

CR171532\_EC01  
04 December 2018  
Version 2

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Forrest ACT 2603

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Dear Andrew,

**Project: 21 Apartments - Moncrieff Street - Dickson**  
**Re: Statement on Parking & Traffic**  
**Blocks 1–6 Section 8 Dickson**

This report is prepared for the ACT Government on behalf of Collins Caddaye Architects to investigate the traffic & parking requirements for the proposed development noted above. This report is based on the preliminary plans provided by Collins Caddaye Architects on 03/12/2018.

The scope of this project was recently increased from the original proposal of 10 apartments over 3 blocks to the current proposal of 21 apartments over 6 blocks.

This Parking & Traffic Assessment is for the proposed Re-Development of 6 blocks located on Blocks 1–6 Section 8 Dickson. This includes the demolition of the existing 6 single dwellings, construction of a townhouse style complex consisting of 15 x 2-bedroom, 4 x 3-bedroom and 2 x 4-bedroom dwellings within 2-3-story high building (ground and 1-2 floors above), 2 concrete driveways, pathways and basement parking.

The new development will increase the amount of traffic generated when compared to the original 6 single dwellings; as such this report has been updated to note the parking required for the proposed development and assess that the existing road network has the capacity to absorb the additional traffic generated by the proposed 21 apartments.

Blocks 1-6 Section 8, (combined area 3,577m<sup>2</sup>) are located on 26-36 Morphet Street in Dickson. In accordance with the Territory Plan, these Blocks are designated as RZ3: URBAN RESIDENTIAL. The existing site and surrounding roads of interest are highlighted on *Figure 1*.

This report updates the previous assessment undertaken in July 2017 to provide a current assessment of the existing and future parking & traffic requirements, for the site based on the current development proposal.

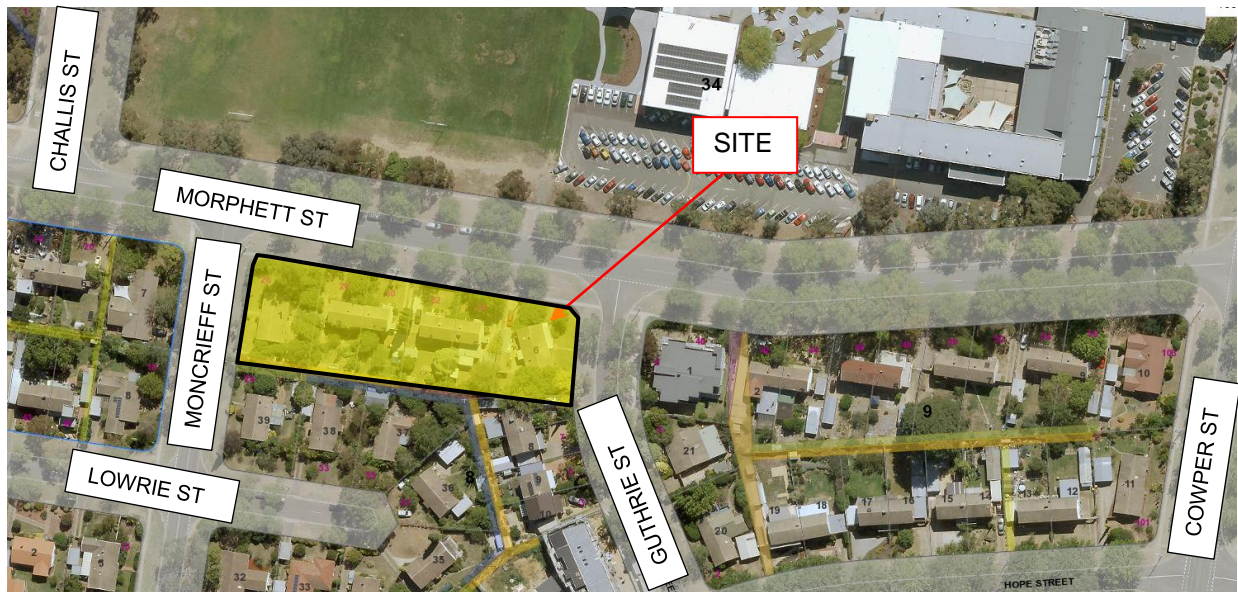


Figure 1 - Aerial of Site & surrounding features (ACTmapapi November 2018)

## Traffic Conditions

### Existing Road Network

The site is bounded by the following roads as defined under ACT Roads Hierarchy

- Moncrieff Street – Bounds the Western edge of the site – 7m wide Access Street road with a nominal capacity of 1,001-2,000 vehicles per day (vpd both directions combined)
- Morphett Street – Bounds the Northern edge of the site – 9m wide Major Collector road with a nominal capacity of 3,000-6,000 vehicles per day (vpd both directions combined)
- Guthrie Street – Bounds the Eastern edge of the site – 7m wide Access Street road with a nominal capacity of 1,001-2,000 vehicles per day (vpd both directions combined)

These are the 3 main roads which will be impacted the greatest by the proposed development, with Morphett Street providing the most direct access onto the nearby Northbourne Ave to the West & Cowper Street to the East which are the 2 most direct routes connecting the proposed development to the rest of Canberra.



## Accident Data

Updated Accident data was obtained by Roads ACT on the roads adjacent to the site. A summary of the data obtain is shown with in the Table 1. The full data as provided by TCCS can be observed in Appendix A.

In Summary:

- The obtained data spans from 2013-2017;
- Accident data was obtained at the intersections and mid-block (between intersections) locations as shown on *Figure 2*;
- only 3 accidents involving an injury were observed with all being at different locations, in different years and all involved different vehicle movements suggests that they are not at all related to each other; and
- The largest number of accidents occurred at the Intersection of Challis St and Morphett Street with 15 accidents observed over the 5 year period all of which were noted as property damage only.



**Figure 2** Approximate locations on nearby streets where accident data has been obtained

Under the Federal Government Black Spot program, for an area to be defined as a Black spot road (midblock or intersection) requiring modification, the road in question is required to meet the following condition.

“For individual sites such as intersections, mid-block or short road sections, there should be a history of at least three casualty crashes over a five-year period. For lengths of road, there should be an average of 0.2 casualty crashes per kilometre per annum over the length in question over five years.”

Table 1 shows a summary of the accident data obtained and from the above definition, none of the locations mentioned in the accident data provided meet this requirement.

**Table 1 – Summary of Accident data on the nearby roadways to the proposed development**

Location	Type of accidents	Number of accidents
Mid-Block – Morphet St (Cowper to Guthrie)	1 x Injury (received treatment) 1 x Property damage only	2 accidents in total
Intersection Guthrie/Morphett	1 x Property damage only	1 accident in total
Mid-Block - Morphet St (Guthrie To Moncrieff)	None	None
Intersection Moncrieff/Morphett	2 x Property damage only	2 accidents in total
Mid-Block Morphet St (Moncrieff to Challis)	1 x Property damage only	1 accident in total
Intersection Challis/Morphett	15 x Property damage only	15 accident in total
Mid-Block Morphet St (Challis to Northbourne)	2 x Property damage only	2 accidents in total
Intersection Lowrie/Moncrieff (Sw)	None	None
Mid-block Lowrie st (moncrieff to moncrieff)	1 x Injury (received treatment) 1 x Property damage only	2 accidents in total
Intersection Lowrie/Moncrieff	None	None
Mid-block Lowrie street (moncrieff to lowrie)	None	None
Intersection Lowrie (Deadend)	None	None
Mid-block Moncrieff st (morphett to lowrie)	None	None
Mid-block Moncrieff st (lowrie to lowrie)	2 x Property damage only	2 accidents in total
Mid-block Moncrieff st (lowrie to dooring)	None	None
Intersection Dooring/Moncrieff	1 x Injury (received treatment) 3 x Property damage only	4 accidents in total
Intersection Guthrie/Hope	None	None



## Existing Traffic data

Previous Traffic count data was obtained from “Matrix traffic & Transport Data” which contained a full week’s worth of traffic volume data from July 27<sup>th</sup> 2017 to 2<sup>nd</sup> August 2017. The 3 locations this data was obtained from are as follows:

- (Site 1) Midblock Morphett Street – Just West of Moncrieff Street before Challis St;
- (Site 2) Midblock Morphett Street - Just East of Moncrieff Street at the start of the 40km/h school zone; and
- (Site 3) Midblock - Moncrieff Street just south of Morphett Street;

The full traffic volume data obtained is attached in Appendix B.

Figure 3 shows the locations where these traffic volume counts were undertaken.



**Figure 3- Locations where traffic counts were undertaken in July 2017**

For the updated traffic assessment currently being undertaken; a traffic growth factor of 2% has been utilised and added to the previously undertaken traffic counts. This growth factor is the same growth factor as outlined within the ACT “Guidelines for Sidra Analysis” document.

From the Previously undertaken traffic counts by “Matrix traffic & Transport Data”, the 2% growth factor was applied and the traffic volumes in *Table 2* were observed:

**Table 2 – Estimate traffic growth where 2% growth factor is applied to observed traffic data**

Location	Estimated Capacity (VPD)	Weekday Average (VPD)	7 Day Average (VPD)	Max AM Peak (VPH)	Max PM Peak (VPH)
Site 1 (Eastbound)	0 – 3,000	2058	1805	420	195
Site 1 (Westbound)	0 – 3,000	2417	2112	278	284
Site 1 (Combined)	3,001 – 6,000	4474	3916	697	462
Site 2 (Eastbound)	0 – 3,000	1464	1262	308	142
Site 2 (Westbound)	0 – 3,000	1607	1377	213	216
Site 2 (Combined)	3,001 – 6,000	3071	2639	520	357
Site 3 (Southbound)	0 – 1,000	801	725	149	75
Site 3 (Northbound)	0 – 1,000	1041	939	133	114
Site 3 (Combined)	1,001 – 2,000	1842	1663	269	187

From the traffic data provided, it can be observed that:

- Moncrieff Street is operating at around 92% of its total nominal capacity on a weekday average;
- Morphett Street is operating at around 75% of its nominal capacity between Moncrieff St & Challis St on a weekday average;
- Morphett Street is operating at around 51% of its nominal capacity east of Moncrieff St.
- Approximately 46-48% of the vehicles on Morphett st were observed to be traveling East (away from Northbourne Ave) with a peak of 420vph being observed during the morning peak.
- With a maximum of more than 690 vph being observed during the morning peak on Morphett Street it may be beneficial from a safety and a resident usability point of view, to only provide vehicle access points onto Moncrieff Street and Guthrie Street (as currently noted on the provided architectural plans) with Moncrieff St observed at having less than half this amount of peak hour vehicle movements.
- It has been estimated that given the location of Guthrie Street it is likely to have similar if not slightly less traffic volumes than Moncrieff street as it is a short side street that does not provide direct access to any other major collector roads which Moncrieff Street does not already provide access too.

## Proposed Traffic Generation

The current proposal for the site will have the traffic generation rates as noted in the below tables. The traffic generated for the 6 existing single dwellings has also been noted below to allow a comparison between preconstruction to post construction traffic generation to be made. The traffic rates noted were obtained from the RTA "Guide to Traffic Generating Developments" (October 2002), RMS "TDT 2013/ 04a Updated traffic surveys" (August 2013) as well as the ACT Government Estate Development Plan (May 2018). Where rates exist for a dwelling type in multiple documents the higher value has been used in order to produce a more conservative estimate.

These traffic generation rates and the estimated total traffic generated by the proposed development can be observed in *Table 3* and *Table 4*.

**Table 3 – Estimated daily traffic generation post development**

Development Option	Traffic Generation rate (vpd)	Daily Traffic generated (vpd)
Existing Single dwellings x6	9 vpd/ Dwelling	-54 vpd total
Proposed 15 x 2-bedroom unit (medium density housing)	6 vpd/ Dwelling	90 vpd total
Proposed 4 x 3-bedroom unit (medium density housing)	7 vpd/ Dwelling	28 vpd total
Proposed 2 x 4-bedroom unit (medium density housing)	7 vpd/ Dwelling	14 vpd total
<b>Total additional traffic generated post development</b>		<b>78 vpd</b>

**Table 4 – Estimated peak Hour vehicle movements post development**

Development Option	Peak Traffic Generation (vph)	Peak Traffic generated (vph)
Existing Single dwellings x6	0.85 vph/ Dwelling	-5.1 vph total
Proposed 15 x 2-bedroom unit (medium density housing)	0.5 vph/ Dwelling	7.5 vph total
Proposed 4 x 3-bedroom unit (medium density housing)	0.65 vph/ Dwelling	2.6 vph total
Proposed 2 x 4-bedroom unit (medium density housing)	0.65 vph/ Dwelling	1.3 vph total
<b>Total additional peak traffic generated post development</b>		<b>6.3 vph total</b>

When the traffic rates in the above tables are added to the new traffic volumes obtained it is observed that:

- Moncrieff Street has the capacity to absorb the additional traffic volume (totalling 78vpd); post development with the road still being below its estimated nominal capacity.
- It should be noted that the traffic produced is likely to be a split exiting onto Moncrieff and Guthrie Street; therefore the post development traffic on these roads will likely be smaller than the total value noted above.
- Morphett Street has ample capacity to absorb the additional traffic generated with the road being at less than 80% of its estimated nominal capacity post development.



## **Parking Generation/ Requirements**

The vehicular parking demand, generated from the proposed development has been assessed against the requirements in the *Parking and Vehicular Access General Code* (25 May 2018).

### ***Locational Parking Requirements***

The locational requirements for long stay, short stay, operational and visitor parking are as follows (*Clause 3.1.4, Locational requirements, Residential zones*):

For Residential use:

- For long stay parking (resident parking), on site;
- For short stay/ visitor parking, on site or within 100m;

### ***Parking Generation Rates***

Table 5 notes the parking generation rates as per the requirements of the *Parking and Vehicular Access General Code* were used for the proposed development (schedule 1 parking provision rates for Residential zones).

**Table 5 – Vehicular parking generation for the proposed development**

Space/type	Num.	Rate	Parking Spaces Required
2-Bedroom Dwelling	15	1.5 spaces/apartment	23 Long stay spaces
3-Bedroom Dwelling	4	2.0 spaces/apartment	8 Long stay spaces
4-Bedroom Dwelling	2	2.0 spaces/apartment	4 Long stay spaces
Visitor Parking	N/A	1 space/ 4 dwellings	5 Visitor spaces
<b>Total Parking Generated</b>			<b>35 Long stay spaces 5 Visitor spaces</b>

### ***Disabled Space Parking Requirements***

The ACTPLA *Parking and Vehicular Access General Code* (Clause 2.2.4) sets out requirements for the number of Disabled spaces to be provided. Notwithstanding any provision in the Building Code of Australia or in AS2890, parking spaces for people with disabilities are to comprise a minimum of 3% (rounded up to the nearest whole number) of the total number of parking spaces required in accordance with the code.

Considering the total generation of parking spaces from the previous section is expected to be approximately 40 spaces a minimum of,  $(0.03 \times 40) = (2)$  car parking spaces are required to be designated as disabled. At least 1 of these spaces should be considered for the visitor parking requirements of this site



### **Delivery and Removalist Van Requirements**

The Multi-Unit Housing Development Code (May 2018) notes that an additional parking space for delivery/ removalist van is to be provided if a development has 40 or more dwellings.

This additional space is not required as the development has less than 40 dwellings.

### **Motorcycle Parking Requirements**

As per the requirements of *Clause 2.4, Parking for motorcycles and motor scooters, Parking and Vehicular Access General Code*, the provision rate for motorcycles is three (3) dedicated spaces per (100) vehicle parking spaces, with a minimum of one (1) space for car parks with a minimum of (30) parking spaces. These spaces are to be provided in addition to the number of car parking spaces required under this code.

Considering the total generation of parking spaces from the previous section is expected to be approximately 43 spaces a minimum of,  $(0.03 \times 40) = (2)$  additional motorcycle spaces are to be provided for the site.

### **Bicycle Parking Requirements**

In Accordance with the ACTPLA Bicycle Parking General Code (October 2013) *Table 6* outlines the bicycle parking provisions which are to be met onsite in addition to the above mentioned vehicle parking requirements.

**Table 6 – Bicycle parking generation for the proposed development**

Development Type	Bicycle Parking type	Rate	Bicycle Parking Required
Apartment	Class 1 or 2	1 per apartment	21 x class 1 or 2 spaces
Visitor Parking	Class 3	1 per 12 apartments after the first 12 apartments	1 x class 3 space
<i>Total Parking Generated</i>			21 x class 1 or 2 spaces 1 x class 3 space

The classes of bicycle parking are defined as follows:

- Class 1 - Bicycle Locker - Fully enclosed individual locker
- Class 2 - Bicycle Enclosure - Locked cages or compounds containing Bicycle Rail installations for multiple users
- Class 3 – Fixed to the ground loop or hoop rails which a bike can be securely fixed to; located in areas with at least good passive surveillance.

## **Parking & Traffic Provision Conclusions**

It was concluded that:

- Based on the current *Parking and Vehicular Access Code*, the proposed development on Blocks 1-6 Section 8 requires 35 parking spaces for residents & 5 parking spaces for visitors (40 spaces in total). Given the location of the proposed development these spaces will need to be provided onsite
- At least 2 of the onsite parking spaces should be designated as disabled accessible including the associated shared zone.
- The current proposal shows 43 parking spaces onsite with 2 marked as disabled accessible including the associated shared space between them.
- 2 additional motorcycle spaces are shown on the ground floor being the basement ramp and the proposed waste enclosure.
- 21 class 1 or 2 bicycle parking spaces are to be provided for residents. The current proposal shows that each parking space in the basement has a storage unit which provides a fully enclosed individual locker (Class 1 bicycle storage) for each dwelling.
- Class 3 bicycle parking spaces are currently shown on the ground floor near the above mentioned motorcycle parking. This is currently nominated as "visitor bicycle parking"
- From the traffic data obtained from Roads ACT the nearby roads of, Moncrieff St & Morphett Street are assessed to have capacity to absorb the additional traffic generated by the proposed development.
- As currently shown on the provide site plan it is beneficial from a safety as well as a resident usability point of view, to provide vehicle access points off Moncrieff Street and Guthrie Street rather than Morphett Street as these streets have been observed as having much smaller peak hour vehicle movements when compared to Morphett Street.

Based on the currently provided with all the required parking spaces being noted onsite the current development proposal of Blocks 1-6 Section 6 Dickson appears to be feasible on parking & traffic grounds.

Don't hesitate to contact the undersigned if you have any questions

### **NORTHROP CONSULTING ENGINEERS**

Sincerely,



Joey Wiltshire  
Civil Engineer

Reviewed by:



David Field  
Principal

## Appendix A: Roads ACT Accident Data 2013-2017

<b>History Location:</b>	<b>MORPHETT STREET - showing Intersections and Midblocks</b>									
<b>Report Date Range:</b>	<b>01/01/2013 12:00:00 AM -&gt; 31/12/2017 11:59:59 PM</b>									
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>MORPHETT STREET (COWPER -&gt; GUTHRIE)</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>MORPHETT STREET (COWPER -&gt; GUTHRIE) : 109</b>	<b>2015-2019400</b>	<b>13/04/2015 12:20</b>	<b>Injury</b>	<b>Received medical treatment</b>	<b>19</b>	<b>1</b>	<b>1</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>704</b>
	Vehicle 1	East bound	1st (kerb or left) lane	Not related to intersection	Straight ahead	Not obstructed				



<b>MORPHETT STREET (COWPER GUTHRIE) : 173</b> ->	<b>2016-1233948</b>	<b>24/06/2016 23:00</b>	<b>Property Damage Only</b>		<b>7</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>601</b>
	Vehicle 1	East bound	1st (kerb or left) lane	Not related to intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Not related to intersection	Parked	Not obstructed				
<b>Crashes = 2</b>										
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>GUTHRIE/MORPHETT</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>GUTHRIE/MORPHETT</b>	<b>2013-2228273</b>	<b>12/06/2013 16:30</b>	<b>Property Damage</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Light rain</b>	<b>104</b>

			e Only							
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	West bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
<b>Crashes = 1</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>MORPHETT STREET (GUTHRIE -&gt; MONCRIEFF)</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>MONCRIEFF/MORPHETT</b>									

Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Number of Vehicles	Road Surface	Weather	Rum Code
		Direction	Lane	Position	Movement	Visibility				
<b>MONCRIEFF/MORPHETT</b>	<b>2014-2124551</b>	<b>4/09/2014 11:00</b>	<b>Property Damage Only</b>		<b>6</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>302</b>
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	North bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
<b>MONCRIEFF/MORPHETT</b>	<b>2017-1106019</b>	<b>24/05/2017 8:50</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Fine</b>	<b>107</b>
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	West bound	1st (kerb or	Within intersection	Straight ahead	Not obstructed				



			left) lane	n		d				
<b>Crashes = 2</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>MORPHETT STREET (MONCRIEFF -&gt; CHALLIS)</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>MORPHETT STREET (MONCRIEFF -&gt; CHALLIS) : 28</b>	<b>2016-1085218</b>	<b>11/11/2016 7:46</b>	<b>Property Damage Only</b>		<b>8</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>404</b>
	Vehicle 1	West bound	1st (kerb or left) lane	Approaching intersection	Straight ahead	Not obstructed				
	Vehicle 2	West bound	1st (kerb or left) lane	Approaching intersection	Backing	Other				
<b>Crashes = 1</b>										

<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>CHALLIS/MORPHETT</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>CHALLIS/MORPHETT</b>	<b>2013-1204230</b>	<b>28/01/2013 18:50</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Light rain</b>	<b>106</b>
	Vehicle 1	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2013-2188669</b>	<b>21/03/2013 16:25</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Light rain</b>	<b>106</b>
	Vehicle 1	South	1st	Within	Right	Not				

		bound	(kerb or left) lane	intersection	turn	obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2013-1168602</b>	<b>22/03/2013 9:35</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Light rain</b>	<b>104</b>
	Vehicle 1	South bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2013-2107825</b>	<b>26/05/2013 8:17</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Fog</b>	<b>106</b>
	Vehicle 1	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	South bound	Right turn	Approaching	Straight ahead	Not obstructed				



			lane	intersection		d				
<b>CHALLIS/MORPHETT</b>	<b>2013-1235634</b>	<b>24/07/2013 19:10</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>105</b>
	Vehicle 1	West bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2013-1176143</b>	<b>5/09/2013 13:20</b>	<b>Property Damage Only</b>		<b>6</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Cloudy or Overcast</b>	<b>302</b>
	Vehicle 1	South bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	South bound	1st (kerb or left) lane	Approaching intersection	Left turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2013-1133262</b>	<b>11/11/2013 13:55</b>	<b>Property Damage</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Heavy rain</b>	<b>103</b>

			<b>e Only</b>							
	Vehicle 1	South bound	Right turn lane	Approaching intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2014-1194621</b>	<b>15/02/2014 0:30</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Light rain</b>	<b>106</b>
	Vehicle 1	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2014-2173081</b>	<b>1/03/2014 17:00</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Heavy rain</b>	<b>102</b>
	Vehicle 1	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	West	1st	Within	Straight	Not				

		bound	(kerb or left) lane	intersection	ahead	obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2014-1170481</b>	<b>28/03/2014 16:20</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Light rain</b>	<b>105</b>
	Vehicle 1	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	West bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2014-1146757</b>	<b>3/05/2014 11:23</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Light rain</b>	<b>103</b>
	Vehicle 1	South bound	Right turn lane	Approaching intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2014-1229025</b>	<b>12/12/2014 10:15</b>	<b>Property</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Good dry</b>	<b>Fine</b>	<b>105</b>



			<b>Damag e Only</b>					<b>surf e</b>		
	Vehicle 1	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	West bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2015-1110889</b>	<b>5/12/2015 18:30</b>	<b>Propert y Damag e Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Good dry surf e</b>	<b>Fine</b>	<b>104</b>
	Vehicle 1	East bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 2	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
<b>CHALLIS/MORPHETT</b>	<b>2016-1217664</b>	<b>16/02/2016 16:20</b>	<b>Propert y Damag e Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Good dry surf e</b>	<b>Fine</b>	<b>105</b>
	Vehicle 1	West bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				

	Vehicle 2	South bound	1st (kerb or left) lane	Within intersection	Right turn	Not known				
<b>CHALLIS/MORPHETT</b>	<b>2016-2130666</b>	<b>26/06/2016 19:20</b>	<b>Property Damage Only</b>		<b>1</b>	<b>0</b>	<b>3</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>202</b>
	Vehicle 1	West bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
	Vehicle 3	South bound	Right turn lane	Within intersection	Right turn	Not obstructed				
<b>Crashes = 15</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>MORPHETT STREET (CHALLIS NORTHBOURNE)</b>									

Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Number of Vehicles	Road Surface	Weather	Rum Code
		Direction	Lane	Position	Movement	Visibility				
<b>MORPHETT STREET (CHALLIS -&gt; NORTHBOURNE) : 30</b>	<b>2014-1131951</b>	<b>31/01/2014 12:49</b>	<b>Property Damage Only</b>		<b>6</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>304</b>
	Vehicle 1	East bound	1st (kerb or left) lane	Not related to intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Not related to intersection	U turn	Not obstructed				
<b>MORPHETT STREET (CHALLIS -&gt; NORTHBOURNE) : 65</b>	<b>2016-1157951</b>	<b>7/06/2016 15:15</b>	<b>Property Damage Only</b>		<b>6</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Cloudy or Overcast</b>	<b>301</b>
	Vehicle 1	East bound	1st (kerb or left) lane	Not related to intersection	Straight ahead	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Not related to intersection	Straight ahead					

			left) lane	intersection						
<b>Crashes = 2</b>										
<b>History Location:</b>	<b>LOWRIE STREET - showing Intersections and Midblocks</b>									
<b>Report Date Range:</b>	<b>01/01/2013 12:00:00 AM -&gt; 31/12/2017 11:59:59 PM</b>									
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>LOWRIE/MONCRIEFF (SW)</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>LOWRIE STREET (MONCRIEFF -&gt; MONCRIEFF)</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>



		Direction	Lane	Position	Movement	Visibility				
<b>LOWRIE STREET (MONCRIEFF MONCRIEFF) : 40</b>	<b>2016-1164124</b>	<b>26/02/2016 18:59</b>	<b>Property Damage Only</b>		<b>9</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>406</b>
	Vehicle 1	West bound	1st (kerb or left) lane	Not related to intersection	Parked	Not obstructed				
	Vehicle 2	South bound	Other	Out of driveway	Backing	Not obstructed				
<b>LOWRIE STREET (MONCRIEFF MONCRIEFF) : 203</b>	<b>2017-2214660</b>	<b>6/04/2017 16:10</b>	<b>Injury</b>	<b>Received medical treatment</b>	<b>9</b>	<b>1</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>406</b>
	Vehicle 1	West bound	Other	Out of driveway	Backing	Not obstructed				
	Vehicle 2	South bound	1st (kerb or left) lane	Not related to intersection	Parked	Not obstructed				
<b>Crashes = 2</b>										
<b>Location Type</b>	<b>Intersection</b>									

<b>Location Description</b>	<b>LOWRIE/MONCRIEFF</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>LOWRIE STREET (MONCRIEFF -&gt; LOWRIE)</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>LOWRIE (END)</b>									

Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Number of Vehicles	Road Surface	Weather	Rum Code
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Total Crashes = 2</b>										
<b>History Location:</b>	<b>MONCRIEFF STREET - showing Intersections and Midblocks</b>									
<b>Report Date Range:</b>	<b>01/01/2013 12:00:00 AM -&gt; 31/12/2017 11:59:59 PM</b>									
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>MONCRIEFF/MORPHETT</b>									
Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Number of Vehicles	Road Surface	Weather	Rum Code
		Direction	Lane	Position	Movement	Visibility				
<b>MONCRIEFF/MORPHETT</b>	<b>2014-2124551</b>	<b>4/09/2014 11:00</b>	<b>Property</b>		<b>6</b>	<b>0</b>	<b>2</b>	<b>Good dry</b>	<b>Fine</b>	<b>302</b>

			<b>Damage Only</b>					<b>surface</b>		
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	North bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
<b>MONCRIEFF/MORPHETT</b>	<b>2017-1106019</b>	<b>24/05/2017 8:50</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Fine</b>	<b>107</b>
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
	Vehicle 2	West bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
<b>Crashes = 2</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>MONCRIEFF STREET (MORPHETT -&gt; LOWRIE)</b>									



Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Number of Vehicles	Road Surface	Weather	Run Code
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>LOWRIE/MONCRIEFF</b>									
Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Number of Vehicles	Road Surface	Weather	Run Code
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>MONCRIEFF STREET (LOWRIE -&gt; LOWRIE)</b>									
Location : Chainage	Police Reference	Date/Time	Severity	Injury Type	Crash Type	Number of Casualties	Number of Vehicles	Road Surface	Weather	Run Code

		Direction	Lane	Position	Movement	Visibility				
<b>MONCRIEFF STREET (LOWRIE -&gt; LOWRIE) : 63</b>	<b>2013-1209835</b>	<b>28/04/20 13 13:30</b>	<b>Property Damage Only</b>		<b>9</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>406</b>
	Vehicle 1	West bound	Other	Out of driveway	Backing	Not obstructed				
	Vehicle 2	North bound	1st (kerb or left) lane	Not related to intersection	Parked	Not obstructed				
<b>MONCRIEFF STREET (LOWRIE -&gt; LOWRIE) : 94</b>	<b>2015-1095416</b>	<b>14/12/20 15 8:20</b>	<b>Property Damage Only</b>		<b>9</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>406</b>
	Vehicle 1	North bound	1st (kerb or left) lane	Not related to intersection	Straight ahead	Not obstructed				
	Vehicle 2		Other							
<b>Crashes = 2</b>										
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>LOWRIE/MONCRIEFF (SW)</b>									

<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>MONCRIEFF STREET (LOWRIE -&gt; DOORING)</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>DOORING/MONCRIEFF</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>

						es	s			e
		Direction	Lane	Position	Moveme nt	Visibility				
<b>DOORING/MONCRIE FF</b>	<b>2013-2166077</b>	<b>4/09/201 3 18:05</b>	<b>Injury</b>	<b>Received medical treatment</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>Good dry surfac e</b>	<b>Fine</b>	<b>107</b>
	Vehicle 1	South bound	1st (kerb or left) lane	Within interseccio n	Left turn	Other				
	Vehicle 2	East bound	1st (kerb or left) lane	Within interseccio n	Straight ahead	Not obstructe d				
<b>DOORING/MONCRIE FF</b>	<b>2013-2180441</b>	<b>9/12/201 3 18:10</b>	<b>Propert y Damag e Only</b>		<b>6</b>	<b>0</b>	<b>2</b>	<b>Good dry surfac e</b>	<b>Fine</b>	<b>303</b>
	Vehicle 1	South bound	1st (kerb or left) lane	Within interseccio n	Right turn	Not obstructe d				
	Vehicle 2	South bound	1st (kerb or left) lane	Within interseccio n	Right turn	Not obstructe d				



<b>DOORING/MONCRIE FF</b>	<b>2016-1199313</b>	<b>19/02/20 16 16:30</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>106</b>
	Vehicle 1	South bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
<b>DOORING/MONCRIE FF</b>	<b>2016-1133028</b>	<b>8/09/201 6 12:30</b>	<b>Property Damage Only</b>		<b>8</b>	<b>0</b>	<b>2</b>	<b>Good dry surface</b>	<b>Fine</b>	<b>404</b>
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Backing	Not obstructed				
	Vehicle 2	East bound	1st (kerb or left) lane	Within intersection	Left turn	Not obstructed				
<b>Crashes = 4</b>										
<b>Total Crashes = 8</b>										

<b>History Location:</b>	<b>GUTHRIE STREET - showing Intersections and Midblocks</b>									
<b>Report Date Range:</b>	<b>01/01/2013 12:00:00 AM -&gt; 31/12/2017 11:59:59 PM</b>									
<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>GUTHRIE/HOPE</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										
<b>Location Type</b>	<b>Mid Block</b>									
<b>Location Description</b>	<b>GUTHRIE STREET (HOPE -&gt; MORPHETT)</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>Crashes = 0</b>										

<b>Location Type</b>	<b>Intersection</b>									
<b>Location Description</b>	<b>GUTHRIE/MORPHETT</b>									
<b>Location : Chainage</b>	<b>Police Reference</b>	<b>Date/Time</b>	<b>Severity</b>	<b>Injury Type</b>	<b>Crash Type</b>	<b>Number of Casualties</b>	<b>Number of Vehicles</b>	<b>Road Surface</b>	<b>Weather</b>	<b>Rum Code</b>
		Direction	Lane	Position	Movement	Visibility				
<b>GUTHRIE/MORPHETT</b>	<b>2013-2228273</b>	<b>12/06/2013 16:30</b>	<b>Property Damage Only</b>		<b>2</b>	<b>0</b>	<b>2</b>	<b>Wet surface</b>	<b>Light rain</b>	<b>104</b>
	Vehicle 1	North bound	1st (kerb or left) lane	Within intersection	Right turn	Not obstructed				
	Vehicle 2	West bound	1st (kerb or left) lane	Within intersection	Straight ahead	Not obstructed				
<b>Crashes = 1</b>										
<b>Total Crashes = 1</b>										

## Appendix B: Traffic data from July 27<sup>th</sup> 2017 to 2<sup>nd</sup> August 2017

Job No	A64 Dickson	 Traffic and Transport Data
Client	Northrop	
Site	Morphette Street, West of Moncrieff Street	
Location	Moncrieff	
Site No	1	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	EB	

Hour	Day of Week							W'Day	7 Day
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	31-Jul	1-Aug	2-Aug	27-Jul	28-Jul	29-Jul	30-Jul	Ave	Ave
AM Peak	411	366	369	399	385	102	93	2017	1769
PM Peak	159	191	174	167	172	116	93		
0:00	4	6	6	11	12	8	17	8	9
1:00	0	8	4	0	4	6	8	3	4
2:00	0	2	1	3	4	3	4	2	2
3:00	1	3	2	2	5	2	3	3	3
4:00	3	2	2	3	1	4	1	2	2
5:00	10	7	9	6	9	2	1	8	6
6:00	25	31	33	30	25	22	6	29	25
7:00	96	112	112	107	97	21	9	105	79
8:00	411	366	369	399	385	43	29	386	286
9:00	160	152	138	155	134	94	37	148	124
10:00	102	89	92	104	86	92	54	95	88
11:00	82	89	97	99	92	102	93	92	93
12:00	100	98	92	108	97	116	88	99	100
13:00	88	100	107	110	111	90	75	103	97
14:00	99	113	105	100	112	100	81	106	101
15:00	159	149	134	153	172	91	73	153	133
16:00	143	140	150	125	133	90	61	138	120
17:00	136	191	174	167	134	93	93	160	141
18:00	101	128	121	111	132	115	72	119	111
19:00	65	87	85	101	111	76	63	90	84
20:00	64	65	88	67	76	63	39	72	66
21:00	42	43	54	66	47	41	22	50	45
22:00	23	29	27	35	43	34	22	31	30
23:00	9	13	14	16	24	26	14	15	17
Total	1923	2023	2016	2078	2046	1334	965	2017	1769

7-19	1677	1727	1691	1738	1685	1047	765	1704	1476
6-22	1873	1953	1951	2002	1944	1249	895	1945	1695
6-24	1905	1995	1992	2053	2011	1309	931	1991	1742
0-24	1923	2023	2016	2078	2046	1334	965	2017	1769

Job No	A64 Dickson	Menu
Client	Northrop	
Site	Morphette Street, West of Moncrieff Street	
Location	Moncrieff	
Site No	1	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	WB	



Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon 31-Jul	Tue 1-Aug	Wed 2-Aug	Thu 27-Jul	Fri 28-Jul	Sat 29-Jul	Sun 30-Jul		
AM Peak	272	263	269	250	256	120	83		
PM Peak	239	259	278	246	275	114	115	2369	2070
0:00	4	7	7	9	12	9	16	8	9
1:00	1	2	5	4	8	4	7	4	4
2:00	2	4	2	3	0	5	12	2	4
3:00	4	4	3	3	8	5	4	4	4
4:00	3	7	5	3	7	2	5	5	5
5:00	17	24	18	15	19	6	10	19	16
6:00	55	69	71	61	54	36	10	62	51
7:00	117	148	126	121	119	47	20	126	100
8:00	272	263	269	250	256	83	39	262	205
9:00	182	166	180	187	169	96	56	177	148
10:00	120	124	121	128	105	101	83	120	112
11:00	93	119	110	109	119	120	79	110	107
12:00	138	138	141	121	161	113	93	140	129
13:00	115	128	148	163	137	114	93	138	128
14:00	125	153	127	132	140	110	87	135	125
15:00	239	232	208	246	275	104	85	240	198
16:00	158	167	162	183	186	99	115	171	153
17:00	212	259	278	228	212	109	99	238	200
18:00	144	148	182	176	151	111	79	160	142
19:00	74	101	108	97	91	79	60	94	87
20:00	49	67	63	59	59	60	46	59	58
21:00	34	55	42	54	66	28	21	50	43
22:00	17	20	21	27	50	35	15	27	26
23:00	8	14	16	16	31	21	13	17	17
Total	2183	2419	2413	2395	2435	1497	1147	2369	2070


7-19	1915	2045	2052	2044	2030	1207	928	2017	1746
6-22	2127	2337	2336	2315	2300	1410	1065	2283	1984
6-24	2152	2371	2373	2358	2381	1466	1093	2327	2028
0-24	2183	2419	2413	2395	2435	1497	1147	2369	2070



Job No	A64 Dickson	Menu
Client	Northrop	
Site	Morphette Street, West of Moncrieff Street	
Location	Moncrieff	
Site No	1	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	Combined	

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon 31-Jul	Tue 1-Aug	Wed 2-Aug	Thu 27-Jul	Fri 28-Jul	Sat 29-Jul	Sun 30-Jul		
AM Peak	683	629	638	649	641	222	172		
PM Peak	398	450	452	399	447	229	192	4386	3839
0:00	8	13	13	20	24	17	33	16	18
1:00	1	10	9	4	12	10	15	7	9
2:00	2	6	3	6	4	8	16	4	6
3:00	5	7	5	5	13	7	7	7	7
4:00	6	9	7	6	8	6	6	7	7
5:00	27	31	27	21	28	8	11	27	22
6:00	80	100	104	91	79	58	16	91	75
7:00	213	260	238	228	216	68	29	231	179
8:00	683	629	638	649	641	126	68	648	491
9:00	342	318	318	342	303	190	93	325	272
10:00	222	213	213	232	191	193	137	214	200
11:00	175	208	207	208	211	222	172	202	200
12:00	238	236	233	229	258	229	181	239	229
13:00	203	228	255	273	248	204	168	241	226
14:00	224	266	232	232	252	210	168	241	226
15:00	398	381	342	399	447	195	158	393	331
16:00	301	307	312	308	319	189	176	309	273
17:00	348	450	452	395	346	202	192	398	341
18:00	245	276	303	287	283	226	151	279	253
19:00	139	188	193	198	202	155	123	184	171
20:00	113	132	151	126	135	123	85	131	124
21:00	76	98	96	120	113	69	43	101	88
22:00	40	49	48	62	93	69	37	58	57
23:00	17	27	30	32	55	47	27	32	34
Total	4106	4442	4429	4473	4481	2831	2112	4386	3839

7-19	3592	3772	3743	3782	3715	2254	1693	3721	3222
6-22	4000	4290	4287	4317	4244	2659	1960	4228	3680
6-24	4057	4366	4365	4411	4392	2775	2024	4318	3770
0-24	4106	4442	4429	4473	4481	2831	2112	4386	3839

Job No	A64 Dickson	<div>Menu</div> 
Client	Northrop	
Site	Morphette Street, East of Moncrieff Street	
Location	Moncrieff	
Site No	2	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	EB	

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon 31-Jul	Tue 1-Aug	Wed 2-Aug	Thu 27-Jul	Fri 28-Jul	Sat 29-Jul	Sun 30-Jul		
AM Peak	301	274	276	291	292	66	54		
PM Peak	135	139	123	126	139	87	56	1435	1237
0:00	4	5	4	10	7	3	12	6	6
1:00	0	8	2	1	2	4	1	3	3
2:00	0	0	1	2	4	2	3	1	2
3:00	0	2	1	1	1	3	1	1	1
4:00	1	1	1	3	1	1	1	1	1
5:00	7	5	5	6	7	2	2	6	5
6:00	22	22	23	17	17	22	6	20	18
7:00	71	76	66	68	55	17	7	67	51
8:00	301	274	276	291	292	30	18	287	212
9:00	101	81	92	88	76	66	29	88	76
10:00	68	63	61	71	60	64	41	65	61
11:00	58	74	67	61	73	58	54	67	64
12:00	66	65	60	82	72	61	56	69	66
13:00	66	82	78	76	92	69	43	79	72
14:00	70	87	71	74	89	60	50	78	72
15:00	135	114	109	126	139	56	54	125	105
16:00	102	101	116	93	111	49	37	105	87
17:00	97	139	123	126	100	57	51	117	99
18:00	80	85	85	84	92	87	51	85	81
19:00	47	60	52	70	85	53	42	63	58
20:00	38	41	63	45	46	36	22	47	42
21:00	30	24	36	37	29	25	14	31	28
22:00	9	16	12	15	28	24	15	16	17
23:00	9	7	11	6	14	18	7	9	10
Total	1382	1432	1415	1453	1492	867	617	1435	1237

7-19	1215	1241	1204	1240	1251	674	491	1230	1045
6-22	1352	1388	1378	1409	1428	810	575	1391	1191
6-24	1370	1411	1401	1430	1470	852	597	1416	1219
0-24	1382	1432	1415	1453	1492	867	617	1435	1237


Job No	A64 Dickson	Menu
Client	Northrop	
Site	Morphette Street, East of Moncrieff Street	
Location	Moncrieff	
Site No	2	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	WB	



Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon 31-Jul	Tue 1-Aug	Wed 2-Aug	Thu 27-Jul	Fri 28-Jul	Sat 29-Jul	Sun 30-Jul		
AM Peak	208	194	187	198	203	74	52		
PM Peak	187	176	183	187	211	69	65	1575	1350
0:00	3	2	2	4	7	6	8	4	5
1:00	0	1	2	0	4	2	4	1	2
2:00	1	2	2	3	0	2	7	2	2
3:00	2	2	2	2	5	3	5	3	3
4:00	3	4	2	1	5	1	2	3	3
5:00	11	21	15	12	17	3	3	15	12
6:00	37	51	46	38	34	19	6	41	33
7:00	83	96	80	85	80	30	13	85	67
8:00	208	194	187	198	203	56	22	198	153
9:00	138	116	120	134	112	69	36	124	104
10:00	83	76	77	77	78	70	52	78	73
11:00	68	84	81	74	85	74	51	78	74
12:00	80	82	84	74	108	65	61	86	79
13:00	78	89	92	100	78	69	56	87	80
14:00	73	110	75	87	90	66	51	87	79
15:00	187	176	149	187	211	66	51	182	147
16:00	101	108	101	127	118	54	65	111	96
17:00	128	170	183	142	126	66	61	150	125
18:00	91	85	96	115	77	67	43	93	82
19:00	39	62	64	65	59	43	32	58	52
20:00	30	34	36	35	42	31	28	35	34
21:00	30	29	28	31	33	15	8	30	25
22:00	10	13	15	11	21	12	5	14	12
23:00	4	6	11	10	18	12	7	10	10
Total	1488	1613	1550	1612	1611	901	677	1575	1350

7-19	1318	1386	1325	1400	1366	752	562	1359	1158
6-22	1454	1562	1499	1569	1534	860	636	1524	1302
6-24	1468	1581	1525	1590	1573	884	648	1547	1324
0-24	1488	1613	1550	1612	1611	901	677	1575	1350



Job No	A64 Dickson	<div>Menu</div> 
Client	Northrop	
Site	Morphette Street, East of Moncrieff Street	
Location	Moncrieff	
Site No	2	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	Combined	

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon 31-Jul	Tue 1-Aug	Wed 2-Aug	Thu 27-Jul	Fri 28-Jul	Sat 29-Jul	Sun 30-Jul		
AM Peak	509	468	463	489	495	135	105		
PM Peak	322	309	306	313	350	154	117	3010	2587
0:00	7	7	6	14	14	9	20	10	11
1:00	0	9	4	1	6	6	5	4	4
2:00	1	2	3	5	4	4	10	3	4
3:00	2	4	3	3	6	6	6	4	4
4:00	4	5	3	4	6	2	3	4	4
5:00	18	26	20	18	24	5	5	21	17
6:00	59	73	69	55	51	41	12	61	51
7:00	154	172	146	153	135	47	20	152	118
8:00	509	468	463	489	495	86	40	485	364
9:00	239	197	212	222	188	135	65	212	180
10:00	151	139	138	148	138	134	93	143	134
11:00	126	158	148	135	158	132	105	145	137
12:00	146	147	144	156	180	126	117	155	145
13:00	144	171	170	176	170	138	99	166	153
14:00	143	197	146	161	179	126	101	165	150
15:00	322	290	258	313	350	122	105	307	251
16:00	203	209	217	220	229	103	102	216	183
17:00	225	309	306	268	226	123	112	267	224
18:00	171	170	181	199	169	154	94	178	163
19:00	86	122	116	135	144	96	74	121	110
20:00	68	75	99	80	88	67	50	82	75
21:00	60	53	64	68	62	40	22	61	53
22:00	19	29	27	26	49	36	20	30	29
23:00	13	13	22	16	32	30	14	19	20
Total	2870	3045	2965	3065	3103	1768	1294	3010	2587

7-19	2533	2627	2529	2640	2617	1426	1053	2589	2204
6-22	2806	2950	2877	2978	2962	1570	1211	2915	2493
6-24	2838	2992	2926	3020	3043	1736	1245	2964	2543
0-24	2870	3045	2965	3065	3103	1768	1294	3010	2587

Job No	A64 Dickson	Menu
Client	Northrop	
Site	Moncrieff Street, South of Morphette Street	
Location	Moncrieff	
Site No	3	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	NB	



Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	31-Jul	1-Aug	2-Aug	27-Jul	28-Jul	29-Jul	30-Jul		
AM Peak	109	104	130	102	98	57	39		
PM Peak	102	110	111	111	108	60	60	1020	920
0:00	2	5	5	3	6	3	11	4	5
1:00	1	1	3	4	3	3	4	2	3
2:00	1	2	0	0	0	3	6	1	2
3:00	2	2	2	1	3	4	0	2	2
4:00	1	4	3	3	3	2	4	3	3
5:00	9	6	7	6	5	5	8	7	7
6:00	19	20	27	24	19	20	5	22	19
7:00	47	64	53	47	46	18	9	51	41
8:00	109	104	130	102	98	32	21	109	85
9:00	64	66	74	65	63	39	29	66	57
10:00	46	56	50	61	46	46	39	52	49
11:00	38	52	36	45	50	57	36	44	45
12:00	63	65	71	63	60	60	41	64	60
13:00	53	64	71	70	75	59	43	67	62
14:00	59	63	61	54	66	57	45	61	58
15:00	82	78	68	72	85	53	41	77	68
16:00	71	76	84	69	82	52	60	76	71
17:00	102	110	111	111	108	58	42	108	92
18:00	65	84	97	77	80	51	48	81	72
19:00	39	44	50	40	43	43	35	43	42
20:00	24	37	39	26	25	31	22	30	29
21:00	10	28	19	28	40	19	17	25	23
22:00	6	13	8	16	35	29	12	16	17
23:00	7	7	8	6	17	13	5	9	9
Total	920	1051	1077	993	1058	757	583	1020	920

7-19	799	882	906	836	859	582	454	856	760
6-22	891	1011	1041	954	986	695	533	977	873
6-24	904	1031	1057	976	1038	737	550	1001	899
0-24	920	1051	1077	993	1058	757	583	1020	920



Job No	A64 Dickson	Menu
Client	Northrop	
Site	Moncrieff Street, South of Morphette Street	
Location	Moncrieff	
Site No	3	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	SB	



Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon 31-Jul	Tue 1-Aug	Wed 2-Aug	Thu 27-Jul	Fri 28-Jul	Sat 29-Jul	Sun 30-Jul		
AM Peak	139	126	133	146	122	57	45		
PM Peak	55	73	67	68	58	65	43	785	710
0:00	0	1	2	1	5	5	8	2	3
1:00	0	0	2	0	2	3	6	1	2
2:00	0	2	0	1	0	1	2	1	1
3:00	1	1	1	1	4	0	3	2	2
4:00	3	2	2	1	1	4	1	2	2
5:00	4	5	7	2	4	2	0	4	3
6:00	6	11	11	14	8	2	1	10	8
7:00	37	46	56	49	49	5	3	47	35
8:00	139	126	133	146	122	17	15	133	100
9:00	74	78	64	77	63	32	17	71	58
10:00	41	31	34	42	41	42	20	38	36
11:00	36	28	32	46	31	57	45	35	39
12:00	41	44	45	47	36	65	39	43	45
13:00	37	37	44	40	37	37	36	39	38
14:00	33	38	44	34	36	46	37	37	38
15:00	50	56	38	48	58	52	29	50	47
16:00	51	55	50	43	39	46	32	48	45
17:00	55	73	67	68	56	48	43	64	59
18:00	35	60	47	43	47	36	28	46	42
19:00	21	34	39	39	31	28	26	33	31
20:00	31	27	33	25	39	30	21	31	29
21:00	19	21	23	34	24	22	12	24	22
22:00	14	18	17	20	19	15	9	18	16
23:00	3	5	7	10	14	12	7	8	8
Total	731	799	798	831	766	607	440	785	710

7-19	629	672	654	683	615	483	344	651	583
6-22	706	765	760	795	717	565	404	749	673
6-24	723	788	784	825	750	592	420	774	697
0-24	731	799	798	831	766	607	440	785	710

Job No	A64 Dickson	Menu
Client	Northrop	
Site	Moncrieff Street, South of Morphette Street	
Location	Moncrieff	
Site No	3	
Start Date	27-Jul-17	
Description	Volume Summary	
Direction	Combined	



Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon 31-Jul	Tue 1-Aug	Wed 2-Aug	Thu 27-Jul	Fri 28-Jul	Sat 29-Jul	Sun 30-Jul		
AM Peak	248	230	263	248	220	114	81		
PM Peak	157	183	178	179	164	125	92	1805	1630
0:00	2	6	7	4	11	8	19	6	8
1:00	1	1	5	4	5	6	10	3	5
2:00	1	4	0	1	0	4	8	1	3
3:00	3	3	3	2	7	4	3	4	4
4:00	4	6	5	4	4	6	5	5	5
5:00	13	11	14	8	9	7	8	11	10
6:00	25	31	38	38	27	22	6	32	27
7:00	84	110	109	96	95	23	12	99	76
8:00	248	230	263	248	220	49	36	242	185
9:00	138	144	138	142	126	71	46	138	115
10:00	87	87	84	103	87	88	59	90	85
11:00	74	80	68	91	81	114	81	79	84
12:00	104	109	116	110	96	125	80	107	106
13:00	90	101	115	110	112	96	79	106	100
14:00	92	101	105	88	102	103	82	98	96
15:00	132	134	106	120	143	105	70	127	116
16:00	122	131	134	112	121	98	92	124	116
17:00	157	183	178	179	164	106	85	172	150
18:00	100	144	144	120	127	87	76	127	114
19:00	60	78	89	79	74	71	61	76	73
20:00	55	64	72	51	64	61	43	61	59
21:00	29	49	42	62	64	41	29	49	45
22:00	20	31	25	36	54	44	21	33	33
23:00	10	12	15	16	31	25	12	17	17
Total	1651	1850	1875	1824	1824	1364	1023	1805	1630

7-19	1428	1554	1560	1519	1474	1065	798	1507	1343
6-22	1597	1776	1801	1749	1703	1260	937	1725	1546
6-24	1627	1819	1841	1801	1788	1329	970	1775	1596
0-24	1651	1850	1875	1824	1824	1364	1023	1805	1630