

## MOVEMENT SUMMARY

### Site: 501 [ONR - Castle - Crane - Future AM]

Old Northern Road - Castle Street - Crane Road

Future AM Peak

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)

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

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
South: Old Northern Road											
1	L2	81	2.0	0.156	23.3	LOS B	1.8	12.9	0.78	0.74	38.3
2	T1	216	2.0	0.832	27.8	LOS B	13.0	92.7	0.97	1.00	35.6
3	R2	190	2.0	0.832	33.4	LOS C	13.0	92.7	0.97	1.00	22.3
Approach		487	2.0	0.832	29.2	LOS C	13.0	92.7	0.94	0.96	31.8
East: Crane Road											
4	L2	121	2.0	0.597	24.7	LOS B	9.1	64.7	0.90	0.78	27.5
5	T1	237	2.0	0.597	19.1	LOS B	9.1	64.7	0.90	0.78	38.0
6	R2	189	2.0	0.885	43.4	LOS D	6.8	48.2	1.00	1.04	26.5
Approach		547	2.0	0.885	28.7	LOS C	9.1	64.7	0.93	0.87	31.2
NorthEast: Old Northern ROad											
24b	L3	10	100.0	0.177	36.5	LOS C	0.6	7.7	0.95	0.71	18.0
24a	L1	10	100.0	0.177	34.5	LOS C	0.6	7.7	0.95	0.71	25.0
Approach		20	100.0	0.177	35.5	LOS C	0.6	7.7	0.95	0.71	21.5
West: Castle Street											
10	L2	95	2.0	0.930	48.9	LOS D	6.7	47.7	1.00	1.13	33.5
11	T1	258	2.0	0.930	43.2	LOS D	6.9	48.9	1.00	1.13	27.0
Approach		353	2.0	0.930	44.8	LOS D	6.9	48.9	1.00	1.13	29.2
All Vehicles		1407	3.4	0.930	33.0	LOS C	13.0	92.7	0.95	0.96	30.6

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		ped	m		per ped	
P1	South Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
P2	East Full Crossing	30	23.4	LOS C	0.0	0.0	0.88	0.88	
P6	NorthEast Full Crossing	30	3.7	LOS A	0.0	0.0	0.35	0.35	
P3	North Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
P4	West Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
All Pedestrians		150	20.0	LOS C			0.79	0.79	

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

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

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

## MOVEMENT SUMMARY

 **Site: 501 [ONR - Castle - Crane - Future PM]**

Old Northern Road - Castle Street - Crane Road

Future PM Peak

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)

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

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
South: Old Northern Road											
1	L2	91	2.0	0.186	24.3	LOS B	2.1	15.0	0.81	0.74	37.7
2	T1	169	2.0	0.867	31.5	LOS C	13.4	95.6	0.99	1.06	33.6
3	R2	223	2.0	0.867	37.1	LOS C	13.4	95.6	0.99	1.06	20.6
Approach		483	2.0	0.867	32.7	LOS C	13.4	95.6	0.95	1.00	29.3
East: Crane Road											
4	L2	97	2.0	0.516	23.3	LOS B	7.9	56.1	0.86	0.75	28.6
5	T1	229	2.0	0.516	17.8	LOS B	7.9	56.1	0.86	0.75	39.1
6	R2	181	2.0	0.847	40.8	LOS C	6.2	44.3	1.00	0.99	27.3
Approach		507	2.0	0.847	27.0	LOS B	7.9	56.1	0.91	0.84	32.3
NorthEast: Old Northern ROad											
24b	L3	10	100.0	0.177	36.5	LOS C	0.6	7.7	0.95	0.71	18.0
24a	L1	10	100.0	0.177	34.5	LOS C	0.6	7.7	0.95	0.71	25.0
Approach		20	100.0	0.177	35.5	LOS C	0.6	7.7	0.95	0.71	21.5
West: Castle Street											
10	L2	85	2.0	0.943	51.3	LOS D	8.3	59.0	1.00	1.17	33.0
11	T1	334	2.0	0.943	45.6	LOS D	8.4	60.1	1.00	1.17	26.3
Approach		419	2.0	0.943	46.7	LOS D	8.4	60.1	1.00	1.17	28.0
All Vehicles		1429	3.4	0.943	34.9	LOS C	13.4	95.6	0.95	0.99	29.7

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		Pedestrian ped	m		per ped	
P1	South Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
P2	East Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
P6	NorthEast Full Crossing	30	3.7	LOS A	0.0	0.0	0.35	0.35	
P3	North Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
P4	West Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
All Pedestrians		150	20.2	LOS C			0.79	0.79	

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

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

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

# MOVEMENT SUMMARY

 **Site: 301 [ONR - Cecil - Future AM]**

Old Northern Road - Cecil Avenue

Future AM Peak

Signals - Fixed Time Isolated Cycle Time = 105 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Northern Road											
1	L2	142	2.0	0.573	32.6	LOS C	16.6	118.2	0.84	0.77	20.7
2	T1	681	2.0	0.573	27.8	LOS B	16.8	119.3	0.85	0.75	28.2
3	R2	874	2.0	1.139	193.5	LOS F	50.0	356.2	1.00	1.51	6.6
Approach		1697	2.0	1.139	113.5	LOS F	50.0	356.2	0.93	1.15	10.4
East: Cecil Avenue											
4	L2	1122	2.0	0.607	25.5	LOS B	20.4	145.0	0.77	0.82	28.9
5	T1	387	2.0	1.173	217.9	LOS F	48.4	344.6	1.00	1.85	2.6
6	R2	255	2.0	0.942	73.2	LOS F	16.2	115.3	0.94	1.05	9.8
Approach		1764	2.0	1.173	74.6	LOS F	48.4	344.6	0.84	1.08	12.4
North: Old Northern Road											
7	L2	107	2.0	1.067	119.5	LOS F	17.6	125.4	1.00	1.26	5.7
8	T1	348	2.0	1.067	125.5	LOS F	19.6	139.7	1.00	1.34	9.3
Approach		455	2.0	1.067	124.1	LOS F	19.6	139.7	1.00	1.32	8.4
West: Cecil Avenue											
10	L2	90	2.0	1.181	229.4	LOS F	38.3	272.9	1.00	1.78	2.6
11	T1	319	2.0	1.181	226.1	LOS F	38.3	272.9	1.00	1.78	2.4
12	R2	191	2.0	1.181	229.6	LOS F	38.0	270.6	1.00	1.78	4.7
Approach		600	2.0	1.181	227.7	LOS F	38.3	272.9	1.00	1.78	3.2
All Vehicles		4516	2.0	1.181	114.5	LOS F	50.0	356.2	0.91	1.22	9.0

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	30	44.9	LOS E	0.1	0.1	0.92	0.92	
P2	East Full Crossing	30	46.7	LOS E	0.1	0.1	0.94	0.94	
P2S	East Slip/Bypass Lane Crossing	30	22.7	LOS C	0.1	0.1	0.66	0.66	
P3	North Full Crossing	30	43.9	LOS E	0.1	0.1	0.92	0.92	
P4	West Full Crossing	30	29.0	LOS C	0.1	0.1	0.74	0.74	
All Pedestrians		150	37.4	LOS D			0.84	0.84	

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

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

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

# MOVEMENT SUMMARY

 **Site: 301 [ONR - Cecil - Future PM]**

Old Northern Road - Cecil Avenue

Future PM Peak

Signals - Fixed Time Isolated Cycle Time = 115 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
South: Old Northern Road											
1	L2	130	2.0	0.572	37.0	LOS C	17.3	123.2	0.86	0.78	19.3
2	T1	638	2.0	0.572	32.2	LOS C	17.4	124.1	0.87	0.76	26.1
3	R2	934	2.0	1.333	361.1	LOS F	78.3	557.2	1.00	1.86	3.7
Approach		1702	2.0	1.333	213.0	LOS F	78.3	557.2	0.94	1.37	6.0
East: Cecil Avenue											
4	L2	1268	2.0	0.766	26.7	LOS B	33.0	234.9	0.79	0.83	28.3
5	T1	489	2.0	1.330	354.8	LOS F	82.9	590.2	1.00	2.31	1.6
6	R2	397	2.0	1.239	284.7	LOS F	59.3	422.1	1.00	1.61	2.9
Approach		2154	2.0	1.330	148.7	LOS F	82.9	590.2	0.87	1.31	6.8
North: Old Northern Road											
7	L2	126	2.0	1.198	229.4	LOS F	30.9	220.1	1.00	1.51	3.3
8	T1	383	2.0	1.198	234.8	LOS F	32.1	228.4	1.00	1.61	5.5
Approach		509	2.0	1.198	233.5	LOS F	32.1	228.4	1.00	1.59	4.9
West: Cecil Avenue											
10	L2	82	2.0	1.346	372.9	LOS F	53.8	383.1	1.00	2.09	1.6
11	T1	398	2.0	1.346	369.6	LOS F	53.8	383.1	1.00	2.09	1.5
12	R2	147	2.0	1.346	373.1	LOS F	53.5	381.1	1.00	2.09	3.0
Approach		627	2.0	1.346	370.8	LOS F	53.8	383.1	1.00	2.09	1.9
All Vehicles		4992	2.0	1.346	207.2	LOS F	82.9	590.2	0.92	1.45	5.3

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		ped	m		per ped	
P1	South Full Crossing	30	41.8	LOS E	0.1	0.1	0.85	0.85	
P2	East Full Crossing	30	51.7	LOS E	0.1	0.1	0.95	0.95	
P2S	East Slip/Bypass Lane Crossing	30	26.5	LOS C	0.1	0.1	0.68	0.68	
P3	North Full Crossing	30	48.9	LOS E	0.1	0.1	0.92	0.92	
P4	West Full Crossing	30	32.9	LOS D	0.1	0.1	0.76	0.76	
All Pedestrians		150	40.4	LOS E			0.83	0.83	

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

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

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

# MOVEMENT SUMMARY

 **Site: 601 [ONR - McMullen - Future AM]**

Old Northern Road - McMullen Road

Future AM Peak

Signals - Fixed Time Isolated Cycle Time = 80 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
NorthEast: Old Northern Road											
25	T1	1700	2.0	0.609	5.8	LOS A	16.2	115.2	0.53	0.49	51.2
26	R2	807	2.0	0.881	47.8	LOS D	18.5	131.8	1.00	1.01	27.1
Approach		2507	2.0	0.881	19.3	LOS B	18.5	131.8	0.68	0.66	38.7
NorthWest: McMullen Avenue											
27	L2	767	2.0	0.465	22.1	LOS B	10.4	74.4	0.74	0.79	37.5
29	R2	388	2.0	0.848	50.4	LOS D	8.6	61.3	1.00	0.98	11.5
Approach		1155	2.0	0.848	31.6	LOS C	10.4	74.4	0.83	0.85	28.7
SouthWest: Old Northern Road											
30	L2	69	2.0	0.057	7.6	LOS A	0.8	6.0	0.38	0.61	35.8
31	T1	1367	2.0	0.888	35.5	LOS C	30.8	219.2	1.00	1.08	29.3
Approach		1436	2.0	0.888	34.1	LOS C	30.8	219.2	0.97	1.06	29.4
All Vehicles		5098	2.0	0.888	26.3	LOS B	30.8	219.2	0.80	0.82	33.4

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		Pedestrian ped	m		per ped	
P6	NorthEast Full Crossing	30	34.3	LOS D	0.1	0.1	0.93	0.93	
P7	NorthWest Full Crossing	30	28.1	LOS C	0.1	0.1	0.84	0.84	
All Pedestrians		60	31.2	LOS D			0.88	0.88	

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.

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Project: C:\Users\tomguerni\Dropbox (TDG)\Australia Business\Australia Jobs\14500 - 14999\14875 - Castle Hill South Traffic Study\SIDRA\14875 SIDRA - Future Intersections.sip7

# MOVEMENT SUMMARY

 **Site: 601 [ONR - McMullen - Future PM]**

Old Northern Road - McMullen Road

Future PM Peak

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
NorthEast: Old Northern Road											
25	T1	1626	2.0	0.618	5.6	LOS A	13.1	93.1	0.59	0.54	51.4
26	R2	600	2.0	0.894	42.8	LOS D	11.0	78.3	1.00	1.09	28.7
Approach		2226	2.0	0.894	15.6	LOS B	13.1	93.1	0.70	0.69	41.4
NorthWest: McMullen Avenue											
27	L2	1004	2.0	0.685	22.3	LOS B	12.6	89.8	0.88	0.85	37.4
29	R2	353	2.0	0.826	39.9	LOS C	6.0	42.4	1.00	0.97	13.8
Approach		1357	2.0	0.826	26.9	LOS B	12.6	89.8	0.91	0.88	32.0
SouthWest: Old Northern Road											
30	L2	123	2.0	0.098	6.3	LOS A	1.0	7.4	0.38	0.62	38.1
31	T1	1374	2.0	0.892	30.1	LOS C	24.9	177.3	1.00	1.13	31.7
Approach		1497	2.0	0.892	28.2	LOS B	24.9	177.3	0.95	1.08	31.9
All Vehicles		5080	2.0	0.894	22.3	LOS B	24.9	177.3	0.83	0.86	35.7

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		ped	m		per ped	
P6	NorthEast Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
P7	NorthWest Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
All Pedestrians		60	24.3	LOS C			0.90	0.90	

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.

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Project: C:\Users\tomguerni\Dropbox (TDG)\Australia Business\Australia Jobs\14500 - 14999\14875 - Castle Hill South Traffic Study\SIDRA\14875 SIDRA - Future Intersections.sip7

# MOVEMENT SUMMARY

 **Site: 601 [ONR - McMullen - Brisbane - Future AM]**

Old Northern Road - McMullen Road - Brisbane Road

Future AM Peak

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
SouthEast: Brisbane Road											
21	L2	89	2.0	0.338	55.7	LOS D	6.2	43.9	0.91	0.77	25.7
22	T1	21	2.0	0.338	50.2	LOS D	6.2	43.9	0.91	0.77	25.4
23	R2	72	2.0	0.382	52.6	LOS D	3.8	27.3	0.98	0.76	32.1
Approach		182	2.0	0.382	53.8	LOS D	6.2	43.9	0.94	0.77	28.4
NorthEast: Old Northern Road											
24	L2	141	2.0	1.113	185.6	LOS F	16.5	117.3	1.00	1.29	14.3
25	T1	1566	2.0	1.075	142.0	LOS F	89.3	635.9	1.00	1.54	13.7
26	R2	807	2.0	0.886	62.0	LOS E	23.8	169.3	1.00	1.07	23.5
Approach		2514	2.0	1.113	118.8	LOS F	89.3	635.9	1.00	1.38	15.8
NorthWest: McMullen Avenue											
27	L2	767	2.0	0.594	41.4	LOS C	20.1	143.4	0.86	0.83	28.8
28	T1	32	2.0	0.142	56.6	LOS E	1.8	13.0	0.93	0.68	25.1
29	R2	358	2.0	0.764	60.3	LOS E	10.5	75.1	1.00	0.92	15.6
Approach		1157	2.0	0.764	47.7	LOS D	20.1	143.4	0.91	0.86	24.6
SouthWest: Old Northern Road											
30	L2	69	2.0	0.074	11.0	LOS A	0.9	6.7	0.42	0.65	38.8
31	T1	1279	2.0	0.793	34.0	LOS C	35.8	254.7	0.92	0.83	33.5
32	R2	61	2.0	0.143	29.4	LOS C	2.0	14.1	0.83	0.72	34.6
Approach		1409	2.0	0.793	32.7	LOS C	35.8	254.7	0.89	0.82	33.7
All Vehicles		5262	2.0	1.113	77.8	LOS F	89.3	635.9	0.95	1.09	20.5

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		ped	m		per ped	
P5	SouthEast Full Crossing	30	25.9	LOS C	0.1	0.1	0.63	0.63	
P6	NorthEast Full Crossing	30	59.2	LOS E	0.1	0.1	0.96	0.96	
P7	NorthWest Full Crossing	30	32.6	LOS D	0.1	0.1	0.71	0.71	
All Pedestrians		90	39.2	LOS D			0.77	0.77	

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

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

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

# MOVEMENT SUMMARY

 **Site: 601 [ONR - McMullen - Brisbane - Future PM]**

Old Northern Road - McMullen Road - Brisbane Road

Future PM Peak

Signals - Fixed Time Isolated Cycle Time = 130 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
SouthEast: Brisbane Road											
21	L2	46	2.0	0.174	53.9	LOS D	3.1	21.8	0.88	0.73	26.2
22	T1	11	2.0	0.174	48.3	LOS D	3.1	21.8	0.88	0.73	25.9
23	R2	16	2.0	0.099	52.8	LOS D	0.8	5.9	0.96	0.68	32.0
Approach		73	2.0	0.174	52.9	LOS D	3.1	21.8	0.90	0.72	27.6
NorthEast: Old Northern Road											
24	L2	85	2.0	0.865	82.1	LOS F	6.1	43.3	1.00	0.93	25.3
25	T1	1545	2.0	0.896	40.6	LOS C	49.3	351.2	0.91	0.92	30.9
26	R2	600	2.0	0.804	48.9	LOS D	13.5	96.3	1.00	1.00	26.9
Approach		2230	2.0	0.896	44.4	LOS D	49.3	351.2	0.93	0.94	29.4
NorthWest: McMullen Avenue											
27	L2	1004	2.0	0.906	67.0	LOS E	36.7	261.6	1.00	0.98	22.0
28	T1	32	2.0	0.142	56.6	LOS E	1.8	13.0	0.93	0.68	25.1
29	R2	323	2.0	0.662	60.4	LOS E	9.4	66.8	0.99	0.90	15.6
Approach		1359	2.0	0.906	65.2	LOS E	36.7	261.6	1.00	0.95	20.9
SouthWest: Old Northern Road											
30	L2	123	2.0	0.133	12.2	LOS A	2.2	15.8	0.45	0.67	37.4
31	T1	1349	2.0	0.715	26.6	LOS B	33.5	238.7	0.83	0.75	37.1
32	R2	43	2.0	0.124	25.4	LOS B	1.3	9.2	0.78	0.73	36.6
Approach		1515	2.0	0.715	25.4	LOS B	33.5	238.7	0.80	0.75	37.1
All Vehicles		5177	2.0	0.906	44.4	LOS D	49.3	351.2	0.91	0.89	28.5

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		ped	m		per ped	
P5	SouthEast Full Crossing	30	20.5	LOS C	0.1	0.1	0.56	0.56	
P6	NorthEast Full Crossing	30	59.2	LOS E	0.1	0.1	0.96	0.96	
P7	NorthWest Full Crossing	30	26.5	LOS C	0.1	0.1	0.64	0.64	
All Pedestrians		90	35.4	LOS D			0.72	0.72	

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

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

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



# MOVEMENT SUMMARY

## Site: 401 [ONR - Showground - Future AM]

Old Northern Road - Showground Road

Future AM Peak

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Back of Queue Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
South: Old Northern Road											
1	L2	601	2.0	0.330	5.8	LOS A	1.7	12.4	0.11	0.55	51.7
2	T1	450	2.0	0.733	21.6	LOS B	12.6	89.7	0.94	0.87	29.9
Approach		1051	2.0	0.733	12.6	LOS A	12.6	89.7	0.47	0.68	42.6
North: Old Northern Road											
8	T1	51	2.0	0.051	7.7	LOS A	0.7	5.2	0.52	0.40	44.2
9	R2	91	2.0	0.497	35.5	LOS C	2.7	19.5	0.99	0.77	32.5
Approach		142	2.0	0.497	25.5	LOS B	2.7	19.5	0.82	0.63	34.5
West: Showground Road											
10	L2	209	2.0	0.726	27.3	LOS B	11.8	84.0	0.95	0.88	36.1
12	R2	587	2.0	0.726	28.3	LOS B	11.8	84.0	0.95	0.88	33.7
Approach		796	2.0	0.726	28.0	LOS B	11.8	84.0	0.95	0.88	34.4
All Vehicles		1989	2.0	0.733	19.7	LOS B	12.6	89.7	0.69	0.76	37.9

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Back of Queue Distance	Prop. Queued	Effective Stop Rate	
		ped/h	sec		ped	m		per ped	
P3	North Full Crossing	30	23.4	LOS C	0.0	0.0	0.88	0.88	
P4	West Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
All Pedestrians		60	23.9	LOS C			0.89	0.89	

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.

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# MOVEMENT SUMMARY

## Site: 401 [ONR - Showground - Future PM]

Old Northern Road - Showground Road

Future PM Peak

Signals - Fixed Time Isolated Cycle Time = 50 seconds (Practical Cycle Time)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Northern Road											
1	L2	621	2.0	0.339	5.6	LOS A	0.0	0.0	0.00	0.53	52.2
2	T1	386	2.0	0.716	19.6	LOS B	9.3	66.3	0.96	0.87	31.4
Approach		1007	2.0	0.716	11.0	LOS A	9.3	66.3	0.37	0.66	44.7
North: Old Northern Road											
8	T1	52	2.0	0.052	6.4	LOS A	0.6	4.4	0.52	0.39	46.3
9	R2	84	2.0	0.382	29.3	LOS C	2.1	14.6	0.96	0.76	35.2
Approach		136	2.0	0.382	20.5	LOS B	2.1	14.6	0.79	0.62	37.3
West: Showground Road											
10	L2	231	2.0	0.684	23.8	LOS B	8.7	62.1	0.94	0.87	37.9
12	R2	445	2.0	0.684	25.4	LOS B	8.7	62.1	0.95	0.87	35.2
Approach		676	2.0	0.684	24.9	LOS B	8.7	62.1	0.95	0.87	36.2
All Vehicles		1819	2.0	0.716	16.9	LOS B	9.3	66.3	0.61	0.73	40.1

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back Pedestrian ped	of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P3	North Full Crossing	30	19.4	LOS B	0.0	0.0	0.88	0.88	
P4	West Full Crossing	30	19.4	LOS B	0.0	0.0	0.88	0.88	
All Pedestrians		60	19.4	LOS B			0.88	0.88	

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.

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# MOVEMENT SUMMARY

 **Site: 502 [Terminus - Crane - Future AM]**

Terminus Street - Crane Street

Future AM Peak

Signals - Fixed Time Isolated Cycle Time = 135 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Terminus Street											
1	L2	141	2.0	0.972	71.4	LOS F	34.2	243.5	1.00	1.13	10.9
2	T1	840	2.0	0.972	66.0	LOS E	34.2	243.5	1.00	1.13	18.0
3	R2	190	2.0	1.167	231.3	LOS F	25.7	183.0	1.00	1.38	4.5
Approach		1171	2.0	1.167	93.5	LOS F	34.2	243.5	1.00	1.17	12.6
East: Crane Road											
4	L2	142	2.0	0.576	37.2	LOS C	22.9	162.8	0.82	0.76	21.5
5	T1	318	2.0	0.576	31.7	LOS C	22.9	162.8	0.82	0.76	16.4
6	R2	462	2.0	1.274	322.1	LOS F	78.6	559.8	1.00	1.62	3.7
Approach		922	2.0	1.274	178.0	LOS F	78.6	559.8	0.91	1.19	5.4
North: Terminus Street											
7	L2	325	2.0	1.269	310.1	LOS F	144.8	1030.8	1.00	1.97	3.7
8	T1	1298	2.0	1.269	305.6	LOS F	144.8	1030.8	1.00	2.10	5.0
9	R2	243	2.0	0.995	111.9	LOS F	21.9	156.2	1.00	1.09	9.4
Approach		1866	2.0	1.269	281.1	LOS F	144.8	1030.8	1.00	1.94	5.0
West: Crane Road											
10	L2	38	2.0	0.350	37.5	LOS C	12.1	86.1	0.73	0.67	23.0
11	T1	241	2.0	0.350	32.0	LOS C	12.1	86.1	0.73	0.67	16.6
12	R2	221	2.0	0.943	95.2	LOS F	19.3	137.2	1.00	1.07	9.9
Approach		500	2.0	0.943	60.3	LOS E	19.3	137.2	0.85	0.85	12.5
All Vehicles		4459	2.0	1.274	185.8	LOS F	144.8	1030.8	0.96	1.46	6.5

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	30	32.1	LOS D	0.1	0.1	0.69	0.69	
P2	East Full Crossing	30	58.9	LOS E	0.1	0.1	0.93	0.93	
P4	West Full Crossing	30	61.7	LOS F	0.1	0.1	0.96	0.96	
All Pedestrians		90	50.9	LOS E			0.86	0.86	

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

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

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

# MOVEMENT SUMMARY

 **Site: 502 [Terminus - Crane - Future PM]**

Terminus Street - Crane Street

Future PM Peak

Signals - Fixed Time Isolated Cycle Time = 145 seconds (Optimum Cycle Time - Minimum Delay)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Terminus Street											
1	L2	225	2.0	1.048	134.6	LOS F	83.3	593.2	1.00	1.33	6.7
2	T1	1081	2.0	1.048	132.0	LOS F	83.3	593.2	1.00	1.37	10.5
3	R2	288	2.0	1.364	400.1	LOS F	54.3	386.5	1.00	1.63	2.7
Approach		1594	2.0	1.364	180.8	LOS F	83.3	593.2	1.00	1.41	7.2
East: Crane Road											
4	L2	97	2.0	0.899	79.4	LOS F	27.9	198.5	1.00	1.02	12.2
5	T1	256	2.0	0.899	73.9	LOS F	27.9	198.5	1.00	1.02	8.5
6	R2	505	2.0	1.333	372.3	LOS F	92.6	659.5	1.00	1.62	3.2
Approach		858	2.0	1.333	250.2	LOS F	92.6	659.5	1.00	1.38	4.1
North: Terminus Street											
7	L2	465	2.0	1.362	379.8	LOS F	173.2	1233.4	1.00	1.86	3.0
8	T1	1348	2.0	1.362	383.3	LOS F	173.2	1233.4	1.00	2.16	4.0
9	R2	244	2.0	0.907	71.3	LOS F	15.8	112.6	1.00	1.01	13.4
Approach		2057	2.0	1.362	345.5	LOS F	173.2	1233.4	1.00	1.96	4.0
West: Crane Road											
10	L2	56	2.0	1.340	379.1	LOS F	64.8	461.2	1.00	1.98	3.1
11	T1	297	2.0	1.340	373.6	LOS F	64.8	461.2	1.00	1.98	1.9
12	R2	198	2.0	0.784	75.3	LOS F	14.4	102.3	1.00	0.88	11.9
Approach		551	2.0	1.340	266.9	LOS F	64.8	461.2	1.00	1.58	3.2
All Vehicles		5060	2.0	1.364	268.9	LOS F	173.2	1233.4	1.00	1.65	4.6

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped	
P1	South Full Crossing	30	57.5	LOS E	0.1	0.1	0.89	0.89	
P2	East Full Crossing	30	64.8	LOS F	0.1	0.1	0.95	0.95	
P4	West Full Crossing	30	35.2	LOS D	0.1	0.1	0.70	0.70	
All Pedestrians		90	52.5	LOS E			0.84	0.84	

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

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

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

# MOVEMENT SUMMARY

 **Site: 402 [Terminus - SC - Future AM]**

Terminus Road - Shopping Centre

Future AM Peak

Signals - Fixed Time Isolated Cycle Time = 60 seconds (Practical Cycle Time)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Terminus Road											
1	L2	80	2.0	0.062	8.6	LOS A	0.7	5.2	0.33	0.65	47.1
2	T1	1109	2.0	0.810	23.0	LOS B	17.4	123.9	0.95	0.95	28.3
Approach		1189	2.0	0.810	22.1	LOS B	17.4	123.9	0.91	0.93	29.6
North: Terminus Road											
8	T1	1301	2.0	0.596	9.2	LOS A	12.6	89.4	0.70	0.63	41.4
9	R2	225	2.0	0.614	36.4	LOS C	3.5	24.8	1.00	0.82	32.0
Approach		1526	2.0	0.614	13.2	LOS A	12.6	89.4	0.75	0.66	38.3
West: Shopping Centre Access											
10	L2	247	2.0	0.578	28.4	LOS B	6.7	47.6	0.94	0.81	35.3
12	R2	353	2.0	0.826	35.3	LOS C	11.6	82.5	1.00	0.97	30.5
Approach		600	2.0	0.826	32.5	LOS C	11.6	82.5	0.97	0.91	32.5
All Vehicles		3315	2.0	0.826	19.9	LOS B	17.4	123.9	0.85	0.80	33.7

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back Pedestrian ped	of Queue Distance m	Prop. Queued	Effective Stop Rate per ped	
P3	North Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
P4	West Full Crossing	30	24.3	LOS C	0.0	0.0	0.90	0.90	
All Pedestrians		60	24.3	LOS C			0.90	0.90	

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.

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# MOVEMENT SUMMARY

 **Site: 402 [Terminus - SC - Future PM]**

Terminus Road - Shopping Centre

Future PM Peak

Signals - Fixed Time Isolated Cycle Time = 50 seconds (Practical Cycle Time)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Terminus Road											
1	L2	67	2.0	0.057	9.2	LOS A	0.6	4.3	0.39	0.66	46.5
2	T1	1076	2.0	0.838	22.8	LOS B	15.2	108.1	0.98	1.02	28.4
Approach		1143	2.0	0.838	22.0	LOS B	15.2	108.1	0.94	1.00	29.6
North: Terminus Road											
8	T1	1414	2.0	0.633	7.6	LOS A	11.6	82.7	0.71	0.64	43.8
9	R2	236	2.0	0.537	30.0	LOS C	3.0	21.1	0.98	0.79	34.7
Approach		1650	2.0	0.633	10.8	LOS A	11.6	82.7	0.75	0.66	40.9
West: Shopping Centre Access											
10	L2	177	2.0	0.537	26.9	LOS B	4.2	29.8	0.95	0.80	36.1
12	R2	287	2.0	0.871	35.7	LOS C	8.6	61.3	1.00	1.06	30.3
Approach		464	2.0	0.871	32.3	LOS C	8.6	61.3	0.98	0.96	32.5
All Vehicles		3257	2.0	0.871	17.8	LOS B	15.2	108.1	0.85	0.82	34.9

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped	
P3	North Full Crossing	30	19.4	LOS B	0.0	0.0	0.88	0.88	
P4	West Full Crossing	30	19.4	LOS B	0.0	0.0	0.88	0.88	
All Pedestrians		60	19.4	LOS B			0.88	0.88	

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.

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# MOVEMENT SUMMARY

 **Site: 201v [ONR - Francis - Future AM]**

Old Northern Road - Francis Street  
Future AM Peak

Signals - Fixed Time Isolated Cycle Time = 90 seconds (Practical Cycle Time)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Northern Road											
2	T1	1462	2.0	0.481	3.4	LOS A	10.7	76.5	0.37	0.34	52.7
3	R2	337	2.0	0.696	39.2	LOS C	12.5	89.0	0.96	1.00	21.3
Approach		1799	2.0	0.696	10.1	LOS A	12.5	89.0	0.48	0.46	41.6
East: Francis Street											
4	L2	386	2.0	0.709	31.0	LOS C	14.2	101.3	0.87	0.83	23.8
6	R2	109	2.0	0.765	54.0	LOS D	5.2	37.3	1.00	0.90	21.4
Approach		495	2.0	0.765	36.1	LOS C	14.2	101.3	0.90	0.85	23.1
North: Old Northern Road											
7	L2	146	2.0	0.873	34.8	LOS C	38.7	275.6	0.95	0.98	29.6
8	T1	1564	2.0	0.873	29.2	LOS C	39.0	277.5	0.96	0.98	27.3
Approach		1710	2.0	0.873	29.7	LOS C	39.0	277.5	0.96	0.98	27.6
All Vehicles		4004	2.0	0.873	21.7	LOS B	39.0	277.5	0.73	0.73	31.5

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	30	14.5	LOS B	0.0	0.0	0.57	0.57
P3	North Full Crossing	30	39.2	LOS D	0.1	0.1	0.93	0.93
All Pedestrians		60	26.9	LOS C			0.75	0.75

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.

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# MOVEMENT SUMMARY

 **Site: 201v [ONR - Francis - Future PM]**

Old Northern Road - Francis Street  
Future PM Peak

Signals - Fixed Time Isolated Cycle Time = 110 seconds (Practical Cycle Time)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Northern Road											
2	T1	1490	2.0	0.642	3.9	LOS A	20.9	148.9	0.38	0.35	51.9
3	R2	393	2.0	0.766	49.4	LOS D	18.1	128.7	0.98	1.06	18.5
Approach		1883	2.0	0.766	13.4	LOS A	20.9	148.9	0.51	0.50	38.0
East: Francis Street											
4	L2	363	2.0	0.615	33.6	LOS C	15.2	108.3	0.84	0.81	22.8
6	R2	74	2.0	0.494	59.5	LOS E	4.0	28.5	1.00	0.76	20.3
Approach		437	2.0	0.615	38.0	LOS C	15.2	108.3	0.86	0.80	22.2
North: Old Northern Road											
7	L2	151	2.0	0.888	40.2	LOS C	48.3	344.1	0.97	0.98	27.4
8	T1	1612	2.0	0.888	34.5	LOS C	48.7	346.4	0.97	0.98	24.9
Approach		1763	2.0	0.888	35.0	LOS C	48.7	346.4	0.97	0.98	25.2
All Vehicles		4083	2.0	0.888	25.3	LOS B	48.7	346.4	0.74	0.74	29.2

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

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

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

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

Movement Performance - Pedestrians								
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	30	16.4	LOS B	0.1	0.1	0.55	0.55
P3	North Full Crossing	30	49.2	LOS E	0.1	0.1	0.95	0.95
All Pedestrians		60	32.8	LOS D			0.75	0.75

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.

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# MOVEMENT SUMMARY

 **Site: 303 [Orange - Cecil Future AM]**

Orange Grove - Cecil Avenue  
Future AM Peak  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Orange Grove											
1	L2	79	2.0	0.454	6.7	LOS A	3.1	21.8	0.61	0.68	40.4
2	T1	309	2.0	0.454	6.4	LOS A	3.1	21.8	0.61	0.68	42.5
3	R2	45	2.0	0.454	9.1	LOS A	3.1	21.8	0.61	0.68	43.6
3u	U	1	2.0	0.454	10.5	LOS A	3.1	21.8	0.61	0.68	40.6
Approach		434	2.0	0.454	6.7	LOS A	3.1	21.8	0.61	0.68	42.3
East: Cecil Avenue											
4	L2	79	2.0	0.225	6.7	LOS A	1.3	9.0	0.56	0.67	43.0
5	T1	80	2.0	0.225	6.3	LOS A	1.3	9.0	0.56	0.67	44.3
6	R2	39	2.0	0.225	9.1	LOS A	1.3	9.0	0.56	0.67	44.5
6u	U	1	2.0	0.225	10.5	LOS A	1.3	9.0	0.56	0.67	45.6
Approach		199	2.0	0.225	7.0	LOS A	1.3	9.0	0.56	0.67	43.8
North: Orange Grove											
7	L2	22	2.0	0.295	4.7	LOS A	1.9	13.6	0.28	0.54	44.6
8	T1	172	2.0	0.295	4.3	LOS A	1.9	13.6	0.28	0.54	43.2
9	R2	179	2.0	0.295	7.1	LOS A	1.9	13.6	0.28	0.54	43.4
9u	U	3	2.0	0.295	8.4	LOS A	1.9	13.6	0.28	0.54	44.6
Approach		376	2.0	0.295	5.7	LOS A	1.9	13.6	0.28	0.54	43.4
West: Cecil Avenue											
10	L2	21	2.0	0.059	6.4	LOS A	0.3	2.2	0.55	0.65	41.9
11	T1	8	2.0	0.059	6.1	LOS A	0.3	2.2	0.55	0.65	44.0
12	R2	19	2.0	0.059	8.9	LOS A	0.3	2.2	0.55	0.65	40.5
12u	U	2	2.0	0.059	10.2	LOS A	0.3	2.2	0.55	0.65	42.0
Approach		50	2.0	0.059	7.5	LOS A	0.3	2.2	0.55	0.65	41.9
All Vehicles		1059	2.0	0.454	6.4	LOS A	3.1	21.8	0.48	0.63	43.0

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

 **Site: 303 [Orange - Cecil Future PM]**

Orange Grove - Cecil Avenue  
Future PM Peak  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Orange Grove											
1	L2	35	2.0	0.488	7.0	LOS A	3.5	24.8	0.68	0.72	39.9
2	T1	313	2.0	0.488	6.7	LOS A	3.5	24.8	0.68	0.72	42.0
3	R2	97	2.0	0.488	9.4	LOS A	3.5	24.8	0.68	0.72	43.2
3u	U	1	2.0	0.488	10.8	LOS A	3.5	24.8	0.68	0.72	40.0
Approach		446	2.0	0.488	7.3	LOS A	3.5	24.8	0.68	0.72	42.2
East: Cecil Avenue											
4	L2	34	2.0	0.112	7.9	LOS A	0.6	4.5	0.67	0.72	42.1
5	T1	28	2.0	0.112	7.6	LOS A	0.6	4.5	0.67	0.72	43.4
6	R2	17	2.0	0.112	10.4	LOS A	0.6	4.5	0.67	0.72	43.7
6u	U	1	2.0	0.112	11.7	LOS A	0.6	4.5	0.67	0.72	44.9
Approach		80	2.0	0.112	8.4	LOS A	0.6	4.5	0.67	0.72	42.9
North: Orange Grove											
7	L2	18	2.0	0.490	5.4	LOS A	3.9	27.5	0.50	0.60	44.1
8	T1	266	2.0	0.490	5.1	LOS A	3.9	27.5	0.50	0.60	42.4
9	R2	280	2.0	0.490	7.9	LOS A	3.9	27.5	0.50	0.60	42.7
9u	U	3	2.0	0.490	9.2	LOS A	3.9	27.5	0.50	0.60	44.0
Approach		567	2.0	0.490	6.5	LOS A	3.9	27.5	0.50	0.60	42.7
West: Cecil Avenue											
10	L2	63	2.0	0.144	6.9	LOS A	0.8	5.9	0.61	0.69	41.8
11	T1	18	2.0	0.144	6.5	LOS A	0.8	5.9	0.61	0.69	43.9
12	R2	32	2.0	0.144	9.3	LOS A	0.8	5.9	0.61	0.69	40.4
12u	U	3	2.0	0.144	10.7	LOS A	0.8	5.9	0.61	0.69	41.9
Approach		116	2.0	0.144	7.6	LOS A	0.8	5.9	0.61	0.69	41.9
All Vehicles		1209	2.0	0.490	7.0	LOS A	3.9	27.5	0.59	0.66	42.4

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

 **Site: 203 [Francis - Orange - Future AM]**

Francis Street - Orange Grove  
Future AM Peak  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
East: Francis Street											
5	T1	29	2.0	0.053	6.5	LOS A	0.2	1.8	0.43	0.63	48.2
6	R2	21	2.0	0.053	9.0	LOS A	0.2	1.8	0.43	0.63	48.7
Approach		50	2.0	0.053	7.6	LOS A	0.2	1.8	0.43	0.63	48.4
North: Orange Grove											
7	L2	8	2.0	0.190	5.7	LOS A	1.0	7.5	0.06	0.66	48.5
9	R2	283	2.0	0.190	7.4	LOS A	1.0	7.5	0.06	0.66	40.8
Approach		291	2.0	0.190	7.4	LOS A	1.0	7.5	0.06	0.66	41.2
West: Francis Street											
10	L2	347	2.0	0.247	5.8	LOS A	1.6	11.3	0.13	0.58	41.7
11	T1	8	2.0	0.247	5.0	LOS A	1.6	11.3	0.13	0.58	49.8
Approach		355	2.0	0.247	5.7	LOS A	1.6	11.3	0.13	0.58	41.9
All Vehicles		696	2.0	0.247	6.6	LOS A	1.6	11.3	0.12	0.61	42.4

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

 **Site: 203 [Francis - Orange - Future PM]**

Francis Street - Orange Grove  
Future PM Peak  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		Total veh/h	HV %	v/c	sec		veh	m		per veh	km/h
East: Francis Street											
5	T1	8	2.0	0.016	6.5	LOS A	0.1	0.5	0.43	0.60	48.1
6	R2	7	2.0	0.016	9.0	LOS A	0.1	0.5	0.43	0.60	48.6
Approach		15	2.0	0.016	7.7	LOS A	0.1	0.5	0.43	0.60	48.4
North: Orange Grove											
7	L2	22	2.0	0.225	5.8	LOS A	1.3	8.9	0.13	0.64	48.4
9	R2	293	2.0	0.225	7.6	LOS A	1.3	8.9	0.13	0.64	40.6
Approach		315	2.0	0.225	7.4	LOS A	1.3	8.9	0.13	0.64	41.5
West: Francis Street											
10	L2	445	2.0	0.300	5.7	LOS A	2.1	14.8	0.07	0.59	42.0
11	T1	27	2.0	0.300	4.9	LOS A	2.1	14.8	0.07	0.59	50.0
Approach		472	2.0	0.300	5.6	LOS A	2.1	14.8	0.07	0.59	42.7
All Vehicles		802	2.0	0.300	6.4	LOS A	2.1	14.8	0.10	0.61	42.4

Site Level of Service (LOS) Method: Delay (RTA NSW). 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.

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY



**Site: 302 [Terminus - Cecil - Future AM]**

Terminus Street - Cecil Avenue  
Future AM Peak  
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Cecil Avenue											
21	L2	353	2.0	0.559	16.2	LOS B	3.6	25.6	0.74	1.16	35.4
Approach		353	2.0	0.559	16.2	LOS B	3.6	25.6	0.74	1.16	35.4
NorthEast: Terminus Street											
24	L2	131	2.0	0.418	5.6	LOS A	0.0	0.0	0.00	0.10	53.3
25	T1	1473	2.0	0.418	0.0	LOS A	0.0	0.0	0.00	0.04	58.2
Approach		1604	2.0	0.418	0.5	NA	0.0	0.0	0.00	0.05	57.5
All Vehicles		1957	2.0	0.559	3.3	NA	3.6	25.6	0.13	0.25	49.6

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY



**Site: 302 [Terminus - Cecil - Future PM]**

Terminus Street - Cecil Avenue  
Future PM Peak  
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Cecil Avenue											
21	L2	417	2.0	0.781	23.6	LOS B	6.9	48.9	0.88	1.40	30.0
Approach		417	2.0	0.781	23.6	LOS B	6.9	48.9	0.88	1.40	30.0
NorthEast: Terminus Street											
24	L2	152	2.0	0.481	5.6	LOS A	0.0	0.0	0.00	0.10	53.3
25	T1	1692	2.0	0.481	0.0	LOS A	0.0	0.0	0.00	0.04	58.2
Approach		1844	2.0	0.481	0.5	NA	0.0	0.0	0.00	0.05	57.5
All Vehicles		2261	2.0	0.781	4.7	NA	6.9	48.9	0.16	0.30	46.4

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

▽ Site: 202 [Francis - Roger - Future AM]

Francis Street - Roger Avenue  
Future AM Peak  
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Francis Street											
5	T1	388	2.0	0.202	0.0	LOS A	0.0	0.1	0.00	0.00	50.0
6	R2	1	2.0	0.202	6.9	LOS A	0.0	0.1	0.00	0.00	46.0
Approach		389	2.0	0.202	0.0	NA	0.0	0.1	0.00	0.00	49.9
North: Roger Avenue											
7	L2	2	2.0	0.142	6.0	LOS A	0.5	3.3	0.60	0.82	32.4
9	R2	77	2.0	0.142	9.4	LOS A	0.5	3.3	0.60	0.82	36.3
Approach		79	2.0	0.142	9.3	LOS A	0.5	3.3	0.60	0.82	36.2
West: Francis Street											
10	L2	91	2.0	0.245	4.6	LOS A	0.0	0.0	0.00	0.11	47.1
11	T1	376	2.0	0.245	0.0	LOS A	0.0	0.0	0.00	0.11	48.5
Approach		467	2.0	0.245	0.9	NA	0.0	0.0	0.00	0.11	48.2
All Vehicles		935	2.0	0.245	1.3	NA	0.5	3.3	0.05	0.12	47.6

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

Site: 202 [Francis - Roger - Future PM]

Francis Street - Roger Avenue  
Future PM Peak  
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Francis Street											
5	T1	329	2.0	0.173	0.0	LOS A	0.0	0.2	0.01	0.00	49.9
6	R2	2	2.0	0.173	7.1	LOS A	0.0	0.2	0.01	0.00	45.9
Approach		331	2.0	0.173	0.1	NA	0.0	0.2	0.01	0.00	49.9
North: Roger Avenue											
7	L2	1	2.0	0.166	6.4	LOS A	0.5	3.8	0.62	0.83	32.2
9	R2	89	2.0	0.166	9.6	LOS A	0.5	3.8	0.62	0.83	36.0
Approach		90	2.0	0.166	9.6	LOS A	0.5	3.8	0.62	0.83	36.0
West: Francis Street											
10	L2	60	2.0	0.267	4.6	LOS A	0.0	0.0	0.00	0.06	47.6
11	T1	451	2.0	0.267	0.0	LOS A	0.0	0.0	0.00	0.06	49.0
Approach		511	2.0	0.267	0.6	NA	0.0	0.0	0.00	0.06	48.9
All Vehicles		932	2.0	0.267	1.3	NA	0.5	3.8	0.06	0.12	47.6

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

▽ Site: 602 [ONR - Brisbane - Future AM]

Old Northern Road - Brisbane Road  
Future AM Peak  
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Brisbane Road											
21	L2	85	2.0	0.220	14.3	LOS A	0.8	5.4	0.76	0.91	44.3
23	R2	88	2.0	14.667	12418.1	LOS F	78.6	559.3	1.00	1.42	0.2
Approach		173	2.0	14.667	6323.8	LOS F	78.6	559.3	0.88	1.17	0.4
NorthEast: Old Northern Road											
24	L2	134	2.0	0.544	3.5	LOS A	0.0	0.0	0.00	0.07	56.0
25	T1	1954	2.0	0.544	0.0	LOS A	0.0	0.0	0.00	0.03	59.1
Approach		2088	2.0	0.544	0.2	NA	0.0	0.0	0.00	0.04	58.8
SouthWest: Old Northern Road											
31	T1	1348	2.0	0.344	1.7	LOS A	1.7	12.4	0.02	0.00	55.0
32	R2	58	2.0	1.526	630.6	LOS F	17.0	121.0	1.00	1.86	3.9
Approach		1406	2.0	1.526	27.6	NA	17.0	121.0	0.06	0.08	24.1
All Vehicles		3667	2.0	14.667	309.1	NA	78.6	559.3	0.06	0.11	3.6

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

▽ Site: 602 [ONR - Brisbane - Future PM]

Old Northern Road - Brisbane Road  
Future PM Peak  
Giveaway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
SouthEast: Brisbane Road											
21	L2	44	2.0	0.114	13.6	LOS A	0.4	2.6	0.73	0.89	44.8
23	R2	25	2.0	4.167	3110.6	LOS F	19.6	139.7	1.00	1.35	0.6
Approach		69	2.0	4.167	1135.7	LOS F	19.6	139.7	0.83	1.05	1.9
NorthEast: Old Northern Road											
24	L2	81	2.0	0.515	3.5	LOS A	0.0	0.0	0.00	0.05	56.3
25	T1	1899	2.0	0.515	0.0	LOS A	0.0	0.0	0.00	0.02	59.4
Approach		1980	2.0	0.515	0.2	NA	0.0	0.0	0.00	0.02	59.2
SouthWest: Old Northern Road											
31	T1	1472	2.0	0.255	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
32	R2	41	2.0	0.777	150.0	LOS F	2.7	19.0	0.99	1.11	14.0
Approach		1513	2.0	0.777	4.1	NA	2.7	19.0	0.03	0.03	49.3
All Vehicles		3562	2.0	4.167	23.8	NA	19.6	139.7	0.03	0.05	25.6

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY



**Site: 101 [ONR - Church - Future AM]**

Old Northern Road - Church Street  
Future AM Peak

Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Northern Road											
2	T1	1618	2.0	0.502	5.7	LOS A	18.6	132.3	0.40	0.01	51.6
3	R2	16	2.0	0.502	67.8	LOS E	18.6	132.3	1.00	0.02	42.5
Approach		1634	2.0	0.502	6.3	NA	18.6	132.3	0.41	0.01	51.4
East: Church Street											
4	L2	31	2.0	0.087	16.2	LOS B	0.3	2.0	0.72	1.00	42.1
6	R2	21	2.0	1.000	341.9	LOS F	3.0	21.6	1.00	1.18	3.8
Approach		52	2.0	1.000	147.7	LOS F	3.0	21.6	0.83	1.08	11.9
North: Old Northern Road											
7	L2	49	2.0	0.469	5.6	LOS A	0.0	0.0	0.00	0.03	54.5
8	T1	1755	2.0	0.469	0.0	LOS A	0.0	0.0	0.00	0.02	59.6
Approach		1804	2.0	0.469	0.2	NA	0.0	0.0	0.00	0.02	59.5
All Vehicles		3490	2.0	1.000	5.2	NA	18.6	132.3	0.20	0.03	52.5

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY



**Site: 101 [ONR - Church - Future PM]**

Old Northern Road - Church Street  
Future PM Peak

Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Northern Road											
2	T1	1711	2.0	0.582	8.2	LOS A	18.4	130.7	0.34	0.02	48.7
3	R2	27	2.0	0.582	67.4	LOS E	18.4	130.7	1.00	0.05	36.8
Approach		1738	2.0	0.582	9.1	NA	18.4	130.7	0.35	0.02	48.4
East: Church Street											
4	L2	18	2.0	0.049	15.7	LOS B	0.2	1.1	0.70	1.00	42.4
6	R2	11	2.0	1.000	568.9	LOS F	2.6	18.7	1.00	1.11	2.4
Approach		29	2.0	1.000	225.5	LOS F	2.6	18.7	0.82	1.04	8.5
North: Old Northern Road											
7	L2	64	2.0	0.470	5.6	LOS A	0.0	0.0	0.00	0.04	54.4
8	T1	1742	2.0	0.470	0.0	LOS A	0.0	0.0	0.00	0.02	59.6
Approach		1806	2.0	0.470	0.2	NA	0.0	0.0	0.00	0.02	59.4
All Vehicles		3573	2.0	1.000	6.4	NA	18.4	130.7	0.18	0.03	51.2

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

Site: 503 [Crane - Orange - Future AM]

Crane Road - Orange Grove  
Future AM Peak  
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Orange Grove											
1	L2	421	2.0	0.403	8.1	LOS A	2.4	16.8	0.54	0.79	32.8
3	R2	5	2.0	0.403	22.7	LOS B	2.4	16.8	0.54	0.79	50.0
Approach		426	2.0	0.403	8.3	LOS A	2.4	16.8	0.54	0.79	33.0
East: Crane Road											
4	L2	21	2.0	0.208	5.6	LOS A	0.0	0.0	0.00	0.03	57.6
5	T1	405	2.0	0.208	0.0	LOS A	0.0	0.0	0.00	0.03	59.5
Approach		426	2.0	0.208	0.3	NA	0.0	0.0	0.00	0.03	59.4
West: Crane Road											
11	T1	169	2.0	0.640	4.8	LOS A	7.9	56.2	0.72	0.80	48.0
12	R2	643	2.0	0.640	10.3	LOS A	7.9	56.2	0.72	0.80	42.7
Approach		812	2.0	0.640	9.2	NA	7.9	56.2	0.72	0.80	44.0
All Vehicles		1664	2.0	0.640	6.7	NA	7.9	56.2	0.49	0.60	44.1

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY

Site: 503 [Crane - Orange - Future PM]

Crane Road - Orange Grove  
Future PM Peak  
Giveway / Yield (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Orange Grove											
1	L2	557	2.0	0.461	6.7	LOS A	2.9	20.7	0.40	0.62	33.5
3	R2	13	2.0	0.461	28.0	LOS B	2.9	20.7	0.40	0.62	50.9
Approach		570	2.0	0.461	7.2	LOS A	2.9	20.7	0.40	0.62	33.9
East: Crane Road											
4	L2	7	2.0	0.096	5.6	LOS A	0.0	0.0	0.00	0.02	57.7
5	T1	189	2.0	0.096	0.0	LOS A	0.0	0.0	0.00	0.02	59.7
Approach		196	2.0	0.096	0.2	NA	0.0	0.0	0.00	0.02	59.6
West: Crane Road											
11	T1	344	2.0	0.637	2.2	LOS A	8.8	62.8	0.54	0.47	51.5
12	R2	691	2.0	0.637	7.9	LOS A	8.8	62.8	0.54	0.47	46.4
Approach		1035	2.0	0.637	6.0	NA	8.8	62.8	0.54	0.47	48.3
All Vehicles		1801	2.0	0.637	5.8	NA	8.8	62.8	0.43	0.47	44.0

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY



**Site: 201 [ONR - Francis - Future AM]**

Old Northern Road - Francis Street  
Future AM Peak

Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Northern Road											
2	T1	1462	2.0	0.759	0.1	LOS A	0.0	0.0	0.00	0.00	59.5
3	R2	337	2.0	2.631	1496.7	LOS F	138.4	985.3	1.00	5.39	0.9
Approach		1799	2.0	2.631	280.4	NA	138.4	985.3	0.19	1.01	4.8
East: Francis Street											
4	L2	386	2.0	0.811	25.7	LOS B	7.7	55.0	0.89	1.52	27.0
6	R2	109	2.0	1.000	79.8	LOS F	4.5	31.7	1.00	1.53	17.1
Approach		495	2.0	1.000	37.6	LOS C	7.7	55.0	0.91	1.52	23.2
North: Old Northern Road											
7	L2	146	2.0	0.446	5.6	LOS A	0.0	0.0	0.00	0.10	55.0
8	T1	1564	2.0	0.446	0.0	LOS A	0.0	0.0	0.00	0.05	58.9
Approach		1710	2.0	0.446	0.5	NA	0.0	0.0	0.00	0.05	58.4
All Vehicles		4004	2.0	2.631	130.9	NA	138.4	985.3	0.20	0.66	9.5

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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# MOVEMENT SUMMARY



**Site: 201 [ONR - Francis - Future PM]**

Old Northern Road - Francis Street  
Future PM Peak

Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Old Northern Road											
2	T1	1490	2.0	0.774	0.1	LOS A	0.0	0.0	0.00	0.00	59.4
3	R2	393	2.0	3.457	2237.0	LOS F	184.2	1311.7	1.00	5.51	0.6
Approach		1883	2.0	3.457	466.9	NA	184.2	1311.7	0.21	1.15	3.0
East: Francis Street											
4	L2	363	2.0	0.792	25.4	LOS B	7.0	49.5	0.88	1.47	27.2
6	R2	74	2.0	1.000	111.4	LOS F	3.9	28.0	1.00	1.42	13.4
Approach		437	2.0	1.000	39.9	LOS C	7.0	49.5	0.90	1.46	22.2
North: Old Northern Road											
7	L2	151	2.0	0.460	5.6	LOS A	0.0	0.0	0.00	0.10	55.0
8	T1	1612	2.0	0.460	0.0	LOS A	0.0	0.0	0.00	0.05	58.8
Approach		1763	2.0	0.460	0.5	NA	0.0	0.0	0.00	0.05	58.4
All Vehicles		4083	2.0	3.457	219.8	NA	184.2	1311.7	0.19	0.71	6.1

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

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

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

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

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

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