Bankstown Complete Streets Project

Canterbury-Bankstown City Council
Traffic Modelling Assessment Report

Prepared by: GTA Consultants (NSW) Pty Ltd for Client Name
on 18/04/19
Reference: N132740
Issue #: A

GTAconsultants

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Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
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1. INTRODUCTION

1.1. Background

The Bankstown City Centre will see significant changes associated with substantial developments and projects brought by the Sydenham to Bankstown Metro and Corridor Renewal Strategy. This has provided an opportunity to transform Bankstown's CBD and create a more people-friendly place. Bankstown is one of the major suburban centres in south-west Sydney, located 15 kilometres south-west from Sydney's CBD. The Bankstown CBD is a complex road network environment with numerous one-way roads and characterised by high private vehicle usage compared to other areas of Sydney.

Roberts Day, in association with Environmental Partnership and GTA Consultants, have been commissioned by the City of Canterbury-Bankstown (Council) to undertake the Bankstown Complete Streets Project, which consists of a holistic approach for the streets in the Bankstown CBD, bringing together traffic planning and public space planning in order to provide better and integrated outcomes for the City.

As part of developing this strategy, a microsimulation(micro) model using Aimsun software has been developed to understand the current key issues and to provide a platform to test various future Complete Streets strategies.

The micro model was used to test the candidate transport strategies proposed in support of the Complete Streets project. The modelling process entails three stages:

- Developing a model that reflects current traffic conditions and is statistically suitable for use in testing the impacts of proposed changes to land use and transport/ traffic operations.
- Using the model to test a forecast year Base Case Scenario that includes confirmed land use and transport changes. (i.e. to show how Bankstown traffic will perform in future without the Complete Streets Strategy).
- Using the model to test alternative Complete Streets Strategies proposed for the Bankstown CBD study area.

As part of this project models have been developed for AM, PM and Saturday Peak hour conditions. AM and PM peak periods were found to be more critical peak periods and thus all the analysis for the options assessment has been carried out for these critical peak periods. No results were extracted from the Saturday models for future conditions.

1.2. Project Objective

The transport strategy for Bankstown have been developed considering the complete streets project aim and the overall vision for Bankstown as a desirable destination to live, work and visit with convenient access by all modes and high amenity, safe, smart, green streets.

The Bankstown Complete Street Project aim is to:

- Address transport issues with smart, sustainable and equitable solutions
- Enhance the CBD as a destination for living, working, studying, shopping and socialising.

1.3. Scope of Work

The project's key components are to

- review existing conditions
- identify key issues and opportunities

- define a vision
- prepare a master plan
- provide recommendations for future options for the movements systems to ensure that as the CBD develops, priority is given towards a more liveable, safer and more attractive public domain that supports all modes of transport.

A microsimulation model was developed in AIMSUN to understand the existing key issues and to test various complete street strategies.

1.4. Study Area

The study area is a combination of the following two areas:

- Part A (Complete Streets): larger area around Bankstown CBD
- Part B (Pedestrian Activity Plan): smaller area of Bankstown CBD, for which a more detailed analysis is undertaken, with a focus on pedestrians.

Figure 1-1 Study Area

Source : Google Maps, modified by GTA

1.5. Report Structure

This report sets out an overview of the micro model development process and the development and assessment of future traffic models. The report is divided in following sections:

- Introduction (Section 1)
- Model Development (Section 2)
- Performance Criteria (Section 3)
- Performance Result (Section 4)
- Summary and Conclusion (Section 5).

2. MODEL DEVELOPMENT

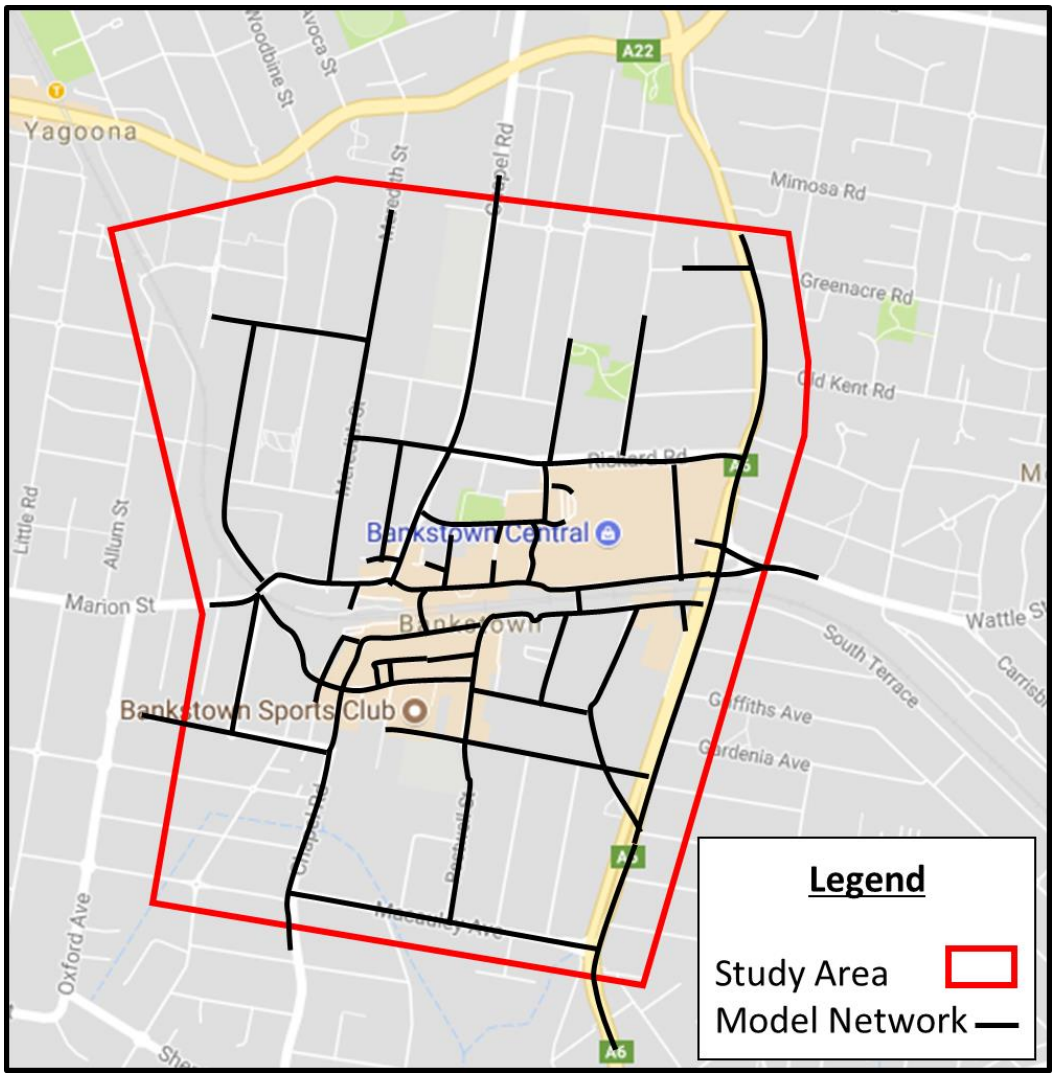
Given the extent and complexity of a CBD, a microsimulation model for Bankstown was considered suitable to produce the analytical results to test different Complete Street Strategies and their corresponding impacts. A microsimulation model describes and simulates the behaviour of individual drivers, their vehicles and their interactions with each other.

The detailed development process adopted for the Base model is provided in the Calibration and Validation Report provided as Appendix A of this report. A quick overview for the base model development is provided in the following sections.

2.1. Existing Conditions Model

The extents of the existing conditions microsimulation model include key intersections and travel routes within the study area. This includes all key intersections along Stacey Street and in the vicinity of Bankstown Central and the railway line. It is noted that the model extents cover all key roads and bus routes contained within the study area as illustrated in Figure 2-1.

Figure 2-1: Micro Modelling Extents



2.1.1. Base Model Development

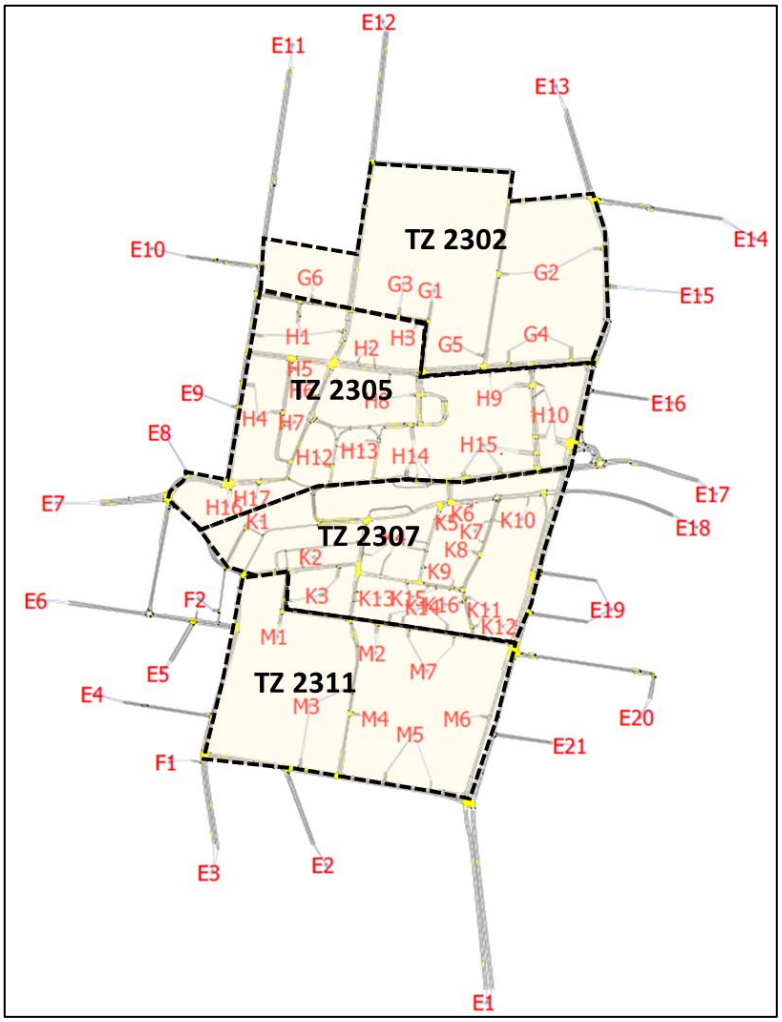
Existing Network

Aimsun version 8.2.3 was used to develop the model for the following peak periods:

- Weekday AM peak period – 7:00am to 9:00am with 30min warm up period
- Weekday PM peak period – 4:00pm to 6:00pm with 30min warm up period
- Saturday peak period – 12:00pm to 2:00pm with 30min warm up period.

A typical road hierarchical structure was used to develop the model skeleton including local, sub-arterial, arterial and State Highway Roads. Vehicle of types car, heavy vehicles and bus have been included in the model. The geometry of the intersections was sourced from the georeferenced imagery provided by council. Spot checks were made to ensure that the modelled network geometry is correct. Following the development of the road network structure, public transport routes were incorporated in the model. The zoning system for the model has been developed based on the Sydney Traffic Model (STM). Each zone of the STM model was further disaggregated into several zones to represent detail attraction and egress points (such as car parks) within the model. Figure 2-2 shows the zoning system implemented within the model. The model zoning system comprises a total of 64 zones within the study area.

Figure 2-2: Aimsun Zoning Structure



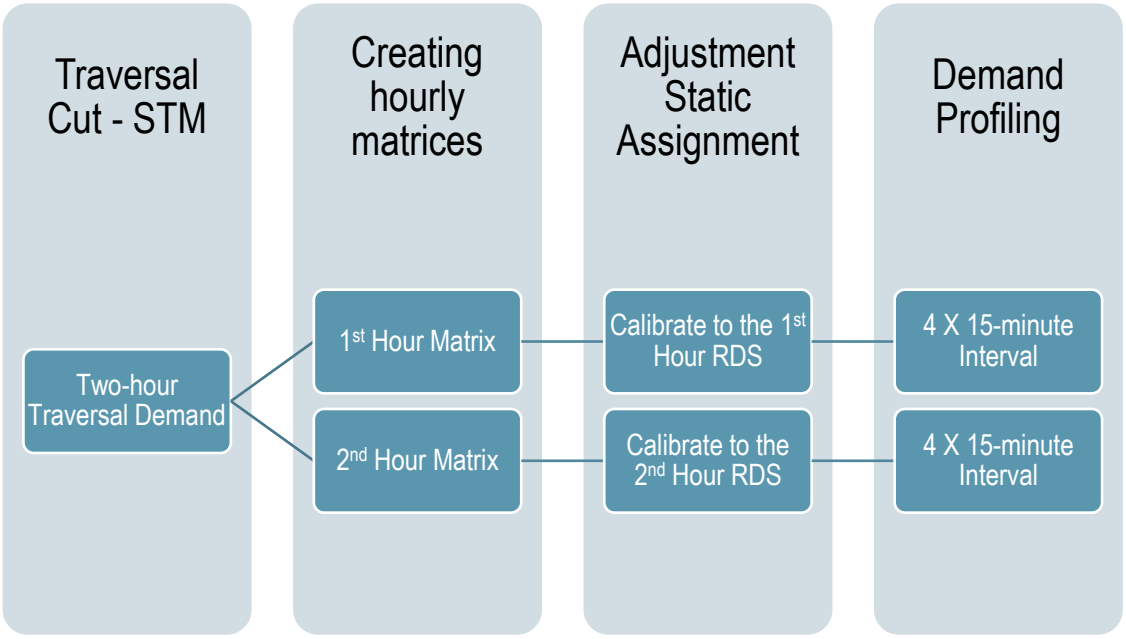
Existing Demand

The process used to develop the demand matrices is provided in Figure 2-3. The prior matrices were extracted from the STM models. These prior matrices were provided for the 7-9 am and 4-6 pm peak periods. The interpeak matrix was initially utilised as the prior matrix for the Saturday model.

These two-hour matrices were then simply halved to develop matrices for each hour for each of the peak periods.

The static adjustment tool in AIMSUN was utilised to adjust the calculated 1-hour matrices to better match the observed data. The O-D Departure tool within AIMSUN was then utilised to factor the hourly matrices to 15-minute matrices. The 15 minutes matrices are further adjusted manually to better match the survey data.

Figure 2-3: Demand Adjustment Process



2.1.2. Calibration and Validation

The role of the calibration and validation process was to develop a model that is fit for purpose and produces results that can be used for testing various Complete Street Strategies.

The calibration and validation process were carried out in accordance with the network wide criteria set out in the Roads and Maritime Services, Traffic Modelling Guidelines, dated March 2013. These guidelines represent the latest comprehensive set of guidelines released in Australia.

The adopted criteria are summarised in Table 2-1.

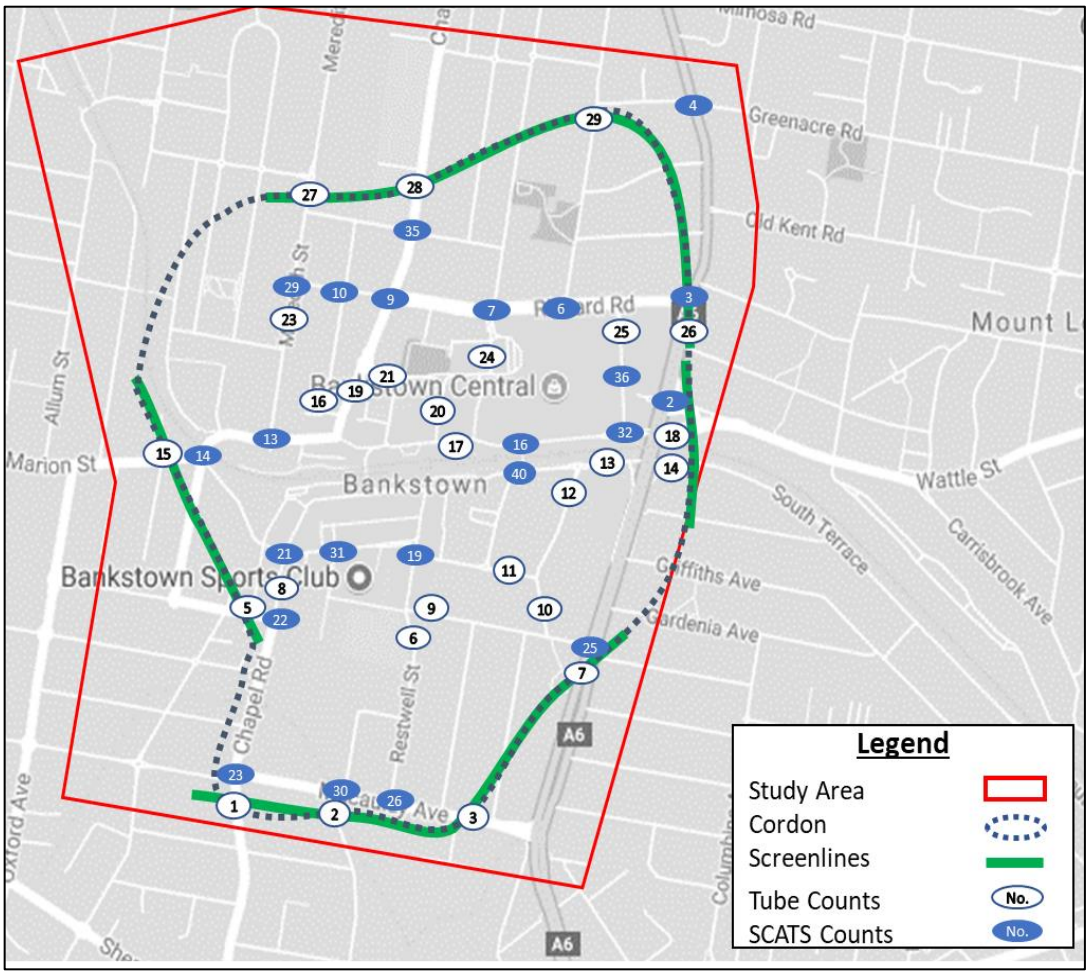
Table 2-1: Calibration and Validation Criteria

Type	Metric	Target
Model Calibration		
Regression	R2 value	>0.90
GEH for link flow comparisons	GEH < 5	85%
Cordon Total	GEH < 4	100%
Individual links in Cordon	GEH <5	85%
Model Validation		
Travel times	Within 15% or one minute	100%

Regression analysis explores the relationship between the observed and the modelled counts. It is quantified by the R^2 value. Another measure is the GEH, which also measures how close the modelled count is to the observed count.

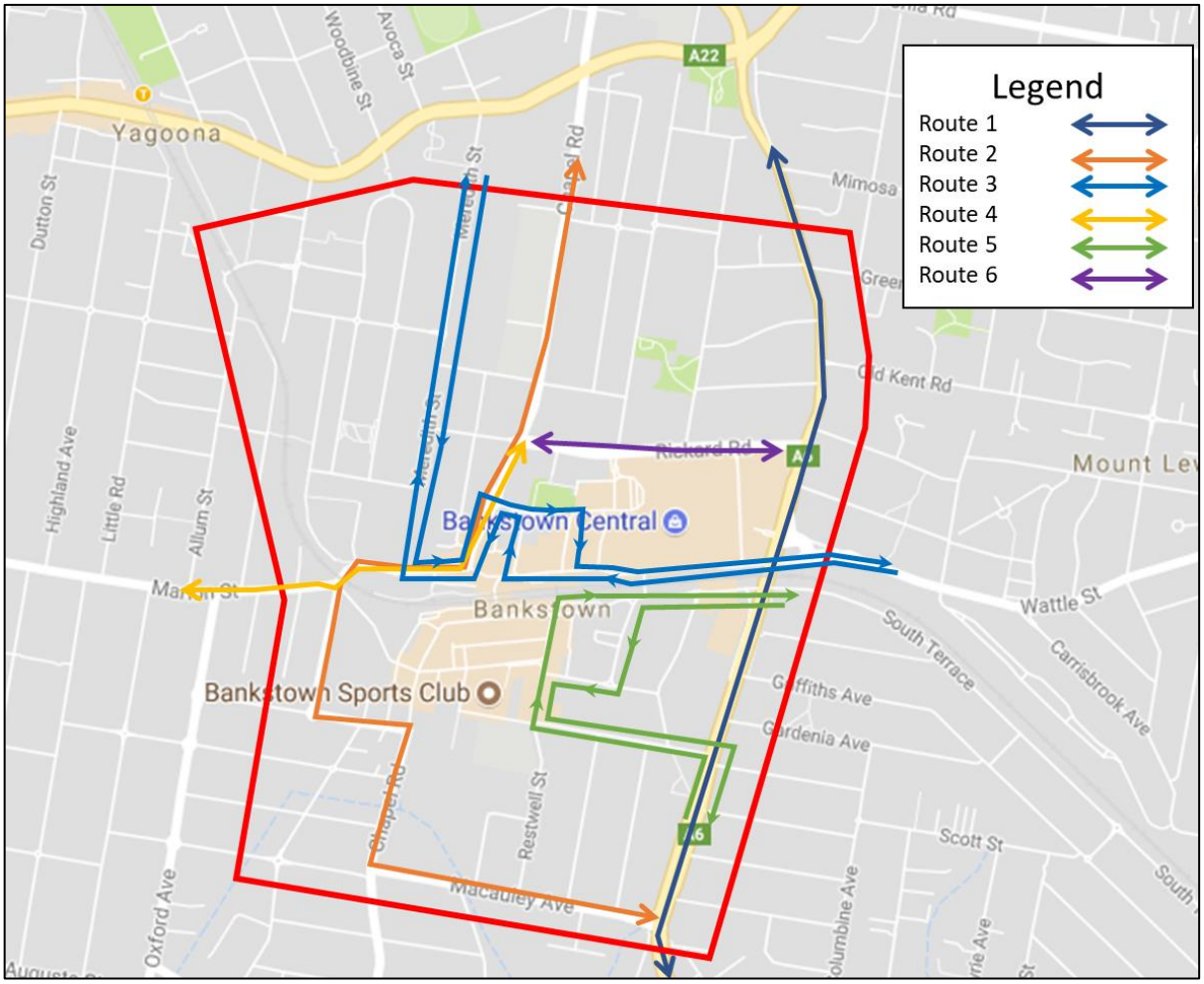
A cordon simply implies a line drawn across the external entry and exit points of the model area. All links falling on this line make up the cordon. The sum of all vehicles passing through the cordon i.e. entering and existing the network should be close to the observed value as this implies that the total amount of traffic entering and exiting the network in the simulation model is similar to what has been observed. Count locations, cordon and screen lines used for model calibration are shown graphically in Figure 2-4.

Figure 2-4: Link Calibration locations and cordon screen lines



Validation was carried out for the six travel time routes surveyed as shown in Figure 2-5. It should be noted that within a CBD environment, there are number of alternative routes and traffic patterns may vary from day to day. Although, it is expected that generally the travel times are within 15% or one-minute, larger variations may be observed. Therefore, attention is paid to the general congestion levels within the simulation model. These congestion points are checked against estimated traffic conditions within Google Maps and inspections.

Figure 2-5: Travel Time Routes



2.1.3. Calibration and Validation Summary

The calibration analysis shows that there is a good match between the modelled and the observed link counts and any variations reflect day-to-day variation in traffic. The travel time comparison results illustrate that the model replicates the average speed for the peak direction with a good level of accuracy.

Table 2.2: AM Model Calibration Results

Type	Metric	Target	7-8 am	8-9 am
Regression	R^2 value	>0.90	0.99	0.98
GEH for link flow comparisons	GEH < 5	85%	91%	88%
Cordon Total	GEH < 4	100%	3.7	5.2
Individual links in Cordon	GEH <5	85%	92%	96%

Table 2.3: PM Model Calibration Results

Type	Metric	Target	4-5 pm	5-6 pm
Regression	R^2 value	>0.90	0.96	0.97
GEH for link flow comparisons	GEH < 5	85%	87%	83%
Cordon Total	GEH < 4	100%	0.4	3.9
Individual links in Cordon	GEH <5	85%	75%	83%

The results of the link volumes comparison illustrate that the model generally meets the calibration criteria. Some deviations are observed from the defined criteria. However, these were deemed minor as they were within the bounds of a day-to day variation in a CBD environment.

The travel time comparison results illustrate that the model replicates the average speed for the peak direction with a good level of accuracy. The modelled travel time along Chapel Road in the southbound direction is overall faster during the PM peak period (4-5 pm) compared to the observed travel time. There is a signalised pedestrian crossing in front of the TAFE entrance on Chapel Road and is included in the model, however, the timing of the pedestrian signal was assumed as no data was available for its activation timing.

The northbound direction along Chapel Road (Route 2) is closely correlated with the observed in the PM peak. Google Maps traffic data shows a high variability in travel time (between 7-16 minutes) along Chapel Road during the PM Peak. Therefore, it was deemed that this simulated travel time in both directions during the PM Peak along Chapel Road is still fit for this study purpose and replicates a typical day.

2.1.4. Visual Inspections

Simulated speed plots at different times were compared to typical traffic conditions estimated by Google Maps. Figure 2-6 to Figure 2-8 illustrate a comparison of the modelled average speeds to the Google Maps data. In general, the congestion trends and hot spot locations were found to be similar for all peak periods modelled.

Figure 2-6: Average Speed Comparison – Weekday

Figure 2-7: Average Speed Comparison – Weekday 5:15 pm

Figure 2-8: Average Speed Comparison – Saturday 12:15pm

It is our view that the model was successfully calibrated, validated and is fit for its intended purpose to assess the Complete Streets Strategies and its impacts on the wider network.

2.2. Future Year Models

2.2.1. Future Year Demand

The future year demands were generated by applying the growth factors calculated from the STM model to the calibrated and validated existing year demands.

2.2.2. Future Network

Do Minimum Network

In consultation with the Bankstown-Canterbury Council (Council) the following projects have been included in the Future Do Minimum model

- Stacey Street/ Fairford Road upgrade
- Stacey Street/ Greenacre Road upgrade
- McDonald Lane Roundabout
- Closure of McDonald Lane
- Stacey Street upgraded to three lanes in each direction
- Stacey Street/ Hume Highway intersection upgrade.

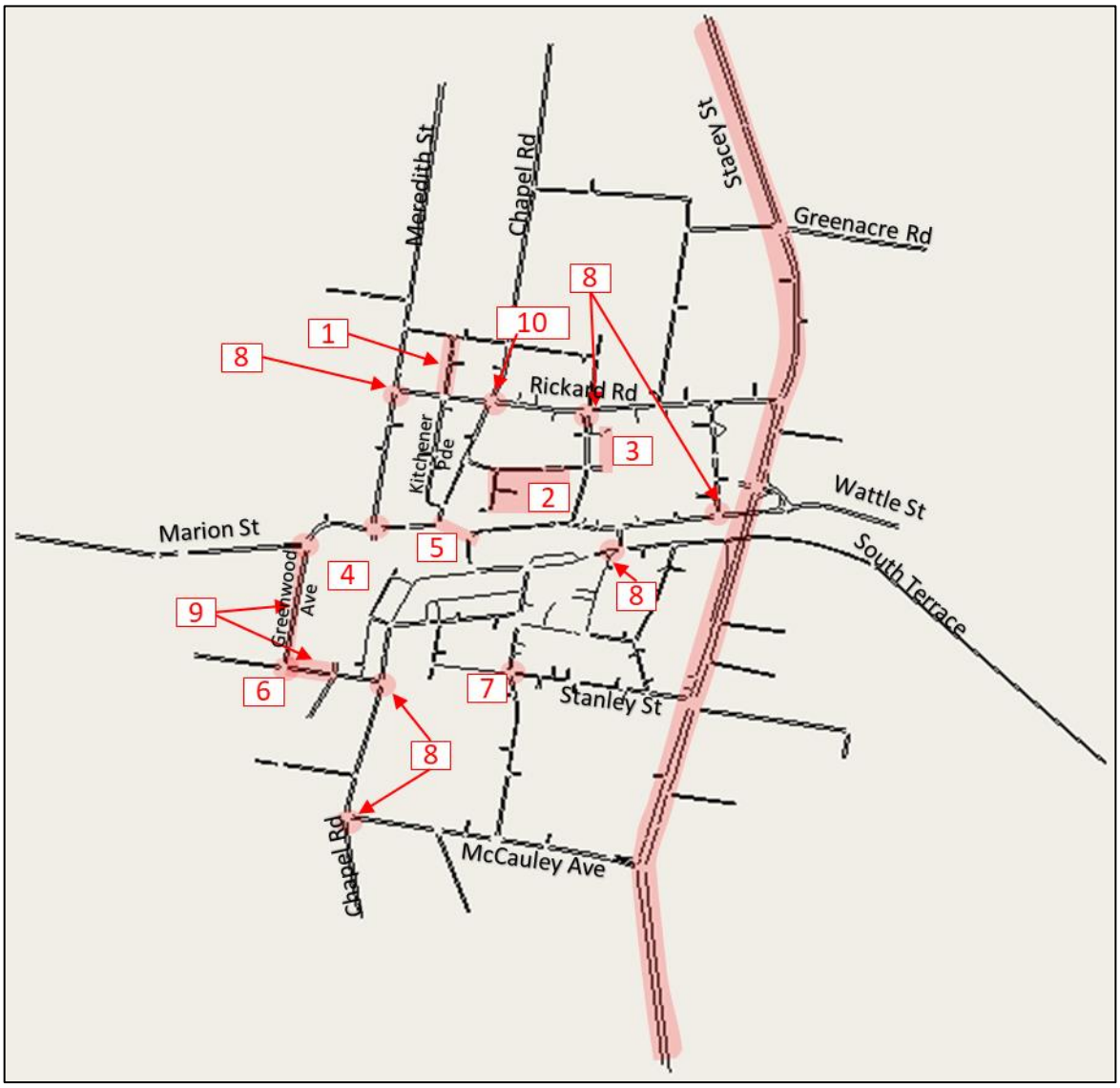
Option1

Option 1 was developed with a view to provide less opportunities for cars to enter the CBD during peak hours, while pushing the traffic onto using the Ring Road and therefore reducing the through traffic within the CBD. This will in turn create more opportunities to provide more pedestrian friendly and connected streets. Option 1 was developed in line with Council's objectives of creating Complete streets within Bankstown that are both a place to move along and linger in.

Option 1 therefore includes the following upgrades in addition to the Do Minimum upgrades (shown in Figure 2-9):

1. Opening of Kitchener Pde/ Rickard Rd northern leg
2. The Appian Way- pedestrian only during peak hours and closure of Featherstone St to traffic
3. Moved interchange to new bus only link
4. Closure of Olympic Pde from Marion Street
5. Bankstown City Plaza – converted to pedestrian only link
6. Greenwood Ave/ Brandon Ave - Conversion to signals
7. Stanley St/ McDonald Lane – Conversion to signals
8. Mitigation works to increase capacity, mostly increasing turn movement capacity and changing the phases and cycle times
9. Clearway conditions in both directions for the peak periods at Greenwood Avenue and Brendon Avenue.
10. Chapel Road southbound- remove parking and provide two right turns into Rickard Street

Figure 2-9: Do Minimum and Option 1 upgrades



3. PERFORMANCE CRITERIA

3.1. Mid-Block Capacity Analysis

A midblock link capacity analysis provides a preliminary analysis of possible congestion areas within the existing road network. It was undertaken using *Austroads Guide to traffic Management Part 3 – Traffic Studies and Analysis, Section 5.2.1* and explanatory notes. Road link data at select locations were sourced from automatic tube counts placed in situ and from the SCATS traffic signal system were utilised in this analysis.

Road network link capacity performance is measured in terms of *Level of Service (LoS).* The LoS criteria are described in the Transportation Research Board's *Highway Capacity Manual* and are based on the traffic volume to road capacity ratio (v/c) as shown below in Table 3-1.

Table 3-1 Level of Service Criteria – Arterial Roads

Level of Service	Description	v/c
A	Free-flow conditions with unimpeded manoeuvrability. Stopped delay at signalized intersection is minimal.	0.00 to 0.60
B	Reasonably unimpeded operations with slightly restricted manoeuvrability. Stopped delays are not bothersome.	0.60 to 0.69
C	Stable operations with somewhat more restrictions in making mid-block lane changes than LoS B. Motorists will experience appreciable tension while driving.	0.70 to 0.79
D	Approaching unstable operations where small increases in volume produce substantial increases in delay and decreases in speed	0.80 to 0.89
E	Operations with significant intersection approach delays and low average speeds.	0.90 to 1.00
F	Operations with extremely low speeds caused by intersection congestion, high delay, and adverse signal progression.	>1.00

For this analysis, vehicle demand is converted to passenger car units (pcu) to express mixed traffic flow in terms of an equivalent number of passenger cars. This is done for normalisation purposes as a car occupies less road space than a truck or a bus. The pcu was calculated based on the Road and Maritime Services *Traffic Modelling Guidelines, Table 5.2.1* which considers passenger cars to have a pcu factor of 1 while rigid heavy vehicles, for example, trucks, have a pcu factor of 2.

Transportation Research Board's, Highway Capacity Manual, defines typical capacities for urban roads with interrupted flows. A capacity of 1200 vehicles per lane per hour (indicative of high volume flows of traffic from upstream intersections) was adopted for Stacey Street. For all other roads a typical capacity of 900 vehicles per hour per lane was adopted. The v/c ratios and the corresponding LoS for each of the peak periods assessed are provided in Table 4-1, Table 4-2 and Table 4-3 for morning, afternoon and Saturday peak periods respectively.

For the purposes of this assessment a v/c ratio of 0.8 or less is considered acceptable.

3.2. Network Statistics

The high-level network statistics provide a good indication of how the network operates and these can be defined in terms of average speed, vehicle hours travelled (VHT) and vehicle kilometres travelled (VKT) for all vehicles in the network in the defined study area. Such statistics enable a relative comparison to be made between the "with" and

"without" scenarios. An increase in VKT indicates that vehicles are travelling longer distances to avoid congestion whilst an increase in VHT is generally due to increased delays and build-up of congestion in the network.

In addition to that, the number of vehicles that passed through and waiting outside the network can provide an indication of the ability of modelled road network to cater for future demands. Because the modelling simulates vehicles travelling through the network, there will be vehicles that have not completed their journey at the end of the modelling period. Any change to levels of traffic congestion will change travels times and therefore affect the number of vehicles on the road network at the end of the modelling period. As such, the number of vehicles at the end of the modelling period is another relative measure of network congestion when comparing scenarios

3.3. Travel Time

Travel time along key sections within the Bankstown CBD is one of the key indicators, as all complete street strategies are aimed to improve the performance of the CBD.

3.4. Level of Service

The Levels of Service (LoS) of a section of a road can be measured by the average travel speeds along the section. The LoS thresholds as compared to the base Free Flow Speed (FFS) is defined in the Austroads Guide to Traffic Management, Part 3 - Traffic Studies and Analysis and is provided in Table 3-2.

For this analysis the posted speed limit is assumed to be the base FFS and LoS D (or above) is assumed to be the acceptable performance level.

Table 3-2: Section LoS Criteria

Travel speed as a percentage of base FFS (%)	LoS
>85	A
>67-85	B
>50-67	C
>40-50	D
> 30-40	E
≤30	F

4. PERFORMANCE RESULT

4.1. Existing Performance

4.1.1. Mid-Block Capacity Analysis

Mid-block capacity analysis results for existing peak hour conditions are provide below in Table 4-1 to Table 4-3 for AM, PM and Saturday peak periods respectively.

Table 4-1: Midblock Levels of Service – AM Peak Hour

Location	NB/ EB PCU (vehicle)	Capacity (vehicle)	v/c	LoS	SB/WB PCU (vehicle)	Capacity (vehicle)	v/c	LoS
Stacey St, 50m south of Rickard St	1939	2400	0.81	D	2282	2400	0.95	E
Stacey St, 100m south of Salvia Ave	1976	2400	0.82	D	2257	2400	0.94	E
Chapel Rd, 100m south of Macauley Ave	1109	900	1.23	F	768	900	0.85	D
Marion St, 150m west of Greenwood Ave	1407	1800	0.78	C	745	1800	0.41	A
Rickard Rd, 50m west of Chapel Rd	916	1800	0.51	A	479.5	1800	0.27	A
Meredith St, 100m south of Rickard Rd	632	900	0.70	C	1151	900	1.28	F
Chapel Rd, 100m north of French Ave	633	900	0.70	C	586	900	0.65	B
North Terrace, 100m east of Lady Cutler Ave	741	900	0.82	D	965	900	1.07	F

Table 4-2: Midblock Levels of Service – PM Peak Hour

Location	NB/EB PCU (vehicle)	Capacity (vehicle)	v/c	LoS	SB/WB PCU (vehicle)	Capacity (vehicle)	v/c	LoS
Stacey St, 50m south of Rickard St	1868	2400	0.78	C	2868	2400	1.20	F
Stacey St, 100m south of Salvia Ave	2058	2400	0.86	D	3284	2400	1.37	F
Chapel Rd, 100m south of Macauley Ave	835	900	0.93	E	915	900	1.02	F
Marion St, 150m west of Greenwood Ave	944	1800	0.52	A	1200	1800	0.67	B
Rickard Rd, 50m west of Chapel Rd	928	1800	0.52	A	1144	1800	0.64	B
Meredith St, 100m south of Rickard Rd	605	900	0.67	B	840	900	0.93	E
Chapel Rd, 100m north of French Ave	450	900	0.50	A	705	900	0.78	C
North Terrace, 100m east of Lady Cutler Ave	785	900	0.87	D	801	900	0.89	D

Table 4-3: Midblock Levels of Service – Saturday Peak Hour

Location	NB/EB PCU (vehicle)	Capacity (vehicle)	v/c	LoS	SB/WB PCU (vehicle)	Capacity (vehicle)	v/c	LoS
Stacey St, 50m south of Rickard St	1948	2400	0.81	D	2394	2400	1.00	E
Stacey St, 100m south of Salvia Ave	2204	2400	0.92	E	2533	2400	1.06	F
Chapel Rd, 100m south of Macauley Ave	703	900	0.78	C	809	900	0.90	D
Marion St, 150m west of Greenwood Ave	911	1800	0.51	A	1058	1800	0.59	A
Rickard Rd, 50m west of Chapel Rd	897	1800	0.50	A	1002	1800	0.56	A
Meredith St, 100m south of Rickard Rd	555	900	0.62	B	576	900	0.64	B
Chapel Rd, 100m north of French Ave	413	900	0.46	A	503	900	0.56	A
North Terrace, 100m east of Lady Cutler Ave	832	900	0.92	E	698	900	0.78	C

The mid-block capacity analysis indicates the following:

- **Stacey Street** is consistently performing at capacity or over capacity for all peak hours in both directions. A v/c ratio >1 indicates that demand is generally higher than the capacity. As a results high delays and very low average speeds are observed at Stacey Street.
- **Chapel Road, south of Macauley Avenue** is consistently performing poorly for all peak hours except in the northbound direction during the Saturday peak hour.
- **North Terrace** is performing close to capacity with v/c >0.8 for all peak hours and both directions, except the westbound direction in the Saturday peak hour.

The traffic volume on Stacey Street exceeds capacity for all three peak periods (LoS E or worse) resulting in high levels of delay and congestion along the route. This results in congestion elsewhere within the CBD, particularly on Rickard Road, North Terrace and Macauley Avenue, as traffic leaving the centre experiences long delays when accessing Stacey Street,

4.1.2. Network Statistics

Table 4-4 shows the overall network performance for all peak periods assessed.

Table 4-4: Overall Existing Conditions Network Performance over 2 hours

Factor	Weekday AM	Weekday PM	Weekend Peak
VHT (hours)	2,768	3,146	2,270
VKT (km)	49,341	57,408	52,747
Travel Time (sec/km)	198	190	161
Average Speed (km/h)	24	23	27
Average Delay (sec/km)	135	128	99
Total Vehicles (2 hour demand)	26,868	29,480	32,002

From the Network performance results the following can be observed:

- The AM peak period is observed to have the highest average delay as compared to the other peak periods.
- Lowest average speed for all vehicles (23 km/hr) is observed to be in the PM peak period.
- The PM peak period has the highest VHT amongst all peak periods, indicating that the highest congestion is observed during the PM peak period.
- The Saturday peak period has the highest 2-hour demand, however, has the lowest VHT indicating that there is less congestion during the weekend peak hours as compared to the weekday peak periods.
- The trip purpose on a Saturday is more for shopping purposes, whereas high proportion of commuter trips are expected for the AM and PM peak hours. Therefore, the travel patterns and distribution of trips for a Saturday are different as compared to the AM and PM peak hours.

Overall the Saturday Peak period is observed to perform better compared to the weekday peak periods. Therefore, AM and PM peak hours were identified as critical peak periods and have been used for future performance analysis.

4.1.3. Travel Time

The modelled travel times along the key routes within the CBD have been compared to the posted speed limits to indicate the current performance. The following four sections have been assessed as shown in Figure 4-1:

- Section 1 – Macauley Avenue between Stacey Street and Chapel Road (Green)
- Section 2 – Chapel Road between Macauley Avenue and Rickard Road (Orange)
- Section 3 – Rickard Road between Chapel Road and Stacey Street (Purple)
- Section 4 – Stacey Street between Rickard Road and Macauley Avenue (Blue).

Figure 4-1 Key Sections within Bankstown CBD

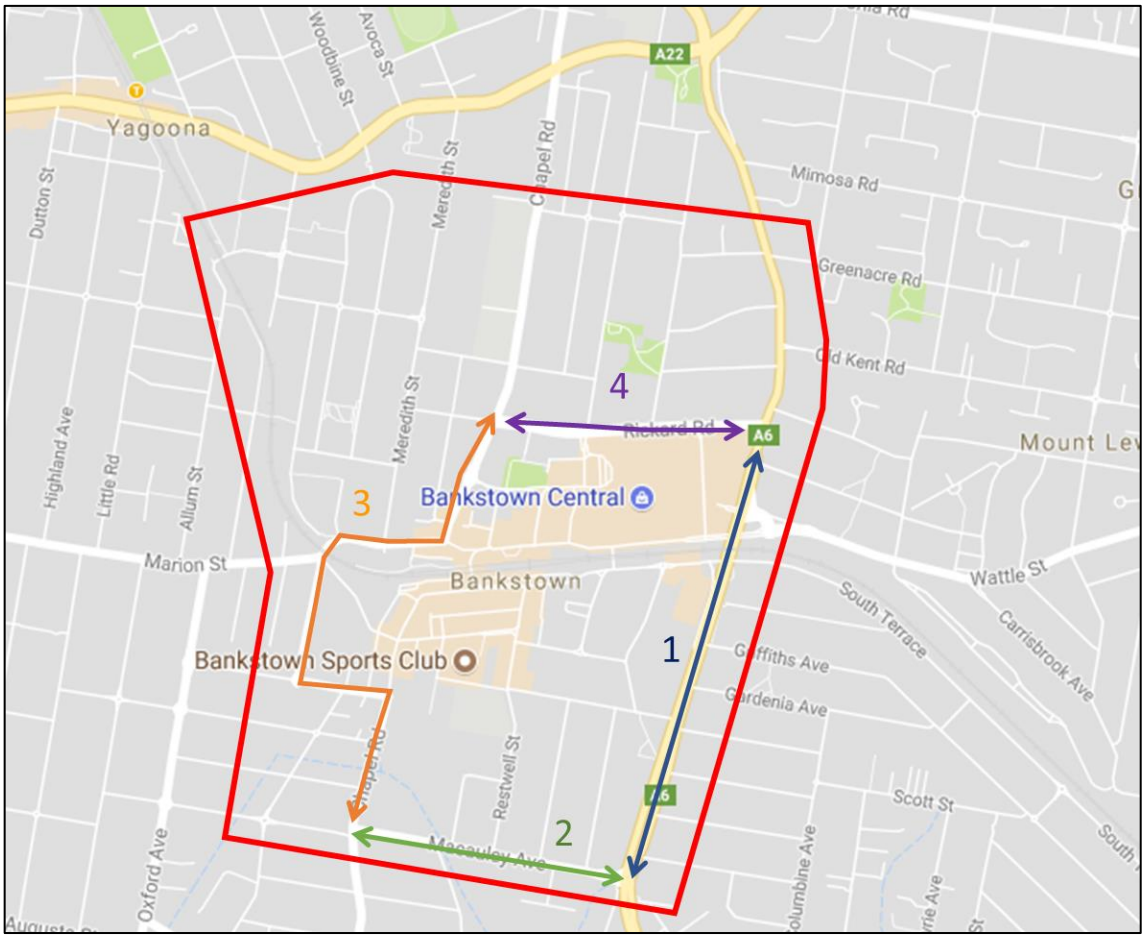


Table 4-5 Modelled Travel Times along Key Sections

Section	Direction	Posted Speed	Modelled Travel Time
Stacey Street between Rickard Road and Macauley Ave	Northbound	60	7.3 minutes
	Southbound	60	1.7 minutes
Macauley Avenue between Chapel Road and Stacey Street	Eastbound	60	1.9 minutes
	Westbound	60	1.3 minutes
Chapel Road between Rickard Road and Macauley Avenue	Northbound	60	4.2 minutes
	Southbound	60	3.1 minutes
Rickard Road between Chapel Road and Stacey Street	Eastbound	60	2.6 minutes
	Westbound	60	2.0 minutes
Clock wise			**10 minutes**
Anticlockwise			**8 minutes**

4.1.4. Level of Service

The modelled travel times extracted for the peak hour for each section are shown in Table 4-6.

Table 4-6: Bankstown CBD Performance

Road Section	Road	Direction	FSS (km/h)	Modelled Average Speed (km/h)			LoS		
				AM	PM	Sat	AM	PM	Sat
1	Stacey St between Rickard Rd and Macauley Ave	Northbound	60	10	15	27	F	F	D
		Southbound	60	42	16	32	B	F	C
2	Macauley Ave between Chapel Rd and Stacey St	Eastbound	60	23	23	31	E	E	C
		Westbound	60	34	23	24	C	E	E
3	Chapel Rd between Rickard Rd and Macauley Ave	Northbound	60	22	19	23	E	E	E
		Southbound	60	30	26	27	C	D	D
4	Rickard Rd between Chapel Rd and Stacey St	Eastbound	60	16	14	16	F	F	F
		Westbound	60	21	13	21	E	F	E
Overall		**Clockwise**		**29**	**18**	**24**	**D**	**E**	**E**
		Anti-clockwise		**23**	**19**	**23**	**E**	**E**	**E**

The following is observed:

- Stacey Street operates at an unsatisfactory LoS F, as the speed is 30% or less when compared to the posted speed.
- Rickard Road operates at a poor LoS (LoS E or worse) for all peak hours in both directions.
- Overall the Ring Road is operating at a poor LoS E for all peak hours assessed except for the AM peak hour.

Model snapshots showing the average speed for each modelled hour is provided in Figure 4-2, Figure 4-3 and Figure 4-4 for morning, afternoon and Saturday periods respectively.

Figure 4-2: Average Hourly Speed Plots – Morning peak period

Figure 4-3: Average Hourly Speed Plots – Afternoon peak period

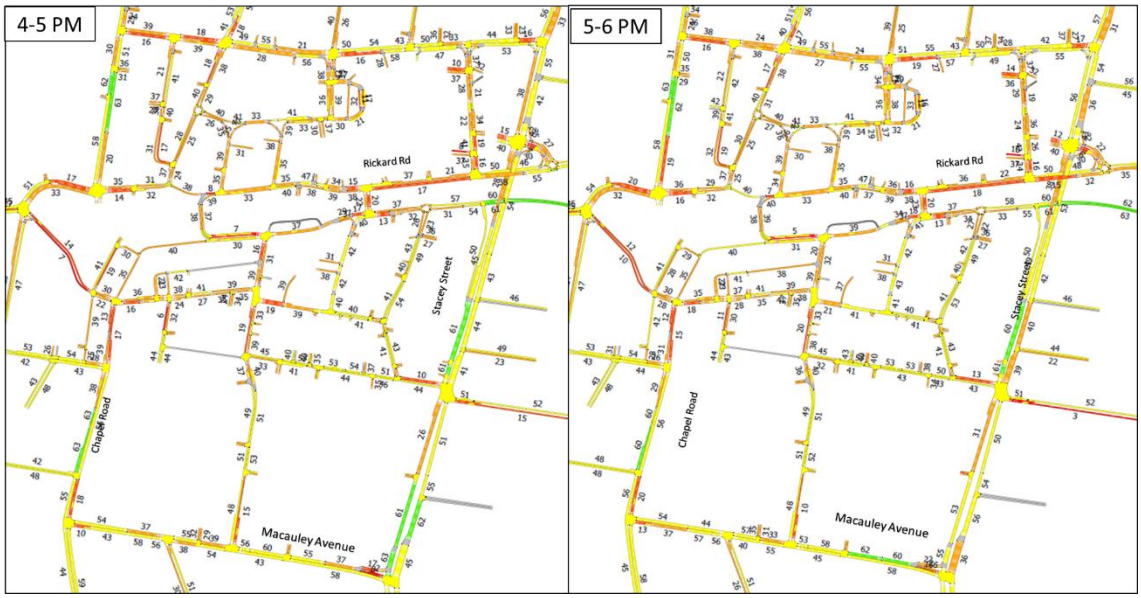


Figure 4-4: Average Hourly Speed Plots – Saturday peak period

4.2. Future Performance

4.2.1. Mid-Block Capacity Analysis

Mid-block capacity analysis results for future peak hour conditions are provide below in Table 4-7 and table Table 4-8 for the AM and PM peak hours respectively.

Table 4-7: Midblock Levels of Service – AM Peak Hour

Location	NB/EB PCU (vehicle)	Capacity (vehicle)	v/c	LoS	SB/WB PCU (vehicle)	Capacity (vehicle)	v/c	LOS
Stacey St, 50m south of Rickard St	2610	3600	0.72	C	2665	3600	0.74	C
Stacey St, 100m south of Salvia Ave	2650	3600	0.74	C	2255	3600	0.63	B
Chapel Rd, 100m south of Macauley Ave	1009	1800	0.56	A	810	1800	0.45	A
Marion St, 150m west of Greenwood Ave	1449	1800	0.81	D	798	1800	0.44	A
Rickard Rd, 50m west of Chapel Rd	993	1800	0.55	A	439	1800	0.24	A
Meredith St, 100m south of Rickard Rd	858	1800	0.48	A	617	1800	0.34	A
Chapel Rd, 100m north of French Ave	621	1800	0.35	A	521	1800	0.29	A
North Terrace, 100m east of Lady Cutler Ave	831	900	0.92	E	644	900	0.72	C

Table 4-8: Midblock Levels of Service – PM Peak Hour

Location	NB/EB PCU (vehicle)	Capacity (vehicle)	v/c	LoS	SB/WB PCU (vehicle)	Capacity (vehicle)	v/c	LoS
Stacey St, 50m south of Rickard St	2237	3600	0.62	B	2869	3600	0.80	C
Stacey St, 100m south of Salvia Ave	2471	3600	0.69	B	3261	3600	0.91	E
Chapel Rd, 100m south of Macauley Ave	705	1800	0.39	A	856	1800	0.48	A
Marion St, 150m west of Greenwood Ave	933	1800	0.52	A	1213	1800	0.67	B
Rickard Rd, 50m west of Chapel Rd	787	1800	0.44	A	1000	1800	0.56	A
Meredith St, 100m south of Rickard Rd	680	1800	0.38	A	864	1800	0.48	A
Chapel Rd, 100m north of French Ave	622	1800	0.35	A	651	1800	0.36	A
North Terrace, 100m east of Lady Cutler Ave	895	900	0.99	E	649	900	0.72	C

The mid-block capacity analysis indicates the following:

- Stacey Street is performing at acceptable levels due to its upgrade from two to three lanes except at a small section in the southbound direction 100m south of Salvia Avenue.
- In general, all links assessed are performing at acceptable levels.

4.2.2. Network Statistics

Whole Network

Network Statistics for the whole network are presented in Table 4-9 for year 2036. Existing model results (Base) are also presented for comparison purposes.

Table 4-9: 2036 Whole Network Statistics

Criteria	AM			PM		
	Base	Do Minimum	Option 1	Base	Do Minimum	Option 1
VHT (hours)	2,768	3,077	3,145	3,146	3,469	3,468
VKT (km)	49,341	60,010	60,282	57,408	63,898	65,565
Travel Time (sec/km)	198	199	198	190	203	193
Average Speed (km/h)	24	25	24	23	23	22
Average Delay (sec/km)	135	136	136	128	141	133
Total Vehicles (2 hour demand)	26,868	33,560	33,777	29,480	36,235	35,927
Vehicles Waiting to Enter Network (veh)	0	626	416	0	629	718

From the Network Statics for the whole network presented in the table above it can be observed that Option 1 performs at similar level to the Do Minimum and the Base scenarios. Therefore, the overall impacts due to Option 1 is very minimal under the future 2036 traffic conditions.

Bankstown CBD

As mentioned earlier the main aim for Option 1 is to improve the performance at and through the CBD, therefore, the performance of the CBD is measured by comparing the network statistics of the Do Minimum and Option 1 scenarios. These results are presented in Table 4-10 below.

Table 4-10: 2036 Whole Network Statistics

Criteria	AM		PM	
	Do Minimum	Option 1	Do Minimum	Option 1
VHT (hours)	3.9	4.6	4.3	4.7
VKT (km)	0.3	0.3	0.4	0.4
Travel Time (seconds)	11.0	10.1	14.9	11.6
Average Speed (km/h)	30.5	30.5	29.9	30.6
Average Delay (sec/km)	7.4	6.8	11.9	8.6

Similar to the whole network statistics, the Bankstown CBD statistics present a similar result. The CBD performs at a similar level under both Do minimum and Option 1 traffic conditions. The average travel times and average speeds are similar for both AM and PM peak periods under both DO Minimum and Option 1 scenarios. Average delay is marginally better in Option 1 as compared to the Do Minimum scenario.

Therefore, it is observed that the changes proposed in Option 1 do not impact the traffic operations when compared to the DO minimum conditions in 2036 future year.

4.2.3. Travel Time

As mentioned earlier, the aim of Option 1 is to move the through traffic within the CBD to the outer roads i.e. the Ring Road. The Ring Road is shown in red in Figure 4-5. Travel times are measured in the clockwise and anticlockwise direction.

Figure 4-5: Ring Road marked with Red Lines

Travel times and average speeds along the Ring Road for both directions are shown in Table 4-11.

Table 4-11: Travel Time and Average Speed at Ring Road- 2036

Performance measure	Peak period	Clockwise		Anticlockwise	
		Do Minimum	Option 1	Do Minimum	Option 1
Travel Time (minutes)	AM	15	15	11	12↑
Average Speed (km/h)		39	37↓	42	40↓
Travel Time (minutes)	PM	14	11↓	15	10↓
Average Speed (km/h)		38	42↑	40	44↑

From the travel time results it can be observed that:

- In general, for Option 1 traffic conditions, travel time improves in the PM peak period. A 3-minute saving is observed in clockwise direction while a 5-minute saving is observed in the anti-clockwise direction.
- In line with the travel time, the average speed during the PM period hour also improves for both directions at the Ring Road.

4.2.4. Level of Service

Modelled Travel speeds and the corresponding LoS for each section of the Ring Road in anticlockwise and clockwise direction are provided in Table 4-12 Table 4-13.

Table 4-12 LoS for Ring Road – 2036 traffic conditions

#	Road	Section		Posted Speed limit	Average Modelled Speed (km/h)		LoS	
		From	To	Km/h	Do Minimum	Option 1	Do Minimum	Option 1
1	Rickard Rd	Stacey St	Meredith St	60	42	40	B	B
2	Meredith St	Rickard St	Marion St	60	41	43	B	B
3	Marion St	Meredith St	Greenwood Ave	60	24	13	E	F
4	Greenwood Ave	Marion St	Brandon Ave	60	50	44	A	B
5	Brandon Ave	Greenwood Ave	Chapel Rd	60	44	32	B	C
6	Chapel Road	Brandon Avenue	Macauley Ave	60	40	37	B	C
7	Macauley Ave	Chapel Rd	Stacey St	60	33	34	C	C
8	Stacey St	Macauley St	Stanley St	70	54	54	B	B
9	Stacey St	Stanley St	Wattle St	60	50	49	B	B
10	Stacey Street	Wattle St	Rickard Rd	60	47	45	B	B

Table 4-13: 2036 AM Ring Road Performance - clockwise

#	Road	Section		Posted Speed limit	Average Modelled Speed (km/h)		LoS	
		From	To	Km/h	Do Minimum	Option 1	Do Minimum	Option 1
1	Stacey St	Rickard Road	Wattle St	60	37	38	B	C
2	Stacey St	Wattle St	Stanley St	60	52	48	A	B
3	Stacey St	Stanley St	Macauley St	70	59	63	A	A
4	Macauley Ave	Stacey St	Chapel Rd	60	34	36	C	C
5	Chapel Rd	Macauley Ave	Brandon Ave	60	27	39	D	C
6	Brandon Ave	Chapel Rd	Greenwood Ave	60	38	21	B	E
7	Greenwood Ave	Brandon Ave	Marion St	60	24	11	D	F
8	Marion St	Greenwood Ave	Meredith St	60	40	39	B	C
9	Meredith St	Marion St	Rickard St	60	39	38	B	C
10	Rickard Rd	Meredith St	Stacey St	60	36	30	C	C

Table 4-14: 2036 PM -Ring Road Performance – anti-clockwise

#	Road	Section		Posted Speed limit	Average Modelled Speed (km/h)		LoS	
		From	To	Km/h	Do Minimum	Option 1	Do Minimum	Option 1
1	Rickard Rd	Stacey St	Meredith St	60	32	44	C	B
2	Meredith St	Rickard St	Marion St	60	33	41	C	B
3	Marion St	Meredith St	Greenwood Ave	60	29	27	D	D
4	Greenwood Ave	Marion St	Brandon Ave	60	43	44	B	B
5	Brandon Ave	Greenwood Ave	Chapel Rd	60	44	29	B	D
6	Chapel Rd	Brandon Ave	Macauley Ave	60	28	39	D	C
7	Macauley Ave	Chapel Rd	Stacey St	60	41	44	B	B
8	Stacey St	Macauley St	Stanley St	70	50	47	B	B
9	Stacey St	Stanley St	Wattle St	60	52	58	A	A
10	Stacey St	Wattle St	Rickard Rd	60	54	45	A	B

Table 4-15: 2036 PM Ring Road Performance - clockwise

#	Road	Section		Posted Speed limit	Average Modelled Speed (km/h)		LoS	
		From	To	Km/h	Do Minimum	Option 1	Do Minimum	Option 1
1	Stacey St	Rickard Rd	Wattle St	60	35	46	C	B
2	Stacey St	Wattle St	Stanley St	60	45	45	B	B
3	Stacey St	Stanley St	Macauley St	70	56	66	B	A
4	Macauley Ave	Stacey St	Chapel Rd	60	37	40	B	B
5	Chapel Rd	Macauley Ave	Brandon Ave	60	39	46	B	B
6	Brandon Ave	Chapel Rd	Greenwood Ave	60	35	25	C	D
7	Greenwood Ave	Brandon Ave	Marion St	60	16	22	F	E
8	Marion St	Greenwood Ave	Meredith St	60	28	46	D	B
9	Meredith St	Marion St	Rickard St	60	39	46	B	B
10	Rickard Rd	Meredith St	Stacey St	60	32	34	C	C

From the LoS results it can be observed that:

- The section of Marion Street between Greenwood Parade and Meredith Street in the westbound direction (anti-clockwise) is performing poorly (LoS F) under Option 1 AM peak period traffic conditions. The average speed at this section drops from 24 km/h in the Do Minimum to 13 km/h in Option 1.
- Due to the conversion of roundabout to traffic signals at Greenwood Avenue/ Brandon Avenue intersection, the performance of Greenwood Avenue and Brandon Avenue deteriorates under Option 1 AM peak period conditions as compared to the Do Minimum.
    - It is observed that the average speed at Greenwood Avenue reduces from 24 km/h in Do Minimum to 11 km/h in Option 1 in the northbound direction.
    - It is observed that the average speed at Brandon Avenue reduces from 38 km/h in Do Minimum to 21 km/h in the westbound direction.
- For the PM peak period under Option 1 traffic conditions, Ring Road performs at similar level as the Do Minimum traffic conditions.

5. SUMMARY AND CONCLUSION

The survey data collected in conjunction with the modelled results is used to assess the performance of the existing road network for morning, afternoon and the evening peak periods.

A mid-block capacity assessment was carried out using the survey data for sections or links within the study area. This capacity assessment presented that **Stacey Street** and **Chapel Road** are performing at poor levels due to high traffic volumes that exceed capacity of these roads.

From the mid-block assessment, it can be observed that demand does not exceed capacity along **Rickard Road**, however, low speeds are observed on Rickard Road. This is predominantly due to congestion at **Stacey Street**, with traffic experiencing long delays to egress on to the highly congested **Stacey Street**. Similarly, lower speeds are observed in the eastbound direction at **Macauley Avenue** with traffic experiencing long delays when accessing Stacey Street especially in the northbound direction for both morning and afternoon peak periods.

Heavy traffic on **Chapel Road** also leads to its poor performance. Congestion on Chapel Road leads to poor performance of Macauley Avenue in the westbound direction as traffic experiences long delays when egressing to Chapel Road during the afternoon peak hour and the Saturday peak hour.

The simulated speeds from the model were compared with the posted speed limits for the Ring Road. In general, the Ring Road performs at a poor level of service in both directions

From the results presented above it can be observed that, the 2036 AM Option 1 network and the 2036 PM Option 1 network performs very similar to the Do Minimum scenario. Marginal changes are observed for the AM and PM peak hours.

A. CALIBRATION AND VALIDATION REPORT

A

GTAconsultants

Bankstown Complete Streets Project Microsimulation Model Calibration and Validation Report

Client // City of Canterbury-Bankstown
Office // NSW
Reference // N132740
Date // 03/06/18

Bankstown Complete Streets Project

Microsimulation Model

Calibration and Validation Report

Issue: A 03/06/18

Client: City of Canterbury-Bankstown
Reference: N132740
GTA Consultants Office: NSW

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	03/06/18	Final	Ingrid Bissaker, Mansee Sachdeva	Volker Buhl	Volker Buhl	

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1. Introduction

1.1 Background

The Bankstown City Centre will see significant changes associated with substantial developments and projects brought by the Sydenham to Bankstown Metro and Corridor Renewal Strategy. This is an opportunity to transform Bankstown's CBD and create a more people-friendly place.

Roberts Day, in association with Environmental Partnership and GTA Consultants, have been commissioned by the City of Canterbury-Bankstown (Council) to undertake the Bankstown Complete Streets Project, which consists of a holistic approach for the streets in the Bankstown CBD, bringing together traffic planning and public space planning in order to provide better and integrated outcomes for the City.

The project's key components are to

- review existing conditions
- identify key issues and opportunities
- define a vision
- prepare a master plan
- provide recommendations for future options for the movements systems to ensure that as the CBD develops, priority is given towards a more liveable, safer and more attractive public domain that supports all modes of transport.

As part of developing this strategy, a microsimulation model using Aimsun software has been developed to understand the current key issues and to provide a platform to test various future Complete Streets strategies.

1.2 Purpose of this Report

This report sets out an overview of the model development, calibration and validation process and includes the following sections:

- Data collection and analysis (Section 2)
- Overview of the base model development process (Section 3)
- Calibration and validation process and criteria (Section 4)
- Summary and conclusions (Section 5).

It is noted that this report provides a detailed description of the model development process and its calibration and validation results, and as such is predominantly aimed at a technical audience.

2. Traffic Data and Analysis

2.1 Overview of the Collected Data

Comprehensive traffic data was collected to develop and calibrate the existing conditions model. A summary of the data collected is provided in Table 2.1.

Table 2.1: Traffic Data Summary

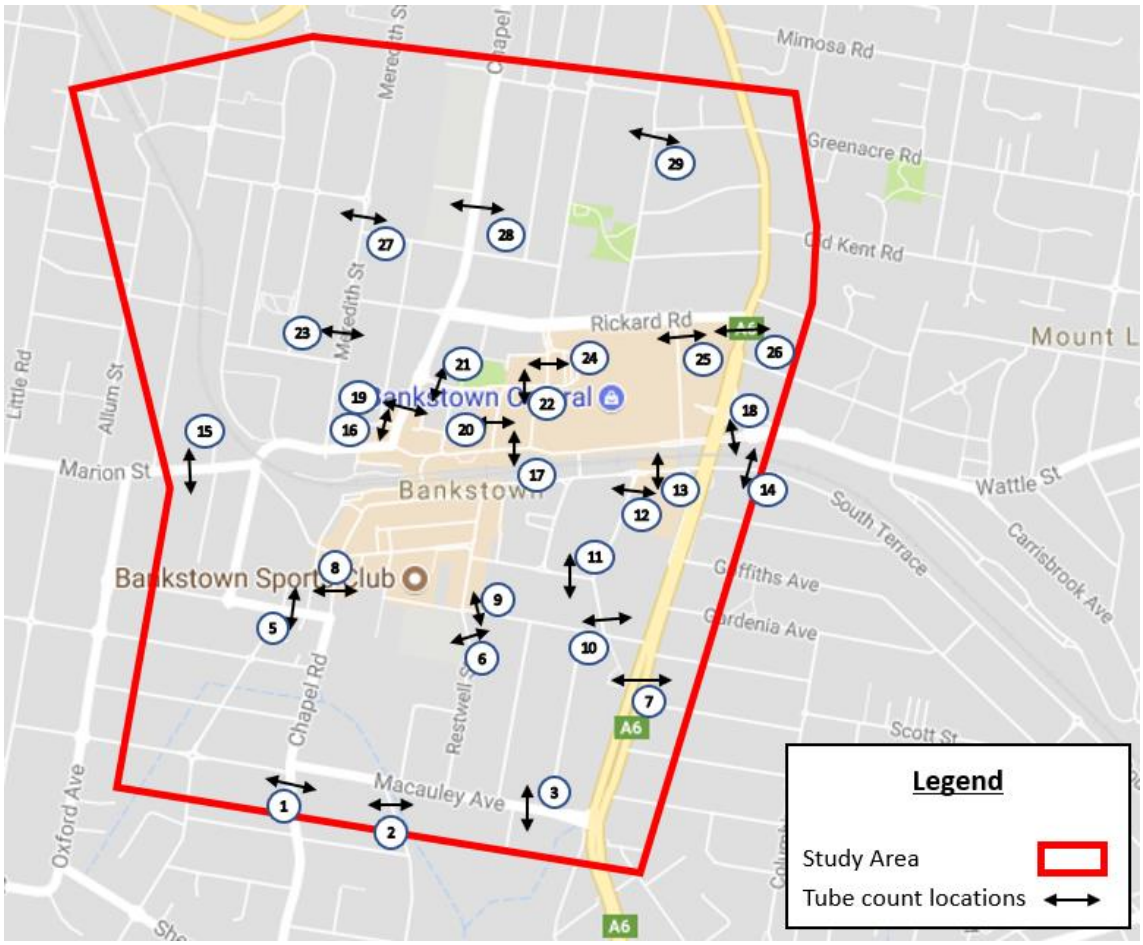
Data Type	Source	Survey Dates	Survey Times
SCATS Detector Volume Data	Roads and Maritime	Thursday 22/02/2018 Saturday 24/02/2018	24 Hours
SCATS Signal Data	Roads and Maritime	Thursday 22/02/2018 Saturday 24/02/2018	24 Hours
Travel Time Surveys	Data Audit Systems	Thursday 22/02/2018 Thursday 22/02/2018 Saturday 24/02/2018	6:00 am to 8:00 am 4:00 pm to 6:00 pm 12:00 pm to 2:00 pm
Automatic Tube Counts	Matrix	Tuesday 10/04/2018 - Tuesday 17/04/2018	24 Hours
Mid-block Video Counts	Matrix	Saturday 7/04/2018 Thursday 12/04/2018 Thursday 12/04/2018	11:00 am to 2:00 pm 6:00 am to 9:00 am 3:00 pm to 6:00 pm

The following sections provide further detail on the different types of data collected, their purposes and the analysis of the data.

2.2 Automatic Tube Counts

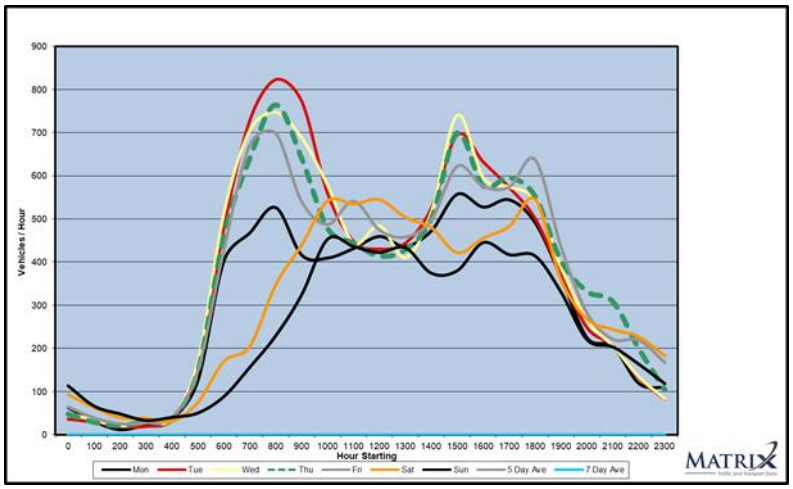
Matrix was engaged to collect the data at 29 locations (Figure 2.1) across the Bankstown CBD for 7 days (10 April to 17 April 2018) and to perform 2 mid-block video counts on Stacey Street. The data was collected across the whole CBD again for consistency purposes. The tube counts can be found in Appendix A.

Figure 2.1: Automatic Tube Count Locations



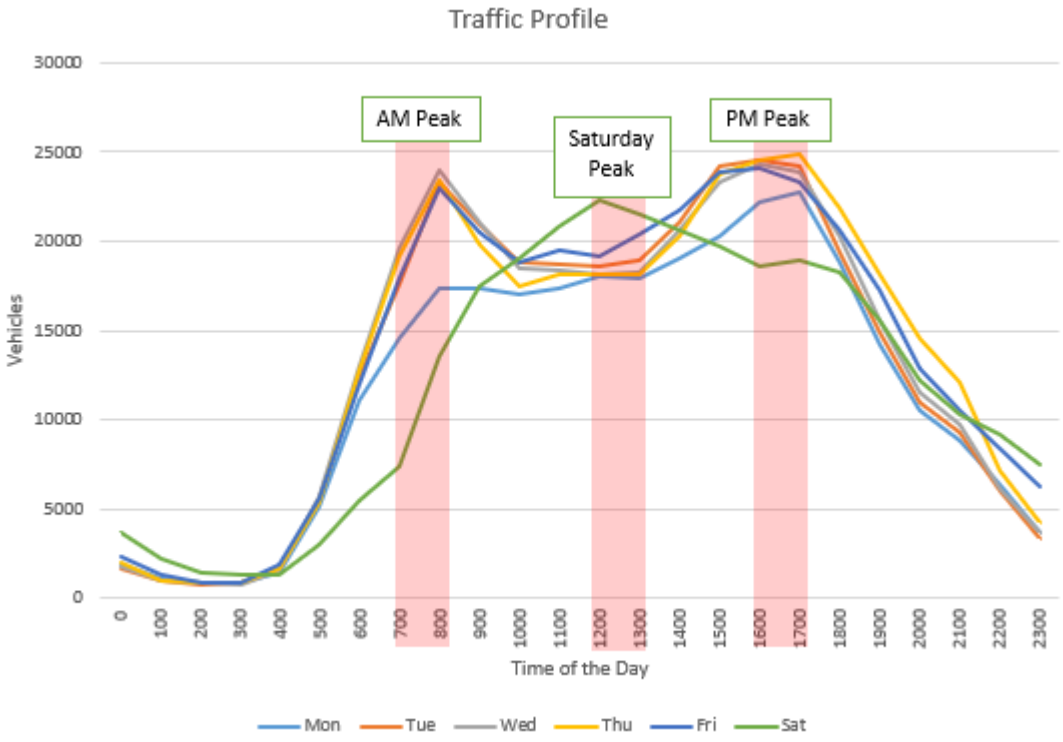
The data was cleaned and checked for inconsistencies with average daily traffic profiles developed for all locations. An example for a daily traffic profile at Macauley Street in Westbound Direction is shown in Figure 2.2.

Figure 2.2: Daily Traffic Profile at Macauley Street



To determine the peak two-hour period for modelling purposes, traffic volumes at all sites were summed up to create a single daily profile for each of the individual weekday as shown in Figure 2.3.

Figure 2.3: Daily Profile within Bankstown Study Area



As can be observed from Figure 2.3, the peak hours for the study area were:

- Morning peak period: 8-9 am
- Afternoon peak period: 4-5 pm
- Saturday peak period: 12-1 pm.

In consultation with Council, Thursday was selected as a typical weekday.

Daily traffic profile for Thursday (12 April 2018) is shown in Figure 2.4 and for Saturday (14 April 2018) is shown in Figure 2.5 based on the total of all the tube counts. Based on the Thursday and Saturday profiles, the modelling peak periods were defined to be the following:

- Morning peak period: 7-9 am
- Afternoon peak period: 4-6 pm
- Saturday: 12-2 pm.

Figure 2.4: Weekday Two-Way Daily Traffic Volume Profile

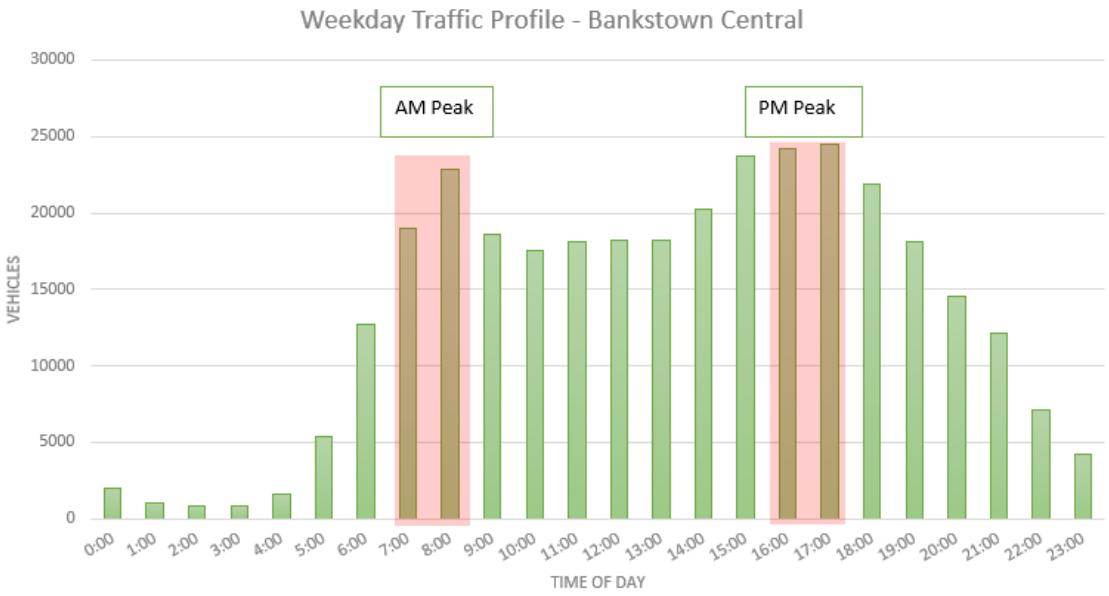
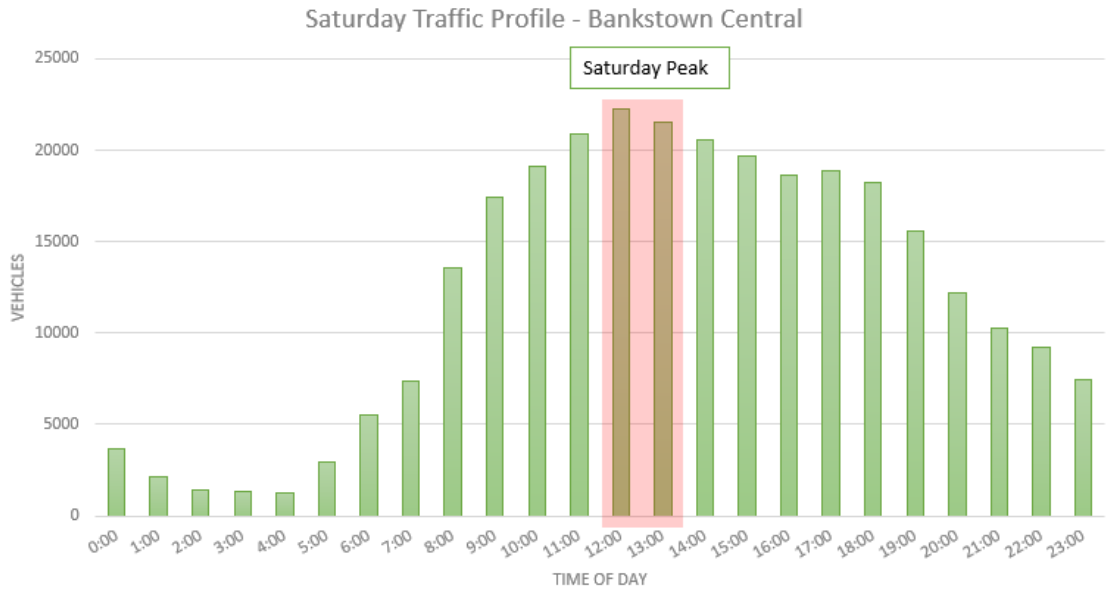


Figure 2.5: Saturday Two-Way Daily Traffic Volume Profile



2.3 Permanent Count Stations

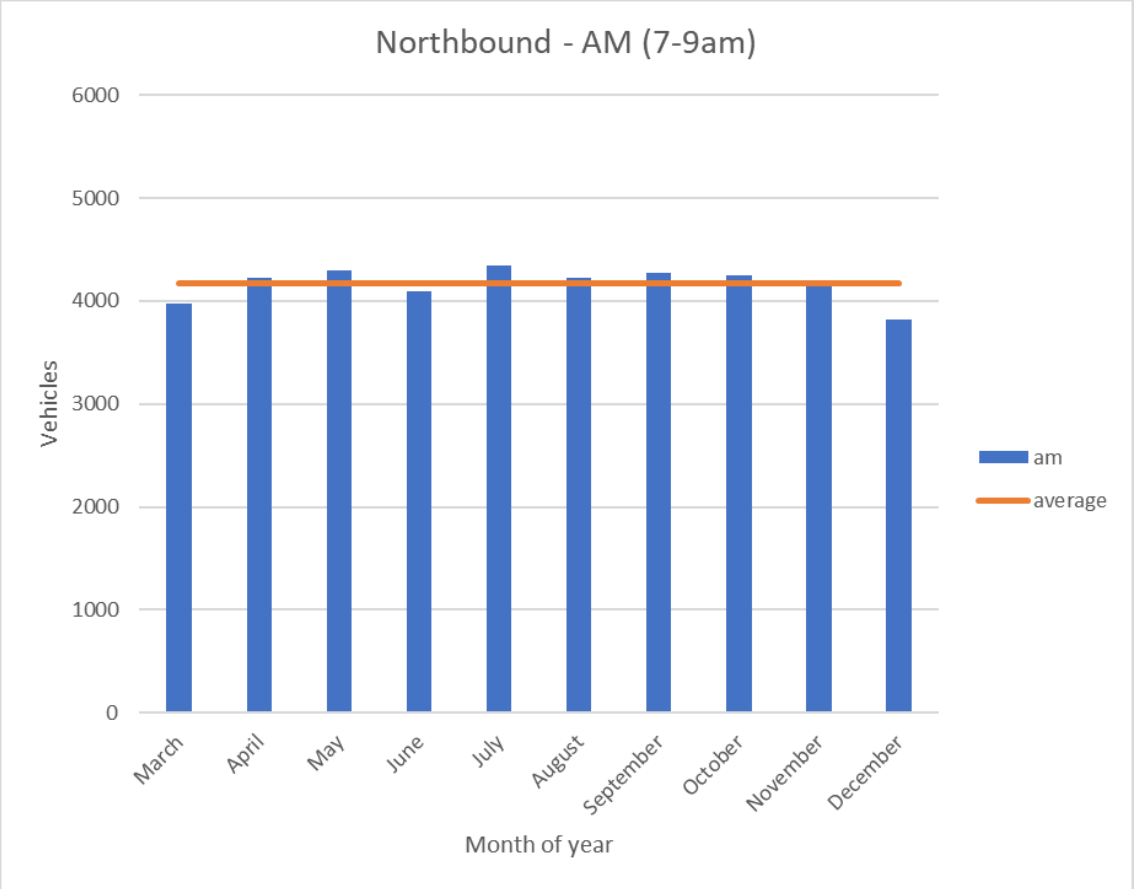
Roads and Maritime collects traffic counts at various locations across the greater Sydney Region. A permanent traffic count station is located at Fairford Road, south of Macauley Avenue. Data from this station was retrieved via the online portal[1] to understand the yearly variation in traffic along Fairford Road (Stacey Street).

Traffic data for all Thursdays across the 2017 year was extracted and analysed for the following peak directions:

- AM Peak period (7 to 9am) – Northbound
- PM Peak period (4 to 6pm) – Southbound.

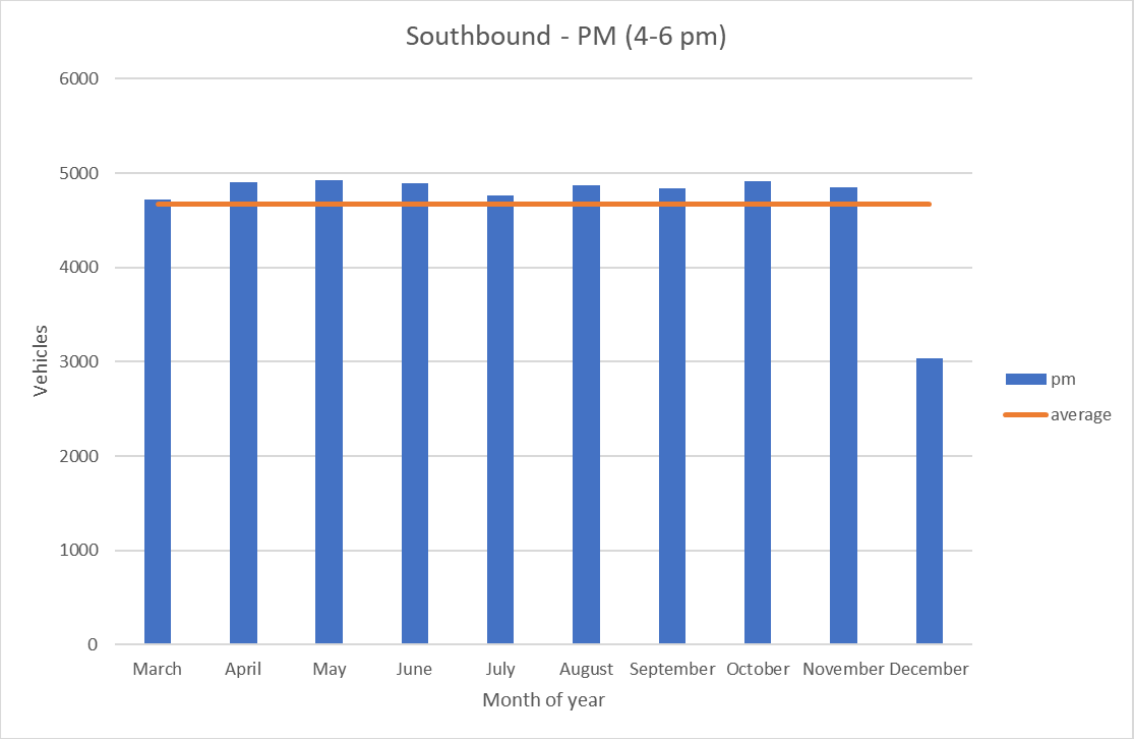
The yearly traffic volume profile for the AM peak (northbound) and PM peak (southbound) is shown in Figure 2.6 and Figure 2.7 respectively.

Figure 2.6: AM Peak Annual Traffic Volume Profile - 2017



[1] http://www.rms.nsw.gov.au/about/corporate-publications/statistics/traffic-volumes/aadt-map/index.html#/?z=15&id=43236

Figure 2.7: PM Peak Annual Traffic Volume Profile - 2017



The graphs indicate that:

- The peak period traffic volumes remain consistent throughout the year except in the month of December. The holiday shoppers usually travel outside of these peak hours and less commuter traffic occurs as offices and schools are closed for the Christmas holiday period.
- Our survey month (April) has marginally lower traffic as compared to the months of May and July during the AM peak period in the northbound direction.
- However, April has marginally higher traffic in the southbound directions as compared to July during the PM peak.

2.4 Travel Time Surveys

Travel time surveys were undertaken on Thursday, 22 February 2018 and Saturday, 24 February 2018 across five bi-directional routes during the following peak times:

- Weekday AM peak (6:00am to 8:00am)
- Weekday PM peak (4:00pm to 6:00pm)
- Saturday peak (12:00 to 2:00pm).

The travel time survey routes are described below and shown graphically in Figure 2.8:

i Route 1 – Stacey Street between Mimosa Road and Macauley Avenue

ii Route 2 – Between the Chapel Road/ Hume Highway intersection and the Macauley Avenue/ Stacey Street intersection via Chapel Road, Marion Street, Greenwood Avenue, Brandon Avenue, Chapel Road and Macauley Avenue

iii Route 3 – Between the Meredith Street/ Hume Highway intersection and the North Terrace/ Wattle Street roundabout via Meredith Street, Marion Street, The Mall, Fetherstone Street/ The Appian Way and North Terrace

iv Route 4 and Route 6 – Between the Marion Street/ Oxford Avenue intersection to the Chapel Road/ Rickard Road (Route 4) and Rickard Road from Chapel Road to Stacey Street (Route 6)

v Route 5 – Between the South Terrace underpass and the Stacey Street/ Stanley Street intersection via South Terrace, East Terrace/Raymond Street/ Restwell Street and Stanley Street.

Figure 2.8: Travel Time Routes

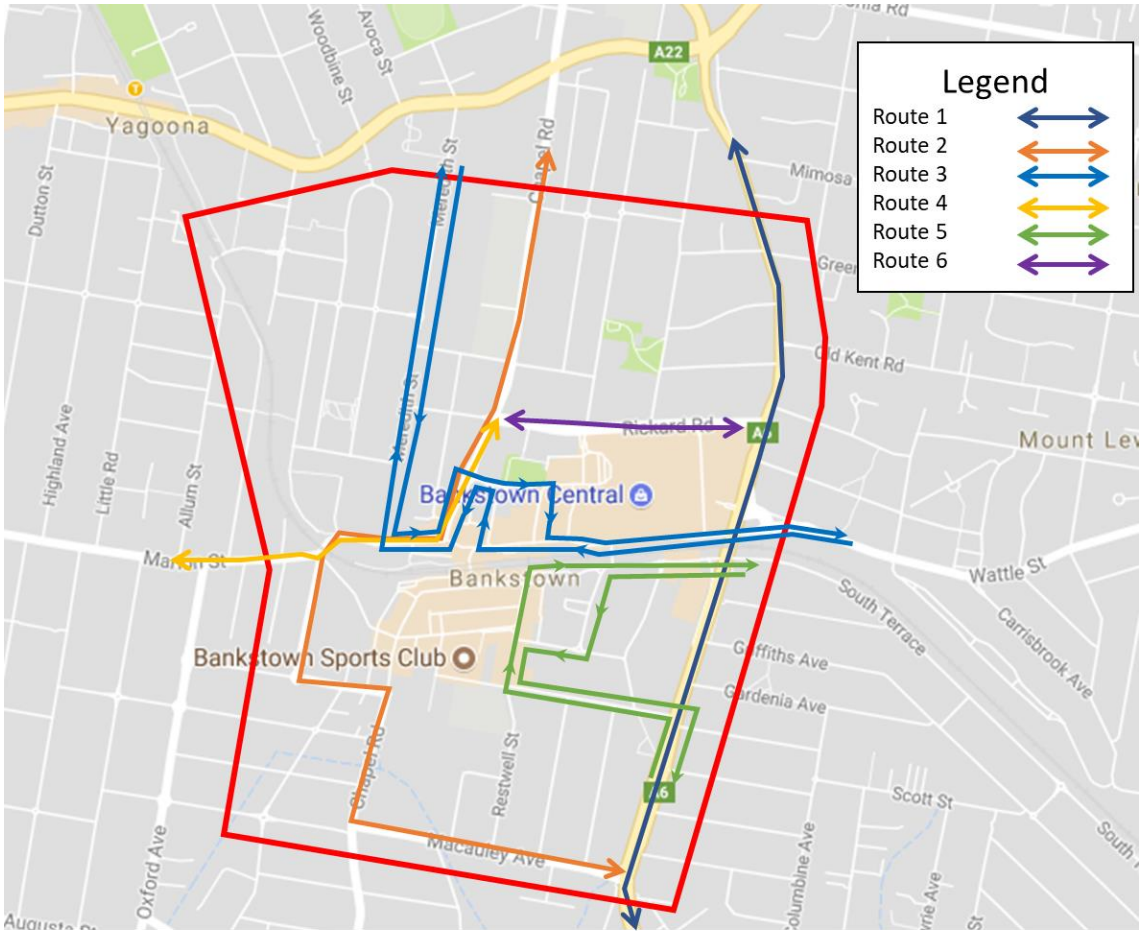
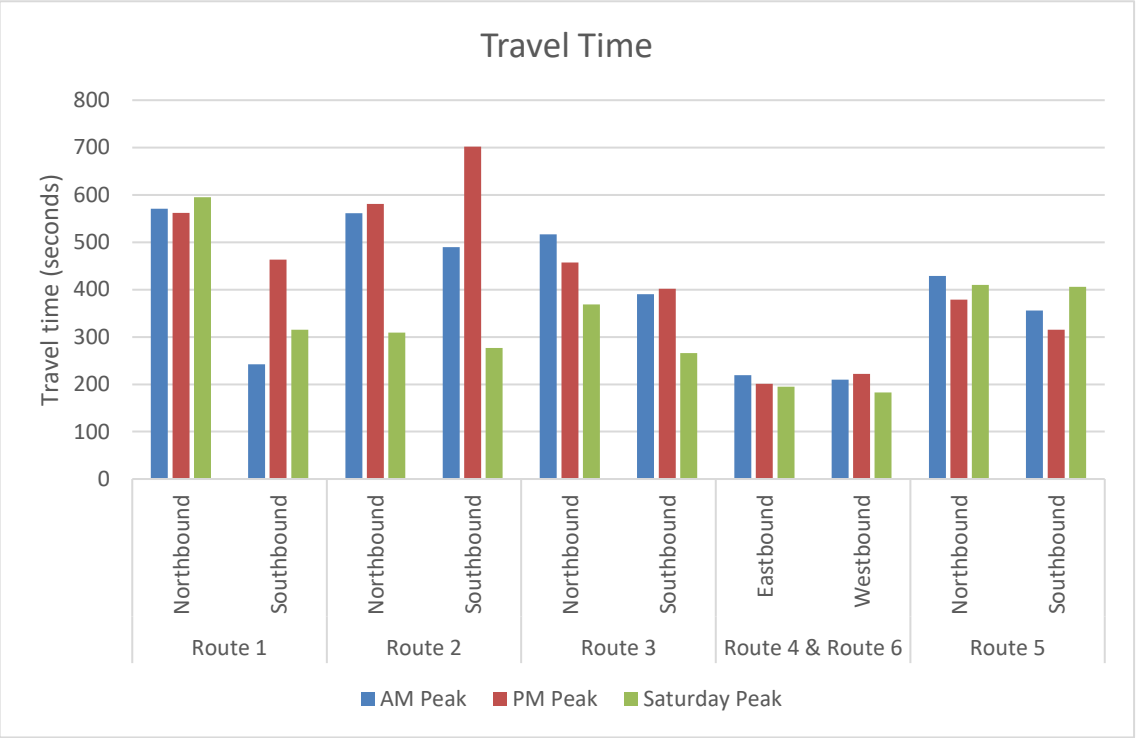


Figure 2.8 below outlines the average travel times observed for the five routes. A detailed description of the routes and a breakup of each route into segments, along with the associated recorded travel times is provided in Appendix B.

Figure 2.9: Average Travel Times



2.4.1 Performance Analysis

Performance Criteria

The Levels of Service (LOS) of a section of a road can be measured by the average travel speeds along the section. The LOS thresholds for base Free Flow Speed (FFS) is defined in the Austroads Guide to Traffic Management, Part 3 - Traffic Studies and Analysis and is provided in the Table 2.2 below.

For this analysis the posted speed limit is assumed to be the base FFS and LOS D (or above) is assumed to be the acceptable performance level.

Table 2.2: Section LOS Criteria

Travel speed as a percentage of base FFS (5)	LOS
>85	A
>67-85	B
>50-67	C
>40-50	D
> 30-40	E
≤30	F

Performance

The average speeds and their respective LOS for each route is provided in the Table 2.3 for AM, PM and Saturday peak periods respectively.

Table 2.3: Bankstown CBD Performance

Road	Direction	FSS (km/h)	Observed Average Speed (km/h)			LOS		
			AM	PM	Sat	AM	PM	Sat
Route 1	Northbound	60	16	17	22	F	F	E
	Southbound	60	31	16	23	C	F	E
Route 2	Northbound	40	23	20	20	C	D	C
	Southbound	40	24	19	21	C	D	C
Route 3	Northbound	40	21	21	20	C	C	D
	Southbound	40	22	21	22	C	C	C
Route 4	Eastbound	40	18	18	19	D	D	D
	Westbound	40	16	16	21	E	E	C
Route 5	Northbound	40	19	20	19	D	C	D
	Southbound	40	26	28	26	C	B	C

Travel time results show that:

- Stacey Street performs poorly in both directions for all peak periods except in the southbound direction in the morning
- All routes within the CBD (routes 2 to 6) perform at acceptable LOS D or above except Route 4 (Chapel Road / Marion Street in the southbound/ westbound direction).

2.5 SCATS Data

SCATS data for a signalised intersection within the study area was obtained from Roads and Maritime Services (Roads and Maritime) at 32 locations as shown in Figure 2.10. The data included detector volume data, layout data and signal phasing and timing data. The SCATS data provided is summarised in the following sub-sections.

Figure 2.10: Locations for SCATS Data Collection

2.5.1 SCATS Detector Volume Data

SCATS detector volume data was obtained for the signalised intersection within the study area. This data was obtained for 24-hour periods for the relevant survey dates. This data is used to cross-check and supplement the automatic tube counts data.

2.5.2 SCATS Signal Data

The SCATS controller operation specification sheets were obtained from RMS to assist with the coding of signalised intersections as well as understand the current operation of the intersection in full detail. This data provides information on the following:

- Lane configuration
- Phasing
- Detector locations and numbers
- Signal groups.

2.6 Site Observations

Site visit was conducted on Tuesday, 7 February between 12 pm and 2 pm. Council members were present and walked the GTA team across some of the key streets within the Bankstown CBD. The purpose of this site visit was to understand the key congestion areas in the Bankstown CBD, road geometry, general traffic movements and driver behaviour. However, since the time of the site visit did not coincide with the peak hour congestion and queues, no peak hour behaviour was observed.

3. Base Model Development

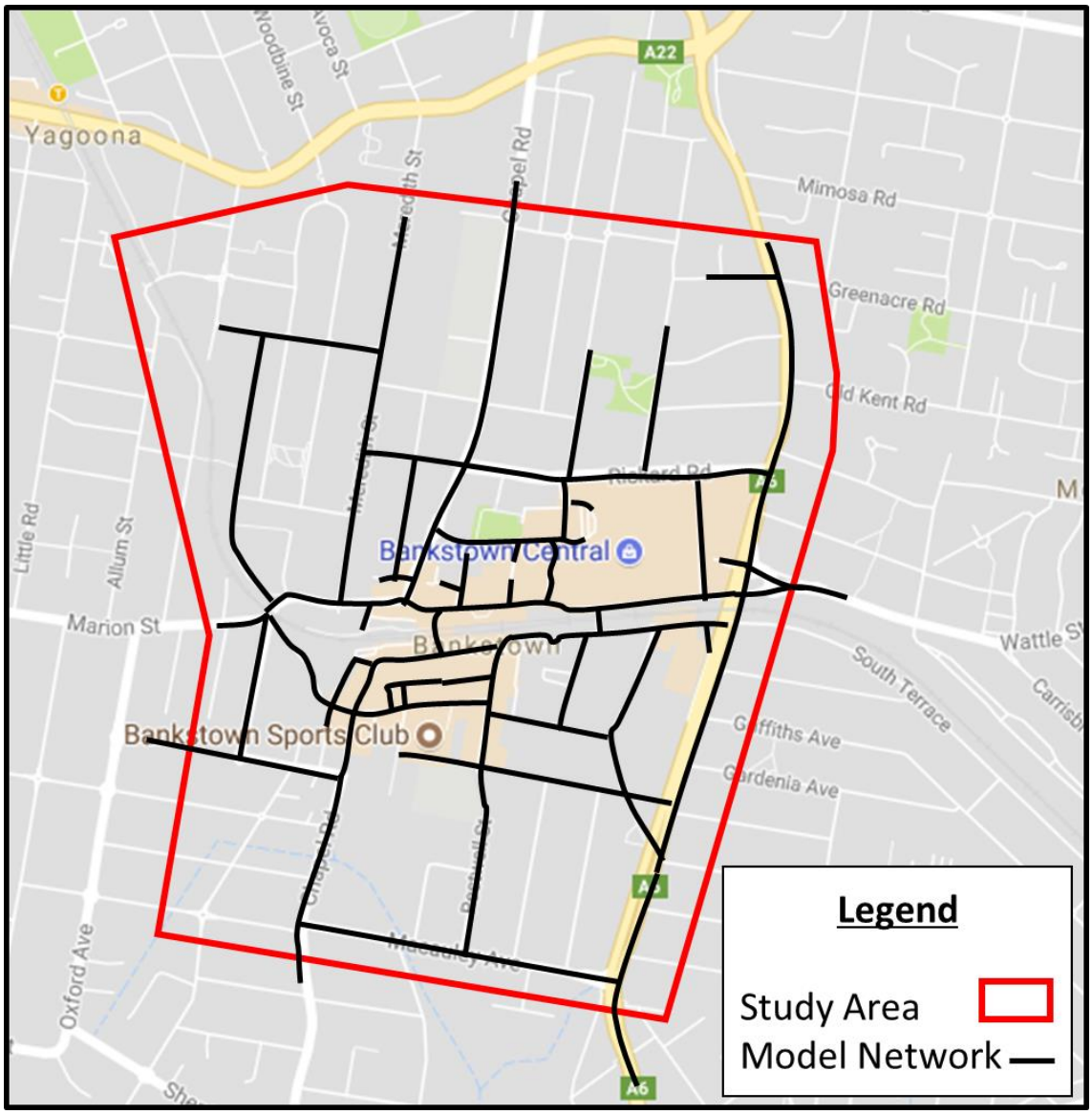
3.1 Study Area

The microsimulation model is to assist in:

- Assessing current and future traffic conditions
- Assessing different Complete Street Strategies for future traffic conditions.

Figure 3.1 illustrates the extents of the traffic modelling assessment.

Figure 3.1: Micro Modelling Extents



3.2 Approach

Given the extent and complexity of a CBD, a microsimulation model for Bankstown was considered suitable to produce the analytical results to test different Complete Street Strategies and their corresponding impacts. A microsimulation model describes and simulates the behaviour of individual drivers, their vehicles and their interactions with each other.

3.3 Network Development

3.3.1 Model Extent

The extents of the existing conditions microsimulation model include key intersections and travel routes within the study area. This includes all key intersections along Stacey Street and in the vicinity of Bankstown Central and the railway line. It is noted that the model extents cover all key roads and bus routes contained within the study area as illustrated in Figure 3.1.

3.3.2 Time Periods & Model Version

Aimsun version 8.2.3 was used to develop the model for the following peak periods. This is line with the observations from the ATC data (Section 2.2).

- Weekday AM peak period – 7:00am to 9:00am with 30min warm up period
- Weekday PM peak period – 4:00pm to 6:00pm with 30min warm up period
- Saturday peak period – 12:00pm to 2:00pm with 30min warm up period.

3.3.3 Network Assumptions

Road Types

Four different road types have been used in the model, each with a distinct lane capacity as shown in Table 3.1.

Table 3.1: Road Type used in the Study Area

Definition	Lane Capacity (veh/h)
Local	800
Sub arterial	900
Arterial	900
State Highway	1500

Vehicle Composition

The following vehicle types were adopted for the purposes of this Aimsun model:

- Cars
- Heavy vehicles (Trucks)
- Buses on fixed routes.

The car and truck volumes used were based on the survey data. Bus volumes were adopted based on bus frequencies from the Transport for NSW's bus timetables on 9th February 2018.

Section Speeds

Sign posted speed limits were applied in the model including reduced speeds at school zones.

Intersection Control

All signalised intersections within the study area are controlled by SCATS (Sydney Coordinated Adaptive Traffic System) which allows for adaptive phase times and cycle times that respond to fluctuating traffic conditions and improving the efficiency of individual intersections.

Average fixed time signal controls over the model period (cycle times, phase times and phase arrangements) have been adopted for each signalised intersection within the modelled network based on the SCATS IDM data provided by Roads and Maritime.

Public Transport

Following the development of the road network structure, public transport routes have also been incorporated.

Regular public transport bus services within the study area are provided by Sydney Buses. The dwell time (time taken to load / unload passengers) of buses at stops was coded with a dwell time of 30 second ±10 seconds. A deviation of 10 was considered appropriate to account for variance in dwell times.

3.4 Demand Development

3.4.1 Zone System

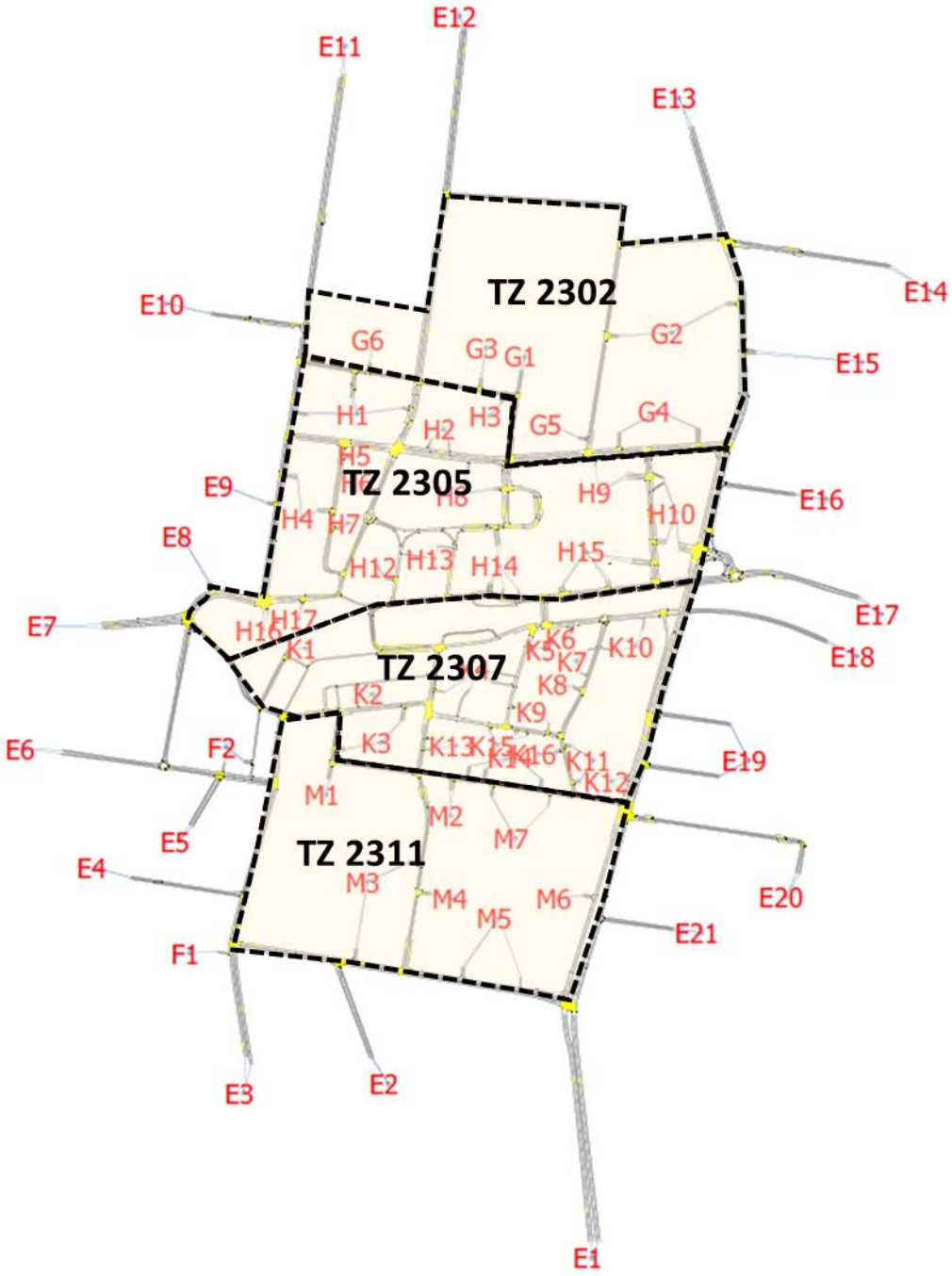
The zoning system for the model has been developed based on the Sydney Traffic Model[2] (STM). Each zone of the STM model was further disaggregated into several zones to represent detail attraction and egress points (such as car parks) within the model. Figure 3.2 shows the zoning system implemented within the model.

The model zoning system comprises a total of 64 zones within the study area and have been set up using the following nomenclature:

- All external zones start with an "E".
- The model is divided in four sectors each corresponding to a travel zone in the STM model.
    - Travel zone 2302 (Bankstown- Sir Joseph Banks St and Milton St) is represented by sector G
    - Travel zone 2305 (Bankstown Square) is represented by sector H
    - Travel zone 2307 (Bankstown Station South) is represented by sector K
    - Travel zone 2311(Bankstown Girls High School) is represented by sector M.

[2] Sydney Traffic Model is a strategic model built in EMME software. It is developed and maintained by Transport for NSW and includes the future population and employment forecasts.

Figure 3.2: Aimsun Zoning Structure



3.4.2 Traffic Demands

The process used to develop the demand matrices is provided in Figure 3.3. The prior matrices were extracted from the STM models. These prior matrices were provided for 7-9 am, 4-6 pm peak hours. The interpeak matrix was initially utilised as the prior matrix for the Saturday model.

These two-hour matrices were then simply halved to develop matrices for each hour for each of the peak periods.

The static adjustment tool in AIMSUN was utilised to adjust the calculated 1-hour matrices to better match the observed data. A comparison of the trip length distribution between the prior and the adjusted matrix for each hour and each of the periods modelled is shown in Appendix C. The O-D Departure tool within AIMSUN was then utilised to factor the hourly matrices to 15-minute matrices. The 15 minutes matrices are developed based on the survey data. The 15 minute profiles developed for each of the AM, PM and Saturday peak periods are shown in Figure 3.4, Figure 3.5, and Figure 3.6 respectively.

Figure 3.3: Demand Adjustment Process

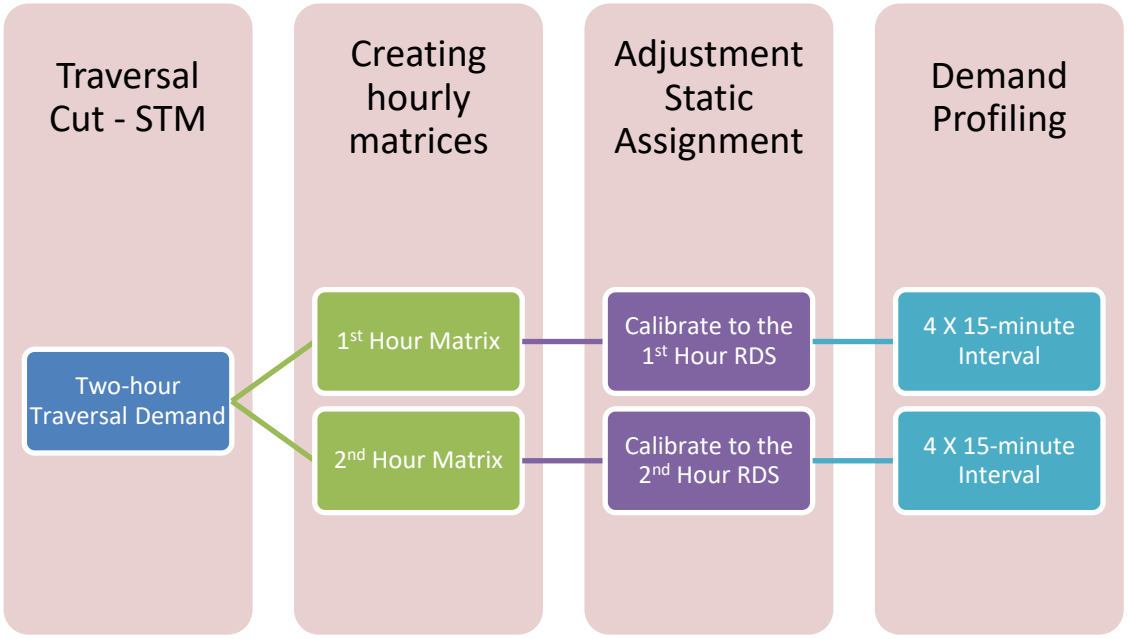


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Figure 3.4: Traffic Demand 15 Minute Interval Profile – AM Peak (7 to 9 am)

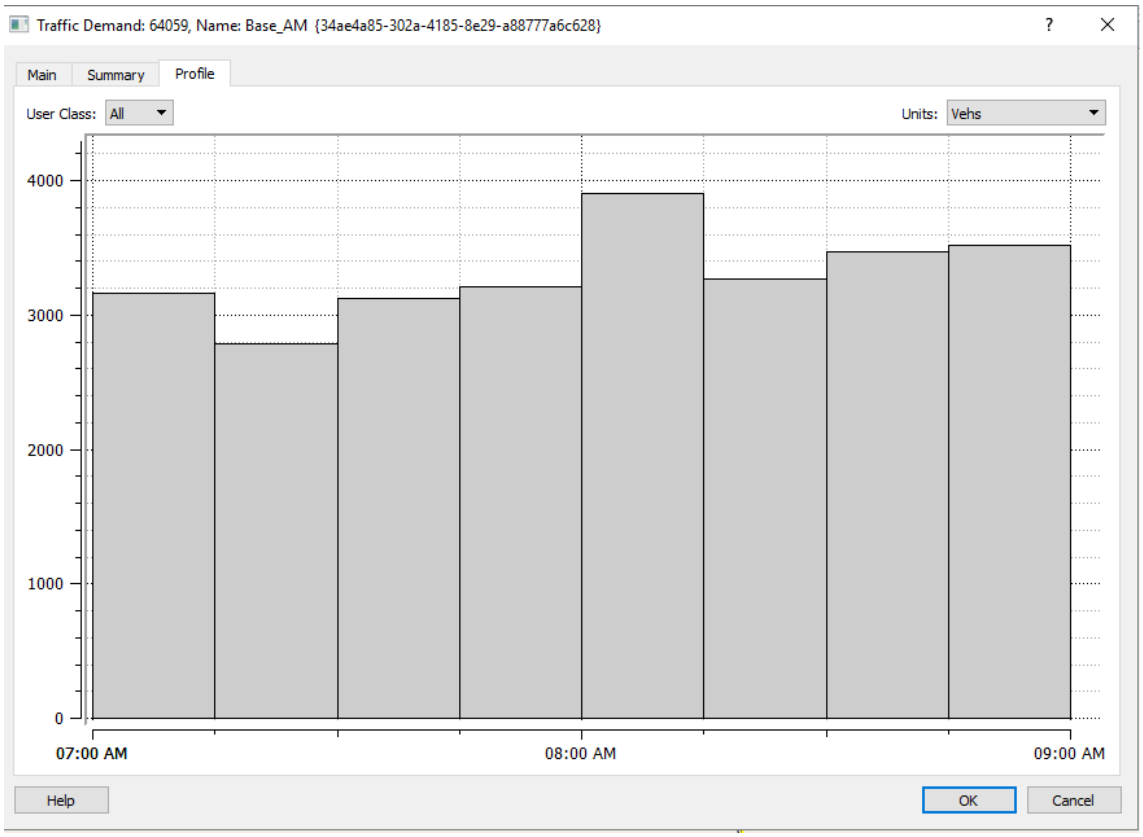


Figure 3.5: Traffic Demand 15 Minute Interval Profile – PM Peak (4 to 6 pm)

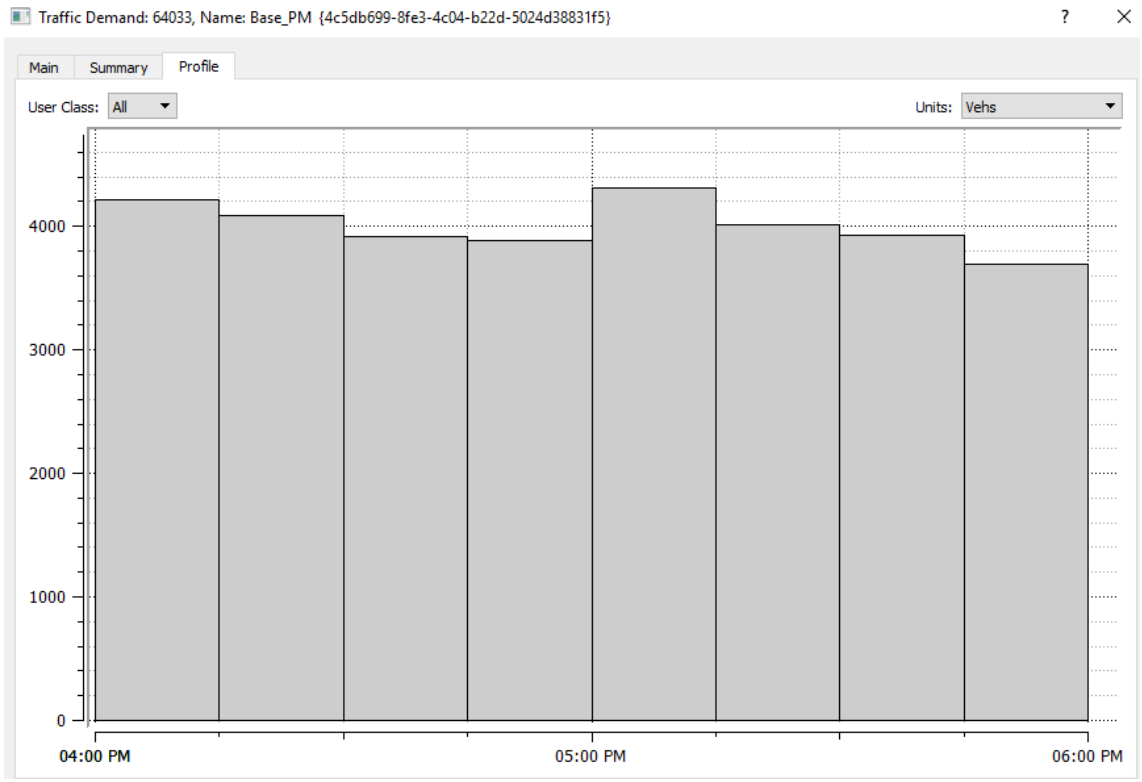
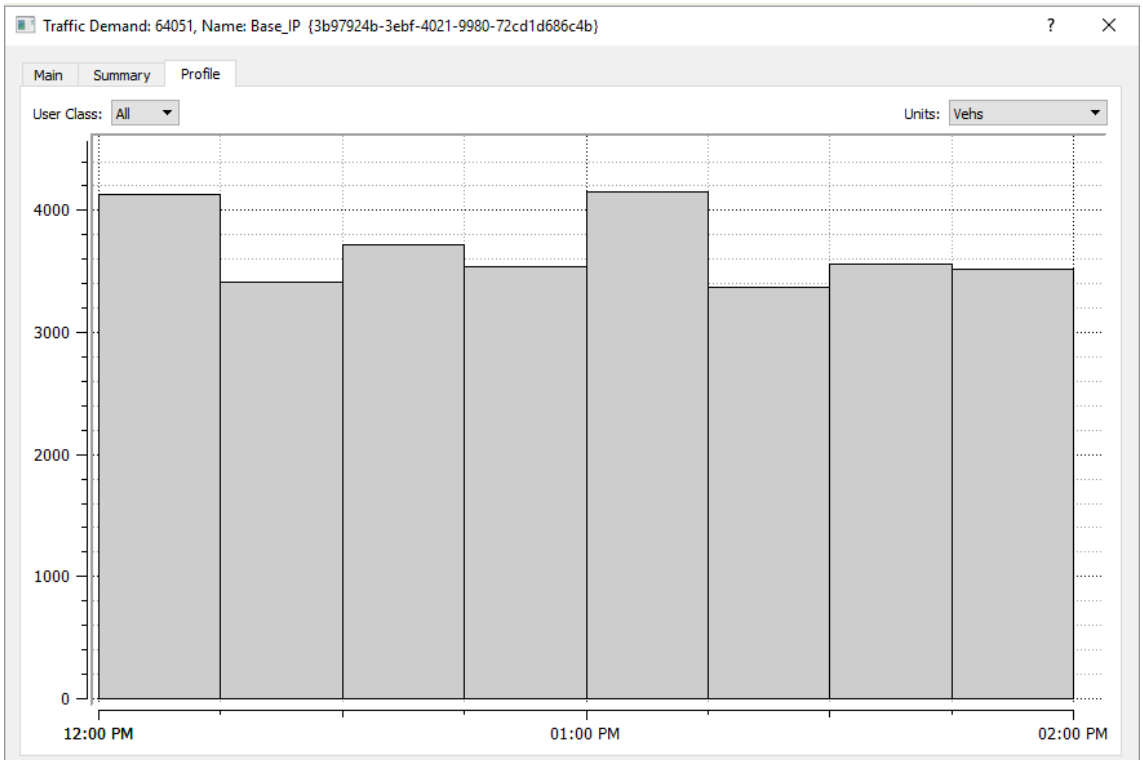


Figure 3.6: Traffic Demand 15 Minute Interval Profile – Saturday Peak (12 to 2 pm)



Following the O-D departure adjustment, the link volumes through the network were compared with observed data set and checked to see if it satisfies the calibration and validation criteria. In order to achieve a higher level of correlation between modelled and observed flows, manual adjustments to the demands were applied (to a reasonable extent) to ensure that the demands accurately represent the existing traffic flows throughout the study area.

4. Calibration and Validation

The role of the calibration and validation process adopted for the project was to develop a model that is fit for purpose and produces results that can be used for testing various network and planning options.

4.1 Process

As simulation models are stochastic, they can produce different outcomes depending on their starting conditions. Due to this stochastic behaviour, it is necessary to assess how the model behaves under a variety of starting conditions (referred as seeds) using the same input parameters. The ability of a model to produce consistent results for a number of seed values is referred as the model stability, which has been assessed in Section 4.3.

The initial calibration efforts were concentrated at visual inspections of the model results to determine 'hot spot' locations where significant congestion was observed as well as whether there were any vehicles left waiting in and outside of the network as a result of excessive gridlock. Model visual density outputs were used to identify whether specific locations were causing blockages or whether the pattern of congestion appeared logical based on the observed conditions and knowledge of travel patterns. Following each model run and visual inspection review, these locations were interrogated and updated to reflect correct configuration and signal arrangements.

In the next stage, model outputs were compared with empirical observations using statistical measures to quantify the goodness of fit. Generally, the process of improving the goodness of fit between model outputs and observed data was the same as used in the qualitative analysis stage. It also relied on an understanding of traffic conditions within the study area and major causes of congestion, as well as modelling judgment. The overall process was performed using the following steps:

- Model stability validation
- Volume based calibration – link count calibration
- Travel time validation
- Congestion validation – visual.

4.2 Calibration and Validation Criteria

The aim of the microsimulation modelling is to obtain the best possible match between the model results and the field measurements. Calibration and validation targets were developed based on the performance requirements.

The calibration and validation process were carried out in accordance with the network wide criteria set out in the Roads and Maritime Services, Traffic Modelling Guidelines, dated March 2013. These guidelines represent the latest comprehensive set of guidelines released in Australia.

The adopted criteria are summarised in Table 4.1.

Table 4.1: Calibration and Validation Criteria

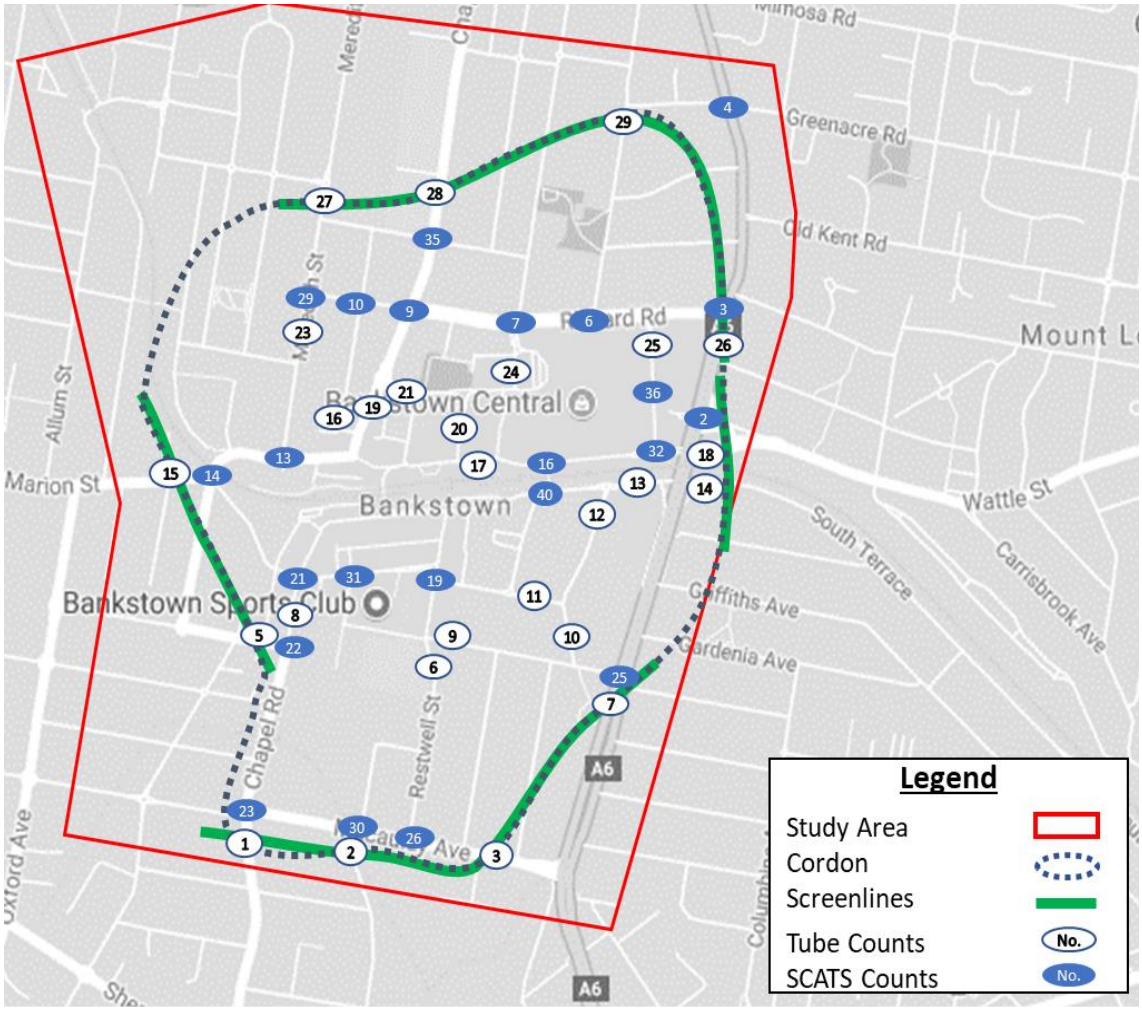
Type	Metric	Target
Model Calibration		
Regression	R^2 value	>0.90
GEH for link flow comparisons	GEH < 5	85%
Cordon Total	GEH < 4	100%
Individual links in Cordon	GEH <5	85%
Model Validation		
Travel times	Within 15% or one minute	100%

Regression analysis explores the relationship between the observed and the modelled counts. It is quantified by the R^2 value. Another measure is the GEH, which also measures how close the modelled count is to the observed count.

A cordon simply implies a line drawn across the external entry and exit points of the model area. All links falling on this line make up the cordon. The sum of all vehicles passing through the cordon i.e. entering and existing the network should be close to the observed value as this implies that the total amount of traffic entering and exiting the network in the simulation model is similar to what has been observed.

A combination of ATC data and SCATS detector data were used for link calibration. A comprehensive list of 109 links within the Bankstown CBD was developed. These locations used for calibration and the cordon lines are shown in Figure 4.1 below.

Figure 4.1: Link Calibration locations and cordon screen lines



Validation was carried out for the six travel time routes surveyed. It should be noted that within a CBD environment, there are number of alternative routes and traffic patterns may vary from day to day. Although, it is expected that generally the travel times are within 15% or one-minute, larger variations may be observed. Therefore, attention is paid to the general congestion levels within the simulation model. These congestion points are checked against estimated traffic conditions within Google Maps and inspections.

4.3 Model Stability

4.3.1 Seed Runs

Traffic conditions vary from day-to-day as a result of random driver behaviour, e.g. speed selection, lane changing and driver route choice. The microsimulation traffic model attempts to replicate this day-to-day random variability by basing simulated driver decision on a set of random numbers. This set of random numbers is generated from an initial "seed" value, which is specified at the start of a microsimulation run. A single set of random numbers, generated by a single seed value therefore represents one potential result, or one particular day of traffic operation.

The following five seeds were selected as per the *Table 11.8* in *RMS Modelling Guidelines*:

- 560
- 28
- 7771
- 86524
- 2849

4.3.2 Model Stability

In order to demonstrate the stability of the model over five seed runs, an assessment of the five seeds has been undertaken which are based on the Vehicle Hours Travelled (VHT), or Total Travel Time, network statistic. The following sections provide scatter plot results for the VHT, whilst the descriptive statistical results for each of the peaks are also presented.

Figure 4.2, Figure 4.3 and Figure 4.4 illustrate the scatter plot results for the VHT in the AM, PM and Saturday peaks respectively, whilst the descriptive statistical results for each peak are presented in Table 4.2.

Figure 4.2: Scatter Plot for VHT – AM Peak

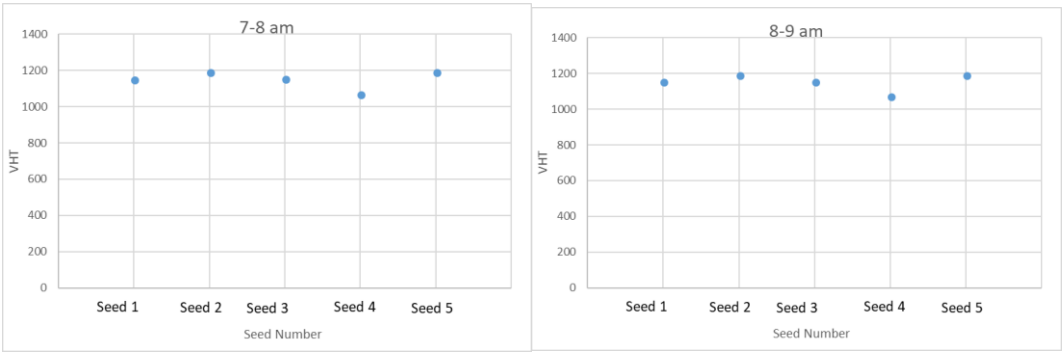


Figure 4.3: Scatter Plot for VHT – PM Peak

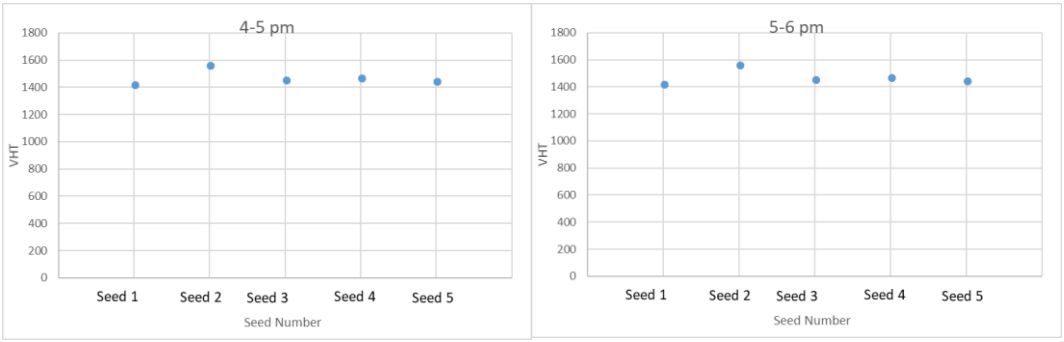


Figure 4.4: Scatter Plot for VHT – Saturday

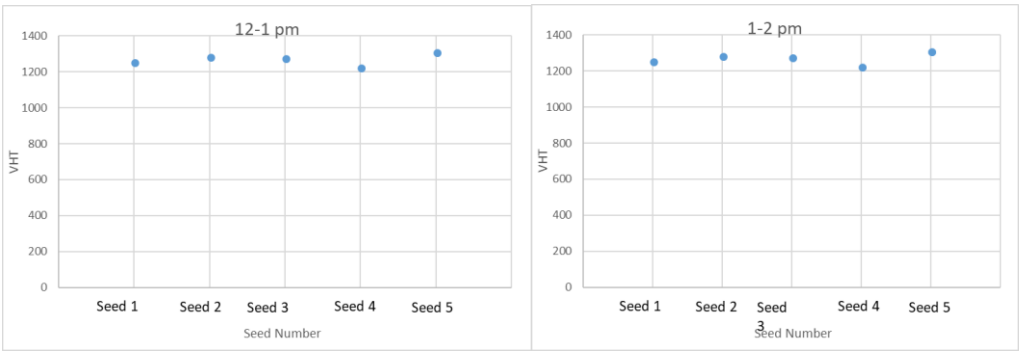


Table 4.2: Descriptive Statistical Results for VHT

Statistic	AM Peak		PM Peak		Saturday Peak	
	7-8 am	8-9 am	4-5 pm	5-6 pm	12-1 pm	1-2 pm
Number of Runs	5	5	5	5	5	5
Mean	1154.07	1614.97	1475.60	2096.12	1271.91	1122.39
Standard Deviation	49.31	73.22	54.31	269.49	32.51	36.53
Range	121.13	194.35	140.50	666.44	86.38	94.61
Minimum	1072.49	1526.05	1426.55	1866.44	1226.48	1077.72
Maximum	1193.62	1720.39	1567.05	2532.88	1312.86	1172.33
95% Confidence Limit	43.22	64.18	47.60	236.22	28.50	32.02
Lower Confidence Limit	1110.85	1550.79	1428.00	1859.90	1243.41	1090.36
Upper Confidence Limit	1197.30	1679.15	1523.20	2332.33	1300.40	1154.41
Median	1157.39	1614.16	1458.45	2005.77	1279.45	1126.76

The results of the model stability analysis put forward Seeds 560 (AM) and 86524 (PM and Saturday) and as the median seeds, and as such these seeds were used in the assessment process.

4.4 Model Calibration Results

Figure 4.5, Figure 4.6 and Figure 4.7 illustrate the associated scatter plots during each hour of each peak.

Figure 4.5: Link Volumes Comparison – AM

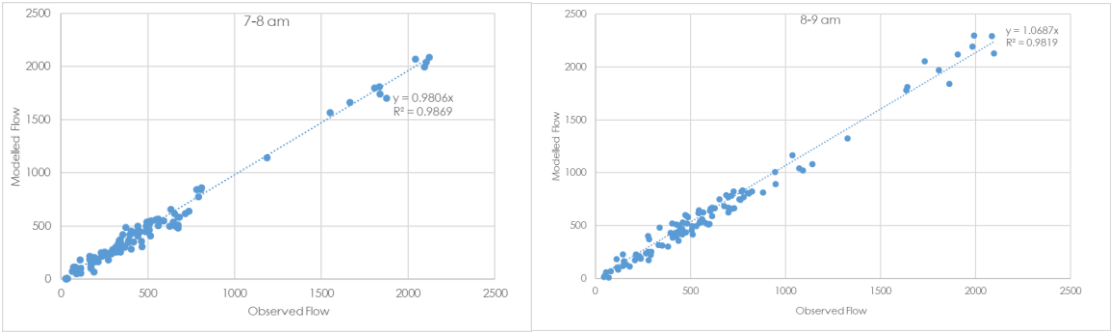


Figure 4.6: Link Volumes Comparison – PM

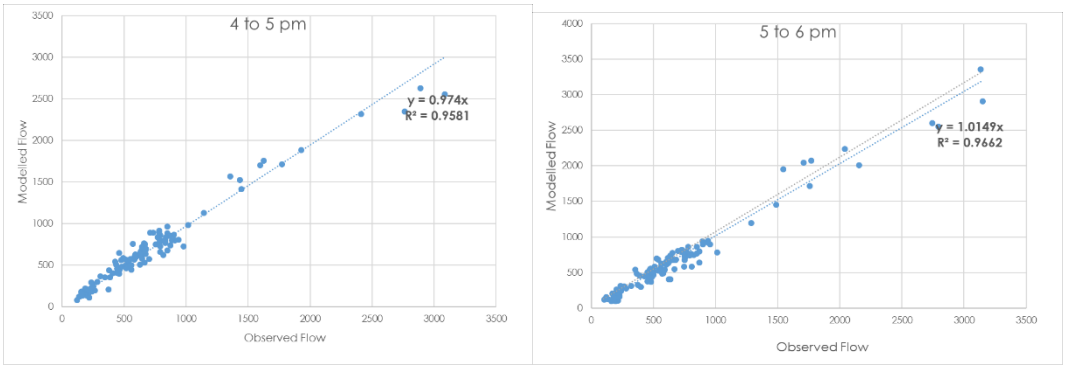
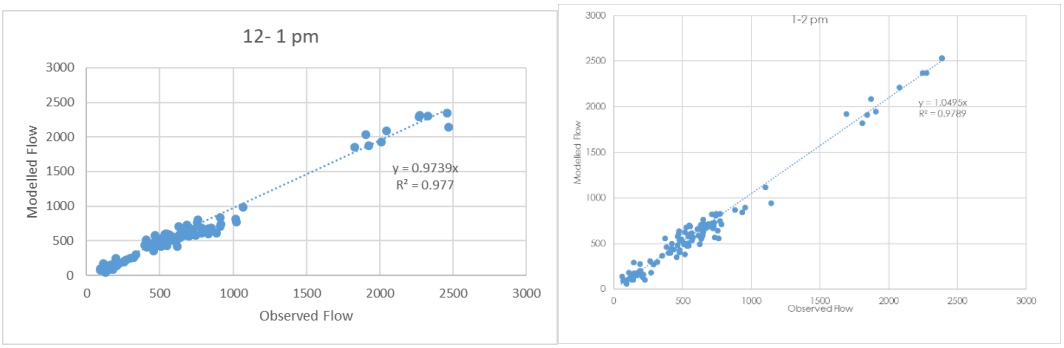


Figure 4.7: Link Volumes Comparison – Saturday



The results of the link volumes comparison illustrate that the model generally meets the calibration criteria. Some minor deviations are observed from the defined criteria. The calibration tables for tube counts and the cordon can be found in Appendix D.

- For the Saturday peak hour of 8-9 am, the cordon has about 4% more traffic as compared to the observed data. This variation is within the day-to-day variations in traffic flow (Section 2) and is considered acceptable.
- For the Saturday peak hour of 12-1 pm, the cordon has about 4% more traffic as compared to the observed data (details in Appendix D). This variation is within the day-to-day variations in traffic flow (Section 2) and is considered acceptable.
- For the PM Peak hour 4-5 pm, the traffic at individual links within the screen lines does not meet the set criteria. However, the modelled traffic is within 20% of the observed counts.

The above analysis shows that there is a good match between the modelled and the observed link counts and any variations reflect day-to-day variation in traffic.

4.5 Model Validation Results

The travel time survey routes as described in Section 2.4 have been used to undertake a comparison between the modelled and observed travel times in order to demonstrate that the base models replicate the existing conditions in terms of travel times and delays.

When interpreting the travel time comparison results, it is important to note that the observed travel times are based on a limited number of travel time runs, whilst the model reports travel times for every single vehicle that traverses the nominated sections.

The following section discusses the outcomes of the travel time validation for vehicles along the surveyed routes, based on meeting the standard within 15% or 60 seconds criteria, with full detailed results of the travel time comparisons provided in Appendix E.

Table 4.3 to Table 4.7 present the travel time comparison for all 3 modelled peak periods. As travel times for AM Peak period were collected for the time period 6-8 am, comparison is provided for the 7-8 am period only.

Table 4.3: Travel Time Comparison – AM Peak (7-8 am)

Route	Direction	Average Observed Travel Time (s)	Average Modelled Travel Time (s)	Difference		Meets Criteria?
				Relative (s)	%	
1	NB	653	559	-94	-14%	Yes
	SB	242	182	-60	-25%	Yes
2	NB	561	522	-39	-7%	Yes
	SB	490	433	-56	-12%	Yes
3	NB	517	494	-23	-4%	Yes
	SB	390	351	-39	-10%	Yes
4	NB	219	220	1	0%	Yes
	SB	210	150	-60	-29%	Yes
5	NB	231	207	-24	-10%	Yes
	SB	254	230	-24	-9%	Yes
6	EB	182	158	-23	-13%	Yes
	WB	177	119	-58	-33%	Yes

Table 4.4: Travel Time Comparison – PM Peak (4-5 pm)

Route	Direction	Average Observed Travel Time (s)	Average Modelled Travel Time (s)	Difference		Meets Criteria?
				Relative (s)	%	
1	NB	488	447	-41	-8%	Yes
	SB	405	385	-20	-5%	Yes
2	NB	540	486	-54	-10%	Yes
	SB	695	427	-268	-39%	No
3	NB	431	426	-4	-1%	Yes
	SB	390	350	-39	-10%	Yes
4	NB	216	218	2	1%	Yes
	SB	189	149	-40	-21%	Yes
5	NB	175	132	-43	-24%	Yes
	SB	166	184	18	11%	Yes
6	EB	159	180	21	13%	Yes
	WB	199	201	2	1%	Yes

Table 4.5: Travel Time Comparison – PM Peak (5-6 pm)

Route	Direction	Average Observed Travel Time (s)	Average Modelled Travel Time (s)	Difference		Meets Criteria?
				Relative (s)	%	
1	NB	571	631	60	10%	Yes
	SB	543	594	52	10%	Yes
2	NB	550	465	-85	-15%	Yes
	SB	595	577	-17	-3%	Yes
3	NB	463	402	-61	-13%	Yes
	SB	370	369	-1	0%	Yes
4	NB	187	185	-2	-1%	Yes
	SB	222	156	-66	-30%	No
5	NB	250	306	56	22%	Yes
	SB	166	207	41	25%	Yes
6	EB	159	144	-15	-9%	Yes
	WB	139	145	6	4%	Yes

Table 4.6: Travel Time Comparison – Saturday (12-1 pm)

Route	Direction	Average Observed Travel Time (s)	Average Modelled Travel Time (s)	Difference		Meets Criteria?
				Relative (s)	%	
1	NB	303	290	-12	-4%	Yes
	SB	299	247	-52	-17%	Yes
2	NB	434	438	4	1%	Yes
	SB	523	600	78	15%	Yes
3	NB	411	419	8	2%	Yes
	SB	300	275	-25	-8%	Yes
4	NB	201	191	-9	-5%	Yes
	SB	194	162	-32	-16%	Yes
5	NB	180	175	-5	-3%	Yes
	SB	170	188	18	11%	Yes
6	EB	164	155	-9	-6%	Yes
	WB	103	121	18	18%	Yes

Table 4.7: Travel Time Comparison (1-2 pm)

Route	Direction	Average Observed Travel Time (s)	Average Modelled Travel Time (s)	Difference		Meets Criteria?
				Relative (s)	%	
1	NB	407	380	-27	-7%	Yes
	SB	331	277	-54	-16%	Yes
2	NB	413	428	16	4%	Yes
	SB	354	380	26	7%	Yes
3	NB	438	406	-32	-7%	Yes
	SB	277	291	14	5%	Yes
4	NB	189	142	-47	-25%	Yes
	SB	180	146	-34	-19%	Yes
5	NB	167	158	-9	-5%	Yes
	SB	179	159	-20	-11%	Yes
6	EB	146	153	7	5%	Yes
	WB	124	102	-21	-17%	Yes

The travel time comparison results illustrate that the model replicates the average speed for the peak direction with a good level of accuracy. The modelled travel time along Chapel Road in the southbound direction is overall faster during the PM peak period (4-5 pm) compared to the observed travel time. There is a signalised pedestrian crossing in front of the TAFE entrance on Chapel Road and is included in the model, however, the timing of the pedestrian signal was assumed as no data was available for its activation timing.

The northbound direction along Chapel Road (Route 2) is closely correlated with the observed in the PM peak. Google Maps traffic data shows a high variability in travel time (between 7-16 minutes) along Chapel Road during the PM Peak. Therefore, it was deemed

that this simulated travel time in both directions during the PM Peak along Chapel Road is still fit for this study purpose and replicates a typical day.

4.6 Visual Inspections

Simulated speed plots at different times were compared to typical traffic conditions estimated by Google Maps. Figure 4.8, Figure 4.9 and Figure 4.10 illustrate a comparison of the modelled average speeds to the Google Maps data. In general, the congestion trends and hot spot locations were found to be similar for all peak periods modelled.

Figure 4.8: Average Speed Comparison – Weekday

Figure 4.9: Average Speed Comparison – Weekday 5:15 pm

Figure 4.10: Average Speed Comparison – Saturday 12:15pm

5. Conclusion

This report has presented the calibration and validation results of the Aimsun microscopic model for Bankstown CBD.

The results presented show that the model demonstrates reasonable 'goodness of fit' with the observed traffic conditions indicating that the model performs well at the network wide level.

The traffic volume comparisons for each of the peaks indicate a high level of correlation between the modelled and observed traffic flows. Some deviations are observed from the set criteria. However, these were deemed minor as they were within the bounds of a day-to day variation in a CBD environment.

The travel time analysis illustrates a reasonably good level of correlation between the modelled and observed travel times, with any discrepancies considered to be minor and justifiable as indicated in the context of this report.

It is our view that the model was successfully calibrated, validated and is fit for its intended purpose to assess the Complete Streets Strategies and its impacts on the wider network.

Appendix A

Tube Count Surveys

Job No	N4085
Client	GTA
Site	Chapel Road
Location	south of Macauley Ave
Site No	1
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

1. Chapel Road

Select Direction

NB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day	7 Day
AM Peak	899	726	1035	1068	992	759	664	Ave	Ave
PM Peak	784	791	799	822	761	695	684	**11576**	**10901**
0:00	69	52	64	71	89	108	129	69	83
1:00	47	32	33	37	49	77	87	40	52
2:00	24	28	43	28	36	42	63	32	38
3:00	36	39	31	31	36	44	53	35	39
4:00	70	83	78	80	76	49	43	77	68
5:00	265	305	295	277	280	123	69	284	231
6:00	719	514	804	816	715	215	122	714	558
7:00	823	548	1035	1047	992	313	214	889	710
8:00	899	726	944	1068	986	594	392	925	801
9:00	765	650	890	880	902	751	553	817	770
10:00	711	595	753	667	711	759	609	687	686
11:00	624	565	684	669	686	748	664	646	663
12:00	643	594	629	629	695	685	684	638	651
13:00	592	612	588	591	658	695	651	608	627
14:00	610	679	677	658	680	662	629	661	656
15:00	656	742	735	729	749	586	563	722	680
16:00	754	768	779	784	761	573	526	769	706
17:00	784	791	799	822	706	635	546	780	726
18:00	664	631	714	772	703	629	580	697	670
19:00	479	492	499	542	584	537	420	519	508
20:00	320	341	332	388	389	360	298	354	347
21:00	241	274	285	321	302	295	247	285	281
22:00	194	193	177	217	247	280	179	206	212
23:00	123	97	116	114	165	217	124	123	137
Total	11112	10351	11984	12238	12197	9977	8445	11576	10901

7-19	8525	7901	9227	9316	9229	7630	6611	8840	8348
6-22	10284	9522	11147	11383	11219	9037	7698	10711	10041
6-24	10601	9812	11440	11714	11631	9534	8001	11040	10390
0-24	11112	10351	11984	12238	12197	9977	8445	11576	10901

Job No	N4085
Client	GTA
Site	Chapel Road
Location	south of Macauley Ave
Site No	1
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

1. Chapel Road

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	627	634	656	694	687	698	614	Ave	Ave
PM Peak	892	913	918	928	869	773	662	**11044**	**10605**
0:00	70	71	90	81	81	165	195	79	108
1:00	39	49	39	44	56	91	113	45	62
2:00	37	30	40	36	42	75	83	37	49
3:00	38	33	34	42	38	61	51	37	42
4:00	62	81	70	48	74	49	45	67	61
5:00	185	196	190	192	192	104	51	191	159
6:00	378	376	360	380	381	219	131	375	318
7:00	437	488	530	486	495	264	191	487	413
8:00	524	634	633	694	618	466	279	621	550
9:00	509	569	575	584	553	584	436	558	544
10:00	608	597	612	623	610	681	540	610	610
11:00	627	623	656	636	687	698	614	646	649
12:00	666	619	631	630	719	773	640	653	668
13:00	681	713	661	688	729	767	649	694	698
14:00	757	750	746	746	776	678	662	755	731
15:00	760	881	918	872	851	691	621	856	799
16:00	868	870	904	879	813	678	628	867	806
17:00	892	913	902	928	869	615	546	901	809
18:00	691	685	765	744	706	573	575	718	677
19:00	514	562	557	643	608	497	458	577	548
20:00	389	445	400	484	451	424	385	434	425
21:00	349	372	359	490	429	440	396	400	405
22:00	210	241	253	287	360	388	257	270	285
23:00	166	128	137	159	241	323	162	166	188
Total	10457	10926	11062	11396	11379	10304	8708	11044	10605

7-19	8020	8342	8533	8510	8426	7468	6381	8366	7954
6-22	9650	10097	10209	10507	10295	9048	7751	10152	9651
6-24	10026	10466	10599	10953	10896	9759	8170	10588	10124
0-24	10457	10926	11062	11396	11379	10304	8708	11044	10605

Job No	N4085
Client	GTA
Site	Marshall Street
Location	south of Macauley Ave
Site No	2
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

2. Marshall Street

Select Direction

NB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	181	280	374	377	301	183	131	Ave	Ave
PM Peak	240	244	250	243	211	172	137	**2746**	**2479**
0:00	5	14	15	12	20	19	21	13	15
1:00	8	10	3	6	8	10	11	7	8
2:00	7	6	10	7	7	10	13	7	9
3:00	8	5	3	7	6	8	8	6	6
4:00	19	21	17	22	19	13	13	20	18
5:00	38	47	48	41	51	27	16	45	38
6:00	105	112	166	138	106	48	21	125	99
7:00	159	207	303	269	212	66	47	230	180
8:00	181	280	374	377	301	122	91	303	247
9:00	156	191	210	247	186	168	128	198	184
10:00	144	146	128	134	133	179	124	137	141
11:00	120	151	129	122	142	183	131	133	140
12:00	135	141	127	102	151	172	137	131	138
13:00	130	112	137	132	140	135	100	130	127
14:00	131	164	196	175	191	149	107	171	159
15:00	178	232	226	224	211	158	94	214	189
16:00	240	244	250	243	211	123	104	238	202
17:00	192	227	225	219	186	143	115	210	187
18:00	142	117	165	194	168	138	100	157	146
19:00	87	105	98	96	111	87	83	99	95
20:00	47	61	70	64	78	78	0	64	57
21:00	37	37	43	43	59	39	0	44	37
22:00	40	35	30	41	40	46	0	37	33
23:00	27	20	20	27	39	30	7	27	24
Total	2336	2685	2993	2942	2776	2151	1471	2746	2479

7-19	1908	2212	2470	2438	2232	1736	1278	2252	2039
6-22	2184	2527	2847	2779	2586	1988	1382	2585	2328
6-24	2251	2582	2897	2847	2665	2064	1389	2648	2385
0-24	2336	2685	2993	2942	2776	2151	1471	2746	2479

Job No	N4085
Client	GTA
Site	Marshall Street
Location	south of Macauley Ave
Site No	2
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

2. Marshall Street

Select Direction

SB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day	7 Day
AM Peak	120	141	147	147	126	157	121	Ave	Ave
PM Peak	194	255	217	236	213	171	148	**2423**	**2275**
0:00	12	9	17	25	24	37	34	17	23
1:00	7	9	13	12	11	21	20	10	13
2:00	5	8	9	11	10	15	24	9	12
3:00	10	8	7	12	7	14	12	9	10
4:00	10	16	19	14	10	13	18	14	14
5:00	33	29	26	30	33	32	14	30	28
6:00	66	68	111	81	82	52	19	82	68
7:00	86	101	121	76	87	44	29	94	78
8:00	97	137	141	145	115	87	50	127	110
9:00	101	140	147	147	111	116	75	129	120
10:00	113	131	118	134	126	154	121	124	128
11:00	120	141	113	124	120	157	115	124	127
12:00	151	134	151	121	127	162	125	137	139
13:00	167	152	137	149	165	171	148	154	156
14:00	161	183	180	162	183	155	130	174	165
15:00	146	255	210	236	209	151	120	211	190
16:00	169	200	217	207	190	162	143	197	184
17:00	194	217	191	192	213	169	138	201	188
18:00	150	159	191	169	183	118	108	170	154
19:00	135	132	145	130	132	120	116	135	130
20:00	64	91	90	119	101	81	5	93	79
21:00	83	83	84	105	71	62	0	85	70
22:00	46	51	46	56	68	77	0	53	49
23:00	43	34	32	43	64	68	5	43	41
Total	2169	2488	2516	2500	2442	2238	1569	2423	2275

7-19	1655	1950	1917	1862	1829	1646	1302	1843	1737
6-22	2003	2324	2347	2297	2215	1961	1442	2237	2084
6-24	2092	2409	2425	2396	2347	2106	1447	2334	2175
0-24	2169	2488	2516	2500	2442	2238	1569	2423	2275

Job No	N4085
Client	GTA
Site	Macauley Ave
Location	east of Megan Ave
Site No	3
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

3. Macauley Ave

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	378	370	483	486	464	457	387	Ave	Ave
PM Peak	530	519	544	502	491	436	413	**6569**	**6360**
0:00	48	39	33	50	61	90	105	46	61
1:00	29	24	28	24	32	46	53	27	34
2:00	23	20	25	22	18	39	42	22	27
3:00	28	22	17	22	27	37	27	23	26
4:00	50	63	73	76	64	49	38	65	59
5:00	163	210	167	163	171	90	48	175	145
6:00	375	328	330	362	315	190	95	342	285
7:00	316	279	333	368	345	194	142	328	282
8:00	370	356	483	476	464	296	205	430	379
9:00	354	339	481	486	451	323	327	422	394
10:00	378	340	338	328	367	410	350	350	359
11:00	345	370	367	351	350	457	387	357	375
12:00	382	359	356	363	359	434	405	364	380
13:00	344	377	373	382	383	390	413	372	380
14:00	367	423	467	419	455	436	407	426	425
15:00	386	383	423	379	412	383	330	397	385
16:00	486	489	540	484	491	391	376	498	465
17:00	530	519	544	502	466	364	370	512	471
18:00	375	396	432	468	433	336	373	421	402
19:00	294	295	316	304	367	318	294	315	313
20:00	228	203	223	264	292	271	219	242	243
21:00	176	168	198	219	208	237	221	194	204
22:00	92	133	138	157	190	227	143	142	154
23:00	99	81	82	86	150	209	86	100	113
Total	6238	6216	6767	6755	6871	6217	5456	6569	6360

7-19	4633	4630	5137	5006	4976	4414	4085	4876	4697
6-22	5706	5624	6204	6155	6158	5430	4914	5969	5742
6-24	5897	5838	6424	6398	6498	5866	5143	6211	6009
0-24	6238	6216	6767	6755	6871	6217	5456	6569	6360

Job No	N4085
Client	GTA
Site	Macauley Ave
Location	east of Megan Ave
Site No	3
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

3. Macauley Ave

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	527	823	747	764	698	542	453		
PM Peak	558	695	740	699	637	545	445		
0:00	63	36	50	48	64	93	113	52	67
1:00	31	29	34	29	39	63	66	32	42
2:00	12	19	20	21	25	40	48	19	26
3:00	23	19	28	31	28	38	33	26	29
4:00	37	35	37	35	40	31	40	37	36
5:00	126	146	169	149	149	75	50	148	123
6:00	403	480	512	460	428	170	88	457	363
7:00	468	728	705	640	671	205	156	642	510
8:00	527	823	747	764	698	348	229	712	591
9:00	417	773	688	640	540	440	324	612	546
10:00	410	559	578	478	487	542	453	502	501
11:00	432	448	444	444	541	535	436	462	469
12:00	460	430	484	414	474	545	422	452	461
13:00	437	444	410	429	458	504	433	436	445
14:00	473	525	516	501	498	480	374	503	481
15:00	558	695	740	699	622	422	380	663	588
16:00	528	632	595	576	575	456	445	581	544
17:00	545	573	574	596	574	483	417	572	537
18:00	492	501	543	552	637	545	414	545	526
19:00	365	370	388	403	435	359	330	392	379
20:00	225	248	265	332	282	268	220	270	263
21:00	205	206	205	308	221	244	203	229	227
22:00	119	131	134	199	219	227	163	160	170
23:00	109	82	83	104	167	183	118	109	121
Total	7465	8932	8949	8852	8872	7296	5955	8614	8046

7-19	5747	7131	7024	6733	6775	5505	4483	6682	6200
6-22	6945	8435	8394	8236	8141	6546	5324	8030	7432
6-24	7173	8648	8611	8539	8527	6956	5605	8300	7723
0-24	7465	8932	8949	8852	8872	7296	5955	8614	8046

Job No	N4085
Client	GTA
Site	Brandon Ave
Location	west of Dale Pde
Site No	5
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

MATRIX Traffic and Transport Data

Select Site

5. Brandon Ave

Select Direction

EB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day	7 Day
AM Peak	482	493	466	461	523	543	457	Ave	Ave
PM Peak	700	737	768	759	689	559	518	**8117**	**7838**
0:00	47	39	36	51	47	103	105	44	61
1:00	17	26	16	14	29	50	48	20	29
2:00	11	11	24	18	13	39	43	15	23
3:00	24	26	22	22	20	31	25	23	24
4:00	52	70	56	54	70	38	39	60	54
5:00	185	198	182	194	190	82	43	190	153
6:00	333	359	358	352	329	199	90	346	289
7:00	347	397	360	397	354	228	161	371	321
8:00	343	428	452	390	412	344	222	405	370
9:00	415	425	386	413	421	495	436	412	427
10:00	468	460	415	461	475	543	435	456	465
11:00	482	493	466	438	523	510	457	480	481
12:00	462	479	441	490	477	536	510	470	485
13:00	489	508	478	502	520	559	486	499	506
14:00	505	558	553	576	605	542	518	559	551
15:00	578	631	633	585	617	522	463	609	576
16:00	693	737	717	702	689	542	430	708	644
17:00	700	735	768	759	658	490	441	724	650
18:00	491	530	536	557	517	450	424	526	501
19:00	358	371	388	396	453	375	372	393	388
20:00	251	281	272	318	331	354	272	291	297
21:00	236	232	237	251	275	286	261	246	254
22:00	152	157	164	162	211	242	158	169	178
23:00	100	65	80	89	164	197	85	100	111
Total	7739	8216	8040	8191	8400	7757	6524	8117	7838

7-19	5973	6381	6205	6270	6268	5761	4983	6219	5977
6-22	7151	7624	7460	7587	7656	6975	5978	7496	7204
6-24	7403	7846	7704	7838	8031	7414	6221	7764	7494
0-24	7739	8216	8040	8191	8400	7757	6524	8117	7838

Job No	N4085
Client	GTA
Site	Brandon Ave
Location	west of Dale Pde
Site No	5
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

5. Brandon Ave

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	421	378	566	557	501	415	339		
PM Peak	440	468	449	448	444	402	330		
								6051	**5728**
0:00	42	40	43	55	47	85	87	45	57
1:00	27	29	26	22	28	53	50	26	34
2:00	13	16	27	15	23	32	47	19	25
3:00	19	24	21	17	21	26	27	20	22
4:00	41	40	34	38	38	29	22	38	35
5:00	148	142	165	154	152	50	44	152	122
6:00	326	279	394	415	331	93	45	349	269
7:00	421	351	566	557	501	118	69	479	369
8:00	398	357	318	276	418	270	142	353	311
9:00	327	378	312	357	389	349	243	353	336
10:00	311	332	369	344	374	415	293	346	348
11:00	312	284	334	324	394	363	339	330	336
12:00	344	346	305	345	390	402	305	346	348
13:00	302	324	309	349	342	391	308	325	332
14:00	325	361	315	331	340	367	324	334	338
15:00	357	445	449	448	444	348	306	429	400
16:00	401	465	432	428	395	324	284	424	390
17:00	440	468	404	392	410	358	294	423	395
18:00	373	360	390	391	402	359	330	383	372
19:00	266	276	286	319	356	314	266	301	298
20:00	195	190	198	217	214	201	188	203	200
21:00	134	163	170	190	166	205	150	165	168
22:00	118	121	128	134	154	171	123	131	136
23:00	77	56	63	77	111	154	76	77	88
Total	5717	5847	6058	6195	6440	5477	4362	6051	5728

7-19	4311	4471	4503	4542	4799	4064	3237	4525	4275
6-22	5232	5379	5551	5683	5866	4877	3886	5542	5211
6-24	5427	5556	5742	5894	6131	5202	4085	5750	5434
0-24	5717	5847	6058	6195	6440	5477	4362	6051	5728

Job No	N4085
Client	GTA
Site	Restwell Street
Location	south of Stanley Street
Site No	6
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

MATRIX Traffic and Transport Data

Select Site

6. Restwell Street

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	426	510	624	668	580	475	352	Ave	Ave
PM Peak	416	465	418	466	441	458	381	**5893**	**5543**
0:00	14	13	21	14	20	29	42	16	22
1:00	12	9	6	9	16	18	17	10	12
2:00	7	5	8	5	10	15	13	7	9
3:00	9	10	10	15	7	17	13	10	12
4:00	18	28	24	29	22	11	15	24	21
5:00	89	98	121	102	118	46	26	106	86
6:00	381	430	478	454	421	99	49	433	330
7:00	416	510	624	668	580	173	110	560	440
8:00	426	478	411	450	472	295	215	447	392
9:00	361	415	467	398	372	427	327	403	395
10:00	364	377	449	361	385	475	332	387	392
11:00	299	327	343	333	354	438	352	331	349
12:00	294	317	342	299	353	458	381	321	349
13:00	295	288	294	268	338	367	360	297	316
14:00	305	309	306	294	315	339	291	306	308
15:00	340	350	407	411	376	285	247	377	345
16:00	416	465	418	440	441	285	270	436	391
17:00	373	424	414	466	389	341	309	413	388
18:00	341	332	394	409	419	383	256	379	362
19:00	214	217	223	259	291	264	172	241	234
20:00	123	160	138	155	180	173	123	151	150
21:00	94	109	137	132	136	118	92	122	117
22:00	70	61	51	86	90	89	64	72	73
23:00	46	29	46	40	65	71	45	45	49
Total	5307	5761	6132	6097	6170	5216	4121	5893	5543

7-19	4230	4592	4869	4797	4794	4266	3450	4656	4428
6-22	5042	5508	5845	5797	5822	4920	3886	5603	5260
6-24	5158	5598	5942	5923	5977	5080	3995	5720	5382
0-24	5307	5761	6132	6097	6170	5216	4121	5893	5543

Job No	N4085
Client	GTA
Site	Restwell Street
Location	south of Stanley Street
Site No	6
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

6. Restwell Street

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	240	237	214	249	250	265	213		
PM Peak	360	384	378	356	383	282	254		
								3935	**3739**
0:00	13	25	32	29	24	48	52	25	32
1:00	14	16	15	15	13	27	29	15	18
2:00	12	12	11	12	15	21	23	12	15
3:00	11	9	8	14	13	23	17	11	14
4:00	12	11	16	16	9	9	15	13	13
5:00	38	37	36	31	38	23	11	36	31
6:00	90	106	116	93	101	38	36	101	83
7:00	127	154	156	173	142	77	61	150	127
8:00	181	216	207	209	209	134	102	204	180
9:00	199	212	207	181	190	188	150	198	190
10:00	240	200	214	237	222	212	213	223	220
11:00	228	237	205	249	250	265	207	234	234
12:00	250	225	220	236	261	260	230	238	240
13:00	273	269	261	258	265	282	254	265	266
14:00	256	306	282	324	309	246	229	295	279
15:00	283	301	312	313	325	264	212	307	287
16:00	307	338	378	338	328	268	246	338	315
17:00	360	384	359	356	383	242	222	368	329
18:00	273	280	259	289	262	192	202	273	251
19:00	198	205	208	241	226	175	150	216	200
20:00	136	154	132	162	156	115	119	148	139
21:00	103	130	113	174	140	123	111	132	128
22:00	59	85	69	73	97	114	108	77	86
23:00	57	44	43	64	76	104	45	57	62
Total	3720	3956	3859	4087	4054	3450	3044	3935	3739

7-19	2977	3122	3060	3163	3146	2630	2328	3094	2918
6-22	3504	3717	3629	3833	3769	3081	2744	3690	3468
6-24	3620	3846	3741	3970	3942	3299	2897	3824	3616
0-24	3720	3956	3859	4087	4054	3450	3044	3935	3739

Job No	N4085
Client	GTA
Site	Chapel Road
Location	south of Greenfield Pde
Site No	8
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

8. Chapel Road

Select Direction

NB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day	7 Day
AM Peak	251	252	320	289	308	230	255	Ave	Ave
PM Peak	271	282	287	279	267	259	257	**3694**	**3613**
0:00	26	14	27	20	27	55	59	23	33
1:00	17	13	11	14	17	22	33	14	18
2:00	10	11	14	10	15	12	29	12	14
3:00	11	15	12	17	7	10	21	12	13
4:00	19	27	16	21	33	14	24	23	22
5:00	69	95	79	87	78	50	29	82	70
6:00	178	167	179	185	177	95	49	177	147
7:00	133	229	320	173	260	109	110	223	191
8:00	230	251	298	7	308	121	198	219	202
9:00	251	251	272	146	250	83	255	234	215
10:00	233	252	250	289	270	230	252	259	254
11:00	245	243	260	278	253	211	235	256	246
12:00	271	252	255	242	261	259	207	256	250
13:00	269	263	246	159	244	247	207	236	234
14:00	250	232	246	82	233	259	254	209	222
15:00	228	242	240	240	257	232	254	241	242
16:00	261	282	287	279	267	106	257	275	248
17:00	165	231	259	200	182	219	253	207	216
18:00	33	141	257	107	144	201	255	136	163
19:00	216	94	210	224	236	231	236	196	207
20:00	129	38	145	203	200	197	177	143	156
21:00	131	124	128	66	151	75	151	120	118
22:00	89	96	72	81	120	0	115	92	82
23:00	48	28	36	54	74	75	46	48	52
Total	3512	3591	4119	3184	4064	3113	3706	3694	3613

7-19	2569	2869	3190	2202	2929	2277	2737	2752	2682
6-22	3223	3292	3852	2880	3693	2875	3350	3388	3309
6-24	3360	3416	3960	3015	3887	2950	3511	3528	3443
0-24	3512	3591	4119	3184	4064	3113	3706	3694	3613

Job No	N4085
Client	GTA
Site	Chapel Road
Location	south of Greenfield Pde
Site No	8
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

8. Chapel Road

Select Direction

SB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day	7 Day
AM Peak	155	162	189	164	162	222	155	Ave	Ave
PM Peak	239	247	253	251	256	249	237	**2766**	**2802**
0:00	33	27	44	40	40	90	108	37	55
1:00	11	23	19	23	22	46	56	20	29
2:00	29	12	18	16	23	36	52	20	27
3:00	22	14	10	15	11	33	36	14	20
4:00	12	25	18	16	23	18	18	19	19
5:00	26	30	28	30	32	28	19	29	28
6:00	37	49	50	57	53	43	41	49	47
7:00	40	68	94	47	77	24	54	65	58
8:00	94	109	117	2	132	51	76	91	83
9:00	102	106	114	78	148	48	118	110	102
10:00	131	157	132	139	155	158	134	143	144
11:00	155	162	189	164	162	222	155	166	173
12:00	192	178	191	193	186	249	170	188	194
13:00	184	195	206	137	256	237	193	196	201
14:00	221	247	200	76	225	215	203	194	198
15:00	170	247	253	251	227	180	217	230	221
16:00	239	234	228	224	243	80	237	234	212
17:00	164	240	237	180	190	180	189	202	197
18:00	30	127	209	53	102	217	187	104	132
19:00	183	87	208	194	214	186	229	177	186
20:00	154	31	140	168	202	176	183	139	151
21:00	141	167	168	85	167	120	185	146	148
22:00	100	114	101	103	165	0	96	117	97
23:00	78	65	59	59	129	127	66	78	83
Total	2548	2714	3033	2350	3184	2764	3022	2766	2802

7-19	1722	2070	2170	1544	2103	1861	1933	1922	1915
6-22	2237	2404	2736	2048	2739	2386	2571	2433	2446
6-24	2415	2583	2896	2210	3033	2513	2733	2627	2626
0-24	2548	2714	3033	2350	3184	2764	3022	2766	2802

Job No	N4085
Client	GTA
Site	Stanley Street
Location	east of Restwell Street
Site No	9
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

9. Stanley Street

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	202	218	244	248	230	163	103	Ave	Ave
PM Peak	201	206	205	257	208	180	113	**2418**	**2189**
0:00	8	7	9	7	7	15	15	8	10
1:00	5	3	6	6	9	8	8	6	6
2:00	5	1	5	2	6	10	4	4	5
3:00	3	8	6	9	4	2	2	6	5
4:00	13	11	10	9	10	8	6	11	10
5:00	24	32	28	31	35	17	9	30	25
6:00	121	123	103	137	126	22	19	122	93
7:00	146	218	244	248	230	54	41	217	169
8:00	146	186	203	207	188	90	87	186	158
9:00	202	211	232	206	197	152	94	210	185
10:00	138	143	159	135	133	163	103	142	139
11:00	138	124	120	104	130	162	103	123	126
12:00	119	130	139	111	145	180	104	129	133
13:00	158	125	127	114	100	119	113	125	122
14:00	132	112	129	42	148	125	101	113	113
15:00	132	184	205	194	208	118	87	185	161
16:00	201	206	186	257	178	107	96	206	176
17:00	197	193	197	220	158	105	113	193	169
18:00	130	150	159	165	146	105	82	150	134
19:00	82	93	93	90	106	78	60	93	86
20:00	55	59	56	53	73	68	44	59	58
21:00	36	52	58	57	58	44	45	52	50
22:00	28	33	27	37	39	50	31	33	35
23:00	14	18	20	16	23	38	29	18	23
Total	2233	2422	2521	2457	2457	1840	1396	2418	2189

7-19	1839	1982	2100	2003	1961	1480	1124	1977	1784
6-22	2133	2309	2410	2340	2324	1692	1292	2303	2071
6-24	2175	2360	2457	2393	2386	1780	1352	2354	2129
0-24	2233	2422	2521	2457	2457	1840	1396	2418	2189

Job No	N4085
Client	GTA
Site	Stanley Street
Location	east of Restwell Street
Site No	9
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

9. Stanley Street

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	147	134	156	138	128	155	148	Ave	Ave
PM Peak	201	192	179	196	198	215	161	**2226**	**2246**
0:00	16	23	27	26	21	38	43	23	28
1:00	9	15	17	10	13	30	30	13	18
2:00	11	10	16	14	16	22	29	13	17
3:00	10	17	22	22	20	27	20	18	20
4:00	20	24	19	18	17	15	15	20	18
5:00	29	35	36	36	36	34	23	34	33
6:00	53	59	51	64	69	49	31	59	54
7:00	87	87	90	91	80	51	50	87	77
8:00	95	130	156	138	125	98	71	129	116
9:00	132	134	142	130	128	136	111	133	130
10:00	147	123	103	123	121	136	129	123	126
11:00	111	115	108	124	117	155	148	115	125
12:00	129	126	110	120	139	180	161	125	138
13:00	145	131	117	115	146	166	161	131	140
14:00	134	116	130	46	156	126	125	116	119
15:00	146	152	155	137	168	159	129	152	149
16:00	154	153	166	148	151	167	126	154	152
17:00	201	192	179	196	192	185	139	192	183
18:00	175	174	161	157	198	215	156	173	177
19:00	137	146	136	135	179	157	130	147	146
20:00	89	97	87	93	119	99	84	97	95
21:00	62	79	72	88	93	100	77	79	82
22:00	44	56	54	51	78	87	70	57	63
23:00	20	37	39	44	44	68	33	37	41
Total	2156	2231	2193	2126	2426	2500	2091	2226	2246

7-19	1656	1633	1617	1525	1721	1774	1506	1630	1633
6-22	1997	2014	1963	1905	2181	2179	1828	2012	2010
6-24	2061	2107	2056	2000	2303	2334	1931	2105	2113
0-24	2156	2231	2193	2126	2426	2500	2091	2226	2246

Job No	N4085
Client	GTA
Site	Cross Street
Location	north of Stanley Street
Site No	10
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

10. Cross Street

Select Direction

NB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	237	282	312	327	289	171	119	Ave	Ave
PM Peak	196	222	216	250	219	176	162	**2803**	**2613**
0:00	12	17	13	18	17	28	24	15	18
1:00	11	7	3	3	9	14	13	7	9
2:00	5	7	3	10	5	15	10	6	8
3:00	4	6	4	6	6	17	5	5	7
4:00	16	8	9	9	12	13	11	11	11
5:00	40	42	38	41	42	24	19	41	35
6:00	93	108	107	129	107	36	32	109	87
7:00	162	193	221	207	235	77	78	204	168
8:00	188	282	312	327	261	127	99	274	228
9:00	237	271	266	264	289	154	113	265	228
10:00	142	177	153	161	151	148	119	157	150
11:00	174	173	135	154	170	171	113	161	156
12:00	109	131	139	147	163	172	138	138	143
13:00	148	169	136	145	140	165	158	148	152
14:00	132	169	162	180	165	139	127	162	153
15:00	156	222	216	250	219	145	137	213	192
16:00	196	200	200	226	189	141	112	202	181
17:00	177	183	180	213	147	176	140	180	174
18:00	136	174	161	171	186	172	162	166	166
19:00	80	111	118	114	141	161	99	113	118
20:00	86	91	71	87	84	93	81	84	85
21:00	67	59	66	68	73	61	55	67	64
22:00	46	44	41	47	61	74	29	48	49
23:00	22	23	33	34	40	45	33	30	33
Total	2439	2867	2787	3011	2912	2368	1907	2803	2613

7-19	1957	2344	2281	2445	2315	1787	1496	2268	2089
6-22	2283	2713	2643	2843	2720	2138	1763	2640	2443
6-24	2351	2780	2717	2924	2821	2257	1825	2719	2525
0-24	2439	2867	2787	3011	2912	2368	1907	2803	2613

Job No	N4085
Client	GTA
Site	Cross Street
Location	north of Stanley Street
Site No	10
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

10. Cross Street

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	147	223	209	232	217	203	179	Ave	Ave
PM Peak	238	269	283	271	280	202	181	**3045**	**2945**
0:00	19	21	17	31	28	46	80	23	35
1:00	13	13	14	9	16	24	24	13	16
2:00	9	5	14	12	11	24	28	10	15
3:00	14	14	10	13	11	23	28	12	16
4:00	25	14	23	23	26	10	14	22	19
5:00	49	52	38	48	43	33	27	46	41
6:00	101	124	135	118	128	72	40	121	103
7:00	94	140	148	159	147	72	55	138	116
8:00	109	223	209	232	217	95	81	198	167
9:00	147	162	148	165	132	159	111	151	146
10:00	141	142	142	153	152	184	179	146	156
11:00	134	148	159	139	154	203	144	147	154
12:00	114	157	147	164	170	202	120	150	153
13:00	145	171	173	154	210	173	153	171	168
14:00	160	192	204	193	217	186	181	193	190
15:00	184	269	283	271	280	178	170	257	234
16:00	238	256	211	228	262	165	176	239	219
17:00	236	267	233	225	250	163	161	242	219
18:00	198	216	188	197	204	156	168	201	190
19:00	111	157	169	175	193	152	160	161	160
20:00	110	121	145	139	174	147	133	138	138
21:00	105	95	121	121	124	137	107	113	116
22:00	78	104	73	89	107	137	96	90	98
23:00	41	64	47	63	94	146	66	62	74
Total	2575	3127	3051	3121	3350	2887	2502	3045	2945

7-19	1900	2343	2245	2280	2395	1936	1699	2233	2114
6-22	2327	2840	2815	2833	3014	2444	2139	2766	2630
6-24	2446	3008	2935	2985	3215	2727	2301	2918	2802
0-24	2575	3127	3051	3121	3350	2887	2502	3045	2945

Job No	N4085
Client	GTA
Site	Raymond Street
Location	west of Cross Street
Site No	11
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

11. Raymond Street

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	90	114	125	108	102	109	66	Ave	Ave
PM Peak	140	155	145	148	156	113	117	**1747**	**1698**
0:00	14	13	9	17	18	30	48	14	21
1:00	11	8	7	7	12	12	19	9	11
2:00	8	4	4	6	6	15	18	6	9
3:00	4	5	7	7	9	11	21	6	9
4:00	7	4	12	8	12	4	9	9	8
5:00	24	31	22	25	28	16	15	26	23
6:00	53	60	60	58	59	37	17	58	49
7:00	55	74	77	77	77	45	25	72	61
8:00	64	114	125	108	101	48	43	102	86
9:00	79	97	99	96	101	88	60	94	89
10:00	80	89	81	103	102	105	63	91	89
11:00	90	93	78	75	90	109	66	85	86
12:00	85	84	92	95	97	110	74	91	91
13:00	90	102	104	97	150	102	93	109	105
14:00	112	111	99	111	131	113	109	113	112
15:00	91	129	145	148	141	111	86	131	122
16:00	140	155	131	133	156	88	92	143	128
17:00	133	148	137	125	151	103	87	139	126
18:00	108	118	105	118	122	111	117	114	114
19:00	83	65	106	103	128	106	97	97	98
20:00	71	62	76	73	107	90	86	78	81
21:00	72	66	76	79	90	87	81	77	79
22:00	44	44	44	49	60	90	67	48	57
23:00	29	36	30	27	59	76	47	36	43
Total	1547	1712	1726	1745	2007	1707	1440	1747	1698

7-19	1127	1314	1273	1286	1419	1133	915	1284	1210
6-22	1406	1567	1591	1599	1803	1453	1196	1593	1516
6-24	1479	1647	1665	1675	1922	1619	1310	1678	1617
0-24	1547	1712	1726	1745	2007	1707	1440	1747	1698

Job No	N4085
Client	GTA
Site	Raymond Street
Location	west of Cross Street
Site No	11
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

11. Raymond Street

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	151	197	209	213	184	126	135	Ave	Ave
PM Peak	160	198	188	210	195	148	142	**2097**	**1977**
0:00	17	17	13	11	14	21	23	14	17
1:00	7	7	4	4	8	12	13	6	8
2:00	6	6	4	6	4	10	12	5	7
3:00	5	6	5	4	7	15	6	5	7
4:00	10	8	12	11	19	14	8	12	12
5:00	27	30	25	26	34	16	10	28	24
6:00	47	45	56	65	58	27	15	54	45
7:00	99	115	113	108	121	56	36	111	93
8:00	118	197	209	213	160	87	63	179	150
9:00	151	171	148	142	184	113	77	159	141
10:00	104	119	97	111	106	118	135	107	113
11:00	127	118	110	128	138	126	96	124	120
12:00	100	113	120	110	106	105	111	110	109
13:00	122	117	118	119	134	121	94	122	118
14:00	97	124	116	126	137	112	103	120	116
15:00	128	173	188	210	195	122	94	179	159
16:00	155	198	169	175	145	105	91	168	148
17:00	160	170	164	169	167	139	120	166	156
18:00	101	125	129	130	144	148	142	126	131
19:00	100	77	104	104	129	123	95	103	105
20:00	69	74	62	64	78	73	65	69	69
21:00	61	59	52	51	72	58	58	59	59
22:00	42	29	30	44	67	61	42	42	45
23:00	24	24	24	26	32	37	27	26	28
Total	1877	2122	2072	2157	2259	1819	1536	2097	1977

7-19	1462	1740	1681	1741	1737	1352	1162	1672	1554
6-22	1739	1995	1955	2025	2074	1633	1395	1958	1831
6-24	1805	2048	2009	2095	2173	1731	1464	2026	1904
0-24	1877	2122	2072	2157	2259	1819	1536	2097	1977

Job No	N4085
Client	GTA
Site	East Terrace
Location	south of South Terrace
Site No	12
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

12. East Terrace

Select Direction

NB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	157	247	285	260	241	145	167	Ave	Ave
PM Peak	171	197	198	212	184	166	130	**2401**	**2251**
0:00	9	9	6	7	11	17	37	8	14
1:00	17	2	2	5	6	14	18	6	9
2:00	5	5	2	10	2	8	13	5	6
3:00	3	5	7	5	9	11	9	6	7
4:00	8	11	12	10	11	12	10	10	11
5:00	51	53	50	51	56	27	18	52	44
6:00	99	123	114	121	106	38	28	113	90
7:00	134	173	192	184	185	59	36	174	138
8:00	140	247	285	260	230	104	66	232	190
9:00	157	217	198	183	241	129	90	199	174
10:00	113	152	146	150	154	135	167	143	145
11:00	137	140	108	120	69	145	126	115	121
12:00	105	119	116	115	119	166	123	115	123
13:00	113	137	139	127	135	75	130	130	122
14:00	157	149	133	135	155	141	107	146	140
15:00	152	197	198	212	171	122	121	186	168
16:00	171	172	175	187	184	123	93	178	158
17:00	114	196	171	188	123	126	105	158	146
18:00	112	142	136	152	141	162	123	137	138
19:00	91	91	111	111	142	150	83	109	111
20:00	70	70	62	79	77	99	68	72	75
21:00	47	55	53	70	44	73	48	54	56
22:00	41	26	33	36	8	65	48	29	37
23:00	15	2	28	35	41	55	33	24	30
Total	2061	2493	2477	2553	2420	2056	1700	2401	2251

7-19	1605	2041	1997	2013	1907	1487	1287	1913	1762
6-22	1912	2380	2337	2394	2276	1847	1514	2260	2094
6-24	1968	2408	2398	2465	2325	1967	1595	2313	2161
0-24	2061	2493	2477	2553	2420	2056	1700	2401	2251

Job No	N4085
Client	GTA
Site	East Terrace
Location	south of South Terrace
Site No	12
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

12. East Terrace

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	140	284	265	274	241	209	176	Ave	Ave
PM Peak	247	304	284	280	257	199	176	**2995**	**2885**
0:00	20	27	18	24	25	36	51	23	29
1:00	18	9	13	12	11	28	19	13	16
2:00	8	10	15	9	11	14	28	11	14
3:00	11	9	7	12	14	23	20	11	14
4:00	12	16	20	16	27	15	17	18	18
5:00	41	41	35	42	41	28	16	40	35
6:00	86	105	113	100	115	53	43	104	88
7:00	103	159	152	165	164	64	61	149	124
8:00	106	284	265	274	241	100	115	234	198
9:00	140	178	157	151	141	140	127	153	148
10:00	127	149	151	130	174	185	163	146	154
11:00	127	138	153	153	76	209	176	129	147
12:00	149	166	159	157	148	183	152	156	159
13:00	137	166	187	158	196	102	149	169	156
14:00	172	232	229	200	244	180	176	215	205
15:00	201	276	284	280	234	194	155	255	232
16:00	247	275	223	245	257	199	152	249	228
17:00	168	304	250	254	235	169	156	242	219
18:00	177	206	177	190	197	197	172	189	188
19:00	139	152	166	178	181	199	150	163	166
20:00	108	126	133	137	141	138	116	129	128
21:00	90	88	102	110	61	116	90	90	94
22:00	73	63	62	85	18	101	93	60	71
23:00	37	12	45	57	80	105	48	46	55
Total	2497	3191	3116	3139	3032	2778	2445	2995	2885

7-19	1854	2533	2387	2357	2307	1922	1754	2288	2159
6-22	2277	3004	2901	2882	2805	2428	2153	2774	2636
6-24	2387	3079	3008	3024	2903	2634	2294	2880	2761
0-24	2497	3191	3116	3139	3032	2778	2445	2995	2885

Job No	N4085
Client	GTA
Site	South Terrace
Location	east of East Terrace
Site No	13
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

13. South Terrace

Select Direction

EB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day Ave	7 Day Ave
AM Peak	358	446	484	450	439	444	397	Ave	Ave
PM Peak	633	624	655	660	625	553	509	**7684**	**7428**
0:00	52	37	50	47	69	92	122	51	67
1:00	39	22	23	26	30	53	84	28	40
2:00	32	26	24	30	27	31	54	28	32
3:00	19	28	19	19	17	32	35	20	24
4:00	34	39	45	44	46	37	25	42	39
5:00	137	165	146	154	179	83	44	156	130
6:00	316	364	371	362	331	156	71	349	282
7:00	352	446	484	450	435	187	114	433	353
8:00	352	430	453	422	429	324	196	417	372
9:00	334	431	428	401	439	361	284	407	383
10:00	339	425	396	342	425	435	319	385	383
11:00	358	384	369	370	431	444	397	382	393
12:00	427	392	431	399	408	481	440	411	425
13:00	404	420	486	456	428	523	485	439	457
14:00	464	516	509	535	525	553	450	510	507
15:00	485	609	504	516	553	501	429	533	514
16:00	611	623	650	660	614	481	509	632	593
17:00	633	624	655	629	625	490	450	633	587
18:00	478	483	525	509	529	467	437	505	490
19:00	352	353	396	400	399	439	378	380	388
20:00	310	306	298	436	362	360	336	342	344
21:00	256	265	255	342	306	292	279	285	285
22:00	208	182	187	179	244	260	214	200	211
23:00	79	95	110	119	172	213	127	115	131
Total	7071	7665	7814	7847	8023	7295	6279	7684	7428

7-19	5237	5783	5890	5689	5841	5247	4510	5688	5457
6-22	6471	7071	7210	7229	7239	6494	5574	7044	6755
6-24	6758	7348	7507	7527	7655	6967	5915	7359	7097
0-24	7071	7665	7814	7847	8023	7295	6279	7684	7428

Job No	N4085
Client	GTA
Site	South Terrace
Location	east of East Terrace
Site No	13
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

13. South Terrace

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	487	692	755	714	670	656	542	Ave	Ave
PM Peak	643	682	657	659	678	642	562	**9012**	**8780**
0:00	76	62	55	78	85	114	154	71	89
1:00	42	28	34	35	45	75	96	37	51
2:00	30	29	30	26	27	51	66	28	37
3:00	30	26	20	20	32	63	56	26	35
4:00	30	43	46	46	58	47	46	45	45
5:00	116	118	125	131	140	88	61	126	111
6:00	230	262	273	266	262	150	85	259	218
7:00	349	424	443	446	430	210	129	418	347
8:00	470	692	755	714	670	413	242	660	565
9:00	487	634	601	655	562	496	413	588	550
10:00	482	557	544	519	541	600	459	529	529
11:00	480	506	525	504	555	656	542	514	538
12:00	539	559	547	549	500	630	520	539	549
13:00	495	550	547	546	678	642	510	563	567
14:00	491	572	583	528	592	616	543	553	561
15:00	587	682	657	655	662	579	475	649	614
16:00	643	661	640	659	626	522	493	646	606
17:00	569	655	611	659	635	547	486	626	595
18:00	558	522	562	641	607	581	562	578	576
19:00	418	447	505	607	537	517	476	503	501
20:00	333	398	389	409	434	440	402	393	401
21:00	292	276	307	356	348	337	299	316	316
22:00	207	193	177	204	274	298	234	211	227
23:00	75	156	108	139	201	237	147	136	152
Total	8029	9052	9084	9392	9501	8909	7496	9012	8780

7-19	6150	7014	7015	7075	7058	6492	5374	6862	6597
6-22	7423	8397	8489	8713	8639	7936	6636	8332	8033
6-24	7705	8746	8774	9056	9114	8471	7017	8679	8412
0-24	8029	9052	9084	9392	9501	8909	7496	9012	8780

Job No	N4085
Client	GTA
Site	South Terrace
Location	east of Stacey Street
Site No	14
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

14. South Terrace

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	385	490	508	479	462	484	401	Ave	Ave
PM Peak	699	736	765	745	696	566	527	**8294**	**7969**
0:00	52	41	54	53	75	95	132	55	72
1:00	43	23	24	26	32	54	92	30	42
2:00	31	26	28	31	28	36	57	29	34
3:00	22	33	22	22	20	34	37	24	27
4:00	41	42	50	46	49	38	27	46	42
5:00	152	176	162	165	180	86	47	167	138
6:00	333	384	404	377	363	161	76	372	300
7:00	385	490	507	479	456	199	121	463	377
8:00	361	474	508	451	462	336	191	451	398
9:00	345	450	460	413	448	381	295	423	399
10:00	361	430	412	355	445	458	344	401	401
11:00	375	414	403	386	451	484	401	406	416
12:00	430	395	440	423	440	542	455	426	446
13:00	421	413	481	476	464	563	512	451	476
14:00	493	557	512	553	530	566	468	529	526
15:00	503	696	606	611	643	545	449	612	579
16:00	656	722	714	745	696	522	527	707	655
17:00	699	736	765	741	696	522	478	727	662
18:00	521	563	596	592	621	519	465	579	554
19:00	375	385	410	434	420	432	389	405	406
20:00	315	318	313	448	391	385	340	357	359
21:00	268	285	268	340	305	309	293	293	295
22:00	221	209	202	209	260	278	225	220	229
23:00	88	98	114	132	182	220	129	123	138
Total	7491	8360	8455	8508	8657	7765	6550	8294	7969

7-19	5550	6340	6404	6225	6352	5637	4706	6174	5888
6-22	6841	7712	7799	7824	7831	6924	5804	7601	7248
6-24	7150	8019	8115	8165	8273	7422	6158	7944	7615
0-24	7491	8360	8455	8508	8657	7765	6550	8294	7969

Job No	N4085
Client	GTA
Site	South Terrace
Location	east of Stacey Street
Site No	14
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

14. South Terrace

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	419	638	666	609	547	500	455		
PM Peak	539	559	551	564	543	510	480	**7464**	**7294**
0:00	66	58	51	69	76	102	134	64	79
1:00	34	28	32	30	40	68	84	33	45
2:00	27	25	27	23	23	42	58	25	32
3:00	26	22	18	18	30	55	51	23	31
4:00	26	40	43	38	54	47	45	40	42
5:00	102	101	102	118	123	82	53	109	97
6:00	206	233	242	234	237	134	78	230	195
7:00	314	376	397	403	357	170	103	369	303
8:00	419	638	666	609	547	339	203	576	489
9:00	374	515	514	527	459	408	337	478	448
10:00	393	423	419	413	428	485	374	415	419
11:00	390	405	401	395	395	500	455	397	420
12:00	416	434	408	407	400	504	439	413	430
13:00	397	434	428	421	542	499	413	444	448
14:00	393	483	470	427	476	489	444	450	455
15:00	476	513	498	490	483	488	381	492	476
16:00	539	559	551	551	501	433	412	540	507
17:00	480	545	514	564	543	461	416	529	503
18:00	490	469	476	546	500	510	480	496	496
19:00	365	381	448	506	442	448	433	428	432
20:00	285	344	339	355	369	374	349	338	345
21:00	249	251	257	299	283	297	255	268	270
22:00	177	164	161	189	236	272	211	185	201
23:00	67	137	101	126	164	203	125	119	132
Total	6711	7578	7563	7758	7708	7410	6333	7464	7294

7-19	5081	5794	5742	5753	5631	5286	4457	5600	5392
6-22	6186	7003	7028	7147	6962	6539	5572	6865	6634
6-24	6430	7304	7290	7462	7362	7014	5908	7170	6967
0-24	6711	7578	7563	7758	7708	7410	6333	7464	7294

Job No	N4085
Client	GTA
Site	Marion Street
Location	east of Oxford Ave
Site No	15
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

15. Marion Street

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	1118	1338	1301	1322	1372	915	835		
PM Peak	779	948	903	906	926	882	838	13301	12620
0:00	73	55	53	57	68	121	128	61	79
1:00	32	28	32	36	41	63	71	34	43
2:00	31	24	25	29	28	29	54	27	31
3:00	37	35	24	33	33	38	50	32	36
4:00	85	96	94	96	96	58	43	93	81
5:00	283	361	352	346	350	149	78	338	274
6:00	572	738	646	671	604	277	123	646	519
7:00	863	1223	1192	1179	1107	438	294	1113	899
8:00	1118	1338	1301	1322	1372	829	522	1290	1115
9:00	905	1131	1044	1066	1057	871	788	1041	980
10:00	745	893	795	801	859	915	776	819	826
11:00	736	756	680	694	764	911	835	726	768
12:00	691	672	657	659	806	882	838	697	744
13:00	647	690	641	603	763	770	786	669	700
14:00	625	827	769	750	817	732	618	758	734
15:00	756	948	903	891	926	702	650	885	825
16:00	779	789	833	906	822	676	578	826	769
17:00	752	748	790	906	828	691	639	805	765
18:00	704	714	762	815	820	762	685	763	752
19:00	562	587	576	612	653	631	503	598	589
20:00	359	399	402	477	441	402	357	416	405
21:00	304	316	309	290	338	335	305	311	314
22:00	213	188	203	232	270	299	208	221	230
23:00	132	105	112	129	182	201	121	132	140
Total	12004	13661	13195	13600	14045	11782	10050	13301	12620

7-19	9321	10729	10367	10592	10941	9179	8009	10390	9877
6-22	11118	12769	12300	12642	12977	10824	9297	12361	11704
6-24	11463	13062	12615	13003	13429	11324	9626	12714	12075
0-24	12004	13661	13195	13600	14045	11782	10050	13301	12620

Job No	N4085
Client	GTA
Site	Marion Street
Location	east of Oxford Ave
Site No	15
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

15. Marion Street

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	654	780	788	800	834	822	680		
PM Peak	1206	1260	1333	1278	1376	1009	837		
0:00	84	91	103	101	119	217	259	100	139
1:00	55	47	54	43	71	129	140	54	77
2:00	37	36	41	55	32	72	101	40	53
3:00	34	31	34	37	41	70	64	35	44
4:00	50	58	49	60	78	55	55	59	58
5:00	152	169	173	166	170	106	86	166	146
6:00	285	307	350	345	345	199	109	326	277
7:00	409	519	546	509	464	261	169	489	411
8:00	424	780	727	693	649	415	294	655	569
9:00	553	670	628	639	648	576	487	628	600
10:00	597	669	655	662	660	822	653	649	674
11:00	654	734	788	800	834	775	680	762	752
12:00	659	765	663	700	878	1008	746	733	774
13:00	759	868	678	738	789	950	789	766	796
14:00	862	1059	935	906	938	956	729	940	912
15:00	961	1242	1118	1130	1154	982	746	1121	1048
16:00	1053	1260	1142	1136	1260	946	837	1170	1091
17:00	1206	1246	1333	1278	1376	1009	764	1288	1173
18:00	1017	1049	1041	1037	999	803	749	1029	956
19:00	707	786	745	828	783	652	668	770	738
20:00	539	591	593	707	624	581	606	611	606
21:00	439	464	524	614	561	540	498	520	520
22:00	386	353	334	351	454	567	386	376	404
23:00	244	178	213	238	348	442	234	244	271
Total	12166	13972	13467	13773	14275	13133	10849	13531	13091

7-19	9154	10861	10254	10228	10649	9503	7643	10229	9756
6-22	11124	13009	12466	12722	12962	11475	9524	12457	11897
6-24	11754	13540	13013	13311	13764	12484	10144	13076	12573
0-24	12166	13972	13467	13773	14275	13133	10849	13531	13091

Job No	N4085
Client	GTA
Site	Kichener Pde
Location	north of Cole Ln
Site No	16
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

16. Kichener Pde

Select Direction

NB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	106	142	124	1	120	95	46	Ave	Ave
PM Peak	90	101	35	2	97	86	48	**672**	**661**
0:00	4	1	3	0	2	5	1	2	2
1:00	1	3	0	0	5	3	2	2	2
2:00	0	2	1	0	1	1	2	1	1
3:00	2	1	0	0	0	3	1	1	1
4:00	1	0	3	0	1	1	1	1	1
5:00	2	3	1	0	2	4	1	2	2
6:00	12	11	13	0	17	10	5	11	10
7:00	33	31	28	0	36	25	1	26	22
8:00	70	66	72	1	91	59	7	60	52
9:00	106	126	124	0	112	82	35	94	84
10:00	21	123	6	1	120	61	46	54	54
11:00	38	142	44	0	102	95	34	65	65
12:00	90	97	35	0	97	86	30	64	62
13:00	66	101	0	1	74	55	23	48	46
14:00	70	73	0	1	79	67	23	45	45
15:00	61	72	0	0	72	67	27	41	43
16:00	31	79	0	0	69	43	12	36	33
17:00	60	62	0	0	63	42	32	37	37
18:00	62	49	0	0	58	53	48	34	39
19:00	37	42	0	1	45	36	34	25	28
20:00	20	16	0	0	29	16	28	13	16
21:00	6	10	0	0	6	13	17	4	7
22:00	12	5	0	0	10	14	7	5	7
23:00	3	5	0	2	4	8	3	3	4
Total	808	1120	330	7	1095	849	420	672	661

7-19	708	1021	309	4	973	735	318	603	581
6-22	783	1100	322	5	1070	810	402	656	642
6-24	798	1110	322	7	1084	832	412	664	652
0-24	808	1120	330	7	1095	849	420	672	661

Job No	N4085
Client	GTA
Site	Kichener Pde
Location	north of Cole Ln
Site No	16
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

16. Kichener Pde

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	101	128	116	1	111	84	20		
PM Peak	90	103	48	3	92	84	49		
0:00	4	3	3	0	4	4	3	3	3
1:00	4	0	2	0	2	5	8	2	3
2:00	2	1	1	0	1	1	3	1	1
3:00	2	1	1	0	1	1	1	1	1
4:00	3	2	8	0	2	2	0	3	2
5:00	6	10	11	0	9	3	2	7	6
6:00	6	8	11	0	5	8	1	6	6
7:00	25	30	25	0	21	10	3	20	16
8:00	42	47	53	0	56	49	12	40	37
9:00	101	125	116	0	111	84	14	91	79
10:00	30	128	2	0	104	65	20	53	50
11:00	28	125	44	1	91	64	15	58	53
12:00	78	99	48	0	76	84	21	60	58
13:00	85	90	0	1	86	62	32	52	51
14:00	90	103	0	0	92	67	49	57	57
15:00	80	65	0	0	88	57	18	47	44
16:00	41	82	0	0	69	39	12	38	35
17:00	67	54	0	0	67	25	14	38	32
18:00	40	49	0	0	29	28	20	24	24
19:00	24	50	0	0	37	39	40	22	27
20:00	36	18	0	0	28	30	33	16	21
21:00	29	17	0	0	26	25	18	14	16
22:00	14	9	0	0	11	17	6	7	8
23:00	5	4	0	3	8	7	4	4	4
Total	842	1120	325	5	1024	776	349	663	634

7-19	707	997	288	2	890	634	230	577	535
6-22	802	1090	299	2	986	736	322	636	605
6-24	821	1103	299	5	1005	760	332	647	618
0-24	842	1120	325	5	1024	776	349	663	634

Job No	N4085
Client	GTA
Site	North Terrace
Location	east of The Appian Way
Site No	17
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

MATRIX Traffic and Transport Data

Select Site

17. North Terrace

Select Direction

EB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day	7 Day
AM Peak	394	479	474	467	500	472	393	Ave	Ave
PM Peak	517	510	515	554	550	555	458	**7121**	**6878**
0:00	45	33	35	48	53	90	113	43	60
1:00	22	15	20	20	28	47	59	21	30
2:00	22	12	17	16	15	23	32	16	20
3:00	13	16	12	16	12	31	24	14	18
4:00	34	36	36	36	38	29	24	36	33
5:00	127	145	145	135	124	80	34	135	113
6:00	218	314	289	267	275	155	57	273	225
7:00	300	435	417	424	395	180	115	394	324
8:00	327	479	474	467	500	319	226	449	399
9:00	373	452	440	446	457	424	322	434	416
10:00	390	447	418	409	471	439	340	427	416
11:00	394	426	374	432	495	472	393	424	427
12:00	428	420	428	417	413	555	415	421	439
13:00	391	423	424	452	464	511	458	431	446
14:00	459	500	493	484	550	533	405	497	489
15:00	436	487	462	474	505	455	362	473	454
16:00	517	502	494	453	509	429	352	495	465
17:00	498	510	515	554	520	400	345	519	477
18:00	411	441	444	496	461	422	432	451	444
19:00	330	345	324	432	399	406	330	366	367
20:00	246	251	288	341	326	283	266	290	286
21:00	241	237	248	290	251	266	225	253	251
22:00	166	130	140	164	208	234	146	162	170
23:00	66	88	91	89	150	182	102	97	110
Total	6454	7144	7028	7362	7619	6965	5577	7121	6878

7-19	4924	5522	5383	5508	5740	5139	4165	5415	5197
6-22	5959	6669	6532	6838	6991	6249	5043	6598	6326
6-24	6191	6887	6763	7091	7349	6665	5291	6856	6605
0-24	6454	7144	7028	7362	7619	6965	5577	7121	6878

Job No	N4085
Client	GTA
Site	North Terrace
Location	east of The Appian Way
Site No	17
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

17. North Terrace

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	340	469	466	455	456	384	330		
PM Peak	415	425	441	439	465	467	400	**6402**	**6232**
0:00	67	45	50	53	66	98	149	56	75
1:00	25	28	19	29	44	64	90	29	43
2:00	19	17	21	23	21	33	67	20	29
3:00	21	18	20	24	20	52	52	21	30
4:00	27	41	37	48	45	33	36	40	38
5:00	101	120	132	112	125	72	44	118	101
6:00	197	279	244	241	207	139	54	234	194
7:00	280	353	351	331	331	130	74	329	264
8:00	340	469	466	455	456	247	140	437	368
9:00	320	452	435	449	428	334	221	417	377
10:00	309	375	350	344	342	347	262	344	333
11:00	336	371	367	362	381	384	330	363	362
12:00	351	381	363	359	392	467	359	369	382
13:00	355	342	379	357	423	430	366	371	379
14:00	351	365	389	362	398	415	309	373	370
15:00	396	412	434	439	425	402	334	421	406
16:00	415	425	370	379	386	410	347	395	390
17:00	398	416	441	420	415	403	382	418	411
18:00	413	391	402	406	465	416	400	415	413
19:00	328	362	400	430	417	398	384	387	388
20:00	248	288	297	328	301	337	317	292	302
21:00	237	257	249	308	258	256	261	262	261
22:00	168	137	155	180	234	260	188	175	189
23:00	72	110	99	138	156	196	121	115	127
Total	5774	6454	6470	6577	6736	6323	5287	6402	6232

7-19	4264	4752	4747	4663	4842	4385	3524	4654	4454
6-22	5274	5938	5937	5970	6025	5515	4540	5829	5600
6-24	5514	6185	6191	6288	6415	5971	4849	6119	5916
0-24	5774	6454	6470	6577	6736	6323	5287	6402	6232

Job No	N4085
Client	GTA
Site	North Terrace
Location	east of Stacey Street
Site No	18
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

18. North Terrace

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	587	728	768	722	716	732	618	Ave	Ave
PM Peak	816	835	794	807	804	839	695	**10394**	**9931**
0:00	55	40	42	39	57	125	133	47	70
1:00	25	23	16	20	24	55	74	22	34
2:00	21	21	20	18	16	34	48	19	25
3:00	19	18	22	20	25	26	37	21	24
4:00	33	36	32	47	45	33	28	39	36
5:00	177	185	192	181	183	92	38	184	150
6:00	450	547	569	549	521	193	84	527	416
7:00	458	639	703	710	618	194	141	626	495
8:00	411	728	768	722	716	293	243	669	554
9:00	421	502	561	547	560	479	369	518	491
10:00	492	531	595	575	611	605	505	561	559
11:00	587	597	602	654	694	732	618	627	641
12:00	632	642	644	623	663	820	648	641	667
13:00	557	693	664	702	717	767	695	667	685
14:00	666	835	794	807	804	839	652	781	771
15:00	739	762	724	747	797	738	675	754	740
16:00	803	754	742	762	784	750	684	769	754
17:00	816	776	675	757	709	731	514	747	711
18:00	577	571	593	704	663	486	489	622	583
19:00	418	453	467	633	457	437	353	486	460
20:00	328	302	357	620	395	331	329	400	380
21:00	254	286	304	589	305	295	294	348	332
22:00	182	163	197	218	240	278	193	200	210
23:00	92	101	112	132	179	256	113	123	141
Total	9213	10205	10395	11376	10783	9589	7957	10394	9931

7-19	7159	8030	8065	8310	8336	7434	6233	7980	7652
6-22	8609	9618	9762	10701	10014	8690	7293	9741	9241
6-24	8883	9882	10071	11051	10433	9224	7599	10064	9592
0-24	9213	10205	10395	11376	10783	9589	7957	10394	9931

Job No	N4085
Client	GTA
Site	North Terrace
Location	east of Stacey Street
Site No	18
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

18. North Terrace

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	608	963	944	942	947	716	718	Ave	Ave
PM Peak	666	795	834	828	828	735	670	**10093**	**9726**
0:00	71	57	59	58	73	117	158	64	85
1:00	34	32	27	35	37	75	80	33	46
2:00	23	24	36	26	32	34	59	28	33
3:00	24	25	26	33	30	39	40	28	31
4:00	26	38	34	38	45	37	38	36	37
5:00	105	97	107	102	104	76	36	103	90
6:00	225	266	268	255	266	155	83	256	217
7:00	392	474	484	483	444	278	140	455	385
8:00	597	963	944	942	947	535	270	879	743
9:00	605	692	763	782	765	655	515	721	682
10:00	573	642	617	589	624	666	539	609	607
11:00	608	582	574	602	609	716	718	595	630
12:00	597	575	560	614	600	687	670	589	615
13:00	600	594	629	603	681	735	658	621	643
14:00	567	644	609	649	663	684	564	626	626
15:00	649	795	834	828	828	614	531	787	726
16:00	666	719	756	782	765	586	480	738	679
17:00	640	691	679	723	684	560	483	683	637
18:00	651	643	658	770	712	608	557	687	657
19:00	437	493	474	637	547	474	444	518	501
20:00	342	340	377	428	351	341	388	368	367
21:00	270	306	320	355	333	300	295	317	311
22:00	217	154	188	196	282	311	219	207	224
23:00	121	115	127	139	224	234	134	145	156
Total	9040	9961	10150	10669	10646	9517	8099	10093	9726

7-19	7145	8014	8107	8367	8322	7324	6125	7991	7629
6-22	8419	9419	9546	10042	9819	8594	7335	9449	9025
6-24	8757	9688	9861	10377	10325	9139	7688	9802	9405
0-24	9040	9961	10150	10669	10646	9517	8099	10093	9726

Job No	N4085
Client	GTA
Site	Chapel Road
Location	north of Kichener Pde
Site No	19
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

19. Chapel Road

Select Direction

NB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day	7 Day
AM Peak	484	541	558	577	553	420	390	Ave	Ave
PM Peak	431	459	451	471	466	464	427	**6325**	**5953**
0:00	39	24	36	30	32	60	77	32	43
1:00	21	20	16	15	19	57	40	18	27
2:00	16	12	14	16	15	22	33	15	18
3:00	11	19	15	14	16	15	18	15	15
4:00	27	30	32	31	26	20	15	29	26
5:00	131	172	171	147	143	69	37	153	124
6:00	263	313	319	304	283	108	39	296	233
7:00	392	463	539	577	483	177	108	491	391
8:00	484	541	558	399	553	347	201	507	440
9:00	469	450	341	261	541	376	390	412	404
10:00	431	474	442	445	458	117	355	450	389
11:00	405	461	419	377	435	420	390	419	415
12:00	397	392	397	374	400	457	427	392	406
13:00	373	325	264	250	408	464	426	324	359
14:00	431	322	394	405	402	389	335	391	383
15:00	268	459	347	471	466	363	301	402	382
16:00	138	402	451	438	414	327	265	369	348
17:00	364	351	365	461	337	295	261	376	348
18:00	318	339	371	443	362	283	304	367	346
19:00	258	313	266	333	352	294	237	304	293
20:00	200	186	221	249	202	181	196	212	205
21:00	181	163	170	154	178	188	163	169	171
22:00	109	110	102	113	140	155	83	115	116
23:00	57	52	61	71	97	101	58	68	71
Total	5783	6393	6311	6378	6762	5285	4759	6325	5953

7-19	4470	4979	4888	4901	5259	4015	3763	4899	4611
6-22	5372	5954	5864	5941	6274	4786	4398	5881	5513
6-24	5538	6116	6027	6125	6511	5042	4539	6063	5700
0-24	5783	6393	6311	6378	6762	5285	4759	6325	5953

Job No	N4085
Client	GTA
Site	Chapel Road
Location	north of Kichener Pde
Site No	19
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

19. Chapel Road

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	481	491	489	425	473	499	423	Ave	Ave
PM Peak	637	657	666	628	652	567	462	**7337**	**6999**
0:00	38	37	41	44	58	110	136	44	66
1:00	25	21	18	24	30	52	51	24	32
2:00	19	20	11	14	29	37	53	19	26
3:00	16	15	15	17	22	29	38	17	22
4:00	24	29	31	31	42	25	22	31	29
5:00	101	104	111	104	83	53	32	101	84
6:00	195	222	229	204	195	128	43	209	174
7:00	302	341	348	332	315	169	100	328	272
8:00	362	477	433	332	473	333	172	415	369
9:00	393	381	284	196	422	353	260	335	327
10:00	433	402	407	421	421	104	351	417	363
11:00	481	491	489	425	471	499	423	471	468
12:00	454	480	424	468	570	567	462	479	489
13:00	426	405	377	281	534	536	456	405	431
14:00	451	405	487	491	580	472	364	483	464
15:00	366	604	408	623	629	496	417	526	506
16:00	194	657	651	625	627	459	402	551	516
17:00	637	609	666	628	652	483	386	638	580
18:00	535	563	590	548	563	406	427	560	519
19:00	359	423	410	481	447	362	331	424	402
20:00	256	304	326	397	321	280	290	321	311
21:00	226	248	203	318	250	248	215	249	244
22:00	160	154	161	194	213	244	166	176	185
23:00	87	98	100	116	172	168	102	115	120
Total	6540	7490	7220	7314	8119	6613	5699	7337	6999

7-19	5034	5815	5564	5370	6257	4877	4220	5608	5305
6-22	6070	7012	6732	6770	7470	5895	5099	6811	6435
6-24	6317	7264	6993	7080	7855	6307	5367	7102	6740
0-24	6540	7490	7220	7314	8119	6613	5699	7337	6999

Job No	N4085
Client	GTA
Site	The Appian Way
Location	north of North Terrace
Site No	20
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

20. The Appian Way

Select Direction

NB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day Ave	7 Day Ave
AM Peak	4	9	0	5	3	4	4		
PM Peak	1	0	4	8	1	14	4	**14**	**16**
0:00	0	0	0	1	0	0	0	0	0
1:00	0	0	0	0	1	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0
3:00	1	0	0	0	0	0	0	0	0
4:00	0	1	0	0	0	0	0	0	0
5:00	0	0	0	0	0	0	0	0	0
6:00	0	0	0	0	0	0	0	0	0
7:00	0	3	0	3	3	0	0	2	1
8:00	3	9	0	5	0	1	0	3	3
9:00	4	2	0	0	0	0	1	1	1
10:00	0	0	0	0	2	0	0	0	0
11:00	1	0	0	2	1	4	4	1	2
12:00	0	0	0	8	0	14	3	2	4
13:00	0	0	0	0	0	7	0	0	1
14:00	0	0	0	0	0	2	0	0	0
15:00	1	0	0	0	0	0	0	0	0
16:00	0	0	0	8	1	0	4	2	2
17:00	0	0	0	4	0	0	3	1	1
18:00	0	0	4	0	0	0	1	1	1
19:00	0	0	0	0	0	0	0	0	0
20:00	0	0	1	1	0	0	0	0	0
21:00	0	0	0	0	0	0	0	0	0
22:00	0	0	0	0	0	0	0	0	0
23:00	0	0	0	0	0	0	0	0	0
Total	10	15	5	32	8	28	16	14	16

7-19	9	14	4	30	7	28	16	13	15
6-22	9	14	5	31	7	28	16	13	16
6-24	9	14	5	31	7	28	16	13	16
0-24	10	15	5	32	8	28	16	14	16

Job No	N4085
Client	GTA
Site	The Appian Way
Location	north of North Terrace
Site No	20
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

20. The Appian Way

Select Direction

SB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day Ave	7 Day Ave
AM Peak	511	621	616	599	623	553	503	Ave	Ave
PM Peak	665	689	641	635	699	659	575	**9132**	**8739**
0:00	54	40	39	59	64	113	135	51	72
1:00	27	18	25	29	35	62	73	27	38
2:00	27	15	22	19	18	30	50	20	26
3:00	17	22	17	15	14	41	26	17	22
4:00	41	39	42	46	46	31	30	43	39
5:00	164	180	184	87	162	99	49	155	132
6:00	301	397	366	336	346	175	67	349	284
7:00	407	563	556	554	521	224	145	520	424
8:00	455	621	616	599	599	383	272	578	506
9:00	499	577	582	569	561	504	396	558	527
10:00	511	544	512	529	577	549	426	535	521
11:00	506	573	522	546	623	553	503	554	547
12:00	529	542	542	575	544	659	517	546	558
13:00	513	532	537	582	574	648	575	548	566
14:00	584	618	589	610	649	625	477	610	593
15:00	583	646	578	584	632	579	478	605	583
16:00	619	651	639	635	666	520	450	642	597
17:00	665	689	641	635	699	540	453	666	617
18:00	551	589	605	622	618	530	516	597	576
19:00	444	441	456	606	516	504	410	493	482
20:00	334	330	368	478	410	360	316	384	371
21:00	305	297	320	349	311	324	274	316	311
22:00	192	176	177	212	245	284	184	200	210
23:00	84	105	111	114	177	228	125	118	135
Total	8412	9205	9046	9390	9607	8565	6947	9132	8739

7-19	6422	7145	6919	7040	7263	6314	5208	6958	6616
6-22	7806	8610	8429	8809	8846	7677	6275	8500	8065
6-24	8082	8891	8717	9135	9268	8189	6584	8819	8409
0-24	8412	9205	9046	9390	9607	8565	6947	9132	8739

Job No	N4085
Client	GTA
Site	The Mall
Location	east of Chapel Road
Site No	21
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

21. The Mall

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	580	685	707	683	668	623	522	Ave	Ave
PM Peak	564	558	551	626	575	673	578	**8383**	**8073**
0:00	46	22	37	37	47	87	98	38	53
1:00	20	18	22	25	25	53	56	22	31
2:00	18	17	14	14	17	28	37	16	21
3:00	13	19	15	10	15	22	25	14	17
4:00	28	32	33	31	32	23	21	31	29
5:00	142	169	166	144	146	80	39	153	127
6:00	240	343	325	289	293	141	58	298	241
7:00	414	535	531	554	506	207	134	508	412
8:00	556	685	707	683	668	475	265	660	577
9:00	580	651	671	679	645	559	470	645	608
10:00	544	573	549	559	581	623	511	561	563
11:00	519	567	541	534	597	599	522	552	554
12:00	544	535	505	515	536	673	578	527	555
13:00	490	493	503	535	534	635	566	511	537
14:00	564	535	533	539	545	600	480	543	542
15:00	512	558	551	545	575	518	451	548	530
16:00	539	526	536	574	564	435	365	548	506
17:00	451	493	483	572	457	427	380	491	466
18:00	444	457	488	626	487	446	433	500	483
19:00	359	383	353	448	485	420	346	406	399
20:00	256	267	283	375	332	309	280	303	300
21:00	237	231	231	253	264	273	227	243	245
22:00	149	146	158	163	205	237	136	164	171
23:00	79	91	91	103	134	163	88	100	107
Total	7744	8346	8326	8807	8690	8033	6566	8383	8073

7-19	6157	6608	6598	6915	6695	6197	5155	6595	6332
6-22	7249	7832	7790	8280	8069	7340	6066	7844	7518
6-24	7477	8069	8039	8546	8408	7740	6290	8108	7796
0-24	7744	8346	8326	8807	8690	8033	6566	8383	8073

Job No	N4085
Client	GTA
Site	The Mall
Location	east of Chapel Road
Site No	21
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

21. The Mall

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	389	504	502	456	465	423	387		
PM Peak	470	527	494	488	511	522	423		
								7012	**6787**
0:00	59	40	48	48	69	108	159	53	76
1:00	26	26	22	29	37	70	80	28	41
2:00	17	22	19	20	23	35	69	20	29
3:00	17	14	16	18	17	43	51	16	25
4:00	22	31	31	37	35	31	36	31	32
5:00	108	116	134	115	122	60	45	119	100
6:00	212	271	248	238	215	145	48	237	197
7:00	273	315	365	341	345	125	72	328	262
8:00	360	504	502	451	465	252	149	456	383
9:00	347	429	450	456	422	359	229	421	385
10:00	368	409	409	405	378	416	318	394	386
11:00	389	435	446	398	417	423	387	417	414
12:00	394	462	395	417	412	522	394	416	428
13:00	415	429	446	440	447	458	423	435	437
14:00	421	474	458	473	449	460	331	455	438
15:00	470	465	443	488	477	472	376	469	456
16:00	462	527	494	473	511	442	403	493	473
17:00	461	459	466	442	477	471	396	461	453
18:00	458	421	494	469	487	421	384	466	448
19:00	352	388	399	423	422	402	386	397	396
20:00	271	299	316	407	302	328	315	319	320
21:00	234	261	242	334	268	278	278	268	271
22:00	154	168	180	209	242	273	195	191	203
23:00	86	115	100	152	161	212	120	123	135
Total	6376	7080	7123	7283	7200	6806	5644	7012	6787

7-19	4818	5329	5368	5253	5287	4821	3862	5211	4963
6-22	5887	6548	6573	6655	6494	5974	4889	6431	6146
6-24	6127	6831	6853	7016	6897	6459	5204	6745	6484
0-24	6376	7080	7123	7283	7200	6806	5644	7012	6787

Job No	N4085
Client	GTA
Site	The Mall
Location	east of The Appian Way
Site No	22
Start Date	10-Apr-18
Description	Volume Summary
Direction	EB

Select Site

22. The Mall

Select Direction

EB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	186	205	204	232	203	185	167	Ave	Ave
PM Peak	258	297	284	275	297	239	182	**2967**	**2764**
0:00	6	15	11	17	17	24	26	13	17
1:00	7	0	4	6	6	5	13	5	6
2:00	7	2	3	3	1	5	9	3	4
3:00	4	4	2	7	3	7	5	4	5
4:00	11	9	12	9	13	8	6	11	10
5:00	28	27	33	34	24	12	9	29	24
6:00	67	67	80	71	67	25	10	70	55
7:00	98	115	132	115	125	41	23	117	93
8:00	130	143	150	157	136	92	59	143	124
9:00	147	192	191	191	179	142	97	180	163
10:00	105	181	189	191	185	173	126	170	164
11:00	186	205	204	232	203	185	167	206	197
12:00	188	206	195	225	178	239	162	198	199
13:00	198	210	207	221	221	231	182	211	210
14:00	217	213	199	229	245	213	152	221	210
15:00	233	232	219	248	232	207	175	233	221
16:00	247	277	284	275	297	194	165	276	248
17:00	258	297	239	253	271	185	128	264	233
18:00	160	169	177	233	155	119	129	179	163
19:00	114	113	131	207	154	139	103	144	137
20:00	94	98	99	188	117	109	69	119	111
21:00	79	77	94	150	88	81	70	98	91
22:00	53	39	34	57	53	55	51	47	49
23:00	18	21	18	19	53	57	30	26	31
Total	2655	2912	2907	3338	3023	2548	1966	2967	2764

7-19	2167	2440	2386	2570	2427	2021	1565	2398	2225
6-22	2521	2795	2790	3186	2853	2375	1817	2829	2620
6-24	2592	2855	2842	3262	2959	2487	1898	2902	2699
0-24	2655	2912	2907	3338	3023	2548	1966	2967	2764

Job No	N4085
Client	GTA
Site	The Mall
Location	east of The Appian Way
Site No	22
Start Date	10-Apr-18
Description	Volume Summary
Direction	WB

Select Site

22. The Mall

Select Direction

WB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	366	421	440	474	378	350	268		
PM Peak	324	323	337	394	365	386	333		
								4561	**4263**
0:00	12	8	17	15	15	26	23	13	17
1:00	10	7	11	15	11	16	24	11	13
2:00	8	7	1	6	9	8	19	6	8
3:00	5	8	8	8	9	9	9	8	8
4:00	10	11	14	12	12	4	6	12	10
5:00	40	41	48	41	41	19	13	42	35
6:00	100	117	136	125	109	30	16	117	90
7:00	232	271	285	277	253	98	47	264	209
8:00	366	353	405	397	361	240	95	376	317
9:00	298	421	440	474	378	315	250	402	368
10:00	213	354	324	342	344	350	259	315	312
11:00	313	349	322	331	348	349	268	333	326
12:00	324	323	304	305	365	364	333	324	331
13:00	278	298	281	290	328	386	297	295	308
14:00	281	268	266	284	309	299	244	282	279
15:00	321	316	314	310	317	296	255	316	304
16:00	289	300	337	357	353	218	185	327	291
17:00	254	267	230	326	240	186	152	263	236
18:00	254	236	233	394	250	192	197	273	251
19:00	159	179	177	276	267	149	117	212	189
20:00	120	139	125	219	164	141	126	153	148
21:00	110	100	114	138	144	113	89	121	115
22:00	62	43	46	63	75	86	45	58	60
23:00	32	22	36	36	61	39	32	37	37
Total	4091	4438	4474	5041	4763	3933	3101	4561	4263

7-19	3423	3756	3741	4087	3846	3293	2582	3771	3533
6-22	3912	4291	4293	4845	4530	3726	2930	4374	4075
6-24	4006	4356	4375	4944	4666	3851	3007	4469	4172
0-24	4091	4438	4474	5041	4763	3933	3101	4561	4263

Job No	N4085
Client	GTA
Site	Meredith Street
Location	north of Gordon Street
Site No	23
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

23. Meredith Street

Select Direction

NB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	586	763	825	798	792	579	458	Ave	Ave
PM Peak	557	665	640	621	600	546	492	**8678**	**7990**
0:00	38	44	42	43	42	77	97	42	55
1:00	32	17	24	26	27	37	41	25	29
2:00	18	18	25	10	21	32	28	18	22
3:00	21	18	19	20	30	25	31	22	23
4:00	54	53	48	43	52	36	25	50	44
5:00	211	176	237	223	171	101	44	204	166
6:00	417	452	502	514	461	163	68	469	368
7:00	569	648	825	798	679	189	119	704	547
8:00	586	763	781	796	792	395	200	744	616
9:00	513	694	707	689	605	503	365	642	582
10:00	478	540	569	518	529	579	387	527	514
11:00	445	485	494	459	509	503	458	478	479
12:00	436	470	484	445	477	546	492	462	479
13:00	413	494	468	455	510	470	454	468	466
14:00	437	537	518	504	519	422	372	503	473
15:00	489	665	640	621	600	420	363	603	543
16:00	546	568	548	588	581	394	370	566	514
17:00	557	596	605	583	554	411	370	579	525
18:00	472	430	501	522	499	444	377	485	464
19:00	374	378	386	410	385	375	317	387	375
20:00	240	270	294	281	259	270	217	269	262
21:00	178	211	185	194	200	206	195	194	196
22:00	135	146	154	152	168	192	136	151	155
23:00	87	75	74	79	121	148	77	87	94
Total	7746	8748	9130	8973	8791	6938	5603	8678	7990

7-19	5941	6890	7140	6978	6854	5276	4327	6761	6201
6-22	7150	8201	8507	8377	8159	6290	5124	8079	7401
6-24	7372	8422	8735	8608	8448	6630	5337	8317	7650
0-24	7746	8748	9130	8973	8791	6938	5603	8678	7990

Job No	N4085
Client	GTA
Site	Meredith Street
Location	north of Gordon Street
Site No	23
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

23. Meredith Street

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	468	590	574	541	517	545	410	Ave	Ave
PM Peak	749	843	853	841	808	569	481	**8651**	**8073**
0:00	45	48	46	41	46	86	100	45	59
1:00	28	20	30	23	31	61	69	26	37
2:00	15	18	20	26	21	33	48	20	26
3:00	16	21	24	25	14	29	18	20	21
4:00	40	32	21	45	45	24	19	37	32
5:00	119	113	146	113	139	81	54	126	109
6:00	188	184	202	193	186	111	62	191	161
7:00	280	345	340	335	332	177	102	326	273
8:00	426	590	574	541	517	267	159	530	439
9:00	443	556	561	491	497	466	299	510	473
10:00	468	504	522	453	459	505	374	481	469
11:00	448	505	490	493	512	545	410	490	486
12:00	499	529	513	500	543	569	481	517	519
13:00	561	577	498	538	510	550	474	537	530
14:00	581	646	629	645	631	530	437	626	586
15:00	642	745	734	704	753	518	416	716	645
16:00	721	843	853	823	803	540	472	809	722
17:00	749	788	820	841	808	518	389	801	702
18:00	549	590	595	618	560	515	425	582	550
19:00	406	449	490	499	408	393	360	450	429
20:00	247	280	272	364	325	278	233	298	286
21:00	170	224	260	333	272	243	212	252	245
22:00	171	142	155	182	182	206	150	166	170
23:00	96	82	86	80	134	165	81	96	103
Total	7908	8831	8881	8906	8728	7410	5844	8651	8073

7-19	6367	7218	7129	6982	6925	5700	4438	6924	6394
6-22	7378	8355	8353	8371	8116	6725	5305	8115	7515
6-24	7645	8579	8594	8633	8432	7096	5536	8377	7788
0-24	7908	8831	8881	8906	8728	7410	5844	8651	8073

Job No	N4085
Client	GTA
Site	Jacobs Street
Location	north of The Mall
Site No	24
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

24. Jacobs Street

Select Direction

NB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day	7 Day
AM Peak	448	500	488	499	436	430	330	Ave	Ave
PM Peak	459	501	551	507	544	473	397	**6234**	**5775**
0:00	16	13	26	23	20	34	27	20	23
1:00	12	7	10	14	15	17	25	12	14
2:00	7	5	1	6	8	12	22	5	9
3:00	7	10	12	10	12	11	9	10	10
4:00	11	13	11	14	13	6	8	12	11
5:00	48	48	57	53	51	21	17	51	42
6:00	127	152	175	162	151	42	17	153	118
7:00	287	343	369	359	315	114	50	335	262
8:00	448	429	476	451	401	254	109	441	367
9:00	369	500	488	499	436	341	239	458	410
10:00	416	415	411	390	415	401	287	409	391
11:00	421	433	418	452	426	430	330	430	416
12:00	416	427	426	427	361	448	397	411	415
13:00	389	431	427	417	453	473	383	423	425
14:00	389	389	424	428	455	413	320	417	403
15:00	459	433	456	436	459	405	381	449	433
16:00	453	501	551	507	544	350	333	511	463
17:00	431	478	436	467	458	310	221	454	400
18:00	354	351	344	505	352	304	287	381	357
19:00	221	243	232	393	360	225	191	290	266
20:00	153	203	182	355	258	213	165	230	218
21:00	155	150	159	252	203	166	143	184	175
22:00	84	72	70	115	106	129	73	89	93
23:00	53	36	44	50	102	59	40	57	55
Total	5726	6082	6205	6785	6374	5178	4074	6234	5775

7-19	4832	5130	5226	5338	5075	4243	3337	5120	4740
6-22	5488	5878	5974	6500	6047	4889	3853	5977	5518
6-24	5625	5986	6088	6665	6255	5077	3966	6124	5666
0-24	5726	6082	6205	6785	6374	5178	4074	6234	5775

Job No	N4085
Client	GTA
Site	Jacobs Street
Location	north of The Mall
Site No	24
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

24. Jacobs Street

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	140	150	180	151	167	141	116	Ave	Ave
PM Peak	157	175	177	176	175	184	133	**2028**	**1962**
0:00	8	7	6	13	13	17	19	9	12
1:00	5	0	3	5	7	5	11	4	5
2:00	7	2	6	4	2	7	10	4	5
3:00	6	5	3	5	4	7	6	5	5
4:00	13	13	9	12	14	13	9	12	12
5:00	31	27	29	42	24	13	14	31	26
6:00	39	45	48	35	40	29	11	41	35
7:00	50	76	86	79	79	34	19	74	60
8:00	104	127	126	140	128	94	59	125	111
9:00	118	150	180	143	167	135	90	152	140
10:00	140	133	128	139	118	135	112	132	129
11:00	130	136	146	151	119	141	116	136	134
12:00	122	140	125	150	41	180	133	116	127
13:00	132	130	137	148	143	184	128	138	143
14:00	146	131	120	149	175	161	102	144	141
15:00	157	175	158	162	168	161	129	164	159
16:00	135	163	177	159	174	132	126	162	152
17:00	151	161	144	176	155	111	82	157	140
18:00	115	107	120	161	108	109	119	122	120
19:00	75	73	96	136	113	120	81	99	99
20:00	71	70	60	103	86	99	65	78	79
21:00	57	57	78	80	89	72	55	72	70
22:00	34	30	22	43	32	34	38	32	33
23:00	16	12	19	13	35	41	23	19	23
Total	1862	1970	2026	2248	2034	2034	1557	2028	1962

7-19	1500	1629	1647	1757	1575	1577	1215	1622	1557
6-22	1742	1874	1929	2111	1903	1897	1427	1912	1840
6-24	1792	1916	1970	2167	1970	1972	1488	1963	1896
0-24	1862	1970	2026	2248	2034	2034	1557	2028	1962

Job No	N4085
Client	GTA
Site	Lady Cutler Ave
Location	south of Rickard Road
Site No	25
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

25. Lady Cutler Ave

Select Direction

NB

Hour	Day of Week								
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
Starting	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr	W'Day Ave	7 Day Ave
AM Peak	802	960	974	885	921	1001	800	Ave	Ave
PM Peak	1051	1084	1070	1057	1090	1139	1046	**13571**	**13132**
0:00	117	93	95	98	118	146	178	104	121
1:00	53	43	57	57	51	87	99	52	64
2:00	32	46	46	58	35	54	74	43	49
3:00	38	45	41	33	46	40	48	41	42
4:00	35	44	31	49	48	50	53	41	44
5:00	98	83	106	95	97	71	39	96	84
6:00	210	264	258	247	274	153	82	251	213
7:00	362	420	480	461	452	196	131	435	357
8:00	528	789	761	757	712	423	232	709	600
9:00	697	780	772	781	727	634	507	751	700
10:00	752	877	866	831	856	815	615	836	802
11:00	802	960	974	885	921	1001	800	908	906
12:00	786	904	962	1030	902	1012	934	917	933
13:00	897	971	942	991	1052	1139	917	971	987
14:00	925	1084	994	989	1063	979	932	1011	995
15:00	931	989	974	1050	1054	1031	970	1000	1000
16:00	1051	1024	1008	973	1048	1061	1046	1021	1030
17:00	1018	1070	1070	1003	1090	1004	706	1050	994
18:00	813	764	772	999	813	771	702	832	805
19:00	562	636	687	923	648	615	572	691	663
20:00	551	533	556	1057	582	505	552	656	619
21:00	446	418	541	986	455	407	439	569	527
22:00	374	312	328	395	385	372	295	359	352
23:00	209	195	179	224	321	354	227	226	244
Total	12287	13344	13500	14972	13750	12920	11150	13571	13132

7-19	9562	10632	10575	10750	10690	10066	8492	10442	10110
6-22	11331	12483	12617	13963	12649	11746	10137	12609	12132
6-24	11914	12990	13124	14582	13355	12472	10659	13193	12728
0-24	12287	13344	13500	14972	13750	12920	11150	13571	13132

Job No	N4085
Client	GTA
Site	Lady Cutler Ave
Location	south of Rickard Road
Site No	25
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

25. Lady Cutler Ave

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	393	484	501	495	484	463	408		
PM Peak	365	445	471	496	502	456	408	**5807**	**5578**
0:00	18	21	25	18	16	33	39	20	24
1:00	9	8	10	10	5	11	23	8	11
2:00	10	12	10	12	7	15	24	10	13
3:00	11	12	17	13	17	5	19	14	13
4:00	24	26	19	31	30	15	15	26	23
5:00	86	97	94	76	89	63	21	88	75
6:00	167	199	203	210	194	80	65	195	160
7:00	186	273	271	253	253	146	106	247	213
8:00	297	446	469	470	460	339	164	428	378
9:00	393	484	501	495	484	463	380	471	457
10:00	362	402	416	420	390	433	404	398	404
11:00	363	381	343	387	394	422	408	374	385
12:00	344	418	386	335	502	456	381	397	403
13:00	350	374	378	337	410	415	397	370	380
14:00	332	376	399	405	374	435	408	377	390
15:00	356	416	397	496	470	360	323	427	403
16:00	352	445	471	451	441	310	283	432	393
17:00	365	337	370	450	350	261	285	374	345
18:00	287	324	298	471	306	253	257	337	314
19:00	221	232	256	401	262	208	209	274	256
20:00	200	186	199	247	198	171	198	206	200
21:00	131	155	182	194	179	164	149	168	165
22:00	119	86	87	128	113	141	104	107	111
23:00	48	51	47	60	81	99	50	57	62
Total	5031	5761	5848	6370	6025	5298	4712	5807	5578

7-19	3987	4676	4699	4970	4834	4293	3796	4633	4465
6-22	4706	5448	5539	6022	5667	4916	4417	5476	5245
6-24	4873	5585	5673	6210	5861	5156	4571	5640	5418
0-24	5031	5761	5848	6370	6025	5298	4712	5807	5578

Job No	N4085
Client	GTA
Site	Meredith Street
Location	north of French Ave
Site No	27
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

27. Meredith Street

Select Direction

NB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	544	589	663	646	617	626	506		
PM Peak	802	864	887	828	846	712	562	**10273**	**9723**
0:00	77	55	52	71	86	131	196	68	95
1:00	38	39	34	41	42	79	104	39	54
2:00	21	28	34	37	44	59	91	33	45
3:00	30	28	34	29	30	45	46	30	35
4:00	60	65	54	62	72	53	46	63	59
5:00	209	222	217	214	235	115	54	219	181
6:00	350	408	442	475	398	179	105	415	337
7:00	528	547	663	646	585	209	103	594	469
8:00	475	589	630	623	617	329	190	587	493
9:00	473	538	526	331	549	509	353	483	468
10:00	490	560	564	325	532	531	448	494	493
11:00	544	577	634	572	533	626	506	572	570
12:00	517	593	601	582	539	712	560	566	586
13:00	561	634	596	627	605	681	541	605	606
14:00	619	725	680	702	668	619	501	679	645
15:00	680	833	769	778	784	630	562	769	719
16:00	787	852	850	828	846	632	452	833	750
17:00	802	864	887	801	825	683	538	836	771
18:00	665	578	656	681	730	584	465	662	623
19:00	500	514	514	626	506	496	459	532	516
20:00	378	390	433	565	401	432	392	433	427
21:00	290	337	344	503	367	374	312	368	361
22:00	214	215	231	287	306	335	267	251	265
23:00	142	25	136	168	242	249	114	143	154
Total	9450	10216	10581	10574	10542	9292	7405	10273	9723

7-19	7141	7890	8056	7496	7813	6745	5219	7679	7194
6-22	8659	9539	9789	9665	9485	8226	6487	9427	8836
6-24	9015	9779	10156	10120	10033	8810	6868	9821	9254
0-24	9450	10216	10581	10574	10542	9292	7405	10273	9723

Job No	N4085
Client	GTA
Site	Meredith Street
Location	north of French Ave
Site No	27
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

27. Meredith Street

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	762	1137	1141	1136	1109	766	651		
PM Peak	642	805	819	787	741	714	672	**10884**	**10366**
0:00	47	49	34	64	59	104	162	51	74
1:00	25	21	34	29	40	74	72	30	42
2:00	22	27	22	27	30	43	65	26	34
3:00	26	25	25	30	21	36	35	25	28
4:00	59	65	49	68	75	48	43	63	58
5:00	230	228	262	212	239	137	78	234	198
6:00	499	552	528	570	555	217	109	541	433
7:00	535	777	794	784	700	317	189	718	585
8:00	762	1137	1141	1136	1109	630	328	1057	892
9:00	695	894	899	562	867	763	605	783	755
10:00	652	650	659	340	623	610	601	585	591
11:00	553	562	547	586	607	766	651	571	610
12:00	616	617	580	590	587	714	672	598	625
13:00	599	598	592	629	606	713	631	605	624
14:00	631	650	696	684	727	695	544	678	661
15:00	609	805	819	787	726	617	485	749	693
16:00	642	770	775	777	741	615	392	741	673
17:00	608	658	690	744	664	603	495	673	637
18:00	569	627	705	751	704	714	573	671	663
19:00	480	548	508	639	583	498	493	552	536
20:00	322	312	342	366	381	377	291	345	342
21:00	235	250	279	332	318	338	260	283	287
22:00	190	177	196	220	247	281	172	206	212
23:00	101	12	107	119	164	196	87	101	112
Total	9707	11011	11283	11046	11373	10106	8033	10884	10366

7-19	7471	8745	8897	8370	8661	7757	6166	8429	8010
6-22	9007	10407	10554	10277	10498	9187	7319	10149	9607
6-24	9298	10596	10857	10616	10909	9664	7578	10455	9931
0-24	9707	11011	11283	11046	11373	10106	8033	10884	10366

Job No	N4085
Client	GTA
Site	Chapel Road
Location	north of French Ave
Site No	28
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

28. Chapel Road

Select Direction

NB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	330	587	625	589	562	340	330		
PM Peak	441	550	555	518	529	425	395	**6622**	**6183**
0:00	30	38	32	46	44	67	120	38	54
1:00	15	21	24	19	31	41	54	22	29
2:00	10	10	15	18	17	33	30	14	19
3:00	15	15	15	21	20	22	23	17	19
4:00	29	41	33	33	39	21	24	35	31
5:00	124	150	160	150	142	55	27	145	115
6:00	297	327	330	320	321	102	27	319	246
7:00	330	376	493	502	429	119	84	426	333
8:00	276	587	625	589	562	187	116	528	420
9:00	246	470	421	420	358	262	202	383	340
10:00	281	332	367	328	317	319	250	325	313
11:00	311	352	362	329	373	340	330	345	342
12:00	303	410	356	373	413	398	347	371	371
13:00	334	405	395	413	479	414	395	405	405
14:00	347	446	480	510	482	380	348	453	428
15:00	392	448	434	398	414	381	354	417	403
16:00	436	434	555	418	456	408	382	460	441
17:00	441	550	535	518	529	425	297	515	471
18:00	348	335	371	413	366	329	315	367	354
19:00	293	287	301	364	309	287	286	311	304
20:00	229	251	238	337	251	269	246	261	260
21:00	184	194	210	318	236	250	210	228	229
22:00	122	134	130	167	189	231	120	148	156
23:00	88	79	70	81	122	165	79	88	98
Total	5481	6692	6952	7085	6899	5505	4666	6622	6183

7-19	4045	5145	5394	5211	5178	3962	3420	4995	4622
6-22	5048	6204	6473	6550	6295	4870	4189	6114	5661
6-24	5258	6417	6673	6798	6606	5266	4388	6350	5915
0-24	5481	6692	6952	7085	6899	5505	4666	6622	6183

Job No	N4085
Client	GTA
Site	Chapel Road
Location	north of French Ave
Site No	28
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

28. Chapel Road

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	432	547	544	555	520	504	409		
PM Peak	663	733	730	792	660	524	425	**7492**	**7014**
0:00	30	25	34	38	39	62	85	33	45
1:00	19	16	19	19	27	41	40	20	26
2:00	13	11	16	13	16	30	37	14	19
3:00	13	16	14	17	19	21	24	16	18
4:00	19	28	28	25	43	13	12	29	24
5:00	75	97	80	89	82	46	28	85	71
6:00	183	225	213	188	185	99	38	199	162
7:00	311	323	324	297	292	170	83	309	257
8:00	432	547	544	555	520	314	148	520	437
9:00	398	506	509	542	505	386	290	492	448
10:00	387	436	404	411	409	407	365	409	403
11:00	414	438	416	420	515	504	409	441	445
12:00	422	417	391	404	393	488	425	405	420
13:00	385	446	435	404	474	524	393	429	437
14:00	453	452	467	474	486	461	347	466	449
15:00	588	662	663	688	660	417	363	652	577
16:00	655	733	697	655	650	363	327	678	583
17:00	663	684	730	792	633	438	377	700	617
18:00	518	620	542	619	538	492	408	567	534
19:00	323	322	373	412	416	390	319	369	365
20:00	188	239	244	259	260	302	213	238	244
21:00	173	197	200	240	220	215	180	206	204
22:00	103	118	115	147	164	209	110	129	138
23:00	85	70	63	80	127	156	72	85	93
Total	6850	7628	7521	7788	7673	6548	5093	7492	7014

7-19	5626	6264	6122	6261	6075	4964	3935	6070	5607
6-22	6493	7247	7152	7360	7156	5970	4685	7082	6580
6-24	6681	7435	7330	7587	7447	6335	4867	7296	6812
0-24	6850	7628	7521	7788	7673	6548	5093	7492	7014

Job No	N4085
Client	GTA
Site	St Josephs Banks Street
Location	south of Greenacre Road
Site No	29
Start Date	10-Apr-18
Description	Volume Summary
Direction	NB

Select Site

29. St Josephs Banks Street

Select Direction

NB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	96	140	136	156	132	118	75		
PM Peak	145	165	175	161	154	143	111	**1898**	**1812**
0:00	12	19	8	16	27	27	29	16	20
1:00	17	4	6	5	8	16	23	8	11
2:00	7	1	5	5	5	10	25	5	8
3:00	6	3	5	5	3	4	10	4	5
4:00	4	7	3	8	8	7	9	6	7
5:00	23	25	25	13	22	10	14	22	19
6:00	44	56	50	51	52	14	10	51	40
7:00	60	88	112	84	89	41	15	87	70
8:00	77	140	136	156	132	60	40	128	106
9:00	87	85	98	116	81	79	69	93	88
10:00	96	74	86	83	100	87	75	88	86
11:00	68	112	112	93	114	118	73	100	99
12:00	91	79	110	110	96	138	111	97	105
13:00	102	124	97	98	134	143	86	111	112
14:00	98	153	153	161	154	136	109	144	138
15:00	118	149	145	157	147	142	88	143	135
16:00	145	157	154	150	147	139	108	151	143
17:00	131	165	175	160	145	116	103	155	142
18:00	133	147	139	114	121	117	108	131	126
19:00	80	106	100	114	90	98	85	98	96
20:00	68	73	86	115	86	95	74	86	85
21:00	77	82	66	101	91	70	62	83	78
22:00	48	42	43	55	96	66	36	57	55
23:00	35	22	27	36	56	60	35	35	39
Total	1627	1913	1941	2006	2004	1793	1397	1898	1812

7-19	1206	1473	1517	1482	1460	1316	985	1428	1348
6-22	1475	1790	1819	1863	1779	1593	1216	1745	1648
6-24	1558	1854	1889	1954	1931	1719	1287	1837	1742
0-24	1627	1913	1941	2006	2004	1793	1397	1898	1812

Job No	N4085
Client	GTA
Site	St Josephs Banks Street
Location	south of Greenacre Road
Site No	29
Start Date	10-Apr-18
Description	Volume Summary
Direction	SB

Select Site

29. St Josephs Banks Street

Select Direction

SB

Hour Starting	Day of Week							W'Day Ave	7 Day Ave
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	16-Apr	10-Apr	11-Apr	12-Apr	13-Apr	14-Apr	15-Apr		
AM Peak	107	213	233	225	207	134	105		
PM Peak	178	285	289	302	282	158	130	**2343**	**2191**
0:00	24	15	13	19	25	42	40	19	25
1:00	15	4	3	4	13	18	29	8	12
2:00	13	4	9	5	6	12	16	7	9
3:00	7	3	9	2	7	10	13	6	7
4:00	10	11	6	9	12	15	8	10	10
5:00	25	29	28	25	25	19	12	26	23
6:00	50	52	48	49	43	22	15	48	40
7:00	88	93	106	108	113	56	22	102	84
8:00	107	213	233	225	207	88	47	197	160
9:00	106	118	143	147	139	105	100	131	123
10:00	101	112	107	99	101	104	105	104	104
11:00	87	95	106	99	117	134	82	101	103
12:00	99	110	115	106	131	157	116	112	119
13:00	115	110	118	105	117	158	119	113	120
14:00	99	137	148	160	144	151	99	138	134
15:00	154	285	289	302	282	147	93	262	222
16:00	166	208	207	242	208	147	100	206	183
17:00	178	229	207	209	169	130	122	198	178
18:00	143	179	174	163	154	128	130	163	153
19:00	118	123	127	131	119	91	101	124	116
20:00	75	72	91	78	116	90	71	86	85
21:00	68	81	68	85	82	72	67	77	75
22:00	55	49	41	65	85	73	52	59	60
23:00	47	50	29	34	72	69	27	46	47
Total	1950	2382	2425	2471	2487	2038	1586	2343	2191

7-19	1443	1889	1953	1965	1882	1505	1135	1826	1682
6-22	1754	2217	2287	2308	2242	1780	1389	2162	1997
6-24	1856	2316	2357	2407	2399	1922	1468	2267	2104
0-24	1950	2382	2425	2471	2487	2038	1586	2343	2191

Appendix B

Travel Time Surveys

Data Audit Systems
TRAFFIC SURVEYS

Route 01
Travel Time Survey 01
Thursday, 22 February 2018

Route of Travel : Travel Time Survey 01
Peak Period : 6:00 to 8:00
Direction : NB

		22-Feb-2018 6:01:48 AM	22-Feb-2018 6:24:37 AM	22-Feb-2018 6:29:04 AM	22-Feb-2018 6:44:41 AM	22-Feb-2018 7:04:25 AM	22-Feb-2018 7:17:40 AM	22-Feb-2018 7:35:55 AM	22-Feb-2018 7:47:38 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:01:48 AM	6:24:37 AM	6:29:04 AM	6:44:41 AM	7:04:25 AM	7:17:40 AM	7:35:55 AM	7:47:38 AM	Average Time (sss)	Average Speed (Km/h)
Macauley Ave / Stanley St	416	141	195	72	112	316	354	200	105	244	6
Stanley St / Wattle St	580	75	133	115	140	58	43	171	122	99	21
Wattle St / Rickard St	230	74	54	74	46	41	23	45	38	37	23
Rickard St / Greenacre Rd	460	43	36	119	103	276	173	111	38	150	11
Greenacre Rd / Mimosa Rd	250	40	42	61	49	39	40	43	49	43	21

Route of Travel : Travel Time Survey 01
Peak Period : 6:00 to 8:00
Direction : SB

		22-Feb-2018 6:12:45 AM	22-Feb-2018 6:16:23 AM	22-Feb-2018 6:36:38 AM	22-Feb-2018 6:54:51 AM	22-Feb-2018 7:02:02 AM	22-Feb-2018 7:27:18 AM	22-Feb-2018 7:37:38 AM	22-Feb-2018 7:52:07 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:12:45 AM	6:16:23 AM	6:36:38 AM	6:54:51 AM	7:02:02 AM	7:27:18 AM	7:37:38 AM	7:52:07 AM	Average Time (sss)	Average Speed (Km/h)
Mimosa Rd / Greenacre Rd	250	83	64	46	40	29	44	40	42	39	23
Greenacre Rd / Rickard St	460	75	69	73	36	30	80	60	58	57	29
Rickard St / Wattle St	230	27	19	27	77	24	17	19	19	20	42
Wattle St / Stanley St	580	42	35	47	37	49	36	92	38	54	39
Stanley St / Macauley Ave	416	53	58	77	58	86	55	94	54	72	21

Data Audit Systems
TRAFFIC SURVEYS

Route 01
Travel Time Survey 01
Thursday, 22 February 2018

Route of Travel : Travel Time Survey 01
Peak Period : 4:00 to 6:00
Direction : NB

		22-Feb-2018 4:08:46 PM	22-Feb-2018 4:10:54 PM	22-Feb-2018 4:44:19 PM	22-Feb-2018 4:58:11 PM	22-Feb-2018 5:07:17 PM	22-Feb-2018 5:24:51 PM	22-Feb-2018 5:30:55 PM	22-Feb-2018 5:51:27 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:08:46 PM	4:10:54 PM	4:44:19 PM	4:58:11 PM	5:07:17 PM	5:24:51 PM	5:30:55 PM	5:51:27 PM	Average Time (sss)	Average Speed (Km/h)
Macauley Ave / Stanley St	416	281	99	112	78	140	277	155	150	162	9
Stanley St / Wattle St	580	163	92	77	102	140	47	116	115	107	20
Wattle St / Rickard St	230	16	17	15	17	22	47	17	19	21	39
Rickard St / Greenacre Rd	460	86	294	98	258	348	50	186	148	184	9
Greenacre Rd / Mimosa Rd	250	78	112	140	78	69	68	87	83	89	10

Route of Travel : Travel Time Survey 01
Peak Period : 4:00 to 6:00
Direction : SB

		22-Feb-2018 4:01:18 PM	22-Feb-2018 4:22:25 PM	22-Feb-2018 4:34:45 PM	22-Feb-2018 4:56:05 PM	22-Feb-2018 5:10:16 PM	10-Oct-2017 5:20:21 PM	22-Feb-2018 5:38:29 PM	22-Feb-2018 5:58:11 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:01:18 PM	4:22:25 PM	4:34:45 PM	4:56:05 PM	5:10:16 PM	5:20:21 PM	5:38:29 PM	5:58:11 PM	Average Time (sss)	Average Speed (Km/h)
Mimosa Rd / Greenacre Rd	250	104	46	78	65	65	59	112	97	78	12
Greenacre Rd / Rickard St	460	156	178	123	170	155	142	170	144	155	11
Rickard St / Wattle St	230	24	22	17	15	94	90	30	98	49	17
Wattle St / Stanley St	580	83	57	63	129	178	88	156	74	104	20
Stanley St / Macauley Ave	416	60	54	64	112	50	79	108	97	78	19

Data Audit Systems
TRAFFIC SURVEYS

Route 01
Travel Time Survey 01
Saturday, 24 February 2018

Route of Travel : Travel Time Survey 01
Peak Period : 12:00 to 14:00
Direction : NB

		24-Feb-2018 12:15:03 PM	24-Feb-2018 12:19:11 PM	24-Feb-2018 12:29:22 PM	24-Feb-2018 12:43:37 PM	24-Feb-2018 1:03:17 PM	22-Feb-2018 4:44:19 PM	22-Feb-2018 5:07:17 PM	24-Feb-2018 1:51:39 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:15:03 PM	12:19:11 PM	12:29:22 PM	12:43:37 PM	1:03:17 PM	1:19:14 PM	1:34:22 PM	1:51:39 PM	Average Time (sss)	Average Speed (Km/h)
Macauley Ave / Stanley St	416	39	101	98	117	98	92	131	201	110	14
Stanley St / Wattle St	580	48	29	30	123	30	78	154	41	67	31
Wattle St / Rickard St	230	40	20	24	60	24	21	29	41	32	26
Rickard St / Greenacre Rd	460	46	36	39	37	39	91	139	76	63	26
Greenacre Rd / Mimosa Rd	250	55	90	91	87	101	130	69	43	83	11

Route of Travel : Travel Time Survey 01
Peak Period : 12:00 to 14:00
Direction : SB

		24-Feb-2018 12:10:42 PM	24-Feb-2018 12:23:24 PM	24-Feb-2018 12:37:30 PM	24-Feb-2018 12:48:47 PM	24-Feb-2018 1:12:29 PM	24-Feb-2018 1:29:28 PM	22-Feb-2018 5:10:16 PM	24-Feb-2018 1:54:37 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:10:42 PM	12:23:24 PM	12:37:30 PM	12:48:47 PM	1:12:29 PM	1:29:28 PM	1:35:55 PM	1:54:37 PM	Average Time (sss)	Average Speed (Km/h)
Mimosa Rd / Greenacre Rd	250	90	95	91	44	44	78	67	30	67	13
Greenacre Rd / Rickard St	460	15	17	16	49	80	123	140	30	59	28
Rickard St / Wattle St	230	90	81	83	50	21	17	104	29	59	14
Wattle St / Stanley St	580	40	29	30	41	36	63	145	54	55	38
Stanley St / Macauley Ave	416	44	90	55	144	55	64	59	86	75	20

Data Audit Systems
TRAFFIC SURVEYS

Route 02
Thursday, 22 February 2018

Route of Travel : Route 02
Peak Period : 6:00 to 8:00
Direction : NB

		22-Feb-2018 6:00:49 AM	22-Feb-2018 6:26:16 AM	22-Feb-2018 6:36:30 AM	22-Feb-2018 6:44:57 AM	22-Feb-2018 7:04:24 AM	22-Feb-2018 7:18:05 AM	22-Feb-2018 6:34:12 AM	22-Feb-2018 7:51:50 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:00:49 AM	6:26:16 AM	6:36:30 AM	6:44:57 AM	7:04:24 AM	7:18:05 AM	6:34:12 AM	7:51:50 AM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Chapel Rd	720	154	72	201	119	200	79	143	211	158	16
Chapel Rd / Brandon Ave	350	30	36	58	30	58	38	33	35	41	31
Brandon Ave / Greenwood Ave	232	31	32	23	27	27	98	24	35	46	18
Greenwood Ave / Marion St	316	43	50	83	127	61	149	83	43	84	14
Marion St / Meredith St	182	28	32	20	24	21	29	20	32	26	26
Meredith St / Chapel Rd	159	41	31	41	36	24	50	38	24	34	17
Chapel Rd / Rickard Rd	330	38	28	63	50	40	49	32	50	43	28
Rickard Rd / French St	155	30	41	32	47	14	21	12	30	19	29
French St / Hume Hwy	760	90	89	149	89	167	79	98	98	111	25

Route of Travel : Route 02
Peak Period : 6:00 to 8:00
Direction : SB

		22-Feb-2018 6:16:47 AM	22-Feb-2018 6:35:19 AM	22-Feb-2018 6:42:12 AM	22-Feb-2018 6:50:31 AM	22-Feb-2018 7:01:45 AM	22-Feb-2018 7:31:51 AM	22-Feb-2018 7:44:04 AM	22-Feb-2018 7:58:44 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:16:47 AM	6:35:19 AM	6:42:12 AM	6:50:31 AM	7:01:45 AM	7:31:51 AM	7:44:04 AM	7:58:44 AM	Average Time (sss)	Average Speed (Km/h)
Hume Hwy / French St	760	127	133	90	87	134	120	112	72	110	25
French St / Rickard Rd	155	59	46	50	20	54	76	44	94	67	8
Rickard Rd / Chapel Rd	330	15	60	62	90	39	47	46	45	44	27
Chapel Rd / Meredith St	159	57	17	27	15	68	45	32	55	50	11
Meredith St / Marion St	182	45	12	50	15	42	65	23	23	38	17
Marion St / Greenwood Ave	316	23	22	33	22	31	42	27	23	31	37
Greenwood Ave / Brandon Ave	232	36	41	27	44	30	24	33	21	27	31
Brandon Ave / Chapel Rd	350	33	66	33	72	49	32	37	39	39	32
Chapel Rd / Stacey St	720	110	65	72	59	127	74	63	70	84	31

Data Audit Systems
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Route 02
Thursday, 22 February 2018

Route of Travel : Route 02
Peak Period : 4:00 to 6:00
Direction : NB

		22-Feb-2018 4:17:23 PM	22-Feb-2018 4:33:59 PM	22-Feb-2018 4:43:15 PM	22-Feb-2018 4:54:39 AM	22-Feb-2018 5:18:54 PM	22-Feb-2018 5:26:58 PM	22-Feb-2018 5:36:19 PM	22-Feb-2018 5:56:10 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:17:23 PM	4:33:59 PM	4:43:15 PM	4:54:39 AM	5:18:54 PM	5:26:58 PM	5:36:19 PM	5:56:10 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Chapel Rd	720	69	79	99	80	88	110	82	116	93	28
Chapel Rd / Brandon Ave	350	39	42	55	72	44	115	66	31	61	21
Brandon Ave / Greenwood Ave	232	27	39	30	27	35	31	47	58	38	22
Greenwood Ave / Marion St	316	41	50	29	121	27	82	47	48	58	20
Marion St / Meredith St	182	41	93	28	21	47	91	68	24	53	12
Meredith St / Chapel Rd	159	34	19	30	36	34	32	19	29	28	20
Chapel Rd / Rickard Rd	330	27	86	29	131	34	83	86	34	69	17
Rickard Rd / French St	155	27	27	32	22	27	19	27	44	28	20
French St / Hume Hwy	760	167	166	160	185	164	176	160	166	168	16

Route of Travel : Route 02
Peak Period : 4:00 to 6:00
Direction : SB

		22-Feb-2018 4:22:02 PM	22-Feb-2018 4:44:28 PM	22-Feb-2018 5:09:02 PM	22-Feb-2018 5:39:19 PM	22-Feb-2018 4:28:47 PM	22-Feb-2018 5:02:45 PM	22-Feb-2018 5:42:17 PM	22-Feb-2018 4:23:04 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:22:02 PM	4:44:28 PM	5:09:02 PM	5:39:19 PM	4:28:47 PM	5:02:45 PM	5:42:17 PM	4:23:04 PM	Average Time (sss)	Average Speed (Km/h)
Hume Hwy / French St	760	109	99	144	94	99	101	93	140	110	25
French St / Rickard Rd	155	65	20	44	30	14	27	30	15	31	18
Rickard Rd / Chapel Rd	330	122	94	184	88	69	91	86	67	100	12
Chapel Rd / Meredith St	159	37	29	21	21	43	36	30	21	30	19
Meredith St / Marion St	182	24	17	67	20	41	86	42	23	40	16
Marion St / Greenwood Ave	316	48	46	34	78	31	20	68	28	44	26
Greenwood Ave / Brandon Ave	232	50	27	60	67	35	24	32	42	42	20
Brandon Ave / Chapel Rd	350	102	54	55	59	30	63	27	50	55	23
Chapel Rd / Stacey St	720	140	320	310	224	301	139	354	216	251	10

Data Audit Systems
TRAFFIC SURVEYS

Route 02
Saturday, 24 February 2018

Route of Travel : Route 02
Peak Period : 12:00 to 14:00
Direction : NB

		24-Feb-2018 12:05:14 PM	24-Feb-2018 12:30:05 PM	24-Feb-2018 12:46:36 PM	24-Feb-2018 12:56:36 PM	24-Feb-2018 1:06:17 PM	24-Feb-2018 1:11:47 PM	24-Feb-2018 1:36:57 PM	24-Feb-2018 1:47:16 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:05:14 PM	12:30:05 PM	12:46:36 PM	12:56:36 PM	1:06:17 PM	1:11:47 PM	1:36:57 PM	1:47:16 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Chapel Rd	720	170	240	70	143	220	80	180	137	155	17
Chapel Rd / Brandon Ave	350	59	36	35	33	50	36	50	38	42	30
Brandon Ave / Greenwood Ave	232	27	28	29	24	55	33	57	25	35	24
Greenwood Ave / Marion St	316	94	44	72	83	183	50	182	55	95	12
Marion St / Meredith St	182	30	24	35	20	32	32	32	27	29	23
Meredith St / Chapel Rd	159	32	20	44	38	31	14	41	34	32	18
Chapel Rd / Rickard Rd	330	63	86	120	32	28	43	63	34	59	20
Rickard Rd / French St	155	27	28	9	12	41	37	32	27	27	21
French St / Hume Hwy	760	176	142	280	98	89	204	149	164	163	17

Route of Travel : Route 02
Peak Period : 12:00 to 14:00
Direction : SB

		24-Feb-2018 12:15:57 PM	24-Feb-2018 12:31:51 PM	24-Feb-2018 12:39:19 PM	24-Feb-2018 12:50:31 PM	24-Feb-2018 1:06:02 PM	24-Feb-2018 1:20:25 PM	24-Feb-2018 1:45:53 PM	24-Feb-2018 1:51:06 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:15:57 PM	12:31:51 PM	12:39:19 PM	12:50:31 PM	1:06:02 PM	1:20:25 PM	1:45:53 PM	1:51:06 PM	Average Time (sss)	Average Speed (Km/h)
Hume Hwy / French St	760	112	110	98	84	90	88	124	110	102	27
French St / Rickard Rd	155	45	77	31	21	50	20	54	75	47	12
Rickard Rd / Chapel Rd	330	46	49	86	90	62	90	40	47	64	19
Chapel Rd / Meredith St	159	32	46	21	27	27	15	68	45	35	16
Meredith St / Marion St	182	30	67	24	44	44	19	39	45	39	17
Marion St / Greenwood Ave	316	36	44	79	29	27	21	27	33	37	31
Greenwood Ave / Brandon Ave	232	49	24	68	34	34	23	20	38	36	23
Brandon Ave / Chapel Rd	350	36	33	64	66	66	36	35	64	50	25
Chapel Rd / Stacey St	720	240	75	120	57	56	120	122	125	114	23

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Route 03
Thursday, 22 February 2018

Route of Travel : Route 03
Peak Period : 12:00 to 14:00
Direction : NB

		22-Feb-2018 1:10:28 PM	22-Feb-2018 12:27:27 PM	22-Feb-2018 12:27:47 PM	22-Feb-2018 1:34:57 PM	22-Feb-2018 12:50:05 PM	22-Feb-2018 12:39:33 PM	22-Feb-2018 12:08:32 PM	22-Feb-2018 1:55:05 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:07:36 AM	6:32:35 AM	6:42:57 AM	6:50:07 AM	7:05:15 AM	7:21:19 AM	7:44:15 AM	7:51:23 AM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Underpass	330	80	104	100	59	147	109	109	120	121	10
Underpass / The Mall	316	30	59	59	39	71	50	59	42	56	20
The Mall / Marion St	382	75	64	66	65	60	69	55	60	61	23
Marion St / Meredith St	156	42	70	80	35	65	84	17	50	54	10
Meredith St / Rickard Rd	360	57	65	61	59	69	68	28	25	48	27
Rickard Rd / French Ave	158	16	14	14	20	15	16	12	12	14	41
French Ave / Hume Hwy	622	73	171	170	123	77	158	123	297	164	14

Route of Travel : Route 03
Peak Period : 12:00 to 14:00
Direction : SB

		22-Feb-2018 1:02:16 PM	22-Feb-2018 1:49:36 PM	22-Feb-2018 12:17:51 PM	22-Feb-2018 12:42:27 PM	22-Feb-2018 12:11:30 PM	22-Feb-2018 12:28:27 PM	22-Feb-2018 1:16:54 PM	22-Feb-2018 1:27:22 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:00:49 AM	6:17:10 AM	6:33:01 AM	6:57:36 AM	7:11:21 AM	7:28:20 AM	7:37:05 AM	7:42:33 AM	Average Time (sss)	Average Speed (Km/h)
Hume Hwy / French Ave	622	59	54	116	94	79	104	90	140	103	22
French Ave / Rickard Rd	158	15	28	17	45	24	50	11	21	27	21
Rickard Rd / Meredith St	360	57	68	45	55	50	49	33	90	56	23
Meredith St / Marion St	156	30	21	24	25	29	21	19	16	21	26
Marion St / The Mall	382	102	41	67	110	73	116	40	64	73	19
The Mall / Underpass	316	68	82	43	61	41	55	77	49	56	20
Underpass / Stacey St	330	43	37	69	42	82	40	41	57	55	22

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Route 03
Thursday, 22 February 2018

Route of Travel : Route 03
Peak Period : 12:00 to 14:00
Direction : NB

		22-Feb-2018 4:11:45 PM	22-Feb-2018 4:15:23 PM	22-Feb-2018 4:32:43 PM	22-Feb-2018 4:43:12 AM	22-Feb-2018 5:14:38 PM	22-Feb-2018 5:27:27 PM	22-Feb-2018 5:45:38 PM	22-Feb-2018 5:58:15 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:11:45 PM	4:15:23 PM	4:32:43 PM	4:43:12 AM	5:14:38 PM	5:27:27 PM	5:45:38 PM	5:58:15 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Underpass	330	92	90	241	60	65	89	80	94	101	12
Underpass / The Mall	316	60	70	64	40	101	50	50	40	59	19
The Mall / Marion St	382	87	85	59	110	65	60	59	110	79	17
Marion St / Meredith St	156	42	69	59	54	109	92	60	54	67	8
Meredith St / Rickard Rd	360	34	59	60	92	29	28	41	32	47	28
Rickard Rd / French Ave	158	29	11	14	19	14	15	22	14	17	33
French Ave / Hume Hwy	622	150	44	81	58	59	64	84	140	85	26

Route of Travel : Route 03
Peak Period : 12:00 to 14:00
Direction : SB

		22-Feb-2018 4:05:27 PM	22-Feb-2018 4:31:37 PM	22-Feb-2018 4:41:40 PM	22-Feb-2018 4:20:04 PM	22-Feb-2018 5:11:02 PM	22-Feb-2018 5:24:28 PM	22-Feb-2018 5:49:48 PM	22-Feb-2018 5:53:45 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:05:27 PM	4:31:37 PM	4:41:40 PM	4:20:04 PM	5:11:02 PM	5:24:28 PM	5:49:48 PM	5:53:45 PM	Average Time (sss)	Average Speed (Km/h)
Hume Hwy / French Ave	622	79	100	72	90	109	169	156	60	104	21
French Ave / Rickard Rd	158	15	46	16	25	12	27	44	19	26	22
Rickard Rd / Meredith St	360	29	49	46	80	48	58	76	50	55	24
Meredith St / Marion St	156	30	20	29	24	23	19	20	20	23	24
Marion St / The Mall	382	81	121	70	54	68	80	69	60	75	18
The Mall / Underpass	316	67	56	35	49	38	36	70	49	50	23
Underpass / Stacey St	330	91	42	65	78	67	64	110	34	69	17

Data Audit Systems
TRAFFIC SURVEYS

Route 03
Saturday, 24 February 2018

Route of Travel : Route 03
Peak Period : 12:00 to 14:00
Direction : NB

		24-Feb-2018 12:08:32 PM	24-Feb-2018 12:27:47 PM	24-Feb-2018 12:39:33 PM	24-Feb-2018 12:50:05 PM	24-Feb-2018 1:10:28 PM	24-Feb-2018 1:27:27 PM	24-Feb-2018 1:34:57 PM	24-Feb-2018 1:55:05 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:08:32 PM	12:27:47 PM	12:39:33 PM	12:50:05 PM	1:10:28 PM	1:27:27 PM	1:34:57 PM	1:55:05 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Underpass	330	89	109	341	394	64	105	57	93	157	8
Underpass / The Mall	316	58	55	60	59	82	50	36	38	55	21
The Mall / Marion St	382	86	60	56	58	74	65	64	116	72	19
Marion St / Meredith St	156	84	79	58	55	97	77	30	85	71	8
Meredith St / Rickard Rd	360	33	63	59	59	27	64	55	28	49	27
Rickard Rd / French Ave	158	24	12	12	12	10	11	11	12	13	44
French Ave / Hume Hwy	622	183	277	90	70	55	273	132	240	165	14

Route of Travel : Route 03
Peak Period : 12:00 to 14:00
Direction : SB

		24-Feb-2018 12:11:30 PM	24-Feb-2018 12:17:51 PM	24-Feb-2018 12:28:27 PM	24-Feb-2018 12:42:27 PM	24-Feb-2018 1:02:16 PM	24-Feb-2018 1:16:54 PM	24-Feb-2018 1:27:22 PM	24-Feb-2018 1:49:37 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:11:30 PM	12:17:51 PM	12:28:27 PM	12:42:27 PM	1:02:16 PM	1:16:54 PM	1:27:22 PM	1:49:37 PM	Average Time (sss)	Average Speed (Km/h)
Hume Hwy / French Ave	622	70	316	108	107	74	150	154	56	129	17
French Ave / Rickard Rd	158	14	12	48	44	12	15	14	14	22	26
Rickard Rd / Meredith St	360	46	47	50	51	24	94	91	58	58	22
Meredith St / Marion St	156	23	22	19	21	24	14	15	16	19	29
Marion St / The Mall	382	70	69	119	123	109	59	59	65	84	16
The Mall / Underpass	316	34	38	54	58	60	45	46	50	48	24
Underpass / Stacey St	330	64	68	38	39	81	76	54	32	57	21

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Route 04
Thursday, 22 February 2018

Route of Travel : Route 04
Peak Period : 6:00 to 8:00
Direction : EB

		22-Feb-2018 6:11:57 AM	22-Feb-2018 6:17:19 AM	22-Feb-2018 6:29:42 AM	22-Feb-2018 6:47:21 AM	22-Feb-2018 7:19:27 AM	22-Feb-2018 7:28:09 AM	22-Feb-2018 7:48:28 AM	22-Feb-2018 7:55:20 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:11:57 AM	6:17:19 AM	6:29:42 AM	6:47:21 AM	7:19:27 AM	7:28:09 AM	7:48:28 AM	7:55:20 AM	Average Time (sss)	Average Speed (Km/h)
Oxford Ave / Greenwood Ave	300	110	80	80	79	77	31	78	76	66	16
Greenwood Ave / Meredith St	182	58	36	46	37	23	30	31	39	31	21
Meredith St / Chapel Rd	159	54	23	56	49	32	30	34	23	30	19
Chapel Rd / Rickhard Rd	330	141	78	98	78	79	78	102	114	93	13
Rickhard Rd / Sir Joseph Banks St	410	76	54	43	80	43	38	45	72	50	30
Sir Joseph Banks St / Stacey St	294	120	141	57	138	137	114	142	136	132	8

Route of Travel : Route 04
Peak Period : 6:00 to 8:00
Direction : WB

		22-Feb-2018 6:06:23 AM	22-Feb-2018 6:10:55 AM	22-Feb-2018 6:17:28 AM	22-Feb-2018 6:46:01 AM	22-Feb-2018 7:12:34 AM	22-Feb-2018 7:19:21 AM	22-Feb-2018 7:39:20 AM	22-Feb-2018 7:54:31 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:06:23 AM	6:10:55 AM	6:17:28 AM	6:46:01 AM	7:12:34 AM	7:19:21 AM	7:39:20 AM	7:54:31 AM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Sir Joseph Banks St	294	29	36	123	114	37	71	175	119	94	11
Sir Joseph Banks St / Rickhard Rd	410	77	63	59	60	99	49	91	66	80	19
Rickhard Rd / Chapel Rd	330	58	100	106	46	66	65	70	101	67	18
Chapel Rd / Meredith St	159	20	28	29	16	39	49	39	24	42	14
Meredith St / Greenwood Ave	182	68	39	39	17	32	88	39	42	53	12
Greenwood Ave / Oxford Ave	300	33	30	27	49	60	39	55	31	51	21

Data Audit Systems
TRAFFIC SURVEYS

Route 04
Thursday, 22 February 2018

Route of Travel : Route 04
Peak Period : 4:00 to 6:00
Direction : EB

		22-Feb-2018 4:10:54 PM	22-Feb-2018 4:28:58 PM	22-Feb-2018 4:33:37 AM	22-Feb-2018 4:53:15 PM	22-Feb-2018 5:31:10 PM	22-Feb-2018 5:47:25 PM	22-Feb-2018 5:19:48 PM	22-Feb-2018 5:27:27 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:10:54 PM	4:28:58 PM	4:33:37 AM	4:53:15 PM	5:31:10 PM	5:47:25 PM	5:19:48 PM	5:27:27 PM	Average Time (sss)	Average Speed (Km/h)
Oxford Ave / Greenwood Ave	300	110	57	68	36	63	75	36	75	65	17
Greenwood Ave / Meredith St	182	56	37	21	20	33	31	37	31	33	20
Meredith St / Chapel Rd	159	75	39	45	56	24	23	44	47	44	13
Chapel Rd / Rickhard Rd	330	110	49	41	43	48	39	39	102	59	20
Rickhard Rd / Sir Joseph Banks St	410	74	43	34	85	40	44	33	44	50	30
Sir Joseph Banks St / Stacey St	294	119	49	110	122	215	140	22	136	114	9

Route of Travel : Route 04
Peak Period : 4:00 to 6:00
Direction : WB

		22-Feb-2018 4:09:54 PM	22-Feb-2018 4:23:33 PM	22-Feb-2018 4:38:45 PM	22-Feb-2018 4:45:11 PM	22-Feb-2018 5:09:53 PM	22-Feb-2018 5:14:20 PM	22-Feb-2018 5:30:40 PM	22-Feb-2018 5:50:28 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:09:54 PM	4:23:33 PM	4:38:45 PM	4:45:11 PM	5:09:53 PM	5:14:20 PM	5:30:40 PM	5:50:28 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Sir Joseph Banks St	294	31	163	99	38	86	71	37	41	71	15
Sir Joseph Banks St / Rickhard Rd	410	75	137	77	83	90	48	75	107	87	17
Rickhard Rd / Chapel Rd	330	91	92	89	54	150	67	91	111	93	13
Chapel Rd / Meredith St	159	24	15	24	76	23	27	37	42	34	17
Meredith St / Greenwood Ave	182	42	59	44	38	19	104	36	34	47	14
Greenwood Ave / Oxford Ave	300	29	67	31	25	74	42	58	57	48	23

Data Audit Systems
TRAFFIC SURVEYS

Route 04
Saturday, 24 February 2018

Route of Travel : Route 04
Peak Period : 12:00 to 14:00
Direction : EB

		24-Feb-2018 12:06:46 PM	24-Feb-2018 12:12:08 PM	24-Feb-2018 12:20:09 PM	24-Feb-2018 12:42:10 PM	24-Feb-2018 1:12:16 PM	24-Feb-2018 1:22:58 PM	24-Feb-2018 1:43:19 AM	24-Feb-2018 1:54:42 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:06:46 PM	12:12:08 PM	12:20:09 PM	12:42:10 PM	1:12:16 PM	1:22:58 PM	1:43:19 AM	1:54:42 PM	Average Time (sss)	Average Speed (Km/h)
Oxford Ave / Greenwood Ave	300	73	36	48	36	75	32	76	80	57	19
Greenwood Ave / Meredith St	182	59	36	37	38	33	30	32	27	37	18
Meredith St / Chapel Rd	159	43	41	71	36	41	45	50	36	45	13
Chapel Rd / Rickhard Rd	330	56	64	59	70	33	63	36	65	56	21
Rickhard Rd / Sir Joseph Banks St	410	72	33	34	35	44	39	44	42	43	34
Sir Joseph Banks St / Stacey St	294	70	134	136	142	114	112	138	49	112	9

Route of Travel : Route 04
Peak Period : 12:00 to 14:00
Direction : WB

		24-Feb-2018 12:01:12 PM	24-Feb-2018 12:05:44 PM	24-Feb-2018 12:32:17 PM	24-Feb-2018 12:44:20 PM	24-Feb-2018 1:06:32 PM	24-Feb-2018 1:14:10 PM	24-Feb-2018 1:34:10 PM	24-Feb-2018 1:49:33 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:01:12 PM	12:05:44 PM	12:32:17 PM	12:44:20 PM	1:06:32 PM	1:14:10 PM	1:34:10 PM	1:49:33 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Sir Joseph Banks St	294	29	33	29	28	38	73	48	44	40	26
Sir Joseph Banks St / Rickhard Rd	410	79	70	71	72	105	50	71	65	73	20
Rickhard Rd / Chapel Rd	330	57	96	106	100	59	65	85	48	77	15
Chapel Rd / Meredith St	159	19	24	24	22	40	28	42	15	27	21
Meredith St / Greenwood Ave	182	67	44	48	43	39	42	37	16	42	16
Greenwood Ave / Oxford Ave	300	34	29	27	34	56	44	55	49	41	26

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Route 05
Thursday, 22 February 2018

Route of Travel : Route 05
Peak Period : 6:00 to 8:00
Direction : NB

		22-Feb-2018 6:25:15 AM	22-Feb-2018 6:43:22 AM	22-Feb-2018 6:58:40 AM	22-Feb-2018 7:02:40 AM	22-Feb-2018 7:21:41 AM	22-Feb-2018 7:41:29 AM	22-Feb-2018 7:48:10 AM	22-Feb-2018 7:52:41 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:25:15 AM	6:43:22 AM	6:58:40 AM	7:02:40 AM	7:21:41 AM	7:41:29 AM	7:48:10 AM	7:52:41 AM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Restwell St	444	60	42	68	60	32	91	86	40	62	26
Restwell St / Raymond St	128	85	95	96	66	48	89	68	38	62	7
Raymond St / South Tce	146	42	43	28	36	42	27	19	52	35	15
South Tce / Underpass	230	34	42	60	20	34	42	33	74	41	20
Underpass / Stacey St	294	53	42	48	34	53	46	40	34	41	26

Route of Travel : Route 05
Peak Period : 6:00 to 8:00
Direction : SB

		22-Feb-2018 6:04:36 AM	22-Feb-2018 6:22:56 AM	22-Feb-2018 6:40:56 AM	22-Feb-2018 6:47:28 AM	22-Feb-2018 7:09:06 AM	22-Feb-2018 7:24:58 AM	22-Feb-2018 7:45:05 AM	22-Feb-2018 8:00:10 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	6:04:36 AM	6:22:56 AM	6:40:56 AM	6:47:28 AM	7:09:06 AM	7:24:58 AM	7:45:05 AM	8:00:10 AM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Underpass	294	80	34	52	61	82	55	31	37	51	21
Underpass / Raymond St	230	40	37	22	32	24	25	38	28	29	29
Raymond St / Restwell St	160	42	30	19	20	13	34	24	46	29	20
Restwell St / Stanley St	128	35	35	18	11	30	23	27	19	25	19
Stanley St / Stacey St	444	34	46	30	57	23	32	35	56	37	44

Data Audit Systems
TRAFFIC SURVEYS

Route 05
Thursday, 22 February 2018

Route of Travel : Route 05
Peak Period : 4:00 to 6:00
Direction : NB

		22-Feb-2018 4:03:56 PM	22-Feb-2018 4:12:03 PM	22-Feb-2018 4:27:12 PM	22-Feb-2018 4:31:21 PM	22-Feb-2018 4:50:22 PM	22-Feb-2018 5:10:10 PM	22-Feb-2018 5:21:22 PM	22-Feb-2018 5:30:37 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:03:56 PM	4:12:03 PM	4:27:12 PM	4:31:21 PM	4:50:22 PM	5:10:10 PM	5:21:22 PM	5:30:37 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Restwell St	444	87	36	72	28	38	131	73	51	65	25
Restwell St / Raymond St	128	47	47	41	32	27	38	38	27	37	12
Raymond St / South Tce	146	36	27	19	19	44	19	16	24	26	21
South Tce / Underpass	230	28	57	63	24	36	44	38	68	45	19
Underpass / Stacey St	294	63	27	41	32	50	49	33	49	43	25

Route of Travel : Route 05
Peak Period : 4:00 to 6:00
Direction : SB

		22-Feb-2018 4:09:37 PM	22-Feb-2018 4:16:09 PM	22-Feb-2018 4:37:47 PM	22-Feb-2018 4:53:39 PM	22-Feb-2018 5:16:28 PM	22-Feb-2018 5:28:51 PM	22-Feb-2018 5:34:29 PM	22-Feb-2018 5:53:17 AM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	4:09:37 PM	4:16:09 PM	4:37:47 PM	4:53:39 PM	5:16:28 PM	5:28:51 PM	5:34:29 PM	5:53:17 AM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Underpass	294	39	54	54	50	41	36	36	50	45	24
Underpass / Raymond St	230	24	34	29	27	29	43	28	33	31	27
Raymond St / Restwell St	160	20	21	14	32	14	20	32	18	21	27
Restwell St / Stanley St	128	17	18	27	19	32	20	28	28	24	20
Stanley St / Stacey St	444	32	54	31	34	37	31	36	43	37	43

Data Audit Systems
TRAFFIC SURVEYS

Route 05
Saturday, 24 February 2018

Route of Travel : Route 05
Peak Period : 12:00 to 14:00
Direction : NB

		24-Feb-2018 12:16:11 PM	24-Feb-2018 12:34:20 PM	24-Feb-2018 12:49:36 PM	24-Feb-2018 12:53:36 PM	24-Feb-2018 1:14:06 PM	24-Feb-2018 1:32:25 PM	24-Feb-2018 1:39:06 PM	24-Feb-2018 1:53:53 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:16:11 PM	12:34:20 PM	12:49:36 PM	12:53:36 PM	1:14:06 PM	1:32:25 PM	1:39:06 PM	1:53:53 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Restwell St	444	71	36	59	36	41	38	108	74	58	28
Restwell St / Raymond St	128	100	82	114	57	34	57	112	59	77	6
Raymond St / South Tce	146	36	34	15	19	45	36	20	16	28	19
South Tce / Underpass	230	29	59	104	24	64	29	36	39	48	17
Underpass / Stacey St	294	63	35	41	40	40	63	40	34	45	24

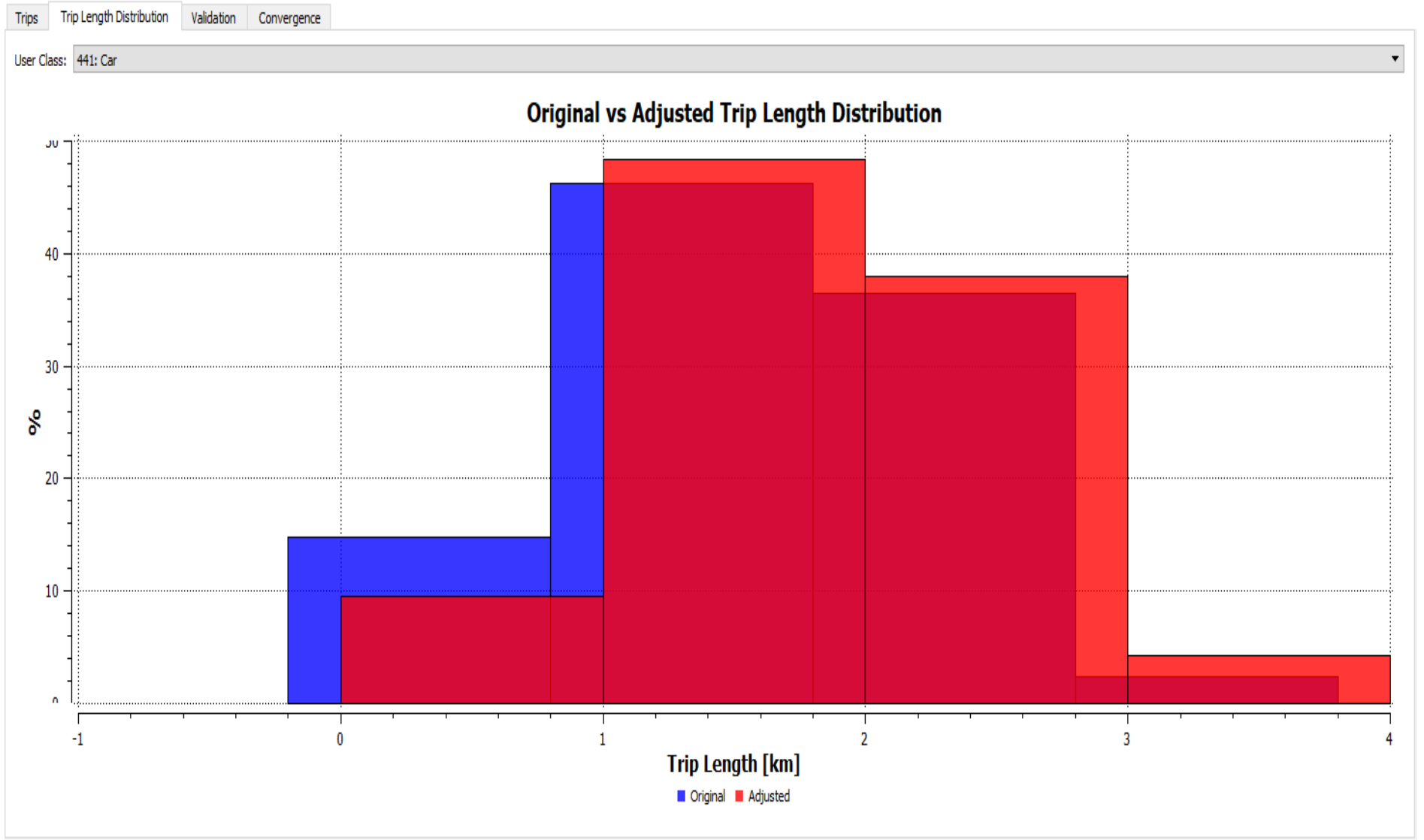
Route of Travel : Route 05
Peak Period : 12:00 to 14:00
Direction : SB

		24-Feb-2018 12:11:12 PM	24-Feb-2018 12:38:24 PM	24-Feb-2018 12:48:44 PM	24-Feb-2018 1:00:02 PM	24-Feb-2018 1:15:54 PM	24-Feb-2018 1:36:01 PM	24-Feb-2018 1:48:49 PM	24-Feb-2018 1:51:06 PM		
		Run 01	Run 02	Run 03	Run 04	Run 05	Run 06	Run 07	Run 08		
Way Points (Origin - Destination)	Length (m)	12:11:12 PM	12:38:24 PM	12:48:44 PM	1:00:02 PM	1:15:54 PM	1:36:01 PM	1:48:49 PM	1:51:06 PM	Average Time (sss)	Average Speed (Km/h)
Stacey St / Underpass	294	45	53	40	71	47	37	41	69	50	21
Underpass / Raymond St	230	27	38	59	29	30	33	32	34	35	23
Raymond St / Restwell St	160	23	24	23	16	29	16	36	36	25	23
Restwell St / Stanley St	128	15	16	23	36	20	36	30	30	26	18
Stanley St / Stacey St	444	36	49	28	28	38	42	40	40	38	42

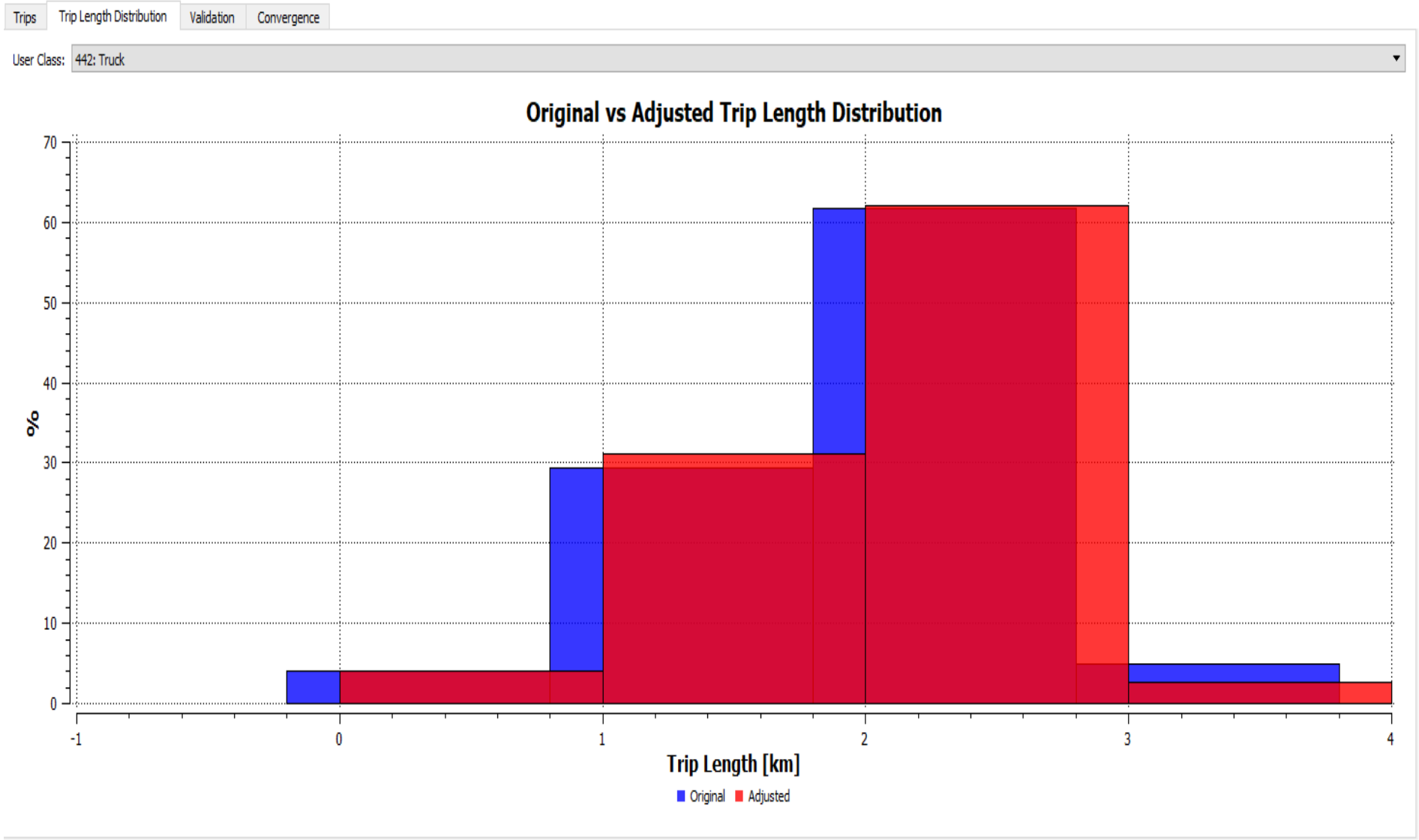
Appendix C

Trip Length Distribution Diagrams

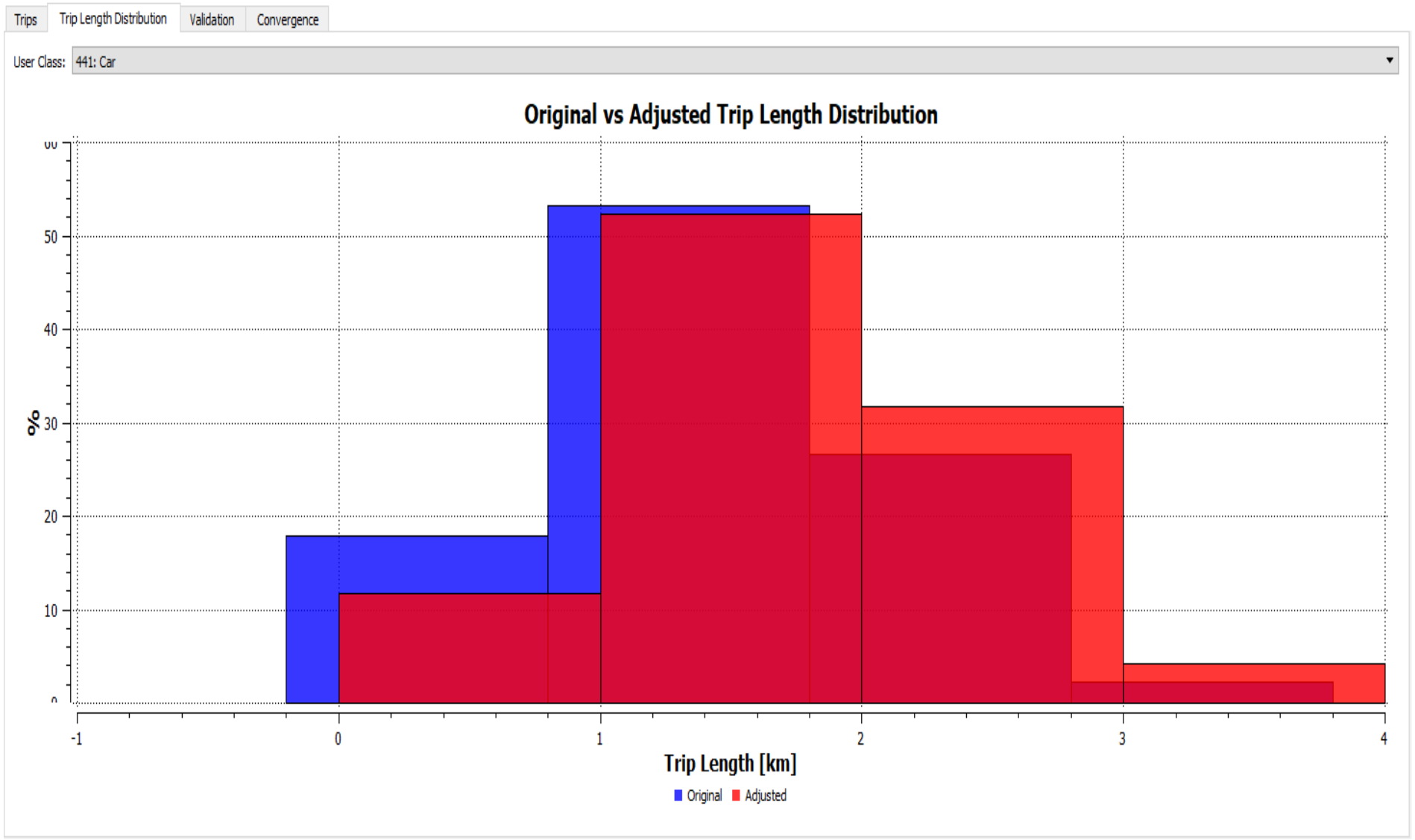
Weekday 7AM-8AM Car Trip Length Distribution



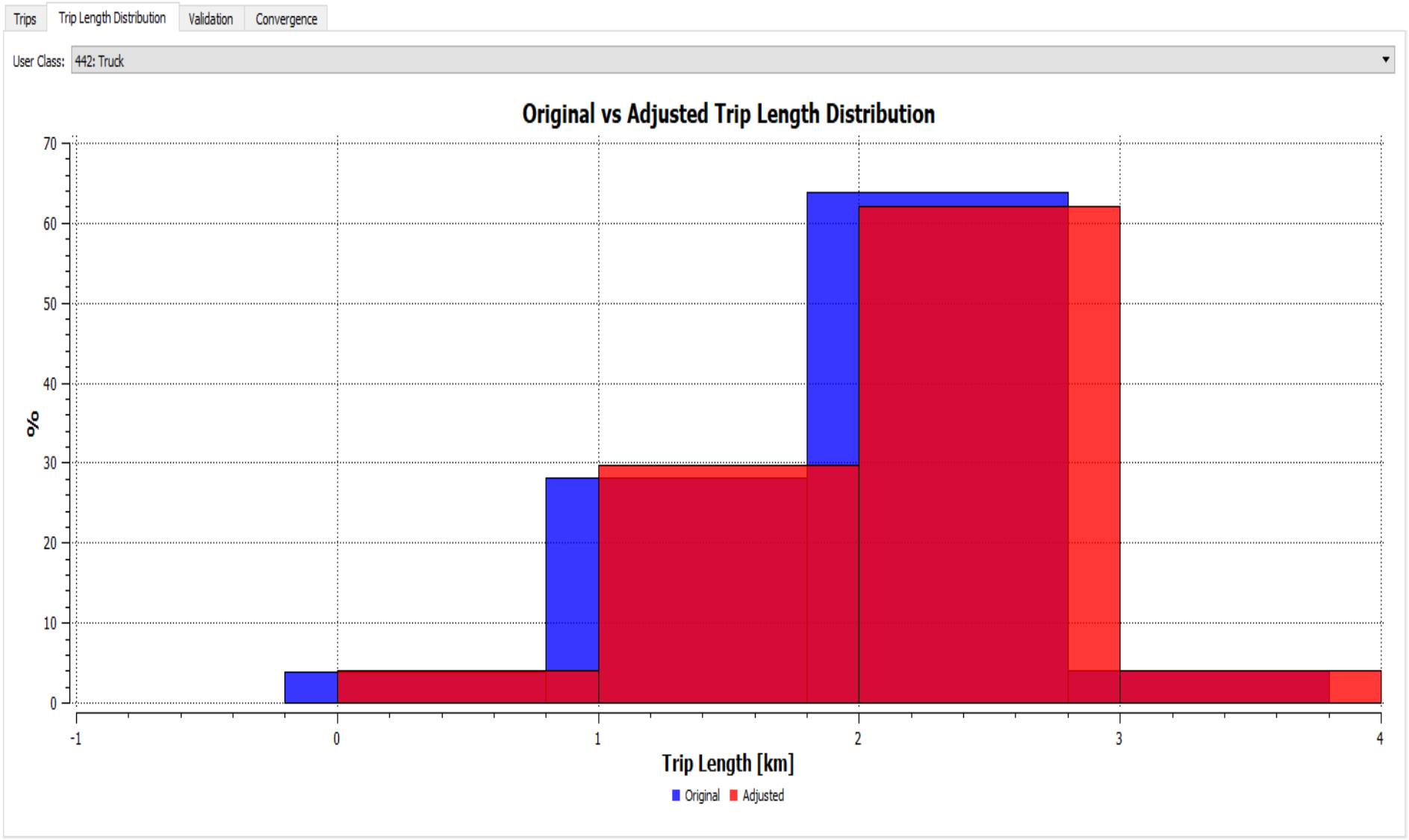
Weekday 7AM-8AM Truck Trip Length Distribution



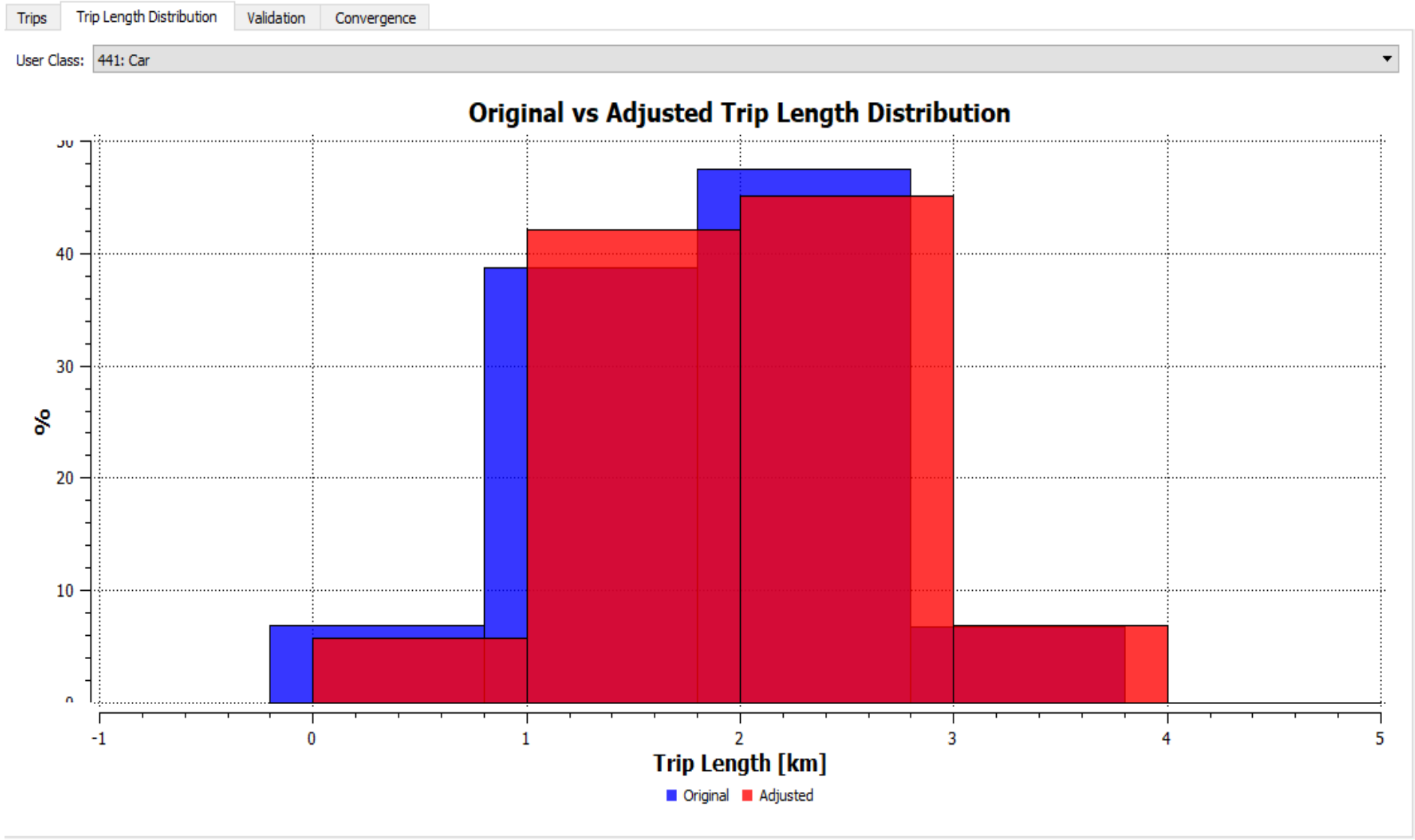
Weekday 8AM-9AM Car Trip Length Distribution



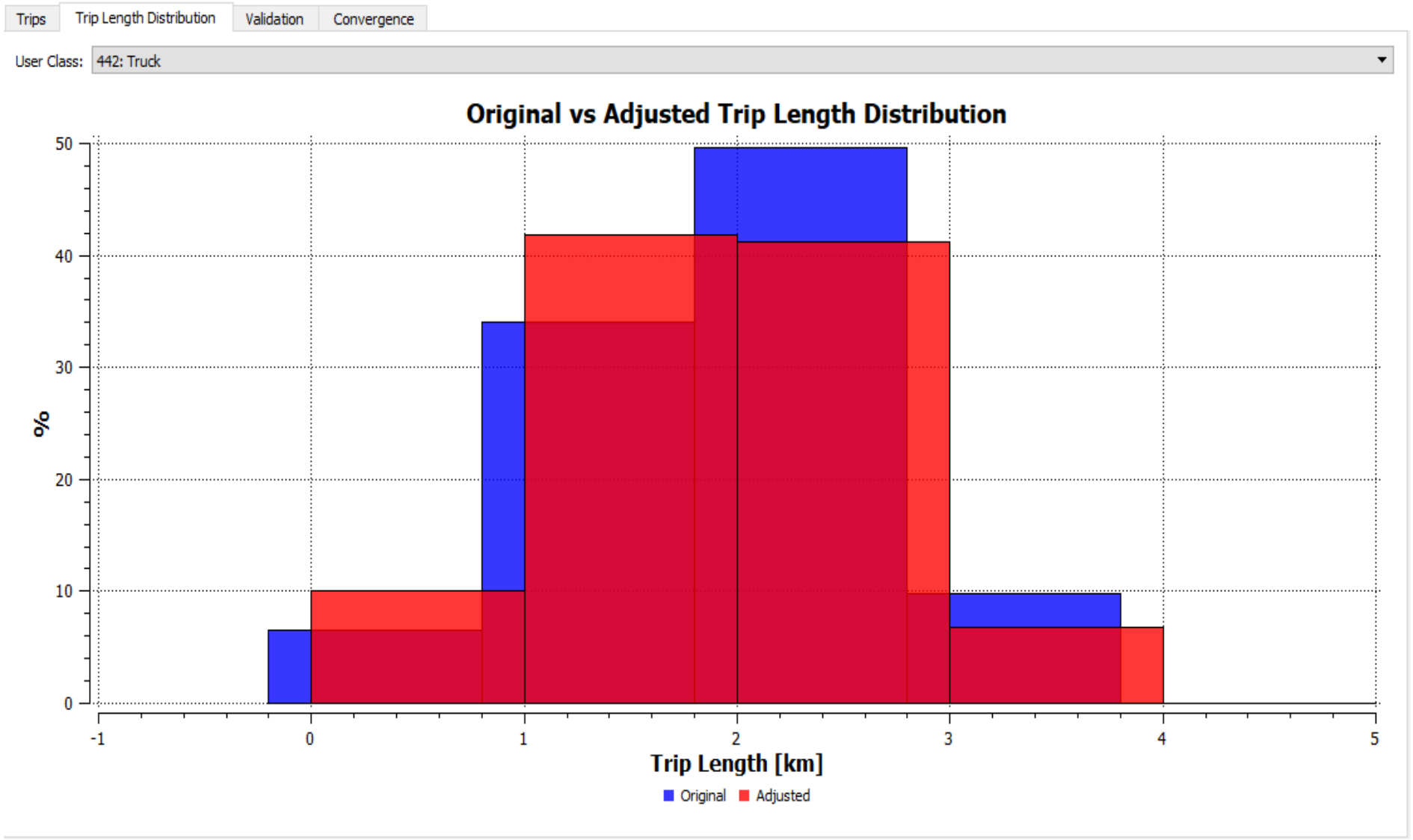
Weekday 8AM-9AM Truck Trip Length Distribution



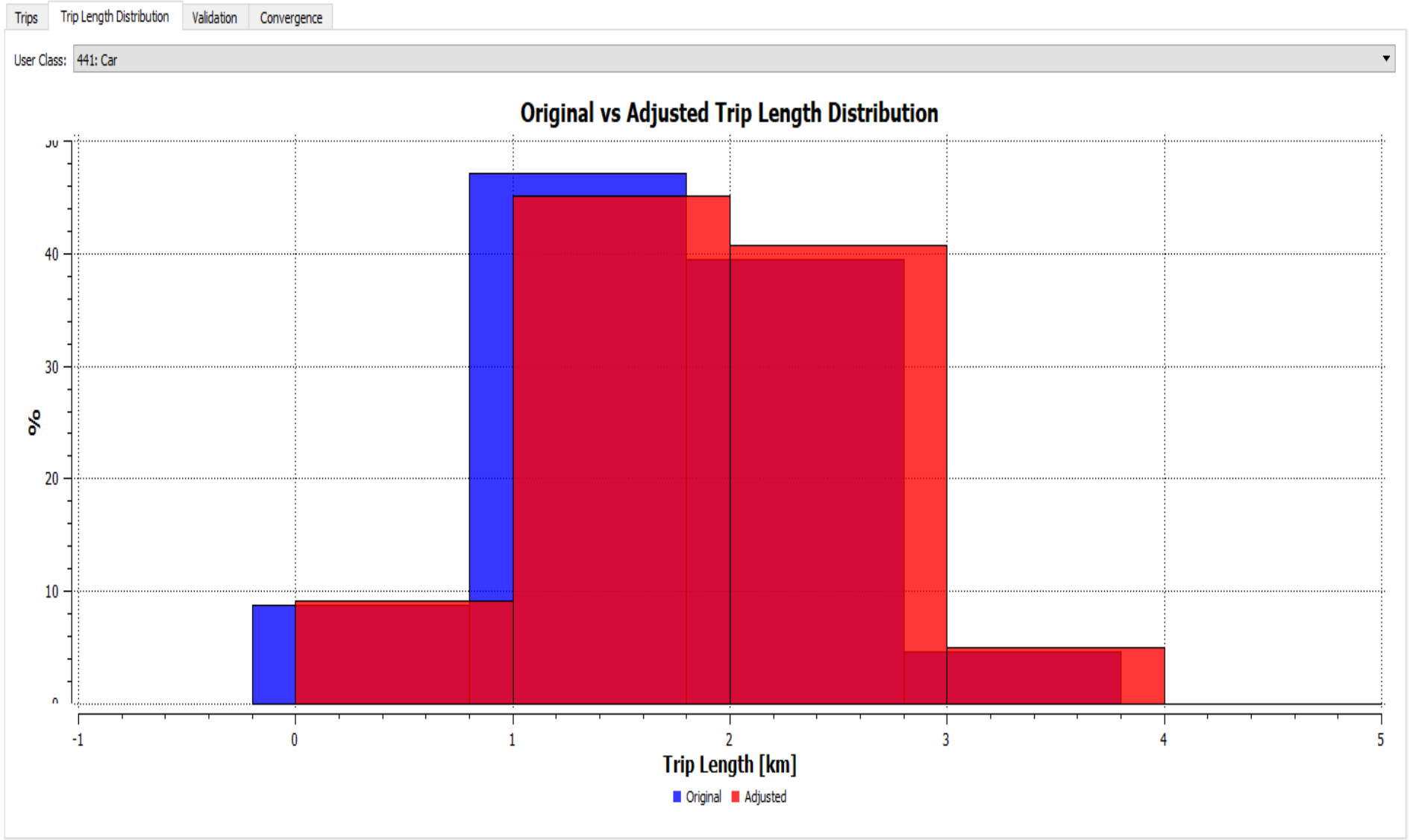
Weekday 4PM-5PM Car Trip Length Distribution



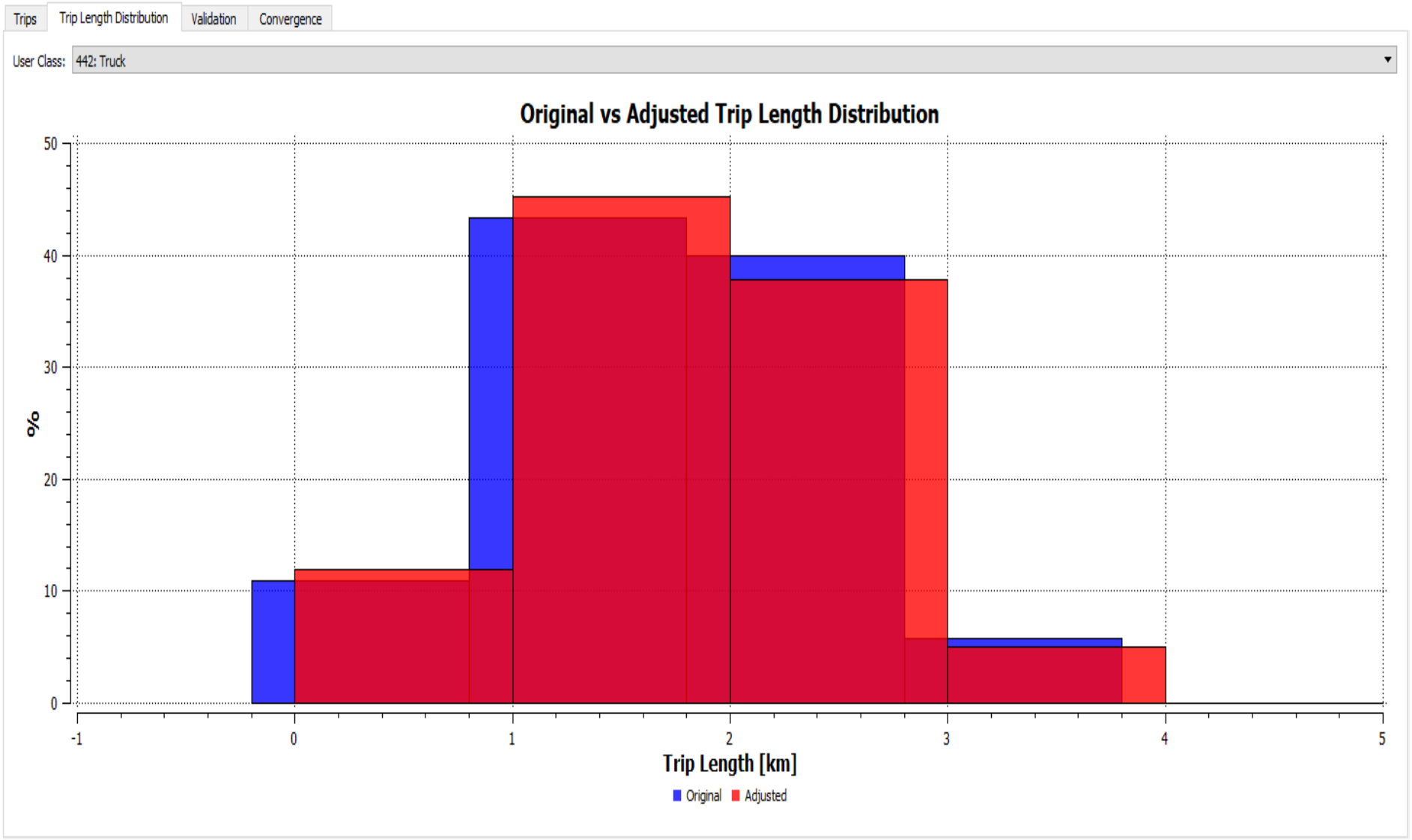
Weekday 4PM-5PM Truck Trip Length Distribution



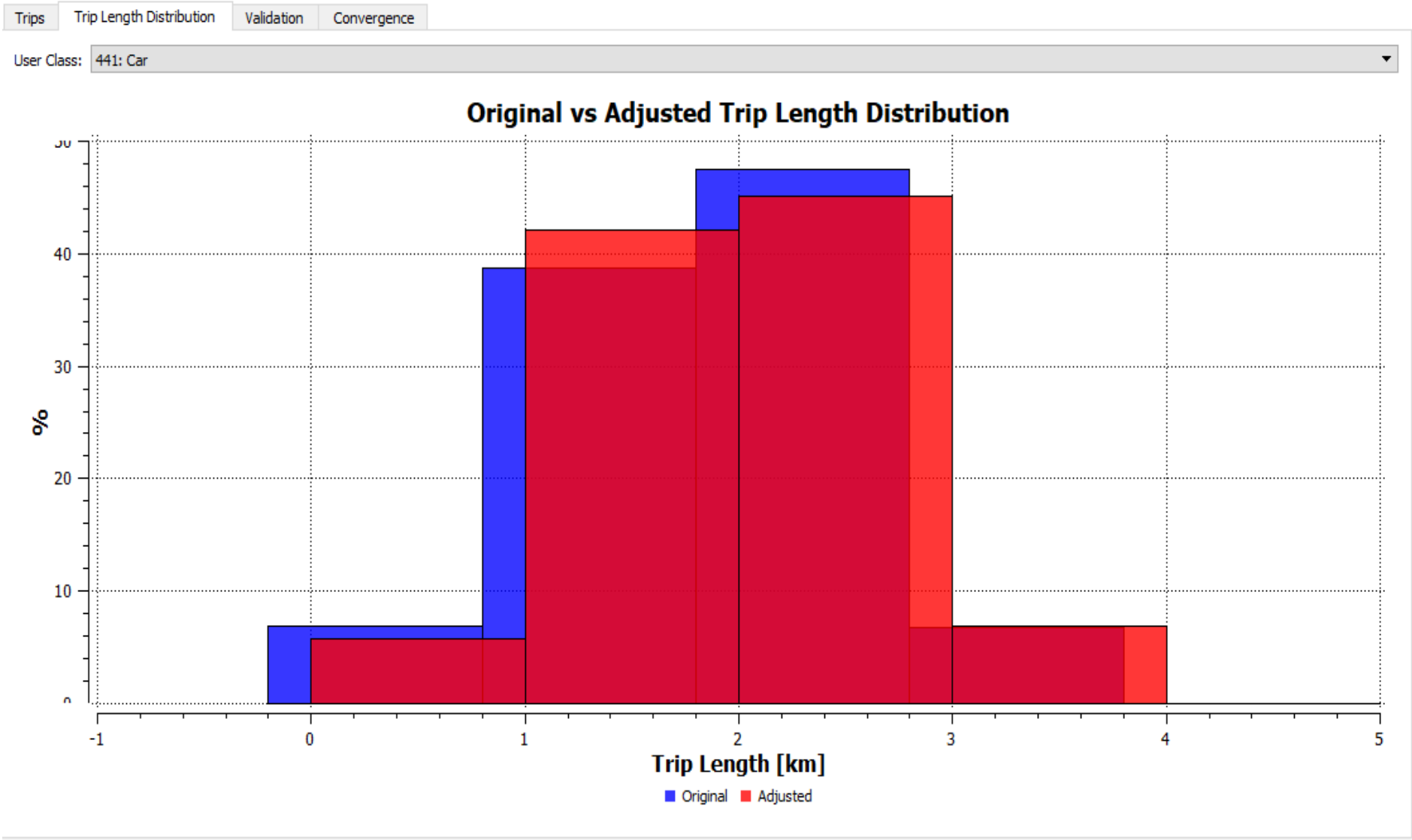
Weekday 5PM-6PM Car Trip Length Distribution



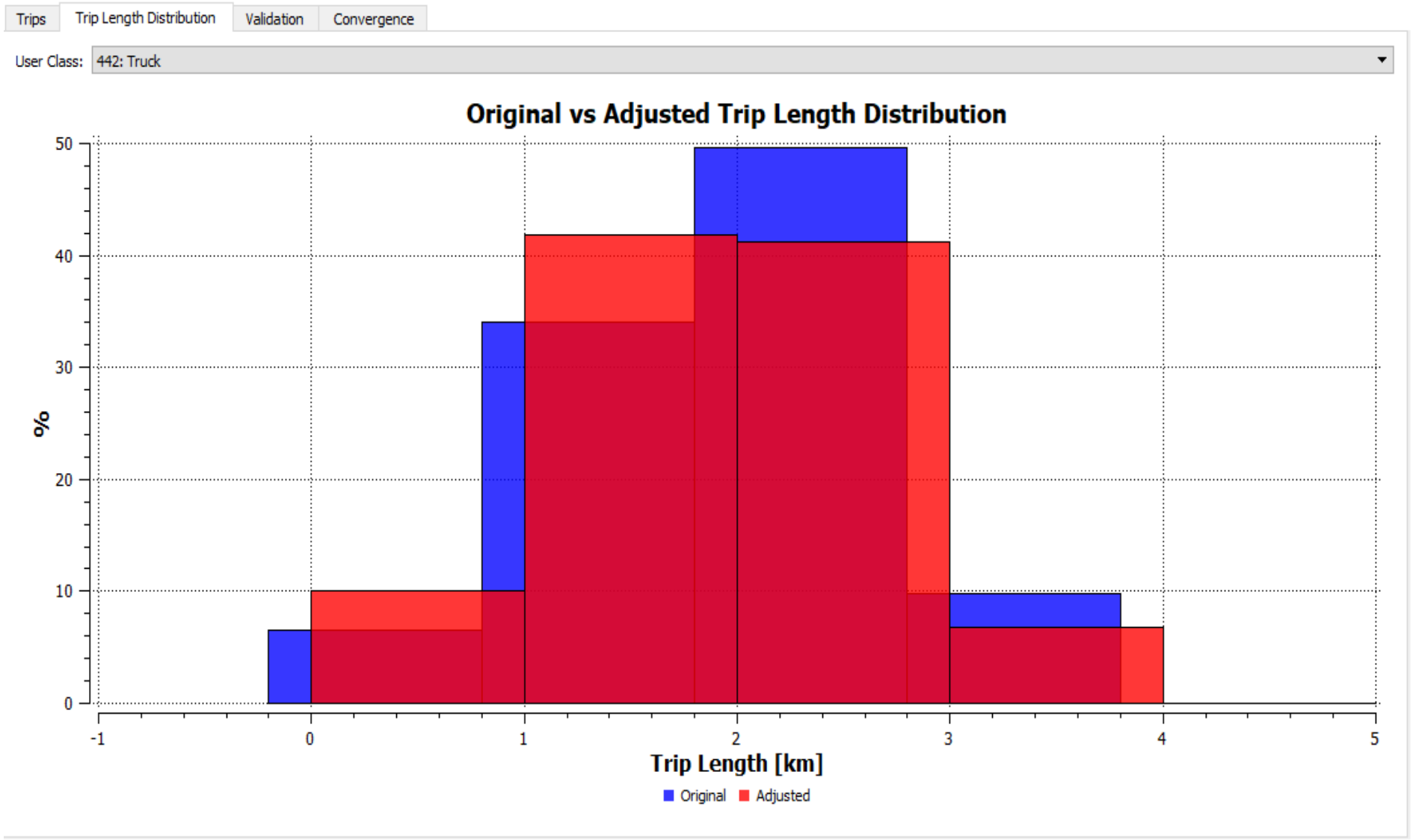
Weekday 5PM-6PM Truck Trip Length Distribution



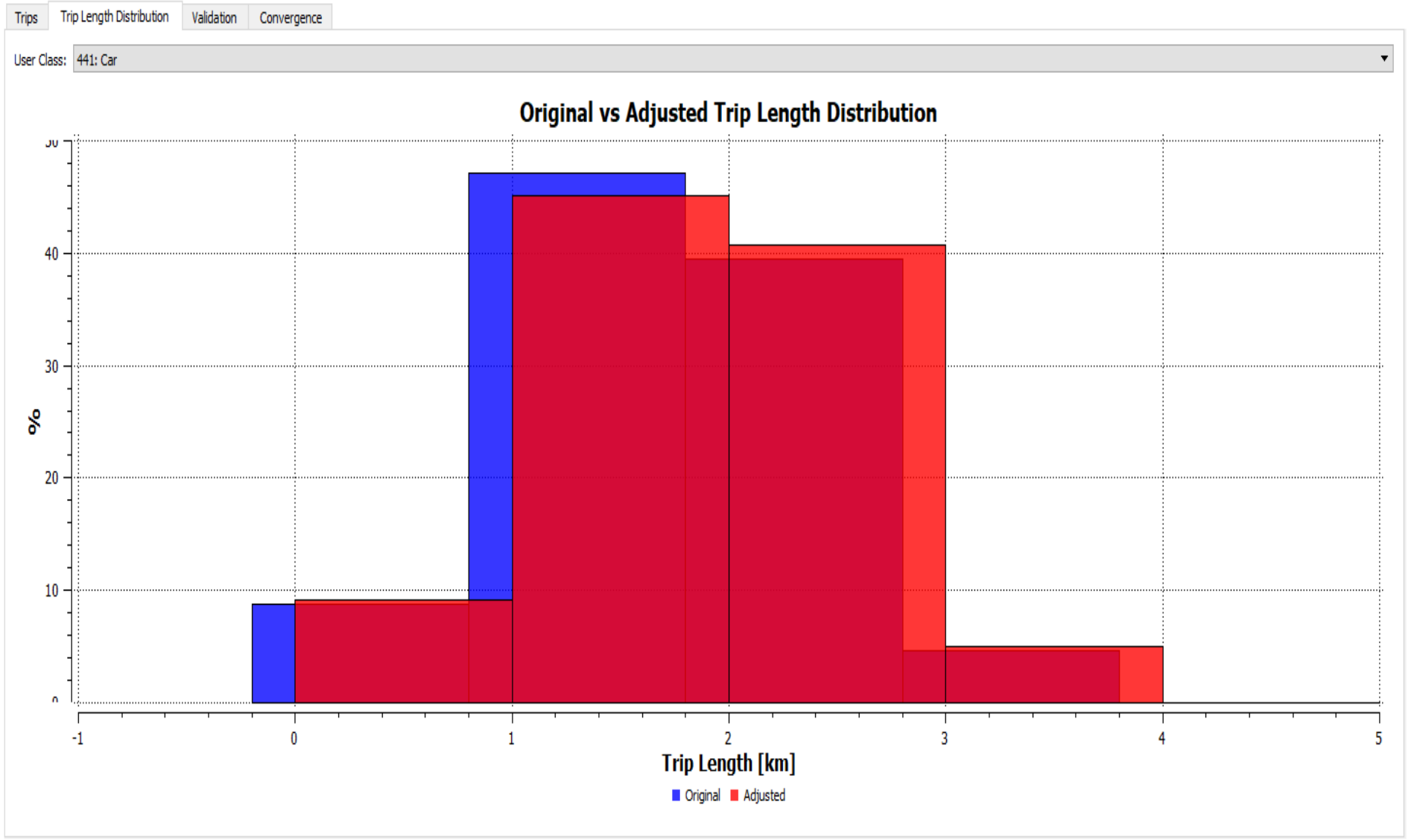
Weekend 4PM-5PM Car Trip Length Distribution



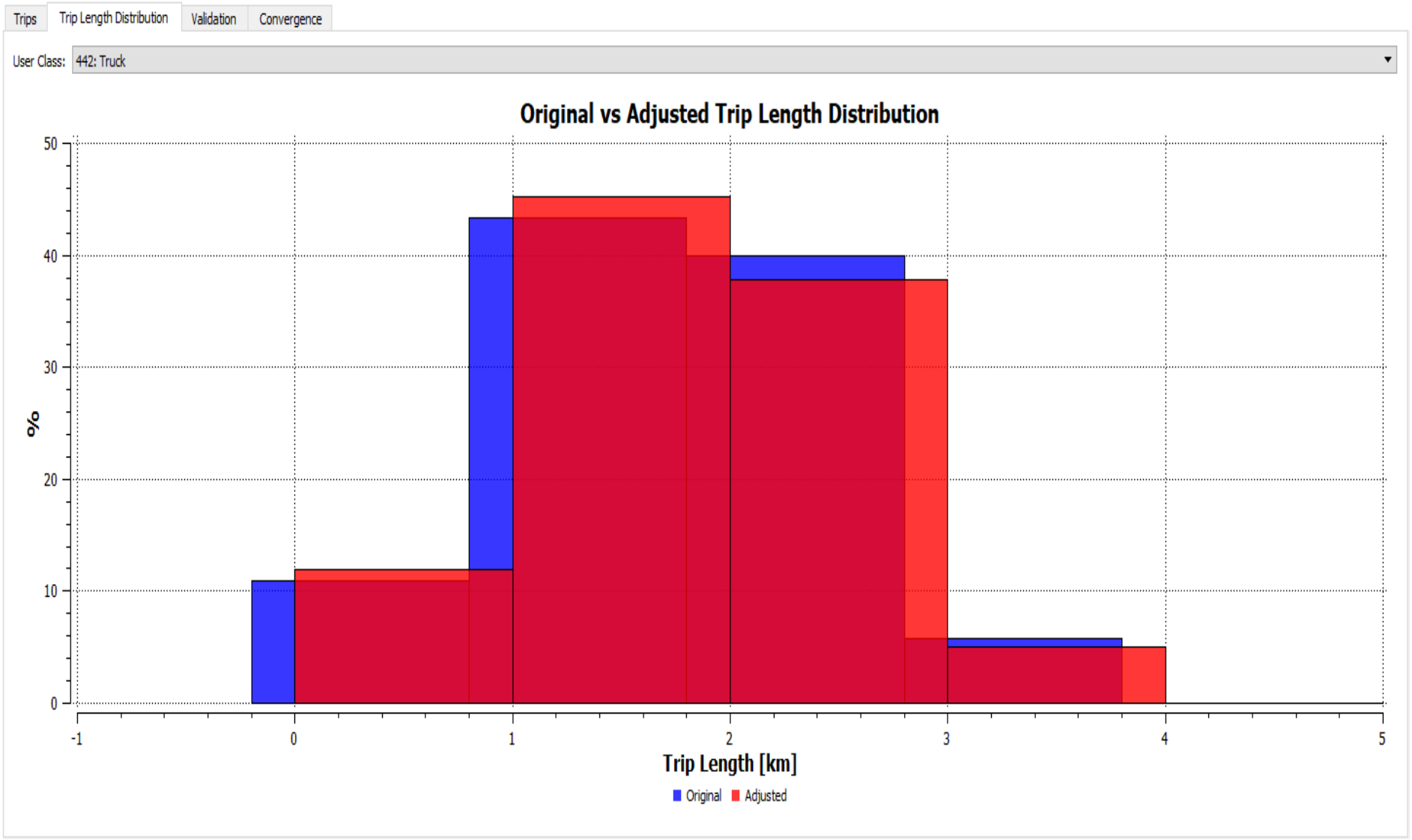
Weekend 4PM-5PM Truck Trip Length Distribution



Weekend 5PM-6PM Car Trip Length Distribution



Weekend 5PM-6PM Truck Trip Length Distribution



Appendix D

Calibration Tables

N132740 Bankstown Complete Streets

Thursday 22 Feb 2018 (7:00 AM - 8:00 AM)

All Vehicles

Section	Approach	Movement	Observed	Modelled	GEH
SCATS Section 2	South	Through	**2096**	2051	**1.0**
SCATS Section 2	North	Through	**1826**	1819	**0.2**
SCATS Section 2	East	Through	**331**	340	**0.5**
SCATS Section 3	West	Through	**380**	358	**1.1**
SCATS Section 3	North	Through	**1658**	1676	**0.4**
SCATS Section 4	South	Through	**2113**	2098	**0.3**
SCATS Section 4	East	Through	**185**	217	**2.3**
SCATS Section 4	West	Through	**165**	159	**0.5**
SCATS Section 4	North	Through	**1542**	1578	**0.9**
SCATS Section 6	North	Through	**164**	114	**4.2**
SCATS Section 6	West	Through	**350**	429	**4.0**
SCATS Section 6	East	Through	**310**	267	**2.5**
SCATS Section 7	West	Through	**503**	478	**1.1**
SCATS Section 7	East	Through	**397**	294	**5.5**
SCATS Section 7	North	Through	**167**	131	**2.9**
SCATS Section 9	South	Through	**397**	444	**2.3**
SCATS Section 9	East	Through	**289**	290	**0.1**
SCATS Section 9	West	Through	**586**	563	**1.0**
SCATS Section 9	North	Through	**307**	309	**0.1**
SCATS Section 10	West	Through	**586**	560	**1.1**
SCATS Section 10	East	Through	**256**	233	**1.5**
SCATS Section 10	South	Through	**23**	13	**2.4**
SCATS Section 13	East	Through	**308**	300	**0.5**
SCATS Section 13	South	Through	**20**	18	**0.5**
SCATS Section 14	South	Through	**666**	595	**2.8**
SCATS Section 14	North	Through	**502**	552	**2.2**
SCATS Section 16	West	Through	**413**	363	**2.5**
SCATS Section 16	South	Through	**655**	508	**6.1**
SCATS Section 16	East	Through	**311**	305	**0.3**
SCATS Section 19	East	Through	**327**	376	**2.6**
SCATS Section 19	West	Through	**457**	368	**4.4**
SCATS Section 21	East	Through	**246**	268	**1.4**
SCATS Section 21	West	Through	**392**	432	**2.0**

SCATS Section 22	South	Through	**730**	653	**2.9**
SCATS Section 23	East	Through	**511**	559	**2.1**
SCATS Section 23	North	Through	**435**	510	**3.5**
SCATS Section 25	East	Through	**102**	193	**7.5**
SCATS Section 26	West	Through	**776**	852	**2.7**
SCATS Section 26	North	Through	**159**	227	**4.9**
SCATS Section 29	East	Through	**227**	224	**0.2**
SCATS Section 30	West	Through	**625**	667	**1.7**
SCATS Section 30	East	Through	**538**	570	**1.4**
SCATS Section 31	West	Through	**618**	507	**4.7**
SCATS Section 31	East	Through	**190**	191	**0.1**
SCATS Section 31	South	Through	**59**	83	**2.8**
SCATS Section 32	West	Through	**673**	597	**3.0**
SCATS Section 32	North	Through	**190**	176	**1.0**
SCATS Section 35	South	Through	**437**	421	**0.8**
SCATS Section 35	West	Through	**195**	196	**0.1**
SCATS Section 35	East	Through	**91**	86	**0.5**
SCATS Section 36	South	Through	**285**	250	**2.1**
SCATS Section 36	North	Through	**223**	258	**2.3**
SCATS Section 38	North	Through	**1831**	1754	**1.8**
SCATS Section 40	North	Through	**321**	342	**1.2**
SCATS Section 40	West	Through	**667**	492	**7.3**
SCATS Section 40	East	Through	**382**	380	**0.1**
Tube Count 1	North	Through	**486**	550	**2.8**
Tube Count 1	**South**	**Through**	**1047**	**869**	**5.8**
Tube Count 2	**South**	**Through**	**269**	**255**	**0.9**
Tube Count 2	North	Through	**76**	81	**0.6**
Tube Count 3	West	Through	**368**	499	**6.3**
Tube Count 3	**East**	**Through**	**640**	**550**	**3.7**
Tube Count 5	East	Through	**557**	559	**0.1**
Tube Count 5	West	Through	**397**	466	**3.3**
Tube Count 6	South	Through	**668**	523	**5.9**
Tube Count 6	North	Through	**173**	213	**2.9**
Tube Count 7	South	Through	**2067**	2082	**0.3**
Tube Count 7	North	Through	**1870**	1715	**3.7**
Tube Count 8	North	Through	**70**	125	**5.6**
Tube Count 8	South	Through	**236**	195	**2.8**
Tube Count 9	East	Through	**91**	109	**1.8**
Tube Count 9	West	Through	**248**	239	**0.6**
Tube Count 10	North	Through	**159**	199	**3.0**
Tube Count 10	South	Through	**207**	175	**2.3**
Tube Count 11	West	Through	**77**	124	**4.7**
Tube Count 11	East	Through	**108**	116	**0.8**
Tube Count 12	South	Through	**184**	78	**9.3**
Tube Count 12	North	Through	**165**	126	**3.2**

Tube Count 13	East	Through	**446**	461	**0.7**
Tube Count 13	West	Through	**450**	458	**0.4**
Tube Count 14	West	Through	**479**	456	**1.1**
Tube Count 14	East	Through	**403**	448	**2.2**
Tube Count 15	West	Through	**1179**	1156	**0.7**
Tube Count 15	East	Through	**509**	420	**4.1**
Tube Count 16	West	Through	**32**	18	**2.8**
Tube Count 16	East	Through		15	**0.0**
Tube Count 17	West	Through	**424**	453	**1.4**
Tube Count 17	East	Through	**331**	349	**1.0**
Tube Count 18	West	Through	**710**	626	**3.3**
Tube Count 18	East	Through	**483**	510	**1.2**
Tube Count 19	South	Through	**577**	562	**0.6**
Tube Count 19	North	Through	**332**	324	**0.4**
Tube Count 20	North	Through	**554**	516	**1.6**
Tube Count 21	East	Through	**341**	333	**0.4**
Tube Count 21	West	Through	**554**	578	**1.0**
Tube Count 23	South	Through	**798**	856	**2.0**
Tube Count 23	North	Through	**335**	385	**2.6**
Tube Count 24	South	Through	**359**	310	**2.7**
Tube Count 24	North	Through	**79**	81	**0.2**
Tube Count 25	South	Through	**461**	316	**7.4**
Tube Count 25	North	Through	**253**	243	**0.6**
Tube Count 26	South	Through	**2126**	2008	**2.6**
Tube Count 26	North	Through	**1798**	1810	**0.3**
Tube Count 27	South	Through	**646**	628	**0.7**
Tube Count 27	North	Through	**784**	786	**0.1**
Tube Count 28	North	Through	**297**	265	**1.9**
Tube Count 28	South	Through	**502**	525	**1.0**
Tube Count 29	South	Through	**84**	60	**2.8**
Tube Count 29	North	Through	**108**	70	**4.0**

N132740 Bankstown Complete Streets

Thursday 22 Feb 2018 (8:00 AM - 9:00 AM)

All Vehicles

Section	Approach	Movement	Observed	Modelled	GEH
SCATS Section 2	South	Through	**1631**	1790	**3.8**
SCATS Section 2	North	Through	**1986**	2306	**6.9**
SCATS Section 2	East	Through	**434**	510	**3.5**
SCATS Section 3	West	Through	**526**	508	**0.8**
SCATS Section 3	North	Through	**1978**	2203	**4.9**
SCATS Section 4	South	Through	**1636**	1820	**4.4**
SCATS Section 4	East	Through	**433**	457	**1.1**
SCATS Section 4	West	Through	**234**	200	**2.3**
SCATS Section 4	North	Through	**1726**	2063	**7.7**
SCATS Section 6	North	Through	**271**	263	**0.5**
SCATS Section 6	West	Through	**536**	630	**3.9**
SCATS Section 6	East	Through	**609**	680	**2.8**
SCATS Section 7	West	Through	**752**	761	**0.3**
SCATS Section 7	East	Through	**723**	674	**1.9**
SCATS Section 7	North	Through	**286**	232	**3.4**
SCATS Section 9	South	Through	**415**	441	**1.3**
SCATS Section 9	East	Through	**475**	598	**5.3**
SCATS Section 9	West	Through	**875**	825	**1.7**
SCATS Section 9	North	Through	**480**	589	**4.7**
SCATS Section 10	West	Through	**801**	816	**0.5**
SCATS Section 10	East	Through	**459**	441	**0.8**
SCATS Section 10	South	Through	**64**	20	**6.8**
SCATS Section 13	East	Through	**420**	521	**4.7**
SCATS Section 13	South	Through	**39**	23	**2.9**
SCATS Section 14	South	Through	**595**	528	**2.8**
SCATS Section 14	North	Through	**768**	842	**2.6**
SCATS Section 16	West	Through	**500**	466	**1.5**
SCATS Section 16	South	Through	**1032**	1178	**4.4**
SCATS Section 16	East	Through	**561**	633	**2.9**
SCATS Section 19	East	Through	**600**	655	**2.2**
SCATS Section 19	West	Through	**563**	545	**0.8**
SCATS Section 21	East	Through	**402**	399	**0.1**
SCATS Section 21	West	Through	**504**	506	**0.1**

SCATS Section 22	South	Through	**646**	757	**4.2**
SCATS Section 23	East	Through	**596**	651	**2.2**
SCATS Section 23	North	Through	**579**	529	**2.1**
SCATS Section 25	East	Through	**107**	191	**6.9**
SCATS Section 26	West	Through	**1087**	1030	**1.8**
SCATS Section 26	North	Through	**232**	196	**2.5**
SCATS Section 29	East	Through	**400**	413	**0.6**
SCATS Section 30	West	Through	**773**	780	**0.3**
SCATS Section 30	East	Through	**711**	795	**3.1**
SCATS Section 31	West	Through	**694**	635	**2.3**
SCATS Section 31	East	Through	**347**	324	**1.3**
SCATS Section 31	South	Through	**202**	183	**1.4**
SCATS Section 32	West	Through	**939**	1015	**2.4**
SCATS Section 32	North	Through	**288**	264	**1.4**
SCATS Section 35	South	Through	**505**	425	**3.7**
SCATS Section 35	West	Through	**432**	368	**3.2**
SCATS Section 35	East	Through	**176**	123	**4.3**
SCATS Section 36	South	Through	**538**	654	**4.8**
SCATS Section 36	North	Through	**404**	412	**0.4**
SCATS Section 38	North	Through	**1900**	2128	**5.1**
SCATS Section 40	North	Through	**546**	549	**0.1**
SCATS Section 40	West	Through	**819**	834	**0.5**
SCATS Section 40	East	Through	**673**	696	**0.9**
Tube Count 1	North	Through	**694**	682	**0.5**
Tube Count 1	**South**	**Through**	**1068**	**1053**	**0.5**
Tube Count 2	**South**	**Through**	**377**	**311**	**3.6**
Tube Count 2	North	Through	**145**	172	**2.1**
Tube Count 3	West	Through	**476**	529	**2.4**
Tube Count 3	**East**	**Through**	**764**	**832**	**2.4**
Tube Count 5	East	Through	**276**	383	**5.9**
Tube Count 5	West	Through	**390**	443	**2.6**
Tube Count 6	South	Through	**450**	478	**1.3**
Tube Count 6	North	Through	**209**	239	**2.0**
Tube Count 7	South	Through	**1802**	1981	**4.1**
Tube Count 7	North	Through	**2092**	2139	**1.0**
Tube Count 8	North	Through	**113**	93	**2.0**
Tube Count 8	South	Through	**272**	410	**7.5**
Tube Count 9	East	Through	**138**	238	**7.3**
Tube Count 9	West	Through	**207**	231	**1.6**
Tube Count 10	North	Through	**232**	205	**1.8**
Tube Count 10	South	Through	**327**	325	**0.1**
Tube Count 11	West	Through	**108**	114	**0.6**
Tube Count 11	East	Through	**213**	219	**0.4**
Tube Count 12	South	Through	**260**	247	**0.8**
Tube Count 12	North	Through	**274**	185	**5.9**

Tube Count 13	East	Through	**714**	671	**1.6**
Tube Count 13	West	Through	**422**	408	**0.7**
Tube Count 14	West	Through	**451**	428	**1.1**
Tube Count 14	East	Through	**609**	602	**0.3**
Tube Count 15	West	Through	**1322**	1336	**0.4**
Tube Count 15	East	Through	**693**	778	**3.1**
Tube Count 16	West	Through	**74.75**	79	**0.5**
Tube Count 16	East	Through	**50**	70	**2.7**
Tube Count 17	West	Through	**467**	608	**6.1**
Tube Count 17	East	Through	**455**	539	**3.8**
Tube Count 18	West	Through	**722**	835	**4.0**
Tube Count 18	East	Through	**942**	903	**1.3**
Tube Count 19	South	Through	**399**	532	**6.2**
Tube Count 19	North	Through	**332**	492	**7.9**
Tube Count 20	North	Through	**599**	670	**2.8**
Tube Count 21	East	Through	**451**	442	**0.4**
Tube Count 21	West	Through	**683**	797	**4.2**
Tube Count 23	South	Through	**796**	821	**0.9**
Tube Count 23	North	Through	**541**	537	**0.2**
Tube Count 24	South	Through	**451**	477	**1.2**
Tube Count 24	North	Through	**140**	129	**0.9**
Tube Count 25	South	Through	**757**	756	**0.0**
Tube Count 25	North	Through	**470**	446	**1.1**
Tube Count 26	South	Through	**1857**	1851	**0.1**
Tube Count 26	North	Through	**2079**	2301	**4.7**
Tube Count 27	South	Through	**623**	677	**2.1**
Tube Count 27	North	Through	**1136**	1090	**1.4**
Tube Count 28	North	Through	**555**	570	**0.6**
Tube Count 28	South	Through	**589**	520	**2.9**
Tube Count 29	South	Through	**156**	144	**1.0**
Tube Count 29	North	Through	**225**	221	**0.3**

N132740 Bankstown Complete Streets
Thursday 22 Feb 2018 (7:00 AM - 8:00 AM)

Cordon	Direction	Observed	Modelled	GEH	Abs diff (veh)	Abs diff (%)
	Inbound	9472	9267	2.1	-205	-2%
	Outbound	8413	8127	3.1	-286	-4%
	Direction	**Observed**	**Modelled**	**GEH**	**Abs diff (veh)**	**Abs diff (%)**
Screenline 1	Inbound	**4023**	**3756**	4.3	-267	-7%
	Outbound	**2800**	**2845**	0.8	45	2%
Screenline 2	Inbound	**886**	**958**	2.4	72	8%
	Outbound	**1189**	**1082**	3.2	-107	-10%
Screenline 3	Inbound	**2987**	**2931**	1.0	-56	-2%
	Outbound	**3358**	**3221**	2.4	-137	-4%
Screenline 4	Inbound	**1576**	**1622**	1.2	46	3%
	Outbound	**1066**	**979**	2.7	-87	-9%
		17885	**17394**	3.7		

N132740 Bankstown Complete Streets
Thursday 22 Feb 2018 (8:00 AM - 9:00 AM)

Cordon	Direction	Observed	Modelled	GEH	Abs diff (veh)	Abs diff (%)
	Inbound	11269	11643	3.5	374	3%
	Outbound	8774	9138	3.8	364	4%
	Direction	**Observed**	**Modelled**	**GEH**	**Abs diff (veh)**	**Abs diff (%)**
Screenline 1	Inbound	**4011**	**4177**	2.6	166	4%
	Outbound	**3407**	**3522**	2.0	115	3%
Screenline 2	Inbound	**1551**	**1505**	1.2	-46	-3%
	Outbound	**1173**	**1263**	2.6	90	7%
Screenline 3	Inbound	**3995**	**4182**	2.9	187	4%
	Outbound	**3225**	**3192**	0.6	-33	-1%
Screenline 4	Inbound	**1712**	**1779**	1.6	67	4%
	Outbound	**969**	**1161**	5.9	192	17%
		20043	**20781**	5.2		

N132740 Bankstown Complete Streets

Thursday 22 Feb 2018 (4:00 PM - 5:00 PM)

All Vehicles

Intersection	Approach	Movement	Observed	Modelled	GEH	Difference (veh)	Differece(%)
SCATS Section 2	South	Through	1617	1770	3.7	153	9%
SCATS Section 2	North	Through	2404	2330	1.5	-74	-3%
SCATS Section 2	East	Through	664	649	0.6	-15	-2%
SCATS Section 3	West	Through	653	777	4.6	124	19%
SCATS Section 3	North	Through	1764	1729	0.8	-35	-2%
SCATS Section 4	South	Through	1347	1579	6.1	232	17%
SCATS Section 4	East	Through	400	415	0.7	15	4%
SCATS Section 4	West	Through	226	238	0.8	12	5%
SCATS Section 4	North	Through	1424	1536	2.9	112	8%
SCATS Section 6	North	Through	277	311	2.0	34	12%
SCATS Section 6	West	Through	904	812	3.1	-92	-10%
SCATS Section 6	East	Through	624	624	0.0	0	0%
SCATS Section 7	West	Through	670	707	1.4	37	6%
SCATS Section 7	East	Through	867	753	4.0	-114	-13%
SCATS Section 7	North	Through	368	219	8.7	-149	-40%
SCATS Section 9	South	Through	434	422	0.6	-12	-3%
SCATS Section 9	East	Through	797	807	0.4	10	1%
SCATS Section 9	West	Through	641	640	0.0	-1	0%
SCATS Section 9	North	Through	632	692	2.3	60	9%
SCATS Section 10	West	Through	629	647	0.7	18	3%
SCATS Section 10	East	Through	774	929	5.3	155	20%
SCATS Section 10	South	Through	131	135	0.3	4	3%
SCATS Section 13	East	Through	585	641	2.3	56	10%
SCATS Section 13	South	Through	192	188	0.3	-4	-2%
SCATS Section 14	South	Through	471	573	4.5	102	22%
SCATS Section 14	North	Through	1439	1427	0.3	-12	-1%
SCATS Section 16	West	Through	781	809	1.0	28	4%
SCATS Section 16	South	Through	839	979	4.6	140	17%
SCATS Section 16	East	Through	636	593	1.7	-43	-7%
SCATS Section 19	East	Through	784	673	4.1	-111	-14%
SCATS Section 19	West	Through	527	547	0.9	20	4%
SCATS Section 21	East	Through	692	589	4.1	-103	-15%
SCATS Section 21	West	Through	455	462	0.3	7	2%
SCATS Section 22	South	Through	582	639	2.3	57	10%
SCATS Section 23	East	Through	782	872	3.1	90	12%
SCATS Section 23	North	Through	1009	995	0.4	-14	-1%
SCATS Section 25	East	Through	114	92	2.2	-22	-19%
SCATS Section 26	West	Through	893	882	0.4	-11	-1%
SCATS Section 26	North	Through	370	450	4.0	80	22%
SCATS Section 29	East	Through	727	904	6.2	177	24%
SCATS Section 30	West	Through	770	861	3.2	91	12%
SCATS Section 30	East	Through	861	868	0.2	7	1%
SCATS Section 31	West	Through	622	518	4.4	-104	-17%
SCATS Section 31	East	Through	503	505	0.1	2	0%

SCATS Section 31	South	Through	173	186	1.0	13	8%
SCATS Section 32	West	Through	930	818	3.8	-112	-12%
SCATS Section 32	North	Through	508	476	1.4	-32	-6%
SCATS Section 35	South	Through	552	461	4.0	-91	-16%
SCATS Section 35	West	Through	211	122	6.9	-89	-42%
SCATS Section 35	East	Through	182	173	0.7	-9	-5%
SCATS Section 36	South	Through	544	586	1.8	42	8%
SCATS Section 36	North	Through	535	507	1.2	-28	-5%
SCATS Section 38	North	Through	2882	2644	4.5	-238	-8%
SCATS Section 40	North	Through	823	785	1.3	-38	-5%
SCATS Section 40	West	Through	841	690	5.5	-151	-18%
SCATS Section 40	East	Through	588	616	1.1	28	5%
Tube Count 1	North	Through	879	813	2.3	-66	-8%
Tube Count 1	**South**	**Through**	564	769	7.9	205	36%
Tube Count 2	**South**	**Through**	242	221	1.4	-21	-9%
Tube Count 2	North	Through	207	178	2.1	-29	-14%
Tube Count 3	West	Through	484	600	5.0	116	24%
Tube Count 3	**East**	**Through**	576	612	1.5	36	6%
Tube Count 5	East	Through	428	523	4.4	95	22%
Tube Count 5	West	Through	702	907	7.2	205	29%
Tube Count 6	South	Through	440	478	1.8	38	9%
Tube Count 6	North	Through	338	368	1.6	30	9%
Tube Count 7	South	Through	1921	1899	0.5	-22	-1%
Tube Count 7	North	Through	3078	2572	9.5	-506	-16%
Tube Count 8	North	Through	232	199	2.2	-33	-14%
Tube Count 8	South	Through	301	380	4.3	79	26%
Tube Count 9	East	Through	148	191	3.3	43	29%
Tube Count 9	West	Through	257	207	3.3	-50	-19%
Tube Count 10	North	Through	228	306	4.8	78	34%
Tube Count 10	South	Through	226	203	1.6	-23	-10%
Tube Count 11	West	Through	133	135	0.2	2	2%
Tube Count 11	East	Through	175	165	0.8	-10	-6%
Tube Count 12	South	Through	187	226	2.7	39	21%
Tube Count 12	North	Through	245	256	0.7	11	4%
Tube Count 13	East	Through	659	547	4.6	-112	-17%
Tube Count 13	West	Through	660	766	4.0	106	16%
Tube Count 14	West	Through	745	764	0.7	19	3%
Tube Count 14	East	Through	551	516	1.5	-35	-6%
Tube Count 15	West	Through	841	897	1.9	56	7%
Tube Count 15	East	Through	1136	1145	0.3	9	1%
Tube Count 16	West	Through	179	236	4.0	57	32%
Tube Count 16	East	Through	192	145	3.6	-47	-24%
Tube Count 17	West	Through	453	659	8.7	206	45%
Tube Count 17	East	Through	379	368	0.6	-11	-3%
Tube Count 18	West	Through	762	851	3.1	89	12%
Tube Count 18	East	Through	782	740	1.5	-42	-5%
Tube Count 19	South	Through	438	470	1.5	32	7%
Tube Count 19	North	Through	625	670	1.8	45	7%
Tube Count 20	North	Through	635	735	3.8	100	16%
Tube Count 21	East	Through	473	496	1.0	23	5%
Tube Count 21	West	Through	574	578	0.2	4	1%
Tube Count 23	South	Through	588	614	1.1	26	4%
Tube Count 23	North	Through	823	813	0.3	-10	-1%
Tube Count 24	South	Through	507	582	3.2	75	15%
Tube Count 24	North	Through	159	149	0.8	-10	-6%
Tube Count 25	South	Through	973	740	8.0	-233	-24%

Tube Count 25	North	Through	451	410	2.0	-41	-9%
Tube Count 26	South	Through	1589	1718	3.2	129	8%
Tube Count 26	North	Through	2756	2363	7.8	-393	-14%
Tube Count 27	South	Through	828	848	0.7	20	2%
Tube Count 27	North	Through	777	913	4.7	136	18%
Tube Count 28	North	Through	810	637	6.4	-173	-21%
Tube Count 28	South	Through	418	558	6.3	140	33%
Tube Count 29	South	Through	150	195	3.4	45	30%
Tube Count 29	North	Through	242	281	2.4	39	16%

N132740 Bankstown Complete Streets

Thursday 22 Feb 2018 (5:00 PM - 6:00 PM)

All Vehicles

Intersection	Approach	Movement	Observed	Modelled	GEH
SCATS Section 2	South	Through	1761	2085	7.4
SCATS Section 2	North	Through	2786	2566	4.3
SCATS Section 2	East	Through	675	694	0.7
SCATS Section 3	West	Through	738	808	2.5
SCATS Section 3	North	Through	2146	2021	2.7
SCATS Section 4	South	Through	1588	1963	8.9
SCATS Section 4	East	Through	480	502	1.0
SCATS Section 4	West	Through	230	259	1.9
SCATS Section 4	North	Through	1748	1734	0.3
SCATS Section 6	North	Through	273	292	1.1
SCATS Section 6	West	Through	946	909	1.2
SCATS Section 6	East	Through	606	716	4.3
SCATS Section 7	West	Through	669	692	0.9
SCATS Section 7	East	Through	891	911	0.7
SCATS Section 7	North	Through	368	341	1.4
SCATS Section 9	South	Through	383	466	4.0
SCATS Section 9	East	Through	798	772	0.9
SCATS Section 9	West	Through	626	710	3.3
SCATS Section 9	North	Through	644	787	5.3
SCATS Section 10	West	Through	590	660	2.8
SCATS Section 10	East	Through	772	877	3.7
SCATS Section 10	South	Through	113	168	4.6
SCATS Section 13	East	Through	612	647	1.4
SCATS Section 13	South	Through	176	154	1.7
SCATS Section 14	South	Through	472	387	4.1
SCATS Section 14	North	Through	1478	1465	0.3
SCATS Section 16	West	Through	712	804	3.3
SCATS Section 16	South	Through	783	756	1.0
SCATS Section 16	East	Through	654	688	1.3
SCATS Section 19	East	Through	747	727	0.7
SCATS Section 19	West	Through	458	414	2.1

SCATS Section 21	East	Through	628	417	9.2
SCATS Section 21	West	Through	445	394	2.5
SCATS Section 22	South	Through	572	502	3.0
SCATS Section 23	East	Through	720	832	4.0
SCATS Section 23	North	Through	930	958	0.9
SCATS Section 25	East	Through	97	137	3.7
SCATS Section 26	West	Through	815	759	2.0
SCATS Section 26	North	Through	347	553	9.7
SCATS Section 29	East	Through	691	817	4.6
SCATS Section 30	West	Through	739	793	2.0
SCATS Section 30	East	Through	842	878	1.2
SCATS Section 31	West	Through	617	422	8.6
SCATS Section 31	East	Through	481	453	1.3
SCATS Section 31	South	Through	153	114	3.4
SCATS Section 32	West	Through	861	651	7.6
SCATS Section 32	North	Through	495	481	0.6
SCATS Section 35	South	Through	533	542	0.4
SCATS Section 35	West	Through	233	255	1.4
SCATS Section 35	East	Through	188	161	2.0
SCATS Section 36	South	Through	491	526	1.6
SCATS Section 36	North	Through	546	563	0.7
SCATS Section 38	North	Through	3123	3369	4.3
SCATS Section 40	North	Through	795	777	0.6
SCATS Section 40	West	Through	740	597	5.5
SCATS Section 40	East	Through	549	574	1.1
Tube Count 1	North	Through	928	938	0.3
Tube Count 1	**South**	**Through**	530	695	6.7
Tube Count 2	**South**	**Through**	219	180	2.8
Tube Count 2	North	Through	192	234	2.9
Tube Count 3	West	Through	502	599	4.1
Tube Count 3	**East**	**Through**	596	625	1.2
Tube Count 5	East	Through	392	310	4.4
Tube Count 5	West	Through	759	802	1.5
Tube Count 6	South	Through	466	562	4.2
Tube Count 6	North	Through	356	497	6.8
Tube Count 7	South	Through	2031	2255	4.8
Tube Count 7	North	Through	3140	2924	3.9
Tube Count 8	North	Through	206	117	7.0
Tube Count 8	South	Through	314	325	0.6
Tube Count 9	East	Through	196	274	5.1
Tube Count 9	West	Through	220	193	1.9
Tube Count 10	North	Through	225	327	6.1

Tube Count 10	South	Through	213	192	1.5
Tube Count 11	West	Through	125	140	1.3
Tube Count 11	East	Through	169	163	0.5
Tube Count 12	South	Through	188	166	1.7
Tube Count 12	North	Through	254	319	3.8
Tube Count 13	East	Through	659	561	4.0
Tube Count 13	West	Through	629	683	2.1
Tube Count 14	West	Through	741	690	1.9
Tube Count 14	East	Through	564	501	2.7
Tube Count 15	West	Through	885	952	2.2
Tube Count 15	East	Through	1278	1211	1.9
Tube Count 16	West	Through	185	125	4.8
Tube Count 16	East	Through	188	114	6.0
Tube Count 17	West	Through	554	640	3.5
Tube Count 17	East	Through	420	462	2.0
Tube Count 18	West	Through	757	769	0.4
Tube Count 18	East	Through	723	835	4.0
Tube Count 19	South	Through	461	470	0.4
Tube Count 19	North	Through	628	753	4.8
Tube Count 20	North	Through	635	703	2.6
Tube Count 21	East	Through	442	520	3.6
Tube Count 21	West	Through	572	509	2.7
Tube Count 23	South	Through	583	557	1.1
Tube Count 23	North	Through	841	781	2.1
Tube Count 24	South	Through	467	568	4.4
Tube Count 24	North	Through	176	181	0.4
Tube Count 25	South	Through	1003	797	6.9
Tube Count 25	North	Through	450	464	0.7
Tube Count 26	South	Through	1700	2058	8.3
Tube Count 26	North	Through	2737	2614	2.4
Tube Count 27	South	Through	801	598	7.7
Tube Count 27	North	Through	744	750	0.2
Tube Count 28	North	Through	863	814	1.7
Tube Count 28	South	Through	518	715	7.9
Tube Count 29	South	Through	160	222	4.5
Tube Count 29	North	Through	209	258	3.2

N132740 Bankstown Complete Streets
Thursday 22 Feb 2018 (4:00PM - 5:00PM)

Cordon	Direction	Observed	Modelled	GEH	Abs diff (veh)	Abs diff (%)
	Inbound	10764	10755	0.1	-9	0%
	Outbound	10704	10765	0.6	61	1%
	Direction	**Observed**	**Modelled**	**GEH**	**Abs diff (veh)**	**Abs diff (%)**
Screenline 1	Inbound	**3303**	**3501**	3.4	198	6%
	Outbound	**4648**	**4163**	7.3	-485	-12%
Screenline 2	Inbound	**1333**	**1256**	2.1	-77	-6%
	Outbound	**1507**	**1615**	2.7	108	7%
Screenline 3	Inbound	**4585**	**4194**	5.9	-391	-9%
	Outbound	**2985**	**3319**	5.9	334	10%
Screenline 4	Inbound	**1543**	**1804**	6.4	261	14%
	Outbound	**1564**	**1668**	2.6	104	6%
		21468	**21520**	0.4		

N132740 Bankstown Complete Streets
Thursday 22 Feb 2018 (5:00PM - 6:00PM)

Cordon	Direction	Observed	Modelled	GEH	Abs diff (veh)	Abs diff (%)
	Inbound	**10860**	**11281**	4.0	421	4%
	Outbound	**11109**	**11268**	1.5	159	1%
	Direction	**Observed**	**Modelled**	**GEH**	**Abs diff (veh)**	**Abs diff (%)**
Screenline 1	Inbound	**3376**	**3755**	6.3	379	10%
	Outbound	**4762**	**4695**	1.0	-67	-1%
Screenline 2	Inbound	**1287**	**1336**	1.4	49	4%
	Outbound	**1498**	**1459**	1.0	-39	-3%
Screenline 3	Inbound	**4553**	**4436**	1.7	-117	-3%
	Outbound	**3179**	**3593**	7.1	414	12%
Screenline 4	Inbound	**1644**	**1754**	2.7	110	6%
	Outbound	**1670**	**1521**	3.7	-149	-10%
		21969	**22549**	3.9		

GTAconsultants

N132740 Bankstown Complete Streets

Saturday 24 Feb 2018 (12:00 PM - 1:00 PM)

All Vehicles

Intersection	Approach	Movement	Observed	Modelled	GEH
SCATS Section 2	South	Through	1915	1897	0.4
SCATS Section 2	North	Through	2258	2311	1.1
SCATS Section 2	East	Through	510	558	2.1
SCATS Section 3	West	Through	676	754	2.9
SCATS Section 3	North	Through	2036	2114	1.7
SCATS Section 4	South	Through	2457	2167	6.0
SCATS Section 4	East	Through	328	324	0.2
SCATS Section 4	West	Through	177	165	0.9
SCATS Section 4	North	Through	1892	2056	3.7
SCATS Section 6	North	Through	245	212	2.2
SCATS Section 6	West	Through	848	707	5.1
SCATS Section 6	East	Through	653	605	1.9
SCATS Section 7	West	Through	640	616	1.0
SCATS Section 7	East	Through	902	730	6.0
SCATS Section 7	North	Through	246	229	1.1
SCATS Section 9	South	Through	390	472	3.9
SCATS Section 9	East	Through	821	622	7.4
SCATS Section 9	West	Through	701	585	4.6
SCATS Section 9	North	Through	511	458	2.4
SCATS Section 10	West	Through	688	604	3.3
SCATS Section 10	East	Through	694	616	3.0
SCATS Section 10	South	Through	117	60	6.1
SCATS Section 13	East	Through	508	496	0.5
SCATS Section 13	South	Through	143	112	2.7
SCATS Section 14	South	Through	434	433	0.0
SCATS Section 14	North	Through	1059	1009	1.6
SCATS Section 16	West	Through	643	698	2.1
SCATS Section 16	South	Through	901	853	1.6
SCATS Section 16	East	Through	640	670	1.2
SCATS Section 19	East	Through	771	708	2.3
SCATS Section 19	West	Through	448	374	3.7

SCATS Section 21	East	Through	595	565	1.2
SCATS Section 21	West	Through	496	439	2.6
SCATS Section 22	South	Through	474	473	0.0
SCATS Section 23	East	Through	594	512	3.5
SCATS Section 23	North	Through	773	703	2.6
SCATS Section 25	East	Through	193	160	2.5
SCATS Section 26	West	Through	747	786	1.4
SCATS Section 26	North	Through	287	268	1.1
SCATS Section 29	East	Through	625	612	0.5
SCATS Section 30	West	Through	616	730	4.4
SCATS Section 30	East	Through	707	609	3.8
SCATS Section 31	West	Through	608	440	7.3
SCATS Section 31	East	Through	435	484	2.3
SCATS Section 31	South	Through	167	129	3.1
SCATS Section 32	West	Through	936	758	6.1
SCATS Section 32	North	Through	530	619	3.7
SCATS Section 35	South	Through	529	475	2.4
SCATS Section 35	West	Through	204	180	1.7
SCATS Section 35	East	Through	126	135	0.8
SCATS Section 36	South	Through	555	607	2.2
SCATS Section 36	North	Through	538	455	3.7
SCATS Section 38	North	Through	2260	2333	1.5
SCATS Section 40	North	Through	748	828	2.8
SCATS Section 40	West	Through	735	595	5.4
SCATS Section 40	East	Through	616	579	1.5
Tube Count 1	North	Through	773	631	5.4
Tube Count 1	**South**	**Through**	685	717	1.2
Tube Count 2	**South**	**Through**	172	110	5.2
Tube Count 2	North	Through	162	171	0.7
Tube Count 3	West	Through	434	456	1.0
Tube Count 3	**East**	**Through**	545	502	1.9
Tube Count 5	East	Through	402	424	1.1
Tube Count 5	West	Through	536	618	3.4
Tube Count 6	South	Through	458	586	5.6
Tube Count 6	North	Through	260	250	0.6
Tube Count 7	South	Through	2121	1945	3.9
Tube Count 7	North	Through	2451	2362	1.8
Tube Count 8	North	Through	249	198	3.4
Tube Count 8	South	Through	259	281	1.3
Tube Count 9	East	Through	180	169	0.8
Tube Count 9	West	Through	180	268	5.9
Tube Count 10	North	Through	202	180	1.6

Tube Count 10	South	Through	172	184	0.9
Tube Count 11	West	Through	110	116	0.6
Tube Count 11	East	Through	105	194	7.3
Tube Count 12	South	Through	166	104	5.3
Tube Count 12	North	Through	183	191	0.6
Tube Count 13	East	Through	630	565	2.7
Tube Count 13	West	Through	481	490	0.4
Tube Count 14	West	Through	542	534	0.3
Tube Count 14	East	Through	504	472	1.4
Tube Count 15	West	Through	882	634	9.0
Tube Count 15	East	Through	1008	838	5.6
Tube Count 16	West	Through	86	123	3.6
Tube Count 16	East	Through	84	100	1.7
Tube Count 17	West	Through	555	605	2.1
Tube Count 17	East	Through	467	452	0.7
Tube Count 18	West	Through	820	697	4.5
Tube Count 18	East	Through	687	712	0.9
Tube Count 19	South	Through	457	595	6.0
Tube Count 19	North	Through	567	578	0.5
Tube Count 20	North	Through	659	687	1.1
Tube Count 21	East	Through	522	608	3.6
Tube Count 21	West	Through	673	595	3.1
Tube Count 23	South	Through	546	570	1.0
Tube Count 23	North	Through	569	594	1.0
Tube Count 24	South	Through	448	429	0.9
Tube Count 24	North	Through	180	254	5.0
Tube Count 25	South	Through	1012	788	7.5
Tube Count 25	North	Through	456	481	1.2
Tube Count 26	South	Through	1860	1876	0.4
Tube Count 26	North	Through	2318	2320	0.0
Tube Count 27	South	Through	712	666	1.8
Tube Count 27	North	Through	714	683	1.2
Tube Count 28	North	Through	488	529	1.8
Tube Count 28	South	Through	398	534	6.3
Tube Count 29	South	Through	138	159	1.7
Tube Count 29	North	Through	157	176	1.5

N132740 Bankstown Complete Streets

Saturday 24 Feb 2018 (1:00 PM - 2:00 PM)

All Vehicles

Intersection	Approach	Movement	Observed	Modelled	GEH	Difference (veh)	Differece(%)
SCATS Section 2	South	Through	1835	1860	0.6	25	1%
SCATS Section 2	North	Through	2266	2393	2.6	127	6%
SCATS Section 2	East	Through	534	584	2.1	50	9%
SCATS Section 3	West	Through	642	790	5.5	148	23%
SCATS Section 3	North	Through	2072	2225	3.3	153	7%
SCATS Section 4	South	Through	1686	1924	5.6	238	14%
SCATS Section 4	East	Through	346	381	1.8	35	10%
SCATS Section 4	West	Through	183	201	1.3	18	10%
SCATS Section 4	North	Through	1863	2097	5.3	234	13%
SCATS Section 6	North	Through	265	193	4.8	-72	-27%
SCATS Section 6	West	Through	522	707	7.5	185	35%
SCATS Section 6	East	Through	721	716	0.2	-5	-1%
SCATS Section 7	West	Through	468	649	7.7	181	39%
SCATS Section 7	East	Through	707	833	4.5	126	18%
SCATS Section 7	North	Through	188	210	1.6	22	12%
SCATS Section 9	South	Through	376	466	4.4	90	24%
SCATS Section 9	East	Through	775	712	2.3	-63	-8%
SCATS Section 9	West	Through	640	594	1.9	-46	-7%
SCATS Section 9	North	Through	536	529	0.3	-7	-1%
SCATS Section 10	West	Through	609	589	0.8	-20	-3%
SCATS Section 10	East	Through	708	721	0.5	13	2%
SCATS Section 10	South	Through	86	76	1.1	-10	-12%
SCATS Section 13	East	Through	531	484	2.1	-47	-9%
SCATS Section 13	South	Through	125	111	1.3	-14	-11%
SCATS Section 14	South	Through	413	458	2.2	45	11%
SCATS Section 14	North	Through	1096	1143	1.4	47	4%
SCATS Section 16	West	Through	644	742	3.7	98	15%
SCATS Section 16	South	Through	875	861	0.5	-14	-2%
SCATS Section 16	East	Through	661	678	0.7	17	3%
SCATS Section 19	East	Through	673	686	0.5	13	2%
SCATS Section 19	West	Through	509	385	5.9	-124	-24%
SCATS Section 21	East	Through	619	512	4.5	-107	-17%
SCATS Section 21	West	Through	478	560	3.6	82	17%
SCATS Section 22	South	Through	457	492	1.6	35	8%
SCATS Section 23	East	Through	487	562	3.3	75	15%
SCATS Section 23	North	Through	724	759	1.3	35	5%
SCATS Section 25	East	Through	183	179	0.3	-4	-2%
SCATS Section 26	West	Through	719	716	0.1	-3	0%
SCATS Section 26	North	Through	256	314	3.4	58	23%
SCATS Section 29	East	Through	627	719	3.5	92	15%
SCATS Section 30	West	Through	606	690	3.3	84	14%
SCATS Section 30	East	Through	749	654	3.6	-95	-13%
SCATS Section 31	West	Through	630	557	3.0	-73	-12%
SCATS Section 31	East	Through	404	408	0.2	4	1%

SCATS Section 31	South	Through	218	110	8.4	-108	-50%
SCATS Section 32	West	Through	926	843	2.8	-83	-9%
SCATS Section 32	North	Through	544	681	5.5	137	25%
SCATS Section 35	South	Through	537	494	1.9	-43	-8%
SCATS Section 35	West	Through	212	145	5.0	-67	-32%
SCATS Section 35	East	Through	128	165	3.1	37	29%
SCATS Section 36	South	Through	641	682	1.6	41	6%
SCATS Section 36	North	Through	472	421	2.4	-51	-11%
SCATS Section 38	North	Through	2381	2568	3.8	187	8%
SCATS Section 40	North	Through	737	829	3.3	92	12%
SCATS Section 40	West	Through	726	560	6.5	-166	-23%
SCATS Section 40	East	Through	601	661	2.4	60	10%
Tube Count 1	North	Through	767	760	0.3	-7	-1%
Tube Count 1	**South**	**Through**	695	701	0.2	6	1%
Tube Count 2	**South**	**Through**	136	114	2.0	-22	-16%
Tube Count 2	North	Through	171	196	1.8	25	15%
Tube Count 3	West	Through	452	379	3.6	-73	-16%
Tube Count 3	**East**	**Through**	504	504	0.0	0	0%
Tube Count 5	East	Through	391	410	0.9	19	5%
Tube Count 5	West	Through	559	628	2.8	69	12%
Tube Count 6	South	Through	367	483	5.6	116	32%
Tube Count 6	North	Through	282	281	0.1	-1	0%
Tube Count 7	South	Through	1899	1957	1.3	58	3%
Tube Count 7	North	Through	2379	2529	3.0	150	6%
Tube Count 8	North	Through	209	170	2.8	-39	-19%
Tube Count 8	South	Through	309	303	0.3	-6	-2%
Tube Count 9	East	Through	166	185	1.4	19	11%
Tube Count 9	West	Through	119	249	9.6	130	109%
Tube Count 10	North	Through	173	176	0.2	3	2%
Tube Count 10	South	Through	165	186	1.6	21	13%
Tube Count 11	West	Through	102	115	1.2	13	13%
Tube Count 11	East	Through	121	152	2.7	31	26%
Tube Count 12	South	Through	75	96	2.3	21	28%
Tube Count 12	North	Through	102	192	7.4	90	88%
Tube Count 13	East	Through	642	637	0.2	-5	-1%
Tube Count 13	West	Through	523	482	1.8	-41	-8%
Tube Count 14	West	Through	563	540	1.0	-23	-4%
Tube Count 14	East	Through	499	520	0.9	21	4%
Tube Count 15	West	Through	757	564	7.5	-193	-25%
Tube Count 15	East	Through	950	914	1.2	-36	-4%
Tube Count 16	West	Through	55	140	8.6	85	155%
Tube Count 16	East	Through	62	103	4.5	41	66%
Tube Count 17	West	Through	511	645	5.6	134	26%
Tube Count 17	East	Through	430	444	0.7	14	3%
Tube Count 18	West	Through	767	813	1.6	46	6%
Tube Count 18	East	Through	735	829	3.4	94	13%
Tube Count 19	South	Through	464	621	6.7	157	34%
Tube Count 19	North	Through	536	580	1.9	44	8%
Tube Count 20	North	Through	648	732	3.2	84	13%
Tube Count 21	East	Through	458	582	5.4	124	27%
Tube Count 21	West	Through	635	654	0.7	19	3%
Tube Count 23	South	Through	470	548	3.5	78	17%
Tube Count 23	North	Through	550	717	6.6	167	30%
Tube Count 24	South	Through	473	460	0.6	-13	-3%
Tube Count 24	North	Through	184	294	7.1	110	60%
Tube Count 25	South	Through	1139	956	5.7	-183	-16%

Tube Count 25	North	Through	415	448	1.6	33	8%
Tube Count 26	South	Through	1802	1796	0.1	-6	0%
Tube Count 26	North	Through	2240	2385	3.0	145	6%
Tube Count 27	South	Through	681	722	1.5	41	6%
Tube Count 27	North	Through	713	682	1.2	-31	-4%
Tube Count 28	North	Through	568	577	0.4	9	2%
Tube Count 28	South	Through	414	505	4.2	91	22%
Tube Count 29	South	Through	143	180	2.9	37	26%
Tube Count 29	North	Through	158	166	0.6	8	5%

N132740 Bankstown Complete Streets
Saturday 24 Feb 2018 (12:00 PM - 1:00 PM)

Cordon	Direction	Observed	Modelled	GEH	Abs diff (veh)	Abs diff (%)
	Inbound	9652	9242	4.2	-410	-4%
	Outbound	9562	9189	3.9	-373	-4%
	Direction	**Observed**	**Modelled**	**GEH**	**Abs diff (veh)**	**Abs diff (%)**
Screenline 1	Inbound	**3523**	**3274**	4.3	-249	-8%
	Outbound	**3820**	**3620**	3.3	-200	-6%
Screenline 2	Inbound	**1191**	**1184**	0.2	-7	-1%
	Outbound	**1362**	**1231**	3.6	-131	-11%
Screenline 3	Inbound	**3520**	**3532**	0.2	12	0%
	Outbound	**2970**	**3076**	1.9	106	3%
Screenline 4	Inbound	**1418**	**1252**	4.5	-166	-13%
	Outbound	**1410**	**1262**	4.0	-148	-12%
		17885	**17394**	3.7		

N132740 Bankstown Complete Streets
Saturday 24 Feb 2018 (1:00 PM - 2:00 PM)

Cordon	Direction	Observed	Modelled	GEH	Abs diff (veh)	Abs diff (%)
	Inbound	**9305**	**9461**	1.6	156	2%
	Outbound	**9337**	**9564**	2.3	227	2%
	Direction	**Observed**	**Modelled**	**GEH**	**Abs diff (veh)**	**Abs diff (%)**
Screenline 1	Inbound	**3234**	**3276**	0.7	42	1%
	Outbound	**3769**	**3864**	1.5	95	2%
Screenline 2	Inbound	**1234**	**1349**	3.2	115	9%
	Outbound	**1330**	**1353**	0.6	23	2%
Screenline 3	Inbound	**3521**	**3644**	2.1	123	3%
	Outbound	**2897**	**3023**	2.3	126	4%
Screenline 4	Inbound	**1316**	**1192**	3.5	-124	-10%
	Outbound	**1341**	**1324**	0.5	-17	-1%
		18642	**19025**	2.8		

Appendix E

Validation Tables and Graphs

63919

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	AVE_2HR
Route 1	Northbound	MaCauley Ave	60666		0	0	0	0	0	0
R1_N1	Macauley Ave / Stanley St	Stanley St	60660	416	244	244	244	244	188	222
R1_N2	Stanley St / Wattle St	Wattle St	60661	580	180	180	424	424	424	561
R1_N3	Wattle St / Rickard St	Rickard St	60662	230	37	37	461	461	439	604
R1_N4	Rickard St / Greenacre Rd	Greenacre Rd	60663	460	150	150	610	610	499	708
R1_N5	Greenacre Rd / Mimosa Rd	Mimosa Rd	60664	250	43	43	653	653	559	777
Route 1Northbound				1936			653	653	559	777
			64656						38.7256	44.59159
Route 1	Southbound	Mimosa Rd	64660		0	0	0	0	0	0
R1_S1		Greenacre Rd	60667	250	39	39	39	39	36	47
R1_S2		Rickard St	60668	460	57	57	96	96	77	103
R1_S3		Wattle St	60669	230	20	20	116	116	101	135
R1_S4		Stanley St	60670	580	54	54	169	169	149	181
R1_S5		MaCauley Ave	60671	416	72	72	242	242	182	214
Route 1Southbound				1936			242	242	182	214
			64660							

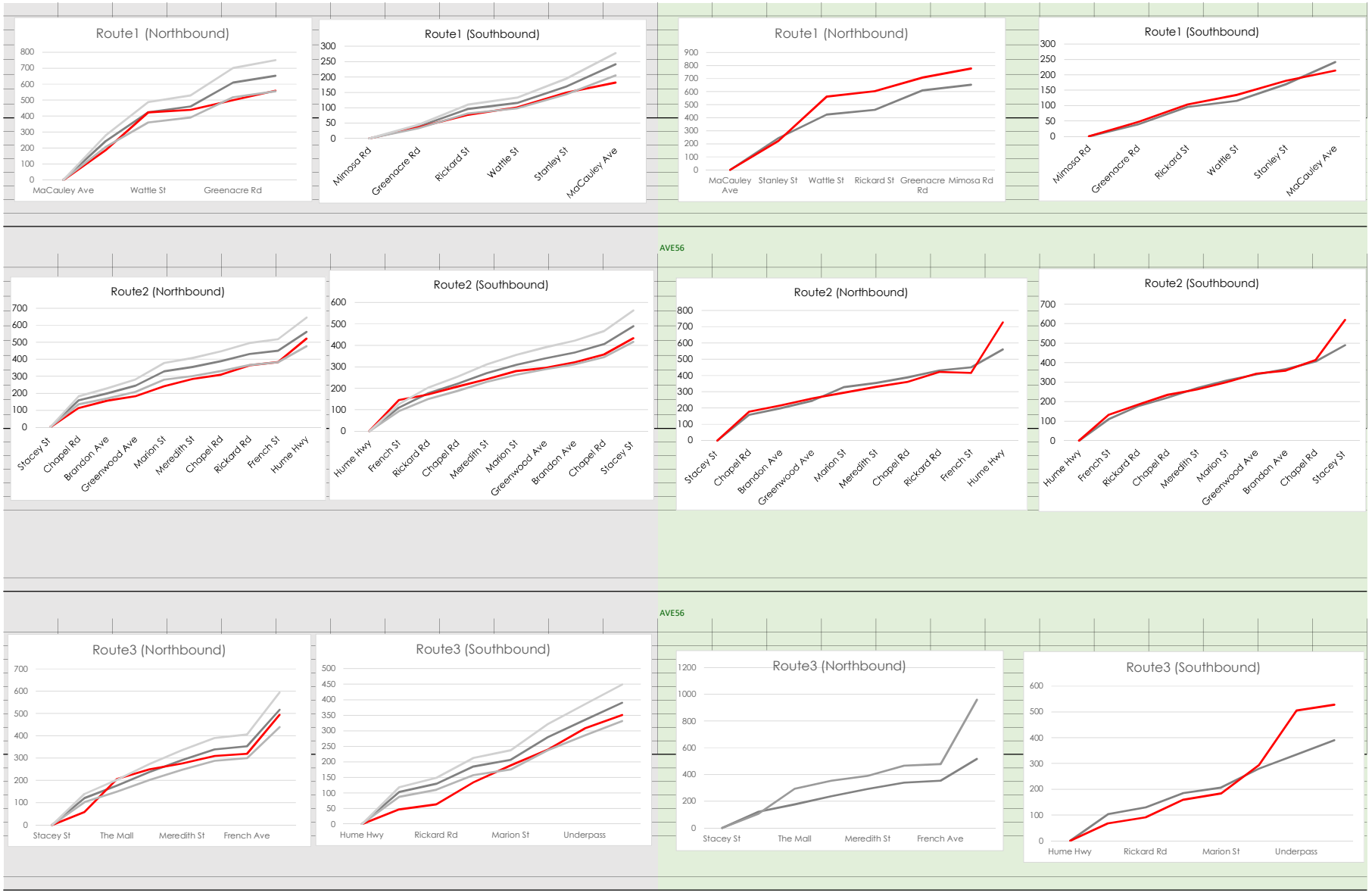
Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	AVE_2HR
Route 2	Northbound	Stacey St	60709		0	0	0	0	0	0
R2_N1	Stacey St / Chapel Rd	Chapel Rd	60710	720	158	158	158	158	113	177
R2_N2	Chapel Rd / Brandon Ave	Brandon Ave	60711	350	41	41	199	199	156	216
R2_N3	Brandon Ave / Greenwood Ave	Greenwood Ave	60712	232	46	46	245	245	183	260
R2_N4	Greenwood Ave / Marion St	Marion St	60713	316	84	84	329	329	241	295
R2_N5	Marion St / Meredith St	Meredith St	60714	182	26	26	355	355	284	330
R2_N6	Meredith St / Chapel Rd	Chapel Rd	60715	159	34	34	389	389	309	361
R2_N7	Chapel Rd / Rickard Rd	Rickard Rd	60716	330	43	43	432	432	365	422
R2_N8	Rickard Rd / French St	French St	60717	155	19	19	451	451	384	416
R2_N9	French St / Hume Hwy	Hume Hwy	60718	760	111	111	561	561	522	727
Route 2Northbound				3204			561	561	522	330
Route 2	Southbound	Hume Hwy			0	0	0	0	0	0
R2_S1	Hume Hwy / French St	French St	60719	760	110	110	110	110	145	132
R2_S2	French St / Rickard Rd	Rickard Rd	60720	155	67	67	177	177	171	185
R2_S3	Rickard Rd / Chapel Rd	Chapel Rd	60721	330	44	44	221	221	208	235
R2_S4	Chapel Rd / Meredith St	Meredith St	60722	159	50	50	271	271	242	263
R2_S5	Meredith St / Marion St	Marion St	60723	182	38	38	309	309	280	301
R2_S6	Marion St / Greenwood Ave	Greenwood Ave	60724	316	31	31	340	340	294	344
R2_S7	Greenwood Ave / Brandon Ave	Brandon Ave	60725	232	27	27	367	367	321	360
R2_S8	Brandon Ave / Chapel Rd	Chapel Rd	60726	350	39	39	406	406	358	413
R2_S9	Chapel Rd / Stacey St	Stacey St	60727	720	84	84	490	490	433	619
Route 2Southbound				3204			490	490	433	619

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	AVE_2HR
Route 3	Northbound	Stacey St			0	0	0	0	0	0
R3_N1	Stacey St / Underpass	Underpass	60728	330	121	121	121	121	59	107
R3_N2	Underpass / The Mall	The Mall	60736	316	56	56	177	177	207	294
R3_N3	The Mall / Marion St	Marion St	60737	382	61	61	238	238	250	354
R3_N4	Marion St / Meredith St	Meredith St	60738	156	54	54	292	292	276	390
R3_N5	Meredith St / Rickard Rd	Rickard Rd	60739	360	48	48	339	339	309	466
R3_N6	Rickard Rd / French Ave	French Ave	60740	158	14	14	353	353	320	477
R3_N7	French Ave / Hume Hwy	Hume Hwy	60741	622	164	164	517	517	494	959
Route 3Northbound				2324			517	517	494	959
Route 3	Southbound	Hume Hwy			0	0	0	0	0	0
R3_S1	Hume Hwy / French Ave	French Ave	60742	622	103	103	103	103	47	68
R3_S2	French Ave / Rickard Rd	Rickard Rd	60743	158	27	27	130	130	64	91
R3_S3	Rickard Rd / Meredith St	Meredith St	60744	360	56	56	185	185	135	159
R3_S4	Meredith St / Marion St	Marion St	60745	156	21	21	207	207	189	184
R3_S5	Marion St / The Mall	The Mall	60746	382	73	73	280	280	239	293
R3_S6	The Mall / Underpass	Underpass	60747	316	56	56	335	335	308	506
R3_S7	Underpass / Stacey St	Stacey St	60748	330	55	55	390	390	351	528
Route 3Southbound				2324			390	390	351	528

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	AVE_2HR
Route 4	Eastbound	Oxford Ave			0	0	0	0	0	0
R4_E1	Oxford Ave / Greenwood Ave	Greenwood Ave	60674	300	66	66	66	66	31	29
R4_E2	Greenwood Ave / Meredith St	Meredith St	60678	182	31	31	96	96	60	51
R4_E3	Meredith St / Chapel Rd	Chapel Rd	60679	159	30	30	126	126	96	86
R4_E4	Chapel Rd / Rickhard Rd	Rickhard Rd	60680	330	93	93	219	219	220	143
Route 4Eastbound				971			219	219	220	143
			65859							
Route 4	Westbound	Rickhard Rd	65843		0	0	0	0	0	0
R4_W1	Rickhard Rd / Chapel Rd	Chapel Rd	64409	330	76	76	76	76	52	67
R4_W2	Chapel Rd / Meredith St	Meredith St	64643	159	38	38	113	113	80	97
R4_W3	Meredith St / Greenwood Ave	Greenwood Ave	64642	182	50	50	164	164	120	135
R4_W4	Greenwood Ave / Oxford Ave	Oxford Ave	64644	300	46	46	210	210	150	161
Route 4Westbound				971			210	210	150	161

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	AVE_2HR
Route 5	Northbound	Stacey St	60750		0	0	0	0	0	0
R5_N1	Stacey St / Restwell St	Restwell St	60751	444	53	53	53	53	85	63
R5_N2	Restwell St / Raymond St	Raymond St	60752	128	51	51	104	104	109	105
R5_N3	Raymond St / South Tce	South Tce	60753	146	38	38	142	142	131	141
R5_N4	South Tce / Underpass	Underpass	60754	230	47	47	189	189	182	178
R5_N5	Underpass / Stacey St	Stacey St	60755	294	42	42	231	231	207	206

Route 5Northbound				1242			231	231	207	206
Route 5	Southbound	Stacey St			0	0	0	0	0	0
R5_S1	Stacey St / Underpass	Underpass	60762	294	51	51	51	51	50	81
R5_S2	Underpass / Raymond St	Raymond St	60763	230	29	29	80	80	71	89
R5_S3	Raymond St / Restwell St	Restwell St	60764	160	29	29	109	109	100	112
R5_S4	Restwell St / Stanley St	Stanley St	60765	128	25	25	134	134	126	154
R5_S5	Stanley St / Stacey St	Stacey St	60766	444	120	120	254	254	230	237
Route 5Southbound				1256			254	254	230	237
Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HF	Ave_1HR	Ave_1HR	Ave_1HR	Ave_1HR	AVE_2HR
Route 6	Eastbound	Rickhard Rd	64662		0	0	0	0	0	0
R6_E1	Rickhard Rd / Sir Joseph Banks St	Sir Joseph Banks St	64645	410	50	50	50	50	67	51
R6_E2	Sir Joseph Banks St / Stacey St	Stacey St	64646	294	132	132	182	182	158	136
Route 6Eastbound				704			182	182	158	136
Route 6	Westbound	Stacey St	64663		0	0	0	0	0	0
R6_W1	Stacey St / Sir Joseph Banks St	Sir Joseph Banks St	64647	294	101	101	101	101	72	92
R6_W2	Sir Joseph Banks St / Rickhard Rd	Rickhard Rd	64648	410	76	76	177	177	119	148
Route 6Westbound				704			177	177	119	148
			64663							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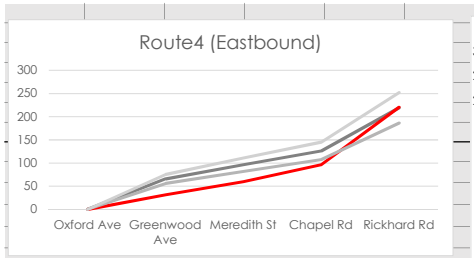
Wattle St
Greenacre Rd
Route1 (Southbound)
Mimosa Rd
Greenacre Rd
Rickard St
Wattle St
Stanley St
MaCauley Ave
Route1 (Northbound)
MaCauley Ave
Stanley St
Wattle St
Rickard St
Greenacre Rd
Mimosa Rd
Route1 (Southbound)
Mimosa Rd
Greenacre Rd
Rickard St
Wattle St
Stanley St
MaCauley Ave
AVE56
Route2 (Northbound)
Stacey St
Chapel Rd
Brandon Ave
Greenwood Ave
Marion St
Meredith St
Chapel Rd
Rickard Rd
French St
Hume Hwy
Route2 (Southbound)
Hume Hwy
French St
Rickard Rd
Chapel Rd
Meredith St
Marion St
Greenwood Ave
Brandon Ave
Chapel Rd
Stacey St
Route2 (Northbound)
Stacey St
Chapel Rd
Brandon Ave
Greenwood Ave
Marion St
Meredith St
Chapel Rd
Rickard Rd
French St
Hume Hwy
Route2 (Southbound)
Hume Hwy
French St
Rickard Rd
Chapel Rd
Meredith St
Marion St
Greenwood Ave
Brandon Ave
Chapel Rd
Stacey St
AVE56
Route3 (Northbound)
Stacey St
The Mall
Meredith St
French Ave
Route3 (Southbound)
Hume Hwy
Rickard Rd
Marion St
Underpass
Route3 (Northbound)
Stacey St
The Mall
Meredith St
French Ave
Route3 (Southbound)
Hume Hwy
Rickard Rd
Marion St
Underpass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300
250
200
150
100
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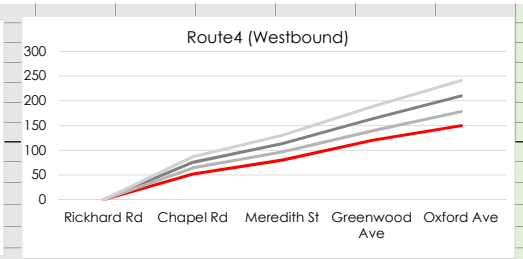
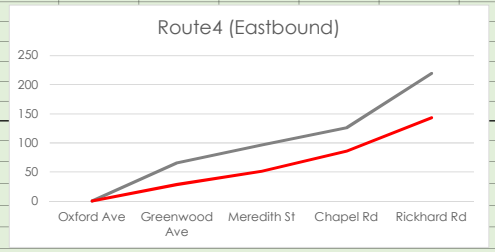
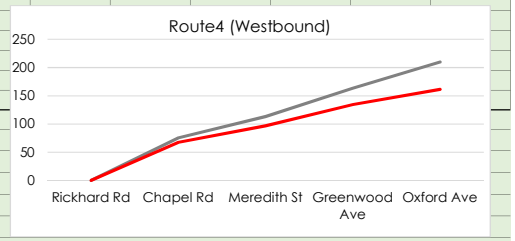
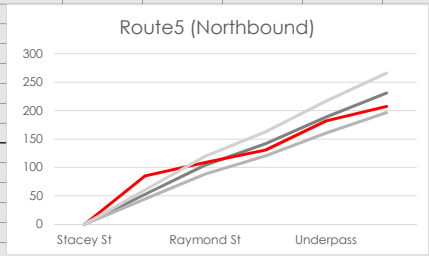
Oxford Ave
Greenwood Ave
Meredith St
Chapel Rd
Rickhard Rd

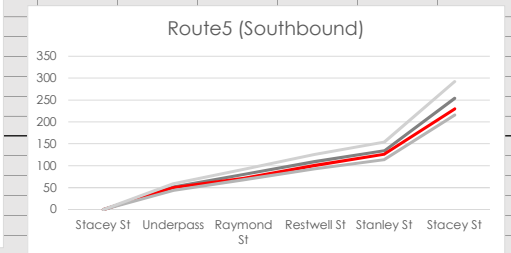

Route4 (Westbound)
300
250
200
150
100
50
0
Rickhard Rd
Chapel Rd
Meredith St
Greenwood Ave
Oxford Ave

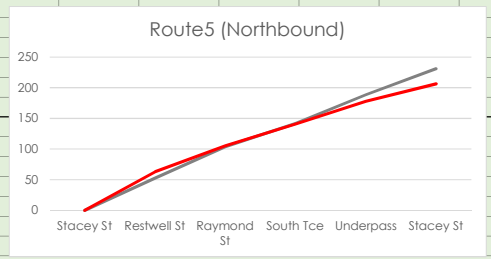

Route4 (Eastbound)
250
200
150
100
50
0
Oxford Ave
Greenwood Ave
Meredith St
Chapel Rd
Rickhard Rd

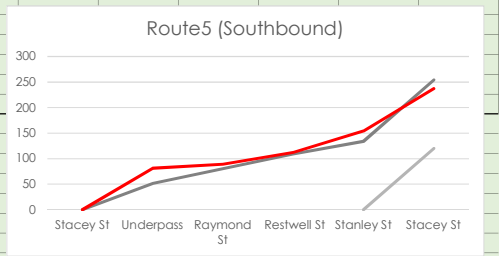

Route4 (Westbound)
250
200
150
100
50
0
Rickhard Rd
Chapel Rd
Meredith St
Greenwood Ave
Oxford Ave

AVE56

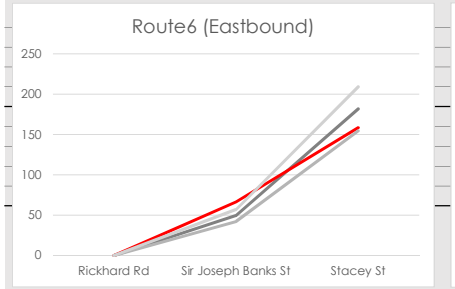

Route5 (Northbound)
300
250
200
150
100
50
0
Stacey St
Raymond St
Underpass

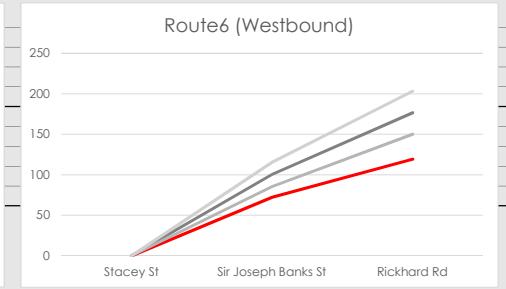

Route5 (Southbound)
350
300
250
200
150
100
50
0
Stacey St
Underpass
Raymond St
Restwell St
Stanley St
Stacey St

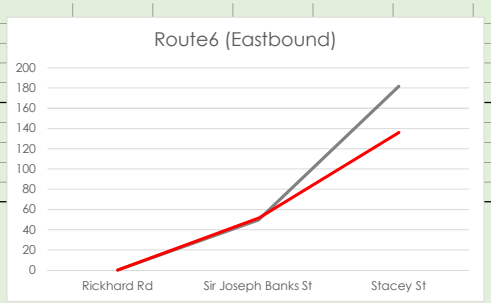

Route5 (Northbound)
250
200
150
100
50
0
Stacey St
Restwell St
Raymond St
South Tce
Underpass
Stacey St

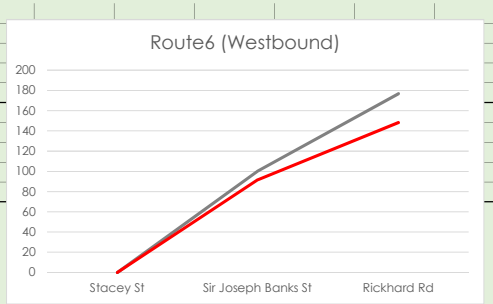

Route5 (Southbound)
300
250
200
150
100
50
0
Stacey St
Underpass
Raymond St
Restwell St
Stanley St
Stacey St

AVE56


Route6 (Eastbound)
250
200
150
100
50
0
Rickhard Rd
Sir Joseph Banks St
Stacey St


Route6 (Westbound)
250
200
150
100
50
0
Stacey St
Sir Joseph Banks St
Rickhard Rd


Route6 (Eastbound)
200
180
160
140
120
100
80
60
40
20
0
Rickhard Rd
Sir Joseph Banks St
Stacey St


Route6 (Westbound)
200
180
160
140
120
100
80
60
40
20
0
Stacey St
Sir Joseph Banks St
Rickhard Rd

GTAconsultants

12:00:00 AM Macauley Ave / Stanley St

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
	Origin/ Destination				Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR
Route 1	Northbound	MaCauley Ave	60666		######	########	########	########	0	0
R1_N1	Macauley Ave / Stanley St	Stanley St	60660	416	89	131	89	131	64	61
R1_N2	Stanley St / Wattle St	Wattle St	60661	580	58	76	146	206	134	112
R1_N3	Wattle St / Rickard St	Rickard St	60662	230	36	29	182	235	164	125
R1_N4	Rickard St / Greenacre Rd	Greenacre Rd	60663	460	40	86	222	321	211	201
R1_N5	Greenacre Rd / Mimosa Rd	Mimosa Rd	60664	250	81	86	303	407	290	380
Route 1Northbound				1936			303	407	290	380
R1_S1	#N/A	Mimosa Rd	60667		######	########	########	########	0	0
R1_S2	Mimosa Rd / Greenacre Rd	Greenacre Rd	60668	250	80	55	80	55	50	62
R1_S3	Greenacre Rd / Rickard St	Rickard St	60669	460	24	93	104	148	108	124
R1_S4	Rickard St / Wattle St	Wattle St	60670	230	76	43	180	191	141	158
R1_S5	Wattle St / Stanley St	Stanley St	60671	580	35	75	215	265	204	231
R1_S6		MaCauley Ave	64526	416	83	66	299	331	247	277
Route 1Southbound				1936			299	331	247	277

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR
Route 2	Northbound	Stacey St	60709		######	########	########	########	0	0
R2_N1	Stacey St / Chapel Rd	Chapel Rd	60710	720	96	109	96	109	84	120
R2_N2	Chapel Rd / Brandon Ave	Brandon Ave	60711	350	32	31	128	140	115	147
R2_N3	Brandon Ave / Greenwood Ave	Greenwood Ave	60712	232	20	28	148	169	133	171
R2_N4	Greenwood Ave / Marion St	Marion St	60713	316	62	72	210	241	247	262
R2_N5	Marion St / Meredith St	Meredith St	60714	182	21	23	231	263	254	270
R2_N6	Meredith St / Chapel Rd	Chapel Rd	60715	159	29	20	260	283	274	299
R2_N7	Chapel Rd / Rickard Rd	Rickard Rd	60716	330	54	26	313	309	333	341
R2_N8	Rickard Rd / French St	French St	60717	155	12	26	325	336	354	365
R2_N9	French St / Hume Hwy	Hume Hwy	60718	760	109	77	434	413	438	428
Route 2Northbound				3204			434	413	438	428
Route 2	Southbound	Hume Hwy			######	########	########	########	0	0
R2_S1	Hume Hwy / French St	French St	60719	760	97	76	97	76	54	52
R2_S2	French St / Rickard Rd	Rickard Rd	60720	155	43	31	140	107	84	81
R2_S3	Rickard Rd / Chapel Rd	Chapel Rd	60721	330	75	48	215	155	132	133
R2_S4	Chapel Rd / Meredith St	Meredith St	60722	159	31	28	247	182	173	163
R2_S5	Meredith St / Marion St	Marion St	60723	182	45	26	292	208	193	180
R2_S6	Marion St / Greenwood Ave	Greenwood Ave	60724	316	51	19	342	226	217	205
R2_S7	Greenwood Ave / Brandon Ave	Brandon Ave	60725	232	42	19	384	246	251	228
R2_S8	Brandon Ave / Chapel Rd	Chapel Rd	60726	350	54	34	439	280	295	271
R2_S9	Chapel Rd / Stacey St	Stacey St	60727	720	84	75	523	354	600	380
Route 2Southbound				3204			523	354	600	380

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR
Route 3	Northbound	Stacey St			######	########	########	########	0	0
R3_N1	Stacey St / Underpass	Underpass	60728	330	60	60	60	60	76	88
R3_N2	Underpass / The Mall	The Mall	60736	316	58	52	118	112	112	114
R3_N3	The Mall / Marion St	Marion St	60737	382	65	80	183	191	165	167
R3_N4	Marion St / Meredith St	Meredith St	60738	156	69	72	252	264	196	181
R3_N5	Meredith St / Rickard Rd	Rickard Rd	60739	360	54	44	306	307	236	225
R3_N6	Rickard Rd / French Ave	French Ave	60740	158	15	11	321	318	247	236
R3_N7	French Ave / Hume Hwy	Hume Hwy	60741	622	90	120	411	438	419	406
Route 3Northbound				2324			411	438	419	406
Route 3	Southbound	Hume Hwy			######	########	########	########	0	0
R3_S1	Hume Hwy / French Ave	French Ave	60742	622	71	71	71	71	43	43
R3_S2	French Ave / Rickard Rd	Rickard Rd	60743	158	27	10	98	81	76	75
R3_S3	Rickard Rd / Meredith St	Meredith St	60744	360	37	43	135	124	117	132
R3_S4	Meredith St / Marion St	Marion St	60745	156	16	14	150	138	146	156
R3_S5	Marion St / The Mall	The Mall	60746	382	78	58	228	196	185	193
R3_S6	The Mall / Underpass	Underpass	60747	316	37	39	265	235	226	242
R3_S7	Underpass / Stacey St	Stacey St	60748	330	35	42	300	277	275	291
Route 3Southbound				2324			300	277	275	291

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR
Route 4	Eastbound	Oxford Ave			######	########	########	########	0	0
R4_E1	Oxford Ave / Greenwood Ave	Greenwood Ave	60674	300	48	66	48	66	23	23
R4_E2	Greenwood Ave / Meredith St	Meredith St	60678	182	43	31	91	96	80	73
R4_E3	Meredith St / Chapel Rd	Chapel Rd	60679	159	48	43	139	139	102	97
R4_E4	Chapel Rd / Rickhard Rd	Rickhard Rd	60680	330	62	49	201	189	191	142
Route 4Eastbound				971			201	189	191	142

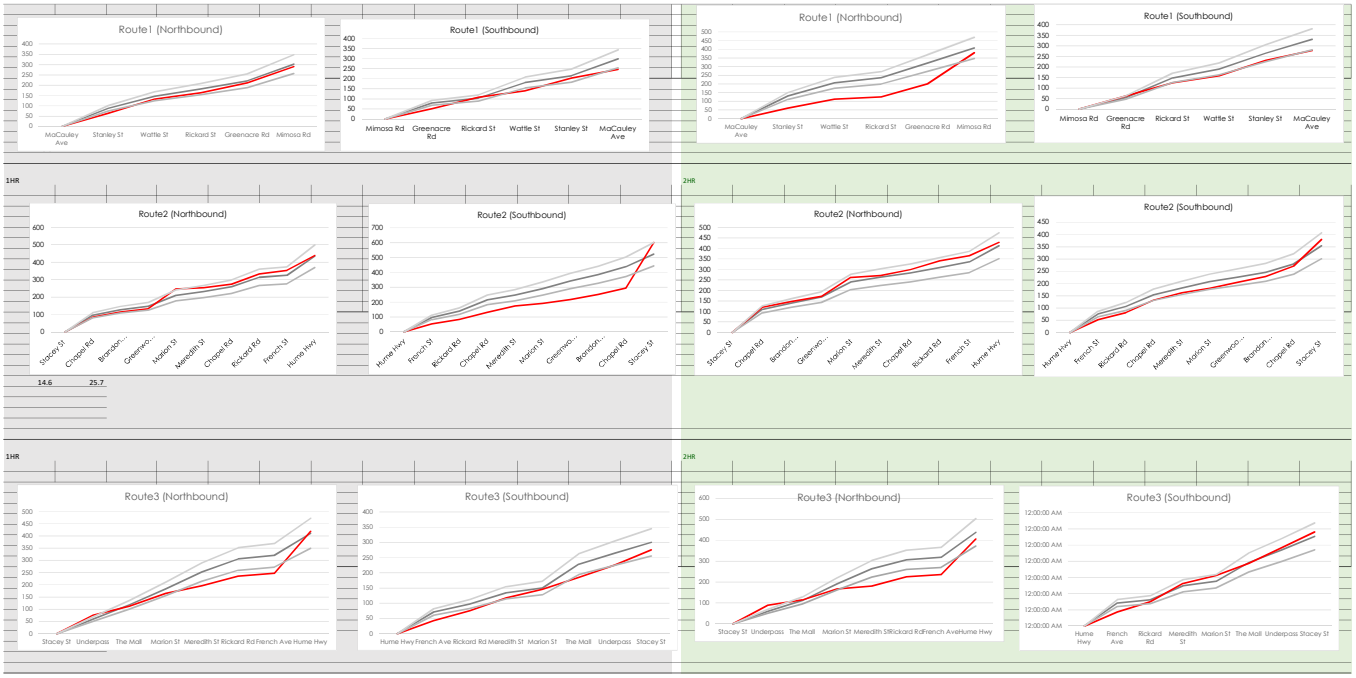
Route 4	Westbound	Rickhard Rd	64499		######	########	########	#########	0	0
R4_W1	Rickhard Rd / Chapel Rd	Chapel Rd	64500	330	90	64	90	64	76	77
R4_W2	Chapel Rd / Meredith St	Meredith St	64501	159	22	31	112	96	122	111
R4_W3	Meredith St / Greenwood Ave	Greenwood Ave	64502	182	51	34	163	129	140	130
R4_W4	Greenwood Ave / Oxford Ave	Oxford Ave	64503	300	31	51	194	180	162	146
Route 4Westbound				971			194	180	162	146

Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR
Route 5	Northbound	Stacey St	60750		######	########	########	#########	0	0
R5_N1	Stacey St / Restwell St	Restwell St	60751	444	36	38	36	38	32	26
R5_N2	Restwell St / Raymond St	Raymond St	60752	128	60	38	96	76	66	53
R5_N3	Raymond St / South Tce	South Tce	60753	146	22	24	118	100	98	75
R5_N4	South Tce / Underpass	Underpass	60754	230	28	33	146	133	150	132
R5_N5	Underpass / Stacey St	Stacey St	60755	294	35	34	180	167	175	158
Route 5Northbound				1242			180	167	175	158

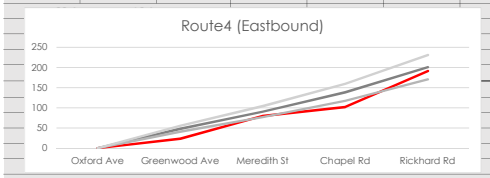
Route 5	Southbound	Stacey St			######	########	########	#########	0	0
R5_S1	Stacey St / Underpass	Underpass	60762	294	52	49	52	49	56	40
R5_S2	Underpass / Raymond St	Raymond St	60763	230	38	32	91	81	77	62
R5_S3	Raymond St / Restwell St	Restwell St	60764	160	22	29	112	110	94	82
R5_S4	Restwell St / Stanley St	Stanley St	60765	128	23	29	135	139	106	95
R5_S5	Stanley St / Stacey St	Stacey St	60766	444	35	40	170	179	188	159
Route 5Southbound				1256			170	179	188	159

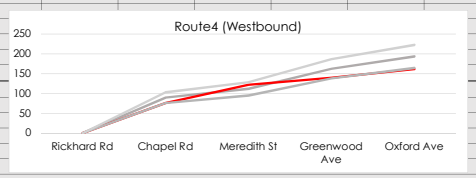
Initial Time	Direction	from	Modeled id	Length	Observed		Accumulated		Modelled	
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR
Route 6	Eastbound	Rickhard Rd	64504		######	########	########	#########	0	0
R6_E1	Rickhard Rd / Sir Joseph Banks St	Sir Joseph Banks St	64505	410	44	42	44	42	63	60
R6_E2	Sir Joseph Banks St / Stacey St	Stacey St	64506	294	121	103	164	146	155	153
Route 6Eastbound				704			164	146	155	153

Route 6	Westbound	Stacey St	64507		######	########	########	#########	0	0
R6_W1	Stacey St / Sir Joseph Banks St	Sir Joseph Banks St	64508	294	30	51	30	51	32	18
R6_W2	Sir Joseph Banks St / Rickhard Rd	Rickhard Rd	64509	410	73	73	103	124	121	102
Route 6Westbound				704			103	124	121	102


Route1 (Northbound)
MaCauley Ave
Stanley St
Wattle St
Rickard St
Greenacre Rd
Mimosa Rd
Route1 (Southbound)
Mimosa Rd
Greenacre Rd
Rickard St
Wattle St
Stanley St
MaCauley Ave
Route1 (Northbound)
MaCauley Ave
Stanley St
Wattle St
Rickard St
Greenacre Rd
Mimosa Rd
Route1 (Southbound)
Mimosa Rd
Greenacre Rd
Rickard St
Wattle St
Stanley St
MaCauley Ave
1HR
Route2 (Northbound)
Stacey St
Chapel Rd
Brandon...
Greenwo...
Marion St
Meredith St
Chapel Rd
Rickard Rd
French St
Hume Hwy
Route2 (Southbound)
Hume Hwy
French St
Rickard Rd
Chapel Rd
Meredith St
Marion St
Greenwo...
Brandon...
Chapel Rd
Stacey St
14.6
25.7
2HR
Route2 (Northbound)
Stacey St
Chapel Rd
Brandon...
Greenwo...
Marion St
Meredith St
Chapel Rd
Rickard Rd
French St
Hume Hwy
Route2 (Southbound)
Hume Hwy
French St
Rickard Rd
Chapel Rd
Meredith St
Marion St
Greenwoo...
Brandon...
Chapel Rd
Stacey St
1HR
Route3 (Northbound)
Stacey St
Underpass
The Mall
Marion St
Meredith St
Rickard Rd
French Ave
Hume Hwy
Route3 (Southbound)
Hume Hwy
French Ave
Rickard Rd
Meredith St
Marion St
The Mall
Underpass
Stacey St
2HR
Route3 (Northbound)
Stacey St
Underpass
The Mall
Marion St
Meredith St
Rickard Rd
French Ave
Hume Hwy
Route3 (Southbound)
12:00:00 AM
Hume Hwy
French Ave
Rickard Rd
Meredith St
Marion St
The Mall
Underpass
Stacey St

1HR





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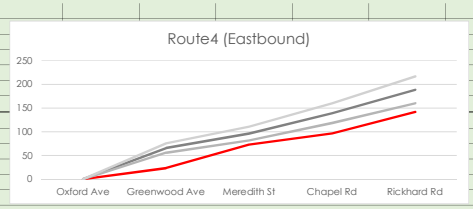

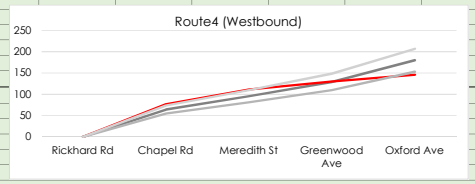

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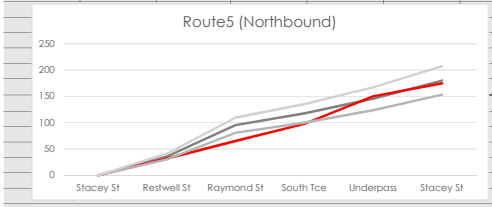

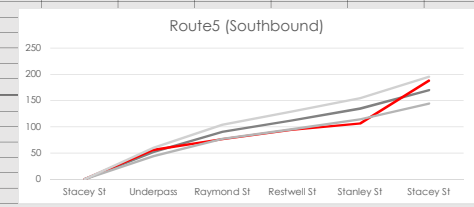

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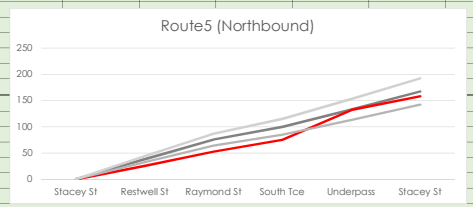

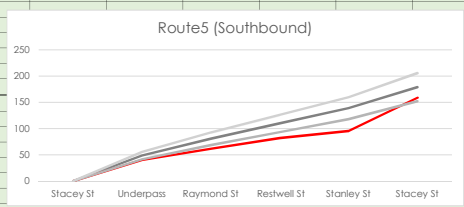

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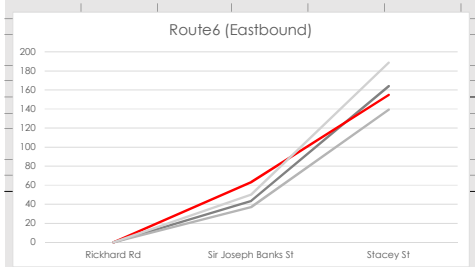

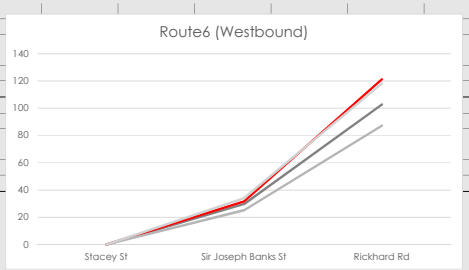

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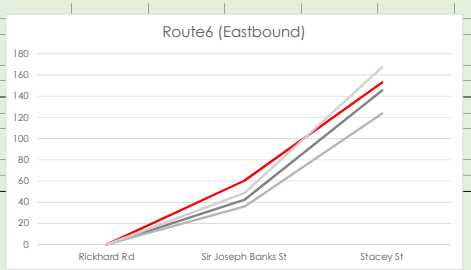

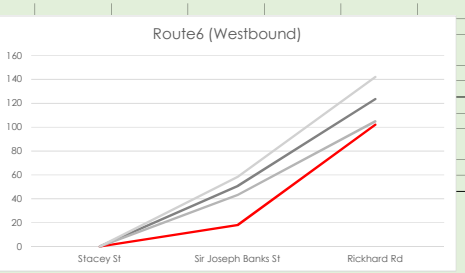

63919

Initial Time	Direction	from	Modeled id	Length	Observed		Accumula		Modelled		-15%	15%		1
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_78	AVE_78	Ave_89	AVE_89
Route 1	Northbound	MaCauley Ave	64651		0	0	0	0	0	0	0	0	0	0
R1_N1	Macauley Ave / Stanley St	Stanley St	64652	416	95	181	95	181	177	97	81	109	153	208
R1_N2	Stanley St / Wattle St	Wattle St	64653	580	90	105	185	285	257	299	157	212	242	328
R1_N3	Wattle St / Rickard St	Rickard St	64654	230	16	26	201	311	294	348	170	231	265	358
R1_N4	Rickard St / Greenacre Rd	Greenacre Rd	64655	460	178	183	379	494	381	521	322	435	420	568
R1_N5	Greenacre Rd / Mimosa Rd	Mimosa Rd	64656	250	109	77	488	571	447	631	414	561	485	657
Route 1Northbound				1936			488	571	447	631				
Route 1	Southbound	Mimosa Rd			0	0	0	0	0	0	0	0	0	0
R1_S1		Greenacre Rd	64657	250	73	91	73	91	47	130	62	84	78	105
R1_S2		Rickard St	64658	460	157	156	230	248	115	269	196	265	211	285
R1_S3		Wattle St	64659	230	20	74	250	322	169	348	212	287	273	370
R1_S4		Stanley St	64660	580	83	136	333	458	325	508	283	382	389	526
R1_S5		MaCauley Ave	64661	416	73	85	405	543	385	594	344	466	461	624
Route 1Southbound				1936			405	543	385	594				

Initial Time	Direction	from	Modeled id	Length	Observed		Accumula		Modelled		-15%	15%		1
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_78	AVE_78	Ave_89	AVE_89
Route 2	Northbound	Stacey St	64663		0	0	0	0	0	0	0	0	0	0
R2_N1	Stacey St / Chapel Rd	Chapel Rd	64664	720	84	116	84	116	113	127	71	97	99	133
R2_N2	Chapel Rd / Brandon Ave	Brandon Ave	64665	350	53	31	137	147	140	155	116	157	125	169
R2_N3	Brandon Ave / Greenwood Ave	Greenwood Ave	64666	232	30	58	166	205	169	181	141	191	174	236
R2_N4	Greenwood Ave / Marion St	Marion St	64667	316	55	48	221	253	250	239	188	254	215	291
R2_N5	Marion St / Meredith St	Meredith St	64668	182	34	24	255	277	280	292	217	293	235	319
R2_N6	Meredith St / Chapel Rd	Chapel Rd	64669	159	34	29	289	306	311	316	245	332	260	352
R2_N7	Chapel Rd / Rickard Rd	Rickard Rd	64670	330	55	34	344	340	411	395	292	395	289	391
R2_N8	Rickard Rd / French St	French St	64671	155	27	44	371	384	441	415	315	426	326	442
R2_N9	French St / Hume Hwy	Hume Hwy	64672	760	169	166	540	550	486	465	459	621	468	633
Route 2Northbound				3204			540	550	486	465				
Route 2	Southbound	Hume Hwy			0	0	0	0	0	0	0	0	0	0
R2_S1	Hume Hwy / French St	French St	64673	760	101	121	101	121	64	68	86	116	102	139
R2_S2	French St / Rickard Rd	Rickard Rd	64674	155	38	21	139	142	93	171	118	160	120	163
R2_S3	Rickard Rd / Chapel Rd	Chapel Rd	64675	330	101	79	240	221	138	220	204	276	187	254
R2_S4	Chapel Rd / Meredith St	Meredith St	64676	159	29	29	269	249	177	269	229	310	212	286
R2_S5	Meredith St / Marion St	Marion St	64677	182	20	55	290	304	196	301	246	333	258	349
R2_S6	Marion St / Greenwood Ave	Greenwood Ave	64678	316	57	24	347	328	232	330	295	399	278	377
R2_S7	Greenwood Ave / Brandon Ave	Brandon Ave	64679	232	48	33	395	361	260	366	336	454	306	415
R2_S8	Brandon Ave / Chapel Rd	Chapel Rd	64680	350	72	57	467	417	314	418	397	537	354	480
R2_S9	Chapel Rd / Stacey St	Stacey St	64681	720	228	178	695	595	427	577	590	799	505	684
Route 2Southbound				3204			695	595	427	577				

Initial Time	Direction	from	Modeled id	Length	Observed		Accumula		Modelled		-15%	15%		1
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_78	AVE_78	Ave_89	AVE_89
Route 3	Northbound	Stacey St			0	0	0	0	0	0	0	0	0	0
R3_N1	Stacey St / Underpass	Underpass	64683	330	75	80	75	80	62	74	64	86	68	91
R3_N2	Underpass / The Mall	The Mall	64684	316	55	71	130	150	116	129	111	150	128	173
R3_N3	The Mall / Marion St	Marion St	64685	382	98	88	228	238	173	229	193	262	202	273
R3_N4	Marion St / Meredith St	Meredith St	64686	156	62	82	289	319	249	286	246	332	271	367
R3_N5	Meredith St / Rickard Rd	Rickard Rd	64687	360	76	31	365	350	329	356	310	419	297	402
R3_N6	Rickard Rd / French Ave	French Ave	64688	158	15	14	380	364	340	366	323	436	309	418
R3_N7	French Ave / Hume Hwy	Hume Hwy	64689	622	51	100	431	463	426	402	366	495	394	532
Route 3Northbound				2324			431	463	426	402				
Route 3	Southbound	Hume Hwy			0	0	0	0	0	0	0	0	0	0
R3_S1	Hume Hwy / French Ave	French Ave	64690	622	85	113	85	113	54	47	72	98	96	130
R3_S2	French Ave / Rickard Rd	Rickard Rd	64691	158	26	19	111	132	92	71	94	127	112	152
R3_S3	Rickard Rd / Meredith St	Meredith St	64692	360	51	52	162	184	229	255	137	186	156	212
R3_S4	Meredith St / Marion St	Marion St	64693	156	26	21	188	205	217	229	159	216	174	235
R3_S5	Marion St / The Mall	The Mall	64694	382	82	69	269	274	260	288	229	309	233	315
R3_S6	The Mall / Underpass	Underpass	64695	316	52	41	321	315	312	325	273	369	268	362
R3_S7	Underpass / Stacey St	Stacey St	64696	330	69	55	390	370	350	369	331	448	315	426
Route 3Southbound				2324			390	370	350	369				

Initial Time	Direction	from	Modeled id	Length	Observed		Accumula		Modelled		-15%	15%		1
					Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_78	AVE_78	Ave_89	AVE_89
Route 4	Eastbound	Oxford Ave			0	0	0	0	0	0	0	0	0	0
R4_E1	Oxford Ave / Greenwood Ave	Greenwood Ave	64697	300	68	62	68	62	33	27	58	78	53	72
R4_E2	Greenwood Ave / Meredith St	Meredith St	64698	182	34	33	101	95	73	60	86	116	81	110
R4_E3	Meredith St / Chapel Rd	Chapel Rd	64699	159	54	35	155	130	122	104	132	178	110	149
R4_E4	Chapel Rd / Rickhard Rd	Rickhard Rd	64700	330	61	57	216	187	218	185	183	248	159	215
Route 4Eastbound				971			216	187	218	185				

Route 4	Westbound	Rickhard Rd			0	0	0	0	0	0	0	0	0	0
R4_W1	Rickhard Rd / Chapel Rd	Chapel Rd	64701	330	78	91	78	91	57	69	66	90	77	105
R4_W2	Chapel Rd / Meredith St	Meredith St	64702	159	41	37	119	128	89	101	101	137	109	147
R4_W3	Meredith St / Greenwood Ave	Greenwood Ave	64703	182	41	36	161	164	111	133	137	185	139	189
R4_W4	Greenwood Ave / Oxford Ave	Oxford Ave	64704	300	28	58	189	222	149	156	161	217	189	255
Route 4Westbound				971			189	222	149	156				

Initial Time	Direction	from	Modeled id	Length	Observed		Accumula		Modelled		-15%	15%		1
					Ave_1HF	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_78	AVE_78	Ave_89	AVE_89
Route 5	Northbound	Stacey St	64705		0	0	0	0	0	0	0	0	0	0
R5_N1	Stacey St / Restwell St	Restwell St	64706	444	34	91	34	91	56	32	29	39	77	105
R5_N2	Restwell St / Raymond St	Raymond St	64707	128	35	33	69	124	70	92	59	80	105	142
R5_N3	Raymond St / South Tce	South Tce	64708	146	30	22	99	145	111	233	84	114	123	167
R5_N4	South Tce / Underpass	Underpass	64709	230	39	56	138	201	104	279	118	159	171	231
R5_N5	Underpass / Stacey St	Stacey St	64710	294	36	49	175	250	132	306	148	201	213	288
Route 5Northbound				1242			175	250	132	306				

Route 5	Southbound	Stacey St			0	0	0	0	0	0	0	0	0	0
R5_S1	Stacey St / Underpass	Underpass	64711	294	53	43	53	43	76	83	45	61	37	49
R5_S2	Underpass / Raymond St	Raymond St	64712	230	30	31	83	74	67	93	70	95	62	85
R5_S3	Raymond St / Restwell St	Restwell St	64713	160	22	25	105	99	81	113	89	121	84	113
R5_S4	Restwell St / Stanley St	Stanley St	64714	128	21	28	126	127	95	114	107	145	108	145
R5_S5	Stanley St / Stacey St	Stacey St	64715	444	40	40	166	166	184	207	141	191	141	191
Route 5Southbound				1256			166	166	184	207				

Initial Time	Direction	from	Modeled id	Length	Observed		Accumula		Modelled		-15%	15%		1
					Ave_1HF	AVE_2HR	Ave_1HR	AVE_2HR	Ave_1HR	AVE_2HR	Ave_78	AVE_78	Ave_89	AVE_89
Route 6	Eastbound	Rickhard Rd	64716		0	0	0	0	0	0	0	0	0	0
R6_E1	Rickhard Rd / Sir Joseph Banks St	Sir Joseph Banks St	64717	410	59	59	59	59	88	72	50	68	50	68
R6_E2	Sir Joseph Banks St / Stacey St	Stacey St	64718	294	100	100	159	159	180	144	135	183	135	183
Route 6Eastbound				704			159	159	180	144				

Route 6	Westbound	Stacey St	64719		0	0	0	0	0	0	0	0	0	0
R6_W1	Stacey St / Sir Joseph Banks St	Sir Joseph Banks St	64720	294	100	59	100	59	102	46	85	115	50	68
R6_W2	Sir Joseph Banks St / Rickhard Rd	Rickhard Rd	64721	410	99	80	199	139	201	145	169	229	118	160
Route 6Westbound				704			199	139	201	145				

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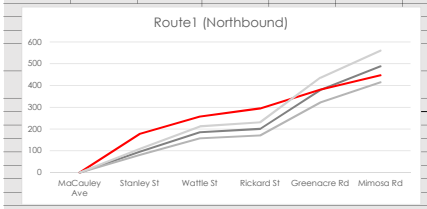

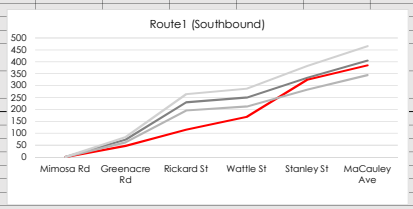

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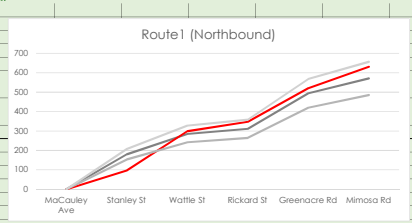

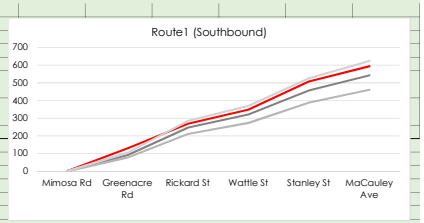

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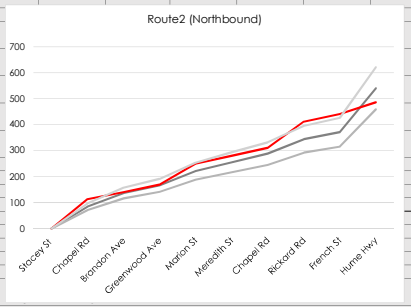

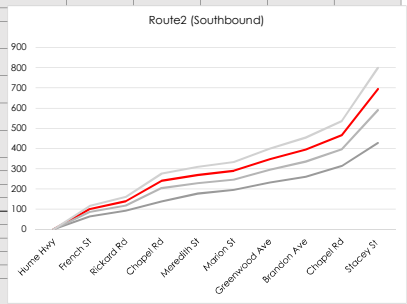

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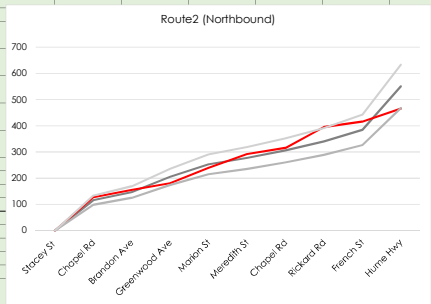

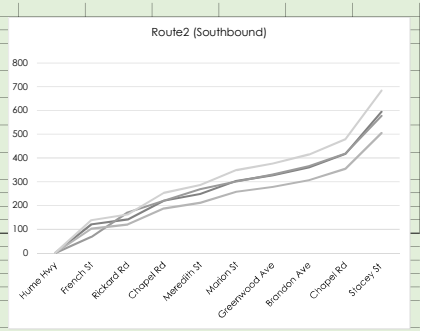

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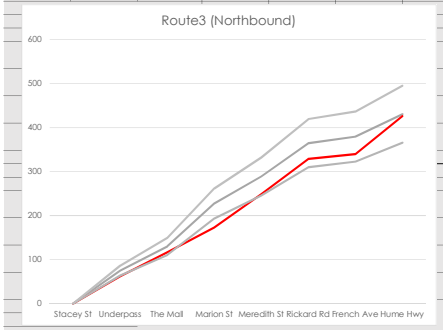

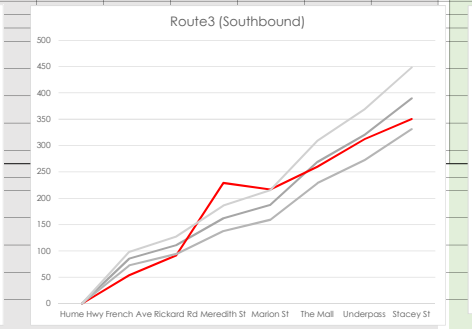

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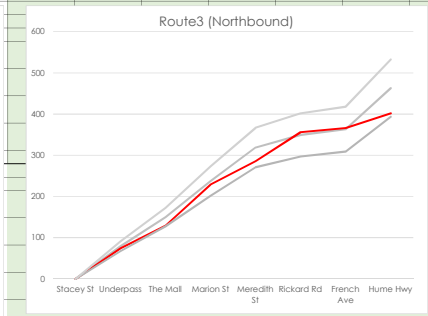

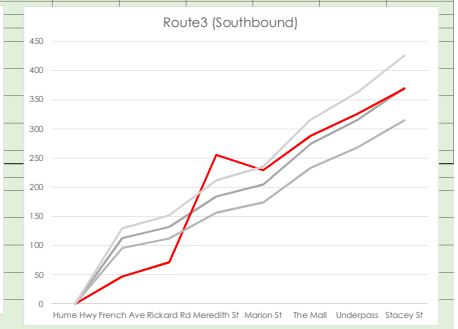

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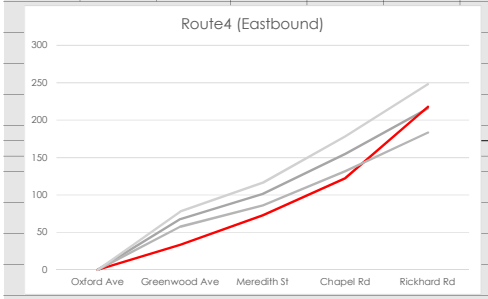

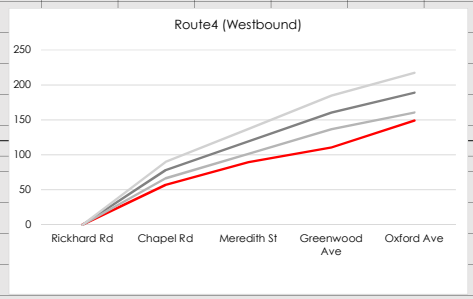

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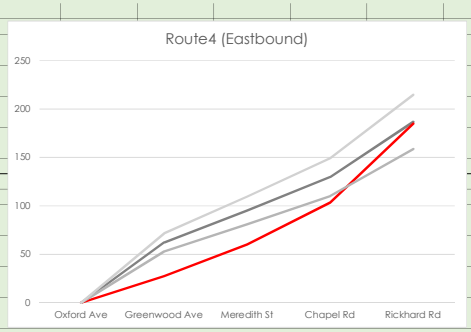

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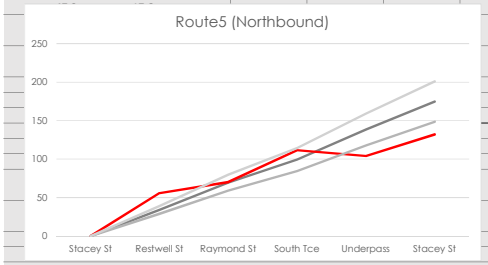

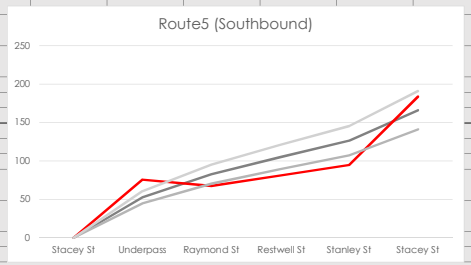

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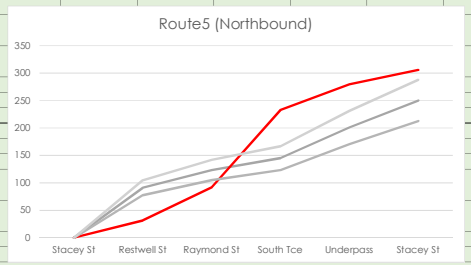

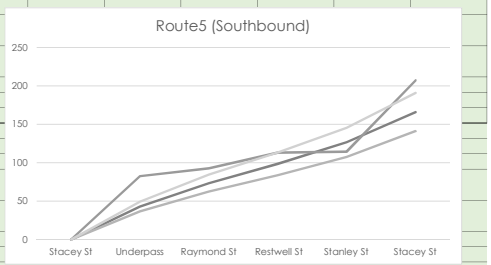

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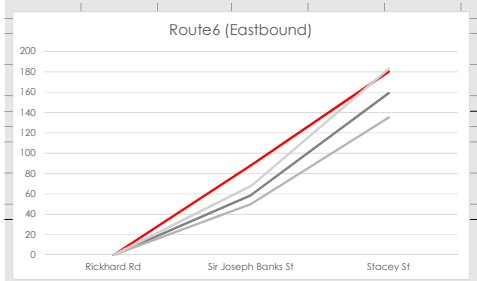

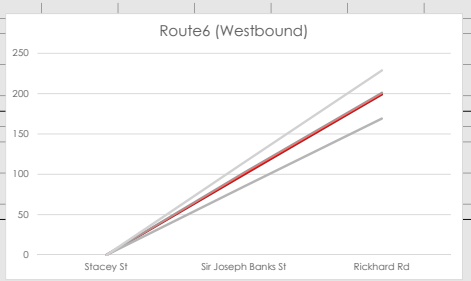

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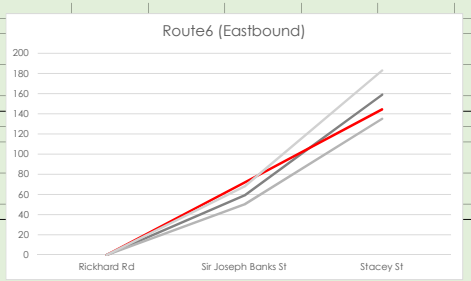

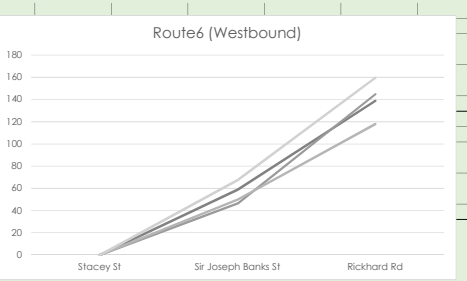

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