

**PROPOSED  
IKEA DEVELOPMENT  
PRINCES HIGHWAY, TEMPE**

***Summary Assessment of Potential  
Traffic Implications***

July 2008

Reference 0778

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## EXECUTIVE SUMMARY

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*IKEA has recently opened major new outlets in Sydney (Rhodes), Brisbane (Springwood) and Melbourne (Richmond) and has a program to introduce 3 additional outlets in Sydney with a geographical 'spread' to serve the Metropolitan Area.*

*The Tempe area presents a desirable location to serve the Sydney south, south-east and south-west areas due to the convenient connections to the arterial road network including Princes Highway, General Holmes Drive, Forest Road and M5 Motorway. The Tempe site also represents a relatively unique large consolidated landholding which is suitable to accommodate an IKEA outlet.*

*Previous actions to rezone the industrial lands in the area have envisaged the development of a large bulky goods element on part of the site now incorporated in the consolidated landholding. The draft Sub-Regional Strategy document identifies this land as suitable for employment generating uses such as freight, logistics, commercial and bulky goods.*

*Valad Property Group submitted an application to the Department of Planning in November 2007 for the development of a contemporary IKEA store. That application was subsequently declared a Major Project under the provisions of Part 3A of the Environmental Planning and Assessment Act. The traffic assessment undertaken for the proposed IKEA development has identified the desirability of:*

- \* providing contemporary arterial traffic management along the section of the Princes Highway at Tempe*
- \* providing a new traffic signal controlled access intersection for IKEA.*

*The traffic assessment has concluded that, subject to proposed traffic management works, the operational performance of this section of the Princes Highway consequential to IKEA development will be satisfactory. This assessment has adopted the patronage characteristics of the Rhodes store for the projected traffic generation and this represents a very robust approach due to the inevitable dilution of demand with the provision of additional outlets in the Metropolitan area.*

# 1. INTRODUCTION

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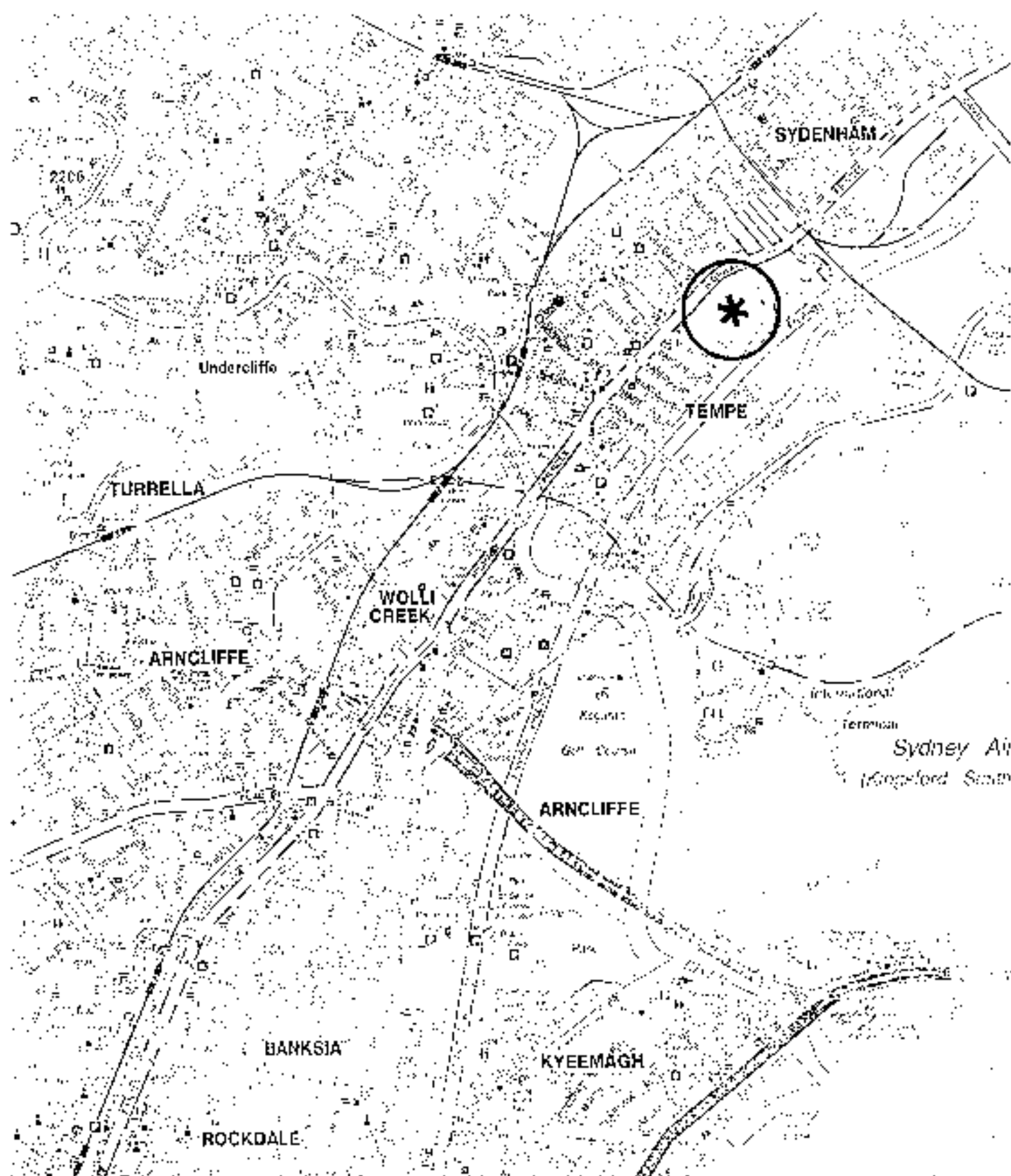
This report has been prepared to provide a summary assessment of the traffic related considerations for a proposed IKEA development on a large industrial site on the Princes Highway at Tempe (Figure 1).

IKEA has had a relatively 'small presence' in the Sydney Metropolitan Area for many years firstly at Gordon, then Moore Park and more recently Rhodes. IKEA has also recently opened major new outlets in Melbourne and Brisbane and has a program to introduce 3 more outlets in Sydney with a geographical 'spread' to serve Metropolitan Area.

The Tempe area presents a desirable location to serve the Sydney south, south-east and south-west areas due to the road network connections (particularly the M5 East, General Homes Drive and Princes Highway routes). The large underutilised/superfluous industrial site at Tempe also presents somewhat unique opportunity to provide an appropriate consolidated landholding necessary to accommodate an IKEA outlet.

IKEA previously expended significant effort in planning and designing for a new outlet on a site with frontage to the Princes Highway and Bellevue Street, however that scheme was ultimately thwarted by 'flight path' height controls and 'ground conditions'. The Valad Property Group (VPG) has created a new opportunity for IKEA with consolidation of lands to the south, including the existing Kennards and Ateco-Penfolds sites.

Vehicle access and the operational performance on this section of the Princes Highway are pre-eminent considerations for the development scheme and the purpose of this report is to present an assessment which enables an 'in principle' determination to be made in relation to the road network and vehicle access issues.



LEGEND



LOCATION

FIG 1

## 2. HISTORY

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In the 1950's the establishment of 'County Road Corridors' included definition of the F6 and F5 corridors which merged at Tempe and extended northwards to the City. The corridor north of St Peters was subsequently abandoned and in 1996 the RTA sponsored a study to identify the future road network needs of the redeveloping South Sydney and Mascot areas.

That study recommended the development of an upgraded route between Randwick and Tempe which:

- \* Utilised existing road widening reserves and freeway corridor reservations.
- \* Extended along Dacey Avenue, McEvoy Street, Euston Road and the freeway corridor providing linkages with Anzac Parade, Eastern Distributor (South Dowling Street), the Southern Arterial Route (Botany Road/Wyndham Street) and the Princes Highway/M5 East.

In 1999 the RTA sponsored a further study which reviewed and defined the future road corridor at St Peters and Tempe. At that time the relocation of the M5 East corridor was resolved and this permitted definition of the new SPIRE ROAD and the redundant land which could be rezoned.

In the period 2001 to 2004 Marrickville Council pursued initiatives to determine future landuses around the proposed SPIRE ROAD corridor including:

- \* St Peters – Tempe Lands: rezoning Traffic Impact Assessment  
Parsons Brinkerhoff July 2003

This study envisaged the rezoning of 4 sites (Salvation Army, Council, Car Repair Shop and Kennards Self Storage) to permit bulky goods development with a total GFA of some 59,000m<sup>2</sup>. The study also took account of other

envisaged developments in the area (eg SACL) while the projected traffic generation of the 'bulky goods' development was some 1,100 vtp/h in the Thursday afternoon peak and some 3,040 vtp/h in the Saturday midday peak.

**\* Proposed Rezoning of Sites at Tempe (St Peters)**

Traffic and Transport Impact Assessment - Transport and Urban Planning Associates November 2004

This study assessed the traffic implications of rezoning 3 sites (including the Council site on the corner of Bellevue Street) for bulky goods use. It was envisaged that the Council site would provide a single bulky goods use of some 28,000m<sup>2</sup> and the assessment included the potential SACL site development for some 41,000m<sup>2</sup> warehouse/office.

The study concluded that vehicle access being concentrated into Bellevue Street presented some operational problems and the provision of a pedestrian bridge (to separate pedestrians from access traffic) was seen as a solution.



### 3. EXISTING SITE CIRCUMSTANCES

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The consolidated lands which are the subject of the envisaged development scheme (Figure 2) are shown in context on the Google image overleaf and comprise:

- \* the Council site (former tip) 5.53 ha
- \* the Kennards site – 1.789ha
- \* the Ateco – Penfolds site – 2.65 ha
- \* the Car Repair Site – 714.5m<sup>2</sup>

The existing/former uses on the lands comprises:

Council site	-	some container storage activity
Kennards site	-	some 9,210m <sup>2</sup> rentable storage space (782 storage units and 42 open storage spaces)
Ateco Penfolds	-	Office building - 1,370m <sup>2</sup>
(vacant)		Tower building - 4,610m <sup>2</sup>
		Warehouse - 11,400m <sup>2</sup>
		Workshop - 900m <sup>2</sup>
KAS Auto Mechanic	-	car repair workshop (former service station)

Vehicle access for these sites is provided by numerous driveways located on the Princes Highway frontage while the Council site is accessed via Bellevue Street and there is the potential for connection to Smith Street.



LEGEND



SITE

FIG 2

## 4. PROPOSED DEVELOPMENT SCHEME

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The proposed IKEA development scheme involves:

- \* removal of the car repair premises
- \* removal of the Kennards occupation
- \* occupation of the remainder by IKEA including its centralised administration function which will occupy the existing Ateco/Penfolds building (upgraded and refurbished).

The development concept, which is reproduced overleaf on drawings produced by Krikis Tayler, comprises:

* IKEA administration	4,460m <sup>2</sup> (existing building)
* IKEA 'Blue Box'	
* Entry/exits	2,616m <sup>2</sup>
* Market hall	7,042m <sup>2</sup>
* Showroom	7,007m <sup>2</sup>
* Restaurant	1,932m <sup>2</sup>
* Offices	1,766m <sup>2</sup>
* Back of house	1,753m <sup>2</sup>
* Warehouse	10,716m <sup>2</sup>
* Loading dock	1,167m <sup>2</sup>
<b>Total</b>	<b>33,999m<sup>2</sup> GFA</b>

The vehicle access provisions will comprise:

- \* a new traffic signal controlled access intersection on the Princes Highway frontage with separate right and left-turn bays (for car access)

- \* connection to Bellevue Street for service vehicles and cars
- \* emergency vehicles access on the Princes Highway (adjacent to the Pretty Girl site) and on Smith Street.

## 5. EXISTING ROAD NETWORK AND TRAFFIC CIRCUMSTANCES

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### 5.1 ROAD NETWORK

The road network serving the development site (Figure 3) comprises:

- \* *Princes Highway* – a State Road and arterial route being the principal north-south connection between Sydney and Wollongong
- \* *M5 Motorway* – a State Road and arterial route linking between General Holmes Drive at Kyeemagh and Liverpool with ramp connections to Princes Highway (eastbound egress) and Marsh Street
- \* *Marsh Street* – a State Road and part of a sub-arterial link between Botany Road/O’Riordan Street and Forest Road connecting with the M5, West Botany Street and Princes Highway
- \* *Canal Road-Gardeners Road* – a State Road and sub-arterial route linking between Princes Highway and Anzac Parade
- \* *Unwins Bridge Road* – a Regional Road and major collector road running parallel and to the west of the Highway with linkage via Gannon Street, Railway Road and Mary Street
- \* *Railway Road* – a major collector road linking westerly from the Princes Highway through Marrickville
- \* *Bellevue Road and Smith Street* – local ‘dead end’ access roadways connecting to the Princes Highway.



## 5.2 ROAD GEOMETRY

The Princes Highway in the vicinity of the site has 6 traffic lanes (generally 3 each way) separated by a narrow median island. Traffic management measures have been applied to various sections at the Highway (on a full-time and part-time 'tidal flow' basis) to reallocate lanes with a diverted median island and lane designation similar to many 'traffic managed' 6 lane arterial roads in the Metropolitan area. However, there is essentially no such traffic management in the section between Bellevue Street and Smith Street/Union Street. The Highway is relatively straight and level in the vicinity of the site, with a slight curve while 'gaps' in the central median island are provided at the 'uncontrolled' Samuel Street, Lymerston Street and Foreman Street intersections (as well as at the traffic signal controlled intersections).

Bellevue Street has 4 traffic lanes within a 20 metre wide reserve while Smith Street has 2 traffic lanes within an 18 metre wide reserve.

## 5.3 TRAFFIC CONTROLS

The principal traffic controls which have been applied to the road system in the vicinity of the site (Figure 4) comprise:

- \* traffic signals at the Princes Highway and Bellevue Street intersection. Details of this intersection arrangement are shown on the traffic signal design plan (Appendix A) which include a right-turn bay for the turn into Bellevue Street, 2 lanes southbound and 3 lanes northbound
- \* the traffic signals at the Princes Highway and Railway Road intersection. Details of this intersection arrangement (Appendix A) include a right-turn bay for the turn into Railway Road, 2 lanes southbound and 3 lanes northbound
- \* the traffic signals at the Princes Highway, Smith Street and Union Street intersection. Details of this intersection arrangement (Appendix A) include a





'leading' right-turn phase for the turn into Union Street and NO RIGHT TURN bay provision

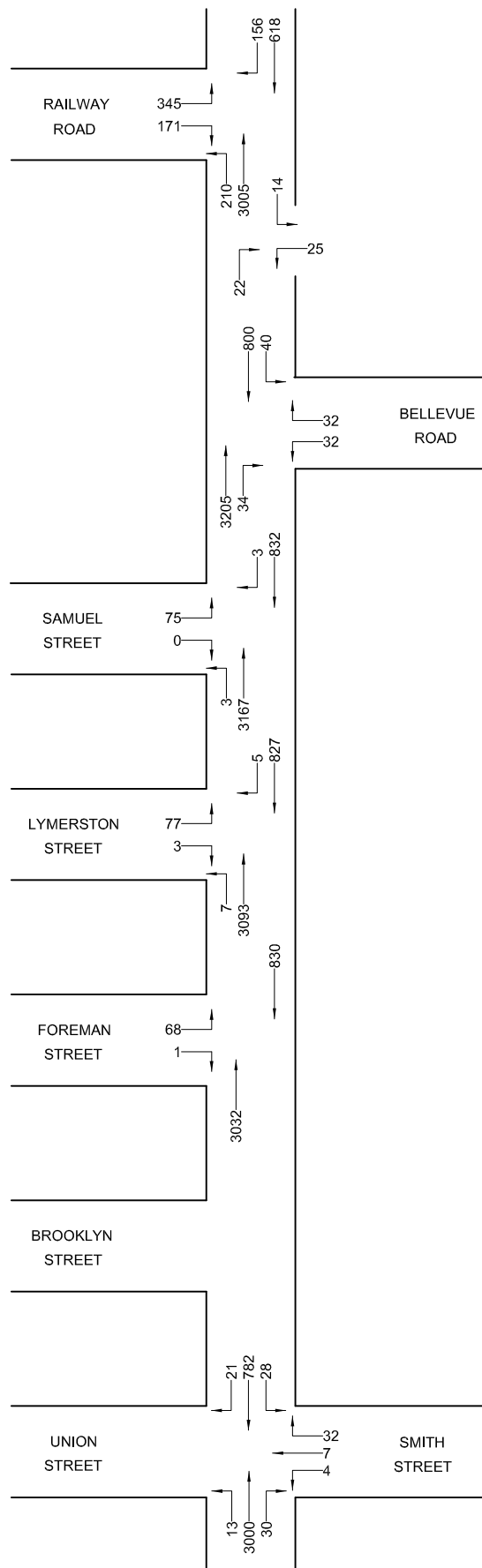
- \* a 'tidal flow' traffic management scheme on the Highway in the section south of the Canal Road intersection
- \* traffic signals on the Princes Highway at the Canal Road, Gannon Road and Holbeche Avenue intersections
- \* CLEARWAY restrictions supplemented by sections of NO STOPPING restrictions along the Highway
- \* central median island along the Highway restricting right-turn access at some intersections
- \* the one-way westerly traffic flow on Union Street and one-way easterly traffic flow on Foreman Street.

## **5.4 TRAFFIC CONDITIONS**

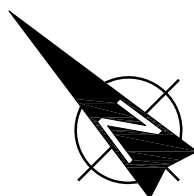
An indication of the traffic conditions in the vicinity of the site is provided by data published by the RTA and surveys undertaken as part of this study (ie June 2007). The data published by the RTA is expressed in terms of Annual Average Daily Traffic (AADT) and recent data (prior to and after the opening of the M5 East) are compared in the following:

<b>Location</b>	<b>AADT</b>	
	<b>2002</b>	<b>2006</b>
Princes Highway at Cooks River	61,116	62,075
Princes Highway north of Railway Road	53,623	52,841

Intersection traffic surveys have been undertaken during the weekday (Thursday) morning and afternoon peak periods and the weekend (Saturday and Sunday)

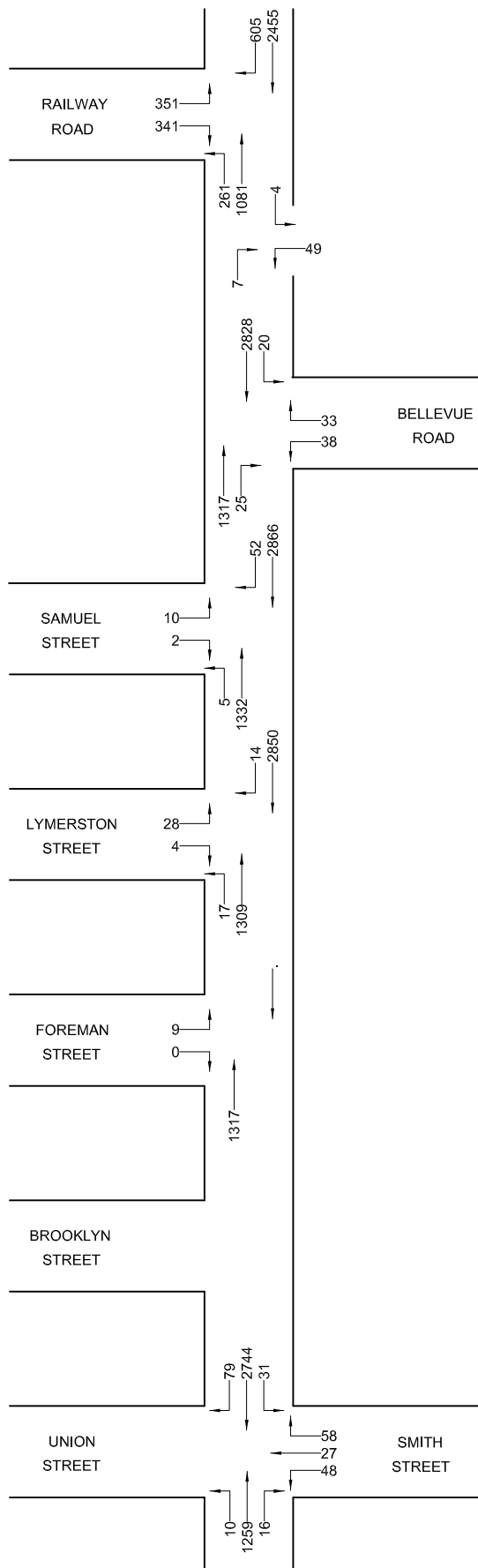


**LEGEND**

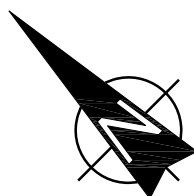


**EXISTING AM PEAK  
TRAFFIC FLOWS**

**FIG 5a**

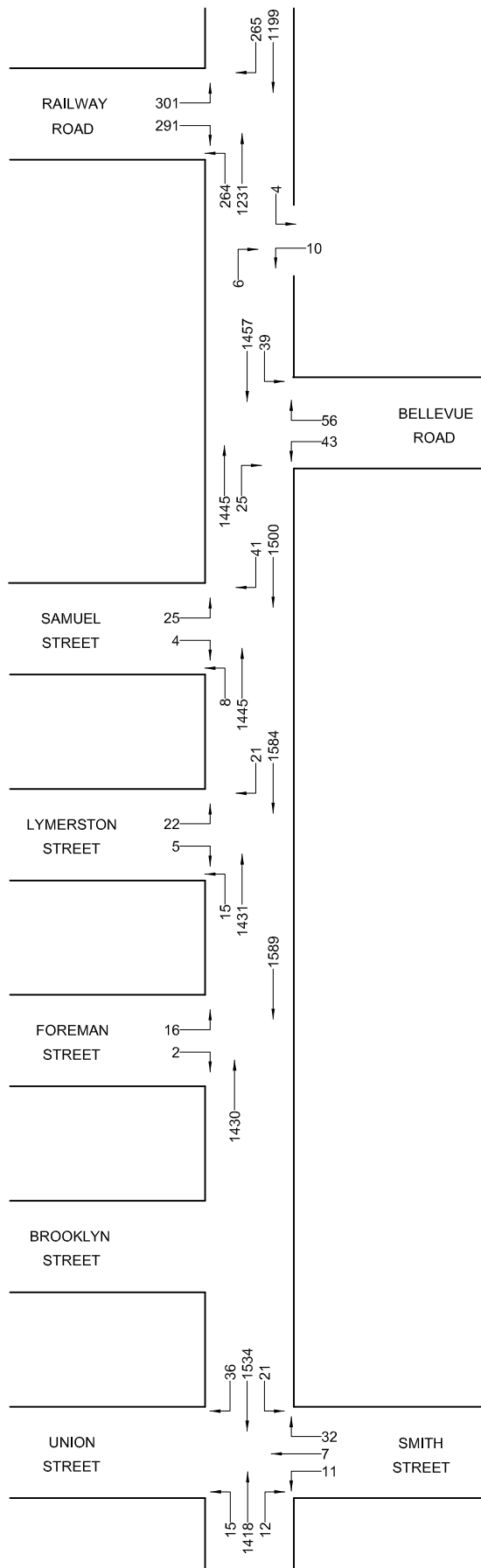


**LEGEND**



**EXISTING PM PEAK  
TRAFFIC FLOWS**

**FIG 5b**



**LEGEND**



**EXISTING SATURDAY  
PEAK  
TRAFFIC FLOWS**

**FIG 5c**

midday/afternoon period. The results of those surveys are provided in Appendix B and it is apparent that the traffic flows on Saturday are heavier than on Sunday. The survey results are summarised in terms of peak hour flows along the Highway in the following, while the individual intersection movements are indicated on Figures 5a, 5b and 5c.

	AM		PM		Sat (MD)	
	NB	SB	NB	SB	NB	SB
<u>Princes Highway</u>						
at Smith Street	3043	831	1285	2854	1445	1594
At Bellevue Street	<u>3215</u>	774	1342	<u>3060</u>	<u>1495</u>	<u>1464</u>

It is apparent that:

- \* the flows on this section of the Highway have reduced slightly since the opening of the M5 East
- \* the flows during the weekend midday/afternoon peak are some 25 to 35% lower bi-directionally and some 50% directionally than the weekday morning and afternoon peaks
- \* the northbound morning peak is significantly higher than the southbound afternoon peak (ie 24% at Bellevue Street) and to some extent this reflects the morning peak tidal flow provision for northbound traffic (not reciprocated for southbound in the afternoon).

The operational performance of the intersections along this section of the Princes Highway during the representative existing peak circumstances has been modelled using SCATES. The results of that assessment are provided in the following and the criteria for interpreting the SCATES output is reproduced overleaf:

	AM			PM			Sat		
	LOS	DS	AVD	LOS	DS	AVD	LOS	DS	AVD
Railway Road	C	0.96	30.7	C	0.89	28.1	B	0.66	20.0
Bellevue Street	C	0.72	9.8	D	1.02	64.9	A	0.72	12.3
Smith St/Union St	A	0.71	7.1	B	0.63	14.8	A	0.41	7.4

# Criteria for Interpreting Results of SCATES Analysis

## 1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good	Good
'B'	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
'C'	Satisfactory	Satisfactory but accident study required
'D'	Operating near capacity	Near capacity and Accident Study required
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
'F'	Unsatisfactory and requires additional capacity	Unsatisfactory and requires other control mode

## 2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabouts	Give Way and Stop Signs
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode

## 3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by **traffic signals**<sup>1</sup> both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a **roundabout or GIVE WAY or STOP signs**, satisfactory intersection operation is indicated by a DS of 0.8 or less.

<sup>1</sup> the values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs

The results indicate relatively acceptable operational circumstances apart from:

- \* the Railway Road intersection in the morning peak
- \* the Bellevue Road intersection in the afternoon peak.

## **5.5 PUBLIC TRANSPORT SERVICES**

Public transport services located within walking distance of the site include both rail and bus services.

### **Rail Services**

Both Sydenham and Tempe Stations are within reasonable walking distance and Sydenham Station has rail services from the Eastern Suburbs/Illawarra line and the Bankstown line. Tempe Station has rail services from the Eastern Suburbs/Illawarra line and the Airport and East Hills line. Both stations have regular train services operating on weekdays and weekends, with Sydenham Station having the highest number of services.

### **Bus Services**

Sydney Buses operate a number of bus services along the Princes Highway in the Tempe/St Peters area. These include:

- Route 422 – City to Tempe
- Route 357 – Bondi Junction to Sydenham
- Route 425 – Dulwich Hill to Tempe

Sydney Buses operate regular bus services along these routes on weekdays and on weekends with bus stops located on the Princes Highway adjacent to the site.

## **5.6 FUTURE CIRCUMSTANCES**

### **Road Network**

The only definitive proposal for the road network is that of the future construction of the SPIRE Road extending from the Princes Highway at Cooks River to Campbell Street, St Peters, however the RTA has no current program to undertake this work. It is envisaged that this roadway will have a connection to Swamp Road which connects to Bellevue Street and the Princes Highway. Various other perceived road network schemes include:

- \* upgraded capacity in the M5 Tunnel
- \* a truck tunnel through Marrickville.

### **Traffic Management**

There are no known proposals for traffic management changes in the area.

### **Transport Services**

The Government is pursuing a process of upgrading rail lines, stations and rolling stock.

### **Urban Development**

Development is continuing to occur in the vicinity of the new Wolli Creek Railway Station while the Port Botany Expansion and Cooks Cove Industrial Park development schemes have been approved and developments are proceeding on the Airport site (although the envisaged retail development has been abandoned).



## 6. POTENTIAL TRAFFIC IMPLICATIONS

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### 6.1 PROJECTED TRAFFIC GENERATION

The recorded traffic generation activities on the site at the time traffic surveys were undertaken included the Kennards Self Storage facility and the container storage movements on part of the 'Council Site'. However, it is not proposed to apply any 'discount' in relation to this existing activity.

The IKEA 'retail experience' is somewhat different to normal bulky goods retailing and reliance on RTA 'generic' traffic generation rates is not really appropriate. At the same time it is not possible to directly survey/establish IKEA traffic generation and parking characteristics at any of its outlets in Australia because there are currently no 'stand alone' locations without shared carparking.

IKEA however maintain a detail 'transaction and visitation' data base which provides the ability to construct a realistic assessment of traffic generation at representative peak times (ie. trading peaks and on-street traffic peaks). IKEA have also undertaken detail customer research by means of questionnaire surveys and the results of these include details of 'travel mode' and 'car occupancy' etc.

'People counters' employed at the entry to the Rhodes IKEA store indicate that on average there are 3 visitors entering the store for every customer transaction and there is relatively little variation to this factor (whether by day or time). The detail customer transaction recordings averaged over 3 months at the Rhodes store for the representative peak periods are converted to visitors entering in the following:

	Transactions	Visitors (IN ONLY)
Normal Weekday	Per Hour	Per Hour
9.00am to 10.00am	18	54
5.00pm to 6.00pm	80	240
Thursday		
5.00pm to 6.00pm	106	318
Saturday/Sunday		
12.00pm to 1.00pm	234	702

The 'travel mode' data for IKEA visitors is focussed towards motor vehicle travel (due to bulky goods purchases) as follows:

Car	92%
Bus	5.3%
Train	0.1%
Walk	1.1%
Cycle/Motor Bike	0.2%
Coach	1.0%
Taxi	0.3%
<b>Total:</b>	<b>100%</b>

The average occupancy of cars visiting IKEA is 1.8 persons and the visitation peaks can be translated to vehicle trips per hour as follows:

	Visitors (IN/OUT)	By Car (92%)	vtph (@ 1.8 per Car)
Normal Weekday			
9.00am to 10.00am	108	100	56
5.00pm to 6.00pm	480	442	246
Thursday			
5.00pm to 6.00pm	636	585	326
Saturday/Sunday			
12.00pm to 1.00pm	1404	1292	718

It is apparent that the opening of additional IKEA stores in Sydney will result in a significant 'spread' of patronage (which is all concentrated at the Rhodes location only at present) and there will be a resultant decrease in the visitation levels (ie as has occurred with major fast food outlets and Bunnings stores (and the like) as they have proliferated). However, in order to ensure a robust assessment of the IKEA traffic implications at Tempe no discount will be applied in relation to this eventuality.

The RTA Development Guidelines provide a generalised indication of the discount which could be applied in relation to 'linked trips' for retail centres which would also be comparable for bulky goods retail circumstances. However, the Queensland Department of Main Roads 'Road Planning and Design Manual (2001)' provides a very detailed assessment of linked trips which has regard for data provided by:

- Queensland Transport
- Brisbane City Council
- Roads and Traffic Authority NSW
- Eppell Olsen and Partners
- Christopher Hallam

The following extract is reproduced from the DMR Queensland Manual:

*Considering the adjacent road network, three shopping centre trip types have been defined as follows:*

- *New Trips – trips that would not have appeared on the immediate approaches, local street network or regional road network prior to the opening of the shopping centre. These trips only appear as a consequence of the opening of the centre.*
- *Diverted Trips – linked trips (ie in conjunction with another trip purpose) which are diverted off the regional road network to access the shopping centre.*
- *Drop-In Trips – linked trips that would have appeared in the local road network irrespective of the presence of the shopping centre.*

*Research undertaken by Hallam developed the rates shown in Table 2A.7 for estimating the proportion of drop-in and diverted trips.*

**Table 2A.7 Proportion of Drop-In and Diverted Trips**

<b>Trip Type</b>	<b>Proportion of Trips</b>	
	<b>Thursday</b>	<b>Saturday</b>
<i>New Trip</i>	50%	68%
<i>Diverted Trip</i>	30%	20%
<i>Drop-In Trip</i>	20%	12%

*Studies undertaken in the USA suggest the factors in Table 2A.8 are applicable to the above percentages to accommodate different diverted pattern trips for different sized centres*

**Table 2A.8 Factors in Drop-In and Diverted Trips**

<b>Shopping Centre Size</b>	<b>Factors to be Applied to Proportion of Drop-In and Diverted Trips</b>
<i>0 – 10,000m<sup>2</sup></i>	1.2
<i>10,000 – 35,000m<sup>2</sup></i>	1.0
<i>&gt; 35,000m<sup>2</sup></i>	0.8

*Upon determining the proportion of drop-in and diverted trips the traffic discounts in Table 2A.9 would be applicable*

**Table 2A.9 Factors in Drop-In and Diverted Trips**

<b>Road Network Element</b>	<b>Trip Discount Applicable</b>
<i>Regional Road Network</i>	<i>Drop-in + diverted trips</i>

The ‘passing trade’ element will be quite significant for the IKEA Tempe location due to the regional traffic movements currently occurring along the Highway including many to/from the numerous existing bulky goods complexes which are located in the near vicinity and in the Green Square and Moore Park areas.

The foregoing data would indicate a linked trip characteristic in relation to the proposed IKEA Tempe store of some 30% on Thursday and some 42% on Saturday/Sunday.

Adopting the peak patronage/traffic characteristics of the Rhodes store (without any mitigation for patronage spread) and the applied ‘linked trip’ factors of 30% and 42% would indicate the following projected peak traffic generation:

**TTPA**

Thursday 5.00pm – 6.00pm	320 vtpm (96 linked)
Sat/Sun 12.00pm – 1.00pm	700 vtpm (294 linked)

In addition, there will be the traffic movements generated by the IKEA administration office which will be provided with 50 parking spaces with a typical peak staff arrival characteristic of 60% in 1 hour (ie 30 vtpm IN am, OUT pm).

Assessment of the IKEA development also needs to include consideration of the other landuse developments, namely:

SACL Freight Forwarding

Weekday	81 vtpm (50:50) IN/OUT split)
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Thus the projected total additional traffic movements which are subject of this assessment are as follows (without any discount in relation to existing traffic generation on the site):

	<b>PM</b>	<b>Sat</b>
IKEA Trading	224	406
IKEA Administration	30	-
SACL	81	-
<b>Total</b>	<b>335</b>	<b>406</b>

## 6.2 PROPOSED ACCESS AND REMEDIAL TREATMENTS

Assessment of the appropriate treatments in relation to vehicle access for the IKEA development involves consideration of both:

- \* the existing unsatisfactory circumstances along this section of the Highway
- \* the development needs.

In relation to the existing circumstances there are a number of significant issues as follows:

\* Arterial Road Traffic Management

The section of the Princes Highway between the Smith Street/Union Street and Bellevue Street intersections is largely devoid of any contemporary traffic management apart from CLEARWAY restrictions and some median island closures.

It is apparent that this circumstance may reflect the absence of any significant traffic capacity constraint with the traffic flow in the vicinity dictated by the situation at the Railway Road intersection northwards and West Botany Street southwards (where traffic management has been applied) hence the RTA has not pursued application of these measures in this section.

The absence of traffic management measures is unusual for a major highway in the Metropolitan Area and results in vehicle conflicts due to the absence of right-turn bays and uncontrolled intersection movements etc. The 5 year accident history provided in Appendix C reveals numerous injury, tow-away, rear end, lane change, right-turn, right angle and U-turn accidents at the uncontrolled intersections in this section of Highway as well as pedestrian accidents.

\* Smith Street/Union Street Intersection

These traffic signals operate with a 'leading' right-turn phase for the turn from the Highway into Union Street (due to the inability to prohibit the turn into Smith Street or to provide diamond turn phasing due to absence of right-turn bays). This phasing is inherently hazardous as vehicles wanting to turn right accumulate during the Highway green phase and often turn after red is displayed due to the absence of a trailing green arrow.

The accident history provided in Appendix C indicates that there were a total of 13 recorded 'injury and tow-away' accidents involving northbound through vehicles in the Highway and southbound vehicles turning into Union Street. These accidents are very largely a direct consequence of the 'leading green arrow' phase arrangement.

The accident situation is exacerbated by the absence of designated right-turn bays and there are also numerous reported 'rear end' and 'lane change' accidents on the Highway approaches resultant to this situation.

\* Pedestrian Crossing Facilities

There is a distance of some 700 metres between the Smith Street/Union Street and Bellevue Street intersections on the Highway without any facilities for the pedestrian crossing needs generated by bus stops and workers etc. The accident history provided in Appendix C reveals 2 reported pedestrian injury accidents on the Highway in the vicinity of Forman Street (ie at the frontage of the development site).

\* Intersection Capacity Limitations

The operational performance analysis of the existing morning and afternoon peak conditions reveals shortcomings at the Railway Road intersection (morning peak) and Bellevue Street intersection (afternoon peak). The potential to achieve additional lanes at these intersections would alleviate these existing shortcomings.

The proposed strategy for treatment of this section of the Highway as part of the development scheme involves conventional arterial road traffic management involving:

- \* creation of right-turn bays by reducing the southbound provision to 2 through lanes as exists at Railway Road and Bellevue Street. The alternative is to provide 2 northbound through lanes, however this is not appropriate due to the occasional extent of the northbound morning peak queuing back from the Railway Road – Canal Road intersections
- \* provision of diamond overlap traffic signal phasing at the Smith Street/Union Street intersection (with the right-turn bays)
- \* provision of a new traffic signal controlled intersection at the IKEA access located between Lymerston Street and Foreman Street. This intersection will

have separate right-turn and left-turn bays (the latter providing for a bus stop) as well as pedestrian crossing facilities

- \* closure of the median island gaps at the Lymerston Street intersection
- \* extension of the right-turn bay at Bellevue Street (and reduction of the bay at Samuel Street)
- \* rearrangement of lanes between Railway Road and Bellevue Street in order to provide sections of left-turn lanes on the approaches to each intersection.

This proposed treatment for the Princes Highway in the section between Smith Street/Union Street and Railway Road is shown on the plan prepared by Krikis Tayler which is reproduced overleaf with a plan of the existing circumstances.



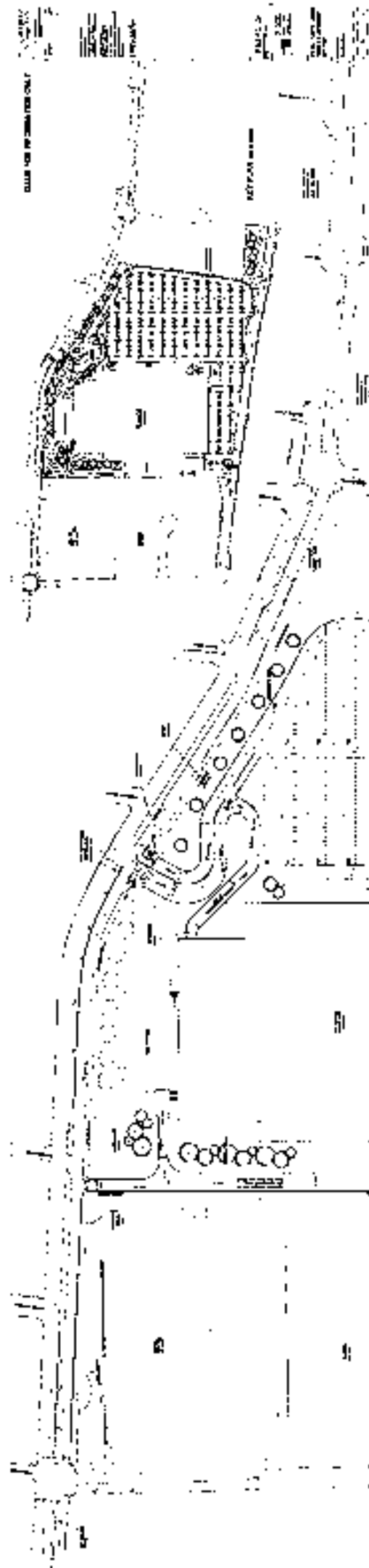


FIG 6A

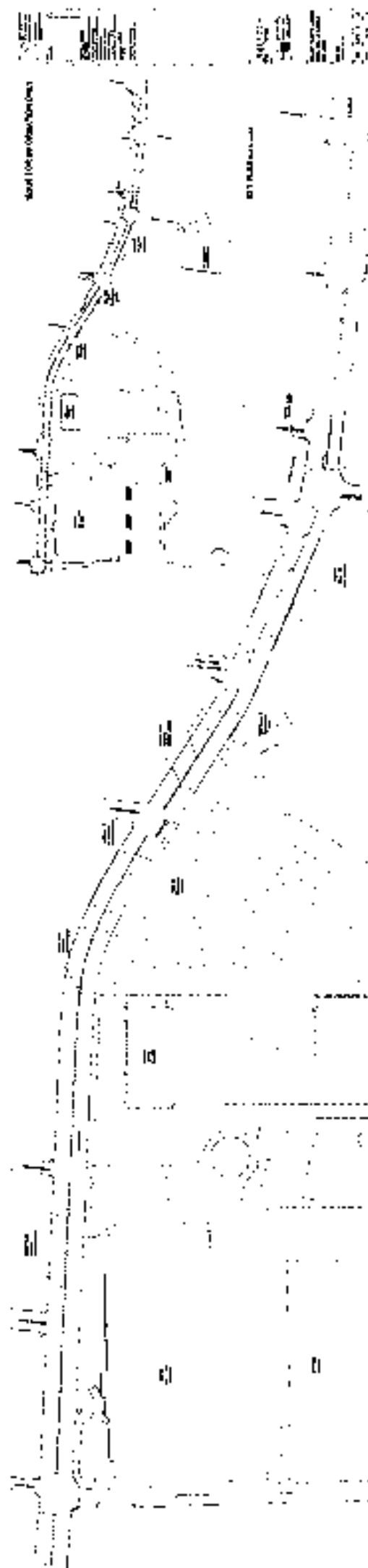


FIG 6B

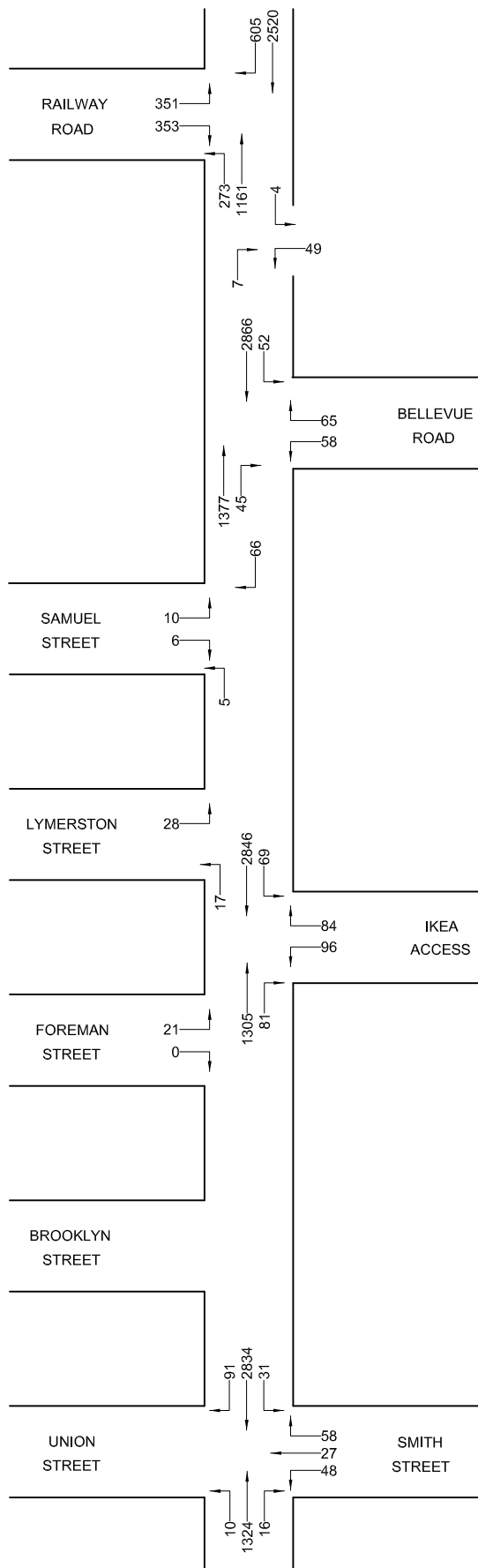
### 6.3 TRAFFIC DISTRIBUTION AND OPERATIONAL PERFORMANCE OUTCOME

The projected peak traffic volumes at the intersections along the Highway consequential to the development outcome (ie Thursday afternoon and Saturday midday) are identified on Figure 7a and 7b. The weekday morning circumstance is inconsequential because IKEA will not open for trading until 10.00am.

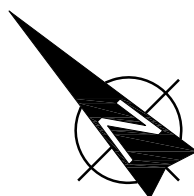
The operational performance of the intersections along the Princes Highway (with the proposed development) has been assessed using the SCATES program adopting the proposed traffic management access arrangements. The results of the SCATES assessment are compared with the existing circumstance in the following:

Intersection	Existing						Future					
	PM			Sat			PM			Sat		
	LOS	DS	AVD	LOS	DS	AVD	LOS	DS	AVD	LOS	DS	AVD
Railway Rd	C	0.89	28.1	B	0.66	20.0	C	0.92	29.4	B	0.63	19.6
Bellevue St	D	1.02	64.9	A	0.72	12.3	B	0.97	17.8	A	0.75	12.9
IKEA	-	-	-	-	-	-	A	0.95	13.7	A	0.62	12.1
Smith/Union	B	0.63	14.8	A	0.41	7.4	D	1.00	45.2	A	0.64	8.3

The criteria for interpreting SCATES output is again reproduced overleaf and it is apparent that a satisfactory level of service will be achieved at intersections along the Highway. In fact the operational performance of the existing Railway Road and Bellevue Street intersections will be improved as a result of works undertaken as part of the project.

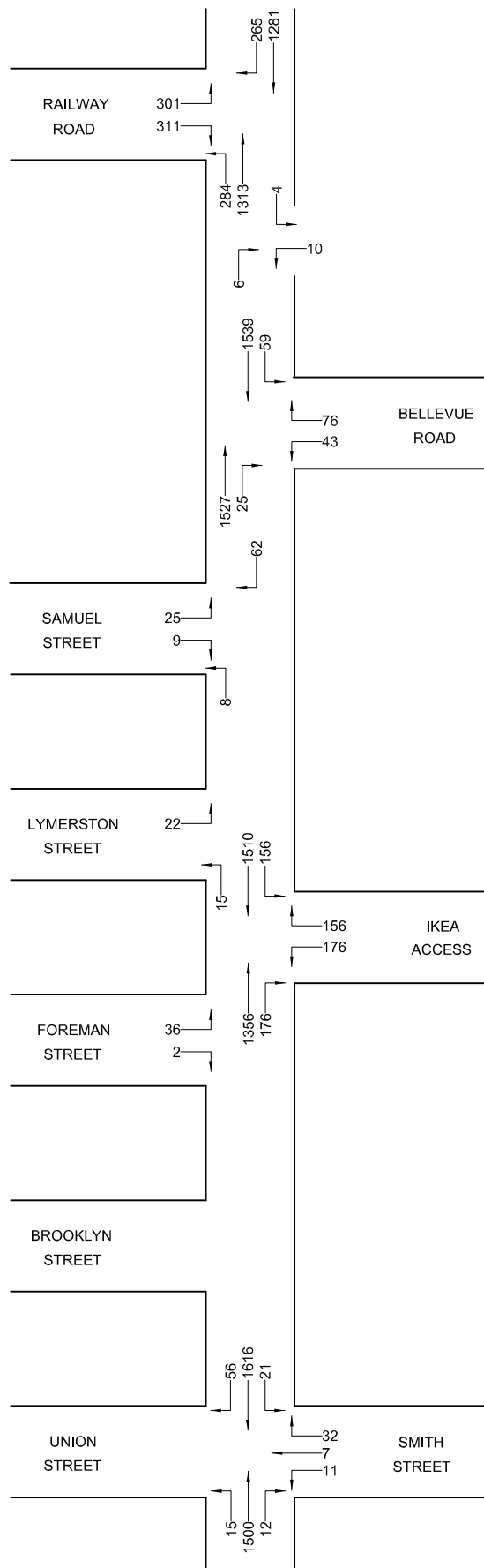


**LEGEND**

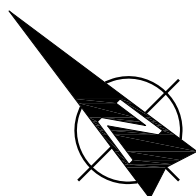


**POST DEVELOPMENT PM  
PEAK  
TRAFFIC FLOWS**

**FIG 7a**



**LEGEND**



**POST DEVELOPMENT  
SATURDAY PEAK  
TRAFFIC FLOWS**

**FIG 7b**

# Criteria for Interpreting Results of SCATES Analysis

## 1. Level of Service (LOS)

LOS	Traffic Signals and Roundabouts	Give Way and Stop Signs
'A'	Good	Good
'B'	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
'C'	Satisfactory	Satisfactory but accident study required
'D'	Operating near capacity	Near capacity and Accident Study required
'E'	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode
'F'	Unsatisfactory and requires additional capacity	Unsatisfactory and requires other control mode

## 2. Average Vehicle Delay (AVD)

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVD's listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

Level of Service	Average Delay per Vehicle (secs/veh)	Traffic Signals, Roundabouts	Give Way and Stop Signs
A	Less than 14	Good operation	Good operation
B	15 to 28	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	29 to 42	Satisfactory	Satisfactory but accident study required
D	43 to 56	Operating near capacity	Near capacity and accident study required
E	57 to 70	At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode	At capacity and requires other control mode

## 3. Degree of Saturation (DS)

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by **traffic signals**<sup>2</sup> both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a **roundabout or GIVE WAY or STOP signs**, satisfactory intersection operation is indicated by a DS of 0.8 or less.

<sup>1</sup> the values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs

## 6.4 SPECIAL PROVISION AND CONTINGENCIES

Experiences with the recent openings of IKEA stores in Australia has provided guidance particularly in relation to the need to facilitate ingress movements and ensure adequate on-site parking for peak demand circumstances. The design provisions for IKEA Tempe include:

- \* optimised ingress capacity with avoidance of conflict, queuing or delay within the site
- \* generous parking provisions which is enabled by the large site area
- \* complete separation of delivery vehicle activity.

The contingent provisions include:

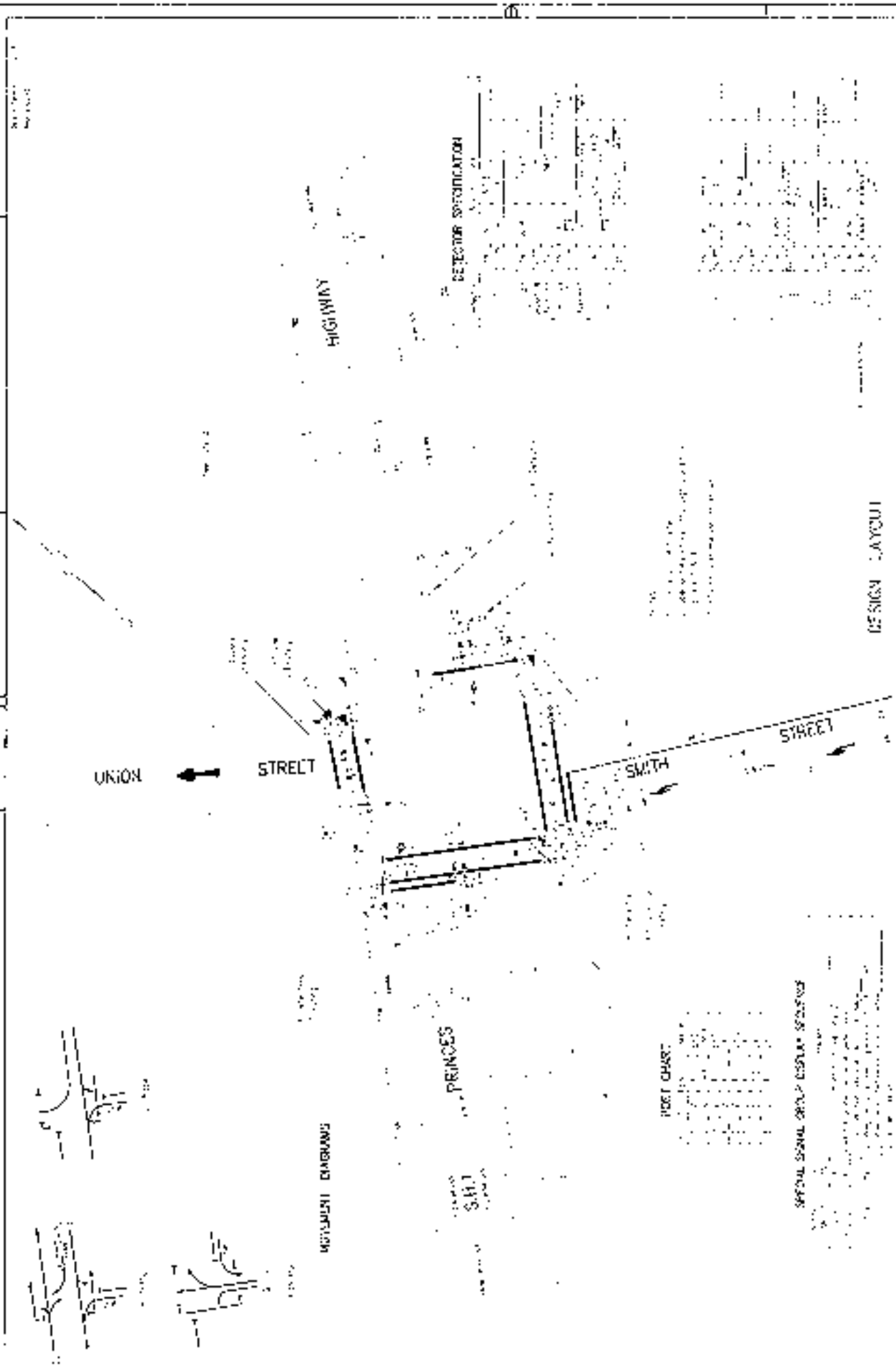
- \* setting back of building to enable potential provision of a second right-turn ingress lane in the Highway (although not foreseen or assessed as necessary)
- \* potential 'safety value' access connection to Smith Street
- \* ability to connect to the future Spire Road via Bellevue Street.

# APPENDIX A

## INTERSECTION PLANS

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<p>DATE: 28/11/2011</p> <p>BY: 28/11/2011</p> <p>NO: 28/11/2011</p> <p>0001.261.VV.285</p>	<p>ROADS AND TRAFFIC AUTHORITY OF NSW</p> <p>MUNICIPALITY OF WARRAGALIE</p> <p>SH 101 - PRINCES HIGHWAY</p> <p>4/11</p> <p>SOUTH &amp; LARSEN STREETS</p> <p>TRIP</p>	<p>DESIGN LAYOUT</p>	<p>UNION STREET</p> <p>SMITH STREET</p> <p>PRINCES HIGHWAY</p>	<p>DETECTOR SPECIFICATION</p>	<p>POST CHART</p>	<p>SPECIAL SIGNAL GROUP DISPLAY SPECIFICATIONS</p>	<p>EMBEDDED LAYOUT</p>	<p>UNION STREET</p> <p>SMITH STREET</p> <p>PRINCES HIGHWAY</p>
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## **APPENDIX B**

### **TRAFFIC SURVEYS**

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# R.O.A.R. DATA

Reliable, Original & Authentic Results  
 Ph. 8818684 / Fax 88196849, Mob. 0418-239019

Client

: T.T.P.A.

Job No/Name : 1863 TEMPE Princess Hwy

Day/Date : Thursday 12th June 07

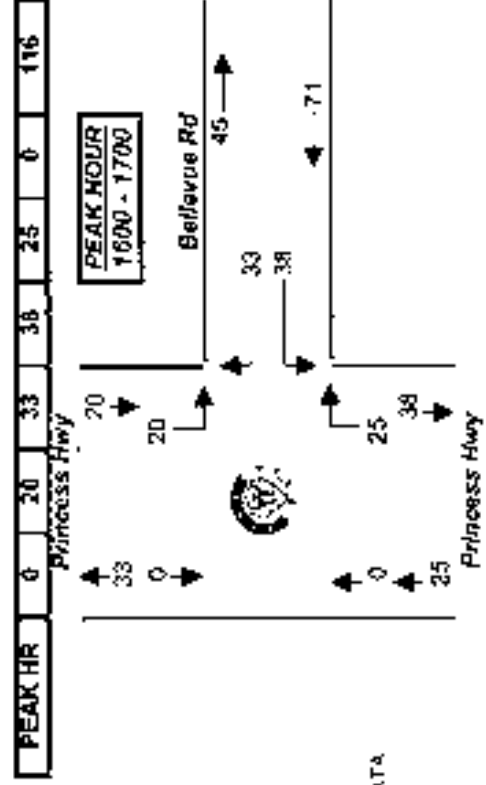
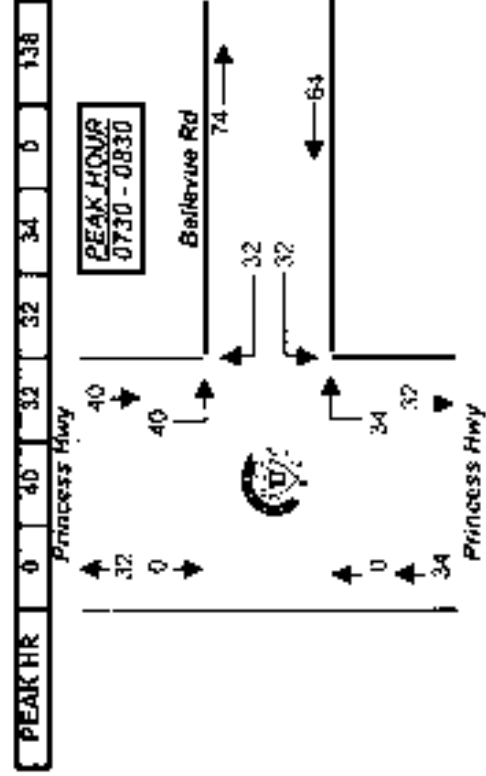
All Vehicles

Time Per	NORTH			EAST			SOUTH		
	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy
0700 - 0715	12	6	5	5	5	5	5	5	5
0715 - 0730	10	3	1	3	3	3	3	3	3
0730 - 0745	14	11	12	19	19	19	19	19	19
0745 - 0800	8	8	5	5	5	5	5	5	5
0800 - 0815	12	9	10	8	8	8	8	8	8
0815 - 0830	6	4	5	4	4	4	4	4	4
0830 - 0845	9	3	9	10	10	10	10	10	10
0845 - 0900	13	9	7	10	10	10	10	10	10
Period End	0	84	53	54	62	0	0	253	253

Time Per	NORTH			EAST			SOUTH		
	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy
1600 - 1615	4	8	19	13	13	13	13	13	13
1615 - 1630	5	5	6	4	4	4	4	4	4
1630 - 1645	8	8	4	3	3	3	3	3	3
1645 - 1700	5	12	3	5	5	5	5	5	5
1700 - 1715	2	6	13	8	8	8	8	8	8
1715 - 1730	7	7	7	2	2	2	2	2	2
1730 - 1745	8	8	3	3	3	3	3	3	3
1745 - 1800	7	1	3	3	3	3	3	3	3
Period End	0	32	55	63	41	0	0	191	191

Peak Per	NORTH			EAST			SOUTH		
	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy
0700 - 0800	0	44	28	32	32	0	0	0	0
0715 - 0815	0	44	31	28	33	0	0	0	0
0730 - 0830	0	40	32	32	34	0	0	0	0
0745 - 0845	0	35	24	25	31	0	0	0	0
0800 - 0900	0	40	25	31	30	0	0	0	0
TOTAL	0	163	150	142	150	0	0	0	0

Peak Per	NORTH			EAST			SOUTH		
	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy
1600 - 1700	0	20	33	25	25	0	0	0	0
1615 - 1715	0	18	31	26	26	0	0	0	0
1630 - 1730	0	15	33	18	18	0	0	0	0
1645 - 1745	0	15	33	32	32	0	0	0	0
1700 - 1800	0	12	22	25	15	0	0	0	0
TOTAL	0	70	132	126	106	0	0	0	0



Copyright ROAR DATA



## R.O.A.R. DATA

Reliable, Original & Authentic Results

17h.88195847, Fax 88195849, Mob.0418-239019

Client

J.T.P.A.

Job No/Name : 1863 TEMPE Princess Hwy

Day/Date : Thursday 12th June 07

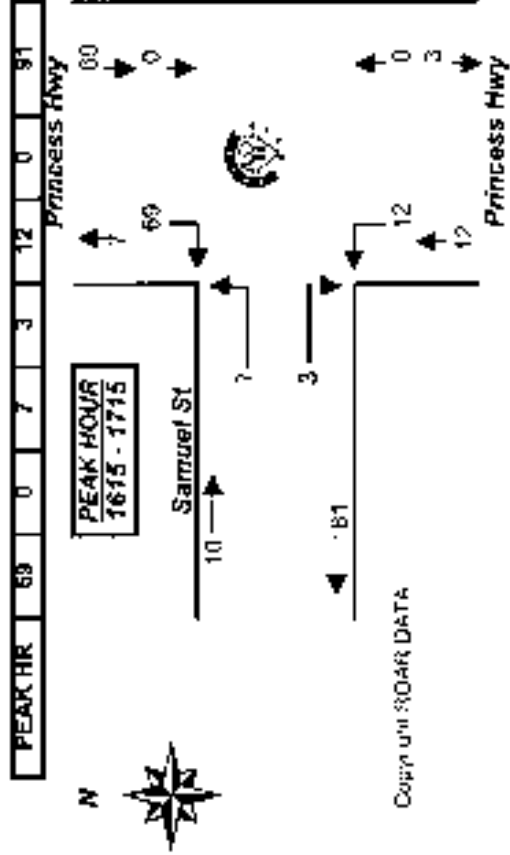
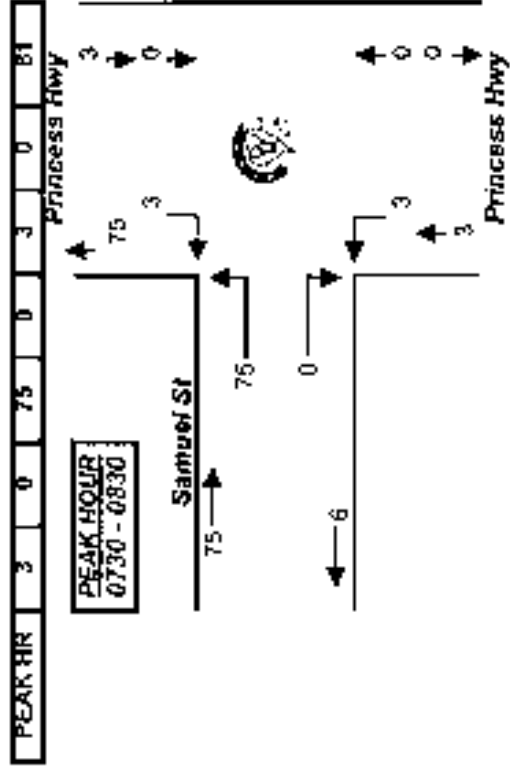
All Vehicles

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Samuel St	Princess Hwy	Samuel St	Princess Hwy	Samuel St	
0700 - 0715	1	0	2	0	4	0	7
0715 - 0730	1	0	5	0	1	0	7
0730 - 0745	0	0	12	0	1	0	13
0745 - 0800	2	0	20	0	1	0	23
0800 - 0815	0	0	18	0	0	0	18
0815 - 0830	1	0	25	0	1	0	27
0830 - 0845	0	0	6	0	1	0	7
0845 - 0900	2	0	7	0	8	0	17
Period End	7	0	95	0	15	0	117

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Samuel St	Princess Hwy	Samuel St	Princess Hwy	Samuel St	
1600 - 1615	10	0	4	0	0	0	14
1615 - 1630	16	0	4	0	3	0	23
1630 - 1645	14	0	0	2	2	0	18
1645 - 1700	21	0	1	0	4	0	26
1700 - 1715	18	0	2	1	3	0	24
1715 - 1730	10	0	3	0	2	0	15
1730 - 1745	11	0	2	1	0	0	14
1745 - 1800	13	0	3	0	0	0	16
Period End	115	0	19	4	14	0	150

Peak Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Samuel St	Princess Hwy	Samuel St	Princess Hwy	Samuel St	
0700 - 0800	4	0	39	0	7	0	50
0715 - 0815	3	0	55	0	3	0	61
0730 - 0830	3	0	75	0	3	0	81
0745 - 0845	3	0	60	0	3	0	75
0800 - 0900	3	0	56	0	4	0	67

Peak Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Samuel St	Princess Hwy	Samuel St	Princess Hwy	Samuel St	
1600 - 1700	61	0	9	2	9	0	81
1615 - 1715	69	0	7	3	12	0	91
1630 - 1730	53	0	6	3	11	0	83
1645 - 1745	60	0	8	2	9	0	79
1700 - 1800	57	0	10	2	5	0	69





**R.O.A.R. DATA**  
 Reliable, Original & Authentic Results  
 Ph.88196847, Fax 88196849, Mob.0418-238018

Client: T.T.P.A.  
 Job No/Name: 1863 TEMPE Princess Hwy  
 Day/Date: Thursday 12th June 07

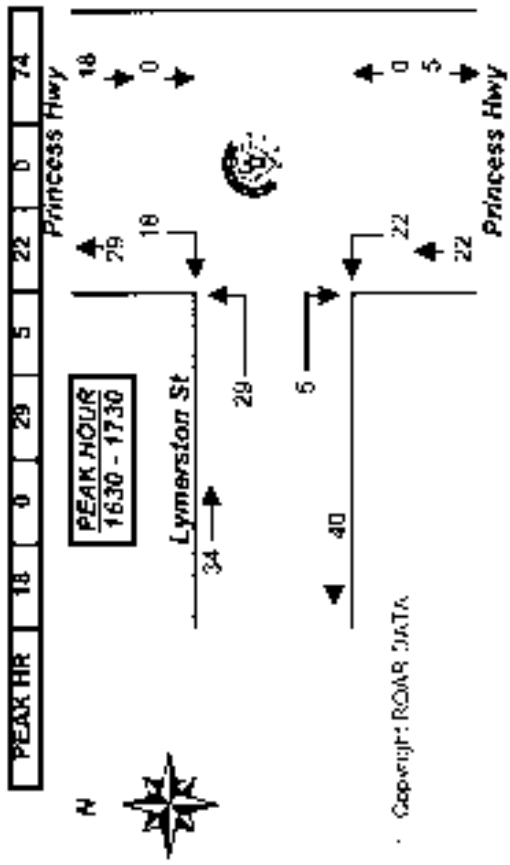
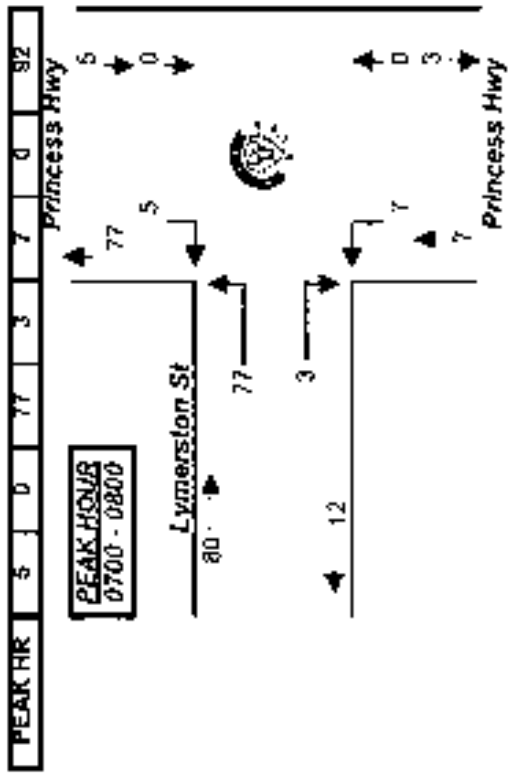
All Vehicles

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Lymerton St	Princess Hwy	Lymerton St	Princess Hwy	Lymerton St	
0700 - 0715	1	15	0	2	2		19
0715 - 0730	2	17	1	4	4		26
0730 - 0745	2	16	2	0	0		20
0745 - 0800	0	26	0	1	1		27
0800 - 0815	0	14	0	1	1		15
0815 - 0830	2	17	0	0	0		19
0830 - 0845	0	13	0	2	2		15
0845 - 0900	2	12	1	2	2		17
Period End	8	133	4	12	0		158

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Lymerton St	Princess Hwy	Lymerton St	Princess Hwy	Lymerton St	
1600 - 1615	4	7	2	5			18
1615 - 1630	11	4	2	3			20
1630 - 1645	5	5	1	8			19
1645 - 1700	4	6	3	2			15
1700 - 1715	4	6	1	7			18
1715 - 1730	5	12	0	5			22
1730 - 1745	2	7	2	2			13
1745 - 1800	3	3	1	3			10
Period End	38	50	12	35	0		135

Peak Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Lymerton St	Princess Hwy	Lymerton St	Princess Hwy	Lymerton St	
0700 - 0800	5	77	3	7	0		92
0715 - 0815	4	75	3	6	0		88
0730 - 0830	4	73	2	2	0		81
0745 - 0845	2	71	0	4	0		76
0800 - 0900	4	56	1	5	0		65

Peak Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Lymerton St	Princess Hwy	Lymerton St	Princess Hwy	Lymerton St	
1600 - 1700	24	22	8	18	0		72
1615 - 1715	24	21	7	20	0		72
1630 - 1730	18	29	5	22	0		74
1645 - 1745	15	31	6	16	0		68
1700 - 1800	14	20	4	17	0		63





# R.O.A.R. DATA

Reliable, Original & Authentic Results  
Ph:88186847, Fax:88186849, Mob:0418-235019

Client : T.T.P.A.

Job No/Name : 1863 TEMPE Princess Hwy

Day/Date : Thursday 12th June 07

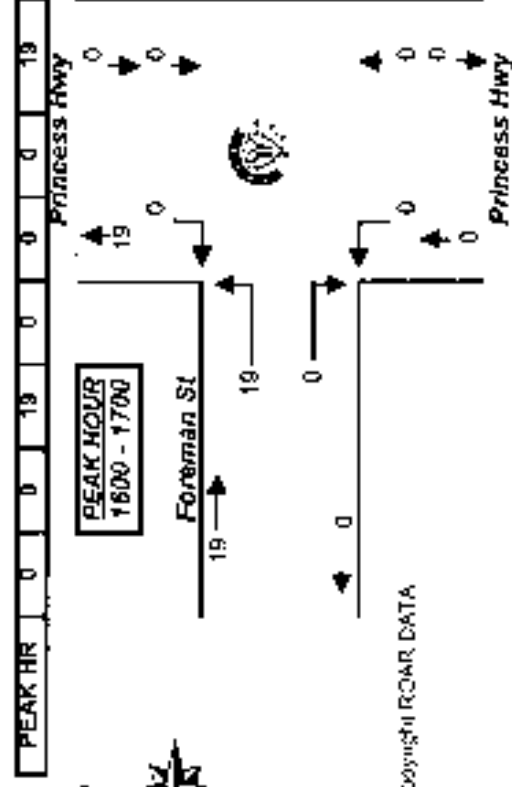
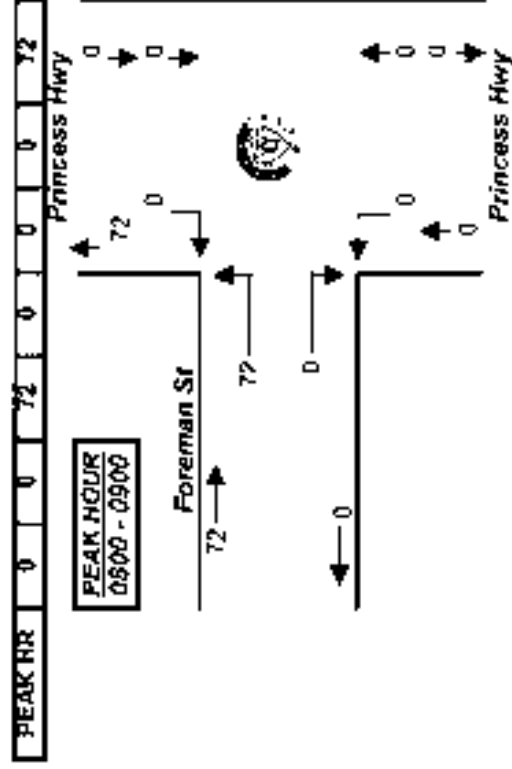
All Vehicles

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Foreman St	Princess Hwy	Foreman St	Princess Hwy	Foreman St	
0700 - 0715		19	1				20
0715 - 0730		17	0				17
0730 - 0745		17	0				17
0745 - 0800		15	0				15
0800 - 0815		13	0				13
0815 - 0830		22	0				22
0830 - 0845		21	0				21
0845 - 0900		16	0				16
Period End	0	140	1		0	0	141

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Foreman St	Princess Hwy	Foreman St	Princess Hwy	Foreman St	
1800 - 1815		8	0				8
1815 - 1830		3	0				3
1830 - 1845		6	0				6
1845 - 1900		2	0				2
1900 - 1915		3	0				3
1915 - 1930		2	0				2
1930 - 1945		1	0				1
1945 - 1800		3	0				3
Period End	0	28	0		0	0	28

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Foreman St	Princess Hwy	Foreman St	Princess Hwy	Foreman St	
0700 - 0800	0	63	1	0	0	0	69
0715 - 0815	0	57	0	0	0	0	62
0720 - 0830	0	67	0	0	0	0	67
0745 - 0845	0	71	0	0	0	0	71
0800 - 0900	0	72	0	0	0	0	72

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Foreman St	Princess Hwy	Foreman St	Princess Hwy	Foreman St	
1800 - 1700	0	0	19	0	0	0	19
1615 - 1715	0	0	14	0	0	0	14
1630 - 1730	0	0	13	0	0	0	13
1645 - 1745	0	0	8	0	0	0	8
1700 - 1800	0	0	3	0	0	0	3







# R.O.A.R. DATA

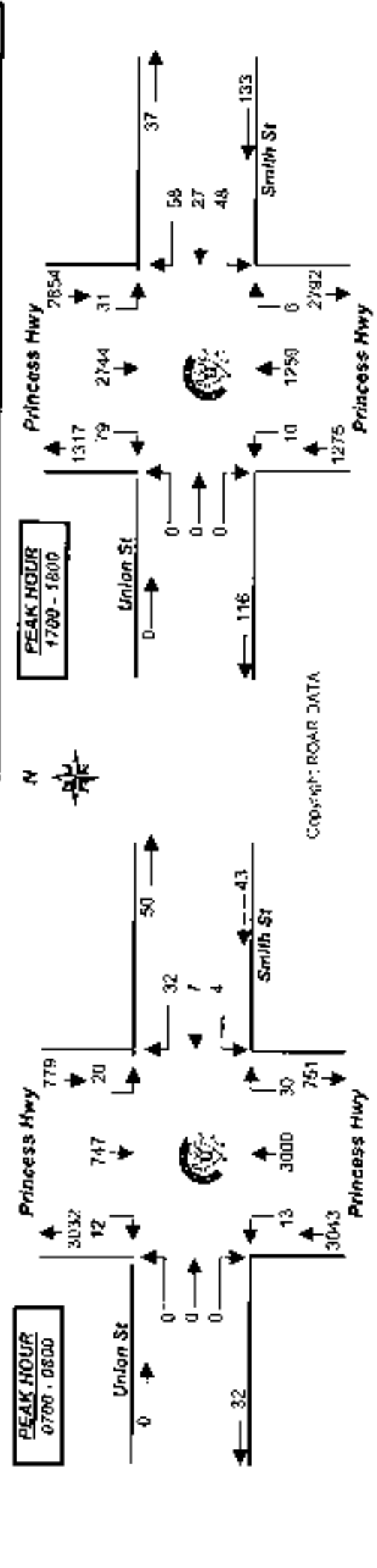
Reliable, Original & Authentic Results  
Ph. 88198847, Fax 88198848, Mob. 0418-239019

Client : T.T.P.A.  
Job No/Name : 1863 TEMPE Princess Hwy  
Day/Date : Thursday 12th June 07

ALL Vehicles	NORTH				WEST				SOUTH				EAST			
	Princess Hwy		Union St		Princess Hwy		Union St		Princess Hwy		Union St		Princess Hwy		Smith St	
	L	T	R	B	L	T	R	B	L	T	R	B	L	T	R	B
Time Par	1800 - 1815	1815 - 1830	1830 - 1845	1845 - 1900	1900 - 1915	1915 - 1930	1930 - 1945	1945 - 1960	1960 - 1975	1975 - 1990	1990 - 2005	2005 - 2020	2020 - 2035	2035 - 2050	2050 - 2105	2105 - 2120
Period End	1800	1815	1830	1845	1845	1860	1875	1890	1905	1920	1935	1950	1965	1980	1995	2010
TOT	12	617	1	1	6	606	27	5	615	18	8	662	27	7	684	29
1800 - 1815	12	617	1	1	6	606	27	5	615	18	8	662	27	7	684	29
1815 - 1830	6	606	27	5	615	18	8	662	27	7	684	29	1	377	2	14
1830 - 1845	2	314	2	3	335	4	9	8	19	885	1017	1034	1054	1071	1081	1086
1845 - 1900	2	314	2	3	335	4	9	8	19	885	1017	1034	1054	1071	1081	1086
1900 - 1915	4	292	4	7	3	11	5	24	1034	1054	1071	1081	1086	1086	1086	1086
1915 - 1930	1	377	2	14	5	7	1071	1081	1086	1086	1086	1086	1086	1086	1086	1086
1930 - 1945	1	335	3	14	13	19	1081	1086	1086	1086	1086	1086	1086	1086	1086	1086
1945 - 1960	4	310	1	8	4	8	1086	1086	1086	1086	1086	1086	1086	1086	1086	1086
Period End	82	5238	162	0	0	0	0	0	16	2483	18	80	47	112	8202	8202

ALL Vehicles	NORTH				WEST				SOUTH				EAST			
	Princess Hwy		Union St		Princess Hwy		Union St		Princess Hwy		Union St		Princess Hwy		Smith St	
	L	T	R	B	L	T	R	B	L	T	R	B	L	T	R	B
Peak Time	1600 - 1730	1730 - 1800	1800 - 1830	1830 - 1900	1900 - 1930	1930 - 2000	2000 - 2030	2030 - 2100	2100 - 2130	2130 - 2200	2200 - 2230	2230 - 2300	2300 - 2330	2330 - 2400	2400 - 2430	2430 - 2500
Period End	1600	1730	1800	1830	1830	1900	1930	2000	2030	2100	2130	2200	2230	2300	2330	2400
TOT	31	2484	83	0	0	0	0	0	12	1198	13	30	22	67	4010	4107
1600 - 1730	31	2484	83	0	0	0	0	0	12	1198	13	30	22	67	4010	4107
1730 - 1800	26	2541	101	0	0	0	0	0	11	1211	13	41	21	60	4107	4213
1800 - 1830	27	2633	90	0	0	0	0	0	10	1241	9	48	26	80	4213	4262
1830 - 1900	30	2702	89	0	0	0	0	0	10	1259	0	48	27	58	4262	4262
1900 - 1930	31	2744	79	0	0	0	0	0	10	1259	0	48	27	58	4262	4262

PEAK HOUR	20	747	12	0	0	0	0	0	0	0	0	10	1259	6	48	27	58	4262
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# R.O.A.R. DATA

Reliable, Original & Authentic Results  
Ph: 88196847, Fax: 88196848, Mob: 0418-239019

Client

T.T.P.A.

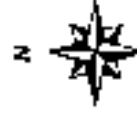
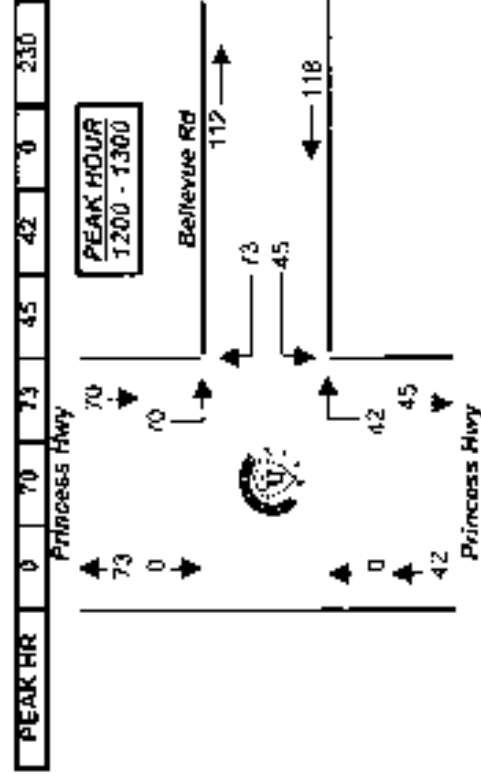
Job No/Name : 1853 TEMPE Princess Hwy

Day/Date : Saturday 7th & Sunday 8th June 07

All Vehicles

Time Per	NORTH			EAST			SOUTH			Sat
	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	
1200 - 1215	16	26	19	10	10	10	10	10	10	71
1215 - 1230	20	13	12	10	10	10	10	10	10	55
1230 - 1245	18	21	8	7	7	7	7	7	7	54
1245 - 1300	16	13	6	16	16	16	16	16	16	50
1300 - 1315	13	13	12	6	6	6	6	6	6	44
1315 - 1330	8	16	7	9	9	9	9	9	9	40
1330 - 1345	9	12	8	4	4	4	4	4	4	33
1345 - 1400	9	16	16	6	6	6	6	6	6	46
1400 - 1415	9	5	9	9	9	9	9	9	9	32
1415 - 1430	5	6	13	7	7	7	7	7	7	31
1430 - 1445	7	9	10	6	6	6	6	6	6	32
1445 - 1500	5	16	8	6	6	6	6	6	6	35
Period End	0	135	128	95	0	0	0	0	0	523

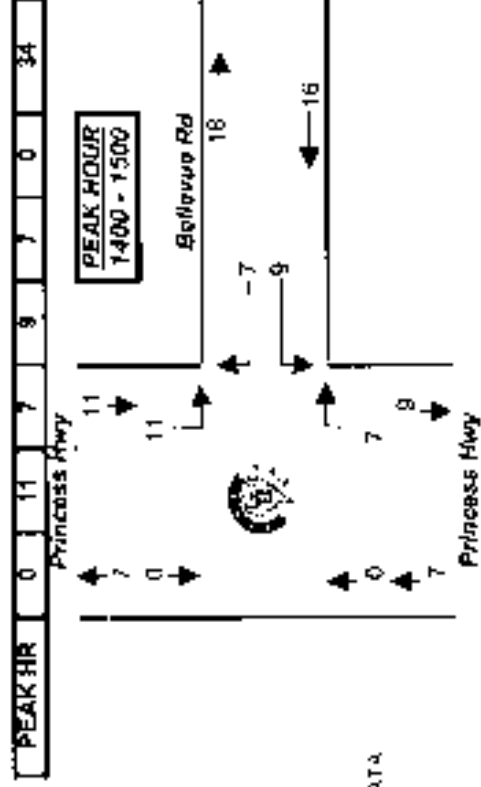
Peak Per	NORTH			EAST			SOUTH			TOTAL
	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	
1200 - 1300	0	70	45	42	0	0	0	0	0	230
1215 - 1315	0	67	50	38	0	0	0	0	0	203
1230 - 1330	0	55	63	33	0	0	0	0	0	188
1245 - 1345	0	46	54	33	0	0	0	0	0	167
1300 - 1400	0	39	56	43	25	0	0	0	0	163
1315 - 1415	0	31	48	40	28	0	0	0	0	151
1330 - 1430	0	32	38	46	26	0	0	0	0	142
1345 - 1445	0	30	35	48	28	0	0	0	0	141
1400 - 1500	0	26	36	40	24	0	0	0	0	130
PEAK HR	0	70	73	45	42	0	0	0	0	230



Copy on ROAD DATA

Time Per	NORTH			EAST			SOUTH			Sun
	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	
1200 - 1215	3	3	1	1	1	1	1	1	1	8
1215 - 1230	2	3	5	2	2	2	2	2	2	12
1230 - 1245	1	2	1	2	1	2	1	2	1	6
1245 - 1300	1	0	2	1	2	1	1	2	1	4
1300 - 1315	4	1	2	2	0	2	0	2	0	7
1315 - 1330	0	1	2	2	2	2	2	2	2	5
1330 - 1345	2	2	2	2	2	2	2	2	2	8
1345 - 1400	2	2	1	1	1	1	1	1	1	8
1400 - 1415	2	3	1	1	1	1	1	1	1	7
1415 - 1430	2	2	2	2	2	2	2	2	2	7
1430 - 1445	4	1	5	3	3	3	3	3	3	13
1445 - 1500	3	2	1	1	1	1	1	1	1	7
Period End	0	26	21	23	18	0	0	0	0	90

Peak Per	NORTH			EAST			SOUTH			TOTAL
	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	Princess Hwy	Bellevue Rd	Princess Hwy	
1200 - 1300	0	7	8	9	6	0	0	0	0	30
1215 - 1315	0	6	6	10	5	0	0	0	0	29
1230 - 1330	0	6	4	7	4	0	0	0	0	22
1245 - 1345	0	7	4	8	5	0	0	0	0	24
1300 - 1400	0	6	6	7	5	0	0	0	0	26
1315 - 1415	0	6	8	6	6	0	0	0	0	26
1330 - 1430	0	8	8	6	6	0	0	0	0	28
1345 - 1445	0	10	7	7	7	0	0	0	0	33
1400 - 1500	0	11	7	9	7	0	0	0	0	34
PEAK HR	0	11	7	9	7	0	0	0	0	34





# R.O.A.R. DATA

Reliable, Original & Authentic Results  
Ph. 88.195.47, Fax 88.198.49, Mch 0418-239019

Client : T T P A

Job No/Name : 1863 TEMPE Princess Hwy

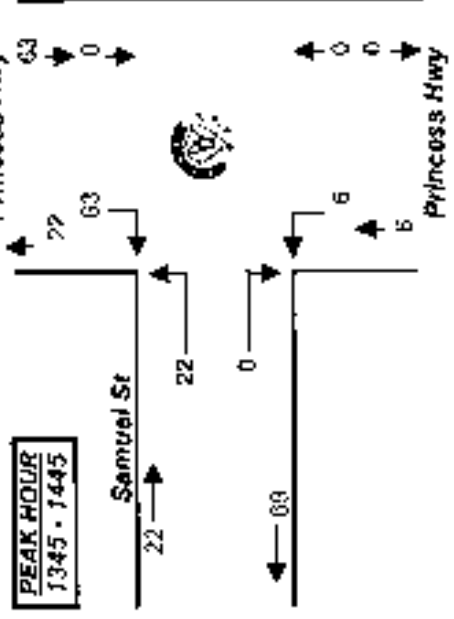
Day/Date : Saturday 7th & Sunday 8th June 07

All Vehicles

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Samuel St	Princess Hwy	Samuel St	Princess Hwy	Samuel St	
1200 - 1215	0	0	0	0	0	0	10
1215 - 1230	15	0	0	0	0	0	15
1230 - 1245	7	0	0	0	0	0	15
1245 - 1300	9	0	0	0	0	0	18
1300 - 1315	11	0	0	0	0	0	19
1315 - 1330	11	0	0	0	0	0	19
1330 - 1345	4	0	0	0	0	0	12
1345 - 1400	15	0	0	0	0	0	24
1400 - 1415	20	0	0	0	0	0	23
1415 - 1430	14	0	0	0	0	0	18
1430 - 1445	14	0	0	0	0	0	26
1445 - 1500	3	0	0	0	0	0	14
Period End	137	0	56	5	14	0	212

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Samuel St	Princess Hwy	Samuel St	Princess Hwy	Samuel St	
1200 - 1300	39	0	0	0	0	0	39
1215 - 1315	42	0	0	0	0	0	42
1230 - 1330	38	0	0	0	0	0	38
1245 - 1345	35	0	0	0	0	0	35
1300 - 1400	41	0	0	0	0	0	41
1315 - 1415	50	0	0	0	0	0	50
1330 - 1430	53	0	0	0	0	0	53
1345 - 1445	63	0	0	0	0	0	63
1400 - 1500	57	0	0	0	0	0	57

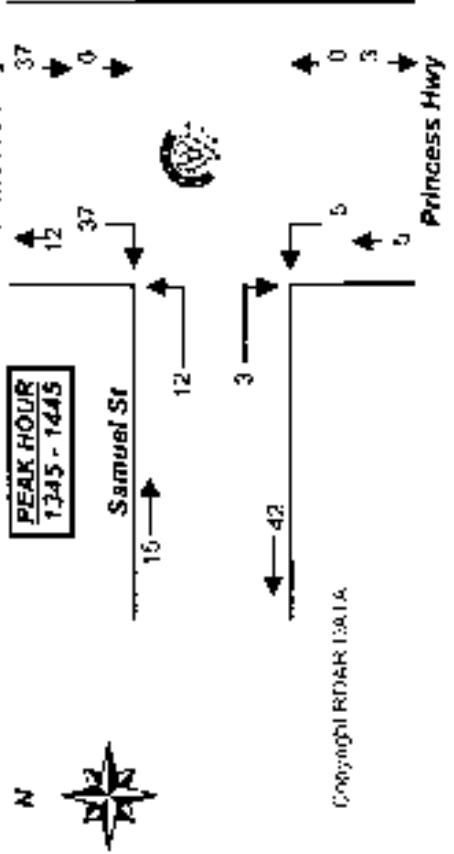
PEAK HR	63	0	22	0	6	0	91
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Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Samuel St	Princess Hwy	Samuel St	Princess Hwy	Samuel St	
1200 - 1215	5	0	0	0	0	0	5
1215 - 1230	5	0	0	0	0	0	5
1230 - 1245	4	0	0	0	0	0	4
1245 - 1300	9	0	0	0	0	0	9
1300 - 1315	4	0	0	0	0	0	4
1315 - 1330	7	0	0	0	0	0	7
1330 - 1345	7	0	0	0	0	0	7
1345 - 1400	8	0	0	0	0	0	8
1400 - 1415	13	0	0	0	0	0	13
1415 - 1430	7	0	0	0	0	0	7
1430 - 1445	9	0	0	0	0	0	9
1445 - 1500	7	0	0	0	0	0	7
Period End	85	0	0	0	0	0	85

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Samuel St	Princess Hwy	Samuel St	Princess Hwy	Samuel St	
1200 - 1300	23	0	0	0	0	0	23
1215 - 1315	22	0	0	0	0	0	22
1230 - 1330	24	0	0	0	0	0	24
1245 - 1345	27	0	0	0	0	0	27
1300 - 1400	26	0	0	0	0	0	26
1315 - 1415	35	0	0	0	0	0	35
1330 - 1430	35	0	0	0	0	0	35
1345 - 1445	37	0	0	0	0	0	37
1400 - 1500	38	0	0	0	0	0	38

PEAK HR	37	0	12	3	5	0	57
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# R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph 88198847, Fax 88198849, Mob 0418-239019

Client : T.T.P.A

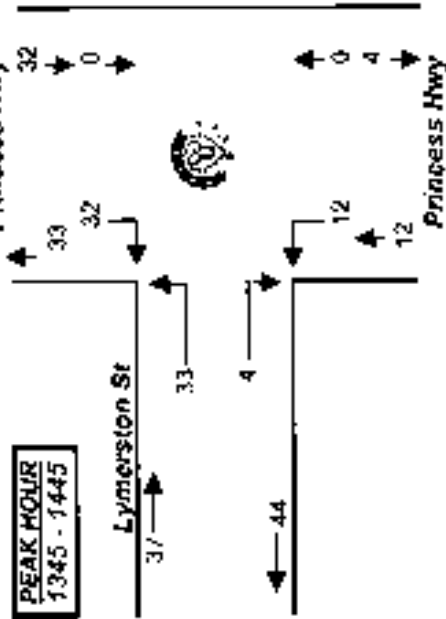
Job No/Name : 1853 TEMPE Princess Hwy

Day/Date : Saturday 7th & Sunday 8th June 07

All Vehicles

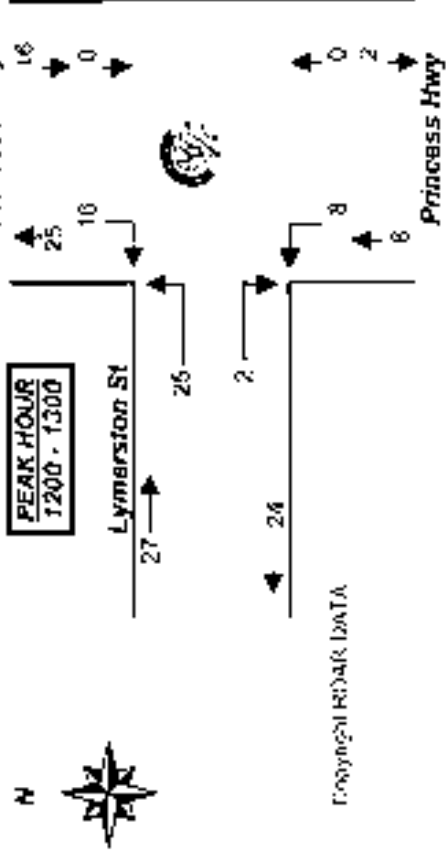
Time Per	NORTH		WEST		SOUTH		Sat
	Princess Hwy	Lymarston St	Princess Hwy	Lymarston St	Princess Hwy	Lymarston St	
1200 - 1215	5	4	2	0	0	0	11
1215 - 1230	3	0	0	3	3	14	14
1230 - 1245	3	0	1	3	3	16	16
1245 - 1300	4	5	1	4	4	14	14
1300 - 1315	4	7	0	4	4	15	15
1315 - 1330	5	4	2	7	7	18	18
1330 - 1345	5	3	0	0	0	8	8
1345 - 1400	7	6	3	4	4	22	22
1400 - 1415	7	11	0	4	4	16	16
1415 - 1430	8	8	1	4	4	21	21
1430 - 1445	9	8	1	4	4	22	22
1445 - 1500	1	5	0	7	7	13	13
Period End	62	0	78	10	40	0	190

Peak Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Lymarston St	Princess Hwy	Lymarston St	Princess Hwy	Lymarston St	
1200 - 1300	15	0	26	4	10	0	55
1215 - 1315	14	0	29	7	14	0	59
1230 - 1330	16	0	25	4	18	0	63
1245 - 1345	18	0	19	3	15	0	55
1300 - 1400	21	0	22	5	15	0	63
1315 - 1415	24	0	21	5	14	0	64
1330 - 1430	28	0	28	3	8	0	87
1345 - 1445	32	0	33	4	12	0	84
1400 - 1500	26	0	30	1	15	0	72
PEAK HR	32	0	33	4	12	0	81



Time Per	NORTH		WEST		SOUTH		SUN
	Princess Hwy	Lymarston St	Princess Hwy	Lymarston St	Princess Hwy	Lymarston St	
1200 - 1215	0	0	0	0	0	0	16
1215 - 1230	4	0	0	0	0	0	13
1230 - 1245	2	0	0	0	0	0	11
1245 - 1300	4	0	0	0	0	0	14
1300 - 1315	2	0	0	0	0	0	12
1315 - 1330	5	0	0	0	0	0	17
1330 - 1345	1	0	0	0	0	0	7
1345 - 1400	4	0	0	0	0	0	11
1400 - 1415	6	0	0	0	0	0	14
1415 - 1430	4	0	0	0	0	0	11
1430 - 1445	6	0	0	0	0	0	12
1445 - 1500	7	0	0	0	0	0	13
Period End	51	0	0	0	0	0	148

Peak Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Lymarston St	Princess Hwy	Lymarston St	Princess Hwy	Lymarston St	
1200 - 1300	16	0	25	2	8	0	51
1215 - 1315	17	0	22	3	10	0	47
1230 - 1330	14	0	22	2	14	0	51
1245 - 1345	12	0	19	1	15	0	47
1300 - 1400	12	0	22	1	17	0	47
1315 - 1415	16	0	22	1	10	0	49
1330 - 1430	15	0	21	2	5	0	43
1345 - 1445	20	0	22	2	4	0	48
1400 - 1500	23	0	20	2	5	0	50
PEAK HR	16	0	25	2	8	0	51





# **R.O.A.R. DATA**

Reliable, Original & Authentic Results

Ph: 88196847, Fax: 88196849, Mob: 0418-239019

Client

Job No/Name

Day/Date

J.T.P.A.

1863 TEMPE Princess Hwy

Saturday 7th & Sunday 8th June 07

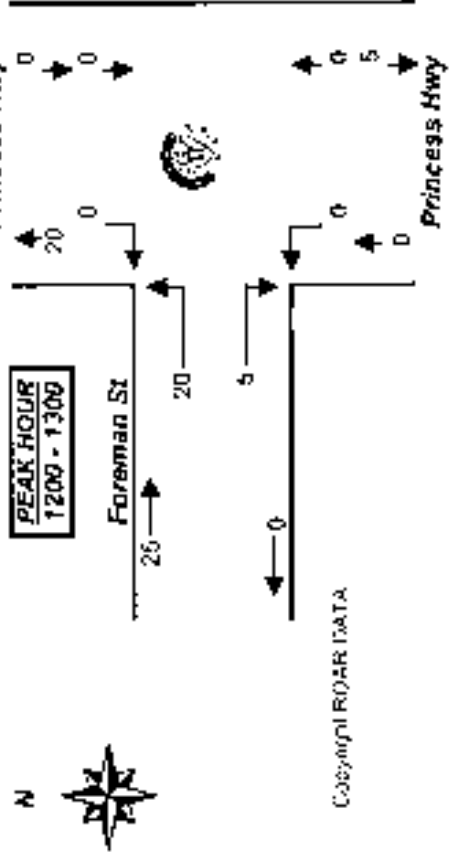
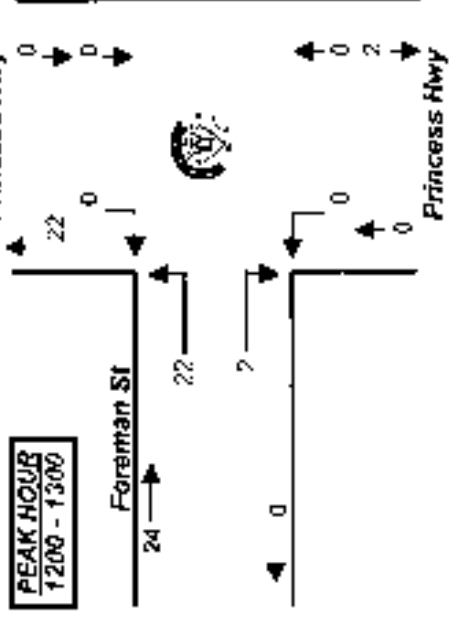
All Vehicles

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Foreman St	Princess Hwy	Foreman St	Princess Hwy	Foreman St	
1200 - 1215			6	0			6
1215 - 1230			5	1			6
1230 - 1245			6	0			6
1245 - 1300			5	1			6
1300 - 1315			5	0			5
1315 - 1330			5	1			6
1330 - 1345			7	1			8
1345 - 1400			4	0			4
1400 - 1415			2	0			2
1415 - 1430			6	0			6
1430 - 1445			3	1			4
1445 - 1500			8	1			9
Period End	0	0	57	6	0	0	63

Time Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Foreman St	Princess Hwy	Foreman St	Princess Hwy	Foreman St	
1200 - 1215			5	3			8
1215 - 1230			2	0			2
1230 - 1245			7	1			8
1245 - 1300			6	1			7
1300 - 1315			3	0			3
1315 - 1330			4	1			5
1330 - 1345			3	0			3
1345 - 1400			3	0			3
1400 - 1415			2	0			2
1415 - 1430			4	1			5
1430 - 1445			7	0			7
1445 - 1500			3	0			3
Period End	0	0	49	7	0	0	56

Peak Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Foreman St	Princess Hwy	Foreman St	Princess Hwy	Foreman St	
1200 - 1300	0	0	22	2	0	0	24
1215 - 1315	0	0	21	2	0	0	23
1230 - 1330	0	0	21	2	0	0	23
1245 - 1345	0	0	17	3	0	0	20
1300 - 1400	0	0	16	2	0	0	18
1315 - 1415	0	0	13	2	0	0	15
1330 - 1430	0	0	14	1	0	0	15
1345 - 1445	0	0	16	1	0	0	16
1400 - 1500	0	0	19	2	0	0	21
PEAK HR	0	0	22	2	0	0	24

Peak Per	NORTH		WEST		SOUTH		TOTAL
	Princess Hwy	Foreman St	Princess Hwy	Foreman St	Princess Hwy	Foreman St	
1200 - 1300	0	0	20	5	0	0	25
1215 - 1315	0	0	18	2	0	0	20
1230 - 1330	0	0	20	3	0	0	23
1245 - 1345	0	0	16	2	0	0	18
1300 - 1400	0	0	13	1	0	0	14
1315 - 1415	0	0	12	1	0	0	13
1330 - 1430	0	0	12	1	0	0	13
1345 - 1445	0	0	16	1	0	0	17
1400 - 1500	0	0	16	1	0	0	17
PEAK HR	0	0	20	5	0	0	25





# R.O.A.R. DATA

Reliable, Original & Authentic Results  
Ph. 88198847, Fax 88198849, Mob. 0418-230019

Client : T.T.P.A.

Job No/Name : 1863 TEMPE Princess Hwy

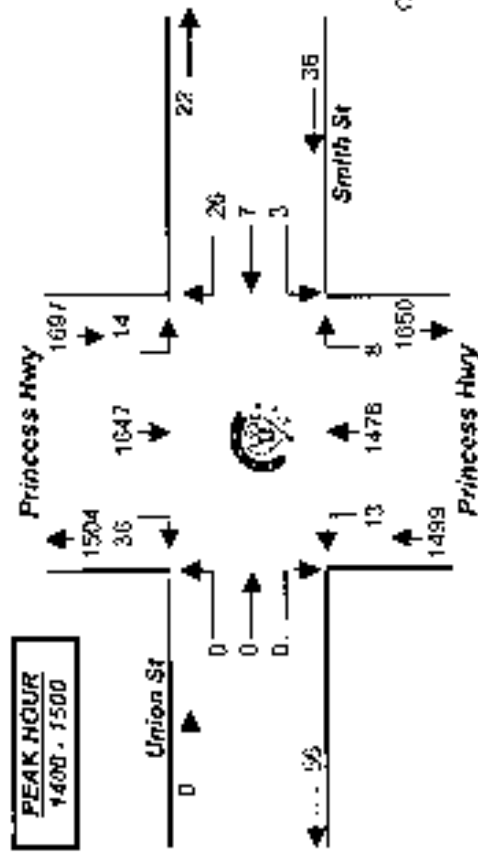
Day/Date : Saturday 7th & Sunday 8th June 07

Sun

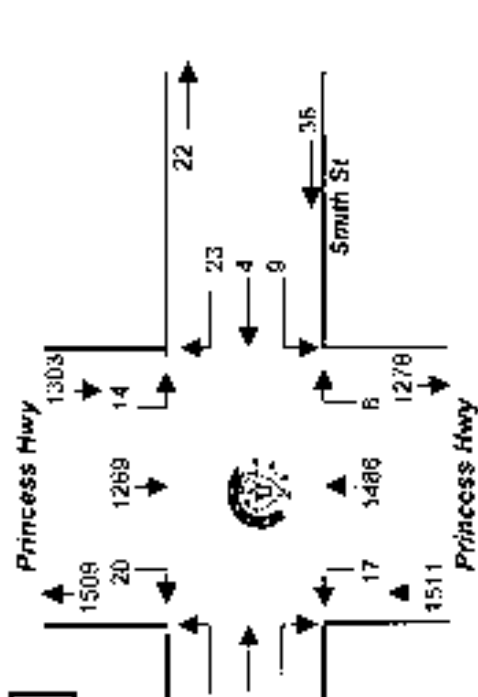
All Vehicles	NORTH				WEST				SOUTH				EAST			
	Princess Hwy		Union St		Union St		Princess Hwy		Princess Hwy		Princess Hwy		Princess Hwy		Smith St	
	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R
1200 - 1215	4	368	0	0	0	0	0	0	9	311	1	1	1	9	8	708
1215 - 1230	7	332	0	0	0	0	0	0	6	440	2	1	0	5	802	701
1230 - 1245	6	317	0	0	0	0	0	0	7	390	5	7	2	11	751	702
1245 - 1300	11	387	0	0	0	0	0	0	2	392	5	3	2	8	818	751
1300 - 1315	1	380	7	0	0	0	0	0	3	384	2	1	0	4	762	696
1315 - 1330	3	375	5	0	0	0	0	0	5	389	6	0	2	10	784	610
1330 - 1345	3	360	8	0	0	0	0	0	3	396	2	1	2	5	744	716
1345 - 1400	14	399	8	0	0	0	0	0	4	349	2	0	3	9	796	699
1400 - 1415	4	366	8	0	0	0	0	0	0	335	0	0	3	10	718	720
1415 - 1430	7	445	10	0	0	0	0	0	2	350	2	1	0	8	825	643
1430 - 1445	1	391	9	0	0	0	0	0	4	381	4	0	1	5	798	733
1445 - 1500	2	455	5	0	0	0	0	0	7	412	2	2	3	3	835	615
Period End	63	4585	89	0	0	0	0	0	52	4429	33	28	13	31	8381	887

Peak Time	NORTH				WEST				SOUTH				EAST			
	Princess Hwy		Union St		Union St		Princess Hwy		Princess Hwy		Princess Hwy		Princess Hwy		Smith St	
	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R
1200 - 1300	28	1404	27	0	0	0	0	0	24	1233	13	12	5	33	3079	2850
1215 - 1315	25	1410	30	0	0	0	0	0	18	1586	14	12	4	28	3133	2759
1230 - 1330	21	1459	26	0	0	0	0	0	17	1515	18	20	6	33	3115	2773
1245 - 1345	10	1522	28	0	0	0	0	0	13	1461	15	14	6	31	3108	2721
1300 - 1400	21	1534	20	0	0	0	0	0	15	1418	12	11	7	32	3076	2745
1315 - 1415	24	1510	27	0	0	0	0	0	12	1389	10	10	10	38	3030	2778
1330 - 1430	28	1580	37	0	0	0	0	0	9	1370	6	2	8	36	3071	2795
1345 - 1445	26	1591	33	0	0	0	0	0	10	1415	8	1	7	32	3123	2711
1400 - 1500	14	1637	30	0	0	0	0	0	15	1678	8	3	7	26	3232	2878
PEAK HOUR	14	1637	36	0	0	0	0	0	13	1478	8	3	7	26	3232	2850

PEAK HOUR  
1400 - 1500



PEAK HOUR  
1200 - 1300



Copyright ROAR DATA

## **APPENDIX C**

### **ACCIDENT HISTORY**

---

# Brief Crash Report

NOTES: Reported crashes on Princes Highway from Gannon Street to Railway Road and within 10m of intersections. Crashes recorded 2001 to 2025

Crash No	Date	Day	Time	Dist	ID Feature	Loc	Alg	Lgt	Wth	Stc	DCA	Tus	TU1	S	D	Min	Max	TUR	S	D	Man	Wthr	K	I	Fac
Sydney Region																									
Marrickville to LGA																									
St Peters																									
Belle Vue St																									
Princes Hwy																									
332565	02/07/2002	Wed	05:39	10m N	BELLEVE ST	XUN	ST4	On	Free	Dr	50	302	2	CAR	1	S	Proceeding in lane	CAR	1	S	Stationary				
402593	02/07/2002	Thu	15:48	20m N	BELLEVE ST	2UT	ST4	On	Free	Dr	50	303	1	UTL	1	S	Turning left								F
332592	02/07/2002	Sat	13:00	30m S	BELLEVE ST	2UT	ST4	On	Free	Dr	50	301	2	CAR	1	N	Proceeding in lane	CAR	1	N	Proceeding in lane				
332597	02/07/2002	Sat	13:16	at	BELLEVE ST	2UT	ST4	On	Free	Dr	50	302	2	UTL	1	S	Turning right	CAR	1	N	Proceeding in lane				
421521	04/07/2002	Mon	15:42	at	BELLEVE ST	2UT	ST4	On	Free	Dr	50	303	2	CAR	1	S	Turning right	CAR	1	N	Turning left				
262529	07/07/2002	Tue	08:45	5m S	BELLEVE ST	2UT	STR	On	Free	Dr	50	301	2	4WD	1	S	Proceeding in lane	CAR	1	S	Stationary				
421504	04/07/2002	Tue	08:45	10m S	BELLEVE ST	2UT	STR	On	Free	Dr	50	301	2	CAR	1	S	Proceeding in lane	TRK	1	N	Stationary				
942503	28/07/2002	Fri	06:45	at	BELLEVE ST	XUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning left	CAR	1	S	Proceeding in lane				
421547	02/07/2002	Tue	19:40	at	BELLEVE ST	XUN	STR	On	Free	Dr	50	305	2	TRK	2	N	Proceeding in lane	CAR	2	N	Proceeding in lane				
261517	01/07/2002	Mon	14:40	5m S	BELLEVE ST	XUN	STR	On	Free	Dr	50	301	2	4WD	1	S	Proceeding in lane	CAR	1	S	Stationary				
307509	30/07/2002	Mon	12:10	5m S	BELLEVE ST	XUN	STR	On	Free	Dr	50	301	1	STK	1	S	Turning right								
Sydney Region																									
Princes Hwy																									
262533	02/07/2002	Sat	10:25	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	4WD	1	N	Turning right	CAR	1	S	Proceeding in lane				
402594	02/07/2002	Sat	10:30	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	TRK	1	N	Turning left	CAR	1	N	Proceeding in lane				
332592	02/07/2002	Sat	02:30	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
332595	02/07/2002	Sat	05:40	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
312503	02/07/2002	Sat	11:10	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	TRK	1	S	Turning right	TRK	1	N	Proceeding in lane				
332596	03/07/2002	Sat	05:35	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
332597	03/07/2002	Sat	11:20	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	TRK	1	S	Turning right	CAR	1	N	Proceeding in lane				
332598	03/07/2002	Sat	18:30	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
332599	03/07/2002	Sat	19:50	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	4	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
332600	04/07/2002	Sun	01:55	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
421501	03/07/2002	Tue	19:30	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
421502	03/07/2002	Tue	19:30	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
421503	03/07/2002	Tue	19:30	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
421504	03/07/2002	Tue	19:30	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				
421505	03/07/2002	Tue	19:30	at	BELLEVE ST	TUN	STR	On	Free	Dr	50	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane				



# Brief Crash Report

Crash No	Date	Day Time	Dist	ID Feature	Loc	Alg	Lgt	Wth	SR	SL	DCA	Tus	TU1	\$	D	Manoeuvre1	TU2	\$	D	Manoeuvre2	K	I	Fsc
420523	05/05/2024	Sun 11:15		at RAULWAY RD	L/N	STR	Q	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	M	Proceeding in line	0		
420110	02/05/2024	Wed 10:11		at RAULWAY RD	L/N	STR	Q	Low	Dry	50	104	2	UTE	2	R	Turning right	CAR	1	M	Proceeding in line	0		
420352	21/05/2024	Tue 14:27		at RAULWAY RD	L/N	STR	Q	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	M	Proceeding in line	0		
420504	04/05/2024	Sat 08:11		at RAULWAY RD	L/N	STR	Q	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	S	Proceeding in line	0		
407546	18/12/2023	Sat 15:27		at RAULWAY RD	L/N	STR	Q	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	M	Proceeding in line	0		
764274	03/01/2023	Sat 13:55	10 m W RAULWAY RD	L/N	STR	Q	Low	Low	Dry	50	201	2	CAR	1	S	Turning right	TRK	1	S	Proceeding in line	0		
429321	08/11/2024	Tue 12:45	10 m W RAULWAY RD	L/N	STR	Q	Low	Low	Dry	50	201	2	CAR	1	S	Proceeding in line	CAR	1	S	Proceeding in line	0		
361212	05/04/2023	Fri 11:11	10 m W RAULWAY RD	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Proceeding in line	CAR	1	S	Stationary	0		
352431	04/12/2023	Thu 10:10	at RAULWAY ST	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	M	Proceeding in line	0		
427749	03/07/2024	Sat 12:22	at SAMUEL ST	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	M	Proceeding in line	0		
427455	26/05/2023	Thu 12:15	at SAMUEL ST	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	M	Proceeding in line	0		
420550	24/12/2023	Fri 10:20	5 m W SAMUEL ST	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	M	Proceeding in line	0		
200758	01/05/2023	Wed 11:35	10 m W TALLBOT ST	L/N	STR	Q	Overhead	Low	Dry	50	201	4	LOP	1	S	Proceeding in line	CAR	1	S	Stationary	0		
382031	21/01/2022	Tue 13:20	20 m W TALLBOT ST	D/W	STR	Q	Low	Low	Dry	50	201	2	TRK	1	S	Proceeding in line	CAR	1	S	Stationary	0		
380234	22/05/2023	Wed 10:40	400 m W TALLBOT ST	D/W	STR	Q	Low	Low	Dry	50	202	2	LOP	1	S	Proceeding in line	CAR	1	S	Stationary	0		
Railway Rd																							
266208	04/01/2023	Wed 12:20	5 m W RAULWAY RD	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Proceeding in line	CAR	1	L	Turning right	0		
441137	07/05/2024	Tue 10:20	5 m W PRINCES HWY	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Proceeding in line	CAR	1	L	Turning right	0		
398455	12/05/2023	Thu 10:21	10 m W PRINCES HWY	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Proceeding in line	CAR	1	L	Turning right	0		
394573	27/07/2023	Sat 12:29	10 m W PRINCES HWY	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Turning right	CAR	1	L	Proceeding in line	0		
411129	06/07/2024	Tue 20:13	10 m W PRINCES HWY	L/N	STR	Q	Overhead	Low	Dry	50	201	2	CAR	1	S	Proceeding in line	CAR	1	S	Proceeding in line	0		
422840	03/04/2024	Fri 11:37	10 m W PRINCES HWY	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	L	Proceeding in line	CAR	1	L	Stationary	0		
Tempe																							
Relloune St																							
385237	25/12/2023	Tue 19:40	2 m W PRINCESS HWY	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Turning left	4200	1	M	Stationary	0		
421400	03/07/2023	Thu 10:10	5 m W PRINCESS HWY	L/N	STR	Q	Low	Low	Dry	50	202	2	TRK	1	S	Proceeding in line	CAR	1	M	Stationary	0		
Foreman St																							
340001	21/07/2019	Sat 11:10	2 m W PRINCESS HWY	L/N	STR	Q	Low	Low	Dry	50	405	2	PIC	2	S	Along footpath	TRK	1	L	Proceeding in line	0		
Gannon St																							
252184	20/12/2021	Thu 05:20	10 m W PRINCES HWY	L/N	STR	Q	Low	Low	Dry	50	202	2	CAR	1	S	Proceeding in line	CAR	1	S	Proceeding in line	0		
422638	03/12/2023	Fri 15:15	10 m W PRINCESS HWY	L/N	STR	Q	Low	Low	Dry	50	202	2	LOP	1	S	Turning left	CAR	1	S	Proceeding in line	0		
Princes Hwy																							

## Brief Crash Report

Crash No	Date	Day	Time	Dist	ID	Feature	Loc	Alg	Lgt	Wth	Site	SL	DCA	Tus	TU1	S	D	Manoeuvre	TU2	S	D	Manoeuvre	K	T	Fas	
45495	24/12/2004	Sat	21:26	10m	N	POWELL ST	TUN	STR	CR	Left	Dry	60	301	2	4WD	-	S	Proceeding in lane	CAR	-	S	Proceeding in lane	0	0	0	
45503	13/07/2001	Sun	23:55	10m	S	BARDEN ST	TUN	STR	CR	Left	Dry	60	304	1	CAR	-	S	Proceeding in lane	PRK	-	S	Proceeding in lane	0	0	0	
45504	24/07/2001	Sat	23:02	30m	S	BELLEVUE ST	TUN	STR	CR	Left	Dry	60	309	2	CAR	-	N	Turning right	SEM	2	W	Turning left	0	0	0	
45505	10/11/2004	Sat	15:00	30m	N	BELLEVUE ST	TUN	STR	CR	Overpass	Dry	60	309	3	CAR	3	W	Turning left	SEM	2	W	Turning left	0	0	0	
45506	13/07/2001	Sat	23:32	15m	N	BELLEVUE ST	DIV	STR	CR	Left	Dry	60	301	1	WAG	-	S	Proceeding in lane	CAR	-	S	Proceeding in lane	0	0	0	
45508	25/03/2005	Fri	21:00	50m	N	BELLEVUE ST	DIV	STR	CR	Left	Dry	60	301	2	CAR	-	S	Proceeding in lane	CAR	-	S	Proceeding in lane	0	0	0	
45509	25/12/2001	Sun	23:22	40m	S	BELLEVUE ST	DIV	STR	CR	Left	Dry	60	301	2	CAR	-	S	Proceeding in lane	SEM	-	S	Pausing	0	0	0	
45510	01/04/2001	Sat	22:14	20m	N	POWELL ST	DIV	STR	CR	Overpass	Wet	60	301	3	CAR	-	S	Proceeding in lane	CAR	-	S	Stationary	0	0	0	
45512	21/04/2001	Sat	23:05	20m	N	BROOKLYN ST	DIV	STR	CR	Overpass	Wet	60	309	2	CAR	-	S	Proceeding in lane	CAR	-	S	Proceeding in lane	0	0	0	
45514	11/02/2001	Tue	23:45	30m	N	BROOKLYN ST	DIV	STR	CR	Overpass	Dry	60	301	4	CAR	-	N	Proceeding in lane	CAR	-	N	Stationary	0	0	0	
45516	14/02/2004	Mon	23:45	10m	S	FARM NG N	TUN	STR	CR	Left	Dry	60	301	2	TRK	-	N	Proceeding in lane	CAR	-	N	Stationary	0	0	0	
45518	18/02/2001	Mon	24:47	30m	N	POWELL ST	TUN	STR	CR	Right	Wet	60	1	2	CAR	-	N	Proceeding in lane	TRK	-	L	Static across carriageway	0	0	0	
45520	18/02/2001	Mon	23:20	30m	N	POWELL ST	TUN	STR	CR	Left	Dry	70	301	3	CAR	-	N	Proceeding in lane	CAR	-	N	Stationary	0	0	0	
45521	14/06/2001	Tue	23:20	30m	N	POWELL ST	TUN	STR	CR	Right	Wet	80	301	3	TRK	-	N	Proceeding in lane	CAR	-	N	Proceeding in lane	0	0	0	
45522	05/04/2001	Tue	24:00	30m	N	POWELL ST	TUN	STR	CR	Left	Dry	60	305	1	WAG	-	N	Proceeding in lane	CAR	-	N	Proceeding in lane	0	0	0	
45523	24/05/2004	Sat	23:45	30m	N	POWELL ST	TUN	STR	CR	Left	Dry	60	403	3	WAG	-	L	Along footpath	CAR	-	L	Turning left	0	0	0	
45524	24/05/2004	Sat	23:45	30m	N	POWELL ST	TUN	STR	CR	Left	Dry	60	301	3	CAR	-	L	Proceeding in lane	WAG	-	L	Stationary	0	0	0	
45525	04/07/2001	Tue	23:45	30m	N	POWELL ST	TUN	STR	CR	Left	Dry	60	304	2	CAR	2	L	Turning right	WAG	-	N	Proceeding in lane	0	0	0	
45526	25/07/2001	Tue	24:10	30m	N	POWELL ST	DIV	STR	CR	Left	Wet	60	305	3	WAG	-	S	Proceeding in lane	CAR	-	S	Proceeding in lane	0	0	0	
45527	04/04/2001	Sat	24:45	30m	N	POWELL ST	DIV	STR	CR	Left	Dry	60	301	2	CAR	-	N	Proceeding in lane	M.C.	-	N	Proceeding in lane	0	0	0	
45528	04/04/2001	Tue	24:50	30m	N	POWELL ST	DIV	STR	CR	Left	Dry	60	301	1	CAR	-	N	Proceeding in lane	WAG	-	N	Proceeding in lane	0	0	0	
45529	04/04/2001	Sat	19:50	30m	N	POWELL ST	DIV	STR	CR	Right	Wet	60	301	2	CAR	-	N	Proceeding in lane	WAG	-	N	Paused	0	0	0	
45530	25/07/2001	Wed	21:10	30m	N	POWELL ST	DIV	STR	CR	Left	Dry	60	304	1	CAR	-	S	Proceeding in lane	CAR	-	N	Stationary	0	0	0	
45532	22/12/2003	Fri	23:25	10m	S	POWELL ST	TUN	STR	CR	Left	Dry	60	301	5	CAR	-	N	Proceeding in lane	PRK	-	S	Proceeding in lane	0	0	0	
45535	14/05/2003	Tue	17:30	35m	S	POWELL ST	DIV	STR	CR	Left	Dry	60	307	2	CAR	-	S	Turning left	PRK	-	F	Run across carriageway	0	0	0	
45537	15/02/2001	Mon	14:00	0m		LOCH MARY ST	DIV	STR	CR	Left	Dry	60	1	2	DUV	-	N	Proceeding in lane	PRK	3	F	Turning left	0	0	0	
45540	24/10/2001	Wed	03:20	30m	N	GANNON ST	TUN	STR	CR	Left	Dry	50	322	2	CAR	2	L	Turning left	PRK	3	F	Turning left	0	0	0	
45541	04/07/2004	Mon	21:20	30m	N	GANNON ST	TUN	STR	CR	Left	Dry	70	301	2	DUV	-	S	Proceeding in lane	CAR	-	S	Stationary	0	0	0	
45542	23/12/2001	Fri	21:40	30m	N	GANNON ST	TUN	STR	CR	Left	Dry	60	307	4	4WD	2	F	Turning left	CAR	-			0	0	0	
45543	24/04/2002	Wed	15:35	2m	N	GANNON ST	TUN	STR	CR	Left	Dry	60	5	2	CAR	-	N	Proceeding in lane	PRK	-	W	Ways across carriageway	0	0	0	
45544	04/07/2001	Mon	03:10	30m	N	GANNON ST	TUN	STR	CR	Left	Dry	60	290	4	1	CAR	-	N	Turning left	PRK	-	W	Ways across carriageway	0	0	0
45545	04/05/2001	Fri	18:10	30m	N	GANNON ST	TUN	STR	CR	Left	Dry	60	301	2	CAR	-	S	Proceeding in lane	CAR	-	S	Stationary	0	0	0	

# Brief Crash Report

Crash No	Date	Day	Time	Dist	ID Feature	Loc	Alg	Lgt	Wth	Stc	SL	DCA	Tas	TU1	S	D	Maneuver1	TU2	S	D	Maneuver2	K	I	Fac
317219	12/03/2007	Sun	14:42	5 m N GARRISON ST		TUN	STR	OP	Free	Var	60	300	3	CAR	1	N	Proceeding in lane	CAR	1	N	Stationary	0	1	Fac
357149	21/07/2007	Sat	14:05	5 m N GARRISON ST		TUN	STR	OP	Free	Car	60	300	3	CAR	1	S	Proceeding in lane	CAR	1	S	Stationary	0	0	Fac
358202	31/03/2007	Sat	06:47	5 m N GARRISON ST		TUN	STR	OP	Free	Car	60	300	1	CAR	1	N	Proceeding in lane					0	0	Fac
405120	20/10/2006	Sat	14:00	5 m N GARRISON ST		TUN	STR	S	Free	Car	60	300	2	CAR	1	S	Proceeding in lane	CAR	1	S	Stationary	0	0	Fac
505781	14/02/2007	Fri	17:20	5 m N GARRISON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	N	Proceeding in lane	CAR	1	N	Stationary	0	0	Fac
455408	02/07/2004	Sun	05:45	5 m N GARRISON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	N	Proceeding in lane	4WD	1	N	Proceeding in lane	0	0	Fac
470540	19/03/2007	Sat	12:00	55 m N GARRISON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	S	Proceeding in lane	RED	1	N	Wait across intersection	0	1	Fac
257200	15/12/2007	Tue	13:00	3 m S GARRISON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	N	Proceeding in lane	CAR	1	N	Wait for right	0	0	Fac
332258	04/06/2007	Tue	17:30	at 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	S	Proceeding in lane	CAR	1	S	Wait for right	0	1	Fac
332262	20/12/2007	Sun	06:45	at 1-UEP/STON ST		TUN	STR	S	Free	Car	60	300	2	CAR	1	S	Proceeding in lane	CAR	1	S	Wait for right	0	1	Fac
404404	09/10/2007	Sat	17:10	at 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	TRK	1	N	Perform u-turn	CAR	1	N	Proceeding in lane	0	0	Fac
405766	12/07/2004	Mon	15:00	at 1-UEP/STON ST		TUN	STR	OP	Overpass	Car	60	300	2	CAR	1	S	Proceeding in lane	Var	1	S	Turning right	0	0	Fac
471483	25/05/2006	Tue	14:20	at 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	S	Turning right	Var	1	N	Proceeding in lane	0	1	Fac
287597	17/05/2007	Fri	08:20	5 m N 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	DRV	1	S	Turning right	DRV	1	N	Wait for right	0	1	Fac
305200	05/12/2007	Tue	17:30	1 m N 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	N	Proceeding in lane	CAR	1	N	Proceeding in lane	0	1	Fac
328387	03/05/2007	Fri	14:30	5 m N 1-UEP/STON ST		TUN	STR	S	Free	Car	60	300	2	CAR	1	S	Proceeding in lane	CAR	1	S	Turning right	0	0	Fac
335577	05/07/2007	Sun	06:50	20 m N 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	TRK	1	N	Proceeding in lane	CAR	1	N	Proceeding in lane	0	0	Fac
502506	24/11/2007	Tue	14:30	10 m S 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	450	2	TRK	1	S	Forward from cross	4WD	1	N	Proceeding in lane	0	0	Fac
420596	12/05/2004	Mon	05:40	85 m S 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	N	Proceeding in lane	CAR	1	N	Proceeding in lane	0	0	Fac
074032	28/11/2007	Fri	07:30	at 1-UEP/STON ST		TUN	STR	OP	Overpass	Var	60	300	1	CAR	1	S	Proceeding in lane					0	0	Fac
375782	14/02/2007	Fri	13:00	at 1-UEP/STON ST		TUN	STR	S	Free	Car	60	300	2	DRV	1	N	Proceeding in lane	DRV	1	N	Turned	0	0	Fac
270430	27/04/2007	Mon	14:00	at 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	0	Fac
207504	18/05/2007	Wed	05:25	at 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	0	Fac
504722	18/05/2007	Wed	17:45	at 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	S	Proceeding in lane	DRV	1	S	Wait for right	0	0	Fac
275404	01/07/2007	Sun	07:20	5 m N SAMUEL ST		TUN	STR	OP	Free	Car	60	300	1	CAR	1	S	Proceeding in lane	DRV	1	N	Turned	0	0	Fac
340087	04/08/2007	Tue	12:50	5 m N SAMUEL ST		TUN	STR	OP	Free	Car	60	300	1	CAR	1	N	Proceeding in lane	CAR	1	N	Proceeding in lane	0	0	Fac
402238	19/02/2004	Tue	13:00	5 m N SAMUEL ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	S	Proceeding in lane	CAR	1	N	Proceeding in lane	0	1	Fac
353200	14/05/2007	Wed	05:20	10 m S SAMUEL ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	N	Proceeding in lane	CAR	1	N	Proceeding in lane	0	0	Fac
343863	05/10/2007	Sun	07:40	40 m S SAMUEL ST		TUN	STR	OP	Free	Car	60	300	1	CAR	1	S	Proceeding in lane	CAR	1	N	Proceeding in lane	0	1	Fac
505277	14/06/2007	Fri	05:30	25 m S SAMUEL ST		TUN	STR	OP	Free	Car	60	300	2	DRV	1	S	Turning right	CAR	1	N	Stationary	0	1	Fac
277040	28/05/2007	Tue	07:45	at 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	0	Fac
287053	07/09/2007	Fri	07:20	at 1-UEP/STON ST		TUN	STR	OP	Free	Car	60	300	2	CAR	1	N	Turning right	CAR	1	S	Proceeding in lane	0	0	Fac



# Brief Crash Report

Crash No	Date	Day	Time	Dist	ID Feature	Loc	Alg	Lgt	Wth	Stc	SL	DCA	Tas	TU1	S	D	Manoeuvre1	TU2	S	D	Manoeuvre2	K	I	Fac
321909	27/11/2007	Tue	17:43	at SOUTH ST		XUN	SUP	CR	Running	Wet	W	202	3	4990	1	N	Turning right	CAR	1	S	Proceeding in lane	0	1	
321910	18/05/2008	Sat	11:30	at SOUTH ST		XUN	STR	CR	Overcast	Dry	W	302	2	CAR	1	N	Turning right	CAR	1	S	Proceeding in lane	0	2	
361561	05/05/2008	Thu	12:48	at SOUTH ST		XUN	STR	CR	Fine	Dry	W	302	2	TRK	1	N	Turning right	WV	1	S	Proceeding in lane	0	0	
419982	01/04/2008	Thu	12:15	at SOUTH ST		XUN	STR	CR	Fine	Dry	W	302	2	CAR	1	N	Turning right	WV	1	S	Proceeding in lane	0	0	
482886	06/11/2007	Fri	15:15	at SOUTH ST		XUN	SUP	CR	Overcast	Wet	W	194	2	WV	2	N	Turning right	CAR	1	S	Proceeding in lane	0	2	
304218	14/11/2007	Mon	11:45	10 m N of SOUTH ST		XUN	STR	CR	Fine	Dry	W	301	3	WV	1	S	Proceeding in lane	CAR	1	S	Stationary	0	0	
278336	21/04/2008	Sat	14:23	5 m S of SOUTH ST		XUN	STR	CR	Fine	Dry	W	301	3	CAR	1	S	Proceeding in lane	WV	1	S	Stationary	0	0	
486216	18/02/2008	Wed	05:15	52 m S of SOUTH ST		UNY	STR	N	Fine	Dry	W	306	2	CAR	1	N	Turning right	CAR	1	N	Proceeding in lane	0	2	
262844	10/03/2007	Fri	12:30	5 m N of SOUTH ST		TUN	SUP	CR	Running	Wet	W	107	2	TRK	2	N	Turning left	CAR	1	N	Proceeding in lane	0	2	
411342	04/11/2007	Tue	17:36	at TERRY ST		TUN	CAR	CR	Fine	Dry	W	405	2	CAR	1	E	Proceeding from cross	WV	1	S	Proceeding in lane	0	1	
345917	19/02/2008	Mon	17:59	4 m S of TERRY ST		TUN	STR	CR	Fine	Dry	W	301	2	CAR	1	S	Proceeding in lane	CAR	1	S	Proceeding in lane	0	2	
312332	14/02/2008	Sat	05:45	10 m S of TERRY ST		TUN	STR	CR	Running	Wet	W	301	2	CAR	1	S	Proceeding in lane	CAR	1	S	Proceeding in lane	0	1	
278342	17/04/2008	Tue	19:40	15 m S of TERRY ST		UNY	CAR	CR	Fine	Dry	W	303	1	CAR	1	N	Proceeding in lane	CAR	1	N	Proceeding in lane	0	2	
265262	30/07/2007	Tue	16:32	at UNION ST		XUN	STR	CR	Overcast	Dry	W	202	3	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	2	
203865	17/12/2007	Fri	13:10	at UNION ST		XUN	STR	CR	Fine	Dry	W	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	2	
355764	01/11/2007	Fri	14:38	at UNION ST		XUN	STR	CR	Fine	Dry	W	302	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	2	
362774	25/07/2007	Mon	08:18	at UNION ST		XUN	STR	CR	Fine	Dry	W	302	2	WV	1	S	Turning right	WV	1	N	Proceeding in lane	0	2	
360512	19/12/2007	Tue	15:45	at UNION ST		XUN	STR	CR	Fine	Dry	W	202	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	2	
448570	26/01/2008	Wed	19:40	at UNION ST		XUN	STR	CR	Fine	Dry	W	202	2	TRK	1	S	Turning right	CAR	1	N	Proceeding in lane	0	2	
434025	26/01/2008	Wed	19:25	at UNION ST		XUN	STR	CR	Fine	Dry	W	202	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	2	
361009	01/10/2007	Tue	17:52	at UNION ST		XUN	STR	CR	Fine	Dry	W	202	2	CAR	1	S	Turning right	CAR	1	N	Proceeding in lane	0	2	
363497	30/07/2007	Fri	12:15	11 m S of UNION ST		TUN	SUP	CR	Fine	Dry	W	200	2	CAR	1	S	Proceeding in lane	TRK	1	N	Parked	0	0	F
402815	30/11/2007	Wed	12:42	11 m S of UNION ST		XUN	STR	N	Fine	Wet	W	207	2	CAR	1	S	Turning left	SFU	1	S	Proceeding in lane	0	0	
362119	10/03/2007	Tue	08:12	10 m S of UNION ST		XUN	STR	CR	Fine	Dry	W	207	2	CAR	1	S	Turning left	TRK	1	S	Proceeding in lane	0	0	S
486275	15/11/2007	Sat	10:00	10 m S of UNION ST		XUN	STR	CR	Fine	Dry	W	207	2	TRK	1	N	Turning right	CAR	1	N	Stationary	0	1	
265296	08/04/2007	Tue	12:15	12 m S of UNION ST		UNY	STR	CR	Fine	Dry	W	107	2	CAR	1	N	Turning right	STA	1	N	Parked (loading)	0	2	
483218	14/07/2007	Mon	16:20	15 m S of UNION ST		UNY	STR	CR	Fine	Dry	W	107	4	CAR	1	N	Turning right	CAR	1	N	Stationary	0	1	
411127	31/03/2008	Wed	17:20	203 m S of UNION ST		UNY	STR	CR	Fine	Dry	W	5	2	SFU	1	N	Proceeding in lane	PED	1	S	Waiting at traffic	0	1	
377079	06/02/2007	Fri	17:08	18 m S of VERNON NORTH ST		TUN	STR	CR	Fine	Dry	W	207	3	WV	1	S	Proceeding in lane	CAR	1	S	Proceeding in lane	0	0	
443775	25/07/2008	Fri	17:40	18 m S of VERNON NORTH ST		UNY	STR	CR	Fine	Dry	W	368	3	CAR	1	S	Proceeding in lane	CAR	1	S	Proceeding in lane	0	0	
455556	30/03/2008	Fri	17:00	20 m S of VERNON NORTH ST		UNY	STR	CR	Fine	Dry	W	2	2	CAR	1	S	Proceeding in lane	PED	1	F	Waiting at traffic	1	0	

Union St

# Brief Crash Report

Crash No	Date	Day	Time	Dist	ID Feature	Loc	Adj	Lgt	Wth	SL	SL	DCA	Tus	TU1	S	D	Manoeuvre1	TU2	S	D	Manoeuvre2	K	I	Fac
34085	20/05/2023	Tue	11:16	177	907001 S HAY	XJN	STB	0.1	Free	0.1	0.1	0.1	0.1	TRK	2	5	Turning right	PHD	1	0	Run across carriageway	0	1	
434752	12/06/2024	Sat	01:50	190	W 3000NS HW DOG RD	XJN	STB	0.1	Free	0.1	0.1	0.1	0.1	CAR	1	0	Proceeding in the	FED	1	0	Walk across carriageway	0	1	
Report Totals:				Crashes	149	Fatal Crashes	1	Injury Crashes	55					Non-Casualty Crashes	93			Traffic Jams	017		0	0	0	

Crashed against Centre Line