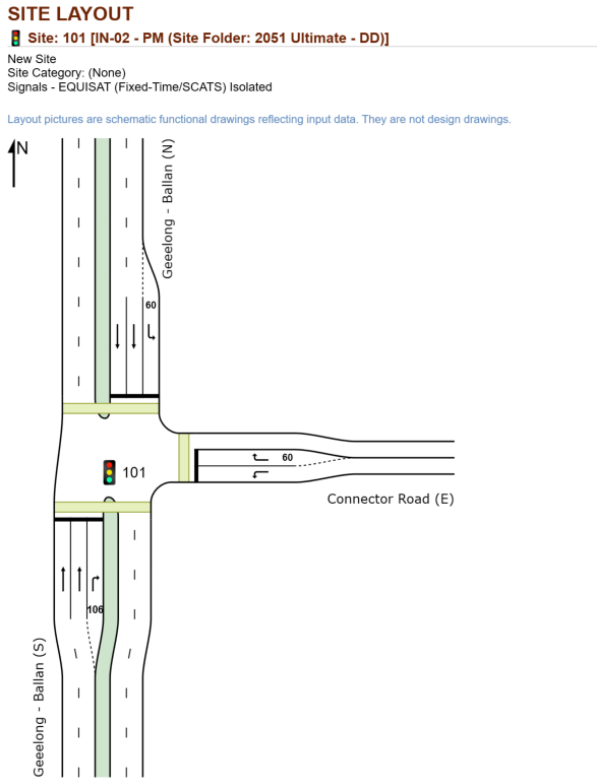


Table 4.3 – SIDRA Intersection Results – Interim & Ultimate

Scenario	**Approach**	AM Peak Hour			PM Peak Hour		
		DOS	Average Delays (secs)	95th Percentile Queue (m)	DOS	Average Delays (secs)	95th Percentile Queue (m)
Interim	Geelong-Ballan Road (South)	0.77	32	134	0.68	29	73
	Connector Road (East)	0.79	47	45	0.65	44	31
	Geelong-Ballan Road (North)	0.57	23	86	0.67	24	108
	Intersetion	**0.79**	**31**	**134**	**0.68**	**28**	**108**
Ultimate	Geelong-Ballan Road (South)	0.87	44	107	0.63	37	61
	Connector Road (East)	0.85	46	61	0.62	44	44
	Geelong-Ballan Road (North)	0.64	32	66	0.67	34	88
	Intersection	**0.87**	**40**	**107**	**0.67**	**36**	**88**

4.5.4 IN-03

The proposed interim and ultimate intersection layouts for IN-03 are presented in Figure 4.5 and Figure 4.6. The corresponding SIDRA Intersection results for the interim and ultimate scenarios are presented in Table 4.4.

Figure 4.5 – Interim Intersection Layout

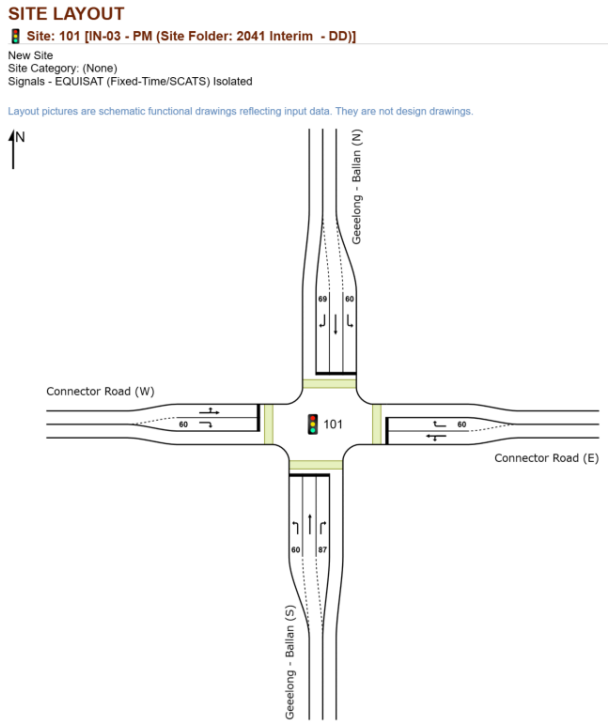


Figure 4.6 – Ultimate Intersection Layout

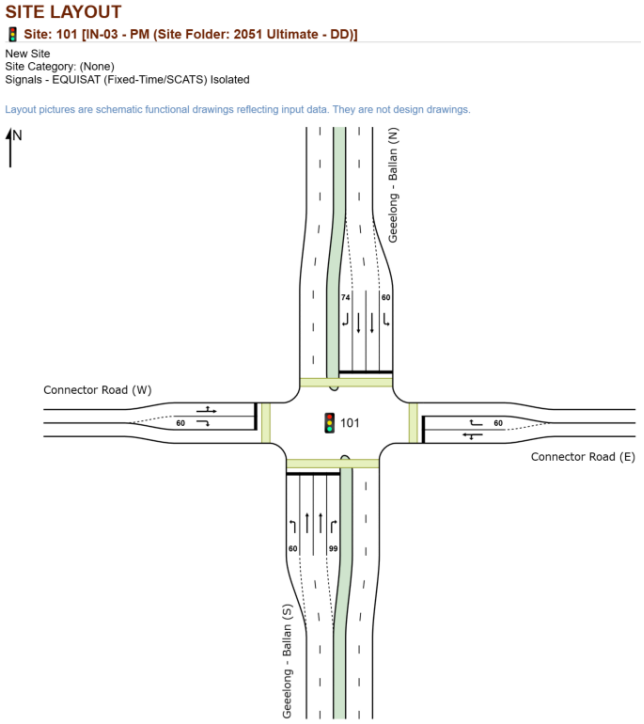


Table 4.4 – SIDRA Intersection Results – Interim & Ultimate

Scenario	**Approach**	AM Peak Hour			PM Peak Hour		
		DOS	Average Delays (secs)	95th Percentile Queue (m)	DOS	Average Delays (secs)	95th Percentile Queue (m)
Interim	Geelong-Ballan Road (South)	0.88	40	168	0.64	28	81
	Connector Road (East)	0.37	34	24	0.52	35	25
	Geelong-Ballan Road (North)	0.69	27	103	0.70	27	113
	Connector Road (West)	0.85	45	56	0.62	41	29
	Intersetion	**0.88**	**36**	**168**	**0.70**	**30**	**113**
Ultimate	Geelong-Ballan Road (South)	0.78	40	111	0.74	34	61
	Connector Road (East)	0.33	33	34	0.61	31	30
	Geelong-Ballan Road (North)	0.76	40	88	0.74	35	85
	Connector Road (West)	0.76	43	76	0.73	39	40
	Intersection	**0.76**	**39**	**111**	**0.74**	**35**	**85**

4.5.6 IN-05

The proposed interim and ultimate intersection layouts for IN-05 are presented in Figure 4.7 and Figure 4.8. The corresponding SIDRA Intersection results for the interim and ultimate scenarios are presented in Table 4.5.

Figure 4.7 – Interim Intersection Layout

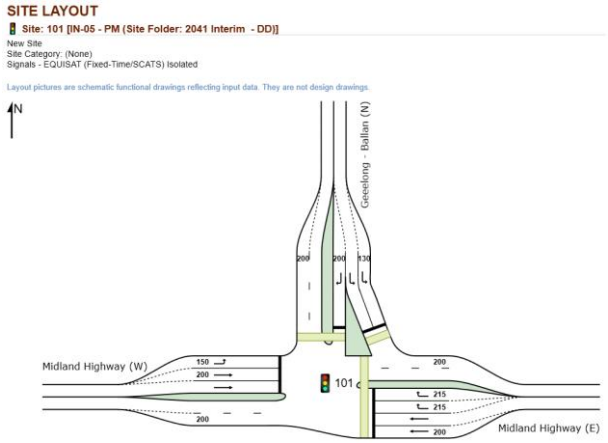


Figure 4.8 – Ultimate Intersection Layout

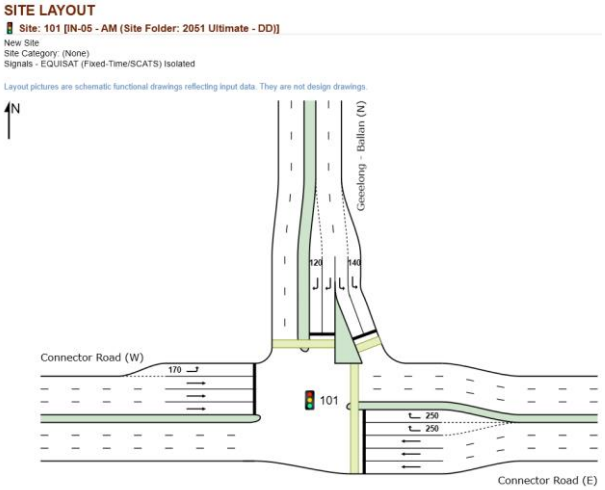


Table 4.5 – SIDRA Intersection Results – Interim & Ultimate

Scenario	**Approach**	AM Peak Hour			PM Peak Hour		
		DOS	Average Delays (secs)	95th Percentile Queue (m)	DOS	Average Delays (secs)	95th Percentile Queue (m)
Ultimate	Midland Highway (East)	0.85	31	125	0.53	20	95
	Geelong-Ballan Road (North)	0.40	34	91	0.43	33	68
	Midland Highway (West)	0.86	36	300	0.54	32	119
	Intersetion	**0.86**	**34**	**300**	**0.54**	**26**	**119**

4.5.8 IN 06

The proposed interim and ultimate intersection layouts for IN-06 are presented in Figure 4.9 and Figure 4.10. The corresponding SIDRA Intersection results for the interim and ultimate scenarios are presented in Table 4.6.

Figure 4.9 – Interim Intersection Layout

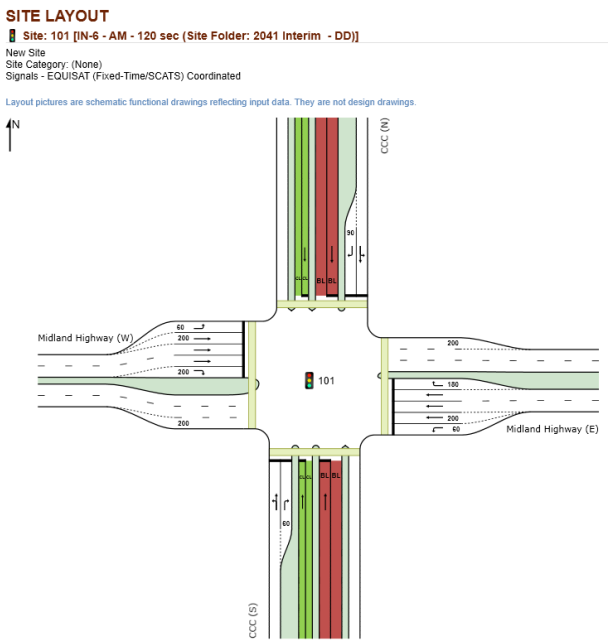


Figure 4.10 – Ultimate Intersection Layout

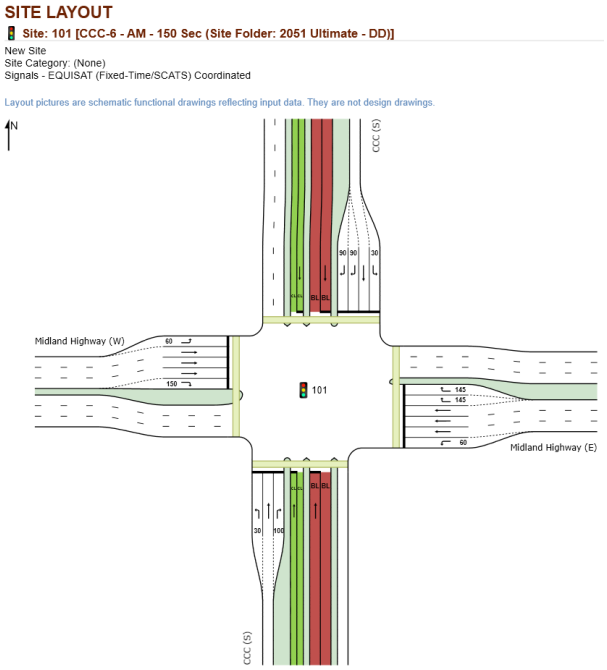


Table 4.6 – SIDRA Intersection Results – Interim & Ultimate

Scenario	Approach	AM Peak Hour			PM Peak Hour		
		DOS	Average Delays (secs)	95th Percentile Queue (m)	DOS	Average Delays (secs)	95th Percentile Queue (m)
Interim	CCC (South)	0.81	47	91	0.44	41	69
	Midland Highway (East)	0.92	41	98	0.74	47	147
	CCC (North)	0.88	53	58	0.78	49	92
	Midland Highway (West)	0.95	44	303	0.76	41	128
	Intersetion	**0.95**	**44**	**303**	**0.78**	**44**	**147**
Ultimate	CCC (South)	0.94	59	92	0.39	38	36
	Midland Highway (East)	0.98	55	149	0.87	54	227
	CCC (North)	0.51	65	47	0.85	57	66
	Midland Highway (West)	0.98	44	529	0.88	30	142
	Intersection	**0.98**	**50**	**529**	**0.88**	**44**	**227**

4.5.10 IN 07

The proposed ultimate intersection layouts for IN-07 is presented in Figure 4.11 (no interim layout is provided for the intersection, as the intersection is proposed to be fully funded by the DCP). The corresponding SIDRA Intersection results for the ultimate scenarios is presented in Table 4.7.

Figure 4.11 –Ultimate Intersection Layout

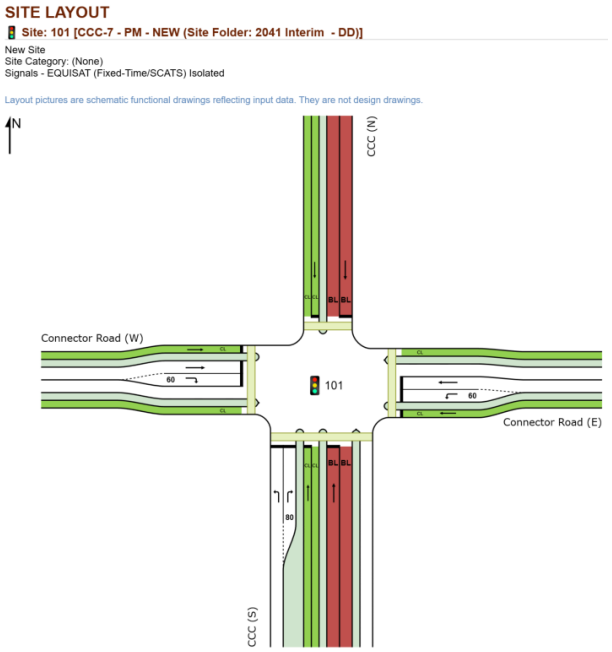


Table 4.7 – SIDRA Intersection Results – Ultimate

Scenario	**Approach**	AM Peak Hour			PM Peak Hour		
		DOS	Average Delays (secs)	95th Percentile Queue (m)	DOS	Average Delays (secs)	95th Percentile Queue (m)
Ultimate	CCC (South)	0.85	36	79	0.79	33	55
	Connector Road (East)	0.29	23	41	0.62	25	101
	CCC – Bus Only (North)	0.04	29	5	0.04	29	5
	Connector Road (West)	0.33	19	58	0.09	16	14
	Intersetion	**0.85**	**27**	**79**	**0.79**	**27**	**101**

4.5.12 IN 09

The proposed ultimate intersection layouts for IN-09 is presented in Figure 4.12 (no interim layout is provided for the intersection, as the intersection is proposed to be fully funded by the DCP). The corresponding SIDRA Intersection results for the ultimate scenarios is presented in Table 4.8.

Figure 4.12 –Ultimate Intersection Layout

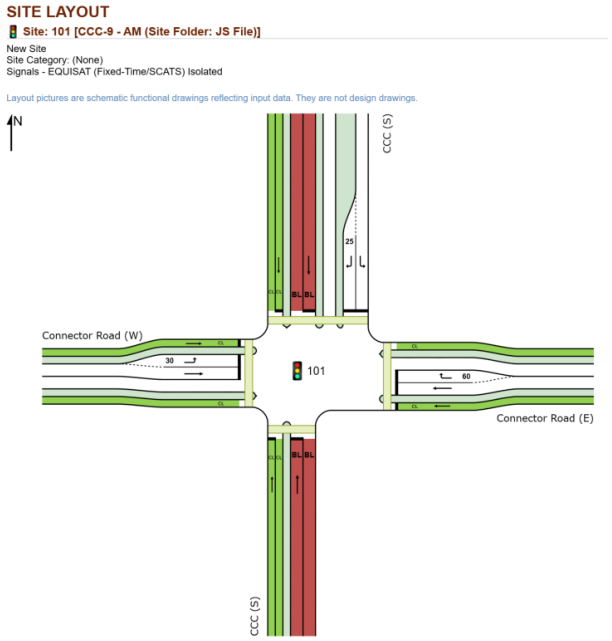


Table 4.8 – SIDRA Intersection Results – Ultimate

Scenario	**Approach**	AM Peak Hour			PM Peak Hour		
		DOS	Average Delays (secs)	95th Percentile Queue (m)	DOS	Average Delays (secs)	95th Percentile Queue (m)
Ultimate	CCC – Bus Only (South)	0.04	29	5	0.04	29	5
	Connector Road (East)	0.11	16	17	0.19	16	31
	Local Access (North)	0.32	28	21	0.37	35	21
	CCC – Bus Only (North)	0.04	29	5	0.04	29	5
	Connector Road (West)	0.33	24	49	0.17	24	25
	Intersetion	**0.33**	**24**	**49**	**0.33**	**24**	**31**

4.5.13 CC-12

The proposed interim and ultimate intersection layouts for CC-12 are presented in Figure 4.13 and Figure 4.14. The corresponding SIDRA Intersection results for the interim and ultimate scenarios are presented in Table 4.9.

Figure 4.13 – Interim Intersection Layout

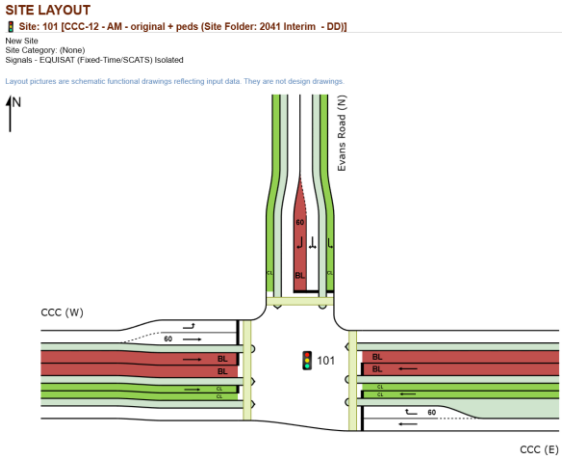


Figure 4.14 – Ultimate Intersection Layout

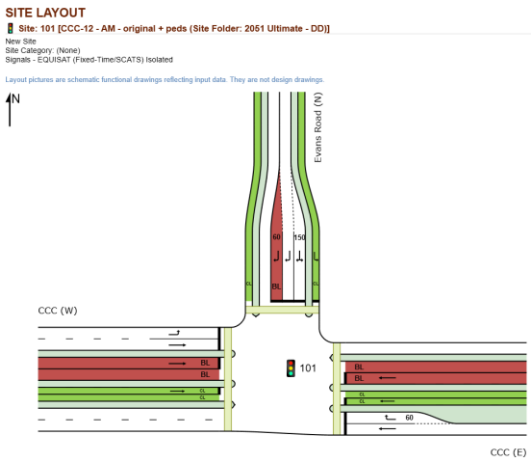


Table 4.9 – SIDRA Intersection Results – Interim & Ultimate

Scenario	**Approach**	AM Peak Hour			PM Peak Hour		
		DOS	Average Delays (secs)	95th Percentile Queue (m)	DOS	Average Delays (secs)	95th Percentile Queue (m)
Interim	CCC (East)	0.29	36	45	0.29	42	39
	Evans Road (North)	0.48	46	75	0.50	41	97
	CCC (West)	0.75	29	198	0.34	29	72
	Intersetion	**0.75**	**35**	**198**	**0.50**	**37**	**97**
Ultimate	CCC (East)	0.20	34	34	0.24	39	35
	Evans Road (North)	0.74	47	134	0.57	47	89
	CCC (West)	0.33	35	60	0.57	28	132
	Intersetion	**0.74**	**40**	**134**	**0.57**	**35**	**132**

5. Summary

Based on the analysis and discussions presented within this report, the following is noted:

- Ultimate traffic volumes have been sourced from the Victorian Integrated Transport Model (updated version to reflect the Geelong Growth Areas).
- Interim traffic volumes have been determined by factoring the ultimate traffic volumes by 75%.
- Some refinements have been undertaken in the development of input volumes to account for turns and movements that have been captured at parallel intersections in the model.
- Intersection layouts have been identified which achieve the key criteria (i.e. target maximum DOS of 0.95 and LOS D).
- In order to achieve the maximum DOS and LOS criteria for IN-06, an extended cycle time of 150 second has been adopted for the ultimate arrangement (which also includes a corresponding DOS of 0.98).
- It is noted that there are no further mitigations works identified between the interim and ultimate design scenarios for CC-07 and CC-09.

Appendix A. Turning Volumes & Refinements

Figure A.1 – Ultimate AM Peak Hour – Raw Traffic Volumes

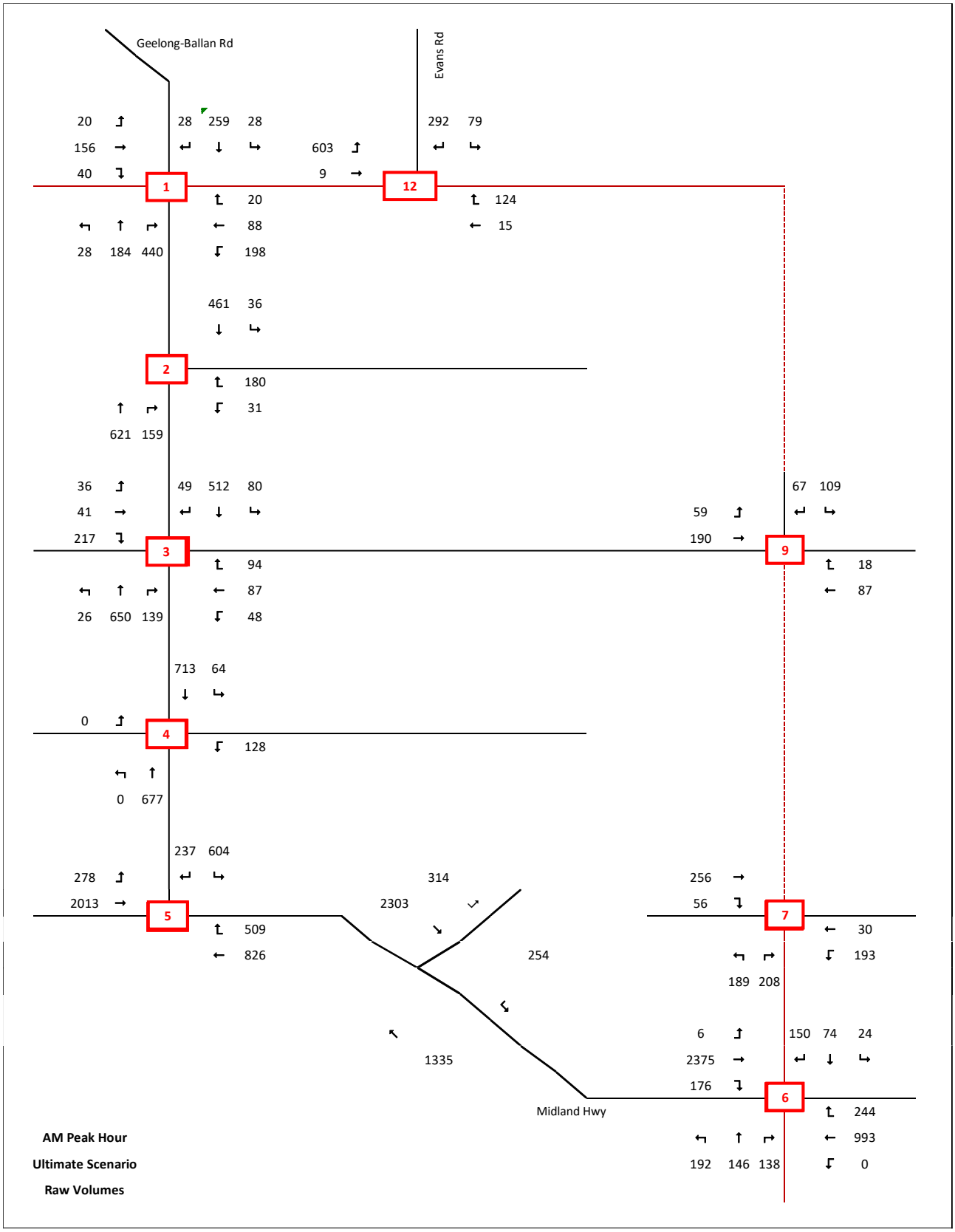


Figure A.2 – Ultimate AM Peak Hour – Adjusted Traffic Volumes

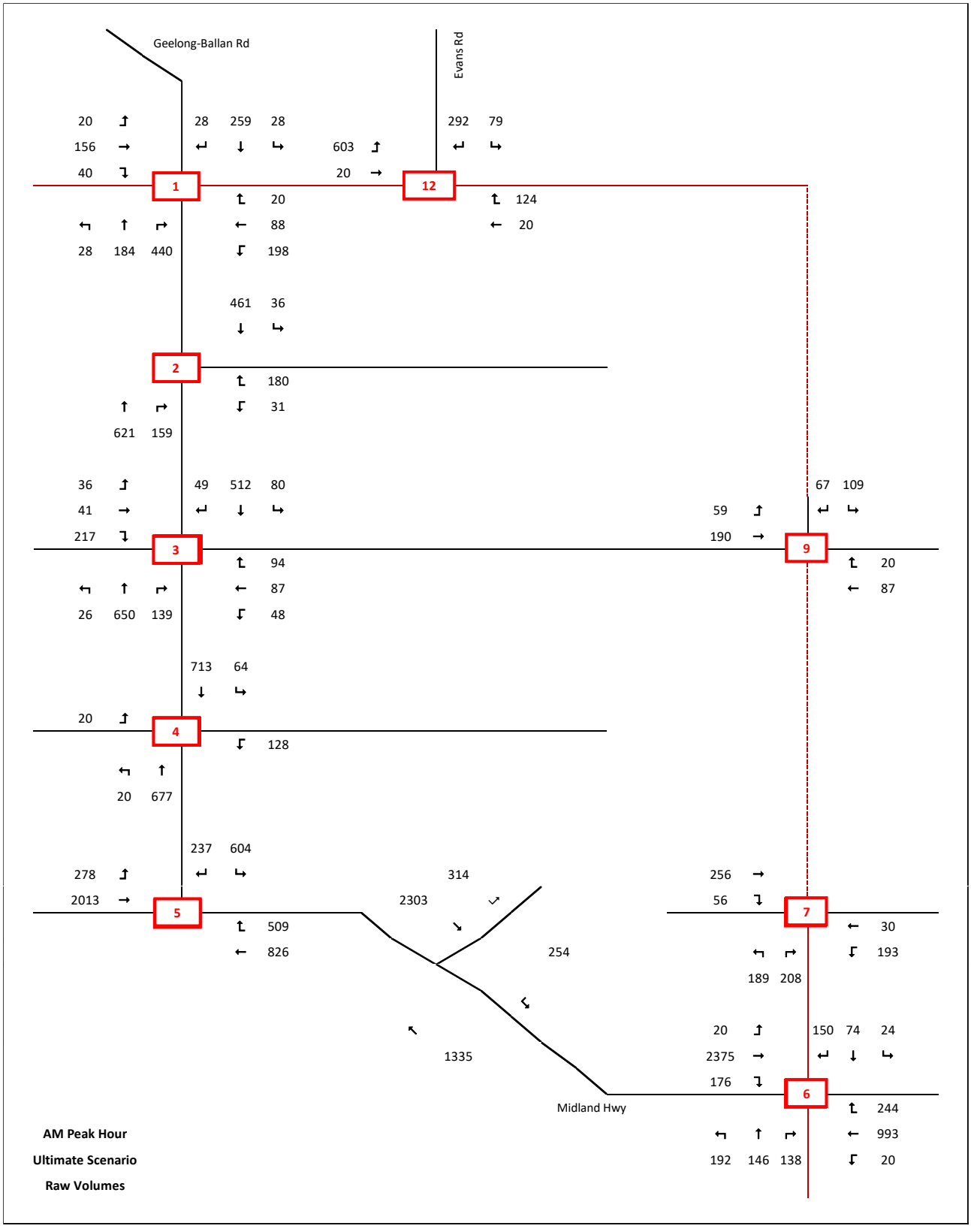


Figure A.3 – Interim AM Peak Hour – Adjusted Traffic Volumes

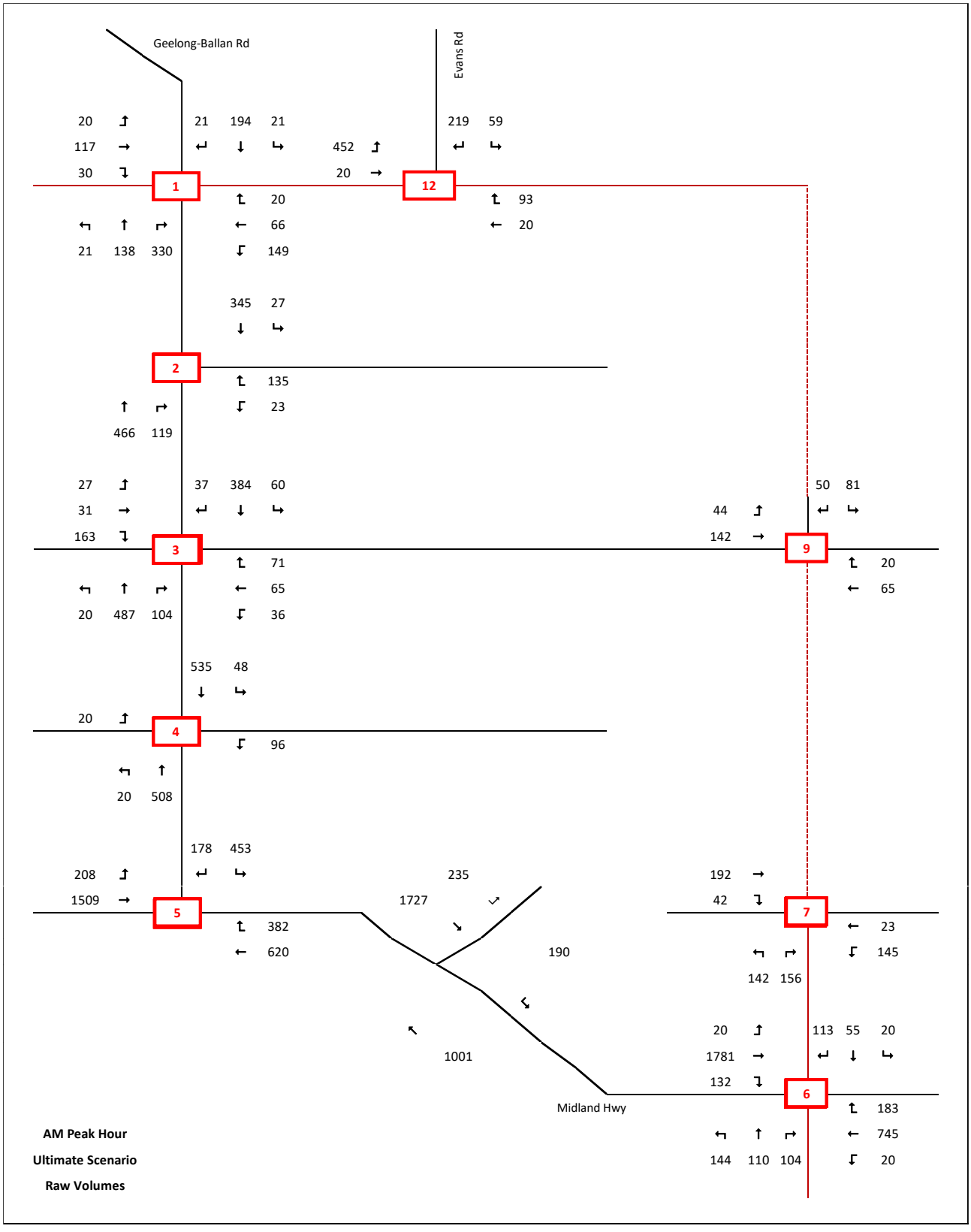


Figure A.4 – Ultimate PM Peak Hour – Raw Traffic Volumes

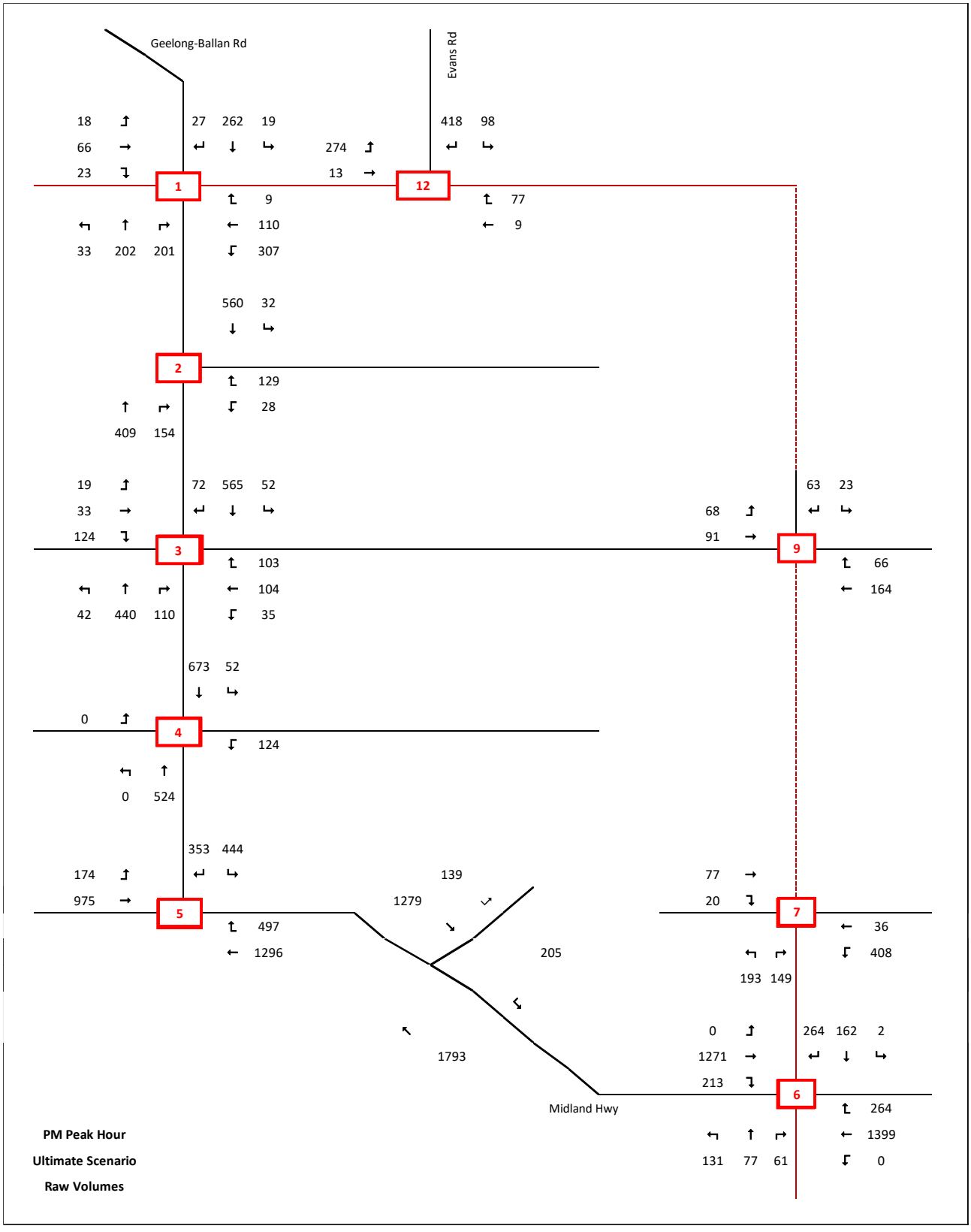


Figure A.5 – Ultimate PM Peak Hour – Adjusted Traffic Volumes

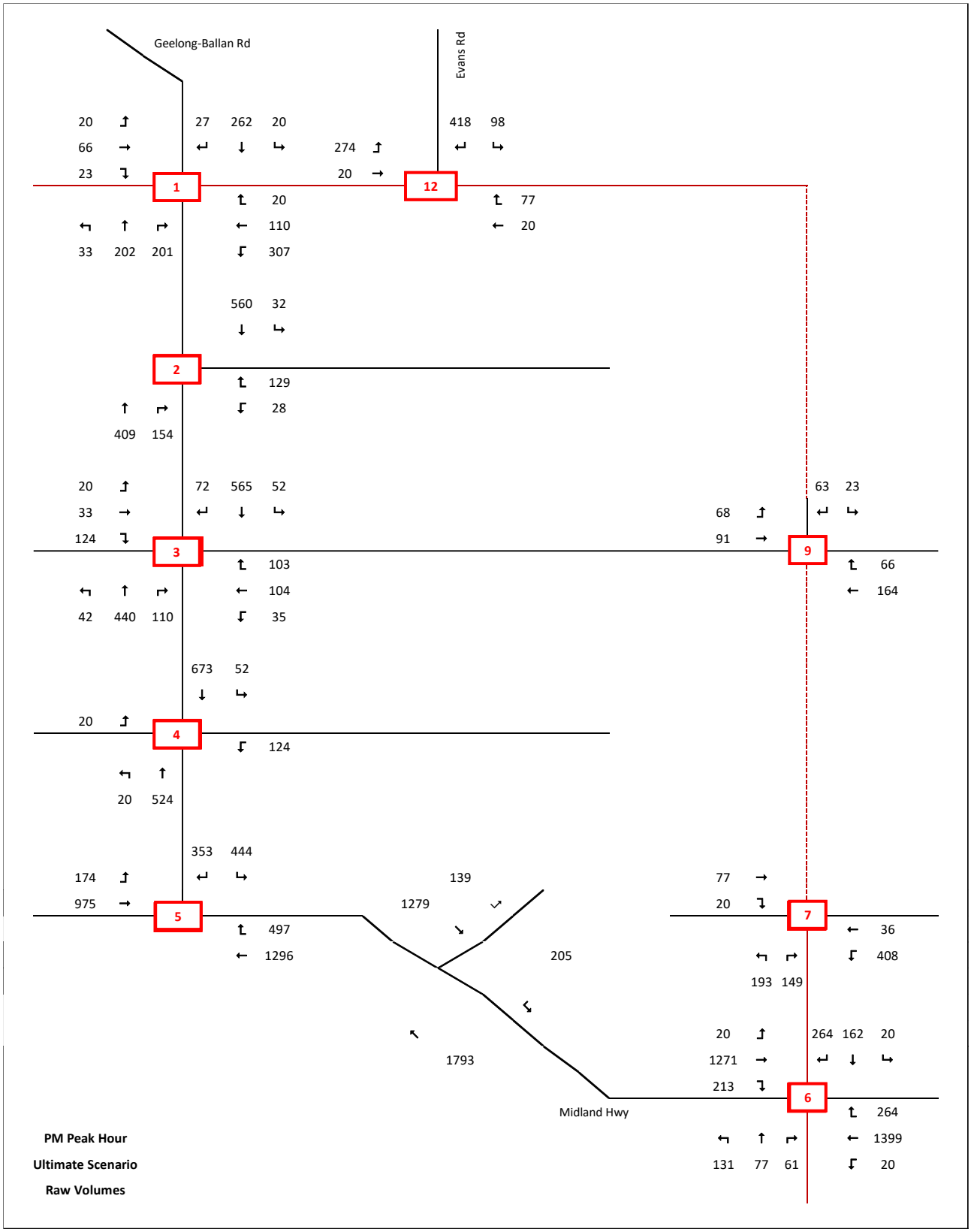
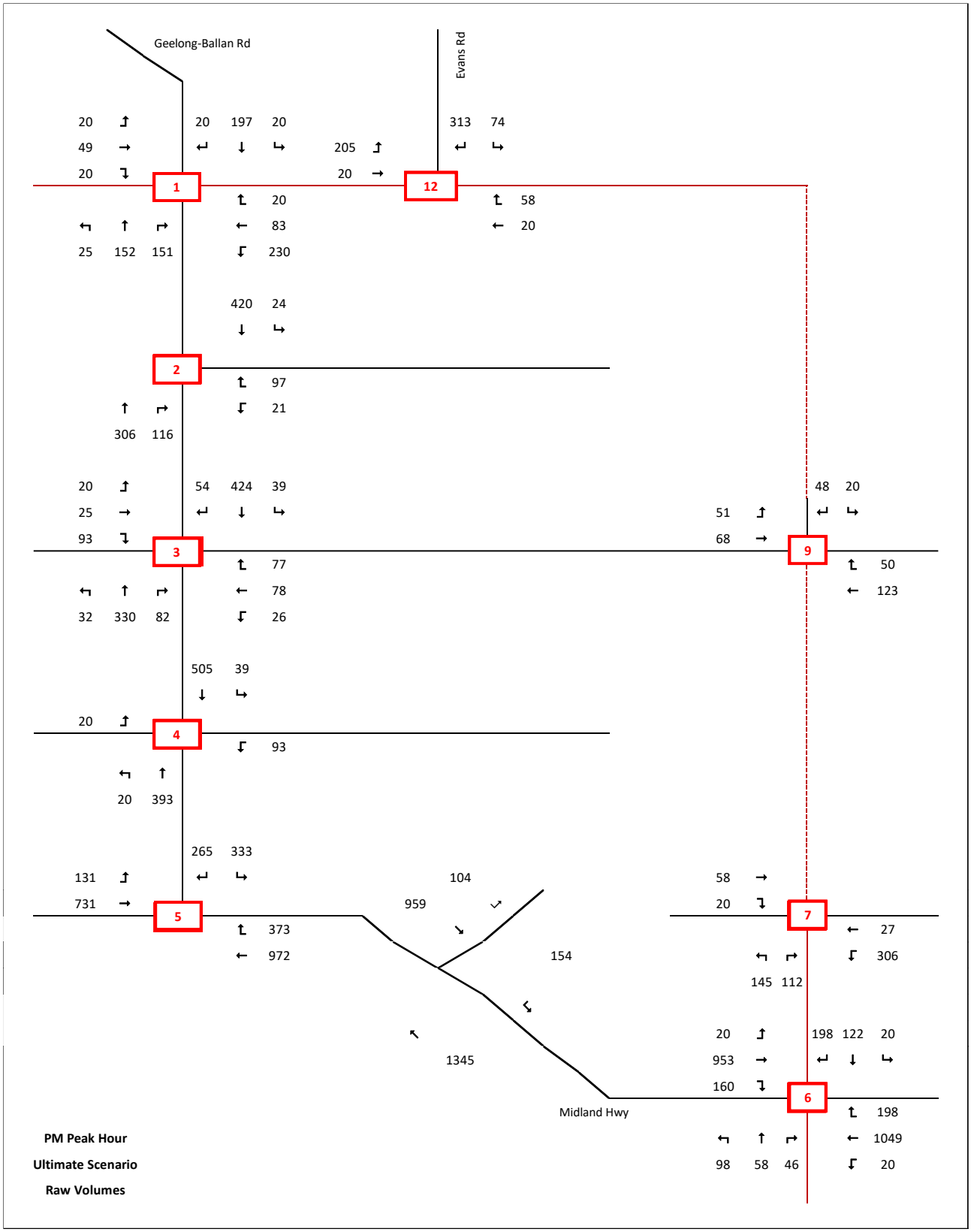


Figure A.6 – Interim PM Peak Hour – Adjusted Traffic Volumes



Appendix B. SIDRA Intersection Outputs

PHASING SUMMARY

Site: 101 [IN-01 - AM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

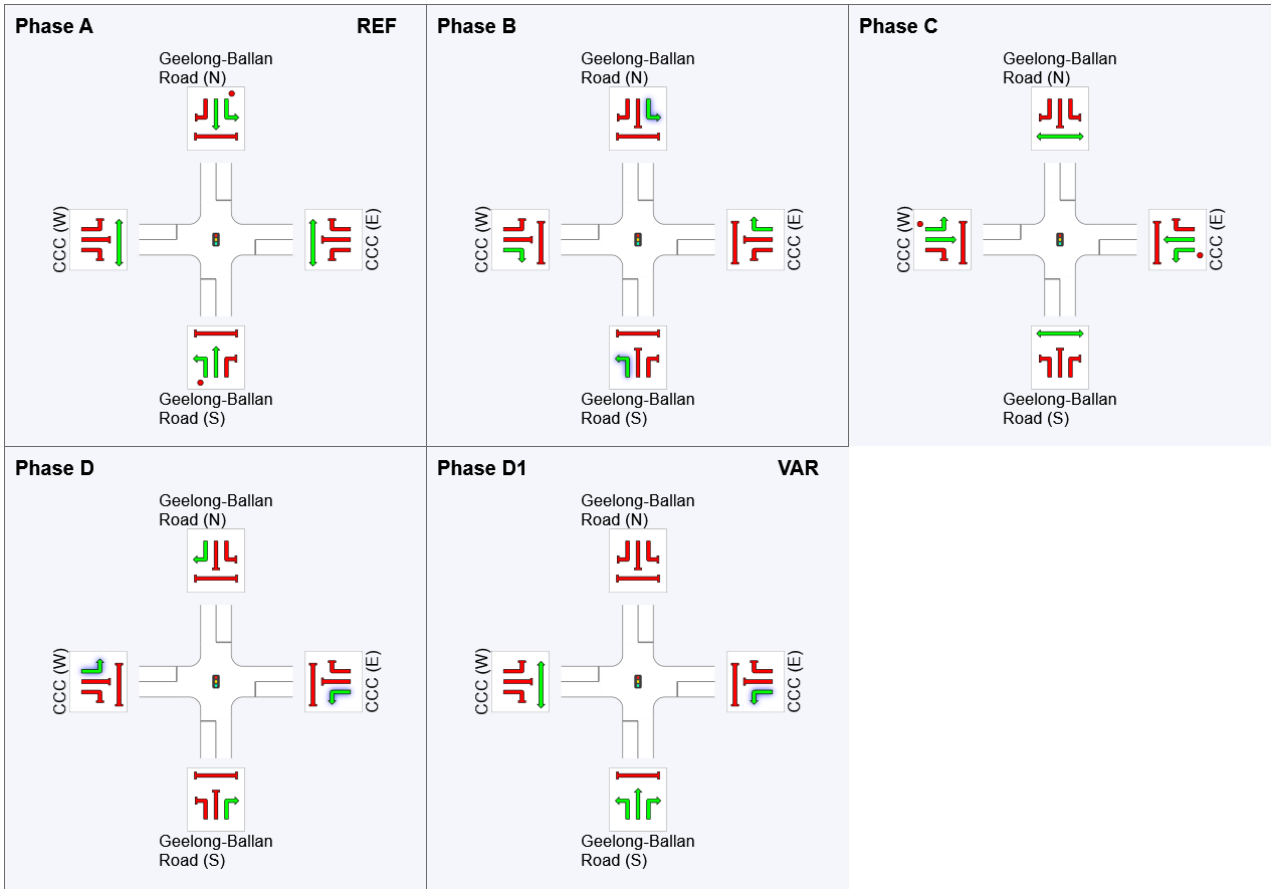
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D, D1*
(* Variable Phase)

Phase Timing Summary

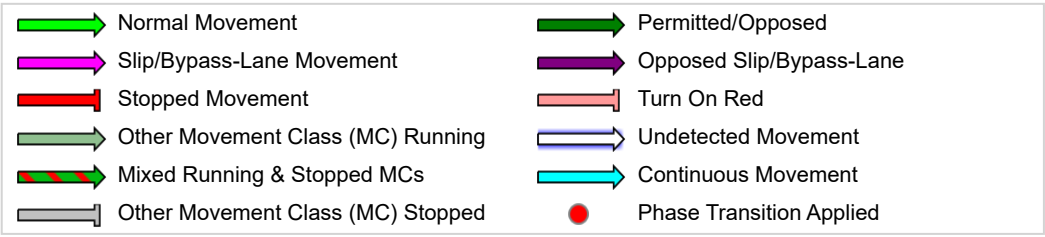
Phase	A	B	C	D	D1
Phase Change Time (sec)	0	36	48	69	82
Green Time (sec)	30	6	15	7	12
Phase Time (sec)	36	12	21	13	18
Phase Split	36%	12%	21%	13%	18%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

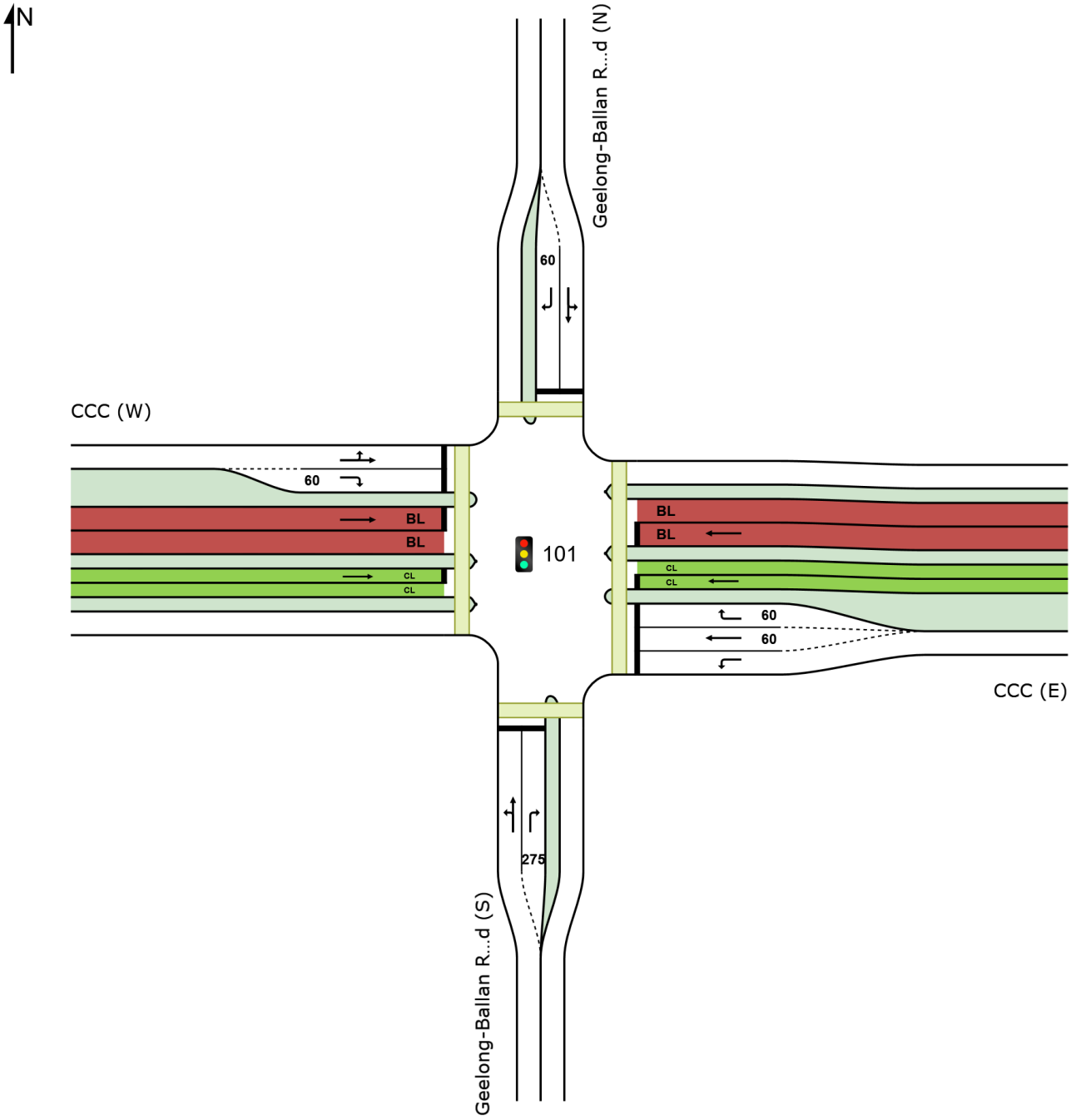


SITE LAYOUT

Site: 101 [IN-01 - AM (Site Folder: 2041 Interim - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [IN-01 - AM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geelong-Ballan Road (S)														
10	L2	21	1	22	5.0	0.189	20.4	LOS C	4.4	32.2	0.61	0.54	0.61	46.7
11	T1	138	7	145	5.0	0.189	14.8	LOS B	4.4	32.2	0.61	0.54	0.61	47.9
12	R2	330	17	347	5.0	* 0.775	46.7	LOS D	16.9	123.2	0.99	0.90	1.09	29.4
Approach		489	24	515	5.0	0.775	36.6	LOS D	16.9	123.2	0.87	0.78	0.93	34.6
East: CCC (E)														
1	L2	149	7	157	5.0	* 0.236	25.9	LOS C	5.0	36.6	0.73	0.74	0.73	37.3
2	T1	130	15	137	11.5	0.372	41.5	LOS D	4.8	34.7	0.93	0.71	0.93	30.7
3	R2	20	1	21	5.0	0.196	57.0	LOS E	1.0	7.6	0.98	0.70	0.98	26.4
Approach		299	23	315	7.8	0.372	34.8	LOS C	5.0	36.6	0.83	0.73	0.83	33.2
North: Geelong-Ballan Road (N)														
4	L2	21	1	22	5.0	0.410	34.7	LOS C	8.7	63.2	0.84	0.72	0.84	35.5
5	T1	194	10	204	5.0	* 0.410	29.1	LOS C	8.7	63.2	0.84	0.72	0.84	40.5
6	R2	21	1	22	5.0	0.176	55.5	LOS E	1.1	7.8	0.97	0.70	0.97	31.0
Approach		236	12	248	5.0	0.410	31.9	LOS C	8.7	63.2	0.86	0.72	0.86	39.1
West: CCC (W)														
7	L2	20	1	21	5.0	0.456	43.6	LOS D	5.4	39.7	0.96	0.77	0.96	35.9
8	T1	130	15	137	11.5	0.456	38.2	LOS D	5.4	39.7	0.94	0.73	0.94	26.6
9	R2	30	2	32	5.0	* 0.294	57.5	LOS E	1.6	11.5	0.99	0.72	0.99	30.5
Approach		180	18	189	9.7	0.456	42.0	LOS D	5.4	39.7	0.95	0.73	0.95	28.1
All Vehicles		1204	77	1267	6.4	0.775	36.0	LOS D	16.9	123.2	0.87	0.75	0.90	34.0

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geelong-Ballan Road (S)												
P4	Full	50	53	44.3	LOS E	0.1	0.1	0.94	0.94	208.8	213.9	1.02
East: CCC (E)												
P1	Full	50	53	44.3	LOS E	0.1	0.1	0.94	0.94	222.6	231.8	1.04
North: Geelong-Ballan Road (N)												

P2 Full	50	53	44.3	LOS E	0.1	0.1	0.94	0.94	208.8	213.9	1.02
West: CCC (W)											
P3 Full	50	53	44.3	LOS E	0.1	0.1	0.94	0.94	220.0	228.5	1.04
All Pedestrians	200	211	44.3	LOS E	0.1	0.1	0.94	0.94	215.1	222.0	1.03

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 [IN-01 - AM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, B1*, C, D
(* Variable Phase)

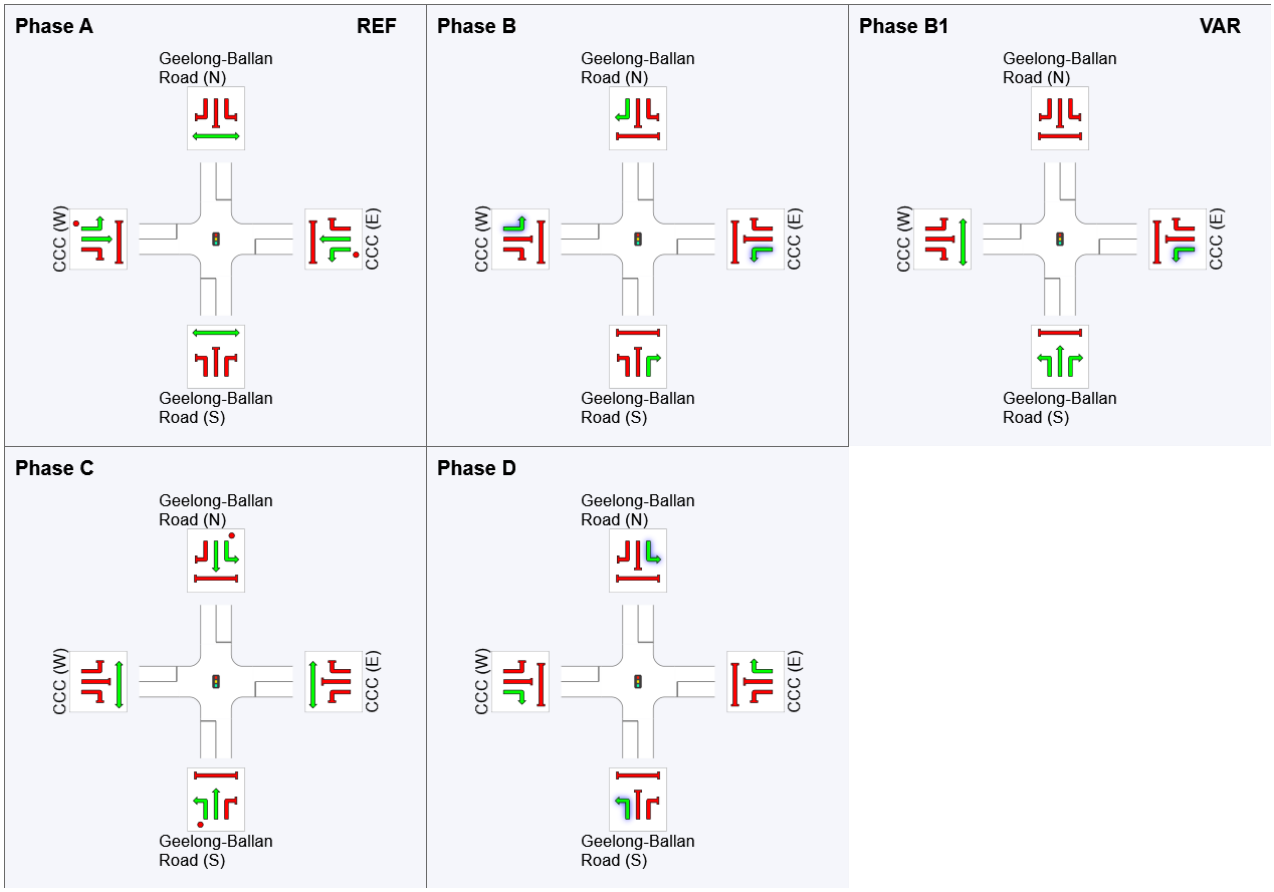
Phase Timing Summary

Phase	A	B	B1	C	D
Phase Change Time (sec)	0	32	55	59	98
Green Time (sec)	26	17	***	33	6
Phase Time (sec)	32	23	4	39	12
Phase Split	29%	21%	4%	35%	11%

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

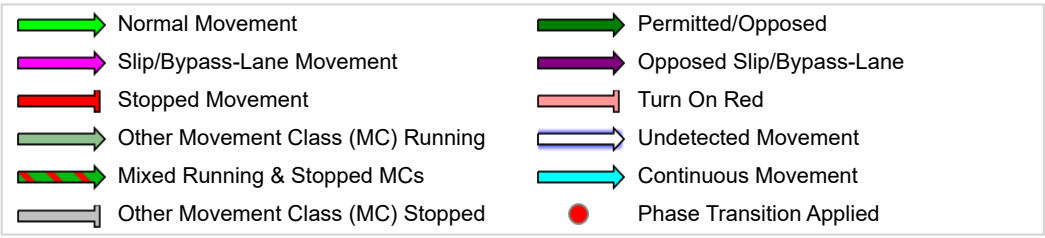
*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

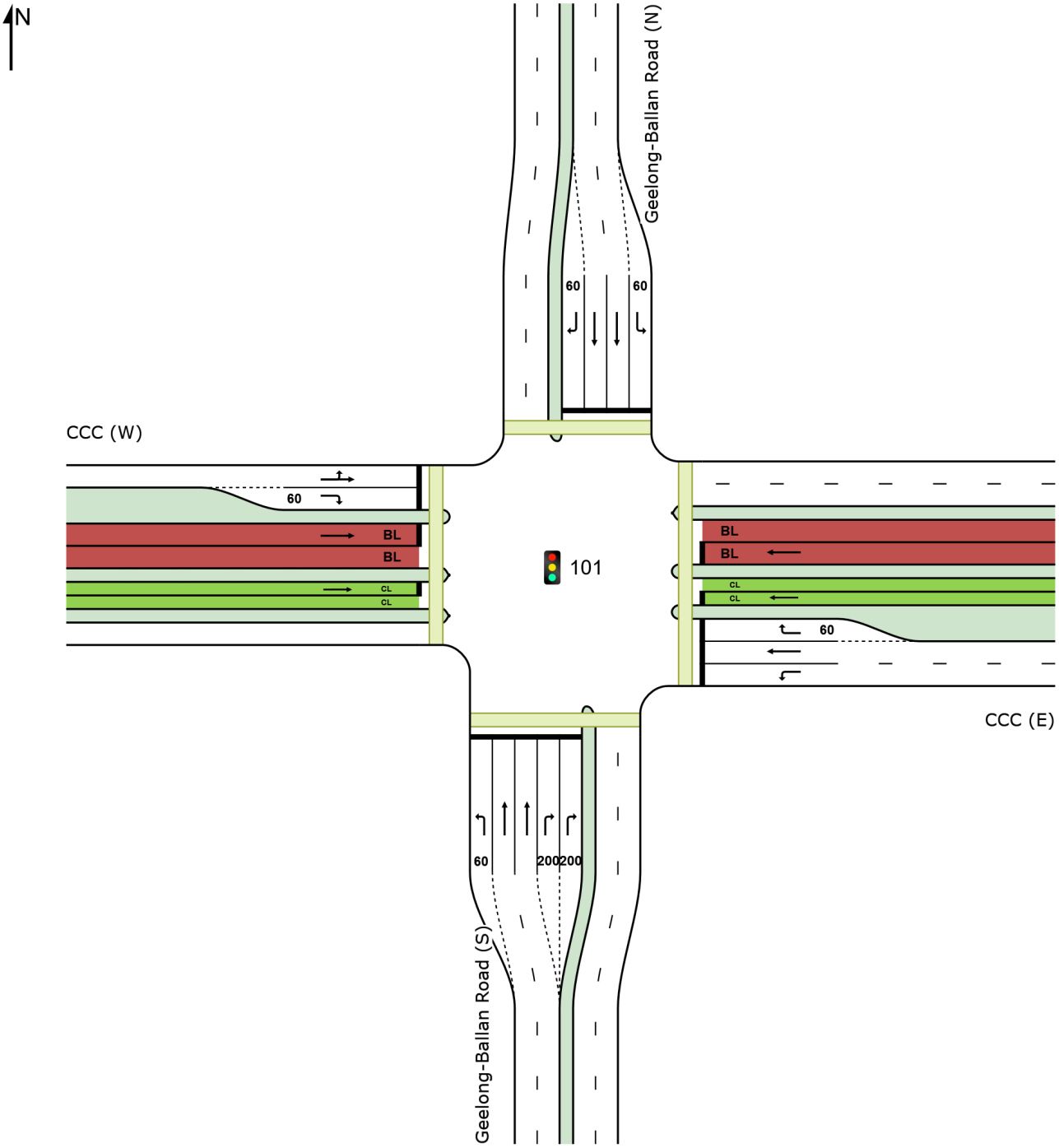


SITE LAYOUT

Site: 101 [IN-01 - AM (Site Folder: 2051 Ultimate - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [IN-01 - AM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 110 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geelong-Ballan Road (S)														
10	L2	28	1	29	5.0	0.048	27.3	LOS C	1.0	7.0	0.69	0.69	0.69	40.6
11	T1	184	9	194	5.0	0.152	27.3	LOS C	3.6	26.3	0.74	0.59	0.74	41.7
12	R2	440	22	463	5.0	* 0.676	51.7	LOS D	11.9	87.0	0.98	0.84	1.01	28.0
Approach		652	33	686	5.0	0.676	43.7	LOS D	11.9	87.0	0.90	0.76	0.92	32.0
East: CCC (E)														
1	L2	198	10	208	5.0	0.291	26.1	LOS C	7.0	51.3	0.72	0.76	0.72	37.2
2	T1	130	15	137	11.5	0.236	36.1	LOS D	4.6	33.5	0.84	0.65	0.84	32.9
3	R2	20	1	21	5.0	0.215	62.8	LOS E	1.2	8.4	0.99	0.70	0.99	25.3
Approach		348	26	366	7.4	0.291	31.9	LOS C	7.0	51.3	0.78	0.71	0.78	34.5
North: Geelong-Ballan Road (N)														
4	L2	28	1	29	5.0	0.053	30.0	LOS C	1.0	7.4	0.73	0.70	0.73	35.1
5	T1	259	13	273	5.0	* 0.241	31.2	LOS C	5.5	40.2	0.80	0.65	0.80	39.9
6	R2	40	2	42	5.0	0.152	49.7	LOS D	2.0	14.5	0.90	0.73	0.90	32.7
Approach		327	16	344	5.0	0.241	33.4	LOS C	5.5	40.2	0.80	0.66	0.80	38.5
West: CCC (W)														
7	L2	28	1	29	5.0	0.441	41.9	LOS D	8.6	62.9	0.90	0.76	0.90	36.7
8	T1	186	18	196	9.7	* 0.441	35.9	LOS D	8.6	62.9	0.88	0.72	0.88	27.7
9	R2	40	2	42	5.0	* 0.430	64.0	LOS E	2.4	17.2	1.00	0.73	1.00	29.2
Approach		254	21	267	8.4	0.441	41.0	LOS D	8.6	62.9	0.90	0.73	0.90	28.8
All Vehicles		1581	96	1664	6.1	0.676	38.5	LOS D	11.9	87.0	0.85	0.73	0.86	33.3

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geelong-Ballan Road (S)												
P4	Full	50	53	49.3	LOS E	0.2	0.2	0.95	0.95	224.0	227.1	1.01
East: CCC (E)												
P1	Full	50	53	49.3	LOS E	0.2	0.2	0.95	0.95	230.1	235.1	1.02
North: Geelong-Ballan Road (N)												

P2 Full	50	53	49.3	LOS E	0.2	0.2	0.95	0.95	221.4	223.8	1.01
West: CCC (W)											
P3 Full	50	53	49.3	LOS E	0.2	0.2	0.95	0.95	225.0	228.5	1.02
All Pedestrians	200	211	49.3	LOS E	0.2	0.2	0.95	0.95	225.1	228.6	1.02

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 [IN-01 - PM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D, D1*
(* Variable Phase)

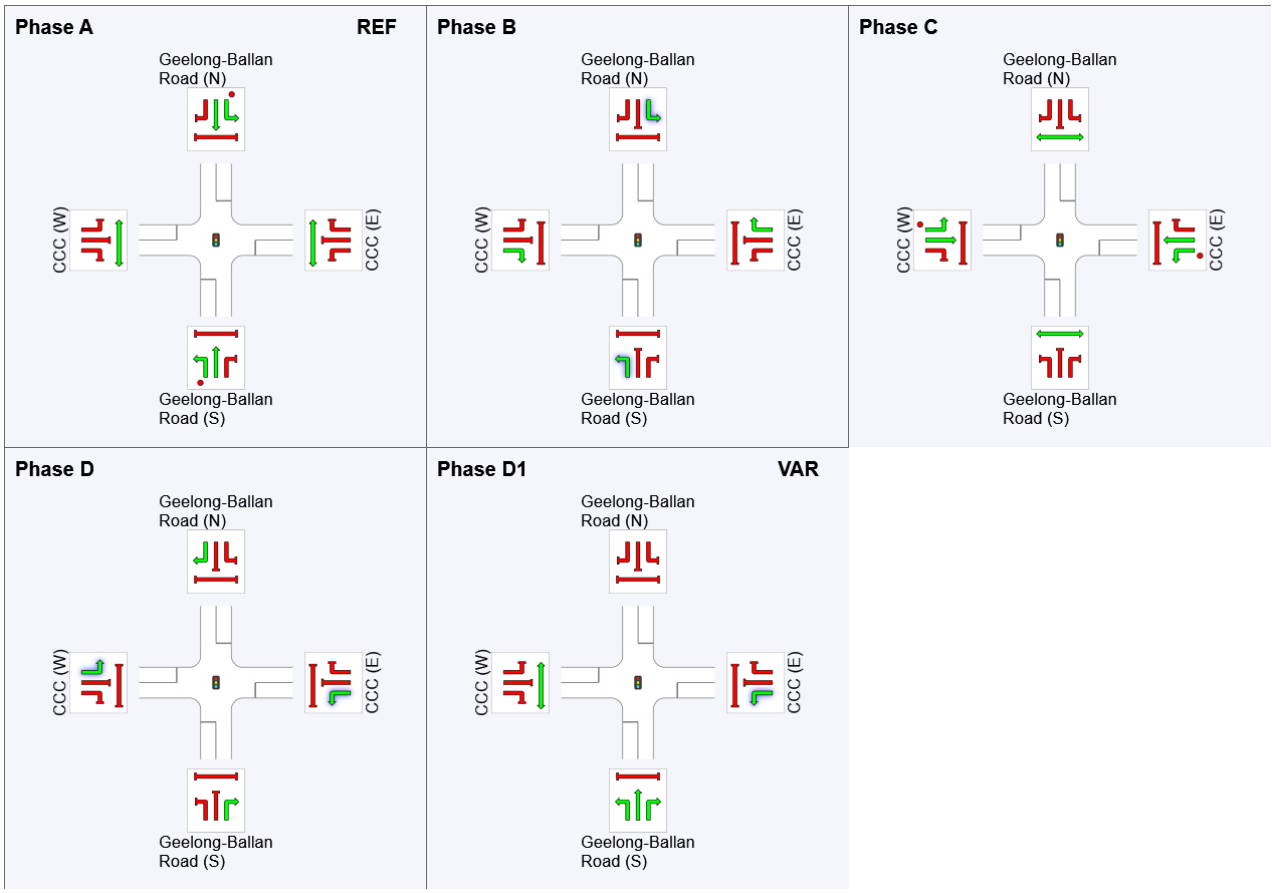
Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	0	36	48	69	84
Green Time (sec)	30	6	15	9	***
Phase Time (sec)	36	12	21	15	6
Phase Split	40%	13%	23%	17%	7%

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

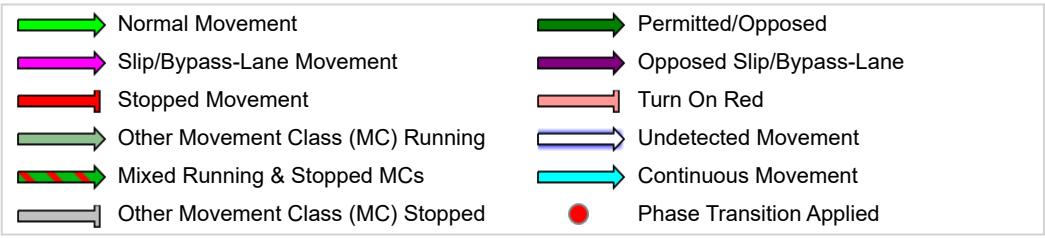
*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-01 - PM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geelong-Ballan Road (S)														
10	L2	25	1	26	5.0	0.254	23.8	LOS C	5.2	38.1	0.71	0.62	0.71	44.8
11	T1	152	8	160	5.0	0.254	18.2	LOS B	5.2	38.1	0.71	0.62	0.71	45.9
12	R2	151	8	159	5.0	* 0.532	43.9	LOS D	6.6	48.3	0.96	0.80	0.96	30.3
Approach		328	16	345	5.0	0.532	30.4	LOS C	6.6	48.3	0.83	0.70	0.83	38.1
East: CCC (E)														
1	L2	230	12	242	5.0	* 0.434	28.6	LOS C	8.0	58.5	0.84	0.79	0.84	36.0
2	T1	100	13	105	12.9	0.242	35.3	LOS D	3.0	21.7	0.90	0.67	0.90	32.8
3	R2	20	1	21	5.0	0.176	51.2	LOS D	0.9	6.8	0.97	0.70	0.97	27.9
Approach		350	25	368	7.2	0.434	31.8	LOS C	8.0	58.5	0.86	0.75	0.86	34.5
North: Geelong-Ballan Road (N)														
4	L2	20	1	21	5.0	0.372	29.4	LOS C	7.5	54.7	0.81	0.69	0.81	38.1
5	T1	197	10	207	5.1	* 0.372	23.8	LOS C	7.5	54.7	0.81	0.69	0.81	43.0
6	R2	20	1	21	5.0	0.117	47.0	LOS D	0.9	6.4	0.94	0.70	0.94	33.4
Approach		237	12	249	5.1	0.372	26.2	LOS C	7.5	54.7	0.82	0.69	0.82	41.7
West: CCC (W)														
7	L2	20	1	21	5.0	0.403	37.8	LOS D	4.7	34.6	0.93	0.75	0.93	38.0
8	T1	130	15	137	11.5	0.403	32.5	LOS C	4.7	34.6	0.92	0.72	0.92	28.1
9	R2	20	1	21	5.0	* 0.176	51.2	LOS D	0.9	6.8	0.97	0.70	0.97	32.2
Approach		170	17	179	10.0	0.403	35.4	LOS D	4.7	34.6	0.93	0.72	0.93	29.5
All Vehicles		1085	71	1142	6.5	0.532	30.7	LOS C	8.0	58.5	0.85	0.72	0.85	36.2

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geelong-Ballan Road (S)												
P4	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	203.8	213.9	1.05
East: CCC (E)												
P1	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	217.6	231.8	1.07
North: Geelong-Ballan Road (N)												

P2 Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	203.8	213.9	1.05
West: CCC (W)											
P3 Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	215.1	228.5	1.06
All Pedestrians	200	211	39.3	LOS D	0.1	0.1	0.94	0.94	210.1	222.0	1.06

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: 101 [IN-01 - PM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geelong-Ballan Road (S)														
10	L2	33	2	35	5.0	0.057	25.5	LOS C	1.0	7.5	0.70	0.70	0.70	41.4
11	T1	202	10	213	5.0	0.171	25.5	LOS C	3.7	26.8	0.75	0.60	0.75	42.5
12	R2	201	10	212	5.0	* 0.655	56.7	LOS E	5.4	39.2	1.00	0.82	1.09	26.6
Approach		436	22	459	5.0	0.655	39.9	LOS D	5.4	39.2	0.86	0.71	0.90	34.4
East: CCC (E)														
1	L2	307	15	323	5.0	* 0.530	29.9	LOS C	11.7	85.7	0.86	0.81	0.86	35.4
2	T1	140	16	147	11.4	0.220	29.3	LOS C	4.3	31.8	0.79	0.62	0.79	35.9
3	R2	20	1	21	5.0	0.196	57.0	LOS E	1.0	7.6	0.98	0.70	0.98	26.7
Approach		467	32	492	6.9	0.530	30.9	LOS C	11.7	85.7	0.84	0.75	0.84	35.0
North: Geelong-Ballan Road (N)														
4	L2	20	1	21	5.0	0.035	25.3	LOS C	0.6	4.5	0.69	0.68	0.69	37.4
5	T1	262	13	276	5.0	* 0.221	26.0	LOS C	4.9	35.4	0.76	0.62	0.76	42.2
6	R2	27	1	28	5.0	0.176	53.0	LOS D	1.3	9.8	0.96	0.72	0.96	31.8
Approach		309	15	325	5.0	0.221	28.3	LOS C	4.9	35.4	0.78	0.63	0.78	40.8
West: CCC (W)														
7	L2	20	1	21	5.0	0.243	31.5	LOS C	4.4	32.2	0.81	0.67	0.81	40.9
8	T1	130	15	137	11.5	0.243	26.2	LOS C	4.4	32.2	0.80	0.64	0.80	30.3
9	R2	23	1	24	5.0	* 0.225	57.2	LOS E	1.2	8.8	0.98	0.71	0.98	30.9
Approach		173	17	182	9.9	0.243	31.0	LOS C	4.4	32.2	0.82	0.65	0.82	31.3
All Vehicles		1385	87	1458	6.3	0.655	33.1	LOS C	11.7	85.7	0.83	0.70	0.84	35.6

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geelong-Ballan Road (S)												
P4	Full	50	53	44.3	LOS E	0.1	0.1	0.94	0.94	219.0	227.1	1.04
East: CCC (E)												
P1	Full	50	53	44.3	LOS E	0.1	0.1	0.94	0.94	225.1	235.1	1.04
North: Geelong-Ballan Road (N)												

P2 Full	50	53	44.3	LOS E	0.1	0.1	0.94	0.94	216.4	223.8	1.03
West: CCC (W)											
P3 Full	50	53	44.3	LOS E	0.1	0.1	0.94	0.94	220.0	228.5	1.04
All Pedestrians	200	211	44.3	LOS E	0.1	0.1	0.94	0.94	220.1	228.6	1.04

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 [IN-01 - PM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

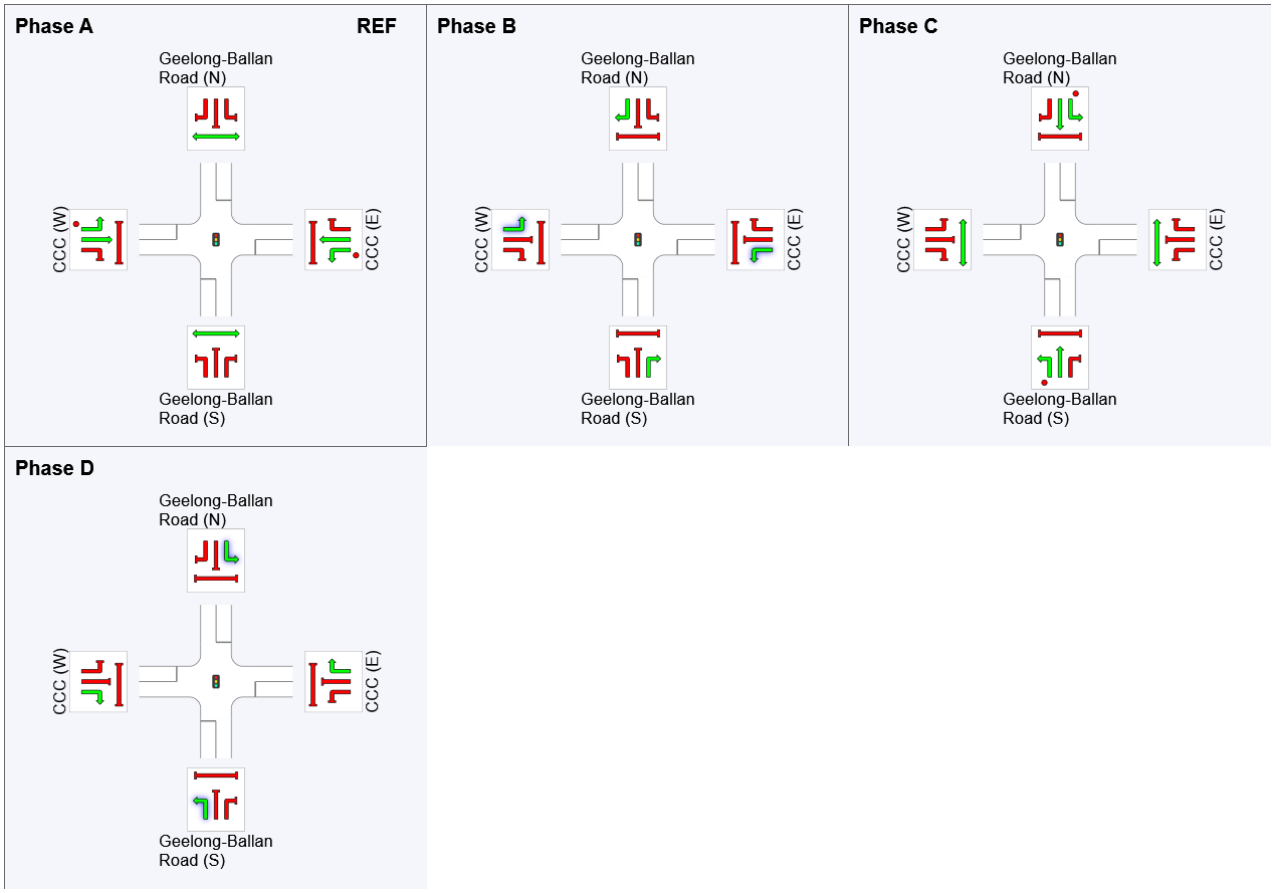
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

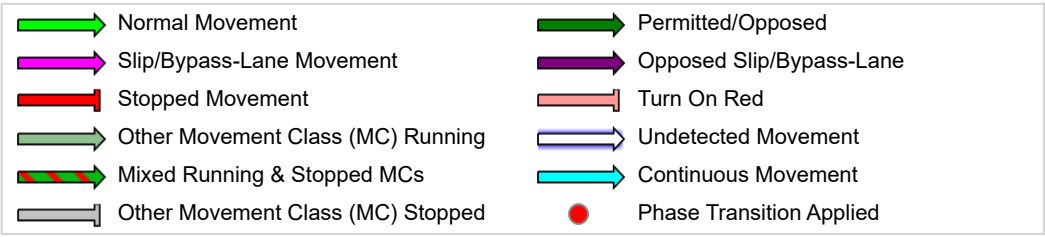
Phase	A	B	C	D
Phase Change Time (sec)	0	34	49	88
Green Time (sec)	28	9	33	6
Phase Time (sec)	34	15	39	12
Phase Split	34%	15%	39%	12%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-02 - AM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geeelong - Ballan (S)														
2	T1	466	5.0	491	5.0	*0.770	28.2	LOS C	18.4	134.1	0.96	0.89	1.04	41.0
3	R2	119	5.0	125	5.0	*0.699	47.0	LOS D	5.2	37.9	1.00	0.85	1.16	33.2
Approach		585	5.0	616	5.0	0.770	32.0	LOS C	18.4	134.1	0.97	0.89	1.06	39.1
East: Connector Road (E)														
4	L2	23	5.0	24	5.0	*0.068	29.9	LOS C	0.7	5.3	0.84	0.69	0.84	39.4
6	R2	135	5.0	142	5.0	*0.792	49.3	LOS D	6.1	44.7	1.00	0.91	1.30	32.5
Approach		158	5.0	166	5.0	0.792	46.5	LOS D	6.1	44.7	0.98	0.88	1.24	33.3
North: Geeelong - Ballan (N)														
7	L2	27	5.0	28	5.0	0.038	17.3	LOS B	0.6	4.2	0.62	0.67	0.62	45.6
8	T1	345	5.0	363	5.0	0.570	23.7	LOS C	11.8	86.0	0.87	0.75	0.87	43.2
Approach		372	5.0	392	5.0	0.570	23.2	LOS C	11.8	86.0	0.86	0.75	0.86	43.3
All Vehicles		1115	5.0	1174	5.0	0.792	31.1	LOS C	18.4	134.1	0.93	0.84	1.02	39.4

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geeelong - Ballan (S)												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
East: Connector Road (E)												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
North: Geeelong - Ballan (N)												
P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
All Pedestrians		150	158	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07

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 [IN-02 - AM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

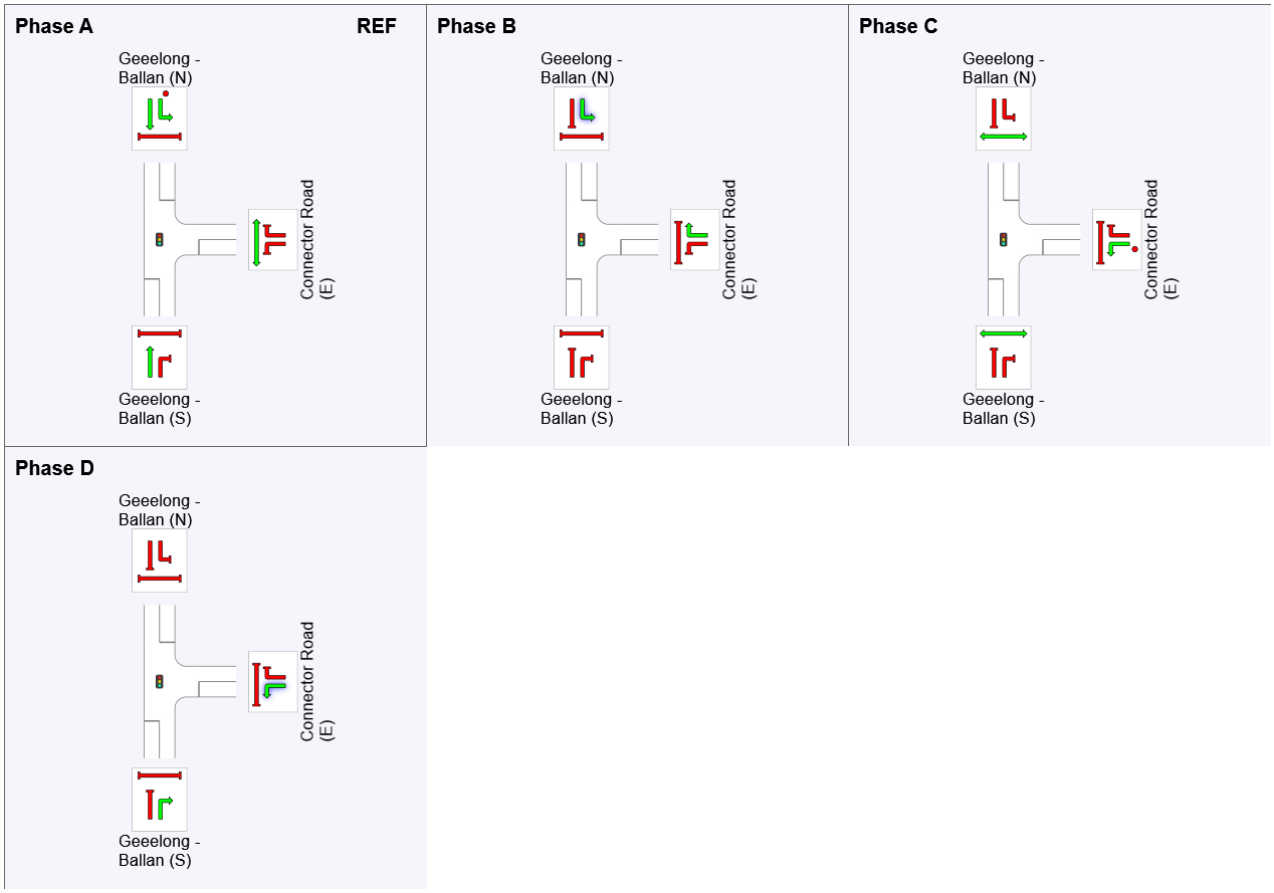
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

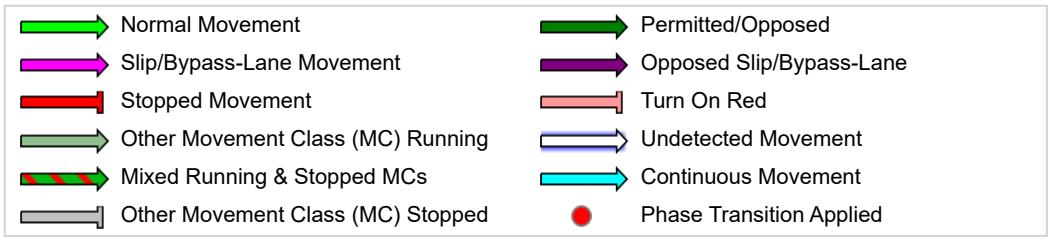
Phase	A	B	C	D
Phase Change Time (sec)	0	33	47	66
Green Time (sec)	27	8	13	8
Phase Time (sec)	33	14	19	14
Phase Split	41%	18%	24%	18%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

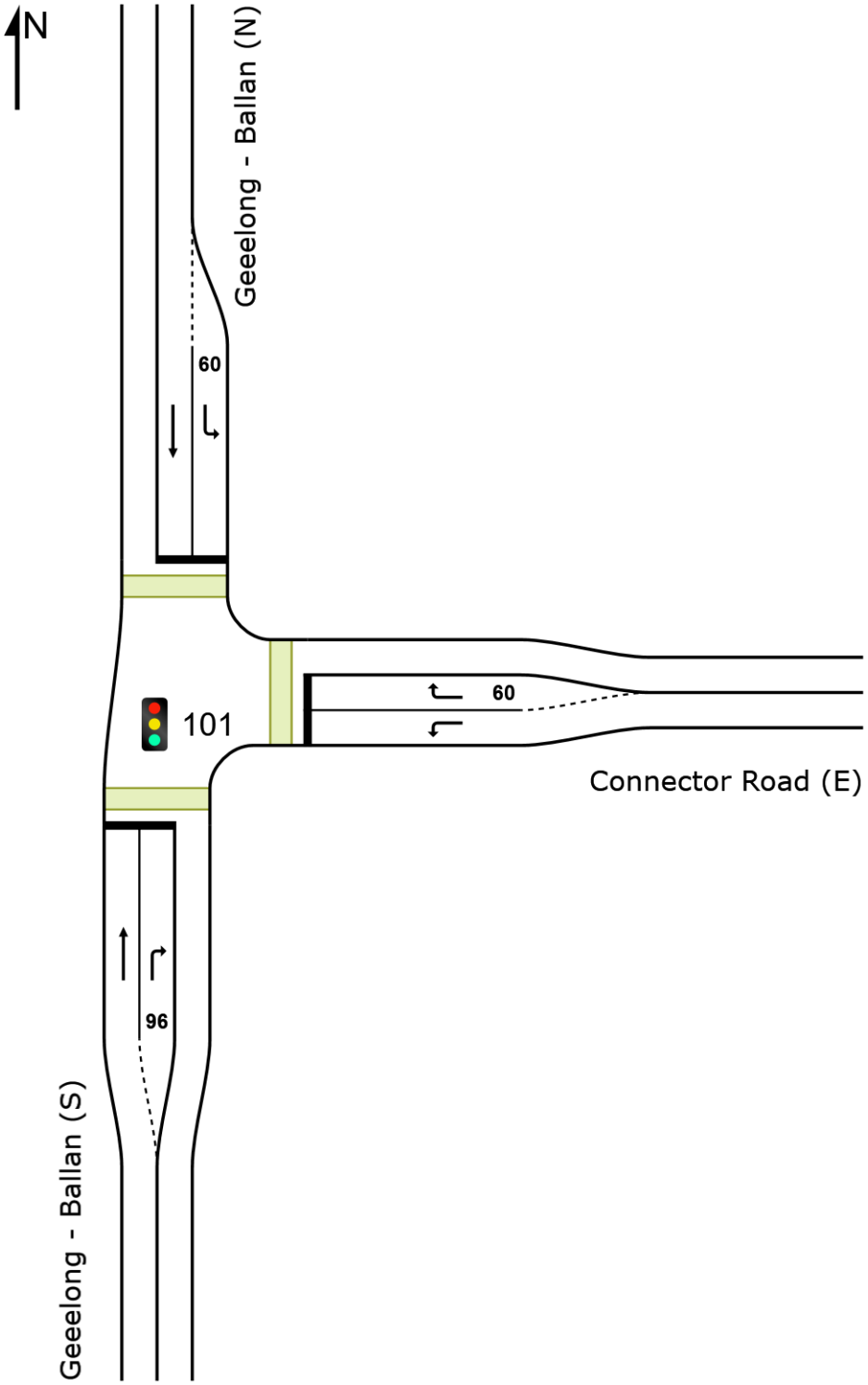


SITE LAYOUT

Site: 101 [IN-02 - AM (Site Folder: 2041 Interim - DD)]

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

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



PHASING SUMMARY

Site: 101 [IN-02 - AM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

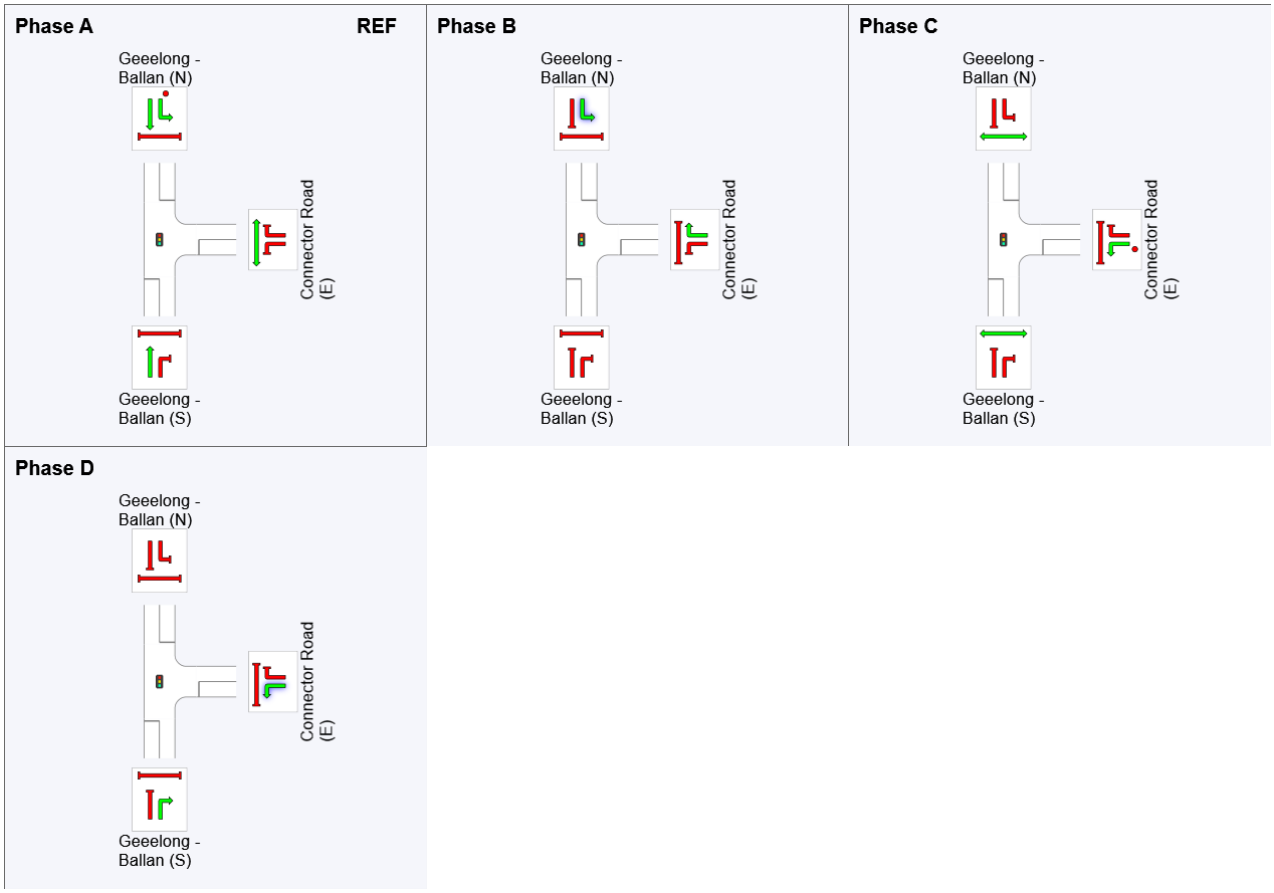
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

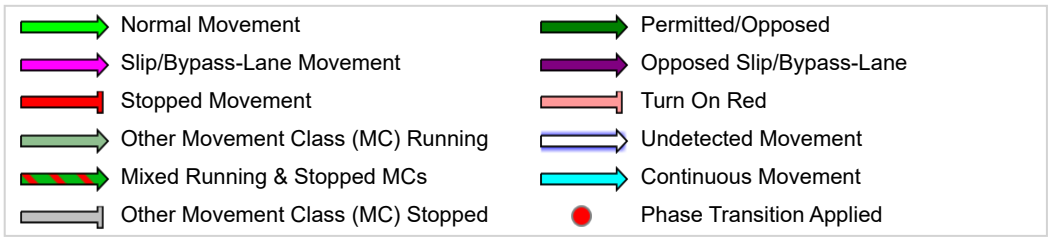
Phase	A	B	C	D
Phase Change Time (sec)	0	22	38	65
Green Time (sec)	16	10	21	9
Phase Time (sec)	22	16	27	15
Phase Split	28%	20%	34%	19%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

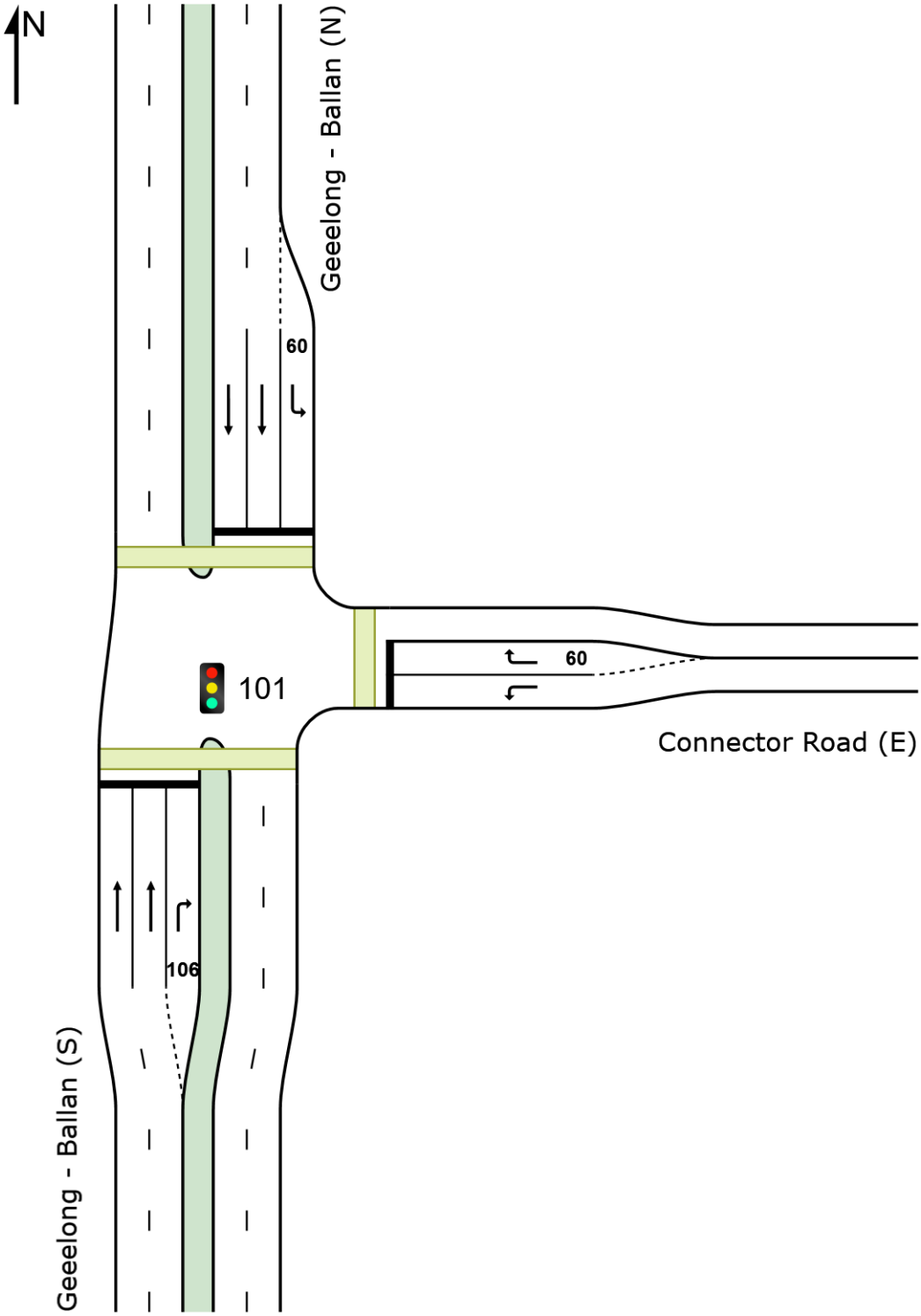


SITE LAYOUT

Site: 101 [IN-02 - AM (Site Folder: 2051 Ultimate - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [IN-02 - AM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geeelong - Ballan (S)														
2	T1	621	5.0	654	5.0	*0.865	42.4	LOS D	14.6	106.7	1.00	1.03	1.33	35.3
3	R2	159	5.0	167	5.0	*0.830	50.2	LOS D	7.4	53.7	1.00	0.95	1.36	32.3
Approach		780	5.0	821	5.0	0.865	44.0	LOS D	14.6	106.7	1.00	1.02	1.34	34.7
East: Connector Road (E)														
4	L2	31	5.0	33	5.0	*0.058	22.6	LOS C	0.8	5.9	0.73	0.69	0.73	42.8
6	R2	180	5.0	189	5.0	*0.845	50.4	LOS D	8.4	61.4	1.00	0.97	1.38	32.3
Approach		211	5.0	222	5.0	0.845	46.3	LOS D	8.4	61.4	0.96	0.93	1.29	33.5
North: Geeelong - Ballan (N)														
7	L2	36	5.0	38	5.0	0.070	23.5	LOS C	1.0	7.1	0.74	0.70	0.74	42.3
8	T1	460	5.0	484	5.0	0.641	32.9	LOS C	9.0	65.9	0.97	0.82	0.99	38.9
Approach		496	5.0	522	5.0	0.641	32.2	LOS C	9.0	65.9	0.95	0.81	0.97	39.1
All Vehicles		1487	5.0	1565	5.0	0.865	40.4	LOS D	14.6	106.7	0.98	0.94	1.21	35.9

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geeelong - Ballan (S)												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	204.7	221.5	1.08
East: Connector Road (E)												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
North: Geeelong - Ballan (N)												
P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	204.7	221.5	1.08
All Pedestrians		150	158	34.3	LOS D	0.1	0.1	0.93	0.93	202.2	218.3	1.08

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 [IN-02 - PM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

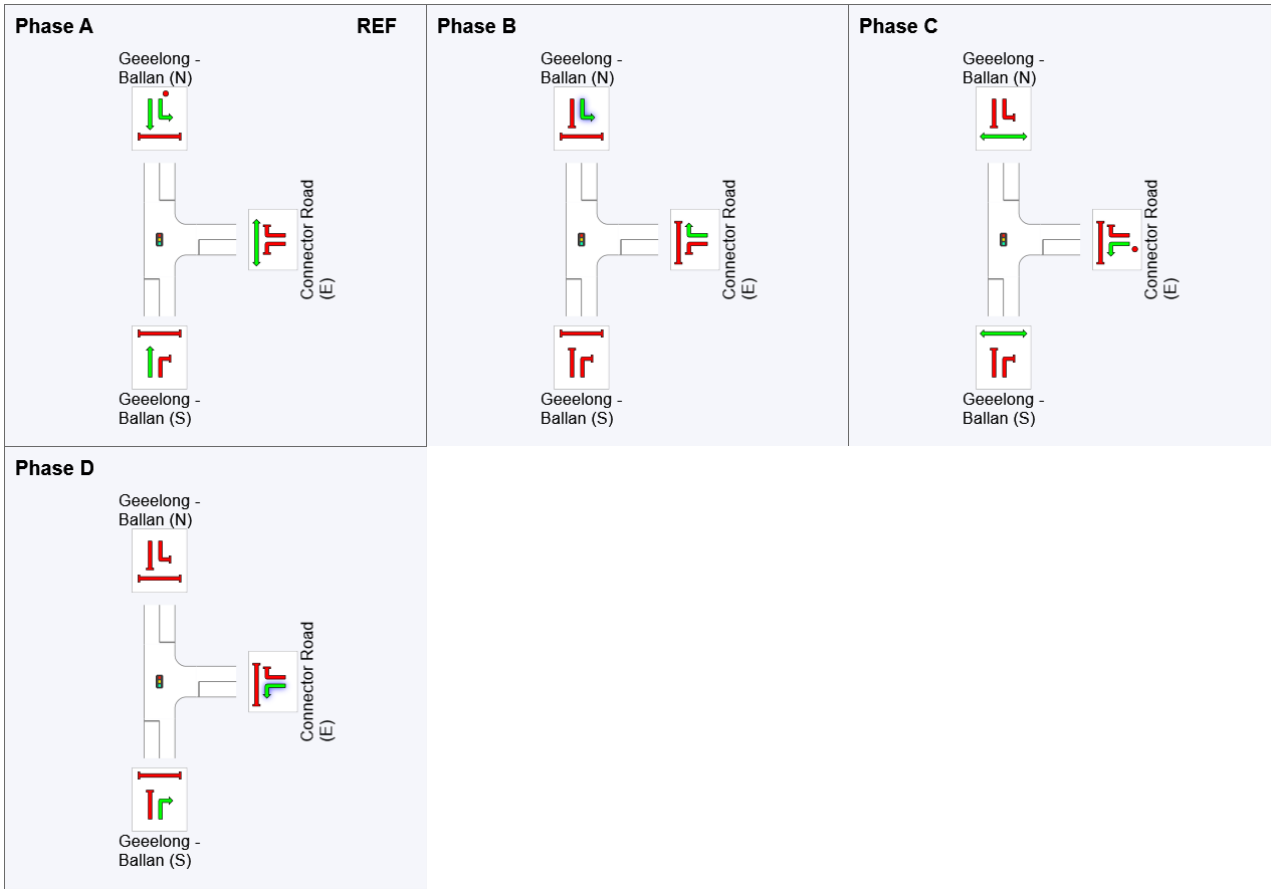
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

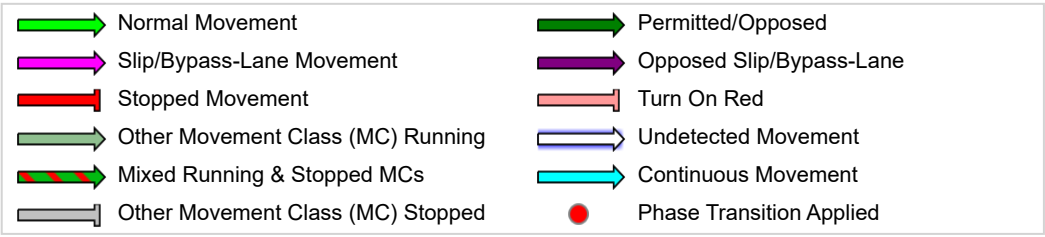
Phase	A	B	C	D
Phase Change Time (sec)	0	34	47	66
Green Time (sec)	28	7	13	8
Phase Time (sec)	34	13	19	14
Phase Split	43%	16%	24%	18%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-02 - PM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geeelong - Ballan (S)														
2	T1	306	5.0	322	5.0	0.487	22.2	LOS C	10.0	72.7	0.83	0.71	0.83	44.0
3	R2	116	5.0	122	5.0	* 0.681	46.7	LOS D	5.0	36.7	1.00	0.84	1.14	33.3
Approach		422	5.0	444	5.0	0.681	28.9	LOS C	10.0	72.7	0.88	0.75	0.92	40.4
East: Connector Road (E)														
4	L2	21	5.0	22	5.0	* 0.062	29.9	LOS C	0.7	4.9	0.84	0.69	0.84	39.4
6	R2	97	5.0	102	5.0	* 0.651	47.3	LOS D	4.2	30.8	1.00	0.82	1.12	33.1
Approach		118	5.0	124	5.0	0.651	44.2	LOS D	4.2	30.8	0.97	0.80	1.07	34.0
North: Geeelong - Ballan (N)														
7	L2	24	5.0	25	5.0	0.034	17.3	LOS B	0.5	3.7	0.62	0.67	0.62	45.6
8	T1	420	5.0	442	5.0	* 0.669	24.1	LOS C	14.8	108.3	0.91	0.79	0.91	43.0
Approach		444	5.0	467	5.0	0.669	23.7	LOS C	14.8	108.3	0.89	0.78	0.89	43.1
All Vehicles		984	5.0	1036	5.0	0.681	28.4	LOS C	14.8	108.3	0.90	0.77	0.92	40.6

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geeelong - Ballan (S)												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
East: Connector Road (E)												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
North: Geeelong - Ballan (N)												
P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
All Pedestrians		150	158	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07

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 [IN-02 - PM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

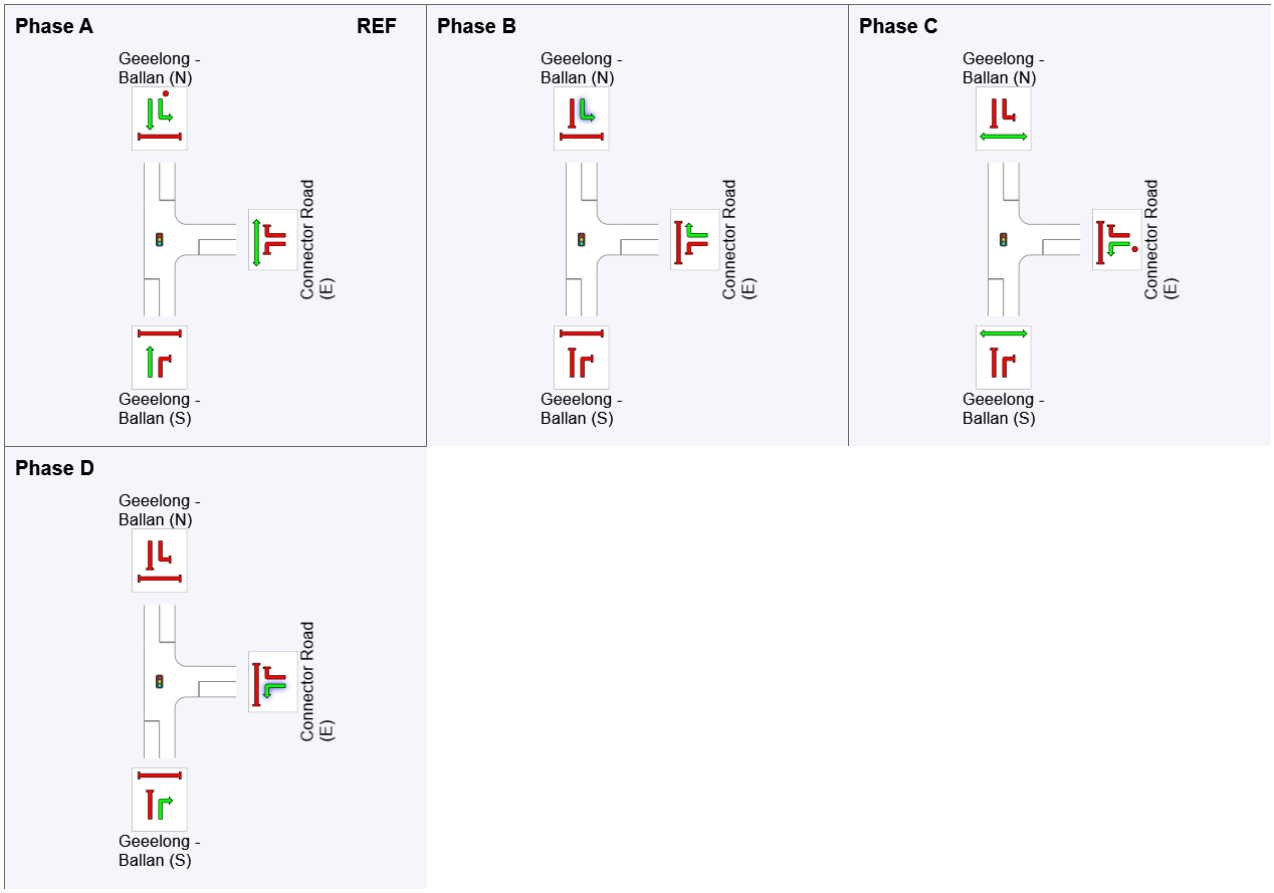
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

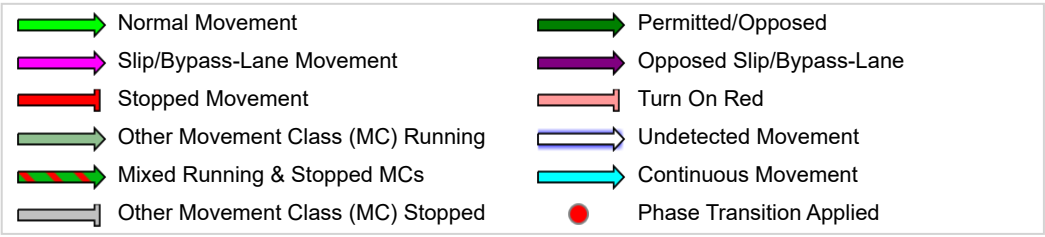
Phase	A	B	C	D
Phase Change Time (sec)	0	27	44	71
Green Time (sec)	21	11	21	13
Phase Time (sec)	27	17	27	19
Phase Split	30%	19%	30%	21%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-02 - PM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geeelong - Ballan (S)														
2	T1	409	5.0	431	5.0	0.488	32.7	LOS C	8.3	60.9	0.92	0.76	0.92	39.0
3	R2	154	5.0	162	5.0	* 0.626	46.6	LOS D	7.0	51.4	0.99	0.82	1.02	33.4
Approach		563	5.0	593	5.0	0.626	36.5	LOS D	8.3	60.9	0.94	0.78	0.94	37.3
East: Connector Road (E)														
4	L2	28	5.0	29	5.0	* 0.051	24.5	LOS C	0.8	6.0	0.72	0.69	0.72	41.8
6	R2	129	5.0	136	5.0	* 0.620	48.4	LOS D	6.0	43.8	1.00	0.81	1.04	32.9
Approach		157	5.0	165	5.0	0.620	44.2	LOS D	6.0	43.8	0.95	0.79	0.98	34.2
North: Geeelong - Ballan (N)														
7	L2	32	5.0	34	5.0	0.056	23.8	LOS C	0.9	6.7	0.71	0.69	0.71	42.2
8	T1	560	5.0	589	5.0	* 0.669	34.8	LOS C	12.1	88.3	0.96	0.82	0.98	38.2
Approach		592	5.0	623	5.0	0.669	34.2	LOS C	12.1	88.3	0.95	0.82	0.97	38.4
All Vehicles		1312	5.0	1381	5.0	0.669	36.4	LOS D	12.1	88.3	0.94	0.80	0.96	37.4

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geeelong - Ballan (S)												
P1	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	209.7	221.5	1.06
East: Connector Road (E)												
P2	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	202.3	211.9	1.05
North: Geeelong - Ballan (N)												
P3	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	209.7	221.5	1.06
All Pedestrians		150	158	39.3	LOS D	0.1	0.1	0.94	0.94	207.2	218.3	1.05

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 [IN-03 - AM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

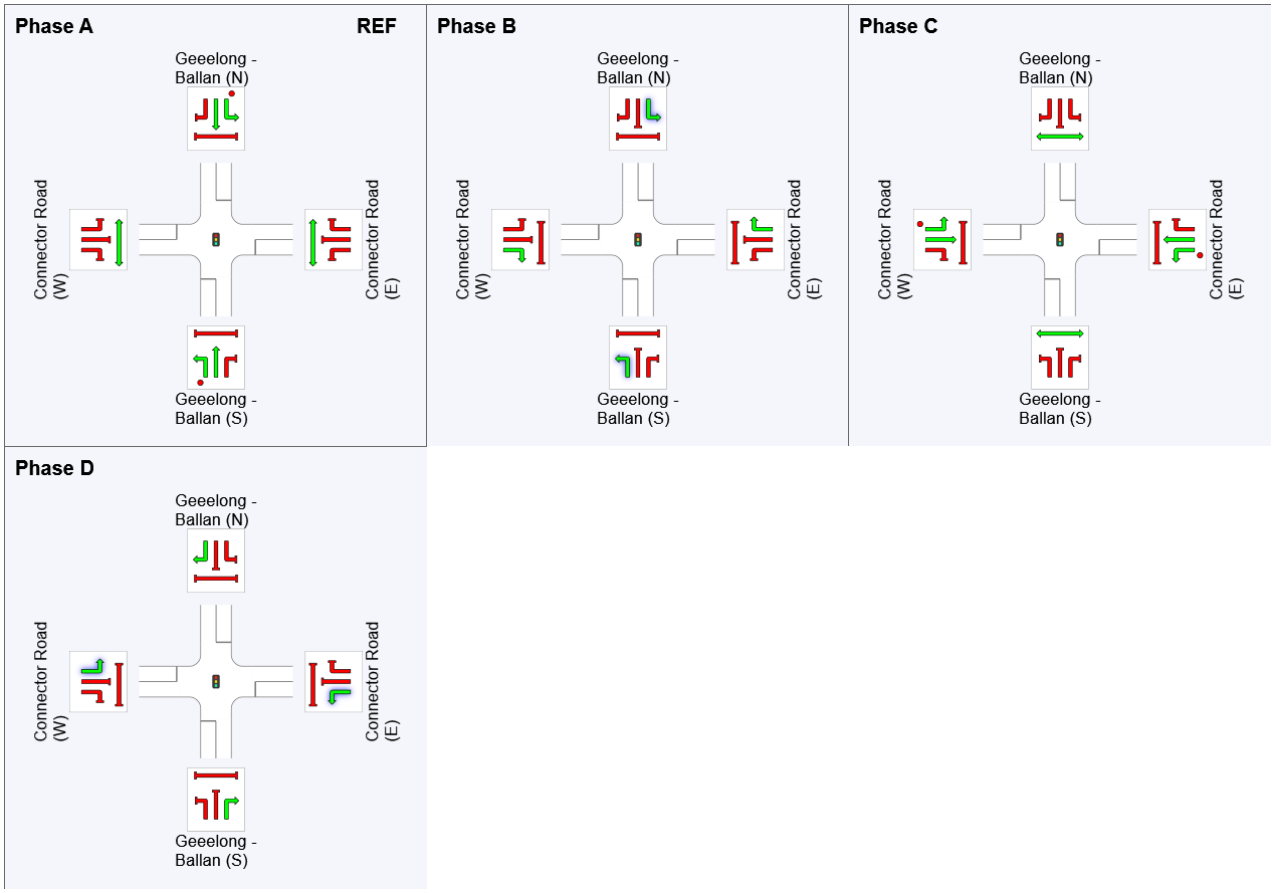
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

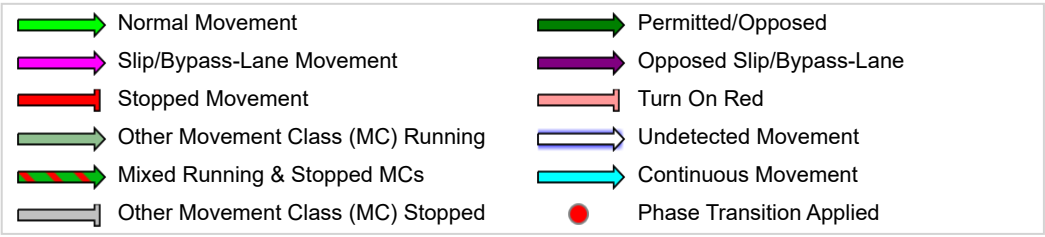
Phase	A	B	C	D
Phase Change Time (sec)	0	31	46	68
Green Time (sec)	25	9	16	6
Phase Time (sec)	31	15	22	12
Phase Split	39%	19%	28%	15%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

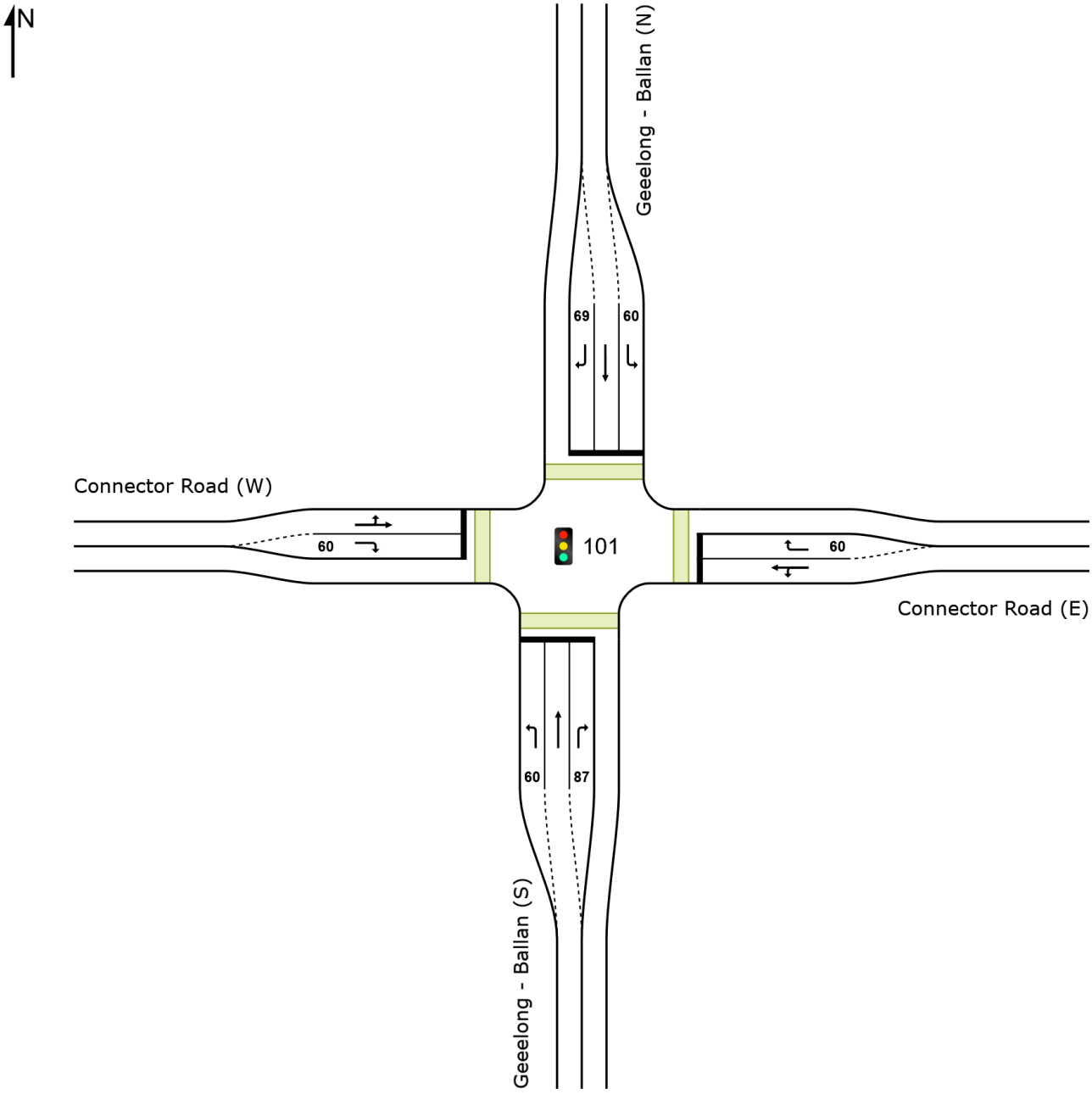


SITE LAYOUT

Site: 101 [IN-03 - AM (Site Folder: 2041 Interim - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [IN-03 - AM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geeelong - Ballan (S)														
1	L2	20	5.0	21	5.0	0.029	17.9	LOS B	0.4	3.2	0.63	0.67	0.63	45.3
2	T1	487	5.0	513	5.0	* 0.878	38.5	LOS D	23.0	168.1	1.00	1.07	1.28	36.7
3	R2	104	5.0	109	5.0	* 0.814	51.8	LOS D	4.8	35.3	1.00	0.93	1.40	31.8
Approach		611	5.0	643	5.0	0.878	40.1	LOS D	23.0	168.1	0.99	1.03	1.28	36.0
East: Connector Road (E)														
4	L2	36	5.0	38	5.0	0.318	30.9	LOS C	3.3	24.2	0.90	0.73	0.90	40.5
5	T1	65	5.0	68	5.0	* 0.318	25.3	LOS C	3.3	24.2	0.90	0.73	0.90	41.4
6	R2	71	5.0	75	5.0	0.370	43.0	LOS D	2.9	20.8	0.97	0.76	0.97	34.6
Approach		172	5.0	181	5.0	0.370	33.8	LOS C	3.3	24.2	0.93	0.74	0.93	38.1
North: Geeelong - Ballan (N)														
7	L2	60	5.0	63	5.0	0.088	18.3	LOS B	1.4	9.9	0.65	0.70	0.65	45.0
8	T1	384	5.0	404	5.0	0.685	26.6	LOS C	14.1	103.2	0.93	0.81	0.94	41.7
9	R2	37	5.0	39	5.0	0.290	46.1	LOS D	1.5	11.3	0.98	0.73	0.98	33.4
Approach		481	5.0	506	5.0	0.685	27.0	LOS C	14.1	103.2	0.90	0.79	0.91	41.3
West: Connector Road (W)														
10	L2	27	5.0	28	5.0	0.184	30.9	LOS C	1.9	13.7	0.88	0.70	0.88	40.2
11	T1	31	5.0	33	5.0	0.184	25.3	LOS C	1.9	13.7	0.88	0.70	0.88	41.1
12	R2	163	5.0	172	5.0	* 0.851	51.4	LOS D	7.7	56.0	1.00	0.98	1.42	32.0
Approach		221	5.0	233	5.0	0.851	45.3	LOS D	7.7	56.0	0.97	0.90	1.27	33.9
All Vehicles		1485	5.0	1563	5.0	0.878	35.9	LOS D	23.0	168.1	0.95	0.90	1.12	37.5

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geeelong - Ballan (S)												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	199.8	215.2	1.08
East: Connector Road (E)												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
North: Geeelong - Ballan (N)												

P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	199.8	215.2	1.08
West: Connector Road (W)												
P4	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
All Pedestrians		200	211	34.3	LOS D	0.1	0.1	0.93	0.93	198.6	213.6	1.08

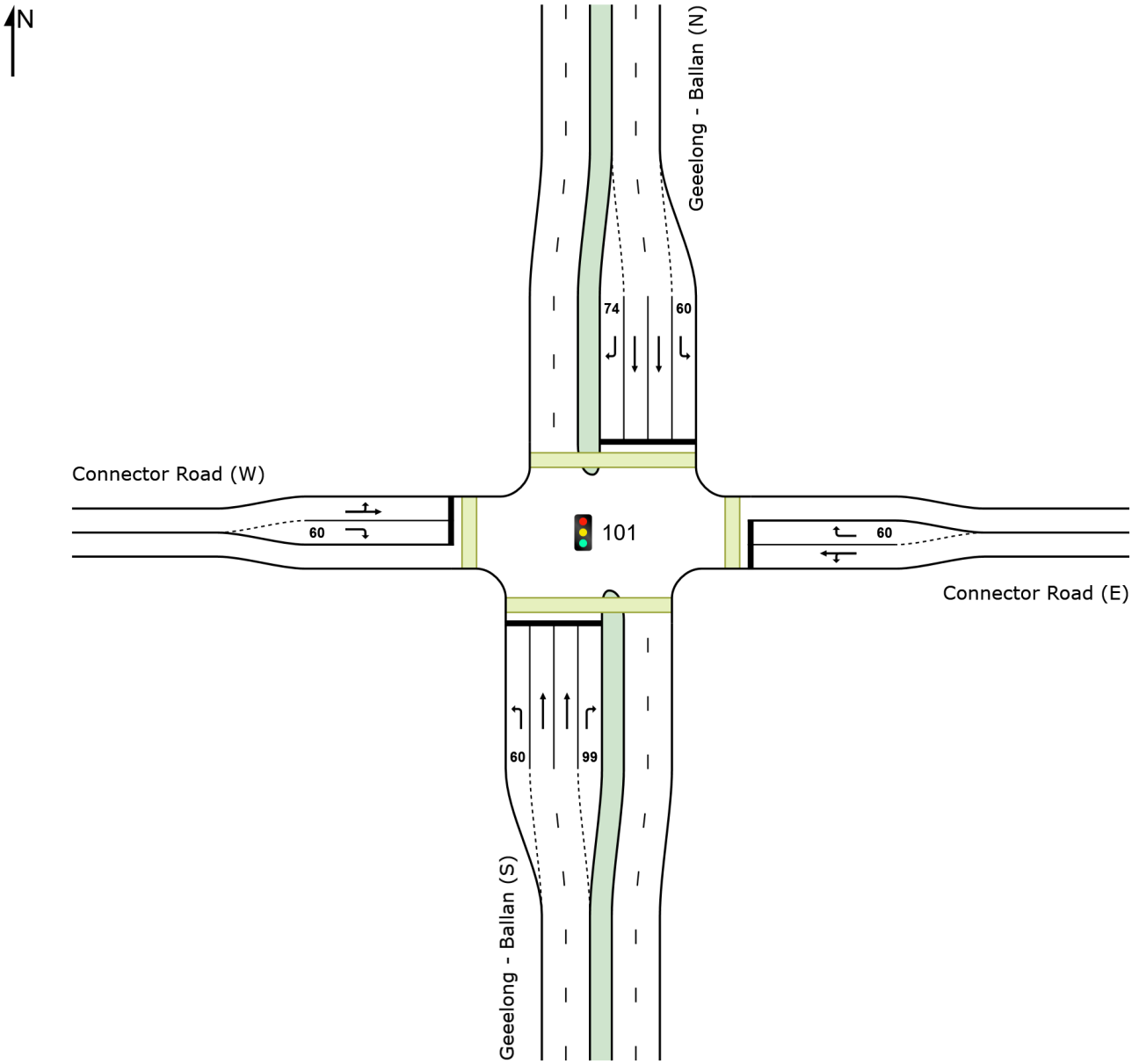
Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

Site: 101 [IN-03 - AM (Site Folder: 2051 Ultimate - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [IN-03 - AM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geeelong - Ballan (S)														
1	L2	26	5.0	27	5.0	0.040	21.1	LOS C	0.7	5.0	0.66	0.68	0.66	43.5
2	T1	650	5.0	684	5.0	* 0.776	38.4	LOS D	15.2	110.9	1.00	0.92	1.11	36.8
3	R2	139	5.0	146	5.0	0.734	51.6	LOS D	6.8	49.6	1.00	0.87	1.17	32.0
Approach		815	5.0	858	5.0	0.776	40.1	LOS D	15.2	110.9	0.99	0.91	1.11	36.0
East: Connector Road (E)														
4	L2	48	5.0	51	5.0	0.307	29.7	LOS C	4.6	33.5	0.84	0.72	0.84	41.1
5	T1	87	5.0	92	5.0	* 0.307	24.1	LOS C	4.6	33.5	0.84	0.72	0.84	42.1
6	R2	94	5.0	99	5.0	0.331	42.3	LOS D	4.0	28.8	0.92	0.77	0.92	35.0
Approach		229	5.0	241	5.0	0.331	32.7	LOS C	4.6	33.5	0.88	0.74	0.88	38.7
North: Geeelong - Ballan (N)														
7	L2	80	5.0	84	5.0	0.141	24.7	LOS C	2.4	17.5	0.73	0.72	0.73	41.7
8	T1	512	5.0	539	5.0	0.755	40.6	LOS D	12.1	88.0	1.00	0.91	1.12	36.0
9	R2	49	5.0	52	5.0	* 0.431	52.5	LOS D	2.4	17.2	1.00	0.74	1.00	31.7
Approach		641	5.0	675	5.0	0.755	39.5	LOS D	12.1	88.0	0.97	0.87	1.06	36.2
West: Connector Road (W)														
10	L2	36	5.0	38	5.0	0.177	29.5	LOS C	2.6	18.7	0.82	0.69	0.82	40.9
11	T1	41	5.0	43	5.0	0.177	23.9	LOS C	2.6	18.7	0.82	0.69	0.82	41.9
12	R2	217	5.0	228	5.0	* 0.764	48.4	LOS D	10.4	76.2	1.00	0.90	1.16	33.1
Approach		294	5.0	309	5.0	0.764	42.6	LOS D	10.4	76.2	0.95	0.84	1.07	34.9
All Vehicles		1979	5.0	2083	5.0	0.776	39.4	LOS D	15.2	110.9	0.96	0.87	1.06	36.2

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geeelong - Ballan (S)												
P1	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	212.2	224.8	1.06
East: Connector Road (E)												
P2	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	202.3	211.9	1.05
North: Geeelong - Ballan (N)												

P3	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	212.2	224.8	1.06
West: Connector Road (W)												
P4	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	202.3	211.9	1.05
All Pedestrians		200	211	39.3	LOS D	0.1	0.1	0.94	0.94	207.2	218.4	1.05

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 [IN-03 - AM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D, D1*
(* Variable Phase)

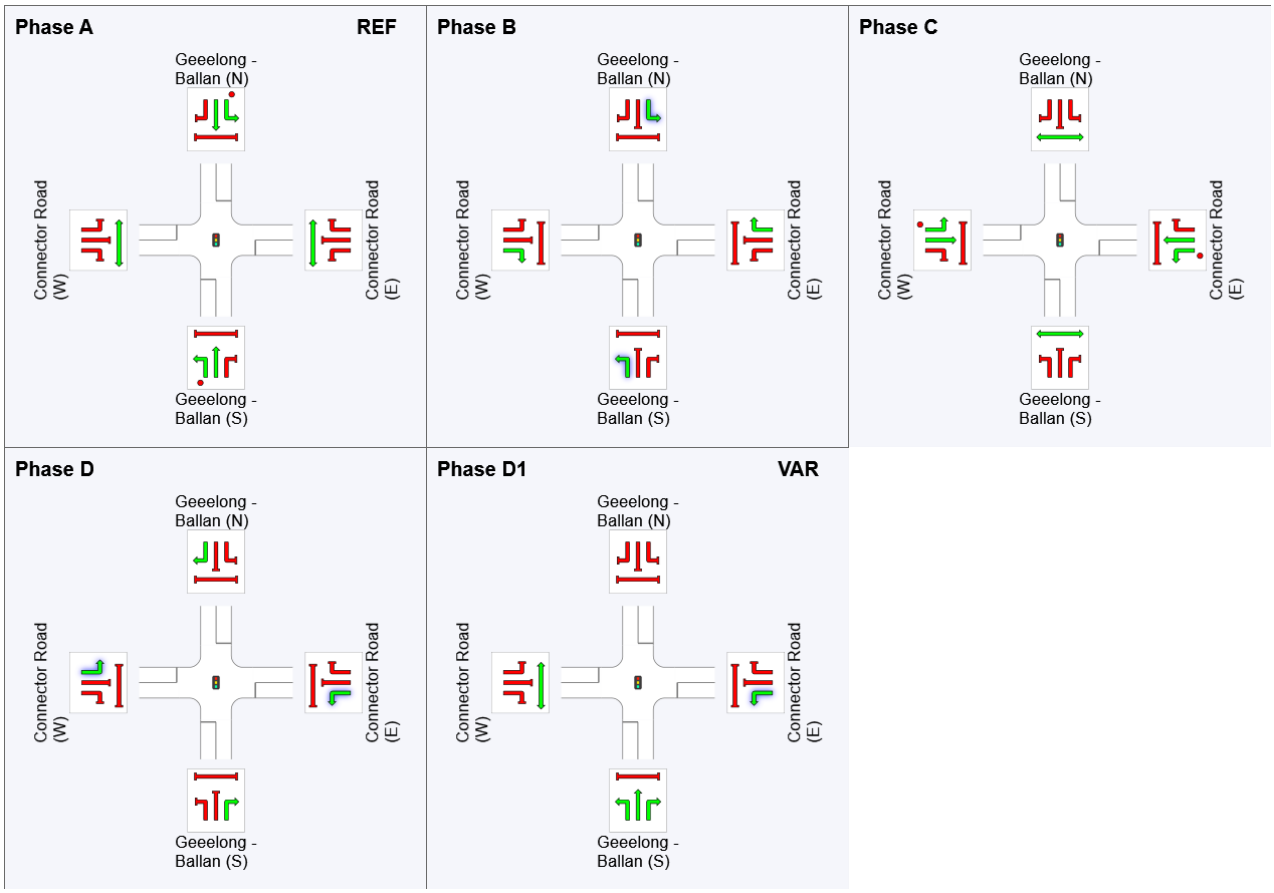
Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	0	23	44	74	86
Green Time (sec)	17	15	24	6	***
Phase Time (sec)	23	21	30	12	4
Phase Split	26%	23%	33%	13%	4%

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

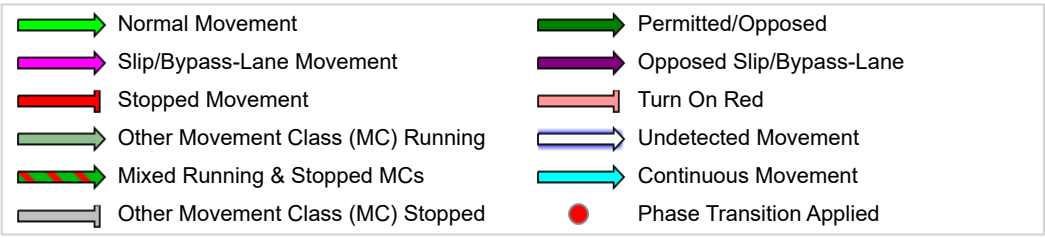
*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



PHASING SUMMARY

Site: 101 [IN-03 - PM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

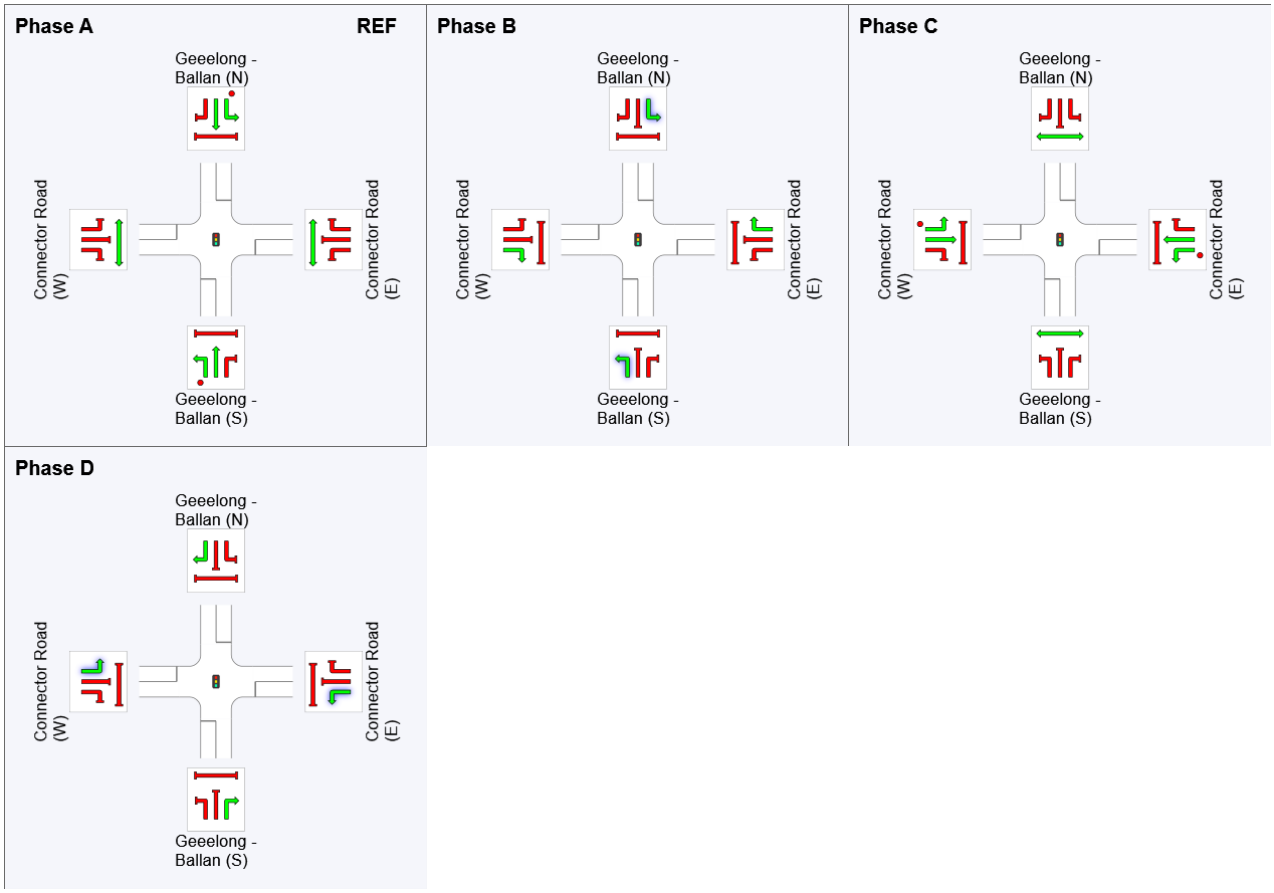
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

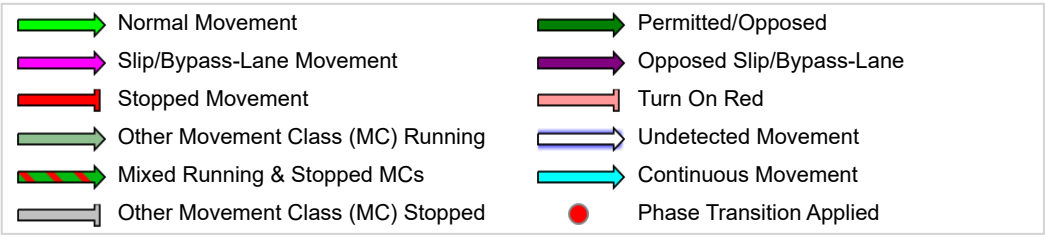
Phase	A	B	C	D
Phase Change Time (sec)	0	33	46	68
Green Time (sec)	27	7	16	6
Phase Time (sec)	33	13	22	12
Phase Split	41%	16%	28%	15%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-03 - PM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geeelong - Ballan (S)														
1	L2	32	5.0	34	5.0	0.047	18.0	LOS B	0.7	5.1	0.64	0.68	0.64	45.2
2	T1	330	5.0	347	5.0	0.545	23.4	LOS C	11.1	81.4	0.86	0.74	0.86	43.3
3	R2	82	5.0	86	5.0	* 0.642	48.3	LOS D	3.6	26.3	1.00	0.81	1.13	32.8
Approach		444	5.0	467	5.0	0.642	27.6	LOS C	11.1	81.4	0.87	0.75	0.90	41.0
East: Connector Road (E)														
4	L2	26	5.0	27	5.0	0.319	30.9	LOS C	3.4	24.9	0.90	0.72	0.90	40.8
5	T1	78	5.0	82	5.0	* 0.319	25.3	LOS C	3.4	24.9	0.90	0.72	0.90	41.7
6	R2	77	5.0	81	5.0	0.517	46.0	LOS D	3.3	23.7	1.00	0.77	1.00	33.6
Approach		181	5.0	191	5.0	0.517	34.9	LOS C	3.4	24.9	0.94	0.74	0.94	37.7
North: Geeelong - Ballan (N)														
7	L2	39	5.0	41	5.0	0.057	18.0	LOS B	0.9	6.3	0.64	0.69	0.64	45.2
8	T1	424	5.0	446	5.0	* 0.704	25.6	LOS C	15.5	113.3	0.93	0.82	0.95	42.2
9	R2	54	5.0	57	5.0	0.423	46.7	LOS D	2.3	16.7	0.99	0.75	0.99	33.2
Approach		517	5.0	544	5.0	0.704	27.2	LOS C	15.5	113.3	0.91	0.80	0.93	41.3
West: Connector Road (W)														
10	L2	20	5.0	21	5.0	0.143	30.7	LOS C	1.4	10.5	0.87	0.68	0.87	40.4
11	T1	25	5.0	26	5.0	0.143	25.1	LOS C	1.4	10.5	0.87	0.68	0.87	41.3
12	R2	93	5.0	98	5.0	* 0.624	47.0	LOS D	4.0	29.3	1.00	0.81	1.09	33.3
Approach		138	5.0	145	5.0	0.624	40.7	LOS D	4.0	29.3	0.96	0.77	1.02	35.5
All Vehicles		1280	5.0	1347	5.0	0.704	29.9	LOS C	15.5	113.3	0.91	0.77	0.93	39.9

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geeelong - Ballan (S)												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	199.8	215.2	1.08
East: Connector Road (E)												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
North: Geeelong - Ballan (N)												

P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	199.8	215.2	1.08
West: Connector Road (W)												
P4	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
All Pedestrians		200	211	34.3	LOS D	0.1	0.1	0.93	0.93	198.6	213.6	1.08

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 [IN-03 - PM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

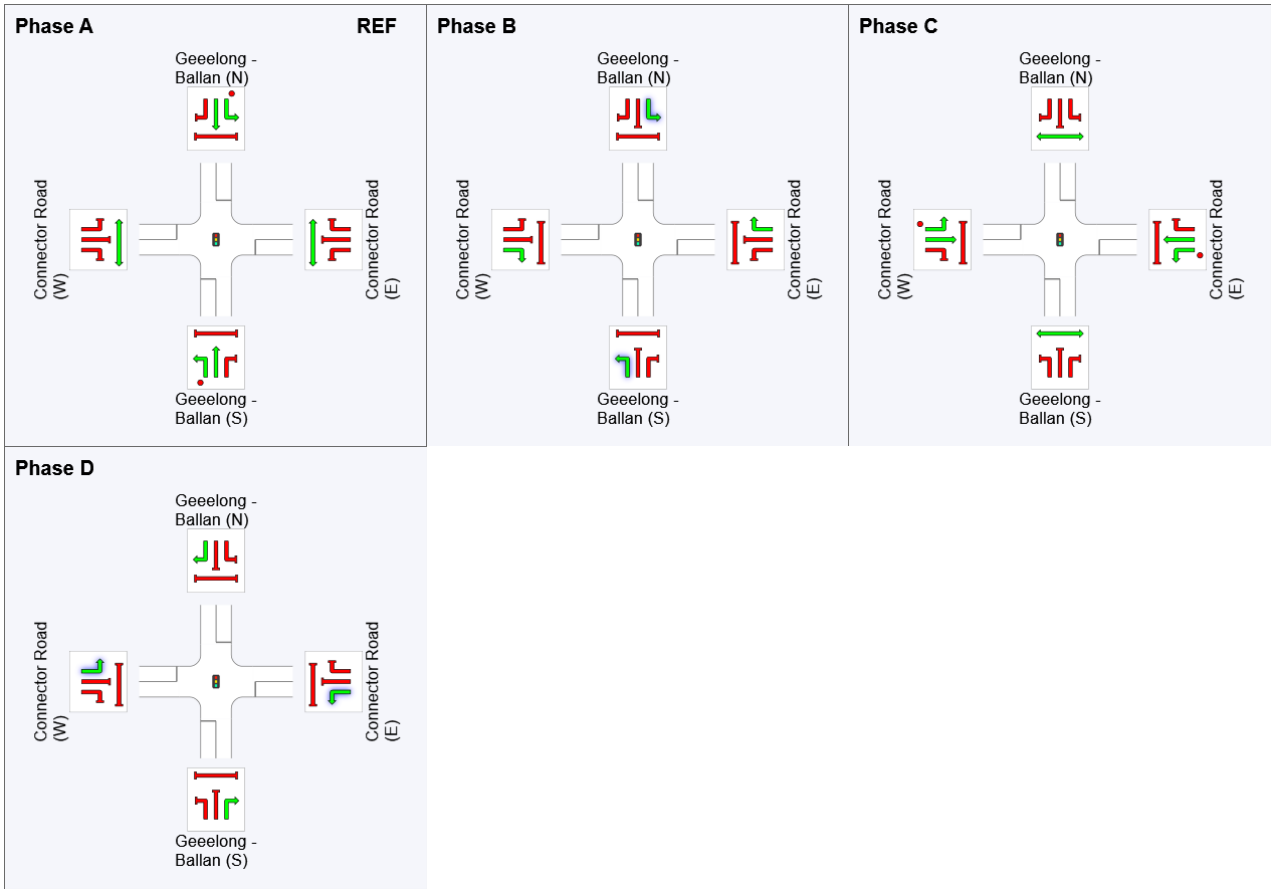
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

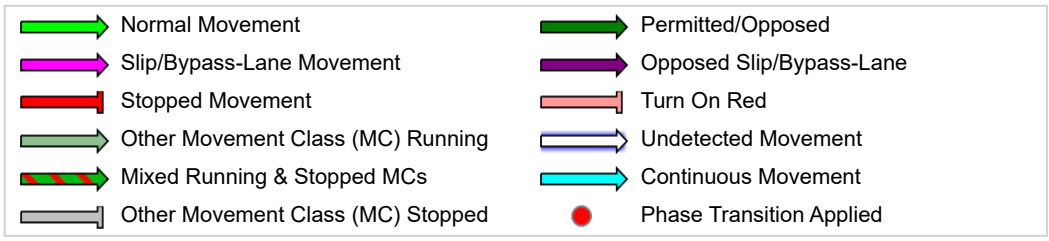
Phase	A	B	C	D
Phase Change Time (sec)	0	23	37	67
Green Time (sec)	17	8	24	7
Phase Time (sec)	23	14	30	13
Phase Split	29%	18%	38%	16%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-03 - PM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Geeelong - Ballan (S)														
1	L2	42	5.0	44	5.0	0.086	24.2	LOS C	1.2	8.4	0.76	0.71	0.76	42.0
2	T1	440	5.0	463	5.0	0.577	31.3	LOS C	8.4	61.0	0.95	0.79	0.95	39.6
3	R2	110	5.0	116	5.0	* 0.738	48.8	LOS D	4.9	35.9	1.00	0.87	1.23	32.7
Approach		592	5.0	623	5.0	0.738	34.1	LOS C	8.4	61.0	0.95	0.80	0.99	38.3
East: Connector Road (E)														
4	L2	35	5.0	37	5.0	0.277	24.6	LOS C	3.9	28.8	0.81	0.68	0.81	43.9
5	T1	104	5.0	109	5.0	* 0.277	19.0	LOS B	3.9	28.8	0.81	0.68	0.81	45.0
6	R2	103	5.0	108	5.0	0.605	45.7	LOS D	4.4	31.9	1.00	0.81	1.06	33.9
Approach		242	5.0	255	5.0	0.605	31.2	LOS C	4.4	31.9	0.89	0.74	0.92	39.4
North: Geeelong - Ballan (N)														
7	L2	52	5.0	55	5.0	0.106	24.4	LOS C	1.4	10.5	0.77	0.72	0.77	41.9
8	T1	565	5.0	595	5.0	* 0.741	34.6	LOS C	11.7	85.2	0.99	0.90	1.10	38.2
9	R2	72	5.0	76	5.0	0.483	45.8	LOS D	3.0	22.1	0.99	0.76	0.99	33.6
Approach		689	5.0	725	5.0	0.741	35.0	LOS C	11.7	85.2	0.97	0.87	1.06	38.0
West: Connector Road (W)														
10	L2	20	5.0	21	5.0	0.107	23.4	LOS C	1.4	10.3	0.76	0.63	0.76	44.2
11	T1	33	5.0	35	5.0	0.107	17.8	LOS B	1.4	10.3	0.76	0.63	0.76	45.2
12	R2	124	5.0	131	5.0	* 0.728	47.6	LOS D	5.5	39.9	1.00	0.87	1.20	33.3
Approach		177	5.0	186	5.0	0.728	39.3	LOS D	5.5	39.9	0.93	0.80	1.07	36.1
All Vehicles		1700	5.0	1789	5.0	0.741	34.6	LOS C	11.7	85.2	0.95	0.82	1.02	38.0

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Geeelong - Ballan (S)												
P1	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	207.2	224.8	1.08
East: Connector Road (E)												
P2	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
North: Geeelong - Ballan (N)												

P3	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	207.2	224.8	1.08
West: Connector Road (W)												
P4	Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	197.3	211.9	1.07
All Pedestrians		200	211	34.3	LOS D	0.1	0.1	0.93	0.93	202.3	218.4	1.08

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 [IN-05 - AM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

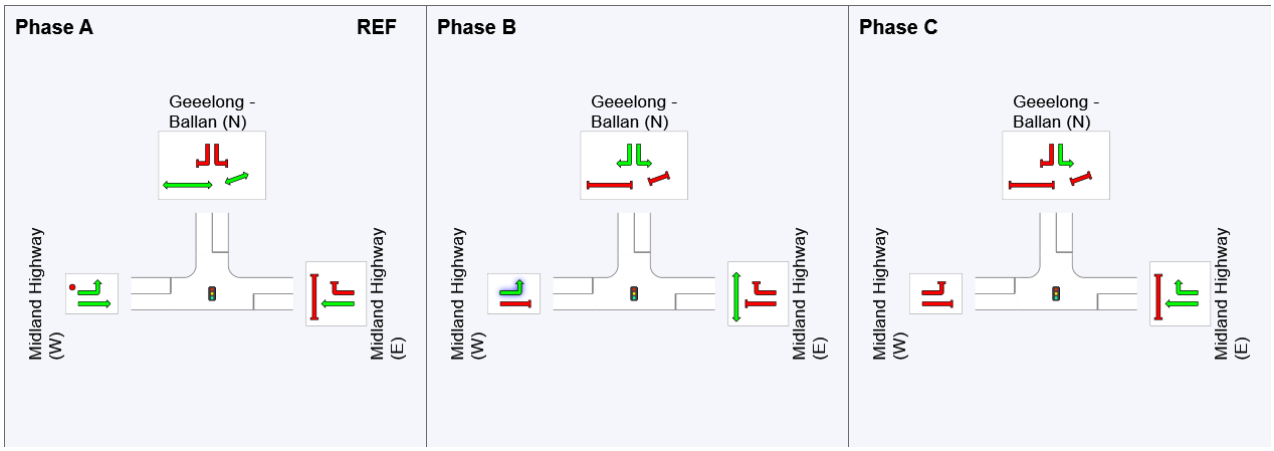
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

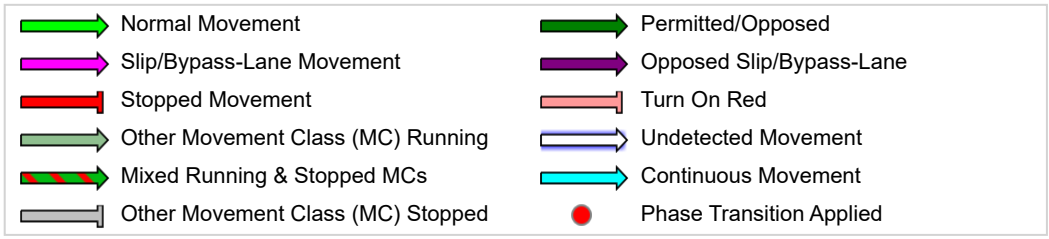
Phase	A	B	C
Phase Change Time (sec)	0	68	97
Green Time (sec)	62	23	17
Phase Time (sec)	68	29	23
Phase Split	57%	24%	19%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

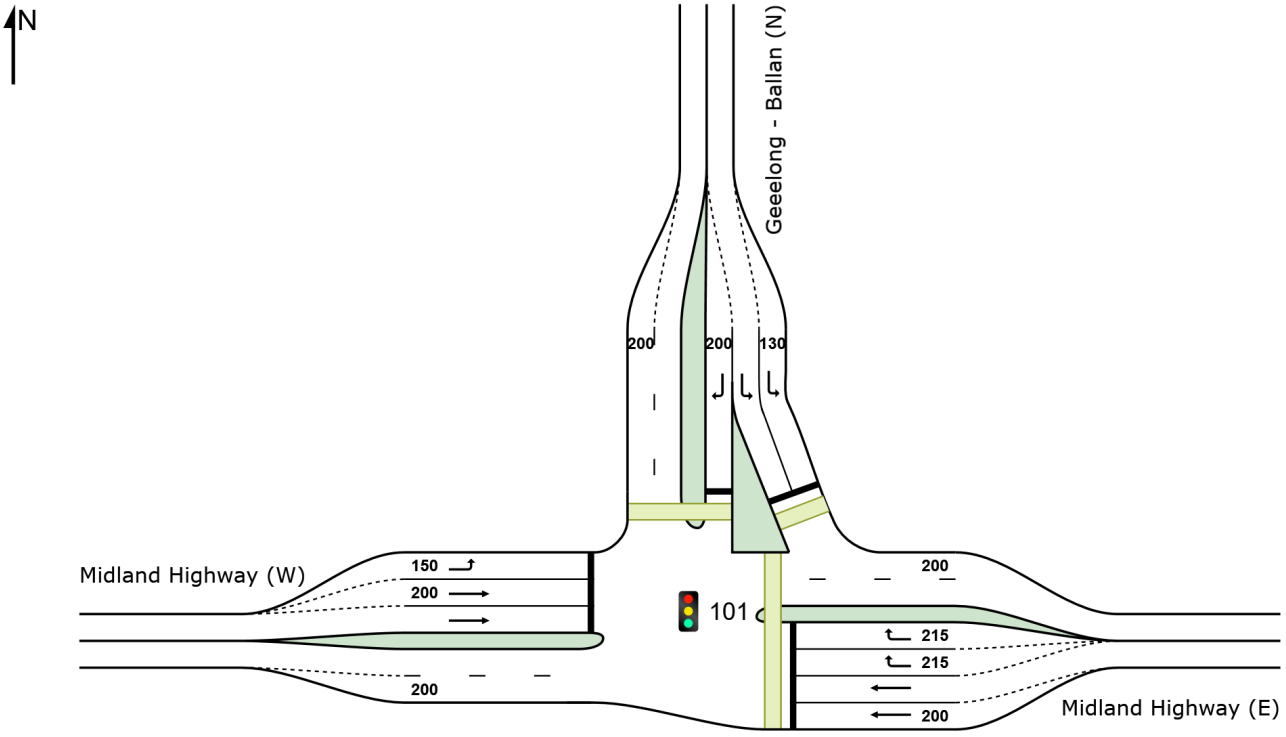


SITE LAYOUT

Site: 101 [IN-05 - AM (Site Folder: 2041 Interim - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [IN-05 - AM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Midland Highway (E)														
5	T1	620	5.0	653	5.0	0.244	7.1	LOS A	6.6	48.0	0.38	0.33	0.38	54.3
6	R2	382	5.0	402	5.0	*0.791	65.0	LOS E	12.3	89.9	1.00	0.89	1.16	28.8
Approach		1002	5.0	1055	5.0	0.791	29.2	LOS C	12.3	89.9	0.62	0.55	0.68	40.6
North: Geeelong - Ballan (N)														
7	L2	453	5.0	477	5.0	0.347	40.0	LOS D	9.9	71.9	0.76	0.78	0.76	38.3
9	R2	176	5.0	185	5.0	*0.539	53.5	LOS D	9.9	72.6	0.95	0.81	0.95	31.6
Approach		629	5.0	662	5.0	0.539	43.8	LOS D	9.9	72.6	0.81	0.79	0.81	36.1
West: Midland Highway (W)														
10	L2	208	5.0	219	5.0	0.183	11.6	LOS B	4.1	29.8	0.40	0.68	0.40	49.1
11	T1	1509	5.0	1588	5.0	*0.824	33.5	LOS C	40.2	293.4	0.90	0.84	0.92	41.5
Approach		1717	5.0	1807	5.0	0.824	30.8	LOS C	40.2	293.4	0.84	0.82	0.86	42.3
All Vehicles		3348	5.0	3524	5.0	0.824	32.8	LOS C	40.2	293.4	0.77	0.73	0.80	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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Midland Highway (E)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	226.4	223.8	0.99
North: Geeelong - Ballan (N)												
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	219.6	214.9	0.98
P3B	Slip/ Bypass	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	214.0	207.6	0.97
All Pedestrians		150	158	54.3	LOS E	0.2	0.2	0.95	0.95	220.0	215.4	0.98

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 [IN-05 - AM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

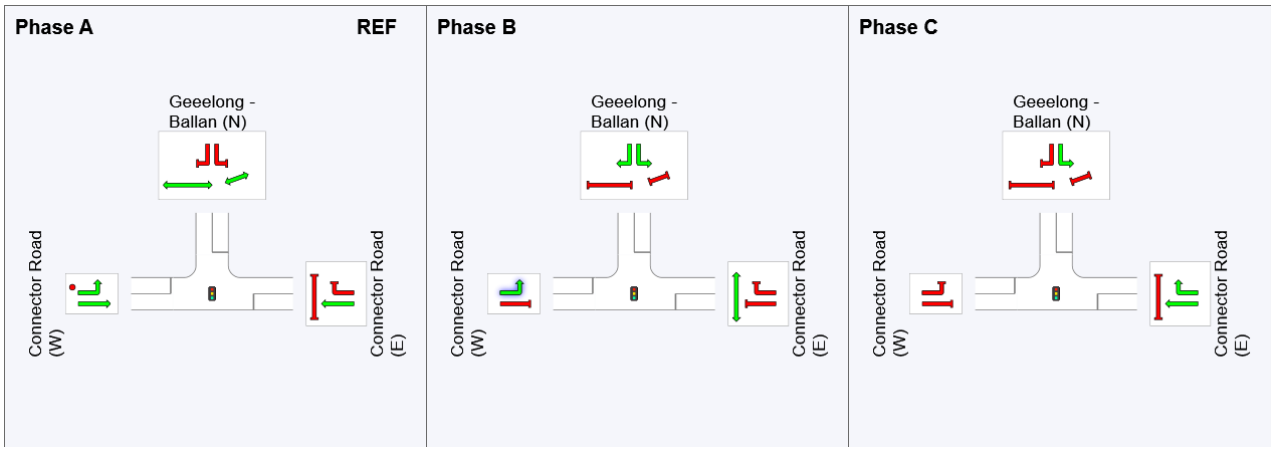
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

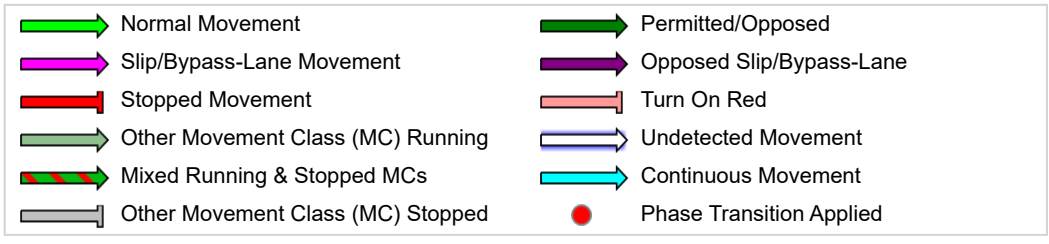
Phase	A	B	C
Phase Change Time (sec)	0	58	93
Green Time (sec)	52	29	21
Phase Time (sec)	58	35	27
Phase Split	48%	29%	23%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

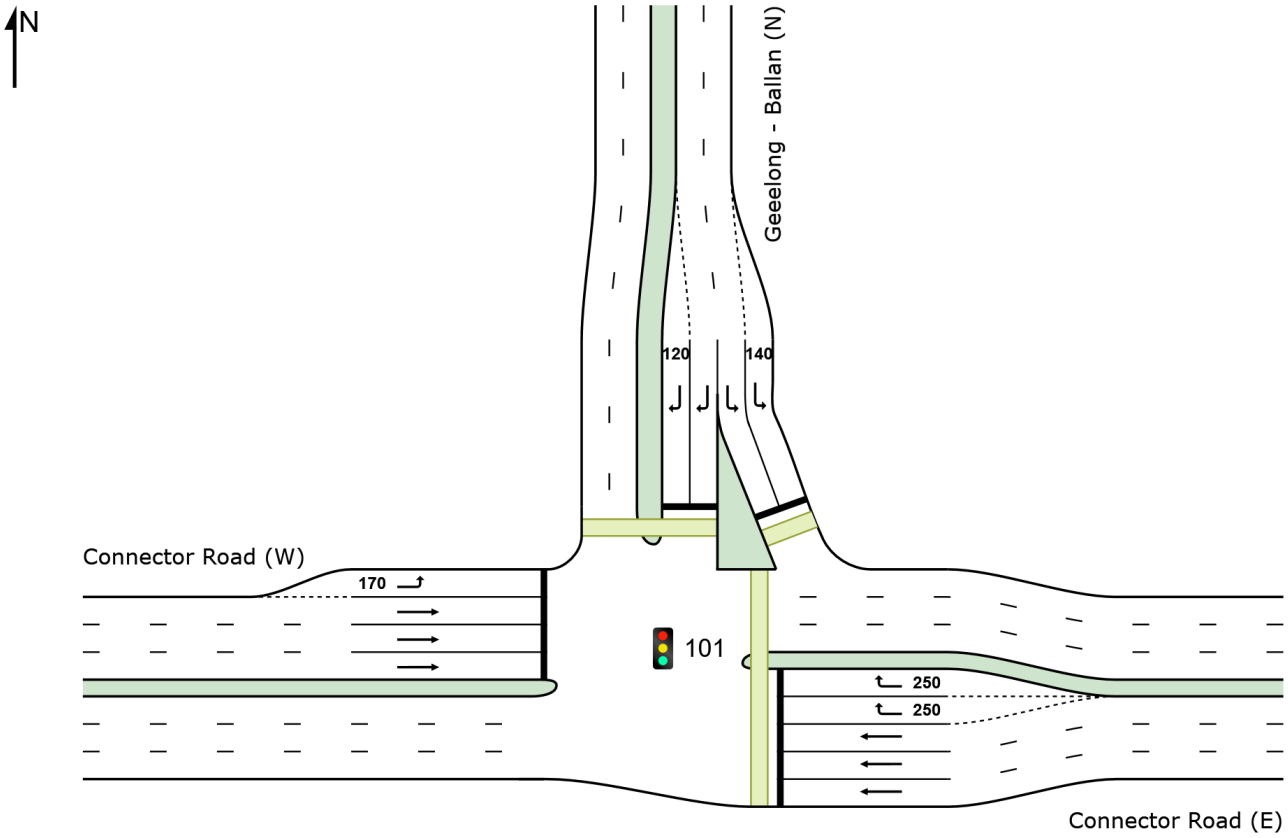


SITE LAYOUT

Site: 101 [IN-05 - AM (Site Folder: 2051 Ultimate - DD)]

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

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



Organisation: STANTEC NEW ZEALAND | Licence: NETWORK / Enterprise | Created: Thursday, January 18, 2024 4:02:05 PM
Project: U:\301400615\technical\modelling\240116_301400615_IN-01,05,06,12.sip9

MOVEMENT SUMMARY

Site: 101 [IN-05 - AM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Connector Road (E)														
5	T1	826	5.0	869	5.0	0.233	8.7	LOS A	6.7	48.8	0.43	0.37	0.43	52.6
6	R2	509	5.0	536	5.0	* 0.854	66.2	LOS E	17.1	124.7	1.00	0.95	1.23	28.6
Approach		1335	5.0	1405	5.0	0.854	30.6	LOS C	17.1	124.7	0.65	0.59	0.74	39.9
North: Geeelong - Ballan (N)														
7	L2	604	5.0	636	5.0	0.401	29.9	LOS C	12.5	91.3	0.73	0.78	0.73	39.9
9	R2	237	5.0	249	5.0	* 0.288	45.7	LOS D	6.0	43.6	0.86	0.77	0.86	34.0
Approach		841	5.0	885	5.0	0.401	34.3	LOS C	12.5	91.3	0.76	0.78	0.76	38.0
West: Connector Road (W)														
10	L2	278	5.0	293	5.0	0.258	13.5	LOS B	6.4	47.0	0.47	0.71	0.47	47.9
11	T1	2013	5.0	2119	5.0	* 0.863	39.5	LOS D	41.1	300.0	0.98	0.96	1.07	36.5
Approach		2291	5.0	2412	5.0	0.863	36.4	LOS D	41.1	300.0	0.92	0.93	1.00	37.6
All Vehicles		4467	5.0	4702	5.0	0.863	34.3	LOS C	41.1	300.0	0.81	0.80	0.87	38.3

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Connector Road (E)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	231.5	230.4	1.00
North: Geeelong - Ballan (N)												
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	222.1	218.2	0.98
P3B	Slip/ Bypass	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	214.0	207.6	0.97
All Pedestrians		150	158	54.3	LOS E	0.2	0.2	0.95	0.95	222.5	218.7	0.98

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 [IN-05 - PM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

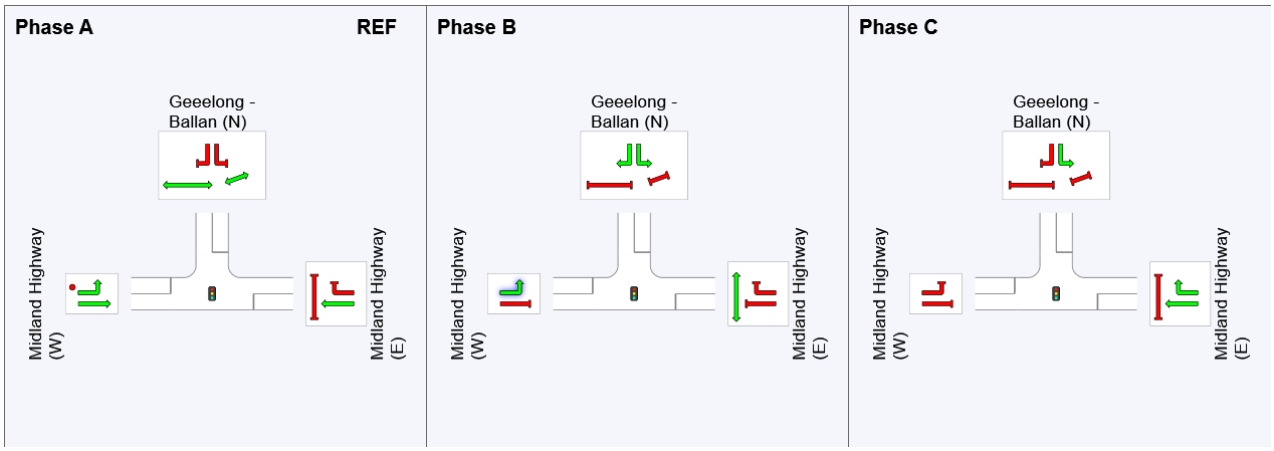
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

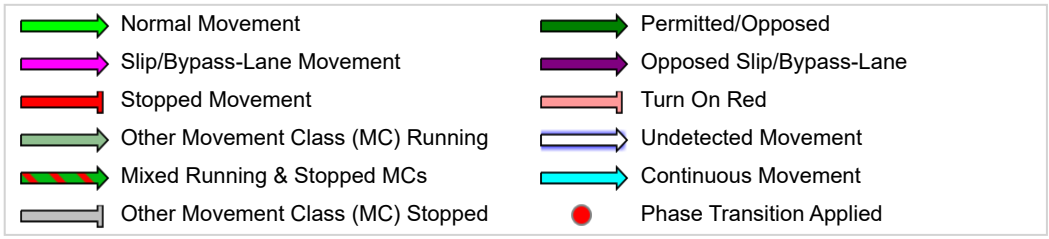
Phase	A	B	C
Phase Change Time (sec)	0	50	90
Green Time (sec)	44	34	24
Phase Time (sec)	50	40	30
Phase Split	42%	33%	25%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-05 - PM (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Midland Highway (E)														
5	T1	972	5.0	1023	5.0	0.439	14.7	LOS B	15.5	112.8	0.57	0.51	0.57	49.6
6	R2	373	5.0	393	5.0	* 0.547	53.0	LOS D	10.5	76.5	0.95	0.82	0.95	31.8
Approach		1345	5.0	1416	5.0	0.547	25.3	LOS C	15.5	112.8	0.67	0.59	0.67	42.9
North: Geeelong - Ballan (N)														
7	L2	333	5.0	351	5.0	0.192	22.9	LOS C	5.5	40.1	0.58	0.72	0.58	43.3
9	R2	265	5.0	279	5.0	* 0.549	45.1	LOS D	13.9	101.6	0.90	0.82	0.90	34.0
Approach		598	5.0	629	5.0	0.549	32.7	LOS C	13.9	101.6	0.72	0.76	0.72	38.6
West: Midland Highway (W)														
10	L2	131	5.0	138	5.0	0.126	14.3	LOS B	3.0	21.7	0.45	0.68	0.45	47.6
11	T1	731	5.0	769	5.0	* 0.556	32.6	LOS C	17.8	130.1	0.85	0.74	0.85	39.2
Approach		862	5.0	907	5.0	0.556	29.8	LOS C	17.8	130.1	0.79	0.73	0.79	40.3
All Vehicles		2805	5.0	2953	5.0	0.556	28.3	LOS C	17.8	130.1	0.72	0.67	0.72	41.1

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Midland Highway (E)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	226.4	223.8	0.99
North: Geeelong - Ballan (N)												
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	219.6	214.9	0.98
P3B	Slip/ Bypass	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	214.0	207.6	0.97
All Pedestrians		150	158	54.3	LOS E	0.2	0.2	0.95	0.95	220.0	215.4	0.98

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 [IN-05 - PM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

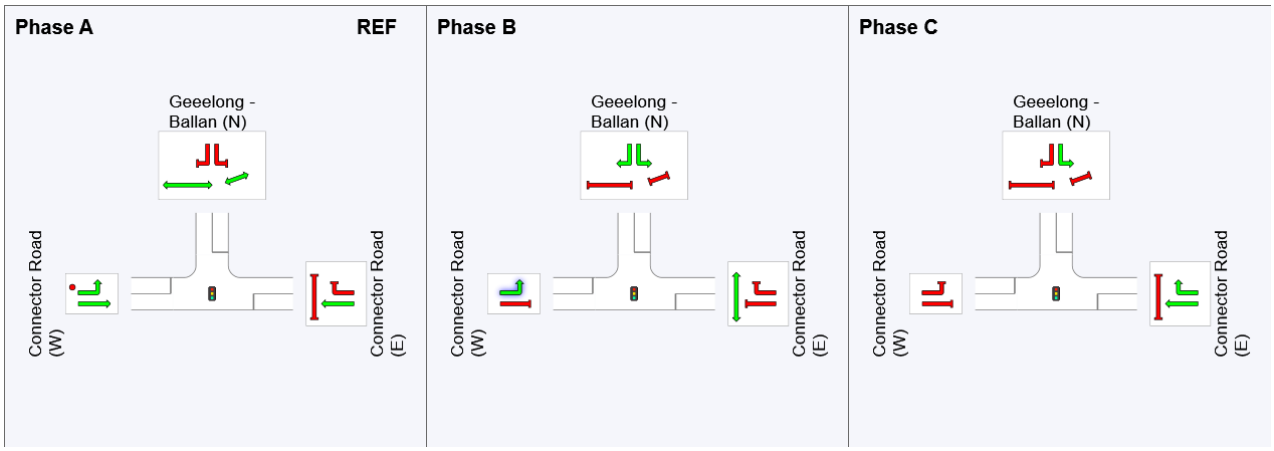
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

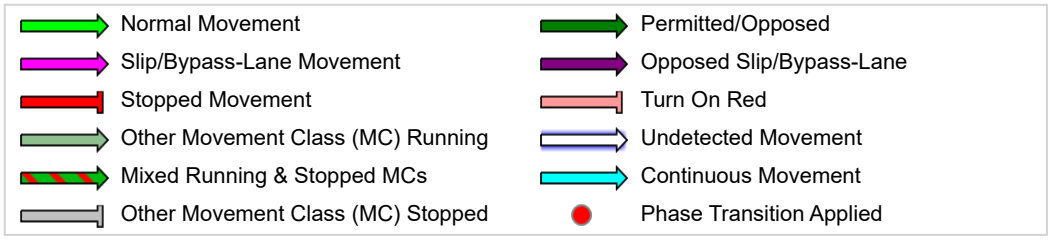
Phase	A	B	C
Phase Change Time (sec)	0	46	81
Green Time (sec)	40	29	33
Phase Time (sec)	46	35	39
Phase Split	38%	29%	33%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-05 - PM (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: Connector Road (E)														
5	T1	1296	5.0	1364	5.0	0.366	9.7	LOS A	11.7	85.6	0.48	0.43	0.48	51.8
6	R2	497	5.0	523	5.0	* 0.530	45.6	LOS D	13.1	95.3	0.90	0.82	0.90	34.1
Approach		1793	5.0	1887	5.0	0.530	19.7	LOS B	13.1	95.3	0.60	0.54	0.60	45.3
North: Geeelong - Ballan (N)														
7	L2	444	5.0	467	5.0	0.241	21.0	LOS C	7.1	51.7	0.56	0.72	0.56	44.2
9	R2	353	5.0	372	5.0	* 0.429	47.4	LOS D	9.3	67.7	0.90	0.80	0.90	33.4
Approach		797	5.0	839	5.0	0.429	32.7	LOS C	9.3	67.7	0.71	0.76	0.71	38.7
West: Connector Road (W)														
10	L2	174	5.0	183	5.0	0.192	18.3	LOS B	5.0	36.3	0.55	0.72	0.55	45.0
11	T1	975	5.0	1026	5.0	* 0.543	35.0	LOS C	16.3	118.7	0.87	0.75	0.87	38.2
Approach		1149	5.0	1209	5.0	0.543	32.4	LOS C	16.3	118.7	0.82	0.75	0.82	39.1
All Vehicles		3739	5.0	3936	5.0	0.543	26.4	LOS C	16.3	118.7	0.69	0.65	0.69	41.7

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: Connector Road (E)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	231.5	230.4	1.00
North: Geeelong - Ballan (N)												
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	222.1	218.2	0.98
P3B	Slip/ Bypass	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	214.0	207.6	0.97
All Pedestrians		150	158	54.3	LOS E	0.2	0.2	0.95	0.95	222.5	218.7	0.98

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 [IN-6 - AM - 120 sec (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

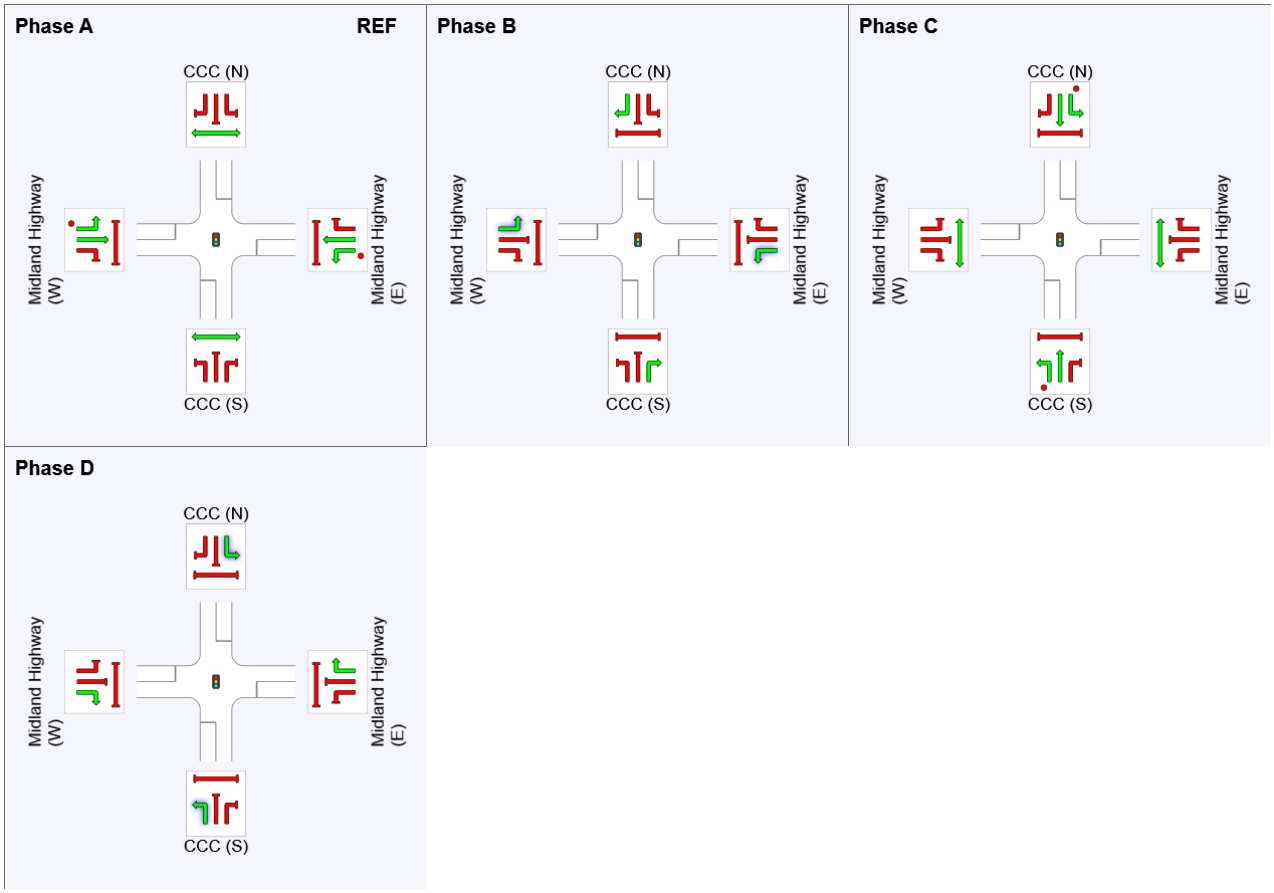
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D
(* Variable Phase)

Phase Timing Summary

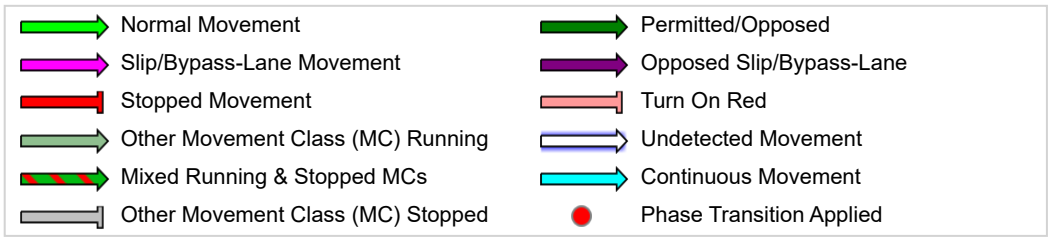
Phase	A	B	C	D
Phase Change Time (sec)	0	48	63	100
Green Time (sec)	42	9	31	14
Phase Time (sec)	48	15	37	20
Phase Split	40%	13%	31%	17%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

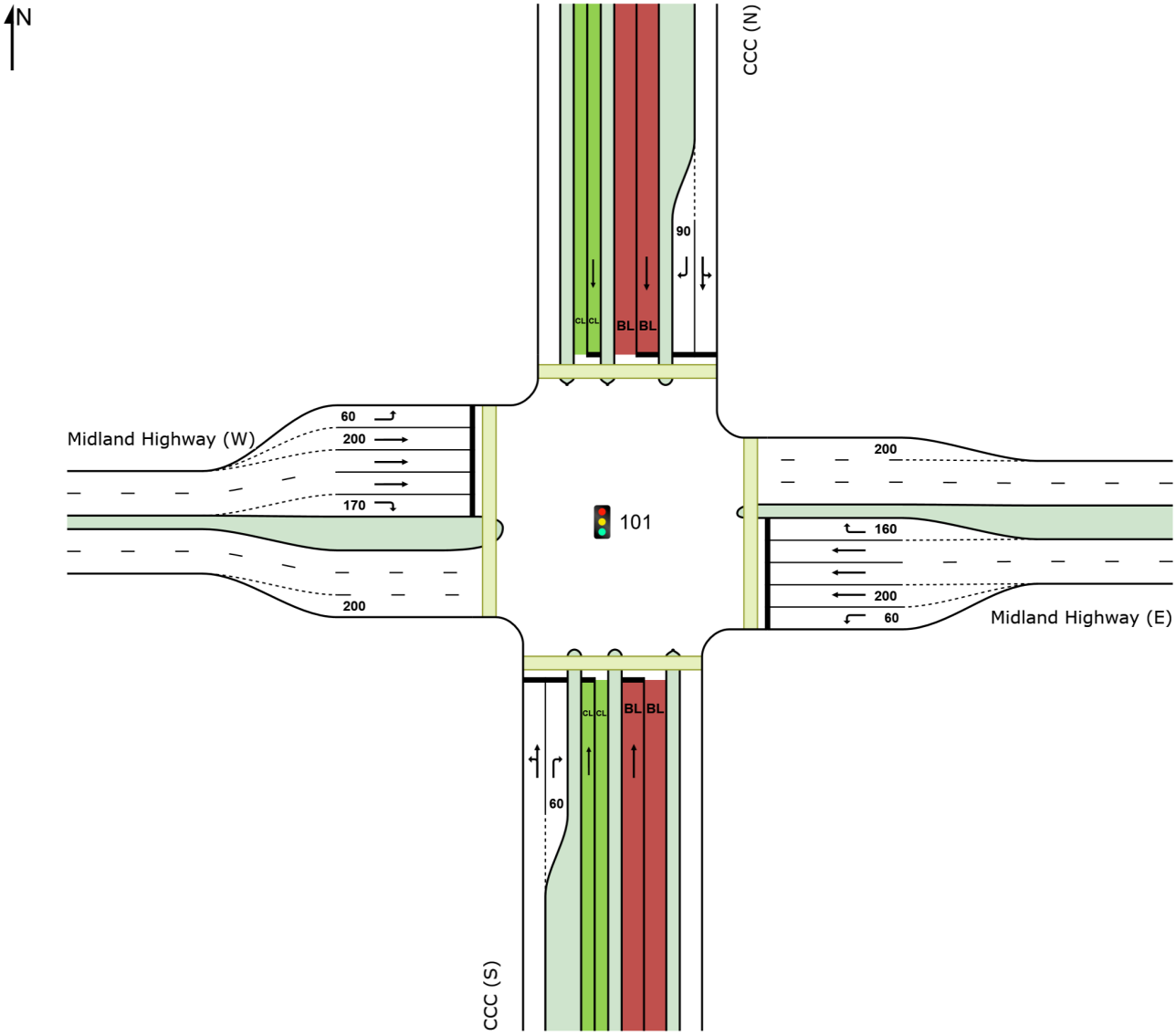


SITE LAYOUT

Site: 101 [IN-6 - AM - 120 sec (Site Folder: 2041 Interim - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [IN-6 - AM - 120 sec (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: CCC (S)														
1	L2	144	7	152	5.0	0.548	41.3	LOS D	12.5	90.6	0.91	0.79	0.91	36.2
2	T1	138	14	146	10.5	* 0.548	35.0	LOS D	12.5	90.6	0.88	0.74	0.88	35.9
3	R2	104	5	109	5.0	0.814	72.1	LOS E	7.0	51.2	1.00	0.91	1.29	27.5
Approach		386	27	407	7.0	0.814	47.4	LOS D	12.5	90.6	0.92	0.81	1.00	33.2
East: Midland Highway (E)														
4	L2	20	1	21	5.0	0.031	26.4	LOS C	0.7	5.1	0.65	0.67	0.65	40.9
5	T1	745	37	784	5.0	0.395	31.7	LOS C	11.5	83.8	0.80	0.68	0.80	39.7
6	R2	183	9	193	5.0	* 0.921	79.5	LOS E	13.4	98.2	1.00	1.03	1.47	25.9
Approach		948	47	998	5.0	0.921	40.8	LOS D	13.4	98.2	0.84	0.75	0.93	36.0
North: CCC (N)														
7	L2	20	1	21	5.0	0.263	42.4	LOS D	5.5	40.3	0.84	0.69	0.84	37.6
8	T1	130	15	137	11.5	0.263	34.0	LOS C	5.5	40.3	0.82	0.66	0.82	36.9
9	R2	113	6	119	5.0	* 0.884	76.9	LOS E	8.0	58.1	1.00	0.98	1.44	26.5
Approach		263	22	277	8.2	0.884	53.1	LOS D	8.0	58.1	0.90	0.80	1.09	31.5
West: Midland Highway (W)														
10	L2	20	1	21	5.0	0.031	17.8	LOS B	0.4	3.0	0.38	0.63	0.38	45.3
11	T1	1781	89	1875	5.0	* 0.952	43.5	LOS D	41.5	302.7	0.99	1.06	1.20	35.5
12	R2	132	7	139	5.0	0.664	57.7	LOS E	7.9	57.3	0.97	0.81	1.00	30.6
Approach		1933	97	2035	5.0	0.952	44.2	LOS D	41.5	302.7	0.99	1.04	1.18	35.2
All Vehicles		3530	193	3716	5.5	0.952	44.3	LOS D	41.5	302.7	0.93	0.92	1.09	34.9

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: CCC (S)												
P1	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
East: Midland Highway (E)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	231.5	230.4	1.00
North: CCC (N)												

P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
West: Midland Highway (W)												
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	233.8	233.4	1.00
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	231.3	230.2	1.00

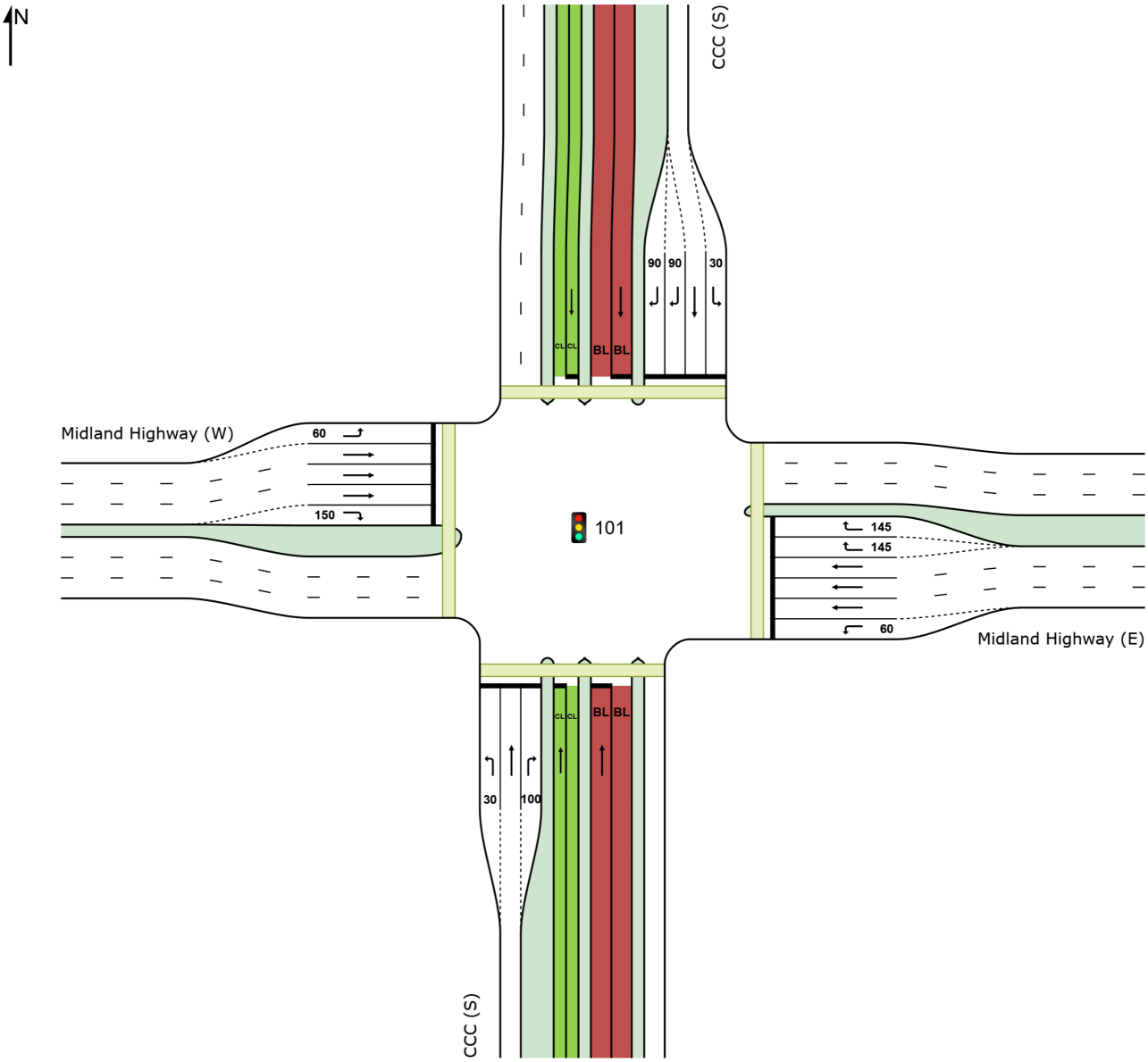
Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

SITE LAYOUT

Site: 101 [CCC-6 - AM - 150 Sec (Site Folder: 2051 Ultimate - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [CCC-6 - AM - 150 Sec (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: CCC (S)														
1	L2	192	10	202	5.0	* 0.317	35.9	LOS D	9.6	70.3	0.73	0.76	0.73	37.0
2	T1	176	17	185	9.7	0.528	53.4	LOS D	9.6	70.2	0.89	0.71	0.89	31.4
3	R2	138	7	145	5.0	* 0.935	99.5	LOS F	12.6	91.7	1.00	1.04	1.47	22.9
Approach		506	34	533	6.6	0.935	59.3	LOS E	12.6	91.7	0.86	0.82	0.99	30.0
East: Midland Highway (E)														
4	L2	20	1	21	5.0	0.029	30.8	LOS C	0.9	6.2	0.63	0.67	0.63	39.0
5	T1	993	50	1045	5.0	0.536	41.8	LOS D	20.4	148.7	0.86	0.74	0.86	35.9
6	R2	244	12	257	5.0	* 0.977	113.0	LOS F	11.9	86.7	1.00	1.09	1.62	21.1
Approach		1257	63	1323	5.0	0.977	55.4	LOS E	20.4	148.7	0.88	0.81	1.00	31.6
North: CCC (S)														
7	L2	24	1	25	5.0	0.053	44.8	LOS D	1.3	9.4	0.77	0.70	0.77	33.9
8	T1	130	15	137	11.5	0.261	51.8	LOS D	6.4	46.7	0.86	0.67	0.86	31.5
9	R2	150	8	158	5.0	0.508	78.6	LOS E	5.7	41.7	1.00	0.77	1.00	26.3
Approach		304	24	320	7.8	0.508	64.5	LOS E	6.4	46.7	0.92	0.72	0.92	28.8
West: Midland Highway (W)														
10	L2	20	1	21	5.0	0.023	9.9	LOS A	0.2	1.4	0.14	0.60	0.14	50.3
11	T1	2375	119	2500	5.0	* 0.981	43.0	LOS D	72.5	529.4	0.92	1.00	1.12	35.4
12	R2	176	9	185	5.0	0.534	55.2	LOS E	11.2	81.6	0.87	0.79	0.87	31.4
Approach		2571	129	2706	5.0	0.981	43.6	LOS D	72.5	529.4	0.91	0.99	1.09	35.2
All Vehicles		4638	249	4882	5.4	0.981	49.9	LOS D	72.5	529.4	0.90	0.90	1.05	33.1

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: CCC (S)												
P1	Full	50	53	69.3	LOS F	0.2	0.2	0.96	0.96	247.6	231.8	0.94
East: Midland Highway (E)												
P2	Full	50	53	69.3	LOS F	0.2	0.2	0.96	0.96	249.0	233.7	0.94

North: CCC (S)											
P3	Full	50	53	69.3	LOS F	0.2	0.2	0.96	0.96	252.7	238.4	0.94
West: Midland Highway (W)											
P4	Full	50	53	69.3	LOS F	0.2	0.2	0.96	0.96	248.8	233.4	0.94
All Pedestrians		200	211	69.3	LOS F	0.2	0.2	0.96	0.96	249.5	234.3	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: 101 [CCC-6 - AM - 150 Sec (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

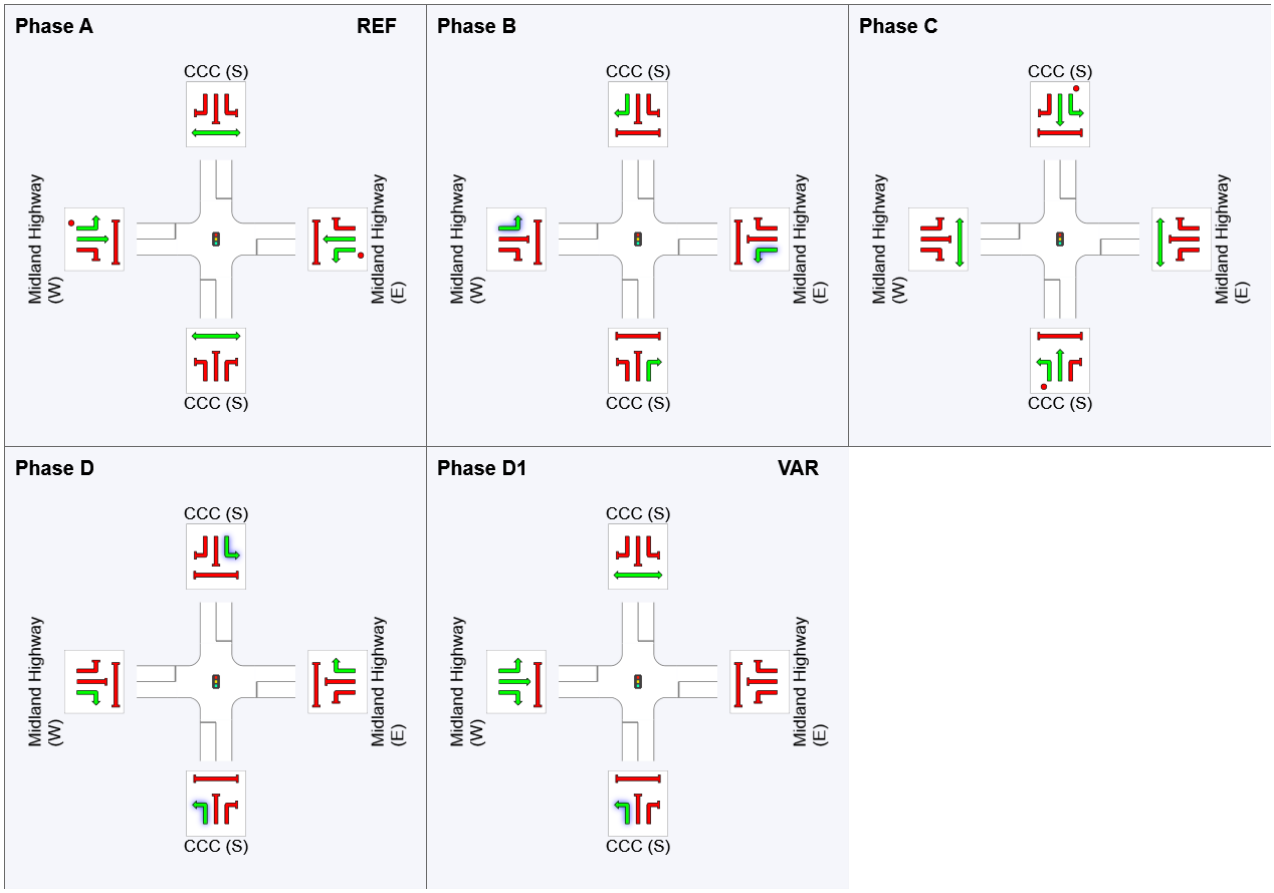
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D, D1*
(* Variable Phase)

Phase Timing Summary

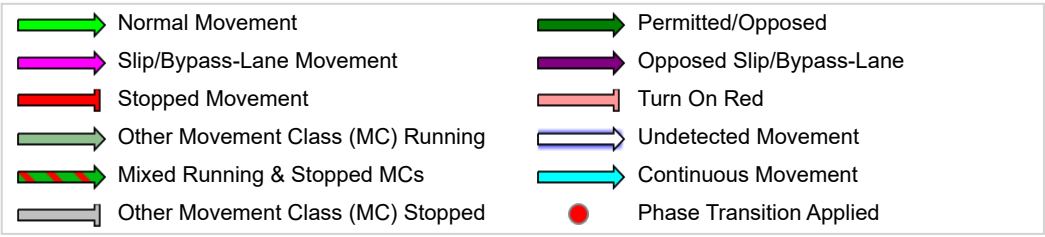
Phase	A	B	C	D	D1
Phase Change Time (sec)	0	58	77	115	132
Green Time (sec)	52	13	32	11	12
Phase Time (sec)	58	19	38	17	18
Phase Split	39%	13%	25%	11%	12%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 101 [IN-6 - PM - 120 sec (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, B2*, C, D, D2*
(* Variable Phase)

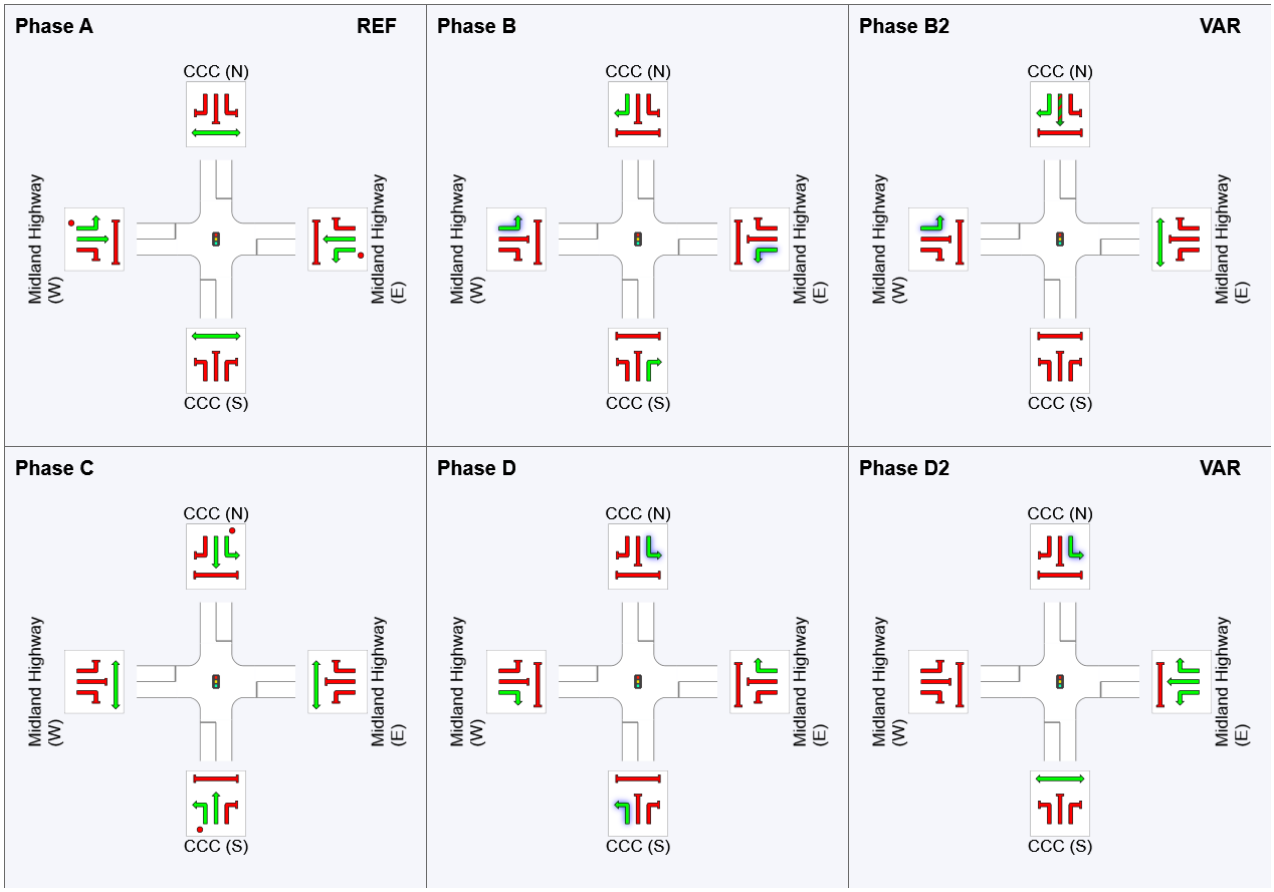
Phase Timing Summary

Phase	A	B	B2	C	D	D2
Phase Change Time (sec)	0	34	52	58	95	116
Green Time (sec)	28	12	***	31	15	***
Phase Time (sec)	34	18	6	37	21	4
Phase Split	28%	15%	5%	31%	18%	3%

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

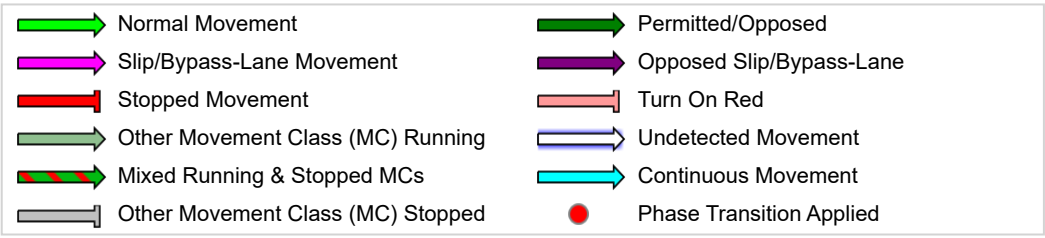
*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [IN-6 - PM - 120 sec (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: CCC (S)														
1	L2	98	5	103	5.0	0.435	41.1	LOS D	9.5	69.3	0.88	0.76	0.88	36.6
2	T1	130	15	137	11.5	* 0.435	34.6	LOS C	9.5	69.3	0.85	0.71	0.85	36.1
3	R2	46	2	48	5.0	0.270	61.3	LOS E	2.7	19.8	0.96	0.74	0.96	29.9
Approach		274	22	288	8.1	0.435	41.4	LOS D	9.5	69.3	0.88	0.74	0.88	34.9
East: Midland Highway (E)														
4	L2	20	1	21	5.0	0.036	31.1	LOS C	0.8	5.7	0.71	0.68	0.71	38.9
5	T1	1049	52	1104	5.0	0.735	44.5	LOS D	20.2	147.2	0.97	0.86	1.00	34.9
6	R2	198	10	208	5.0	* 0.734	60.5	LOS E	12.2	89.4	1.00	0.87	1.08	29.9
Approach		1267	63	1334	5.0	0.735	46.8	LOS D	20.2	147.2	0.97	0.86	1.00	34.1
North: CCC (N)														
7	L2	20	1	21	5.0	0.267	37.8	LOS D	6.3	46.2	0.80	0.68	0.80	38.6
8	T1	152	16	160	10.5	0.267	32.1	LOS C	6.3	46.2	0.80	0.65	0.80	37.9
9	R2	198	10	208	5.0	* 0.775	63.0	LOS E	12.6	91.9	1.00	0.89	1.14	29.5
Approach		370	27	389	7.3	0.775	48.9	LOS D	12.6	91.9	0.91	0.78	0.98	32.8
West: Midland Highway (W)														
10	L2	20	1	21	5.0	0.034	21.5	LOS C	0.5	3.6	0.46	0.64	0.46	43.3
11	T1	953	48	1003	5.0	* 0.762	38.4	LOS D	17.5	128.0	0.92	0.81	0.95	37.0
12	R2	160	8	168	5.0	0.751	58.0	LOS E	9.8	71.2	0.99	0.84	1.06	30.6
Approach		1133	57	1193	5.0	0.762	40.9	LOS D	17.5	128.0	0.92	0.81	0.96	36.0
All Vehicles		3044	169	3204	5.6	0.775	44.4	LOS D	20.2	147.2	0.94	0.82	0.97	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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: CCC (S)												
P1	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
East: Midland Highway (E)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	231.5	230.4	1.00
North: CCC (N)												

P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
West: Midland Highway (W)												
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	233.8	233.4	1.00
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	231.3	230.2	1.00

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 [CCC-6 - PM - 150 Sec (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, B1*, B2*, C, D, D1*, D2*
Output Phase Sequence: A, B, C, D, D1*
(* Variable Phase)

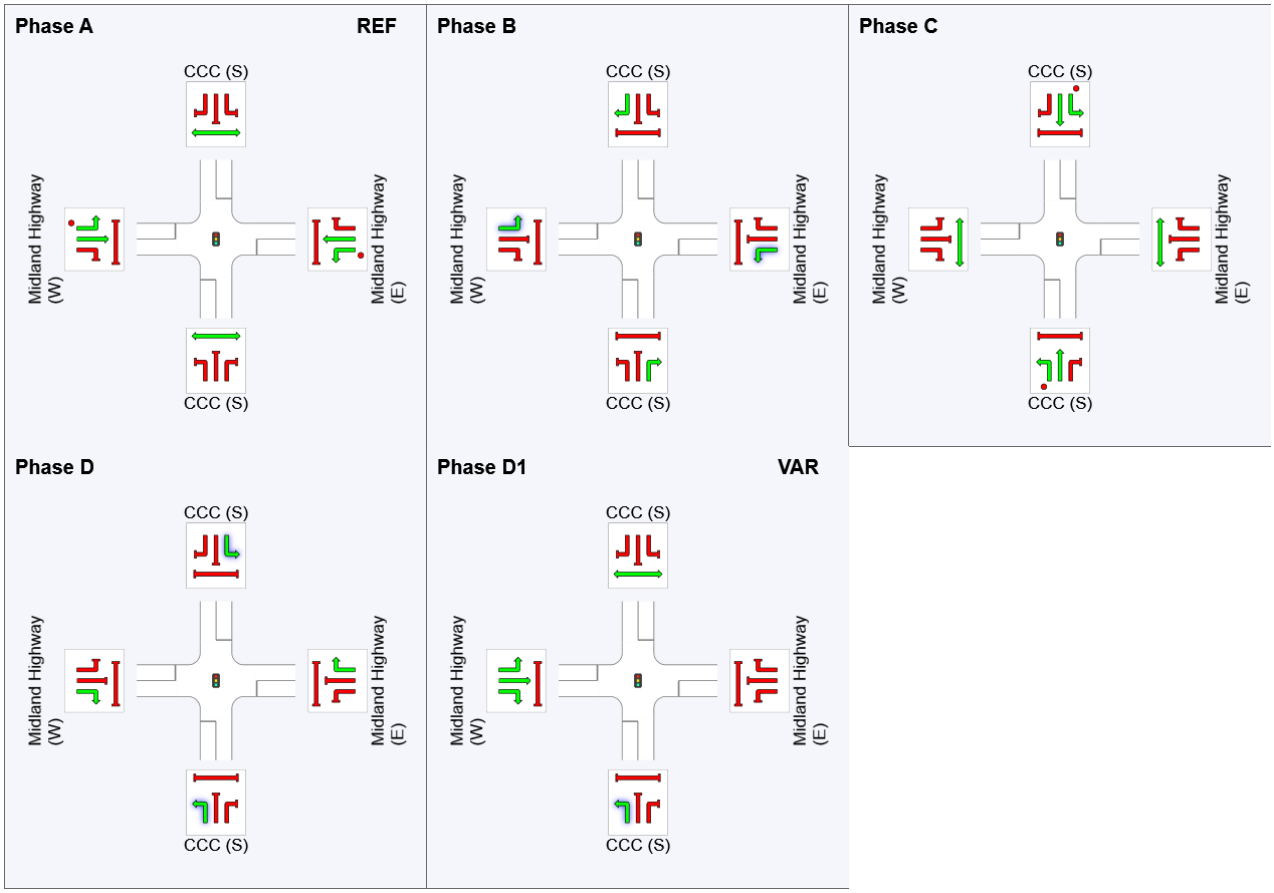
Phase Timing Summary

Phase	A	B	C	D	D1
Phase Change Time (sec)	0	42	59	97	116
Green Time (sec)	36	11	32	13	***
Phase Time (sec)	42	17	38	19	4
Phase Split	35%	14%	32%	16%	3%

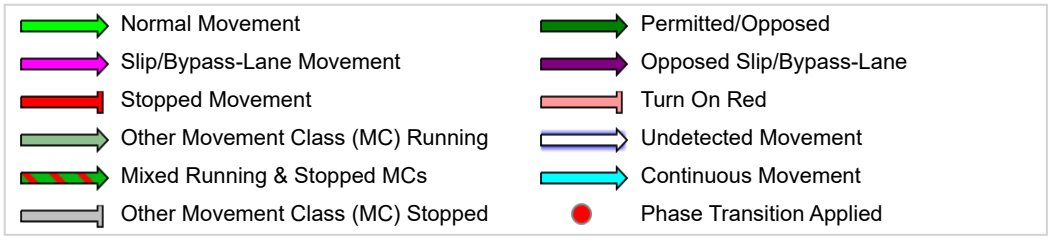
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified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

*** No green time has been calculated for this phase because the next phase starts during its intergreen time. This occurs with overlap phasing where there is no single movement connecting this phase to the next, or where the only such movement is a dummy movement with zero minimum green time specified. If a green time is required for this phase, specify a dummy movement with a non-zero minimum green time.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [CCC-6 - PM - 150 Sec (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 120 seconds (Site Practical Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: CCC (S)														
1	L2	131	7	138	5.0	0.201	28.4	LOS C	5.0	36.4	0.70	0.74	0.70	40.1
2	T1	130	15	137	11.5	0.209	36.0	LOS D	4.8	34.8	0.80	0.63	0.80	36.4
3	R2	61	3	64	5.0	0.391	63.3	LOS E	3.7	27.0	0.98	0.76	0.98	29.5
Approach		322	25	339	7.6	0.391	38.1	LOS D	5.0	36.4	0.80	0.70	0.80	36.0
East: Midland Highway (E)														
4	L2	20	1	21	5.0	0.034	29.1	LOS C	0.7	5.4	0.68	0.68	0.68	39.8
5	T1	1399	70	1473	5.0	* 0.873	52.2	LOS D	31.1	227.0	1.00	1.02	1.17	32.6
6	R2	264	13	278	5.0	0.715	65.2	LOS E	8.4	61.1	1.00	0.85	1.11	29.1
Approach		1683	84	1772	5.0	0.873	54.0	LOS D	31.1	227.0	1.00	0.99	1.15	32.1
North: CCC (S)														
7	L2	20	1	21	5.0	0.034	29.1	LOS C	0.7	5.4	0.68	0.68	0.68	39.7
8	T1	192	18	202	9.4	* 0.343	37.5	LOS D	8.1	58.7	0.84	0.68	0.84	36.4
9	R2	264	13	278	5.0	* 0.845	72.3	LOS E	9.0	65.6	1.00	0.95	1.32	27.5
Approach		476	32	501	6.8	0.845	56.5	LOS E	9.0	65.6	0.92	0.83	1.10	30.9
West: Midland Highway (W)														
10	L2	20	1	21	5.0	0.031	17.8	LOS B	0.4	3.0	0.38	0.63	0.38	45.3
11	T1	1271	72	1338	5.7	0.715	25.1	LOS C	19.3	141.9	0.79	0.69	0.79	42.7
12	R2	213	11	224	5.0	* 0.883	60.9	LOS E	13.9	101.5	1.00	0.92	1.18	29.9
Approach		1504	84	1583	5.6	0.883	30.0	LOS C	19.3	141.9	0.81	0.72	0.84	40.3
All Vehicles		3985	225	4195	5.6	0.883	44.0	LOS D	31.1	227.0	0.90	0.84	1.00	34.9

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: CCC (S)												
P1	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	232.6	231.8	1.00
East: Midland Highway (E)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	234.0	233.7	1.00

North: CCC (S)											
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	237.7	238.4	1.00
West: Midland Highway (W)											
P4	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	233.8	233.4	1.00
All Pedestrians		200	211	54.3	LOS E	0.2	0.2	0.95	0.95	234.5	234.3	1.00

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 [CCC-7 - AM - NEW (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

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

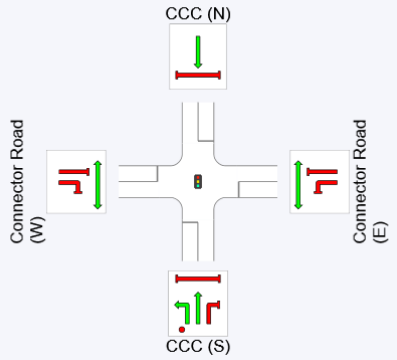
Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	26	38	71
Green Time (sec)	20	6	27	13
Phase Time (sec)	26	12	33	19
Phase Split	29%	13%	37%	21%

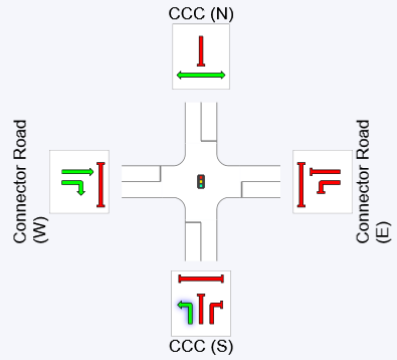
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified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

Output Phase Sequence

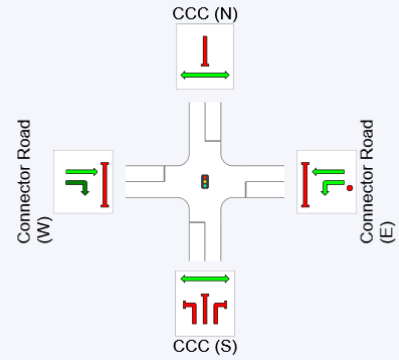
Phase A **REF**



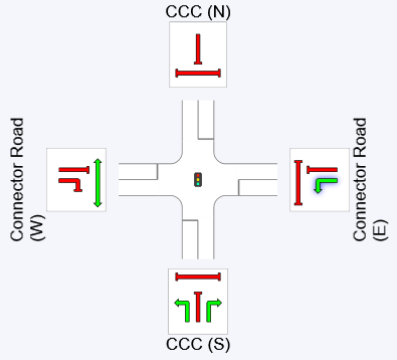
Phase B



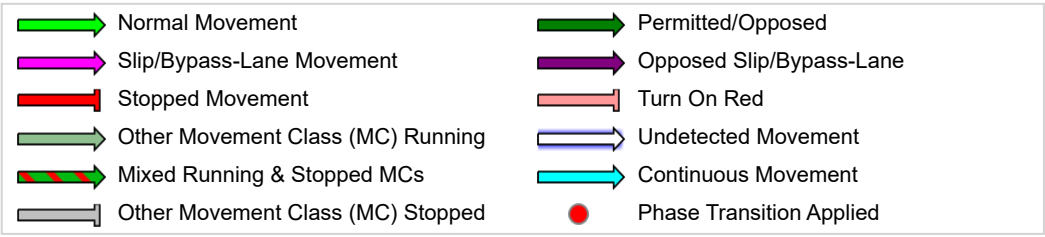
Phase C



Phase D



REF: Reference Phase
VAR: Variable Phase

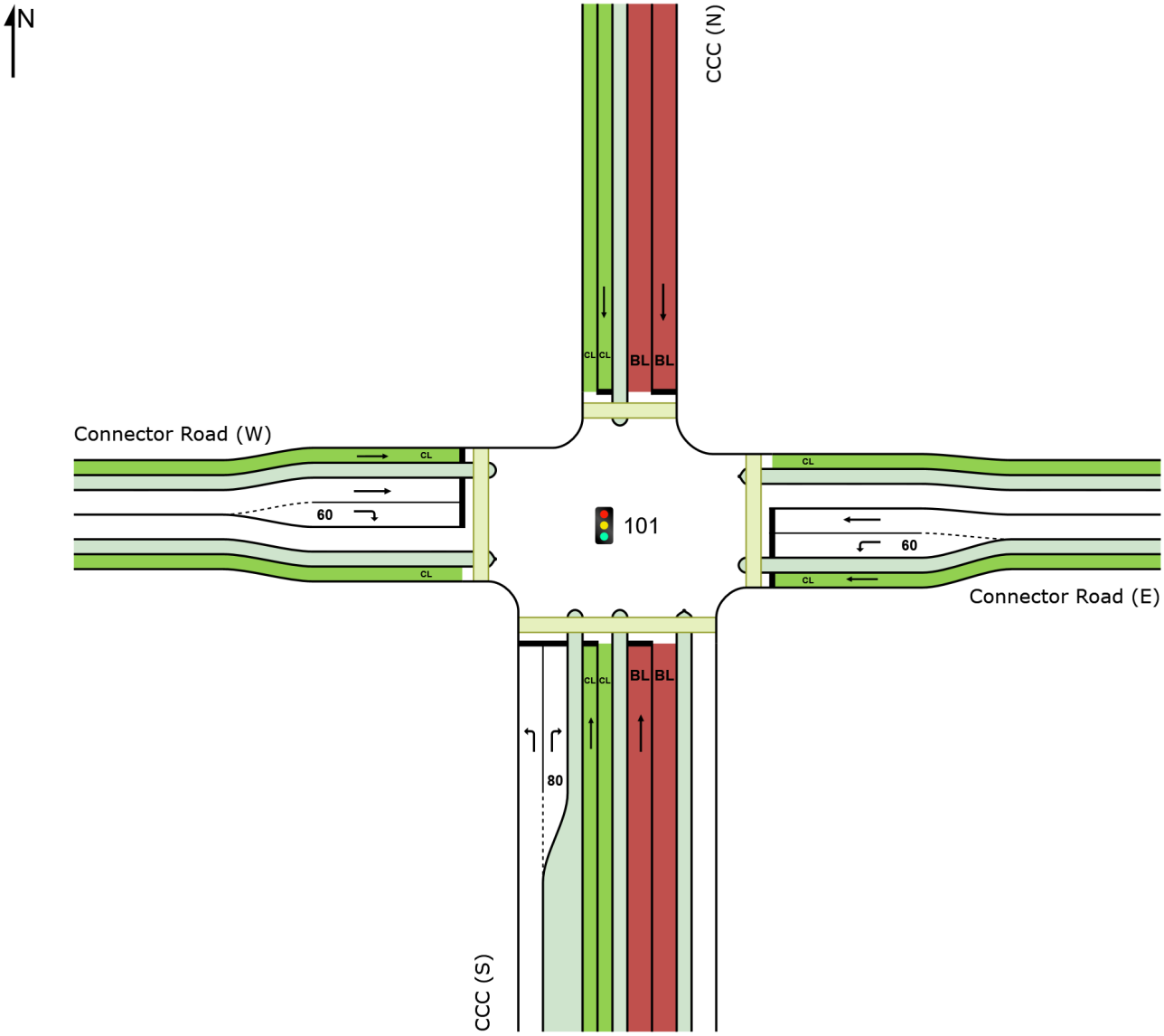


SITE LAYOUT

Site: 101 [CCC-7 - AM - NEW (Site Folder: 2041 Interim - DD)]

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

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



MOVEMENT SUMMARY

Site: 101 [CCC-7 - AM - NEW (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: CCC (S)														
1	L2	189	9	199	4.8	0.232	17.2	LOS B	4.5	32.6	0.62	0.74	0.62	45.7
2	T1	60	10	63	16.7	*0.040	28.9	LOS C	1.8	4.7	0.81	0.59	0.81	32.0
3	R2	208	11	219	5.3	*0.847	54.3	LOS D	10.8	78.9	1.00	0.96	1.33	31.4
Approach		457	30	481	6.6	0.847	35.6	LOS D	10.8	78.9	0.82	0.82	0.97	36.1
East: Connector Road (E)														
4	L2	193	9	203	4.7	*0.291	22.3	LOS C	5.6	40.6	0.73	0.76	0.73	42.9
5	T1	50	2	53	4.0	0.056	23.6	LOS C	1.0	7.3	0.73	0.53	0.73	38.6
Approach		243	11	256	4.5	0.291	22.6	LOS C	5.6	40.6	0.73	0.71	0.73	41.7
North: CCC (N)														
8	T1	60	10	63	16.7	0.040	28.9	LOS C	1.8	4.7	0.81	0.59	0.81	25.3
Approach		60	10	63	16.7	0.040	28.9	LOS C	1.8	4.8	0.81	0.59	0.81	25.1
West: Connector Road (W)														
11	T1	276	16	291	5.8	0.332	17.9	LOS B	7.8	57.6	0.70	0.59	0.70	45.5
12	R2	56	3	59	5.4	*0.166	24.9	LOS C	1.6	12.0	0.82	0.72	0.82	41.9
Approach		332	19	349	5.7	0.332	19.1	LOS B	7.8	57.6	0.72	0.61	0.72	44.6
All Vehicles		1092	70	1149	6.4	0.847	27.3	LOS C	10.8	78.9	0.77	0.72	0.83	38.6

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: CCC (S)												
P1	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	215.1	228.5	1.06
East: Connector Road (E)												
P2	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	208.4	219.9	1.05
North: CCC (N)												
P3	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	204.4	214.6	1.05
West: Connector Road (W)												
P4	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	208.4	219.9	1.05

All Pedestrians	200	211	39.3	LOS D	0.1	0.1	0.94	0.94	209.1	220.7	1.06

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: 101 [CCC-7 - PM - NEW (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: CCC (S)														
1	L2	193	10	203	5.2	0.255	19.0	LOS B	4.9	36.0	0.66	0.75	0.66	44.7
2	T1	60	10	63	16.7	* 0.040	28.9	LOS C	1.8	4.7	0.81	0.59	0.81	32.0
3	R2	149	8	157	5.4	* 0.789	53.3	LOS D	7.5	54.8	1.00	0.91	1.25	31.6
Approach		402	28	423	7.0	0.789	33.2	LOS C	7.5	54.8	0.81	0.78	0.90	36.8
East: Connector Road (E)														
4	L2	408	22	429	5.4	* 0.618	25.2	LOS C	13.8	101.0	0.86	0.83	0.86	41.5
5	T1	56	2	59	3.6	0.060	21.4	LOS C	1.1	8.2	0.70	0.51	0.70	40.1
Approach		464	24	488	5.2	0.618	24.7	LOS C	13.8	101.0	0.84	0.79	0.84	41.2
North: CCC (N)														
8	T1	60	10	63	16.7	0.040	28.9	LOS C	1.8	4.7	0.81	0.59	0.81	25.3
Approach		60	10	63	16.7	0.040	28.9	LOS C	1.8	4.8	0.81	0.59	0.81	25.1
West: Connector Road (W)														
11	T1	98	3	103	3.1	0.092	14.0	LOS B	2.0	14.3	0.58	0.45	0.58	45.9
12	R2	20	1	21	5.0	* 0.080	24.9	LOS C	0.5	3.9	0.86	0.69	0.86	41.9
Approach		118	4	124	3.4	0.092	15.8	LOS B	2.0	14.3	0.63	0.49	0.63	44.5
All Vehicles		1044	66	1099	6.3	0.789	27.2	LOS C	13.8	101.0	0.80	0.74	0.84	38.3

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: CCC (S)												
P1	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	215.1	228.5	1.06
East: Connector Road (E)												
P2	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	208.4	219.9	1.05
North: CCC (N)												
P3	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	204.4	214.6	1.05
West: Connector Road (W)												
P4	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	208.4	219.9	1.05

All Pedestrians	200	211	39.3	LOS D	0.1	0.1	0.94	0.94	209.1	220.7	1.06

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 [CCC-7 - PM - NEW (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

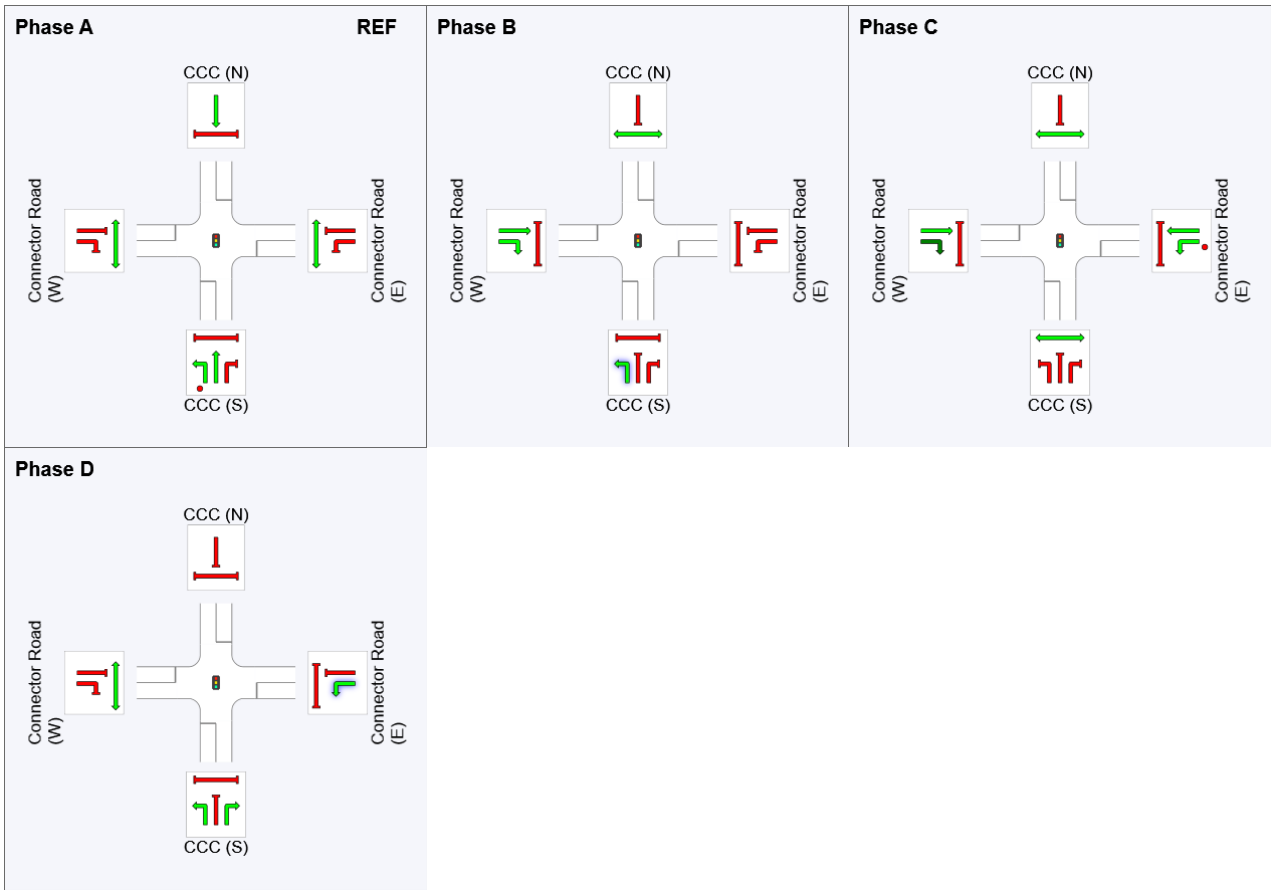
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

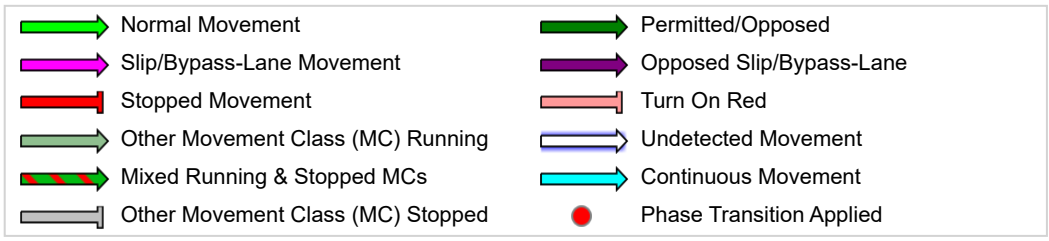
Phase	A	B	C	D
Phase Change Time (sec)	0	26	38	74
Green Time (sec)	20	6	30	10
Phase Time (sec)	26	12	36	16
Phase Split	29%	13%	40%	18%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

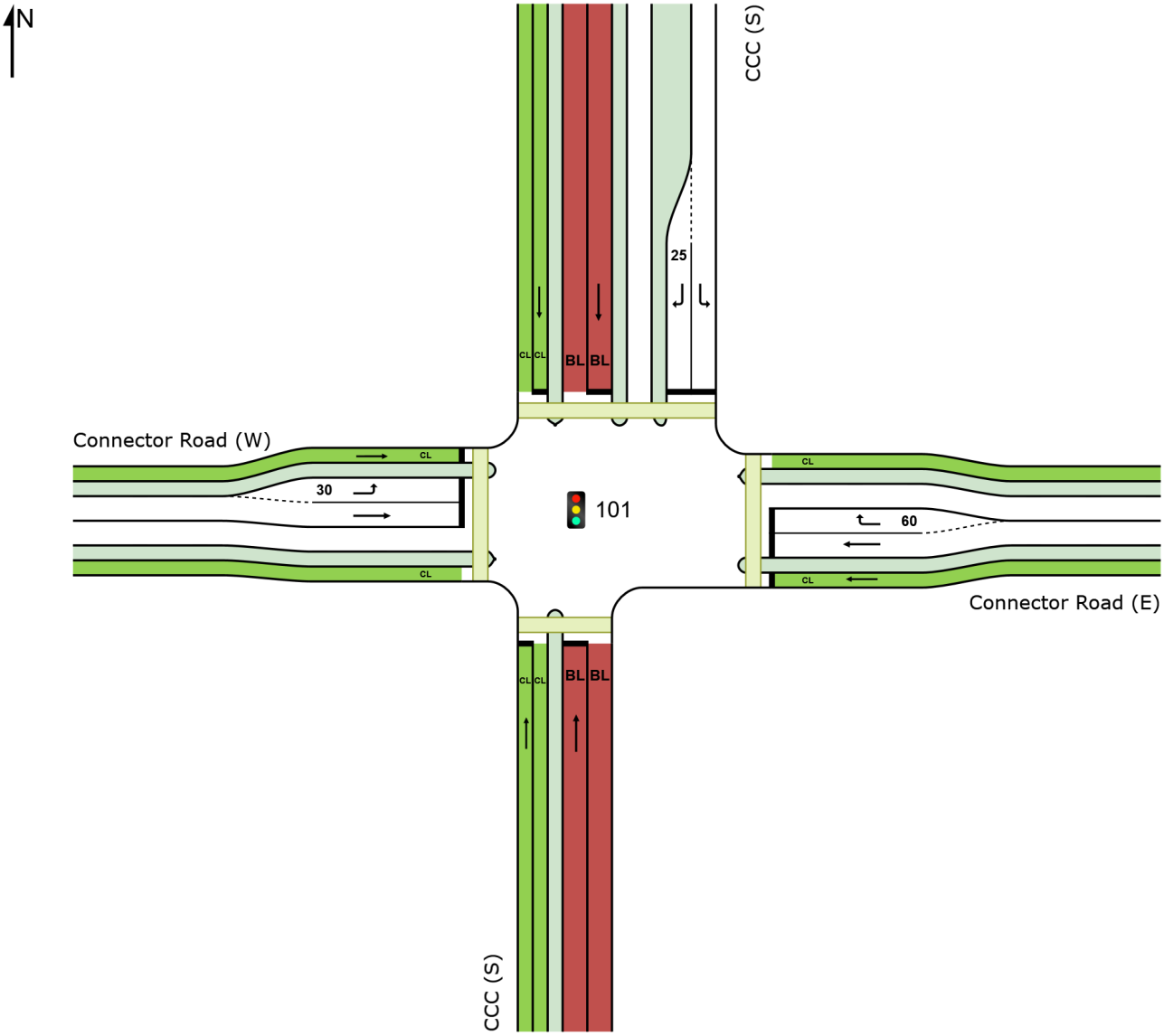


SITE LAYOUT

Site: 101 [CCC-9 - AM (Site Folder: JS File)]

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

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



MOVEMENT SUMMARY

Site: 101 [CCC-9 - AM (Site Folder: JS File)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: CCC (S)														
2	T1	60	10	63	16.7	0.040	28.9	LOS C	1.8	4.7	0.81	0.59	0.81	32.0
Approach		60	10	63	16.7	0.040	28.9	LOS C	1.8	4.8	0.81	0.59	0.81	31.6
East: Connector Road (E)														
5	T1	107	4	113	3.7	0.106	14.7	LOS B	2.3	16.5	0.59	0.46	0.59	45.7
6	R2	20	1	21	5.0	*0.050	22.2	LOS C	0.5	4.0	0.72	0.67	0.72	43.2
Approach		127	5	134	3.9	0.106	15.9	LOS B	2.3	16.5	0.61	0.50	0.61	44.7
North: CCC (S)														
7	L2	111	2	116	1.4	0.132	16.5	LOS B	2.5	17.5	0.59	0.71	0.59	46.2
8	T1	60	10	63	16.7	*0.042	28.8	LOS C	1.8	4.7	0.81	0.59	0.81	32.0
9	R2	67	1	71	1.7	*0.315	46.0	LOS D	3.0	21.0	0.95	0.76	0.95	33.7
Approach		238	13	250	5.3	0.315	28.0	LOS C	3.0	21.0	0.75	0.69	0.75	37.8
West: Connector Road (W)														
10	L2	59	3	62	5.1	0.076	20.3	LOS C	1.5	11.1	0.59	0.70	0.59	44.0
11	T1	210	9	221	4.3	*0.328	24.7	LOS C	6.7	48.7	0.79	0.65	0.79	41.7
Approach		269	12	283	4.5	0.328	23.7	LOS C	6.7	48.7	0.75	0.66	0.75	41.9
All Vehicles		694	40	730	5.7	0.328	24.2	LOS C	6.7	48.7	0.73	0.63	0.73	39.8

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: CCC (S)												
P1	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	204.4	214.6	1.05
East: Connector Road (E)												
P2	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	208.4	219.9	1.05
North: CCC (S)												
P3	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	215.1	228.5	1.06
West: Connector Road (W)												
P4	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	208.4	219.9	1.05

All Pedestrians	200	211	39.3	LOS D	0.1	0.1	0.94	0.94	209.1	220.7	1.06

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 [CCC-9 - AM (Site Folder: JS File)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

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

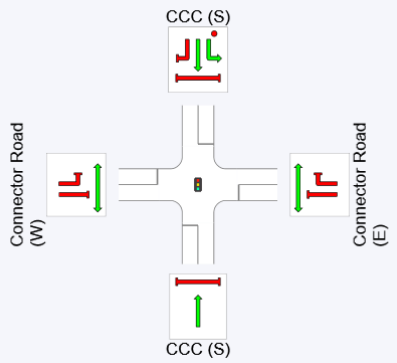
Phase Timing Summary

Phase	A	B	C	D
Phase Change Time (sec)	0	26	38	73
Green Time (sec)	20	6	29	11
Phase Time (sec)	26	12	35	17
Phase Split	29%	13%	39%	19%

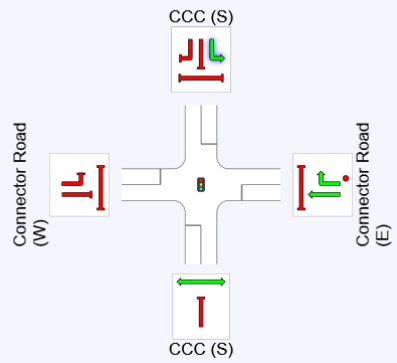
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified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

Output Phase Sequence

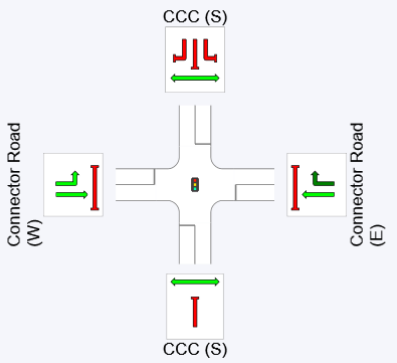
Phase A **REF**



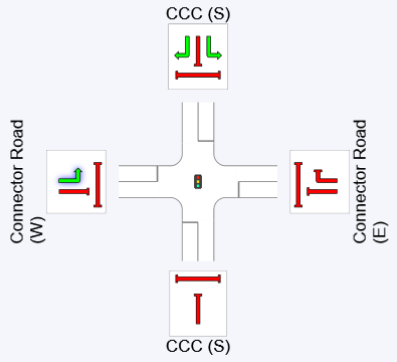
Phase B



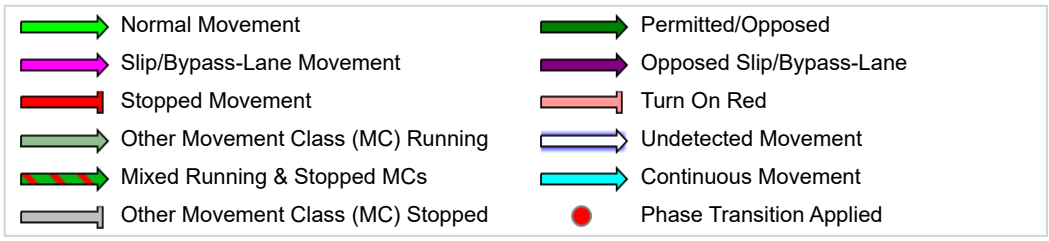
Phase C



Phase D



REF: Reference Phase
VAR: Variable Phase



PHASING SUMMARY

Site: 101 [CCC-9 - PM (Site Folder: JS File)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

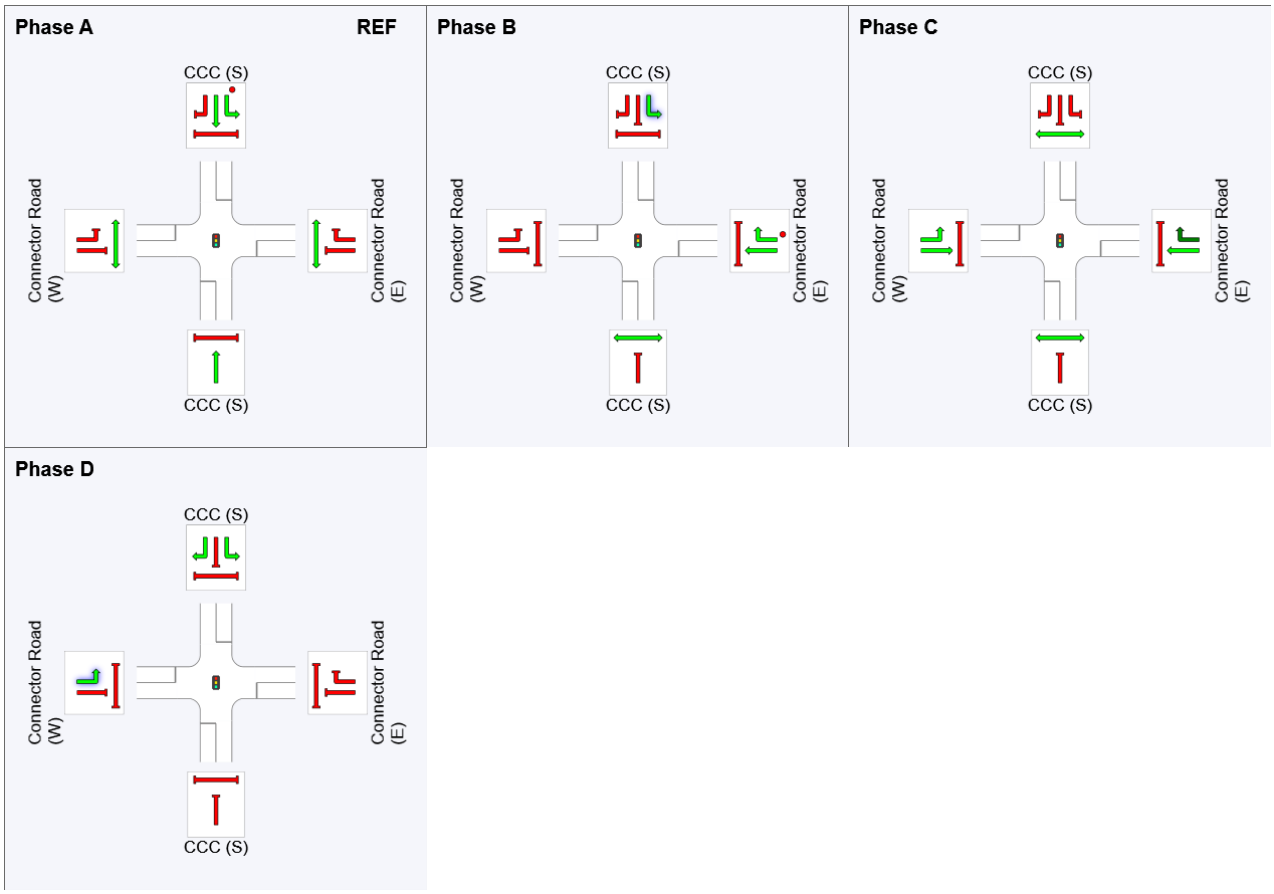
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D

Phase Timing Summary

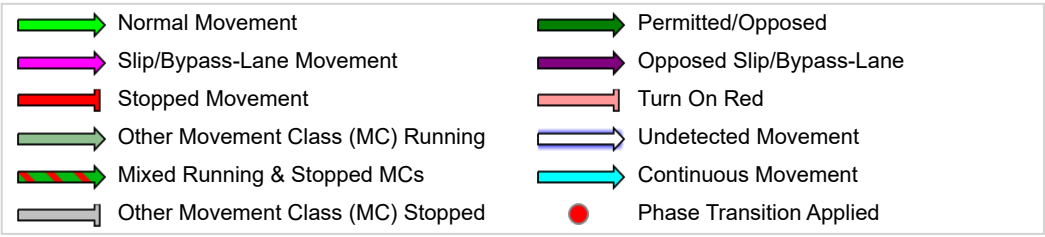
Phase	A	B	C	D
Phase Change Time (sec)	0	26	42	75
Green Time (sec)	20	10	27	9
Phase Time (sec)	26	16	33	15
Phase Split	29%	18%	37%	17%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [CCC-9 - PM (Site Folder: JS File)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: CCC (S)														
2	T1	60	10	63	16.7	0.040	28.9	LOS C	1.8	4.7	0.81	0.59	0.81	32.0
Approach		60	10	63	16.7	0.040	28.9	LOS C	1.8	4.8	0.81	0.59	0.81	31.6
East: Connector Road (E)														
5	T1	184	7	194	3.8	0.190	14.2	LOS B	4.3	31.3	0.60	0.49	0.60	47.1
6	R2	66	3	69	4.5	*0.139	21.1	LOS C	1.7	12.6	0.73	0.71	0.73	43.8
Approach		250	10	263	4.0	0.190	16.0	LOS B	4.3	31.3	0.63	0.55	0.63	45.8
North: CCC (S)														
7	L2	23	2	24	8.7	0.028	15.0	LOS B	0.5	3.5	0.53	0.66	0.53	46.8
8	T1	60	10	63	16.7	*0.042	28.8	LOS C	1.8	4.7	0.81	0.59	0.81	32.0
9	R2	63	3	66	4.8	*0.369	48.6	LOS D	2.9	20.9	0.97	0.76	0.97	32.9
Approach		146	15	154	10.3	0.369	35.2	LOS D	2.9	20.9	0.84	0.67	0.84	33.9
West: Connector Road (W)														
10	L2	68	3	72	4.4	0.097	22.9	LOS C	1.9	13.9	0.64	0.71	0.64	42.6
11	T1	111	5	117	4.5	*0.170	24.7	LOS C	3.1	22.8	0.77	0.59	0.77	40.7
Approach		179	8	188	4.5	0.170	24.0	LOS C	3.1	22.8	0.72	0.64	0.72	41.1
All Vehicles		635	43	668	6.8	0.369	23.9	LOS C	4.3	31.3	0.72	0.61	0.72	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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: CCC (S)												
P1	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	204.4	214.6	1.05
East: Connector Road (E)												
P2	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	208.4	219.9	1.05
North: CCC (S)												
P3	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	215.1	228.5	1.06
West: Connector Road (W)												
P4	Full	50	53	39.3	LOS D	0.1	0.1	0.94	0.94	208.4	219.9	1.05

All Pedestrians	200	211	39.3	LOS D	0.1	0.1	0.94	0.94	209.1	220.7	1.06

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 [CCC-12 - AM - original + peds (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified)
Reference Phase: Phase A
Input Phase Sequence: A, B, Bi, C, C1*
Output Phase Sequence: A, B, Bi, C
(* Variable Phase)

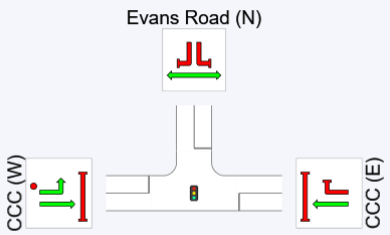
Phase Timing Summary

Phase	A	B	Bi	C
Phase Change Time (sec)	0	38	71	87
Green Time (sec)	32	27	10	27
Phase Time (sec)	38	33	16	33
Phase Split	32%	28%	13%	28%

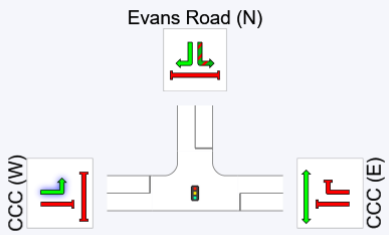
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified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

Output Phase Sequence

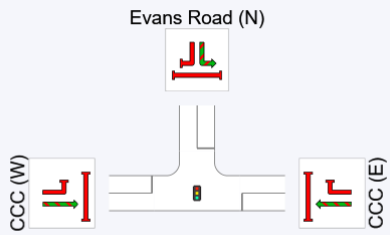
Phase A **REF**



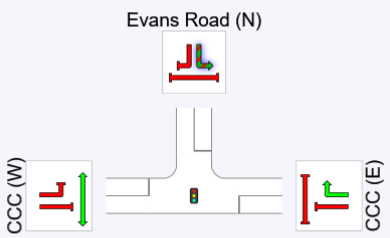
Phase B



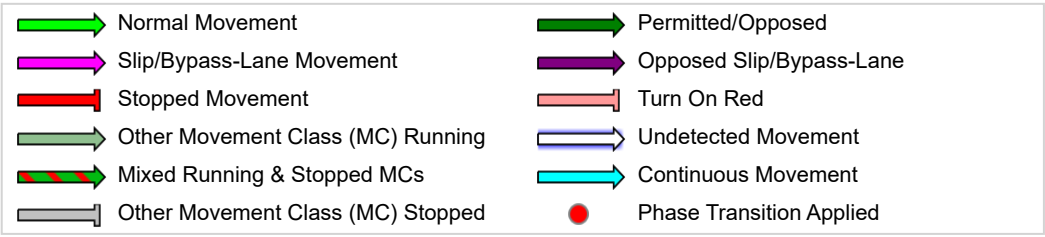
Phase Bi



Phase C



REF: Reference Phase
VAR: Variable Phase



SITE LAYOUT

Site: 101 [CCC-12 - AM - original + peds (Site Folder: 2041 Interim - DD)]

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

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

Organisation: STANTEC NEW ZEALAND | Licence: NETWORK / Enterprise | Created: Thursday, January 18, 2024 4:00:03 PM
Project: U:\301400615\technical\modelling\240116_301400615_IN-01,05,06,12.sip9

MOVEMENT SUMMARY

Site: 101 [CCC-12 - AM - original + peds (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: CCC (E)														
2	T1	130	15	137	11.5	0.209	32.9	LOS C	4.8	34.8	0.79	0.62	0.79	33.0
3	R2	93	5	98	5.4	* 0.243	46.9	LOS D	4.7	34.6	0.86	0.76	0.86	33.5
Approach		223	20	235	9.0	0.243	38.8	LOS D	4.8	34.8	0.82	0.68	0.82	33.2
North: Evans Road (N)														
4	L2	79	3	83	3.8	* 0.458	36.8	LOS D	3.2	19.7	0.98	0.76	0.98	34.0
6	R2	229	21	241	9.2	* 0.571	50.5	LOS D	12.1	88.7	0.94	0.82	0.94	28.0
Approach		308	24	324	7.8	0.571	47.0	LOS D	12.1	88.7	0.95	0.80	0.95	29.7
West: CCC (W)														
7	L2	452	11	476	2.4	* 0.571	26.5	LOS C	18.5	131.9	0.77	0.81	0.77	37.1
8	T1	130	15	137	11.5	0.209	32.9	LOS C	4.8	34.8	0.79	0.62	0.79	24.8
Approach		582	26	613	4.5	0.571	27.9	LOS C	18.5	131.9	0.78	0.76	0.78	33.4
All Vehicles		1113	70	1172	6.3	0.571	35.4	LOS D	18.5	131.9	0.83	0.76	0.83	32.2

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: CCC (E)												
P1	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
North: Evans Road (N)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	223.4	219.9	0.98
West: CCC (W)												
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
All Pedestrians		150	158	54.3	LOS E	0.2	0.2	0.95	0.95	227.8	225.6	0.99

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 [CCC-12 - AM - original + peds (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import (2)
Reference Phase: Phase A
Input Phase Sequence: A, B, Bi, C, C1*
Output Phase Sequence: A, B, Bi, C
(* Variable Phase)

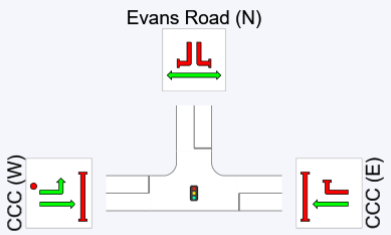
Phase Timing Summary

Phase	A	B	Bi	C
Phase Change Time (sec)	0	38	72	84
Green Time (sec)	32	28	6	30
Phase Time (sec)	38	34	12	36
Phase Split	32%	28%	10%	30%

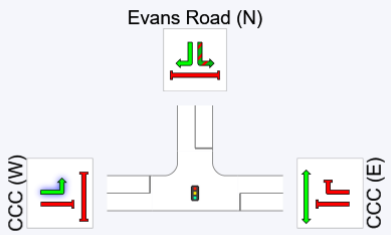
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified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

Output Phase Sequence

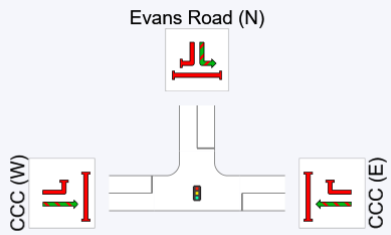
Phase A **REF**



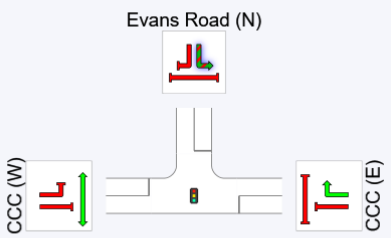
Phase B



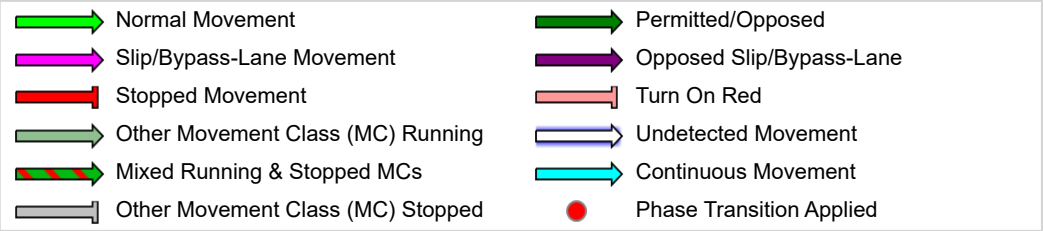
Phase Bi



Phase C



REF: Reference Phase
VAR: Variable Phase

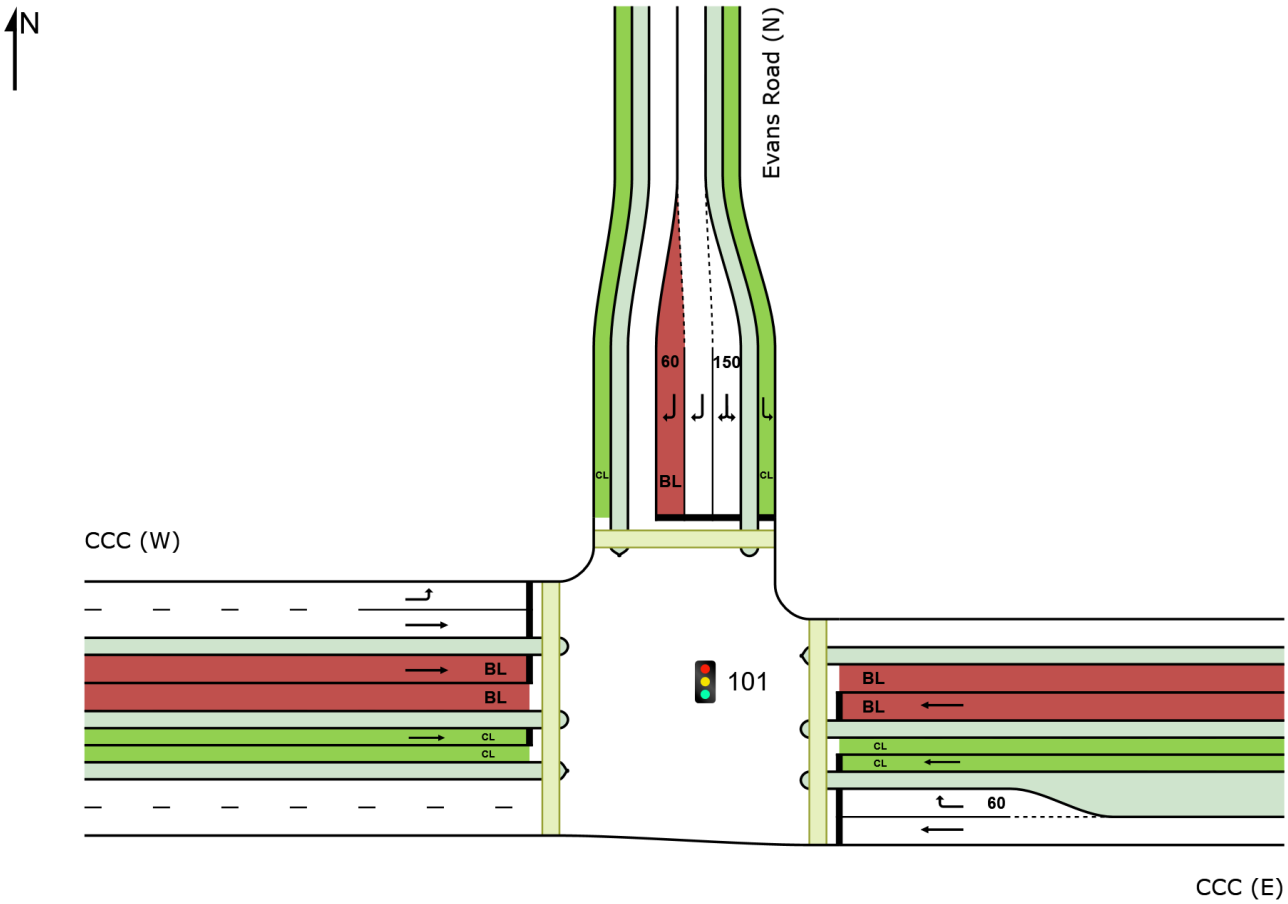


SITE LAYOUT

Site: 101 [CCC-12 - AM - original + peds (Site Folder: 2051 Ultimate - DD)]

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

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



Organisation: STANTEC NEW ZEALAND | Licence: NETWORK / Enterprise | Created: Thursday, January 18, 2024 4:04:10 PM
Project: U:\301400615\technical\modelling\240116_301400615_IN-01,05,06,12.sip9

MOVEMENT SUMMARY

Site: 101 [CCC-12 - AM - original + peds (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: CCC (E)														
2	T1	160	15	168	9.4	*0.209	29.8	LOS C	4.8	34.8	0.78	0.60	0.78	32.4
3	R2	124	6	131	4.8	*0.291	44.9	LOS D	6.2	45.2	0.85	0.77	0.85	34.2
Approach		284	21	299	7.4	0.291	36.4	LOS D	6.2	45.2	0.81	0.68	0.81	33.3
North: Evans Road (N)														
4	L2	99	4	104	4.0	0.480	44.4	LOS D	8.4	61.6	0.93	0.78	0.93	33.1
6	R2	302	25	318	8.3	*0.480	45.8	LOS D	10.2	74.7	0.91	0.81	0.91	29.4
Approach		401	29	422	7.2	0.480	45.5	LOS D	10.2	74.7	0.92	0.80	0.92	30.2
West: CCC (W)														
7	L2	603	30	635	5.0	*0.745	29.1	LOS C	27.1	197.7	0.87	0.87	0.87	35.8
8	T1	160	15	168	9.4	0.209	29.8	LOS C	4.8	34.8	0.78	0.60	0.78	25.0
Approach		763	45	803	5.9	0.745	29.3	LOS C	27.1	197.7	0.85	0.81	0.85	32.8
All Vehicles		1448	95	1524	6.6	0.745	35.2	LOS D	27.1	197.7	0.86	0.78	0.86	32.1

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: CCC (E)												
P1	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
North: Evans Road (N)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	226.0	223.2	0.99
West: CCC (W)												
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	232.6	231.8	1.00
All Pedestrians		150	158	54.3	LOS E	0.2	0.2	0.95	0.95	229.5	227.8	0.99

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 [CCC-12 - PM - original + peds (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

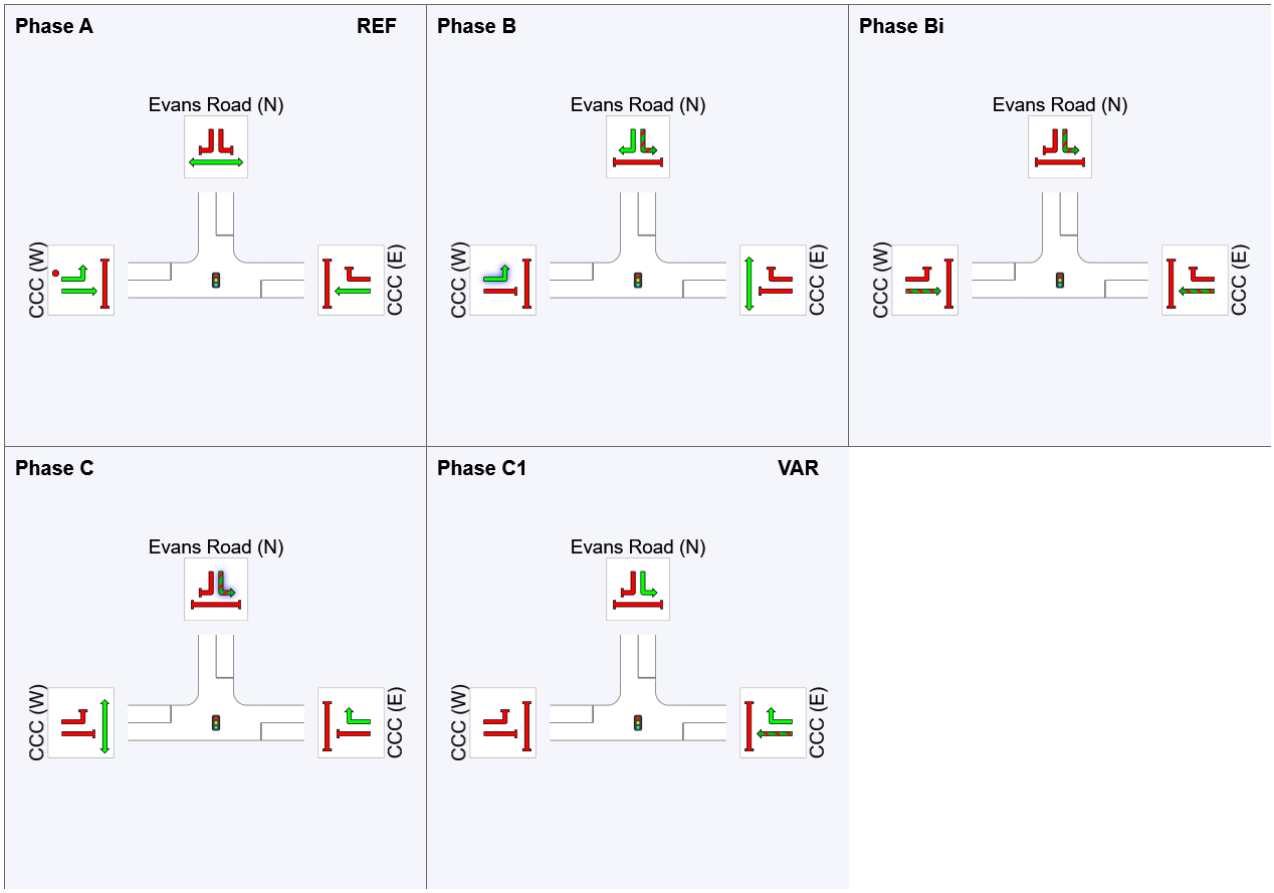
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import (2)
Reference Phase: Phase A
Input Phase Sequence: A, B, Bi, C, C1*
Output Phase Sequence: A, B, Bi, C, C1*
(* Variable Phase)

Phase Timing Summary

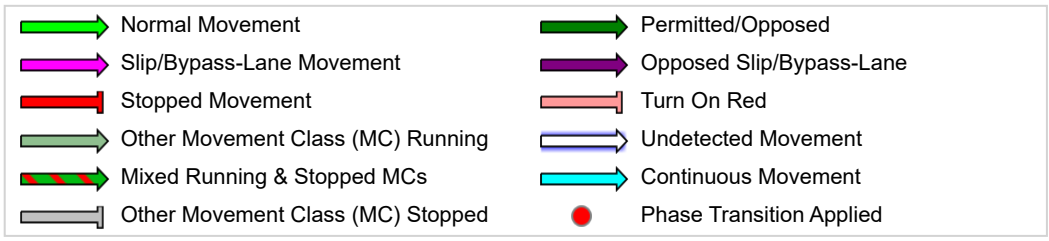
Phase	A	B	Bi	C	C1
Phase Change Time (sec)	0	26	62	74	107
Green Time (sec)	20	30	6	27	7
Phase Time (sec)	26	36	12	33	13
Phase Split	22%	30%	10%	28%	11%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [CCC-12 - PM - original + peds (Site Folder: 2041 Interim - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: CCC (E)														
2	T1	130	15	137	11.5	* 0.203	34.1	LOS C	4.7	34.4	0.81	0.63	0.81	32.7
3	R2	58	3	61	5.2	0.102	35.0	LOS D	2.4	17.8	0.72	0.72	0.72	37.5
Approach		188	18	198	9.6	0.203	34.4	LOS C	4.7	34.4	0.79	0.66	0.79	34.2
North: Evans Road (N)														
4	L2	94	4	99	4.3	* 0.292	29.3	LOS C	3.2	20.0	0.89	0.76	0.89	37.0
6	R2	323	26	340	8.0	* 0.743	51.7	LOS D	18.3	133.9	0.97	0.86	1.01	27.7
Approach		417	30	439	7.2	0.743	46.7	LOS D	18.3	133.9	0.95	0.84	0.99	29.8
West: CCC (W)														
7	L2	205	10	216	4.9	* 0.307	29.4	LOS C	8.3	60.4	0.73	0.76	0.73	35.7
8	T1	130	15	137	11.5	0.334	43.7	LOS D	5.5	40.3	0.90	0.70	0.90	22.7
Approach		335	25	353	7.5	0.334	34.9	LOS C	8.3	60.4	0.80	0.74	0.80	29.1
All Vehicles		940	73	989	7.8	0.743	40.0	LOS D	18.3	133.9	0.86	0.77	0.88	30.4

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: CCC (E)												
P1	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
North: Evans Road (N)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	223.4	219.9	0.98
West: CCC (W)												
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
All Pedestrians		150	158	54.3	LOS E	0.2	0.2	0.95	0.95	227.8	225.6	0.99

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 [CCC-12 - PM - original + peds (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Diamond Phase (modified) - Import (2)
Reference Phase: Phase A
Input Phase Sequence: A, B, Bi, C, C1*
Output Phase Sequence: A, B, Bi, C
(* Variable Phase)

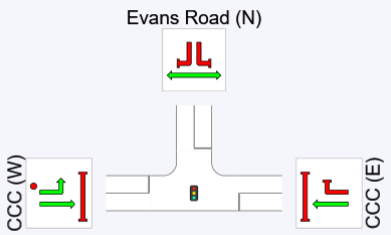
Phase Timing Summary

Phase	A	B	Bi	C
Phase Change Time (sec)	0	29	72	84
Green Time (sec)	23	37	6	30
Phase Time (sec)	29	43	12	36
Phase Split	24%	36%	10%	30%

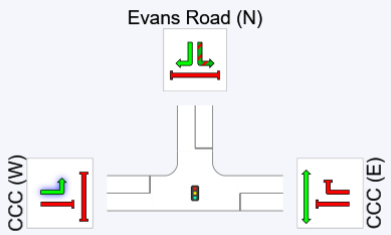
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified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

Output Phase Sequence

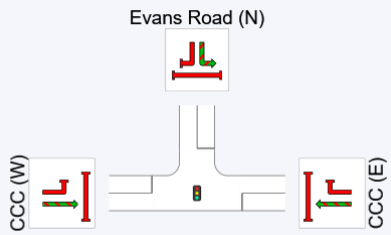
Phase A **REF**



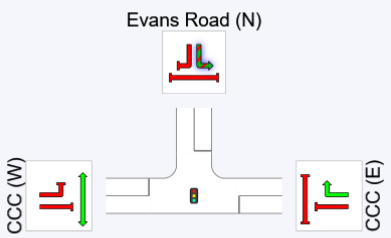
Phase B



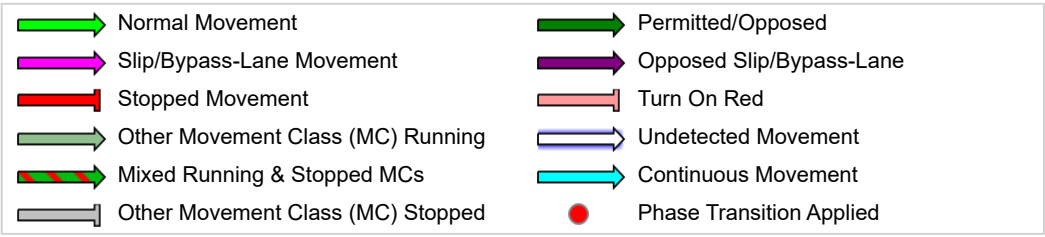
Phase Bi



Phase C



REF: Reference Phase
VAR: Variable Phase



MOVEMENT SUMMARY

Site: 101 [CCC-12 - PM - original + peds (Site Folder: 2051 Ultimate - DD)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)
Variable Sequence Analysis applied. The results are given for the selected output sequence.

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
East: CCC (E)														
2	T1	130	15	137	11.5	0.291	40.8	LOS D	5.3	38.9	0.88	0.68	0.88	30.2
3	R2	77	4	81	5.2	*0.181	43.7	LOS D	3.7	27.2	0.82	0.75	0.82	34.6
Approach		207	19	218	9.2	0.291	41.9	LOS D	5.3	38.9	0.86	0.70	0.86	32.0
North: Evans Road (N)														
4	L2	118	5	124	4.2	*0.501	42.0	LOS D	11.7	85.7	0.89	0.80	0.89	34.1
6	R2	428	31	451	7.2	*0.501	40.7	LOS D	13.3	97.0	0.87	0.82	0.87	31.1
Approach		546	36	575	6.6	0.501	41.0	LOS D	13.3	97.0	0.87	0.81	0.87	31.6
West: CCC (W)														
7	L2	274	14	288	5.1	*0.339	23.6	LOS C	9.8	71.8	0.66	0.75	0.66	38.5
8	T1	130	15	137	11.5	0.291	40.8	LOS D	5.3	38.9	0.88	0.68	0.88	23.2
Approach		404	29	425	7.2	0.339	29.2	LOS C	9.8	71.8	0.73	0.73	0.73	31.7
All Vehicles		1157	84	1218	7.3	0.501	37.0	LOS D	13.3	97.0	0.82	0.76	0.82	31.7

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.
Delay Model: SIDRA Standard (Geometric Delay is included).
Queue Model: SIDRA Standard.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

* Critical Movement (Signal Timing)

Pedestrian Movement Performance

Mov ID	Crossing	Input Vol. ped/h	Dem. Flow ped/h	Aver. Delay sec	Level of Service	AVERAGE BACK OF QUEUE [Ped ped	Dist] m	Prop. Que	Effective Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
East: CCC (E)												
P1	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	230.0	228.5	0.99
North: Evans Road (N)												
P2	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	226.0	223.2	0.99
West: CCC (W)												
P3	Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	232.6	231.8	1.00
All Pedestrians		150	158	54.3	LOS E	0.2	0.2	0.95	0.95	229.5	227.8	0.99

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.

Appendix C. Forecast Right Turn Queue Lengths

Interim

Intersection	Approach	95% Queue (SIDRA) - AM	95% Queue (SIDRA) - PM	95% Queue SIDRA	Taper	Storage (Excluding Taper)	Total Right Turn Lane Length
IN-01	South	222 (123)	113 (48)	222 (123)	23	274 (175)	297 (198)
	East	12 (8)	8 (7)	12 (8)	50	60	110
	North	9 (8)	8 (6)	9 (8)	23	61 (60)	84 (83)
	West	10 (12)	8 (7)	10 (12)	50	60	110
IN-02	South	44 (38)	34 (37)	44 (38)	23	96 (90)	119 (113)
	East	17 (45)	13 (31)	17 (45)	50	60 (60)	110 (110)
IN-03	South	31 (35)	34 (26)	34 (35)	23	86 (87)	109 (110)
	East	45 (21)	34 (24)	30 (24)	50	60 (60)	110 (110)
	North	44 (11)	34 (17)	44 (17)	23	96 (69)	119 (92)
	West	17 (56)	13 (29)	17 (56)	50	60 (60)	110 (110)
IN-05	East	112 (90)	83 (77)	112 (90)	30	207 (185)	237 (215)
	North	85 (73)	101 (102)	101 (102)	23	153 (154)	176 (177)
IN-06	South	48 (51)	18 (20)	48 (51)	40	60	100
	East	56 (98)	62 (89)	62 (98)	30	157 (193)	187 (223)
	North	46 (58)	89 (92)	89 (98)	40	90	130
	West	53 (57)	75 (71)	75 (71)	30	170 (166)	200 (196)
CCC-12	East	9 (35)	6 (18)	9 (35)	40	30	70
	North	120 (89)	190 (134)	190 (134)	23	190	213

Note: updated values shown in brackets.

Ultimate

Intersection	Approach	95% Queue (SIDRA) - AM	95% Queue (SIDRA) - PM	95% Queue SIDRA	Taper	Storage (Excluding Taper)	Total Right Turn Lane Length
IN-01	South	145 (87)	80 (39)	145 (87)	23	197 (139)	220 (162)
	East	9 (8)	9 (8)	9 (8)	50	60	110
	North	8 (15)	8 (10)	8 (15)	23	60 (67)	83 (90)
	West	9 (17)	9 (9)	9 (17)	50	60	110
IN-02	South	40 (54)	47 (51)	47 (54)	23	99 (106)	122 (129)
	East	24 (61)	20 (44)	24 (61)	50	60 (60)	110 (110)
IN-03	South	43 (47)	32 (36)	43 (47)	23	95 (99)	118 (122)
	East	57 (29)	42 (32)	57 (32)	50	60 (60)	110 (110)
	North	24 (17)	33 (22)	33 (22)	23	85 (74)	108 (97)
	West	38 (76)	19 (40)	38 (76)	50	60 (76)	110 (126)
IN-05	East	156 (125)	104 (95)	156 (125)	30	251 (210)	281 (240)
	North	45 (44)	68 (68)	68 (68)	23	120	143
IN-06	South	83 (92)	40 (27)	83 (92)	40	90	130
	East	49 (87)	42 (61)	49 (87)	30	144 (182)	174 (212)
	North	34 (79)	68 (66)	68 (79)	40	80	120
	West	87 (82)	104 (102)	104 (102)	30	199 (197)	229 (227)
CCC-07	South	73 (79)	45 (55)	73 (79)	40	80 (80)	120 (120)
	East	8 (NA)	7 (NA)	8 (NA)	50	60 (NA)	110 (NA)
	North	6 (NA)	5 (NA)	6 (NA)	40	30 (NA)	70 (NA)
	West	8 (12)	7 (4)	8 (12)	50	60 (60)	110 (110)
CCC-09	East	5 (4)	11 (13)	11 (13)	50	60 (60)	110 (110)
	North	7 (21)	8 (21)	8 (21)	40 (15)	30 (25)	70 (40)
CCC-12	East	10 (45)	7 (27)	10 (45)	40	30	70
	North	80 (75)	95 (97)	95 (97)	23	95 (97)	118 (120)

Note: updated values shown in brackets.

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