

Traffic Impact Assessment Fitzroy North Local Area Place Making – Area 3 Final Report

Prepared by: GTA Consultants (VIC) Pty Ltd for City of Yarra

on 8/10/19

Reference: V171550

Issue #: A

Traffic Impact Assessment Fitzroy North Local Area Place Making – Area 3


Client: City of Yarra

on 8/10/19

Reference: V171550

Issue #: A

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A-Dr	25/7/2019	Draft	Hui-Lin Tan	Ben Krastins	Karen Cogo	
A	8/10/2019	Final	Hui-Lin Tan	Ben Krastins	Karen Cogo	

© Greg Tucker & Associates Pty Ltd [ABN 34 005 839 645] 2019
The information contained in this document is confidential and intended solely for the use of the client for the purpose for which it has been prepared and no representation is made or is to be implied as being made to any third party. Use or copying of this document in whole or in part without the written permission of GTA Consultants constitutes an infringement of copyright. The intellectual property contained in this document remains the property of GTA Consultants.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Overview

GTA Consultants was engaged by Yarra City Council during April 2019 to undertake a Traffic Impact Assessment (TIA) on the proposed traffic calming measures for the Fitzroy North Local Area Place Making (LAPM) - Area 3.

The report provides an assessment of the traffic impacts which could be expected from the following four proposals:

1. Partial closure of Rae Street, Fitzroy North to prevent access onto Alexandra Parade
2. Limit through traffic access in the laneway to the west of Rae Street, to Alexandra Parade traffic only
3. Trial the installation of a kerbed median on Holden Street to prohibit right turns into and out of both Brunswick Street North and Dean Street
4. Trial the installation of a kerbed median on Miller Street to prohibit right turns into and out of both Rae Street and White Street

The TIA investigates the potential impacts associated with the proposed closures to road vehicles in the Study area which is bounded by Holden Street, St Georges Road, Nicholson Street and Alexandra Parade and considers all the requirements set out in Part 2.8 of *Traffic Engineering Manual (TEM) Volume 3, Additional Network Standards and Guidelines, Changing traffic movements other than for events or works* (VicRoads, October 2015).

In addition to addressing the requirements of the Department of Transport (formally VicRoads) for its road network and intersections, the findings of the traffic assessment will be used to inform subsequent public consultation. As such, the TIA will clearly identify:

- any issues with regards to potential rat running (in both directions) and any existing safety issues.
- any impacts associated with any redistribution of traffic on local streets in the Study Area, particularly in locations where there is a high number of vulnerable road users.
- the cumulative impacts of the proposal bearing in mind that changes in Holden Street and Miller Street are trials

Conclusion

As outlined throughout the report, and based on the analysis undertaken, the proposed treatments are not expected to have an adverse impact on the operation of the surrounding road network, and traffic can be redistributed accordingly.

Origin-destination surveys, along with site observations did not find a significant issue with non-local through traffic (or 'rat running') with only 28 vehicles on average travelling the full route between Holden Street and Alexandra Parade during the AM peak. It could be expected that the majority of vehicles generated at the intersection of Rae Street and Alexandra Parade have either their origin or destination within the study area. This indicates that the trial closures are likely to have a large impact local residents and visitors, while there will be only limited benefits to reducing non-local through traffic. Notwithstanding, it cannot be determined at what point in the study area the vehicle originated, and if there is major benefit of utilising Rae Street in the south-bound direction, as opposed to joining St Georges Road or Nicholson Street earlier (further north).

Due to the proposed trials at Holden Street and Miller Street to the northern end of the study area, it was identified that the redistribution of traffic to the nearby signalised intersections on Holden Street with Nicholson Street and St Georges Road, slightly increased the DOS and delay times on the two arterial roads. It is expected that the redistribution of non-local trips from within the area can be accommodated by Nicholson Street and St Georges Road.

Recommendations

Having regard to the analysis of traffic impacts associated with the proposed traffic management treatments within Fitzroy North, the following recommendations are made:

- For projects which involve the installation of a median such as Holden Street and Miller Street, the design should consider pedestrian and bicycle access requirements to ensure connectivity through the study area (e.g. similar to other nearby closure treatments including Holden Street / Rae Street intersection trial).
- Review the need for trial closures due to the low level of through traffic, and whether other improvements or traffic management could be implemented.
- Council is to work directly with business owners who will be affected by any of the proposed treatments to identify alternative routes or infrastructure requirements.
- Where an increase in right turns onto tram or bicycle routes are identified, consideration should be given to investigating potential solutions with the relevant parties to mitigate any safety issues created.
- Develop concept plans for the proposed treatments to better understand the impacts on safety and access, including pedestrian, cyclists and large vehicles.
- Review traffic conditions after no less than 6 months after the implementation of treatments to understand the effectiveness and any further works required to mitigate unexpected impacts on the surrounding road network.
- Any follow up traffic surveys should occur approximately 12 months after implementation so that recorded volumes are undertaken at a comparable time to the surveys undertaken as part of this assessment.
- Following the trials, assess whether all projects are necessary or if the permanent closures alone are sufficient to limit the traffic using Rae Street onto either Nicholson Street St Georges Road whilst maintaining local access for residents and business activities.

CONTENTS

1.	Introduction	1
1.1.	Background & Proposal	2
1.2.	VicRoads Traffic Engineering Manual Volume	2
1.3.	References	2
2.	Existing Conditions	3
2.1.	Transport Network	4
2.2.	Data Collection	9
2.3.	Existing Traffic Volume Movement Results	9
2.4.	Origin and Destination Survey Analysis	11
2.5.	Existing Network Function – SIDRA existing	12
2.6.	Site Observations	13
2.7.	Heavy Vehicle Movements	14
2.8.	Summary	14
3.	Network Changes	16
3.1.	Proposed Treatments	17
3.2.	Other Proposals	19
4.	Impact Assessment	20
4.1.	Overview	21
4.2.	Traffic Impacts – Holden Street & Miller Street centre medians	21
4.3.	Traffic Impacts – Rae Street & Laneway Closures	25
4.4.	Summary	26
5.	Conclusions and Recommendations	27
5.1.	Conclusions	28
5.2.	Recommendations	28

Appendices

- A. Traffic Volumes
- B. SIDRA Assessment

Figures

Figure 2.1:	Location of Project Sites	4
Figure 2.2:	Public Transport Network	6
Figure 2.3:	Travel Smart Map (2014)	7
Figure 2.4:	Strategic Cycling Corridor Network	7
Figure 2.5:	Casualty Accident Locations	8
Figure 2.6:	Turning Movement Diagram – Holden Street – Existing AM Peak (8-9AM)	9
Figure 2.7:	Turning Movement Diagram – Holden Street – Existing PM Peak (5-6PM)	10
Figure 2.8:	Turning Movement Diagram – Miller Street - Existing AM (8-9AM) & PM (5-6PM) Peak	10
Figure 2.9:	Turning Movement Diagram – York Street – Existing AM Peak (8-9AM)	10
Figure 2.10:	Turning Movement Diagram – York Street – Existing PM Peak (5-6PM)	11
Figure 2.11:	Origin Destination Survey Results	11
Figure 2.12:	Miller Street / White Street Intersection	14
Figure 2.13:	Holden Street / Dean Street Intersection, looking west towards Brunswick Street North	14
Figure 2.14:	Holden Street, looking east towards St Georges Road	14
Figure 2.15:	Rae Street, looking south towards Alexandra Parade	14
Figure 3.1:	Locations of Proposed Treatments	17
Figure 3.2:	Project 1 – Permitted traffic movements before & after project	18
Figure 3.3:	Project 2 – Permitted traffic movements before & after project	18
Figure 3.4:	Project 3 – Permitted traffic movements before & after project	19
Figure 3.5:	Project 4 – Permitted traffic movements before & after project	19
Figure 4.1:	Turning Movement Diagram – Holden Street – Post Project AM Peak (8-9am)	22
Figure 4.2:	Turning Movement Diagram – Holden Street – Post Project PM Peak (5-6pm)	22
Figure 4.3:	Expected traffic redistribution from Rae Street and Laneway closures	25

Tables

Table 2.1:	Description of key roads	5
Table 2.2:	Key intersections	5
Table 2.3:	Public Transport Routes	6
Table 2.4:	Casualty Accident History	8
Table 2.5:	Data Collection Summary	9
Table 3.1:	Proposed Treatment Locations	17
Table 4.1:	Nicholson Street / Holden Street intersection – ‘Project Case’ Operating Conditions – 2019	23
Table 4.2:	St Georges Road Intersection / Holden Street – ‘Project Case’ Operating Conditions – 2019	23
Table 4.3:	Summary of SIDRA modelling results – Existing Conditions & Project Case	23

1. INTRODUCTION

01

1.1. Background & Proposal

Yarra City Council adopted a Local Area Place Making Plan (LAPM) for Fitzroy North in March 2019. The LAPM aims to take a place making approach to creating a more liveable area for the community.

GTA Consultants has been engaged by Yarra City Council to provide transport engineering services for the proposed traffic calming measures for the Fitzroy North Local Area Place Making (LAPM) - Area 3.

As part of the LAPM, Yarra City Council proposes to:

1. Partial closure of Rae Street, Fitzroy North to prevent access onto Alexandra Parade
2. Limit through traffic access in the laneway to the west of Rae Street, to Alexandra Parade traffic only
3. Trial the installation of a kerbed median on Holden Street to prohibit right turns into and out of both Brunswick Street North and Dean Street
4. Trial the installation of a kerbed median on Miller Street to prohibit right turns into and out of both Rae Street and White Street

The proposed LAPM treatments will result in the redistribution of traffic to and from the arterial road network, particularly at the intersections of Nicholson Street/Holden Street and St Georges Road/Holden Street.

As these intersections are managed by VicRoads, Council must provide a Transport Impact Assessment (TIA) report to VicRoads on the matter. This report provides the required information to assist in the relevant approval process.

1.2. VicRoads Traffic Engineering Manual Volume

Part 2.8 of Traffic Engineering Manual (TEM) Volume 3, Changing traffic movements other than for events or works (VicRoads, October 2015) sets out the considerations which VicRoads will require to assess changes to the road environment. This supersedes the old Sections 13.4.2 and 13.5 of Traffic Engineering Manual (TEM) Volume 1, Chapter 13: Road Closure (VicRoads, August 2014).

1.3. References

In preparing this report, reference has been made to the following:

- Local Area Place Making Plan (LAPM) for Fitzroy North, January 2019 (by O'Brien Traffic)
- Traffic Engineering Manual (TEM) Volume 3, Changing traffic movements other than for events or works (VicRoads, October 2015)
- Traffic and car parking surveys undertaken by GTA Consultants as referenced in the context of this report
- An inspection of the site and its surrounds
- Other documents as nominated.

2. EXISTING CONDITIONS

02

2.1. Transport Network

2.1.1. Road Network

The four subject sites are located Fitzroy North which is situated in the Study Area bounded by Holden Street, St Georges Road, Nicholson Street and Alexandra Parade. The area includes a mix of land uses including residential, retail, commercial and Primary Schools.

The location of the site and the surrounding environs is shown in Figure 2.1.

Figure 2.1: Location of Project Sites



PROJECT SITES

1. Rae Street / Alexandra Parade
2. Laneway to the west of Rae Street, near Alexandra Parade
3. Holden Street / Brunswick Street North / Dean Street.
4. Miller Street / Rae Street / White Street

Table 2.1 provides key information on the roads impacted by the Study Area including estimated daily traffic volume.

Table 2.1: Description of key roads

Road Name	Classification	Responsible Authority	Carriageway width (m)	Estimated Traffic Volumes ¹
Nicholson Street	Primary Arterial	VicRoads	14-22	22,000
Holden Street	Major Road (between Nicholson Street and St Georges Road)	City of Yarra	12.5	11,600
St Georges Road	Primary Arterial	VicRoads	12	26,000
Alexandra Parade	Primary Arterial	VicRoads	53 (dual carriageway)	70,000
Miller Street	Local Road	City of Yarra	13	2,900
Brunswick Street North	Local Road	City of Yarra	13.5	4,200
Dean Street	Local Road	City of Yarra	8	1,600
Rae Street	Local Road	City of Yarra	14.5	2,200
White Street	Local Road	City of Yarra	9.5	3,100
York Street	Local Road	City of Yarra	13	700
York Place	Laneway	City of Yarra	3.2	<50
Curtin Place	Laneway	City of Yarra	4	<50

2.1.2. Existing Intersections

Table 2.2 presents the existing intersections impacted by the project, the Responsible Authority and type of intersection control. Where a local / council road intersects an arterial road, the responsible authority is VicRoads.

Table 2.2: Key intersections

Intersection (Road Names)	Responsible Authority	Type of Control
Nicholson St / Holden Street	VicRoads	Signalised cross intersection
St Georges St / Holden Street	VicRoads	Signalised cross intersection
Holden Street / Brunswick Street North	VicRoads	Unsignalised T-intersection
Holden Street / Dean Street	VicRoads	Unsignalised T-intersection
Miller Street / Rae Street	City of Yarra	Unsignalised T-intersection
Miller Street / White Street	City of Yarra	Unsignalised T-intersection
Rae Street / Alexandra Parade	VicRoads	Unsignalised T-intersection

¹ Arterial estimate traffic volumes sourced from VicRoads Open Data.
Other roads where the surveyed peak hour is assumed to be 10% of the daily two-way volume

2.1.3. Public Transport Network

Good public transport services exist in the area, with multiple bus and tram routes providing access to the rest of Melbourne. Public transport routes also exist on all roads which have proposed treatments. Figure 2.1 presents the public transport network around the Study Area with Table 2.3 describing the public transport routes. Trams travel along Nicholson Street and St Georges Road at a frequency of approximately 8-10 per hour in each direction during peak periods.

Figure 2.2: Public Transport Network

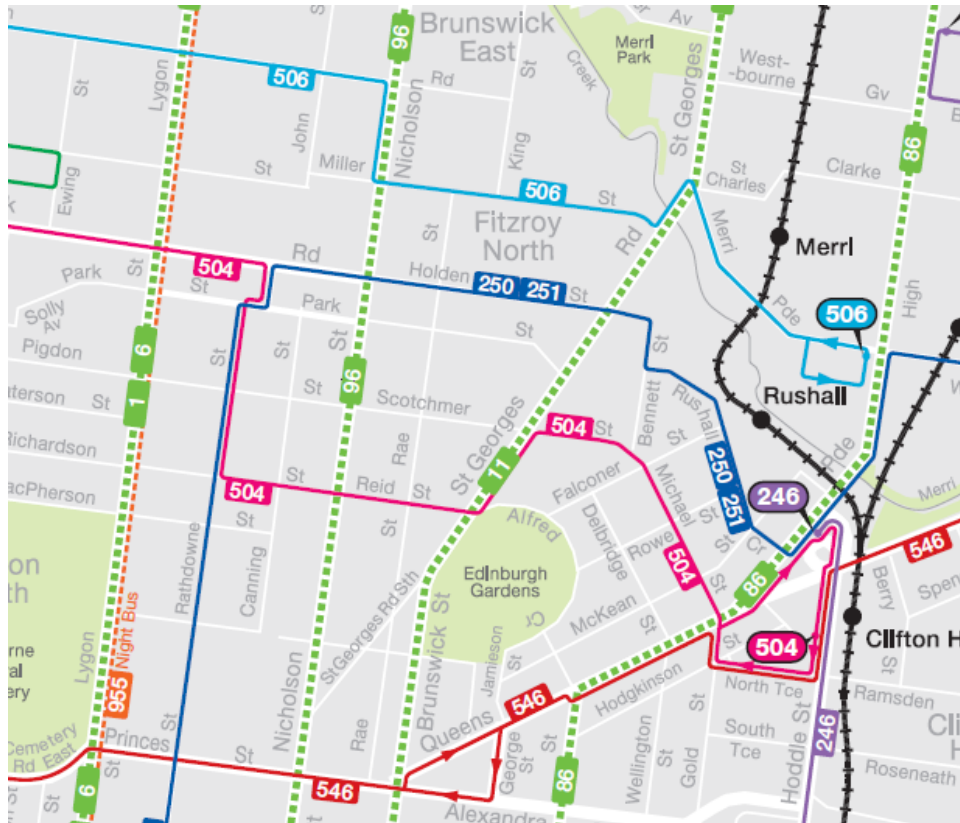


Table 2.3: Public Transport Routes

Route	Route	Road	Route	Frequency
Bus	Bus Route 506	Miller Street	Moonee Ponds - Westgarth Station via Brunswick	20 mins (weekday) 30 mins (weekend)
	Bus Route 250	Holden Street	City (Queen St) - La Trobe University	20 mins (weekday) 30 mins (weekend)
	Bus Route 251	Holden Street	City (Queen St) - Northland SC	20 mins (weekday) 30 mins (weekend)
	Bus Route 546	Alexandra Parade	Heidelberg Station - Melb Uni - Queen Victoria Market via Clifton Hill and Carlton	10-20 mins (weekday) 30 mins (weekend)
Tram	Tram Route 11	St Georges Road	West Preston - Victoria Harbour Docklands	6-10 mins (weekday) 10 mins (weekend)
	Tram Route 96	Nicholson Street	East Brunswick - St Kilda Beach	6-10 mins (weekday) 10 mins (weekend)

2.1.4. Active Travel Network

Figure 2.3 presents the City of Yarra's Travel Smart Map, which shows the bicycle path network around the study area. There is good bicycle infrastructure in the vicinity the project sites, with many formal bike routes running in the north-south and east-west directions. On road bicycle lanes are present on St Georges Road and Holden Street / Nicholson Street, and the Capital City Trail is an off-road bicycle path running along Park Street.

Figure 2.4 presents the VicRoads Strategic Cycling Corridor Network. These corridors have been identified by DoT as priorities for investment. It shows that an off-road cycling path runs south of Holden Street. There are also north-south links running along Canning Street, connecting Holden Street to Alexandra Parade and further south and proposed on-road corridors on Alexandra Parade.

Figure 2.3: Travel Smart Map (2014)

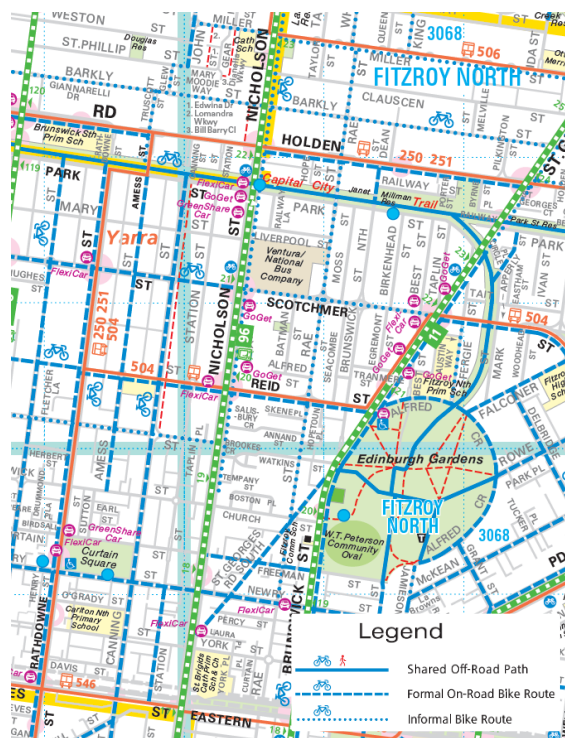
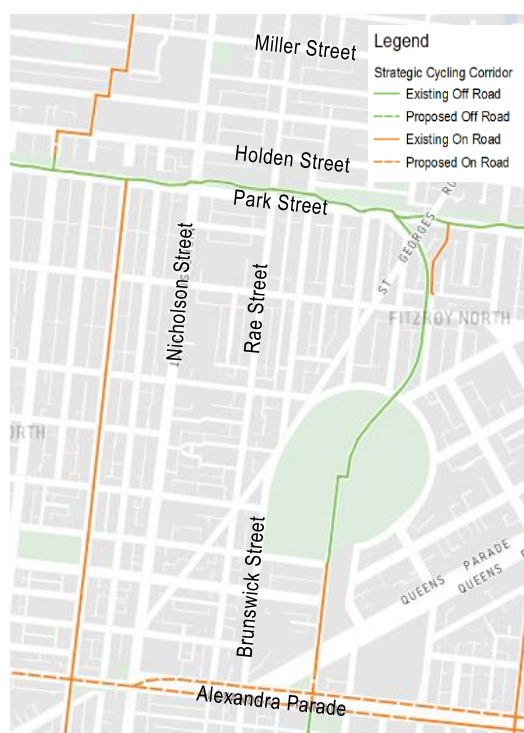


Figure 2.4: Strategic Cycling Corridor Network



2.1.5. Safety Review

A review of the reported casualty accident history for the roads and intersections adjoining the subject site has been sourced from VicRoads CrashStats accident database.

This database records all accidents causing injury that have occurred in Victoria since 1987 (as recorded by Victorian Police) and categorises these accidents as follows:

- Fatal injury: at least one person was killed in the accident or died within 30 days as a result of the accident.
- Serious injury: at least one person was sent to hospital as a result of the accident.
- Other injury: at least one person required medical treatment as a result of the accident.

A summary of the accidents in the vicinity of the site for the last available five-year period (January 2014-December 2018) is presented in Figure 2.5 and summarised in Table 2.4.

Figure 2.5: Casualty Accident Locations



Table 2.4: Casualty Accident History

Location	Number of crashes		
	Fatality	Serious Injury	Other Injury
Holden Street – between & including Nicholson Street Intersection & St Georges Road intersection	0	2	21
Miller Street / Rae Street & White Street	0	0	1
Alexandra Parade / Rae Street	0	0	0
Alexandra Parade / Laneway to the west of Rae Street	0	0	1

Source: VicRoads

Figure 2.5 and Table 2.4 indicate that there are a number of casualty crashes located on key intersections on the arterial road network, including Nicholson Street, St Georges Road and Alexandra Parade. However, at the project sites themselves there were very few crashes over the 5 year period with only 4 “other” injury type crashes not requiring hospitalisation.

2.2. Data Collection

Data was collected around the project sites through a number of surveys at various locations. Table 2.5 presents the survey locations, type of survey and survey dates.

Table 2.5: Data Collection Summary

Location	Survey Type	Data
<ul style="list-style-type: none"> Rae Street, north of Alexandra Parade Taylor Street, between Miller Street and Clauscen Street Queen Street, between Pleasance Street and Miller Street King Street between Miller Street and Clauscen Street 	Automatic Tube Counts (ATCs)	Wednesday 22 nd May – Tuesday 28 th May
<ul style="list-style-type: none"> Rae Street, north of Alexandra Parade Rae Street, south of Holden Street Brunswick Street, south of Holden Street 	Origin-Destination (OD) Surveys	Thursday 23 rd May 2019 07:30 to 09:30 and 15:00 to 18:00
<ul style="list-style-type: none"> Holden Street / Dean Street Holden Street / Brunswick St N St Georges Street / Holden Street Nicholson Street / Holden Street Miller Street / White Street / Rae Street Miller St & Queen St Miller St & King St York St & Curtain Pl 	Turning Movement Counts	Thursday 23 rd May 2019
<ul style="list-style-type: none"> York St & Unnamed Rd York St & Laura St 	Turning Movement Counts	Tuesday 18 th June 2019

2.3. Existing Traffic Volume Movement Results

Turning movements counts were undertaken on 23rd May 2019 at various locations near the nominated projects. Based on the data, the morning and evening peak hours were identified to be 8-9AM and 5-6PM. Figure 2.6 through to Figure 2.10 present the existing turning movement diagrams for the peak periods.

Figure 2.6: Turning Movement Diagram – Holden Street – Existing AM Peak (8-9AM)

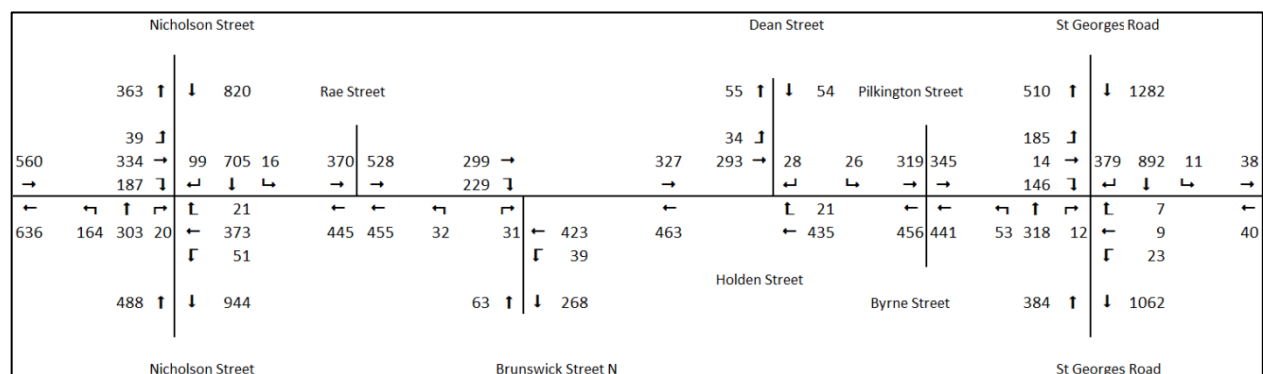


Figure 2.7: Turning Movement Diagram – Holden Street – Existing PM Peak (5-6PM)

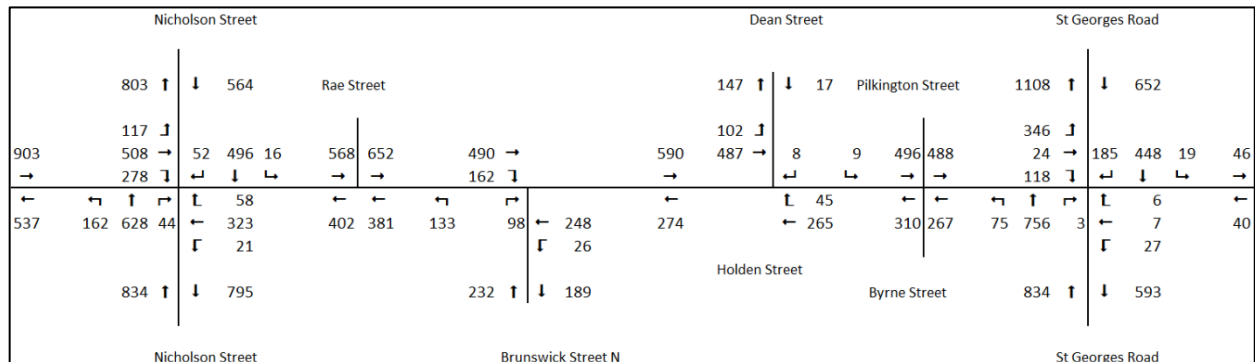


Figure 2.8: Turning Movement Diagram – Miller Street - Existing AM (8-9AM) & PM (5-6PM) Peak

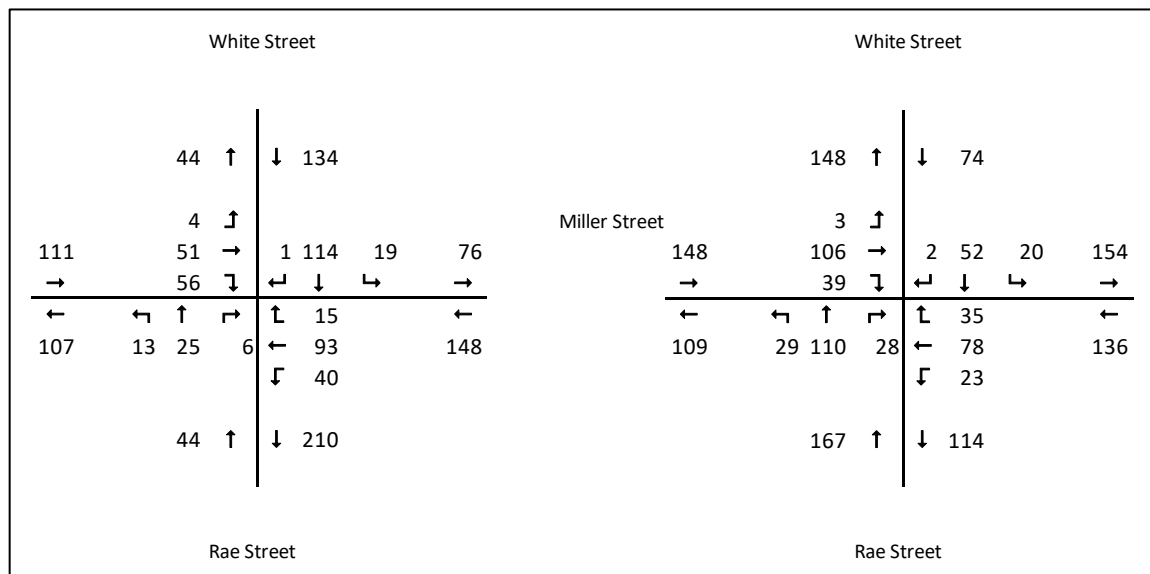


Figure 2.9: Turning Movement Diagram – York Street – Existing AM Peak (8-9AM)

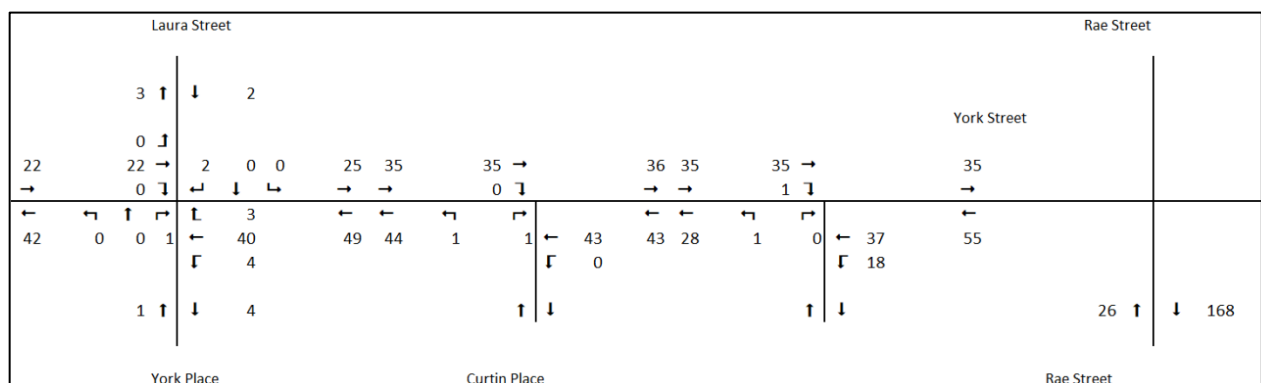
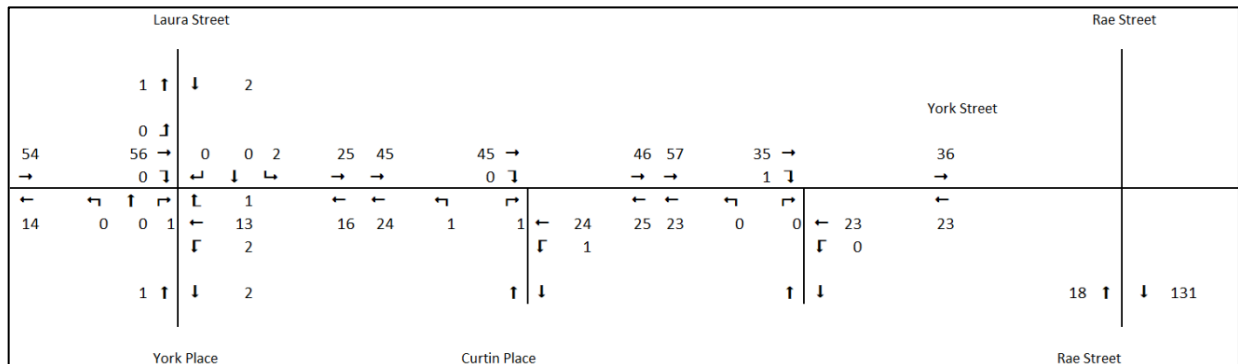


Figure 2.10: Turning Movement Diagram – York Street – Existing PM Peak (5-6PM)



2.4. Origin and Destination Survey Analysis

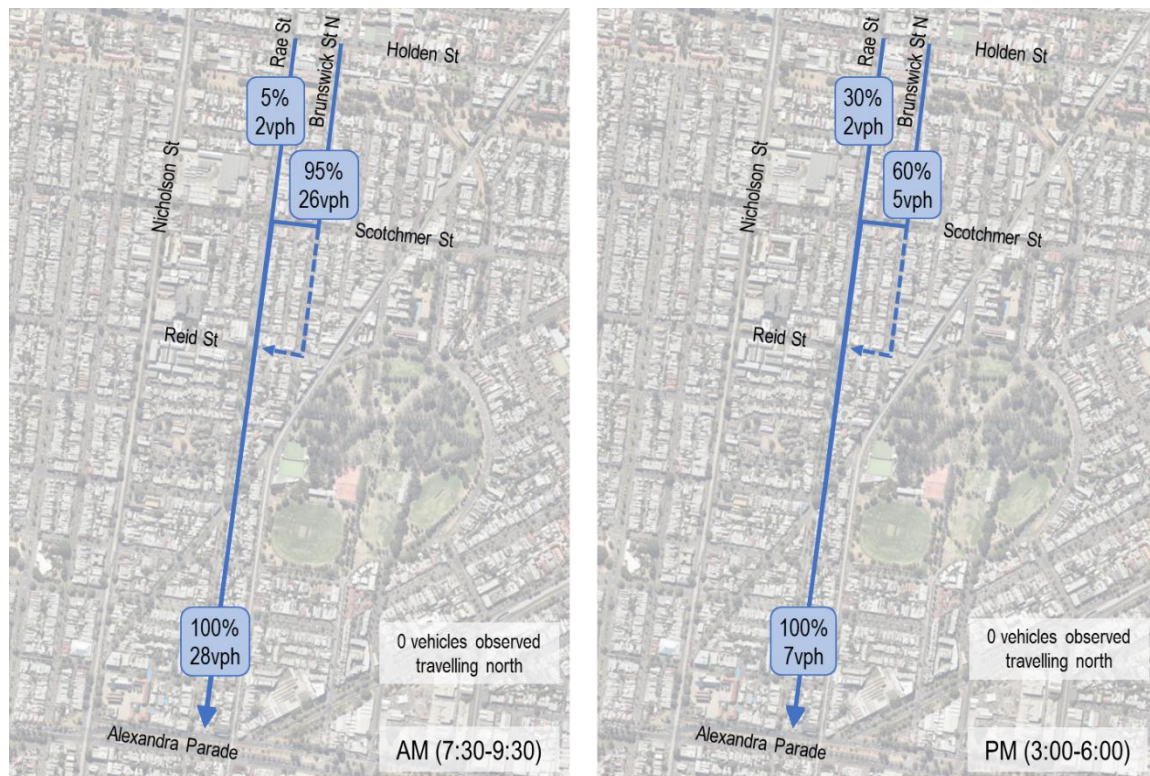
An Origin and Destination survey was also undertaken on 23rd May 2019 between 7:30-9:30AM and 3:00-6:00PM. The purpose was to determine any “rat-running” traffic between Holden Street and Alexandra Parade.

The locations recorded were:

- Rae Street, south of Holden Street
- Brunswick Street North, south of Holden Street
- Rae Street, north of Alexandra Parade.

Figure 2.11 presents an analysis of the Origin-Destination survey. The results shown are the hourly average of the summary period.

Figure 2.11: Origin Destination Survey Results



It is noted that no vehicles were recorded travelling north between the survey points. This is likely because Alexandra Parade is a divided road and at the Rae Street intersection, vehicles must turn right to continue travelling in the eastbound direction. As a result, the vehicles recorded travelling south are more likely to be travelling south-east. For these vehicles, it is more difficult to travel north-west in the opposite direction from Alexandra Parade.

All vehicles were travelling southbound, with more users travelling via Brunswick Street North (95% in AM, 60% in PM). This is likely because of the median on Holden Street at the Rae Street intersection, preventing eastbound (from Holden Street) and southbound (from Rae Street, north of Holden Street) traffic turning south into Rae Street. It is noted however that only 7 vehicles travelled the entire north-south route in the PM peak.

It is expected that most vehicles travelling via Brunswick Street North will turn onto Rae Street via Scotchmer Street, due to the Scotchmer Street / Brunswick Street North roundabout providing the quickest route. However, some vehicles may still travel via the unsignalised intersection at Reid Street.

2.5. Existing Network Function – SIDRA existing

The existing network function of the Holden Street and Nicholson Street / St Georges Road intersection has been assessed using SIDRA intersection, a computer- based modelling package which calculates intersection performance.

The commonly used measure of intersection performance is referred to as the Degree of Saturation (DOS). The DOS represents the flow-to-capacity ratio for the most critical movement on each leg of the intersection. For unsignalised intersections, a DOS of around 0.90 has been typically considered the 'ideal' limit, beyond which queues and delays increase disproportionately².

The results are presented in Table 2.6 and The Nicholson Street / Holden Street intersection has a rating of 'good' in the AM peak and 'poor' in the PM peak. In the PM peak, the intersection is at effective capacity with a DOS > 0.95 however it still is able to function.

Table 2.7.

Table 2.6: Nicholson Street / Holden Street intersection – 'Base Case' Operating Conditions – 2019

Peak Hour	Approach	DOS	Average Delay (sec)	95 th Percentile Queue (m)
AM	Nicholson Street (south)	0.81	37s	125m
	Holden Street (east)	0.64	32s	69m
	Nicholson Street (north)	# 0.88	42s	266m
	Holden Street (west)	0.51	22s	85m
PM	Nicholson Street (south)	0.73	32s	140m
	Holden Street (east)	0.75	40s	75m
	Nicholson Street (north)	# 0.99	29s	136m
	Holden Street (west)	0.90	35s	191m

DOS – Degree of Saturation. # Intersection DOS.

² SIDRA INTERSECTION adopts the following criteria for Level of Service assessment:

Level of Service		Intersection Degree of Saturation (DOS)		
		Unsignalised Intersection	Signalised Intersection	Roundabout
A	Excellent	<=0.60	<=0.60	<=0.60
B	Very Good	0.60-0.70	0.60-0.70	0.60-0.70
C	Good	0.70-0.80	0.70-0.90	0.70-0.85
D	Acceptable	0.80-0.90	0.90-0.95	0.85-0.95
E	Poor	0.90-1.00	0.95-1.00	0.95-1.00
F	Very Poor	>=1.0	>=1.0	>=1.0

EXISTING CONDITIONS

The Nicholson Street / Holden Street intersection has a rating of 'good' in the AM peak and 'poor' in the PM peak. In the PM peak, the intersection is at effective capacity with a DOS > 0.95 however it still is able to function.

Table 2.7: St Georges Road / Holden Street intersection – 'Base Case' Operating Conditions – 2019

Peak Hour	Approach	DOS	Average Delay (sec)	95 th Percentile Queue (m)
AM	St Georges Road (south)	0.53	24s	94m
	Holden Street (east)	0.07	38s	7m
	St Georges Road (north)	# 0.68	11s	176m
	Holden Street (west)	0.56	33s	56m
PM	St Georges Road (south)	0.58	25s	127m
	Holden Street (east)	0.09	42s	8m
	St Georges Road (north)	# 0.80	13s	80m
	Holden Street (west)	0.61	32s	87m

DOS – Degree of Saturation. # Intersection DOS.

The St Georges Road / Holden Street intersection has a rating of 'very good' in the AM peak and 'good' in the PM peak.

2.6. Site Observations

The Project sites were observed during the AM peak period on the 19th June 2019 and the following was observed:

- Miller Street / Rae Street / White Street: high volumes, both vehicles and cyclists undertaking right turn movements predominately travelling southbound
- Holden Street / Dean Street / Brunswick Street North high right turn movements into Brunswick Street North and moderate left turn movements into Brunswick Street North
- Nicholson Street / Holden Street: traffic at all legs of the intersection travelled through a traffic cycle
- St Georges Road / Holden Street: traffic at all legs of the intersection travelled through a traffic cycle and many gaps were experienced.
- Alexandra Parade / Rae Street: low vehicle delays for left turning vehicles into Alexandra Parade. Minor traffic volumes turning into Rae Street.
- Laneway west of Rae Street: no vehicle movements observed.

Figure 2.12: Miller Street / White Street Intersection Figure 2.13: Holden Street / Dean Street Intersection, looking west towards Brunswick Street North



Figure 2.14: Holden Street, looking east towards St Georges Road



Figure 2.15: Rae Street, looking south towards Alexandra Parade



2.7. Heavy Vehicle Movements

A supermarket is located at the corner of Scotchmer Street and Best Street, Fitzroy North. It is understood that the supermarket is a generator of heavy vehicles in the Fitzroy North area. The delivery vehicles currently undertake deliveries by travelling along Holden Street turning right at Brunswick Street North where one of the medians is proposed. The largest vehicle is approximately 17m in length and occurring around 6 times a week.

Other generators of heavy / larger vehicles include service vehicles (e.g. waste collection) which have flexible routes, and buses, which travel straight along Holden Street and the surrounding arterial road network.

2.8. Summary

A summary of the existing conditions is provided below.

- The results of the OD survey indicate that all vehicles travelling between Rae Street and Brunswick Street North (just south of Holden Street) and Rae Street (just north of Alexandra Parade) travel southbound. This is greatest in the AM peak, with 28 vehicles per hour using this route.

EXISTING CONDITIONS

- No vehicles in the AM or PM peak travel north for the full route within the study area.
- The surrounding arterial road network is congested, with the Nicholson Street / Holden Street intersection operating with a DOS of 0.99 and the St Georges Road / Holden Street intersection operating with a DOS of 0.80, both during the PM Peak.
- Multiple public transport routes operate in the area, including tram routes along Nicholson Street and St Georges Road, and bus routes along Alexandra Parade and Holden Street.
- There is good infrastructure for active travel, including on-road bicycle lanes along Holden Street and St Georges Road and off-road cycling routes just south of St Georges Road.
- The area also has good pedestrian accessibility, with footpaths and signalised crossings.
- There is no identifiable pattern of crashes associated at the sites, with no serious injuries recorded at any of the project sites. As such, the locations could be considered to be generally safe having regard to this information.
- Heavy vehicle delivery in the area which travels through Brunswick Street North via Holden Street.

3. NETWORK CHANGES

03

3.1. Proposed Treatments

Four treatments which are proposed as part of the LAPM for Fitzroy North are being considered in this study. The locations of the treatments have been summarised in Figure 3.1 and Table 3.1.

Figure 3.1: Locations of Proposed Treatments



Table 3.1: Proposed Treatment Locations

Project	Location	Proposal
1	Rae Street / Alexandra Parade Intersection	Install a kerb buildout to implement a partial road closure and allow only northbound traffic through the intersection.
2	Laneway to the west of Rae Street, near Alexandra Parade (York Street)	Limit to northbound traffic only and close access to York Street
3	Holden Street, at the intersections with Brunswick Street North and Dean Street. (Trial)	Install a kerbed median on prohibit right turns into and out of both Brunswick Street North and Dean Street.
4	Miller Street, at the intersections with Rae Street and White Street (Trial)	Install a kerbed median on Miller Street to prohibit right turns into and out of both Rae Street and White Street.

The following sections describe details of each treatment including how traffic movements will change.

3.1.1. Project 1 - Rae Street / Alexandra Parade

Project 1 is located at the Rae Street / Alexandra Parade intersection. The proposed treatment is to permanently install a kerb buildout at the southern end of Rae Street to only allow traffic to enter Rae Street from Alexandra Parade to travel in the northbound direction. This will prevent southbound traffic using Rae Street to access Alexandra Parade.

Figure 3.2: Project 1 – Permitted traffic movements before & after project



3.1.2. Project 2 - Laneway west of Rae Street, between Alexandra Parade and York Street

Project 2 is located at the laneway west of Rae Street between Alexandra Parade and York Street. The proposed treatment is to allow traffic to only enter the laneway via Alexandra Parade and permanently close access through to York Street. This will require vehicles use the laneway to the west of Alexandra Parade to exit via York Street. Alternatively, they will need to make a U-turn to travel back down Alexandra parade.

Figure 3.3: Project 2 – Permitted traffic movements before & after project



3.1.3. Project 3 - Holden Street at Dean Street and Brunswick Street North (Trial)

Project 3 is located on Holden Street at Dean Street and Brunswick Street North. It involves trialling a physical median in Holden Street to restrict right turns to and from Dean Street and Brunswick Street North.

Figure 3.4: Project 3 – Permitted traffic movements before & after project



3.1.4. Project 4 - Miller Street at White Street and Rae Street (Trial)

Project 4 is located on Miller Street at White Street and Rae Street. It involves trialling a physical median in Miller Street to restrict right turns to and from White Street and Rae Street, and provide improved pedestrian and cycling crossing points at the intersection.

Figure 3.5: Project 4 – Permitted traffic movements before & after project



3.2. Other Proposals

It is understood that the City of Moreland is currently considering closures in Sumner Street and Peers Street, Brunswick East. These treatments are not expected to have any impact on traffic volumes within the study area including at treatment locations. This is because Glenlyon Road (directly to the north of Miller Street – Project 5), can still be accessed from all directions at Nicholson Street.

Any impacts of these projects on the signalised intersection of Nicholson Street and Glenlyon Road / Holden Street, including any cumulative impacts of the two separate projects, should be considered by the relevant road authority.

4. IMPACT ASSESSMENT

04

4.1. Overview

This section outlines an assessment of the impacts of the proposed treatments on the surrounding transport network, having consideration of the existing road network operation and nature of the proposed projects including expected redistribution of traffic.

The Holden Street and Miller Street closures have been assessed separately from the projects on Alexandra Parade due to evidence that the two areas are used separately in a single vehicle trip. As such, it is not expected that projects at Alexandra Parade will have any noticeable impact on the intersections of Holden Street and St Georges Road / Nicholson Street.

SIDRA intersection traffic modelling software was used to determine the performance of the intersections Holden Street and Nicholson Street / St Georges Road as a result of the projects.

In accordance with Section 3 of the VicRoads TEM Volume 3 *Part 2.8: Changing traffic movements other than for events or works*, the following impact assessment responds specifically to the requirement to understand the impact on 'network capacity and operation' as a result of the treatments.

It is noted that other assessments undertaken by Council to accompany this assessment will include the consultation with emergency vehicles, public transport operators and the community.

4.2. Traffic Impacts – Holden Street & Miller Street centre medians

4.2.1. Traffic Redistribution

Implementing the median on Holden Street at Brunswick Street North and Dean Street will ban right turns at these intersections, restricting the movements to left-in/left-out only. The median on Miller Street at White Street and Rae Street will also restrict these intersection movements to left-in/left-out only.

It is likely that vehicles travelling north will use either Scotchmer Street or Park Street, and vehicles travelling south will use Barkly Street to access St Georges Road or Nicholson Street, however the number of road users using the local road network for this route is low (refer Section 2.4).

It is also likely that some vehicles which previously used the local road network may use St Georges Road or Nicholson Street in its entirety as the Projects will restrict through movements and extending the travel time.

Given that the distribution does not consider local streets that don't connect with Holden Street, and that these local roads will be used to access St Georges Road and Nicholson Street, it has been assumed that all existing vehicles turning right into Brunswick Street North stay on the arterial network without travelling through the local area.

The following assumptions have been made:

- Of the existing traffic turning right onto Brunswick Street North:
 - 80% of left turning traffic from Rae Street will be redirected down Nicholson Street, which includes traffic from Miller Street.
- As a result, this traffic through the Nicholson Street intersection will be redistributed as follows:
 - 50% will travel south through Nicholson Street and
 - 50% will turn right from Brunswick Road to travel south.
- Of the existing traffic turning right from Brunswick Street North onto Holden Street:
 - 50% will use St Georges Road and continue north through the intersection and
 - 50% will turn left onto Holden Street, then right through the Nicholson Street intersection.

- Of the existing traffic turning right from Dean Street on to Holden Street:
 - 50% will travel south through the St Georges Road intersection and
 - 50% will travel south through the Nicholson Street intersection.
- The existing traffic turning right onto Dean Street from Holden Street will access Dean Street via Barkly Street through the St Georges Road intersection.

Figure 4.1 and Figure 4.2 present the assumed turning movement diagram along Holden Street. Increases in traffic volumes are highlighted in green, while decreases are shown in red.

Figure 4.1: Turning Movement Diagram – Holden Street – Post Project AM Peak (8-9am)

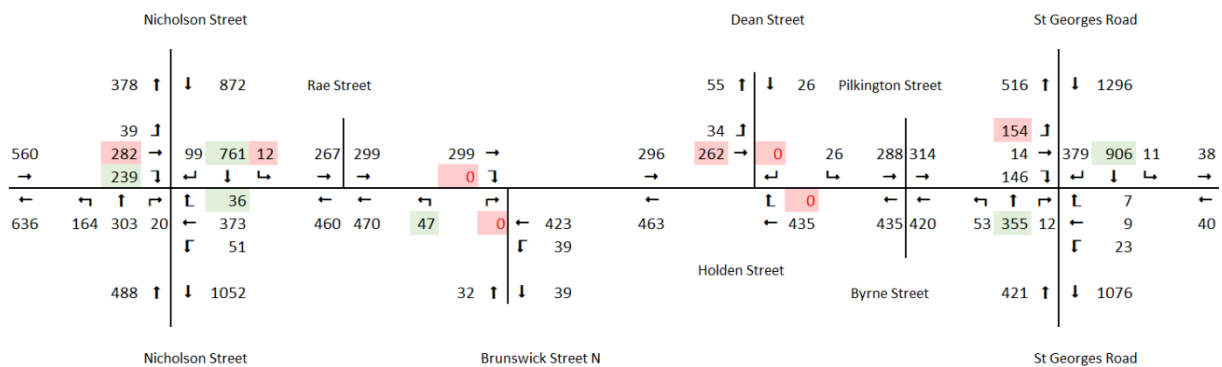
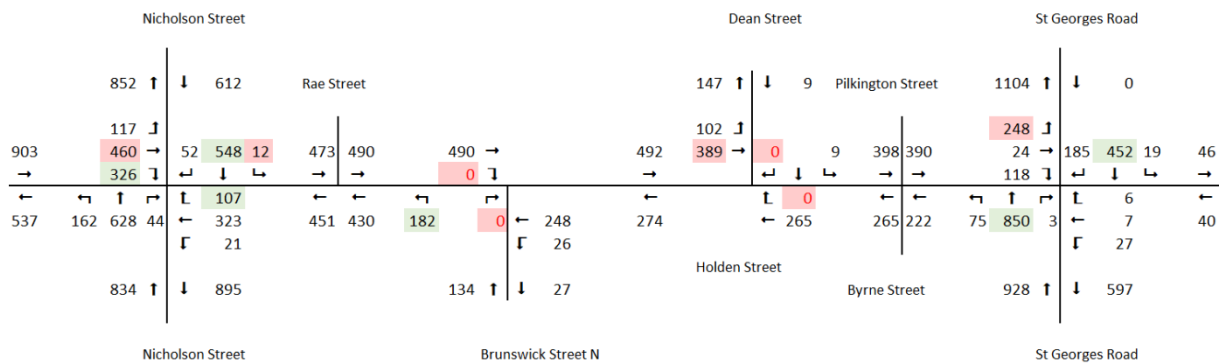


Figure 4.2: Turning Movement Diagram – Holden Street – Post Project PM Peak (5-6pm)



4.2.2. SIDRA results – Project Case

The SIDRA results are shown below for both the Nicholson Street / Holden Street and St Georges Road/ Holden Street intersections with the redistributed traffic volumes.

Table 4.1: Nicholson Street / Holden Street intersection – ‘Project Case’ Operating Conditions – 2019

Peak Hour	Approach	DOS	Average Delay (sec)	95 th Percentile Queue (m)
AM	Nicholson Street (south)	0.85	40s	132m
	Holden Street (east)	0.68	33s	74m
	Nicholson Street (north)	# 0.92	51s	319m
	Holden Street (west)	0.66	23s	69m
PM	Nicholson Street (south)	0.75	33s	146m
	Holden Street (east)	0.96	75s	121m
	Nicholson Street (north)	# 1.00	31s	159m
	Holden Street (west)	0.94	41s	156m

Intersection DOS

Table 4.2: St Georges Road Intersection / Holden Street – ‘Project Case’ Operating Conditions – 2019

Peak Hour	Approach	DOS	Average Delay (sec)	95 th Percentile Queue (m)
AM	St Georges Road (south)	0.58	24s	103m
	Holden Street (east)	0.07	38s	7m
	St Georges Road (north)	# 0.70	11s	184m
	Holden Street (west)	0.56	34s	56m
PM	St Georges Road (south)	0.64	26s	144m
	Holden Street (east)	0.09	42s	8m
	St Georges Road (north)	# 0.85	18s	93m
	Holden Street (west)	0.57	33s	58m

Intersection DOS

In summary, the results indicate that the DOS at the following intersections increase marginally with both intersections operating satisfactorily with a DOS less than 1, apart from the Nicholson Street / Holden Street intersection in the PM peak. A summary of the results before and after implementation of the projects is presented in Table 4.3.

Table 4.3: Summary of SIDRA modelling results – Existing Conditions & Project Case

Intersection	Peak Hour	Scenario	DOS
Nicholson Street / Holden Street	AM	Existing Conditions	0.88
		Project Case	0.92
	PM	Existing Conditions	0.99
		Project Case	1.00
St Georges Road / Holden Street	AM	Existing Conditions	0.68
		Project Case	0.70
	PM	Existing Conditions	0.80
		Project Case	0.85

There is a small increase in DOS, average delay and queues for vehicles due to the increased traffic volumes using the intersections following implementation of the projects, however the change is relatively minor considering the existing performance.

4.2.3. General Impacts

Public Transport

The increase in traffic volumes on Nicholson Street and St Georges Road may impact the tram routes operating along these roads, as they share a lane with traffic. It is noted however that tram lanes were modelled into the SIDRA intersection analysis as general traffic. As such, these impacts are considered to be acceptable.

Buses that travel along Holden Street (Route 250 and 251) may experience improved reliability and travel times due to the reduction of traffic volumes and removal of right turning vehicles at Brunswick Street North and Dean Street.

Active Travel

Implementing the medians on Holden Street and Miller Street may impact cyclists travelling on the Brunswick Street North bike lane connecting Holden Street to the Capital City Trail. However, the reduction in traffic on Holden Street and connecting local roads could be expected to improve overall safety and accessibility for pedestrians and cyclists. All median treatments should consider pedestrian and cyclist safety during the concept design stage to maintain or improve accessibility.

Other

As described in Section 2.7, right turn movements are currently undertaken from Holden Street into Brunswick Street North to assist with servicing a supermarket. The installation of a median on Holden Street would potentially impact the ability for the supermarket to receive deliveries given the lack of alternative routes. It is recommended that Council work with the affected supermarket to identify an alternative route.

Overall, there will be an increase in the traffic volumes on arterial roads and through the Nicholson Street and St Georges Road intersections with Holden Street, and a decrease on the local road network. This impact will be minimal however, having regard to the small numbers of vehicles performing the full movement from Holden Street to Rae Street.

4.3. Traffic Impacts – Rae Street & Laneway Closures

4.3.1. Traffic Redistribution and Impacts

A diagram showing indicative changes to traffic volumes resulting from the Rae Street and Laneway closures are illustrated in Figure 4.3.

Figure 4.3: Expected traffic redistribution from Rae Street and Laneway closures



The traffic classifier surveys indicate that 131 vehicles in the AM travel southbound along Rae Street, south of York Street, and the OD surveys indicate that up to 28 vehicles per hour in the AM peak are completing the full route between Alexandra Parade and Holden Street (i.e. originating from outside of the study area).

The changes to Rae Street will prevent southbound vehicles from Rae Street making a left turn onto Alexandra Parade. This will likely result in local traffic travelling southbound to access Alexandra Parade, to divert either by making right turn from York Street or Newry Street into Brunswick Street. Due to the lack of signalised intersections along Brunswick Street between Alexandra Parade and Scotchmer Street, a high proportion of the vehicles travelling south in Rae Street (immediately north of Alexandra Parade) could be expected to be generated from the local area.

The changes to the laneway will prevent vehicles from travelling northbound and accessing the laneway via York Street. As a result, vehicles will use the existing minor laneways to access York Street. The traffic classifier surveys indicate that only 1 vehicle per hour travelled north in the AM peak along this laneway, meaning that the effects are expected to be minor.

Having consideration for nature of the three laneways which connect York Street to Alexandra Parade (e.g. narrow width, with tight corners) will naturally discourage any additional volumes of vehicles seeking to avoid the closure at Rae Street.

4.3.2. Impact of trial closures

The proposed trial closures at Miller Street and Holden Street will have a limited reduction in traffic travelling the full length of Rae Street between Holden Street and Alexandra Parade. If the trial is discontinued, the same vehicles travelling the route would still be unable to make the full movement due to the restriction of vehicles exiting Rae Street into Alexandra Parade.

Considering that the closures at Holden Street and Miller Street are likely to have the most significant impact on the arterial road network of any of the scenarios, and these were found to be acceptable, the implementation of the closures at the southern end of the study area could not be expected to result in an unacceptable impact to the operation of the arterial road network.

4.3.3. General Impacts

Public Transport

The increase in traffic volumes on Brunswick Street may impact on the tram route operating along this road, as it is shared with traffic and any increase in congestion will also slow down trams. Separating the tram route may be able to mitigate this. Buses that travel along Alexandra Parade (Route 546) will have improved reliability and travel times due to the reduction of traffic volumes and removal left-turning vehicles from Rae Street.

Active Travel

Brunswick Street has an on-street bicycle lane which may be impacted by the incremental increases in traffic volumes associated with the redistribution of traffic onto Brunswick Street. However, the reduction in traffic on Rae Street and connecting local roads will improve accessibility. Although bicycle volumes in Rae Street were not available at the time of this report, access for cyclists wishing to exit south at Rae Street onto Alexandra Parade should still be accommodated for.

Other

The existing service station at the north-eastern corner of Rae Street and Alexandra Parade will likely experience an increase in traffic movements through the property. Such impacts should be mitigated by early engagement with the business operator or owner to identify opportunities to reduce instances of non-customer through trips.

Overall, there will be an increase in the traffic volumes on arterial roads and a decrease on the local road network. There will be likely an increase in right turns into Brunswick Street from within the study area which may create safety issues due to the existing volumes and modal mix along Brunswick Street (vehicles, trams and cyclists).

4.4. Summary

The proposed treatments will redistribute traffic into the surrounding road network, reducing overall volumes of traffic in local streets. The implementation of these projects will discourage non-local through trips (or 'rat-running') to a certain extent, particularly in the preferred southbound direction.

The increases in traffic along the arterial road network will increase volumes at intersections of Holden Street and Nicholson Street / St Georges Road, however SIDRA intersection analysis indicated that any impacts will be relatively minor and are not expected to compromise their function.

5. CONCLUSIONS AND RECOMMENDATIONS

05

5.1. Conclusions

As outlined throughout the report, and based on the analysis undertaken, the proposed treatments are not expected to have an adverse impact on the operation of the surrounding road network due to the low numbers of non-local through trips expected to be impacted, and traffic can be redistributed accordingly.

Origin-destination surveys, along with site observations did not find a significant issue with non-local through traffic (or 'rat running') with only 28 vehicles on average travelling the full route between Holden Street and Alexandra Parade during the AM peak. It could be expected that the majority of vehicles generated at the intersection of Rae Street and Alexandra Parade have either their origin or destination within the study area. This indicates that the trial closures are likely to have a large impact on local residents and visitors, while there will be only limited benefits to reducing non-local through traffic. Notwithstanding, it cannot be determined at what point in the study area the vehicle originated, and if there is major benefit of utilising Rae Street in the southbound direction, as opposed to joining St Georges Road or Nicholson Street earlier (further north).

Due to the proposed trials at Holden Street and Miller Street to the northern end of the study area, it was identified that the redistribution of traffic to the nearby signalised intersections on Holden Street with Nicholson Street and St Georges Road, slightly increased the DOS and delay times on the two arterial roads. It is expected that the redistribution of non-local trips from within the area can be accommodated by Nicholson Street and St Georges Road.

5.2. Recommendations

Having regard to the analysis of traffic impacts associated with the proposed traffic management treatments within Fitzroy North, the following recommendations are made:

- For projects which involve the installation of a median such as Holden Street and Miller Street, the design should consider pedestrian and bicycle access requirements to ensure connectivity through the study area (e.g. similar to other nearby closure treatments including the Holden Street / Rae Street intersection trial)
- Council is to work directly with business owners who will be affected by any of the proposed treatments to identify alternative routes or infrastructure requirements.
- Review the need for trial closures due to the low level of through traffic, and whether other improvements or traffic management could be implemented.
- Where an increase in right hand turns onto tram or bicycle routes are identified, consideration should be given to investigating potential solutions with the relevant parties to mitigate any safety issues created.
- Develop concept plans for the proposed treatments to better understand the impacts on safety and access, including pedestrian, cyclists and large vehicles.
- Review traffic conditions after no less than 6 months after the implementation of treatments to understand the effectiveness and any further works required to mitigate unexpected impacts on the surrounding road network.
- Any follow up traffic surveys should occur approximately 12 months after implementation so that recorded volumes are undertaken at a comparable time to the surveys undertaken as part of this assessment.
- Following the trials, assess whether all projects are necessary or if the permanent closures alone are sufficient to limit the traffic using Rae Street onto either Nicholson Street St Georges Road whilst maintaining local access for residents and business activities.

A. TRAFFIC VOLUMES

A

Job No	V1602
Client	GTA Consultants
Site	Rae Street
Location	North of Alexandra Parade
Site No	1
Start Date	22-May-19
Description	Volume Summary
Direction	Combined



Hour Starting	Day of Week							W'Day Ave 2195	7 Day Ave 2007
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	27-May	28-May	22-May	23-May	24-May	25-May	26-May		
AM Peak	220	230	220	271	231	116	73		
PM Peak	137	141	186	198	202	202	150		
0:00	6	3	8	13	16	23	16	9	12
1:00	4	2	2	7	4	16	15	4	7
2:00	4	1	6	2	3	11	10	3	5
3:00	1	0	1	0	3	10	12	1	4
4:00	0	0	0	0	4	8	8	1	3
5:00	5	4	3	3	9	6	2	5	5
6:00	4	14	6	7	13	9	1	9	8
7:00	97	158	128	137	127	11	5	129	95
8:00	220	227	188	194	231	20	11	212	156
9:00	186	230	220	271	223	47	28	226	172
10:00	126	155	158	189	147	81	48	155	129
11:00	105	114	160	187	193	116	73	152	135
12:00	98	123	171	177	178	162	125	149	148
13:00	85	91	182	137	178	166	150	135	141
14:00	127	97	186	122	202	202	135	147	153
15:00	137	131	119	179	181	145	82	149	139
16:00	115	124	95	198	149	152	94	136	132
17:00	98	141	137	149	150	148	101	135	132
18:00	118	114	167	178	160	164	77	147	140
19:00	107	121	147	165	175	200	65	143	140
20:00	41	55	73	69	77	141	26	63	69
21:00	31	46	28	36	36	36	16	35	33
22:00	26	31	28	23	40	26	26	30	29
23:00	12	9	18	27	32	27	20	20	21
Total	1753	1991	2231	2470	2531	1927	1146	2195	2007

7-19	1512	1705	1911	2118	2119	1414	929	1873	1673
6-22	1695	1941	2165	2395	2420	1800	1037	2123	1922
6-24	1733	1981	2211	2445	2492	1853	1083	2172	1971
0-24	1753	1991	2231	2470	2531	1927	1146	2195	2007

Job No V1602
Client GTA Consultants
Site Taylor Street
Location Between Miller Street and Clausen Street
Site No 2
Start Date 22-May-19
Description Volume Summary
Direction Combined



Hour Starting	Day of Week							W'Day Ave 279	7 Day Ave 261
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	27-May	28-May	22-May	23-May	24-May	25-May	26-May		
AM Peak	38	36	29	34	33	25	15		
PM Peak	47	37	25	46	36	35	20		
0:00	1	3	2	5	4	2	4	3	3
1:00	1	1	0	0	0	1	3	0	1
2:00	1	1	1	1	0	0	7	1	2
3:00	0	0	0	0	0	2	0	0	0
4:00	0	0	0	0	0	0	0	0	0
5:00	0	1	2	1	0	0	0	1	1
6:00	2	0	3	1	2	2	0	2	1
7:00	13	15	3	8	11	0	2	10	7
8:00	18	10	28	20	9	3	2	17	13
9:00	38	36	29	34	33	7	2	34	26
10:00	21	25	22	22	22	13	7	22	19
11:00	25	29	10	10	14	25	15	18	18
12:00	3	24	10	20	14	23	15	14	16
13:00	17	29	25	14	12	35	11	19	20
14:00	15	17	8	16	13	31	20	14	17
15:00	10	8	24	13	16	20	12	14	15
16:00	47	24	15	46	36	13	15	34	28
17:00	19	16	15	12	14	22	19	15	17
18:00	16	37	20	26	12	13	7	22	19
19:00	15	15	14	22	8	25	4	15	15
20:00	13	6	10	13	13	11	5	11	10
21:00	0	5	7	3	8	9	6	5	5
22:00	3	4	4	4	9	7	6	5	5
23:00	2	7	1	5	2	6	0	3	3
Total	280	313	253	296	252	270	162	279	261

7-19	242	270	209	241	206	205	127	234	214
6-22	272	296	243	280	237	252	142	266	246
6-24	277	307	248	289	248	265	148	274	255
0-24	280	313	253	296	252	270	162	279	261

Job No V1602
Client GTA Consultants
Site Queen Street
Location Between Pleasance Street and Miller Street
Site No 3
Start Date 22-May-19
Description Volume Summary
Direction Combined



Hour Starting	Day of Week							W'Day Ave 62	7 Day Ave 59
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	27-May	28-May	22-May	23-May	24-May	25-May	26-May		
AM Peak	9	11	10	9	7	6	4		
PM Peak	6	10	6	7	6	9	6		
0:00	1	0	1	0	2	1	3	1	1
1:00	1	0	0	0	2	2	1	1	1
2:00	0	1	0	2	1	1	0	1	1
3:00	0	0	0	0	2	1	0	0	0
4:00	0	0	0	0	0	0	0	0	0
5:00	0	1	0	0	0	0	0	0	0
6:00	1	0	3	0	0	2	0	1	1
7:00	2	5	4	4	3	1	3	4	3
8:00	3	0	2	1	1	1	3	1	2
9:00	9	11	10	9	6	1	0	9	7
10:00	4	6	4	8	7	5	4	6	5
11:00	6	4	5	3	2	6	1	4	4
12:00	2	3	1	0	5	5	4	2	3
13:00	3	2	4	2	6	1	2	3	3
14:00	1	3	2	4	2	5	2	2	3
15:00	5	10	5	5	1	0	6	5	5
16:00	4	3	6	2	5	3	2	4	4
17:00	3	7	1	5	3	5	1	4	4
18:00	4	3	4	7	4	6	4	4	5
19:00	6	2	2	4	2	9	1	3	4
20:00	2	3	0	2	3	0	5	2	2
21:00	2	1	2	2	2	2	1	2	2
22:00	0	2	2	1	2	2	1	1	1
23:00	3	1	1	0	1	0	1	1	1
Total	62	68	59	61	62	59	45	62	59

7-19	46	57	48	50	45	39	32	49	45
6-22	57	63	55	58	52	52	39	57	54
6-24	60	66	58	59	55	54	41	60	56
0-24	62	68	59	61	62	59	45	62	59

Job No	V1602
Client	GTA Consultants
Site	King Street
Location	Between Miller Street and Clausen Street
Site No	4
Start Date	22-May-19
Description	Volume Summary
Direction	Combined



Hour Starting	Day of Week							W'Day Ave 1495	7 Day Ave 1362
	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	27-May	28-May	22-May	23-May	24-May	25-May	26-May		
AM Peak	199	194	193	197	166	110	69		
PM Peak	191	163	186	185	157	116	91		
0:00	9	3	8	9	13	26	25	8	13
1:00	6	2	3	3	3	11	10	3	5
2:00	5	3	4	3	4	12	15	4	7
3:00	3	8	3	2	0	2	8	3	4
4:00	3	0	3	2	2	1	6	2	2
5:00	2	3	5	1	2	4	4	3	3
6:00	8	1	5	8	7	3	8	6	6
7:00	44	45	47	43	34	5	7	43	32
8:00	114	110	106	113	102	23	15	109	83
9:00	199	194	193	197	166	47	20	190	145
10:00	89	117	96	110	96	71	47	102	89
11:00	60	55	60	52	76	110	69	61	69
12:00	53	76	73	58	62	101	78	64	72
13:00	51	59	57	51	59	116	84	55	68
14:00	42	48	50	72	54	107	86	53	66
15:00	47	55	68	59	81	100	71	62	69
16:00	106	129	112	100	113	80	91	112	104
17:00	127	99	129	117	142	73	56	123	106
18:00	191	163	186	185	157	84	17	176	140
19:00	111	151	119	155	113	78	46	130	110
20:00	79	66	86	81	73	44	34	77	66
21:00	58	50	44	69	41	44	26	52	47
22:00	31	25	48	31	31	19	26	33	30
23:00	18	25	22	25	30	27	21	24	24
Total	1456	1487	1527	1546	1461	1188	870	1495	1362

7-19	1123	1150	1177	1157	1142	917	641	1150	1044
6-22	1379	1418	1431	1470	1376	1086	755	1415	1274
6-24	1428	1468	1501	1526	1437	1132	802	1472	1328
0-24	1456	1487	1527	1546	1461	1188	870	1495	1362



Fitzroy North OD Survey

GTA

- ❖ Report
- ❖ June 2019

MATRIX Traffic and Transport Data Pty Ltd

16/25 Cook Road, Mitcham VIC 3132

ABN 56 112 563 201

PH : 1300 782 623

FX : 1300 782 624

Table of Contents

1.0 Introduction.....	3
2.0 Data Collection.....	4
2.1 Site Location.....	4
2.2 Observations	6
3.0 Data Processing and Analysis	7
3.1 General.....	7
3.2 Data processing.....	7
3.3 Travel time distributions	7
3.4 Matching process	7
3.5 Expansion process.....	9
4.0 Reporting	10

1.0 Introduction

On Thursday 23rd May 2019, Matrix Traffic Data undertook an origin destination survey around the Fitzroy North area in Melbourne's north.

The survey used video capture techniques to record vehicle number plates on Thursday for five hours from:

- 07:30 to 09:30 on Thursday 23rd May 2019
- 15:00 to 18:00 on Thursday 23rd May 2019

The information was recorded at 6 stations, covering a range of movements. Number plate observations were classified into two vehicle classes:

- Light vehicles
- Heavy vehicles.

The analysis of the survey presented here encompasses cordon matching on a cordon comprised of the three survey stations. The analysis also includes same station matching in the output matrices (i.e., where a vehicle entered and departed a cordon via the same station without being detected at an intervening station) in order to provide a more comprehensive account of where vehicles may have travelled.

This report provides:

- an outline of data collection in Chapter 2.
- a description of how the data was processed to produce clean records in Chapter 3.
- Chapter 4 provides a description of the reporting outputs from the analysis.

2.0 Data Collection

2.1 Site Location

Vehicle number plates were recorded at 3 two-way stations within the study area, and these were processed and analysed for subsequent reporting. The table below describes station locations, their site numbering and their directions for directional matching.

Table 1: Observation station locations

Station	Direction	Road	Location
1N	Northbound	Rae Street	south of Holden Street
1S	Southbound	Rae Street	south of Holden Street
2N	Eastbound	Rae Street	north of Alexandra Parade
2S	Westbound	Rae Street	north of Alexandra Parade
3N	Northbound	Brunswick Street	south of Holden Street
3S	Southbound	Brunswick Street	south of Holden Street

The observation system is shown on the figures below.



Figure 1 Map of Survey Area

2.2 Observations

Vehicles' number plates were videoed at each of the stations on:

- 07:30 to 09:30 on Thursday 23rd May 2019
- 15:00 to 18:00 on Thursday 23rd May 2019

Number plate observations were classified into two vehicle classes:

- Light vehicles
- Heavy vehicles.

All vehicles formed the sample.

These videos were subsequently reduced in a controlled office environment to provide a single file of records comprising the following fields: number plate, vehicle class, time of observation and observation station.

Where a number plate had one or more character positions obscured to the point where it could not be read with certainty, data entry staff were instructed to insert a hyphen ('-') in that position(s).

3.0 Data Processing and Analysis

3.1 General

This chapter describes data processing and analysis applied to identify movements through the study area.

3.2 Data processing

Records of number plate observations were reviewed to identify if the number plate was complete during data processing. If a number plate contained one or more 'hyphens' (i.e., missed number plate character position(s)), it was excluded from further matching analysis, and is accounted for through an expansion process, which is described in Section 3.5 below.

3.3 Travel time distributions

Number plates were matched to identify travel time distributions between logical station pairs. This process assists to: identify possible problems with the data; and to provide a set of minimum and maximum travel time cut-offs for 'trips'¹.

3.4 Matching process

The matching process has been designed to be two stages:

- (1) Exact matches. If two number plates from different station are exactly same, then they are picked up as an exact match.
- (2) Fuzzy matches. A specific fuzzy logic has been introduced into the matching process to pick up matches where 5 digits in a pair of number plates are same while 1 digit is different. For instance, ABC12D and A8C12D will be picked up as a fuzzy match. To limit the probability of false positive, we only match the digit that is different if they are paired in the table below:

¹ Where a trip is considered to be travel between an origin station and a destination station by a reasonably direct route (i.e., the driver is seeking to minimise travel time).

Digit	Alternates
0	[69OCDQU]
1	[7IJLT]
2	[7LZ]
3	[89SE]
4	[AS]
5	[69SEF]
6	[05OS]
7	[12TZ]
8	[39BE]
9	0358OGQ
A	[4DSV]
B	[8CDEPS]
C	[0BDGOL]
D	[ABCO0QU]
E	[358BF]
F	[5EPR]
G	[9CSQ]
H	[MNK]
I	[1JLTY]
J	[I1LT]
K	[RNWYH]
L	[12IJNC]
M	[NHWX]
N	[MHKWL]
O	[096CQDU]
P	[BFR]
Q	[90ODG]
R	[FKP]
S	[3456ABG]
T	[17IJ]
U	[0DVYOW]
V	[UWYA]
W	[MNKVU]
X	[MYZ]
Y	[IKVUX]
Z	[27X]

Analysis was undertaken for the whole survey period with reporting by hour.

3.5 Expansion process

Due to a range of factors associated with number plate surveys, some observations are incomplete.

Incomplete number plates

As noted previously, where a character position or positions in a numberplate were not clear to the data recorder, then a hyphen ('-') was inserted. If at least one hyphen was recorded in the number plate field, then it was excluded from further matching analysis. In order to account for this in the results, a process of expansion was applied.

Expansion factors for each station were calculated using the following approach:

$$\text{Expansion factor} = \text{total plates (including those with a '-')} / \text{good plates} \quad [1]$$

This was undertaken by station, vehicle class and by hour.

These expansion factors were applied multiplicatively for the first and last station observed. That is, for an observation I, passing from Station O to Station D, the expansion factor is computed using the following²:

$$\text{ExpFactorObservation I} = \text{Expansion Factor Station O} * \text{Expansion Factor Station D} \quad [2]$$

Where:

- *Expansion Factor Station O is the expansion factor calculated for origin station using [1] above*
- *Expansion Factor Station D is the expansion factor calculated for destination station using [1] above*

² Where secondary stations were included in the matching – along general route alignments – the expansion factors were applied to the first and last stations only, i.e., to the primary stations only.

4.0 Reporting

The following is a list of the reporting for the project in the following workbooks:

- **V1602 – Fitzroy North - OD Report.xlsx**
- **V1602 – Fitzroy North - TT Report.xlsx**

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 7:30:00 AM

End Time 7:45:00 AM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 7:30 7:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	2	58	13	73	
1S	5	0	0	0	0	0.0%
2N	4	0	1	0	1	25.0%
3S	64	0	5	0	5	7.8%
Total	73	0	6	0	6	8.2%
Percentage Matched		0.0%	10.3%	0.0%	8.2%	

O-D Matches - Classification 2 - Heavy

Time Period 7:30 7:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	3	0	3	
1S	0	0	0	0	0	0.0%
2N	1	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	1	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 7:30 7:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	2	61	13	76	
1S	5	0	0	0	0	0.0%
2N	5	0	1	0	1	20.0%
3S	64	0	5	0	5	7.8%
Total	74	0	6	0	6	8.1%
Percentage Matched		0.0%	9.8%	0.0%	7.9%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 7:45:00 AM

End Time 8:00:00 AM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 7:45 8:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	1	67	9	77	
1S	4	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	69	0	7	0	7	10.1%
Total	73	0	7	0	7	9.6%
Percentage Matched		0.0%	10.4%	0.0%	9.1%	

O-D Matches - Classification 2 - Heavy

Time Period 7:45 8:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	2	0	2	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 7:45 8:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	1	69	9	79	
1S	4	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	69	0	7	0	7	10.1%
Total	73	0	7	0	7	9.6%
Percentage Matched		0.0%	10.1%	0.0%	8.9%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 8:00:00 AM

End Time 8:15:00 AM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 8:00 8:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	6	77	10	93	
1S	8	0	1	0	1	12.5%
2N	2	0	0	0	0	0.0%
3S	58	0	4	0	4	6.9%
Total	68	0	5	0	5	7.4%
Percentage Matched		0.0%	6.5%	0.0%	5.4%	

O-D Matches - Classification 2 - Heavy

Time Period 8:00 8:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	1	0	1	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 8:00 8:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	6	78	10	94	
1S	8	0	1	0	1	12.5%
2N	2	0	0	0	0	0.0%
3S	58	0	4	0	4	6.9%
Total	68	0	5	0	5	7.4%
Percentage Matched		0.0%	6.4%	0.0%	5.3%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 8:15:00 AM

End Time 8:30:00 AM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 8:15 8:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	5	66	14	85	
1S	5	0	0	0	0	0.0%
2N	6	0	0	0	0	0.0%
3S	75	0	11	0	11	14.7%
Total	86	0	11	0	11	12.8%
Percentage Matched		0.0%	16.7%	0.0%	12.9%	

O-D Matches - Classification 2 - Heavy

Time Period 8:15 8:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	1	0	1	
1S	0	0	0	0	0	0.0%
2N	1	0	0	0	0	0.0%
3S	1	0	0	0	0	0.0%
Total	2	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 8:15 8:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	5	67	14	86	
1S	5	0	0	0	0	0.0%
2N	7	0	0	0	0	0.0%
3S	76	0	11	0	11	14.5%
Total	88	0	11	0	11	12.5%
Percentage Matched		0.0%	16.4%	0.0%	12.8%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 8:30:00 AM

End Time 8:45:00 AM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 8:30 8:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	2	79	25	106	
1S	7	0	0	0	0	0.0%
2N	3	0	0	0	0	0.0%
3S	79	0	9	3	12	15.2%
Total	89	0	9	3	12	13.5%
Percentage Matched		0.0%	11.4%	12.0%	11.3%	

O-D Matches - Classification 2 - Heavy

Time Period 8:30 8:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	0	0	0	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 8:30 8:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	2	79	25	106	
1S	7	0	0	0	0	0.0%
2N	3	0	0	0	0	0.0%
3S	79	0	9	3	12	15.2%
Total	89	0	9	3	12	13.5%
Percentage Matched		0.0%	11.4%	12.0%	11.3%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 8:45:00 AM

End Time 9:00:00 AM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 8:45 9:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	4	64	12	80	
1S	4	0	0	0	0	0.0%
2N	7	0	0	0	0	0.0%
3S	58	0	10	0	10	17.2%
Total	69	0	10	0	10	14.5%
Percentage Matched		0.0%	15.6%	0.0%	12.5%	

O-D Matches - Classification 2 - Heavy

Time Period 8:45 9:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	2	1	3	
1S	0	0	0	0	0	0.0%
2N	2	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	2	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 8:45 9:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	4	66	13	83	
1S	4	0	0	0	0	0.0%
2N	9	0	0	0	0	0.0%
3S	58	0	10	0	10	17.2%
Total	71	0	10	0	10	14.1%
Percentage Matched		0.0%	15.2%	0.0%	12.0%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 9:00:00 AM

End Time 9:15:00 AM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 9:00 9:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	4	36	8	48	
1S	10	0	2	0	2	20.0%
2N	6	0	0	0	0	0.0%
3S	48	0	3	1	4	8.3%
Total	64	0	5	1	6	9.4%
Percentage Matched		0.0%	13.9%	12.5%	12.5%	

O-D Matches - Classification 2 - Heavy

Time Period 9:00 9:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	0	0	0	
1S	0	0	0	0	0	0.0%
2N	2	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	2	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 9:00 9:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	4	36	8	48	
1S	10	0	2	0	2	20.0%
2N	8	0	0	0	0	0.0%
3S	48	0	3	1	4	8.3%
Total	66	0	5	1	6	9.1%
Percentage Matched		0.0%	13.9%	12.5%	12.5%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 9:15:00 AM

End Time 9:30:00 AM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 9:15 9:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	3	56	14	73	
1S	2	0	0	0	0	0.0%
2N	4	0	0	0	0	0.0%
3S	42	0	3	0	3	7.1%
Total	48	0	3	0	3	6.3%
Percentage Matched		0.0%	5.4%	0.0%	4.1%	

O-D Matches - Classification 2 - Heavy

Time Period 9:15 9:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	2	0	2	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 9:15 9:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	3	58	14	75	
1S	2	0	0	0	0	0.0%
2N	4	0	0	0	0	0.0%
3S	42	0	3	0	3	7.1%
Total	48	0	3	0	3	6.3%
Percentage Matched		0.0%	5.2%	0.0%	4.0%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 3:00:00 PM

End Time 3:15:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 15:00 15:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	3	61	25	89	
1S	3	0	2	0	2	66.7%
2N	1	0	0	0	0	0.0%
3S	34	0	1	1	2	5.9%
Total	38	0	3	1	4	10.5%
Percentage Matched		0.0%	4.9%	4.0%	4.5%	

O-D Matches - Classification 2 - Heavy

Time Period 15:00 15:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	3	1	4	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 15:00 15:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	3	64	26	93	
1S	3	0	2	0	2	66.7%
2N	1	0	0	0	0	0.0%
3S	34	0	1	1	2	5.9%
Total	38	0	3	1	4	10.5%
Percentage Matched		0.0%	4.7%	3.8%	4.3%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 3:15:00 PM

End Time 3:30:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 15:15 15:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	6	64	28	98	
1S	4	0	2	0	2	50.0%
2N	6	0	0	0	0	0.0%
3S	33	0	0	0	0	0.0%
Total	43	0	2	0	2	4.7%
Percentage Matched		0.0%	3.1%	0.0%	2.0%	

O-D Matches - Classification 2 - Heavy

Time Period 15:15 15:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	1	2	3	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 15:15 15:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	6	65	30	101	
1S	4	0	2	0	2	50.0%
2N	6	0	0	0	0	0.0%
3S	33	0	0	0	0	0.0%
Total	43	0	2	0	2	4.7%
Percentage Matched		0.0%	3.1%	0.0%	2.0%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 3:30:00 PM

End Time 3:45:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 15:30 15:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	5	41	27	73	
1S	2	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	50	0	1	0	1	2.0%
Total	52	0	1	0	1	1.9%
Percentage Matched		0.0%	2.4%	0.0%	1.4%	

O-D Matches - Classification 2 - Heavy

Time Period 15:30 15:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	1	0	1	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	1	0	0	0	0	0.0%
Total	1	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 15:30 15:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	5	42	27	74	
1S	2	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	51	0	1	0	1	2.0%
Total	53	0	1	0	1	1.9%
Percentage Matched		0.0%	2.4%	0.0%	1.4%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 3:45:00 PM

End Time 4:00:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 15:45 16:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	11	31	31	73	
1S	4	0	0	0	0	0.0%
2N	6	0	0	0	0	0.0%
3S	53	0	1	0	1	1.9%
Total	63	0	1	0	1	1.6%
Percentage Matched		0.0%	3.2%	0.0%	1.4%	

O-D Matches - Classification 2 - Heavy

Time Period 15:45 16:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	0	1	1	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	1	0	0	0	0	0.0%
Total	1	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 15:45 16:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	11	31	32	74	
1S	4	0	0	0	0	0.0%
2N	6	0	0	0	0	0.0%
3S	54	0	1	0	1	1.9%
Total	64	0	1	0	1	1.6%
Percentage Matched		0.0%	3.2%	0.0%	1.4%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 4:00:00 PM

End Time 4:15:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 16:00 16:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	13	36	33	82	
1S	3	0	0	0	0	0.0%
2N	3	0	0	0	0	0.0%
3S	43	0	0	1	1	2.3%
Total	49	0	0	1	1	2.0%
Percentage Matched		0.0%	0.0%	3.0%	1.2%	

O-D Matches - Classification 2 - Heavy

Time Period 16:00 16:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	1	2	0	3	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 16:00 16:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	14	38	33	85	
1S	3	0	0	0	0	0.0%
2N	3	0	0	0	0	0.0%
3S	43	0	0	1	1	2.3%
Total	49	0	0	1	1	2.0%
Percentage Matched		0.0%	0.0%	3.0%	1.2%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 4:15:00 PM

End Time 4:30:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 16:15 16:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	15	40	47	102	
1S	6	0	0	0	0	0.0%
2N	4	0	0	0	0	0.0%
3S	52	0	1	0	1	1.9%
Total	62	0	1	0	1	1.6%
Percentage Matched		0.0%	2.5%	0.0%	1.0%	

O-D Matches - Classification 2 - Heavy

Time Period 16:15 16:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	1	0	1	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 16:15 16:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	15	41	47	103	
1S	6	0	0	0	0	0.0%
2N	4	0	0	0	0	0.0%
3S	52	0	1	0	1	1.9%
Total	62	0	1	0	1	1.6%
Percentage Matched		0.0%	2.4%	0.0%	1.0%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 4:30:00 PM

End Time 4:45:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 16:30 16:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	16	29	43	88	
1S	3	0	0	0	0	0.0%
2N	5	0	0	0	0	0.0%
3S	40	0	1	0	1	2.5%
Total	48	0	1	0	1	2.1%
Percentage Matched		0.0%	3.4%	0.0%	1.1%	

O-D Matches - Classification 2 - Heavy

Time Period 16:30 16:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	1	0	1	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 16:30 16:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	16	30	43	89	
1S	3	0	0	0	0	0.0%
2N	5	0	0	0	0	0.0%
3S	40	0	1	0	1	2.5%
Total	48	0	1	0	1	2.1%
Percentage Matched		0.0%	3.3%	0.0%	1.1%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 4:45:00 PM

End Time 5:00:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 16:45 17:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	16	27	39	82	
1S	2	0	0	0	0	0.0%
2N	1	0	0	0	0	0.0%
3S	28	0	0	1	1	3.6%
Total	31	0	0	1	1	3.2%
Percentage Matched		0.0%	0.0%	2.6%	1.2%	

O-D Matches - Classification 2 - Heavy

Time Period 16:45 17:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	0	1	1	
1S	0	0	0	0	0	0.0%
2N	1	0	0	0	0	0.0%
3S	1	0	0	0	0	0.0%
Total	2	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 16:45 17:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	16	27	40	83	
1S	2	0	0	0	0	0.0%
2N	2	0	0	0	0	0.0%
3S	29	0	0	1	1	3.4%
Total	33	0	0	1	1	3.0%
Percentage Matched		0.0%	0.0%	2.5%	1.2%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 5:00:00 PM

End Time 5:15:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 17:00 17:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	20	49	50	119	
1S	2	0	0	0	0	0.0%
2N	5	0	0	0	0	0.0%
3S	46	0	2	1	3	6.5%
Total	53	0	2	1	3	5.7%
Percentage Matched		0.0%	4.1%	2.0%	2.5%	

O-D Matches - Classification 2 - Heavy

Time Period 17:00 17:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	0	2	2	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 17:00 17:15	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	20	49	52	121	
1S	2	0	0	0	0	0.0%
2N	5	0	0	0	0	0.0%
3S	46	0	2	1	3	6.5%
Total	53	0	2	1	3	5.7%
Percentage Matched		0.0%	4.1%	1.9%	2.5%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 5:15:00 PM

End Time 5:30:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 17:15 17:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	20	34	55	109	
1S	3	0	2	0	2	66.7%
2N	1	0	0	0	0	0.0%
3S	49	0	6	1	7	14.3%
Total	53	0	8	1	9	17.0%
Percentage Matched		0.0%	23.5%	1.8%	8.3%	

O-D Matches - Classification 2 - Heavy

Time Period 17:15 17:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	0	0	0	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 17:15 17:30	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	20	34	55	109	
1S	3	0	2	0	2	66.7%
2N	1	0	0	0	0	0.0%
3S	49	0	6	1	7	14.3%
Total	53	0	8	1	9	17.0%
Percentage Matched		0.0%	23.5%	1.8%	8.3%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 5:30:00 PM

End Time 5:45:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 17:30 17:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	18	33	57	108	
1S	1	0	0	0	0	0.0%
2N	5	0	0	0	0	0.0%
3S	39	0	1	1	2	5.1%
Total	45	0	1	1	2	4.4%
Percentage Matched		0.0%	3.0%	1.8%	1.9%	

O-D Matches - Classification 2 - Heavy

Time Period 17:30 17:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	0	0	0	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 17:30 17:45	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	18	33	57	108	
1S	1	0	0	0	0	0.0%
2N	5	0	0	0	0	0.0%
3S	39	0	1	1	2	5.1%
Total	45	0	1	1	2	4.4%
Percentage Matched		0.0%	3.0%	1.8%	1.9%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 5:45:00 PM

End Time 6:00:00 PM

Match Time 10 Minutes

O-D Matches - Classification 1 - Light

Time Period 17:45 18:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	17	51	64	132	
1S	4	0	0	0	0	0.0%
2N	2	0	1	0	1	50.0%
3S	51	0	1	1	2	3.9%
Total	57	0	2	1	3	5.3%
Percentage Matched		0.0%	3.9%	1.6%	2.3%	

O-D Matches - Classification 2 - Heavy

Time Period 17:45 18:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	0	0	1	1	
1S	0	0	0	0	0	0.0%
2N	0	0	0	0	0	0.0%
3S	0	0	0	0	0	0.0%
Total	0	0	0	0	0	0.0%
Percentage Matched		0.0%	0.0%	0.0%	0.0%	

O-D Matches - Total Vehicles

Time Period 17:45 18:00	Destination Station	1N	2S	3N	Total	Percentage Matched
Origin Station	Volume	17	51	65	133	
1S	4	0	0	0	0	0.0%
2N	2	0	1	0	1	50.0%
3S	51	0	1	1	2	3.9%
Total	57	0	2	1	3	5.3%
Percentage Matched		0.0%	3.9%	1.5%	2.3%	

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 7:30:00 AM

End Time 6:00:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 7:30 18:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:03:22	NA
2N		NA	0:02:58	NA
3S		NA	0:04:13	0:04:55

O-D Matches - Median Travel Time

Time Period 7:30 18:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:03:06	NA
2N		NA	0:02:58	NA
3S		NA	0:03:50	0:04:52

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 7:30:00 AM

End Time 7:45:00 AM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 7:30 7:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	0:00:32	NA
3S		NA	0:04:39	NA

O-D Matches - Median Travel Time

Time Period 7:30 7:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	0:00:32	NA
3S		NA	0:04:01	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 7:45:00 AM

End Time 8:00:00 AM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 7:45 8:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:04:39	NA

O-D Matches - Median Travel Time

Time Period 7:45 8:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:04:29	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 8:00:00 AM

End Time 8:15:00 AM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 8:00 8:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:03:25	NA
2N		NA	NA	NA
3S		NA	0:03:51	NA

O-D Matches - Median Travel Time

Time Period 8:00 8:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:03:25	NA
2N		NA	NA	NA
3S		NA	0:03:42	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 8:15:00 AM

End Time 8:30:00 AM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 8:15 8:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:04:15	NA

O-D Matches - Median Travel Time

Time Period 8:15 8:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:47	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 8:30:00 AM

End Time 8:45:00 AM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 8:30 8:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:53	0:05:34

O-D Matches - Median Travel Time

Time Period 8:30 8:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:37	0:05:46

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 8:45:00 AM

End Time 9:00:00 AM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 8:45 9:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:04:09	NA

O-D Matches - Median Travel Time

Time Period 8:45 9:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:50	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 9:00:00 AM

End Time 9:15:00 AM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 9:00 9:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:03:04	NA
2N		NA	NA	NA
3S		NA	0:04:38	0:05:38

O-D Matches - Median Travel Time

Time Period 9:00 9:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:03:04	NA
2N		NA	NA	NA
3S		NA	0:03:40	0:05:38

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 9:15:00 AM

End Time 9:30:00 AM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 9:15 9:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:05:10	NA

O-D Matches - Median Travel Time

Time Period 9:15 9:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:05:15	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 3:00:00 PM

End Time 3:15:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 15:00 15:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:03:06	NA
2N		NA	NA	NA
3S		NA	0:03:48	0:04:52

O-D Matches - Median Travel Time

Time Period 15:00 15:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:03:06	NA
2N		NA	NA	NA
3S		NA	0:03:48	0:04:52

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 3:15:00 PM

End Time 3:30:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 15:15 15:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:04:14	NA
2N		NA	NA	NA
3S		NA	NA	NA

O-D Matches - Median Travel Time

Time Period 15:15 15:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:04:14	NA
2N		NA	NA	NA
3S		NA	NA	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 3:30:00 PM

End Time 3:45:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 15:30 15:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:44	NA

O-D Matches - Median Travel Time

Time Period 15:30 15:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:44	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 3:45:00 PM

End Time 4:00:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 15:45 16:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:30	NA

O-D Matches - Median Travel Time

Time Period 15:45 16:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:30	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 4:00:00 PM

End Time 4:15:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 16:00 16:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	NA	0:02:42

O-D Matches - Median Travel Time

Time Period 16:00 16:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	NA	0:02:42

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 4:15:00 PM

End Time 4:30:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 16:15 16:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:13	NA

O-D Matches - Median Travel Time

Time Period 16:15 16:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:13	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 4:30:00 PM

End Time 4:45:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 16:30 16:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:51	NA

O-D Matches - Median Travel Time

Time Period 16:30 16:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:51	NA

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 4:45:00 PM

End Time 5:00:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 16:45 17:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	NA	0:09:54

O-D Matches - Median Travel Time

Time Period 16:45 17:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	NA	0:09:54

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 5:00:00 PM

End Time 5:15:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 17:00 17:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:08	0:01:05

O-D Matches - Median Travel Time

Time Period 17:00 17:15	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:03:08	0:01:05

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 5:15:00 PM

End Time 5:30:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 17:15 17:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:02:47	NA
2N		NA	NA	NA
3S		NA	0:03:51	0:02:48

O-D Matches - Median Travel Time

Time Period 17:15 17:30	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	0:02:47	NA
2N		NA	NA	NA
3S		NA	0:03:44	0:02:48

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 5:30:00 PM

End Time 5:45:00 PM

Match Time 10 Minutes

O-D Matches - Average Travel Time

Time Period 17:30 17:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:05:17	0:07:47

O-D Matches - Median Travel Time

Time Period 17:30 17:45	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	NA	NA
3S		NA	0:05:17	0:07:47

V1602 Fitzroy North OD

Date 23/05/2019

Start Time 5:45:00 PM

End Time 6:00:00 PM

Match Time 10 Minutes

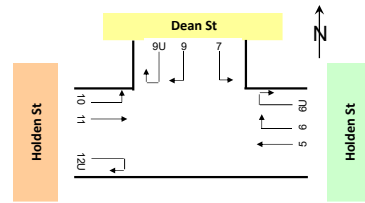
O-D Matches - Average Travel Time

Time Period 17:45 18:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	0:05:23	NA
3S		NA	0:05:19	0:02:40

O-D Matches - Median Travel Time

Time Period 17:45 18:00	Destination Station	1N	2S	3N
Origin Station	Volume			
1S		NA	NA	NA
2N		NA	0:05:23	NA
3S		NA	0:05:19	0:02:40

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 1. Holden St / Dean St
 Day/Date : Thu, 23rd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : 15 mins Data

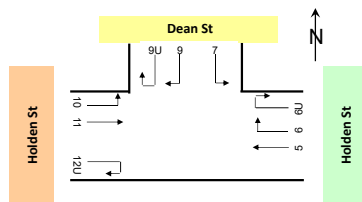


Classifications	Class 1	Class 2
	Lights	Heavies

Approach	Holden St											
Direction												
Time Period												
7:30 to 7:45	Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)					
7:45 to 8:00	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
8:00 to 8:15	101	4	105	3	1	4	0	0	0	0	0	0
8:15 to 8:30	95	6	101	5	0	5	0	0	0	0	0	0
8:30 to 8:45	105	3	108	6	0	6	0	0	0	0	0	0
8:45 to 9:00	94	3	97	5	0	5	0	0	0	0	0	0
9:00 to 9:15	116	4	120	4	1	5	0	0	0	0	0	0
9:15 to 9:30	104	6	110	5	0	5	0	0	0	0	0	0
AM Totals	75	3	78	7	0	7	0	0	0	0	0	0
15:00 to 15:15	95	8	103	2	0	2	0	0	0	0	0	0
15:15 to 15:30	785	37	822	37	2	39	0	0	0	0	0	0
15:30 to 15:45	65	3	68	6	0	6	0	0	0	0	0	0
15:45 to 16:00	49	5	54	3	0	3	0	0	0	0	0	0
16:00 to 16:15	57	6	63	9	2	11	0	0	0	0	0	0
16:15 to 16:30	70	3	73	4	1	5	0	0	0	0	0	0
16:30 to 16:45	48	3	51	7	0	7	0	0	0	0	0	0
16:45 to 17:00	66	5	71	7	0	7	0	0	0	0	0	0
17:00 to 17:15	52	7	59	7	0	7	0	0	0	0	0	0
17:15 to 17:30	55	2	57	10	0	10	0	0	0	0	0	0
17:30 to 17:45	60	3	63	13	0	13	0	0	0	0	0	0
17:45 to 18:00	61	2	63	11	0	11	0	0	0	0	0	0
PM Totals	64	0	64	9	0	9	0	0	0	0	0	0
	71	4	75	12	0	12	0	0	0	0	0	0
	718	43	761	98	3	101	0	0	0	0	0	0

Approach	Dean St									Holden St											
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)					
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	5	0	5	4	0	4	0	0	0	3	1	4	61	5	66	0	0	0	0	0	0
7:45 to 8:00	6	0	6	4	0	4	0	0	0	3	0	3	73	5	78	0	0	0	0	0	0
8:00 to 8:15	6	0	6	6	0	6	0	0	0	6	0	6	60	1	61	0	0	0	0	0	0
8:15 to 8:30	8	0	8	6	0	6	0	0	0	3	0	3	68	5	73	0	0	0	0	0	0
8:30 to 8:45	4	0	4	4	0	4	0	0	0	13	0	13	79	4	83	0	0	0	0	0	0
8:45 to 9:00	8	0	8	12	0	12	0	0	0	11	1	12	68	8	76	0	0	0	0	0	0
9:00 to 9:15	6	0	6	8	0	8	0	0	0	4	0	4	80	6	86	0	0	0	0	0	0
9:15 to 9:30	4	0	4	3	0	3	0	0	0	3	0	3	86	4	90	0	0	0	0	0	0
AM Totals	47	0	47	47	0	47	0	0	0	46	2	48	575	38	613	0	0	0	0	0	0
15:00 to 15:15	5	0	5	3	0	3	0	0	0	9	1	10	118	4	122	0	0	0	0	0	0
15:15 to 15:30	5	0	5	4	0	4	0	0	0	16	0	16	118	6	124	0	0	0	0	0	0
15:30 to 15:45	5	0	5	3	0	3	0	0	0	15	0	15	122	3	125	1	0	1	0	0	1
15:45 to 16:00	1	0	1	6	1	7	0	0	0	12	0	12	128	3	131	0	0	0	0	0	0
16:00 to 16:15	3	0	3	3	0	3	0	0	0	15	0	15	115	2	117	1	0	1	0	0	1
16:15 to 16:30	2	0	2	5	0	5	0	0	0	17	0	17	118	1	119	0	0	0	0	0	0
16:30 to 16:45	1	0	1	1	0	1	0	0	0	24	0	24	112	6	118	1	0	1	0	0	1
16:45 to 17:00	1	0	1	4	0	4	0	0	0	13	0	13	104	4	108	0	0	0	0	0	0
17:00 to 17:15	2	0	2	2	0	2	0	0	0	18	1	19	118	3	121	0	0	0	0	0	0
17:15 to 17:30	4	0	4	3	0	3	0	0	0	25	0	25	110	2	112	0	0	0	0	0	0
17:30 to 17:45	2	0	2	1	0	1	0	0	0	26	0	26	113	5	118	1	0	1	0	0	1
17:45 to 18:00	1	0	1	2	0	2	0	0	0	32	0	32	134	2	136	0	0	0	0	0	0
PM Totals	32	0	32	37	1	38	0	0	0	222	2	224	1,410	41	1,451	4	0	4	0	0	4

Job No.	: V1602
Client	: GTA
Suburb	: Fitzroy North
Location	: 1. Holden St / Dean St
Day/Date	: Thu, 23rd May 2019
Weather	: Fine
Description	: Classified Intersection Count
	: Hourly Summary

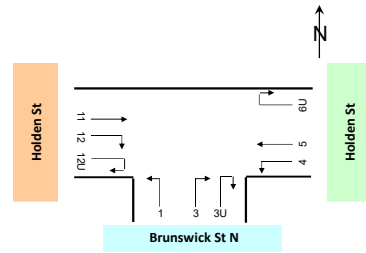


Approach	Holden St									
Direction	Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)			
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:30 to 8:30	395	16	411	19	1	20	0	0	0	
7:45 to 8:45	410	16	426	20	1	21	0	0	0	
8:00 to 9:00	419	16	435	20	1	21	0	0	0	
8:15 to 9:15	389	16	405	21	1	22	0	0	0	
8:30 to 9:30	390	21	411	18	1	19	0	0	0	
AM Totals	785	37	822	37	2	39	0	0	0	
15:00 to 16:00	241	17	258	22	3	25	0	0	0	
15:15 to 16:15	224	17	241	23	3	26	0	0	0	
15:30 to 16:30	241	17	258	27	3	30	0	0	0	
15:45 to 16:45	236	18	254	25	1	26	0	0	0	
16:00 to 17:00	221	17	238	31	0	31	0	0	0	
16:15 to 17:15	233	17	250	37	0	37	0	0	0	
16:30 to 17:30	228	14	242	41	0	41	0	0	0	
16:45 to 17:45	240	7	247	43	0	43	0	0	0	
17:00 to 18:00	256	9	265	45	0	45	0	0	0	
PM Totals	718	43	761	98	3	101	0	0	0	

Approach	Dean St									Holden St								
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	25	0	25	20	0	20	0	0	0	15	1	16	262	16	278	0	0	0
7:45 to 8:45	24	0	24	20	0	20	0	0	0	25	0	25	280	15	295	0	0	0
8:00 to 9:00	26	0	26	28	0	28	0	0	0	33	1	34	275	18	293	0	0	0
8:15 to 9:15	26	0	26	30	0	30	0	0	0	31	1	32	295	23	318	0	0	0
8:30 to 9:30	22	0	22	27	0	27	0	0	0	31	1	32	313	22	335	0	0	0
AM Totals	47	0	47	47	0	47	0	0	0	46	2	48	575	38	613	0	0	0
15:00 to 16:00	16	0	16	16	1	17	0	0	0	52	1	53	486	16	502	1	0	1
15:15 to 16:15	14	0	14	16	1	17	0	0	0	58	0	58	483	14	497	2	0	2
15:30 to 16:30	11	0	11	17	1	18	0	0	0	59	0	59	483	9	492	2	0	2
15:45 to 16:45	7	0	7	15	1	16	0	0	0	68	0	68	473	12	485	2	0	2
16:00 to 17:00	7	0	7	13	0	13	0	0	0	69	0	69	449	13	462	2	0	2
16:15 to 17:15	6	0	6	12	0	12	0	0	0	72	1	73	452	14	466	1	0	1
16:30 to 17:30	8	0	8	10	0	10	0	0	0	80	1	81	444	15	459	1	0	1
16:45 to 17:45	9	0	9	10	0	10	0	0	0	82	1	83	445	14	459	1	0	1
17:00 to 18:00	9	0	9	8	0	8	0	0	0	101	1	102	475	12	487	1	0	1
PM Totals	32	0	32	37	1	38	0	0	0	222	2	224	1,410	41	1,451	4	0	

Job No. : V1602
Client : GTA
Suburb : Fitzroy North
Location : 2. Holden St / Brunswick St N

Day/Date : Thu, 23rd May 2019
Weather : Fine
Description : Classified Intersection Count
: 15 mins Data



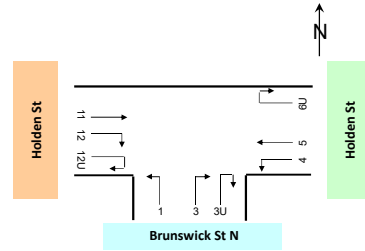
Classifications	Class 1	Class 2
	Lights	Heavies

Approach	Brunswick St N									Holden St								
Direction	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	9	0	9	2	1	3	0	0	0	15	0	15	89	4	93	0	0	0
7:45 to 8:00	6	1	7	2	0	2	0	0	0	12	0	12	88	6	94	0	0	0
8:00 to 8:15	6	0	6	6	0	6	0	0	0	9	0	9	99	3	102	0	0	0
8:15 to 8:30	6	2	8	3	0	3	0	0	0	12	0	12	89	3	92	0	0	0
8:30 to 8:45	12	0	12	18	0	18	0	0	0	9	0	9	112	4	116	0	0	0
8:45 to 9:00	5	1	6	4	0	4	0	0	0	9	0	9	107	6	113	0	0	0
9:00 to 9:15	5	0	5	2	0	2	0	0	0	10	0	10	74	3	77	0	0	0
9:15 to 9:30	10	0	10	3	0	3	0	0	0	8	0	8	91	8	99	0	0	0
AM Totals	59	4	63	40	1	41	0	0	0	84	0	84	749	37	786	0	0	0
15:00 to 15:15	15	0	15	10	1	11	0	0	0	3	0	3	64	3	67	0	0	0
15:15 to 15:30	14	2	16	17	0	17	0	0	0	2	0	2	51	5	56	0	0	0
15:30 to 15:45	14	0	14	9	0	9	0	0	0	7	1	8	54	5	59	0	0	0
15:45 to 16:00	18	1	19	14	0	14	0	0	0	7	1	8	70	3	73	0	0	0
16:00 to 16:15	19	0	19	15	0	15	0	0	0	4	0	4	48	3	51	0	0	0
16:15 to 16:30	27	0	27	19	0	19	0	0	0	5	0	5	66	5	71	0	0	0
16:30 to 16:45	21	0	21	20	0	20	0	0	0	1	0	1	53	7	60	0	0	0
16:45 to 17:00	29	2	31	10	0	10	0	0	0	5	0	5	54	2	56	0	0	0
17:00 to 17:15	35	0	35	19	1	20	0	0	0	7	0	7	54	3	57	0	0	0
17:15 to 17:30	29	0	29	24	0	24	0	0	0	7	0	7	58	2	60	0	0	0
17:30 to 17:45	33	0	33	25	0	25	0	0	0	7	0	7	58	0	58	0	0	0
17:45 to 18:00	36	0	36	28	1	29	1	0	1	5	0	5	69	4	73	0	0	0
PM Totals	290	5	295	210	3	213	1	0	1	60	2	62	699	42	741	0	0	0

Approach	Holden St											
Direction	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	60	5	65	53	0	53	0	0	0	0	0	0
7:45 to 8:00	72	5	77	54	0	54	0	0	0	0	0	0
8:00 to 8:15	60	1	61	46	2	48	0	0	0	0	0	0
8:15 to 8:30	70	5	75	69	1	70	0	0	0	0	0	0
8:30 to 8:45	74	5	79	62	0	62	0	0	0	0	0	0
8:45 to 9:00	76	8	84	49	0	49	0	0	0	0	0	0
9:00 to 9:15	81	6	87	38	0	38	0	0	0	0	0	0
9:15 to 9:30	87	4	91	35	0	35	0	0	0	0	0	0
AM Totals	580	39	619	406	3	409	0	0	0	0	0	0
15:00 to 15:15	120	4	124	34	0	34	0	0	0	0	0	0
15:15 to 15:30	118	6	124	30	0	30	0	0	0	0	0	0
15:30 to 15:45	126	3	129	39	1	40	0	0	0	0	0	0
15:45 to 16:00	131	3	134	48	0	48	0	0	0	0	0	0
16:00 to 16:15	115	2	117	36	0	36	0	0	0	0	0	0
16:15 to 16:30	118	1	119	49	0	49	0	0	0	0	0	0
16:30 to 16:45	114	6	120	40	0	40	0	0	0	0	0	0
16:45 to 17:00	107	4	111	22	1	23	0	0	0	0	0	0
17:00 to 17:15	118	3	121	42	0	42	0	0	0	0	0	0
17:15 to 17:30	110	2	112	39	0	39	0	0	0	0	0	0
17:30 to 17:45	114	5	119	35	0	35	0	0	0	0	0	0
17:45 to 18:00	136	2	138	46	0	46	0	0	0	0	0	0
PM Totals	1,427	41	1,468	460	2	462	0	0	0	0	0	0

Job No. : V1602
Client : GTA
Suburb : Fitzroy North
Location : 2. Holden St / Brunswick St N

Day/Date : Thu, 23rd May 2019
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary

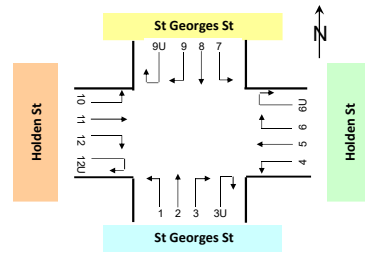


Approach	Brunswick St N									Holden St								
Direction	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Lights	Heavy/Ves	Total	Lights	Heavy/Ves	Total	Lights	Heavy/Ves	Total	Lights	Heavy/Ves	Total	Lights	Heavy/Ves	Total	Lights	Heavy/Ves	Total
7:30 to 8:30	27	3	30	13	1	14	0	0	0	48	0	48	365	16	381	0	0	0
7:45 to 8:45	30	3	33	29	0	29	0	0	0	42	0	42	388	16	404	0	0	0
8:00 to 9:00	29	3	32	31	0	31	0	0	0	39	0	39	407	16	423	0	0	0
8:15 to 9:15	28	3	31	27	0	27	0	0	0	40	0	40	382	16	398	0	0	0
8:30 to 9:30	32	1	33	27	0	27	0	0	0	36	0	36	384	21	405	0	0	0
AM Totals	59	4	63	40	1	41	0	0	0	84	0	84	749	37	786	0	0	0
15:00 to 16:00	61	3	64	50	1	51	0	0	0	19	2	21	239	16	255	0	0	0
15:15 to 16:15	65	3	68	55	0	55	0	0	0	20	2	22	223	16	239	0	0	0
15:30 to 16:30	78	1	79	57	0	57	0	0	0	23	2	25	238	16	254	0	0	0
15:45 to 16:45	85	1	86	68	0	68	0	0	0	17	1	18	237	18	255	0	0	0
16:00 to 17:00	96	2	98	64	0	64	0	0	0	15	0	15	221	17	238	0	0	0
16:15 to 17:15	112	2	114	68	1	69	0	0	0	18	0	18	227	17	244	0	0	0
16:30 to 17:30	114	2	116	73	1	74	0	0	0	20	0	20	219	14	233	0	0	0
16:45 to 17:45	126	2	128	78	1	79	0	0	0	26	0	26	224	7	231	0	0	0
17:00 to 18:00	133	0	133	96	2	98	1	0	1	26	0	26	239	9	248	0	0	0
PM Totals	290	5	295	210	3	213	1	0	1	60	2	62	699	42	741	0	0	0

Approach	Holden St								
Direction	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavy/Ves	Total	Lights	Heavy/Ves	Total	Lights	Heavy/Ves	Total
7:30 to 8:30	262	16	278	222	3	225	0	0	0
7:45 to 8:45	276	16	292	231	3	234	0	0	0
8:00 to 9:00	280	19	299	226	3	229	0	0	0
8:15 to 9:15	301	24	325	218	1	219	0	0	0
8:30 to 9:30	318	23	341	184	0	184	0	0	0
AM Totals	580	39	619	406	3	409	0	0	0
15:00 to 16:00	495	16	511	151	1	152	0	0	0
15:15 to 16:15	490	14	504	153	1	154	0	0	0
15:30 to 16:30	490	9	499	172	1	173	0	0	0
15:45 to 16:45	478	12	490	173	0	173	0	0	0
16:00 to 17:00	454	13	467	147	1	148	0	0	0
16:15 to 17:15	457	14	471	153	1	154	0	0	0
16:30 to 17:30	449	15	464	143	1	144	0	0	0
16:45 to 17:45	449	14	463	138	1	139	0	0	0
17:00 to 18:00	478	12	490	162	0	162	0	0	0
PM Totals	1,427	41	1,468	460	2	462	0	0	0

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 3. Holden St / St Georges St
 Day/Date : Thu, 23rd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : 15 mins Data

Classifications
 Class 1 : Lights
 Class 2 : Heavies

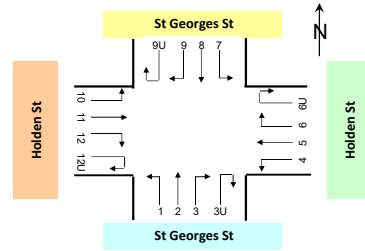


Approach	St Georges St												Holden St											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	14	2	16	81	7	88	1	1	2	0	0	0	4	0	4	1	0	1	3	0	3	0	0	0
7:45 to 8:00	14	2	16	62	1	63	0	0	0	0	0	0	6	0	6	0	0	0	3	0	3	0	0	0
8:00 to 8:15	10	2	12	84	1	85	4	1	5	0	0	0	5	0	5	1	0	1	2	0	2	0	0	0
8:15 to 8:30	11	3	14	84	6	90	2	0	2	0	0	0	6	0	6	3	0	3	1	0	1	0	0	0
8:30 to 8:45	12	3	15	64	1	65	2	0	2	0	0	0	9	0	9	2	0	2	2	0	2	1	0	1
8:45 to 9:00	9	3	12	74	4	78	1	2	3	1	0	1	3	0	3	3	0	3	2	0	2	0	0	0
9:00 to 9:15	14	1	15	78	4	82	2	1	3	0	0	0	1	0	1	1	1	2	0	0	0	0	0	0
9:15 to 9:30	21	6	27	64	1	65	0	0	0	0	0	0	7	0	7	5	1	6	2	1	3	0	0	0
AM Totals	105	22	127	591	25	616	12	5	17	1	0	1	41	0	41	16	2	18	15	1	16	1	0	1
15:00 to 15:15	7	2	9	134	4	138	2	0	2	0	0	0	8	0	8	2	0	2	3	0	3	0	0	0
15:15 to 15:30	12	3	15	155	2	157	1	0	1	0	0	0	9	0	9	0	2	2	1	1	2	0	0	0
15:30 to 15:45	21	5	26	133	2	135	4	0	4	0	0	0	18	0	18	3	0	3	2	1	3	0	0	0
15:45 to 16:00	9	3	12	167	4	171	0	0	0	0	0	0	12	1	13	2	0	2	6	1	7	0	0	0
16:00 to 16:15	13	1	14	155	3	158	3	0	3	0	0	0	5	0	5	0	0	0	3	0	3	0	0	0
16:15 to 16:30	20	3	23	147	1	148	4	0	4	0	0	0	10	0	10	1	0	1	2	0	2	0	0	0
16:30 to 16:45	19	4	23	166	1	167	1	0	1	0	0	0	5	0	5	2	0	2	2	0	2	0	0	0
16:45 to 17:00	17	1	18	175	0	175	1	0	1	0	0	0	3	0	3	1	0	1	2	0	2	0	0	0
17:00 to 17:15	23	2	25	181	1	182	1	0	1	0	0	0	6	0	6	1	0	1	1	0	1	0	0	0
17:15 to 17:30	13	2	15	172	1	173	0	0	0	0	0	0	6	0	6	3	0	3	0	0	0	0	0	0
17:30 to 17:45	20	1	21	207	2	209	1	0	1	0	0	0	8	0	8	2	0	2	3	0	3	0	0	0
17:45 to 18:00	14	0	14	192	0	192	1	0	1	0	0	0	7	0	7	1	0	1	2	0	2	0	0	0
PM Totals	188	27	215	1,984	21	2,005	19	0	19	0	0	0	97	1	98	18	2	20	27	3	30	0	0	0

Approach	St Georges St												Holden St											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	2	0	2	272	7	279	90	2	92	0	0	0	41	5	46	3	0	3	30	0	30	0	0	0
7:45 to 8:00	1	0	1	232	4	236	88	4	92	0	0	0	44	0	44	2	0	2	29	5	34	0	0	0
8:00 to 8:15	2	0	2	236	5	241	95	1	96	0	0	0	40	0	40	2	0	2	28	1	29	0	0	0
8:15 to 8:30	1	0	1	235	2	237	78	0	78	0	0	0	41	2	43	5	0	5	36	2	38	0	0	0
8:30 to 8:45	5	0	5	216	1	217	105	2	107	0	0	0	54	1	55	3	1	4	29	3	32	0	0	0
8:45 to 9:00	3	0	3	190	7	197	95	3	98	0	0	0	46	1	47	3	0	3	43	4	47	0	0	0
9:00 to 9:15	1	1	2	183	4	187	62	1	63	0	0	0	54	2	56	1	0	1	25	3	28	0	0	0
9:15 to 9:30	1	0	1	139	4	143	69	2	71	0	0	0	52	1	53	2	0	2	32	3	35	0	0	0
AM Totals	16	1	17	1,703	34	1,737	682	15	697	0	0	0	372	12	384	21	1	22	252	21	273	0	0	0
15:00 to 15:15	2	0	2	105	3	108	54	1	55	0	0	0	75	1	76	8	0	8	35	3	38	0	0	0
15:15 to 15:30	4	0	4	82	1	83	41	0	41	0	0	0	67	2	69	12	0	12	41	3	44	0	0	0
15:30 to 15:45	4	1	5	88	0	88	43	2	45	0	0	0	73	1	74	9	0	9	37	2	39	0	0	0
15:45 to 16:00	2	0	2	103	1	104	50	0	50	0	0	0	105	1	106	10	0	10	44	3	47	0	0	0
16:00 to 16:15	2	0	2	83	4	87	31	2	33	0	0	0	88	0	88	5	0	5	27	2	29	0	0	0
16:15 to 16:30	9	0	9	103	1	104	48	2	50	0	0	0	76	0	76	1	0	1	33	1	34	0	0	0
16:30 to 16:45	6	0	6	76	0	76	33	3	36	0	0	0	75	2	77	8	0	8	26	3	29	0	0	0
16:45 to 17:00	1	0	1	91	1	92	41	1	42	0	0	0	83	1	84	4	0	4	19	3	22	0	0	0
17:00 to 17:15	5	0	5	93	1	94	45	1	46	0	0	0	97	2	99	7	0	7	25	2	27	0	0	0
17:15 to 17:30	7	0	7	97	3	100	33	0	33	0	0	0	72	0	72	7	0	7	23	2	25	0	0	0
17:30 to 17:45	2	0	2	124	2	126	42	0	42	0	0	0	84	2	86	8	0	8	31	3	34	0	0	0
17:45 to 18:00	5	0	5	128	0	128	60	4	64	0	0	0	89	0	89	2	0	2	31	1	32	0	0	0
PM Totals	49	1	50	1,173	17	1,190	521	16	537	0	0	0	984	12	996	81	0	81	372	28	400	0	0	0

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 3. Holden St / St Georges St

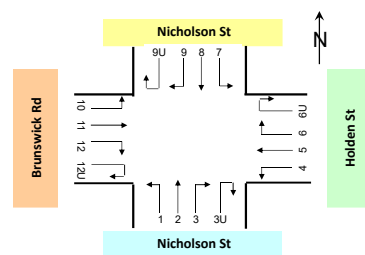
Day/Date : Thu, 23rd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : Hourly Summary



Approach	St Georges St												Holden St											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	49	9	58	311	15	326	7	2	9	0	0	0	21	0	21	5	0	5	9	0	9	0	0	0
7:45 to 8:45	47	10	57	294	9	303	8	1	9	0	0	0	26	0	26	6	0	6	8	0	8	1	0	1
8:00 to 9:00	42	11	53	306	12	318	9	3	12	1	0	1	23	0	23	9	0	9	7	0	7	1	0	1
8:15 to 9:15	46	10	56	300	15	315	7	3	10	1	0	1	19	0	19	9	1	10	5	0	5	1	0	1
8:30 to 9:30	56	13	69	280	10	290	5	3	8	1	0	1	20	0	20	11	2	13	6	1	7	1	0	1
AM Totals	105	22	127	591	25	616	12	5	17	1	0	1	41	0	41	16	2	18	15	1	16	1	0	1
15:00 to 16:00	49	13	62	589	12	601	7	0	7	0	0	0	47	1	48	7	2	9	12	3	15	0	0	0
15:15 to 16:15	55	12	67	610	11	621	8	0	8	0	0	0	44	1	45	5	2	7	12	3	15	0	0	0
15:30 to 16:30	63	12	75	602	10	612	11	0	11	0	0	0	45	1	46	6	0	6	13	2	15	0	0	0
15:45 to 16:45	61	11	72	635	9	644	8	0	8	0	0	0	32	1	33	5	0	5	13	1	14	0	0	0
16:00 to 17:00	69	9	78	643	5	648	9	0	9	0	0	0	23	0	23	4	0	4	9	0	9	0	0	0
16:15 to 17:15	79	10	89	669	3	672	7	0	7	0	0	0	24	0	24	5	0	5	7	0	7	0	0	0
16:30 to 17:30	72	9	81	694	3	697	3	0	3	0	0	0	20	0	20	7	0	7	5	0	5	0	0	0
16:45 to 17:45	73	6	79	735	4	739	3	0	3	0	0	0	23	0	23	7	0	7	6	0	6	0	0	0
17:00 to 18:00	70	5	75	752	4	756	3	0	3	0	0	0	27	0	27	7	0	7	6	0	6	0	0	0
PM Totals	188	27	215	1,984	21	2,005	19	0	19	0	0	0	97	1	98	18	2	20	27	3	30	0	0	0

Approach	St Georges St												Holden St											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	6	0	6	975	18	993	351	7	358	0	0	0	166	7	173	12	0	12	123	8	131	0	0	0
7:45 to 8:45	9	0	9	919	12	931	366	7	373	0	0	0	179	3	182	12	1	13	122	11	133	0	0	0
8:00 to 9:00	11	0	11	877	15	892	373	6	379	0	0	0	181	4	185	13	1	14	136	10	146	0	0	0
8:15 to 9:15	10	1	11	824	14	838	340	6	346	0	0	0	195	6	201	12	1	13	133	12	145	0	0	0
8:30 to 9:30	10	1	11	728	16	744	331	8	339	0	0	0	206	5	211	9	1	10	129	13	142	0	0	0
AM Totals	16	1	17	1,703	34	1,737	682	15	697	0	0	0	372	12	384	21	1	22	252	21	273	0	0	0
15:00 to 16:00	12	1	13	378	5	383	188	3	191	0	0	0	320	5	325	39	0	39	157	11	168	0	0	0
15:15 to 16:15	12	1	13	356	6	362	165	4	169	0	0	0	333	4	337	36	0	36	149	10	159	0	0	0
15:30 to 16:30	17	1	18	377	6	383	172	6	178	0	0	0	342	2	344	25	0	25	141	8	149	0	0	0
15:45 to 16:45	19	0	19	365	6	371	162	7	169	0	0	0	344	3	347	24	0	24	130	9	139	0	0	0
16:00 to 17:00	18	0	18	353	6	359	153	8	161	0	0	0	322	3	325	18	0	18	105	9	114	0	0	0
16:15 to 17:15	21	0	21	363	3	366	167	7	174	0	0	0	331	5	336	20	0	20	103	9	112	0	0	0
16:30 to 17:30	19	0	19	357	5	362	152	5	157	0	0	0	327	5	332	26	0	26	93	10	103	0	0	0
16:45 to 17:45	15	0	15	405	7	412	161	2	163	0	0	0	336	5	341	26	0	26	98	10	108	0	0	0
17:00 to 18:00	19	0	19	442	6	448	180	5	185	0	0	0	342	4	346	24	0	24	110	8	118	0	0	0
PM Totals	49	1	50	1,173	17	1,190	521	16	537	0	0	0	984	12	996	81	0	81	372	28	400	0	0	0

	Class 1	Class 2
Classifications	Lights	Heavies



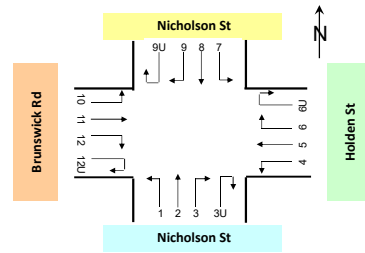
MATRIX
Traffic and Transport Data

Approach	Nicholson St												Holden St											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heaves	Total	Lights	Heaves	Total	Lights	Heaves	Total	Lights	Heaves	Total	Lights	Heaves	Total	Lights	Heaves	Total	Lights	Heaves	Total	Lights	Heaves	Total
7:30 to 7:45	52	1	53	70	6	76	3	2	5	0	0	0	9	1	10	101	2	103	4	0	4	0	0	0
7:45 to 8:00	28	2	30	63	2	65	5	1	6	0	0	0	6	0	6	88	7	95	6	0	6	0	0	0
8:00 to 8:15	36	0	36	58	6	64	5	0	5	0	0	0	6	0	6	88	3	91	5	0	5	0	0	0
8:15 to 8:30	36	1	37	65	4	69	6	1	7	0	0	0	16	1	17	80	3	83	8	1	9	0	0	0
8:30 to 8:45	46	2	48	85	4	89	4	0	4	0	0	0	15	0	15	101	4	105	4	0	4	0	0	0
8:45 to 9:00	40	3	43	80	1	81	3	1	4	1	0	1	12	1	13	89	5	94	3	0	3	0	0	0
9:00 to 9:15	32	2	34	73	4	77	7	0	7	0	0	0	9	1	10	75	3	78	2	0	2	0	0	0
9:15 to 9:30	40	0	40	70	10	80	6	0	6	0	0	0	9	2	11	71	2	73	13	0	13	0	0	0
AM Totals	310	11	321	564	37	601	39	5	44	1	0	1	82	6	88	693	29	722	45	1	46	0	0	0
15:00 to 15:15	43	0	43	132	5	137	10	0	10	0	0	0	7	2	9	60	1	61	8	0	8	0	0	0
15:15 to 15:30	35	1	36	133	2	135	17	0	17	0	0	0	6	1	7	62	4	66	6	0	6	0	0	0
15:30 to 15:45	39	0	39	152	1	153	13	0	13	0	0	0	5	1	6	52	3	55	12	0	12	0	0	0
15:45 to 16:00	42	0	42	148	2	150	11	1	12	0	0	0	5	0	5	75	4	79	11	0	11	0	0	0
16:00 to 16:15	50	1	51	154	3	157	10	0	10	0	0	0	6	1	7	54	3	57	7	0	7	0	0	0
16:15 to 16:30	49	1	50	142	3	145	17	0	17	0	0	0	3	1	4	80	5	85	13	0	13	0	0	0
16:30 to 16:45	55	0	55	159	0	159	11	4	15	1	0	1	5	4	9	70	2	72	6	0	6	0	0	0
16:45 to 17:00	51	1	52	154	0	154	16	1	17	1	0	1	3	0	3	78	1	79	17	1	18	0	0	0
17:00 to 17:15	53	1	54	175	2	177	9	1	10	0	0	0	6	2	8	82	2	84	16	0	16	0	0	0
17:15 to 17:30	34	0	34	116	1	117	10	0	10	0	0	0	4	0	4	69	3	72	14	0	14	0	0	0
17:30 to 17:45	37	0	37	158	1	159	9	1	10	0	0	0	5	0	5	86	0	86	12	0	12	0	0	0
17:45 to 18:00	37	0	37	174	1	175	14	0	14	0	0	0	4	0	4	80	1	81	16	0	16	0	0	0
PM Totals	525	5	530	1,797	21	1,818	147	8	155	2	0	2	59	12	71	848	29	877	138	1	139	0	0	0

Approach	Nicholson St												Brunswick Rd											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	3	0	3	166	8	174	29	1	30	0	0	0	10	2	12	79	5	84	59	1	60	0	0	0
7:45 to 8:00	2	0	2	148	6	154	23	0	23	0	0	0	0	0	0	85	3	88	46	0	46	0	0	0
8:00 to 8:15	3	1	4	190	4	194	24	1	25	0	0	0	4	1	5	67	3	70	56	0	56	0	0	0
8:15 to 8:30	1	1	2	167	1	168	19	1	20	0	0	0	9	1	10	84	3	87	46	4	50	0	0	0
8:30 to 8:45	3	2	5	168	5	173	33	1	34	0	0	0	12	1	13	78	3	81	35	3	38	0	0	0
8:45 to 9:00	5	0	5	168	2	170	20	0	20	0	0	0	10	1	11	89	7	96	40	3	43	0	0	0
9:00 to 9:15	5	0	5	121	5	126	32	1	33	0	0	0	14	0	14	70	6	76	52	4	56	0	0	0
9:15 to 9:30	3	1	4	141	7	148	18	1	19	0	0	0	4	2	6	82	3	85	34	9	43	0	0	0
AM Totals	25	5	30	1,269	38	1,307	198	6	204	0	0	0	63	8	71	634	33	667	368	24	392	0	0	0
15:00 to 15:15	5	0	5	117	5	122	11	0	11	0	0	0	23	1	24	101	4	105	57	1	58	0	0	0
15:15 to 15:30	5	0	5	108	1	109	10	0	10	0	0	0	25	4	29	108	7	115	54	3	57	0	0	0
15:30 to 15:45	4	0	4	100	4	104	8	0	8	0	0	0	22	2	24	107	3	110	55	1	56	0	0	0
15:45 to 16:00	9	0	9	95	2	97	9	0	9	0	0	0	20	0	20	135	2	137	61	0	61	0	0	0
16:00 to 16:15	2	0	2	137	2	139	11	0	11	0	0	0	19	0	19	110	2	112	69	4	73	0	0	0
16:15 to 16:30	5	0	5	115	5	120	9	0	9	0	0	0	17	0	17	123	1	124	75	2	77	0	0	0
16:30 to 16:45	2	0	2	116	1	117	15	0	15	0	0	0	35	0	35	113	3	116	57	2	59	0	0	0
16:45 to 17:00	3	0	3	111	4	115	5	0	5	0	0	0	26	0	26	105	3	108	75	0	75	0	0	0
17:00 to 17:15	1	0	1	125	0	125	12	0	12	0	0	0	29	0	29	125	2	127	64	2	66	0	0	0
17:15 to 17:30	7	0	7	106	2	108	9	0	9	0	0	0	24	1	25	117	2	119	68	1	69	0	0	0
17:30 to 17:45	4	0	4	126	1	127	19	0	19	0	0	0	36	1	37	118	4	122	76	0	76	0	0	0
17:45 to 18:00	4	0	4	136	0	136	12	0	12	0	0	0	26	0	26	138	2	140	64	3	67	0	0	0
PM Totals	51	0	51	1,392	27	1,419	130	0	130	0	0	0	302	9	311	1,400	35	1,435	775	19	794	0	0	0

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 4. Holden St / Nicholson St / Brunswick Rd

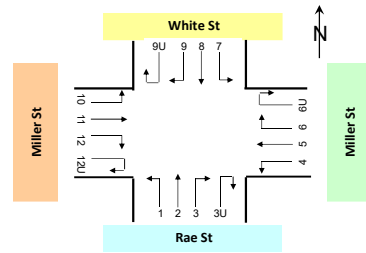
Day/Date : Thu, 23rd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : Hourly Summary



Approach	Nicholson St												Holden St											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	152	4	156	256	18	274	19	4	23	0	0	0	37	2	39	357	15	372	23	1	24	0	0	0
7:45 to 8:45	146	5	151	271	16	287	20	2	22	0	0	0	43	1	44	357	17	374	23	1	24	0	0	0
8:00 to 9:00	158	6	164	288	15	303	18	2	20	1	0	1	49	2	51	358	15	373	20	1	21	0	0	0
8:15 to 9:15	154	8	162	303	13	316	20	2	22	1	0	1	52	3	55	345	15	360	17	1	18	0	0	0
8:30 to 9:30	158	7	165	308	19	327	20	1	21	1	0	1	45	4	49	336	14	350	22	0	22	0	0	0
AM Totals	310	11	321	564	37	601	39	5	44	1	0	1	82	6	88	693	29	722	45	1	46	0	0	0
15:00 to 16:00	159	1	160	565	10	575	51	1	52	0	0	0	23	4	27	249	12	261	37	0	37	0	0	0
15:15 to 16:15	166	2	168	587	8	595	51	1	52	0	0	0	22	3	25	243	14	257	36	0	36	0	0	0
15:30 to 16:30	180	2	182	596	9	605	51	1	52	0	0	0	19	3	22	261	15	276	43	0	43	0	0	0
15:45 to 16:45	196	2	198	603	8	611	49	5	54	1	0	1	19	6	25	279	14	293	37	0	37	0	0	0
16:00 to 17:00	205	3	208	609	6	615	54	5	59	2	0	2	17	6	23	282	11	293	43	1	44	0	0	0
16:15 to 17:15	208	3	211	630	5	635	53	6	59	2	0	2	17	7	24	310	10	320	52	1	53	0	0	0
16:30 to 17:30	193	2	195	604	3	607	46	6	52	2	0	2	18	6	24	299	8	307	53	1	54	0	0	0
16:45 to 17:45	175	2	177	603	4	607	44	3	47	1	0	1	18	2	20	315	6	321	59	1	60	0	0	0
17:00 to 18:00	161	1	162	623	5	628	42	2	44	0	0	0	19	2	21	317	6	323	58	0	58	0	0	0
PM Totals	525	5	530	1,797	21	1,818	147	8	155	2	0	2	59	12	71	848	29	877	138	1	139	0	0	0

Approach	Nicholson St												Brunswick Rd											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	9	2	11	671	19	690	95	3	98	0	0	0	23	4	27	315	14	329	207	5	212	0	0	0
7:45 to 8:45	9	4	13	673	16	689	99	3	102	0	0	0	25	3	28	314	12	326	183	7	190	0	0	0
8:00 to 9:00	12	4	16	693	12	705	96	3	99	0	0	0	35	4	39	318	16	334	177	10	187	0	0	0
8:15 to 9:15	14	3	17	624	13	637	104	3	107	0	0	0	45	3	48	321	19	340	173	14	187	0	0	0
8:30 to 9:30	16	3	19	598	19	617	103	3	106	0	0	0	40	4	44	319	19	338	161	19	180	0	0	0
AM Totals	25	5	30	1,269	38	1,307	198	6	204	0	0	0	63	8	71	634	33	667	368	24	392	0	0	0
15:00 to 16:00	23	0	23	420	12	432	38	0	38	0	0	0	90	7	97	451	16	467	227	5	232	0	0	0
15:15 to 16:15	20	0	20	440	9	449	38	0	38	0	0	0	86	6	92	460	14	474	239	8	247	0	0	0
15:30 to 16:30	20	0	20	447	13	460	37	0	37	0	0	0	78	2	80	475	8	483	260	7	267	0	0	0
15:45 to 16:45	18	0	18	463	10	473	44	0	44	0	0	0	91	0	91	481	8	489	262	8	270	0	0	0
16:00 to 17:00	12	0	12	479	12	491	40	0	40	0	0	0	97	0	97	451	9	460	276	8	284	0	0	0
16:15 to 17:15	11	0	11	467	10	477	41	0	41	0	0	0	107	0	107	466	9	475	271	6	277	0	0	0
16:30 to 17:30	13	0	13	458	7	465	41	0	41	0	0	0	114	1	115	460	10	470	264	5	269	0	0	0
16:45 to 17:45	15	0	15	468	7	475	45	0	45	0	0	0	115	2	117	465	11	476	283	3	286	0	0	0
17:00 to 18:00	16	0	16	493	3	496	52	0	52	0	0	0	115	2	117	498	10	508	272	6	278	0	0	0
PM Totals	51	0	51	1,392	27	1,419	130	0	130	0	0	0	302	9	311	1,400	35	1,435	775	19	794	0	0	0

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 5. Miller St / White St / Rae St
 Day/Date : Thu, 23rd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : 15 mins Data



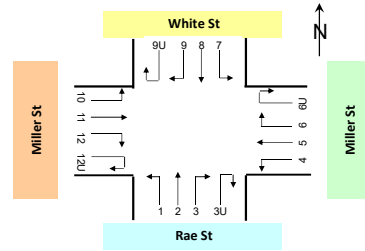
Classifications	Class 1	Class 2
	Lights	Heavies

Approach	Rae St												Miller St											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	0	1	1	3	0	3	0	0	0	0	0	0	13	1	14	11	1	12	4	0	4	0	0	0
7:45 to 8:00	3	0	3	7	0	7	0	0	0	0	0	0	8	1	9	16	1	17	0	0	0	0	0	0
8:00 to 8:15	7	1	8	5	0	5	2	0	2	0	0	0	9	1	10	12	1	13	2	0	2	0	0	0
8:15 to 8:30	0	0	0	7	0	7	0	0	0	0	0	0	7	0	7	21	0	21	6	0	6	0	0	0
8:30 to 8:45	1	0	1	7	0	7	1	0	1	0	0	0	6	0	6	26	2	28	2	0	2	0	0	0
8:45 to 9:00	4	0	4	6	0	6	2	1	3	0	0	0	17	0	17	31	0	31	4	1	5	0	0	0
9:00 to 9:15	1	0	1	7	0	7	2	0	2	0	0	0	9	0	9	24	1	25	6	0	6	0	0	0
9:15 to 9:30	1	0	1	6	0	6	0	0	0	0	0	0	13	0	13	21	1	22	8	0	8	0	0	0
AM Totals	17	2	19	48	0	48	7	1	8	0	0	0	82	3	85	162	7	169	32	1	33	0	0	0
15:00 to 15:15	2	0	2	13	0	13	3	0	3	0	0	0	4	0	4	14	1	15	1	1	2	0	0	0
15:15 to 15:30	0	0	0	11	0	11	6	1	7	0	0	0	4	0	4	6	1	7	3	0	3	0	0	0
15:30 to 15:45	5	1	6	20	0	20	2	0	2	0	0	0	9	0	9	14	1	15	5	0	5	0	0	0
15:45 to 16:00	1	0	1	16	1	17	6	0	6	0	0	0	1	1	2	12	1	13	2	0	2	0	0	0
16:00 to 16:15	5	0	5	23	0	23	4	0	4	0	0	0	4	0	4	12	1	13	7	1	8	0	0	0
16:15 to 16:30	2	0	2	22	0	22	2	0	2	0	0	0	4	0	4	12	2	14	16	0	16	0	0	0
16:30 to 16:45	5	0	5	26	0	26	6	0	6	0	0	0	5	0	5	10	1	11	15	0	15	0	0	0
16:45 to 17:00	6	0	6	17	0	17	6	0	6	0	0	0	5	0	5	13	1	14	8	1	9	0	0	0
17:00 to 17:15	2	0	2	30	1	31	6	0	6	0	0	0	8	0	8	17	1	18	9	0	9	0	0	0
17:15 to 17:30	10	0	10	18	0	18	8	0	8	0	0	0	3	0	3	22	0	22	6	0	6	0	0	0
17:30 to 17:45	9	0	9	27	0	27	9	0	9	1	0	1	7	0	7	22	2	24	11	0	11	1	0	1
17:45 to 18:00	8	0	8	33	1	34	5	0	5	0	0	0	5	0	5	13	1	14	9	0	9	0	0	0
PM Totals	55	1	56	256	3	259	63	1	64	1	0	1	59	1	60	167	13	180	92	3	95	1	0	1

Approach	White St												Miller St											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	2	0	2	20	0	20	0	0	0	0	0	0	0	0	0	10	2	12	9	0	9	0	0	0
7:45 to 8:00	4	0	4	22	0	22	0	0	0	0	0	0	1	0	1	9	1	10	7	0	7	0	0	0
8:00 to 8:15	8	0	8	26	0	26	0	0	0	0	0	0	0	1	1	6	2	8	11	0	11	0	0	0
8:15 to 8:30	1	1	2	32	0	32	0	0	0	0	0	0	2	0	2	6	1	7	12	0	12	0	0	0
8:30 to 8:45	4	0	4	29	0	29	1	0	1	1	0	1	1	0	1	7	1	8	19	0	19	0	0	0
8:45 to 9:00	4	1	5	27	0	27	0	0	0	0	0	0	0	0	0	27	1	28	14	0	14	0	0	0
9:00 to 9:15	2	0	2	14	0	14	1	0	1	0	0	0	1	0	1	13	1	14	6	0	6	0	0	0
9:15 to 9:30	3	0	3	13	0	13	3	0	3	0	0	0	1	0	1	9	2	11	9	1	10	1	0	1
AM Totals	28	2	30	183	0	183	5	0	5	1	0	1	6	1	7	87	11	98	87	1	88	1	0	1
15:00 to 15:15	3	0	3	18	0	18	1	0	1	0	0	0	0	0	0	17	1	18	7	0	7	0	0	0
15:15 to 15:30	7	0	7	21	0	21	1	0	1	0	0	0	0	0	0	15	3	18	10	0	10	0	0	0
15:30 to 15:45	1	0	1	18	0	18	0	0	0	0	0	0	1	0	1	11	2	13	9	0	9	0	0	0
15:45 to 16:00	1	0	1	6	0	6	0	0	0	0	0	0	3	0	3	12	1	13	18	0	18	0	0	0
16:00 to 16:15	0	0	0	10	0	10	1	0	1	0	0	0	0	0	0	10	2	12	9	0	9	0	0	0
16:15 to 16:30	3	0	3	8	0	8	1	0	1	0	0	0	1	0	1	9	1	10	9	0	9	0	0	0
16:30 to 16:45	2	0	2	11	0	11	1	0	1	0	0	0	1	0	1	17	1	18	6	0	6	0	0	0
16:45 to 17:00	5	0	5	5	0	5	3	0	3	0	0	0	1	0	1	21	1	22	2	0	2	0	0	0
17:00 to 17:15	4	0	4	9	0	9	2	0	2	0	0	0	0	0	0	29	0	29	11	0	11	0	0	0
17:15 to 17:30	6	0	6	13	0	13	0	0	0	0	0	0	0	0	0	21	2	23	13	0	13	0	0	0
17:30 to 17:45	2	0	2	22	0	22	0	0	0	0	0	0	1	0	1	24	1	25	5	0	5	0	0	0
17:45 to 18:00	8	0	8	12	0	12	0	0	0	0	0	0	2	0	2	28	1	29	10	0	10	0	0	0
PM Totals	42	0	42	153	0	153	10	0	10	0	0	0	10	0	10	214	16	230	109	0	109	0	0	0

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 5. Miller St / White St / Rae St

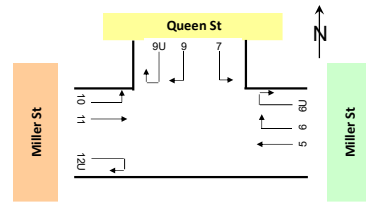
Day/Date : Thu, 23rd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : Hourly Summary



Approach	Rae St												Miller St											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	10	2	12	22	0	22	2	0	2	0	0	0	37	3	40	60	3	63	12	0	12	0	0	0
7:45 to 8:45	11	1	12	26	0	26	3	0	3	0	0	0	30	2	32	75	4	79	10	0	10	0	0	0
8:00 to 9:00	12	1	13	25	0	25	5	1	6	0	0	0	39	1	40	90	3	93	14	1	15	0	0	0
8:15 to 9:15	6	0	6	27	0	27	5	1	6	0	0	0	39	0	39	102	3	105	18	1	19	0	0	0
8:30 to 9:30	7	0	7	26	0	26	5	1	6	0	0	0	45	0	45	102	4	106	20	1	21	0	0	0
AM Totals	17	2	19	48	0	48	7	1	8	0	0	0	82	3	85	162	7	169	32	1	33	0	0	0
15:00 to 16:00	8	1	9	60	1	61	17	1	18	0	0	0	18	1	19	46	4	50	11	1	12	0	0	0
15:15 to 16:15	11	1	12	70	1	71	18	1	19	0	0	0	18	1	19	44	4	48	17	1	18	0	0	0
15:30 to 16:30	13	1	14	81	1	82	14	0	14	0	0	0	18	1	19	50	5	55	30	1	31	0	0	0
15:45 to 16:45	13	0	13	87	1	88	18	0	18	0	0	0	14	1	15	46	5	51	40	1	41	0	0	0
16:00 to 17:00	18	0	18	88	0	88	18	0	18	0	0	0	18	0	18	47	5	52	46	2	48	0	0	0
16:15 to 17:15	15	0	15	95	1	96	20	0	20	0	0	0	22	0	22	52	5	57	48	1	49	0	0	0
16:30 to 17:30	23	0	23	91	1	92	26	0	26	0	0	0	21	0	21	62	3	65	38	1	39	0	0	0
16:45 to 17:45	27	0	27	92	1	93	29	0	29	1	0	1	23	0	23	74	4	78	34	1	35	1	0	1
17:00 to 18:00	29	0	29	108	2	110	28	0	28	1	0	1	23	0	23	74	4	78	35	0	35	1	0	1
PM Totals	55	1	56	256	3	259	63	1	64	1	0	1	59	1	60	167	13	180	92	3	95	1	0	1

Approach	White St												Miller St											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	15	1	16	100	0	100	0	0	0	0	0	0	3	1	4	31	6	37	39	0	39	0	0	0
7:45 to 8:45	17	1	18	109	0	109	1	0	1	1	0	1	4	1	5	28	5	33	49	0	49	0	0	0
8:00 to 9:00	17	2	19	114	0	114	1	0	1	1	0	1	3	1	4	46	5	51	56	0	56	0	0	0
8:15 to 9:15	11	2	13	102	0	102	2	0	2	1	0	1	4	0	4	53	4	57	51	0	51	0	0	0
8:30 to 9:30	13	1	14	83	0	83	5	0	5	1	0	1	3	0	3	56	5	61	48	1	49	1	0	1
AM Totals	28	2	30	183	0	183	5	0	5	1	0	1	6	1	7	87	11	98	87	1	88	1	0	1
15:00 to 16:00	12	0	12	63	0	63	2	0	2	0	0	0	4	0	4	55	7	62	44	0	44	0	0	0
15:15 to 16:15	9	0	9	55	0	55	2	0	2	0	0	0	4	0	4	48	8	56	46	0	46	0	0	0
15:30 to 16:30	5	0	5	42	0	42	2	0	2	0	0	0	5	0	5	42	6	48	45	0	45	0	0	0
15:45 to 16:45	6	0	6	35	0	35	3	0	3	0	0	0	5	0	5	48	5	53	42	0	42	0	0	0
16:00 to 17:00	10	0	10	34	0	34	6	0	6	0	0	0	3	0	3	57	5	62	26	0	26	0	0	0
16:15 to 17:15	14	0	14	33	0	33	7	0	7	0	0	0	3	0	3	76	3	79	28	0	28	0	0	0
16:30 to 17:30	17	0	17	38	0	38	6	0	6	0	0	0	2	0	2	88	4	92	32	0	32	0	0	0
16:45 to 17:45	17	0	17	49	0	49	5	0	5	0	0	0	2	0	2	95	4	99	31	0	31	0	0	0
17:00 to 18:00	20	0	20	56	0	56	2	0	2	0	0	0	3	0	3	102	4	106	39	0	39	0	0	0
PM Totals	42	0	42	153	0	153	10	0	10	0	0	0	10	0	10	214	16	230	109	0	109	0	0	0

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 6. Miller St / Queen St
 Day/Date : Thu, 23rd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : 15 mins Data



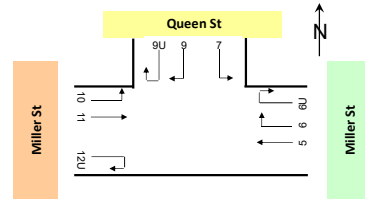
Classifications	Class 1	Class 2
	Lights	Heavies

Approach	Miller St								
Direction	Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	27	1	28	0	0	0	0	0	0
7:45 to 8:00	23	3	26	0	0	0	0	0	0
8:00 to 8:15	24	2	26	0	0	0	0	0	0
8:15 to 8:30	31	1	32	0	0	0	0	0	0
8:30 to 8:45	33	1	34	0	0	0	0	0	0
8:45 to 9:00	54	1	55	3	0	3	0	0	0
9:00 to 9:15	39	1	40	0	0	0	0	0	0
9:15 to 9:30	37	1	38	1	0	1	0	0	0
AM Totals	268	11	279	4	0	4	0	0	0
15:00 to 15:15	18	2	20	0	0	0	0	0	0
15:15 to 15:30	10	1	11	0	0	0	0	0	0
15:30 to 15:45	28	1	29	0	0	0	0	0	0
15:45 to 16:00	17	2	19	0	0	0	0	0	0
16:00 to 16:15	23	2	25	1	0	1	0	0	0
16:15 to 16:30	32	2	34	0	0	0	0	0	0
16:30 to 16:45	31	1	32	1	0	1	1	0	1
16:45 to 17:00	29	2	31	0	0	0	0	0	0
17:00 to 17:15	30	1	31	1	0	1	0	0	0
17:15 to 17:30	32	0	32	0	0	0	0	0	0
17:30 to 17:45	38	2	40	0	0	0	0	0	0
17:45 to 18:00	25	1	26	0	0	0	0	0	0
PM Totals	313	17	330	3	0	3	1	0	1

Approach	Queen St						Miller St											
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	0	0	0	0	0	0	0	0	0	13	2	15	0	0	0	0	0	0
7:45 to 8:00	0	0	0	0	0	0	0	0	0	13	1	14	0	0	0	0	0	0
8:00 to 8:15	0	0	0	1	0	1	0	0	0	14	1	15	1	0	1	0	0	0
8:15 to 8:30	1	0	1	3	0	3	0	0	0	7	2	9	0	0	0	0	0	0
8:30 to 8:45	1	0	1	0	0	0	0	0	0	11	1	12	0	0	0	0	0	0
8:45 to 9:00	0	0	0	0	0	0	0	1	0	32	3	35	0	0	0	0	0	0
9:00 to 9:15	0	0	0	0	0	0	0	0	0	18	1	19	0	0	0	0	0	0
9:15 to 9:30	0	0	0	1	0	1	0	0	0	13	2	15	1	0	1	0	0	0
AM Totals	2	0	2	5	0	5	0	0	0	121	13	134	2	0	2	0	0	0
15:00 to 15:15	0	0	0	1	0	1	0	0	0	23	1	24	0	0	0	0	0	0
15:15 to 15:30	0	0	0	0	0	0	0	1	0	26	4	30	0	0	0	0	0	0
15:30 to 15:45	0	0	0	0	0	0	0	0	0	12	2	14	0	0	0	0	0	0
15:45 to 16:00	0	0	0	0	0	0	0	1	0	20	1	21	0	0	0	0	0	0
16:00 to 16:15	0	0	0	0	0	0	0	0	0	13	2	15	0	0	0	0	0	0
16:15 to 16:30	0	0	0	0	0	0	0	0	0	12	1	13	0	0	0	0	0	0
16:30 to 16:45	0	0	0	0	0	0	0	1	0	23	1	24	0	0	0	0	0	0
16:45 to 17:00	0	0	0	0	0	0	0	1	0	33	1	34	0	0	0	0	0	0
17:00 to 17:15	1	0	1	0	0	0	0	0	0	38	1	39	0	0	0	0	0	0
17:15 to 17:30	0	0	0	0	0	0	0	0	0	36	1	37	1	0	1	0	0	0
17:30 to 17:45	0	0	0	0	0	0	0	1	0	33	1	34	0	0	0	0	0	0
17:45 to 18:00	0	0	0	1	0	1	0	0	0	40	1	41	0	0	0	0	0	0
PM Totals	1	0	1	2	0	2	0	0	0	309	17	326	1	0	1	0	0	0

Job No. : V1602
Client : GTA
Suburb : Fitzroy North
Location : 6. Miller St / Queen St

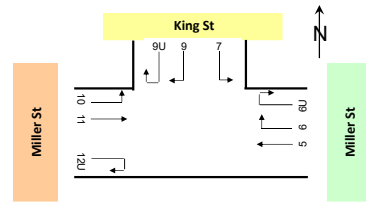
Day/Date : Thu, 23rd May 2019
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



Approach	Miller St								
Direction									
Time Period									
7:30 to 8:30									
7:45 to 8:45									
8:00 to 9:00									
8:15 to 9:15									
8:30 to 9:30									
AM Totals									
15:00 to 16:00									
15:15 to 16:15									
15:30 to 16:30									
15:45 to 16:45									
16:00 to 17:00									
16:15 to 17:15									
16:30 to 17:30									
16:45 to 17:45									
17:00 to 18:00									
PM Totals									

Approach	Queen St						Miller St											
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	1	0	1	4	0	4	0	0	0	1	0	1	47	6	53	1	0	1
7:45 to 8:45	2	0	2	4	0	4	0	0	0	1	1	2	45	5	50	1	0	1
8:00 to 9:00	2	0	2	4	0	4	0	0	0	2	1	3	64	7	71	1	0	1
8:15 to 9:15	2	0	2	3	0	3	0	0	0	1	1	2	68	7	75	0	0	0
8:30 to 9:30	1	0	1	1	0	1	0	0	0	1	1	2	74	7	81	1	0	1
AM Totals	2	0	2	5	0	5	0	0	0	2	1	3	121	13	134	2	0	2
15:00 to 16:00	0	0	0	1	0	1	0	0	0	2	0	2	81	8	89	0	0	0
15:15 to 16:15	0	0	0	0	0	0	0	0	0	2	0	2	71	9	80	0	0	0
15:30 to 16:30	0	0	0	0	0	0	0	0	0	1	0	1	57	6	63	0	0	0
15:45 to 16:45	0	0	0	0	0	0	0	0	0	2	0	2	68	5	73	0	0	0
16:00 to 17:00	0	0	0	0	0	0	0	0	0	2	0	2	81	5	86	0	0	0
16:15 to 17:15	1	0	1	0	0	0	0	0	0	2	0	2	106	4	110	0	0	0
16:30 to 17:30	1	0	1	0	0	0	0	0	0	2	0	2	130	4	134	1	0	1
16:45 to 17:45	1	0	1	0	0	0	0	0	0	2	0	2	140	4	144	1	0	1
17:00 to 18:00	1	0	1	1	0	1	0	0	0	3	0	3	147	4	151	1	0	1
PM Totals	1	0	1	2	0	2	0	0	0	7	0	7	309	17	326	1	0	1

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 7. Miller St / King St
 Day/Date : Wed, 22nd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : 15 mins Data



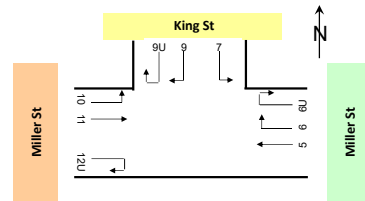
	Class 1	Class 2
Classifications	Lights	Heavies

Approach	Miller St									
Direction	Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)			
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:30 to 7:45	28	1	29	2	0	2	0	0	0	
7:45 to 8:00	14	1	15	2	0	2	0	0	0	
8:00 to 8:15	22	2	24	4	0	4	0	0	0	
8:15 to 8:30	15	1	16	1	0	1	0	0	0	
8:30 to 8:45	23	1	24	4	0	4	0	0	0	
8:45 to 9:00	48	1	49	8	0	8	0	0	0	
9:00 to 9:15	38	1	39	3	0	3	0	0	0	
9:15 to 9:30	27	2	29	1	0	1	0	0	0	
AM Totals	215	10	225	25	0	25	0	0	0	
15:00 to 15:15	9	1	10	6	0	6	0	0	0	
15:15 to 15:30	21	1	22	2	0	2	0	0	0	
15:30 to 15:45	16	0	16	14	0	14	0	0	0	
15:45 to 16:00	12	1	13	1	0	1	0	0	0	
16:00 to 16:15	18	1	19	3	0	3	0	0	0	
16:15 to 16:30	15	1	16	2	0	2	0	0	0	
16:30 to 16:45	20	3	23	7	0	7	0	0	0	
16:45 to 17:00	15	1	16	8	0	8	0	0	0	
17:00 to 17:15	17	1	18	1	0	1	0	0	0	
17:15 to 17:30	24	1	25	5	0	5	0	0	0	
17:30 to 17:45	37	1	38	5	0	5	1	0	1	
17:45 to 18:00	32	1	33	8	0	8	0	0	0	
PM Totals	236	13	249	62	0	62	1	0	1	

Approach	King St									Miller St								
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	2	0	2	3	0	3	0	0	0	0	0	0	6	2	8	0	0	0
7:45 to 8:00	2	0	2	5	0	5	0	1	1	1	0	1	17	1	18	0	0	0
8:00 to 8:15	6	0	6	5	0	5	0	0	0	0	0	0	26	2	28	0	0	0
8:15 to 8:30	8	0	8	5	0	5	0	0	0	0	1	1	12	1	13	0	0	0
8:30 to 8:45	3	0	3	6	0	6	0	0	0	0	1	1	26	2	28	0	0	0
8:45 to 9:00	10	0	10	10	0	10	0	0	0	1	1	2	24	1	25	0	0	0
9:00 to 9:15	8	0	8	7	0	7	0	0	0	1	1	2	11	2	13	0	0	0
9:15 to 9:30	4	0	4	6	0	6	0	0	0	0	0	0	11	0	11	0	0	0
AM Totals	43	0	43	47	0	47	0	1	1	3	4	7	133	11	144	0	0	0
15:00 to 15:15	12	0	12	2	0	2	0	0	0	1	0	1	14	0	14	0	0	0
15:15 to 15:30	6	1	7	1	0	1	0	0	0	1	0	1	22	2	24	0	0	0
15:30 to 15:45	8	0	8	3	0	3	0	0	0	2	0	2	26	1	27	0	0	0
15:45 to 16:00	13	0	13	7	0	7	0	0	0	4	0	4	26	0	26	0	0	0
16:00 to 16:15	9	0	9	1	0	1	0	0	0	4	0	4	25	2	27	0	0	0
16:15 to 16:30	7	0	7	4	0	4	0	0	0	3	0	3	21	1	22	0	0	0
16:30 to 16:45	9	1	10	4	0	4	0	0	0	4	0	4	19	1	20	0	0	0
16:45 to 17:00	6	0	6	5	0	5	0	0	0	3	0	3	19	1	20	0	0	0
17:00 to 17:15	6	0	6	5	0	5	0	0	0	2	0	2	25	1	26	0	0	0
17:15 to 17:30	6	0	6	2	0	2	0	0	0	1	0	1	25	1	26	0	0	0
17:30 to 17:45	11	0	11	4	0	4	0	0	0	4	0	4	16	1	17	0	0	0
17:45 to 18:00	11	0	11	7	0	7	0	0	0	6	0	6	26	1	27	0	0	0
PM Totals	104	2	106	45	0	45	0	0	0	35	0	35	264	12	276	0	0	0

Job No. : V1602
Client : GTA
Suburb : Fitzroy North
Location : 7. Miller St / King St

Day/Date : Wed, 22nd May 2019
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary

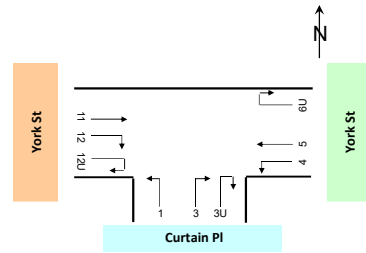


Approach	Miller St								
Direction									
Time Period									
7:30 to 8:30									
7:45 to 8:45									
8:00 to 9:00									
8:15 to 9:15									
8:30 to 9:30									
AM Totals									
15:00 to 16:00									
15:15 to 16:15									
15:30 to 16:30									
15:45 to 16:45									
16:00 to 17:00									
16:15 to 17:15									
16:30 to 17:30									
16:45 to 17:45									
17:00 to 18:00									
PM Totals									

Approach	King St						Miller St											
Direction	Direction 7 (Left Turn)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	18	0	18	18	0	18	1	1	2	61	6	67	0	0	0	0	0	0
7:45 to 8:45	19	0	19	21	0	21	1	1	2	81	6	87	0	0	0	0	0	0
8:00 to 9:00	27	0	27	26	0	26	0	0	0	1	3	4	88	6	94	0	0	0
8:15 to 9:15	29	0	29	28	0	28	0	0	0	2	4	6	73	6	79	0	0	0
8:30 to 9:30	25	0	25	29	0	29	0	0	0	2	3	5	72	5	77	0	0	0
AM Totals	43	0	43	47	0	47	0	1	1	3	4	7	133	11	144	0	0	0
15:00 to 16:00	39	1	40	13	0	13	0	0	0	8	0	8	88	3	91	0	0	0
15:15 to 16:15	36	1	37	12	0	12	0	0	0	11	0	11	99	5	104	0	0	0
15:30 to 16:30	37	0	37	15	0	15	0	0	0	13	0	13	98	4	102	0	0	0
15:45 to 16:45	38	1	39	16	0	16	0	0	0	15	0	15	91	4	95	0	0	0
16:00 to 17:00	31	1	32	14	0	14	0	0	0	14	0	14	84	5	89	0	0	0
16:15 to 17:15	28	1	29	18	0	18	0	0	0	12	0	12	84	4	88	0	0	0
16:30 to 17:30	27	1	28	16	0	16	0	0	0	10	0	10	88	4	92	0	0	0
16:45 to 17:45	29	0	29	16	0	16	0	0	0	10	0	10	85	4	89	0	0	0
17:00 to 18:00	34	0	34	18	0	18	0	0	0	13	0	13	92	4	96	0	0	0
PM Totals	104	2	106	45	0	45	0	0	0	35	0	35	264	12	276	0	0	0

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 8. York St / Curtain Pl
 Day/Date : Thu, 23rd May 2019
 Weather : Fine
 Description : Classified Intersection Count
 : 15 mins Data

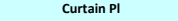
Classifications
 Class 1 : Lights
 Class 2 : Heavies



Approach	Curtain Pl									York St								
Direction	Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0
7:45 to 8:00	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0
8:00 to 8:15	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	0	0	0
8:15 to 8:30	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0
8:30 to 8:45	0	0	0	1	0	1	0	0	0	0	0	0	10	0	10	0	0	0
8:45 to 9:00	1	0	1	0	0	0	0	0	0	0	0	0	15	1	16	0	0	0
9:00 to 9:15	0	0	0	0	0	0	0	0	0	0	0	0	5	2	7	0	0	0
9:15 to 9:30	0	0	0	1	0	1	0	0	0	0	0	0	6	0	6	0	0	0
AM Totals	1	0	1	2	0	2	0	0	0	0	0	0	68	3	71	0	0	0
15:00 to 15:15	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0
15:15 to 15:30	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	1	0	1
15:30 to 15:45	0	0	0	1	0	1	0	0	0	0	0	0	4	0	4	0	0	0
15:45 to 16:00	0	0	0	0	0	0	0	0	0	1	0	1	2	0	2	0	0	0
16:00 to 16:15	0	0	0	2	0	2	0	0	0	0	0	0	8	0	8	0	0	0
16:15 to 16:30	0	0	0	0	0	0	0	0	0	1	0	1	6	0	6	0	0	0
16:30 to 16:45	1	0	1	0	0	0	0	0	0	2	0	2	4	0	4	0	0	0
16:45 to 17:00	0	0	0	1	0	1	0	0	0	1	0	1	7	0	7	0	0	0
17:00 to 17:15	0	0	0	1	0	1	0	0	0	0	0	0	5	0	5	0	0	0
17:15 to 17:30	0	0	0	0	0	0	0	0	0	1	0	1	4	0	4	0	0	0
17:30 to 17:45	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0
17:45 to 18:00	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10	1	0	1
PM Totals	1	0	1	5	0	5	0	0	0	6	0	6	65	0	65	2	0	2

Approach	York St								
Direction	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	5	0	5	0	0	0	0	0	0
7:45 to 8:00	9	0	9	0	0	0	1	0	1
8:00 to 8:15	9	0	9	0	0	0	0	0	0
8:15 to 8:30	11	1	12	0	0	0	0	0	0
8:30 to 8:45	5	0	5	0	0	0	0	0	0
8:45 to 9:00	9	0	9	0	0	0	0	0	0
9:00 to 9:15	5	0	5	0	0	0	0	0	0
9:15 to 9:30	10	0	10	0	0	0	0	0	0
AM Totals	63	1	64	0	0	0	1	0	1
15:00 to 15:15	8	0	8	0	0	0	0	0	0
15:15 to 15:30	10	0	10	0	0	0	0	0	0
15:30 to 15:45	8	0	8	0	0	0	0	0	0
15:45 to 16:00	5	0	5	0	0	0	0	0	0
16:00 to 16:15	7	0	7	0	0	0	0	0	0
16:15 to 16:30	5	0	5	0	0	0	0	0	0
16:30 to 16:45	8	0	8	0	0	0	0	0	0
16:45 to 17:00	11	0	11	0	0	0	0	0	0
17:00 to 17:15	12	0	12	0	0	0	0	0	0
17:15 to 17:30	10	0	10	0	0	0	0	0	0
17:30 to 17:45	7	0	7	0	0	0	0	0	0
17:45 to 18:00	15	1	16	0	0	0	0	0	0
PM Totals	106	1	107	0	0	0	0	0	0

: Hourly Summary

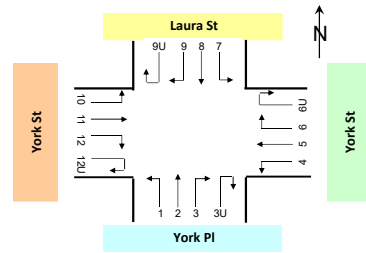


Approach		York St								
Direction		Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30		34	1	35	0	0	0	1	0	1
7:45 to 8:45		34	1	35	0	0	0	1	0	1
8:00 to 9:00		34	1	35	0	0	0	0	0	0
8:15 to 9:15		30	1	31	0	0	0	0	0	0
8:30 to 9:30		29	0	29	0	0	0	0	0	0
AM Totals		63	1	64	0	0	0	1	0	1
15:00 to 16:00		31	0	31	0	0	0	0	0	0
15:15 to 16:15	30	0	30	0	0	0	0	0	0	
15:30 to 16:30	25	0	25	0	0	0	0	0	0	
15:45 to 16:45	25	0	25	0	0	0	0	0	0	
16:00 to 17:00	31	0	31	0	0	0	0	0	0	
16:15 to 17:15	36	0	36	0	0	0	0	0	0	
16:30 to 17:30	41	0	41	0	0	0	0	0	0	
16:45 to 17:45	40	0	40	0	0	0	0	0	0	
17:00 to 18:00	44	1	45	0	0	0	0	0	0	
PM Totals	106	1	107	0	0	0	0	0	0	

Approach	York St									
Direction										
Time Period	Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)			
	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	
7:30 to 8:30	34	1	35	0	0	0	1	0	1	
7:45 to 8:45	34	1	35	0	0	0	1	0	1	
8:00 to 9:00	34	1	35	0	0	0	0	0	0	
8:15 to 9:15	30	1	31	0	0	0	0	0	0	
8:30 to 9:30	29	0	29	0	0	0	0	0	0	
AM Totals	63	1	64	0	0	0	1	0	1	
15:00 to 16:00	31	0	31	0	0	0	0	0	0	
15:15 to 16:15	30	0	30	0	0	0	0	0	0	
15:30 to 16:30	25	0	25	0	0	0	0	0	0	
15:45 to 16:45	25	0	25	0	0	0	0	0	0	
16:00 to 17:00	31	0	31	0	0	0	0	0	0	
16:15 to 17:15	36	0	36	0	0	0	0	0	0	
16:30 to 17:30	41	0	41	0	0	0	0	0	0	
16:45 to 17:45	40	0	40	0	0	0	0	0	0	
17:00 to 18:00	44	1	45	0	0	0	0	0	0	
PM Totals	106	1	107	0	0	0	0	0	0	

Job No. : V1602
Client : GTA
Suburb : Fitzroy North
Location : 2. York St / York Pl / Laura St
Day/Date : Tue,18th Jun 2019
Weather : Fine
Description : Classified Intersection Count
: 15 mins Data

Classifications
Class 1 : Lights
Class 2 : Heavies

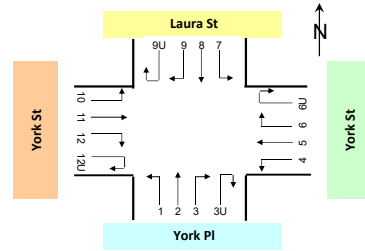


Approach	York Pl												York St											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	1	0	1	0	0	0
7:45 to 8:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	1	0	0	0	0	0	0
8:00 to 8:15	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	5	0	5	0	1	1	0	0	0
8:15 to 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	15	0	0	0	0	0	0
8:30 to 8:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7	0	7	1	0	1	1	0	1
8:45 to 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	0	13	1	0	1	1	0	1
9:00 to 9:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	10	0	10	0	1	1	1	0	1
9:15 to 9:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	1	0	1
AM Totals	1	0	1	0	0	0	1	0	1	0	0	0	7	0	7	64	0	64	3	2	5	4	0	4
15:00 to 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	0
15:15 to 15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
15:30 to 15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0
15:45 to 16:00	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	6	0	6	1	0	1	0	0	0
16:00 to 16:15	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	5	0	5	2	0	2	0	0	0
16:15 to 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0
16:30 to 16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	1	0	1	2	0	2
16:45 to 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	2	0	2	0	0	0
17:00 to 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0
17:15 to 17:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
17:30 to 17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0
17:45 to 18:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	1	1	0	1
PM Totals	2	0	2	0	0	0	1	0	1	0	0	0	4	0	4	45	0	45	7	0	7	3	0	3

Approach	Laura St												York St											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 7:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	0	0	0	0	0	0
7:45 to 8:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	1	0	1	0	0	0
8:00 to 8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	0	0	0	0
8:15 to 8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0
8:30 to 8:45	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0
8:45 to 9:00	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0
9:00 to 9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0
9:15 to 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	9	0	0	0	0	0	0
AM Totals	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	48	1	49	1	0	1	0	0	0
15:00 to 15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0	0	0	0
15:15 to 15:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0
15:30 to 15:45	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	8	1	9	0	0	0	0	0	0
15:45 to 16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	1	0	1	0	0	0
16:00 to 16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	1	0	1	0	0	0
16:15 to 16:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	0
16:30 to 16:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8	0	8	0	0	0	0	0	0
16:45 to 17:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	12	0	12	0	0	0	0	0	0
17:00 to 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	12	0	0	0	0	0	0
17:15 to 17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	0	15	0	0	0	0	0	0
17:30 to 17:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	0	0	0	0	0	0
17:45 to 18:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	1	0	1	0	0	0
PM Totals	5	0	5	0	0	0	1	0	1	0	0	0	1	0	1	117	1	118	3	0	3	0	0	0

Job No. : V1602
 Client : GTA
 Suburb : Fitzroy North
 Location : 2. York St / York Pl / Laura St

Day/Date : Tue,18th Jun 2019
 Weather : Fine
 Description : Classified Intersection Count
 : Hourly Summary

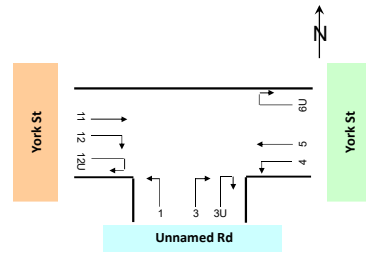


Approach	York Pl												York St											
Direction	Direction 1 (Left Turn)			Direction 2 (Through)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6 (Right Turn)			Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	0	0	0	0	0	0	1	0	1	0	0	0	4	0	4	29	0	29	1	1	2	0	0	0
7:45 to 8:45	0	0	0	0	0	0	1	0	1	0	0	0	6	0	6	28	0	28	1	1	2	1	0	1
8:00 to 9:00	0	0	0	0	0	0	1	0	1	0	0	0	4	0	4	40	0	40	2	1	3	2	0	2
8:15 to 9:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	45	0	45	2	1	3	3	0	3
8:30 to 9:30	1	0	1	0	0	0	0	0	0	0	0	0	3	0	3	35	0	35	2	1	3	4	0	4
AM Totals	1	0	1	0	0	0	1	0	1	0	0	0	7	0	7	64	0	64	3	2	5	4	0	4
15:00 to 16:00	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	14	0	14	1	0	1	0	0	0
15:15 to 16:15	1	0	1	0	0	0	1	0	1	0	0	0	2	0	2	15	0	15	3	0	3	0	0	0
15:30 to 16:30	1	0	1	0	0	0	1	0	1	0	0	0	2	0	2	17	0	17	3	0	3	0	0	0
15:45 to 16:45	1	0	1	0	0	0	1	0	1	0	0	0	2	0	2	19	0	19	4	0	4	2	0	2
16:00 to 17:00	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	18	0	18	5	0	5	2	0	2
16:15 to 17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	18	3	0	3	2	0	2
16:30 to 17:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	15	0	15	3	0	3	2	0	2
16:45 to 17:45	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	16	0	16	2	0	2	0	0	0
17:00 to 18:00	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	13	0	13	1	0	1	1	0	1
PM Totals	2	0	2	0	0	0	1	0	1	0	0	0	4	0	4	45	0	45	7	0	7	3	0	3

Approach	Laura St												York St											
Direction	Direction 7 (Left Turn)			Direction 8 (Through)			Direction 9 (Right Turn)			Direction 9U (U Turn)			Direction 10 (Left Turn)			Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Time Period	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
7:30 to 8:30	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	29	0	29	1	0	1	0	0	0
7:45 to 8:45	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	22	0	22	1	0	1	0	0	0
8:00 to 9:00	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	22	0	22	0	0	0	0	0	0
8:15 to 9:15	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	14	0	14	0	0	0	0	0	0
8:30 to 9:30	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	19	1	20	0	0	0	0	0	0
AM Totals	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	48	1	49	1	0	1	0	0	0
15:00 to 16:00	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	29	1	30	1	0	1	0	0	0
15:15 to 16:15	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	30	1	31	2	0	2	0	0	0
15:30 to 16:30	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	30	1	31	2	0	2	0	0	0
15:45 to 16:45	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	30	0	30	2	0	2	0	0	0
16:00 to 17:00	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	35	0	35	1	0	1	0	0	0
16:15 to 17:15	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	40	0	40	0	0	0	0	0	0
16:30 to 17:30	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	47	0	47	0	0	0	0	0	0
16:45 to 17:45	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	56	0	56	0	0	0	0	0	0
17:00 to 18:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	53	0	53	1	0	1	0	0	0
PM Totals	5	0	5	0	0	0	1	0	1	0	0	0	1	0	1	117	1	118	3	0	3	0	0	0

Job No. : V1602
Client : GTA
Suburb : Fitzroy North
Location : 1. York St / Unnamed Rd

Day/Date : Tue,18th Jun 2019
Weather : Fine
Description : Classified Intersection Count
: 15 mins Data

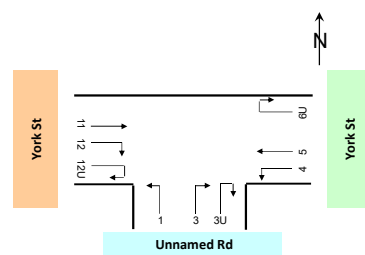


	Class 1	Class 2
Classifications	Lights	Heavies

Approach				Unnamed Rd												York St											
Direction				Direction 1 (Left Turn)			Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)			Direction 6U (U Turn)								
Time Period				Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total						
7:30 to 7:45				0	0	0	0	0	0	0	0	0	2	0	2	8	0	8	0	0	0						
7:45 to 8:00				1	0	1	0	0	0	0	0	0	11	0	11	3	0	3	0	0	0						
8:00 to 8:15				0	0	0	0	0	0	0	0	0	2	0	2	9	1	10	0	0	0						
8:15 to 8:30				0	0	0	0	0	0	0	0	0	3	0	3	16	0	16	0	0	0						
8:30 to 8:45				0	0	0	0	0	0	0	0	0	1	0	1	9	0	9	1	0	1						
8:45 to 9:00				0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	1	0	1						
9:00 to 9:15				0	0	0	0	0	0	0	0	0	0	0	0	13	1	14	0	0	0						
9:15 to 9:30				0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0						
AM Totals				1	0	1	0	0	0	0	0	0	19	0	19	81	2	83	2	0	2						
15:00 to 15:15				0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0						
15:15 to 15:30				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						
15:30 to 15:45				0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0						
15:45 to 16:00				0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0						
16:00 to 16:15				0	0	0	0	0	0	0	0	0	0	0	0	11	0	11	0	0	0						
16:15 to 16:30				0	0	0	0	0	0	0	0	0	1	0	1	5	0	5	0	0	0						
16:30 to 16:45				0	0	0	0	0	0	0	0	0	0	0	0	9	0	9	1	0	1						
16:45 to 17:00				0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0						
17:00 to 17:15				0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0						
17:15 to 17:30				0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0						
17:30 to 17:45				0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0						
17:45 to 18:00				0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0						
PM Totals				0	0	0	0	0	0	0	0	0	1	0	1	69	0	69	1	0	1						

Approach				York St											
Direction				Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)					
Time Period				Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total			
7:30 to 7:45				13	0	13	0	0	0	0	0	0			
7:45 to 8:00				7	0	7	0	0	0	0	0	0			
8:00 to 8:15				12	0	12	1	0	1	0	0	0			
8:15 to 8:30				3	0	3	0	0	0	0	0	0			
8:30 to 8:45				4	0	4	0	0	0	0	0	0			
8:45 to 9:00				7	0	7	0	0	0	0	0	0			
9:00 to 9:15				5	0	5	0	0	0	0	0	0			
9:15 to 9:30				10	1	11	0	0	0	0	0	0			
AM Totals				61	1	62	1	0	1	0	0	0			
15:00 to 15:15				7	0	7	0	0	0	0	0	0			
15:15 to 15:30				9	0	9	0	0	0	0	0	0			
15:30 to 15:45				8	1	9	0	0	0	0	0	0			
15:45 to 16:00				9	0	9	0	0	0	0	0	0			
16:00 to 16:15				8	0	8	0	0	0	0	0	0			
16:15 to 16:30				8	0	8	0	0	0	0	0	0			
16:30 to 16:45				9	0	9	0	0	0	0	0	0			
16:45 to 17:00				16	0	16	0	0	0	0	0	0			
17:00 to 17:15				12	0	12	0	0	0	0	0	0			
17:15 to 17:30				15	0	15	0	0	0	0	0	0			
17:30 to 17:45				20	0	20	0	0	0	0	0	0			
17:45 to 18:00				10	0	10	0	0	0	0	0	0			
PM Totals				131	1	132	0	0	0	0	0	0			

Day/Date : Tue,18th Jun 2019
Weather : Fine
Description : Classified Intersection Count
: Hourly Summary



Approach	Unnamed Rd									York St										
Direction	Direction 1 (Left Turn)				Direction 3 (Right Turn)			Direction 3U (U Turn)			Direction 4 (Left Turn)			Direction 5 (Through)				Direction 6U (U Turn)		
Time Period	Lights	Heavies	Total		Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total		Lights	Heavies	Total
7:30 to 8:30	1	0	1		0	0	0	0	0	0	18	0	18	36	1	37		0	0	0
7:45 to 8:45	1	0	1		0	0	0	0	0	0	17	0	17	37	1	38		1	0	1
8:00 to 9:00	0	0	0		0	0	0	0	0	0	6	0	6	51	1	52		2	0	2
8:15 to 9:15	0	0	0		0	0	0	0	0	0	4	0	4	55	1	56		2	0	2
8:30 to 9:30	0	0	0		0	0	0	0	0	0	1	0	1	45	1	46		2	0	2
AM Totals	1	0	1		0	0	0	0	0	0	19	0	19	81	2	83		2	0	2
15:00 to 16:00	0	0	0		0	0	0	0	0	0	0	0	0	14	0	14		0	0	0
15:15 to 16:15	0	0	0		0	0	0	0	0	0	0	0	0	22	0	22		0	0	0
15:30 to 16:30	0	0	0		0	0	0	0	0	0	1	0	1	27	0	27		0	0	0
15:45 to 16:45	0	0	0		0	0	0	0	0	0	1	0	1	32	0	32		1	0	1
16:00 to 17:00	0	0	0		0	0	0	0	0	0	1	0	1	32	0	32		1	0	1
16:15 to 17:15	0	0	0		0	0	0	0	0	0	1	0	1	27	0	27		1	0	1
16:30 to 17:30	0	0	0		0	0	0	0	0	0	0	0	0	24	0	24		1	0	1
16:45 to 17:45	0	0	0		0	0	0	0	0	0	0	0	0	23	0	23		0	0	0
17:00 to 18:00	0	0	0		0	0	0	0	0	0	0	0	0	23	0	23		0	0	0
PM Totals	0	0	0		0	0	0	0	0	0	1	0	1	69	0	69		1	0	

Approach	York St									
Direction										
Time Period										
7:30 to 8:30										
7:45 to 8:45										
8:00 to 9:00										
8:15 to 9:15										
8:30 to 9:30										
AM Totals										
15:00 to 16:00										
15:15 to 16:15										
15:30 to 16:30										
15:45 to 16:45										
16:00 to 17:00										
16:15 to 17:15										
16:30 to 17:30										
16:45 to 17:45										
17:00 to 18:00										
PM Totals										

Direction 11 (Through)			Direction 12 (Right Turn)			Direction 12U (U Turn)		
Lights	Heavies	Total	Lights	Heavies	Total	Lights	Heavies	Total
35	0	35	1	0	1	0	0	0
26	0	26	1	0	1	0	0	0
26	0	26	1	0	1	0	0	0
19	0	19	0	0	0	0	0	0
26	1	27	0	0	0	0	0	0
61	1	62	1	0	1	0	0	0
33	1	34	0	0	0	0	0	0
34	1	35	0	0	0	0	0	0
33	1	34	0	0	0	0	0	0
34	0	34	0	0	0	0	0	0
41	0	41	0	0	0	0	0	0
45	0	45	0	0	0	0	0	0
52	0	52	0	0	0	0	0	0
63	0	63	0	0	0	0	0	0
57	0	57	0	0	0	0	0	0
131	1	132	0	0	0	0	0	0

B. SIDRA INTERSECTION RESULTS

B

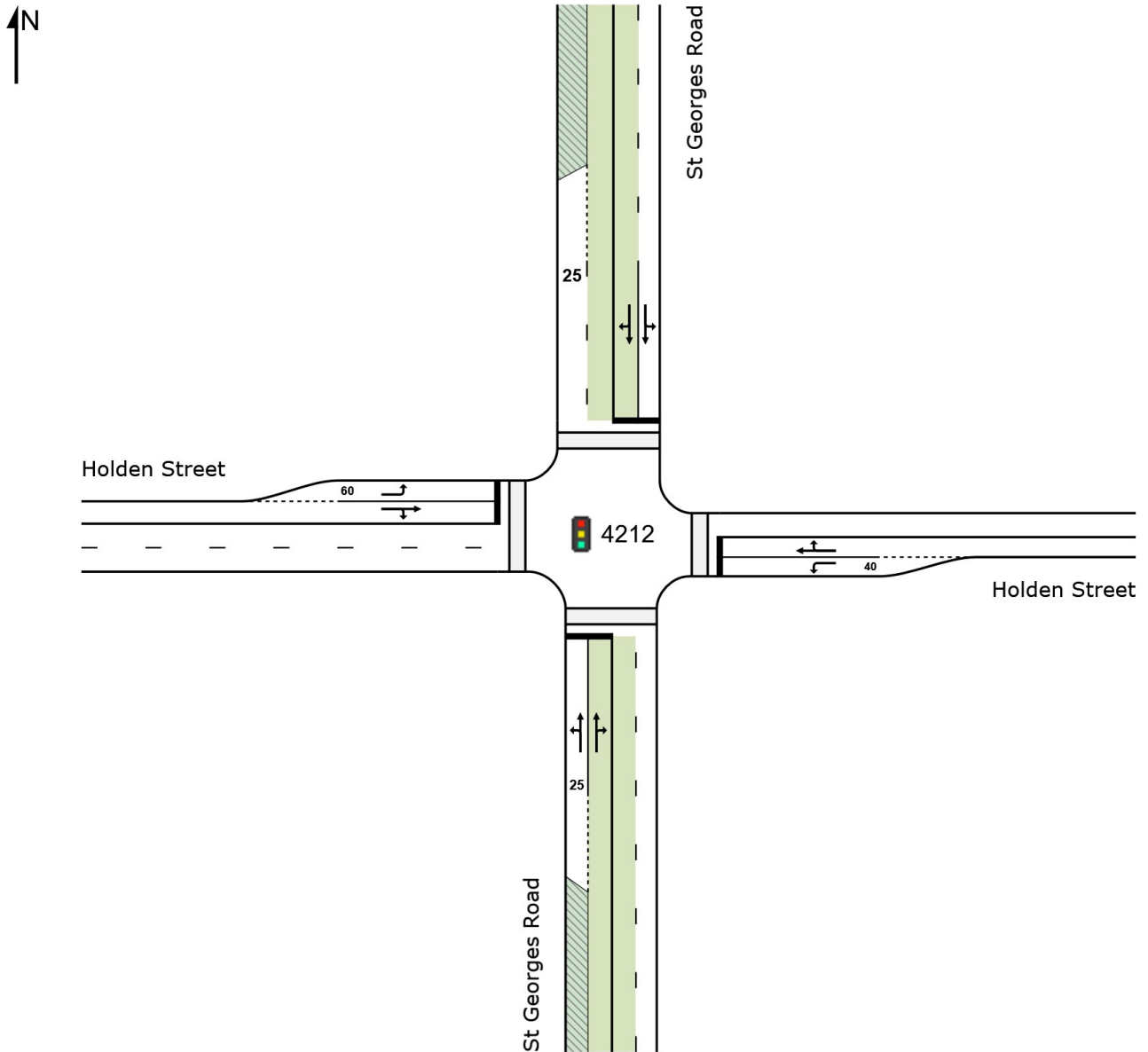
SITE LAYOUT

 **Site: 4212 [St Georges Road / Holden Street - AM - base]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated



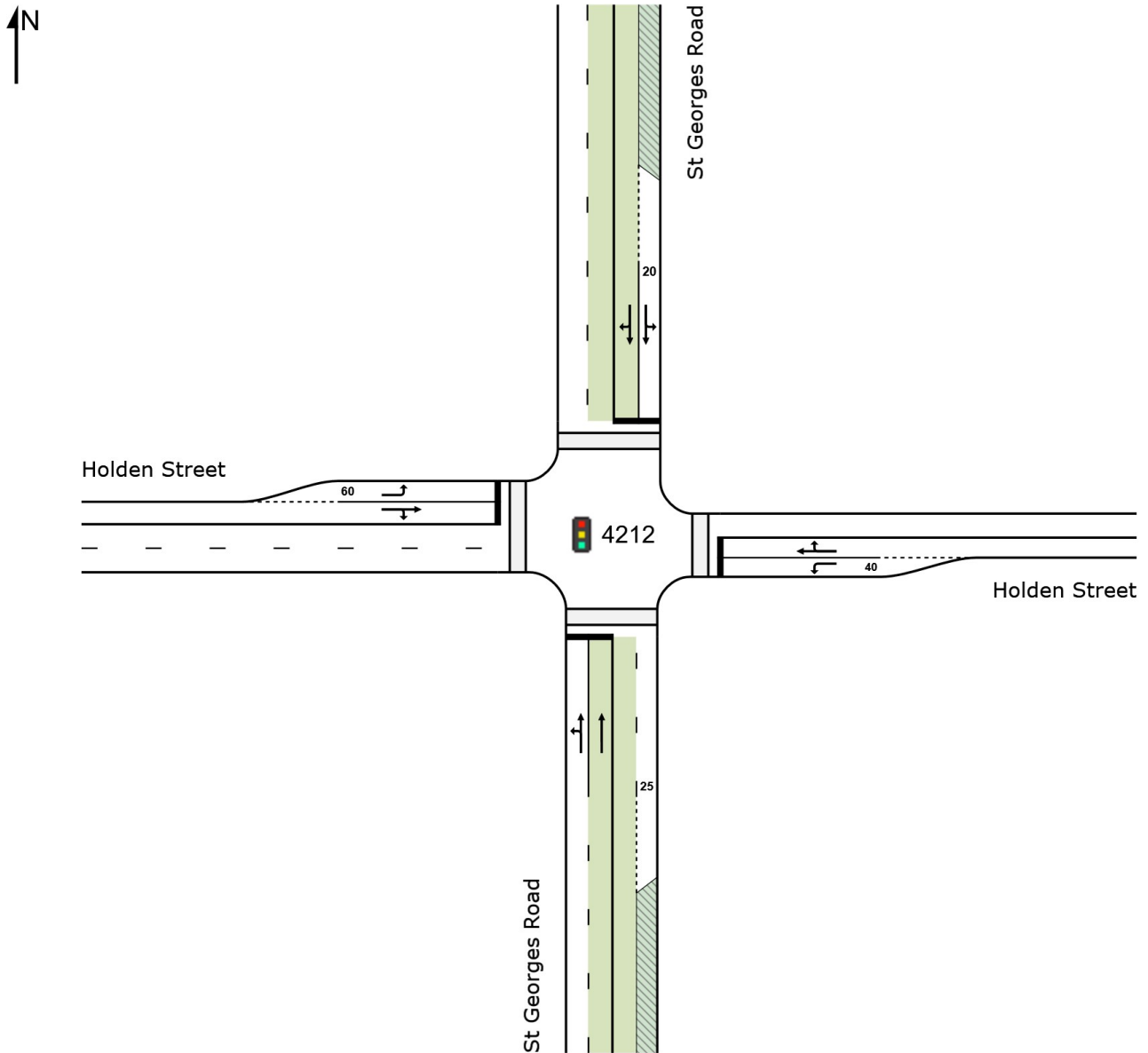
SITE LAYOUT

 **Site: 4212 [St Georges Road / Holden Street - PM - base]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated



MOVEMENT SUMMARY

 **Site: 4212 [St Georges Road / Holden Street - AM - base]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: St Georges Road												
1	L2	56	20.8	0.120	26.0	LOS C	2.4	19.2	0.66	0.66	0.66	41.7
2	T1	346	6.1	0.532	23.6	LOS C	12.1	93.7	0.78	0.68	0.78	43.1
3	R2	13	25.0	0.532	29.6	LOS C	12.1	93.7	0.79	0.68	0.79	41.3
Approach		415	8.6	0.532	24.1	LOS C	12.1	93.7	0.76	0.68	0.76	42.8
East: Holden Street												
4	L2	24	0.0	0.065	39.7	LOS D	1.0	6.7	0.83	0.70	0.83	35.7
5	T1	9	0.0	0.049	34.1	LOS C	0.7	4.6	0.83	0.64	0.83	37.5
6	R2	7	0.0	0.049	39.6	LOS D	0.7	4.6	0.83	0.64	0.83	36.7
Approach		41	0.0	0.065	38.4	LOS D	1.0	6.7	0.83	0.68	0.83	36.3
North: St Georges Road												
7	L2	12	0.0	0.685	14.7	LOS B	24.8	176.3	0.63	0.58	0.63	50.9
8	T1	949	2.8	0.685	9.3	LOS A	24.8	176.3	0.64	0.60	0.64	51.8
9	R2	399	1.6	0.685	15.9	LOS B	9.9	74.5	0.77	0.79	0.77	46.9
Approach		1360	2.4	0.685	11.2	LOS B	24.8	176.3	0.68	0.65	0.68	50.2
West: Holden Street												
10	L2	195	2.2	0.240	23.1	LOS C	5.7	40.8	0.64	0.75	0.64	42.6
11	T1	15	7.1	0.560	39.3	LOS D	7.6	56.3	0.95	0.81	0.95	34.7
12	R2	154	6.8	0.560	44.9	LOS D	7.6	56.3	0.95	0.81	0.95	33.9
Approach		363	4.3	0.560	33.0	LOS C	7.6	56.3	0.78	0.78	0.78	38.1
All Vehicles		2179	3.9	0.685	17.8	LOS B	24.8	176.3	0.71	0.68	0.71	46.0

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

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

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

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

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P2	East Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P4	West Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
All Pedestrians		211	44.3	LOS E			0.94	0.94	

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

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

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

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: GTA CONSULTANTS | Processed: Wednesday, 10 July 2019 2:38:32 PM

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Stre\Modelling\190710sid-V190605-St
Georges Road & Holden Street.sip8

MOVEMENT SUMMARY



Site: 4212 [St Georges Road / Holden Street - PM - base]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: St Georges Road												
1	L2	79	6.7	0.584	30.2	LOS C	16.8	119.5	0.83	0.75	0.83	41.3
2	T1	814	1.8	0.584	24.6	LOS C	16.9	126.8	0.83	0.74	0.83	42.5
Approach		893	2.2	0.584	25.1	LOS C	16.9	126.8	0.83	0.74	0.83	42.4
East: Holden Street												
4	L2	28	0.0	0.089	42.8	LOS D	1.2	8.2	0.87	0.71	0.87	34.7
5	T1	7	0.0	0.051	37.8	LOS D	0.6	4.0	0.86	0.65	0.86	36.1
6	R2	6	0.0	0.051	43.3	LOS D	0.6	4.0	0.86	0.65	0.86	35.3
Approach		42	0.0	0.089	42.0	LOS D	1.2	8.2	0.86	0.69	0.86	35.0
North: St Georges Road												
7	L2	20	0.0	0.180	10.3	LOS B	3.7	26.3	0.34	0.33	0.34	53.9
8	T1	479	2.9	0.797	10.5	LOS B	10.7	79.8	0.57	0.57	0.63	50.1
9	R2	195	2.7	0.797	21.1	LOS C	10.7	79.8	0.77	0.79	0.87	45.3
Approach		694	2.7	0.797	13.5	LOS B	10.7	79.8	0.62	0.63	0.69	48.7
West: Holden Street												
10	L2	364	1.2	0.456	26.0	LOS C	12.3	86.6	0.74	0.79	0.74	41.2
11	T1	25	0.0	0.606	42.1	LOS D	6.9	51.0	0.96	0.81	0.98	34.0
12	R2	124	6.8	0.606	47.7	LOS D	6.9	51.0	0.96	0.81	0.98	33.3
Approach		514	2.5	0.606	32.0	LOS C	12.3	86.6	0.81	0.80	0.81	38.6
All Vehicles		2142	2.4	0.797	23.3	LOS C	16.9	126.8	0.76	0.72	0.78	43.0

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

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

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

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

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P2	East Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P4	West Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
All Pedestrians		211	44.3	LOS E			0.94	0.94	

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

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

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

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Stre\Modelling\190710sid-V190605-St
Georges Road & Holden Street.sip8

MOVEMENT SUMMARY

 **Site: 4212 [St Georges Road / Holden Street - AM - project]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: St Georges Road												
1	L2	56	20.8	0.131	26.1	LOS C	2.7	21.0	0.67	0.66	0.67	41.8
2	T1	382	5.5	0.579	23.9	LOS C	13.3	102.6	0.79	0.69	0.79	42.9
3	R2	13	25.0	0.579	30.1	LOS C	13.3	102.6	0.80	0.70	0.80	41.2
Approach		451	7.9	0.579	24.4	LOS C	13.3	102.6	0.78	0.69	0.78	42.7
East: Holden Street												
4	L2	24	0.0	0.065	39.7	LOS D	1.0	6.7	0.83	0.70	0.83	35.7
5	T1	9	0.0	0.049	34.1	LOS C	0.7	4.6	0.83	0.64	0.83	37.5
6	R2	7	0.0	0.049	39.6	LOS D	0.7	4.6	0.83	0.64	0.83	36.7
Approach		41	0.0	0.065	38.4	LOS D	1.0	6.7	0.83	0.68	0.83	36.3
North: St Georges Road												
7	L2	12	0.0	0.700	14.9	LOS B	25.9	184.1	0.64	0.60	0.64	50.7
8	T1	964	2.7	0.700	9.5	LOS A	25.9	184.1	0.65	0.61	0.65	51.7
9	R2	399	1.6	0.700	16.2	LOS B	9.7	73.4	0.79	0.80	0.79	46.6
Approach		1375	2.4	0.700	11.5	LOS B	25.9	184.1	0.69	0.66	0.69	50.1
West: Holden Street												
10	L2	162	2.6	0.201	22.7	LOS C	4.7	33.4	0.63	0.74	0.63	42.8
11	T1	15	7.1	0.560	39.3	LOS D	7.6	56.3	0.95	0.81	0.95	34.7
12	R2	154	6.8	0.560	44.9	LOS D	7.6	56.3	0.95	0.81	0.95	33.9
Approach		331	4.8	0.560	33.8	LOS C	7.6	56.3	0.79	0.77	0.79	37.8
All Vehicles		2197	3.8	0.700	18.0	LOS B	25.9	184.1	0.73	0.69	0.73	45.9

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

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

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

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

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P2	East Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P4	West Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
All Pedestrians		211	44.3	LOS E			0.94	0.94	

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

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

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

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: GTA CONSULTANTS | Processed: Wednesday, 10 July 2019 2:38:31 PM

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Stre\Modelling\190710sid-V190605-St
Georges Road & Holden Street.sip8

MOVEMENT SUMMARY



Site: 4212 [St Georges Road / Holden Street - PM - project]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 100 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: St Georges Road												
1	L2	79	6.7	0.642	31.0	LOS C	19.2	135.9	0.86	0.77	0.86	40.9
2	T1	905	1.6	0.642	25.4	LOS C	19.3	143.6	0.86	0.76	0.86	42.1
Approach		984	2.0	0.642	25.9	LOS C	19.3	143.6	0.86	0.77	0.86	42.0
East: Holden Street												
4	L2	28	0.0	0.089	42.8	LOS D	1.2	8.2	0.87	0.71	0.87	34.7
5	T1	7	0.0	0.048	36.9	LOS D	0.6	3.9	0.85	0.64	0.85	36.4
6	R2	6	0.0	0.048	42.4	LOS D	0.6	3.9	0.85	0.64	0.85	35.7
Approach		42	0.0	0.089	41.7	LOS D	1.2	8.2	0.86	0.69	0.86	35.1
North: St Georges Road												
7	L2	20	0.0	0.192	10.3	LOS B	4.0	28.3	0.35	0.33	0.35	53.9
8	T1	483	2.8	0.849	13.9	LOS B	12.5	93.0	0.58	0.60	0.68	47.9
9	R2	195	2.7	0.849	28.4	LOS C	12.5	93.0	0.81	0.86	1.01	41.5
Approach		698	2.7	0.849	17.9	LOS B	12.5	93.0	0.64	0.67	0.77	46.0
West: Holden Street												
10	L2	261	1.6	0.328	24.6	LOS C	8.2	58.0	0.69	0.77	0.69	41.9
11	T1	25	0.0	0.571	41.9	LOS D	6.9	50.8	0.96	0.80	0.96	34.0
12	R2	124	6.8	0.571	47.5	LOS D	6.9	50.8	0.96	0.80	0.96	33.3
Approach		411	3.1	0.571	32.6	LOS C	8.2	58.0	0.79	0.78	0.79	38.4
All Vehicles		2135	2.4	0.849	24.9	LOS C	19.3	143.6	0.77	0.73	0.82	42.3

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

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

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

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

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P2	East Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P3	North Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
P4	West Full Crossing	53	44.3	LOS E	0.1	0.1	0.94	0.94	
All Pedestrians		211	44.3	LOS E			0.94	0.94	

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

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

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

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Stre\Modelling\190710sid-V190605-St
Georges Road & Holden Street.sip8

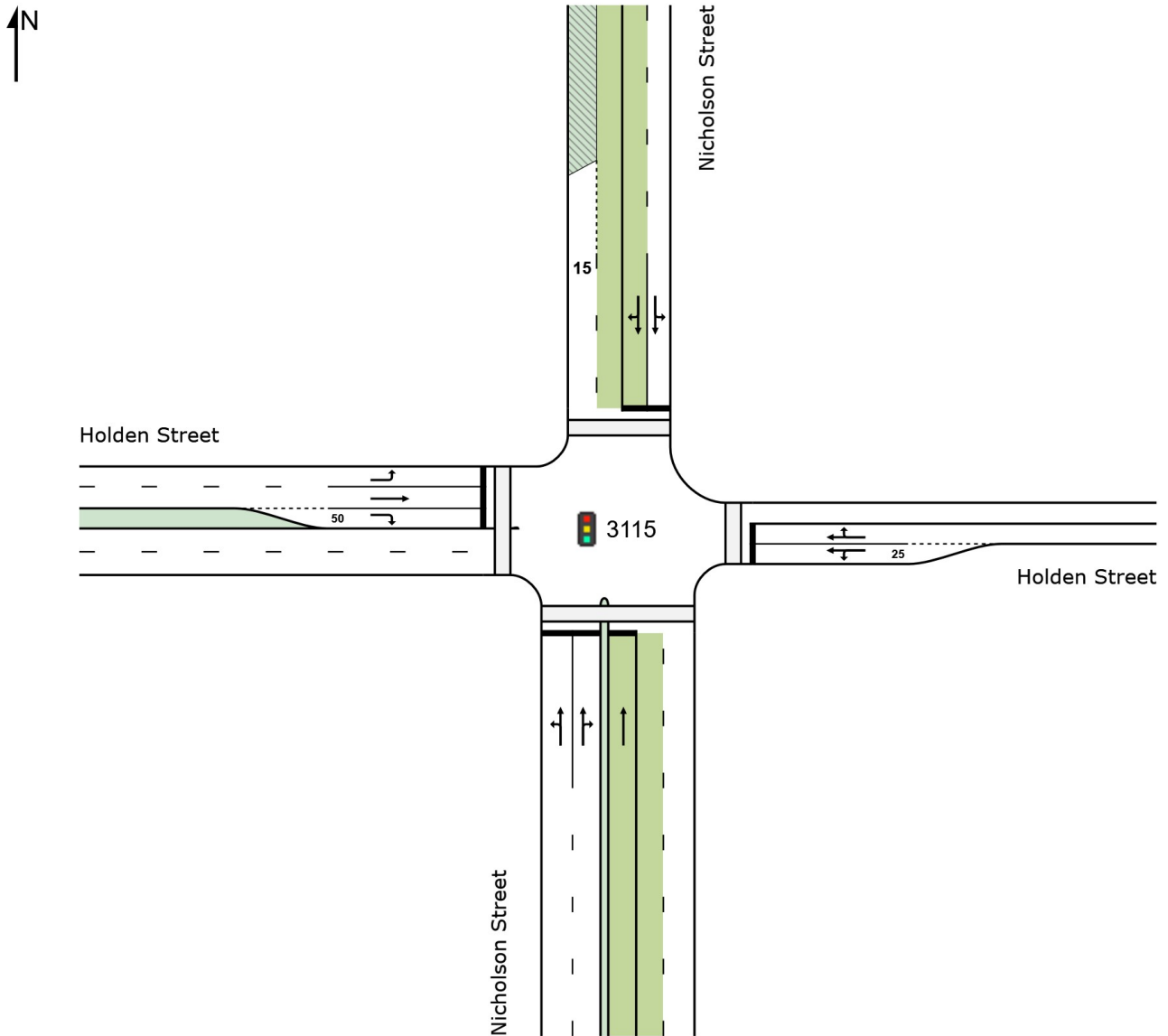
SITE LAYOUT

 **Site: 3115 [Nicholson Street / Holden Street - AM - Base]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated



SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: GTA CONSULTANTS | Created: Thursday, 25 July 2019 9:22:28 AM

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Street\Modelling\190710sid-V190605-Nicholson Street & Holden Street.sip8

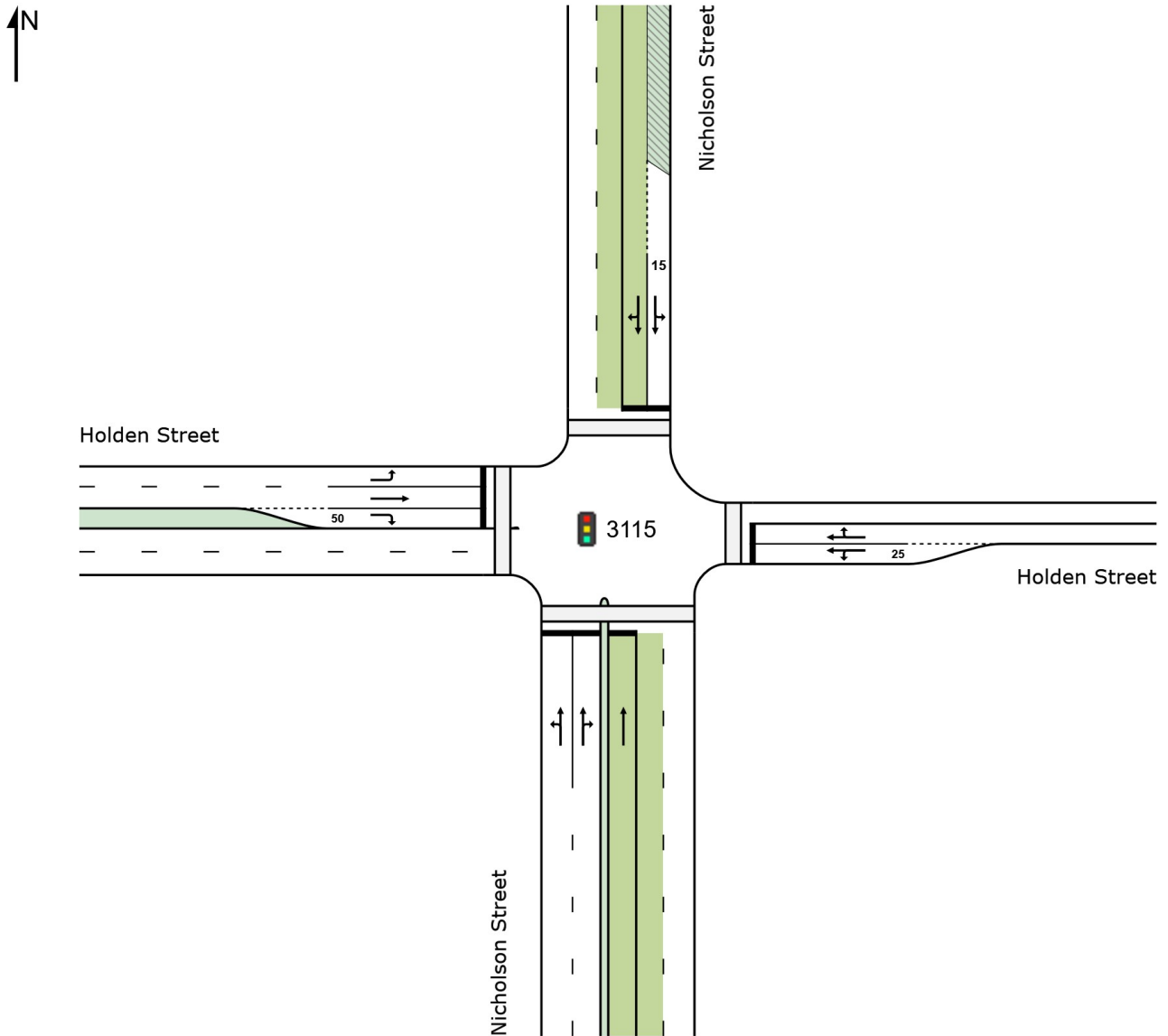
SITE LAYOUT

 **Site: 3115 [Nicholson Street / Holden Street - PM - Base]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated



MOVEMENT SUMMARY

 **Site: 3115 [Nicholson Street / Holden Street - AM - Base]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 99 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Nicholson Street												
1	L2	173	3.7	0.240	24.0	LOS C	5.1	37.0	0.72	0.75	0.72	42.1
2	T1	328	7.7	0.807	43.4	LOS D	17.0	124.6	0.99	0.94	1.14	35.0
3	R2	21	10.0	0.807	49.5	LOS D	17.0	124.6	1.00	0.95	1.15	34.1
Approach		522	6.5	0.807	37.2	LOS D	17.0	124.6	0.90	0.88	1.00	37.0
East: Holden Street												
4	L2	54	3.9	0.635	36.5	LOS D	9.5	68.6	0.86	0.74	0.86	38.5
5	T1	393	4.0	0.635	31.1	LOS C	9.5	68.6	0.87	0.74	0.87	39.4
6	R2	22	4.8	0.635	36.8	LOS D	9.2	66.7	0.87	0.74	0.87	38.5
Approach		468	4.0	0.635	32.0	LOS C	9.5	68.6	0.87	0.74	0.87	39.3
North: Nicholson Street												
7	L2	17	25.0	0.878	42.9	LOS D	37.3	265.8	0.99	1.02	1.14	36.2
8	T1	753	3.1	0.878	38.5	LOS D	37.3	265.8	0.99	1.02	1.16	36.7
9	R2	104	3.0	0.878	64.2	LOS E	8.6	73.6	1.00	1.03	1.46	29.2
Approach		874	3.5	0.878	41.6	LOS D	37.3	265.8	0.99	1.02	1.20	35.6
West: Holden Street												
10	L2	41	10.3	0.046	14.7	LOS B	0.8	6.2	0.50	0.67	0.50	47.0
11	T1	352	4.8	0.429	20.2	LOS C	11.6	84.6	0.73	0.64	0.73	45.1
12	R2	197	5.3	0.513	27.0	LOS C	6.4	46.5	0.86	0.78	0.86	40.9
Approach		589	5.4	0.513	22.1	LOS C	11.6	84.6	0.76	0.69	0.76	43.7
All Vehicles		2454	4.7	0.878	34.2	LOS C	37.3	265.8	0.89	0.86	0.99	38.3

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

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

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

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

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	43.8	LOS E	0.1	0.1	0.94	0.94	
P2	East Full Crossing	53	43.8	LOS E	0.1	0.1	0.94	0.94	
P3	North Full Crossing	53	43.8	LOS E	0.1	0.1	0.94	0.94	
P4	West Full Crossing	53	43.8	LOS E	0.1	0.1	0.94	0.94	
All Pedestrians		211	43.8	LOS E			0.94	0.94	

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

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

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

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: GTA CONSULTANTS | Processed: Wednesday, 19 June 2019 1:44:35 PM

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Stre\Modelling\190710sid-V190605-Nicholson Street & Holden Street.sip8

MOVEMENT SUMMARY

 **Site: 3115 [Nicholson Street / Holden Street - PM - Base]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 97 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Nicholson Street												
1	L2	171	0.6	0.731	34.0	LOS C	19.8	139.5	0.94	0.85	0.98	39.3
2	T1	671	2.2	0.731	31.1	LOS C	19.8	139.5	0.94	0.85	0.98	39.2
3	R2	46	4.5	0.731	39.4	LOS D	17.0	120.1	0.95	0.86	0.99	37.6
Approach		887	2.0	0.731	32.1	LOS C	19.8	139.5	0.94	0.85	0.98	39.1
East: Holden Street												
4	L2	22	9.5	0.755	43.4	LOS D	10.5	75.2	0.92	0.84	1.05	36.1
5	T1	340	1.9	0.755	39.1	LOS D	10.5	75.2	0.93	0.86	1.08	36.3
6	R2	61	0.0	0.755	46.9	LOS D	8.7	61.9	0.95	0.89	1.12	34.4
Approach		423	2.0	0.755	40.5	LOS D	10.5	75.2	0.93	0.86	1.08	36.0
North: Nicholson Street												
7	L2	17	0.0	0.707	27.2	LOS C	19.4	136.2	0.82	0.73	0.82	43.3
8	T1	532	2.4	0.990	22.8	LOS C	19.4	136.2	0.82	0.74	0.84	43.8
9	R2	55	0.0	0.990	93.5	LOS F	4.3	43.0	1.00	1.15	2.17	23.6
Approach		603	2.1	0.990	29.3	LOS C	19.4	136.2	0.84	0.77	0.96	40.4
West: Holden Street												
10	L2	123	1.7	0.141	16.7	LOS B	2.8	19.6	0.57	0.71	0.57	46.0
11	T1	535	2.0	0.896	40.7	LOS D	26.8	190.5	0.87	0.97	1.14	36.1
12	R2	293	2.2	0.769	33.3	LOS C	11.0	78.3	0.96	0.89	1.09	38.3
Approach		951	2.0	0.896	35.3	LOS D	26.8	190.5	0.86	0.91	1.05	37.8
All Vehicles		2864	2.0	0.990	33.8	LOS C	26.8	190.5	0.89	0.86	1.02	38.4

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

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

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

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

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	42.8	LOS E	0.1	0.1	0.94	0.94	
P2	East Full Crossing	53	42.8	LOS E	0.1	0.1	0.94	0.94	
P3	North Full Crossing	53	42.8	LOS E	0.1	0.1	0.94	0.94	
P4	West Full Crossing	53	42.8	LOS E	0.1	0.1	0.94	0.94	
All Pedestrians		211	42.8	LOS E			0.94	0.94	

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

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

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

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: GTA CONSULTANTS | Processed: Wednesday, 19 June 2019 1:44:59 PM

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Stre\Modelling\190710sid-V190605-Nicholson Street & Holden Street.sip8

MOVEMENT SUMMARY



Site: 3115 [Nicholson Street / Holden Street - AM - Project]

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 99 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Nicholson Street												
1	L2	173	3.7	0.240	24.0	LOS C	5.1	37.0	0.72	0.75	0.72	42.1
2	T1	328	7.7	0.854	48.1	LOS D	18.0	131.9	0.99	0.99	1.22	33.5
3	R2	21	10.0	0.854	54.3	LOS D	18.0	131.9	1.00	1.00	1.24	32.6
Approach		522	6.5	0.854	40.4	LOS D	18.0	131.9	0.90	0.91	1.06	35.8
East: Holden Street												
4	L2	54	3.9	0.682	37.7	LOS D	10.2	73.5	0.87	0.77	0.91	38.1
5	T1	393	4.0	0.682	32.4	LOS C	10.2	73.5	0.87	0.77	0.92	38.8
6	R2	38	2.8	0.682	38.2	LOS D	9.8	70.6	0.88	0.78	0.92	37.9
Approach		484	3.9	0.682	33.4	LOS C	10.2	73.5	0.87	0.77	0.92	38.7
North: Nicholson Street												
7	L2	13	16.7	0.925	52.9	LOS D	44.9	319.4	1.00	1.12	1.27	33.0
8	T1	812	2.9	0.925	48.6	LOS D	44.9	319.4	1.00	1.12	1.30	33.3
9	R2	104	3.0	0.925	70.7	LOS E	10.0	84.2	1.00	1.10	1.60	27.8
Approach		928	3.1	0.925	51.1	LOS D	44.9	319.4	1.00	1.12	1.33	32.6
West: Holden Street												
10	L2	41	10.3	0.046	14.7	LOS B	0.8	6.2	0.50	0.67	0.50	47.0
11	T1	297	5.7	0.365	19.5	LOS B	9.5	69.4	0.71	0.61	0.71	45.5
12	R2	252	4.2	0.659	28.4	LOS C	8.5	61.7	0.91	0.81	0.92	40.3
Approach		589	5.4	0.659	23.0	LOS C	9.5	69.4	0.78	0.70	0.78	43.2
All Vehicles		2524	4.5	0.925	38.9	LOS D	44.9	319.4	0.90	0.91	1.07	36.5

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

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

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

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

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	43.8	LOS E	0.1	0.1	0.94	0.94	
P2	East Full Crossing	53	43.8	LOS E	0.1	0.1	0.94	0.94	
P3	North Full Crossing	53	43.8	LOS E	0.1	0.1	0.94	0.94	
P4	West Full Crossing	53	43.8	LOS E	0.1	0.1	0.94	0.94	
All Pedestrians		211	43.8	LOS E			0.94	0.94	

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

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

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

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: GTA CONSULTANTS | Processed: Wednesday, 10 July 2019 2:34:57 PM

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Stre\Modelling\190710sid-V190605-Nicholson Street & Holden Street.sip8

MOVEMENT SUMMARY

 **Site: 3115 [Nicholson Street / Holden Street - PM - Project]**

New Site

Site Category: (None)

Signals - Fixed Time Isolated Cycle Time = 97 seconds (Site User-Given Phase Times)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Nicholson Street												
1	L2	171	0.6	0.750	35.0	LOS C	20.8	146.4	0.95	0.86	1.01	38.9
2	T1	671	2.2	0.750	32.3	LOS C	20.8	146.4	0.95	0.87	1.01	38.7
3	R2	46	4.5	0.750	41.1	LOS D	16.9	119.7	0.96	0.88	1.03	36.9
Approach		887	2.0	0.750	33.3	LOS C	20.8	146.4	0.95	0.87	1.01	38.6
East: Holden Street												
4	L2	22	9.5	0.961	76.4	LOS E	17.0	121.5	0.94	1.16	1.62	27.3
5	T1	340	1.9	0.961	72.3	LOS E	17.0	121.5	0.95	1.17	1.66	27.3
6	R2	113	0.0	0.961	82.2	LOS F	13.7	96.7	0.98	1.20	1.75	25.6
Approach		475	1.8	0.961	74.9	LOS E	17.0	121.5	0.96	1.18	1.68	26.9
North: Nicholson Street												
7	L2	13	0.0	0.765	29.1	LOS C	22.6	159.0	0.85	0.78	0.87	42.4
8	T1	586	2.2	1.000	24.7	LOS C	22.6	159.0	0.85	0.78	0.90	42.9
9	R2	55	0.0	1.000	98.6	LOS F	4.5	44.4	1.00	1.16	2.22	22.8
Approach		654	1.9	1.000	30.9	LOS C	22.6	159.0	0.86	0.82	1.01	39.7
West: Holden Street												
10	L2	123	1.7	0.141	16.7	LOS B	2.8	19.6	0.57	0.71	0.57	46.0
11	T1	484	2.2	0.859	34.3	LOS C	21.9	156.0	0.84	0.88	1.04	38.5
12	R2	343	1.8	0.943	59.2	LOS E	17.2	122.5	1.00	1.13	1.64	30.2
Approach		951	2.0	0.943	41.0	LOS D	21.9	156.0	0.86	0.95	1.20	35.7
All Vehicles		2966	2.0	1.000	41.9	LOS D	22.6	159.0	0.90	0.93	1.18	35.4

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

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

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

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

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

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

Movement Performance - Pedestrians									
Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate	
P1	South Full Crossing	53	42.8	LOS E	0.1	0.1	0.94	0.94	
P2	East Full Crossing	53	42.8	LOS E	0.1	0.1	0.94	0.94	
P3	North Full Crossing	53	42.8	LOS E	0.1	0.1	0.94	0.94	
P4	West Full Crossing	53	42.8	LOS E	0.1	0.1	0.94	0.94	
All Pedestrians		211	42.8	LOS E			0.94	0.94	

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

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

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

SIDRA INTERSECTION 8.0 | Copyright © 2000-2019 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: GTA CONSULTANTS | Processed: Wednesday, 10 July 2019 2:34:58 PM

Project: \\gta.com.au\projectfiles\ProjectFilesMelb\V17100-17199\V171550 Holden Street and Brunswick Stre\Modelling\190710sid-V190605-Nicholson Street & Holden Street.sip8

