SCENTRE GROUP

WESTFIELD KOTARA SHOPPING CENTRE EXTENSIONS - TRAFFIC ASESSESSMENT

NOVEMBER 2016

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1. INTRODUCTION

1.1. Colston Budd Rogers & Kafes Pty Ltd has been commissioned by Scentre Group to assess the traffic effects of the proposed extensions to Westfield Kotara Shopping Centre. The traffic assessment has been requested by RMS as set out in its letter dated 11 October 2016. The matters raised by RMS are set out below.

Roads and Maritime objects to the proposal until the following information is submitted for review:

- An updated Traffic Assessment Report that includes:
  - Assessment of all relevant vehicular traffic routes and intersections for access to / from the site.
  - Current traffic counts for all of the traffic routes and intersections including the Thursday and Saturday peak periods.
  - The distribution on the road network of the trips generated by the proposed development. It is requested that the predicted traffic flows are shown diagrammatically to a level of detail sufficient for easy interpretation.
  - Traffic analysis of the relevant intersections impacted by the development, using SIDRA or similar traffic model (including a copy of the electronic files)
  - Consideration of the traffic impacts of the proposed development on the current levels of service at critical intersections.

Comment: Roads and Maritime understands that the ongoing incremental development to the Kotara Shopping Centre will create further pressure on the adjacent intersections and adversely impact the safety and efficiency of the surrounding road network. An updated Traffic Assessment Report is required to assess the shopping centre's overall impact on the local road network and ensure that the proposed development does not significantly impact on the operation of traffic at the surrounding intersections.

1.2. The last major traffic assessment for development at Westfield Kotara shopping centre was undertaken in 2009 as part of the approved Entertainment and Lifestyle Extensions (ELP). Since then there have been a number of minor extensions to the shopping centre completed or approved. The existing shopping centre has some 74,560m^2 GLA with some 1,336m^2 GLA currently under construction (approved mini-major). The current DA will expand the shopping centre by an additional 6,295m^2.

1.3. This report assesses the cumulative traffic effects of approved (but not completed) and proposed extensions to the shopping centre and address the matters raised by RMS in its letter dated 11 October 2016. The report also assesses some minor changes in the DA with respect to parking.

1.4. The scope of the traffic assessment is the same as undertaken for the last major traffic assessment of extensions to the shopping centre in 2009.

1.5. The findings of the traffic assessment are set down in Chapter 2.

2. TRAFFIC ASSESSMENT

2.1. The traffic assessment is set down through the following sections:

- existing centre;
- road network;
- existing traffic flows;
- existing intersection operation;
- proposed development;
- parking provision;
- traffic effects; and
- summary.

Existing Centre

2.2. Westfield Kotara Shopping Centre is located as shown on Figure 1. The centre occupies the whole of the site bounded by Northcott Drive, Park Avenue, Lexington Parade, Hudson Park and Cynthia Street. The centre currently has a gross leasable area (GLA) of some 74,560m^2. Parking is provided in structured, ground level, undercroft and roof parking. The centre also has approval for an additional 1,336m^2 of retail space (mini-major).

2.3. The main vehicular entry to the centre is provided via a signal controlled intersection with Park Avenue, located about half way between Northcott Drive and Lexington Parade. A left in ingress only is provided to the multi deck car park from Park Avenue, between the main access and Northcott Drive. The main pedestrian entry to the centre is also located on Park Avenue, between the two vehicular accesses. A bus bay is provided in front of this entrance.

2.4. The centre has two driveways off Lexington Parade, an entry only opposite Princeton Avenue and an entry/exit adjacent to the southern boundary of the site.

The centre has an egress to Northcott Drive, between Cynthia Street and Park Avenue. This access is limited to left turns only due to the median in Northcott Drive. The centre has three driveways off Cynthia Street. The driveway closest to the Northcott Drive accesses service areas and is restricted to use by service vehicles. The other two accesses connect to parking and provide for both entry and exit.

2.5. The Park Avenue access driveway provides connections to the two main structure car parks, located either side of the access, fronting Park Avenue. The accesses off Lexington Parade, Cynthia Street and Northcott Drive primarily provide access to the ground level and undercroft parking, as well as to the roof parking. The parking within the centre is interconnected making it possible to search all areas without leaving the site.

Road Network

2.6. Northcott Drive and Park Avenue are major roads. Northcott Drive is a six lane divided road in the vicinity of the site. Park Avenue is a four lane road with additional turn lanes at intersections. The intersections of Northcott Drive, the main centre access and Lexington Parade with Park Avenue are controlled by signals.

2.7. All other intersections in the vicinity of the site are priority intersections. Vehicles moving between Northcott Drive and Cynthia Street have to left turn in and out of Cynthia Street due to the median in Northcott Drive. There is a substantial level difference between the north and southbound carriageways of Northcott Drive in the vicinity of Cynthia Street.

Existing Traffic Flows

2.8. Updated traffic counts have been undertaken at the following intersections:-

- Park Avenue with
  - Lexington Parade;
  - Centre Accesses;
  - Northcott Drive;
- Northcott Drive with
  - Cynthia Street;
  - Car Park Egress;
- Lexington Parade with
  - Princeton Avenue/Car Park ingress;
  - Centre Access;
- Cynthia Street with
  - Centre Access (Northern);
  - Centre Access (Southern).

2.9. The traffic counts were undertaken on Saturday 15 October 2016 (between 10.30am and 1.30pm) and Thursday 20 October 2016 (between 3.30pm and 6.30pm). The results are summarised in Table 2.1 and displayed in Figures 2 and 3. Table 2.1 also includes the 2009 traffic counts for comparison.

2.10. Examination of Table 2.1 reveals that:

- traffic flows were generally higher on the surrounding road network during the Thursday afternoon peak hour;
- the highest traffic flows were on Northcott Drive (some 1450 to 2,600 vehicles per hour, two way) and Park Avenue (some 1400 to 2,250 vehicles per hour, two way); and

- the next busiest street is Lexington Parade, which carries flows in the range 500 to 1,200 vehicles per hour. Princeton Avenue and Cynthia Street, just west of Northcott Drive, carry similar flows in the range 250 to 400 vehicles per hour. Flows in the southern section of Cynthia Street are much lower

Table 2.1 : Two-Way (sum of both directions) Peak Hour Traffic Flows

Location	Thursday		Saturday	
	2009	2016	2009	2016
Northcott Drive				
- north of Park Avenue	2570	2580	2335	2500
- south of Park Avenue	1700	2025	1405	1615
- south of Cynthia Street	1485	1955	1215	1455
Park Avenue				
- east of Northcott Drive	1425	1440	1300	1410
- west of Northcott Drive	2285	2240	1950	2035
- west of Centre Access	1860	1655	1540	1450
- west of Lexington Parade	1770	1830	1595	1415
Lexington Parade				
- south of Park Avenue	1070	1155	1225	1165
- south of Princeton Avenue	730	845	840	940
- south of Centre Access	490	535	695	520
Princeton Avenue				
- west of Lexington Parade	270	305	265	255
Cynthia Street				
- west of Northcott Drive	320	405	450	390
- south of Centre Access (N)	55	145	95	115
- south of Centre Access (S)	35	60	70	40

2.11. Comparing the 2009 with the 2016 traffic flows it can be seen that:

- 2016 Thursday traffic flows were generally similar to 2009 traffic flows;
- 2016 Saturday traffic flows were generally some 10% higher than 2009 traffic flows; and
- traffic flows along Northcott Drive (south of Park Avenue) had increased from 2009 to 2016.

2.12. The traffic counts also measured the number of vehicles entering and exiting the centre via the various access driveways. The surveys found that the centre generated:

- some 2,795 vehicles per hour (two way) in the Thursday afternoon peak hour. This equates to a generation rate of 3.8 vehicles per 100m^2 per hour (two way); and
- some 3,440 vehicles per hour (two way) in the Saturday midday peak hour. This equates to a generation rate of 4.6 vehicles per 100m^2 per hour (two way).

Existing Intersection Operations

2.13. The capacity of the road network is generally determined by the capacity of its intersections to cater for peak period traffic flows. The signalised intersections along Park Avenue (Park Avenue/Northcott Drive, Park Avenue/Site Access and Park Avenue/Lexington Parade) have been analysed using the SIDRA 7 network program. The intersections of Lexington Parade/Princeton Avenue and the internal roundabout off Park Avenue have been included in the SIDRA 7 network model due to their close proximity to the signalised intersections on Park Avenue. The SIDRA 7 network model is designed to analyse signal controlled intersections, roundabouts and priority intersections.

2.14. The program produces a number of measures of intersection operations. The most useful measure provided is average delay per vehicle expressed in seconds per vehicle. Based on average delay per vehicle, SIDRA estimates the following levels of service (LOS):-

- For Traffic Signals, the average delay per vehicle in seconds is calculated as Delay/(All Vehicles), for roundabouts the average delay per vehicle in seconds

is selected for the movement with the highest average delay per vehicle, equivalent to the following LOS:-

0 to 14	=	"A"	Good
15 to 28	=	"B"	Good with minimal delays and spare capacity
29 to 42	=	"C"	Satisfactory with spare capacity
43 to 56	=	"D"	Satisfactory but operating near capacity
57 to 70	=	"E"	At capacity and incidents will cause excessive delays. Roundabouts require other control Mode.
>70	=	"F"	Unsatisfactory and requires additional capacity

- For Give Way and Stop Signs, the average delay per vehicle in seconds is selected from the movement with the highest average delay per vehicle, equivalent to following LOS:-

0 to 14	=	"A"	Good
15 to 28	=	"B"	Acceptable delays and spare capacity
29 to 42	=	"C"	Satisfactory but accident study required
43 to 56	=	"D"	Near capacity and accident study required
57 to 70	=	"E"	At capacity and requires other control mode.
>70	=	"F"	Unsatisfactory and requires other control Mode

2.15. It should be noted that for roundabouts, give way and stop signs, in some circumstances, simply examining the highest individual average delay can be misleading. The size of the movement with the highest average delay per vehicle should also be taken into account. Thus, for example, an intersection where all movements are operating at a level of service A, except one which is at level of service E, may not necessarily define the intersection level of service as E if that

movement is very small. That is, longer delays to a small number of vehicles may not justify upgrading an intersection unless a safety issue was also involved.

2.16. The results of the intersection analyses are set out in Table 2.2.

Table 2.2 : Intersection Analysis Results for Existing Situation

Intersection	Average Delay[(1)]		Level of Service	
	Thursday	Saturday	Thursday	Saturday
Park Avenue with				
- Lexington Parade	25	25	B	B
- Centre Access	17	18	B	B
- Northcott Drive	44	44	D	D
Lexington Parade				
- Princeton Avenue	22	26	B	B
- Centre Access	17	19	B	B
Northcott Drive				
- Cynthia Street	9	9	A	A
- Centre Access	10	10	A	A

(1) Average delay expressed in seconds delay per vehicle

2.17. It can be seen from Table 2.2 that for the existing situation:

- the traffic signal controlled intersection of Park Avenue and Northcott Drive operates at level of service D, a satisfactory level of service for major traffic signal controlled intersection;

- the priority controlled intersections of Northcott Drive with the site access and Cynthia Street operate at level of service A/B, a good level of service;

- the traffic signal controlled intersections of Park Avenue with the site access and Lexington Parade operate at level of service B, a satisfactory level of service; and

- the priority controlled intersections of Lexington Parade with the site access and Princeton Avenue operate at level of service B, a satisfactory level of service.

Proposed Development

2.18. The proposed development includes the following:

- additional 6,295m^2 GLA retail area following reconfiguration of the eastern part of the shopping centre to create an eastern mall on Level 2;
- reconfiguration of the existing eastern at grade car park (along Northcott Drive) with part of this car park proposed to be under cover;
- modifications to the eastern loading dock on the corner of Northcott Drive and Cynthia Street to service the new retail area; and
- construction of a new car park on the eastern side of Level 3, that will connect the existing Park Avenue multi deck car park with the existing southern multi deck car park.

2.19. The DA originally submitted to Council has been modified to address matters raised by Council and this has allowed the development to be refined. With respect to traffic, the changes are:

- an increase in GLA of some 440m^2 (from 5,855m^2 to 6,295m^2);
- increase in additional parking from 189 to 197 spaces; and
- some minor modifications to the loading dock accessed from Cynthia Street.

2.20. These minor changes are addressed in this report.

Parking

2.21. Parking requirements for previous extensions to the shopping centre have been based on surveys of the 98th percentile existing demand of the shopping centre.

These surveys found a parking requirement of 3.8 spaces per 100m^2 GLA. Based on this rate the additional 6,295m^2 GLA would require 239 spaces.

2.22. A summary of existing parking provision and approved parking requirements is summarised below:

- existing parking requirement 2,830 spaces (Post ELP - DA 2003/2991) with a provision of 2,906 spaces (surplus of 76 spaces);
- as part of the approved Bowling Alley DA (DA 2010/0904) an additional 154 spaces to be constructed in L2M with a requirement for 66 spaces (hence additional surplus of 88 spaces); and
- as part of the approved mini-major (DA 2015/0838) a loss of 81 spaces with a requirement of 53 spaces (net requirement of 134 spaces). This was accommodated by the surplus of 164 spaces (existing surplus of 76 spaces and surplus of 88 spaces as part of Bowling Alley DA).

2.23. The Eastern Mall DA will replace the approved Bowling Alley DA, however, construction of the L2M car park will be retained. Thus there will be a surplus of 88 spaces on current approvals.

2.24. As part of the Eastern Mall DA an additional 197 parking spaces will be provided. This combined with surplus of 96 spaces (on current approvals) results in 293 spaces available to accommodate the required 239 spaces for the additional retail area and loss of 43 existing spaces (total requirement 282 spaces). This will result in a surplus of 11 spaces. Appropriate additional disabled parking will be provided in accordance with Council requirements.

2.25. With regards to provision of staff parking, the proposed Eastern Mall and approved mini-major DA will result in an increase of the approved shopping centre by some 8%. As part of the 2013 approval for the ELP (an increase of some 3.5% in the size of the shopping centre) staff parking was increased by 25% (from 320 to 400 spaces). Thus the increase in staff parking required with the proposed Eastern Mall and mini-

major DA could be readily accommodated by the expansion of the staff car park associated with the ELP.

Traffic Effects

2.26. The approved and proposed extensions will increase the retail area by 7,630m^2, to some 82,190m^2. The existing centre has a traffic generation rate of 3.8 vehicles per hour per 100m^2 during the Thursday afternoon peak hour and 4.6 vehicles per hour per 100m^2 during the Saturday peak hour. Using these rates the additional approved and proposed retail area would generate some 290 and 350 vehicles per hour (two way) during the Thursday afternoon and Saturday midday peak periods.

2.27. A proportion of additional generation will be "passing" trade. Passing trade is customers that are already in the traffic stream and would have driven past the centre regardless of their visit to the centre. RTA guidelines suggest that passing trade is typically 15 to 25 per cent of total generation. A figure of 15 per cent has been adopted. Thus the net increase in traffic generation would be some 245 and 295 vehicles per hour (two way) during the Thursday afternoon and Saturday midday peak periods.

2.28. The additional traffic from the proposed and approved development has been assigned to the surrounding road network based on existing arrival and departure patterns and provision of the exit speed ramp to Northcott Drive. The increases in traffic flows are set out on Figures 2 and 3 and summarised in Table 2.3.

Table 2.3 :	**Existing + Development Two-Way (sum of both directions)Peak Hour Traffic Flows**

Location	**Thursday**		**Saturday**	
	Existing	+ Dev	Existing	+ Dev
Northcott Drive				
- north of Park Avenue	2580	+40	2500	+50
- south of Park Avenue	2025	+40	1615	+45
- south of Cynthia Street	1955	+5	1455	+15
Park Avenue				
- east of Northcott Drive	1440	+45	1410	+60
- west of Northcott Drive	2240	+55	2035	+70
- west of Centre Access	1655	+10	1450	+10
- west of Lexington Parade	1830	+70	1415	+75
Lexington Parade				
- south of Park Avenue	1155	+60	1165	+70
- south of Princeton Avenue	845	+55	940	+60
- south of Centre Access	535	+20	520	+30
Princeton Avenue				
- west of Lexington Parade	305	+0	255	+0
Cynthia Street				
- west of Northcott Drive	405	+15	390	+25
- south of Centre Access (N)	145	+5	115	+15
- south of Centre Access (S)	60	+5	40	+0

2.29. Examination of Table 2.3 reveals that the greatest increases in traffic flows occur on Park Avenue (west of Northcott Drive and Lexington Parade) and Lexington Parade (north of the site access). These increases would be some 55 to 75 vehicles per hour (two way) during the Thursday afternoon and Saturday peak periods.

2.30. On Northcott Drive, Lexington Parade (south of the site access), Park Avenue (between Lexington Parade and the centre access), Cynthia Street (west of Northcott Drive) and Northcott Drive (south of Cynthia Street) the increases are smaller ranging from 5 to 40 vehicles per hour during the peak periods on both Thursday and Saturday.

2.31. The intersections analysed in Chapter 2 have been reanalysed using SIDRA. The analysis has included traffic from the approved Kotara Homemaker centre located to the north of the site. The results of those analyses are summarised in Table 2.4.

Table 2.4 : Intersection Analysis Results with Development Traffic

Intersection	Average Delay(1)				Level of Service			
	Thursday		Saturday		Thursday		Saturday	
	Exist	With Dev	Exist	With Dev	Exist	With Dev	Exist	With Dev
Park Avenue with								
- Lexington Parade	25	27	25	27	B	B	B	B
- Centre Access	17	18	18	17	B	B	B	B
- Northcott Drive	44	47	44	49	D	D	D	D
Lexington Parade								
- Princeton Ave	22	24	26	30	B	B	B	C
- Centre Access	17	19	19	22	B	B	B	B
Northcott Drive								
- Cynthia Street	9	9	9	9	A	A	A	A
- Centre Access	10	10	10	10	B	B	B	B

(1) Average delay expressed in seconds delay per vehicle

2.32. Examination of Table 2.4 reveals that:

- the traffic signal controlled intersection of Park Avenue with Northcott Drive would continue to operate at level of service D, a satisfactory level of service in the peak periods. Average delays would increase by some 3 to 5 to seconds per vehicle;

- the traffic signal controlled intersections of Park Avenue with Lexington Parade and the centre access would continue to operate at level of service B, a satisfactory level of service in the peak periods. Average delays would increase by some 2 seconds per vehicle;

- the priority controlled intersections of Lexington Parade and the centre access and Princeton Street would continue to operate at level of service B, a satisfactory level of service in the peak periods. Average delays would increase

by some 2 to 3 seconds per vehicle. The exception is the intersection of Princeton Avenue and Lexington Parade which would operate with average delays of some 30 seconds per vehicle in the Saturday midday peak period. This represents level of service C, as satisfactory level of service; and

- the remaining intersections would operate at level of service A/B (a satisfactory or better level of service) with average delays per vehicle increasing by less than 1 second.

2.33. Thus in summary the surrounding road network will be able to cater for the traffic generated by the approved and proposed extensions to Westfield Kotara shopping centre with no change in the levels of service at major intersections. This is to be expected given the minor increase in traffic on major roads (Park Avenue and Northcott Drive) of less than 5% in peak periods.

Response to RMS Matters

2.34. The matters raised in the RMS letter of 11 October 2016 have been addressed in this report by:

- an assessment of site access points and adjacent intersections (as per the last major traffic assessment for extensions to the shopping centre);
- updated traffic counts;
- additional traffic shown diagrammatically in Figures 2 and 3;
- updated traffic analysis using SIDRA 7;
- assessment of traffic impacts and LOS at intersections before and after development.

Summary

2.35. In summary, the key findings of the traffic assessment for the proposed extensions to Westfield Kotara shopping centre are:

i) the approved and proposed development at the shopping centre would increase GLA by some 7,630m^2;

ii) the proposed parking provision is appropriate;

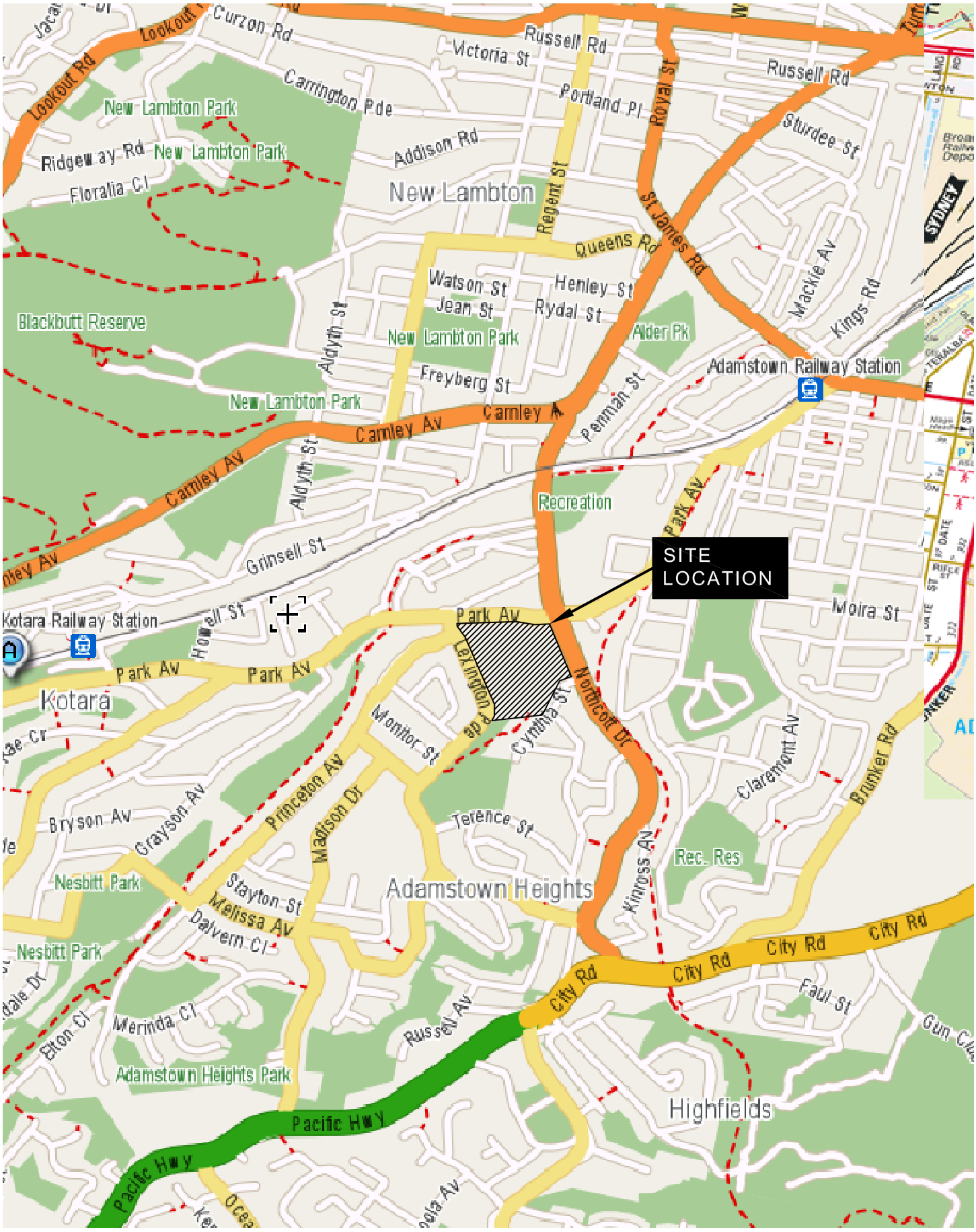
iii) a traffic assessment (including updated traffic counts and analysis) has been undertaken addressing the traffic matters raised by RMS;

iv) the scope of the traffic assessment is the same as the last major traffic assessment undertaken in 2009;

v) the traffic assessment found that the existing road network is operating at a satisfactory or better level of service in peak periods;

vi) the approved and proposed extensions would generate a minor increase in traffic flows on the surrounding road network (less than 5%) in peak periods;

vii) the surrounding road network will be able to cater for the traffic generated by the approved and proposed extensions to Westfield Kotara shopping centre, with no change in the levels of service at major intersections.



Location Plan

Colston Budd Rogers & Kafes Pty Ltd

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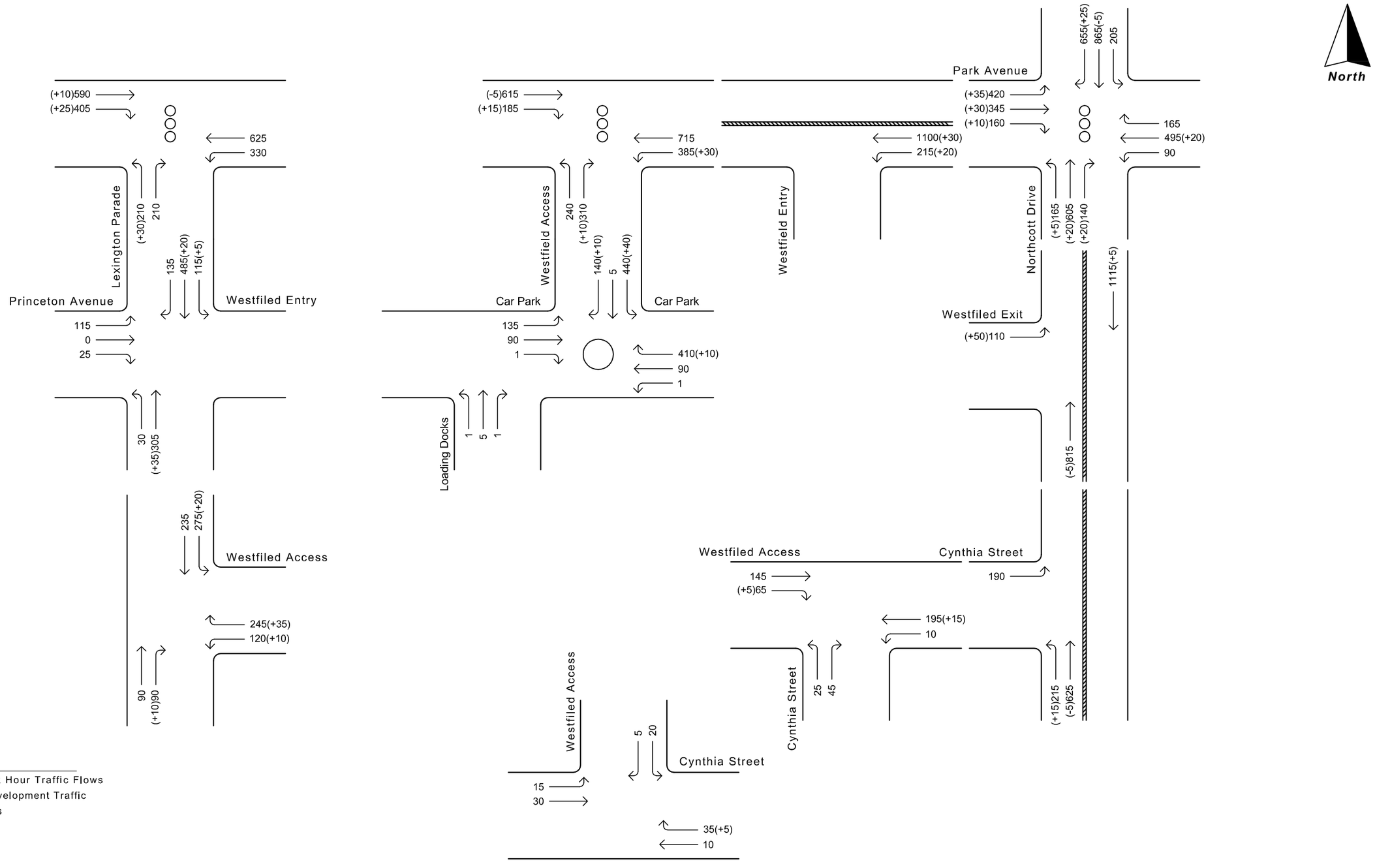
Figure 1



LEGEND

100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic
- Traffic Signals
- Roundabout

Existing Thursday afternoon peak hour traffic flows plus development traffic

Colston Budd Rogers & Kafes Pty Ltd

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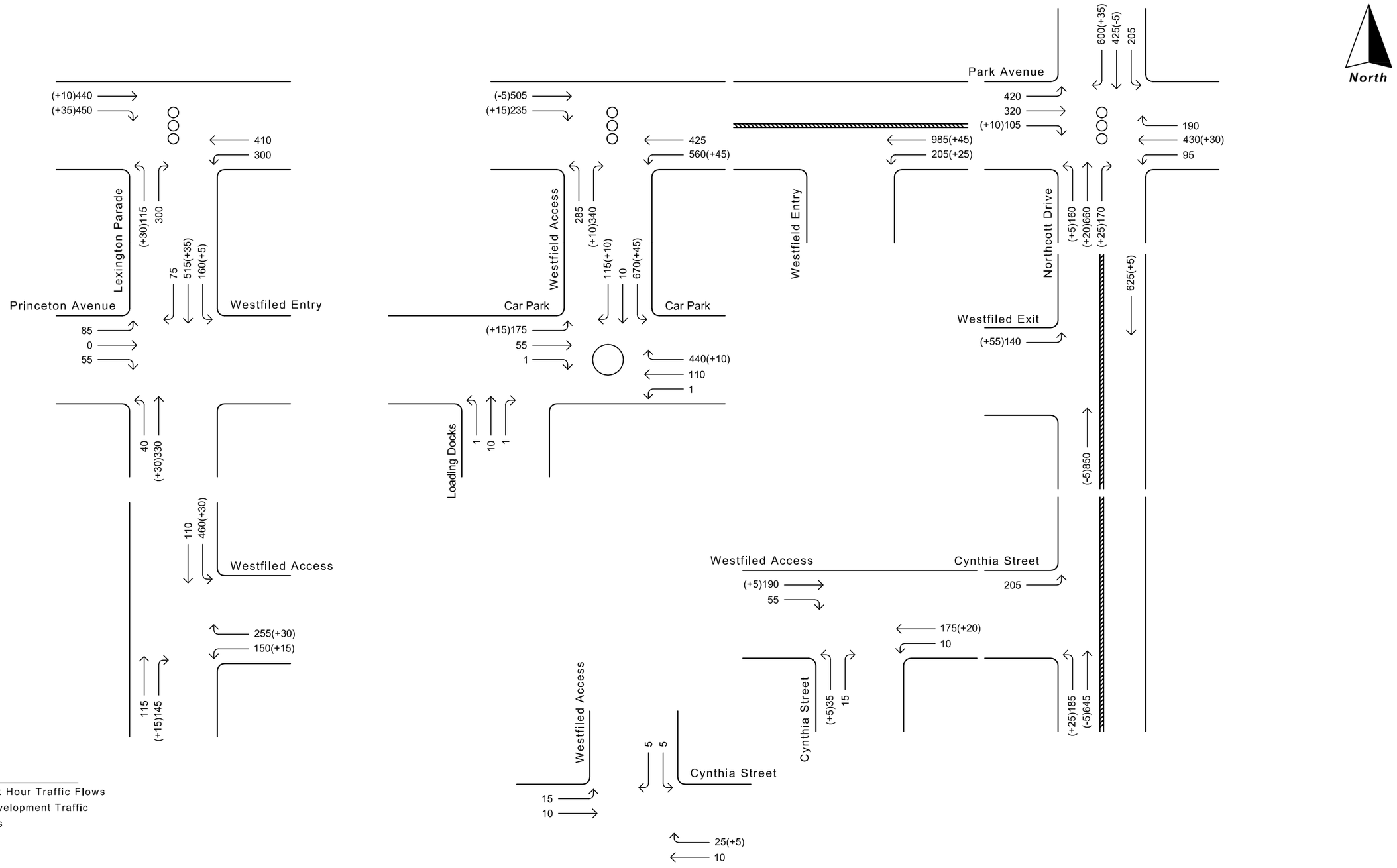
Figure 2



LEGEND

100 - Existing Peak Hour Traffic Flows
(+10) - Additional Development Traffic
- Traffic Signals
- Roundabout

Existing Saturday midday peak hour traffic flows plus development traffic

Colston Budd Rogers & Kafes Pty Ltd

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Figure 3

ATTACHMENT A

SIDRA MOVEMENT SUMMARIES

MOVEMENT SUMMARY

▽ Site: 105 [Princeton Avenue - Lexinton Parade Existing PM] ⊕⊕ Network: N101 [Existing PM]

Lexinton Parade & Princeton Avenue
Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Lexinton Parade (south)													
1	L2	31	2.0	31	2.0	0.341	5.6	LOS A	6.2	43.8	0.00	0.05	57.7
2	T1	311	2.0	311	2.0	0.341	0.1	LOS A	6.2	43.8	0.00	0.05	58.9
Approach		342	2.0	342	2.0	0.341	0.6	NA	6.2	43.8	0.00	0.05	58.7
North: Lexington Parade (north)													
7	L2	117	2.0	117	2.0	0.072	3.7	LOS A	0.0	0.0	0.00	0.49	52.1
8	T1	495	2.0	495	2.0	0.360	0.7	LOS A	1.3	9.5	0.23	0.15	56.9
9	R2	138	2.0	138	2.0	0.360	5.5	LOS A	1.3	9.5	0.23	0.14	53.7
Approach		750	2.0	750	2.0	0.360	2.0	NA	1.3	9.5	0.19	0.20	55.5
West: Princeton Avenue													
10	L2	117	2.0	117	2.0	0.360	7.6	LOS A	0.9	6.5	0.50	0.73	45.3
12	R2	26	2.0	26	2.0	0.360	21.5	LOS B	0.9	6.5	0.50	0.73	49.7
Approach		143	2.0	143	2.0	0.360	10.1	LOS A	0.9	6.5	0.50	0.73	46.5
All Vehicles		1235	2.0	1235	2.0	0.360	2.6	NA	6.2	43.8	0.18	0.22	55.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 103 [Lexington Parade - Park Avenue - Existing PM]

Network: N101 [Existing PM]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Lexington Parade													
1	L2	214	2.0	214	2.0	0.756	58.1	LOS E	10.3	73.4	1.00	0.87	21.6
3	R2	214	2.0	214	2.0	0.756	63.7	LOS E	10.3	73.4	1.00	0.87	3.2
Approach		429	2.0	429	2.0	0.756	60.9	LOS E	10.3	73.4	1.00	0.87	13.9
East: Park Avenue (east)													
4	L2	337	2.0	337	2.0	0.338	9.0	LOS A	2.7	19.3	0.14	0.62	29.6
5	T1	638	2.0	638	2.0	0.881	28.2	LOS B	29.8	212.2	0.90	0.86	34.7
Approach		974	2.0	974	2.0	0.881	21.6	LOS B	29.8	212.2	0.64	0.78	34.1
West: Park Avenue (west)													
11	T1	602	2.0	602	2.0	0.199	0.3	LOS A	0.4	3.2	0.03	0.02	59.4
12	R2	413	2.0	413	2.0	0.870	34.3	LOS C	18.2	129.5	0.69	0.82	28.5
Approach		1015	2.0	1015	2.0	0.870	14.1	LOS A	18.2	129.5	0.30	0.35	41.2
All Vehicles		2418	2.0	2418	2.0	0.881	25.4	LOS B	29.8	212.2	0.56	0.61	31.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

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	53	18.0	LOS B	0.1	0.1	0.54	0.54
P4	West Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		105	37.4	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.

MOVEMENT SUMMARY

Site: 104 [Park Avenue Acecss Roundabout Existing PM] Network: N101 [Existing PM]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Loading Dock Access													
1	L2	1	2.0	1	2.0	0.015	7.3	LOS A	0.1	0.8	0.67	0.63	50.8
2	T1	5	100.0	5	100.0	0.015	10.8	LOS A	0.1	0.8	0.67	0.63	45.5
3	R2	1	2.0	1	2.0	0.015	12.1	LOS A	0.1	0.8	0.67	0.63	52.0
Approach		7	72.0	7	72.0	0.015	10.3	LOS A	0.1	0.8	0.67	0.63	47.9
East: Eastern Car park													
4	L2	1	2.0	1	2.0	0.398	4.8	LOS A	2.9	20.9	0.42	0.61	51.3
5	T1	92	2.0	92	2.0	0.398	5.1	LOS A	2.9	20.9	0.42	0.61	52.5
6	R2	418	2.0	418	2.0	0.398	9.7	LOS A	2.9	20.9	0.42	0.61	46.3
Approach		511	2.0	511	2.0	0.398	8.9	LOS A	2.9	20.9	0.42	0.61	48.0
North: Park Avenue													
7	L2	449	2.0	449	2.0	0.431	3.7	LOS A	3.2	22.9	0.33	0.52	51.0
8	T1	5	2.0	5	2.0	0.431	4.0	LOS A	3.2	22.9	0.33	0.52	53.1
9	R2	143	2.0	143	2.0	0.431	8.5	LOS A	3.2	22.9	0.33	0.52	53.0
Approach		597	2.0	597	2.0	0.431	4.8	LOS A	3.2	22.9	0.33	0.52	51.5
West: Western Car Park													
10	L2	138	2.0	138	2.0	0.245	6.3	LOS A	1.4	10.1	0.60	0.66	49.1
11	T1	87	2.0	87	2.0	0.245	6.6	LOS A	1.4	10.1	0.60	0.66	54.5
12	R2	1	2.0	1	2.0	0.245	11.2	LOS A	1.4	10.1	0.60	0.66	54.4
Approach		226	2.0	226	2.0	0.245	6.4	LOS A	1.4	10.1	0.60	0.66	52.0
All Vehicles		1341	2.4	1341	2.4	0.431	6.7	LOS A	3.2	22.9	0.41	0.58	50.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 102 [Site Access - Park Avenue Existing PM]

Network: N101 [Existing PM]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Siter Access													
1	L2	245	2.0	245	2.0	0.334	32.5	LOS C	10.2	72.9	0.74	0.77	8.8
3	R2	316	2.0	316	2.0	0.540	57.8	LOS E	9.0	64.4	0.97	0.81	4.9
Approach		561	2.0	561	2.0	0.540	46.7	LOS D	10.2	72.9	0.87	0.79	6.2
East: Park Avenue (east)													
4	L2	393	2.0	393	2.0	0.280	5.8	LOS A	0.5	3.6	0.03	0.56	38.5
5	T1	765	2.0	765	2.0	0.526	7.2	LOS A	8.8	62.5	0.31	0.27	34.9
Approach		1158	2.0	1158	2.0	0.526	6.7	LOS A	8.8	62.5	0.21	0.37	36.0
West: Park Avenue (west)													
11	T1	628	2.0	628	2.0	0.219	0.4	LOS A	0.5	3.4	0.03	0.02	57.4
12	R2	189	2.0	189	2.0	0.537	47.4	LOS D	9.6	68.2	0.87	0.79	9.5
Approach		816	2.0	816	2.0	0.537	11.3	LOS A	9.6	68.2	0.22	0.20	26.4
All Vehicles		2536	2.0	2536	2.0	0.540	17.0	LOS B	10.2	72.9	0.36	0.41	20.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

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	53	19.6	LOS B	0.1	0.1	0.56	0.56
P2	East Full Crossing	53	53.0	LOS E	0.2	0.2	0.92	0.92
P4	West Full Crossing	53	55.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		158	42.8	LOS E			0.81	0.81

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

MOVEMENT SUMMARY

▽ Site: 105 [Princeton Avenue - Lexinton Parade Existing SAT]

Network: N101 [Existing SAT]

Lexinton Parade & Princeton Avenue
Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Lexinton Parade (south)													
1	L2	41	2.0	41	2.0	0.373	5.6	LOS A	3.7	26.4	0.00	0.06	57.6
2	T1	337	2.0	337	2.0	0.373	0.1	LOS A	3.7	26.4	0.00	0.06	58.7
Approach		378	2.0	378	2.0	0.373	0.7	NA	3.7	26.4	0.00	0.06	58.5
North: Lexington Parade (north)													
7	L2	163	2.0	163	2.0	0.089	3.7	LOS A	0.0	0.0	0.00	0.54	51.5
8	T1	526	2.0	526	2.0	0.337	0.4	LOS A	0.8	5.7	0.15	0.08	58.0
9	R2	77	2.0	77	2.0	0.337	5.7	LOS A	0.8	5.7	0.15	0.08	54.7
Approach		765	2.0	765	2.0	0.337	1.7	NA	0.8	5.7	0.12	0.18	56.2
West: Princeton Avenue													
10	L2	87	2.0	87	2.0	0.494	10.9	LOS A	1.6	11.5	0.62	0.89	38.9
12	R2	56	2.0	56	2.0	0.494	25.7	LOS B	1.6	11.5	0.62	0.89	45.6
Approach		143	2.0	143	2.0	0.494	16.7	LOS B	1.6	11.5	0.62	0.89	42.4
All Vehicles		1286	2.0	1286	2.0	0.494	3.1	NA	3.7	26.4	0.14	0.22	54.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 103 [Lexington Parade - Park Avenue - Existing SAT]

Network: N101 [Existing SAT]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Lexington Parade													
1	L2	117	2.0	117	2.0	0.720	58.4	LOS E	10.3	73.4	1.00	0.86	21.5
3	R2	306	2.0	306	2.0	0.720	59.9	LOS E	10.3	73.4	1.00	0.85	3.4
Approach		423	2.0	423	2.0	0.720	59.5	LOS E	10.3	73.4	1.00	0.85	10.0
East: Park Avenue (east)													
4	L2	306	2.0	306	2.0	0.332	11.9	LOS A	4.1	29.0	0.24	0.64	25.5
5	T1	418	2.0	418	2.0	0.715	29.5	LOS C	19.7	140.5	0.83	0.72	34.1
Approach		724	2.0	724	2.0	0.715	22.1	LOS B	19.7	140.5	0.58	0.69	32.5
West: Park Avenue (west)													
11	T1	449	2.0	449	2.0	0.155	0.4	LOS A	0.3	2.2	0.03	0.02	59.3
12	R2	459	2.0	459	2.0	0.746	23.5	LOS B	16.0	113.9	0.61	0.76	34.1
Approach		908	2.0	908	2.0	0.746	12.1	LOS A	16.0	113.9	0.32	0.40	43.2
All Vehicles		2056	2.0	2056	2.0	0.746	25.4	LOS B	19.7	140.5	0.55	0.59	29.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

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	53	20.8	LOS C	0.1	0.1	0.58	0.58
P4	West Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		105	38.8	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: 102 [Site Access - Park Avenue Existing SAT]

Network: N101 [Existing SAT]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Siter Access													
1	L2	291	2.0	291	2.0	0.261	16.8	LOS B	8.1	57.6	0.50	0.70	15.0
3	R2	347	2.0	347	2.0	0.408	48.8	LOS D	9.0	64.3	0.90	0.80	5.8
Approach		638	2.0	638	2.0	0.408	34.2	LOS C	9.0	64.3	0.72	0.75	8.1
East: Park Avenue (east)													
4	L2	571	2.0	571	2.0	0.439	5.8	LOS A	0.9	6.6	0.04	0.56	38.4
5	T1	434	2.0	434	2.0	0.405	27.2	LOS B	8.9	63.2	0.67	0.56	16.1
Approach		1005	2.0	1005	2.0	0.439	15.1	LOS B	8.9	63.2	0.31	0.56	24.3
West: Park Avenue (west)													
11	T1	515	2.0	515	2.0	0.199	0.5	LOS A	0.4	2.7	0.03	0.02	56.8
12	R2	240	2.0	240	2.0	0.399	29.1	LOS C	8.4	60.1	0.62	0.74	14.1
Approach		755	2.0	755	2.0	0.399	9.6	LOS A	8.4	60.1	0.21	0.25	28.8
All Vehicles		2398	2.0	2398	2.0	0.439	18.4	LOS B	9.0	64.3	0.39	0.52	18.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

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	53	36.9	LOS D	0.1	0.1	0.77	0.77
P2	East Full Crossing	53	45.0	LOS E	0.2	0.2	0.85	0.85
P4	West Full Crossing	53	47.6	LOS E	0.2	0.2	0.87	0.87
All Pedestrians		158	43.2	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: 104 [Park Avenue Acecss Roundabout Existing SAT]

Network: N101 [Existing SAT]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Loading Dock Access													
1	L2	1	2.0	1	2.0	0.026	7.5	LOS A	0.1	1.5	0.69	0.67	50.5
2	T1	10	100.0	10	100.0	0.026	11.3	LOS A	0.1	1.5	0.69	0.67	44.9
3	R2	1	2.0	1	2.0	0.026	12.4	LOS A	0.1	1.5	0.69	0.67	51.6
Approach		12	83.7	12	83.7	0.026	10.9	LOS A	0.1	1.5	0.69	0.67	46.5
East: Eastern Car park													
4	L2	1	2.0	1	2.0	0.425	4.7	LOS A	3.2	22.8	0.40	0.60	51.4
5	T1	112	2.0	112	2.0	0.425	5.0	LOS A	3.2	22.8	0.40	0.60	52.6
6	R2	449	2.0	449	2.0	0.425	9.6	LOS A	3.2	22.8	0.40	0.60	46.5
Approach		562	2.0	562	2.0	0.425	8.6	LOS A	3.2	22.8	0.40	0.60	48.3
North: Park Avenue													
7	L2	684	2.0	684	2.0	0.546	3.5	LOS A	5.1	36.6	0.32	0.48	51.5
8	T1	10	2.0	10	2.0	0.546	3.8	LOS A	5.1	36.6	0.32	0.48	53.7
9	R2	117	2.0	117	2.0	0.546	8.3	LOS A	5.1	36.6	0.32	0.48	53.6
Approach		811	2.0	811	2.0	0.546	4.2	LOS A	5.1	36.6	0.32	0.48	51.8
West: Western Car Park													
10	L2	179	2.0	179	2.0	0.254	6.6	LOS A	1.6	11.0	0.63	0.68	49.1
11	T1	56	2.0	56	2.0	0.254	6.8	LOS A	1.6	11.0	0.63	0.68	54.5
12	R2	1	2.0	1	2.0	0.254	11.5	LOS A	1.6	11.0	0.63	0.68	54.4
Approach		236	2.0	236	2.0	0.254	6.7	LOS A	1.6	11.0	0.63	0.68	51.0
All Vehicles		1621	2.6	1621	2.6	0.546	6.2	LOS A	5.1	36.6	0.40	0.55	50.3

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

▽ Site: 105 [Princeton Avenue - Lexinton Parade Existing SAT +Dev]

⊕⊕ Network: N101 [Existing SAT + dev]

Lexinton Parade & Princeton Avenue
Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Lexinton Parade (south)													
1	L2	41	2.0	41	2.0	0.405	5.7	LOS A	5.6	39.8	0.00	0.06	57.6
2	T1	367	2.0	367	2.0	0.405	0.1	LOS A	5.6	39.8	0.00	0.06	58.7
Approach		408	2.0	408	2.0	0.405	0.7	NA	5.6	39.8	0.00	0.06	58.5
North: Lexington Parade (north)													
7	L2	168	2.0	168	2.0	0.092	3.7	LOS A	0.0	0.0	0.00	0.54	51.5
8	T1	561	2.0	561	2.0	0.358	0.5	LOS A	0.9	6.5	0.15	0.07	57.9
9	R2	77	2.0	77	2.0	0.358	6.1	LOS A	0.9	6.5	0.15	0.07	54.6
Approach		806	2.0	806	2.0	0.358	1.7	NA	0.9	6.5	0.12	0.17	56.1
West: Princeton Avenue													
10	L2	87	2.0	87	2.0	0.552	13.0	LOS A	1.9	13.4	0.65	0.95	36.5
12	R2	56	2.0	56	2.0	0.552	30.4	LOS C	1.9	13.4	0.65	0.95	43.9
Approach		143	2.0	143	2.0	0.552	19.9	LOS B	1.9	13.4	0.65	0.95	40.3
All Vehicles		1357	2.0	1357	2.0	0.552	3.3	NA	5.6	39.8	0.14	0.22	54.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.5 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 103 [Lexington Parade - Park Avenue - Existing SAT + Dev]

Network: N101 [Existing SAT + dev]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Lexington Parade													
1	L2	148	2.0	148	2.0	0.755	59.0	LOS E	10.3	73.4	1.00	0.87	21.4
3	R2	306	2.0	306	2.0	0.755	61.1	LOS E	10.3	73.4	1.00	0.87	3.4
Approach		454	2.0	454	2.0	0.755	60.4	LOS E	10.3	73.4	1.00	0.87	10.8
East: Park Avenue (east)													
4	L2	306	2.0	306	2.0	0.343	13.2	LOS A	4.8	33.9	0.28	0.66	24.0
5	T1	423	2.0	423	2.0	0.764	32.6	LOS C	21.5	153.0	0.88	0.78	32.6
Approach		730	2.0	730	2.0	0.764	24.5	LOS B	21.5	153.0	0.63	0.73	31.0
West: Park Avenue (west)													
11	T1	464	2.0	464	2.0	0.160	0.4	LOS A	0.3	2.3	0.03	0.02	59.3
12	R2	495	2.0	495	2.0	0.784	23.0	LOS B	17.2	122.3	0.60	0.77	34.5
Approach		959	2.0	959	2.0	0.784	12.0	LOS A	17.2	122.3	0.32	0.41	43.2
All Vehicles		2143	2.0	2143	2.0	0.784	26.5	LOS B	21.5	153.0	0.57	0.61	29.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.5 %
Number of Iterations: 10 (maximum specified: 10)

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	53	22.0	LOS C	0.1	0.1	0.59	0.59
P4	West Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		105	39.4	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: 102 [Site Access - Park Avenue Existing SAT + Dev]

Network: N101 [Existing SAT + dev]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Siter Access													
1	L2	291	2.0	291	2.0	0.265	17.3	LOS B	8.3	58.8	0.51	0.71	14.7
3	R2	357	2.0	357	2.0	0.420	49.0	LOS D	9.3	66.4	0.90	0.80	5.7
Approach		648	2.0	648	2.0	0.420	34.8	LOS C	9.3	66.4	0.72	0.76	8.0
East: Park Avenue (east)													
4	L2	617	2.0	617	2.0	0.469	5.8	LOS A	1.0	7.4	0.04	0.56	38.4
5	T1	439	2.0	439	2.0	0.416	21.0	LOS B	7.8	55.3	0.56	0.47	19.3
Approach		1056	2.0	1056	2.0	0.469	12.1	LOS A	7.8	55.3	0.26	0.52	27.4
West: Park Avenue (west)													
11	T1	515	2.0	515	2.0	0.199	0.5	LOS A	0.4	2.7	0.03	0.02	56.8
12	R2	245	2.0	245	2.0	0.418	24.5	LOS B	7.3	52.1	0.52	0.71	16.0
Approach		760	2.0	760	2.0	0.418	8.2	LOS A	7.3	52.1	0.19	0.25	31.0
All Vehicles		2464	2.0	2464	2.0	0.469	16.9	LOS B	9.3	66.4	0.36	0.50	20.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.5 %
Number of Iterations: 10 (maximum specified: 10)

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	53	36.2	LOS D	0.1	0.1	0.76	0.76
P2	East Full Crossing	53	45.0	LOS E	0.2	0.2	0.85	0.85
P4	West Full Crossing	53	47.6	LOS E	0.2	0.2	0.87	0.87
All Pedestrians		158	43.0	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: 104 [Park Avenue Acecss Roundabout Existing SAT + Dev]

Network: N101 [Existing SAT + dev]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Loading Dock Access													
1	L2	1	2.0	1	2.0	0.028	8.0	LOS A	0.1	1.7	0.71	0.69	50.0
2	T1	10	100.0	10	100.0	0.028	12.0	LOS A	0.1	1.7	0.71	0.69	44.3
3	R2	1	2.0	1	2.0	0.028	12.8	LOS A	0.1	1.7	0.71	0.69	51.1
Approach		12	83.7	12	83.7	0.028	11.6	LOS A	0.1	1.7	0.71	0.69	45.9
East: Eastern Car park													
4	L2	1	2.0	1	2.0	0.462	4.8	LOS A	3.6	25.6	0.44	0.61	51.3
5	T1	112	2.0	112	2.0	0.462	5.1	LOS A	3.6	25.6	0.44	0.61	52.5
6	R2	490	2.0	490	2.0	0.462	9.7	LOS A	3.6	25.6	0.44	0.61	46.3
Approach		603	2.0	603	2.0	0.462	8.8	LOS A	3.6	25.6	0.44	0.61	48.0
North: Park Avenue													
7	L2	714	2.0	714	2.0	0.573	3.6	LOS A	5.8	41.1	0.34	0.48	51.4
8	T1	10	2.0	10	2.0	0.573	3.8	LOS A	5.8	41.1	0.34	0.48	53.5
9	R2	128	2.0	128	2.0	0.573	8.4	LOS A	5.8	41.1	0.34	0.48	53.4
Approach		852	2.0	852	2.0	0.573	4.3	LOS A	5.8	41.1	0.34	0.48	51.7
West: Western Car Park													
10	L2	194	2.0	194	2.0	0.281	7.0	LOS A	1.8	12.6	0.67	0.71	48.7
11	T1	56	2.0	56	2.0	0.281	7.2	LOS A	1.8	12.6	0.67	0.71	54.2
12	R2	1	2.0	1	2.0	0.281	11.8	LOS A	1.8	12.6	0.67	0.71	54.2
Approach		251	2.0	251	2.0	0.281	7.0	LOS A	1.8	12.6	0.67	0.71	50.6
All Vehicles		1718	2.6	1718	2.6	0.573	6.3	LOS A	5.8	41.1	0.42	0.56	50.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.5 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

▽ Site: 105 [Princeton Avenue - Lexington Parade Existing PM + Dev] Network: N101 [Existing PM + Dev]

Lexington Parade & Princeton Avenue
Giveway / Yield (Two-Way)

Movement Performance - Vehicles													
Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Lexinton Parade (south)													
1	L2	31	2.0	31	2.0	0.378	5.6	LOS A	9.2	65.7	0.00	0.05	57.7
2	T1	347	2.0	347	2.0	0.378	0.1	LOS A	9.2	65.7	0.00	0.05	58.9
Approach		378	2.0	378	2.0	0.378	0.5	NA	9.2	65.7	0.00	0.05	58.8
North: Lexington Parade (north)													
7	L2	122	2.0	122	2.0	0.075	3.7	LOS A	0.0	0.0	0.00	0.49	52.1
8	T1	515	2.0	515	2.0	0.375	0.8	LOS A	1.5	10.8	0.24	0.15	56.6
9	R2	138	2.0	138	2.0	0.375	5.9	LOS A	1.5	10.8	0.24	0.14	53.5
Approach		776	2.0	776	2.0	0.375	2.2	NA	1.5	10.8	0.20	0.20	55.3
West: Princeton Avenue													
10	L2	117	2.0	117	2.0	0.386	8.3	LOS A	1.0	7.2	0.53	0.77	44.2
12	R2	26	2.0	26	2.0	0.386	23.9	LOS B	1.0	7.2	0.53	0.77	49.1
Approach		143	2.0	143	2.0	0.386	11.0	LOS A	1.0	7.2	0.53	0.77	45.6
All Vehicles		1296	2.0	1296	2.0	0.386	2.7	NA	9.2	65.7	0.18	0.22	54.8

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network 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.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 4.8 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 103 [Lexington Parade - Park Avenue - Existing PM + Dev] Network: N101 [Existing PM + Dev]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Lexington Parade													
1	L2	250	2.0	250	2.0	0.737	57.7	LOS E	10.3	73.4	1.00	0.87	21.7
3	R2	214	2.0	214	2.0	0.737	63.0	LOS E	10.3	73.4	1.00	0.86	3.3
Approach		464	2.0	464	2.0	0.737	60.1	LOS E	10.3	73.4	1.00	0.86	14.7
East: Park Avenue (east)													
4	L2	342	2.0	342	2.0	0.348	9.6	LOS A	3.2	22.6	0.17	0.62	28.7
5	T1	643	2.0	643	2.0	0.907	32.2	LOS C	29.8	212.2	0.94	0.93	32.8
Approach		985	2.0	985	2.0	0.907	24.3	LOS B	29.8	212.2	0.67	0.82	32.3
West: Park Avenue (west)													
11	T1	602	2.0	602	2.0	0.199	0.3	LOS A	0.4	3.2	0.03	0.02	59.4
12	R2	439	2.0	439	2.0	0.900	37.0	LOS C	20.3	144.8	0.69	0.84	27.3
Approach		1041	2.0	1041	2.0	0.900	15.8	LOS B	20.3	144.8	0.31	0.37	39.8
All Vehicles		2490	2.0	2490	2.0	0.907	27.4	LOS B	29.8	212.2	0.58	0.64	30.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 4.8 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Distance	Prop. Queued	Effective Stop Rate
		ped/h	sec		ped	m		per ped
P1	South Full Crossing	53	18.5	LOS B	0.1	0.1	0.55	0.55
P4	West Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		105	37.7	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.

MOVEMENT SUMMARY

Site: 102 [Site Access - Park Avenue Existing PM +dev]

Network: N101 [Existing PM + Dev]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Siter Access													
1	L2	245	2.0	245	2.0	0.315	30.2	LOS C	9.8	69.8	0.71	0.76	9.4
3	R2	327	2.0	327	2.0	0.531	56.8	LOS E	9.3	66.0	0.96	0.81	5.0
Approach		571	2.0	571	2.0	0.531	45.4	LOS D	9.8	69.8	0.85	0.79	6.3
East: Park Avenue (east)													
4	L2	423	2.0	423	2.0	0.306	5.8	LOS A	0.6	4.1	0.03	0.56	38.5
5	T1	735	2.0	735	2.0	0.530	9.3	LOS A	10.2	72.8	0.37	0.33	31.0
Approach		1158	2.0	1158	2.0	0.530	8.0	LOS A	10.2	72.8	0.25	0.41	33.5
West: Park Avenue (west)													
11	T1	628	2.0	628	2.0	0.221	0.4	LOS A	0.5	3.4	0.03	0.02	57.3
12	R2	204	2.0	204	2.0	0.536	45.2	LOS D	10.1	71.9	0.85	0.79	9.9
Approach		832	2.0	832	2.0	0.536	11.4	LOS A	10.1	71.9	0.23	0.21	26.2
All Vehicles		2561	2.0	2561	2.0	0.536	17.5	LOS B	10.2	72.8	0.38	0.43	19.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 4.8 %
Number of Iterations: 10 (maximum specified: 10)

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	53	21.4	LOS C	0.1	0.1	0.59	0.59
P2	East Full Crossing	53	52.1	LOS E	0.2	0.2	0.91	0.91
P4	West Full Crossing	53	54.9	LOS E	0.2	0.2	0.94	0.94
All Pedestrians		158	42.8	LOS E			0.81	0.81

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

MOVEMENT SUMMARY

Site: 104 [Park Avenue Acecss Roundabout Existing PM + dev]

Network: N101 [Existing PM + Dev]

New Site
Roundabout

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Loading Dock Access													
1	L2	1	2.0	1	2.0	0.015	7.4	LOS A	0.1	0.8	0.68	0.63	50.7
2	T1	5	100.0	5	100.0	0.015	11.1	LOS A	0.1	0.8	0.68	0.63	45.2
3	R2	1	2.0	1	2.0	0.015	12.3	LOS A	0.1	0.8	0.68	0.63	51.8
Approach		7	72.0	7	72.0	0.015	10.5	LOS A	0.1	0.8	0.68	0.63	47.7
East: Eastern Car park													
4	L2	1	2.0	1	2.0	0.411	4.9	LOS A	3.1	21.8	0.44	0.62	51.2
5	T1	92	2.0	92	2.0	0.411	5.2	LOS A	3.1	21.8	0.44	0.62	52.4
6	R2	429	2.0	429	2.0	0.411	9.8	LOS A	3.1	21.8	0.44	0.62	46.2
Approach		521	2.0	521	2.0	0.411	9.0	LOS A	3.1	21.8	0.44	0.62	47.9
North: Park Avenue													
7	L2	490	2.0	490	2.0	0.465	3.7	LOS A	3.7	26.1	0.34	0.52	50.9
8	T1	5	2.0	5	2.0	0.465	4.0	LOS A	3.7	26.1	0.34	0.52	53.0
9	R2	153	2.0	153	2.0	0.465	8.5	LOS A	3.7	26.1	0.34	0.52	52.9
Approach		648	2.0	648	2.0	0.465	4.8	LOS A	3.7	26.1	0.34	0.52	51.4
West: Western Car Park													
10	L2	148	2.0	148	2.0	0.255	6.4	LOS A	1.5	10.9	0.62	0.67	49.1
11	T1	87	2.0	87	2.0	0.255	6.7	LOS A	1.5	10.9	0.62	0.67	54.5
12	R2	1	2.0	1	2.0	0.255	11.3	LOS A	1.5	10.9	0.62	0.67	54.4
Approach		236	2.0	236	2.0	0.255	6.5	LOS A	1.5	10.9	0.62	0.67	51.8
All Vehicles		1412	2.4	1412	2.4	0.465	6.7	LOS A	3.7	26.1	0.43	0.58	50.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 4.8 %
Number of Iterations: 10 (maximum specified: 10)

MOVEMENT SUMMARY

Site: 101 [Northcott Drive - Park Avenue Existing SAT + Dev]

Network: N101 [Existing SAT + dev]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (User-Given Phase Times)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Northcott Drive (south)													
1	L2	168	2.0	168	2.0	0.977	96.5	LOS F	25.5	181.7	1.00	1.18	14.9
2	T1	694	2.0	694	2.0	0.977	90.9	LOS F	25.5	181.7	1.00	1.18	24.1
3	R2	199	2.0	199	2.0	0.906	78.8	LOS F	14.1	100.2	1.00	0.99	25.9
Approach		1061	2.0	1061	2.0	0.977	89.6	LOS F	25.5	181.7	1.00	1.15	23.2
East: Park Avenue (east)													
4	L2	97	2.0	97	2.0	0.875	70.0	LOS E	19.6	139.5	1.00	1.01	28.4
5	T1	469	2.0	469	2.0	0.875	64.7	LOS E	19.6	139.5	1.00	1.01	19.5
6	R2	194	2.0	194	2.0	0.945	87.7	LOS F	14.6	103.9	1.00	1.04	24.4
Approach		760	2.0	760	2.0	0.945	71.2	LOS F	19.6	139.5	1.00	1.02	22.4
North: Northcott Drive (north)													
7	L2	209	2.0	209	2.0	0.399	11.0	LOS A	3.6	25.7	0.20	0.48	51.0
8	T1	429	2.0	429	2.0	0.399	7.8	LOS A	5.2	36.7	0.27	0.31	52.5
9	R2	648	2.0	648	2.0	0.941	29.3	LOS C	37.1	263.8	0.91	0.92	31.1
Approach		1286	2.0	1286	2.0	0.941	19.2	LOS B	37.1	263.8	0.58	0.64	42.3
West: Park Avenue (west)													
10	L2	429	2.0	429	2.0	0.395	6.3	LOS A	0.8	6.0	0.04	0.59	49.9
11	T1	321	2.0	321	2.0	0.703	42.1	LOS C	12.3	87.8	0.88	0.72	29.5
12	R2	117	2.0	117	2.0	0.572	56.9	LOS E	6.6	46.9	0.93	0.78	24.6
Approach		867	2.0	867	2.0	0.703	26.4	LOS B	12.3	87.8	0.47	0.66	35.7
All Vehicles		3974	2.0	3974	2.0	0.977	49.5	LOS D	37.1	263.8	0.75	0.85	29.1

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.5 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Distance	Prop. Queued	Effective Stop Rate
		ped/h	sec		ped	m		per ped
P1	South Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P2	East Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P3	North Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		211	56.8	LOS E			0.95	0.95

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

MOVEMENT SUMMARY

Site: 101 [Northcott Drive - Park Avenue Existing SAT]

Network: N101 [Existing SAT]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Northcott Drive (south)													
1	L2	163	2.0	163	2.0	0.914	76.7	LOS F	21.0	149.5	1.00	1.05	17.7
2	T1	653	2.0	653	2.0	0.914	71.9	LOS F	21.0	149.5	1.00	1.06	27.5
3	R2	194	2.0	194	2.0	0.882	75.6	LOS F	13.3	94.9	1.00	0.97	26.5
Approach		1010	2.0	1010	2.0	0.914	73.4	LOS F	21.0	149.5	1.00	1.04	26.0
East: Park Avenue (east)													
4	L2	97	2.0	97	2.0	0.815	64.1	LOS E	17.3	123.0	1.00	0.94	29.8
5	T1	439	2.0	439	2.0	0.815	59.1	LOS E	17.3	123.0	1.00	0.94	20.7
6	R2	194	2.0	194	2.0	0.945	87.7	LOS F	14.6	103.9	1.00	1.04	24.4
Approach		730	2.0	730	2.0	0.945	67.4	LOS E	17.3	123.0	1.00	0.97	23.3
North: Northcott Drive (north)													
7	L2	209	2.0	209	2.0	0.389	11.0	LOS A	3.5	24.8	0.19	0.48	50.9
8	T1	413	2.0	413	2.0	0.389	7.8	LOS A	5.0	35.3	0.26	0.31	52.5
9	R2	612	2.0	612	2.0	0.889	24.3	LOS B	29.4	209.3	0.81	0.85	33.9
Approach		1235	2.0	1235	2.0	0.889	16.5	LOS B	29.4	209.3	0.52	0.61	44.1
West: Park Avenue (west)													
10	L2	429	2.0	429	2.0	0.395	6.3	LOS A	0.8	6.0	0.04	0.59	49.9
11	T1	327	2.0	327	2.0	0.715	45.9	LOS D	13.0	92.8	0.91	0.76	28.2
12	R2	107	2.0	107	2.0	0.522	59.0	LOS E	6.1	43.4	0.94	0.78	24.1
Approach		862	2.0	862	2.0	0.715	27.8	LOS B	13.0	92.8	0.48	0.68	34.9
All Vehicles		3837	2.0	3837	2.0	0.945	43.7	LOS D	29.4	209.3	0.73	0.81	30.9

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Distance	Prop. Queued	Effective Stop Rate
		ped/h	sec		ped	m		per ped
P1	South Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P2	East Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P3	North Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		211	56.8	LOS E			0.95	0.95

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

MOVEMENT SUMMARY

Site: 101 [Northcott Drive - Park Avenue Existing PM + dev] Network: N101 [Existing PM + Dev]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Northcott Drive (south)													
1	L2	173	2.0	173	2.0	0.950	86.4	LOS F	22.6	161.1	1.00	1.11	16.2
2	T1	638	2.0	638	2.0	0.950	81.3	LOS F	22.6	161.1	1.00	1.12	25.7
3	R2	163	2.0	163	2.0	0.929	84.4	LOS F	11.9	84.8	1.00	1.02	24.9
Approach		974	2.0	974	2.0	0.950	82.8	LOS F	22.6	161.1	1.00	1.11	24.1
East: Park Avenue (east)													
4	L2	92	2.0	92	2.0	0.979	96.8	LOS F	26.5	189.0	1.00	1.21	23.6
5	T1	526	2.0	526	2.0	0.979	91.3	LOS F	26.5	189.0	1.00	1.20	15.3
6	R2	168	2.0	168	2.0	0.958	91.9	LOS F	12.9	92.0	1.00	1.06	23.7
Approach		786	2.0	786	2.0	0.979	92.1	LOS F	26.5	189.0	1.00	1.17	18.5
North: Northcott Drive (north)													
7	L2	209	2.0	209	2.0	0.630	9.2	LOS A	5.7	40.4	0.19	0.35	53.4
8	T1	878	2.0	878	2.0	0.630	4.7	LOS A	7.8	55.6	0.23	0.28	55.1
9	R2	694	2.0	694	2.0	0.947	27.1	LOS B	39.1	278.4	0.89	0.91	32.3
Approach		1781	2.0	1781	2.0	0.947	14.0	LOS A	39.1	278.4	0.48	0.53	46.7
West: Park Avenue (west)													
10	L2	429	2.0	429	2.0	0.380	6.2	LOS A	0.8	5.8	0.03	0.59	50.0
11	T1	347	2.0	347	2.0	0.759	46.7	LOS D	14.2	101.0	0.93	0.78	27.9
12	R2	173	2.0	173	2.0	0.987	87.2	LOS F	13.2	93.7	1.00	1.03	18.8
Approach		949	2.0	949	2.0	0.987	35.8	LOS C	14.2	101.0	0.54	0.74	31.3
All Vehicles		4490	2.0	4490	2.0	0.987	47.2	LOS D	39.1	278.4	0.70	0.81	30.0

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 4.8 %
Number of Iterations: 10 (maximum specified: 10)

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	53	56.8	LOS E	0.2	0.2	0.95	0.95
P2	East Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P3	North Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		211	56.8	LOS E			0.95	0.95

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

MOVEMENT SUMMARY

Site: 101 [Northcott DRive - Park Avenue Existing PM]

Network: N101 [Existing PM]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total	HV	Arrival Flows Total	HV	Deg. Satn	Average Delay	Level of Service	95% Back of Queue Vehicles	Distance	Prop. Queued	Effective Stop Rate	Average Speed
		veh/h	%	veh/h	%	v/c	sec		veh	m		per veh	km/h
South: Northcott Drive (south)													
1	L2	168	2.0	168	2.0	0.910	76.4	LOS F	20.1	143.1	1.00	1.04	17.7
2	T1	617	2.0	617	2.0	0.910	71.7	LOS F	20.1	143.1	1.00	1.05	27.5
3	R2	143	2.0	143	2.0	0.887	78.5	LOS F	9.9	70.5	1.00	0.97	26.0
Approach		929	2.0	929	2.0	0.910	73.6	LOS F	20.1	143.1	1.00	1.04	25.8
East: Park Avenue (east)													
4	L2	92	2.0	92	2.0	0.942	83.2	LOS F	23.4	166.9	1.00	1.12	25.9
5	T1	505	2.0	505	2.0	0.942	77.7	LOS F	23.4	166.9	1.00	1.12	17.2
6	R2	168	2.0	168	2.0	1.045	137.1	LOS F	16.1	114.5	1.00	1.21	18.4
Approach		765	2.0	765	2.0	1.045	91.5	LOS F	23.4	166.9	1.00	1.14	18.7
North: Northcott Drive (north)													
7	L2	209	2.0	209	2.0	0.611	7.5	LOS A	3.2	22.7	0.10	0.30	54.7
8	T1	883	2.0	883	2.0	0.611	3.0	LOS A	5.5	38.9	0.15	0.21	56.5
9	R2	668	2.0	668	2.0	0.895	20.4	LOS B	29.4	209.4	0.74	0.83	36.5
Approach		1760	2.0	1760	2.0	0.895	10.1	LOS A	29.4	209.4	0.37	0.46	49.7
West: Park Avenue (west)													
10	L2	429	2.0	429	2.0	0.375	6.2	LOS A	0.8	5.8	0.03	0.59	50.0
11	T1	352	2.0	352	2.0	0.770	46.9	LOS D	14.5	103.2	0.93	0.79	27.8
12	R2	163	2.0	163	2.0	1.013	101.0	LOS F	13.3	94.8	1.00	1.07	17.0
Approach		944	2.0	944	2.0	1.013	37.8	LOS C	14.5	103.2	0.54	0.75	30.6
All Vehicles		4398	2.0	4398	2.0	1.045	43.6	LOS D	29.4	209.4	0.65	0.76	31.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Network Model Accuracy Level (largest change in degree of saturation for any lane): 2.3 %
Number of Iterations: 10 (maximum specified: 10)

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow	Average Delay	Level of Service	Average Back of Queue Pedestrian	Distance	Prop. Queued	Effective Stop Rate
		ped/h	sec		ped	m		per ped
P1	South Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P2	East Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P3	North Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
P4	West Full Crossing	53	56.8	LOS E	0.2	0.2	0.95	0.95
All Pedestrians		211	56.8	LOS E			0.95	0.95

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

PHASING SUMMARY

Site: 101 [Northcott Drive - Park Avenue Existing SAT]

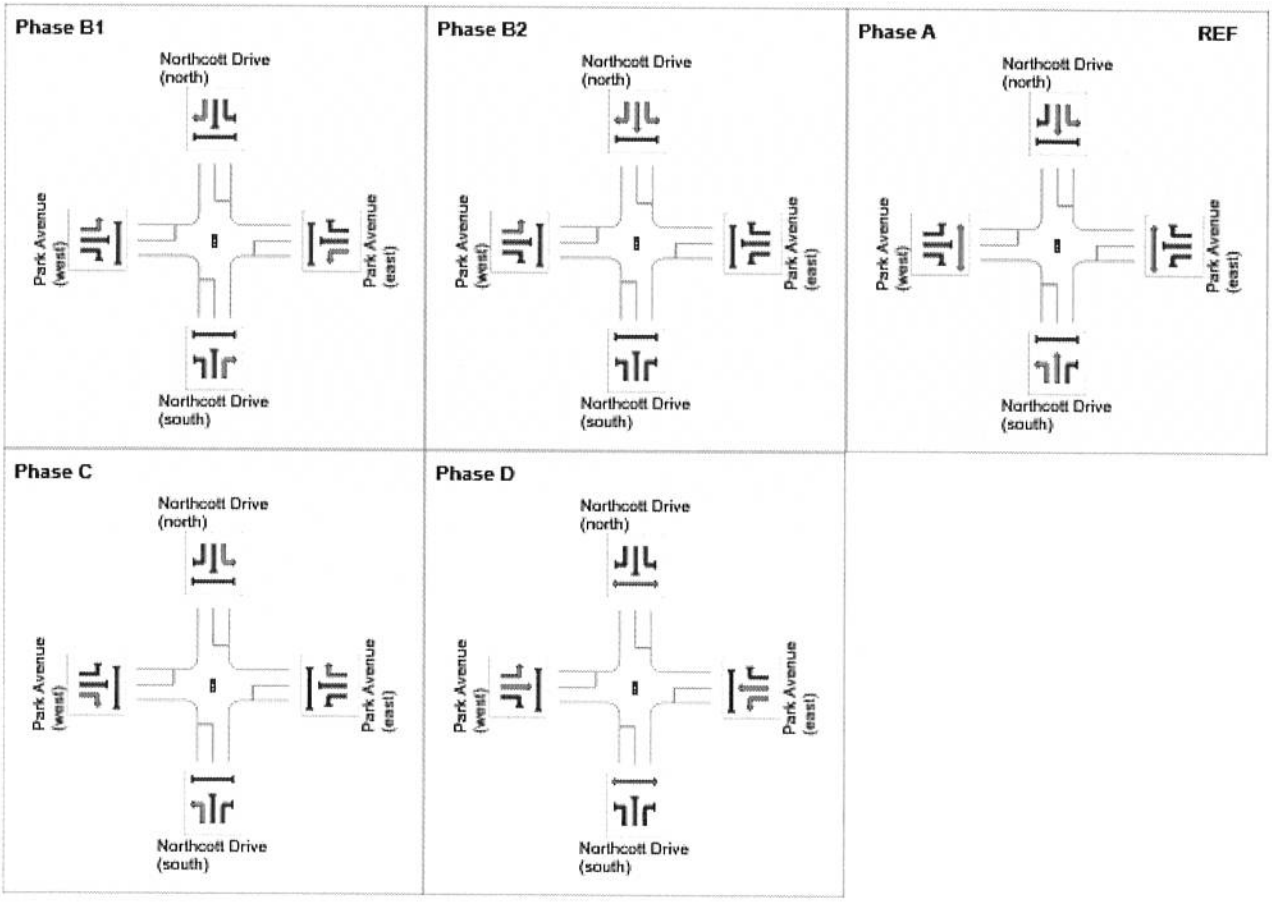
Network: N101 [Existing SAT]

New Site
Signals - Fixed Time Coordinated Cycle Time = 125 seconds (Network Cycle Time - User-Given)

Phase Times determined by the program
Green Split Priority applies
Sequence: Variable Phasing (phase reduction applied)
Reference Phase: Phase A
Input Sequence: B1, B2, A, C, C1, D
Output Sequence: B1, B2, A, C, D

Phase Timing Results

Phase	B1	B2	A	C	D
Phase Change Time (sec)	72	93	0	25	45
Green Time (sec)	15	26	19	14	21
Yellow Time (sec)	4	4	4	4	4
All-Red Time (sec)	2	2	2	2	2
Phase Time (sec)	21	32	25	20	27
Phase Split	17%	26%	20%	16%	22%



REF: Reference Phase
VAR: Variable Phase

Normal Movement
Slip/Bypass-Lane Movement
Stopped Movement
Other Movement Class Running
Mixed Running & Stopped Movement Classes
Undetected Movement
Permitted/Opposed
Opposed Slip/Bypass-Lane
Turn On Red
Other Movement Class Stopped
Phase Transition Applied

MOVEMENT SUMMARY

Site: 106 [Existing Saturday + Dev]

New Site
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Lexington Parade (south)											
2	T1	117	2.0	0.061	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R2	163	2.0	0.180	8.6	LOS A	0.8	5.4	0.59	0.79	51.1
Approach		281	2.0	0.180	5.0	NA	0.8	5.4	0.34	0.46	54.4
East: site acecss											
4	L2	168	2.0	0.132	8.6	LOS A	0.6	4.0	0.24	0.88	51.7
6	R2	291	2.0	0.658	21.6	LOS B	4.8	34.1	0.81	1.24	43.8
Approach		459	2.0	0.658	16.8	LOS B	4.8	34.1	0.60	1.11	46.4
North: Lexington Parade											
7	L2	500	2.0	0.331	5.6	LOS A	0.0	0.0	0.00	0.48	54.3
8	T1	112	2.0	0.331	0.0	LOS A	0.0	0.0	0.00	0.48	55.8
Approach		612	2.0	0.331	4.6	NA	0.0	0.0	0.00	0.48	54.6
All Vehicles		1352	2.0	0.658	8.8	NA	4.8	34.1	0.27	0.69	51.5

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.

MOVEMENT SUMMARY

Site: 106 [Existing Saturday]

New Site
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Lexington Parade (south)											
2	T1	117	2.0	0.061	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R2	148	2.0	0.156	8.3	LOS A	0.7	4.7	0.57	0.77	51.3
Approach		265	2.0	0.156	4.6	NA	0.7	4.7	0.32	0.43	54.8
East: site acecss											
4	L2	153	2.0	0.120	8.6	LOS A	0.5	3.6	0.23	0.88	51.7
6	R2	260	2.0	0.560	18.6	LOS B	3.6	25.5	0.75	1.16	45.3
Approach		413	2.0	0.560	14.9	LOS B	3.6	25.5	0.56	1.06	47.5
North: Lexington Parade											
7	L2	469	2.0	0.315	5.6	LOS A	0.0	0.0	0.00	0.47	54.3
8	T1	112	2.0	0.315	0.0	LOS A	0.0	0.0	0.00	0.47	55.8
Approach		582	2.0	0.315	4.5	NA	0.0	0.0	0.00	0.47	54.6
All Vehicles		1260	2.0	0.560	8.0	NA	3.6	25.5	0.25	0.65	52.1

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.

Lex / site Access

MOVEMENT SUMMARY

Site: 106 [Existing PM]

New Site
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Lexington Parade (south)											
2	T1	92	2.0	0.048	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R2	92	2.0	0.089	7.7	LOS A	0.4	2.7	0.52	0.71	51.7
Approach		184	2.0	0.089	3.9	NA	0.4	2.7	0.26	0.35	55.5
East: site acecss											
4	L2	122	2.0	0.110	9.2	LOS A	0.4	3.2	0.35	0.88	51.4
6	R2	250	2.0	0.505	16.8	LOS B	3.1	21.8	0.70	1.13	46.3
Approach		372	2.0	0.505	14.3	LOS A	3.1	21.8	0.59	1.05	47.9
North: Lexington Parade											
7	L2	281	2.0	0.278	5.6	LOS A	0.0	0.0	0.00	0.32	55.6
8	T1	240	2.0	0.278	0.0	LOS A	0.0	0.0	0.00	0.32	57.1
Approach		520	2.0	0.278	3.0	NA	0.0	0.0	0.00	0.32	56.3
All Vehicles		1077	2.0	0.505	7.1	NA	3.1	21.8	0.25	0.58	52.9

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.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 106 [Existing PM + dev]

New Site
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Lexington Parade (south)											
2	T1	92	2.0	0.048	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R2	102	2.0	0.102	7.9	LOS A	0.4	3.0	0.54	0.72	51.5
Approach		194	2.0	0.102	4.2	NA	0.4	3.0	0.28	0.38	55.2
East: site acecss											
4	L2	133	2.0	0.119	9.2	LOS A	0.5	3.5	0.36	0.88	51.4
6	R2	286	2.0	0.596	18.9	LOS B	4.1	29.2	0.76	1.18	45.2
Approach		418	2.0	0.596	15.8	LOS B	4.1	29.2	0.63	1.09	47.0
North: Lexington Parade											
7	L2	301	2.0	0.289	5.6	LOS A	0.0	0.0	0.00	0.33	55.5
8	T1	240	2.0	0.289	0.0	LOS A	0.0	0.0	0.00	0.33	57.0
Approach		541	2.0	0.289	3.1	NA	0.0	0.0	0.00	0.33	56.2
All Vehicles		1153	2.0	0.596	7.9	NA	4.1	29.2	0.28	0.61	52.3

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.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 106 [Existing Saturday]

New Site
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Lexington Parade (south)											
2	T1	117	2.0	0.061	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R2	148	2.0	0.156	8.3	LOS A	0.7	4.7	0.57	0.77	51.3
Approach		265	2.0	0.156	4.6	NA	0.7	4.7	0.32	0.43	54.8
East: site acecss											
4	L2	153	2.0	0.120	8.6	LOS A	0.5	3.6	0.23	0.88	51.7
6	R2	260	2.0	0.560	18.6	LOS B	3.6	25.5	0.75	1.16	45.3
Approach		413	2.0	0.560	14.9	LOS B	3.6	25.5	0.56	1.06	47.5
North: Lexington Parade											
7	L2	469	2.0	0.315	5.6	LOS A	0.0	0.0	0.00	0.47	54.3
8	T1	112	2.0	0.315	0.0	LOS A	0.0	0.0	0.00	0.47	55.8
Approach		582	2.0	0.315	4.5	NA	0.0	0.0	0.00	0.47	54.6
All Vehicles		1260	2.0	0.560	8.0	NA	3.6	25.5	0.25	0.65	52.1

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.

MOVEMENT SUMMARY

Site: 106 [Existing Saturday + Dev]

New Site
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Lexington Parade (south)											
2	T1	117	2.0	0.061	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
3	R2	163	2.0	0.180	8.6	LOS A	0.8	5.4	0.59	0.79	51.1
Approach		281	2.0	0.180	5.0	NA	0.8	5.4	0.34	0.46	54.4
East: site acecss											
4	L2	168	2.0	0.132	8.6	LOS A	0.6	4.0	0.24	0.88	51.7
6	R2	291	2.0	0.658	21.6	LOS B	4.8	34.1	0.81	1.24	43.8
Approach		459	2.0	0.658	16.8	LOS B	4.8	34.1	0.60	1.11	46.4
North: Lexington Parade											
7	L2	500	2.0	0.331	5.6	LOS A	0.0	0.0	0.00	0.48	54.3
8	T1	112	2.0	0.331	0.0	LOS A	0.0	0.0	0.00	0.48	55.8
Approach		612	2.0	0.331	4.6	NA	0.0	0.0	0.00	0.48	54.6
All Vehicles		1352	2.0	0.658	8.8	NA	4.8	34.1	0.27	0.69	51.5

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.

ND/CS

MOVEMENT SUMMARY

Site: 107 [Existing PM + dev]

New Site
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Northcott Drive (south)											
1	L2	235	2.0	0.153	5.6	LOS A	0.0	0.0	0.00	0.48	54.3
2	T1	638	2.0	0.153	0.0	LOS A	0.0	0.0	0.00	0.04	59.6
Approach		872	2.0	0.153	1.5	NA	0.0	0.0	0.00	0.16	58.1
North: Northcott Drive (north)											
8	T1	1138	2.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1138	2.0	0.296	0.0	NA	0.0	0.0	0.00	0.00	59.9
West: Cynthia Street											
10	L2	194	2.0	0.171	8.4	LOS A	0.7	5.0	0.15	0.91	51.7
Approach		194	2.0	0.171	8.4	LOS A	0.7	5.0	0.15	0.91	51.7
All Vehicles		2204	2.0	0.296	1.4	NA	0.7	5.0	0.01	0.14	58.4

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.

MOVEMENT SUMMARY

Site: 107 [Existing PM]

New Site
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Northcott Drive (south)											
1	L2	219	2.0	0.150	5.6	LOS A	0.0	0.0	0.00	0.46	54.5
2	T1	638	2.0	0.150	0.0	LOS A	0.0	0.0	0.00	0.04	59.6
Approach		857	2.0	0.150	1.4	NA	0.0	0.0	0.00	0.15	58.2
North: Northcott Drive (north)											
8	T1	1138	2.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1138	2.0	0.296	0.0	NA	0.0	0.0	0.00	0.00	59.9
West: Cynthia Street											
10	L2	194	2.0	0.173	8.4	LOS A	0.7	5.0	0.17	0.90	51.7
Approach		194	2.0	0.173	8.4	LOS A	0.7	5.0	0.17	0.90	51.7
All Vehicles		2189	2.0	0.296	1.3	NA	0.7	5.0	0.01	0.14	58.4

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.

MOVEMENT SUMMARY

Site: 107 [Existing Saturday]

New Site
Stop (Two-Way)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Northcott Drive (south)											
1	L2	189	2.0	0.148	5.6	LOS A	0.0	0.0	0.00	0.40	54.9
2	T1	658	2.0	0.148	0.0	LOS A	0.0	0.0	0.00	0.05	59.5
Approach		847	2.0	0.148	1.3	NA	0.0	0.0	0.00	0.13	58.4
North: Northcott Drive (north)											
8	T1	638	2.0	0.166	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		638	2.0	0.166	0.0	NA	0.0	0.0	0.00	0.00	60.0
West: Cynthia Street											
10	L2	209	2.0	0.193	8.6	LOS A	0.8	5.7	0.22	0.89	51.6
Approach		209	2.0	0.193	8.6	LOS A	0.8	5.7	0.22	0.89	51.6
All Vehicles		1694	2.0	0.193	1.7	NA	0.8	5.7	0.03	0.18	58.0

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.

MOVEMENT SUMMARY

Site: 107 [Existing Saturday + dev]

New Site
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Northcott Drive (south)											
1	L2	214	2.0	0.153	5.6	LOS A	0.0	0.0	0.00	0.44	54.6
2	T1	658	2.0	0.153	0.0	LOS A	0.0	0.0	0.00	0.05	59.5
Approach		872	2.0	0.153	1.4	NA	0.0	0.0	0.00	0.14	58.2
North: Northcott Drive (north)											
8	T1	638	2.0	0.166	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		638	2.0	0.166	0.0	NA	0.0	0.0	0.00	0.00	60.0
West: Cynthia Street											
10	L2	209	2.0	0.189	8.5	LOS A	0.8	5.6	0.19	0.90	51.7
Approach		209	2.0	0.189	8.5	LOS A	0.8	5.6	0.19	0.90	51.7
All Vehicles		1719	2.0	0.189	1.7	NA	0.8	5.6	0.02	0.18	58.0

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.

MOVEMENT SUMMARY

NB / Sit Access

Site: 107 [Existing PM]

New Site
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Northcott Drive (south)											
2	T1	832	2.0	0.144	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		832	2.0	0.144	0.0	NA	0.0	0.0	0.00	0.00	60.0
North: Northcott Drive (north)											
8	T1	1138	2.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1138	2.0	0.296	0.0	NA	0.0	0.0	0.00	0.00	59.9
West: Site Access											
10	L2	112	2.0	0.129	9.7	LOS A	0.5	3.4	0.39	0.90	51.1
Approach		112	2.0	0.129	9.7	LOS A	0.5	3.4	0.39	0.90	51.1
All Vehicles		2082	2.0	0.296	0.6	NA	0.5	3.4	0.02	0.05	59.4

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.

MOVEMENT SUMMARY

Site: 107 [Existing PM + dev]

New Site
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Northcott Drive (south)											
2	T1	832	2.0	0.144	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		832	2.0	0.144	0.0	NA	0.0	0.0	0.00	0.00	60.0
North: Northcott Drive (north)											
8	T1	1138	2.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1138	2.0	0.296	0.0	NA	0.0	0.0	0.00	0.00	59.9
West: Site Access											
10	L2	163	2.0	0.187	9.8	LOS A	0.7	5.2	0.41	0.91	51.0
Approach		163	2.0	0.187	9.8	LOS A	0.7	5.2	0.41	0.91	51.0
All Vehicles		2133	2.0	0.296	0.8	NA	0.7	5.2	0.03	0.07	59.2

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.

MOVEMENT SUMMARY

Site: 107 [Existing Saturday]

New Site
Stop (Two-Way)

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Northcott Drive (south)											
2	T1	867	2.0	0.150	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		867	2.0	0.150	0.0	NA	0.0	0.0	0.00	0.00	60.0
North: Northcott Drive (north)											
8	T1	1138	2.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1138	2.0	0.296	0.0	NA	0.0	0.0	0.00	0.00	59.9
West: Site Access											
10	L2	143	2.0	0.166	9.9	LOS A	0.6	4.5	0.41	0.91	51.0
Approach		143	2.0	0.166	9.9	LOS A	0.6	4.5	0.41	0.91	51.0
All Vehicles		2148	2.0	0.296	0.7	NA	0.6	4.5	0.03	0.06	59.3

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.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

Site: 107 [Existing Saturday + dev]

New Site
Stop (Two-Way)

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
South: Northcott Drive (south)											
2	T1	867	2.0	0.150	0.0	LOS A	0.0	0.0	0.00	0.00	60.0
Approach		867	2.0	0.150	0.0	NA	0.0	0.0	0.00	0.00	60.0
North: Northcott Drive (north)											
8	T1	1138	2.0	0.296	0.0	LOS A	0.0	0.0	0.00	0.00	59.9
Approach		1138	2.0	0.296	0.0	NA	0.0	0.0	0.00	0.00	59.9
West: Site Access											
10	L2	199	2.0	0.231	10.0	LOS A	0.9	6.7	0.43	0.92	50.9
Approach		199	2.0	0.231	10.0	LOS A	0.9	6.7	0.43	0.92	50.9
All Vehicles		2204	2.0	0.296	0.9	NA	0.9	6.7	0.04	0.08	59.0

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.