1. Toowoomba Connection Rd (380m west of Troy's Rd overpass)
Speed Statistics Combined EASTBOUND

SpeedStat-889
Site: Q2756 ATC 1 EBLL.0.0E Q2756 ATC 1 EBRL.0.0E
Description: **Multiple sites - See Header sheet for site descriptions.**
Filter time: **00:00 27 August 2020 => 00:00 03 September 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100) Lane(0-16)

Vehicles = 20840
Posted speed limit = 90 km/h, Exceeding = 5398 (25.90%), Mean Exceeding = 95.08 km/h
Maximum = 152.5 km/h, **Minimum** = 14.9 km/h, **Mean** = 86.2 km/h
85% Speed = 92.61 km/h, **95% Speed** = 98.19 km/h, **Median** = 86.40 km/h
15 km/h Pace = 79 - 94, **Number in Pace** = 15620 (74.95%)
Variance = 60.63, **Standard Deviation** = 7.79 km/h

Speed Bins

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 10	0 0.000%	0 0.000%	20840 100.0%	0.00	0.00	0.00
10 - 20	7 0.034%	7 0.034%	20833 99.97%	0.00	0.00	0.00
20 - 30	12 0.058%	19 0.091%	20821 99.91%	0.00	0.00	0.00
30 - 40	6 0.029%	25 0.120%	20815 99.88%	0.00	0.00	0.00
40 - 50	0 0.000%	25 0.120%	20815 99.88%	0.00	0.00	0.00
50 - 60	28 0.134%	53 0.254%	20787 99.75%	0.00	0.00	0.00
60 - 70	360 1.727%	413 1.982%	20427 98.02%	0.00	0.00	0.00
70 - 80	3116 14.95%	3529 16.93%	17311 83.07%	0.00	0.00	0.00
80 - 90	11913 57.16%	15442 74.10%	5398 25.90%	0.00	0.00	0.00
90 - 100	4675 22.43%	20117 96.53%	723 3.469%	0.00	0.00	0.00
100 - 110	595 2.855%	20712 99.39%	128 0.614%	0.00	0.00	0.00
110 - 120	85 0.408%	20797 99.79%	43 0.206%	0.00	0.00	0.00
120 - 200	43 0.206%	20840 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields

	Limit	Below	Above
0	90 (PSL)	15442 74.1%	5398 25.9%

1. Toowoomba Connection Rd (380m west of Troy's Rd overpass) Speed Statistics Left lane EASTBOUND

SpeedStat-890
Site: Q2756 ATC 1 EBLL.0.0E
Description: **A21 550m east of toowoomba clay target club**
Filter time: **00:00 27 August 2020 => 00:00 03 September 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100) Lane(0-16)

Vehicles = 13682
Posted speed limit = 90 km/h, Exceeding = 3241 (23.69%), Mean Exceeding = 94.97 km/h
Maximum = 152.5 km/h, **Minimum** = 14.9 km/h, **Mean** = 85.4 km/h
85% Speed = 92.07 km/h, **95% Speed** = 97.47 km/h, **Median** = 85.77 km/h
15 km/h Pace = 78 **-** 93, **Number in Pace** = 9996 (73.06%)
Variance = 66.28, **Standard Deviation** = 8.14 km/h

Speed Bins

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 10	0 0.000%	0 0.000%	13682 100.0%	0.00	0.00	0.00
10 - 20	7 0.051%	7 0.051%	13675 99.95%	0.00	0.00	0.00
20 - 30	12 0.088%	19 0.139%	13663 99.86%	0.00	0.00	0.00
30 - 40	6 0.044%	25 0.183%	13657 99.82%	0.00	0.00	0.00
40 - 50	0 0.000%	25 0.183%	13657 99.82%	0.00	0.00	0.00
50 - 60	26 0.190%	51 0.373%	13631 99.63%	0.00	0.00	0.00
60 - 70	324 2.368%	375 2.741%	13307 97.26%	0.00	0.00	0.00
70 - 80	2516 18.39%	2891 21.13%	10791 78.87%	0.00	0.00	0.00
80 - 90	7550 55.18%	10441 76.31%	3241 23.69%	0.00	0.00	0.00
90 - 100	2816 20.58%	13257 96.89%	425 3.106%	0.00	0.00	0.00
100 - 110	348 2.543%	13605 99.44%	77 0.563%	0.00	0.00	0.00
110 - 120	53 0.387%	13658 99.82%	24 0.175%	0.00	0.00	0.00
120 - 200	24 0.175%	13682 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields

	Limit	Below	Above
0	90 (PSL)	10441 76.3%	3241 23.7%

1. Toowoomba Connection Rd (380m west of Troy's Rd overpass) Speed Statistics Right lane EASTBOUND

SpeedStat-891
Site: Q2756 ATC 1 EBRL.0.0E
Description: **A21 550m east of toowoomba clay target club**
Filter time: **00:00 27 August 2020 => 00:00 03 September 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100) Lane(0-16)

Vehicles = 7158
Posted speed limit = 90 km/h, Exceeding = 2157 (30.13%), Mean Exceeding = 95.23 km/h
Maximum = 151.9 km/h, **Minimum** = 58.9 km/h, **Mean** = 87.7 km/h
85% Speed = 93.51 km/h, **95% Speed** = 99.00 km/h, **Median** = 87.30 km/h
15 km/h Pace = 80 - 95, **Number in Pace** = 5706 (79.72%)
Variance = 46.28, **Standard Deviation** = 6.80 km/h

Speed Bins

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 10	0 0.000%	0 0.000%	7158 100.0%	0.00	0.00	0.00
10 - 20	0 0.000%	0 0.000%	7158 100.0%	0.00	0.00	0.00
20 - 30	0 0.000%	0 0.000%	7158 100.0%	0.00	0.00	0.00
30 - 40	0 0.000%	0 0.000%	7158 100.0%	0.00	0.00	0.00
40 - 50	0 0.000%	0 0.000%	7158 100.0%	0.00	0.00	0.00
50 - 60	2 0.028%	2 0.028%	7156 99.97%	0.00	0.00	0.00
60 - 70	36 0.503%	38 0.531%	7120 99.47%	0.00	0.00	0.00
70 - 80	600 8.382%	638 8.913%	6520 91.09%	0.00	0.00	0.00
80 - 90	4363 60.95%	5001 69.87%	2157 30.13%	0.00	0.00	0.00
90 - 100	1859 25.97%	6860 95.84%	298 4.163%	0.00	0.00	0.00
100 - 110	247 3.451%	7107 99.29%	51 0.712%	0.00	0.00	0.00
110 - 120	32 0.447%	7139 99.73%	19 0.265%	0.00	0.00	0.00
120 - 200	19 0.265%	7158 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields

	Limit	Below	Above
0	90 (PSL)	5001 69.9%	2157 30.1%

2. Toowoomba Connection Rd (130m west of Troy's Rd overpass)
Speed Statistics Combined EASTBOUND

SpeedStat-892
Site: Q2756 ATC 2 EBLL.0.0E Q2756 ATC 2 EBRL.0.0E
Description: **Multiple sites - See Header sheet for site descriptions.**
Filter time: **00:00 27 August 2020 => 00:00 03 September 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100) Lane(0-16)

Vehicles = 20863
Posted speed limit = 90 km/h, Exceeding = 3910 (18.74%), Mean Exceeding = 95.13 km/h
Maximum = 151.8 km/h, **Minimum** = 15.1 km/h, **Mean** = 84.7 km/h
85% Speed = 91.08 km/h, **95% Speed** = 96.57 km/h, **Median** = 84.69 km/h
15 km/h Pace = 77 - 92, **Number in Pace** = 15829 (75.87%)
Variance = 56.31, **Standard Deviation** = 7.50 km/h

Speed Bins

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 10	0 0.000%	0 0.000%	20863 100.0%	0.00	0.00	0.00
10 - 20	8 0.038%	8 0.038%	20855 99.96%	0.00	0.00	0.00
20 - 30	3 0.014%	11 0.053%	20852 99.95%	0.00	0.00	0.00
30 - 40	1 0.005%	12 0.058%	20851 99.94%	0.00	0.00	0.00
40 - 50	4 0.019%	16 0.077%	20847 99.92%	0.00	0.00	0.00
50 - 60	47 0.225%	63 0.302%	20800 99.70%	0.00	0.00	0.00
60 - 70	460 2.205%	523 2.507%	20340 97.49%	0.00	0.00	0.00
70 - 80	3967 19.01%	4490 21.52%	16373 78.48%	0.00	0.00	0.00
80 - 90	12463 59.74%	16953 81.26%	3910 18.74%	0.00	0.00	0.00
90 - 100	3371 16.16%	20324 97.42%	539 2.584%	0.00	0.00	0.00
100 - 110	449 2.152%	20773 99.57%	90 0.431%	0.00	0.00	0.00
110 - 120	60 0.288%	20833 99.86%	30 0.144%	0.00	0.00	0.00
120 - 200	30 0.144%	20863 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields

	Limit	Below	Above
0	90 (PSL)	16953 81.3%	3910 18.7%

2. Toowoomba Connection Rd (130m west of Troy's Rd overpass)
Speed Statistics Left Lane EASTBOUND

SpeedStat-893
Site: Q2756 ATC 2 EBLL.0.0E
Description: **250m east of ATC 1**
Filter time: **00:00 27 August 2020 => 00:00 03 September 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100) Lane(0-16)

Vehicles = 14134
Posted speed limit = 90 km/h, Exceeding = 1827 (12.93%), Mean Exceeding = 94.96 km/h
Maximum = 151.8 km/h, **Minimum** = 15.1 km/h, **Mean** = 83.2 km/h
85% Speed = 89.37 km/h, **95% Speed** = 94.50 km/h, **Median** = 83.43 km/h
15 km/h Pace = 76 **-** 91, **Number in Pace** = 10866 (76.88%)
Variance = 54.64, **Standard Deviation** = 7.39 km/h

Speed Bins

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 10	0 0.000%	0 0.000%	14134 100.0%	0.00	0.00	0.00
10 - 20	8 0.057%	8 0.057%	14126 99.94%	0.00	0.00	0.00
20 - 30	3 0.021%	11 0.078%	14123 99.92%	0.00	0.00	0.00
30 - 40	1 0.007%	12 0.085%	14122 99.92%	0.00	0.00	0.00
40 - 50	4 0.028%	16 0.113%	14118 99.89%	0.00	0.00	0.00
50 - 60	45 0.318%	61 0.432%	14073 99.57%	0.00	0.00	0.00
60 - 70	428 3.028%	489 3.460%	13645 96.54%	0.00	0.00	0.00
70 - 80	3450 24.41%	3939 27.87%	10195 72.13%	0.00	0.00	0.00
80 - 90	8368 59.20%	12307 87.07%	1827 12.93%	0.00	0.00	0.00
90 - 100	1587 11.23%	13894 98.30%	240 1.698%	0.00	0.00	0.00
100 - 110	195 1.380%	14089 99.68%	45 0.318%	0.00	0.00	0.00
110 - 120	29 0.205%	14118 99.89%	16 0.113%	0.00	0.00	0.00
120 - 200	16 0.113%	14134 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields

	Limit	Below	Above
0	90 (PSL)	12307 87.1%	1827 12.9%

2. Toowoomba Connection Rd (130m west of Troy's Rd overpass)
Speed Statistics Right Lane EASTBOUND

SpeedStat-894
Site: Q2756 ATC 2 EBRL.0.0E
Description: **250m east of ATC 1**
Filter time: **00:00 27 August 2020 => 00:00 03 September 2020**
Scheme: Vehicle classification (AustRoads94)
Filter: Cls(1-13) Dir(E) Sp(10,160) Headway(>4) Span(0 - 100) Lane(0-16)

Vehicles = 6729
Posted speed limit = 90 km/h, Exceeding = 2083 (30.96%), Mean Exceeding = 95.27 km/h
Maximum = 140.6 km/h, **Minimum** = 57.2 km/h, **Mean** = 87.9 km/h
85% Speed = 93.78 km/h, **95% Speed** = 99.50 km/h, **Median** = 87.30 km/h
15 km/h Pace = 80 - 95, **Number in Pace** = 5389 (80.09%)
Variance = 45.20, **Standard Deviation** = 6.72 km/h

Speed Bins

Speed	Bin	Below	Above	Energy	vMult	n * vMult
0 - 10	0 0.000%	0 0.000%	6729 100.0%	0.00	0.00	0.00
10 - 20	0 0.000%	0 0.000%	6729 100.0%	0.00	0.00	0.00
20 - 30	0 0.000%	0 0.000%	6729 100.0%	0.00	0.00	0.00
30 - 40	0 0.000%	0 0.000%	6729 100.0%	0.00	0.00	0.00
40 - 50	0 0.000%	0 0.000%	6729 100.0%	0.00	0.00	0.00
50 - 60	2 0.030%	2 0.030%	6727 99.97%	0.00	0.00	0.00
60 - 70	32 0.476%	34 0.505%	6695 99.49%	0.00	0.00	0.00
70 - 80	517 7.683%	551 8.188%	6178 91.81%	0.00	0.00	0.00
80 - 90	4095 60.86%	4646 69.04%	2083 30.96%	0.00	0.00	0.00
90 - 100	1784 26.51%	6430 95.56%	299 4.443%	0.00	0.00	0.00
100 - 110	254 3.775%	6684 99.33%	45 0.669%	0.00	0.00	0.00
110 - 120	31 0.461%	6715 99.79%	14 0.208%	0.00	0.00	0.00
120 - 200	14 0.208%	6729 100.0%	0 0.000%	0.00	0.00	0.00

Total Speed Rating = 0.00
Total Moving Energy (Estimated) = 0.00

Speed limit fields

	Limit	Below	Above
0	90 (PSL)	4646 69.0%	2083 31.0%

Controllers\units involved in reported road traffic crashes along Bridge Street (Toowoomba Connection Road), Warrego Highway and Gowrie Junction Road, within the defined subject area in Toowoomba Regional LGA
Fatal crashes: 1 January 2015 to 30 April 2020
Non-fatal casualty (hospitalisation, medical treatment and minor injury) crashes: 1 January 2015 to 29 February 2020

CRASH REF NUMBER	CRASH SEVERITY	CRASH YEAR	CRASH MONTH	CRASH DAY OF WEEK	CRASH HOUR	CRASH LONGITUDE GDA94	CRASH LATITUDE GDA94	CRASH STREET	CRASH STREET INTERSECTING	CRASH SUBURB	CRASH LOCAL GOVERNMENT AREA	CRASH ROADS REGION	CRASH ROADS DISTRICT	CRASH ROADSECTION AUTHORITY
1	Hospitalisation	2018	January	Wednesday	3	151.866641	-27.525956	Toowoomba Connection Rd		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
2	Minor injury	2015	June	Friday	14	151.892424	-27.531849	Bridge St	Toowoomba Connection Rd	Cotswold Hills	Toowoomba Region	Downs South West	Darling Downs	State controlled
2	Minor injury	2015	June	Friday	14	151.892424	-27.531849	Bridge St	Toowoomba Connection Rd	Cotswold Hills	Toowoomba Region	Downs South West	Darling Downs	State controlled
3	Medical treatment	2015	June	Saturday	12	151.86993	-27.527538	Toowoomba Connection Rd		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
3	Medical treatment	2015	June	Saturday	12	151.86993	-27.527538	Toowoomba Connection Rd		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
4	Medical treatment	2016	March	Tuesday	7	151.8918594	-27.531865	Bridge St		Cotswold Hills	Toowoomba Region	Downs South West	Darling Downs	State controlled
4	Medical treatment	2016	March	Tuesday	7	151.8918594	-27.531865	Bridge St		Cotswold Hills	Toowoomba Region	Downs South West	Darling Downs	State controlled
4	Medical treatment	2016	March	Tuesday	7	151.8918594	-27.531865	Bridge St		Cotswold Hills	Toowoomba Region	Downs South West	Darling Downs	State controlled
4	Medical treatment	2016	March	Tuesday	7	151.8918594	-27.531865	Bridge St		Cotswold Hills	Toowoomba Region	Downs South West	Darling Downs	State controlled
5	Medical treatment	2017	July	Wednesday	15	151.871808	-27.526593	Toowoomba Connection Rd		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
6	Medical treatment	2019	December	Friday	7	151.858927	-27.523861	Warrego Hwy		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
6	Medical treatment	2019	December	Friday	7	151.858927	-27.523861	Warrego Hwy		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
7	Minor injury	2018	May	Monday	16	151.86458	-27.52494	Toowoomba Connection Rd		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
7	Minor injury	2018	May	Monday	16	151.86458	-27.52494	Toowoomba Connection Rd		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
7	Minor injury	2018	May	Monday	16	151.86458	-27.52494	Toowoomba Connection Rd		Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
8	Minor injury	2018	December	Wednesday	18	151.863979	-27.524891	Toowoomba Connection Rd	Willetts Rd	Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled
8	Minor injury	2018	December	Wednesday	18	151.863979	-27.524891	Toowoomba Connection Rd	Willetts Rd	Charlton	Toowoomba Region	Downs South West	Darling Downs	State controlled

CRASH REF NUMBER	CRASH ROADSECTION ID	CRASH ROADSECTION NAME	CRASH ROADSECTION CARRIAGEWAY	CRASH ROADSECTION TDIST	CRASH ROADSECTION INTERSECTION ID	CRASH ROADSECTION AADT	CRASH LANDMARK DISTANCE	CRASH LANDMARK UNIT	CRASH LANDMARK DIRECTION	CRASH LANDMARK NAME
1	315	TOOWOOMBA CONNECTION ROAD	2	26.71		7065.5				
2	18B	WARREGO HIGHWAY (TOOWOOMBA - DALBY)	1	8.71		9332				
2	18B	WARREGO HIGHWAY (TOOWOOMBA - DALBY)	1	8.71		9332				
3	315	TOOWOOMBA CONNECTION ROAD	2	26.09		6757.5				
3	315	TOOWOOMBA CONNECTION ROAD	2	26.09		6757.5				
4	315	TOOWOOMBA CONNECTION ROAD	3	23.92		6778				
4	315	TOOWOOMBA CONNECTION ROAD	3	23.92		6778				
4	315	TOOWOOMBA CONNECTION ROAD	3	23.92		6778				
4	315	TOOWOOMBA CONNECTION ROAD	3	23.92		6778				
5	315	TOOWOOMBA CONNECTION ROAD	X	26.78		14697				
6	18B	WARREGO HIGHWAY (TOOWOOMBA - DALBY)	2	0.449		6766				
6	18B	WARREGO HIGHWAY (TOOWOOMBA - DALBY)	2	0.449		6766				
7	315	TOOWOOMBA CONNECTION ROAD	3	26.92		7065.5				
7	315	TOOWOOMBA CONNECTION ROAD	3	26.92		7065.5				
7	315	TOOWOOMBA CONNECTION ROAD	3	26.92		7065.5				
8	315	TOOWOOMBA CONNECTION ROAD	3	26.978		7065.5				
8	315	TOOWOOMBA CONNECTION ROAD	3	26.978		7065.5				

CRASH REF NUMBER	CRASH LANDMARK AREA	CRASH SPEED LIMIT GROUP	CRASH SPEED LIMIT	CRASH TYPE	CRASH NATURE	CRASH ROADWAY FEATURE	CRASH TRAFFIC CONTROL	CRASH ROAD HORIZ ALIGN	CRASH ROAD VERT ALIGN	CRASH LIGHTING CONDITION	CRASH ATMOSPHERIC CONDITION	CRASH ROAD SURFACE CONDITION	CRASH DCA KEY APPROACH
1	Charlton	80 - 90 km/h	80 km/h	Other	Hit animal	Not applicable	No traffic control	Straight	Level	Darkness - Lighted	Clear	Sealed - Dry	West
2	Cotswold Hills	60 km/h	60 km/h	Multi-vehicle	Rear-end	Intersection - T Junction	Road/Rail worker	Straight	Level	Daylight	Clear	Sealed - Dry	West
2	Cotswold Hills	60 km/h	60 km/h	Multi-vehicle	Rear-end	Intersection - T Junction	Road/Rail worker	Straight	Level	Daylight	Clear	Sealed - Dry	West
3	Charlton	60 km/h	60 km/h	Multi-vehicle	Angle	Intersection - Interchange	Give way sign	Curved - view open	Grade	Daylight	Clear	Sealed - Dry	West
3	Charlton	60 km/h	60 km/h	Multi-vehicle	Angle	Intersection - Interchange	Give way sign	Curved - view open	Grade	Daylight	Clear	Sealed - Dry	West
4	Cotswold Hills	60 km/h	60 km/h	Multi-vehicle	Rear-end	Not applicable	No traffic control	Straight	Level	Daylight	Clear	Sealed - Dry	East
4	Cotswold Hills	60 km/h	60 km/h	Multi-vehicle	Rear-end	Not applicable	No traffic control	Straight	Level	Daylight	Clear	Sealed - Dry	East
4	Cotswold Hills	60 km/h	60 km/h	Multi-vehicle	Rear-end	Not applicable	No traffic control	Straight	Level	Daylight	Clear	Sealed - Dry	East
4	Cotswold Hills	60 km/h	60 km/h	Multi-vehicle	Rear-end	Not applicable	No traffic control	Straight	Level	Daylight	Clear	Sealed - Dry	East
5	Charlton	60 km/h	60 km/h	Single vehicle	Overturned	Intersection - Interchange	No traffic control	Curved - view obscured	Crest	Daylight	Clear	Sealed - Dry	East
6	Charlton	70 km/h	70 km/h	Multi-vehicle	Rear-end	Intersection - Cross	Operating traffic lights	Straight	Level	Daylight	Clear	Sealed - Dry	West
6	Charlton	70 km/h	70 km/h	Multi-vehicle	Rear-end	Intersection - Cross	Operating traffic lights	Straight	Level	Daylight	Clear	Sealed - Dry	West
7	Charlton	60 km/h	60 km/h	Multi-vehicle	Rear-end	Not applicable	No traffic control	Straight	Level	Daylight	Clear	Sealed - Dry	East
7	Charlton	60 km/h	60 km/h	Multi-vehicle	Rear-end	Not applicable	No traffic control	Straight	Level	Daylight	Clear	Sealed - Dry	East
7	Charlton	60 km/h	60 km/h	Multi-vehicle	Rear-end	Not applicable	No traffic control	Straight	Level	Daylight	Clear	Sealed - Dry	East
8	Charlton	80 - 90 km/h	80 km/h	Multi-vehicle	Rear-end	Intersection - Cross	Operating traffic lights	Straight	Level	Dawn/Dusk	Clear	Sealed - Dry	East
8	Charlton	80 - 90 km/h	80 km/h	Multi-vehicle	Rear-end	Intersection - Cross	Operating traffic lights	Straight	Level	Dawn/Dusk	Clear	Sealed - Dry	East

CRASH REF NUMBER	CRASH DCA CODE	CRASH DCA DESCRIPTION	CRASH DCA GROUP CODE	CRASH DCA GROUP DESCRIPTION	UNIT CRASH REF NUMBER	UNIT UNIT	UNIT GROUP	UNIT TYPE	UNIT INTENDED ACTION	UNIT OVERALL DAMAGE	UNIT NO OF OCCUPANTS	UNIT HEADED DIRECTION	UNIT ON STREET	CONT PRESENT
1	609	Pass & Misc: Hit Animal	14	Hit animal	1	1	Light passenger vehicle	Utility/Panel van	Go straight ahead	Major - towed away	1	West	Unknown	Yes
2	301	Veh'S Same Direction: Rear End	4	Rear-end	2	1	Heavy freight vehicle	Rigid truck	Go straight ahead	Moderate - towed away	1	West	Unknown	Yes
2	301	Veh'S Same Direction: Rear End	4	Rear-end	2	2	Light passenger vehicle	Car/Station wagon	Slow or stop	Minor	1	West	Unknown	Yes
3	300	Veh'S Same Direction: Other	21	Other	3	1	Light passenger vehicle	Car/Station wagon	Make U turn	Major - towed away	1	West	Unknown	Yes
3	300	Veh'S Same Direction: Other	21	Other	3	2	Heavy freight vehicle	Articulated truck	Go straight ahead	Minor	1	West	Unknown	Yes
4	301	Veh'S Same Direction: Rear End	4	Rear-end	4	1	Light passenger vehicle	Car/Station wagon	Go straight ahead	Moderate - towed away	1	East	Unknown	Yes
4	301	Veh'S Same Direction: Rear End	4	Rear-end	4	2	Light passenger vehicle	Car/Station wagon	Stay stopped	Major - towed away	1	East	Unknown	Yes
4	301	Veh'S Same Direction: Rear End	4	Rear-end	4	3	Light passenger vehicle	Car/Station wagon	Slow or stop	Major - towed away	1	East	Unknown	Yes
4	301	Veh'S Same Direction: Rear End	4	Rear-end	4	4	Light passenger vehicle	Utility/Panel van	Stay stopped	Moderate - drivable vehicle	1	East	Unknown	Yes
5	805	Off Path-Curve: Out Of Control On Cway	20	Out of control on curve	5	1	Heavy freight vehicle	Articulated truck	Go straight ahead	Major - towed away	1	East	Unknown	Yes
6	301	Veh'S Same Direction: Rear End	4	Rear-end	6	1	Light passenger vehicle	Utility/Panel van	Go straight ahead	Extensive, unrepairable	1	West	Unknown	Yes
6	301	Veh'S Same Direction: Rear End	4	Rear-end	6	2	Light passenger vehicle	Car/Station wagon	Stay stopped	Extensive, unrepairable	1	West	Unknown	Yes
7	301	Veh'S Same Direction: Rear End	4	Rear-end	7	1	Light passenger vehicle	Utility/Panel van	Slow or stop	Major - towed away	2	East	Unknown	Yes
7	301	Veh'S Same Direction: Rear End	4	Rear-end	7	2	Light passenger vehicle	Utility/Panel van	Go straight ahead	Minor	1	East	Unknown	Yes
7	301	Veh'S Same Direction: Rear End	4	Rear-end	7	3	Light passenger vehicle	Car/Station wagon	Slow or stop	Major - towed away	2	East	Unknown	Yes
8	301	Veh'S Same Direction: Rear End	4	Rear-end	8	1	Light passenger vehicle	Car/Station wagon	Go straight ahead	Moderate - towed away	2	East	Unknown	Yes
8	301	Veh'S Same Direction: Rear End	4	Rear-end	8	2	Light passenger vehicle	Car/Station wagon	Slow or stop	Moderate - drivable vehicle	1	East	Unknown	Yes

CRASH REF NUMBER	UNIT CASUALTY FATALITY	UNIT CASUALTY HOSPITALISED	UNIT CASUALTY MEDICAL TREAMENT	UNIT CASUALTY MINOR INJURY	UNIT CASUALTY TOTAL	UNIT FACTOR UNRESTRAINED	CONT FACTOR ALCOHOLDRUG RELATED	CONT FACTOR DRINK DR	CONT FACTOR ALCOHOL IMPAIRED PEDESTRIAN	CONT FACTOR SPEEDING DR	CONT FACTOR FATIGUE RELATED	CONT FACTOR DISOBEY ROADRULE ALL DR	CONT FACTOR DISOBEY ROADRULE TRAFFIC DR	CONT FACTOR DISOBEY ROADRULE GIVEWAY DR
1	0	1	0	0	1	0	0	0	0	0	0	0	0	0
2	0	0	0	1	1	0	0	0	0	0	0	1	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	1	0	1	0	0	0	0	0	0	1	0	1
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	1	0	0	0	0	1	0	0
4	0	0	1	0	1	0	1	0	0	0	0	0	0	0
4	0	0	0	0	0	0	1	0	0	0	0	0	0	0
4	0	0	0	0	0	0	1	0	0	0	0	0	0	0
5	0	0	1	0	1	0	0	0	0	0	0	0	0	0
6	0	0	1	0	1	0	0	0	0	0	0	0	0	0
6	0	0	1	0	1	0	0	0	0	0	0	0	0	0
7	0	0	0	1	1	0	0	0	0	0	0	1	0	0
7	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7	0	0	0	1	1	0	0	0	0	0	0	0	0	0
8	0	0	0	1	1	0	0	0	0	0	0	1	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CRASH REF NUMBER	CONT FACTOR DISOBEY ROADRULE OTHER DR	CONT FACTOR CONTROLLER CONDITION DR	CONT FACTOR YOUNGADULT 16 24 DR	CONT FACTOR SENIORADULT 60 74 DR	CONT FACTOR SENIORADULT 60+ DR	CONT FACTOR UNLICENSED DR	UNIT FACTOR VEHICLE UNREGISTERED	UNIT FACTOR VEHICLE DEFECT	UNIT FACTOR UNIT HFV	UNIT FACTOR UNIT MOTORCYCLE MOPED	UNIT FACTOR UNIT MOTORCYCLE	UNIT FACTOR UNIT MOPED	UNIT FACTOR BUS
1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	1	0	0	1	1	0	0	0	1	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	1	0	0	0	0	0	0	0	0
3	0	0	0	1	1	0	0	0	1	0	0	0	0
4	1	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	1	0	1	1	0	0	0	1	0	0	0	0
6	0	0	0	0	1	0	0	0	0	0	0	0	0
6	0	0	1	0	0	0	0	0	0	0	0	0	0
7	1	0	0	0	0	0	0	0	0	0	0	0	0
7	1	0	1	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0
8	1	0	0	0	0	1	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0

CRASH REF NUMBER	UNIT FACTOR ATMOSPHERIC COND	UNIT FACTOR RAINWETSLIPPERY COND	UNIT FACTOR ROAD COND	UNIT FACTOR LIGHTING COND
1	0	0	0	0
2	0	0	0	0
2	0	0	0	0
3	0	0	0	0
3	0	0	0	0
4	0	0	0	0
4	0	0	0	0
4	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
6	0	0	0	0
7	0	0	0	0
7	0	0	0	0
7	0	0	0	0
8	0	0	0	0
8	0	0	0	0

Appendix C Component schedule

1. Component Schedule Template – Toowoomba Regional Sports Precinct

1.1 Option 1 - Base Facility Mix

The recommended facilities, their rationale for development and priority is summarised in the tables below.

Facility	Component	Specification	Connectivity/ Functionality	Stage
	Retain green buffer between site and future TWAC road corridor			
Premier Hub	*Central location adjacent to Warrego Highway to maximise main road frontage*			
	Premier rectangular field	▪ 122m x 70m ▪ 200 lux lighting: ○ Junction box at light poles with 10amp & 3-phase points ▪ 3m perimeter safety zone (5m from light poles) ▪ High grade perimeter fence surrounding main field ▪ Grass embankments: ○ Surrounding field with natural shading on peripherals (avoid sightline conflicts) ○ Adequate space to support bump-in/ temporary seating over mound; and food & beverage/ retail infrastructure on top of mount ○ Accessible walkway at bottom of the hill; around field; between embankment and playing field ▪ Emergency vehicle access ▪ Tiered seating for 300pax ▪ Scoreboard	NEED SPATIAL AREA SURROUNDING FOR MAJOR STADIUM FOOTPRINT (50,000 Seats) FOR LONG TERM OPPORTUNITY ▪ Position to the east of the central premier building ▪ Provide vehicle accessibility from the rear of grass embankments ▪ Tiered seating on western side of the field, connected to amenities	3
	Premier oval field	▪ 165m x 135m ▪ Turf wicket block (8 pitches: 22.56m x 3.05m) ▪ 500 lux lighting wicket block ▪ 300 lux lighting outfield: ○ Junction box at light poles with 10amp & 3-phase points ▪ 5m perimeter safety zone ▪ High grade perimeter fence surrounding field	▪ Position to the west of the central premier building ▪ Provide vehicle accessibility from the rear of grass embankments ▪ Tiered seating on eastern side of the field, connected to amenities	3

Facility	Component	Specification	Connectivity/ Functionality	Stage
		▪ Grass embankments: ○ Surrounding field with natural shading on peripherals (avoid sightline conflicts) ○ Adequate space to support bump-in/ temporary seating over mound; and food & beverage/ retail infrastructure on top of mount ○ Accessible walkway at bottom of the hill; around field; between embankment and playing field ▪ Coaches boxes x 2 ▪ Interchange benches x 2 (6.0m long x 1.2m wide; seat 10 people) ▪ Official box (6.0m long x 1.2m wide; seat 10 people) ▪ Emergency vehicle access ▪ Tiered seating for 300pax ▪ Scoreboard		
	Multi-purpose Training/ Conference/ Hospitality Rooms	▪ 350m2 ▪ One large or three separated rooms: ○ 50m2 ○ 100m2 ○ 200m2	▪ Overlooking both Premier fields	3
	Sports House / Allied Health	▪ Total area = 500m^2 ▪ Meeting room 25m^2 ▪ Storage 100m^2 ▪ Kitchen/ eating lounge 50m^2 ▪ Open space office area / consultation rooms 325m^2		Beyond planning horizon
	Licensed Club	▪ 1,250m^2	▪ Top floor to support future staged development	Beyond planning horizon
	Amenities	1,012m^2: ▪ Timekeeping 15m^2 ▪ Office 25m^2 ▪ First Aid 15m^2 ▪ Kitchen / Kiosk 40m^2 ▪ Storage 22m^2 ▪ Third Umpire / Match Officials 15m^2	▪ Accessible from both premier rectangle and premier oval fields	3

Facility	Component	Specification	Connectivity/ Functionality	Stage

		▪ Umpire 40m^2
		▪ Utility 5m^2
		▪ Accessibility WC 9m^2 x 2
		▪ Female WC 30m^2
		▪ Male WC 30m^2
		▪ Change Room 1
		  ○ Open change area 80m^2
		  ○ Amenity Room 35m^2
		  ○ Massage Room 20m^2
		  ○ Doctors Room 15m^2
		▪ Change Room 2
		  ○ Open change area 80m^2
		  ○ Amenity Room 35m^2
		  ○ Massage Room 20m^2
		  ○ Doctors Room 15m^2
		▪ Change Room 3
		  ○ Open change area 80m^2
		  ○ Amenity Room 35m^2
		  ○ Massage Room 20m^2
		▪ Change Room 4
		  ○ Open change area 80m^2
		  ○ Amenity Room 35m^2
		  ○ Massage Room 20m^2
		▪ Gymnasium 46m^2
		▪ External Covered Area 150m^2		

Indoor Leisure Centre	Indoor aquatic zone	▪ 2,000m^2
		  ○ 25m pool x 10 lanes
		  ○ Warm water program pool 20m x 15m
		  ○ Learn-to-swim pool 12.5m x 20m
		  ○ Adventure slides (2 slides)
		  ○ Water play park (250m^2)
		  ○ Amenities
			▪ Attach to premier hub amenities
			▪ Provide maximised highway frontage
			▪ Locate climbing adjacent to adventure park (see below)
				Beyond planning horizon

	Indoor court zone	▪ 4,500m^2
		  ○ Multi-purpose indoor courts x 4 (including 1 x show court)
		  ○ Squash courts x 6
		  ○ Indoor and outdoor climbing		

Facility	Component	Specification	Connectivity/ Functionality	Stage
		○ Amenities		
	Health and fitness	▪ 1,000m^2 ○ Program rooms (100m^2, 150m^2) ○ Equipment room 700m^2 ○ Consultation rooms ○ Storage		
	Wellness	▪ 200m^2		
	Food & beverage / retail	▪ 250m^2		
Adventure Park	Skate, scooter, bike park	▪ 1,000m^2 circuit ▪ 100 lux lighting to circuit ▪ Security lighting ▪ Security fencing to zone off for staging of events ▪ Grass embankments: ○ Surrounding all facility with combination of natural and artificial shading ▪ Public toilets (male, female, accessible) ▪ PWD accessible paths from car park to facilities ▪ Emergency access points ▪ Natural and artificial shading ▪ Multiple water fountains	▪ Locate to provide maximum passive promotion of facilities to Warrego Highway	Beyond planning horizon
Netball Precinct	Netball Courts	▪ 20 courts ▪ 30.5m x 15.25m ▪ 3.05m run-off clear zone to the outside of each sideline and baseline and 3.65m between courts ▪ Lighting to 200 lux ▪ Bench seating at court level to each court	▪ Preferable to co-locate adjacent to proposed multi-purpose indoor courts	Beyond planning horizon
	Amenities	547m^2 ▪ Club room 80m^2 ▪ Timekeeping 15m^2 ▪ Office 25m^2 ▪ First Aid 15m^2 ▪ Kitchen / Kiosk 30m^2 ▪ Storage 22m^2 ▪ Umpire 40m^2	▪ Position on western side of courts	

Facility	Component	Specification	Connectivity/ Functionality	Stage

		▪ Utility 5m^2
		▪ Accessibility WC 9m^2
		▪ Female WC 18m^2
		▪ Male WC 18m^2
		▪ Change Room 1
		  ○ Open change area 60m^2
		  ○ Amenity Room 25m^2
		▪ Change Room 2
		  ○ Open change area 60m^2
		  ○ Amenity Room 25m^2
		▪ External Covered Area 100m^2		

Rectangular Field - Precinct 1	Playing Fields	▪ 4 x rectangular football fields:
		  ○ 105m x 68m
		  ○ 3m safety runoff surrounding all fields
		  ○ Lighting to 150 lux
		  ○ One fields only:
		  ▪ Interchange benches x 2 (6.0m long x 1.2m wide; seat 10 people)
		  ▪ Official box (6.0m long x 1.2m wide; seat 10 people)
		  ▪ Emergency vehicle access
			▪ Ensure all fields on one level and at the same level as premier rectangular field and ground level hub facilities
			▪ Maximise clustering of fields
				1

	Amenities	475m^2:
		▪ Club room 75m^2
		▪ Timekeeping 15m^2
		▪ Office 15m^2
		▪ First Aid 15m^2
		▪ Kitchen / Kiosk 30m^2
		▪ Storage 20m^2
		▪ Umpire 25m^2
		▪ Utility 5m^2
		▪ Accessibility WC 9m^2
		▪ Female WC 18m^2
		▪ Male WC 18m^2
		▪ Change Room 1
		  ○ Open change area 45m^2
		  ○ Amenity Room 20m^2
			▪ Position on western side of courts	

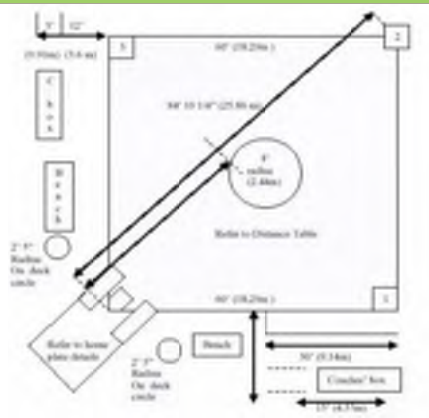
Facility	Component	Specification	Connectivity/ Functionality	Stage
		▪ Change Room 2 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ External Covered Area 100m^2		
Rectangular Field - Precinct 2	Playing Fields	▪ 6 x rectangular football fields: ○ 105m x 68m ○ 3m safety runoff surrounding all fields ○ Lighting to 150 lux ○ One fields only: ▪ Interchange benches x 2 (6.0m long x 1.2m wide; seat 10 people) ▪ Official box (6.0m long x 1.2m wide; seat 10 people) ▪ Emergency vehicle access	▪ Maximise clustering of fields	4
	Amenities	475m^2: ▪ Club room 75m^2 ▪ Timekeeping 15m^2 ▪ Office 15m^2 ▪ First Aid 15m^2 ▪ Kitchen / Kiosk 30m^2 ▪ Storage 20m^2 ▪ Umpire 25m^2 ▪ Utility 5m^2 ▪ Accessibility WC 9m^2 ▪ Female WC 18m^2 ▪ Male WC 18m^2 ▪ Change Room 1 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ Change Room 2 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ External Covered Area 100m^2	▪ Position on western side of courts	
	Playing Fields	▪ 4 x rectangular football fields: ○ 105m x 68m	▪ Maximise clustering of fields	6

Facility	Component	Specification	Connectivity/ Functionality	Stage
Rectangular Field - Precinct 3		○ Synthetic 3.05m pitch in between 2 fields x 2 ○ 3m safety runoff surrounding all fields ○ Lighting to 150 lux ○ One fields only: ▪ Interchange benches x 2 (6.0m long x 1.2m wide; seat 10 people) ▪ Official box (6.0m long x 1.2m wide; seat 10 people) ▪ Emergency vehicle access		
	Amenities	475m^2: ▪ Club room 75m^2 ▪ Timekeeping 15m^2 ▪ Office 15m^2 ▪ First Aid 15m^2 ▪ Kitchen / Kiosk 30m^2 ▪ Storage 20m^2 ▪ Umpire 25m^2 ▪ Utility 5m^2 ▪ Accessibility WC 9m^2 ▪ Female WC 18m^2 ▪ Male WC 18m^2 ▪ Change Room 1 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ Change Room 2 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ External Covered Area 100m^2	▪ Position on western side of courts	
Oval Field Precinct		▪ 1 x exclusive use AFL field: ○ 165m x 135m ○ Coaches boxes x 2 ○ Interchange benches x 2 (6.0m long x 1.2m wide; seat 10 people) ○ Official box (6.0m long x 1.2m wide; seat 10 people)	▪ Maximise clustering of fields	2

Facility	Component	Specification	Connectivity/ Functionality	Stage
		▪ 1 x exclusive use cricket field: ○ 165m x 135m ○ One field Turf wicket block (8 pitches: 22.56m x 3.05m) ▪ Cricket training nets: ○ 3 synthetic pitches ○ 10 turf pitches ○ Lighting to 200 lux ○ Safety netting ○ 13.85m run up areas ▪ 1 x shared used AFL/ cricket field: ○ 165m x 135m ○ One field Turf wicket block (4 pitches: 22.56m x 3.05m) ▪ 5m perimeter safety zones ▪ Emergency vehicle access		
	Amenities	809m^2: ▪ Club room 100m^2 x 2 ▪ Timekeeping 15m^2 ▪ Office 25m^2 ▪ First Aid 15m^2 ▪ Kitchen / Kiosk 40m^2 ▪ Storage 44m^2 ▪ Umpire 40m^2 ▪ Utility 5m^2 ▪ Accessibility WC 9m^2 ▪ Female WC 18m^2 ▪ Male WC 18m^2 ▪ Change Room 1 ○ Open change area 80m^2 ○ Amenity Room 35m^2 ▪ Change Room 2 ○ Open change area 80m^2 ○ Amenity Room 35m^2 ▪ External Covered Area 150m^2	▪ Central location between three fields	
	Athletics Track	Track:	▪	5

Facility	Component	Specification	Connectivity/ Functionality	Stage
Athletics Precinct		▪ Oval track with 8 lanes (400m + 0.04m x 1.22m ± 0.01m) and safety zones measuring not less than 1.00m on the inside and preferably 1.00m on the outside ▪ Straight with 8 lanes (100m + 0.02m x 1.22m ± 0.01m for sprints and 110m + 0.02m x 1.22m ± 0.01m for hurdles) ▪ Starting area: 3m min. (for 110m Hurdles, category V 2.5m min.) ▪ Run-out: 17m min ▪ Steeplechase track as for oval track with a permanent water jump (3.66m x 3.66m x 0.50m-0.70m) placed inside or outside the second bend Jumping Events: ▪ Facility for Long Jump with runway (40m min. x 1.22m ± 0.01m), take-off board (1.22m ± 0.01m x 0.20m ± 0.002m x 0.10m max.), placed between 1m and 3m from the nearer end of the landing area, and the landing area 2.75m min. wide with the far end at least 10m min. from the take-off line) ▪ Facility for Triple Jump as for Long Jump except for a take-off board placed 13m min. for men or 11m min. for women from the nearer end of the landing area for international competitions. For any other competition, this distance shall be appropriate for the level of competition ▪ Facility for High Jump with a semicircular runway (radius 20m min.) and landing ▪ area (6m x 4m min.) ▪ Facility for Pole Vault with a runway (40m min. x 1.22m ± 0.01m), a box for inserting the pole and landing area (6m x 6m min.) with an additional forward extension Throwing Events:		

Facility	Component	Specification	Connectivity/ Functionality	Stage
		▪ Facility for Discus Throw with throwing circle (2.50m ± 0.005m diameter), protective cage and landing sector (80m radius, 48m chord) ▪ Facility for Hammer Throw with throwing circle (2.135m ± 0.005m diameter), protective cage and landing sector (90m radius, 54m chord) ▪ Facility for Javelin Throw with runway (30m min. x 4m), arc with a radius of 8m and landing sector (100m radius, 50.00m chord) ▪ Facility for Shot Put with throwing circle (2.135m ± 0.005m diameter) stop board (1.21m ± 0.01m x 0.112m x 0.10m ± 0.02m) and landing sector (25m radius, 15m chord)		
	Amenities	475m^2: ▪ Club room 75m^2 ▪ Timekeeping 15m^2 ▪ Office 15m^2 ▪ First Aid 15m^2 ▪ Kitchen / Kiosk 30m^2 ▪ Storage 20m^2 ▪ Umpire 25m^2 ▪ Utility 5m^2 ▪ Accessibility WC 9m^2 ▪ Female WC 18m^2 ▪ Male WC 18m^2 ▪ Change Room 1 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ Change Room 2 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ External Covered Area 100m^2	▪ Position on western side of straight	
Baseball/ Softball Precinct	Diamonds	Softball fields x 2: ▪ Bases 19.81m ▪ Pitching 15.24m	Softball:	1

Facility	Component	Specification	Connectivity/ Functionality	Stage
		▪ Outfield fence 91.44m ▪ Perimeter fencing ▪ 500 lux lighting infield (diamond) ▪ 300 lux lighting outfield ▪ Dugouts 6.0m long x 1.2m wide; seat 10 people) x 2 Baseball fields x 2: ▪ Infield (diamond) 27.4m square ▪ Minimum distance from home base to the nearest fence 76.2m. ▪ Home base to second base 38.8m ▪ Home base to first base 27.4m. ▪ Second base to first base 27.4m. ▪ Home base to third base 27.4m ▪ Second base to third base 27.4m ▪ First base to second base 27.4m ▪ Distance between first and third base is 38.8m ▪ 500 lux lighting infield (diamond) ▪ 300 lux lighting outfield ▪ Dugouts 6.0m long x 1.2m wide; seat 10 people) x 2	 Baseball: 	
	Amenities	475m^2: ▪ Club room 75m^2 ▪ Timekeeping 15m^2 ▪ Office 15m^2 ▪ First Aid 15m^2	▪ Position on western side of diamonds	3

Facility	Component	Specification	Connectivity/ Functionality	Stage

		▪ Kitchen / Kiosk 30m^2
		▪ Storage 20m^2
		▪ Umpire 25m^2
		▪ Utility 5m^2
		▪ Accessibility WC 9m^2
		▪ Female WC 18m^2
		▪ Male WC 18m^2
		▪ Change Room 1
		  ○ Open change area 45m^2
		  ○ Amenity Room 20m^2
		▪ Change Room 2
		  ○ Open change area 45m^2
		  ○ Amenity Room 20m^2
		▪ External Covered Area 100m^2		

Shooting/ Archery Precinct	Ensure full separation visually, accessibility from remainder of precinct sport and recreation facilities			
	Shooting ranges	Outdoor range: ▪ 200m radius from shooting point (including safety template) ▪ Mound and vegetation buffer adjacent to any alternative development Indoor range: ▪ 60m x 10m	▪ Orientate outdoor range approx. 45º to the north/ west of Milestone 1 concept position ▪ Locate to the very north of the site	5
	Archery range	▪ 115m long x 38m wide ▪ Mound and vegetation buffer adjacent to any alternative development	▪ Orientate outdoor range approx. 45º to the north/ west of Milestone 1 concept position ▪ Locate to the very north of the site	
	Shared amenities	510m^2: ▪ Club room 75m^2 x 2 ▪ Office 15m^2 ▪ First Aid 15m^2 ▪ Kitchen / Kiosk 30m^2 ▪ Storage 20m^2 ▪ Utility 5m^2 ▪ Accessibility WC 9m^2 ▪ Female WC 18m^2	▪ Locate between archery and shooting facilities ▪ Avoid placement on eastern side of ranges	

Facility	Component	Specification	Connectivity/ Functionality	Stage
		▪ Male WC 18m^2 ▪ Change Room 1 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ Change Room 2 ○ Open change area 45m^2 ○ Amenity Room 20m^2 ▪ External Covered Area 100m^2		
Maintenance Precinct	Maintenance Shed, Waste Station, Storage	▪ 1,250m^2 ▪ Storage shed ▪ Recycling/ waste station ▪ Machinery parking ▪ Materials/ fertilizers store	▪ Perimeter fencing 2m ▪ Green buffer to hide sightlines to remainder of facility	3
Recreation Elements	District recreation park	▪ 22,250m^2 ▪ Park signage ▪ Park lighting ▪ Bike racks ▪ Water bubbler ▪ Bench seats ▪ Picnic tables ▪ Barbeques ▪ Shade Structure (natural shade preferred) ▪ Rubbish Bins ▪ Playground ▪ Obstacle course	▪ Position adjacent to ornamental lake	4
	Local recreation park	▪ 7,500m^2 ▪ Small park name sign ▪ Water bubbler ▪ Bench seats ▪ Picnic table ▪ Rubbish bins ▪ Small playground	▪ Position opposite end of site from district park, close to sporting fields	Beyond planning horizon
	Playground Nodes	▪ Small playgrounds adjacent to each outdoor playing field/ court clusters	▪	Align to field development timing
	Ornamental lake	▪ Support water harvesting and field irrigation initiatives	▪ Position to maximise overland flow intakes	2

Facility	Component	Specification	Connectivity/ Functionality	Stage
		▪ Recreational use (eg. small species recreational fishing), including fishing/ observation deck	▪ Subject to regulatory approval - (Murray Darling Basin)	
	Amphitheatre	▪ Natural grass amphitheatre ▪ Outdoor stage ▪ Electrical, water, sewerage dump points to support major events	▪ Within district recreation park	4
	Internal trails, walk/cycle paths	▪ Full connected network of formed and natural trails/ walkways for safe and active: o Minimum loop of 5km o Access/ egress o Cycling o Exercise o Pedestrian movement from car park to activity nodes o Connection to the former rail corridor and historical bridge	▪ Ensure incorporation of full loop to support physical activity outcomes	Progressive in line with development stages
Car Parking and Access Elements	Playing fields	▪ 40 car parks per field	▪ Individual car parking nodes, with all nodes connected via internal road network ▪ Security lighting	Progressive in line with development stages
	Netball courts	▪ 20 car parks per court		Beyond planning horizon
	Adventure park	▪ 40 car parks		Beyond planning horizon
	Recreation park	▪ 40 car parks		Progressive in line with development stages
	Athletics precinct	▪ 40 car parks		Progressive in line with development stages

Facility	Component	Specification	Connectivity/ Functionality	Stage
	Baseball/ softball precinct	▪ 40 car parks per court		Progressive in line with development stages
	Archery & shooting	▪ 50 car parks		Progressive in line with development stages
	Licensed club	▪ 100 car parks		Beyond planning horizon
	Indoor leisure centre	▪ 200 car parks ▪ Vehicle drop off		Beyond planning horizon
	Buses	▪ Bus set-down (4 buses) ▪ Temporary bus parking (8 buses)		Progressive in line with development stages
		▪	▪	

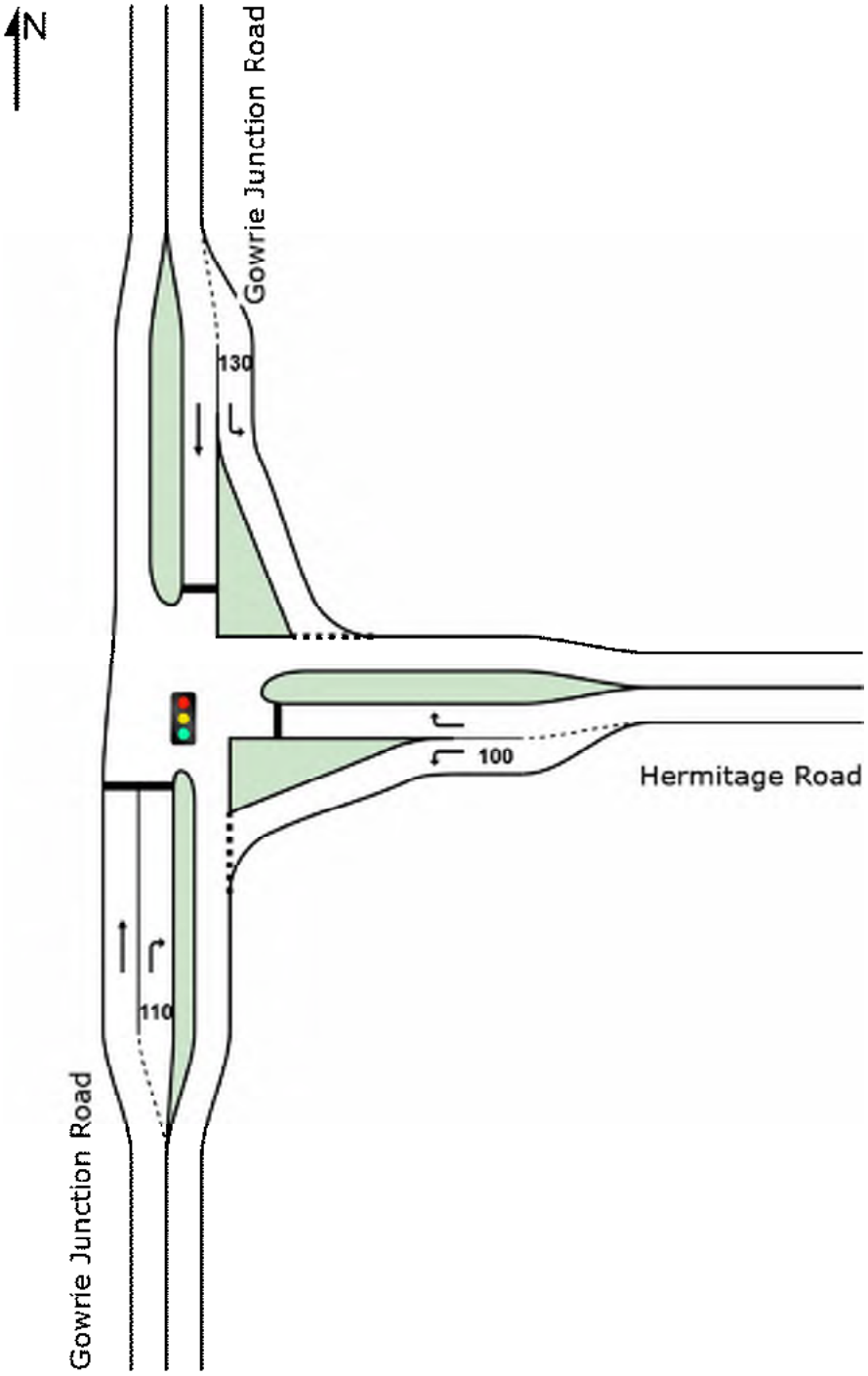
Appendix D SIDRA outputs

SITE LAYOUT

Site: [Gowrie Junction Rd/Hermitage Rd 2030 bgd am (Site Folder: General)]

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: [Gowrie Junction Rd/Hermitage Rd 2030 bgd am (Site Folder: General)]

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

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: Gowrie Junction Road														
2	T1	76	5.0	80	5.0	0.054	2.4	LOS A	0.8	6.1	0.23	0.19	0.23	76.0
3	R2	4	5.0	4	5.0	* 0.039	56.8	LOS E	0.2	1.5	0.96	0.64	0.96	34.0
Approach		80	5.0	84	5.0	0.054	5.1	LOS A	0.8	6.1	0.27	0.21	0.27	71.6
East: Hermitage Road														
4	L2	2	5.0	2	5.0	0.002	7.9	LOS A	0.0	0.1	0.14	0.62	0.14	63.4
6	R2	13	5.0	14	5.0	* 0.085	53.5	LOS D	0.6	4.6	0.95	0.69	0.95	35.1
Approach		15	5.0	16	5.0	0.085	47.4	LOS D	0.6	4.6	0.84	0.68	0.84	37.3
North: Gowrie Junction Road														
7	L2	5	5.0	5	5.0	0.003	7.8	LOS A	0.0	0.1	0.12	0.62	0.12	63.5
8	T1	112	5.0	118	5.0	* 0.093	6.1	LOS A	2.0	14.4	0.37	0.30	0.37	70.6
Approach		117	5.0	123	5.0	0.093	6.2	LOS A	2.0	14.4	0.36	0.32	0.36	70.2
All Vehicles		212	5.0	223	5.0	0.093	8.7	LOS A	2.0	14.4	0.36	0.30	0.36	66.5

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)

PHASING SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2030 bgd am (Site Folder: General)]

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

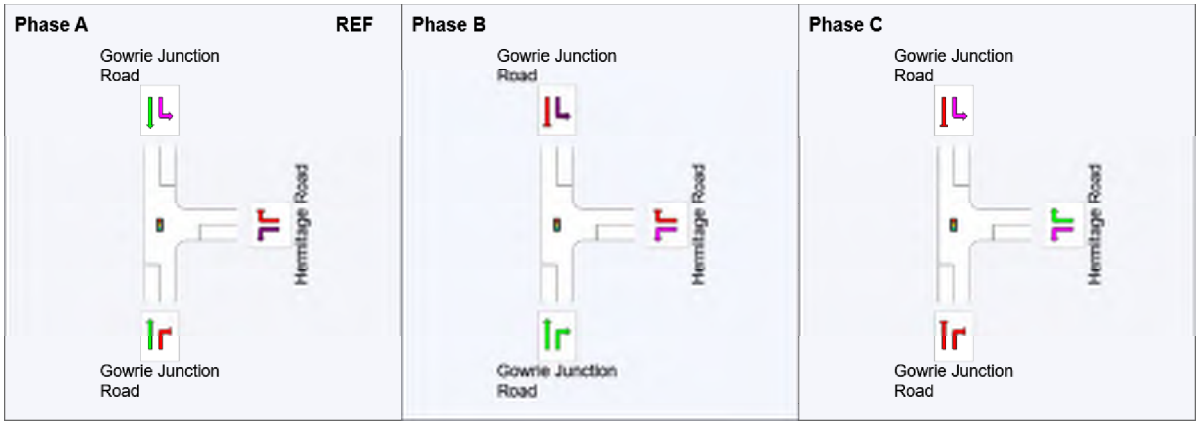
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

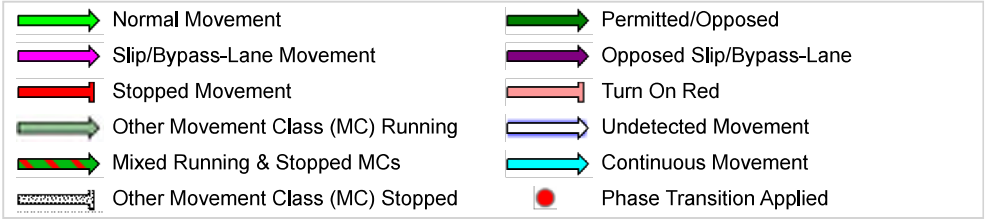
Phase	A	B	C
Phase Change Time (sec)	0	73	85
Green Time (sec)	67	6	9
Phase Time (sec)	73	12	15
Phase Split	73%	12%	15%

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: [Gowrie Junction Rd/Hermitage Rd 2030 bgd pm (Site Folder: General)]

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

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: Gowrie Junction Road														
2	T1	233	5.0	245	5.0	0.162	2.4	LOS A	2.7	19.6	0.25	0.21	0.25	76.0
3	R2	10	5.0	11	5.0	* 0.073	54.6	LOS D	0.5	3.6	0.95	0.68	0.95	34.7
Approach		243	5.0	256	5.0	0.162	4.6	LOS A	2.7	19.6	0.27	0.23	0.27	72.4
East: Hermitage Road														
4	L2	11	5.0	12	5.0	0.009	7.8	LOS A	0.0	0.3	0.14	0.62	0.14	63.4
6	R2	20	5.0	21	5.0	* 0.147	55.2	LOS E	1.0	7.3	0.96	0.71	0.96	34.5
Approach		31	5.0	33	5.0	0.147	38.4	LOS D	1.0	7.3	0.67	0.68	0.67	41.2
North: Gowrie Junction Road														
7	L2	17	5.0	18	5.0	0.012	7.8	LOS A	0.1	0.4	0.13	0.63	0.13	63.5
8	T1	73	5.0	77	5.0	* 0.062	6.3	LOS A	1.3	9.5	0.37	0.30	0.37	70.3
Approach		90	5.0	95	5.0	0.062	6.6	LOS A	1.3	9.5	0.33	0.36	0.33	68.9
All Vehicles		364	5.0	383	5.0	0.162	7.9	LOS A	2.7	19.6	0.32	0.30	0.32	67.2

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)

PHASING SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2030 bgd pm (Site Folder: General)]

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

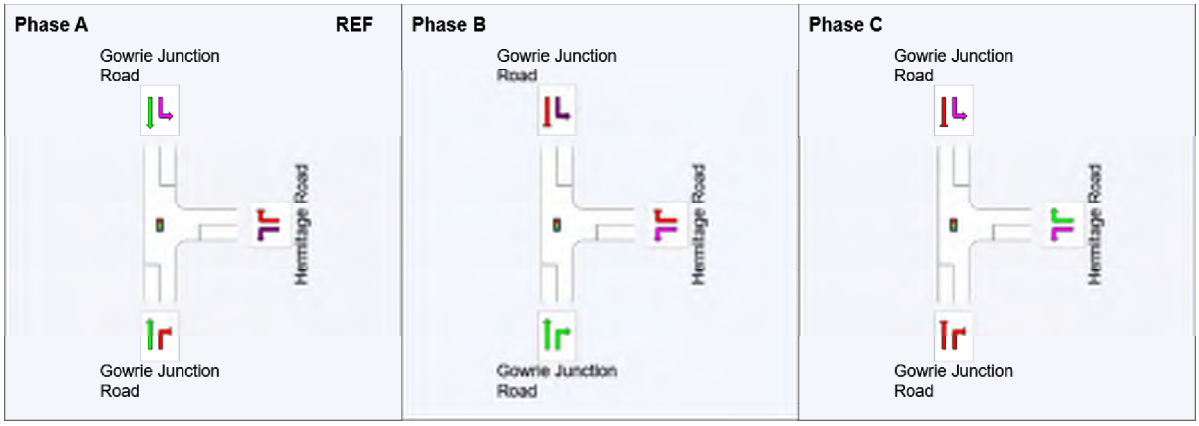
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	72	86
Green Time (sec)	66	8	8
Phase Time (sec)	72	14	14
Phase Split	72%	14%	14%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

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

MOVEMENT SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2030 bgd+dev am (Site Folder: General)]

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

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: Gowrie Junction Road														
2	T1	97	5.0	102	5.0	0.066	1.8	LOS A	0.9	6.7	0.20	0.16	0.20	77.0
3	R2	47	5.0	49	5.0	* 0.131	41.8	LOS D	2.0	14.4	0.85	0.74	0.85	39.6
Approach		144	5.0	152	5.0	0.131	14.8	LOS B	2.0	14.4	0.41	0.35	0.41	58.8
East: Hermitage Road														
4	L2	45	5.0	47	5.0	0.039	8.0	LOS A	0.2	1.5	0.16	0.64	0.16	63.3
6	R2	13	5.0	14	5.0	* 0.127	57.7	LOS E	0.7	4.9	0.98	0.69	0.98	33.7
Approach		58	5.0	61	5.0	0.127	19.2	LOS B	0.7	4.9	0.34	0.65	0.34	53.0
North: Gowrie Junction Road														
7	L2	5	5.0	5	5.0	0.004	7.9	LOS A	0.0	0.1	0.14	0.62	0.14	63.4
8	T1	133	5.0	140	5.0	* 0.135	11.6	LOS B	3.3	23.8	0.51	0.42	0.51	63.8
Approach		138	5.0	145	5.0	0.135	11.4	LOS B	3.3	23.8	0.50	0.43	0.50	63.8
All Vehicles		340	5.0	358	5.0	0.135	14.2	LOS B	3.3	23.8	0.44	0.43	0.44	59.6

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)

PHASING SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2030 bgd+dev am (Site Folder: General)]

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

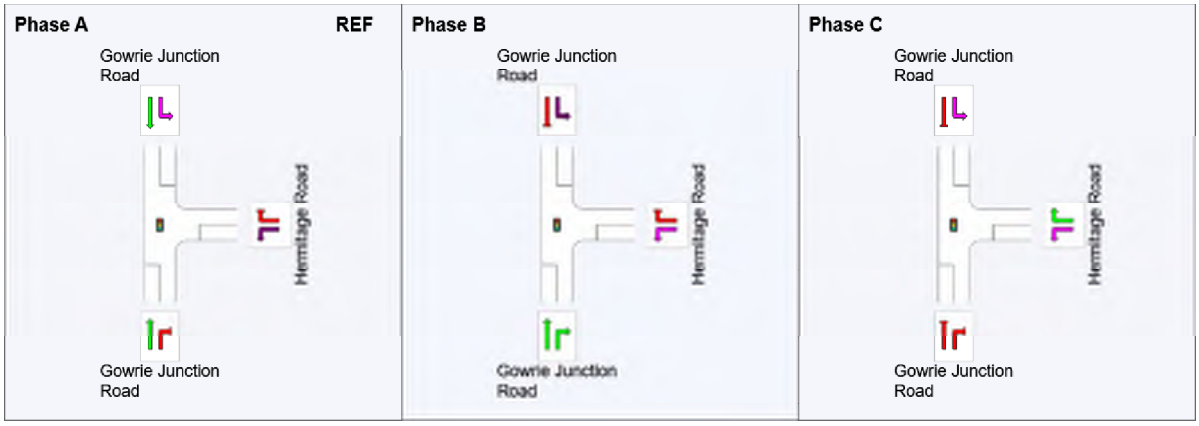
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

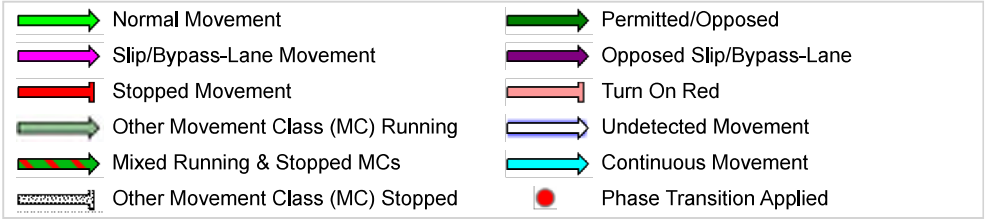
Phase	A	B	C
Phase Change Time (sec)	0	61	88
Green Time (sec)	55	21	6
Phase Time (sec)	61	27	12
Phase Split	61%	27%	12%

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: [Gowrie Junction Rd/Hermitage Rd 2030 bgd+dev pm (Site Folder: General)]

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

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: Gowrie Junction Road														
2	T1	251	5.0	264	5.0	0.173	2.2	LOS A	2.8	20.3	0.24	0.20	0.24	76.3
3	R2	45	5.0	47	5.0	* 0.110	38.9	LOS D	1.8	13.2	0.81	0.74	0.81	40.8
Approach		296	5.0	312	5.0	0.173	7.8	LOS A	2.8	20.3	0.32	0.28	0.32	67.4
East: Hermitage Road														
4	L2	46	5.0	48	5.0	0.038	7.9	LOS A	0.2	1.4	0.15	0.64	0.15	63.3
6	R2	20	5.0	21	5.0	* 0.168	56.7	LOS E	1.0	7.5	0.97	0.70	0.97	34.1
Approach		66	5.0	69	5.0	0.168	22.7	LOS C	1.0	7.5	0.40	0.66	0.40	50.3
North: Gowrie Junction Road														
7	L2	17	5.0	18	5.0	0.012	7.9	LOS A	0.1	0.5	0.15	0.63	0.15	63.4
8	T1	91	5.0	96	5.0	* 0.099	13.4	LOS B	2.4	17.3	0.54	0.44	0.54	61.9
Approach		108	5.0	114	5.0	0.099	12.5	LOS B	2.4	17.3	0.48	0.47	0.48	62.1
All Vehicles		470	5.0	495	5.0	0.173	11.0	LOS B	2.8	20.3	0.37	0.38	0.37	63.1

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)

PHASING SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2030 bgd+dev pm (Site Folder: General)]

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

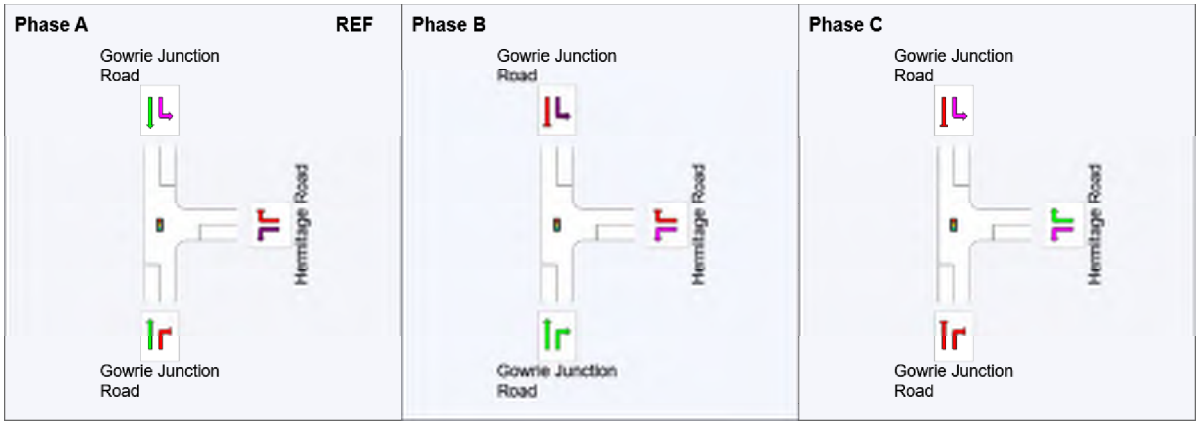
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

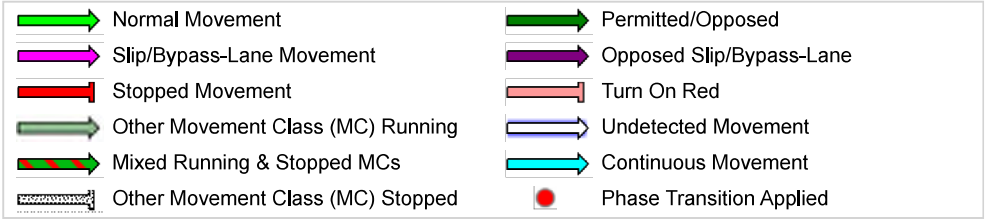
Phase	A	B	C
Phase Change Time (sec)	0	57	87
Green Time (sec)	51	24	7
Phase Time (sec)	57	30	13
Phase Split	57%	30%	13%

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: [Gowrie Junction Rd/Hermitage Rd 2040 bgd am (Site Folder: General)]

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

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: Gowrie Junction Road														
2	T1	91	5.0	96	5.0	0.064	2.4	LOS A	1.0	7.3	0.23	0.19	0.23	76.0
3	R2	4	5.0	4	5.0	* 0.039	56.8	LOS E	0.2	1.5	0.96	0.64	0.96	34.0
Approach		95	5.0	100	5.0	0.064	4.7	LOS A	1.0	7.3	0.26	0.21	0.26	72.2
East: Hermitage Road														
4	L2	3	5.0	3	5.0	0.003	7.9	LOS A	0.0	0.1	0.14	0.62	0.14	63.4
6	R2	16	5.0	17	5.0	* 0.104	53.6	LOS D	0.8	5.7	0.95	0.70	0.95	35.0
Approach		19	5.0	20	5.0	0.104	46.4	LOS D	0.8	5.7	0.82	0.69	0.82	37.7
North: Gowrie Junction Road														
7	L2	6	5.0	6	5.0	0.004	7.8	LOS A	0.0	0.1	0.12	0.62	0.12	63.5
8	T1	135	5.0	142	5.0	* 0.112	6.2	LOS A	2.4	17.7	0.38	0.31	0.38	70.4
Approach		141	5.0	148	5.0	0.112	6.3	LOS A	2.4	17.7	0.37	0.33	0.37	70.1
All Vehicles		255	5.0	268	5.0	0.112	8.7	LOS A	2.4	17.7	0.36	0.31	0.36	66.6

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)

PHASING SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2040 bgd am (Site Folder: General)]

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

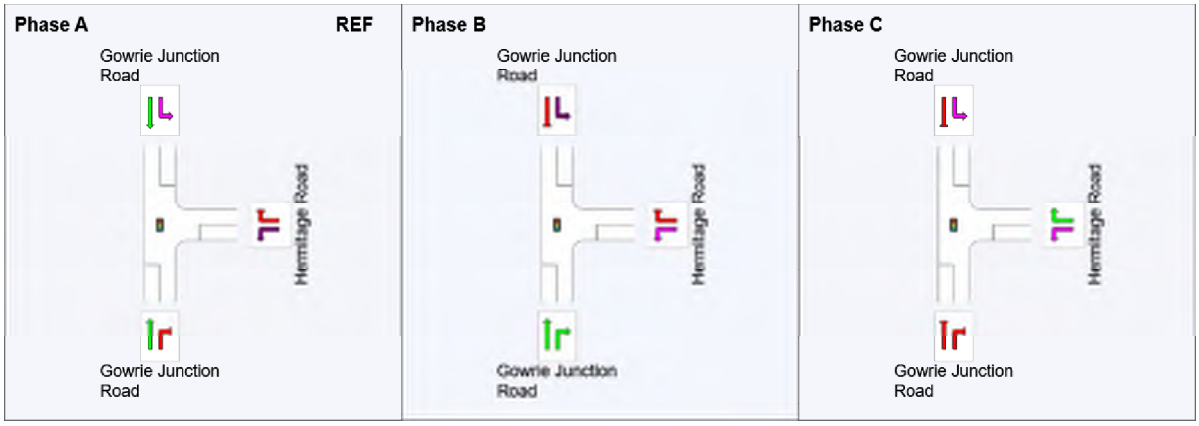
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

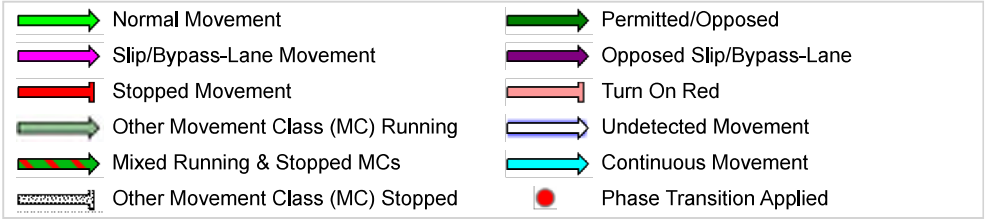
Phase	A	B	C
Phase Change Time (sec)	0	73	85
Green Time (sec)	67	6	9
Phase Time (sec)	73	12	15
Phase Split	73%	12%	15%

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: [Gowrie Junction Rd/Hermitage Rd 2040 bgd pm (Site Folder: General)]

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

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: Gowrie Junction Road														
2	T1	281	5.0	296	5.0	0.196	2.5	LOS A	3.3	24.4	0.25	0.22	0.25	75.9
3	R2	12	5.0	13	5.0	* 0.088	54.7	LOS D	0.6	4.3	0.95	0.68	0.95	34.7
Approach		293	5.0	308	5.0	0.196	4.6	LOS A	3.3	24.4	0.28	0.24	0.28	72.3
East: Hermitage Road														
4	L2	13	5.0	14	5.0	0.011	7.8	LOS A	0.0	0.3	0.14	0.63	0.14	63.4
6	R2	25	5.0	26	5.0	* 0.183	55.5	LOS E	1.3	9.2	0.97	0.72	0.97	34.4
Approach		38	5.0	40	5.0	0.183	39.2	LOS D	1.3	9.2	0.68	0.68	0.68	40.9
North: Gowrie Junction Road														
7	L2	20	5.0	21	5.0	0.014	7.8	LOS A	0.1	0.5	0.13	0.63	0.13	63.5
8	T1	88	5.0	93	5.0	* 0.074	6.4	LOS A	1.6	11.5	0.38	0.30	0.38	70.2
Approach		108	5.0	114	5.0	0.074	6.6	LOS A	1.6	11.5	0.33	0.36	0.33	68.8
All Vehicles		439	5.0	462	5.0	0.196	8.1	LOS A	3.3	24.4	0.33	0.31	0.33	67.0

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)

PHASING SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2040 bgd pm (Site Folder: General)]

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

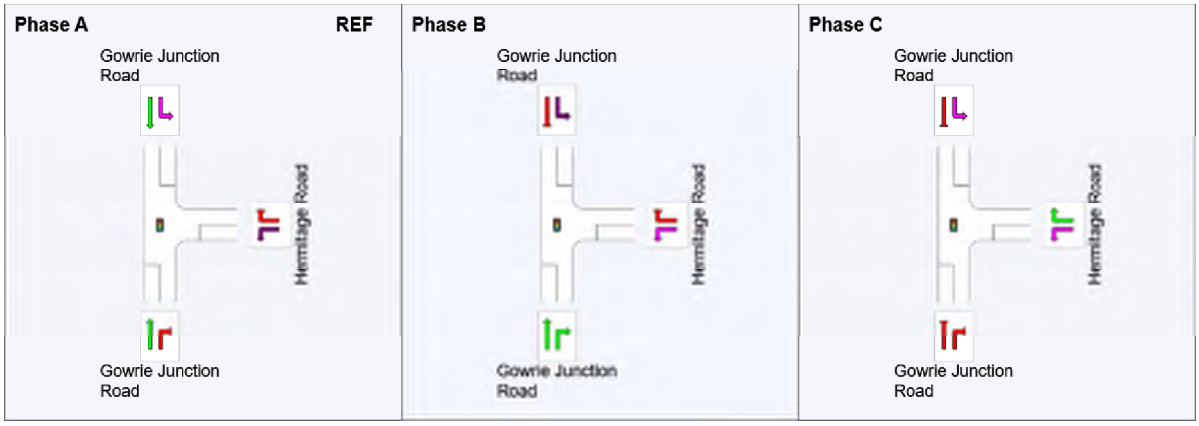
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	72	86
Green Time (sec)	66	8	8
Phase Time (sec)	72	14	14
Phase Split	72%	14%	14%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

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

MOVEMENT SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2040 bgd+dev am (Site Folder: General)]

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

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: Gowrie Junction Road														
2	T1	112	5.0	118	5.0	0.077	2.0	LOS A	1.1	8.3	0.21	0.18	0.21	76.6
3	R2	47	5.0	49	5.0	* 0.153	44.7	LOS D	2.1	15.1	0.88	0.74	0.88	38.3
Approach		159	5.0	167	5.0	0.153	14.6	LOS B	2.1	15.1	0.41	0.34	0.41	59.2
East: Hermitage Road														
4	L2	46	5.0	48	5.0	0.040	8.1	LOS A	0.2	1.7	0.17	0.64	0.17	63.2
6	R2	16	5.0	17	5.0	* 0.134	56.4	LOS E	0.8	5.9	0.97	0.70	0.97	34.1
Approach		62	5.0	65	5.0	0.134	20.6	LOS C	0.8	5.9	0.38	0.65	0.38	51.9
North: Gowrie Junction Road														
7	L2	6	5.0	6	5.0	0.004	7.9	LOS A	0.0	0.2	0.14	0.62	0.14	63.4
8	T1	156	5.0	164	5.0	* 0.153	10.7	LOS B	3.7	27.1	0.50	0.42	0.50	64.8
Approach		162	5.0	171	5.0	0.153	10.6	LOS B	3.7	27.1	0.49	0.42	0.49	64.7
All Vehicles		383	5.0	403	5.0	0.153	13.9	LOS B	3.7	27.1	0.44	0.43	0.44	60.0

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)

PHASING SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2040 bgd+dev am (Site Folder: General)]

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

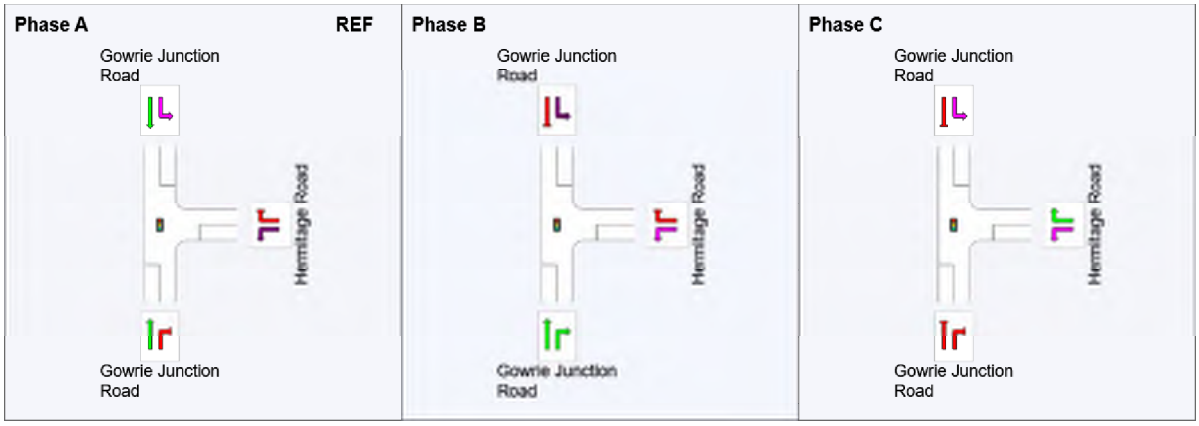
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

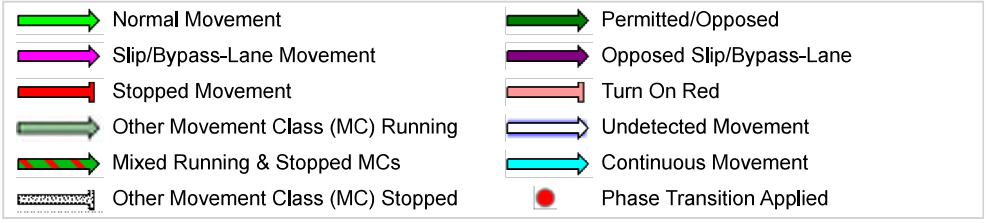
Phase	A	B	C
Phase Change Time (sec)	0	63	87
Green Time (sec)	57	18	7
Phase Time (sec)	63	24	13
Phase Split	63%	24%	13%

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: [Gowrie Junction Rd/Hermitage Rd 2040 bgd+dev pm (Site Folder: General)]

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

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: Gowrie Junction Road														
2	T1	299	5.0	315	5.0	0.208	2.5	LOS A	3.6	26.3	0.26	0.22	0.26	75.8
3	R2	47	5.0	49	5.0	* 0.125	40.8	LOS D	2.0	14.2	0.84	0.74	0.84	40.0
Approach		346	5.0	364	5.0	0.208	7.7	LOS A	3.6	26.3	0.34	0.29	0.34	67.6
East: Hermitage Road														
4	L2	48	5.0	51	5.0	0.040	8.0	LOS A	0.2	1.6	0.16	0.64	0.16	63.3
6	R2	25	5.0	26	5.0	* 0.183	55.5	LOS E	1.3	9.2	0.97	0.72	0.97	34.4
Approach		73	5.0	77	5.0	0.183	24.3	LOS C	1.3	9.2	0.44	0.66	0.44	49.2
North: Gowrie Junction Road														
7	L2	20	5.0	21	5.0	0.014	7.9	LOS A	0.1	0.6	0.15	0.63	0.15	63.4
8	T1	106	5.0	112	5.0	* 0.114	12.9	LOS B	2.7	19.9	0.54	0.44	0.54	62.3
Approach		126	5.0	133	5.0	0.114	12.2	LOS B	2.7	19.9	0.48	0.47	0.48	62.5
All Vehicles		545	5.0	574	5.0	0.208	11.0	LOS B	3.6	26.3	0.38	0.38	0.38	63.2

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)

PHASING SUMMARY

Site: [Gowrie Junction Rd/Hermitage Rd 2040 bgd+dev pm (Site Folder: General)]

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

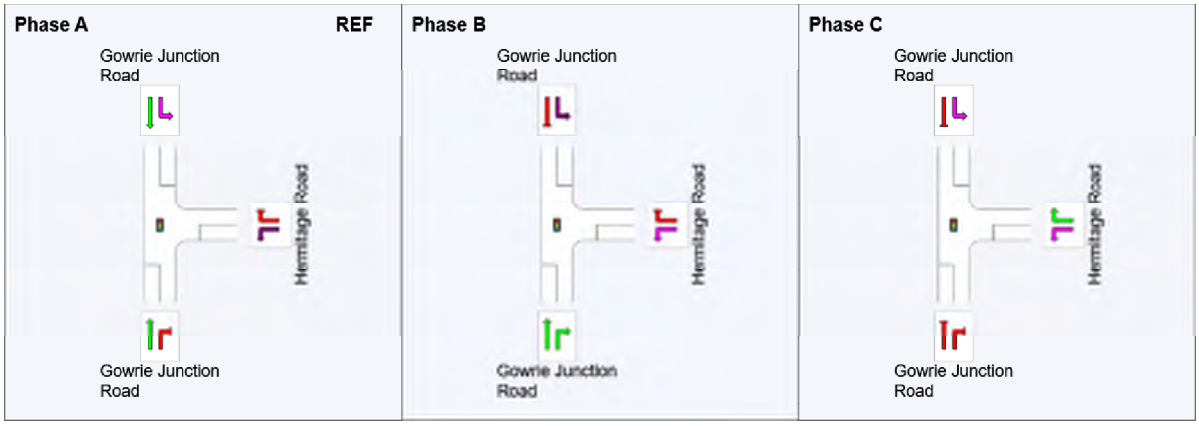
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase A
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	0	58	86
Green Time (sec)	52	22	8
Phase Time (sec)	58	28	14
Phase Split	58%	28%	14%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

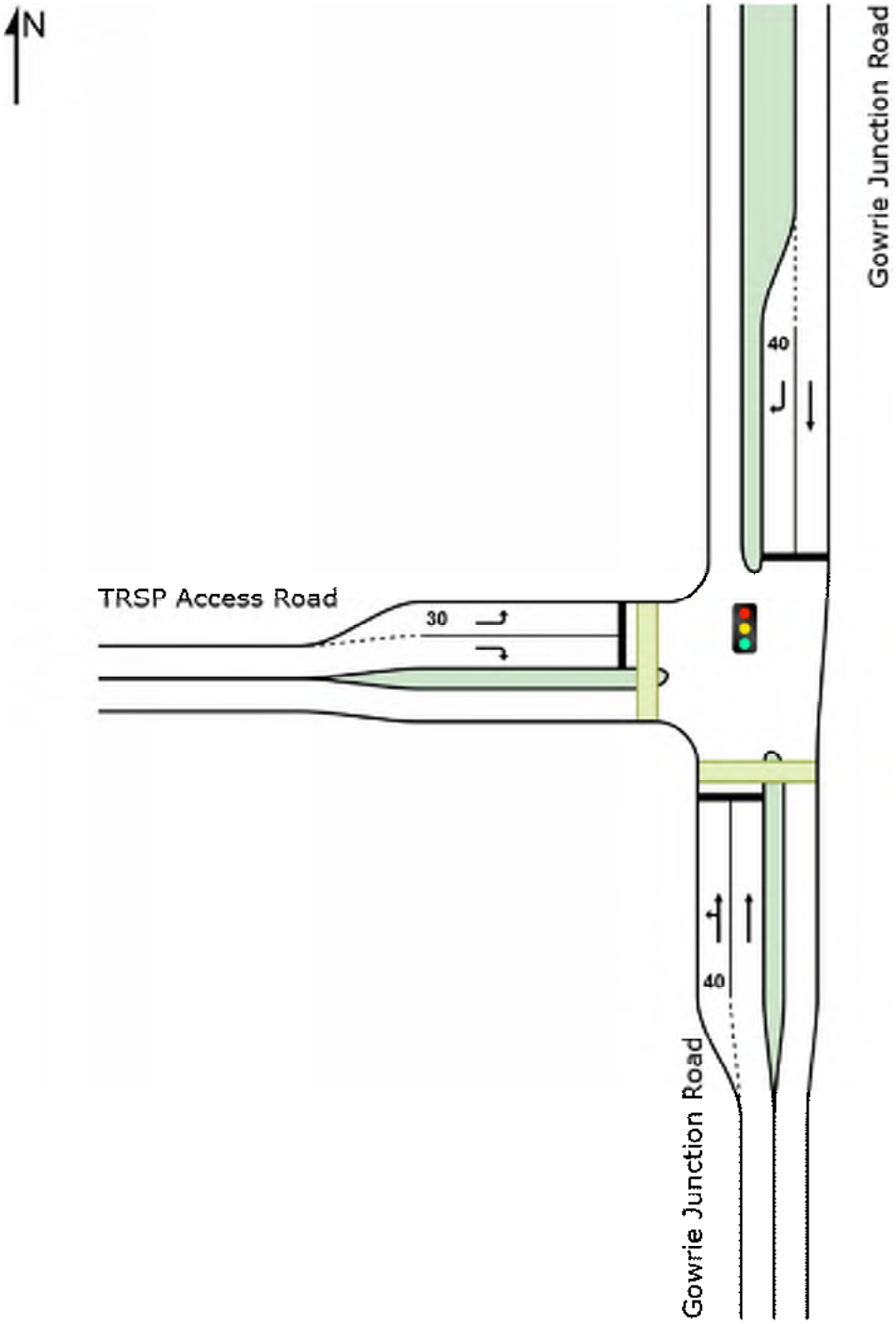
Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

SITE LAYOUT

Site: [Gowrie Junction Rd/TRSP Access Road 2040 Sat am (Site Folder: General)]

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: [Gowrie Junction Rd/TRSP Access Road 2040 Sat am (Site Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site Optimum Cycle Time - Minimum Delay)

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: Gowrie Junction Road														
1	L2	337	5.0	337	5.0	*0.587	21.5	LOS C	7.2	52.3	0.89	0.82	0.89	43.3
2	T1	247	5.0	247	5.0	0.409	14.8	LOS B	4.9	35.6	0.83	0.69	0.83	48.3
Approach		584	5.0	584	5.0	0.587	18.7	LOS B	7.2	52.3	0.86	0.76	0.86	45.3
North: Gowrie Junction Road														
8	T1	278	5.0	278	5.0	0.263	6.2	LOS A	3.5	25.8	0.55	0.46	0.55	54.5
9	R2	67	5.0	67	5.0	*0.311	29.0	LOS C	1.6	11.8	0.95	0.75	0.95	39.6
Approach		345	5.0	345	5.0	0.311	10.6	LOS B	3.5	25.8	0.63	0.52	0.63	50.8
West: TRSP Access Road														
10	L2	67	5.0	67	5.0	0.187	24.4	LOS C	1.4	10.4	0.87	0.74	0.87	41.9
12	R2	225	5.0	225	5.0	*0.627	27.0	LOS C	5.4	39.7	0.96	0.84	1.03	40.5
Approach		292	5.0	292	5.0	0.627	26.4	LOS C	5.4	39.7	0.94	0.82	0.99	40.8
All Vehicles		1221	5.0	1221	5.0	0.627	18.2	LOS B	7.2	52.3	0.82	0.71	0.83	45.5

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: Gowrie Junction Road												
P1	Full	20	20	19.4	LOS B	0.0	0.0	0.88	0.88	183.9	213.9	1.16
West: TRSP Access Road												
P4	Full	20	20	19.4	LOS B	0.0	0.0	0.88	0.88	183.9	213.9	1.16
All Pedestrians		40	40	19.4	LOS B	0.0	0.0	0.88	0.88	183.9	213.9	1.16

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: [Gowrie Junction Rd/TRSP Access Road 2040 Sat am (Site Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site Optimum Cycle Time - Minimum Delay)

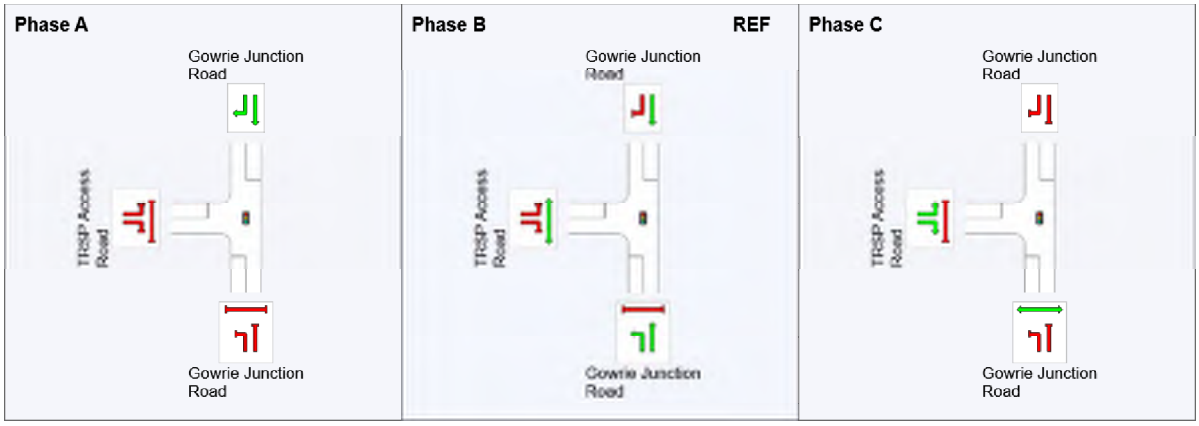
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase B
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	38	0	22
Green Time (sec)	6	16	10
Phase Time (sec)	12	22	16
Phase Split	24%	44%	32%

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

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

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

MOVEMENT SUMMARY

Site: [Gowrie Junction Rd/TRSP Access Road 2040 Fri pm (Site Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

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: Gowrie Junction Road														
1	L2	279	5.0	279	5.0	0.346	17.3	LOS B	5.4	39.3	0.69	0.76	0.69	45.6
2	T1	525	5.0	525	5.0	* 0.692	14.2	LOS B	12.1	88.7	0.82	0.73	0.84	48.6
Approach		804	5.0	804	5.0	0.692	15.3	LOS B	12.1	88.7	0.77	0.74	0.79	47.5
North: Gowrie Junction Road														
8	T1	191	5.0	191	5.0	0.156	4.4	LOS A	2.2	15.8	0.41	0.34	0.41	56.0
9	R2	56	5.0	56	5.0	* 0.312	34.8	LOS C	1.6	12.0	0.97	0.74	0.97	37.3
Approach		247	5.0	247	5.0	0.312	11.3	LOS B	2.2	15.8	0.54	0.43	0.54	50.3
West: TRSP Access Road														
10	L2	56	5.0	56	5.0	0.208	31.0	LOS C	1.5	11.1	0.91	0.74	0.91	39.0
12	R2	186	5.0	186	5.0	* 0.691	34.5	LOS C	5.7	41.6	1.00	0.87	1.14	37.4
Approach		242	5.0	242	5.0	0.691	33.7	LOS C	5.7	41.6	0.98	0.84	1.09	37.7
All Vehicles		1293	5.0	1293	5.0	0.692	18.0	LOS B	12.1	88.7	0.77	0.70	0.80	45.8

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: Gowrie Junction Road												
P1	Full	20	20	24.3	LOS C	0.0	0.0	0.90	0.90	188.9	213.9	1.13
West: TRSP Access Road												
P4	Full	20	20	24.3	LOS C	0.0	0.0	0.90	0.90	188.9	213.9	1.13
All Pedestrians		40	40	24.3	LOS C	0.0	0.0	0.90	0.90	188.9	213.9	1.13

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: [Gowrie Junction Rd/TRSP Access Road 2040 Fri pm (Site Folder: General)]

Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 60 seconds (Site Optimum Cycle Time - Minimum Delay)

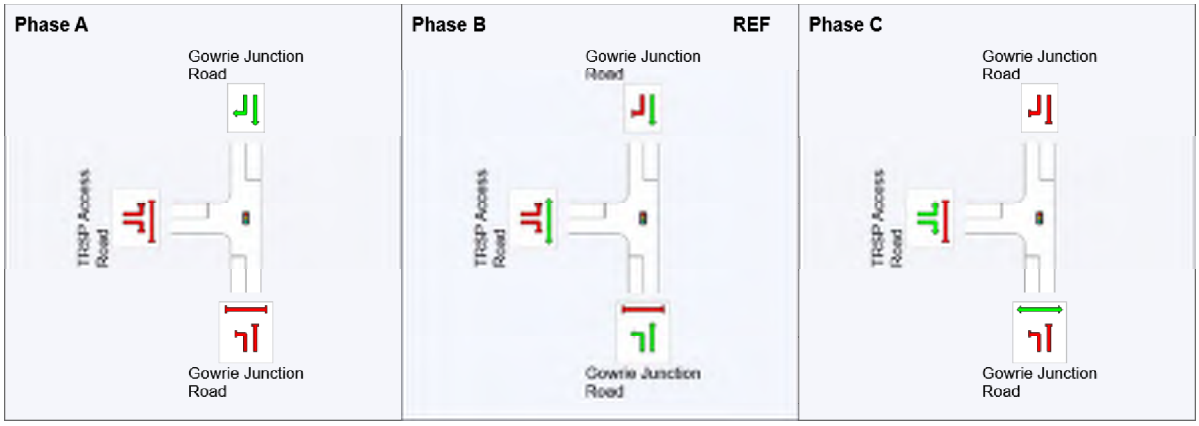
Timings based on settings in the Site Phasing & Timing dialog
Phase Times determined by the program
Phase Sequence: Leading Right Turn
Reference Phase: Phase B
Input Phase Sequence: A, B, C
Output Phase Sequence: A, B, C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	48	0	33
Green Time (sec)	6	27	9
Phase Time (sec)	12	33	15
Phase Split	20%	55%	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%.

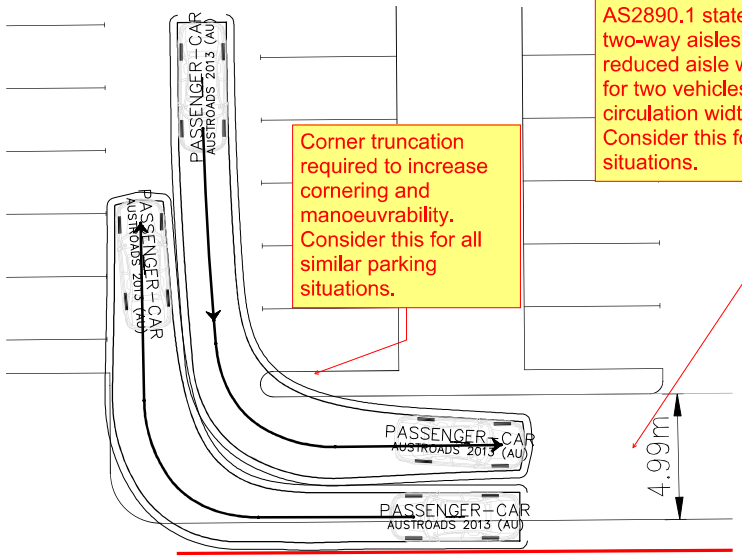
Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase

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

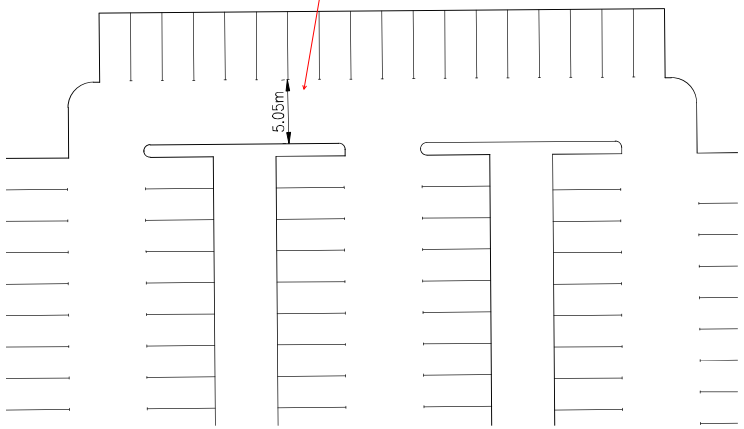
Appendix E Swept path assessment



Circulation aisle is only 5m wide. The AS2890.1 states that minimum two-way aisles are to be 5.5m. The reduced aisle width makes it difficult for two vehicles turning (6.2m circulation width is recommended. Consider this for all similar parking situations.

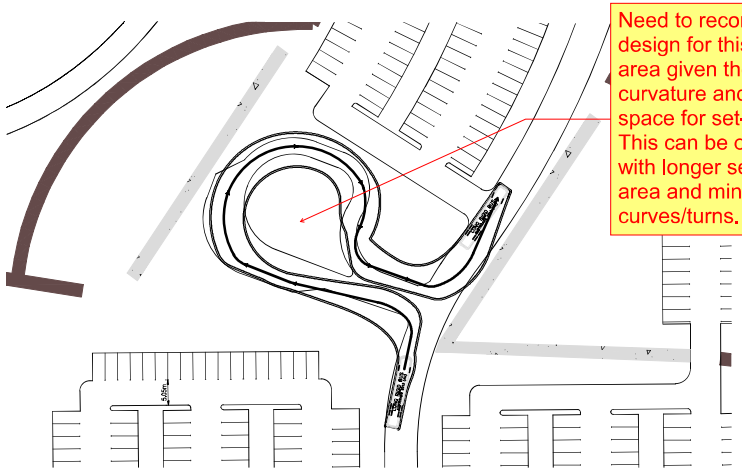
Corner truncation required to increase cornering and manoeuvrability. Consider this for all similar parking situations.

TURN PATH 1
Scale 1:100 (A1)



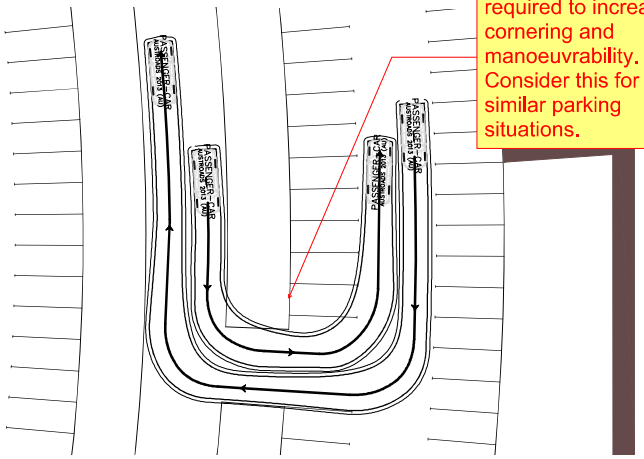
Parking aisle is only 5m wide. the AS2890.1 states that minimum 6.2m is required for the 90 degree parking spaces.

TURN PATH 2
Scale 1:200 (A1)



Need to reconsider design for this drop-off area given the curvature and limited space for set-down. This can be optimised with longer set-down area and minimal curves/turns.

TURN PATH 3
Scale 1:500 (A1)



Corner truncation required to increase cornering and manoeuvrability. Consider this for all similar parking situations.

TURN PATH 4
Scale 1:200 (A1)

LEGEND:

- Existing Property Boundary
- Existing Easement Boundary
- Existing Road Pavement
- Proposed Concrete Pavement
- Direction of Travel

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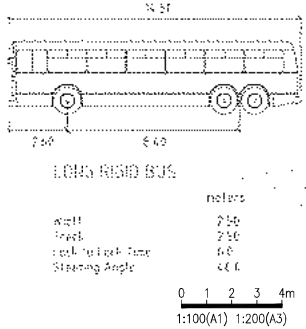

SCALE BARS
0 2 4 6 8m
1:200(A1) 1:400(A3)
0 5 10 15 20m
1:500(A1) 1:1000(A3)

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
0	-	17/12/21	- - - - -	MS	- - - - -	DD

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TITLE
CAR PARK TURN PATHS

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HEIGHT DATUM	GRID	SIZE
AHD	MGA-5	A1

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COUNCIL OW NO. - -

PROJECT NO	DRAWING NO.	ISSUE
16567	T-SK0003	0

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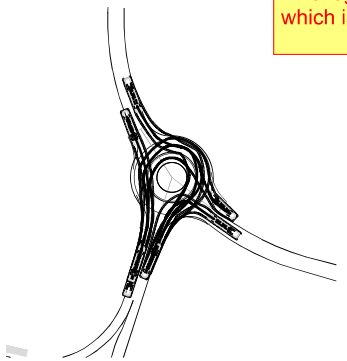
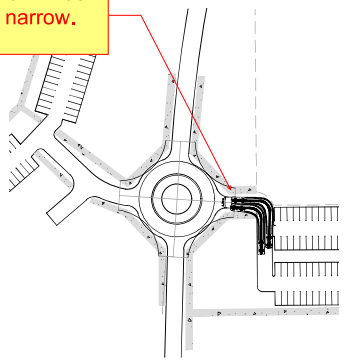
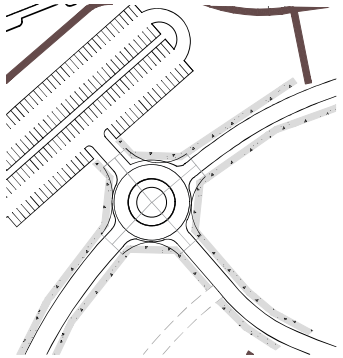


LAYOUT 1
Scale 1:1000 (A1)

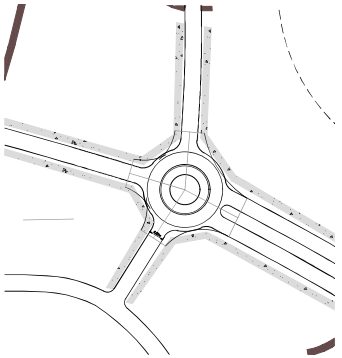
This leg is 4.3m wide which is too narrow.



LAYOUT 2
Scale 1:1000 (A1)



LAYOUT 3
Scale 1:1000 (A1)

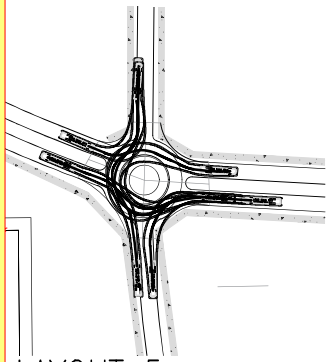


LAYOUT 4
Scale 1:1000 (A1)

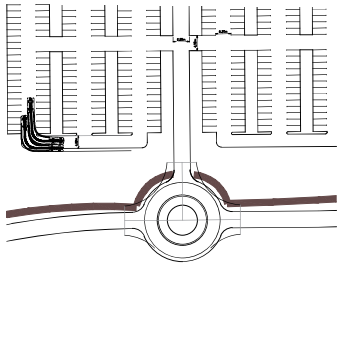
In general, all roundabouts shown on the plans do not have adequate geometry - especially given that the intersecting legs do not flare or have median separation.

The roundabout island diameter and circulation can also be improved to cater for larger 14.5m bus as check vehicles and B99 cars as the design vehicles.

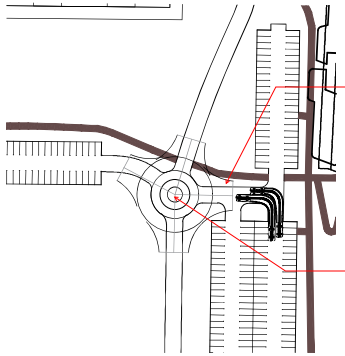
The recommended design and flare widths are shown in the general turn paths below. This design has been superimposed indicatively over the layouts as shown.



LAYOUT 5
Scale 1:1000 (A1)



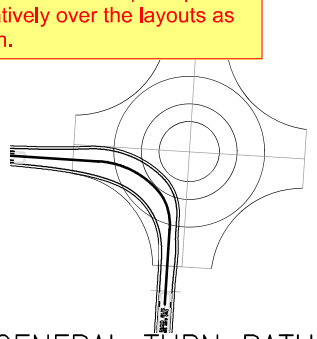
LAYOUT 6
Scale 1:1000 (A1)



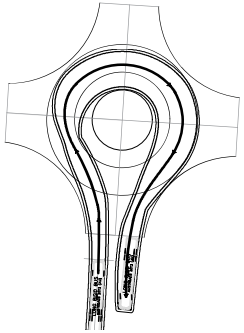
Roundabout turn-outs and flares will likely impede this first intersection location. Car park can be modified to cater for this.

Roundabout is very small radius and doesn't allow for check vehicles.

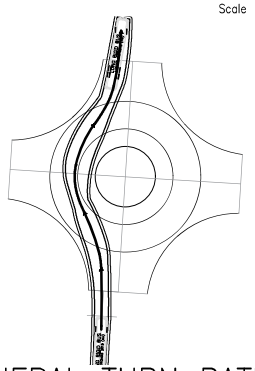
LAYOUT 7
Scale 1:1000 (A1)



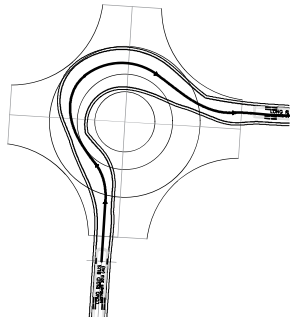
GENERAL TURN PATH 1
Scale 1:500 (A1)



GENERAL TURN PATH 2
Scale 1:500 (A1)



GENERAL TURN PATH 3
Scale 1:500 (A1)



GENERAL TURN PATH 4
Scale 1:500 (A1)

LEGEND:

- Existing Property Boundary
- Existing Easement Boundary
- Existing Road Pavement
- Proposed Concrete Pavement
- Direction of Travel

Consider pedestrian provisions on relevant legs - i.e. wombat crossings.

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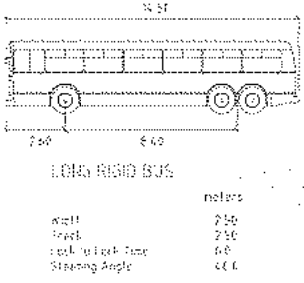

SCALE BARS
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1:500(A1) 1:1000(A3)
0 10 20 30 40m
1:1000(A1) 1:2000(A3)

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
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TITLE
ROUNDABOUT LAYOUTS AND TURN PATHS

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HEIGHT DATUM	GRID	SIZE
AHD	MGA-5	A1

COUNCIL RAL M CU NO. - -
COUNCIL OW NO. - -

PROJECT NO	DRAWING NO.	ISSUE
16567	T-SK0001	0

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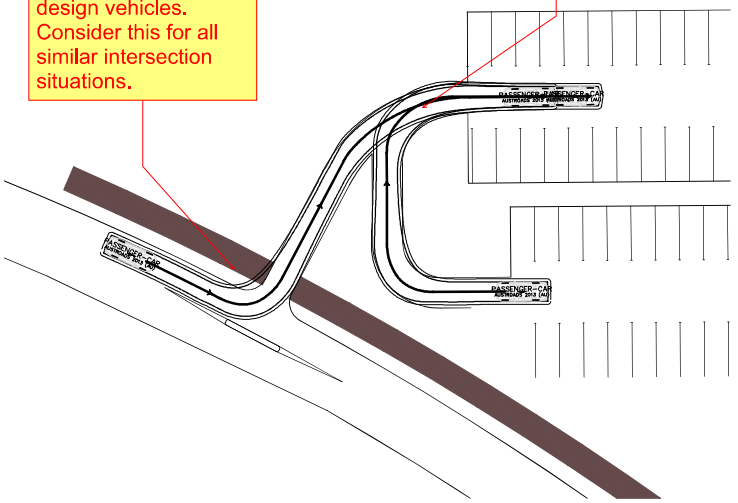
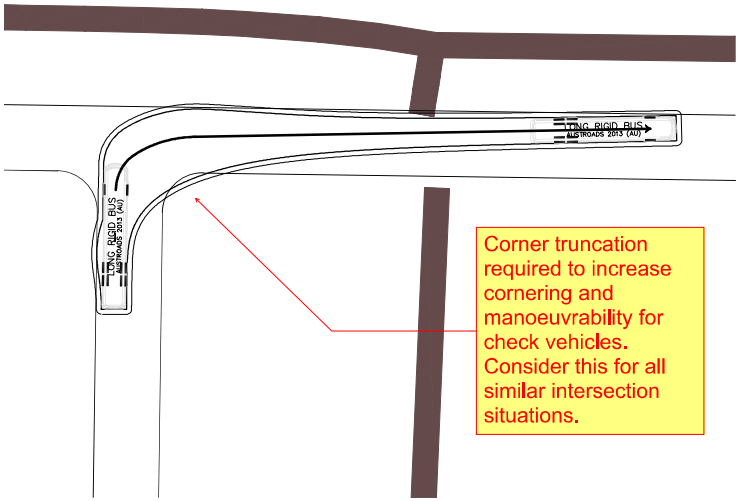
Corner truncation required to increase cornering and manoeuvrability for design vehicles. Consider this for all similar intersection situations.

One-way circulation road is too narrow. Will need to be designed to accommodate required design vehicles.



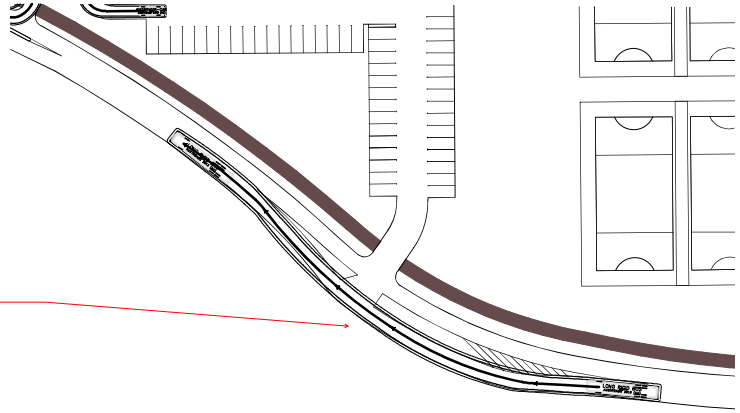
TURN PATH 1
Scale 1:250 (A1)



Corner truncation required to increase cornering and manoeuvrability for check vehicles. Consider this for all similar intersection situations.

TURN PATH 2
Scale 1:250 (A1)

Tapers and lane width will need to be increased to accommodate larger check vehicles around the CHR provision.



In general, consider turn-around provisions or circulation provisions for all blind aisles.

TURN PATH 3
Scale 1:500 (A1)

LEGEND:

- Existing Property Boundary
- Existing Easement Boundary
- Existing Road Pavement
- Proposed Concrete Pavement
- Direction of Travel

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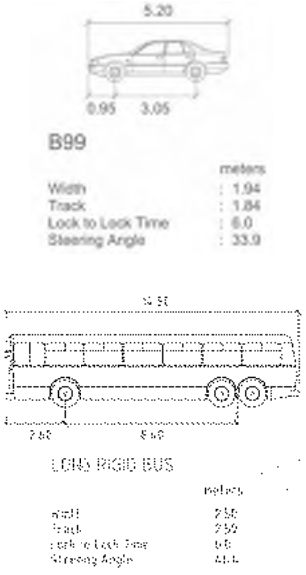

SCALE BARS
0 2 4 6 8 10m
1:250(A1) 1:500(A3)
0 5 10 15 20m
1:500(A1) 1:1000(A3)

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
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PROJECT: TOOWOOMBA SPORTS PRECINCT

TITLE: INTERSECTION LAYOUTS AND TURN PATHS

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AHD	MGA-5	A1

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COUNCIL OW NO. --

PROJECT NO	DRAWING NO.	ISSUE
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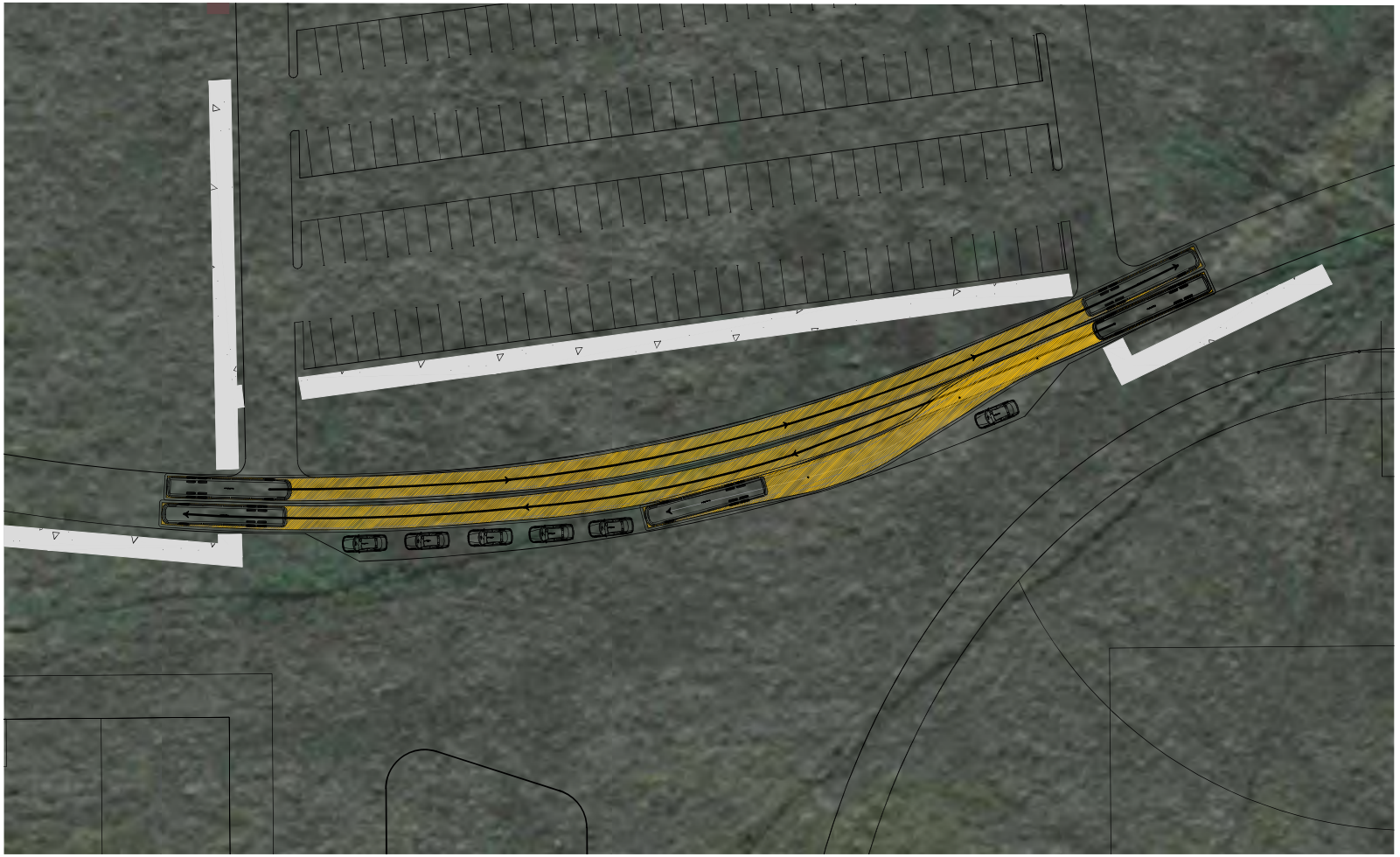

LEGEND:

- Existing Property Boundary
- Existing Easement Boundary
- Existing Road Pavement
- Proposed Concrete Pavement

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Scale 1:255 (A1)

SCALE BARS
0 10.0
1:255(A1) 1:509 3/8(A3)

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
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HEIGHT DATUM	GRID	SIZE
AHD	MGA-5	A1

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COUNCIL OW NO.: - -

PROJECT NO	DRAWING NO.	ISSUE
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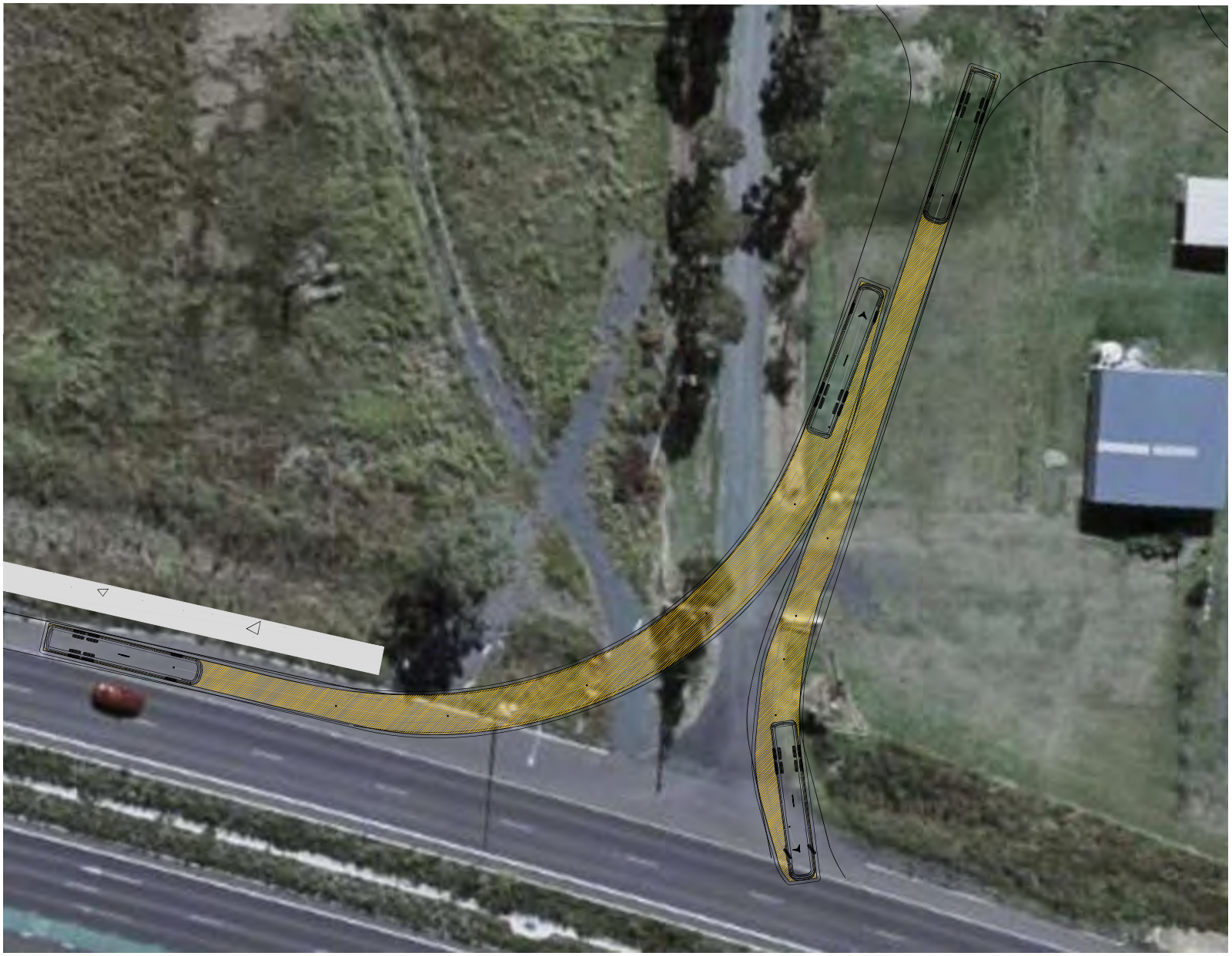

LEGEND:

- Existing Property Boundary
- Existing Easement Boundary
- Existing Road Pavement
- Proposed Concrete Pavement

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Scale 1:175 (A1)

SCALE BARS
0 20.0
1:175(A1) 1:350 7/8(A3)

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
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HEIGHT DATUM	GRID	SIZE
AHD	MGA-5	A1

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PROJECT NO	DRAWING NO.	ISSUE
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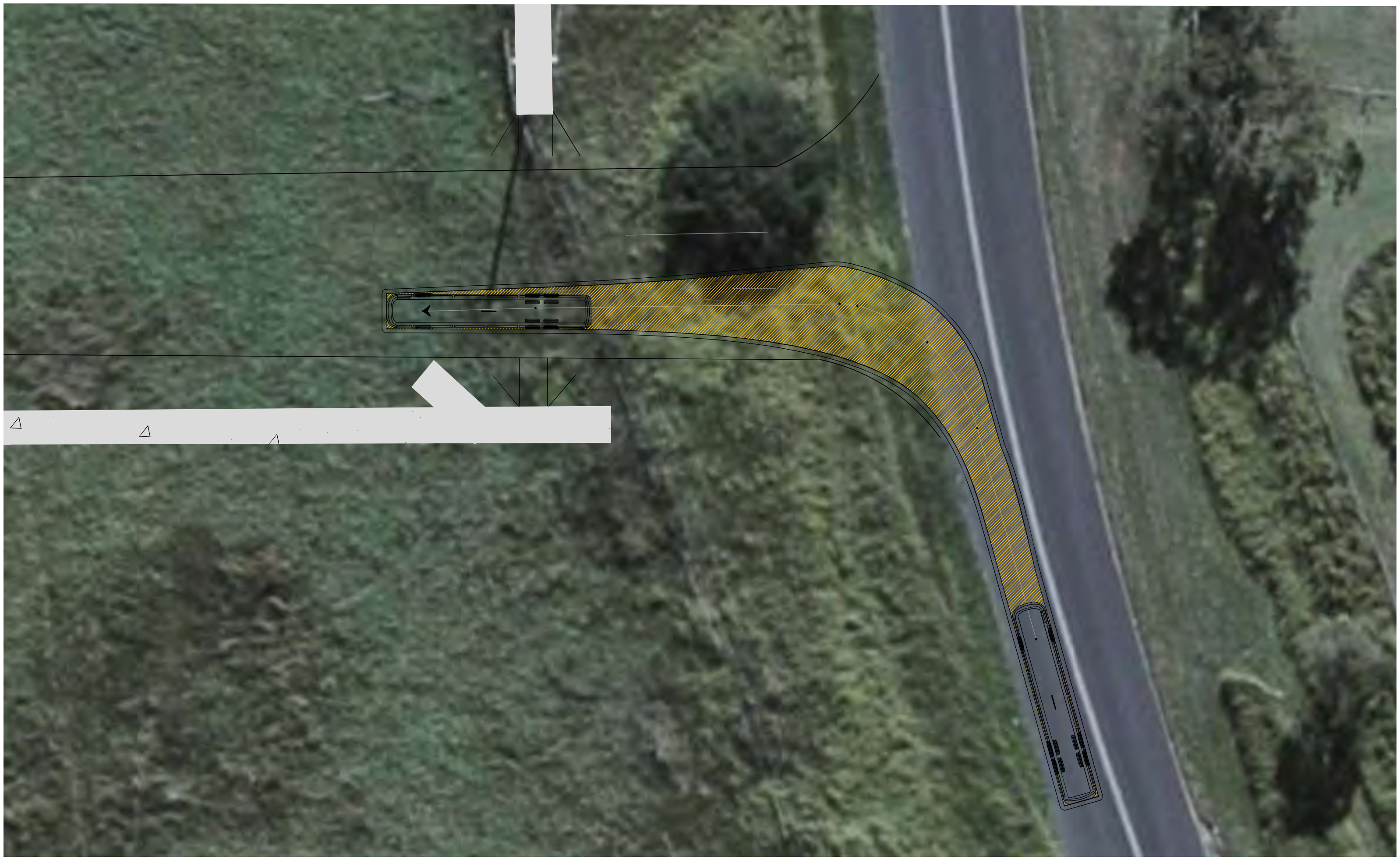

LEGEND:

- Existing Property Boundary
- Existing Easement Boundary
- Existing Road Pavement
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Scale 1:156 (A1)

SCALE BARS
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1:156(A1) 1:311 1/2(A3)

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
0	**	16/12/21	** · · · ·	MS	** · · · ·	DD

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TITLE
GOWRIE JUNCTION ROAD SITE ACCESS

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HEIGHT DATUM	GRID	SIZE
AHD	MGA-5	A1

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COUNCIL OW NO. ••

PROJECT NO.	DRAWING NO.	ISSUE
16567	T-SK0001	0

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LEGEND:

- Existing Property Boundary
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- Existing Road Pavement
- Proposed Concrete Pavement

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Scale 1:111 (A1)

SCALE BARS
0 10.0
1:111(A1) 1:221 5/8(A3)

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
0	-	17/12/21	- - - - -	MS	- - - - -	DD

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TITLE
EASTERN SITE ACCESS RIGHT OUT

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HEIGHT DATUM	GRID	SIZE
AHD	MGA-5	A1

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COUNCIL OW NO.: - -

PROJECT NO	DRAWING NO.	ISSUE
16567	T-SK0015	0

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Appendix F Code compliance

Table 9.4.6.1 – Transport, Access and Parking Code

Performance outcomes	Acceptable outcomes	Proposed outcome
Network impacts		
PO1 Vehicular access arrangements: (a) are appropriate for: (i) the capacity of the parking area; (ii) the volume, frequency and type of vehicle useage; and (iii) the function and configuration of the access road; (b) minimise any potentially adverse impact on: (i) the safety and efficiency of the road; (ii) the integrity of any infrastructure within the road reserve; and (iii) the safety of access to adjacent properties; and (c) protect the amenity of premises in the vicinity. Note: Access to State-controlled Roads requires the approval of the Department of Transport and Main Roads.	AO1.1 Other than for a Dwelling House, Dual Occupancy, Home-based Business, vehicular access to a Council-controlled road is provided in accordance with Australian Standard AS 2890.1 – Off Street Car Parking (and Australian Standard AS 2890.2 where relevant). AO1.2 Where the vehicular access is for a Dwelling House, Dual Occupancy or Home-based Business, the driveway crossover: (a) is not: (i) a second property access; (ii) located on a bend in the road of more than 45°; or (iii) to a State-controlled Road or a road with bluestone kerbing; (b) is not within: (i) 25m of a signalised road intersection; (ii) 20m of an unsignalised road intersection in an industrial or Centre's zone or 10m otherwise; (iii) 2m of any adjoining property access, including shared property accesses, at the property line; (iv) 1m of any street signage, power poles, street lights, manholes, stormwater gully pits, or other Council asset; or (v) the outer canopy of any street tree. (c) does not: (i) require the modification, relocation, or removal of any existing	Complies with PO1. Development traffic has been shown to be effectively accommodated within the adjacent road network and proposed access intersections through SIDRA intersection modelling, as described in the *Traffic Impact Assessment – Toowoomba Region Sports Precinct Business Case* report (HIG, 2020) and Section 4.3 of this report. Queuing provision at the site accesses exceeds minimum requirements set out in Australian Standards for the parking area capacity and traffic generation.

	infrastructure (e.g. street trees, fire hydrants, water meters, manholes or stormwater gully pits); (ii) front a traffic island, speed control device, car parking bay, bus stop, or other structure within the roadway; (iii) require removal or modification of any existing bluestone kerbing; (iv) require any change to existing footpath/verge profiles; (v) have access restricted by an access restriction strip or link reserve; or (vi) access an unformed or unkerbed road; (d) is constructed of gravel (but only in a non-urban zone), reinforced concrete, bitumen or pavers; and (e) is provided in accordance with the relevant diagram in SC6.2 PSP No. 2 – Engineering Standards – Roads and Drainage Infrastructure.	
Car parking provision		
PO2 Provision is made for on-site vehicle parking to meet the demand likely to be generated by the development and to avoid on-street parking where that would adversely impact on the safety or capacity of the road network or unduly impact on local amenity. Note: Where the development does not meet the acceptable outcomes, or where no acceptable outcome is specified, a parking demand analysis report prepared by a suitably qualified person may assist in demonstrating compliance with the performance outcome.	AO2.1 Where in the Principal Centre Zone or Mixed Use Zone Car parking is provided at the rate of: (a) Non-Residential Use one (1) parking space per 50m² of GFA; and (b) Residential Use - one (1) parking space per dwelling. AO2.2 Where not in the Principal Centre Zone or Mixed Use Zone Car parking is provided at the rates set out in Table 9.4.6:3 to this Code. Note: Where a parking rate for a use is unspecified in Table 9.4.6:3 – no acceptable outcome is provided.	Complies with PO2. The TRC Planning Scheme *Transport, Access and Parking Code* does not include parking rates for developments described as major sport, recreation and entertainment facility, and the applicant is required to justify the proposed provision. The proposed car parking provision has been compared to the rates described in the *Toowoomba Regional Sports Precinct Component Schedule* (2019). The proposed parking yield exceeds the

	Note: If the number of car parking spaces calculated in accordance with AO2.1 and AO2.2 is not a whole number, the number of parking spaces to be provided is rounded-up to next highest whole number. Note: Where application is made for establishment of two or more uses on the same premises, the parking demand is calculated by totalling the requirements for each use.	requirements set out in the component schedule, and is therefore considered to be appropriate for the site.
Transport network		
PO1 The development is located on roads that are appropriate for the nature of traffic generated, having regard to the safety and efficiency of the transport network, and the functions and characteristics identified in the transport network hierarchy contained in SC 6.2 PSP No. 2 – Engineering Standards – Roads and Drainage Infrastructure.	No acceptable outcome is nominated.	Complies with PO1. Development traffic has been shown to be adequately accommodated within the adjacent road network and proposed access intersections through SIDRA intersection modelling, as described in the *Traffic Impact Assessment – Toowoomba Region Sports Precinct Business Case* report (HIG, 2020) and Section 4.3 of this report.
PO2 Development does not compromise the orderly provision or upgrading of the transport network.	No acceptable outcome is nominated.	Complies with PO2. No road upgrades have been identified in the vicinity of the site.
PO3 Onsite transport network infrastructure (including roads, parking, access and public transport, pedestrian and cyclist facilities) appropriately integrates with surrounding networks and facilitates the orderly development of adjoining land.	No acceptable outcome is nominated.	Complies with PO3. Proposed transport network infrastructure links to surrounding available transport options.
PO4 Development is designed to encourage travel	No acceptable outcome is nominated.	Not applicable at this stage of

by public transport, walking and cycling. This may include integrated access between adjoining sites and/or the provision of midblock connections which are safe, functional and legible for potential users.		development, to be examined with ongoing planning. Internal roads and paths include cycling provision.
PO5 Car parking areas, pathways and other elements of transport network infrastructure are designed to enhance public safety by discouraging crime and anti-social behaviour, having regard to: (a) provision of opportunities for casual surveillance; (b) provision of lighting; (c) the use of fencing to define public and private spaces, whilst allowing for appropriate sightlines; (d) minimising potential concealment points and assault locations; (e) minimising opportunities for graffiti and other vandalism; and (f) restricting unlawful access to buildings and between buildings.	AO5.1 Car parking areas, pathways and other elements of transport network infrastructure are designed in accordance with Crime Prevention Through Environmental Design (CPTED) Guidelines.	Not applicable at this stage of development, to be examined with ongoing planning.
PO6 Directional signage is provided within a development site to assist legibility and wayfinding, including for pedestrians and cyclists.	No acceptable outcome is nominated.	Not applicable to this report.
Access		
PO7 Vehicle access arrangements and queuing areas are appropriate for: (a) the capacity of the parking area; (b) the volume, frequency and type of vehicle	AO7.1 Access driveways and queuing areas are located and designed in accordance with the provisions of Australian Standard AS 2890.1 Part 1: Off Street Carparking.	Complies with PO7. Queuing provision at the site accesses exceeds minimum requirements set out in Australian Standards for the parking area

usage; and (c) the function and characteristics of the access road and adjoining road network.		capacity and traffic generation.
PO8 Access arrangements minimise any adverse impact on: (a) the integrity of any infrastructure within the road reserve; (b) the safety and convenience of pedestrians and cyclists; (c) the safety and convenience of access to adjacent properties; (d) the amenity of premises in the vicinity; and (e) street trees in the road reserve.	No acceptable outcome is nominated.	Not applicable at this stage of development, to be examined with ongoing planning.
PO9 Where the nature of the proposed development creates a demand due to the frequency and volume of vehicle movements for the set-down and pick–up of passengers, provision is made for set-down and pick-up facilities by bus, taxis or private vehicle.	No acceptable outcome is nominated.	Not applicable to this development.
PO10 Where set-down and pick-up facilities for bus, taxis or private vehicles are provided as part of development they are: (a) safe for pedestrians, cyclists and vehicles; (b) conveniently connected to the main component of the development by pedestrian pathway; and (c) designed to provide for pedestrian priority and clear sightlines.	AO10.1 Bus pick-up/set-down areas: (a) allow a bus, based on the Long Rigid Bus (12m) in Austroads/Standards Australia HB72 – Design Vehicles and Turning Path Templates, to turn and manoeuvre in and out of the area in an easy and safe manner; (b) afford maximum safety for passengers boarding or alighting buses; (c) avoid standing or queuing buses from obstructing access to	Not compliant. Initial review of the set down and pick up facilities indicate that they are situated conveniently at the central premier hub. Detail of connecting pedestrian paths will be considered as part of future design stages. The set down and pick up areas are recommended to be considered further in

	car parking spaces or circulation within the Site; and (d) avoid on-street queuing or boarding/alighting of buses that would reduce traffic flow or safety on the road network. One clear traffic lane in each direction should be maintained. AO10.2 Car and taxi pick-up/set-down areas: (a) allow a car to maneouver in and out of the area in an easy and safe manner; (b) afford maximum safety for passengers boarding or alighting cars; (c) avoid standing or queuing cars from obstructing access to car parking spaces or circulation within the site; and (d) avoid on-street queuing or boarding/alighting of cars that would reduce traffic flow or safety on the road network. One clear traffic lane in each direction should be maintained.	detailed design. Initial review of dimensional requirements and swept path assessment indicate that the circulation road width and curve radii at the circular facility do not meet standards.
Pedestrian and cycle facilities		
11 Provision is made for the safe and convenient movement of pedestrians on site and external to the site, having regard to desire lines, legibility, weather protection and the needs of people with disabilities.	AO11.1 Pedestrian pathways and crossings are provided in accordance with SC6.2 PSP No.2 – Engineering Standards – Roads and Drainage Infrastructure. AO11.2 Access for cyclists and pedestrians is clearly distinguished from vehicle access. AO11.3 Pedestrian paths of a minimum width of 1.5m are provided through each car parking row and connect to the main entrance(s) to the building(s).	Complies with PO11. The proposed road type cross sections include pedestrian paths which meet relevant standard widths. The internal roads and associated paths connect to all proposed facilities. Pedestrian provision is proposed at the Gowrie Junction Road access intersection.
PO12 Provision is made for safe and convenient cycle movement to the site and within the site having regard to desire lines, users' needs and legibility.	AO12.1 Shared paths and on-road cycle lane facilities are provided in accordance with SC6.2 PSP No.2 – Engineering Standards Roads and Drainage Infrastructure.	Complies with PO12. Shared paths and on-road cycle lane facilities are proposed as part of internal roads. Pedestrian provision is proposed at the Gowrie Junction Road access intersection.

Parking and circulation		
PO13 Car parking areas are designed to be: (a) clearly defined, marked and signed; (b) convenient, safe and accessible; and (c) safe for vehicles, pedestrians and cyclists and minimise vehicle/pedestrian conflicts by providing clear access lines for pedestrians movement within car park areas.	AO13.1 The entry to the car park is clearly signposted.	Not applicable to this report.
	AO13.2 Parking spaces are freely available for use by the development's occupants and visitors during the business hours of the use.	Complies with AO13.2. It is expected that parking will be freely available during business hours.
	AO13.3 Visitor or customer parking spaces are located in the most accessible position to the main entrance of the building and signed as such.	Complies with AO13.3. Car parking is located adjacent to the clubhouses, premier hub and all sporting fields.
	AO13.4 Unless otherwise specified in another code relevant to the development, 60% of the parking spaces for non-residential development are clearly visible from the street.	Not applicable to this development.
	AO13.5 Public Safety: (a) The car park is located where it can be monitored by passers-by or the occupiers of the development. (b) Where the car park is open to the public at night, lighting is provided throughout the car park and along pedestrian access paths in compliance with Australian Standard AS 1158.3.1 – Road Lighting – Pedestrian Area (Category P) Lighting – Performance and Installation Design Requirements. (c) Except in the case of residential development: (i) where the car park is not required at night, entry to the car park is physically restricted; and (ii) where the car park is enclosed, the walls are finished in a	Not applicable at this stage of development, to be examined with ongoing planning.

	light coloured material that reflects light. (d) Landscaping throughout the car park is provided in a manner, as indicated in the Landscaping Code that allows surveillance and minimises the risk of crime.	
PO14 Car parking areas are designed to provide spaces which meet the needs of people with disabilities.	AO14.1 Parking spaces for people with disabilities are provided at the rates specified in Appendix C of Australian Standard AS2890.1 Part 1: Off Street Carparking.	Complies with AO14.1 The proposed number of parking spaces for people with disabilities exceeds requirements.
	AO14.2 Car parking spaces for people with disabilities are located as near as possible to the entrance or entrances of the facility or use they serve.	Complies with AO14.2. Car parking spaces for people with disabilities are located as close as possible to clubhouses and sporting facilities.
	AO14.3 Parking spaces for people with disabilities are designed in accordance with the provisions of Australian Standard AS2890.1 Part 1: Off Street Carparking.	Complies with AO14.3. The provision and dimensions of spaces for people with disabilities meet Australian Standards requirements, including adjacent shared spaces.
	AO14.4 Pathways and ramps between parking areas and the entrances to buildings are designed in accordance with the provisions of Australian Standard AS1428.1: Design for Access and Mobility.	Not applicable at this stage of development, to be examined with ongoing planning.
	AO14.5 Parking spaces for people with disabilities are identified by a sign incorporating the International Symbol specified in Australian Standard AS1428.1: Design for Access and Mobility.	Not applicable to this report.

	AO14.6 The sign is readily visible from a vehicle at the entrance to the carpark, or guide signs are provided to indicate the direction of the disabled parking spaces.	Not applicable to this report.
PO15 Car parking areas for non-residential development on a site in, or adjoining, a residential zone, are designed to minimise any adverse impact on the amenity of premises in the vicinity.	For non-residential development on a site in, or adjoining, a residential zone: AO15.1 Car parking and driveway areas are setback a minimum distance of 3m from a side boundary that is common with a residential use in a residential zone. AO15.2 Landscape planting is used between the car park and driveway areas and the side boundary to soften the visual impacts of car park areas and to provide shade. AO15.3 An acoustic fence of 1.8m height is provided along the property boundary that is common with a residential use in a residential zone.	Not applicable. Site is not located adjacent to a residential area.
PO16 Car parking and associated access arrangements are located and designed to avoid dominating the road frontage of the site or otherwise detracting from streetscape character.	AO16.1 Car parking is provided either at the rear of the development or beneath buildings.	Complies with PO16. The car parking areas are located internal to the site without detracting from the streetscape character.
PO17 Above ground or multi-level car parking areas are designed, articulated and finished to make a positive contribution to the local streetscape character.	AO17.1 Above ground or multi-level parking areas are designed, articulated and finished to a quality equal to or better than adjoining buildings.	Not applicable to this report.
PO18 Landscaping is provided to soften the visual impact of car parking areas and to provide shading and protection from glare.	AO18.1 Aesthetics, glare, heat absorption and reradiation. (a) Landscaping is provided throughout the car park in the manner and at the rate indicated in the Landscaping Code; and (b) Unless otherwise specified in a zone, precinct or use code,	Not applicable to this report.

	where the car park adjoins a street frontage, or a boundary with a Residential or other sensitive land use, a landscaped strip of minimum 3 m width is provided along the frontage/boundary.	
PO19 Any parking, access and any other vehicle access/manoeuvring areas incorporate design measures to avoid dust nuisance to surrounding properties.	AO19.1 Car parking, access and any other vehicle access/manoeuvring areas vehicle manoeuvring areas are imperviously sealed.	Not applicable to this report.
PO20 Noise impacts from vehicle movement areas on any adjoining residential or other sensitive land use are mitigated.	AO20.1 A solid, good quality brick, timber or masonry fence of a minimum 1.8m height is constructed between any vehicle movement areas and a boundary to an adjoining residential or other sensitive land use.	Not applicable to this report.
PO21 Any part of the parking area designated as a vehicle cleaning or repair area is designed and constructed to avoid adverse impact on water quality or Council's wastewater or stormwater infrastructure.	AO21.1 The development is capable of meeting the requirements of Council's Trade Waste Policy and the Trade Waste Environmental Management Plan.	Not applicable to this development.
Servicing		
PO22 Provision is made for the on-site loading, unloading, manoeuvring and access by service vehicles that: (a) is adequate to meet the demands generated by the development; (b) is able to accommodate the design service vehicle requirements; and (c) does not unduly impede vehicular, cyclist and pedestrian safety and convenience within the site.	AO22.1 The service bays provided and access to them, can accommodate, at any one time, the types and numbers of service vehicles detailed in Table 9.4.6:3. AO22.2 Service bays provided wholly or partly within a building are physically separated from the rest of the buildings floor space in manner that makes it impractical to use them as storage or work areas. AO22.3 The design and provision of access driveways, manoeuvring areas and loading and unloading facilities for service vehicles complies with Australian Standard AS 2890.2 – 1989 – Off Street Parking – Commercial Vehicle Facilities. AO22.4 Vehicles being loaded or unloaded with goods stand	Not applicable at this stage of development, to be examined with ongoing planning.

	completely on-site and do not impede access to more than 6 parking spaces or 50% of the on-site parking spaces (whichever is the lesser) while doing so. AO22.5 Service vehicles can enter and leave the site in a forward gear.	
PO23 Refuse collection vehicles are able to access on-site refuse collection facilities.	AO23.1 Where an on-site refuse area is provided, access and manoeuvring areas are designed and provided to enable access by refuse collection vehicle based on the Design Service Vehicle in Austroads/Standards Australia HB72 – Design Vehicles and Turning Path Templates.	Not applicable at this stage of development, to be examined with ongoing planning.
PO24 Servicing arrangements minimise any adverse impact the amenity of premises in the vicinity.	No acceptable outcome is nominated.	Not applicable at this stage of development, to be examined with ongoing planning.
PO25 Servicing arrangements are located and designed to avoid dominating the road frontage of the site or otherwise detracting from streetscape character.	AO25.1 Areas used for servicing are not located at the front of developments, or are otherwise screened to minimise visual intrusion in the streetscape.	