

## Appendix E. Transport Modelling Report

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# **Centenary Motorway Planning Study - Medium Staged Upgrades (Frederick St to Sumners Rd)**

Department of Transport & Main Roads

## **Transport Modelling Report**

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## Centenary Motorway Planning Study - Medium Staged Upgrades (Frederick St to Sumners Rd)

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# Executive Summary

## Introduction

The Queensland Department of Transport and Main Roads (TMR) have engaged the Jacobs+Aurecon team to carry out the Centenary Motorway Planning Study: Medium Staged Upgrades project. This report documents the traffic and transport modelling carried out to inform the Planning Study.

The study area extends from the Ipswich Motorway in the south to Legacy Way / Mt Coot-tha Road in the north, including the Centenary Bridge, interchanges south of the river at Sumners Road, Dandenong Road and Sinnamon Road, and interchanges north of the river at Fig Tree Pocket Road and Moggill Road.

The Centenary Motorway has developed from a two-lane local arterial to an urban motorway that now provides the primary link between the Western Corridor and the inner and northern suburbs of Brisbane, resulting in a number of operational limitations. Continued strong growth in traffic demand is expected on the corridor, driven by growth in key catchment areas including the Western Corridor and Australia Trade Coast, and reinforced by adjacent infrastructure improvements, including the Ipswich Motorway and Legacy Way. There is also a lack of alternative bridge crossings in the western suburbs, which continues the need for local use of the corridor.

The corridor experiences significant peak period congestion at present, with delays of over 15 minutes northbound in the morning peak and both northbound and southbound in the evening peak. As a result of the influences mentioned above, these issues are expected to grow over time.

The Planning Study has identified a package of realistic and viable short to medium term improvement measures to address this. Taken together these would upgrade the Motorway to a six lane cross-section between Moggill Road and Sumners Road, duplicate the Centenary Bridge, and replace the two roundabouts on Mount Coot-tha Road with upgraded signalised intersections. Two delivery strategies for these works have been examined, identified as PE1 and PE2. In PE1, the full package of works is constructed by 2024, while in PE2 the works are staged between 2024 and 2031.

Traffic and transport modelling undertaken as part of the Planning Study included strategic transport modelling to identify the benefits and wider network effects of the project options and to inform economic analysis, and update of the microsimulation traffic model of the corridor (developed in the previous study in 2012) to reflect current traffic conditions.

## The transport model

The transport model used for this analysis was the Version 2.0 Brisbane Strategic Transport Model: Multi Modal (BSTM-MMv2.0). The base year model supplied by TMR was reviewed to assess its validation, both overall (using the 2016 screenline spreadsheet provided by TMR) and along the study corridor (using 2017 count data), which identified a need for targeted updates and refinements to improve the model's forecasting accuracy for the corridor, connections and competing routes.

The BSTM-MM is a four-step strategic transport model that extends from Elimbah (north of Caboolture) in the north to Jimboomba and Ormeau in the south, and to the west beyond Ipswich and Rosewood. The model area includes 1,543 internal transport zones and 28 external cordon locations. In calculating trip generation from each of these zones, eight travel purposes are considered (classified into home based and non-home based trips). These trips choose between seven transport modes (including car, public transport and active modes). Commercial vehicle demand matrices are calculated separately and not subject to mode choice. Thus, eight transport modes are modelled in total.

The model represents a full typical subdivided into four time periods, including a two-hour AM peak (7am to 9am), a two-hour PM peak (4pm to 6pm), a seven-hour daytime off peak period (9am to 4pm) and an 'evening' period capturing the rest of the day (6pm to 7am).

Key inputs to the BSTM-MM include demographic and land use data for each zone, a representation of the road and public transport networks for each time period, cost information (such as parking charges, fares, tolls, vehicle operating costs and value of time) and external demands.

## 2016 model update

After reviewing the performance of the base year BSTM-MM against contemporary count data, it was identified that targeted updates and revalidation of the strategic model would be appropriate for this project. The following updates were undertaken in consultation with TMR:

- Demographic and land use updates – based on the latest Queensland Government Statisticians Office (QGSO) medium series projections (2015 edition)
- Network updates – review of base year networks to confirm inclusion of appropriate recently completed upgrade projects and the coding of the corridor and key congestion points
- User costs and tolling parameters – updated using the latest available information including:
  - Consumer Price Index (CPI) and Average Weekly Earnings (AWE), based on published historical data
  - Public transport fares, based on TransLink published rates
  - Toll road charges, from operator websites
  - Alternative specific constants (ASCs) for toll roads, based on updated toll charges and test runs
- Matrix estimation – approach adopted to improve the fit of modelled to observed commercial and private vehicles across the network, as part of revalidation process
- Other calibration and validation adjustments, including changes to k-factor distribution weights, time period factors and special generators.

The performance of the base year model has been measured both across the overall BSTM-MM area, using observed count data from the 2016 model validation screenline spreadsheet provided by TMR, as well as in more detail along the study corridor, using 2017 count data collected for this study.

Statistics for the original and updated models shows a substantial improvement resulting from the revalidation process, particularly for peak period totals, and show that the update process has substantially improved the goodness of fit at interchanges along the study corridor for all vehicle classes. Overall, the screenline and study corridor results indicate that the final updated base year model is appropriately validated and suitable for use in the current work.

## Future transport demands – without project

Future year base case BSTM-MM models have been developed in consultation with TMR's Transport Analysis Unit to provide a sound basis for analysing the impact of the Centenary Motorway Upgrade Project. The general approach to future year modelling has been to adopt a 'do minimum' base scenario, including only committed works, to comply with the requirements of Building Queensland (BQ) and Infrastructure Australia (IA).

### Demographics assumptions

The demographic and land use inputs used for the future year modelling (both with and without the project) are from the data set supplied by TMR, based on the 'medium' series from the latest (2015 edition) QGSO population projections. The key sectors of interest surrounding the Centenary Motorway are the Local North (Toowong, Indooroopilly, Kenmore, Fig Tree Pocket) and Local South (Jindalee, Mt Ommaney, Sumners, Corinda, Chelmer). Modest population growth is forecast for these areas along with moderate employment growth. Forecast growth in the South-West (Ipswich and surrounding areas), Australia Trade Coast (Brisbane Airport, Port of Brisbane) and parts of the North (particularly the CBD) is higher than the local catchment of the motorway and will have a large influence on the traffic growth in this corridor.

## Network assumptions

A detailed review of the project inclusions was carried out for the modelled network, in consultation with TMR, as the existing scheme list was not up-to-date. Firstly, the scheme list and coding was updated to reflect the latest Queensland Transport and Roads Investment Program (QTRIP) four-year plan. The recent BNE model development (separate to this project) conducted detailed review of future year network coding, including discussions with affected local governments to identify planned and committed infrastructure improvement projects on the roads under their control. In the BSTM-MM, the 2021 and 2026 schemes from the BNE model were taken as 'committed' projects, while all upgrade projects beyond 2026 were considered 'not committed' and not included in the base case.

Any schemes related to or involving upgrades along the Centenary Motorway corridor were also excluded from the base case in all years, except for the Sumners Road interchange upgrade, which was required to prevent unrealistic congestion and is presently in detailed design planning expecting to be delivered before 2021.

In order to ensure model stability and avoid the arising convergence issues in later forecast years, additional 'not committed' network schemes were added to provide more realistic connections from the high growth zones to the surrounding road network and to address unrealistic bottlenecks in those areas.

The 2036 networks also have a modest level of capacity uplift on higher order roads to reflect trends of more efficient road space use through vehicle/network management technology, which also helps to ensure model stability.

## Public transport services assumptions

Due to the exclusion of non-committed projects, several public transport infrastructure projects were not included. Therefore, modifications to public transport routes in response to these infrastructure changes were minimised and timetables were not altered. In the case where changes were made to suit project coding, the routes were kept as close as possible to the original path.

## Forecast traffic volumes – without project

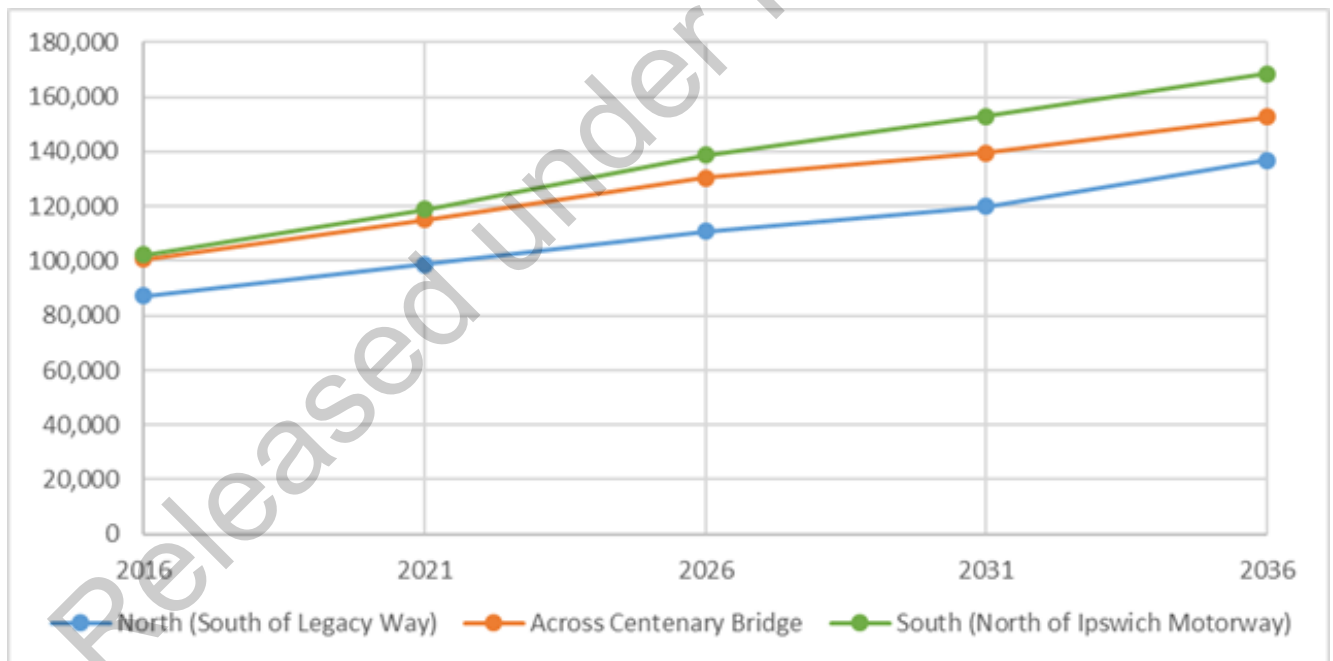
Key indicators of transport demand and network performance for the future year base case models are summarised in Table ES.1-1. The results indicate that:

- Private vehicle demand across the network grows by over a quarter across the forecast period. Growth in demand on the Centenary Bridge is faster than the network average and overall cross river demand, due to its strategic position linking growth areas in the south-west to the CBD and northern suburbs.
- There is increasing trip lengths and congestion in the network. VKT grows significantly faster than vehicle trips and VHT grows much faster than VKT. There is a declining overall average speed, falling by over 10% in the forecast period.
- Public transport usage grows significantly faster than private vehicles, caused by major projects such as Cross River Rail, and more road network congestion increasing the attractiveness of rail/bus services. The average trip length increases in later years (PKT increases faster than number of passenger trips), while the average travel speed increases (PHT grows slightly slower than PKT).

**Table ES.1-1: Network demand and performance measures, base case models**

Data	2021	2026	2031	2036	2036 vs 2021
Daily private vehicle trips	5,160,000	5,591,000	6,061,000	6,544,000	+27%
Daily private vehicle person trips	7,255,000	7,859,000	8,498,000	9,149,000	+26%
Daily commercial vehicle trips	209,000	230,000	253,000	278,000	+33%
Daily VKT (km)	72,308,000	80,442,000	89,227,000	98,868,000	+37%
Daily VHT (hours)	1,285,000	1,454,000	1,682,000	1,960,000	+53%
Average network speed	56.3	55.3	53.0	50.4	-10%
River Crossing Screenline Total	663,945	725,868	787,787	858,176	+29%
Centenary Bridge Total	115,226	130,331	139,631	152,756	+33%
Daily PT trips	833,000	930,000	1,037,000	1,166,000	+40%
Daily PKT (km)	12,587,000	14,228,000	16,099,000	18,519,000	+47%
Daily PHT (hours)	336,000	379,000	428,000	491,000	+46%

As shown in Figure ES.1, the Centenary Motorway bridge increasingly acts as bottleneck, despite stronger than average growth, growing more slowly than the northern and southern ends of the corridor. Growth on the bridge visibly drops off in 2031 and 2036.



**Figure ES.1: Weekday two-way modelled volumes on key segments of the Centenary Motorway, base case**

## Forecast transport demands – with Centenary Motorway project

The project consists of a package of works which, taken together, expand the Centenary Motorway to three lanes in each direction between Moggill Road and Sumners Road, duplicate the Centenary Bridge, and upgrade and signalise the two roundabouts on Mt Coot-tha Road. The two delivery strategies modelled in the study are:

- PE1 – full upgrade of the Centenary Motorway upgrade to six lanes delivered by 2024
- PE2 – staged delivery of the Centenary Motorway upgrade to six lanes between 2024 and 2031

For PE2, the project would be delivered in five distinct stages described as follows (with indicative construction start and end dates):

- Stage 1 (Sep 2020 to Mar 2024) – new three-lane northbound bridge with connection to existing northbound carriageway and added lane from Sinnamon Road on ramp
- Stage 2 (Jul 2023 to Jul 2026) – three lanes northbound from Dandenong Road on ramp to Moggill Road off ramp, signalisation and upgrade of Mt Coot-tha Road and Milton Road roundabouts
- Stage 3 (Jul 2025 to Jul 2028) – three lanes southbound from Moggill Road on ramp to Dandenong Road off ramp with reconfiguration of existing bridge to three lanes southbound
- Stage 4 (Jul 2026 to Jul 2029) – widening of Stage 1 bridge to six lanes with realignment of northbound and southbound carriageways
- Stage 5 (Jul 2028 to Jul 2031) – three lanes northbound and southbound between Sumners Road south facing ramps and Dandenong Road north facing ramps

Nine project case and four base case models were run to test the performance and benefits under the PE1 and PE2 delivery strategies, summarised in Table ES.1-2.

**Table ES.1-2: Summary of modelling scenarios and years**

Model year	Base Case	Stage 1	Stages 1-4	Stages 1-5
2021	✓	✓		✓
2026	✓	✓	✓	✓
2031	✓	✓	✓	✓
2036	✓			✓

## Forecast traffic volumes – with project

The full medium term upgrade is expected to increase daily traffic volumes by 23% northbound and 25% southbound across the Centenary Bridge in 2036. The upgrade will also be able to deliver an additional 16% to and from Legacy Way / Mt Coot-tha Road per day, and deliver around 18-19% more to and from the Ipswich Motorway and further south per day.

The growth in two-way total daily volumes at these points on the Centenary Motorway, over time and for the three staging configurations modelled, is shown in Figure ES.2, Figure ES.3 and Figure ES.4. These graphs indicate that in isolation, Stage 1 has little impact on daily traffic on the motorway, however Stages 1-4 and Stages 1-5 have strong growth in throughput and capacity along the corridor over time.

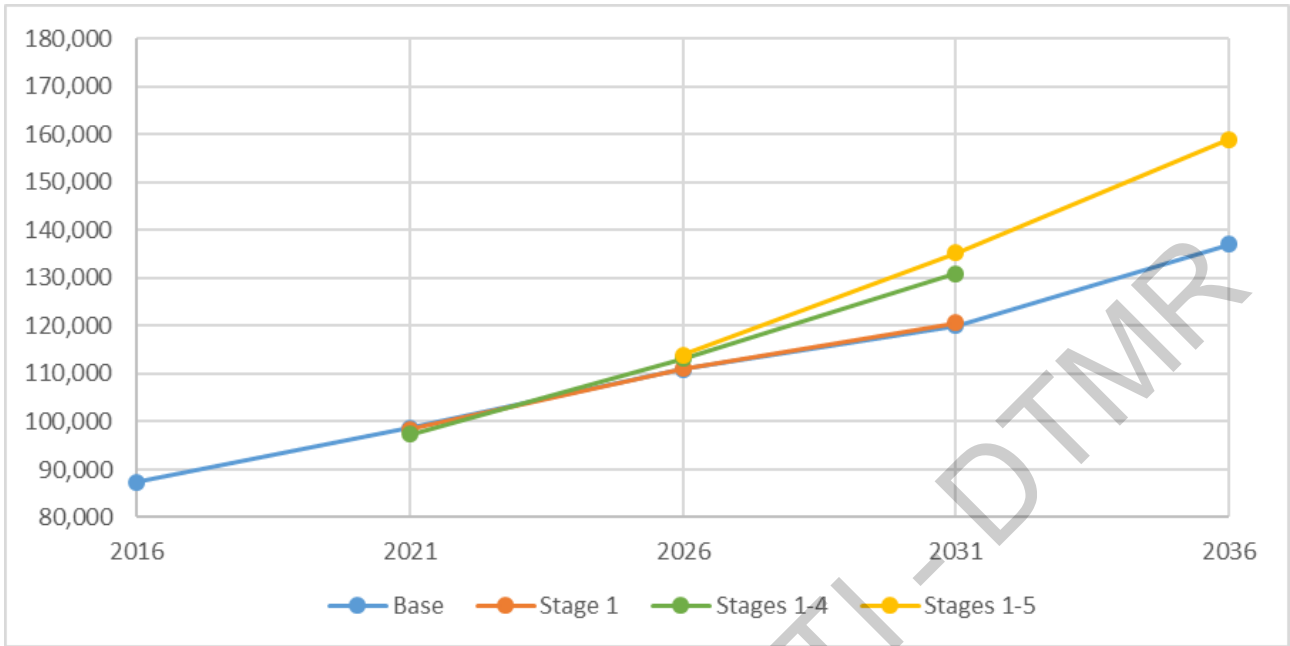


Figure ES.2: Weekday two-way modelled volumes on northern Centenary Motorway (south of Legacy Way)

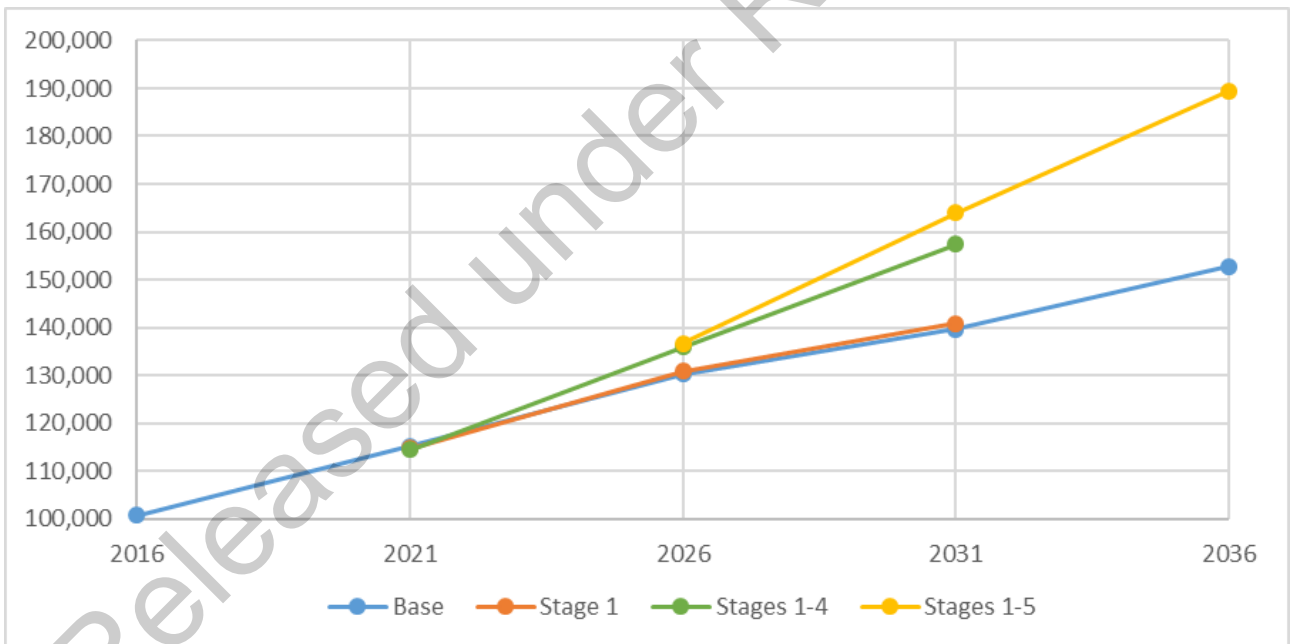
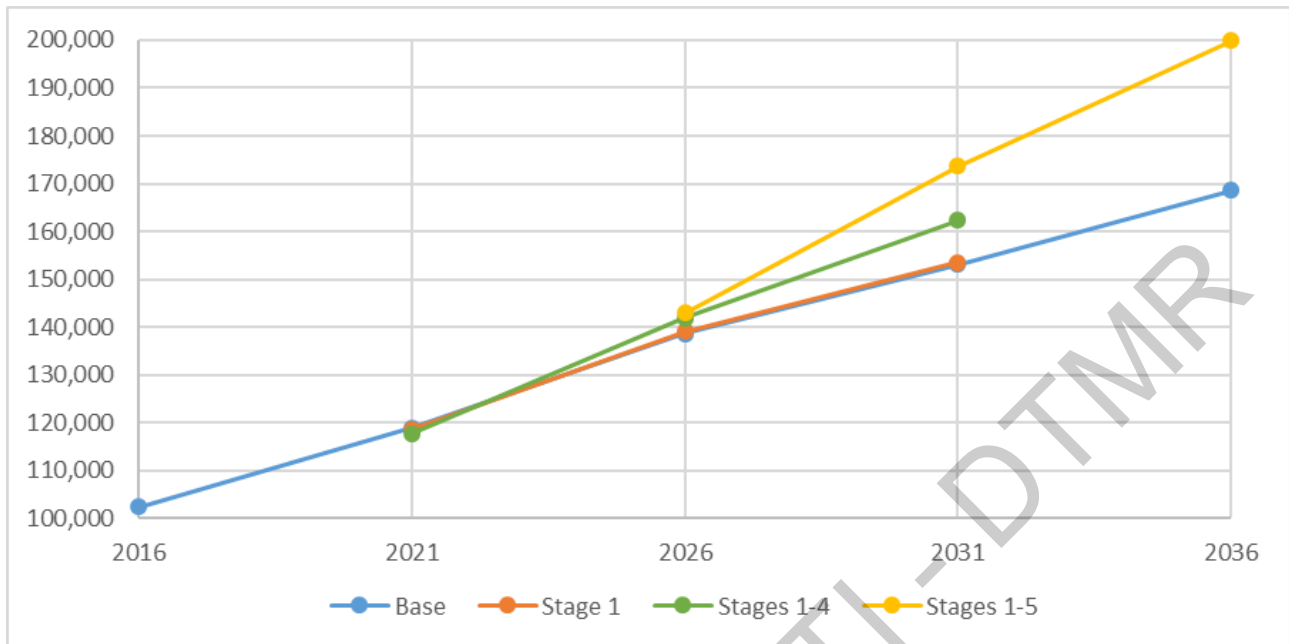


Figure ES.3: Weekday two-way modelled volumes across Centenary Bridge





**Figure ES.4: Weekday two-way modelled volumes on southern Centenary Motorway (north of Ipswich Motorway)**

The project also has an effect on the wider metropolitan road network. Again, the impact of Stage 1 alone is modest with very little change on the surrounding roads. With Stages 2 to 4 added, the project has wide ranging effects, with longer distance traffic drawn to the Centenary Motorway away from the Ipswich Motorway, which reduces traffic on other routes into the CBD. There are also smaller effects as far as the Gateway Bridge and Brisbane Airport. Locally, traffic is also diverted away from the Indooroopilly Bridge to the Centenary Bridge via Seventeen Mile Rocks Road.

The addition of Stage 5 generally strengthens the effects from Stages 1-4, with traffic able to access the Centenary Motorway more easily from the south rather than from Seventeen Mile Rocks Road.

By 2036, the project attracts almost 25% more traffic to the Centenary Bridge, compared to the base case, and removes more than one in eight trips from the Indooroopilly Bridge.

### Transport user benefits

The impact of the Centenary Motorway project on transport users as forecast by the BSTM-MM was used to derive inputs to the economic analysis, and was separated into private vehicles, commercial vehicles and public transport.

The results show that the project delivers significant reductions in travel time for private and commercial vehicles in the later modelled years, with a modest increase in travel distance, which occurs when drivers are attracted to a less direct route that has travel time savings, likely from the diversion of traffic from the Captain Cook Bridge / M3 and CLEM7. By 2036, the full upgrade delivers over 25,000 additional vehicle-kilometres travelled per day and a reduction of almost 18,000 vehicle-hours travelled per day across the metropolitan network.

The project has no significant effect on public transport service provision. However, changes in peak period travel times on the road network will also benefit buses, and may also affect the choice of park 'n' ride or kiss 'n' ride locations, affecting public transport trip lengths. The results suggest a small shift away from public transport use, particularly with the more complete project stages. With the increase in road capacity from the project and the overall improvement in traffic conditions, such a mode shift is understandable. The project also delivers user benefits to the passengers who do not change modes.

## Microsimulation model update

The Centenary Motorway Planning Study (CMPS) Full Corridor Paramics Model is a detailed representation of the full study corridor from Toowong to the Ipswich Motorway, including all interchanges and ramp terminal intersections as well as the two roundabouts on Mount Coot-tha Road and Goggs Road and Sinnamon Road in Jindalee.

As part of the study, the microsimulation model of the Centenary Motorway corridor originally developed for the 2012 study was updated to a 2017 base year and revalidated, ready for use in the Business Case phase of project delivery. The basic characteristics of the updated 2017 full corridor model remain the same as the original CMPS version, with the addition of a new zone 36 for Legacy Way.

The model update for the current study included:

- Detailed review and update of network coding, particularly around the Legacy Way connections and the Moggill Road interchange improvements which were completed after the previous work
- Update of signal phasing and timing using actual control data from March 2017
- Update of bus routes and timetables using contemporary TransLink information
- Adjustment of the demand matrices in line with 2017 count data

The updated model is very well calibrated. Of the 225 targets (five hourly measurements at 45 count locations), a GEH below 5.0 was achieved in 99.2% of cases in the AM period and 100% in the PM.

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# 1. Introduction and project description

## 1.1 Introduction

The Queensland Department of Transport and Main Roads (TMR) have engaged the Jacobs+Aurecon team to carry out the Centenary Motorway Planning Study: Medium Staged Upgrades project. This builds on previous planning studies and focuses on addressing current and anticipated short to medium term performance issues while maintaining compatibility with the longer term vision for the corridor. Performance improvements are to be delivered via an OnQ Business Case (BC) phase for short term options and a Project Assessment Framework (PAF) Preliminary Evaluation (PE) for the medium term options.

This report documents the traffic and transport modelling carried out to inform the Planning Study.

## 1.2 Project description

The study area extends from the Ipswich Motorway in the south to Legacy Way / Mt Coot-tha Road in the north, including the Centenary Bridge, interchanges south of the river at Sumners Road, Dandenong Road and Sinnamon Road, and interchanges north of the river at Fig Tree Pocket Road and Moggill Road.

The Centenary Motorway has developed from a two-lane local arterial to an urban motorway that now provides the primary link between the Western Corridor and the inner and northern suburbs of Brisbane. This progressive development has resulted in a number of operational limitations. Continued strong growth in traffic demand is expected on the corridor, driven by growth in key catchment areas including the Western Corridor and Australia Trade Coast, and reinforced by infrastructure improvements at the northern and southern ends of the corridors, including the Ipswich Motorway and Legacy Way. There is also a lack of alternative bridge crossings in the western suburbs, which will continue the need for local use of the corridor.

The corridor experiences significant peak period congestion at present, with delays of over 15 minutes northbound in the morning peak and both northbound and southbound in the evening peak. As a result of the influences mentioned above, these issues are expected to grow over time.

To address this, the Planning Study has identified a package of realistic and viable short to medium term improvement measures. Taken together these would upgrade the Motorway to a six lane cross-section between Moggill Road and Sumners Road, duplicate the Centenary Bridge, and replace the two roundabouts on Mount Coot-tha Road with upgraded signalised intersections.

The transport modelling for the study has examined two delivery strategies for these works, identified as PE1 and PE2. In PE1, the full package of works is constructed by 2024, while in PE2 the works are staged between 2024 and 2031.

The project elements and staging strategies are described in more detail in Section 4.1.

## 1.3 Modelling scope

Traffic and transport modelling undertaken as part of the Planning Study comprises:

- Strategic transport modelling to identify the benefits and wider network effects of the project options and to inform economic analysis
- Updating the microsimulation traffic model of the study corridor developed by the previous Centenary Motorway Planning Study in 2012, to reflect current (2017) traffic conditions following opening of Legacy Way in June 2015, in preparation for detailed analysis of the performance and benefits of specific work package designs in subsequent Business Case phases.

## 1.4 Report structure

The structure of this report is outlined in Table 1-1.

Table 1-1: Report structure

Section	Title	Description
1	Introduction and project description (this section)	Describes the scope and background of the current work
2	The transport model	Summarises the model characteristics and methodology
3	Future transport demands without the project	Documents the assumptions used in the future base case modelling and the resulting network performance
4	Forecast transport demand with the Centenary Motorway Upgrades	Describes the modelling of the project and its impact on the corridor and the wider network
5	Transport user benefits of the Centenary Motorway Upgrades	Outlines the derivation of traffic inputs for economic assessment and summarises the key results
6	Microsimulation model update	Describes the scope and methodology of the update and the final calibration results
Appendix A	Validation statistics	
Appendix B	Toll fares and ASC values	
Appendix C	Detailed network assumptions	
Appendix D	Not committed network schemes	
Appendix E	Detailed economic outputs	
Appendix F	Paramics model calibration results	

## 2. The transport model

### 2.1 Introduction

The transport model used for this analysis was the Version 2.0 Brisbane Strategic Transport Model: Multi Modal (BSTM-MMv2.0), developed and owned by the Queensland Department of Transport and Main Roads (TMR).

With the next generation BNE strategic model currently under development, the V2.0 BSTM-MM is the best available tool for analysing the transport impact of projects with the potential to affect travel patterns over a wide area, and thus to deliver wide ranging benefits for Greater Brisbane, such as the Centenary Motorway Upgrade Project.

The base year BSTM-MMv2.0 supplied by TMR was reviewed to assess its validation, both overall (using the 2016 screenline spreadsheet provided by TMR) and along the study corridor (using 2017 count data). This identified a need for targeted updates and refinements to improve the model's forecasting accuracy for the Centenary Motorway corridor, its surface road connections and competing routes.

This section briefly describes the key characteristics of the BSTM-MM as well as the model updates and revalidation carried out for this project.

### 2.2 Transport model description

The BSTM-MM is a four-step strategic transport model that extends from Elimbah (north of Caboolture) in the north to Jimboomba and Ormeau in the south, and to the west beyond Ipswich and Rosewood.

As a four step transport model, the model process includes:

- Trip generation – how many trips are made on the modelled day (by travel purpose)
- Trip distribution – where these trips are from and to (by transport zone)
- Trip mode choice – the mode used for these trips (including car driver, car passenger, public transport and active modes)
- Trip assignment – the routes these trips take (for both the road and public transport networks).

The BSTM-MM model area includes 1,543 internal transport zones and 28 external cordon locations (where transport demands can either enter or exit the model area). The model area and zone system is shown in Figure 2-1.

In calculating trip generation from each of these zones, eight travel purposes are considered. These are:

- Home based travel
  - white and blue collar work trips
  - primary/secondary and tertiary education trips
  - shopping trips
  - other home based trips
- Non home based travel
  - work based work (business) trips
  - other non-home based trips



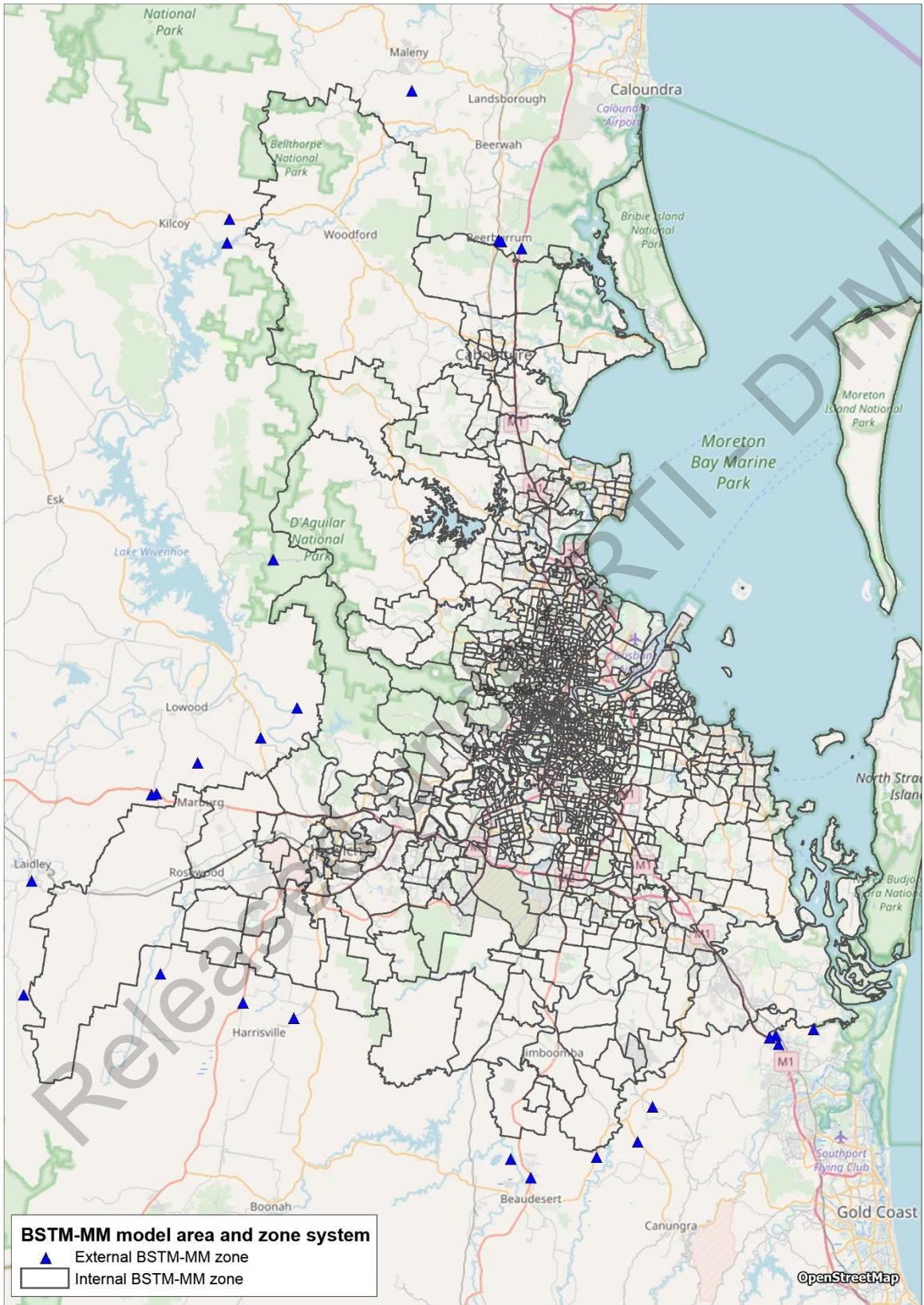


Figure 2-1: BSTM-MM model area and zone system

These trips can choose between seven transport modes, based on mode choice utility equations forming a logit choice model for each trip purpose. Commercial vehicle demand matrices are calculated separately, and are not subject to mode choice. Thus, in all, eight transport modes are modelled:

- car
  - as driver
  - as passenger
- public transport
  - access by walking
  - access by park & ride
  - access by kiss & ride
- active modes
  - walk
  - cycle
- commercial vehicles

The model represents a full typical day. For the assignment of trips to the road and public transport networks, the day is subdivided into four time periods: a two-hour AM peak (7am to 9am), a two-hour PM peak (4pm to 6pm), a seven-hour daytime off peak period (9am to 4pm) and an 'evening' period capturing the rest of the day (6pm to 7am).

Key inputs to the BSTM-MM include:

- demographic (e.g. population) and land-use data (e.g. employment or enrolments) for each transport zone;
- a representation, for each time period, of the road and public transport networks (encompassing both the PT infrastructure and the services operated for bus, rail and ferry);
- other cost information – including parking charges, fares, tolls, vehicle operating costs and users value of time; and
- demands external to the study area (for both road and public transport).

The BSTM-MMv2.0 has a calibrated base year of 2004, with validation also undertaken by TMR on a 2012 base year using traffic counts collected in 2012. A more recent validation dataset was collected for 2016 however no formal validation exercise had been undertaken with this data by TMR.

## 2.3 2016 model update

After processing 2017 count data for the Centenary Motorway corridor and interchanges, and reviewing the performance of the base year BSTM-MM v2.0 originally supplied by TMR in May 2017 (BSTMmmV2.0a) against the new counts and TMR's 2016 screenline data, it was identified that targeted updates and revalidation of the strategic model would be appropriate for this project. This section summarises the model updates, which were undertaken in consultation with TMR.

### 2.3.1 Demographic and land use updates

Demographic and land use data for use with the BSTMmmv2.0 was supplied by TMR as a macro-enabled Excel spreadsheet which is interrogated by the model run process to provide Emme input files for the appropriate year and zoning system. The spreadsheet is compatible with the zone systems of both the BSTMmmV2.0 and the evolving BNE strategic model.

The demographic forecasts in this dataset are based on the latest Queensland Government Statisticians Office (QGSO) medium series projections (2015 edition).

The dataset originally supplied with version 2.0a of the model was identified by TMR as QGSOv04. An updated version identified as QGSOv05 was provided by TMR in early August 2017. The updated version included revised education enrolment figures, generally higher than in v04. It was advised by TMR that these were

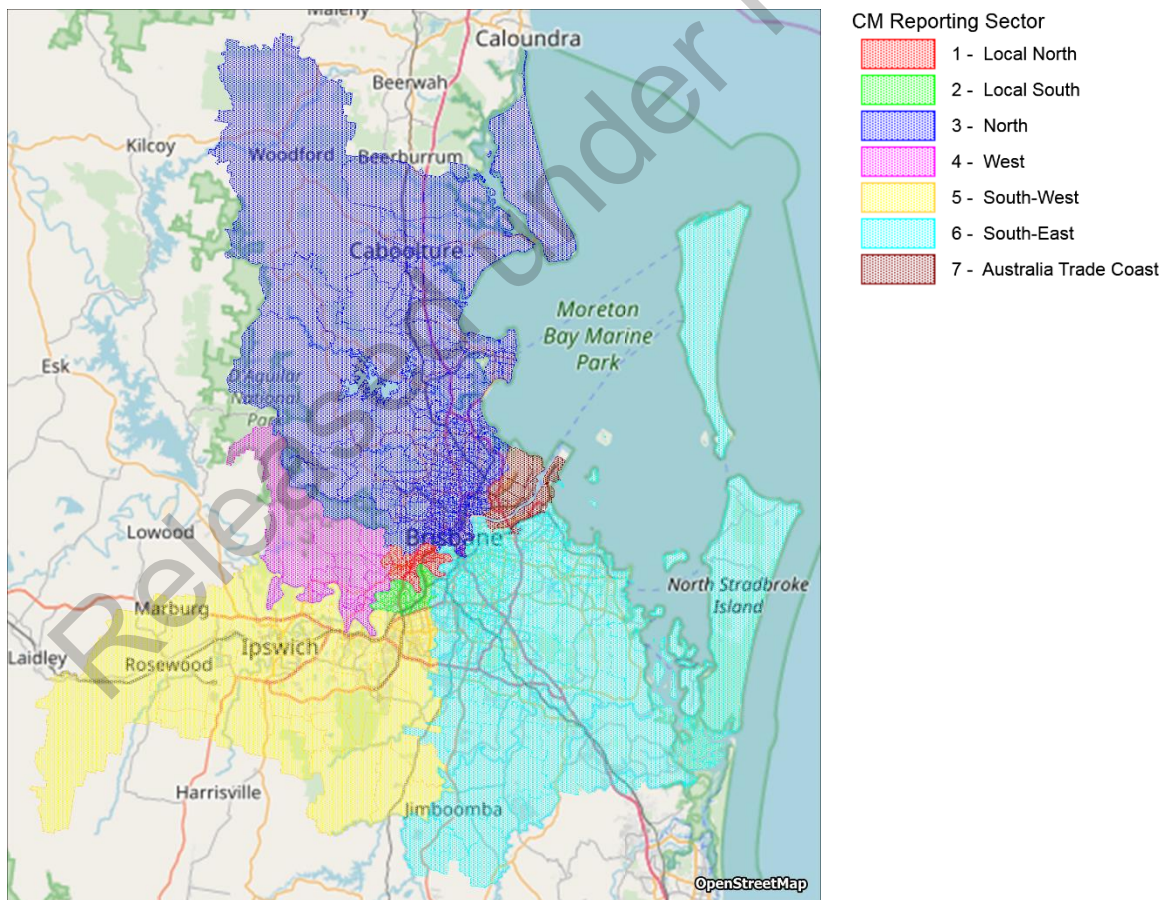


generated in an attempt to balance the demand (students at place of residents) with enrolments at SA4 level, and should reflect the actual situation better.

The original and updated base year demographics are summarised in Table 2-1. In this table, the demographics inputs are summarised into the sector system shown in Figure 2-2.

**Table 2-1: Base year demographics comparison**

Sector	Population			Employment			Enrolments		
	v04	v05	Change	v04	v05	Change	v04	v05	Change
Local North	71,393	71,393	0	37,701	37,701	0	45,865	46,575	710
Local South	63,531	63,531	0	25,105	25,105	0	10,669	10,750	81
North	887,875	887,875	0	575,271	575,271	0	211,821	215,441	3,620
West	26,068	26,068	0	4,089	4,089	0	2,485	2,526	40
South-West	275,049	275,049	0	99,755	99,755	0	53,971	55,394	1,423
South-East	947,895	947,895	0	370,650	370,650	0	175,252	182,307	7,055
Australia Trade Coast	5,396	5,396	0	66,428	66,428	0	2,028	2,267	239
<b>Total</b>	<b>2,277,205</b>	<b>2,277,205</b>	<b>0</b>	<b>1,178,999</b>	<b>1,178,999</b>	<b>0</b>	<b>502,092</b>	<b>515,260</b>	<b>13,169</b>



**Figure 2-2: BSTM-MM zoning – reporting sectors for Centenary Motorway Upgrade Project**



### 2.3.2 Network updates

The base year highway and public transport networks were reviewed to confirm the inclusion of appropriate recently completed upgrade projects and the coding of the study corridor and key congestion points. The most significant inclusion in terms of impact on the study corridor was Legacy Way, which opened in 2015. The connection of Boundary Road in Wacol from Bukulla Street to Fulcrum Street, completed in 2016, is also significant, being located close to the southern end of the study corridor, although the resulting through route does not connect to the Motorway.

A complete list of recently completed projects included in the updated 2016 model is included in Appendix C.

During the calibration and validation process the coding of Moggill Road between Stamford Road, Indooroopilly and Kenmore Road, Kenmore was modified, increasing the traffic impedance from 'low' to 'medium' to better match observed conditions.

The final updated base year network is identified as BN\BN\_2016\_003.

### 2.3.3 User costs and tolling parameters

User cost inputs to the model were updated using the latest available information at the time of the update (early August 2017):

- Consumer Price Index (CPI) and Average Weekly Earnings (AWE), based on published historical data
- Public transport fares, based on TransLink published rates
- Toll road charges, from operator websites
- Alternative specific constants (ASCs) for toll roads, based on updated toll charges and test runs

A large range of model tests were carried out to calculate the most appropriate ASC values for the updated base year model. This was targeted at achieving a better match of modelled to observed volumes by vehicle class across all toll roads in the model. This was important as the route choice on many of these roads affects traffic volumes on the study corridor.

Following agreement with the Transport Analysis team at TMR, the methodology used to calculate future year cost escalations was also updated. In the updated process, AWE increases at 2.5% per annum, in line with CPI, rather than faster than CPI as in previous iterations of the BSTM. The new AWE projection rate is approximately equal to the actual average AWE growth rate since 2012.

A table is included in Appendix B that lists the toll fares (dollars and minutes), and existing and new ASC values.

### 2.3.4 Matrix estimation

As part of the revalidation process, a matrix estimation (ME) approach was adopted, primarily to improve the fit of modelled to observed commercial vehicles across the network. The estimation approach was later also applied to private vehicles to further improve model performance. This decision was taken in discussion with TMR as the validation results of the 2016 model for all vehicle classes were quite poor (refer Section 2.4). The poor validation in the standard model is likely due to a number of reasons including the fact that the model's calibration year is 2004, and since that time there have been a large number of toll roads open across the network, combined with significant growth in some greenfield areas and these factors have combined to have a significant impact on trip distribution (as well as departure time choice and mode share).

A range of adjustments to other model parameters was also tested prior to matrix estimation (refer Section 2.3.5) however these alone did not improve validation performance enough for the model to be considered fit for purpose in this study.

The matrix estimation was undertaken using reliable traffic counts collected during 2016-17 and through the use of SOLA assignment scripting in Emme. The steps undertaken were as follows:

- Adopt SOLA python script previously used on SEQSTM-MM matrix estimation processes, using the demand adjustment matrix estimation process available in Emme
- 3 outer adjustment loops by time period with post ME matrices reset and then new mask matrices set for externals (not adjusted in final loop 3)
- 10 “inner” SOLA demand adjustment loops
- Reset factors max/min origin-destination cell values by time period [car = 0.1 to 25 times prior, trucks = 0.05 to 100 times prior]
- Reset factors max/min trip end totals by time period [car = 0.4 to 2.5 times prior trip end total, trucks = 0.1 to 10 times prior trip end total]
- Reset time period adjusted matrices to ensure matrices are balanced at 24-hour Trip End level

*Note1: The Prior Matrix is always the original prior NOT the one from the previous outer loop*

*Note2: Park and Ride zones excluded from ME process*

The resulting time period sector adjustment percentages from the matrix estimation process are tabulated below by vehicle class. It is noted that some of these factors are quite high, which was necessary to improve the performance of the model suitable for application in this study. In overall terms trip generation by sector has not changed significantly for private vehicles, however distribution between some sectors is much higher in certain cases.

**Table 2-2: Private Vehicle Matrix Estimation Changes by Time Period Sector**

Sector	CBD	External	Inner NE	Inner SE	Inner Sth	Inner west	Outer NE	Outer NW	Outer SE	Outer SW	Grand Total
CBD	4.2%	-21.4%		2.2%	28.0%	5.9%	-42.0%	-32.2%	-13.6%		<b>2.3%</b>
External	-21.8%			11.1%	-17.3%		20.9%		9.2%	5.3%	<b>0.8%</b>
Inner NE			6.3%	-4.1%	32.8%	14.7%	-5.2%	-6.4%	-25.9%		<b>3.5%</b>
Inner SE		25.0%		6.7%	13.3%	-21.5%	48.6%		12.7%	7.4%	<b>6.6%</b>
Inner Sth	38.6%	-12.9%	20.6%	16.4%		-9.8%		-31.7%		-8.7%	<b>2.7%</b>
Inner west	2.3%	-9.7%	7.7%	-27.4%	6.3%	0.9%	-16.3%	3.4%	-22.5%	8.8%	<b>0.5%</b>
Outer NE	-39.3%	18.0%	-3.0%	45.2%		-14.3%	4.9%	7.1%			<b>3.0%</b>
Outer NW	-34.3%		-4.7%		-22.8%		8.8%	1.5%			<b>0.8%</b>
Outer SE	-13.1%	6.9%	-14.7%	14.1%		-18.8%			0.3%		<b>1.0%</b>
Outer SW	29.9%	5.1%			-9.2%	-16.3%			4.1%	2.0%	<b>1.0%</b>
<b>Grand Total</b>	<b>2.1%</b>	<b>0.8%</b>	<b>3.4%</b>	<b>6.6%</b>	<b>2.6%</b>	<b>0.5%</b>	<b>3.1%</b>	<b>0.8%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>2.2%</b>

\*Empty cells contained differences of less than 1000 trips

For medium and heavy commercial vehicles, the adjustments are more substantial, which is not unexpected given the nature of these trip tables which are generally more sparse. The underlying trip generation and distribution processes for commercial vehicles has limitations and accurately predicting such movements is often very challenging in strategic transport models depending on the data available. The matrix estimation process can improve these matrices significantly through use of classified traffic counts to adjust commercial vehicle movements in order to better match observed generation and traffic flows.

**Table 2-3: Medium Commercial Vehicle Matrix Estimation Changes by Time Period Sector**

Sector	CBD	External	Inner NE	Inner SE	Inner Sth	Inner west	Outer NE	Outer NW	Outer SE	Outer SW	Grand Total
CBD	161.1%	-47.5%	64.8%		36.1%	81.8%		64.4%	-21.5%		<b>62.9%</b>
External	-52.9%		-16.9%		-10.9%	-27.9%		35.0%	17.4%	25.0%	
Inner NE	71.1%	-20.0%	41.5%	-12.1%	81.1%	172.5%	41.6%	83.1%	-20.9%		<b>40.8%</b>
Inner SE			-16.5%	32.8%	62.5%				85.7%	128.3%	<b>33.5%</b>
Inner Sth	36.2%		54.3%	44.6%	11.1%	39.4%			48.7%	14.2%	<b>22.4%</b>
Inner west	75.2%	-30.0%	133.2%		79.9%	51.4%	74.8%	129.7%			<b>62.2%</b>
Outer NE			70.0%			104.9%	50.8%	177.4%	-41.4%		<b>62.5%</b>
Outer NW	53.3%	35.8%	99.8%			105.6%	194.4%	58.8%		58.0%	<b>73.3%</b>
Outer SE	-24.2%	22.5%	-18.5%	87.7%	60.8%		-38.1%		9.4%	88.3%	<b>21.8%</b>
Outer SW		16.4%		97.0%		-34.7%	-47.5%	55.9%	69.3%	70.7%	<b>37.8%</b>
<b>Grand Total</b>	<b>60.3%</b>		<b>37.1%</b>	<b>32.6%</b>	<b>23.3%</b>	<b>59.9%</b>	<b>57.0%</b>	<b>70.0%</b>	<b>20.4%</b>	<b>48.1%</b>	<b>36.3%</b>

\*Empty cells contained differences of less than 250 trips

**Table 2-4: Heavy Commercial Vehicle Matrix Estimation Changes by Time Period Sector**

Sector	CBD	External	Inner NE	Inner SE	Inner Sth	Inner west	Outer NE	Outer NW	Outer SE	Outer SW	Grand Total
CBD		-59.1%	-24.8%						-76.2%		<b>-27.9%</b>
External	-61.3%		-10.9%	61.4%		-47.2%			15.7%	12.6%	
Inner NE	-22.6%	-15.9%	-10.2%	80.6%		-24.2%		-29.7%	-29.3%		<b>-8.8%</b>
Inner SE		59.5%	50.2%	41.5%	103.6%			75.4%	29.5%	310.9%	<b>58.7%</b>
Inner Sth				78.2%	7.9%					7.5%	<b>10.9%</b>
Inner west		-45.1%	-24.9%						-65.1%		<b>-24.4%</b>
Outer NE								-24.6%	-48.6%		<b>-18.7%</b>
Outer NW			-33.7%	125.8%			-19.7%	-11.4%	-36.2%	-38.9%	<b>-16.1%</b>
Outer SE	-69.3%	14.6%		19.4%			-44.4%	-30.9%	-9.8%	45.2%	<b>-2.3%</b>
Outer SW		15.4%		298.1%				-31.1%	50.4%	5.9%	<b>19.5%</b>
<b>Grand Total</b>	<b>-27.8%</b>		<b>-8.8%</b>	<b>58.7%</b>	<b>11.0%</b>	<b>-24.4%</b>	<b>-18.8%</b>	<b>-16.1%</b>	<b>-2.3%</b>	<b>19.5%</b>	<b>3.1%</b>

\*Empty cells contained differences of less than 250 trips

In order to carry these improvements through to future year forecasts, the final set of positive and negative adjustments to the trip matrix - known as the 'delta matrix' - is applied to future year demand matrices immediately before assignment.

### 2.3.5 Other calibration and validation adjustments

A number of other adjustments specific to the corridor of interest were tested and applied during the revalidation process, including changes to k-factor distribution weights, time period factors, and special generators.

Preliminary tests showed that the forecast traffic demand between Ipswich and the rest of Greater Brisbane significantly exceeded observed count data. The k-factor distribution weights for both private and commercial vehicles were thus adjusted to achieve more realistic distributions.

Preliminary tests also showed that peak direction traffic in general was too high in both the AM and PM peak periods. The time period factors were accordingly adjusted to improve the directional balance.

Finally, the Mount Ommaney shopping centre (zone 4618) was removed from the special generator list, as the trip generation multiplier which applied to it as a 'Regional Shopping Centre' resulted in significantly higher than observed volumes in the immediate area.

## 2.4 2016 validation results

The performance of the base year model has been measured both across the overall BSTM-MM area, using observed count data from the 2016 model validation screenline spreadsheet provided by TMR, as well as in more detail along the study corridor, using 2017 count data collected for this study.

The overall validation of the BSTM-MMv2.0 is measured using 40 screenlines established by TMR. These are a subset of the 60 screenlines used for strategic modelling in South-East Queensland.

Overall statistics for the original and updated models, totalled across all 40 screenlines, is summarised in Table 2-5. This shows a substantial improvement resulting from the revalidation process, particularly for peak period totals. The adjusted model demands represent a reduction of between 10 to 15% during the AM and PM peak periods. This reflects the changes in travel behaviour including continued peak spreading which has occurred since the development of the original BSTM-MM, which was built based on the 2004 Household Travel survey (HTS) data.

**Table 2-5: BSTM-MM total 2016 screenline validation (vehicles)**

Data	Observed data	Model performance – unadjusted		Model performance – adjusted	
	Value	Value	Difference (%)	Value	Difference (%)
AM 2hr peak period total	1,362,000	1,521,000	159,000 (+11.7%)	1,371,000	9,000 (+0.7%)
PM 2hr peak period total	1,403,000	1,612,000	210,000 (+15.0%)	1,401,000	-2,000 (-0.1%)
Daily total	9,239,000	9,405,000	166,000 (+1.8%)	9,256,000	17,000 (+0.2%)

Figure 2-3 shows the screenlines surrounding the study corridor, which is highlighted in red.

Screenlines 18 (Brisbane River) and 21 (Western Screenline) intersect the Centenary Motorway, at the Centenary Bridge and north of Moggill Road respectively. The other screenlines most relevant to the project are 16 (Enoggera Creek – Breakfast Creek) and 17 (Brisbane Circle) north of the study area and 20a (South of Logan Motorway) and 23 (Oxley Creek) to the south.

Base year model performance for these screenlines, before and after revalidation, is summarised in Table 2-6 and Table 2-7. These show that the model update and adjustment process has substantially improved the goodness of fit to observed volumes for all of these key screenlines.

More detailed screenline validation results for the updated model, including directional volumes at individual points along the screenlines, are presented in Appendix A.1.

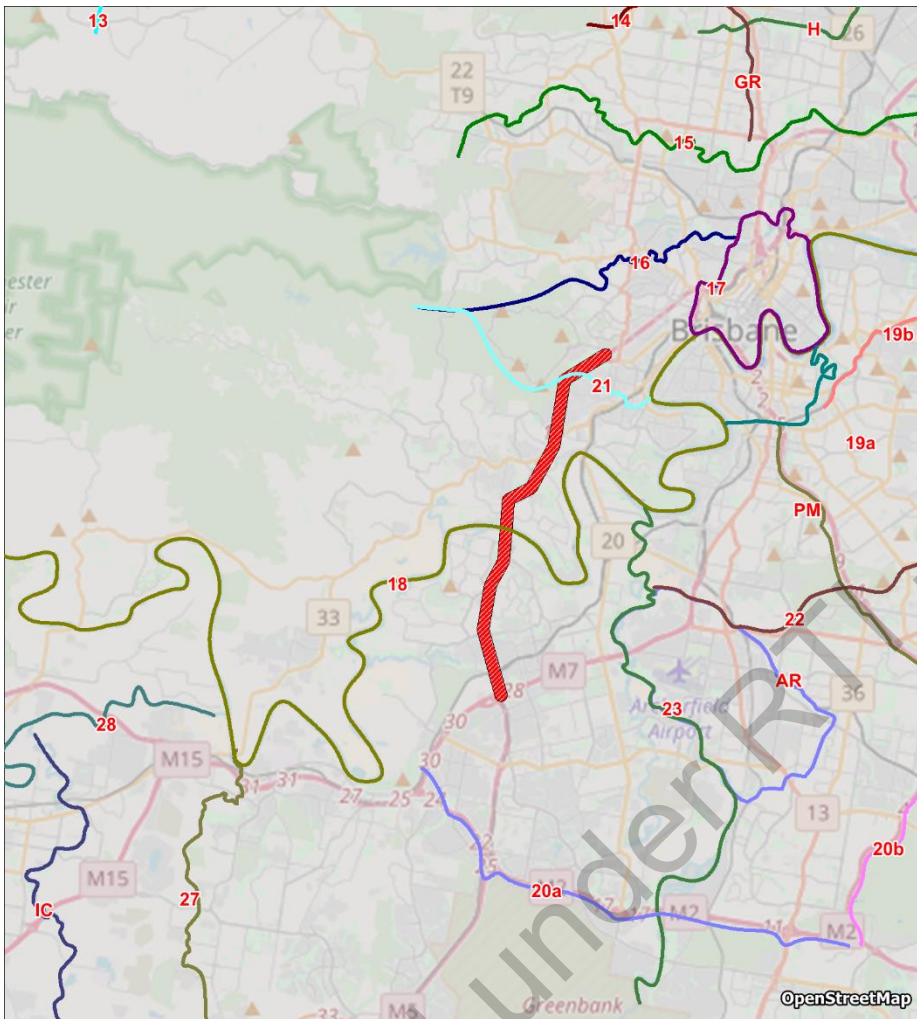


Figure 2-3: BSTM-MM validation screenlines around study corridor

Table 2-6: BSTM-MM 2016 screenline validation (vehicles) – screenlines intersecting study corridor

Data	Observed data	Model performance – unadjusted		Model performance – adjusted	
	Value	Value	Difference (%)	Value	Difference (%)
<b>Screenline 18 - Brisbane River</b>					
AM 2hr peak period total	92,000	109,000	16,000 (+17.5%)	91,000	-1,000 (-1.2%)
PM 2hr peak period total	92,000	116,000	24,000 (+26.4%)	87,000	-5,000 (-5.2%)
Daily total	608,000	647,000	39,000 (+6.4%)	608,000	-400 (-0.1%)
<b>Screenline 21 - Western Screenline</b>					
AM 2hr peak period total	26,000	29,000	4,000 (+14.1%)	26,000	200 (+0.7%)
PM 2hr peak period total	26,000	32,000	6,000 (+21.7%)	26,000	-300 (-1.3%)
Daily total	172,000	182,000	10,000 (+5.8%)	177,000	5,000 (+2.8%)

**Table 2-7: BSTM-MM 2016 screenline validation (vehicles) – screenlines surrounding study corridor**

Data	Observed data	Model performance – unadjusted		Model performance – adjusted	
	Value	Value	Difference (%)	Value	Difference (%)
<b>Screenline 16 - Enoggera Creek - Breakfast Creek</b>					
AM 2hr peak period total	22,000	25,000	3,000 (+12.5%)	22,000	<100 (+0.9%)
PM 2hr peak period total	23,000	27,000	5,000 (+21.5%)	23,000	200 (+0.9%)
Daily total	140,000	150,000	10,000 (+7.4%)	142,000	2,000 (+1.4%)
<b>Screenline 17 - Brisbane Circle</b>					
AM 2hr peak period total	140,000	158,000	19,000 (+13.5%)	137,000	-2,000 (-1.7%)
PM 2hr peak period total	139,000	169,000	30,000 (+21.3%)	133,000	-6,000 (-4.6%)
Daily total	920,000	1,000,000	80,000 (+8.7%)	929,000	9,000 (+1.0%)
<b>Screenline 20a - South of Logan Motorway</b>					
AM 2hr peak period total	42,000	49,000	7,000 (+15.6%)	42,000	300 (+0.6%)
PM 2hr peak period total	47,000	54,000	7,000 (+14.2%)	48,000	1,000 (+1.4%)
Daily total	296,000	313,000	17,000 (+5.6%)	298,000	2,000 (+0.7%)
<b>Screenline 23 - Oxley Creek</b>					
AM 2hr peak period total	39,000	41,000	2,000 (+5.5%)	39,000	-200 (-0.5%)
PM 2hr peak period total	39,000	45,000	6,000 (+15.9%)	38,000	-1,000 (-2.6%)
Daily total	252,000	249,000	-2,000 (-0.8%)	248,000	-3,000 (-1.2%)

Along the Centenary Motorway corridor, 2017 count data was collected for motorway segments, ramps, and feeder roads at each interchange. Improving the goodness of fit of the model at this detailed level was also a priority for the model update process.

Results before and after the update are summarised in Table 2-8. More detailed results for the updated model, including diagrams of observed and modelled volumes at each interchange, are presented in Appendix A.2.

These statistics show that the update process has substantially improved the goodness of fit at interchanges along the study corridor, for all vehicle classes.

Overall, the screenline and study corridor results indicate that the final updated base year model, BSTMmmV2.0e\_qgsoV4\_bstm\_2016\_BN003v01, is appropriately validated and suitable for use in the current work.

Table 2-8: BSTM-MM 2016 validation (vehicles) – Centenary Motorway interchange segments<sup>1</sup>

Data	Observed data	Model performance – unadjusted		Model performance – adjusted	
	Value	Value	Difference (%)	Value	Difference (%)
<b>Private vehicles</b>					
AM 2hr peak period total	99,000	121,000	22,000 (+22.2%)	100,700	1,700 (+1.7%)
PM 2hr peak period total	115,800	134,000	18,200 (+15.7%)	114,900	-900 (-0.8%)
Daily total	353,000	386,000	32,800 (+9.3%)	357,000	4,500 (+1.3%)
<b>Medium commercial vehicles</b>					
AM 2hr peak period total	4,500	4,100	-400 (-7.8%)	4,500	20 (+0.4%)
PM 2hr peak period total	3,100	2,500	-600 (-20.3%)	3,200	100 (+3.7%)
Daily total	18,000	22,000	3,900 (+21.9%)	18,000	400 (+2.1%)
<b>Heavy commercial vehicles</b>					
AM 2hr peak period total	900	1,800	900 (+94.8%)	1,000	100 (+11.4%)
PM 2hr peak period total	600	1,000	400 (+71.8%)	600	30 (+6.0%)
Daily total	5,000	14,000	8,600 (+171.7%)	5,000	300 (+6.0%)
<b>Total vehicles</b>					
AM 2hr peak period total	104,400	126,900	22,500 (+21.5%)	106,300	1,800 (+1.8%)
PM 2hr peak period total	119,500	137,500	18,000 (+15.1%)	118,800	-700 (-0.6%)
Daily total	538,000	583,000	44,300 (+8.2%)	541,000	2,500 (+0.5%)

Note 1: These values include volumes on ramps, motorway through segments, and surface road approaches at all interchanges from Legacy Way to the Ipswich Motorway inclusive, taken from the corridor validation diagrams in Appendix A.2.



### 3. Future transport demands without the project

#### 3.1 Introduction

To provide a sound basis for analysing the impact of the Centenary Motorway Upgrade Project, future year base case BSTM-MM models have been developed in consultation with TMR's Transport Analysis Unit.

The general approach to future year modelling has been to adopt a 'do minimum' base scenario, including only committed works, to comply with the requirements of Building Queensland (BQ) and Infrastructure Australia (IA).

This section describes the inputs and assumptions used in the future year base case modelling, in Section 3.2, followed by base case traffic forecasts in Section 3.3.

#### 3.2 Base case forecast assumptions

##### 3.2.1 Demographic growth

The demographic and land use inputs used for the future year modelling (both with and without the project) are the QGSO v05 data set supplied by TMR. This data set is based on the 'medium' series from the latest (2015 edition) QGSO population projections.

The future population, employment and education enrolment inputs to the strategic modelling are summarised in Table 3-1, Table 3-2 and Table 3-3 respectively. The inputs are summarised using the sector system is shown in Figure 2-2.

The key sectors of interest surrounding the Centenary Motorway are the Local North (Toowong, Indooroopilly, Kenmore, Fig Tree Pocket) and Local South (Jindalee, Mt Ommaney, Sumners, Corinda, Chelmer). Modest population growth is forecast for these areas along with moderate employment growth. Forecast growth in the South-West (Ipswich and surrounding areas), Australia Trade Coast (Brisbane Airport, Port of Brisbane) and parts of the North (particularly the CBD) is higher than the local catchment of the motorway and will have a large influence on the traffic growth in this corridor.

**Table 3-1: Strategic model demographic inputs – population growth**

Sector	2016	2021	2026	2031	2036	% growth 2016 to 2036
Local North	71,393	73,998	76,297	78,857	81,527	14%
Local South	63,531	64,886	65,779	66,368	66,574	5%
North	887,875	970,445	1,054,526	1,136,820	1,209,078	36%
West	26,068	26,490	26,859	27,022	26,888	3%
South-West	275,049	326,247	416,458	518,006	635,018	131%
South-East	947,895	1,006,311	1,068,486	1,133,933	1,205,696	27%
Australia Trade Coast	5,396	7,192	8,668	13,050	16,223	201%
<b>Total</b>	<b>2,277,205</b>	<b>2,475,568</b>	<b>2,717,073</b>	<b>2,974,055</b>	<b>3,241,004</b>	<b>42%</b>



**Table 3-2: Strategic model demographic inputs – employment growth**

Sector	2016	2021	2026	2031	2036	% growth 2016 to 2036
Local North	37,701	39,655	41,577	44,223	47,347	26%
Local South	25,105	26,871	27,995	30,325	32,836	31%
North	575,271	628,675	685,322	745,872	810,196	41%
West	4,089	4,307	4,370	4,743	5,026	23%
South-West	99,755	113,000	131,743	153,630	178,458	79%
South-East	370,650	407,072	440,214	481,014	521,750	41%
Australia Trade Coast	66,428	77,077	88,483	95,715	101,651	53%
<b>Total</b>	<b>1,178,999</b>	<b>1,296,656</b>	<b>1,419,704</b>	<b>1,555,522</b>	<b>1,697,265</b>	<b>44%</b>

**Table 3-3: Strategic model demographic inputs – enrolment growth**

Sector	2016	2021	2026	2031	2036	% growth 2016 to 2036
Local North	46,575	50,731	53,335	56,591	60,345	30%
Local South	10,750	11,864	12,047	12,310	12,400	15%
North	215,441	243,244	257,359	272,063	285,261	32%
West	2,526	2,581	2,609	2,637	2,619	4%
South-West	55,394	67,861	84,753	103,016	124,868	125%
South-East	182,307	205,303	217,884	227,610	239,174	31%
Australia Trade Coast	2,267	2,681	2,996	3,108	3,207	41%
<b>Total</b>	<b>515,260</b>	<b>584,264</b>	<b>630,983</b>	<b>677,335</b>	<b>727,874</b>	<b>41%</b>

### 3.2.2 Network assumptions

The modelled networks were initially based on the BSTM-MMV2.0a model networks provided by TMR in mid-2017. However, as the scheme list for these networks was several years old and also included many planned but uncommitted projects, a detailed review of the project inclusions was carried out, in consultation with TMR.

As a first step in this process, the scheme list and scheme coding was updated to reflect the latest Queensland Transport and Roads Investment Program (QTRIP) four-year plan.

The BNE model development program has conducted a detailed review of future year network coding, which included discussions with the affected local governments to identify planned and committed infrastructure improvement projects on the roads under their control. The resulting BNE networks are more recent than the supplied BSTM-MMV2.0 networks.

As agreed with TMR, the schemes included in the BNE networks for the years 2021 and 2026 have been taken to be 'committed' projects. For those not already coded into the BSTM-MM networks (or with different extents or other description changes), equivalent BSTM-MM schemes were created based on BNE coding.

All upgrade projects beyond 2026 have been considered 'not committed' and excluded from the base case networks for this study.

Irrespective of the year of inclusion in the BNE or original BSTM-MM networks, any schemes involving upgrades along the Centenary Motorway corridor or related infrastructure were excluded from the base network. In particular, the Kenmore Bypass and Western Orbital are not included.

The only exception is an upgrade to Sumners Road over the Centenary Motorway to a four lane overpass. This was required to prevent unrealistic congestion directly affecting interchange demand forecasts on the project corridor. This upgrade is presently in detailed design planning and expected to be delivered before 2021. This scheme has been included in the base networks from 2021 onwards, as agreed with TMR.

Following the initial testing of future year scenarios, convergence issues were observed in the later forecast years. The issues were found to result from inadequate network supply in greenfield areas (particularly around Ripley, Flagstone and Yarrabilba). In these areas, a 'committed projects only' network approach is not compatible with the demographic forecasts. In order to ensure model stability, network schemes were added to provide more realistic connections from the high growth zones to the surrounding road network and to address unrealistic bottlenecks in those areas. These nominal improvements are the only scheme differences between the 2026, 2031 and 2036 base case networks. Details and plots of the 'not committed' network schemes that were included are provided in Appendix D.

The modelling horizon year (2036) networks have also been coded with a modest level of capacity uplift on higher order roads, reflecting current trends towards more efficient use of road space through vehicle and network management technology. Motorway and expressway links have a 7.5% higher capacity in 2036 than in earlier years, while for arterial routes the uplift is 5%. This network wide measure also helps to ensure model stability in the 'committed projects only' context.

The final list of included projects for each modelled year is attached as Appendix C.

### **3.2.3 Public transport services**

The public service coding (routes, timetables and stopping patterns) used in the base case models are based on the BSTM-MMV2.0a models originally supplied by TMR.

The 'committed projects only' network coding approach led to several public transport infrastructure projects being removed from scheme list. These included:

- Extension of Springfield rail line to School Road
- Salisbury to Flagstone rail line
- Extension of the Northern Busway from Federation Street to Truro Street
- Extension of the South East Busway from School Road to Underwood Road

As no alternative service plans were available, modifications to public transport routes in response to these infrastructure changes were minimised, and timetables were not altered. Affected bus services were rerouted to run as close as possible to the original BSTM-MMV2.0a paths. Rail services were truncated at the nearest existing station.

There were also a small number of changes to route coding required to switch to equivalent node numbers where a new scheme affected local node numbering or connectivity. In the same way, in the 'with project' case, node numbers had to be adjusted around Mount Coot-tha Road to suit the project coding. In these cases' the route was kept as close as possible to the original path.

### 3.3 Forecast traffic volumes without project

Key indicators of transport demand and network performance for the base year and the future year base case models are summarised in Table 3-4.

The results indicate that private vehicle demand across the network grows by more than a third across the forecast period, with growth on the Centenary Bridge being faster than the network average and faster than the overall cross river demand. This is attributed to its strategic position linking growth areas in the south-west with the CBD and northern suburbs.

The model indicates increasing trip length and increasing congestion in the network, with VKT growing significantly faster than vehicle trips and VHT growing much faster than VKT. This is reflected in a declining overall average speed, which falls by more than 10% in the forecast period.

Public transport usage grows significantly faster than private vehicle traffic over this period, influenced by major network improvement projects such as Cross River Rail as well as by increasing congestion on the road network increasing the attractiveness of rail and busway services. Passenger kilometres travelled (PKT) increases faster than the number of passenger trips, indicating a longer average trip length in the later years, while passenger hours travelled (PHT) increases slightly more slowly than PKT, indicating a faster average travel speed. Both of these factors are also suggestive of ridership growth being skewed towards rail and busway services from less central suburbs.

**Table 3-4 : Network demand and performance measures, base case models**

Data	2016	2021	2026	2031	2036	2036 vs 2016
Daily private vehicle trips	4,782,000	5,160,000	5,591,000	6,061,000	6,544,000	+37%
Daily private vehicle person trips	6,724,000	7,255,000	7,859,000	8,498,000	9,149,000	+36%
Daily commercial vehicle trips	185,000	209,000	230,000	253,000	278,000	+50%
Daily VKT (kms)	65,605,000	72,308,000	80,442,000	89,227,000	98,868,000	+51%
Daily VHT (hours)	1,165,000	1,285,000	1,454,000	1,682,000	1,960,000	+68%
Average network speed	56.3	56.3	55.3	53.0	50.4	-10%
River Crossing Screenline Total	607,614	663,945	725,868	787,787	858,176	+41%
Centenary Bridge Total	100,749	115,226	130,331	139,631	152,756	+52%
Daily PT trips	693,000	833,000	930,000	1,037,000	1,166,000	+68%
Daily PKT (kms)	10,192,000	12,587,000	14,228,000	16,099,000	18,519,000	+82%
Daily PHT (hours)	276,000	336,000	379,000	428,000	491,000	+78%

The modelled growth in traffic volumes on key sections of the Centenary Motorway over time, without the Centenary Motorway project, is shown in Figure 3-1. This shows that the Centenary Bridge, despite stronger than average growth as noted above, increasingly acts as a bottleneck on the study corridor, growing more slowly than either the northern or southern ends of the route. Growth on the bridge drops off visibly in the later years (2031 and 2036).

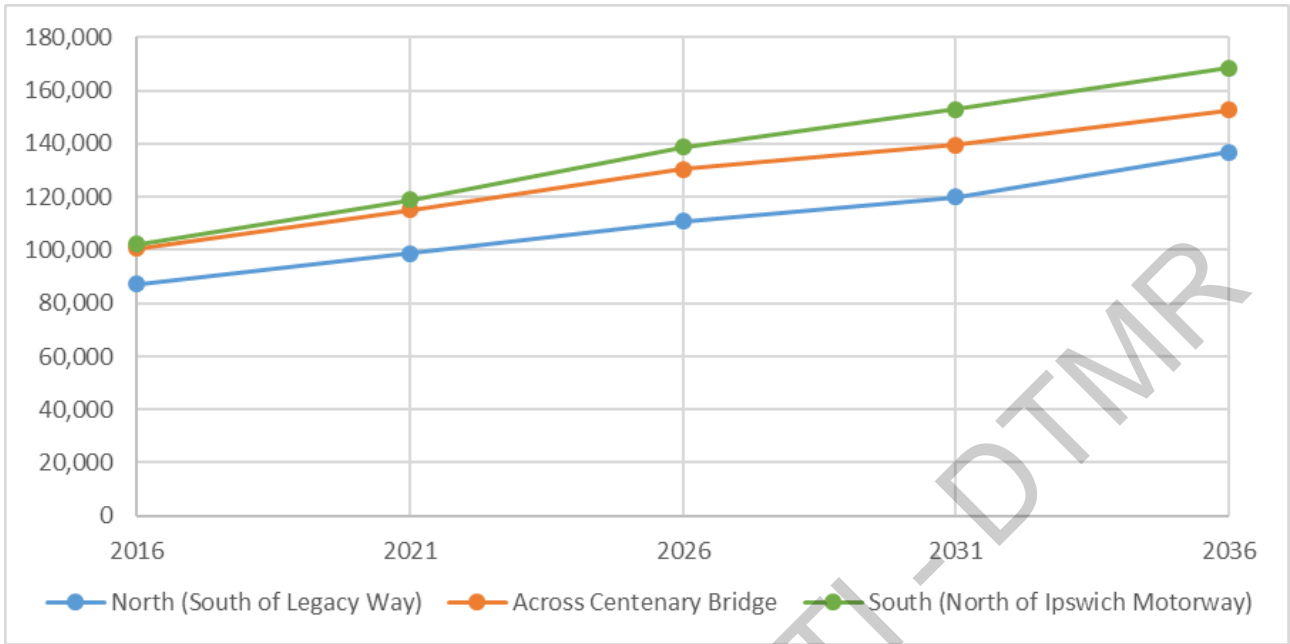


Figure 3-1 : Weekday two-way modelled volumes on key segments of the Centenary Motorway, base case

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## 4. Forecast transport demand with the Centenary Motorway Upgrades

### 4.1 Project description and options

The Centenary Motorway Medium Staged Upgrades project consists of a package of works which, taken together, expand the Centenary Motorway to three through lanes in each direction between Moggill Road and Sumners Road, duplicate the Centenary Bridge, and upgrade and signalise the two roundabouts on Mount Coot-tha Road.

Two delivery strategies have been modelled in the current study:

- PE1 – full upgrade of the Centenary Motorway upgrade to six lanes delivered by 2024
- PE2 – staged delivery of the Centenary Motorway upgrade to six lanes between 2024 and 2031

For PE2, the project would be delivered in five distinct stages, as shown in Figure 4-1, indicatively following the schedule in Table 4-1.

**Table 4-1: Indicative construction start and end dates**

Construction	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Start	Sep 2020	Jul 2023	Jul 2025	Jul 2026	Jul 2028
End	Mar 2024	Jul 2026	Jul 2028	Jul 2029	Jul 2031

The traffic impacts of each stage are detailed below:

**Stage 1** – three-lane northbound (ultimate southbound) bridge upgrade, which is the critical piece of infrastructure to facilitate the higher priority northbound road upgrade (refer Stage 2)

**Stage 2** – three-lane northbound road upgrade between Dandenong Road on ramp and Moggill Road off ramp. This upgrade provides a larger capacity improvement for northbound AM peak traffic than the subsequent southbound road upgrade (refer Stage 3) provides for southbound PM peak traffic.

**Stage 3** – three-lane southbound road upgrade between Moggill Road on ramp and Dandenong Road off ramp. This upgrade provides a modest improvement for southbound PM peak traffic.

**Stage 4** – three-lane widening of the new bridge to enable decommissioning of the existing bridge. Note this upgrade was based on the premise of delivering the full bridge upgrade as soon as possible to minimise afflux issues etc. This premise will be revisited/tested during the Centenary Bridge PE & BC. This stage provides no capacity improvement and it is likely that the existing bridge will be retained for an extended period.

**Stage 5** – completion of the last section of three-lane upgrade in both directions between Sumners Road south facing ramps and Dandenong Road north facing ramps. This upgrade provides significant additional capacity for southbound traffic in both the AM and PM peaks and northbound traffic in the PM peak, and a more modest improvement for northbound traffic in the AM peak.



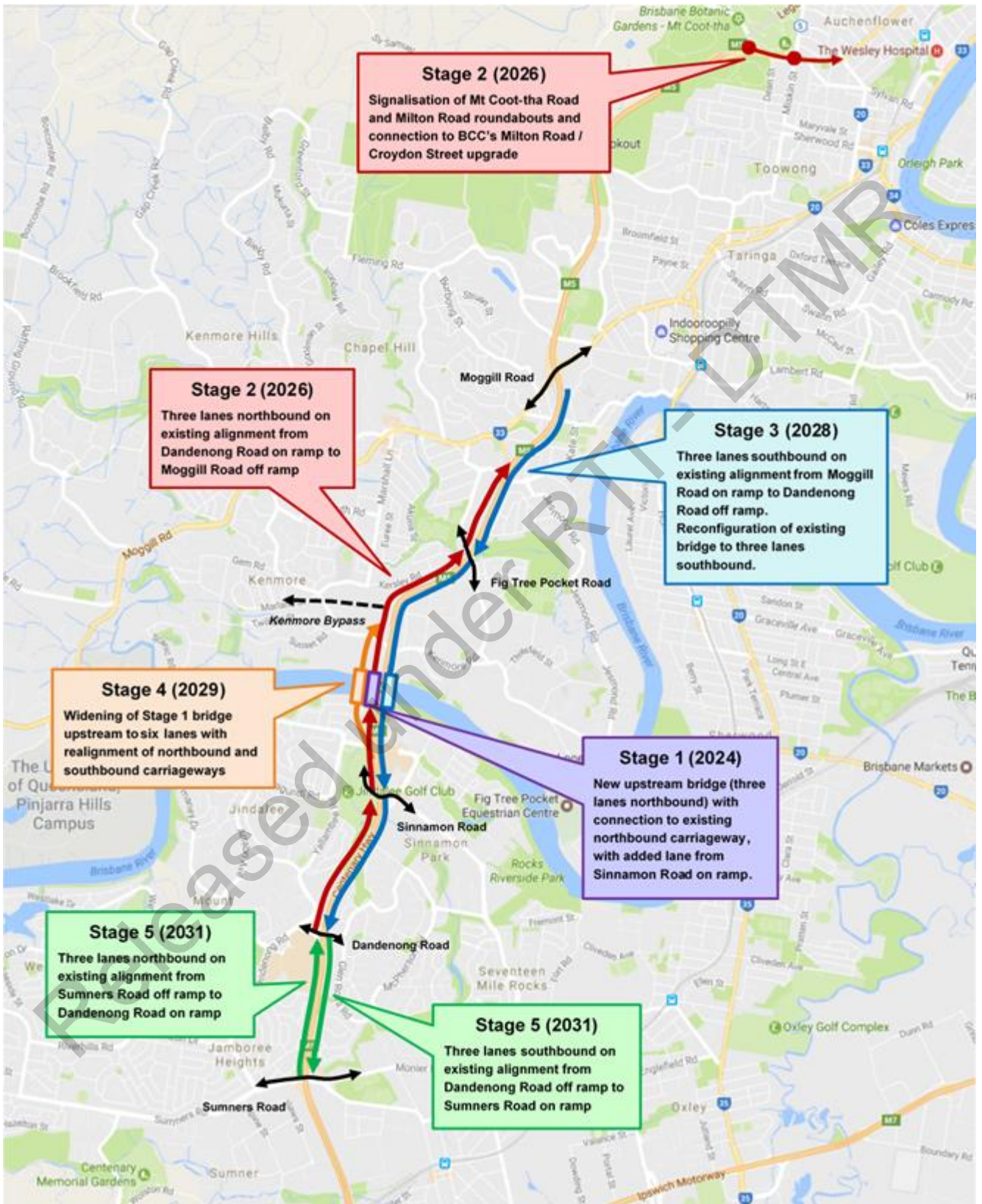


Figure 4-1: Centenary Motorway six-lane upgrade staged delivery

In order to test the performance and benefits of the project under the PE1 and PE2 approaches, nine project case and four base case models have been run, summarised in Table 4-2.

**Table 4-2: Summary of modelling scenarios and years**

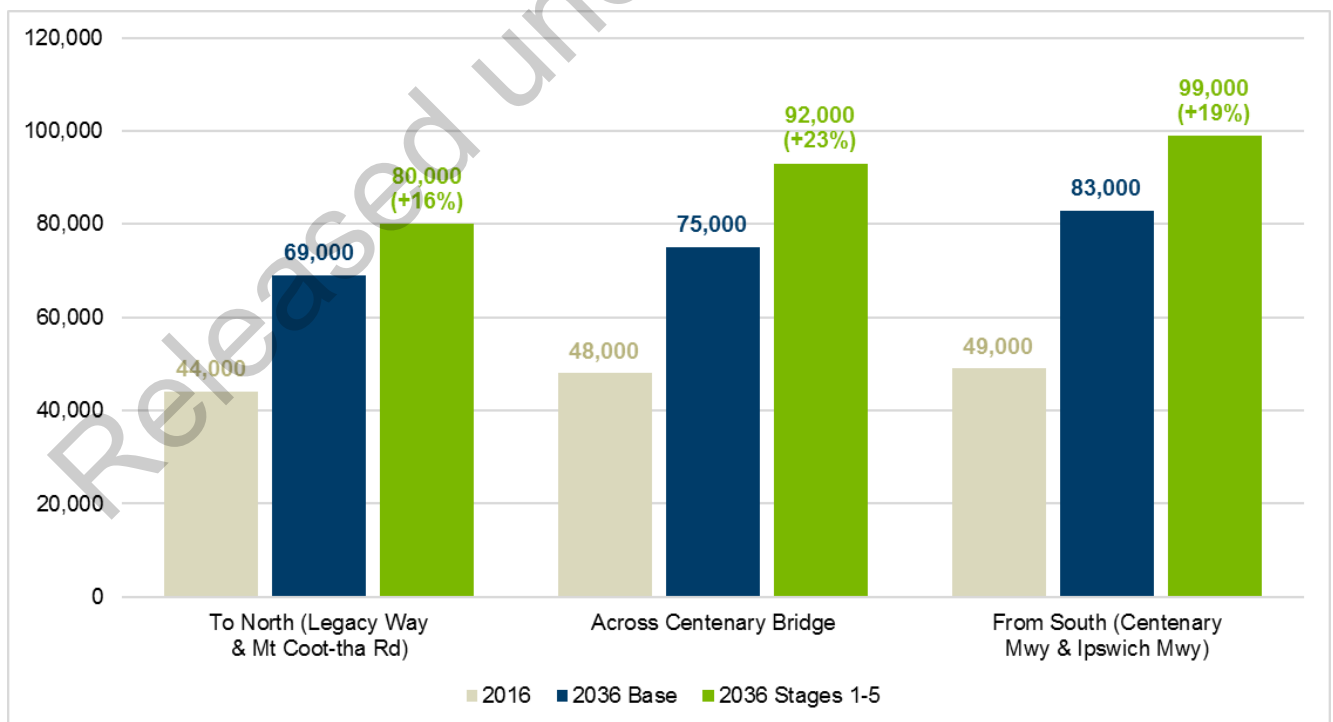
Model year	Base Case	Stage 1	Stages 1-4	Stages 1-5
2021	✓	✓		✓
2026	✓	✓	✓	✓
2031	✓	✓	✓	✓
2036	✓			✓

## 4.2 Forecast traffic volumes with project

Daily northbound and southbound modelled volumes (weekday) are shown in Figure 4-2 and Figure 4-3 respectively for 2016, 2036 base case and 2036 with Stages 1-5 in place, at key locations including across the Centenary Bridge, to/from the North (just south of the Legacy Way / Mt Coot-tha merge/diverge) and to/from the South (just north of the Ipswich Motorway ramps).

These figures have been updated since Control Point Paper 3, after the future year base and project scenarios were rerun using tighter convergence criteria to reduce noise in the inputs to economic assessment. The changes are very small (less than 1000 vehicles per day) and are not significant.

In summary, the full medium term upgrade is expected to increase daily traffic volumes by 23% northbound and 25% southbound across the Centenary Bridge in 2036. The upgrade will also be able to deliver an additional 16% to and from the north per day, and deliver around 18-19% more to and from the south per day.



**Figure 4-2 : Weekday 2016 and 2036 northbound modelled volumes**

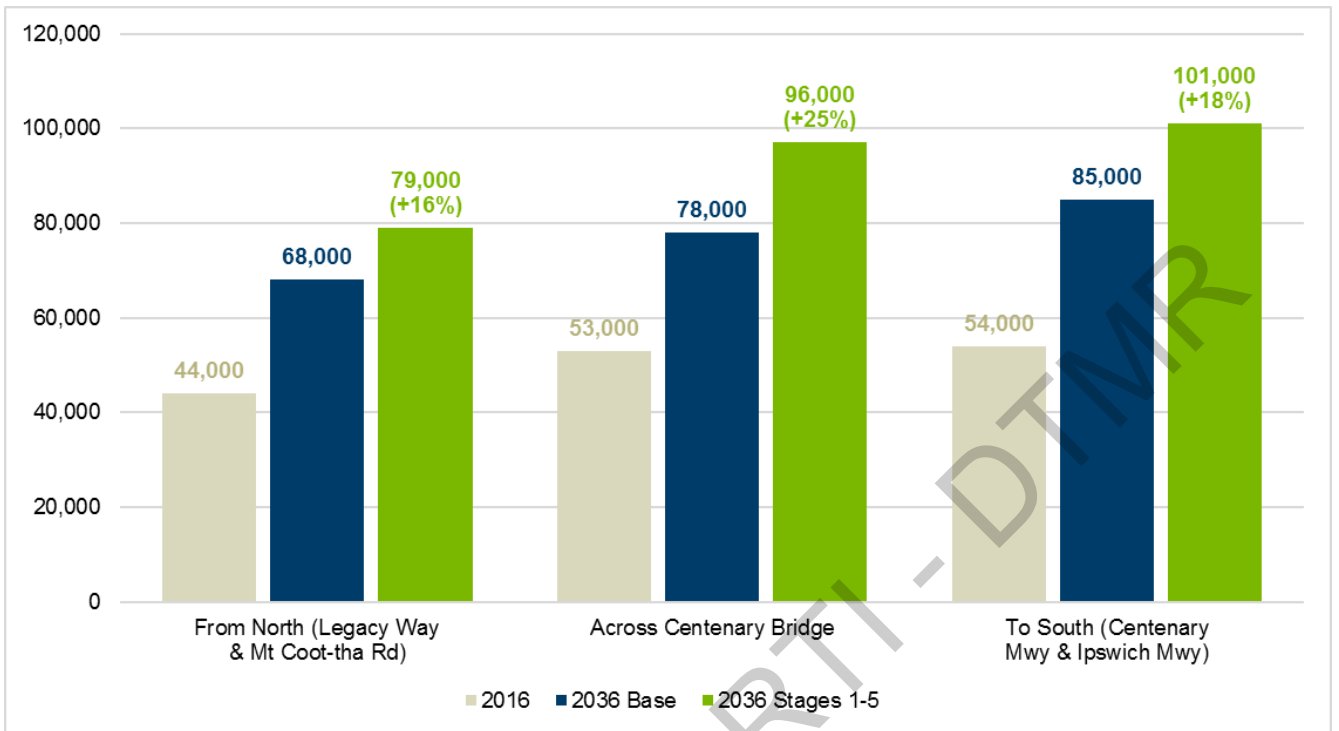


Figure 4-3: Weekday 2016 and 2036 southbound modelled volumes

The growth in two way total daily volumes at these points on the Centenary Motorway, over time and for the three staging configurations modelled, is shown in Figure 4-4, Figure 4-5 and Figure 4-6.

These graphs indicate that in isolation Stage 1 has little impact on daily traffic on the Motorway. The benefits, in terms of increased throughput and capacity along the corridor, for Stages 1-4 and Stages 1-5 grow strongly over time. In 2026 the complete medium term upgrade (Stages 1-5) delivers similar throughput to the Stages 1-4 combination, but by 2031 the increased benefit of the final stage is clear, particularly at the southern end of the corridor.

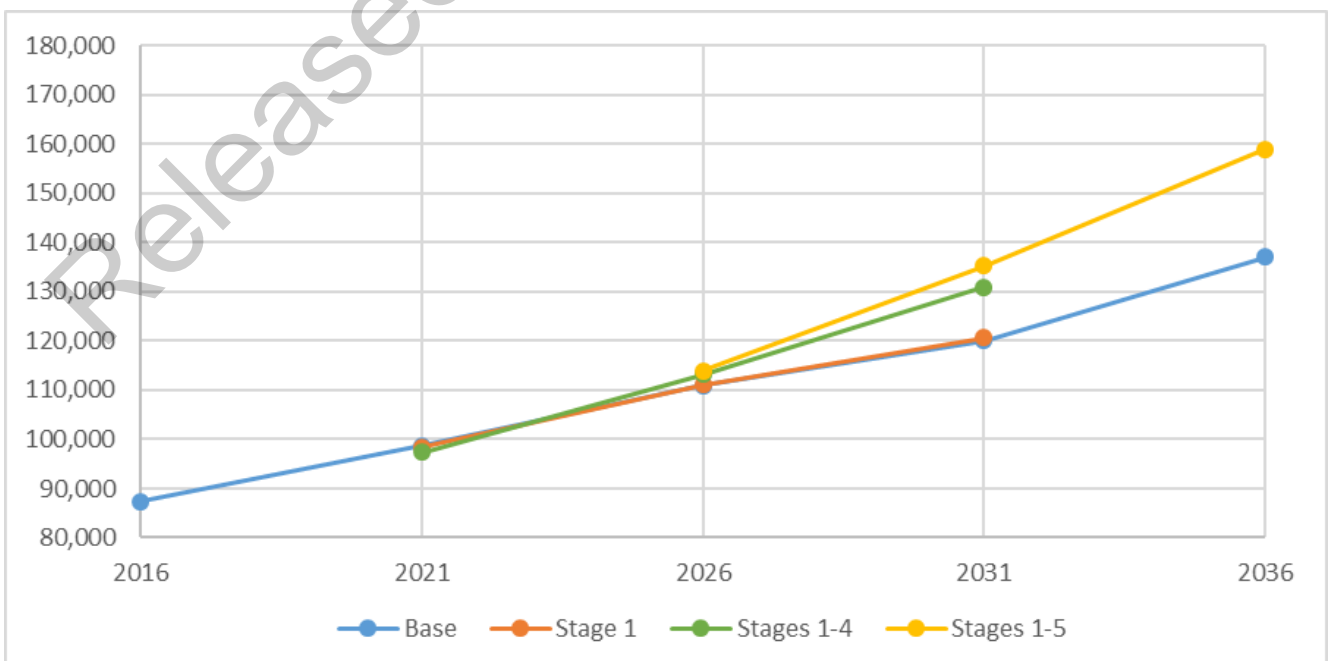


Figure 4-4: Weekday two-way modelled volumes on northern Centenary Motorway (south of Legacy Way)



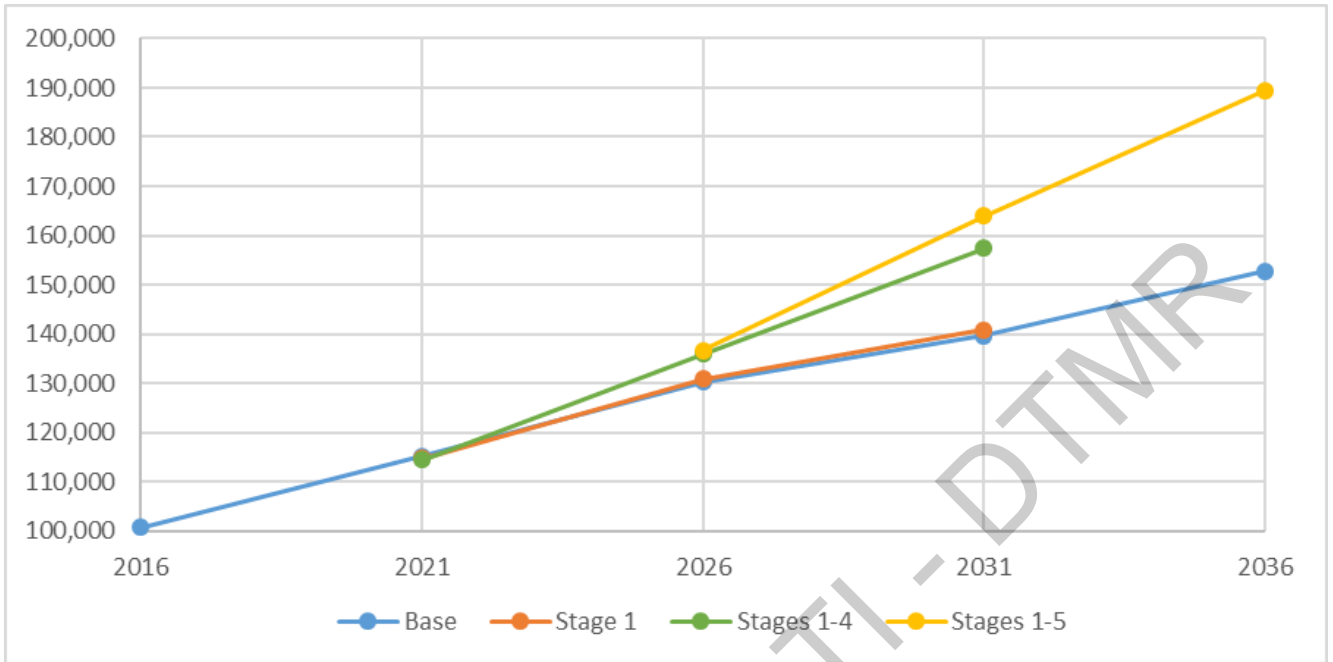


Figure 4-5: Weekday two-way modelled volumes across Centenary Bridge

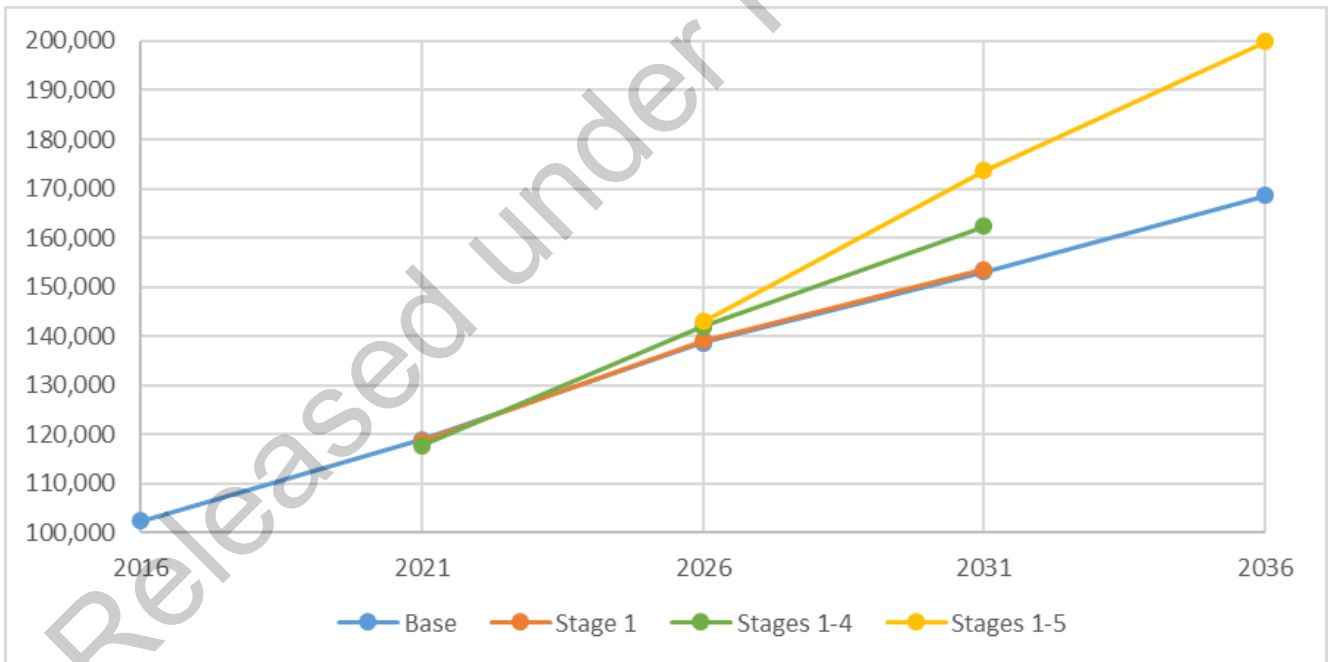


Figure 4-6: Weekday two-way modelled volumes on southern Centenary Motorway (north of Ipswich Motorway)

The effect of the project on route choice and traffic volumes across the metropolitan road network is illustrated in Figure 4-7. Here, an increase in traffic volume is shown in red, while a decrease is shown in green. The width of the link bars is proportional to the change in volume. The figure compares the impact of the three staging scenarios tested in the strategic modelling on the base case daily volumes in 2031.

As suggested by the Centenary Motorway graphs above, the impact of Stage 1 alone is modest, with very little change discernible on the surrounding roads.

With Stages 2 to 4 added, on the other hand, the project begins to show wide ranging effects. The volume changes suggest that longer distance traffic is drawn to the Centenary Motorway away from the Ipswich Motorway. This reduces traffic on the Ipswich Road and Fairfield Road – Annerley Road routes into the CBD via the Captain Cook Bridge / M3 and towards the northern suburbs via CLEM7. There is also a more local effect with traffic diverted from the Walter Taylor Bridge in Indooroopilly to the Centenary Bridge via Seventeen Mile Rocks Road. Smaller impacts reach out as far as the Gateway Bridge and the Brisbane Airport.

The completion of the medium term upgrades with the addition of Stage 5 generally strengthens the effects observed with Stages 1-4. The most significant difference in route change effects is around the southern end of the study corridor, where traffic diverted away from Oxley Road and the Walter Taylor Bridge is able to more easily enter the upgraded Centenary Motorway from the south rather than increasing traffic on Seventeen Mile Rocks Road.

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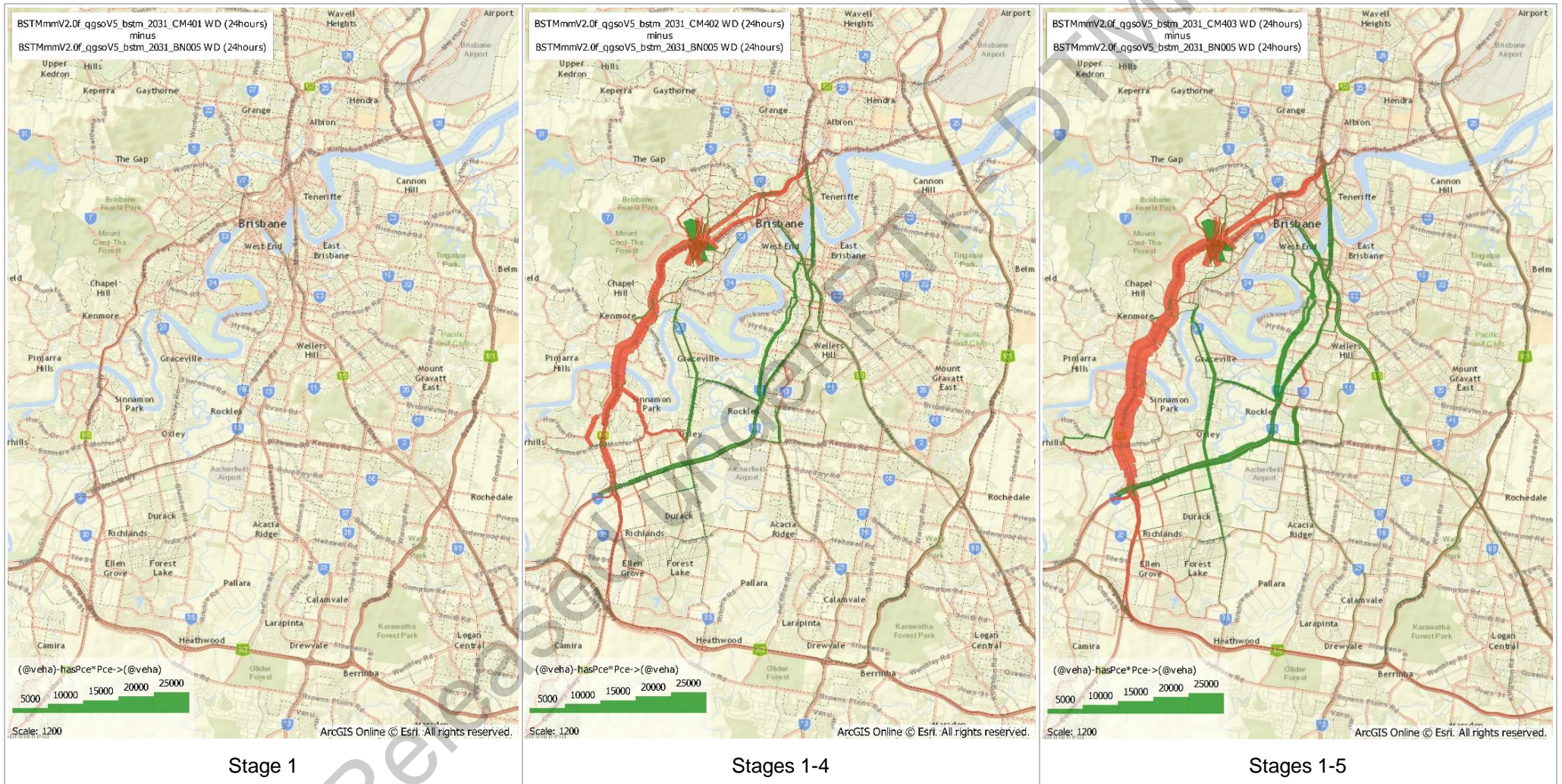


Figure 4-7: Effect of Centenary Motorway Upgrade Project on metropolitan traffic patterns – Daily modelled volume changes, 2031



The scale and significance of the impacts of the Centenary Motorway project on the wider network is illustrated by the key bridge volumes in Table 4-3. This table compares the effects of the project cases in the year 2031. Each stage of the medium term upgrade project attracts additional traffic to the Centenary Bridge and slightly increases the total traffic crossing the Brisbane River, although for Stage 1 in isolation the effect is very small and immaterial. The later stages of the upgrade deliver significant relief to the nearby Indooroopilly (Walter Taylor) bridge, and a modest reduction in demand across the Captain Cook Bridge. Minor effects are observed as far away as the Gateway Bridge.

**Table 4-3: Brisbane River crossing volumes, 2031 daily two-way modelled volumes**

Scenario	Data	Centenary Bridge	Indooroopilly Bridge	Captain Cook Bridge	Gateway Bridge	River Crossing Screenline Total
Base Case	Volume	140,000	40,000	156,000	162,000	788,000
Stage 1	Volume	141,000	39,000	155,000	162,000	788,000
	vs Base	+1,200	-200	-300	-100	+100
	% change	+0.9%	-0.5%	-0.2%	-0.0%	+0.0%
Stages 1-4	Volume	157,000	37,000	153,000	161,000	792,000
	vs Base	+17,800	-2,800	-2,700	-500	+3,700
	% change	+12.7%	-7.1%	-1.8%	-0.3%	+0.5%
Stages 1-5	Volume	164,000	36,000	151,000	161,000	792,000
	vs Base	+24,300	-4,000	-4,600	-800	+4,500
	% change	+17.4%	-10.0%	-2.9%	-0.5%	+0.6%

The effect of the full medium term upgrade at the modelling horizon year for this study, 2036, is shown in Table 4-4. With the full upgrade in place the project attracts almost 25% more traffic to the Centenary Bridge, compared to the 2036 base case volumes, and removes more than one in eight trips from the Indooroopilly crossing. The relative impact on overall screenline volumes and on the distant Gateway Bridge continues to grow. Increasing the river crossing capacity is likely to increase the attractiveness of trip ends requiring river crossings in the distribution stage, hence the uplift in total screenline volume of 5,900 vehicles in 2036, compared to the Base Case.

**Table 4-4: Brisbane River crossing volumes, 2016 and 2036 daily two-way modelled volumes**

River Crossing	Base	Base	Stages 1-5	Difference 2036 Stages 1-5 v Base	
	2016	2036	2036	Volume	%
Centenary Bridge	101,000	153,000	189,000	+36,700	+24.0%
Indooroopilly Bridge	32,000	44,000	38,000	-6,000	-13.6%
Captain Cook Bridge	141,000	163,000	158,000	-4,200	-2.6%
Gateway Bridge	121,000	176,000	174,000	-1,600	-0.9%
<b>River Crossing Screenline Total</b>	<b>608,000</b>	<b>858,000</b>	<b>864,000</b>	<b>+5,900</b>	<b>+0.7%</b>

Note 1: Modelled 2016 volumes have been compared to the modelled 2036 volumes, rather than the observed 2016 volumes, to quantify the relative increase in modelled river crossing demands between 2016 and 2036 for the Base Case.

## 5. Transport user benefits of the Centenary Motorway Upgrades

### 5.1 Approach

The impact of the Centenary Motorway project on transport users as forecast by the BSTM-MM was used to derive inputs to the economic analysis. This section presents a high level summary of the outcomes, with the full traffic modelling data provided for the economic evaluation reported in Appendix E.

Separate summaries are provided below for public transport users, private vehicle users and commercial vehicles. Each section reports global statistics (such as trips, passenger kilometres or hours travelled) as well as an overall user benefit for each category of user in generalised minutes. This benefit was calculated using standard economic theory (rule of a half), which states that:

$$\text{User benefit} = \text{Base Case Trips} * (\text{Cost of Travel Project Case} - \text{Cost of Travel Base Case}) \\ + \frac{1}{2} * \text{New Trips} * (\text{Cost of Travel Project Case} - \text{Cost of Travel Base Case})$$

This formulation is used for each element of Cost of Travel. For example, private and commercial vehicles accumulate in-vehicle journey time and both perceived and unperceived vehicle operating costs, while costs for public transport users include journey time, waiting time, boarding time and access time.

The calculations outlined above are repeated for each generalised cost component, for each user type. The calculations are performed at a matrix level (that is for each origin – destination pair), with the values reported below the summation of each matrix pair, each travel purpose and each cost component.

Further breakdown by travel purpose and cost component is reported in Appendix E. In this breakdown, trips are identified as:

- internal (both trip ends within the model area) or external (one or both trip ends outside the model area);
- business (work based work), commuter (blue collar and white collar home based work), or other (the remaining trip purposes); and
- existing (the base case origin-destination demand) or diverted (project minus base case demand).

Vehicle operating cost, both perceived (fuel costs) and resource (including elements not perceived for individual trip decisions), are calculated using a cost per unit distance which is based on speed. The equation is:

$$\text{VOC} = A + (B / \text{Speed})$$

The A and B parameters are specified by vehicle class (private, medium commercial, or heavy commercial) and by cost type (perceived or resource). For each modelled time period the rate calculations are done at link level, multiplied by link length, and summed along the trip paths for each origin-destination pair before being multiplied by the relevant demand. Like travel time benefits, VOC benefits are calculated using the 'rule of a half' equation above.

In Appendix E, results for each benefit calculation case are identified by their economic comparison code, which is shown in the top right corner of each page. The codes for each case are listed in Table 5-1.

**Table 5-1: Summary of modelling scenarios and years**

Model year	Stage 1 vs Base Case	Stages 1-4 vs Base Case	Stages 1-5 vs Base Case
2021	CEN_EC_2021_BN004_CM401	-	CEN_EC_2021_BN004_CM402
2026	CEN_EC_2026_BN005_CM401	CEN_EC_2026_BN005_CM402	CEN_EC_2026_BN005_CM403
2031	CEN_EC_2031_BN005_CM401	CEN_EC_2031_BN005_CM402	CEN_EC_2031_BN005_CM403
2036	-	-	CEN_EC_2036_BN006_CM404

## 5.2 Transport user benefits – private and commercial vehicles

The effects of the Centenary Motorway upgrade project on overall highway travel in the modelled area are summarised by the Vehicle Kilometres Travelled (VKT) and Vehicle Hours Travelled (VHT) shown in Table 5-2.

These results show that the project delivers significant reductions in travel time in the later modelled years, with a modest increase in travel distance. Travel distance increases occur when drivers are attracted to a less direct route because it offers savings in travel time through faster average speeds - Figure 4-7 suggests that diversion of longer distance traffic from the Captain Cook Bridge / M3 and CLEM7 may be a significant contributor here. This effect strengthens over time due to increasing congestion on the rest of the network. The increase in overall VKT with reduced VHT also indicates higher average travel speeds across the network, as would be anticipated from a project which adds significant capacity to a strategic location.

At the network level the effect of Stage 1 in isolation is very small in each year, but the larger upgrade combinations deliver over a thousand vehicle hours of travel time reduction per day from 2026 on. By 2036, the full medium term upgrade project (Stages 1-5) delivers over 25,000 additional vehicle-kilometres travelled per day and a reduction of almost 18,000 vehicle-hours travelled per day across the metropolitan network.

It is noted that there are some fluctuations in VKT between the different scenarios however VHT savings are more consistently greater with each stage of the project. VHT is the better indicator of overall network performance and improvement, and being a strategic model with equilibrium assignment, some differences in VKT (and in-turn route choice) can be expected when the model is run with different network configurations. Overall the network is operating in a better state with less travel time as each project stage is added, and the changes in VKT are much smaller in percentage terms compared with the VHT changes.

**Table 5-2: Total daily private and commercial VKT and VHT**

Year	Project	Vehicle-Kilometres Travelled (VKT)			Vehicle-Hours Travelled (VHT)		
		Base	Project	Change	Base	Project	Change
2021	Stage 1	72,308,000	72,304,000	-3,400 (0.00%)	1,285,000	1,285,000	100 (0.01%)
	Stages 1-5	72,308,000	72,304,000	-3,900 (-0.01%)	1,285,000	1,285,000	400 (0.03%)
2026	Stage 1	80,442,000	80,441,000	-800 (0.00%)	1,454,000	1,454,000	-200 (-0.01%)
	Stages 1-4	80,442,000	80,455,000	13,000 (0.02%)	1,454,000	1,453,000	-1,100 (-0.08%)
	Stages 1-5	80,442,000	80,442,000	-300 (0.00%)	1,454,000	1,452,000	-2,400 (-0.16%)
2031	Stage 1	89,227,000	89,235,000	7,900 (0.01%)	1,682,000	1,681,000	-600 (-0.03%)
	Stages 1-4	89,227,000	89,273,000	46,000 (0.05%)	1,682,000	1,675,000	-7,200 (-0.43%)
	Stages 1-5	89,227,000	89,255,000	28,000 (0.03%)	1,682,000	1,670,000	-12,000 (-0.70%)
2036	Stages 1-5	98,868,000	98,894,000	25,000 (0.03%)	1,960,000	1,942,000	-18,000 (-0.90%)

Key performance indicators of the project's benefits for private vehicle users are summarised in Table 5-3. In this table, 'Daily Person Trips' and 'User Benefit – Person Travel Time' include results for both car drivers and car passengers, while the other measures are calculated on a vehicle basis and do not consider passengers. 'User Benefit – Perceived VOC' is driven by fuel costs and calculated using the link-based speed related equations described in Section 5.1.

The results show a very small change in daily person and vehicle trips, but this is not significant compared to the seven to nine million person trips by private vehicle per day in the model. There are no significant travel time savings or user benefits at first, but by 2026 the larger stage combinations deliver significant benefits each day and these increase substantially in later years.

**Table 5-3: Private vehicle user benefits**

Data	2021		2026			2031			2036
	Stage 1	Stages 1-5	Stage 1	Stages 1-4	Stages 1-5	Stage 1	Stages 1-4	Stages 1-5	Stages 1-5
Daily vehicle trips	-700	-500	-100	-800	-1,100	300	-1,900	-3,300	-2,800
Daily person trips	-900	-400	-200	-300	-500	500	-300	-1,200	0
Daily VKT (km)	-3,600	-3,400	-1,100	8,700	-4,000	7,500	43,000	21,000	28,000
Daily VHT (hours)	90	400	-200	-1,100	-2,300	-600	-6,900	-11,000	-17,000
User benefit – person travel time (minutes)	3,000	31,000	-10,000	-86,000	-152,000	-49,000	-532,000	-764,000	-1,188,000
User benefit – perceived VOC (\$)	200	500	-600	-3,500	-4,500	-2,000	-18,000	-24,000	-39,000

Similar statistics for commercial vehicle traffic are summarised in Table 5-4. The overall patterns of change are similar to private vehicle users, although the values are much smaller since commercial vehicles comprise a small proportion of overall modelled demand. As there is no mode choice for commercial traffic in the BSTM-MM (between road and rail freight transport, for example) the project does not change the number of modelled trips.

**Table 5-4: Commercial vehicle user benefits**

Data	2021		2026			2031			2036
	Stage 1	Stages 1-5	Stage 1	Stages 1-4	Stages 1-5	Stage 1	Stages 1-4	Stages 1-5	Stages 1-5
Daily vehicle trips	0	0	0	0	0	0	0	0	0
Daily VKT (km)	200	-500	300	4,000	3,700	400	2,800	6,600	-2,300
Daily VHT (hours)	20	10	-10	-50	-100	-20	-300	-500	-700
User benefit – travel time (minutes)	100	2,500	-1,100	-7,100	-13,000	-1,900	-39,000	-58,000	-77,000
User benefit - perceived cost (\$)	-400	-200	-700	-2,500	-50	-300	-3,900	-3,500	-4,200

The average travel time per trip was calculated for private vehicles and commercial vehicles, and is shown in Table 5-5. Compared to the base case in 2036, there is an average travel time saving of 0.89% for private vehicles and 0.52% for commercial vehicles.

**Table 5-5: Average travel time per private vehicle trip and commercial vehicle trip**

Year	Avg travel time per trip (mins) – private vehicles			Avg travel time per trip (mins) – commercial vehicles		
	Base	Stages 1-5	Change	Base	Stages 1-5	Change
2021	13.85	13.86	0.01 (0.05%)	26.97	26.97	0.00 (0.01%)
2026	14.47	14.45	-0.02 (-0.15%)	27.49	27.46	-0.03 (-0.10%)
2031	15.45	15.35	-0.10 (-0.66%)	28.66	28.53	-0.13 (-0.45%)
2036	16.69	16.54	-0.15 (-0.89%)	30.06	29.90	-0.16 (-0.52%)



### 5.3 Transport user benefits – public transport users

Key performance statistics for public transport users are summarised in Table 5-6. The project has no significant effect on public transport service provision (the only coding change in the model being some node number adjustments following the replacement of the roundabouts on Mount Coot-tha Road). However, changes in peak period travel times on the road network will also benefit buses, and may also affect the choice of park and ride or kiss and ride locations, affecting public transport trip lengths.

The results suggest a small shift away from public transport use, particularly with the more complete project stages. With the increase in road capacity from the project and the overall improvement in traffic conditions indicated by the general traffic VKT and VHT in Table 5-2, such a mode shift is understandable. The project also delivers user benefits to the passengers who do not change modes.

**Table 5-6: Public transport user benefits**

Data	2021		2026			2031			2036
	Stage 1	Stages 1-5	Stage 1	Stages 1-4	Stages 1-5	Stage 1	Stages 1-4	Stages 1-5	Stages 1-5
Daily PT trips	600	20	60	-800	-900	-300	-1,600	-1,400	-1,800
Daily PKT (km)	9,400	3,000	-3,900	-22,000	-22,000	-5,300	-36,000	-28,000	-41,000
Daily PHT (hours)	200	50	-30	-700	-900	-200	-1,700	-1,700	-2,300
User benefit – general. minutes	2,000	800	-600	-16,000	-18,000	-8,800	-51,000	-53,000	-76,000

The average travel time for each public transport trip is shown in Table 5-7. In 2036, there is a travel time saving of 0.32% with the project compared to the base case.

**Table 5-7: Average travel time per public transport trip**

Year	Average travel time per trip (mins)		
	Base	Stages 1-5	Change
2021	24.18	24.18	0.00 (0.01%)
2026	24.43	24.40	-0.03 (-0.14%)
2031	24.78	24.71	-0.07 (-0.26%)
2036	25.27	25.18	-0.08 (-0.32%)

## 6. Microsimulation model update

As part of the PE, the microsimulation model of the Centenary Motorway corridor originally developed for the 2012 study was updated to a 2017 base year and revalidated, ready for use in the Business Case phase of project delivery.

The Centenary Motorway Planning Study (CMPS) Full Corridor Paramics Model is a detailed representation of the full study corridor from Toowong to the Ipswich Motorway, including all interchanges and ramp terminal intersections as well as the two roundabouts on Mount Coot-tha Road and Goggs Road and Sinnamon Road in Jindalee.

The original development of the model is reported in detail in the *Centenary Motorway Planning Study Transport Modelling Services for the Preliminary Evaluation Phase – TMS8 Full Microsimulation Model Development Report (Rev 2.0) (March 2013)*.

The basic characteristics of the updated 2017 full corridor model remain the same as the original CMPS version, with the addition of a new zone 36 for Legacy Way. The network extents and zones are shown in Figure 6-1.

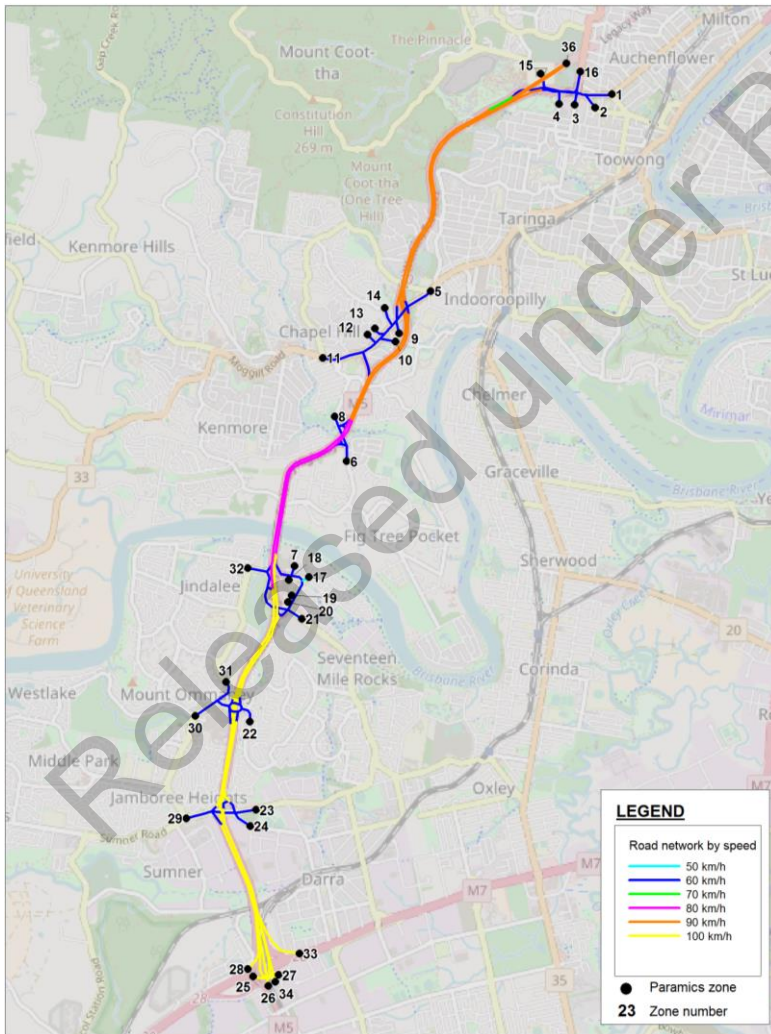


Figure 6-1 : Paramics model network and zoning

The morning and evening peak models each simulate five-hour peak periods, in order to capture the build-up and recovery from congestion. For the morning peak the model duration is from 5 am to 10 am, with a thirty minute warm up period starting at 4.30 am to ensure there is traffic already traversing the model network at the start of the model period. The evening peak model duration is from 2 pm to 7 pm with a thirty minute warm up period starting at 1.30 pm.

Demand matrices are defined for 15 minute intervals, providing the finest control of demands at each zone supported by the available data. Separate matrices are used for light and heavy vehicles. Scheduled bus services which use the Motorway are coded as fixed routes, while other bus demands (such as coaches, out of service running vehicles and Moggill Road only services) are included in the 'heavy vehicles' matrices.

The network is coded as a 2D rather than 3D model, because the Paramics gradient model has little effect in this type of terrain unless heavy vehicle percentages are high, while the additional nodes required to reflect vertical geometry can adversely affect vehicle decision making. As the Centenary Motorway is not a primary freight route and has only moderate heavy vehicle demands, 2D modelling is considered more appropriate in this case.

The model update for the current study included:

- a detailed review and update of network coding, particularly around the Legacy Way connections and the Moggill Road interchange improvements which were completed after the previous work;
- updating signal phasing and timing using actual control data from March 2017;
- updating bus routes and timetables using contemporary TransLink information; and
- adjusting the demand matrices in line with 2017 count data.

Throughout the process traffic conditions on the Motorway have been reviewed visually to ensure that the location and severity of congestion accords with current observations.

The updated model is very well calibrated. Of the 45 count locations (comprising the Centenary Bridge, all on and off ramps in the study area, and feeder roads around each interchange, all by direction), a GEH below 5.0 is achieved for 99.2% of hourly flows in the AM period and 100% in the PM period. The only location not to achieve a 100% compliance rate with desirable targets is the Mount Coot-tha Road northbound off ramp, where for two hours in the AM peak the model overestimates the variability of the balance between this exit and Legacy Way.

A more detailed picture of the goodness of fit between the updated model and the 2017 count data is provided by the flow profiles across the Centenary Bridge in Figure 6-2, Figure 6-3, Figure 6-4 and Figure 6-5.

In these graphs the blue line shows the 2017 observed counts, at 15-minute resolution, while the modelled volumes are shown in red.

The graphs generally show a very good match between the modelled and observed profiles, although the drop off in southbound throughput in the final hour of the PM peak is more abrupt in the model than was recorded on the survey day.

Detailed calibration results, including GEH statistics, flow profiles for all count locations and vehicle release tables showing releases from each zone throughout the modelled periods, are presented in Appendix F. The vehicle release tables show that less than 1% of the total matrix demands were unable to be released during both peak periods, indicating minimal virtual/residual queuing occurs during the modelled periods.

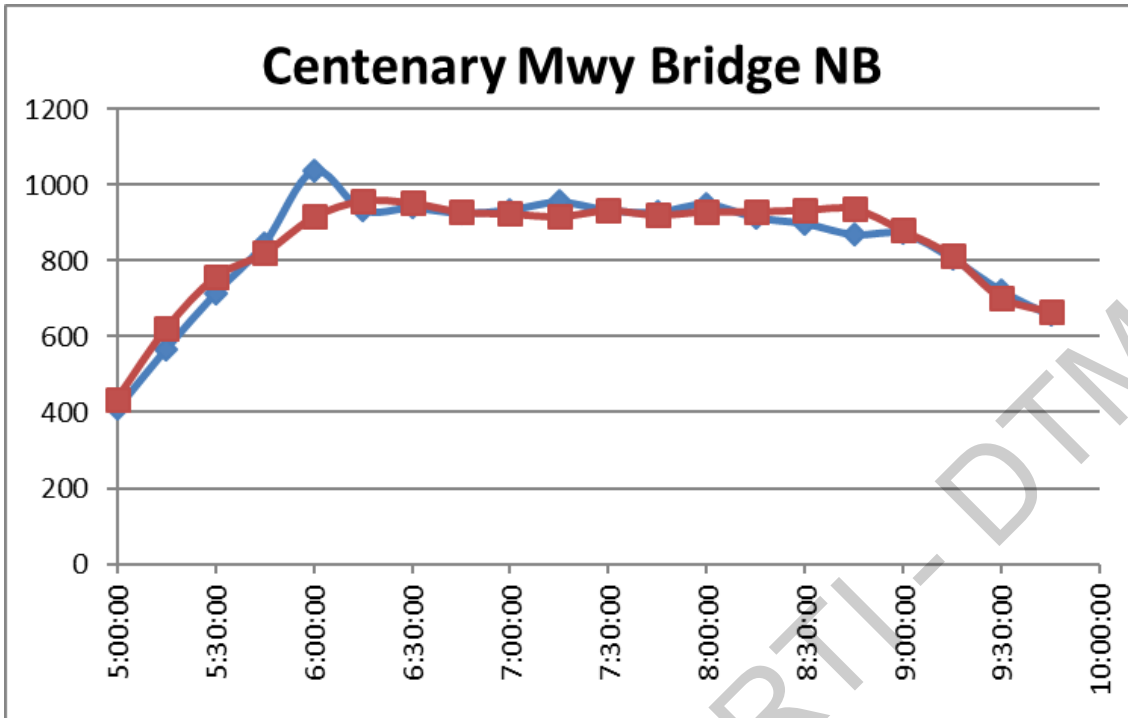


Figure 6-2 : Paramics 15 min flow profiles versus 2017 actuals - Centenary Bridge northbound, AM modelled period

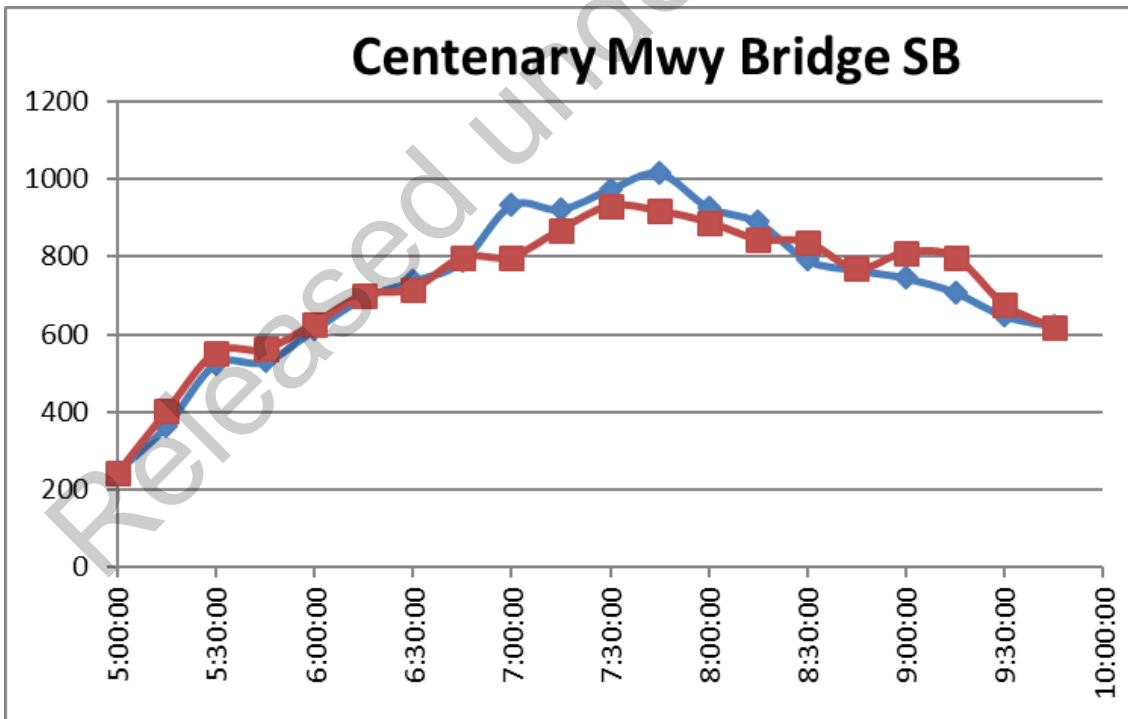


Figure 6-3 : Paramics 15 min flow profiles versus 2017 actuals - Centenary Bridge southbound, AM modelled period

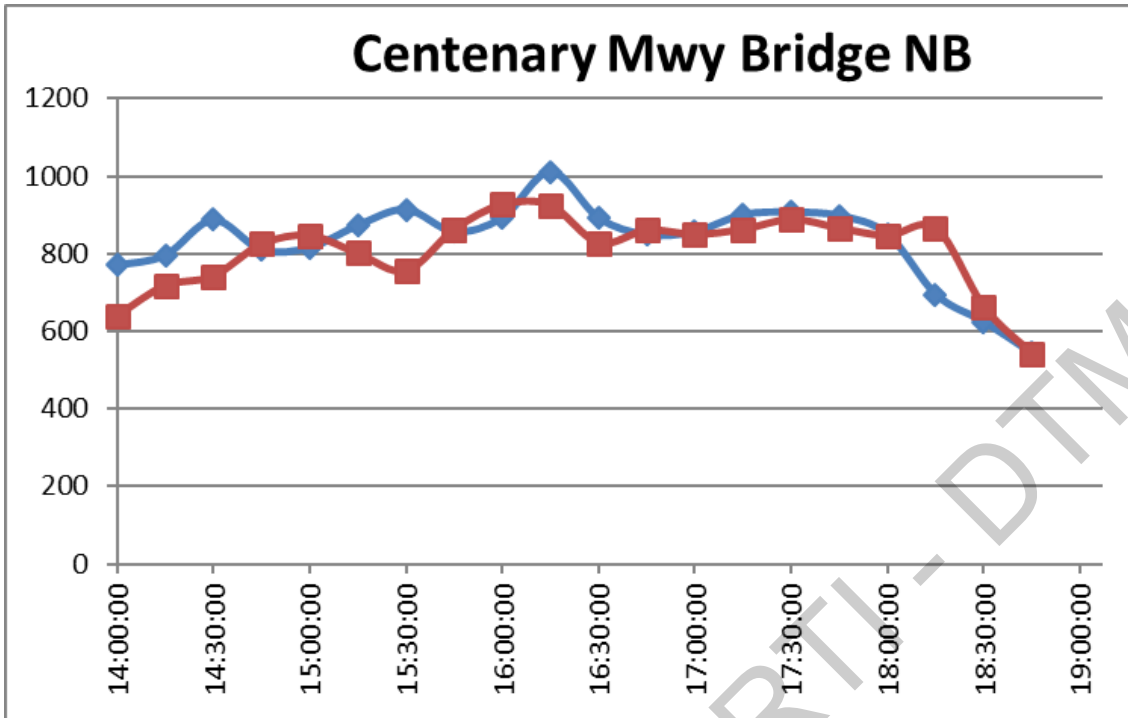


Figure 6-4 : Paramics 15 min flow profiles versus 2017 actuals - Centenary Bridge northbound, PM modelled period

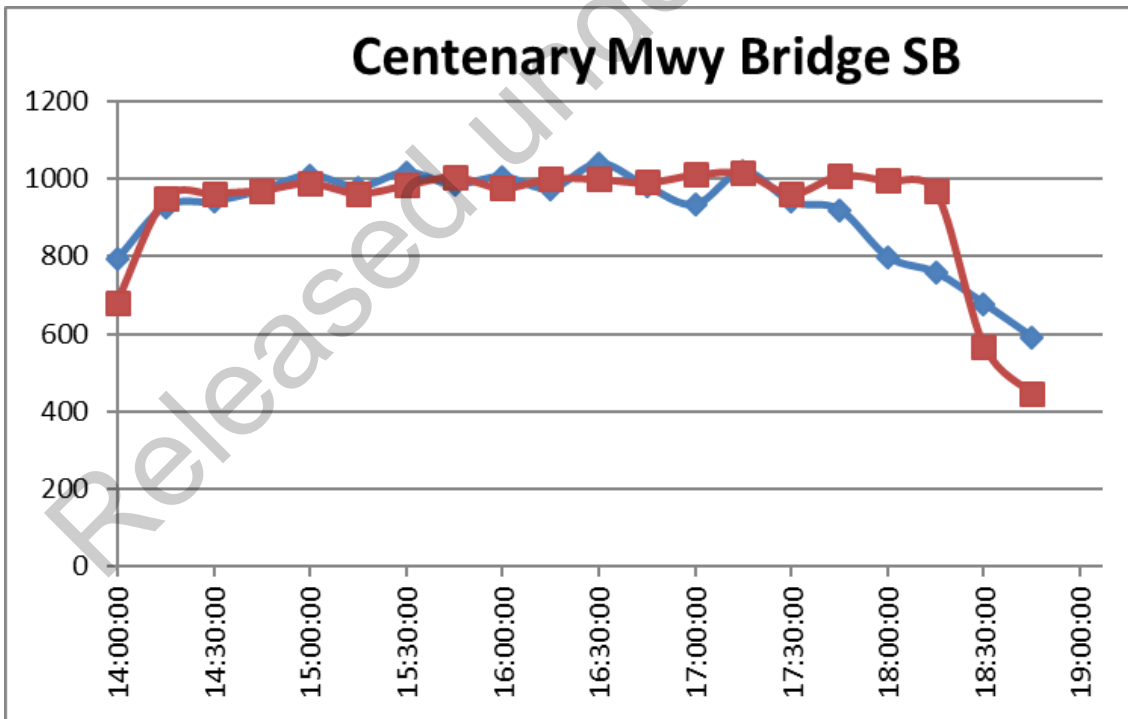


Figure 6-5 : Paramics 15 min flow profiles versus 2017 actuals - Centenary Bridge southbound, PM modelled period

Travel time and speed graphs extracted from the microsimulation model runs for the following critical time periods, directions and motorway sections are provided below:

- Northbound AM peak period 5-10am – between Ipswich Motorway and Centenary Bridge (Figure 6-6 and Figure 6-7)
- Southbound PM peak period 2-7pm – between Milton Road and Centenary Bridge (Figure 6-8 and Figure 6-9)

The graphs show the average cumulative travel time and link speed for the 15 minute period immediately prior to each hour for the durations shown above and highlight the current bottlenecks:

**Northbound AM peak** – Jindalee NB on-ramp where speeds are around 65 km/h at 6am but have fallen to around 20 km/h by 7am and don't recover above 30 km/h until after 9am. This leads to increased queuing south from 6am reaching Ipswich Motorway by 8am with travel times between Ipswich Motorway and Centenary Bridge increasing from less than 5 mins (300 sec) at 6am to over 22 mins (1320 sec) at 8am. After the Jindalee NB on-ramp merge (bottleneck) speeds increase to around 80 km/h across the Centenary Bridge.

**Southbound PM peak** – Fig Tree Pocket SB on-ramp where speeds have already dropped to between 40-50 km/h by 3pm, then drop to around 25 km/h by 4pm and 5pm and only increase marginally to 30 km/h by 6pm before recovering to above 70 km/h by 7pm. This leads to increased queuing north from 3pm reaching Legacy Way just after 4pm and extending to the Toowong roundabouts by 5pm with travel times to the Bridge increasing from 6 mins (360 sec) to over 23 mins (1400 sec) by 5pm. After the Fig Tree Pocket on-ramp merge (bottleneck) speeds increase to between 70-80 km/h.

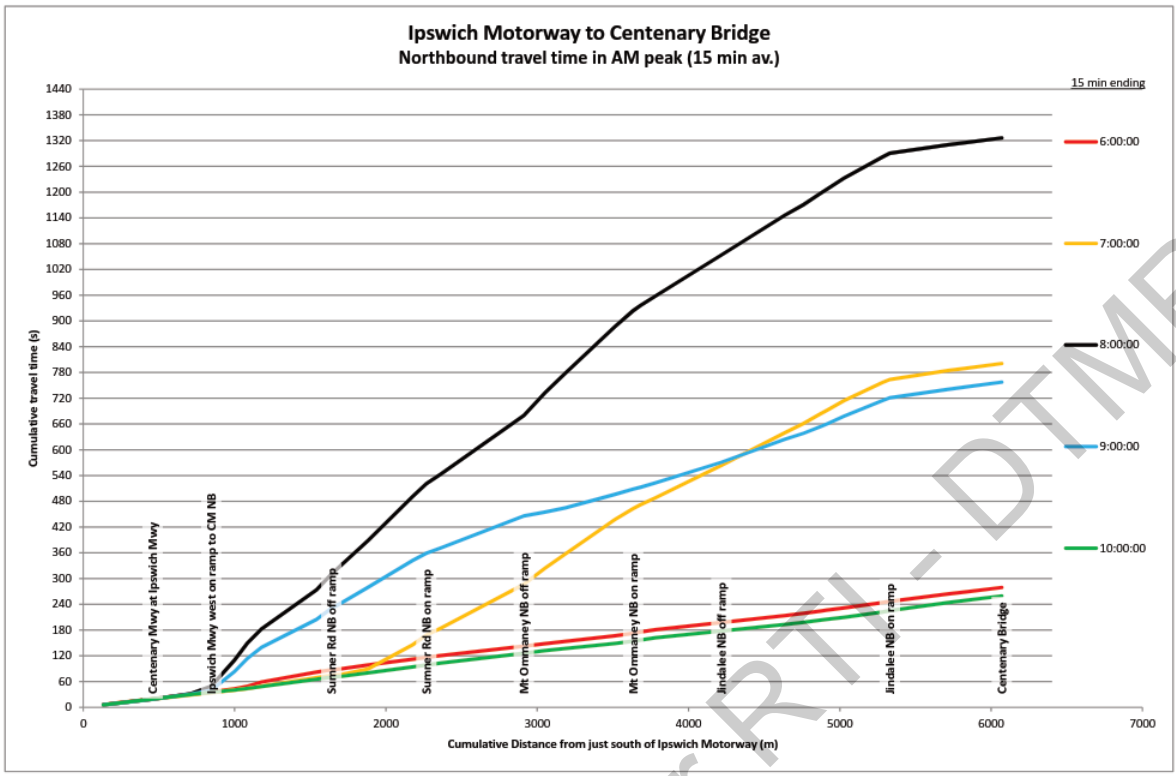


Figure 6-6 : Northbound travel times Ipswich Motorway to Centenary Bridge, AM modelled period

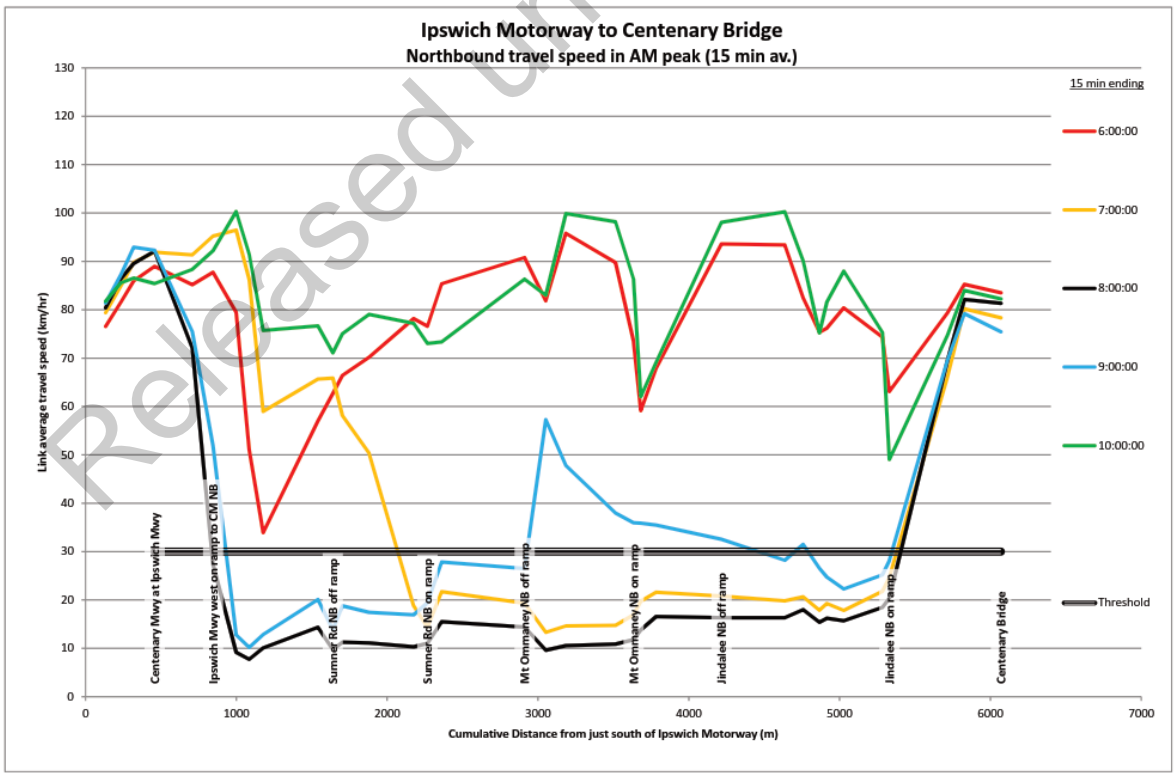


Figure 6-7 : Northbound average speeds Ipswich Motorway to Centenary Bridge, AM modelled period



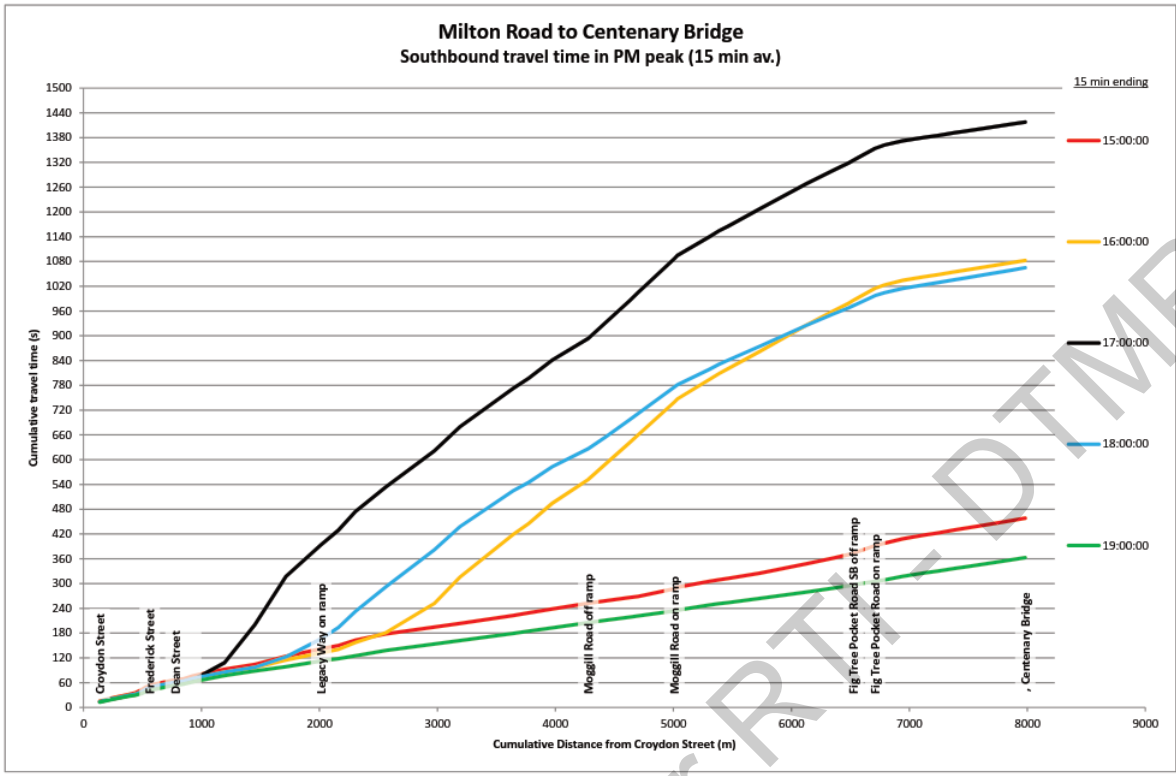


Figure 6-8 : Southbound travel times Milton Road to Centenary Bridge, PM modelled period

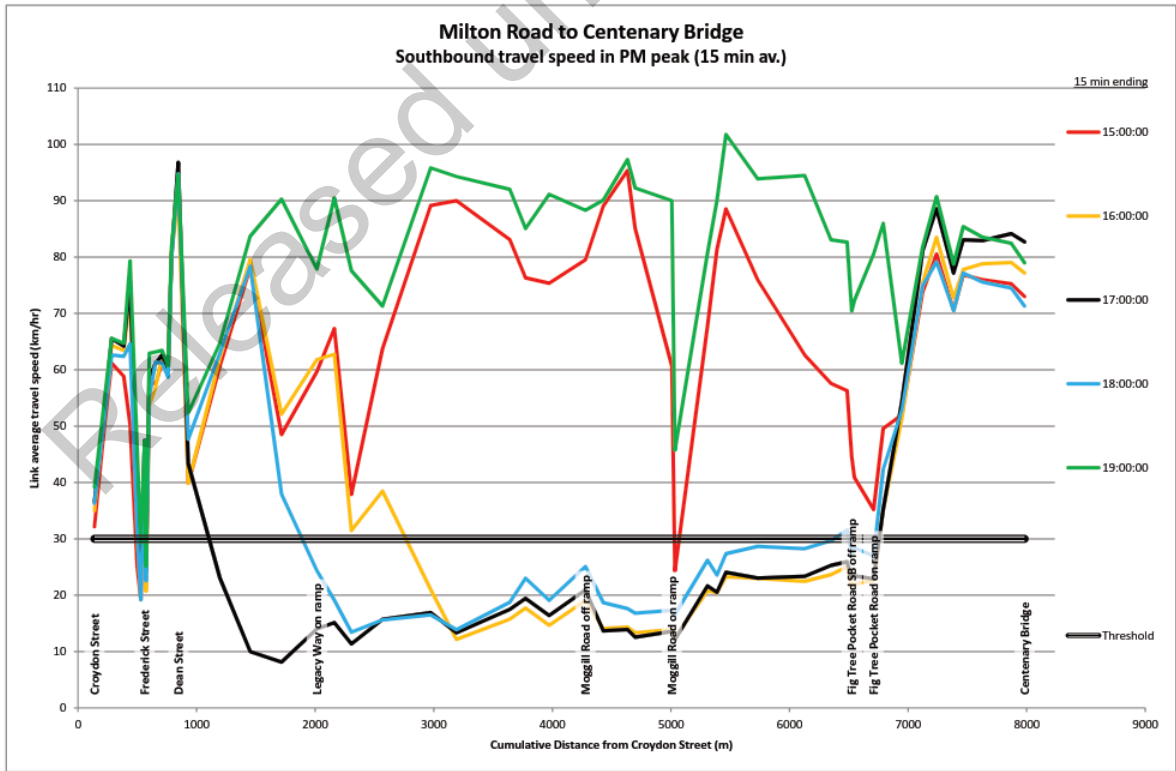


Figure 6-9 : Southbound average speeds Milton Road to Centenary Bridge, PM modelled period



## Appendix A. Validation statistics

### A.1 Detailed screenline result tables

Released under RTI - DTMR

Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. WD Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV
Dir 1 Total				5106	367	201	5684	4965	278	158	5406	34386	2752	1760	38949	5634	380	225	6240	5210	296	182	5689	36278	2935	1907	41118	528	13	24	10.34%	3.54%
Dir 2 Total				4455	390	214	5064	5941	269	141	6365	34989	2707	1796	39528	4858	393	233	5485	6344	247	159	6751	36570	2703	1957	41229	403	3	19	9.05%	0.77%
9 Total				9561	757	415	10748	10906	547	299	11771	69375	5459	3556	78477	10492	773	458	11725	11554	543	341	12440	72848	5638	3864	82347	931	16	43	9.74%	2.11%
Dir 1 Total				2957	199	30	3192	1655	113	15	1783	15506	1233	227	16986	2899	140	27	3067	1916	65	12	1995	16418	893	214	17524	-58	-59	-3	-1.96%	-29.65%
Dir 2 Total				1526	178	35	1740	3193	172	22	3387	15545	1315	212	17089	1757	125	30	1912	3163	112	24	3299	16291	904	214	17408	231	-53	-5	15.14%	-29.78%
10 Total				4483	377	65	4932	4848	285	37	5170	31051	2548	439	34075	4656	265	57	4979	5079	177	36	5294	32709	1797	428	34932	173	-112	-8	3.86%	-29.71%
Dir 1 Total				17040	1020	366	18434	16552	707	170	17436	118787	7591	2682	129127	17821	975	338	19132	16691	643	179	17513	120148	7298	2544	129990	781	-45	-28	4.58%	-4.41%
Dir 2 Total				14759	1125	337	16230	21817	900	228	22946	119019	7682	2640	129410	14472	1063	321	15856	21562	760	217	22541	118566	7053	2570	128188	-287	-62	-16	-1.94%	-5.51%
11 Total				31799	2145	703	34664	38369	1607	398	40382	237806	15273	5322	258537	32293	2038	659	34988	38253	1403	396	40054	238714	14351	5114	258178	494	-107	-44	1.55%	-4.99%
Dir 1 Total				3115	125	15	3256	2537	54	5	2597	18766	694	73	19551	2857	169	26	3052	2302	65	10	2378	17259	922	133	18314	-258	44	11	-8.28%	35.20%
Dir 2 Total				2107	106	11	2226	3519	96	6	3619	18486	775	66	19343	1899	92	17	2008	3468	81	16	3564	17011	667	137	17815	-208	-14	6	-9.87%	-13.21%
12a Total				5222	231	26	5482	6056	150	11	6216	37252	1469	139	38894	4756	261	43	5060	5770	146	26	5942	34270	1589	270	36129	-466	30	17	-8.92%	12.99%
Dir 1 Total				26703	1379	427	28526	20340	793	187	21320	159671	9869	3150	172797	29026	1436	425	30886	20891	825	214	21930	164199	10509	3289	177997	2323	57	-2	8.70%	4.13%
Dir 2 Total				17904	1361	368	19642	30783	1399	296	32481	156734	11123	3240	171154	18821	1292	405	20519	32166	1228	269	33662	162578	10327	3311	176214	917	-69	37	5.12%	-5.07%
13 Total				44607	2740	795	48168	51123	2192	483	53801	316405	20992	6390	343951	47847	2728	830	51405	53057	2053	483	55592	363777	20836	6600	354211	3240	-12	35	7.26%	-0.44%
Dir 1 Total				33592	1444	380	35427	20595	796	163	21562	178220	9787	2844	190926	35559	1435	392	37384	21515	850	196	22563	181787	9889	3025	194700	1967	-9	12	5.86%	-0.62%
Dir 2 Total				17073	1290	349	18721	35720	1172	201	37100	173658	9829	2775	186295	18298	1255	389	19940	38473	1070	244	39786	182546	9440	3059	195045	1225	-35	40	7.18%	-2.71%
14 Total				50665	2734	729	54148	56315	1968	364	58662	351878	19616	5619	377221	53857	2690	781	57324	59988	1920	440	62349	364333	19329	6084	389745	3192	-44	52	6.30%	-1.61%
Dir 1 Total				44374	2365	569	47311	28503	1230	231	29987	230944	14463	3954	249500	45549	2349	556	48455	27557	1221	269	29045	227584	14195	4093	245872	1175	-16	-13	2.65%	-0.68%
Dir 2 Total				24692	2088	534	27325	45550	1729	310	47599	230030	15639	3967	249735	23985	1970	564	26519	42680	1504	300	44487	227779	14231	4129	246130	-707	-118	30	-2.86%	-5.65%
15 Total				69066	4453	1103	74636	74053	2999	541	77586	460974	30102	7921	499235	69534	4319	1120	74974	70237	2725	569	73532	455363	28426	8222	492002	468	-134	17	0.68%	-3.01%
Dir 1 Total				14476	534	45	15277	8218	308	15	8557	68097	3225	240	72032	14126	349	33	14505	8874	303	26	9207	69083	2834	286	72203	-350	-185	-12	-2.42%	-34.64%
Dir 2 Total				6557	399	30	6995	13616	347	21	13992	64773	2827	219	67899	7505	418	40	7964	13233	294	20	13546	66779	2655	308	69741	948	19	10	14.46%	4.76%
16 Total				21033	933	75	22272	21834	655	36	22549	132870	6052	459	139931	21631	767	73	22469	22107	597	46	22753	135862	5489	594	141944	598	-166	-2	2.84%	-17.79%
Dir 1 Total				79138	3546	399	83111	58806	2108	144	61069	439958	22628	2706	465477	77486	3226	441	81151	57731	1957	232	59917	439639	21469	3153	464261	-1652	-320	42	-2.09%	-9.02%
Dir 2 Total				52925	3153	370	56472	76062	1997	138	78277	430631	20832	2558	454342	52639	2982	434	56057	70664	2092	244	72997	439791	21415	3152	464362	-286	-171	64	-0.54%	-5.42%
17 Total				132063	6699	769	139583	134868	4105	282	139346	870589	43460	5264	919819	130125	6208	875	137208	128395	4049	476	132914	879430	42884	6305	928623	-1938	-491	106	-1.47%	-7.33%
Dir 1 Total				48924	2869	736	52533	40442	1593	296	42335	287391	17911	5155	310505	48058	2631	738	51426	37839	1503	344	39686	281523	17158	5267	303949	-866	-238	2	-1.77%	-8.30%
Dir 2 Total				36674	2534	682	39889	47441	1731	371	49551	275475	16823	5191	297525	36799	2414	693	39908	45308	1705	413	47427	281471	16945	5247	303665	125	-120	11	0.34%	-4.74%
18 Total				85598	5403	1418	92422	87883	3324	667	91886	562866	34734	10346	608030	84857	5045	1431	91334	83147	3208	757	87113	562994	34103	10514	607614	-741	-358	13	-0.87%	-6.63%
Dir 1 Total				35553	1200	107	36859	24239	615	42	24900	187895	7694	860	196528	35936	1300	191	37428	24168	668	74	24912	188670	8008	1200	197877	383	100	84	1.08%	8.33%
Dir 2 Total				20892	1207	125	22229	33802	714	41	34560	186481	7930	872	195363	20473	1241	190	21905	33165	748	80	33997	185349	7713	1210	194273	-419	34	65	-2.01%	2.82%
19a Total				56445	2407	232	59088	58041	1329	83	59460	374376	15624	1732	391891	56409	2541	381	59333	57333	1416	154	58909	374019	15721	2410	392150	-36	134	149	-0.06%	5.57%
Dir 1 Total				12361	700	86	13163	10496	421	39	10962	69578	4366	653	74652	12811	626	129	13567	10584	372	74	11033	70415	3814	1053	75285	450	-74	43	3.64%	-10.57%
Dir 2 Total				10099	575	59	10765	13236	354	45	13653	73021	3702	552	77462	9841	576	97	10513	13440	347	78	13865	74024	3728	963	78716	-258	1	38	-2.55%	0.17%
19b Total				22460	1275	145	23928	23732	775	84	24615	142599	8068	1205	152114	22652	1202	226	24080	24024	719	152	24898	144439	7542	2016	154001	192	-73	81	0.85%	-5.73%
Dir 1 Total				20066	1629	721	22442	20195	976	472	21655	132018	11311	6005	149508	20135	1610	716	22464													

Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. WD Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV
<b>32b Total</b>				7232	762	523	8527	8587	648	403	9644	48283	5250	4551	58137	7468	780	529	8778	8810	670	426	9906	50761	5333	4691	60783	236	18	6	3.26%	2.36%
Dir 1 Total				12523	868	592	13992	12265	529	210	13003	80465	5988	4027	90520	13931	874	605	15411	12969	545	234	13747	87244	6133	4129	97506	1408	6	13	11.24%	0.69%
Dir 2 Total				10361	904	504	11771	14397	601	313	15320	82220	6126	3950	92336	11079	915	528	12522	16091	597	341	17029	86587	5944	4156	96687	718	11	24	6.93%	1.22%
<b>33 Total</b>				22884	1772	1096	25763	26662	1130	523	28323	162685	12114	7977	182856	25010	1789	1133	27933	29060	1142	575	30776	173831	12077	8285	194193	2126	17	37	9.29%	0.96%
Dir 1 Total				13129	871	483	14483	11221	622	208	12059	81140	6582	3152	90928	13523	885	479	14888	11536	642	212	12389	82506	6713	3237	92456	394	14	-4	3.00%	1.61%
Dir 2 Total				10179	1009	409	11602	16021	678	254	16965	82593	6372	3109	92153	10724	1000	435	12162	16274	629	263	17169	82600	6289	3256	92146	545	-9	26	5.35%	-0.89%
<b>34 Total</b>				23308	1880	892	26085	27242	1300	462	29024	163733	12954	6261	183081	24247	1885	914	27050	27810	1271	475	29558	165106	13002	6493	184602	939	5	22	4.03%	0.27%
Dir 1 Total				8124	716	211	9053	5983	400	83	6468	54346	4470	1375	60220	7701	612	210	8523	5617	388	84	6089	51160	3864	1381	56405	-423	-104	-1	-5.21%	-14.53%
Dir 2 Total				6603	737	187	7535	6932	415	85	7442	54289	4766	1254	60418	6088	605	180	6872	7184	353	127	7664	51357	3899	1394	56650	-515	-132	-7	-7.80%	-17.91%
<b>AP Total</b>				14727	1453	398	16588	12915	815	168	13910	108635	9236	2629	120638	13789	1217	390	15395	12801	741	211	13753	102517	7763	2775	113055	-938	-236	-8	-6.37%	-16.24%
Dir 1 Total				25626	2460	863	28965	34247	1374	427	36054	189053	16518	6225	211955	24810	2387	867	28060	32510	1299	423	34232	181847	15606	6251	203706	-816	-73	4	-3.18%	-2.97%
Dir 2 Total				31540	2664	889	35112	26537	1367	412	28326	189222	17215	6429	213004	30566	2528	879	33973	24660	1193	392	26244	181834	15658	6241	203737	-974	-136	-10	-3.09%	-5.11%
<b>AR Total</b>				57166	5124	1752	64077	60784	2741	839	64380	378275	33733	12654	424959	55376	4915	1746	62033	57170	2492	815	60476	363681	31264	12492	407443	-1790	-209	-6	-3.13%	-4.08%
Dir 1 Total				17435	1757	333	19551	10715	471	57	11266	144533	12250	2149	159239	18969	1510	295	20776	13295	519	138	13953	143231	10578	2180	155984	1534	-247	-38	8.80%	-14.06%
Dir 2 Total				16338	1497	332	18192	12549	534	63	13156	145094	11035	2147	158544	16862	1373	303	18535	16481	644	159	17284	144370	10054	2155	156580	524	-124	-29	3.21%	-8.28%
<b>BH Total</b>				33773	3254	665	37743	23264	1005	120	24422	289627	23285	4296	317783	35831	2883	598	39311	29776	1163	297	31237	287601	20632	4335	312564	2058	-371	-67	6.09%	-11.40%
Dir 1 Total				6790	409	62	7268	9408	482	33	9924	47486	3195	374	51081	6534	372	55	6961	8976	391	44	9409	46189	2855	389	49433	-256	-37	-7	-3.77%	-9.05%
Dir 2 Total				8582	440	58	9084	6739	278	23	7044	47504	2873	355	50764	8358	437	63	8859	6545	277	27	6850	46392	2909	397	49698	-224	-3	5	-2.61%	-0.68%
<b>BR Total</b>				15372	849	120	16352	16147	760	56	16968	94990	6068	729	101845	14892	809	118	15820	15521	668	71	16259	92581	5764	786	99131	-480	-40	-2	-3.12%	-4.71%
Dir 1 Total				9800	602	220	10626	11311	369	186	11866	70314	3872	1899	76080	9098	601	240	9939	11054	353	189	11596	67356	3919	2016	73294	-702	-1	20	-7.16%	-0.17%
Dir 2 Total				9245	582	225	10053	10780	421	139	11341	69407	4189	1951	75555	9200	561	231	9992	10131	407	160	10699	67331	4135	1968	73433	-45	-21	6	-0.49%	-3.61%
<b>CS Total</b>				19045	1184	445	20679	22091	790	325	23207	139721	8061	3850	151635	18298	1162	471	19931	21185	760	349	22295	134687	8054	3984	146727	-747	-22	26	-3.92%	-1.86%
Dir 1 Total				13825	790	62	14690	9306	315	9	9632	71506	3914	262	75753	13254	716	65	14035	8855	288	33	9177	69520	3360	419	73299	-571	-74	3	-4.13%	-9.37%
Dir 2 Total				7778	451	35	8269	13261	504	19	13802	67423	3850	235	71565	8177	506	57	8743	13623	520	38	14180	68014	3546	386	71946	399	55	22	5.13%	12.20%
<b>GR Total</b>				21603	1241	97	22959	22567	819	28	23434	138929	7764	497	147318	21431	1222	122	22778	22478	808	71	23357	137534	6906	805	145245	-172	-19	25	-0.80%	-1.53%
Dir 1 Total				22145	1247	369	23782	13472	596	163	14236	121992	8641	2938	133638	23278	1325	384	24989	14049	639	181	14869	124034	8723	2957	135715	1133	78	15	5.12%	6.26%
Dir 2 Total				11565	1143	364	13094	21403	750	239	22419	115380	8263	2855	126605	12096	1169	379	13644	23882	764	240	24887	123859	8567	2938	135363	531	26	15	4.59%	2.27%
<b>H Total</b>				33710	2390	733	36876	34875	1346	402	36655	237372	16904	5793	260243	35374	2494	763	38633	37931	1403	421	39756	247893	17290	5895	271078	1664	104	30	4.94%	4.35%
Dir 1 Total				5542	620	241	6404	6743	417	126	7286	40708	4270	1771	46771	5586	534	217	6334	6670	372	120	7162	40363	3639	1648	45651	44	-86	-24	0.79%	-13.87%
Dir 2 Total				5860	471	237	6569	7443	417	158	8021	41261	3344	1721	46343	5759	489	208	6454	7198	367	158	7724	40230	3179	1671	45081	-101	18	-29	-1.72%	3.82%
<b>IC Total</b>				11402	1091	478	12973	14186	834	284	15307	81969	7614	3492	93114	11345	1023	425	12788	13868	739	278	14886	80593	6818	3319	90732	-57	-68	-53	-0.50%	-6.23%
Dir 1 Total				5983	600	852	7436	4292	228	455	4975	31348	3737	6089	41187	5859	644	769	7272	5161	243	410	5815	33746	3407	5878	43032	-124	44	-83	-2.07%	7.33%
Dir 2 Total				4794	661	770	6227	6384	288	391	7073	32698	3979	5689	42406	4429	678	993	6099	6232	250	305	6788	29697	3532	6924	40151	-365	17	223	-7.61%	2.57%
<b>PB Total</b>				10777	1261	1622	13663	10676	516	846	12048	64046	7716	11778	83593	10288	1322	1762	19371	11393	493	715	12603	63443	6939	12802	83183	-489	61	140	-4.54%	4.84%
Dir 1 Total				18080	1277	500	23471	21033	726	233	24522	124858	8232	3580	157047	22996	1325	620	24942	24627	740	307	25674	151041	8378	4336	163756	4916	48	120	27.19%	3.76%
Dir 2 Total				19788	1199	525	24368	20410	939	348	26096	127154	8531	4214	164813	22797	1160	547	24506	23739	872	378	24987	151727	8110	4328	164166	3009	-39	22	15.21%	-3.25%
<b>PM Total</b>				37868	2476	1025	47839	41443	1665	581	50618	252012	16763	7794	321860	45793	2485	1167	49448													

Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional Split AM - Obs	Directional Split AM - Model	GEH AM Car	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP Car	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM Car	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV Car	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr Car	GEH 24hr MCV	GEH 24hr HCV	GEH 24hr Total	
Dir 1 Total				11.94%	9.78%	245	18	24	283	4.93%	6.47%	15.19%	5.23%	1890	186	144	2172	5.50%	6.76%	8.18%	5.58%			5	0	1	5	3	1	0	3	2	1	1	3	4	3	2	5	7	2	2	8	
Dir 2 Total				8.88%	8.31%	403	-22	18	386	6.78%	-8.18%	12.77%	6.06%	1579	-4	162	1703	4.51%	-0.15%	9.02%	4.31%			4	0	1	4	3	0	1	3	4	1	1	3	2	0	2	2	6	0	3	6	
9 Total				10.36%	9.09%	648	-4	42	669	5.94%	-0.73%	14.05%	5.68%	3469	182	306	3875	5.00%	3.33%	8.61%	4.94%			7	0	1	7	4	0	1	4	4	0	2	4	4	3	3	5	9	2	4	10	
Dir 1 Total				-10.00%	-3.92%	261	-48	-3	212	15.77%	-42.48%	-20.00%	11.89%	912	-340	-14	540	5.88%	-27.58%	-6.17%	3.18%			1	3	0	2	3	5	2	2	4	4	1	3	4	4	1	3	5	7	1	3	
Dir 2 Total				-14.29%	9.89%	-30	-60	2	-88	-0.94%	-34.88%	9.09%	-2.60%	746	-411	1	318	4.80%	-31.25%	0.47%	1.86%			4	3	1	3	1	7	1	1	0	4	0	1	5	3	2	4	4	9	0	2	
10 Total				-12.31%	0.95%	231	-108	-1	124	4.76%	-37.89%	-2.70%	-2.40%	1658	-751	-13	858	5.34%	-29.47%	-2.96%	2.52%			2	4	1	0	3	8	2	1	2	5	0	1	6	5	3	5	7	11	0	3	
Dir 1 Total				-7.65%	3.79%	139	-64	9	77	0.84%	-9.05%	5.29%	0.44%	1362	-289	-138	864	1.15%	-3.81%	-5.15%	0.67%			4	1	1	4	0	2	2	1	1	2	0	0	1	1	0	1	3	2	2	2	
Dir 2 Total				-4.75%	-2.30%	-255	-140	-11	-405	-1.17%	-15.56%	-4.82%	-1.77%	-452	-629	-70	-1220	-0.38%	-8.19%	-2.65%	-0.94%			2	1	1	2	2	5	2	3	1	3	1	2	3	1	2	3	1	5	1	2	
11 Total				-6.26%	0.93%	-116	-204	-2	-328	-0.30%	-12.69%	-0.50%	-0.81%	910	-918	-208	-356	0.38%	-6.01%	-3.91%	-0.14%			2	2	1	1	1	5	3	3	0	4	0	1	3	1	1	3	1	5	2	0	
Dir 1 Total				73.33%	-6.27%	-235	11	5	-219	-9.26%	20.37%	100.00%	-8.43%	-1507	227	60	-1237	-8.03%	32.71%	82.19%	-6.33%			3	3	2	3	5	3	3	4	3	1	1	3	4	4	2	3	8	6	4	6	
Dir 2 Total				54.55%	-9.79%	-51	-15	10	-55	-1.45%	-15.63%	166.67%	-1.52%	-1475	-107	71	-1528	-7.98%	-13.81%	107.58%	-7.90%			3	1	1	3	7	3	2	7	1	1	2	1	4	4	1	5	4	8	3	5	8
12a Total				65.38%	-7.70%	-286	-4	15	-274	-4.72%	-2.67%	136.36%	-4.41%	-2982	120	131	-2765	-8.00%	8.17%	94.24%	-7.11%			5	1	2	4	8	0	4	8	3	0	2	2	6	4	5	5	11	2	6	10	
Dir 1 Total				-0.47%	8.27%	551	32	27	610	2.71%	4.04%	14.44%	2.86%	4529	640	137	5200	2.84%	6.48%	4.35%	3.01%			10	1	0	10	2	3	1	3	3	1	1	3	3	3	2	4	8	4	2	9	
Dir 2 Total				10.05%	4.46%	1383	-171	-27	1181	4.49%	-12.22%	-9.12%	3.64%	5845	-797	71	5062	3.73%	-7.17%	2.19%	2.96%			5	1	1	4	5	4	0	4	6	3	1	5	6	2	2	5	10	5	1	9	
13 Total				4.40%	6.72%	1934	-139	0	1791	3.78%	-6.34%	0.00%	3.33%	10374	-157	208	10262	3.28%	-0.75%	3.26%	2.98%			11	0	1	10	5	1	0	5	6	2	0	5	6	1	2	6	13	1	2	12	
Dir 1 Total				3.16%	5.52%	920	54	33	1001	4.47%	6.78%	20.25%	4.64%	3570	104	179	3776	2.00%	1.06%	6.29%	1.98%			7	0	0	7	2	2	2	3	4	1	2	5	0	1	1	0	6	1	2	6	
Dir 2 Total				11.46%	6.51%	2753	-102	43	2686	7.71%	-8.70%	21.39%	7.24%	8891	-389	286	8753	5.12%	-3.96%	10.31%	4.70%			7	1	1	6	7	1	2	6	10	2	2	10	8	2	3	7	15	3	4	14	
14 Total				7.13%	5.87%	3673	-48	76	3687	6.52%	-2.44%	20.88%	6.29%	12461	-285	465	12529	3.54%	-1.45%	8.28%	3.32%			10	1	1	10	6	0	2	6	11	1	3	11	5	2	3	5	15	1	4	14	
Dir 1 Total				-2.28%	2.42%	-946	-9	38	-942	-3.32%	-0.73%	16.45%	-3.14%	-3360	-269	137	-3627	-1.45%	-1.86%	3.46%	-1.45%			4	0	0	4	5	1	1	4	4	0	2	4	5	2	2	5	5	2	2	5	
Dir 2 Total				5.62%	-2.95%	-2870	-225	-10	-3112	-6.30%	-13.01%	-3.23%	-6.54%	-2255	-1411	156	-3603	-0.98%	-9.02%	3.93%	-1.44%			3	2	1	3	1	7	0	1	10	4	0	10	3	3	2	3	8	2	5		
15 Total				1.54%	0.45%	-3816	-234	28	-4054	-5.15%	-7.91%	5.18%	-5.23%	-5615	-1680	293	-7230	-1.22%	-5.58%	3.70%	-1.45%			1	1	0	1	3	5	1	4	10	3	1	10	1	4	3	2	6	7	2	7	
Dir 1 Total				-26.67%	-5.05%	656	-5	11	650	7.98%	-1.62%	73.33%	7.60%	987	-393	45	169	1.45%	-12.19%	18.75%	0.23%			2	6	1	4	1	2	1	0	5	0	2	5	2	2	2	1	3	5	2	0	
Dir 2 Total				33.33%	13.85%	-383	-53	-1	-446	-2.81%	-15.27%	-4.76%	-3.19%	2005	-172	88	1843	3.10%	-6.08%	40.18%	2.71%			8	1	1	8	3	1	2	2	2	2	0	3	4	2	4	4	6	2	4	5	
16 Total				-2.67%	0.88%	273	10	204	1.25%	-8.85%	27.78%	0.90%	2.992	1.44	133	2012	2.25%	-9.34%	28.98%	1.44%			3	4	0	1	3	3	2	2	1	2	1	1	5	3	4	3	6	5	4	4		
Dir 1 Total				10.53%	-2.36%	-1075	-151	88	-1152	-1.83%	-7.16%	61.11%	-1.89%	-317	-1156	450	-1215	-0.07%	-5.11%	16.63%	-0.26%			4	4	1	5	3	3	2	3	2	5	3	2	5	0	2	5	0	6	6	1	
Dir 2 Total				17.30%	-0.73%	-5398	95	106	-5280	-7.10%	4.76%	76.81%	-6.75%	9159	584	594	10017	2.13%	2.80%	23.22%	2.20%			1	2	2	16	3	4	16	14	1	5	14	10	2	6	11	10	3	8	10		
17 Total				13.78%	-1.70%	-6473	-56	194	-6432	-4.80%	-1.36%	68.79%	-4.62%	8842	1044	8802	1.02%	-1.32%	19.83%	0.96%			4	4	3	5	14	0	4	14	13	1	7	12	8	0	8	8	7	2	10	6		
Dir 1 Total				0.27%	-2.11%	-2603	-90	48	-2649	-6.44%	-5.65%	16.22%	-6.26%	-5868	-752	109	-6556	-2.04%	-4.20%	2.11%	-2.11%			3	3	0	3	4	3	0	5	9	2	2	9	1	1	1	1	8	4	1	8	
Dir 2 Total				1.61%	0.05%	-2133	-26	42	-2124	-4.50%	-1.50%	11.32%	-4.29%	5995	122	54	6141	2.18%	0.73%	1.04%	2.06%			0	2	0	0	9	1	1	9	7	0	2	7	9	2	2	9	8	1	1	8	
18 Total				0.92%	-1.18%	-4736	-116	90	-4773	-5.39%	-3.49%	13.49%	-5.19%	127	-630	173	-415	0.02%	-1.81%	1.58%	-0.07%			2	4	0	3	4	1	1	3	11	1	2	11	5	0	2	5	0	2	1	0	
Dir 1 Total				78.50%	1.54%	-71	53	32	12	-0.29%	8.62%	76.19%	0.05%	777	311	339	1351	0.41%	4.04%	39.42%	0.69%			1	2	5	2	0	1	4	1	0	1	3	0	1	1	3	1	1	3	7	2	
Dir 2 Total				52.00%	-1.46%	-637	34	39	-563	-1.88%	4.76%	95.12%	-1.63%	-1137	-216	335	-1088	-0.61%	-2.72%	38.42%	-0.56%			2	1	4	2	2	2	4	1	2	1	4	2	2	2	4	2	2	2	7	2	
19a Total				64.22%	0.41%	-708	87	71	-551	-1.22%	6.55%	85.54%	-0.93%	-360	95	674	263	-0.10%	0.61%	38.91%	0.07%			0	2	6	1	1	1	6	2	2	2	5	2	1	5	1	0	1	11	0		



Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional Split AM - Obs	Directional Split AM - Model	GEH AM Car	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP Car	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM Car	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV Car	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr Car	GEH 24hr MCV	GEH 24hr HCV	GEH 24hr Total		
32b Total				1.15%	2.94%	223	22	23	262	2.60%	3.40%	5.71%	2.72%	2476	83	138	2646	5.13%	1.58%	3.03%	4.55%			2	0	0	2	8	0	0	7	2	1	1	2	3	1	2	3	8	1	1	8		
Dir 1 Total				2.20%	10.14%	704	16	24	744	5.74%	3.02%	11.43%	5.72%	6779	147	103	6988	8.42%	2.45%	2.56%	7.72%			9	0	0	8	9	1	1	9	4	0	1	5	11	1	0	10	17	1	1	16		
Dir 2 Total				4.76%	6.38%	1694	-4	28	1709	11.77%	-0.67%	8.95%	11.16%	4367	-182	203	4350	5.31%	-2.97%	5.14%	4.71%			5	0	1	5	5	2	1	4	10	0	1	10	3	1	1	3	11	2	2	10		
33 Total				3.38%	8.42%	2398	12	52	2453	8.99%	1.06%	9.94%	8.66%	11146	-35	306	11338	6.85%	-0.29%	3.84%	6.20%			10	0	1	9	10	0	2	9	10	0	2	10	10	0	1	9	19	0	2	10		
Dir 1 Total				-0.83%	2.80%	315	20	4	330	2.81%	3.22%	1.92%	2.74%	1368	132	82	1532	1.69%	2.01%	2.60%	1.68%			2	0	0	2	1	1	1	2	2	1	0	2	1	1	1	3	1	1	4			
Dir 2 Total				6.36%	4.83%	253	-49	9	204	1.58%	-7.23%	3.54%	1.20%	5	-85	144	-8	0.01%	-1.33%	4.63%	-0.01%			4	0	1	4	1	0	1	1	1	0	1	3	1	1	3	0	1	2	0			
34 Total				2.47%	3.70%	568	-29	13	534	2.09%	-2.23%	2.81%	1.84%	1373	47	226	1524	0.84%	0.36%	3.61%	0.83%			4	0	1	4	0	1	1	1	2	1	0	2	1	0	2	1	0	2	3			
Dir 1 Total				-0.47%	-5.85%	-366	-12	1	-379	-6.12%	-3.00%	1.20%	-5.86%	-3188	-606	5	-3818	-5.87%	-13.56%	0.36%	-6.34%			3	3	0	4	8	6	2	10	3	0	0	3	4	2	2	4	10	7	0	11		
Dir 2 Total				-3.74%	-8.80%	252	-62	42	222	3.64%	-14.94%	49.41%	2.98%	-2932	-868	140	-3768	-5.40%	-18.21%	11.16%	-6.24%			5	4	0	6	9	8	0	11	2	2	3	2	4	3	4	4	9	9	3	11		
AP Total				-2.01%	-7.19%	-114	-74	43	-157	-0.88%	-9.08%	25.60%	-1.13%	-6120	-1474	145	-7586	-5.63%	-15.96%	5.52%	-6.29%			6	5	0	7	12	10	1	15	1	2	2	1	6	3	4	6	13	11	2	16		
Dir 1 Total				0.46%	-3.12%	-1737	-75	-4	-1822	-5.07%	-5.46%	-0.94%	-5.05%	-7203	-910	21	-8251	-3.81%	-5.51%	0.34%	-3.89%			4	1	0	4	8	5	0	9	7	1	0	7	5	2	1	5	12	5	0	13		
Dir 2 Total				-1.12%	-3.24%	-1877	-174	-20	-2082	-7.07%	-12.73%	-4.85%	-7.35%	-7386	-1557	-189	-9262	-3.90%	-9.04%	-2.94%	-4.35%			4	2	0	4	7	7	2	9	8	3	1	9	6	4	1	7	12	9	3	14		
AR Total				-0.34%	-3.19%	-3614	-249	-24	-3904	-5.95%	-9.08%	-2.86%	-6.06%	-14589	-2467	-168	-17513	-3.86%	-7.31%	-1.33%	-4.12%			5	2	0	6	10	8	1	13	11	3	1	11	7	4	0	8	17	10	1	19		
Dir 1 Total				-11.41%	6.27%	2580	48	81	2687	24.08%	10.19%	142.11%	23.85%	-1308	-1679	32	-3253	-0.90%	-13.71%	1.49%	-2.04%			8	4	2	6	4	6	2	6	17	2	6	17	12	10	3	15	2	11	0	6		
Dir 2 Total				-8.73%	1.89%	3932	110	96	4128	31.33%	20.60%	152.38%	31.38%	-723	-984	14	-1968	-0.50%	-8.92%	0.65%	-1.24%			3	2	1	2	8	4	2	9	23	3	6	24	7	7	1	9	1	7	0	3		
BH Total				-10.08%	4.15%	6512	158	177	6815	27.99%	15.72%	147.50%	27.91%	-2031	-2663	46	-5221	-0.70%	-11.44%	1.07%	-1.64%			8	5	2	6	9	7	0	11	28	3	9	28	14	12	2	17	3	13	0	7		
Dir 1 Total				-11.29%	-4.22%	-432	-91	11	-515	-4.59%	-18.88%	33.33%	-5.19%	-1296	-340	17	-1647	-2.73%	-10.64%	4.55%	-3.22%			2	1	1	3	2	2	0	2	3	3	1	4	2	3	1	2	4	4	1	5		
Dir 2 Total				8.62%	-2.48%	-194	-1	4	-194	-2.88%	-0.36%	17.39%	-2.75%	-1113	35	41	-1067	-2.34%	1.22%	11.55%	-2.10%			2	0	0	2	1	0	0	1	2	0	1	2	3	1	2	2	4	0	2	3		
BR Total				-1.67%	-3.25%	-626	-92	15	-709	-3.88%	-12.11%	26.79%	-4.18%	-2409	-305	58	-2714	-2.54%	-5.03%	7.96%	-2.66%			3	1	0	3	2	2	0	3	4	2	1	4	3	1	2	3	6	3	1	6		
Dir 1 Total				9.09%	-6.47%	-257	-16	3	-270	-2.27%	-4.34%	1.61%	-2.28%	-2956	48	116	-2786	-4.20%	1.24%	6.11%	-3.66%			5	0	1	5	7	1	1	7	2	1	0	2	1	3	2	0	8	1	2	7		
Dir 2 Total				2.67%	-0.61%	-649	-14	21	-642	-6.02%	-3.33%	15.11%	-5.66%	-2077	-54	17	-2121	-2.99%	-1.29%	0.87%	-2.81%			0	1	0	0	5	1	0	5	4	0	1	4	1	1	0	1	6	1	0	5		
CS Total				5.84%	-3.62%	-906	-30	24	-912	-4.10%	-3.80%	7.38%	-3.93%	-5033	-6	133	-4907	-3.60%	-0.07%	3.45%	-3.24%			4	0	1	4	8	1	1	8	4	1	1	4	2	2	1	1	10	0	2	9		
Dir 1 Total				4.84%	-4.46%	-451	-27	24	-455	-4.85%	-8.57%	266.67%	-4.72%	-1984	-555	156	-2453	-2.77%	-14.18%	59.54%	-3.24%			3	2	0	4	1	4	4	2	3	1	4	3	4	5	4	4	5	6	6	6		
Dir 2 Total				62.86%	5.73%	362	16	19	378	2.73%	3.17%	100.00%	2.74%	588	-302	154	381	0.87%	-7.84%	65.53%	0.53%			3	2	2	4	0	4	2	1	2	1	3	2	1	3	6	1	2	4	6	1		
GR Total				25.77%	-0.79%	-89	-11	43	-77	-0.39%	-1.34%	153.57%	-0.33%	-1396	-857	310	-2072	-1.00%	-11.04%	62.37%	-1.41%			1	0	2	1	1	6	4	2	0	0	4	0	3	6	7	4	3	7	9	4		
Dir 1 Total				4.07%	5.08%	577	43	18	633	4.28%	7.21%	11.04%	4.45%	2041	81	20	2076	1.67%	0.94%	0.68%	1.55%			5	2	1	5	1	0	0	1	3	1	1	4	2	0	1	2	0	1	4	1	0	4
Dir 2 Total				4.12%	4.20%	2479	14	1	2468	11.58%	1.87%	0.42%	11.01%	8478	305	82	8759	7.35%	3.69%	2.87%	6.92%			3	1	1	3	10	2	1	10	12	0	0	11	9	1	1	9	17	2	1	17		
H Total				4.09%	4.76%	3056	57	19	3101	8.76%	4.23%	4.73%	8.46%	10519	386	102	10835	4.43%	2.28%	1.76%	4.16%			6	1	1	6	7	1	1	7	11	1	1	11	8	1	0	7	15	2	1	15		
Dir 1 Total				-9.96%	-1.09%	-73	-45	-6	-124	-1.08%	-10.79%	-4.76%	-1.70%	-347	-629	-121	-1120	-0.85%	-14.73%	-6.83%	-2.39%			0	3	1	1	0	4	3	2	1	2	0	1	2	6	1	4	1	7	2	4		
Dir 2 Total				-12.24%	-1.75%	-245	-50	0	-297	-3.29%	-11.99%	0.00%	-3.70%	-1032	-163	-49	-1263	-2.50%	-4.87%	-3.85%	-2.73%			1	1	1	1	3	1	2	4	2	2	0	2	0	2	0	2	1	4	2	1	4	
IC Total				-11.09%	-1.43%	-318	-95	-6	-421	-2.24%	-11.39%	-2.11%	-2.75%	-1379	-792	-170	-2383	-1.68%	-10.40%	-4.87%	-2.56%			0	1	2	1	2	3	3	4	2	2	0	2	2	6	2	3	3	7	2	6		
Dir 1 Total				-9.74%	-2.21%	869	15	-45	840	20.25%	6.58%	-9.89%	16.88%	2396	-330	-212	1845	7.64%	-8.83%	-3.48%	4.48%			1	1	2	1	9	7	3	6	9	1	2	8	2	1	6	0	9	4	2	6		
Dir 2 Total				28.96%	-2.06%	-152	-38	-86	-285	-2.38%	-13.19%	-21.99%	-4.03%	-2999	-448	1234	-2254	-9.17%	-11.26%	21.69%	-5.32%			4	0	5	1	6	8	7	5	1	2	3	2	12	2	9	7	1					

Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. WD Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV
Dir 1	9.01	Stuve Hwy	SB	3287	197	146	3629	3547	151	126	3827	23919	1564	1313	26798	3,337	194	147	3,678	3,335	159	134	3,628	23,086	1,582	1,323	25,991	50	-3	1	1.52%	-1.52%
Dir 1	9.02	Steve Irwin Highway	SB	531	46	22	602	498	34	8	543	3441	384	159	3990	534	47	25	606	483	34	12	530	3349	389	177	3914	3	1	3	0.56%	2.17%
Dir 1	9.03	Beerburum Road	SB	319	33	4	356	227	30	7	262	1525	215	32	1777	323	32	5	361	229	30	6	265	1510	216	38	1764	4	-1	1	1.25%	-3.03%
Dir 1	9.05	D'Aguiar Hwy	SB	935	86	29	1054	628	59	17	703	5137	568	256	5981	1365	103	47	1515	1136	70	29	1235	8073	730	362	9165	430	17	18	45.99%	19.77%
Dir 1	9.06	Mt Mee - Woodford Rd	SB	34	5	0	43	65	4	0	71	364	21	0	403	75	4	1	80	27	3	1	31	260	18	7	284	41	-1	1	120.59%	-20.00%
Dir 1 Total				5106	367	201	5684	4965	278	158	5406	34386	2752	1760	38949	5634	380	225	6240	5210	296	182	5689	36278	2935	1907	41118	528	13	24	10.34%	3.54%
Dir 2	9.01	Stuve Hwy	NB	3114	239	148	3500	3989	128	109	4227	24303	1575	1336	27208	3143	240	149	3532	3868	128	118	4114	23101	1577	1392	26069	29	1	1	0.93%	0.42%
Dir 2	9.02	Steve Irwin Highway	NB	416	38	25	477	627	26	10	668	3564	304	166	4037	404	38	25	468	610	29	14	653	3412	315	172	3899	-12	0	0	-2.88%	0.00%
Dir 2	9.03	Beerburum Road	NB	210	23	1	236	312	11	1	329	1598	126	16	1756	208	21	3	232	309	14	2	326	1564	132	25	1721	-2	-2	2	-0.95%	-8.70%
Dir 2	9.05	D'Aguiar Hwy	NB	663	84	40	790	963	102	21	1087	5181	668	277	6145	1083	91	55	1229	1487	71	24	1582	8260	657	362	9279	420	7	15	63.35%	8.33%
Dir 2	9.06	Mt Mee - Woodford Rd	NB	52	6	0	61	50	2	0	54	343	34	1	382	20	3	1	24	70	5	1	76	233	22	6	261	-32	-3	1	-61.54%	-50.00%
Dir 2 Total				4455	390	214	5064	5941	269	141	6365	34989	2707	1796	39528	4858	393	233	5485	6344	247	159	6751	36570	2703	1957	41229	403	3	19	9.05%	0.77%
9 Total				9561	757	415	10748	10906	547	299	11771	69375	5459	3556	78477	10492	773	458	11725	11554	543	341	12440	72848	5638	3864	82347	931	16	43	9.74%	2.11%
Dir 1	10.02	Pumicestone Road	WB	229	70	7	310	95	43	5	143	1120	391	45	1559	148	13	5	166	122	6	3	132	1034	65	42	1141	-81	-57	-2	-35.37%	-81.43%
Dir 1	10.03	Caboolture - Bribie Island Rd	WB	2215	93	22	2332	1268	55	9	1333	11644	631	161	12439	2261	88	19	2368	1413	44	6	1463	12130	582	145	12857	46	-5	-3	2.08%	-5.38%
Dir 1	10.04	Caboolture - Beachmere Road	WB	513	36	1	550	292	15	1	307	2742	211	21	2988	490	39	3	533	381	15	3	400	3254	246	27	3526	-23	3	2	-4.48%	8.33%
Dir 1 Total				2957	199	30	3192	1655	113	15	1783	15506	1233	227	16986	2899	140	27	3067	1916	65	12	1995	16418	893	214	17524	-58	-59	-3	-1.96%	-29.65%
Dir 2	10.02	Pumicestone Road	EB	103	18	3	123	302	8	3	315	1460	93	19	1575	125	5	5	136	184	3	6	193	1096	35	44	1174	22	-13	2	21.36%	-72.22%
Dir 2	10.03	Caboolture - Bribie Island Rd	EB	1191	102	27	1319	2400	70	14	2482	11688	681	154	12531	1293	94	22	1408	2482	61	16	2559	12003	621	143	12766	102	-8	-5	8.56%	-7.84%
Dir 2	10.04	Caboolture - Beachmere Road	EB	232	58	5	298	491	94	5	590	2397	541	39	2983	339	26	3	368	497	48	2	547	3192	248	27	3468	107	-32	-2	46.12%	-55.17%
Dir 2 Total				1526	178	35	1740	3193	172	22	3387	15545	1315	212	17089	1757	125	30	1912	3163	112	24	3299	16291	904	214	17408	231	-53	-5	15.14%	-29.78%
10 Total				4483	377	65	4932	4848	285	37	5170	31051	2548	439	34075	4656	265	57	4979	5079	177	36	5294	32709	1797	428	34932	173	-112	-8	3.86%	-29.71%
Dir 1	13.01	BRIGHTON - REDCLIFFE ROAD	SB	4420	174	22	4616	2686	110	9	2805	24807	1371	153	26330	4323	199	34	4555	3356	138	18	3512	24997	1559	222	26778	-97	25	12	-2.19%	14.37%
Dir 1	11.01	Anzac Av	SB	2095	202	38	2337	3334	216	17	3565	18970	1606	213	20805	2196	195	28	2419	3309	185	7	3502	19471	1445	122	21037	101	-7	-10	4.82%	-3.47%
Dir 1	11.02	North South Arterial Rd	SB	968	89	10	1068	1568	70	4	1644	8760	575	59	9406	681	42	1	724	1039	27	1	1067	6490	234	10	6734	-287	-47	-9	-29.65%	-52.81%
Dir 1	11.03	Bruce Highway	SB	6150	361	262	6775	6877	222	133	7231	50139	3034	2088	55260	7538	394	250	8181	7161	240	138	7540	53858	3268	2029	59156	1388	43	-12	22.57%	9.14%
Dir 1	11.04	Old Gympie Rd	SB	1182	105	15	1304	1030	50	3	1087	6800	591	66	7469	1146	107	16	1269	856	33	10	898	7218	594	98	7910	-36	2	1	-3.05%	1.90%
Dir 1	11.06	Narangba Rd	SB	1509	44	18	1572	737	18	4	760	6386	227	97	6724	1425	18	5	1448	678	9	2	689	5888	102	37	6027	-84	-26	-13	-5.57%	-59.09%
Dir 1	11.07	Browns Rd	SB	483	33	1	518	219	16	0	236	1894	136	6	2043	370	13	2	385	200	6	1	207	1518	55	13	1586	-113	-20	1	-23.40%	-60.61%
Dir 1	11.08	Smith Rd	SB	9	1	0	10	5	0	0	5	39	1	0	41	67	3	1	71	65	2	1	67	448	23	6	478	58	2	1	644.44%	200.00%
Dir 1	11.09	Brisbane-Woodford Rd	SB	224	11	0	234	96	5	0	103	992	50	0	1049	75	4	1	80	27	3	1	31	260	18	7	284	-149	-7	1	-66.52%	-63.64%
Dir 1 Total				17040	1020	366	18434	16552	707	170	17436	118787	7591	2682	129127	17821	975	338	19132	16691	643	179	17513	120148	7298	2544	129990	781	-45	-28	4.58%	-4.41%
Dir 2	13.01	BRIGHTON - REDCLIFFE ROAD	NB	2532	222	24	2778	5263	230	15	5508	23012	1575	154	24741	2837	213	31	3081	5509	224	18	5750	24056	1503	212	25770	305	-9	7	12.05%	-4.05%
Dir 2	11.01	Anzac Av	NB	3217	176	35	3433	2779	117	18	2915	19456	1118	214	20808	3014	185	18	3217	2362	111	8	2481	18327	1181	115	19623	-203	9	-17	-6.31%	5.11%
Dir 2	11.02	North South Arterial Rd	NB	934	63	7	1007	1283	53	8	1344	8397	451	49	8913	863	54	4	921	1075	31	3	1109	7773	344	26	8143	-71	-9	-3	-7.60%	-14.29%
Dir 2	11.03	Bruce Highway	NB	6089	534	254	6874	9296	324	169	9788	53667	3484	2071	59220	6023	506	249	6779	9755	275	172	10202	54886	3260	2069	60215	-66	-28	-5	-1.08%	-5.24%
Dir 2	11.04	Old Gympie Rd	NB	1005	60	6	1071	1199	43	7	1250	6705	431	51	7194	933	70	11	1014	1166	41	11	1219	6921	461	89	7471	-72	10	5	-7.16%	16.67%
Dir 2	11.06	Narangba Rd	NB	683	48	11	742	1230	80	7	1317	5030	416	90	5548	564	18	4	586	1170	41	2	1214	4640	161	134	4835	-119	-30	-7	-17.42%	-62.50%
Dir 2	11.07	Browns Rd	NB	214	15	0	232	514	48	3	564	1729	161	10	1908	161	9	2	172	395	30	1	427	1331	87	13	1432	-53				





Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV
Dir 1	17.09	Hertson Rd	EB	1334	59	3	1405	658	21	0	683	5448	285	5	5779	1270	20	1	1292	987	15	2	1004	6108	162	19	6289	-64	-39	-2	-4.80%	-66.10%
Dir 1	17.10	Victoria Park Rd	SB	352	16	0	367	270	12	0	283	2009	106	0	2125	257	14	1	272	151	6	1	158	1614	49	7	1671	-95	-2	1	-26.99%	-12.50%
Dir 1	17.11	Musk Ave	SB	208	17	1	228	206	11	0	218	1548	129	1	1695	475	15	3	492	368	6	1	374	3430	79	10	3519	267	-2	2	128.37%	-11.76%
Dir 1	17.12	Kelvin Grove Rd	SB	4647	151	10	4809	3034	102	5	3140	25322	1041	69	26432	4160	70	0	4230	2831	87	6	2924	24238	858	68	25163	-487	-81	-10	-10.48%	-53.64%
Dir 1	17.13a	Legacy Way	NB	2307	97	23	2429	1348	74	12	1434	9461	659	185	10312	2173	1	38	2212	1612	0	24	1636	8953	674	323	9950	-134	-96	15	-5.81%	-98.97%
Dir 1	17.13	Musgrave Rd	EB	4217	83	2	4303	1904	59	0	1965	17540	510	4	18061	4343	90	8	4441	2061	57	7	2125	17205	541	61	17807	126	7	6	2.99%	8.43%
Dir 1	17.14	Caxton St	EB	2206	77	0	2284	1466	48	0	1514	10016	446	0	10461	1783	48	7	1838	1122	44	4	1170	8769	400	65	9234	-423	-29	7	-19.17%	-37.66%
Dir 1	17.15	Millton Rd	EB	3341	109	28	3479	3257	105	10	3375	21390	1017	265	22684	4574	194	28	4795	3671	130	6	3807	27125	844	151	28120	1233	85	0	36.91%	77.98%
Dir 1	17.16	Coronation Dr	EB	6395	184	2	6582	5715	112	6	5833	43262	1420	29	44720	6405	235	35	5833	5958	134	15	6107	45275	1617	215	47106	10	51	33	0.16%	27.72%
Dir 1	18.07	Go Between Bridge	NB	1037	67	10	1113	1663	24	2	1688	7241	486	72	7803	177	0	20	197	1513	4	18	1534	7311	497	116	7923	-860	-67	10	-82.93%	-100.00%
Dir 1	18.06	William Jolly Bridge	NB	2489	100	19	2609	3001	24	6	3033	17514	519	102	18150	2715	222	21	2957	2566	64	5	2634	16977	421	125	17823	226	122	2	9.08%	122.00%
Dir 1	18.05	Victoria Bridge	NB	663	391	3	1059	712	337	3	1055	4999	2784	16	7817	669	324	5	998	629	277	3	909	3905	2220	30	6155	6	-67	2	0.90%	-17.14%
Dir 1	18.04	Pacific Motorway (SOUTH-EAST ARTE)	NB	12066	634	23	12723	7896	400	9	8305	73742	3348	239	77329	11963	401	18	12382	7199	360	14	7573	69511	2993	236	72650	-103	-233	-5	-0.85%	-36.75%
Dir 1	18.02	Clem7 Tunnel	NB	2449	151	33	2634	3251	82	13	3345	14570	901	164	15641	2192	28	36	2257	3151	0	17	3168	15693	581	66	16340	-257	-123	3	-10.49%	-81.46%
Dir 1	18.03	Story Bridge	NB	9055	232	52	9337	6689	156	17	6859	49949	1696	265	51908	8810	293	33	9136	6053	210	16	6279	47625	2022	290	49938	-245	61	-19	-2.71%	26.29%
Dir 1 Total				79138	3546	399	83111	58806	2108	144	61069	439958	22628	2706	465477	77486	3226	441	81151	57731	1957	232	59917	439639	21469	3153	464261	-1652	-320	42	-2.09%	-9.02%
Dir 2	17.01	Breakfast Creek Rd	NB	2178	188	35	2421	3311	115	18	3500	19170	1357	245	20983	1860	198	40	2098	2939	122	21	3082	17491	1342	299	19132	-318	10	5	-14.60%	5.32%
Dir 2	17.02	Inner City Bypass	EB	2213	121	49	2382	1798	63	19	1881	13623	1050	390	15073	2248	124	59	2432	1034	69	25	1128	13117	1080	445	14643	35	3	10	1.58%	2.48%
Dir 2	17.03	Allison St	EB	437	33	0	478	490	25	0	520	3137	236	1	3409	282	12	3	297	209	10	1	220	1507	94	12	1613	-155	-21	3	-35.47%	-63.64%
Dir 2	17.04	Abbotsford Rd	NB	1621	70	11	1704	3267	44	2	3312	16798	562	49	17414	1348	60	12	1420	1637	136	18	1791	14409	544	91	15045	-273	-10	1	-16.84%	-14.29%
Dir 2	17.05	Burrows Rd	NB	1088	54	17	1159	2551	33	1	2586	11117	350	75	11541	1043	46	10	1100	1740	7	0	1747	10080	310	66	10457	-45	-8	-7	-4.14%	-14.81%
Dir 2	17.06a	Airport Link tunnel	NB	3185	253	31	3467	5481	155	17	5655	25701	1607	210	27509	2847	180	4	3030	6458	26	0	6484	28767	1483	38	30288	-338	-73	-27	-10.61%	-28.85%
Dir 2	17.06b	Lutwyche Road	NB	2892	171	15	3075	5464	120	11	5594	31034	1317	148	32495	3066	179	33	3279	4706	200	26	4932	32063	1465	256	33784	174	8	18	6.02%	4.68%
Dir 2	17.07a	Cox Road	NB	175	1	0	180	595	0	0	596	2139	13	0	2159	16	1	0	17	130	0	0	130	383	3	1	387	-159	0	0	-90.86%	0.00%
Dir 2	17.07b	Newmarket Road	WB	1468	84	4	1557	2828	60	3	2892	14160	593	19	14784	1490	86	13	1589	2928	66	9	3002	14213	608	85	14906	22	2	9	1.50%	2.38%
Dir 2	17.08	Butterfield St	WB	305	18	0	321	326	10	0	336	1866	102	0	1970	709	16	7	732	424	37	4	464	2347	109	46	2502	404	-2	7	132.46%	-11.11%
Dir 2	17.09	Hertson Rd	WB	908	36	0	944	1474	37	1	1514	6458	265	3	6737	979	15	1	996	1295	40	1	1336	6485	197	23	6704	71	-21	1	7.82%	-58.33%
Dir 2	17.10	Victoria Park Rd	NB	164	8	0	170	224	4	0	229	1140	48	0	1190	269	4	1	274	370	3	1	374	2062	45	7	2114	105	-4	1	64.02%	-50.00%
Dir 2	17.11	Musk Ave	NB	298	12	0	310	659	6	0	667	3093	79	0	3175	202	7	1	210	409	2	0	412	1623	31	6	1660	-96	-5	1	-32.21%	-41.67%
Dir 2	17.12	Kelvin Grove Rd	NB	2502	133	13	2647	4691	104	3	4799	25578	937	96	26611	2562	122	9	2693	4721	71	5	4797	26651	828	72	27551	60	-11	-4	2.40%	-8.27%
Dir 2	17.13a	Legacy Way	SB	1196	93	28	1317	1799	50	11	1861	8549	583	174	9305	1172	121	40	1333	1974	0	29	2002	8510	724	310	9544	-24	28	12	-2.01%	30.11%
Dir 2	17.13	Musgrave Rd	WB	1539	85	1	1624	4073	55	0	4128	17391	479	5	17880	1690	97	9	1796	4039	85	4	4128	16849	630	77	17557	151	12	8	9.81%	14.12%
Dir 2	17.14	Caxton St	WB	1316	71	5	1392	2078	59	4	2144	9902	474	43	10425	1281	38	8	1326	1116	34	5	1155	9044	388	62	9493	-35	-33	3	-2.66%	-46.48%
Dir 2	17.15	Millton Rd	WB	4158	192	29	4380	4001	103	9	4114	29449	1272	236	30957	3807	253	33	4093	3679	176	13	3868	27593	1397	256	29247	-351	61	4	-8.44%	31.77%
Dir 2	17.16	Coronation Dr	WB	4478	186	4	4670	4871	88	0	4960	32628	1136	24	33802	6103	150	14	6267	6202	151	13	6365	49137	1455	133	50725	1625	-36	10	36.29%	-19.35%
Dir 2	18.07	Go Between Bridge	SB	1096	50	9	1156	762	24	3	788	5039	341	65	5452	857	0	23	880	943	0	18	961	5018	304	75	5397	-239	-50	14	-21.81%	-100.00%
Dir 2	18.06	William Jolly Bridge	SB	3912	66	13	3989	2827	69	2	2898	20187	659	95	20938	4132	78	2	4212	1456	53	2	1510	18938	635	112	19685	220	12	-11	5.62%	18.18%
Dir 2	18.05	Victoria Bridge	SB	754	276	2	1033	896	210	1	1107	5840	2088	29	7965	776	313	10	1099	932	235	5	1173	5862	2395	67	8324	22	37	8	2.92%	13.41%
Dir 2	18.04	Pacific Motorway (SOUTH-EAST ARTE)	SB	6624	537	31	7192	10483	376	9	10869	63206	2738	204	66148	6485																



Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. WD Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV
Dir 2	19.03	Annerley Rd	SB	1004	36	2	1041	2237	30	0	2266	9857	312	3	10178	754	42	22	818	2332	83	12	2427	9417	334	134	9884	-250	6	20	-24.90%	16.67%
Dir 2	19.04	Ipswich Rd	SB	3579	308	50	3936	5141	193	22	5355	29062	2199	378	31639	4727	349	66	5142	5029	154	11	5194	29635	2166	389	32190	1148	41	16	32.08%	13.31%
Dir 2	19.05	Pacific Motorway (SOUTH-EAST ARTE)	SB	7059	368	35	7462	10232	139	8	10379	66600	2173	259	69032	6692	419	41	7152	9334	200	19	9553	65766	2204	283	68253	-367	51	6	-5.20%	13.86%
Dir 2	19.05a	Clem 7 on/off ramp pair from/to Paci	SB	1127	44	16	1187	1222	30	0	1253	6039	246	63	6357	377	0	7	384	1900	0	4	1905	7377	245	18	7641	-750	-44	-9	-66.55%	-100.00%
Dir 2	19.06	Logan Rd	SB	813	53	0	868	1448	48	1	1497	6829	378	4	7217	738	37	2	778	1045	35	3	1084	5942	290	27	6259	-75	-16	2	-9.23%	-30.19%
Dir 2	19.07	Deshon St / Main Ave	SB	351	23	0	375	1186	33	0	1218	4287	205	1	4500	373	20	2	395	1423	48	3	1474	4369	155	12	4536	22	-3	2	6.27%	-13.04%
Dir 2	19.08	Turbo Dr	NB	411	33	0	445	264	30	0	293	2137	247	3	2393	204	5	1	210	192	8	1	201	876	42	5	924	-207	-28	1	-50.36%	-84.85%
Dir 2	19.09	Stanley St East	NB	1969	101	0	2068	4658	67	0	4725	20946	597	4	21554	2008	111	6	2125	4678	69	3	4750	21660	690	55	22405	39	10	6	1.98%	9.90%
Dir 2	19.10	Wynnum Rd	NB	2883	166	9	3058	4555	71	3	4633	27165	1029	65	28266	3098	183	25	3307	4705	106	15	4827	28235	1105	159	29499	215	17	16	7.46%	10.24%
Dir 2 Total				20892	1207	125	22229	33802	714	41	34560	186481	7930	872	195363	20473	1241	190	21905	33165	748	80	33997	185349	7713	1210	194273	-419	34	65	-2.01%	2.82%
19a Total				56445	2407	232	59088	58041	1329	83	59460	374376	15624	1732	391891	56409	2541	381	59333	57333	1416	154	58909	374019	15721	2410	392150	-36	134	149	-0.06%	5.57%
Dir 1	19.11	Cavendish Road	NB	1648	44	2	1692	1391	15	0	1408	9680	265	7	9955	1585	38	8	1631	1063	15	3	1081	8875	251	54	9179	-63	-6	6	-3.82%	-13.64%
Dir 1	19.11a	Temple Street	WB	118	4	0	123	252	5	0	258	971	23	0	998	301	18	2	321	304	8	2	315	1465	69	17	1551	183	14	2	155.08%	350.00%
Dir 1	19.12	Stanley Street East	WB	843	17	2	863	172	4	0	176	2179	62	2	2247	662	27	5	694	228	8	1	238	2265	106	41	2413	-181	10	3	-21.47%	58.82%
Dir 1	19.13	Crown Street	WB	2605	86	3	2696	1197	70	1	1268	10786	542	12	11348	2792	75	3	2870	1394	59	2	1455	11433	446	21	11901	187	-11	0	7.18%	-12.79%
Dir 1	19.14	Agnew Road	WB	932	85	1	1021	850	70	0	922	5203	561	12	5784	1035	46	2	1083	831	44	1	877	5190	236	12	5438	103	-39	1	11.05%	-45.88%
Dir 1	19.15	Jack Flynn Memorial Drive	NB	1096	28	0	1125	1111	22	0	1133	6869	232	4	7113	1107	44	27	1179	1095	27	17	1139	7164	315	249	7728	11	16	27	1.00%	57.14%
Dir 1	19.16	Wynnum Road	WB	2421	123	8	2554	2680	73	1	2755	17627	813	45	18491	2614	108	12	2734	2845	65	9	2919	17937	710	96	18744	193	-15	4	7.97%	-12.20%
Dir 1	19.17	Barrack Road	NB	755	16	0	772	400	8	0	407	2938	88	0	3030	714	6	1	721	310	2	1	313	2633	44	12	2690	-41	-10	1	-5.43%	-62.50%
Dir 1	19.18	Lytton Rd	WB	1943	297	70	2317	2443	154	37	2635	13325	1780	571	15686	2001	264	69	2334	2514	144	38	2696	13453	1637	551	15641	58	-33	-1	2.99%	-11.11%
Dir 1 Total				12361	700	86	13163	10496	421	39	10962	69578	4366	653	74652	12811	626	129	13567	10584	372	74	11033	70415	3814	1053	75285	450	-74	43	3.64%	-10.57%
Dir 2	19.11	Cavendish Road	SB	1402	45	0	1451	1891	24	0	1916	10826	295	0	11139	1329	40	4	1372	1730	14	3	1747	11033	326	40	11399	-73	-5	4	-5.21%	-11.11%
Dir 2	19.11a	Temple Street	EB	496	4	0	501	188	1	0	189	1381	12	0	1399	500	27	7	534	513	16	3	532	2105	114	41	2260	4	23	7	0.81%	575.00%
Dir 2	19.12	Stanley Street East	EB	89	4	0	93	467	15	0	484	1733	64	0	1813	170	17	2	190	423	13	1	437	1697	75	15	1787	81	13	2	91.01%	325.00%
Dir 2	19.13	Crown Street	EB	1082	75	0	1159	2870	59	5	2932	11965	446	9	12427	1065	74	2	1142	2935	51	1	2987	11815	370	15	12200	-17	-1	2	-1.57%	-1.33%
Dir 2	19.14	Agnew Road	EB	787	55	3	846	647	40	3	691	4494	335	10	4849	763	27	1	791	627	22	1	650	4302	157	9	4468	-24	-28	-2	-3.05%	-50.91%
Dir 2	19.15	Jack Flynn Memorial Drive	SB	994	45	2	1041	1236	15	0	1250	6877	236	5	7124	838	38	15	890	1242	34	20	1296	7125	313	190	7629	-156	-7	13	-15.69%	-15.56%
Dir 2	19.16	Wynnum Road	EB	2418	117	7	2543	3218	80	3	3307	19090	812	39	19959	2422	120	10	2552	3256	78	8	3343	19390	618	96	20304	4	3	3	0.17%	2.56%
Dir 2	19.17	Barrack Road	SB	435	27	0	463	547	20	0	570	2503	148	0	2665	389	7	1	396	532	5	1	538	2464	60	13	2537	-46	-20	1	-10.57%	-74.07%
Dir 2	19.18	Lytton Rd	EB	2396	203	47	2668	2172	100	34	2314	14152	1354	489	16087	2365	226	55	2646	2182	114	40	2335	14093	1495	544	16132	-31	23	8	-1.29%	11.33%
Dir 2 Total				10099	575	59	10765	13236	354	45	13653	73021	3702	552	77462	9841	576	97	10513	13440	347	78	13865	74024	3728	963	78716	-258	1	38	-2.55%	0.17%
19b Total				22460	1275	145	23928	23732	775	84	24615	142599	8068	1205	152114	22652	1202	226	24080	24024	719	152	24898	144439	7542	2016	154001	192	-73	81	0.85%	-5.73%
Dir 1	20.02	Wiruna St	NB	590	33	0	625	251	17	0	269	2147	148	3	2304	262	2	0	264	86	1	0	87	1099	9	1	1109	-328	-31	0	-55.59%	-93.94%
Dir 1	20.03	IPSWICH MOTORWAY (CUNNINGHAM)	EB	5756	269	105	6130	6469	209	71	6749	42233	2742	1095	46071	5722	285	114	6121	6221	224	75	6520	41256	2732	1137	45125	-34	16	9	-0.59%	5.95%
Dir 1	20.04	Formation Street	NB	1507	127	29	1668	1050	63	17	1133	8592	804	237	9654	1491	117	23	1632	1016	66	19	1101	8534	782	270	9586	-16	-10	-6	-1.06%	-7.87%
Dir 1	20.05	Logan Motorway	EB	2013	190	237	2440	2178	112	166	2458	12923	1361	1994	16284	2054	208	243	2505	2084	119	170	2373	12774	1395	2056	16224	41	18	6	2.04%	9.47%
Dir 1	20.06	Boundary Road	NB	483	163	78	725	728	55	37	820	4329	950	494	5794	445	163	72	681	681	63	35	779	3960	978	475	5412	-38	0	-6	-7.87%	0.00%
Dir 1	20.07	CENTENARY MOTORWAY	NB	2035	152	33	2220	4377	136	20	4533	18391	998	213	19602	2085	158	34	2277	4253	130	20	4402	18144	989	217	19349	50	6	1	2.46%	3.95%
Dir 1	20.08	Woogaroo Street	NB	631	24	2	658	525	12	1	538	3523	122	25	3681	622	17	1	640	540												





Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. WD Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV
Dir 1	25.06	Rochedale Road	NB	1669	74	8	1758	822	31	1	854	6097	312	19	6445	1616	51	5	1671	551	13	3	567	5064	173	30	5268	-53	-23	-3	-3.18%	-31.08%
Dir 1	25.07	Ford Road	NB	316	22	0	341	38	2	0	40	574	52	1	632	90	1	0	92	3	0	0	3	123	1	0	124	-226	-21	0	-71.52%	-95.45%
Dir 1	25.08	Kloske Rd / Alperton Road	NB	205	9	0	215	398	17	0	413	1366	61	0	1425	198	11	2	211	267	21	1	288	1326	98	12	1437	-7	2	0	-3.41%	22.22%
Dir 1	26.07	Avalon Road	NB	321	15	0	337	245	8	0	253	1347	56	1	1408	175	2	2	178	720	64	9	793	895	66	10	971	-146	-13	2	-45.48%	-86.67%
Dir 1	25.10	West Mount Cotton Road	NB	195	25	21	245	184	16	6	206	897	135	153	1194	578	46	21	645	474	13	4	491	1907	127	89	2122	383	21	0	196.41%	84.00%
Dir 1	25.11	MOUNT COTTON ROAD	NB	1930	106	21	2057	1151	54	10	1215	8104	553	128	8785	1607	74	13	1694	951	52	15	1018	6813	535	168	7515	-323	-32	-8	-16.74%	-30.19%
Dir 1	25.12	Springacre Road	NB	904	45	5	956	334	17	1	354	3113	214	19	3362	590	27	5	622	176	12	3	190	1515	116	34	1665	-314	-18	0	-34.73%	-40.00%
Dir 1	25.13	CLEVELAND - REDLAND BAY ROAD	NB	3795	172	13	3980	2745	113	6	2864	20662	1074	96	21832	3832	178	23	4034	2722	123	10	2856	20497	1180	151	21828	37	6	10	0.97%	3.49%
Dir 1 Total				23256	1193	279	24746	19260	646	129	20034	135553	7324	2351	145286	23538	1104	324	24968	19440	668	179	20285	134801	7093	2653	144547	282	-89	45	1.21%	-7.46%
Dir 2	20.25	Logan Sub-Arterial	EB	2012	126	14	2153	3548	167	13	3732	16316	1084	117	17531	2190	120	31	2341	3944	167	32	4144	17761	1028	253	19041	178	-6	17	8.85%	-4.76%
Dir 2	20.26	Gateway Mwy / Pacific Mwy Ramp Pz	SB	4527	346	191	5064	4795	196	96	5089	31846	2445	1475	35768	4781	325	207	5314	4085	189	104	4378	31598	2349	1520	35468	254	-21	16	5.61%	-6.07%
Dir 2	20.27	Pacific Mwy	SB	5609	247	31	5892	5946	168	17	6132	40857	1700	317	42868	5584	267	43	5894	7297	164	28	7489	43472	1679	379	45530	-25	20	12	-0.45%	8.10%
Dir 2	25.05	School Road	SB	270	15	1	288	775	26	0	804	2559	95	1	2669	347	19	4	370	678	22	2	702	2978	133	26	3137	77	4	3	28.52%	26.67%
Dir 2	25.06	Rochedale Road	SB	830	32	2	867	1382	83	6	1471	5331	323	17	5682	643	18	2	662	1329	83	3	1414	4374	191	13	4577	-187	-14	0	-22.53%	-43.75%
Dir 2	25.07	Ford Road	SB	41	5	0	45	145	7	0	152	454	37	0	498	6	0	0	6	146	4	0	150	184	4	1	189	-35	-5	0	-85.37%	-100.00%
Dir 2	25.08	Kloske Rd / Alperton Road	SB	512	32	1	547	208	8	0	216	1418	83	3	1507	346	21	1	368	215	7	1	223	1371	94	12	1477	-166	-11	0	-32.42%	-34.38%
Dir 2	26.07	Avalon Road	SB	346	15	0	359	211	10	0	224	1366	75	0	1443	295	15	1	311	85	1	1	87	379	16	2	398	-51	0	1	-14.74%	0.00%
Dir 2	25.10	West Mount Cotton Road	SB	133	20	25	179	150	16	27	195	808	122	175	1112	309	14	11	334	337	13	13	363	1354	63	66	1484	176	-6	-14	132.33%	-30.00%
Dir 2	25.11	MOUNT COTTON ROAD	SB	1084	78	24	1186	1861	102	10	1973	7708	583	141	8432	979	69	32	1080	1622	59	6	1687	6791	503	167	7461	-105	-9	8	-9.69%	-11.54%
Dir 2	25.12	Springacre Road	SB	223	19	2	245	651	39	2	694	2567	190	18	2787	156	12	5	173	489	20	6	514	1387	97	32	1515	-67	-7	3	-30.04%	-36.84%
Dir 2	25.13	CLEVELAND - REDLAND BAY ROAD	SB	2567	156	14	2737	4257	182	14	4453	20591	1184	102	21877	2574	147	20	2741	4240	156	14	4410	20436	1132	146	21714	7	-9	6	0.27%	-5.77%
Dir 2 Total				18154	1091	305	19562	23929	1004	185	25135	131821	7921	2366	142174	18210	1027	357	19594	24467	885	210	25561	132085	7289	2617	141991	56	-64	52	0.31%	-5.87%
25 Total				41410	2284	584	44308	43189	1650	314	45169	267374	15245	4717	287460	41748	2131	681	44562	43907	1553	389	45846	266886	14382	5270	286538	338	-153	97	0.82%	-6.70%
Dir 1	26.01	Rickertt Road	WB	2462	87	7	2557	1174	31	1	1208	10834	454	26	11319	2398	82	5	2485	1204	34	4	1243	10975	475	57	11507	-64	-5	-2	-2.60%	-5.75%
Dir 1	26.02	Cleveland Sub-Arterial Rd (Old Cleve)	WB	4339	343	31	4717	2862	197	16	3075	22386	2146	171	24716	4317	277	26	4620	2865	168	11	3044	22246	1862	133	24241	-22	-66	-5	-0.51%	-19.24%
Dir 1	26.03	Moreton Bay Rd (BRISBANE - REDLAN	WB	4035	196	26	4257	2031	100	12	2143	18384	1309	200	19893	3994	403	68	4465	2002	96	19	2117	18773	1393	325	20492	-41	207	42	-1.02%	105.61%
Dir 1	26.04	REDLAND SUB-ARTERIAL ROAD	WB	2316	241	47	2604	1023	107	31	1161	9626	1517	363	11506	2287	47	4	2338	1063	97	24	1184	9554	1216	218	10988	-29	-194	-43	-1.25%	-80.50%
Dir 1	26.07	Avalon Road	WB	346	15	0	359	211	10	0	224	1366	75	0	1443	295	15	1	311	85	1	1	87	379	16	2	398	-51	0	1	-14.74%	0.00%
Dir 1	26.08	California Creek Road	WB	1241	80	2	1324	800	53	4	860	5072	397	20	5496	1575	98	50	1723	1017	79	33	1129	6556	646	318	7520	334	18	48	26.91%	22.50%
Dir 1	26.09	Beenleigh-Redland Rd	WB	1976	181	48	2211	1507	100	21	1628	10699	1056	322	12106	1792	194	37	2024	1514	75	15	1605	10604	860	236	11699	-184	13	-11	-9.31%	7.18%
Dir 1 Total				16715	1143	161	18029	9608	598	85	10299	78367	6954	1102	86479	16658	1116	191	17966	9750	550	107	10409	79087	6468	1289	86845	-57	-27	30	-0.34%	-2.36%
Dir 2	26.01	Rickertt Road	EB	980	66	6	1052	2826	134	11	2971	10822	658	44	11531	962	61	8	1030	2539	105	4	2648	10468	583	69	11121	-18	-5	2	-1.84%	-7.58%
Dir 2	26.02	Cleveland Sub-Arterial Rd (Old Cleve)	EB	2187	181	23	2393	4283	233	22	4547	20578	1597	140	22335	2208	198	21	2427	4240	227	25	4491	20891	1746	158	22795	21	17	-2	0.96%	9.39%
Dir 2	26.03	Moreton Bay Rd (BRISBANE - REDLAN	EB	2013	140	25	2178	3954	131	16	4101	18843	1048	184	20075	2089	139	27	2255	4341	275	38	4654	19530	1308	236	21074	76	-1	2	3.78%	-0.71%
Dir 2	26.04	REDLAND SUB-ARTERIAL ROAD	EB	916	139	54	1109	2660	321	52	3033	9795	1493	369	11657	979	122	42	1143	2354	81	6	2442	9745	1127	236	11108	63	-17	-12	6.88%	-12.23%
Dir 2	26.07	Avalon Road	NB	321	15	0	337	245	8	0	253	1347	56	1	1408	175	2	2	178	720	64	9	793	895	66	10	971	-146	-13	2	-45.48%	-86.67%
Dir 2	26.08	California Creek Road	EB	939	58	2	1001	1139	57	3	1198	5503	370	20	5905	1036	121	68	1225	1805	72	24	1901	6903	748	379	8029	97	63	66	10.33%	108.62%
Dir 2	26.09	Beenleigh-Redland Rd	EB	1491	186	63	1742	2118	204	28	2349	10580	1292	372	12248	1514	134	26	1673	1888	205	24	2117	11005	938	203	12146	23	-52	-37	1.54%	-27.96%
Dir 2 Total				8847	785	173	9812	17225	1088	132	18452	77468	6514	1130																		

Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. WD Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV
Dir 2	30.01a	Kilcoy beerwah Road	NB	136	12	6	154	255	18	4	277	1320	126	43	1499	140	14	7	161	222	17	4	244	1225	128	54	1407	4	2	1	2.94%	16.67%
Dir 2	30.01	D'Aguiar Hwy	WB	400	38	28	467	482	25	11	522	3031	238	148	3436	403	40	28	472	451	25	12	489	2891	252	169	3313	3	2	0	0.75%	5.26%
Dir 2	30.02	Neurum Road	WB	161	9	0	173	116	3	0	121	800	45	3	861	161	12	2	175	107	4	0	111	762	58	9	829	0	3	2	0.00%	33.33%
Dir 2	30.03	Mount Glorious Rd	WB	13	2	0	18	14	1	0	16	135	6	0	148	16	3	0	19	16	2	0	19	150	11	0	162	3	1	0	23.08%	50.00%
Dir 2 Total				710	61	34	812	867	47	15	936	5286	415	194	5944	720	69	37	827	796	48	16	863	5028	449	232	5711	10	8	3	1.41%	13.11%
30a Total				1453	133	61	1652	1691	109	38	1845	10347	895	400	11704	1467	142	66	1676	1564	109	42	1718	9882	959	464	11307	14	9	5	0.96%	6.77%
Dir 1	30.04	Pine Mountain Road	SB	25	2	0	27	65	7	0	71	315	23	0	344	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n/a	n/a
Dir 1	30.05	BRISBANE VALLEY HIGHWAY (IPSWICH)	SB	900	86	22	1008	523	60	20	603	4483	585	238	5306	897	83	25	1006	515	59	18	593	4454	570	239	5263	-3	-3	3	-0.33%	-3.49%
Dir 1	30.11	Claus Road	SB	37	4	0	41	73	5	0	77	333	16	0	354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.00%	-100.00%
Dir 1	30.12	Linnings Road	SB	27	1	0	27	11	0	0	12	110	2	0	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.00%	-100.00%
Dir 1	30.13	Marburg Road	SB	40	10	1	51	52	9	0	60	291	44	8	349	108	15	0	124	144	17	1	162	761	77	10	848	68	5	-1	170.00%	50.00%
Dir 1	30.14	Warrego Highway	EB	1501	190	131	1824	1576	165	112	1850	10624	1487	1209	13325	1475	179	129	1783	1558	155	111	1824	10520	1429	1179	13129	-26	-11	-2	-1.73%	-5.79%
Dir 1	30.15	Tallegalla Road	SB	59	10	0	71	66	6	0	72	408	54	0	468	59	10	0	69	69	8	0	77	419	59	0	478	0	0	0	0.00%	0.00%
Dir 1	30.16	Long Gully Road	SB	16	0	0	18	23	3	0	25	104	8	0	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.00%	#DIV/0!
Dir 1	30.20	Rosewood - Laidley Road	EB	133	21	1	158	130	13	0	144	890	111	5	1020	164	29	0	193	159	21	0	180	992	155	8	1155	31	8	-1	23.31%	38.10%
Dir 1 Total				2738	324	155	3225	2519	268	132	2914	17558	2330	1460	21405	2703	316	154	3175	2445	260	130	2836	17146	2290	1436	20873	-35	-8	-1	-1.28%	-2.47%
Dir 2	30.04	Pine Mountain Road	NB	56	3	0	64	32	4	0	37	303	29	0	337	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	n/a	n/a
Dir 2	30.05	BRISBANE VALLEY HIGHWAY (IPSWICH)	NB	465	79	31	575	970	105	27	1102	4466	556	248	5270	463	84	32	580	973	103	28	1105	4423	563	252	5239	-2	5	1	-0.43%	6.33%
Dir 2	30.11	Claus Road	NB	62	2	0	64	37	0	0	37	314	3	0	322	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.00%	-100.00%
Dir 2	30.12	Linnings Road	NB	10	1	0	12	30	3	0	33	126	7	0	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.00%	-100.00%
Dir 2	30.13	Marburg Road	NB	62	9	3	73	47	3	0	52	321	35	10	367	141	11	1	153	118	10	1	129	779	59	7	845	79	2	-2	127.42%	22.22%
Dir 2	30.14	Warrego Highway	WB	1342	198	145	1685	1988	218	119	2327	10713	1395	1199	13309	1318	193	136	1647	1982	216	113	2311	10675	1390	1148	13213	-24	-5	-9	-1.79%	-2.53%
Dir 2	30.15	Tallegalla Road	NB	57	9	0	68	81	7	0	90	397	42	0	452	58	10	0	68	82	9	1	92	410	48	2	460	1	1	0	1.75%	11.11%
Dir 2	30.16	Long Gully Road	NB	15	3	0	20	15	2	0	17	99	14	0	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-100.00%	-100.00%
Dir 2	30.20	Rosewood - Laidley Road	WB	104	12	0	116	175	10	0	188	890	72	0	978	128	17	0	145	198	13	0	211	994	115	0	1109	24	5	0	23.08%	41.67%
Dir 2 Total				2173	316	179	2677	3375	352	146	3883	17629	2153	1457	21288	2108	315	169	2593	3353	351	143	3848	17281	2175	1409	20866	-65	-1	-10	-2.99%	-0.32%
30b Total				4911	640	334	5902	5894	620	278	6797	35187	4483	2917	42693	4811	631	323	5768	5798	611	273	6684	34427	4465	2845	41739	-100	-9	-11	-2.04%	-1.41%
Dir 1	30.17	Grandchester Mount Mort Road	NB	10	3	0	12	2	0	0	4	42	12	0	59	10	3	0	13	2	0	0	2	45	17	0	62	0	0	0	0.00%	0.00%
Dir 1	30.18	Rosewood - Warrill View Road	NB	52	5	0	56	17	4	0	22	202	40	1	244	211	15	7	233	170	8	4	182	1321	117	52	1489	159	10	7	305.77%	200.00%
Dir 1	30.19	CUNNINGHAM HIGHWAY (IPSWICH - BOONAH ROAD)	NB	321	61	50	432	218	45	47	310	1856	424	574	2854	325	62	48	435	230	49	49	328	1889	450	588	2926	4	1	-2	1.25%	1.64%
Dir 1	32.08	IPSWICH - BOONAH ROAD	NB	633	50	41	724	361	32	5	398	3050	292	190	3532	665	52	47	763	372	31	9	412	3208	308	240	3755	32	2	6	5.06%	4.00%
Dir 1 Total				1016	119	91	1224	598	81	52	734	5150	768	765	6689	1211	132	102	1444	774	88	62	924	6463	892	880	8232	195	13	11	19.19%	10.92%
Dir 2	30.17	Grandchester Mount Mort Road	SB	6	3	0	11	9	0	0	10	43	8	0	59	8	4	0	12	8	1	0	9	54	13	0	67	2	1	0	33.33%	33.33%
Dir 2	30.18	Rosewood - Warrill View Road	SB	25	13	5	48	41	10	0	53	192	59	6	266	164	23	10	197	254	12	5	271	1373	120	59	1552	139	10	5	556.00%	76.92%
Dir 2	30.19	CUNNINGHAM HIGHWAY (IPSWICH - BOONAH ROAD)	SB	233	44	64	341	342	49	70	461	1932	333	652	2917	234	45	63	342	350	49	67	467	2014	342	637	2992	1	1	-1	0.43%	2.27%
Dir 2	32.08	IPSWICH - BOONAH ROAD	SB	272	37	31	340	704	31	18	753	3086	221	191	3498	296	39	38	373	730	34	24	788	3242	239	239	3721	24	2	7	8.82%	5.41%
Dir 2 Total				536	97	100	740	1096	90	88	1277	5253	621	849	6740	702	111	111	924	1342	96	96	1535	6683	714	935	8332	166	14	11	30.97%	14.43%
30c Total				1552	216	191	1964	1694	171	140	2011	10403	1389	1614	13429	1913	243	323	2368	2116	184	158	2459	13146	1606	1815	16564	361	27	22	23.26%	12.50%
Dir 1	32.01	Pacific Hwy (service road)	NB	402	35	4	439	180	16	0	196	1587	160	8	1758	645	30	7	682	538	14	3	556	3229	145	44	3418	243	-5	3	60.45%	-14.29%
Dir 1	32.02	Pacific Motorway	NB	12292	736	579	13608	12691	411	212	13313	84086	5337	3835	93255	12558	728	575	13861	12708	404	212	13324	84540	5305	3856	93700	266	-8	-4	2.16%	-1.09%
Dir 1	32.03	Brisbane-Beenleigh Rd	NB	2508	179	24	2714	4570	189	24	4785	23102	1309	186	24614	2570	205	31	2806	4565	204	24	4793	23315	1429	222	2496					



Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. WD Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV	
Dir 1	34.03	Pacific Motorway	NB	10359	513	353	11226	9099	325	151	9578	66183	4093	2331	72605	10516	511	347	11374	8987	333	161	9481	65488	4113	2368	71969	157	-2	-6	1.52%	-0.39%	
Dir 1	34.04	Beaudesert - Beenleigh Rd	NB	668	57	24	749	363	34	13	408	3079	369	155	3615	573	37	10	620	387	23	3	414	3350	240	61	3650	-95	-20	-14	-14.22%	-35.09%	
Dir 1	34.05	Chardon Bridge Rd	NB	133	11	1	143	54	7	0	63	507	63	8	584	66	3	1	70	125	3	1	128	606	16	10	633	-67	-8	0	-50.38%	-72.73%	
Dir 1	34.06	Waterford - Tamborine Rd	NB	347	30	11	385	254	24	7	281	1863	167	52	2077	566	47	14	627	417	35	3	455	2499	243	50	2792	219	17	3	63.11%	56.67%	
Dir 1	34.07	Mundoolun Rd	NB	286	20	6	313	301	22	2	326	1818	138	34	2000	526	45	13	584	527	35	8	570	3212	299	115	3626	240	25	7	83.92%	125.00%	
Dir 1	34.07a	Veresdale Scrub Road	NB	96	2	0	99	61	3	1	67	459	18	1	489	8	2	1	11	2	1	0	3	17	6	2	26	-88	0	1	-91.67%	0.00%	
Dir 1	34.08	Mt Lindsey Hwy	NB	474	124	42	640	598	149	22	771	3570	1067	301	4950	487	125	40	653	600	148	23	770	3643	1090	315	5047	13	1	-2	2.74%	0.81%	
Dir 1 Total				13129	871	483	14483	11221	622	208	12059	81140	6582	3152	90928	13523	885	479	14888	11536	642	212	12389	82506	6713	3237	92456	394	14	-4	3.00%	1.61%	
Dir 2	34.00	Kerkin Road North	SB	77	21	4	102	74	11	0	86	424	141	18	592	80	24	5	109	69	11	0	81	438	159	31	629	3	3	1	3.90%	14.29%	
Dir 2	34.01	Jacobs Well Road	SB	389	73	33	493	350	57	15	426	2027	482	250	2771	396	73	37	507	344	57	20	422	2017	496	275	2788	7	0	4	1.80%	0.00%	
Dir 2	34.02	Creek St	SB	272	31	6	309	818	58	5	880	2332	231	36	2599	275	31	8	315	708	51	6	765	2155	229	46	2430	3	0	2	1.10%	0.00%	
Dir 2	34.03	Pacific Motorway	SB	7839	634	289	8762	12430	296	184	12913	66060	3903	2294	72269	7892	651	303	8845	12642	305	194	13142	64046	3977	2364	70387	53	17	14	0.68%	2.68%	
Dir 2	34.04	Beaudesert - Beenleigh Rd	SB	344	44	19	407	789	41	10	841	3353	284	131	3772	383	32	9	425	818	35	7	861	3610	182	63	3854	39	-12	-10	11.34%	-27.27%	
Dir 2	34.05	Chardon Bridge Rd	SB	66	6	0	73	135	5	0	140	543	31	0	577	142	5	2	148	67	2	1	70	578	25	12	614	76	-1	2	115.15%	-16.67%	
Dir 2	34.06	Waterford - Tamborine Rd	SB	171	57	9	239	380	79	10	469	1624	402	59	2087	342	36	6	384	435	42	7	483	2309	243	48	2601	171	-21	-3	100.00%	-36.84%	
Dir 2	34.07	Mundoolun Rd	SB	229	38	6	273	330	43	7	380	1647	241	42	1940	499	41	16	557	576	39	5	620	3358	314	125	3797	270	3	10	117.90%	7.89%	
Dir 2	34.07a	Veresdale Scrub Road	SB	93	7	0	101	85	5	0	92	493	36	0	538	3	0	0	4	11	1	0	12	25	2	2	29	-90	-7	0	-96.77%	-100.00%	
Dir 2	34.08	Mt Lindsey Hwy	SB	699	98	43	843	630	83	23	738	4090	621	279	4998	712	107	49	868	604	86	23	713	4064	662	290	5017	13	9	6	1.86%	9.18%	
Dir 2 Total				10179	1009	409	11602	16021	678	254	16965	82593	6372	3109	92153	10724	1000	435	12162	16274	629	263	17169	82600	6289	3256	92146	545	-9	26	5.35%	-0.89%	
34 Total				23308	1880	892	26085	27242	1300	462	29024	163733	12954	6261	183081	24247	1885	914	27050	27810	1271	475	29558	165106	13002	6493	184602	939	5	22	4.03%	0.27%	
Dir 1	AP.01	Gateway/ Moreton Dr Ramps	EB	2164	50	4	2219	1231	14	3	1248	14809	297	36	15141	2137	55	28	2220	1097	23	11	1131	14756	348	165	15270	-27	5	24	-1.25%	10.00%	
Dir 1	AP.02	Airport Drive	EB	2463	61	9	2533	1981	17	2	1998	18911	364	31	19300	2546	84	14	2644	2110	33	7	2150	19168	469	99	19735	83	23	5	3.37%	37.70%	
Dir 1	AP.03	Lomandra Drv	EB	529	205	20	753	2053	157	12	2224	8463	1227	142	9841	1011	205	34	1250	1786	161	13	1960	8687	1244	203	10134	482	0	14	91.12%	0.00%	
Dir 1	AP.04	Kingsford Smith Dr	EB	1942	256	139	2339	451	162	55	667	7827	1716	911	10466	1962	268	134	2364	619	171	53	843	8456	1803	914	11173	20	12	-5	1.03%	4.69%	
Dir 1	AP.05	Lavarak Ave	EB	734	79	19	829	104	27	8	140	2912	494	151	3558	0	0	0	0	0	0	0	0	0	0	0	0	0	-734	-79	-19	-100.00%	-100.00%
Dir 1	AP.06	Curtin Ave	EB	292	65	20	380	163	23	3	191	1424	372	104	1914	45	0	0	45	5	0	0	5	93	0	0	93	-247	-65	-20	-84.59%	-100.00%	
Dir 1 Total				8124	716	211	9053	5983	400	83	6468	54346	4470	1375	60220	7701	612	210	8523	5617	388	84	6089	51160	3864	1381	56405	-423	-104	-1	-5.21%	-14.53%	
Dir 2	AP.01	Gateway/ Moreton Dr Ramps	WB	948	33	8	986	1321	20	1	1343	11746	215	33	12001	1003	35	17	1054	1572	22	18	1613	12065	232	151	12448	55	2	9	5.80%	6.06%	
Dir 2	AP.02	Airport Drive	WB	2745	103	7	2854	2490	40	6	2536	23162	671	40	23878	2713	98	17	2828	2544	48	10	2602	22052	637	124	22813	-32	-5	10	-1.17%	-4.85%	
Dir 2	AP.03	Lomandra Drv	WB	2013	208	17	2240	464	120	4	593	7974	1275	91	9365	1666	211	29	1906	1212	123	40	1374	8698	1244	207	10149	-347	3	12	-17.24%	1.44%	
Dir 2	AP.04	Kingsford Smith Dr	WB	572	273	121	972	1766	167	61	1998	7908	1806	918	10679	703	261	117	1081	1799	160	59	2018	8425	1786	912	11123	131	-12	-4	22.90%	-4.40%	
Dir 2	AP.05	Lavarak Ave	WB	155	63	21	242	514	35	10	558	1856	395	100	2364	0	0	0	0	0	0	0	0	0	0	0	0	0	-155	-63	-21	-100.00%	-100.00%
Dir 2	AP.06	Curtin Ave	WB	170	57	13	241	377	33	3	414	1643	404	72	2131	3	0	0	3	57	0	0	57	117	0	0	117	-167	-57	-13	-98.24%	-100.00%	
Dir 2 Total				6603	737	187	7535	6932	415	85	7442	54289	4766	1254	60418	6088	605	180	6872	7184	353	127	7664	51357	3899	1394	56650	-515	-132	-7	-7.80%	-17.91%	
AP Total				14727	1453	398	16588	12915	815	168	13910	108635	9236	2629	120638	13789	1217	390	15395	12801	741	211	13753	102517	7763	2775	113055	-938	-236	-8	-6.37%	-16.24%	
Dir 1	22.00	Ipswich Rd (Local)	NB	170	53	14	236	223	22	10	259	1313	390	104	1814	601	67	69	737	0	0	0	0	601	67	69	737	431	14	55	253.53%	26.42%	
Dir 1	22.01	Ipswich Rd (to Motorway)	NB	5183	443	182	5811	4349	124	61	4536	29796	2627	1201	33632	4828	461	126	5415	4228	125	60	4413	29248	2608	1241	33096	-355	18	-56	-6.85%	4.06%	
Dir 1	22.02	Marshall Rd	NB	381	43	3	427	192	17	2	213	2051	300	34	2397	35	4	1	39	26	2	0	28	245	34	7	285	-346	-39	-2	-90.81%	-90.70%	
Dir 1	22.03	Beaudesert Rd	NB	2772	200	21	2996	2075	95	7	2176	15393	1360	141	16905	2771	224	48	3042	2205	110	17	2332	15497	1457	257	17211	-1	24	27	-0.04%	12.00%	
Dir 1																																	





Dir Group	SL Point	Name	Dir	2016 Obs. AM Car	2016 Obs. AM MCV	2016 Obs. AM HCV	2016 Obs. AM Total	2016 Obs. PM Car	2016 Obs. PM MCV	2016 Obs. PM HCV	2016 Obs. PM Total	2016 Obs. WD Car	2016 Obs. WD MCV	2016 Obs. WD HCV	2016 Obs. WD Total	2016 Model AM Car	2016 Model AM MCV	2016 Model AM HCV	2016 Model AM Total	2016 Model PM Car	2016 Model PM MCV	2016 Model PM HCV	2016 Model PM Total	2016 Model WD Car	2016 Model WD MCV	2016 Model WD HCV	2016 Model WD Total	Diff AM Car	Diff AM MCV	Diff AM HCV	% Diff AM Car	% Diff AM MCV
Dir 2	IC.3	Thomas Street	WB	1087	54	2	1144	919	50	4	974	5534	330	21	5890	832	40	0	872	626	24	0	650	3968	174	3	4145	-255	-14	-2	-23.46%	-25.93%
Dir 2	IC.4	CUNNINGHAM HIGHWAY (PSWICH - SWANBANK ROAD)	SB	1678	211	147	2036	2862	199	111	3172	14685	1609	1169	17463	1631	218	142	1990	2809	189	114	3112	14358	1558	1181	17098	-47	7	-5	-2.80%	3.32%
Dir 2	IC.5	SWANBANK ROAD	WB	37	25	59	121	101	19	28	148	444	203	366	1013	237	29	30	295	224	19	14	257	1612	209	196	2017	200	4	-29	540.54%	16.00%
Dir 2	IC.6	CENTENARY MOTORWAY	WB	605	55	15	675	939	77	12	1028	4145	466	107	4718	607	53	14	675	892	66	9	967	3868	447	100	4415	2	-2	-1	0.33%	-3.64%
Dir 2 Total				5860	471	237	6569	7443	417	158	8021	41261	3344	1721	46343	5759	489	208	6454	7198	367	158	7724	40230	3179	1671	45081	-101	18	-29	-1.72%	3.82%
IC Total				11402	1091	478	12973	14186	834	284	15307	81969	7614	3492	93114	11345	1023	425	12788	13868	739	278	14886	80593	6818	3319	90732	-57	-68	-53	-0.50%	-6.23%
Dir 1	PB.01	Port Drive	SB	253	64	290	609	696	23	197	917	3419	432	2193	6061	214	148	221	583	1124	42	143	1310	5304	349	1730	7384	-39	84	-69	-15.42%	131.25%
Dir 1	PB.02	Pritchard Road	WB	1356	73	1	1430	329	18	0	347	4515	354	12	4885	1299	37	7	1343	426	13	3	442	4335	199	53	4587	-57	-36	6	-4.20%	-49.32%
Dir 1	PB.03	Lindum Road	WB	1167	69	6	1242	399	23	3	426	4448	365	53	4866	1134	79	11	1224	597	18	5	620	5081	334	126	5541	-33	10	5	-2.83%	14.49%
Dir 1	PB.04	Hemmant Road	NB	824	43	6	874	209	9	0	217	2638	187	45	2874	755	33	7	795	196	8	3	206	2401	133	43	2577	-69	-10	1	-8.37%	-23.26%
Dir 1	20.39	Port of Brisbane Motorway	EB	1610	168	436	2212	1581	75	211	1866	10264	1212	3059	14523	1687	184	426	2297	1793	90	218	2102	10906	1345	3309	15560	77	16	-10	4.78%	9.52%
Dir 1	20.40	Lytton Rd (PORT OF BRISBANE ROAD)	EB	773	183	113	1069	1078	80	44	1202	6064	1187	727	7978	770	163	97	1030	1025	72	38	1135	5719	1047	617	7383	-3	-20	-16	-0.39%	-10.93%
Dir 1 Total				5983	600	852	7436	4292	228	455	4975	31348	3737	6089	41187	5859	644	769	7272	5161	243	410	5815	33746	3407	5878	43032	-124	44	-83	-2.07%	7.33%
Dir 2	PB.01	Port Drive	NB	917	126	233	1277	267	28	122	418	4394	803	1902	7114	532	155	387	1074	5	0	2	8	1191	467	2766	4424	-385	29	154	-41.98%	23.02%
Dir 2	PB.02	Pritchard Road	EB	294	44	0	341	1377	62	0	1442	4426	347	2	4788	339	40	23	402	1313	50	11	1374	4254	270	123	4646	45	-4	23	15.31%	-9.09%
Dir 2	PB.03	Lindum Road	EB	362	26	7	394	1032	19	6	1059	3979	177	49	4215	493	29	18	539	1113	19	9	1141	4878	202	100	5179	131	3	11	36.19%	11.54%
Dir 2	PB.04	Hemmant Road	SB	213	25	2	242	821	36	1	861	2693	198	27	2925	219	25	8	252	886	39	8	933	2942	188	52	3182	6	0	6	2.82%	0.00%
Dir 2	20.39	Port of Brisbane Motorway	WB	1616	236	393	2242	1810	66	189	2066	9736	1244	2788	13763	1529	218	414	2161	1699	58	178	1935	8820	942	2772	12535	-87	-18	21	-5.38%	-7.63%
Dir 2	20.40	Lytton Rd (PORT OF BRISBANE ROAD)	WB	1392	204	135	1731	1077	77	73	1227	7470	1210	921	9601	1317	211	143	1671	1216	84	97	1397	7612	1463	1111	10185	-75	7	8	-5.39%	3.43%
Dir 2 Total				4794	661	770	6227	6384	288	391	7073	32698	3979	5689	42406	4429	678	993	6099	6232	250	305	6788	29697	3532	6924	40151	-365	17	223	-7.61%	2.57%
PB Total				10777	1261	1622	13663	10676	516	846	12048	64046	7716	11778	83593	10288	1322	1762	13371	11393	493	715	12603	63443	6939	12802	83183	-489	61	140	-4.54%	4.84%
Dir 1	PM.01	O'Keefe Street	EB	1154	74	15	1244	2182	66	2	2251	10400	582	72	11063	696	49	13	757	1920	68	13	2001	8041	355	93	8489	-458	-25	-2	-39.69%	-33.78%
Dir 1	PM.02	Cornwall Street	EB	1968	83	10	2059	3228	34	2	3264	17686	571	67	18332	2134	105	27	2267	3188	25	4	3217	17954	512	181	18647	166	22	17	8.43%	26.51%
Dir 1	PM.03	Juliette Street	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	#DIV/0!
Dir 1	PM.04	Lewisham Street	NB	1512	44	1	1587	1096	25	0	1127	7290	235	3	7605	1532	29	5	1566	1238	23	6	1267	7559	174	43	7776	20	-15	4	1.32%	-34.09%
Dir 1	PM.05	Esher Street	EB	859	25	0	884	845	34	0	883	4526	183	1	4718	890	27	10	927	871	25	2	898	4521	139	27	4688	31	2	10	3.61%	8.00%
Dir 1	PM.06	Weller Road	EB	627	23	2	659	649	18	1	668	4230	137	4	4394	705	17	3	725	820	19	3	842	4860	166	29	5055	78	-6	1	12.44%	-26.09%
Dir 1	PM.07	Marshall Road	EB	1207	85	3	1293	1738	19	1	1758	8526	460	12	9011	1267	86	23	1375	1811	29	14	1854	9094	511	169	9774	60	1	20	4.97%	1.18%
Dir 1	PM.08	Mains Rd (NATHAN CONNECTION AR)	NB	2134	177	10	2321	2922	121	5	3048	19986	1187	70	21243	2200	139	2	2342	2959	96	1	3056	20218	988	18	21224	66	-38	-8	3.09%	-21.47%
Dir 1	PM.09	Kessels Rd (GRIFFITH ARTERIAL ROAD)	EB	3637	214	67	3918	3870	115	22	4007	25233	1686	616	27535	3628	234	85	3947	3977	146	34	4157	25806	1879	703	28387	-9	20	18	-0.25%	9.35%
Dir 1	PM.10	Logan Rd (LOGAN SUB-ARTERIAL ROAD)	NB	0	0	0	3576	0	0	0	2517	0	0	0	20230	5053	101	23	5178	4063	50	13	4126	27186	625	180	27991	5053	101	23	#DIV/0!	#DIV/0!
Dir 1	PM.11	Miles Platting Road	EB	1274	104	32	1414	2389	107	15	2514	11334	865	232	12444	1270	107	48	1425	1976	112	19	2107	10769	842	272	11883	-4	3	16	-0.31%	2.88%
Dir 1	PM.12	Gateway Motorway	NB	3708	448	360	4516	2114	187	185	2485	15647	2326	2503	20472	3621	431	381	4433	1804	147	198	2149	15033	2187	2621	19842	-87	-17	21	-2.35%	-3.79%
Dir 1 Total				18080	1277	500	23471	21033	726	233	24522	124858	8232	3580	157047	22996	1325	620	24942	24627	740	307	25674	151041	8378	4336	163756	4916	48	120	27.19%	3.76%
Dir 2	PM.01	O'Keefe Street	WB	2132	117	15	2279	1373	69	2	1450	11020	752	94	11915	1942	84	3	2029	1187	48	11	1246	10057	438	34	10529	-190	-33	-12	-8.91%	-28.21%
Dir 2	PM.02	Cornwall Street	N/A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	#DIV/0!	#DIV/0!
Dir 2	PM.03	Juliette Street	WB	2521	72	4	2597	1803	24	2	1828	13792	421	49	14266	2130	42	11	2183	911	12	9	932	12242	334	137	12713	-391	-30	7	-15.51%	-41.67%
Dir 2	PM.04	Lewisham Street	SB	1115	62	2	1179	1581	71	3	1656	8099	450	8	8561	964	32	5	1000	1425	37	2	1464	7329	205	33	7568	-151	-30	3	-13.54%	-48.39%
Dir 2	PM.05	Esher Street	WB	809	12	0	822	751	4	0	756	4114	61	0	4180	755	13	3	772	667	8	2	676	3766	68	2						

Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional AM - Obs	Directional AM - Model	GEH AM AM	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP AM	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM AM	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV Car	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr Car	GEH 24hr MCV	GEH 24hr HCV	GEH 24hr Total		
Dir 1	9.01	Stuve Hwy	SB	0.68%	1.35%	-212	8	8	-199	-5.98%	5.30%	6.35%	-5.20%	-834	19	10	-807	-3.49%	1.21%	0.76%	-3.01%	50.90%	51.01%	1	0	0	1	4	0	0	4	3	0	0	2	1	1	0	1	4	0	0	4		
Dir 1	9.02	Steve Irwin Highway	SB	13.64%	0.66%	-15	0	4	-13	-3.01%	0.00%	50.00%	-2.39%	-93	6	17	-75	-2.70%	1.56%	10.69%	-1.88%	55.79%	56.42%	0	0	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	1	0	1	1	
Dir 1	9.03	Beerburum Road	SB	25.00%	1.40%	2	0	-1	3	0.88%	0.00%	-14.29%	1.15%	-15	1	6	-12	-0.98%	0.47%	10.75%	-0.68%	60.14%	60.88%	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	0	0	0	0	1	0	
Dir 1	9.05	D'Aguilar Hwy	SB	62.07%	43.74%	508	11	12	532	80.89%	18.64%	70.59%	75.68%	2936	162	105	3184	57.15%	28.52%	41.02%	53.24%	57.16%	55.21%	9	1	2	9	17	2	0	16	12	1	2	12	12	5	6	14	26	4	4	26		
Dir 1	9.06	Mt Mee - Woodford Rd	SB	#DIV/0!	86.05%	-38	-1	1	-40	-58.46%	-25.00%	#DIV/0!	-56.34%	-104	-2	6	-118	-28.57%	-9.52%	#DIV/0!	-29.28%	41.35%	76.92%	4	0	0	3	5	0	0	6	4	0	0	4	1	1	0	1	4	0	0	5		
Dir 1 Total				11.94%	9.78%	245	18	24	283	4.93%	6.47%	15.19%	5.23%	1890	186	144	2172	5.50%	6.76%	8.18%	5.58%			5	0	1	5	3	1	0	3	2	1	1	3	4	3	2	5	7	2	2	8		
Dir 2	9.01	Stuve Hwy	NB	0.68%	0.91%	-121	0	9	-113	-3.03%	0.00%	8.26%	-2.67%	-1203	3	56	-1138	-4.95%	0.19%	4.19%	-4.18%	49.10%	48.99%	0	0	0	0	4	0	1	4	1	0	1	1	4	0	1	4	6	0	1	5		
Dir 2	9.02	Steve Irwin Highway	NB	0.00%	-1.89%	-17	3	4	-15	-2.71%	11.54%	40.00%	-2.25%	-152	11	6	-138	-4.26%	3.62%	3.61%	-3.42%	44.21%	43.58%	0	0	0	0	2	0	0	1	0	0	1	0	1	1	0	1	0	1	2	0	0	2
Dir 2	9.03	Beerburum Road	NB	200.00%	-1.69%	-3	3	1	-3	-0.96%	27.27%	100.00%	-0.91%	-35	5	9	-34	-2.19%	3.97%	56.25%	-1.94%	39.86%	39.12%	0	0	1	0	1	0	1	1	0	1	1	0	0	0	0	0	0	1	0	1	1	
Dir 2	9.05	D'Aguilar Hwy	NB	37.50%	55.57%	524	-31	3	495	54.41%	-30.39%	14.29%	45.54%	3079	-11	85	3134	59.43%	-1.65%	30.69%	51.00%	42.84%	44.79%	10	1	2	10	18	0	1	17	11	2	0	10	12	1	4	13	27	0	3	25		
Dir 2	9.06	Mt Mee - Woodford Rd	NB	#DIV/0!	-60.66%	20	3	1	22	40.00%	150.00%	#DIV/0!	40.74%	-110	-12	6	-121	-32.07%	-35.29%	600.00%	-31.68%	58.65%	23.08%	4	1	0	4	5	2	1	5	2	1	0	2	2	1	0	2	5	2	2	5		
Dir 2 Total				8.88%	8.31%	403	-22	18	386	6.78%	-8.18%	12.77%	6.06%	1579	-4	162	1703	4.51%	-0.15%	9.02%	4.31%			4	0	1	4	3	0	1	3	4	1	1	3	2	0	2	2	6	0	3	6		
9 Total				10.36%	9.09%	648	-4	42	669	5.94%	-0.73%	14.05%	5.68%	3469	182	306	3875	5.00%	3.33%	8.61%	4.94%			7	0	1	7	4	0	1	4	0	2	4	4	3	3	5	9	2	4	10			
Dir 1	10.02	Pumicestone Road	WB	-28.57%	-46.45%	27	-37	-2	-11	28.42%	-86.05%	-40.00%	-7.69%	-86	-326	-4	-418	-7.68%	-83.38%	-8.89%	-26.81%	71.59%	54.97%	4	6	1	7	2	10	1	6	2	5	1	1	1	8	1	2	2	15	0	8		
Dir 1	10.03	Caboolture - Bribe Island Rd	WB	-13.64%	1.54%	145	-11	-3	130	11.44%	-20.00%	-33.33%	9.75%	486	-48	-15	419	4.17%	-7.61%	-8.92%	3.37%	63.87%	62.71%	1	0	0	1	1	1	1	1	3	1	1	2	2	0	1	2	3	1	1	3		
Dir 1	10.04	Caboolture - Beachmere Road	WB	200.00%	-3.09%	89	0	2	93	30.48%	0.00%	200.00%	30.29%	512	34	5	539	18.67%	16.11%	23.81%	18.04%	64.86%	59.16%	1	0	1	1	6	1	0	6	3	0	1	3	4	1	1	4	7	2	1	7		
Dir 1 Total				-10.00%	-3.92%	261	-48	-3	212	15.77%	-42.48%	-20.00%	11.89%	912	-340	-14	540	5.88%	-27.58%	-6.17%	3.18%			1	3	0	2	3	5	2	2	4	4	1	3	4	4	1	3	5	7	1	3		
Dir 2	10.02	Pumicestone Road	EB	66.67%	10.57%	-118	-5	3	-122	-39.07%	-62.50%	100.00%	-38.73%	-365	-58	24	-402	-25.00%	-62.37%	126.32%	-25.52%	28.41%	45.03%	1	3	1	1	7	4	1	8	5	2	1	5	1	1	3	0	7	5	3	8		
Dir 2	10.03	Caboolture - Bribe Island Rd	EB	-18.52%	6.75%	82	-9	2	77	3.42%	-12.86%	14.29%	3.10%	315	-60	-11	235	2.70%	-8.81%	-7.14%	1.88%	36.13%	37.29%	2	1	1	2	0	2	1	0	1	1	0	1	0	1	0	1	0	1	2	2	1	1
Dir 2	10.04	Caboolture - Beachmere Road	EB	-40.00%	23.49%	6	-46	-3	-43	1.22%	-48.94%	-60.00%	-7.29%	796	-293	-12	485	33.21%	-54.16%	-30.77%	16.26%	35.14%	40.84%	4	3	1	3	6	8	2	3	0	4	1	1	1	10	5	1	8	11	10	1	6	
Dir 2 Total				-14.29%	9.89%	-30	-60	2	-88	-0.94%	-34.88%	9.09%	-2.60%	746	-411	1	318	4.80%	-31.25%	0.47%	1.86%			4	3	1	3	1	7	1	1	0	4	0	1	5	3	2	4	4	9	0	2		
10 Total				-12.31%	0.95%	231	-108	-1	124	4.76%	-37.89%	-2.70%	2.40%	1658	-751	-13	858	5.34%	-29.47%	-2.96%	2.52%			2	4	1	0	3	8	2	0	2	5	0	1	6	5	3	5	7	11	0	3		
Dir 1	13.01	BRIGHTON - REDCLIFFE ROAD	SB	54.55%	-1.32%	670	28	9	707	24.94%	25.45%	100.00%	25.20%	189	189	68	447	0.76%	13.79%	44.44%	1.70%	62.43%	59.65%	1	1	2	1	2	2	2	1	9	2	2	9	1	2	2	1	3	4	2			
Dir 1	11.01	Anzac Av	SB	-26.32%	3.51%	-25	-31	-10	-63	-0.75%	-14.35%	-58.82%	-1.77%	501	-161	-91	232	2.64%	-10.02%	-42.72%	1.12%	40.50%	42.92%	2	0	1	2	2	5	1	0	2	2	1	1	1	0	1	3	3	5	1			
Dir 1	11.02	North South Arterial Rd	SB	-90.00%	-32.21%	-529	-43	-3	-577	-33.74%	-61.43%	-75.00%	-35.10%	-2270	-341	-49	-2672	-25.91%	-59.30%	-83.05%	-28.41%	51.47%	44.01%	7	4	3	8	14	9	4	17	10	4	1	11	4	5	3	5	18	12	6	21		
Dir 1	11.03	Bruce Highway	SB	-4.58%	20.75%	284	18	5	309	4.13%	8.11%	3.76%	4.27%	3719	235	-59	3896	7.42%	7.75%	-2.83%	7.05%	49.64%	54.69%	12	1	1	11	5	2	1	5	2	1	0	3	5	2	1	6	12	3	1	12		
Dir 1	11.04	Old Gympie Rd	SB	6.67%	-2.68%	-174	-17	7	-189	-16.89%	-34.00%	233.33%	-17.39%	419	4	32	441	6.16%	0.68%	48.48%	5.90%	54.91%	55.58%	1	0	0	1	4	2	1	4	4	2	2	4	5	3	3	5	4	0	2	4		
Dir 1	11.06	Narangba Rd	SB	-72.22%	-7.89%	-59	-9	-2	-71	-8.01%	-50.00%	-50.00%	-9.34%	-497	-126	-60	-697	-7.78%	-55.51%	-61.86%	-10.37%	67.93%	71.19%	2	3	2	0	4	3	2	2	2	1	2	5	5	3	6	4	7	5	6			
Dir 1	11.07	Browns Rd	SB	100.00%	-25.68%	-19	-10	1	-29	-8.68%	-62.50%	-71.43%	-12.29%	-376	-81	8	-456	-61.85%	-59.56%	138.33%	-22.32%	69.07%	69.12%	4	3	1	4	0	3	1	1	1	2	-1	7	4	1	8	6	6	2	8			
Dir 1	11.08	Smith Rd	SB	#DIV/0!	610.00%	60	2	1	62	1200.00%	#DIV/0!	#DIV/0!	1240.00%	409	23	7	437	1048.72%	2300.00%	#DIV/0!	1065.85%	83.33%	53.38%	7	1	-7	13	-	-13	7	-	-7	9	-	-9	19	4	-	19	4	-	19			
Dir 1	11.09	Brisbane-Woodford Rd	SB	#DIV/0!	-65.81%	-69	-2	1	-72	-71.88%	-40.00%	#DIV/0!	-69.90%	-732	-31	6	-764	-73.79%	-62.00%	#DIV/0!	-72.83%	72.00%	76.92%	9	2	-9	14	3	-14	6	1	-6	12	0	-12	21	4	-	21	4	-	21			
Dir 1 Total				-7.65%	3.79%	139	-64	9	77	0.84%	-9.05%	5.29%	0.44%	1362	-289	-138																													



Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional AM - Split	Directional AM - Model	GEH AM AM	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP OP	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM PM	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV EV	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr 24hr	GEH 24hr 24hr	GEH 24hr 24hr	GEH 24hr 24hr		
Dir 2	14.02	Gateway Arterial	NB	6.30%	6.46%	1294	-5	21	1312	14.04%	-1.81%	14.48%	13.62%	3246	112	72	3458	6.30%	2.99%	3.36%	6.03%	50.25%	47.24%	3	1	1	3	4	1	0	4	9	0	1	9	4	1	1	4	10	1	1	10		
Dir 2	14.03	Lemke Road	NB	0.00%	15.43%	97	-8	-3	86	4.70%	-8.70%	-60.00%	3.98%	419	-73	-4	331	4.67%	-14.23%	-20.00%	3.48%	28.44%	32.54%	3	1	0	3	0	1	0	4	1	1	1	2	2	0	2	3	2	1	2			
Dir 2	14.04	Roghan Road	WB	#DIV/0!	-1.41%	-69	-17	0	-88	-5.55%	-62.96%	#DIV/0!	-6.91%	-507	-102	1	-621	-10.53%	-64.56%	#DIV/0!	-12.46%	26.40%	25.91%	0	2	-	0	4	4	-	5	1	3	-	2	4	5	-	5	7	-	6			
Dir 2	14.05	Beams Road	WB	-75.00%	-21.02%	-146	-29	-2	-178	-10.60%	-32.95%	-100.00%	-12.12%	-508	-174	-19	-706	-6.44%	-28.52%	-65.52%	-8.27%	35.80%	31.17%	4	3	1	5	1	2	3	2	3	2	1	3	2	5	1	3	4	5	3	6		
Dir 2	14.06	Dorville Road	NB	#DIV/0!	-17.02%	-243	-20	0	-263	-14.46%	-37.74%	#DIV/0!	-15.18%	-1117	-128	-1	-1250	-18.42%	-56.14%	-100.00%	-19.85%	29.55%	31.39%	3	2	-	3	6	6	1	7	4	2	-	5	8	4	-	8	11	7	0	12		
Dir 2	14.07	Gympie Road	NB	35.90%	11.80%	831	-36	14	810	11.36%	-20.22%	82.35%	10.79%	3922	55	108	4077	9.81%	3.31%	35.53%	9.72%	34.72%	35.33%	5	0	1	5	8	2	2	8	7	2	2	6	8	1	3	8	14	1	4	14		
Dir 2	14.08	ALBANY CREEK SUB-ARTERIAL ROAD	NB	150.00%	0.36%	136	33	3	172	5.47%	36.26%	37.50%	6.65%	-22	36	27	42	-0.22%	6.44%	61.36%	0.40%	23.08%	24.82%	0	0	2	0	1	0	1	0	2	2	1	2	1	0	1	1	0	1	3	0		
Dir 2	14.09	Beckett Road	NB	100.00%	15.92%	386	18	9	411	14.76%	14.52%	112.50%	14.96%	1520	16	93	1618	12.48%	2.05%	113.41%	12.40%	41.83%	42.40%	5	1	2	5	4	1	3	4	5	1	2	5	6	0	5	6	9	0	6	10		
Dir 2	14.10	Hamilton Road	WB	0.00%	-6.31%	-22	-10	3	-31	-1.82%	-24.39%	#DIV/0!	-2.47%	-280	-1	19	-276	-5.59%	-0.49%	190.00%	-5.27%	43.49%	42.17%	1	0	0	1	3	0	2	3	0	1	-	1	0	1	3	0	3	0	3	3		
Dir 2	14.11	Old Northern Road	NB	-20.00%	11.41%	240	-18	0	219	5.48%	-11.69%	0.00%	4.82%	1550	-57	-12	1470	8.40%	-5.66%	-10.17%	7.50%	28.28%	29.25%	4	0	1	3	5	1	1	5	3	1	0	2	4	0	4	8	1	1	7	0		
Dir 2 Total				11.46%	6.51%	2753	-102	43	2686	7.71%	-8.70%	21.39%	7.24%	8891	-389	286	8753	5.12%	-3.96%	10.31%	4.70%			7	1	1	6	7	1	2	6	10	2	2	10	4	2	3	7	15	3	4	14		
14 Total				7.13%	5.87%	3673	-48	76	3687	6.52%	-2.44%	20.88%	6.29%	12461	-285	465	12529	3.54%	-1.45%	8.28%	3.32%			10	1	1	10	6	0	2	6	11	1	3	11	5	2	3	5	15	1	4	14		
Dir 1	15.01	Gateway Arterial	SB	-1.96%	7.84%	-506	2	-1	-505	-14.80%	0.98%	-0.88%	-13.51%	576	80	-24	631	2.23%	3.78%	-1.45%	2.13%	48.75%	49.08%	4	1	0	3	2	1	1	2	6	0	0	6	3	1	0	3	3	1	0	3		
Dir 1	15.02	SOUTHERN CROSS WAY	SB	-2.12%	0.31%	-28	2	1	-28	-1.05%	0.95%	1.33%	-0.95%	110	0	-26	63	0.50%	0.00%	-1.90%	0.24%	59.28%	58.66%	1	1	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0		
Dir 1	15.03	Nudgee Road	SB	9.09%	16.78%	50	17	5	71	5.20%	44.74%	500.00%	7.09%	514	79	31	607	7.94%	12.36%	43.66%	8.43%	53.91%	71.17%	4	1	0	4	2	1	3	1	2	2	2	1	3	2	4	2	2	5	2	5		
Dir 1	15.04	Widdop Road	SB	0.00%	-1.77%	-141	-21	1	-163	-13.60%	-70.00%	#DIV/0!	-15.26%	-502	-137	8	-639	-7.89%	-63.43%	400.00%	-9.70%	51.86%	55.69%	0	3	0	0	1	5	-	2	3	3	-	4	5	4	1	6	5	8	2	6		
Dir 1	15.05	Sandgate Sub-Arterial	SB	125.00%	3.90%	715	35	8	758	22.36%	28.46%	88.89%	22.78%	472	58	74	595	1.71%	3.83%	59.68%	2.04%	67.52%	67.40%	2	1	3	2	1	0	2	1	8	2	2	9	2	0	2	2	2	1	4	2		
Dir 1	15.06	Shaw Road	SB	-66.67%	-8.16%	40	-20	2	18	4.14%	-48.78%	#DIV/0!	1.78%	-266	-218	9	-484	-3.41%	-56.62%	128.57%	-5.90%	69.62%	68.52%	2	6	1	3	1	5	-	2	1	3	-	0	2	6	0	3	2	9	2	4		
Dir 1	15.07a	Gympie Rd at Kedron Brook (EAST-WI	SB	11.76%	11.65%	841	16	11	869	26.27%	16.84%	91.67%	26.27%	2194	121	64	2381	7.59%	6.76%	25.00%	7.69%	64.02%	63.01%	5	2	1	6	2	1	2	2	10	1	2	10	3	0	1	3	9	2	3	9		
Dir 1	5.07b_S	Airport Link (4 Lanes on surface and 4	EB	-100.00%	8.62%	-658	-1	0	-663	-100.00%	-0.73%	#DIV/0!	-95.53%	-48	202	33	180	-0.72%	53.58%	103.13%	2.53%	79.38%	97.20%	2	5	3	3	5	3	2	6	26	0	-	25	2	4	5	4	0	7	3	2		
Dir 1	5.07b_G	Airport Link (4 Lanes on surface and 4	SB	-90.00%	-46.19%	-1196	-23	-3	-1222	-100.00%	-30.67%	-100.00%	-95.92%	-7017	-153	-113	-7282	-66.99%	-22.47%	-99.12%	-64.61%	66.64%	94.46%	20	1	3	19	35	4	8	35	35	2	2	34	35	4	7	35	59	4	11	59		
Dir 1	15.08	Bradshaw Street	EB	#DIV/0!	4.96%	-7	-2	2	-8	-1.85%	-16.67%	#DIV/0!	-2.04%	188	-34	25	183	5.78%	-26.77%	#DIV/0!	5.42%	75.63%	72.47%	1	2	-	1	3	1	-	3	0	0	-	0	0	-	0	2	-	2	-	2		
Dir 1	15.09	Gilbert Road	SB	#DIV/0!	31.45%	59	-1	0	59	17.30%	-16.67%	#DIV/0!	17.05%	252	9	6	258	13.04%	24.32%	#DIV/0!	13.04%	68.03%	73.01%	5	0	-	5	1	1	-	0	2	0	-	2	1	-	1	1	-	1	4	1	-	4
Dir 1	15.10	Webster Road	SB	50.00%	18.81%	-4	6	6	7	-0.21%	16.67%	#DIV/0!	0.36%	373	78	45	489	2.89%	16.05%	409.09%	3.64%	60.61%	63.70%	6	1	1	6	0	2	5	1	0	1	-	0	1	1	3	1	2	2	5	3		
Dir 1	15.11	Shand Street	SB	-61.54%	-9.64%	-61	-3	3	-64	-3.81%	-4.29%	#DIV/0!	-3.82%	-130	-72	1	-202	-1.02%	-9.05%	1.92%	-1.49%	59.45%	57.07%	3	1	2	3	1	1	0	1	1	0	-	1	0	1	2	0	1	2	0	1		
Dir 1	15.12	South Pine Road	SB	0.00%	14.18%	-55	5	3	-49	-2.67%	5.68%	37.50%	-2.27%	503	-40	6	455	2.76%	-3.65%	5.04%	2.34%	65.71%	65.55%	6	2	0	5	1	1	1	1	1	0	1	1	0	0	0	3	1	0	2	1		
Dir 1	15.13	Burwood Road	WB	#DIV/0!	15.37%	20	0	1	21	2.56%	0.00%	#DIV/0!	2.58%	72	-5	20	78	1.51%	-1.98%	2000.00%	1.55%	49.96%	46.21%	3	1	-	3	2	0	3	1	1	0	-	1	2	0	-	2	1	0	4	1		
Dir 1	15.14	Osborne Road	SB	-25.00%	-4.33%	-20	-12	2	-41	-2.74%	-27.27%	#DIV/0!	-3.60%	-264	-86	20	-335	-2.84%	-20.77%	142.86%	-3.45%	73.82%	73.36%	1	1	0	2	1	2	3	1	1	-	1	2	1	1	2	1	2	3	2			
Dir 1	15.15	Dawson Pde	SB	-77.78%	-3.20%	-31	-7	-4	-35	-1.50%	-16.28%	-66.67%	-2.41%	-313	-118	-50	-496	-3.07%	-24.43%	-65.79%	-4.60%	64.40%	63.53%	1	1	0	1	1	2	3	2	0	1	1	1	2	3	2	2	4	5	3			
Dir 1	15.16	SAMFORD SUB-ARTERIAL ROAD	SB	16.67%	3.98%	67	6	1	74	5.55%	17.14%	25.00%	5.94%	67	34	14	116	0.59%	9.94%	38.89%	0.98%	72.59%	72.00%	1	1	0	1	0	1	1	0	1	1	0	1	1	2	1	0	1	2	1			
Dir 1	15.17	Upper Kedron Road	EB	-75.00%	0.96%	-31	-8	0	-41	-6.95%	-61.54%	#DIV/0!	-8.89%	-141	-67	-6	-225	-3.58%	-58.77%	-60.00%	-5.53%	74.84%	77.46%	1	2	1	0	1	4	1	1	1	2	-	1	2	-	3	-	3	2	5	2		
Dir 1 Total				-2.28%	2.42%	-946	-9	38	-942	-3.32%	-0.73%	16.45%	-3.																																





Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional Split AM - Split	Directional Split AM - Model	GEH AM AM	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP OP	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM PM	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV EV	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr 24hr	GEH 24hr MCV	GEH 24hr HCV	GEH 24hr Total	
Dir 2	19.03	Annerley Rd	SB	1000.00%	-21.42%	95	53	12	161	4.25%	176.67%	#DIV/0!	7.11%	-441	22	130	-293	-4.47%	7.05%	4333.33%	-2.88%	29.91%	24.92%	6	4	5	2	2	8	1	1	5	-	2	2	0	-	2	3	1	11	2		
Dir 2	19.04	Ipswich Rd	SB	32.00%	30.64%	-112	-39	-11	-161	-2.18%	-20.21%	-50.00%	-3.01%	573	-33	11	552	1.97%	-1.50%	2.91%	1.74%	43.96%	52.42%	13	2	1	13	2	0	1	2	1	2	2	2	1	1	1	2	0	0	2		
Dir 2	19.05	Pacific Motorway (SOUTH-EAST ARTE)	SB	17.14%	-4.15%	-898	61	11	-826	-8.78%	43.88%	137.50%	-7.96%	-834	31	24	-779	-1.25%	1.43%	9.27%	-1.13%	38.79%	37.74%	3	2	1	3	1	1	0	6	3	2	6	1	0	1	1	2	0	1	2		
Dir 2	19.05a	Clem 7 on/off ramp pair from/to Paci	SB	-56.25%	-67.65%	678	-30	4	652	55.48%	-100.00%	#DIV/0!	52.04%	1338	0	-45	1284	22.16%	0.00%	-71.43%	20.20%	53.91%	22.16%	19	7	2	20	20	4	5	19	12	5	-	12	3	1	2	4	12	0	5	11	
Dir 2	19.06	Logan Rd	SB	#DIV/0!	-10.37%	-403	-13	2	-413	-27.83%	-27.08%	200.00%	-27.59%	-888	-88	23	-957	-13.00%	-23.28%	575.00%	-13.26%	27.63%	22.43%	2	2	-	2	3	2	3	8	1	1	8	3	2	-	3	8	3	4	8		
Dir 2	19.07	Deshon St / Main Ave	SB	#DIV/0!	5.33%	237	15	3	256	19.98%	45.45%	#DIV/0!	21.02%	81	-50	11	36	1.60%	-24.39%	1100.00%	0.80%	16.15%	18.24%	1	0	-	1	2	3	-	3	5	2	-	5	1	3	1	2	1	3	3	0	
Dir 2	19.08	Turbo Dr	NB	#DIV/0!	-52.81%	-72	-22	1	-92	-27.27%	-73.33%	#DIV/0!	-31.40%	-1262	-205	2	-1470	-59.05%	-83.00%	66.67%	-61.43%	62.85%	45.16%	8	5	-	9	19	9	-	21	3	4	-	4	11	5	1	13	23	12	1	26	
Dir 2	19.09	Stanley St East	NB	#DIV/0!	2.76%	20	2	3	25	0.43%	2.99%	#DIV/0!	0.53%	714	93	51	851	3.41%	15.58%	1275.00%	3.95%	31.45%	31.95%	1	1	-	1	4	2	5	4	0	0	-	0	2	1	3	2	3	3	7	4	
Dir 2	19.10	Wynnum Rd	NB	177.78%	8.14%	150	35	12	194	3.29%	49.30%	400.00%	4.19%	1070	76	93	1234	3.94%	7.39%	143.08%	4.37%	42.88%	42.77%	3	1	3	3	3	0	4	3	2	3	3	2	2	1	3	2	5	2	6	5	
Dir 2 Total				52.00%	-1.46%	-637	34	39	-563	-1.88%	4.76%	95.12%	-1.63%	-1137	-216	335	-1088	-0.61%	-2.72%	38.42%	-0.56%			2	1	4	2	2	2	4	1	2	1	4	2	2	2	4	2	2	2	7	2	
19a Total				64.22%	0.41%	-708	87	71	-551	-1.22%	6.55%	85.54%	-0.93%	-360	95	674	263	-0.10%	0.61%	38.91%	0.07%			0	2	6	1	1	1	6	2	2	5	2	1	1	5	1	0	1	11	0		
Dir 1	19.11	Cavendish Road	NB	300.00%	-3.61%	-328	0	3	-327	-23.58%	0.00%	#DIV/0!	-23.22%	-805	-14	47	-776	-8.32%	-5.28%	671.43%	-7.80%	53.83%	54.31%	1	1	2	1	3	1	4	3	7	0	-	7	2	0	-	2	6	1	6	6	
Dir 1	19.11a	Temple Street	WB	#DIV/0!	160.98%	52	3	2	57	20.63%	60.00%	#DIV/0!	22.09%	493	46	17	553	50.77%	200.00%	#DIV/0!	55.41%	19.71%	37.54%	9	3	-	9	5	3	-	6	2	1	-	2	4	2	-	5	10	5	-	11	
Dir 1	19.12	Stanley Street East	WB	150.00%	-19.58%	56	4	1	62	32.56%	100.00%	#DIV/0!	35.23%	86	44	39	167	3.95%	70.97%	1950.00%	7.43%	90.27%		5	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	2	
Dir 1	19.13	Crown Street	WB	0.00%	6.45%	197	-11	1	187	16.46%	-15.71%	100.00%	14.75%	647	-95	8	553	6.00%	-17.53%	66.67%	4.87%	69.94%	71.54%	3	1	0	2	1	1	2	1	4	1	1	4	2	3	0	1	4	3	2	4	
Dir 1	19.14	Agnew Road	WB	100.00%	6.07%	-19	-26	1	-45	-2.24%	-37.14%	#DIV/0!	-4.88%	-13	-326	-1	-346	-0.25%	-58.11%	-8.33%	-5.98%	54.69%	57.79%	2	3	1	1	1	8	1	3	0	2	-	1	8	0	3	0	12	0	3		
Dir 1	19.15	Jack Flynn Memorial Drive	NB	#DIV/0!	4.80%	-16	5	17	6	-1.44%	22.73%	#DIV/0!	0.53%	295	82	245	615	4.29%	35.34%	6125.00%	8.65%	51.94%	56.98%	0	2	-	1	3	2	10	5	0	1	-	0	1	3	10	3	2	4	15	5	
Dir 1	19.16	Wynnum Road	WB	50.00%	7.05%	165	-8	8	164	6.16%	-10.96%	800.00%	5.95%	310	-102	51	252	1.76%	-12.55%	113.33%	1.36%	50.11%	51.72%	3	1	1	2	1	2	2	1	2	1	3	2	0	1	4	0	2	3	4	1	
Dir 1	19.17	Barrack Road	NB	#DIV/0!	-6.61%	-90	-6	1	-94	-22.50%	-75.00%	#DIV/0!	-23.10%	-304	-45	12	-340	-10.35%	-51.14%	#DIV/0!	-11.22%	62.51%	64.55%	1	2	-	1	1	3	-	1	3	2	-	4	1	-	4	4	1	-	4		
Dir 1	19.18	Lytton Rd	WB	-1.43%	0.73%	71	-10	1	61	2.91%	-6.49%	2.70%	2.31%	127	-142	-19	-44	0.95%	-7.98%	-3.33%	-0.28%	46.48%	46.87%	1	1	0	0	2	1	0	0	1	1	0	1	0	1	0	1	1	2	1	0	
Dir 1 Total				50.00%	3.07%	88	-49	35	71	0.84%	-11.64%	89.74%	0.65%	836	-552	399	634	1.20%	-12.64%	61.10%	0.85%			3	2	3	2	1	4	6	1	1	2	3	0	0	4	7	0	2	6	10	2	
Dir 2	19.11	Cavendish Road	SB	#DIV/0!	-5.44%	-161	-10	3	-169	-8.51%	-41.67%	#DIV/0!	-8.82%	209	31	41	260	1.93%	10.51%	#DIV/0!	2.33%	46.17%	45.69%	1	1	-	1	3	1	-	3	3	2	-	3	2	2	-	2	1	1	-	2	
Dir 2	19.11a	Temple Street	EB	#DIV/0!	6.59%	325	15	3	343	172.87%	1500.00%	#DIV/0!	181.48%	724	102	41	861	52.43%	850.00%	#DIV/0!	61.54%	80.29%	62.46%	0	4	-	1	7	7	-	9	12	4	-	13	6	2	-	7	12	9	-	14	
Dir 2	19.12	Stanley Street East	EB	#DIV/0!	104.30%	-44	-2	1	-47	-9.42%	-13.33%	#DIV/0!	-9.71%	-37	11	15	25	-2.14%	17.19%	#DIV/0!	-1.38%	9.73%	21.49%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dir 2	19.13	Crown Street	EB	#DIV/0!	-1.47%	65	-8	-4	55	2.26%	-13.56%	-80.00%	1.88%	-151	-76	6	-227	-1.26%	-17.04%	66.67%	-1.83%	30.06%	28.46%	0	0	-	0	1	2	2	1	1	2	1	1	2	1	3	5	1	1	3	1	1
Dir 2	19.14	Agnew Road	EB	-66.67%	-6.50%	-19	-18	-2	-41	-3.09%	-45.00%	-66.67%	-5.93%	-192	-178	0	-380	-4.27%	-53.13%	0.00%	-7.84%	45.31%	42.21%	1	3	1	1	0	5	1	2	1	2	1	1	3	1	3	2	8	0	4		
Dir 2	19.15	Jack Flynn Memorial Drive	SB	650.00%	-14.51%	6	19	20	46	0.49%	126.67%	#DIV/0!	3.68%	249	78	185	504	3.62%	33.05%	3700.00%	7.07%	48.06%	43.02%	4	1	3	3	4	1	7	4	0	3	-	1	2	4	-	4	2	3	13	4	
Dir 2	19.16	Wynnum Road	EB	42.86%	0.35%	38	-2	5	36	1.18%	-2.50%	166.67%	1.09%	300	6	56	345	1.57%	0.74%	143.59%	1.73%	49.89%	48.28%	0	0	1	0	1	1	2	2	0	0	2	0	1	1	5	1	2	0	5	2	
Dir 2	19.17	Barrack Road	SB	#DIV/0!	-14.47%	-15	-15	1	-32	-2.74%	-75.00%	#DIV/0!	-5.61%	-39	-88	13	-128	-1.56%	-59.46%	1.88%	-4.80%	37.49%	35.45%	2	3	-	2	1	4	-	0	0	3	-	1	0	2	-	1	6	-	2		
Dir 2	19.18	Lytton Rd	EB	17.02%	-0.82%	10	14	6	21	0.46%	14.00%	17.65%	0.91%	-59	141	56	45	-0.42%	-10.41%	-11.45%	0.28%	53.52%	53.13%	0	1	1	0	0	2	1	0	0	1	1	0	0	1	1	0	0	3	2	0	
Dir 2 Total				64.41%	-2.34%	204	-7	33	212	1.54%	-1.98%	73.33%	1.55%	1004	27	413	1255	1.37%	0.73%	74.82%	1.62%			2	0	3	2	3	0	6	4	1	0	3	1	0	8	2	3	0	11	3		
19b Total				55.86%	0.64%	292	-56	68	283	1.23%	-7.23%	80.95%	1.15%	1840	-525	812	1889	1.29%	-6.51%	67.39%	1.24%			1	1	4	1	3	3	8	3	1	1	0										



Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional Split AM - Obs	Directional Split AM - Model	GEH AM AM	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH PM AM	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH OP AM	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH EV AM	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24h AM	GEH 24h MCV	GEH 24h HCV	GEH 24h Total			
Dir 1 Total				-1.57%	-1.91%	-261	-49	30	-291	-1.61%	-7.10%	8.67%	-1.68%	-2237	-359	133	-2538	-1.83%	-3.93%	2.65%	-1.86%			2	2	0	2	3	2	1	3	1	1	1	2	3	0	1	3	5	3	1	5			
Dir 2	20.30 Miles Platting Road	EB	-22.22%	2.45%	187	36	-3	219	10.05%	42.86%	-33.33%	11.21%	338	-26	-5	303	4.60%	-5.57%	-8.47%	3.85%	30.82%	31.20%	1	1	1	1	3	1	1	2	3	3	1	3	2	2	2	3	1	1	2	3	1	2		
Dir 2	20.31 Gardner Road	SB	-63.89%	-6.51%	-55	-26	-2	-82	-12.88%	-70.27%	-40.00%	-17.52%	-174	-219	-109	-501	-9.33%	-64.99%	-66.06%	-21.17%	40.19%	43.35%	1	4	3	1	1	8	6	5	2	4	1	3	4	4	2	6	3	10	7	8				
Dir 2	20.32 Redland Sub-Arterial	EB	20.00%	1.27%	58	-95	-33	-79	1.27%	-39.58%	-70.21%	-1.62%	129	70	22	195	0.71%	4.74%	6.90%	0.97%	32.45%	33.01%	0	1	1	0	1	2	1	1	1	5	4	1	0	3	3	1	1	1	1	1				
Dir 2	20.34 CLEVELAND SUB-ARTERIAL ROAD	EB	61.90%	-1.90%	-647	40	3	-604	-10.74%	16.46%	7.32%	-9.58%	-1115	161	5	-948	-3.77%	9.16%	1.60%	-2.99%	38.10%	37.91%	1	1	2	1	1	1	1	1	6	2	0	6	1	2	1	1	5	3	0	4				
Dir 2	20.35 London Road	EB	#DIV/0!	-100.00%	-193	30	1	-224	-51.47%	-78.95%	100.00%	-53.85%	-600	-86	4	-686	-70.09%	-86.87%	400.00%	-71.46%	23.38%	#DIV/0!	-	-	-	-	-	-	-	-	8	4	1	9	-	-	-	-	18	8	1	20				
Dir 2	20.36 Belmont Road	NB	300.00%	34.48%	477	21	13	511	103.92%	77.78%	1300.00%	104.93%	789	48	36	868	55.25%	47.52%	900.00%	56.47%	18.95%	17.72%	2	2	1	3	5	1	3	6	13	2	3	13	3	0	2	3	13	3	5	14				
Dir 2	20.37 Meadowlands Road	EB	-91.49%	-15.24%	-209	-31	-19	-261	-7.75%	-22.14%	-79.17%	-9.12%	-768	-289	-272	-1339	-4.64%	-25.97%	-86.35%	-7.44%	53.72%	52.84%	5	4	6	6	1	3	10	3	3	2	4	4	1	6	8	3	4	7	14	7				
Dir 2	20.38 Wynnum Rd	EB	68.42%	7.77%	76	12	9	98	1.35%	14.29%	81.82%	1.71%	1013	70	199	1279	3.99%	6.23%	174.56%	4.80%	31.47%	32.43%	3	0	2	3	3	0	2	3	1	1	2	1	2	2	11	4	1	10	5					
Dir 2	20.39 Port of Brisbane Motorway	EB	-2.29%	3.84%	212	15	7	236	13.41%	20.00%	3.32%	12.65%	642	134	249	1038	6.25%	11.06%	8.14%	7.15%	49.66%	51.53%	1	1	0	1	1	2	3	4	4	1	0	4	3	2	1	3	4	3	3	5				
Dir 2	20.40 Lytton Rd (PORT OF BRISBANE ROAD)	EB	-14.16%	-3.65%	-53	-8	-6	-67	-4.92%	-10.00%	-13.64%	-5.57%	-346	-140	-109	-594	-5.71%	-11.79%	-14.99%	-7.45%	38.18%	38.13%	0	1	1	1	2	2	2	4	2	1	1	1	1	1	1	0	3	0	2	0	1			
Dir 2 Total				-7.70%	-1.87%	-147	-66	-30	-253	-0.59%	-6.30%	-7.61%	-0.97%	-92	-277	20	-385	-0.08%	-3.12%	0.39%	-0.29%			1	1	1	2	1	1	1	0	1	1	1	1	0	0	3	0	0	2	0	1			
20c Total				-4.57%	-1.89%	-408	-115	0	-544	-1.00%	-6.62%	0.00%	-1.25%	-2329	-636	153	-2923	-0.97%	-3.53%	1.52%	-1.09%			2	2	1	3	1	2	0	2	1	2	0	2	2	0	3	2	3	3	1	4			
Dir 1	21.01 Gailley Road	NB	#DIV/0!	2.98%	199	-2	2	199	9.25%	-3.28%	#DIV/0!	9.00%	765	-44	21	730	5.09%	-8.41%	700.00%	4.69%	41.98%	39.75%	1	1	-	1	4	0	2	3	3	0	-	3	1	2	-	1	4	1	4	4				
Dir 1	21.02 Burns Road	NB	#DIV/0!	-3.35%	-95	0	1	-96	-16.27%	0.00%	#DIV/0!	-16.19%	42	-28	7	9	1.48%	-34.57%	#DIV/0!	0.31%	50.71%	48.54%	0	2	-	1	2	1	2	2	3	0	-	3	1	1	-	1	1	2	-	0				
Dir 1	21.03 Moggill Road	EB	#DIV/0!	-20.97%	-456	-14	3	-468	-22.23%	-25.45%	#DIV/0!	-22.22%	-3044	-80	26	-3112	-16.31%	-11.59%	185.71%	-16.06%	68.26%	60.79%	9	2	-	9	8	1	2	8	8	1	-	8	9	1	2	9	16	2	4	16				
Dir 1	21.04 Miskin Street	NB	#DIV/0!	11.19%	49	12	1	61	9.96%	240.00%	#DIV/0!	12.27%	399	71	8	470	12.78%	139.22%	#DIV/0!	14.78%	50.66%	57.00%	2	1	-	2	3	4	-	4	2	3	-	2	3	-	3	-	3	5	5	-	6			
Dir 1	21.05 Orchard Street	EB	#DIV/0!	-34.72%	-44	-7	0	-50	-26.51%	-87.50%	#DIV/0!	-28.90%	-474	-59	0	-542	-34.40%	-90.77%	#DIV/0!	-37.33%	66.67%	69.12%	5	3	-	6	7	5	-	8	3	2	-	3	4	3	-	5	10	7	-	11				
Dir 1	21.06 Western Arterial Rd /Mway	NB	24.00%	8.48%	448	33	15	497	8.30%	24.26%	65.22%	8.94%	1929	141	92	2160	4.94%	7.57%	20.44%	5.22%	56.24%	57.70%	5	2	1	5	3	0	2	4	4	2	2	5	2	2	1	3	7	2	3	7				
Dir 1	16.16 Dillon Rd	NB	#DIV/0!	4.29%	-50	-5	0	-57	-13.59%	-55.56%	#DIV/0!	-15.04%	193	-19	6	169	11.80%	-36.54%	#DIV/0!	9.95%	47.95%	54.72%	1	0	-	1	2	2	-	2	2	1	-	2	2	1	-	2	6	1	-	5	3	2	-	3
Dir 1 Total				50.00%	-1.35%	51	17	22	86	0.45%	6.05%	95.65%	0.75%	-190	-18	160	-116	-0.23%	-0.54%	34.26%	-0.14%			1	0	2	1	1	1	3	1	0	1	3	1	1	0	3	1	0	0	5	0			
Dir 2	21.01 Gailley Road	SB	200.00%	12.95%	172	7	2	181	7.84%	16.67%	#DIV/0!	8.09%	2634	91	21	2738	17.63%	18.02%	420.00%	17.71%	58.02%	60.25%	4	1	1	5	11	3	3	11	3	1	-	3	9	1	1	9	15	3	4	15				
Dir 2	21.02 Burns Road	SB	#DIV/0!	5.43%	-221	0	0	-226	-37.39%	-45.45%	#DIV/0!	-37.48%	-272	-7	6	-284	-7.85%	-6.73%	#DIV/0!	-7.93%	49.29%	51.46%	0	3	-	1	2	2	-	7	1	-	7	1	-	7	1	1	-	9	3	0	-	13		
Dir 2	21.03 Moggill Road	WB	100.00%	9.65%	57	12	3	70	1.93%	19.05%	#DIV/0!	2.31%	1591	57	35	1668	9.14%	7.70%	500.00%	9.18%	31.74%	39.21%	2	1	1	3	6	1	4	7	1	1	-	1	5	0	3	5	8	1	5	9				
Dir 2	21.04 Miskin Street	SB	#DIV/0!	-13.88%	1	-3	0	-6	0.10%	-8.82%	#DIV/0!	-0.59%	-241	-1	5	-254	-6.06%	-0.61%	500.00%	-6.10%	49.34%	43.00%	3	0	-	3	2	0	-	2	0	0	-	0	0	1	1	3	0	2	3	0	2	3		
Dir 2	21.05 Orchard Street	WB	#DIV/0!	-41.67%	-150	-5	0	-155	-46.58%	-83.33%	#DIV/0!	-47.26%	-593	-40	0	-634	-43.16%	-81.63%	#DIV/0!	-44.49%	33.33%	30.88%	5	2	-	5	7	4	-	7	6	3	-	7	6	3	-	7	13	5	-	13				
Dir 2	21.06 Western Arterial Rd /Mway	SB	10.29%	2.22%	-265	-22	12	-275	-3.98%	-10.28%	36.36%	-3.98%	1670	-123	71	1630	4.22%	-5.86%	15.17%	3.87%	43.76%	42.30%	2	2	1	1	5	1	0	4	2	1	1	2	6	0	3	6	6	2	2	6				
Dir 2	16.16 Dillon Rd	SB	-50.00%	-20.53%	2	-3	1	-1	0.54%	-15.79%	#DIV/0!	-0.26%	170	-56	0	102	10.18%	-50.00%	0.00%	5.67%	52.05%	45.28%	2	3	1	3	3	2	1	3	0	1	-	0	4	4	1	-	0	4	4	3	4	0	2	
Dir 2 Total				16.44%	3.37%	-404	-19	18	-412	-2.87%	-4.88%	54.55%	-2.84%	4959	-79	138	4966	6.02%	-2.09%	28.28%	5.73%			3	1	1	3	10	0	2	10	2	1	2	2	11	0	4	10	12	1	4	12			
21 Total				30.08%	0.74%	-353	-2	40	-326	-1.40%	-0.30%	71.43%	-1.25%	4769	-97	298	4850	2.90%	-1.37%	31.20%	2.81%			1	1	2	1	8	1	3	7	2	0	3	1	7	0	4	7	8	1	6	8			
Dir 1	22.00 Ipswich Rd (Local)	NB	392.86%	212.29%	-223	-22	-10	-259	-100.00%	-100.00%	-100.00%	-100.00%	-712	-323	-35	-1077	-54.23%	-82.82%	-33.65%	-59.37%	35.70%	49.86%	16	1	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	16	15	-	21			
Dir 1	22.01 Ipswich Rd (to Motorway)	NB	-30.77%	-6.81%	-121	1	-1	-123	-2.78%	0.81%	-1.64%	-2.71%	-548	-20	39	-535	-1.84%	-0.76%	3.25%	-1.59%	57.10%	55.54%	4	1	3	4	0	1	3	0																

Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional AM - Obs	Directional AM - Model	GEH AM AM	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP AM	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM AM	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV Car	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr Car	GEH 24hr MCV	GEH 24hr HCV	GEH 24hr Total			
Dir 1	25.06	Rochedale Road	NB	-37.50%	-4.95%	-271	-18	2	-287	-32.97%	-58.06%	200.00%	-33.61%	-1033	-139	12	-1177	-16.94%	-44.55%	63.16%	-18.26%	66.97%	71.62%	1	2	1	1	7	3	2	7	7	3	1	8	6	5	1	7	10	6	2	11			
Dir 1	25.07	Ford Road	NB	#DIV/0!	-73.02%	-35	-2	0	-37	-92.11%	-100.00%	#DIV/0!	-92.50%	-452	-51	-1	-507	-78.75%	-98.08%	-100.00%	-80.22%	88.34%	-	11	4	-12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	7	1	18		
Dir 1	25.08	Kloske Rd / Alperton Road	NB	#DIV/0!	-1.86%	-131	4	1	-125	-32.91%	23.53%	#DIV/0!	-30.27%	-40	37	12	12	-2.93%	60.66%	#DIV/0!	0.84%	28.22%	36.44%	0	0	-	2	3	-	2	5	1	-	5	2	1	-	2	1	-	2	1	3	-	0	
Dir 1	26.07	Avalon Road	NB	#DIV/0!	-47.18%	475	56	9	540	193.88%	700.00%	#DIV/0!	213.44%	-452	10	10	-437	-33.56%	17.86%	1000.00%	-31.04%	48.42%	36.40%	7	3	-	7	-	-	-	-	15	7	-	17	-	-	-	-	-	-	10	1	3	9	
Dir 1	25.10	West Mount Cotton Road	NB	0.00%	163.27%	290	-3	-2	285	157.61%	-18.75%	-33.33%	138.35%	1009	-8	-64	928	112.49%	-5.93%	-41.83%	77.72%	57.78%	65.88%	14	2	0	13	4	2	4	1	11	1	1	11	10	0	2	8	19	0	4	16			
Dir 1	25.11	MOUNT COTTON ROAD	NB	-38.10%	-17.65%	-200	-2	5	-197	-17.38%	-3.70%	50.00%	-16.21%	-1291	-18	40	-1271	-15.93%	-3.25%	31.25%	-14.47%	63.43%	61.07%	5	2	1	6	5	0	3	4	4	0	1	4	6	1	1	5	11	1	2	10			
Dir 1	25.12	Springacre Road	NB	0.00%	-34.94%	-158	-5	2	-164	-47.31%	-29.41%	200.00%	-46.33%	-1597	-98	15	-1697	-51.30%	-45.79%	78.95%	-50.48%	79.60%	78.24%	8	2	0	8	16	3	2	16	7	1	1	7	16	4	0	16	23	5	2	24			
Dir 1	25.13	CLEVELAND - REDLAND BAY ROAD	NB	76.92%	1.36%	-23	10	4	-8	-0.84%	8.85%	66.67%	-0.28%	-165	107	54	-3	-0.80%	9.96%	56.25%	-0.01%	59.25%	59.54%	0	0	2	1	1	1	3	0	0	1	1	0	1	2	1	0	1	2	3	0			
Dir 1 Total				16.13%	0.90%	180	22	50	251	0.93%	3.41%	38.76%	1.25%	-752	-231	303	-738	-0.55%	-3.15%	12.89%	-0.51%			1	2	2	1	3	1	3	3	1	1	3	1	1	2	1	1	2	4	1				
Dir 2	20.25	Logan Sub-Arterial	EB	121.43%	8.73%	396	0	19	412	11.16%	0.00%	146.15%	11.04%	1444	-57	136	1511	8.85%	-5.26%	116.24%	8.62%	47.92%	50.01%	3	0	3	3	5	1	5	5	5	0	3	5	3	1	4	4	8	1	7	8			
Dir 2	20.26	Gateway Mwy / Pacific Mwy Ramp Pz	SB	8.38%	4.94%	-710	-7	8	-711	-14.81%	-3.57%	8.33%	-13.97%	-248	-97	45	-301	-0.78%	-3.97%	3.05%	-0.84%	51.26%	51.37%	3	1	1	2	1	1	0	1	8	0	1	7	0	0	0	1	1	1	1	1			
Dir 2	20.27	Pacific Mwy	SB	38.71%	0.03%	1351	-4	11	1357	22.72%	-2.38%	64.71%	-22.13%	2615	-21	63	2662	6.40%	1.24%	19.87%	6.21%	45.44%	43.53%	0	1	1	0	4	0	1	4	12	0	2	12	4	1	1	4	9	0	2	9			
Dir 2	25.05	School Road	SB	300.00%	28.47%	-97	-4	2	-102	-12.52%	-15.38%	#DIV/0!	-12.69%	419	39	25	468	16.37%	41.05%	2500.00%	17.53%	31.48%	31.52%	3	-	-	3	5	2	-	5	3	1	-	3	1	0	1	3	7	6	3	5			
Dir 2	25.06	Rochedale Road	SB	0.00%	-23.64%	-53	0	-3	-57	-3.84%	0.00%	-50.00%	-3.87%	-956	-132	-4	-1105	-17.93%	-40.87%	-23.53%	-19.45%	33.03%	28.38%	5	2	0	5	8	5	1	10	1	0	1	1	5	5	1	5	10	6	1	11			
Dir 2	25.07	Ford Road	SB	#DIV/0!	-86.67%	1	-3	0	-2	0.69%	-42.86%	#DIV/0!	-1.32%	-269	-33	0	-309	-59.25%	-89.19%	#DIV/0!	-62.05%	11.66%	6.12%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	-	12
Dir 2	25.08	Kloske Rd / Alperton Road	SB	0.00%	-32.72%	7	-1	1	7	3.37%	-12.50%	#DIV/0!	3.24%	-47	12	8	-30	-3.31%	14.46%	266.67%	-1.99%	71.78%	63.56%	6	2	0	6	2	0	2	2	0	0	-	0	2	3	1	3	1	1	2	1			
Dir 2	26.07	Avalon Road	SB	#DIV/0!	-13.37%	-126	-9	1	-137	-59.72%	-90.00%	#DIV/0!	-61.16%	-986	-59	2	-1045	-72.18%	-78.67%	#DIV/0!	-72.42%	51.58%	63.60%	2	0	-	2	-	-	-	-	7	3	-	8	-	-	-	-	-	-	24	6	-	24	
Dir 2	25.10	West Mount Cotton Road	SB	-56.00%	86.59%	187	-3	-14	168	124.67%	-18.75%	-51.85%	86.15%	546	-58	-109	372	67.57%	-47.54%	-62.29%	33.45%	42.22%	34.12%	8	1	2	7	2	5	7	3	8	1	2	7	6	1	1	6	12	4	7	7			
Dir 2	25.11	MOUNT COTTON ROAD	SB	33.33%	-8.94%	-239	-43	-4	-286	-12.84%	-42.16%	-40.00%	-14.50%	-917	-80	27	-971	-11.90%	-13.72%	19.15%	-11.52%	36.57%	38.93%	2	1	2	4	1	2	3	4	3	1	5	5	2	0	5	8	2	1	8				
Dir 2	25.12	Springacre Road	SB	150.00%	-29.39%	-162	-19	4	-180	-24.88%	-48.72%	200.00%	-25.94%	-1180	-93	15	-1272	-45.97%	-48.95%	83.33%	-45.64%	20.40%	21.76%	3	1	1	4	14	4	1	14	5	2	1	5	14	2	1	14	19	5	2	19			
Dir 2	25.13	CLEVELAND - REDLAND BAY ROAD	SB	42.86%	0.15%	-17	-26	0	-43	-0.40%	-14.29%	0.00%	-0.97%	-155	-53	44	-164	-0.75%	-4.48%	43.14%	-0.75%	40.75%	40.46%	0	1	1	0	1	1	2	1	0	1	0	0	0	0	1	1	1	3	1				
Dir 2 Total				17.05%	0.16%	538	-119	25	426	2.25%	-11.85%	13.51%	1.69%	266	-632	252	-184	0.20%	-7.98%	10.65%	-0.13%			0	1	2	0	1	4	2	2	2	3	1	2	0	2	3	0	1	5	4	0			
25 Total				16.61%	0.57%	718	-97	75	677	1.66%	-5.88%	23.89%	1.50%	-486	-863	555	-922	-0.18%	-5.66%	11.77%	-0.32%			1	2	3	1	3	4	3	3	2	2	3	2	1	2	3	1	1	5	6	1			
Dir 1	26.01	Rickertt Road	WB	-28.57%	-2.82%	30	3	3	35	2.56%	9.68%	300.00%	2.90%	140	21	31	188	1.29%	4.63%	119.23%	1.66%	70.85%	70.70%	1	0	1	1	1	2	4	1	1	0	1	1	1	1	0	1	1	1	1	3	1		
Dir 1	26.02	Cleveland Sub-Arterial Rd (Old Cleve)	WB	-16.13%	-2.06%	3	-9	-5	-31	0.10%	-14.72%	-31.25%	-1.01%	-140	-285	-39	-475	-0.63%	-13.28%	-22.81%	-1.92%	66.34%	65.56%	0	3	1	1	1	2	1	1	0	2	1	0	0	3	2	1	1	4	2	2			
Dir 1	26.03	Moreton Bay Rd (BRISBANE - REDLAN)	WB	161.54%	4.89%	-29	-4	7	-26	-1.43%	-4.00%	58.33%	-1.21%	389	84	125	598	2.12%	6.42%	62.50%	3.01%	66.15%	66.44%	0	8	4	2	2	1	2	2	0	0	1	0	2	4	3	2	2	2	5	3			
Dir 1	26.04	REDLAND SUB-ARTERIAL ROAD	WB	-91.49%	-10.22%	40	-10	-7	23	3.91%	-9.35%	-22.58%	1.98%	-71	-301	-146	-518	-0.74%	-19.84%	-40.22%	-4.50%	70.13%	67.16%	0	11	6	4	2	1	2	2	1	1	1	0	0	2	5	1	1	6	6	3			
Dir 1	26.07	Avalon Road	WB	#DIV/0!	-13.37%	-126	-9	1	-137	-59.72%	-90.00%	#DIV/0!	-61.16%	-986	-59	2	-1045	-72.18%	-78.67%	#DIV/0!	-72.42%	51.58%	63.60%	2	0	-	2	-	-	-	-	7	3	-	8	-	-	-	-	-	24	6	-	24		
Dir 1	26.08	California Creek Road	WB	2400.00%	30.14%	217	26	29	269	27.13%	49.06%	725.00%	31.28%	1483	250	297	2023	29.24%	62.97%	1485.00%	36.81%	56.95%	58.45%	6	1	7	7	10	6	12	13	5	2	5	6	5	5	8	7	14	8	16	18			
Dir 1	26.09	Beenleigh-Redland Rd	WB	-22.92%	-8.46%	7	-25	-6	-23	0.46%	-25.00%	-28.57%	-1.41%	-96	-197	-87	-407	-0.90%	-18.66%	-27.02%	-3.36%	55.93%	54.75%	3	1	1	3	1	3	3	3	0	2	1	0	2	4	1	1	1	4	4	3			
Dir 1 Total				18.63%	-0.35%	142	-48	22	110	1.48%	-8.03%	25.88%	1.07%	719	-487	183	364	0.92%	-7.00%	16.61%	0.42%			0	1	2	0	1	2	3	0	1	1	2	1	2	1	2	4	1	2	4	4			
Dir 2	26.01	Rickertt Road	EB	33.33%																																										



Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional Split AM - Obs	Directional Split AM - Model	GEH AM AM	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP AM	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM AM	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV AM	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24h AM	GEH 24h MCV	GEH 24h HCV	GEH 24h Total		
Dir 2	30.01a	Kilcoy beerwah Road	NB	16.67%	4.55%	-33	-1	0	-33	-12.94%	-5.56%	0.00%	-11.91%	-96	1	11	-92	-7.27%	0.79%	25.58%	-6.14%	37.02%	37.88%	0	0	0	0	1	0	1	1	2	0	0	1	1	1	0	1	1	2	0	1	2	
Dir 2	30.01	D'Aguiar Hwy	WB	0.00%	1.07%	-31	0	1	-33	-6.43%	0.00%	9.09%	-6.32%	-140	13	21	-123	-4.62%	5.46%	14.19%	-3.58%	49.79%	49.48%	0	0	0	0	2	0	1	1	1	0	0	1	1	1	0	1	0	2	1	1	1	
Dir 2	30.02	Neurum Road	WB	#DIV/0!	1.16%	-9	1	0	-10	-7.76%	33.33%	#DIV/0!	-8.26%	-38	12	6	-32	-4.75%	26.67%	200.00%	-3.72%	64.07%	65.30%	0	1	-0	1	1	1	1	1	0	-1	0	1	0	1	0	1	1	2	1	2	1	
Dir 2	30.03	Mount Glorious Rd	WB	#DIV/0!	5.56%	2	1	0	3	14.29%	100.00%	#DIV/0!	18.75%	14	5	13	10.37%	83.33%	#DIV/0!	8.78%	64.29%	65.52%	1	0	-0	1	1	-1	1	1	-1	0	1	-1	0	1	-0	0	1	1	1	1	1	1	
Dir 2 Total				8.82%	1.85%	-71	1	1	-73	-8.19%	2.13%	6.67%	-7.80%	-260	31	38	-234	-4.92%	7.47%	19.59%	-3.94%			0	1	0	0	2	0	1	2	2	0	0	2	1	1	1	1	3	1	2	2		
30a Total				8.20%	1.45%	-127	0	4	-127	-7.51%	0.00%	10.53%	-6.88%	-467	61	64	-399	-4.51%	6.82%	16.00%	-3.41%			0	1	0	0	3	1	1	2	2	0	0	2	1	2	2	1	3	1	2	3		
Dir 1	30.04	Pine Mountain Road	SB	n/a	n/a	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	29.67%	#VALUE!	###	###	-###	###	###	-###	###	###	-###	###	###	-###	###	###	-###	###	###	-###	###	###	-###
Dir 1	30.05	BRISBANE VALLEY HIGHWAY (IPSWICH)	SB	13.64%	-0.20%	-8	-1	-2	-10	-1.53%	-1.67%	-10.00%	-1.66%	-30	-15	0	-43	-0.67%	-2.56%	0.00%	-0.81%	63.68%	63.43%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Dir 1	30.11	Claus Road	SB	#DIV/0!	-100.00%	-73	-5	0	-77	-100.00%	-100.00%	#DIV/0!	-100.00%	-333	-16	0	-354	-100.00%	-100.00%	#DIV/0!	-100.00%	39.05%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Dir 1	30.12	Linnings Road	SB	#DIV/0!	-100.00%	-11	0	0	-12	-100.00%	#DIV/0!	#DIV/0!	-100.00%	-110	-2	0	-116	-100.00%	-100.00%	#DIV/0!	-100.00%	69.23%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
Dir 1	30.13	Marburg Road	SB	-100.00%	143.14%	92	8	1	102	176.92%	88.89%	#DIV/0!	170.00%	470	33	2	500	161.51%	75.00%	25.00%	143.27%	41.13%	44.77%	6	1	-6	9	2	0	9	7	2	-7	8	2	-8	14	3	0	14					
Dir 1	30.14	Warrego Highway	EB	-1.53%	-2.25%	-18	-10	-1	-26	-1.14%	-6.06%	-0.89%	-1.41%	-105	-57	-30	-196	-0.99%	-3.83%	-2.48%	-1.47%	51.98%	51.98%	0	1	0	1	0	0	0	0	1	0	0	1	1	0	2	1	1	1	1			
Dir 1	30.15	Tallegalla Road	SB	#DIV/0!	-2.82%	3	2	0	5	4.55%	33.33%	#DIV/0!	6.94%	11	5	0	10	2.70%	9.26%	#DIV/0!	2.14%	51.08%	50.36%	0	0	-0	0	0	0	0	1	-0	0	0	0	0	0	0	0	0	0	0			
Dir 1	30.16	Long Gully Road	SB	#DIV/0!	-100.00%	-23	-3	0	-25	-100.00%	-100.00%	#DIV/0!	-100.00%	-104	-8	0	-123	-100.00%	-100.00%	#DIV/0!	-100.00%	47.37%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Dir 1	30.20	Rosewood - Laidley Road	EB	-100.00%	22.15%	29	8	0	36	22.31%	61.54%	#DIV/0!	25.00%	103	44	3	136	11.57%	39.64%	60.00%	13.33%	57.66%	57.10%	2	1	-2	0	2	1	1	2	1	-2	1	1	1	1	2	3	1	3				
Dir 1 Total				-0.65%	-1.55%	-74	-8	-2	-78	-2.94%	-2.99%	-1.52%	-2.68%	-413	-39	-25	-530	-2.35%	-1.67%	-1.71%	-2.48%			0	0	0	1	1	0	0	1	1	0	0	1	1	0	0	2	2	1	0	3		
Dir 2	30.04	Pine Mountain Road	NB	n/a	n/a	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	70.33%	#VALUE!	###	###	-###	###	###	-###	###	###	-###	###	###	-###	###	###	-###	###	###	-###	###	###	-###
Dir 2	30.05	BRISBANE VALLEY HIGHWAY (IPSWICH)	NB	3.23%	0.87%	3	-2	1	3	0.31%	-1.90%	3.70%	0.27%	-43	7	4	-30	-0.96%	1.26%	1.61%	-0.57%	36.32%	36.57%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Dir 2	30.11	Claus Road	NB	#DIV/0!	-100.00%	-37	0	0	-37	-100.00%	#DIV/0!	#DIV/0!	-100.00%	-314	-3	0	-322	-100.00%	-100.00%	#DIV/0!	-100.00%	60.95%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Dir 2	30.12	Linnings Road	NB	#DIV/0!	-100.00%	-30	-3	0	-33	-100.00%	-100.00%	#DIV/0!	-100.00%	-126	-7	0	-136	-100.00%	-100.00%	#DIV/0!	-100.00%	30.77%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Dir 2	30.13	Marburg Road	NB	-66.67%	109.59%	71	7	1	77	151.06%	233.33%	#DIV/0!	148.08%	458	23	-3	477	142.68%	65.71%	-30.00%	129.97%	58.87%	55.23%	6	0	1	5	8	2	1	8	6	2	-6	8	1	-8	14	2	1	14				
Dir 2	30.14	Warrego Highway	WB	-6.21%	-2.26%	-6	-2	-6	-6	-0.30%	-0.92%	-5.04%	-0.69%	-38	-6	-51	-96	-0.35%	-0.43%	-4.25%	-0.72%	48.02%	48.02%	0	0	1	1	1	0	1	0	0	0	0	0	1	0	1	1	0	0	1	1		
Dir 2	30.15	Tallegalla Road	NB	#DIV/0!	0.00%	-1	2	1	2	1.23%	28.57%	#DIV/0!	2.22%	12	6	2	7	3.02%	14.29%	#DIV/0!	1.55%	48.92%	49.64%	0	0	-0	0	0	0	1	-0	0	1	-0	0	1	-0	0	1	-0					
Dir 2	30.16	Long Gully Road	NB	#DIV/0!	-100.00%	-15	-2	0	-17	-100.00%	-100.00%	#DIV/0!	-100.00%	-99	-14	0	-117	-100.00%	-100.00%	#DIV/0!	-100.00%	52.63%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Dir 2	30.20	Rosewood - Laidley Road	WB	#DIV/0!	25.00%	23	3	0	23	13.14%	30.00%	#DIV/0!	12.23%	103	42	0	130	11.57%	58.33%	#DIV/0!	13.29%	42.34%	42.90%	2	1	-2	1	2	-1	1	2	-1	1	1	-1	2	2	-2	2	3	-3				
Dir 2 Total				-5.59%	-3.14%	-22	-1	-3	-25	-0.65%	-0.28%	-2.05%	-0.90%	-350	19	-48	-424	-1.99%	0.88%	-3.29%	-1.99%			1	0	1	1	1	0	0	1	1	0	0	0	1	1	0	1	2	0	1	2		
30b Total				-3.29%	-2.27%	-96	-9	-5	-113	-1.63%	-1.45%	-1.80%	-1.66%	-763	-20	-73	-954	-2.17%	-0.45%	-2.50%	-2.23%			1	0	0	1	2	0	1	2	1	0	0	1	2	0	1	2	3	0	1	3		
Dir 1	30.17	Grandchester Mount Mort Road	NB	#DIV/0!	8.33%	0	0	0	-2	0.00%	#DIV/0!	#DIV/0!	-50.00%	3	5	0	3	7.14%	41.67%	#DIV/0!	5.08%	52.17%	52.00%	0	0	-0	0	1	-0	0	1	-0	0	0	0	0	0	0	0	0	0	0	0		
Dir 1	30.18	Rosewood - Warrill View Road	NB	#DIV/0!	316.07%	153	4	4	160	900.00%	100.00%	#DIV/0!	727.27%	1118	76	52	1245	553.47%	190.00%	5200.00%	510.25%	53.85%	54.19%	10	2	-10	18	5	5	20	11	1	-11	16	3	-17	29	6	7	30					
Dir 1	30.19	CUNNINGHAM HIGHWAY (IPSWICH -	NB	-4.00%	0.69%	12	4	2	18	5.50%	8.89%	4.26%	5.81%	32	25	13	72	1.72%	5.90%	2.26%	2.52%	55.89%	55.98%	0	0	0	0	1	0	1	1	0	0	1	0	0	1	1	0	1	1	0	1		
Dir 1	32.08	IPSWICH - BOONAH ROAD	NB	14.63%	5.39%	11	-1	4	14	3.05%	-3.13%	80.00%	3.52%	158	16	50	223	5.18%	5.48%	26.32%	6.31%	68.05%	67.17%	1	1	1	2	1	1	2	1	0	1	0	1	0	2	1	2	1	2	3			
Dir 1 Total				12.09%	17.97%	176	7	10	190	29.43%	8.64%	19.23%	25.89%	1311	122	115	1543	25.46%	15.89%	15.03%	23.07%			4	1	1	4	8	3	2	9	5	1	1	5	7	1	2	7	12	3	3			
Dir 2	30.17	Grandchester Mount Mort Road	SB	#DIV/0!	9.09%	-1	1	0	-1	-11.11%	#DIV/0!	#DIV/0!	-10.00%	11	5	0	8	25.58%	62.50%	#DIV/0!	13.56%	47.83%	48.00%	1	0	-0	1	1	-1	0	-	0	1	-	0	1									

Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional Split AM - Model	Directional Split AM - Model	GEH AM AM	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP Car	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM Car	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV Car	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr Car	GEH 24hr MCV	GEH 24hr HCV	GEH 24hr Total		
Dir 1	34.03	Pacific Motorway	NB	-1.70%	1.32%	-112	8	10	-97	-1.23%	2.46%	6.62%	-1.01%	-695	20	37	-636	-1.05%	0.49%	1.59%	-0.88%	56.16%	56.25%	1	0	0	1	3	0	0	2	1	0	1	1	1	0	0	1	2	0	1	2		
Dir 1	34.04	Beaudesert - Beenleigh Rd	NB	-58.33%	-17.22%	24	-11	-10	6	6.61%	-32.35%	-76.92%	1.47%	270	-129	-95	36	8.77%	-34.96%	-61.29%	1.00%	64.79%	59.33%	3	2	2	3	5	3	5	3	1	1	3	0	2	4	3	0	3	5	6	0		
Dir 1	34.05	Chardon Bridge Rd	NB	0.00%	-51.05%	71	-4	1	65	131.48%	-57.14%	#DIV/0!	103.17%	100	-46	2	49	131.48%	-57.14%	-73.02%	8.39%	66.20%	32.11%	5	2	0	5	3	3	0	2	5	1	-	5	2	3	-	1	3	5	0	1		
Dir 1	34.06	Waterford - Tamborine Rd	NB	27.27%	62.86%	163	11	-4	174	64.17%	45.83%	-57.14%	61.92%	636	76	-2	715	34.14%	45.51%	-3.85%	34.42%	61.70%	62.02%	7	2	1	8	6	3	1	6	6	1	1	6	1	1	1	1	1	10	4	0	10	
Dir 1	34.07	Mundoolun Rd	NB	116.67%	86.58%	226	13	6	244	75.08%	59.09%	300.00%	74.85%	1394	161	80	1626	76.68%	116.67%	235.29%	81.30%	53.41%	51.18%	8	3	2	9	13	5	5	14	8	2	2	8	9	5	4	11	20	8	7	22		
Dir 1	34.07a	Versdale Scrub Road	NB	#DIV/0!	-88.89%	-59	-2	-1	-64	-96.72%	-66.67%	-100.00%	-95.52%	-442	-12	1	-463	-96.30%	-66.67%	100.00%	-94.68%	49.50%	73.33%	9	0	-	8	14	3	-	14	7	1	-	8	9	0	-	10	20	2	1	20		
Dir 1	34.08	Mt Lindsey Hwy	NB	-4.76%	2.03%	2	-1	1	-1	0.33%	-0.67%	4.55%	-0.13%	73	23	14	98	2.04%	2.16%	100.00%	1.98%	43.16%	42.93%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	1
Dir 1 Total				-0.83%	2.80%	315	20	4	330	2.81%	3.22%	1.92%	2.74%	1368	132	82	1532	1.69%	2.01%	2.60%	1.68%			2	0	0	2	1	1	1	2	2	1	0	2	1	1	1	1	1	3	1	1	4	
Dir 2	34.00	Kerkin Road North	SB	25.00%	6.86%	-5	0	0	-5	-6.76%	0.00%	#DIV/0!	-5.81%	14	17	13	37	3.30%	12.06%	72.22%	6.25%	46.79%	46.78%	0	0	0	0	1	1	2	1	0	0	-	0	0	-	0	0	-	0	1	2	1	
Dir 2	34.01	Jacobs Well Road	SB	12.12%	2.84%	-6	0	5	-4	-1.71%	0.00%	33.33%	-0.94%	-11	14	25	17	-0.54%	2.90%	10.00%	0.61%	53.53%	53.88%	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	1	0	
Dir 2	34.02	Creek St	SB	33.33%	1.94%	-110	-7	1	-115	-13.45%	-12.07%	20.00%	-13.07%	-177	-3	10	-168	-7.59%	-1.30%	27.78%	-6.46%	44.59%	44.62%	0	0	1	0	1	0	1	1	3	1	0	3	1	0	1	3	0	1	2			
Dir 2	34.03	Pacific Motorway	SB	4.84%	0.95%	212	9	10	229	1.71%	3.04%	5.43%	1.77%	-2014	74	70	-1883	-3.05%	1.90%	3.05%	-2.61%	43.84%	43.75%	0	0	1	1	5	1	1	5	1	0	1	1	6	0	0	6	6	1	1	5		
Dir 2	34.04	Beaudesert - Beenleigh Rd	SB	-52.63%	4.42%	29	-6	-3	20	3.68%	-14.63%	-30.00%	2.38%	256	-103	-69	82	7.63%	-36.27%	-52.67%	2.17%	35.21%	40.67%	1	1	2	1	3	3	5	1	1	1	0	1	1	1	0	3	5	5	1			
Dir 2	34.05	Chardon Bridge Rd	SB	#DIV/0!	102.74%	-68	-3	1	-70	-50.37%	-60.00%	#DIV/0!	-50.00%	36	-6	11	27	6.63%	-19.35%	#DIV/0!	4.60%	33.80%	67.89%	5	0	-	5	0	0	-	0	5	1	-	5	1	-	2	1	1	-	1			
Dir 2	34.06	Waterford - Tamborine Rd	SB	-33.33%	60.67%	55	-37	-3	14	14.47%	-46.84%	-30.00%	2.99%	685	-159	-11	513	42.18%	-39.55%	-18.64%	24.58%	38.30%	37.98%	8	2	1	6	7	4	1	5	2	3	1	0	5	3	1	4	11	6	1	8		
Dir 2	34.07	Mundoolun Rd	SB	166.67%	104.03%	246	-4	-2	240	74.55%	-9.30%	-28.57%	63.16%	1712	73	83	1857	103.95%	30.29%	197.62%	95.72%	46.59%	48.82%	10	0	2	10	17	4	5	18	8	0	1	8	11	1	5	11	24	3	6	25		
Dir 2	34.07a	Versdale Scrub Road	SB	#DIV/0!	-96.04%	-74	-4	0	-80	-87.06%	-80.00%	#DIV/0!	-86.96%	-469	-34	1	-509	-95.13%	-94.44%	#DIV/0!	-94.61%	50.50%	26.67%	9	3	-	9	14	4	-	15	8	-	-	9	2	-	10	21	6	-	21			
Dir 2	34.08	Mt Lindsey Hwy	SB	13.95%	2.97%	-26	3	0	-25	-4.13%	3.61%	0.00%	-3.39%	-27	42	11	19	-0.66%	6.76%	3.94%	0.38%	56.84%	57.07%	0	1	1	1	0	1	0	0	1	0	0	1	0	0	1	0	0	1	0	0		
Dir 2 Total				6.36%	4.83%	253	-49	9	204	1.58%	-7.23%	3.54%	1.20%	5	-85	144	-8	0.01%	-1.33%	4.63%	-0.01%			4	0	1	4	1	0	1	1	1	1	0	1	1	3	1	3	0	1	2	0		
34 Total				2.47%	3.70%	568	-29	13	534	2.09%	-2.23%	2.81%	1.84%	1373	47	226	1524	0.84%	0.36%	3.61%	0.83%			4	0	1	4	0	1	1	1	2	1	0	2	1	0	2	1	0	2	3	2	3	
Dir 1	AP.01	Gateway/ Moreton Dr Ramps	EB	600.00%	0.05%	-134	9	8	-117	-10.89%	64.29%	266.67%	-9.38%	-54	51	129	128	-0.36%	17.17%	358.33%	0.88%	69.24%	67.81%	0	0	4	0	1	1	4	1	3	1	2	2	0	1	7	1	0	2	9	1		
Dir 1	AP.02	Airport Drive	EB	55.56%	4.38%	129	16	5	152	6.51%	94.12%	250.00%	7.61%	256	105	68	435	1.35%	28.85%	219.35%	2.25%	47.02%	48.32%	1	2	1	2	0	2	4	0	2	2	2	2	1	1	5	1	1	4	6	2		
Dir 1	AP.03	Lomandra Drv	EB	70.00%	66.00%	-267	4	1	-264	-13.01%	2.55%	8.33%	-11.87%	228	17	60	293	2.65%	1.39%	42.25%	2.98%	25.16%	39.61%	12	0	2	11	2	0	2	1	4	0	0	4	3	0	3	3	2	0	3	2		
Dir 1	AP.04	Kingsford Smith Dr	EB	-3.60%	1.07%	168	9	-2	176	37.25%	5.56%	-3.64%	26.39%	630	87	3	706	8.05%	5.07%	0.33%	6.75%	70.64%	68.62%	0	1	0	0	3	1	0	3	5	0	0	5	3	1	0	3	5	1	0	5		
Dir 1	AP.05	Lavarak Ave	EB	-100.00%	-100.00%	-104	-27	-8	-140	-100.00%	-100.00%	-100.00%	-100.00%	-2912	-494	-151	-3558	-100.00%	-100.00%	-100.00%	-100.00%	77.40%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Dir 1	AP.06	Curtin Ave	EB	-100.00%	-88.16%	-158	-23	-3	-186	-96.93%	-100.00%	-100.00%	-97.38%	-1332	-372	-104	-1822	-93.54%	-100.00%	-100.00%	-95.19%	61.19%	93.75%	13	8	4	16	26	16	8	31	12	5	2	13	14	6	4	16	34	19	10	41		
Dir 1 Total				-0.47%	-5.85%	-366	-12	1	-379	-6.12%	-3.00%	1.20%	-5.86%	-3188	-606	5	-3818	-5.87%	-13.56%	0.36%	-6.34%			3	3	0	4	8	6	2	10	3	0	0	3	4	2	2	4	10	7	0	11		
Dir 2	AP.01	Gateway/ Moreton Dr Ramps	WB	112.50%	6.90%	251	2	17	270	19.00%	10.00%	1700.00%	20.10%	319	17	118	447	2.72%	7.91%	357.58%	3.72%	30.76%	32.19%	1	0	2	2	1	1	4	2	5	0	4	5	1	0	-	1	2	1	9	3		
Dir 2	AP.02	Airport Drive	WB	142.86%	-0.91%	54	8	4	66	2.17%	20.00%	66.67%	2.60%	-1110	-35	84	-1065	-4.79%	-5.22%	210.00%	-4.46%	52.98%	51.68%	0	0	2	0	4	1	4	4	1	1	1	1	4	1	5	4	5	1	7	5		
Dir 2	AP.03	Lomandra Drv	WB	70.59%	-14.91%	748	3	36	781	161.21%	2.50%	900.00%	131.70%	724	-31	116	784	9.08%	-2.43%	127.47%	8.37%	74.84%	60.39%	6	0	2	5	4	1	4	4	18	0	5	18	0	0	3	0	6	1	7	6		
Dir 2	AP.04	Kingsford Smith Dr	WB	-3.31%	11.21%	33	-7	-2	20	1.87%	-4.19%	-3.28%	1.00%	517	-20	-6	444	6.54%	-1.11%	-0.65%	4.16%	29.36%	31.38%	4	1	0	2	1	0	0	1	1	0	0	0	4	0	0	3	4	0	0	3		
Dir 2	AP.05	Lavarak Ave	WB	-100.00%	-100.00%	-514	-35	-10	-558	-100.00%	-100.00%	-100.00%	-10																																



Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional AM - Obs	Directional AM - Model	GEH AM AM	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP AM	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM AM	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV Car	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr Car	GEH 24hr MCV	GEH 24hr HCV	GEH 24hr Total		
Dir 1	BH.11	Anzac Avenue	EB	-29.63%	4.14%	798	14	6	817	72.61%	40.00%	#DIV/0!	71.98%	1060	27	-41	1035	5.35%	2.31%	-26.97%	4.89%	52.25%	54.34%	2	0	1	1	1	1	1	1	15	2	-	15	0	1	3	0	5	1	3	5		
Dir 1	BH.12	Brays Road	EB	33.33%	-19.23%	-39	1	1	-36	-11.75%	16.67%	#DIV/0!	-10.65%	-580	-9	6	-584	-14.25%	-4.02%	42.86%	-13.56%	49.74%	42.97%	2	0	0	3	2	0	1	2	2	0	-	1	7	0	0	7	7	0	1	7		
Dir 1	BH.13	Dohles Rocks Road	EB	0.00%	44.27%	171	-7	6	164	31.38%	-25.00%	#DIV/0!	28.32%	1013	-90	-14	794	10.33%	-11.80%	-9.66%	7.33%	50.89%	59.99%	10	1	0	9	3	2	1	3	5	1	-	5	1	1	3	1	7	2	1	5		
Dir 1	13.03	BRISBANE - WOODFORD ROAD	SB	5.26%	16.38%	-391	-10	7	-394	-13.06%	-6.71%	33.33%	-12.45%	528	-37	40	533	2.76%	-2.20%	10.72%	2.52%	49.89%	52.63%	7	1	0	6	1	0	1	1	5	1	1	5	2	0	1	3	3	1	1	3		
Dir 1	13.04	Linkfield Road	EB	-62.79%	-23.78%	-310	-31	-9	-351	-14.12%	-28.70%	-56.25%	-15.12%	-1755	-74	-72	-1918	-11.54%	-5.29%	-23.15%	-11.32%	58.34%	52.83%	9	1	4	10	5	0	2	5	5	2	2	5	2	0	0	2	10	1	3	11		
Dir 1 Total				-11.41%	6.27%	2580	48	81	2687	24.08%	10.19%	142.11%	23.85%	-1308	-1679	32	-3253	-0.90%	-13.71%	1.49%	-2.04%			8	4	2	6	4	6	2	6	17	2	6	17	12	10	3	15	2	11	0	6		
Dir 2	BH.01	Pumicestone Road	WB	42.86%	17.70%	169	7	12	185	85.35%	233.33%	#DIV/0!	90.69%	-600	-81	46	-647	-17.80%	-43.55%	117.95%	-17.94%	52.28%	52.64%	2	1	1	2	10	4	2	10	7	2	-	8	7	4	3	7	8	5	4	8		
Dir 2	BH.02	D'Agular Highway	WB	-11.11%	45.10%	650	38	20	705	138.30%	122.58%	285.71%	137.96%	489	-113	11	360	6.15%	-10.84%	-2.54%	3.82%	46.10%	46.35%	10	1	1	9	2	2	0	3	16	4	3	17	5	3	1	6	4	3	0	3		
Dir 2	BH.03	Caboolture Connection Road	WB	0.00%	-4.30%	224	20	15	256	28.94%	57.14%	1500.00%	31.49%	-1050	36	22	-1003	-6.34%	3.27%	27.16%	-5.65%	51.88%	51.25%	2	1	0	1	5	0	1	5	5	2	4	6	5	3	0	0	5	6	1	2	5	
Dir 2	BH.04	Buchanan Road	WB	80.00%	-0.84%	274	6	6	287	49.46%	54.55%	600.00%	50.80%	-273	-70	30	-316	-2.63%	-16.87%	63.83%	-2.91%	51.87%	54.41%	0	1	1	0	2	1	1	2	7	1	2	8	5	3	1	5	2	3	3	2		
Dir 2	BH.05	Uhlmann Road	WB	-30.77%	1.39%	357	10	1	369	55.09%	50.00%	14.29%	54.67%	735	-16	-60	586	6.81%	-2.32%	-29.27%	4.98%	47.79%	44.32%	1	0	1	0	1	0	3	0	9	1	0	9	3	2	1	2	5	0	3	4		
Dir 2	BH.06	Arthur Drewett Drive (west of Bruce)	WB	#DIV/0!	-14.69%	106	-1	0	105	77.94%	-16.67%	#DIV/0!	74.47%	-669	-158	1	-841	-21.59%	-66.11%	33.33%	-25.06%	49.36%	54.71%	1	4	-	2	8	8	0	10	5	0	-	5	8	4	-	8	9	9	1	11		
Dir 2	BH.07	New Settlement Road	WB	-3.85%	-1.67%	508	4	13	525	58.59%	6.67%	433.33%	56.45%	896	-82	7	752	7.74%	-6.59%	3.74%	5.75%	45.42%	40.45%	0	0	0	0	2	1	0	1	11	0	3	11	2	2	0	1	6	2	0	5		
Dir 2	BH.08	Frawley Road (west of Bruce Highway)	WB	-81.82%	-55.39%	53	2	1	56	160.61%	100.00%	#DIV/0!	160.00%	-1083	-256	-55	-1400	-65.44%	-75.07%	-79.71%	-67.63%	49.39%	35.69%	4	5	-	7	21	-	-	23	5	-	-	13	-	-	16	23	12	6	27			
Dir 2	BH.09	Boundary Road	WB	-12.82%	21.41%	299	19	16	335	55.78%	126.67%	800.00%	60.69%	312	12	13	318	3.69%	1.42%	6.57%	3.34%	49.88%	50.10%	5	0	1	5	0	1	0	0	8	3	4	9	2	2	0	3	2	0	1	2		
Dir 2	BH.10	Plantation Road	WB	#DIV/0!	-3.43%	153	1	1	154	46.93%	9.09%	#DIV/0!	45.56%	-446	-147	7	-600	-9.52%	-55.68%	140.00%	-12.08%	49.05%	46.83%	0	3	-	1	5	5	1	6	5	0	-	5	6	0	6	5	8	2	6			
Dir 2	BH.11	Anzac Avenue	WB	-34.48%	-4.23%	8	19	5	31	0.51%	76.00%	500.00%	1.95%	-49	80	-28	-13	-0.25%	8.38%	-22.22%	-0.06%	47.75%	45.66%	1	0	1	1	0	0	0	0	2	2	1	1	1	2	1	0	2	2	0	2		
Dir 2	BH.12	Brays Road	WB	0.00%	6.09%	-64	-2	1	-65	-32.16%	-28.57%	#DIV/0!	-31.55%	-558	-107	-4	-676	-15.40%	-31.47%	-15.38%	-16.92%	50.26%	57.03%	1	1	0	1	4	3	1	5	4	1	-	3	7	3	0	7	7	4	1	8		
Dir 2	BH.13	Dohles Rocks Road	WB	-25.00%	-0.29%	1146	-7	9	1146	144.15%	-25.93%	#DIV/0!	139.25%	1103	-117	32	1004	10.66%	-16.91%	37.21%	9.02%	49.11%	40.01%	1	2	1	0	1	3	1	2	22	1	1	-	22	1	1	2	1	7	3	2	7	
Dir 2	13.03	BRISBANE - WOODFORD ROAD	NB	86.36%	4.31%	638	6	15	660	23.87%	4.65%	150.00%	23.47%	1461	94	99	1654	7.81%	7.56%	40.24%	8.19%	50.11%	47.37%	1	1	2	2	4	1	1	4	8	0	3	8	3	1	5	3	7	2	4	8		
Dir 2	13.04	Linkfield Road	WB	-21.05%	-4.70%	-589	-12	-19	-621	-21.20%	-7.89%	-61.29%	-20.97%	-991	-59	-85	-1146	-7.07%	-4.11%	-21.46%	-7.23%	41.66%	47.17%	1	1	1	2	3	1	3	4	8	1	3	9	0	0	1	0	6	1	3	7		
Dir 2 Total				-8.73%	1.89%	3932	110	96	4128	31.33%	20.60%	152.38%	31.38%	-723	-984	14	-1968	-0.50%	-8.92%	0.65%	-1.24%			3	2	1	2	8	4	2	9	23	3	6	24	7	7	1	9	1	7	0	3		
BH Total				-10.08%	4.15%	6512	158	177	6815	27.99%	15.72%	147.50%	27.91%	-2031	-2663	46	-5221	-0.70%	-11.44%	1.07%	-1.64%			8	5	2	6	9	7	0	11	28	3	9	28	14	12	2	17	3	13	0	7		
Dir 1	BR.01	Sturgeon Street	EB	-44.44%	-2.04%	-156	-22	-3	-182	-9.38%	-41.51%	-60.00%	-10.57%	-535	-125	-13	-689	-5.72%	-36.23%	-29.55%	-7.06%	54.00%	54.99%	0	2	1	1	2	3	1	2	3	2	1	3	3	3	1	4	4	5	2	5		
Dir 1	BR.02	CAPALABA - CLEVELAND ROAD	EB	17.65%	-1.38%	-38	-14	5	-47	-1.32%	-10.53%	45.45%	-1.55%	-111	-101	33	-178	-0.65%	-8.74%	27.73%	-0.97%	48.67%	48.63%	0	1	0	1	0	1	1	0	1	1	1	1	1	1	1	2	1	2	2	1		
Dir 1	BR.04	REDLAND BAY ROAD	EB	-24.14%	-3.34%	9	-49	8	-33	0.21%	-17.82%	53.33%	-0.72%	-130	-122	-11	-266	-0.72%	-8.02%	-6.25%	-1.34%	34.76%	33.17%	1	1	1	1	0	1	0	0	2	1	0	1	1	1	1	1	1	2	1	1		
Dir 1	BR.05	Woodlands Dr	EB	14.29%	-26.30%	-247	-6	1	-253	-42.96%	-28.57%	50.00%	-42.24%	-520	8	8	-514	-17.78%	4.65%	22.86%	-16.35%	47.49%	51.36%	5	1	0	5	4	0	0	4	8	1	0	8	2	1	2	2	7	0	1	7		
Dir 1 Total				-11.29%	-4.22%	-432	-91	11	-515	-4.59%	-18.88%	33.33%	-5.19%	-1296	-340	17	-1647	-2.73%	-10.64%	4.55%	-3.22%			2	1	1	3	2	2	0	2	3	3	1	4	2	3	1	2	4	4	1	5		
Dir 2	BR.01	Sturgeon Street	WB	-50.00%	-5.85%	-97	-11	2	-107	-5.81%	-36.67%	#DIV/0!	-6.29%	-656	-76	2	-752	-7.04%	-31.54%	8.33%	-7.83%	46.00%	45.01%	1	2	1	2	2	3	0	3	2	2	2	-	2	4	1	2	4	5	4	0	6	
Dir 2	BR.02	CAPALABA - CLEVELAND ROAD	WB	60.00%	-1.20%	-34	2	3	-29	-1.29%	2.06%	33.33%	-1.06%	-273	52	35	-187	-1.53%	5.22%	30.17%	-0.99%	51.33%	51.37%	1	0	1	0	0	1	1	0	0	0	1	0	1	1	2	1	1	2	1	1	2	1
Dir 2	BR.04	REDLAND BAY ROAD	WB	-3.33%	3.74%	25	15	0	40	1.28%	13.51%	0.00%	1.93%	319	122	0	442	1.82%	9.07%	0.00%	2.32%	65.24%	66.83%	1	1	0	2	2	1	0	2	1	1	0	1	0	1	0	0	2	2	0	2		
Dir 2	BR.05	Woodlands Dr	WB	0.00%	-36.86%																																								

Dir Group	SL Point	Name	Dir	% Diff AM HCV	% Diff AM Total	Diff PM Car	Diff PM MCV	Diff PM HCV	Diff PM Total	% Diff PM Car	% Diff PM MCV	% Diff PM HCV	% Diff PM Total	Diff 24h Car	Diff 24h MCV	Diff 24h HCV	Diff 24h Total	% Diff 24h Car	% Diff 24h MCV	% Diff 24h HCV	% Diff 24h Total	Directional Split AM - Obs	Directional Split AM - Model	GEH AM Car	GEH AM MCV	GEH AM HCV	GEH AM Total	GEH OP Car	GEH OP MCV	GEH OP HCV	GEH OP Total	GEH PM Car	GEH PM MCV	GEH PM HCV	GEH PM Total	GEH EV Car	GEH EV MCV	GEH EV HCV	GEH EV Total	GEH 24hr Car	GEH 24hr MCV	GEH 24hr HCV	GEH 24hr Total	
Dir 2	IC.3	Thomas Street	WB	-100.00%	-23.78%	-293	-26	-4	-324	-31.88%	-52.00%	-100.00%	-33.26%	-1567	-155	-18	-1745	-28.32%	-46.97%	-85.71%	-29.63%	59.18%	61.32%	6	1	1	6	11	4	3	12	7	3	2	8	7	6	1	8	16	7	4	17	
Dir 2	IC.4	CUNNINGHAM HIGHWAY (PSWICH -	SB	-3.40%	-2.26%	-53	-10	3	-60	-1.85%	-5.03%	2.70%	-1.89%	-327	-51	12	-366	-2.23%	-3.17%	1.03%	-2.10%	42.21%	41.85%	1	0	0	1	2	0	0	1	1	1	0	1	1	2	0	1	2	1	0	2	
Dir 2	IC.5	SWANBANK ROAD	WB	-49.15%	143.80%	123	0	-14	109	121.78%	0.00%	-50.00%	73.65%	1168	6	-169	1003	263.06%	2.96%	-46.17%	99.01%	43.06%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dir 2	IC.6	CENTENARY MOTORWAY	WB	-6.67%	0.00%	-47	-11	-3	-61	-5.01%	-14.29%	-25.00%	-5.93%	-277	-19	-7	-302	-6.68%	-4.08%	-6.54%	-6.40%	46.11%	47.40%	0	0	0	0	3	0	0	3	1	1	1	1	2	0	0	2	3	1	0	3	
Dir 2 Total				-12.24%	-1.75%	-245	-50	0	-297	-3.29%	-11.99%	0.00%	-3.70%	-1032	-163	-49	-1263	-2.50%	-4.87%	-2.85%	-2.73%			1	1	1	1	3	1	2	4	2	2	0	2	0	2	2	2	1	4	2	1	4
IC Total				-11.09%	-1.43%	-318	-95	-6	-421	-2.24%	-11.39%	-2.11%	-2.75%	-1379	-792	-170	-2383	-1.68%	-10.40%	-4.87%	-2.56%			0	1	2	1	2	3	3	4	2	2	0	2	2	6	2	3	3	7	2	6	
Dir 1	PB.01	Port Drive	SB	-23.79%	-4.27%	428	19	-54	393	61.49%	82.61%	-27.41%	42.86%	1885	-83	-464	1324	55.13%	-19.21%	-21.16%	21.84%	32.29%	35.18%	2	6	3	1	17	17	1	10	10	2	3	8	9	8	16	3	20	3	7	11	
Dir 1	PB.02	Pritchard Road	WB	600.00%	-6.08%	97	-5	3	95	29.48%	-27.78%	#DIV/0!	27.38%	-180	-156	41	-299	-3.99%	-44.07%	341.67%	-6.12%	80.75%	76.96%	1	3	2	2	1	4	4	2	4	1	-	3	3	4	3	4	2	7	5	3	
Dir 1	PB.03	Lindum Road	WB	83.33%	-1.45%	198	-5	2	194	49.62%	-21.74%	66.67%	45.54%	632	-31	73	674	14.21%	-8.49%	137.74%	13.85%	75.92%	69.43%	1	1	1	0	6	0	2	6	6	1	1	6	2	2	5	2	6	1	5	7	
Dir 1	PB.04	Hemmant Road	NB	16.67%	-9.04%	-13	-1	3	-11	-6.22%	-11.11%	#DIV/0!	-5.07%	-237	-54	-2	-298	-8.98%	-28.88%	-4.44%	-10.37%	78.32%	75.93%	2	1	0	2	0	3	2	1	1	0	-	1	5	0	2	5	3	3	0	4	
Dir 1	20.39	Port of Brisbane Motorway	EB	-2.29%	3.84%	212	15	7	236	13.41%	20.00%	3.32%	12.65%	642	134	249	1038	6.25%	11.06%	8.14%	7.15%	49.66%	51.53%	1	1	0	1	1	2	3	4	4	1	0	4	3	2	1	3	4	3	0	6	
Dir 1	20.40	Lytton Rd (PORT OF BRISBANE ROAD)	EB	-14.16%	-3.65%	-53	-8	-6	-67	-4.92%	-10.00%	-13.64%	-5.57%	-346	-140	-109	-594	-5.71%	-11.79%	-14.99%	-7.45%	38.18%	38.13%	0	1	1	1	2	2	2	4	1	1	1	1	2	1	1	3	3	3	3	5	
Dir 1 Total				-9.74%	-2.21%	869	15	-45	840	20.25%	6.58%	-9.89%	16.88%	2396	-330	-212	1845	7.64%	-8.83%	-3.48%	4.48%			1	1	2	1	9	7	3	6	9	1	2	8	2	1	6	0	9	4	2	6	
Dir 2	PB.01	Port Drive	NB	66.09%	-15.90%	-262	-28	-120	-410	-98.13%	-100.00%	-98.36%	-98.09%	-3203	-336	864	-2690	-72.89%	-41.84%	45.43%	-37.81%	67.71%	64.82%	10	2	6	4	19	20	8	10	16	5	11	20	37	3	12	21	43	9	13	25	
Dir 2	PB.02	Pritchard Road	EB	#DIV/0!	17.89%	-64	-12	11	-68	-4.65%	-19.35%	#DIV/0!	-4.72%	-172	-78	121	-141	-3.89%	-22.48%	6050.00%	-2.94%	19.25%	23.04%	2	0	-	2	4	3	8	4	1	1	-	1	2	0	-	2	3	11	1		
Dir 2	PB.03	Lindum Road	EB	157.14%	36.80%	81	0	3	82	7.85%	0.00%	50.00%	7.74%	900	24	51	964	22.62%	13.56%	104.08%	22.87%	24.08%	30.57%	4	0	2	5	7	1	1	7	2	0	1	2	6	1	5	6	10	1	4	10	
Dir 2	PB.04	Hemmant Road	SB	300.00%	4.13%	65	3	7	72	7.92%	8.33%	700.00%	8.36%	249	-11	25	256	9.25%	-5.56%	92.59%	8.75%	21.68%	24.07%	0	0	2	0	2	1	0	1	2	0	2	2	3	0	-	3	1	3	0	4	
Dir 2	20.39	Port of Brisbane Motorway	WB	5.34%	-3.61%	-111	-8	-11	-131	-6.13%	-12.12%	-5.82%	-6.34%	-916	-301	-16	-1228	-9.41%	-24.20%	-0.57%	-8.92%	50.34%	48.47%	2	1	1	1	6	7	0	7	2	1	1	2	3	2	0	3	7	6	0	8	
Dir 2	20.40	Lytton Rd (PORT OF BRISBANE ROAD)	WB	5.93%	-3.47%	139	7	24	170	12.91%	9.09%	32.88%	13.85%	143	254	189	585	1.91%	20.99%	20.52%	6.09%	61.82%	61.87%	1	0	0	1	0	5	4	3	3	1	2	2	3	1	2	2	1	5	4	4	
Dir 2 Total				28.96%	-2.06%	-152	-38	-86	-285	-2.38%	-13.19%	-21.99%	-4.03%	-2999	-448	1234	-2254	-9.17%	-11.26%	21.69%	-5.32%			4	0	5	1	6	8	7	5	1	2	3	2	12	2	9	7	12	5	11	8	
PB Total				8.63%	-2.14%	717	-23	-131	555	6.72%	-4.46%	-15.48%	4.61%	-603	-778	1022	-409	-0.94%	-10.08%	8.68%	-0.49%			3	1	2	2	2	11	7	1	5	1	3	4	6	2	3	4	2	6	7	1	
Dir 1	PM.01	O'Keefe Street	EB	-13.33%	-39.15%	-262	2	11	-250	-12.01%	3.03%	550.00%	-11.11%	-2359	-226	22	-2573	-22.68%	-38.83%	30.56%	-23.26%	35.31%	27.17%	11	2	0	11	8	4	2	9	4	0	3	4	13	8	2	15	17	7	2	18	
Dir 1	PM.02	Cornwall Street	EB	170.00%	10.10%	-40	-9	2	-47	-1.24%	-26.47%	100.00%	-1.44%	268	-58	113	315	1.52%	-10.16%	168.66%	1.72%	-	-	3	2	3	3	0	4	2	1	0	1	1	1	1	1	10	2	1	2	7	2	
Dir 1	PM.03	Juliette Street	N/A	#DIV/0!	#DIV/0!	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0	0	0	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.00%	0.00%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dir 1	PM.04	Lewisham Street	NB	400.00%	-1.32%	142	-2	6	140	12.96%	-8.00%	#DIV/0!	12.42%	270	-61	40	171	3.70%	-25.96%	1333.33%	2.25%	57.38%	61.03%	0	2	2	0	1	1	4	1	3	0	-	3	0	3	3	0	2	3	6	1	
Dir 1	PM.05	Esher Street	EB	#DIV/0!	4.86%	26	-9	2	15	3.08%	-26.47%	#DIV/0!	1.70%	-5	-44	27	-30	-0.11%	-24.04%	2700.00%	-0.64%	51.82%	54.56%	1	0	-	1	1	2	-	1	1	1	-	0	1	2	2	1	0	2	5	0	
Dir 1	PM.06	Weller Road	EB	50.00%	10.02%	171	1	2	174	26.35%	5.56%	200.00%	26.05%	631	29	25	661	14.92%	21.17%	625.00%	15.04%	63.30%	53.11%	2	1	0	2	3	2	4	3	4	0	1	4	5	1	-	5	7	2	4	7	
Dir 1	PM.07	Marshall Road	EB	666.67%	6.34%	73	10	13	96	4.20%	52.63%	1300.00%	5.46%	569	50	157	763	6.67%	10.87%	1308.33%	8.47%	41.10%	43.24%	1	0	4	2	3	1	8	4	1	1	3	2	3	1	7	4	4	2	12	6	
Dir 1	PM.08	Mains Rd (NATHAN CONNECTION AR	NB	-80.00%	0.90%	37	-25	-4	8	1.27%	-20.66%	-80.00%	0.26%	231	-200	-52	-19	1.16%	-16.85%	-74.29%	-0.09%	45.09%	45.09%	1	2	2	0	1	3	3	0	0	2	2	0	0	1	4	0	1	4	0	6	0
Dir 1	PM.09	Kessels Rd (GRIFFITH ARTERIAL ROAD	EB	26.87%	0.74%	107	31	12	150	2.76%	26.96%	54.55%	3.74%	572	192	87	852	2.27%	11.39%	14.12%	3.09%	51.53%	50.93%	0	1	1	0	2	2	2	3	1	2	2	2	2	1	1	2	3	3	2	4	
Dir 1	PM.10	Logan Rd (LOGAN SUB-ARTERIAL ROA	NB	#DIV/0!	44.80%	4063	50	13	1609	#DIV/0!	#DIV/0!	#DIV/0!	63.93%	27186	624	180	7762	#DIV/0!	#DIV/0!	#DIV/0!	38.37%	55.94%	59.33%	-	-	-	-	17	-	-	-	17	-	-	20	-	-	19	-	-	35			
Dir 1	PM.11	Miles Platting Road	EB	50.00%	0.78%	-413	5	4	-407	-17.29%	4.67%	26.67%	-16.19%	-565	-22	40	-561	-4.99%	-2.54%																									



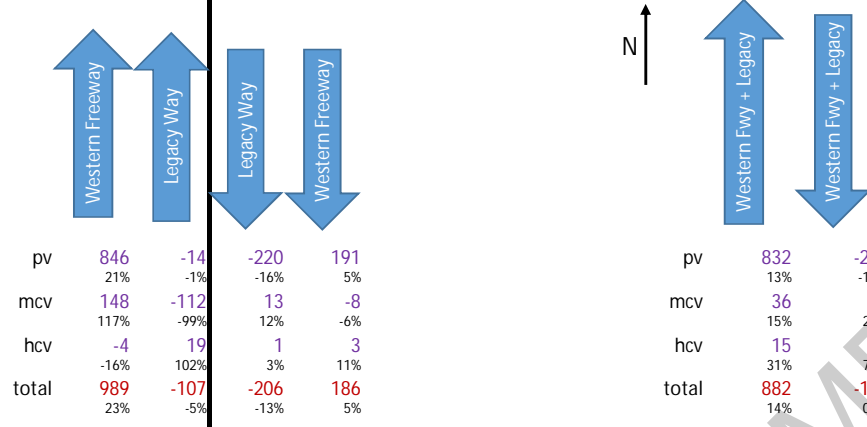


**A.2 Centenary Motorway corridor and interchange validation diagrams**

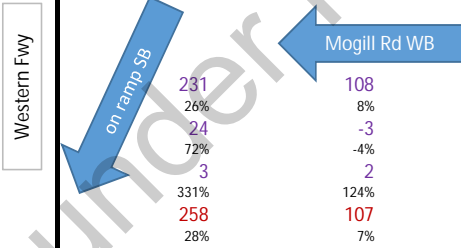
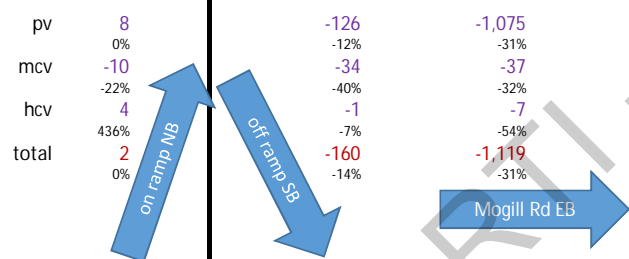
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AM peak Differences: "modelled" - "observed"

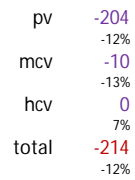
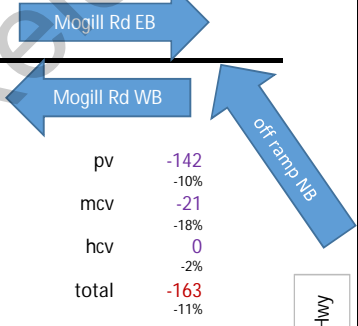
1. Legacy Way split

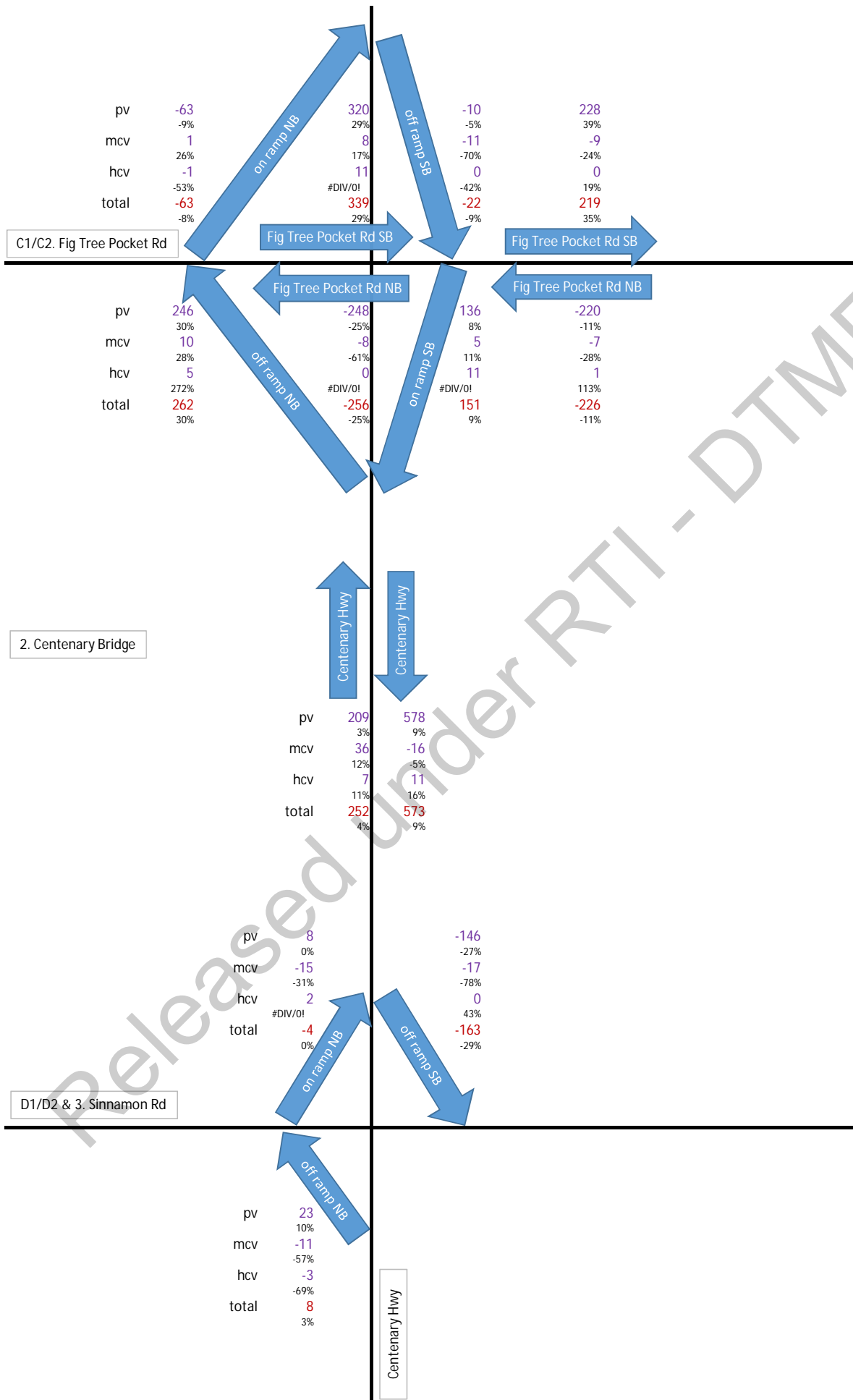


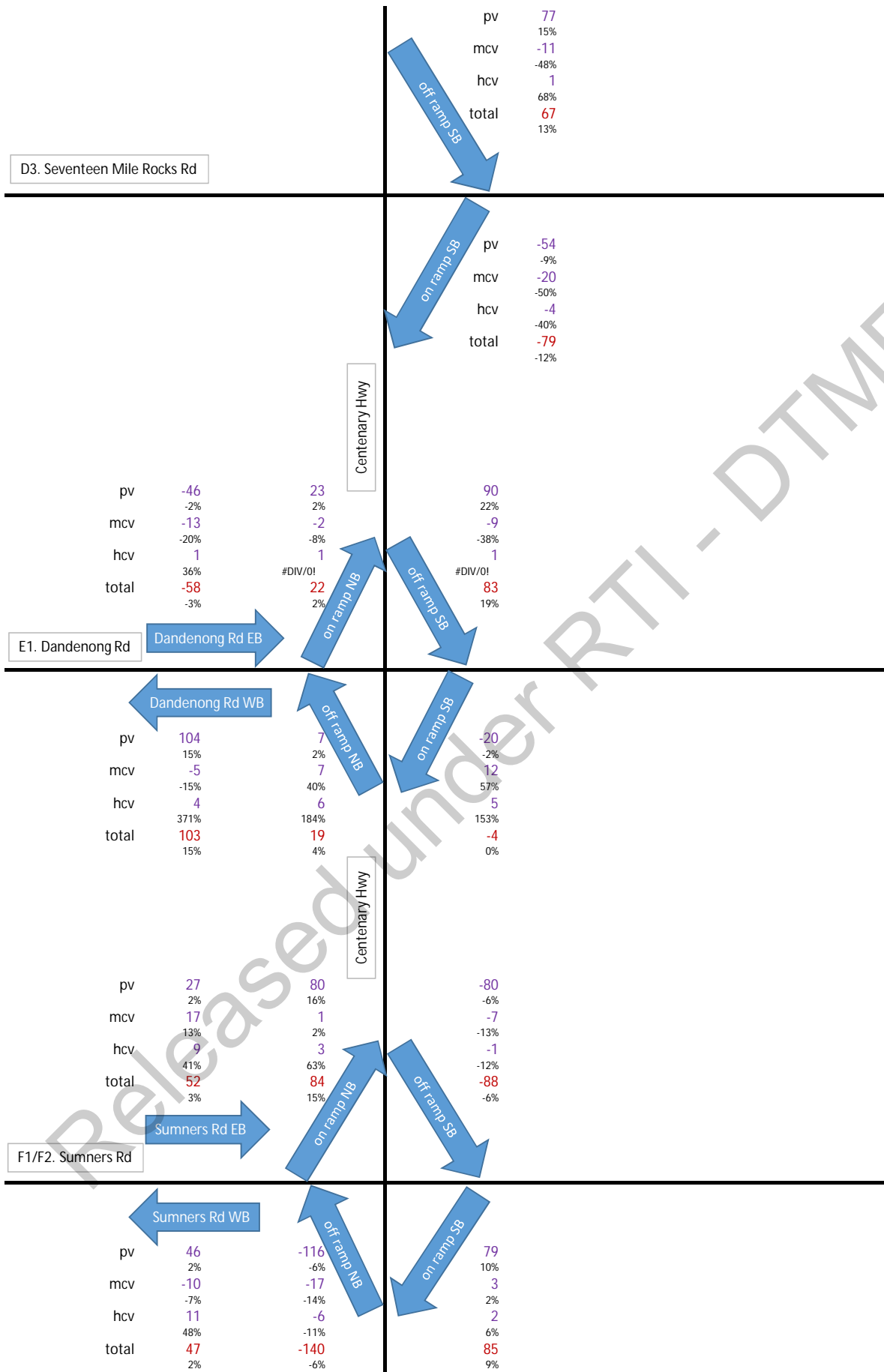
A1/A2. Mogill Rd

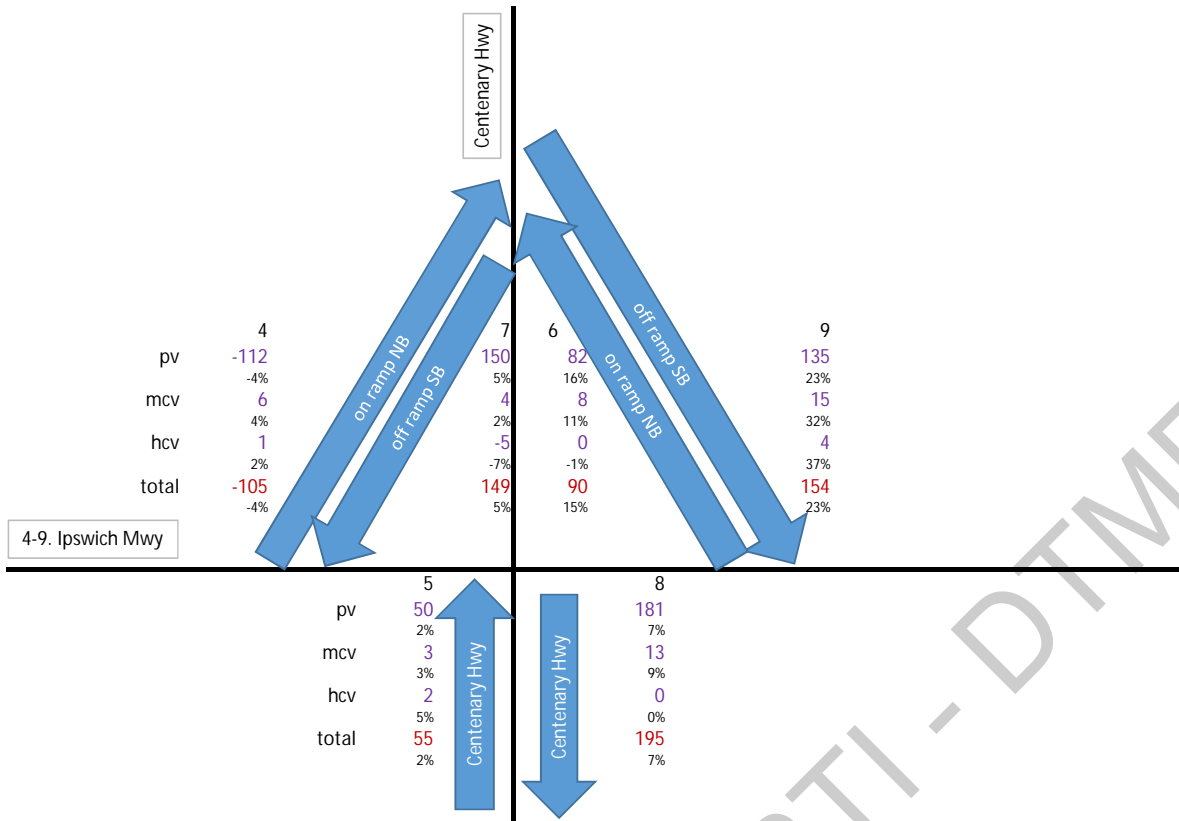


B1. Mogill Rd









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PM peak Differences: "modelled" - "observed"

1. Legacy Way split

	Western Freeway	Legacy Way	Legacy Way	Western Freeway
pv	21 0%	256 19%	75 4%	-257 -5%
mcv	97 135%	-66 -100%	-75 -100%	67 53%
hcv	-2 -14%	9 57%	11 64%	1 3%
total	115 3%	199 14%	11 1%	-190 -4%

	Western Fwy + Legacy	Western Fwy + Legacy
pv	277 5%	-182 -3%
mcv	30 22%	-8 -4%
hcv	7 21%	12 35%
total	314 5%	-178 -3%

pv	124 9%	-202 -9%	-955 -34%
mcv	12 36%	16 97%	-40 -52%
hcv	2 69%	2 112%	-3 -61%
total	138 10%	-184 -8%	-999 -35%

Mogill Rd EB	111 3%
Mogill Rd WB	-21 -18%
total	89 2%

A1/A2. Mogill Rd

	Western Fwy	on ramp SB	on ramp SB
pv	445 27%	111 3%	111 3%
mcv	20 33%	-21 -18%	-21 -18%
hcv	-5 -42%	-1 -14%	-1 -14%
total	460 27%	89 2%	89 2%

pv	-133 -7%
mcv	-1 -2%
hcv	-5 -53%
total	-140 -7%

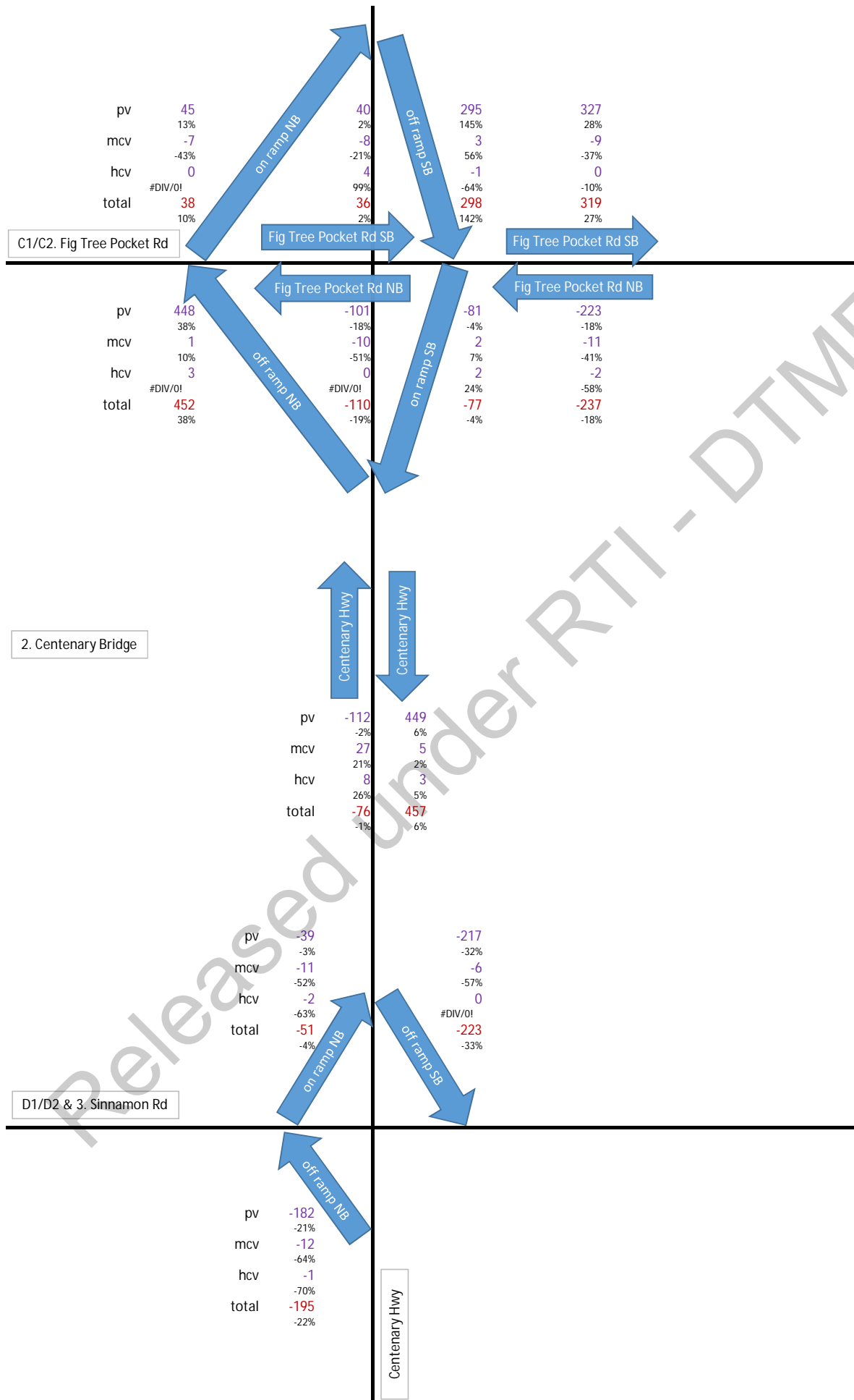
B1. Mogill Rd

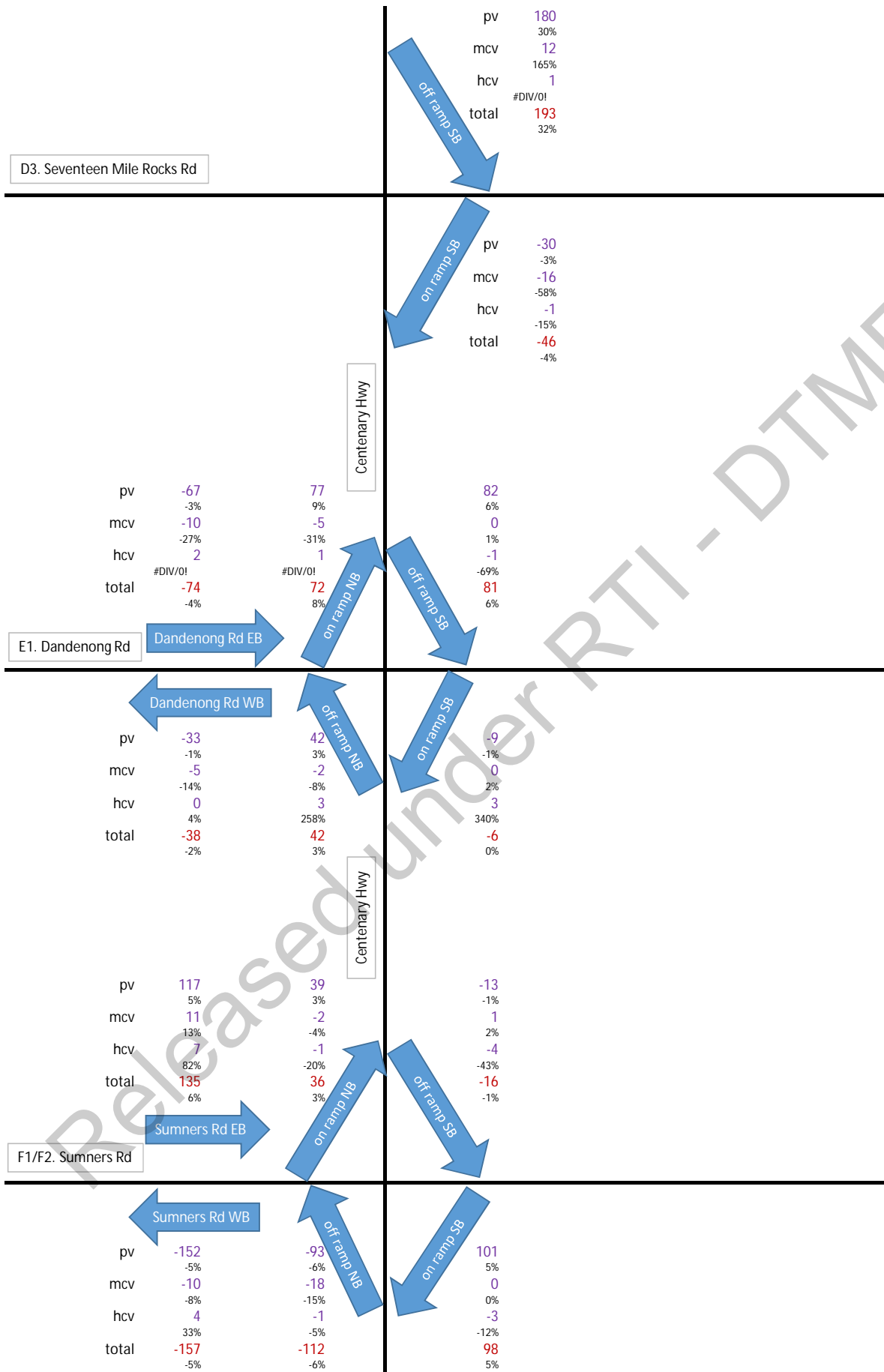
Mogill Rd EB	111 3%
Mogill Rd WB	-21 -18%
total	89 2%

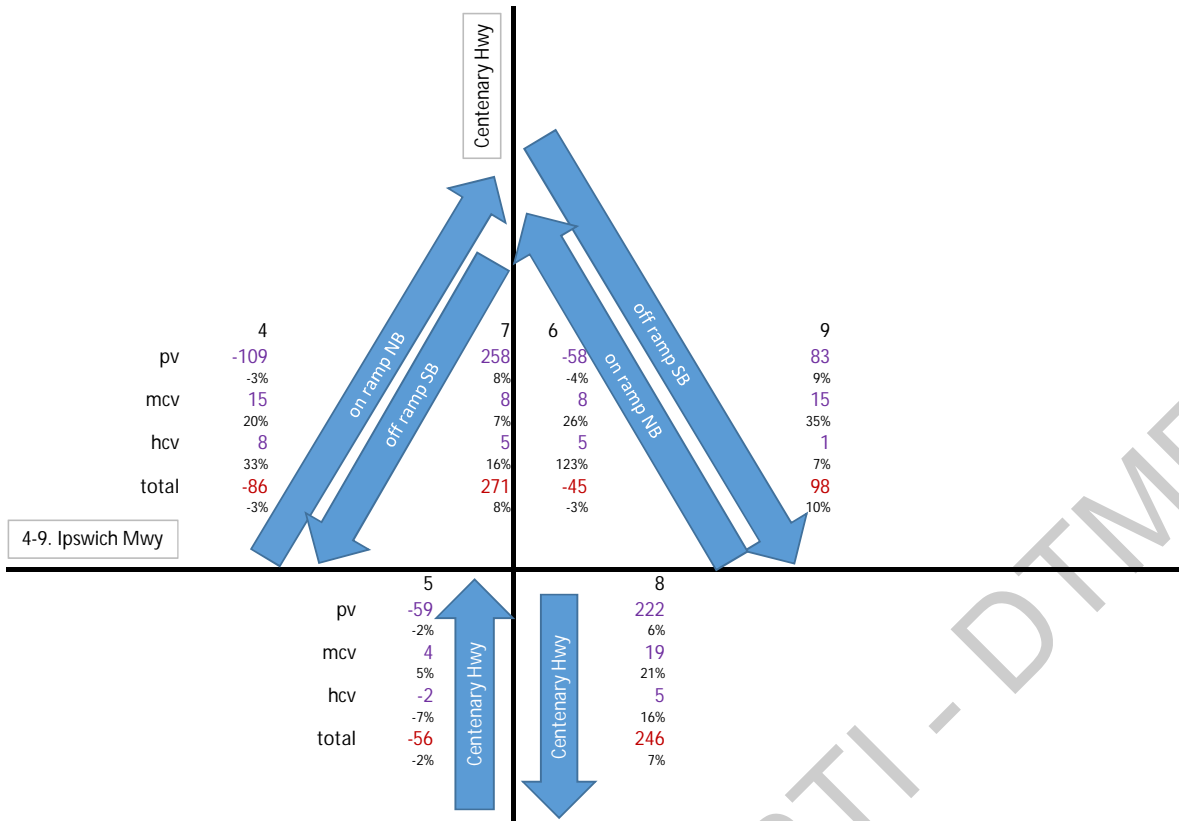
pv	-356 -9%
mcv	-4 -6%
hcv	-2 -22%
total	-362 -9%

pv	-548 -30%
mcv	-12 -30%
hcv	-5 -52%
total	-565 -30%

Centenary Hwy







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24 Hr Differences: "modelled" - "observed"

1. Legacy Way split

	Western Freeway	Legacy Way	Legacy Way	Western Freeway
pv	2,126 7%	-786 -8%	-988 -10%	585 2%
mcv	188 16%	-67 -9%	34 5%	-13 -1%
hcv	-41 -16%	73 29%	63 25%	-5 -2%
total	2,273 7%	-780 -7%	-891 -9%	567 2%

	Western Fwy + Legacy	Western Fwy +
pv	1,340 3%	-403 -1%
mcv	121 6%	21 1%
hcv	32 6%	58 12%
total	1,493 4%	-324 -1%

total	1,165 10%	819 6%
	on ramp NB	off ramp SB

A1/A2. Mogill Rd

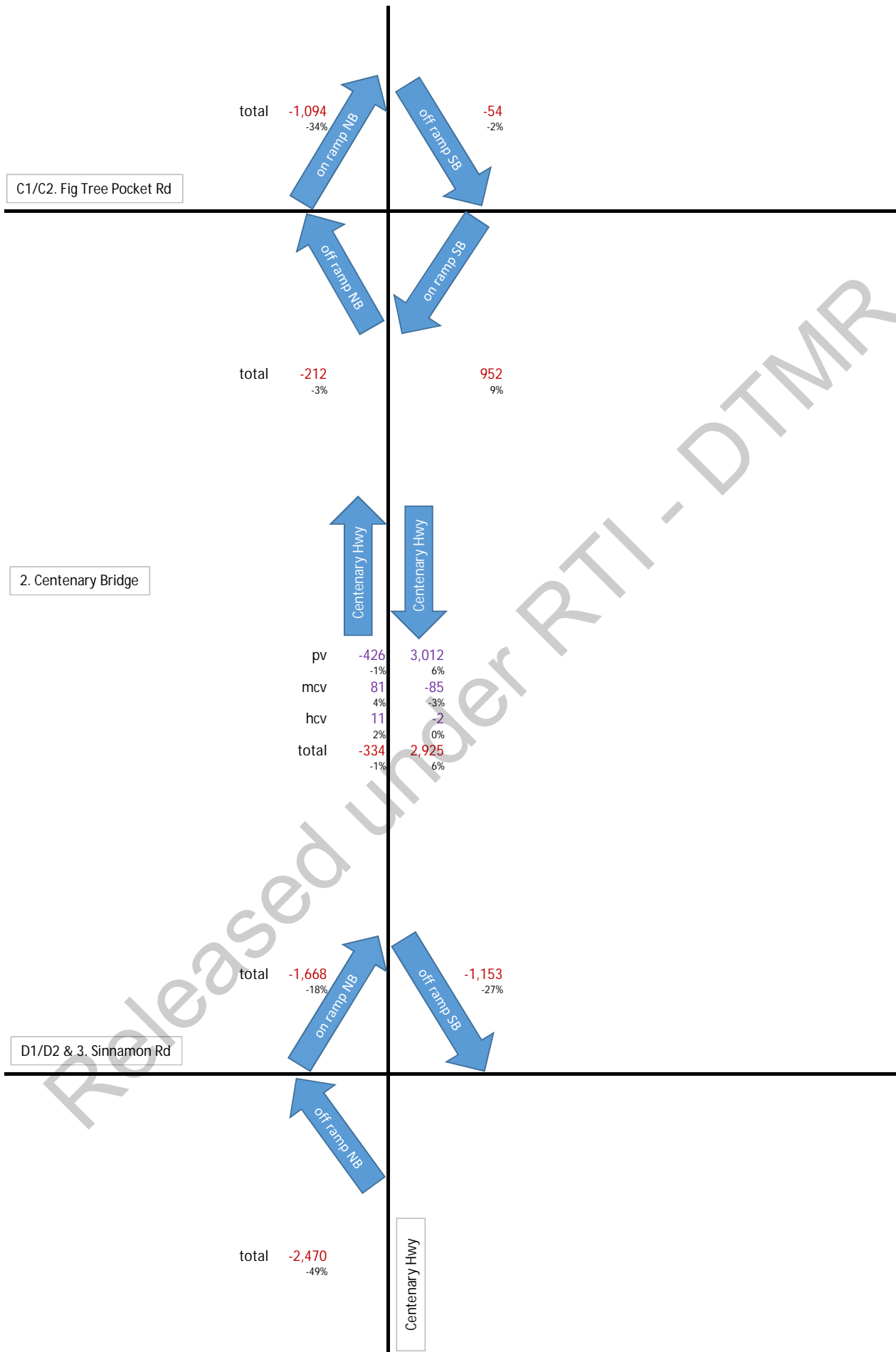
total	3,101 31%
	Western Fwy
	on ramp SB

B1.

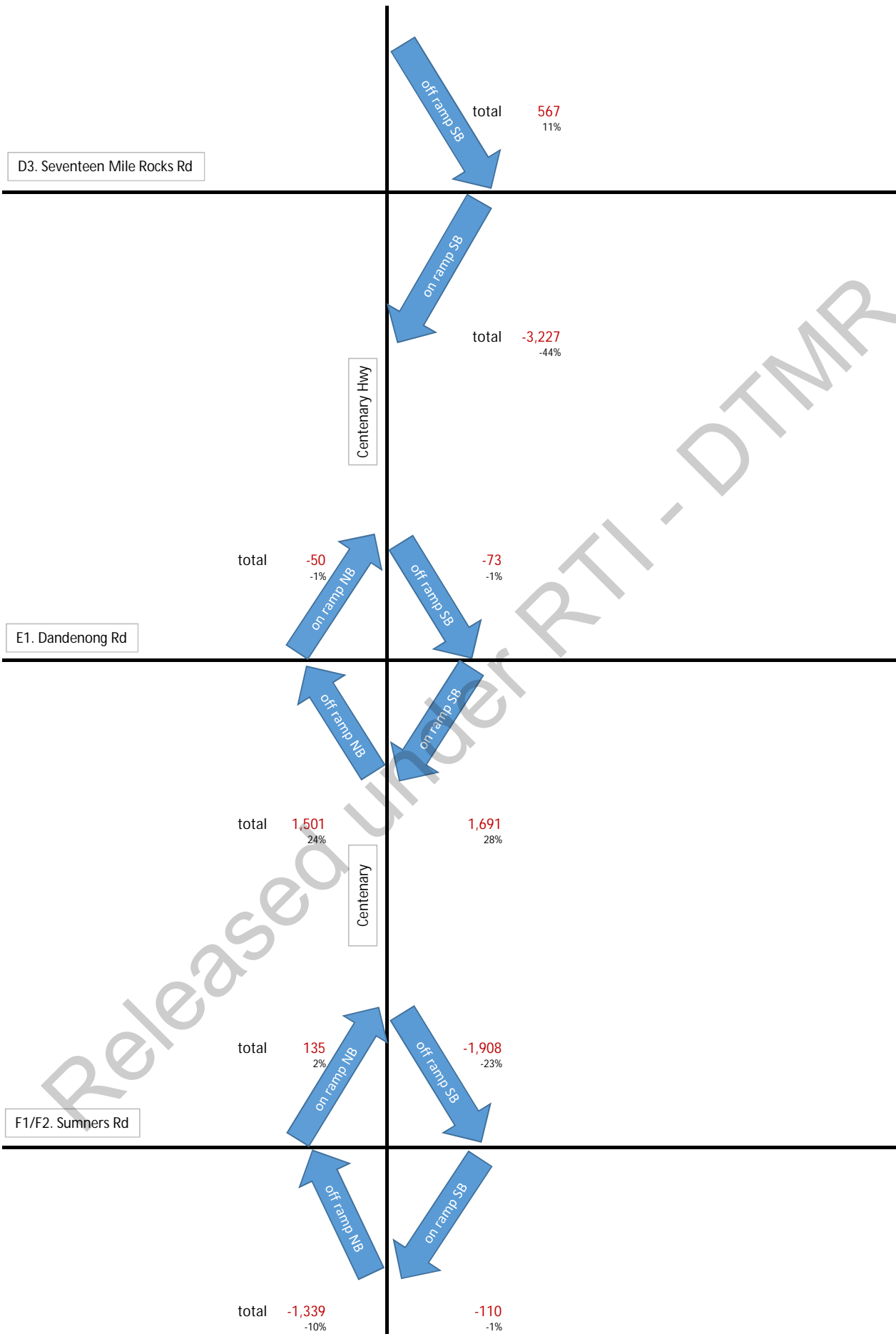
total	-356 -3%
	off ramp NB
	Centenary Hwy

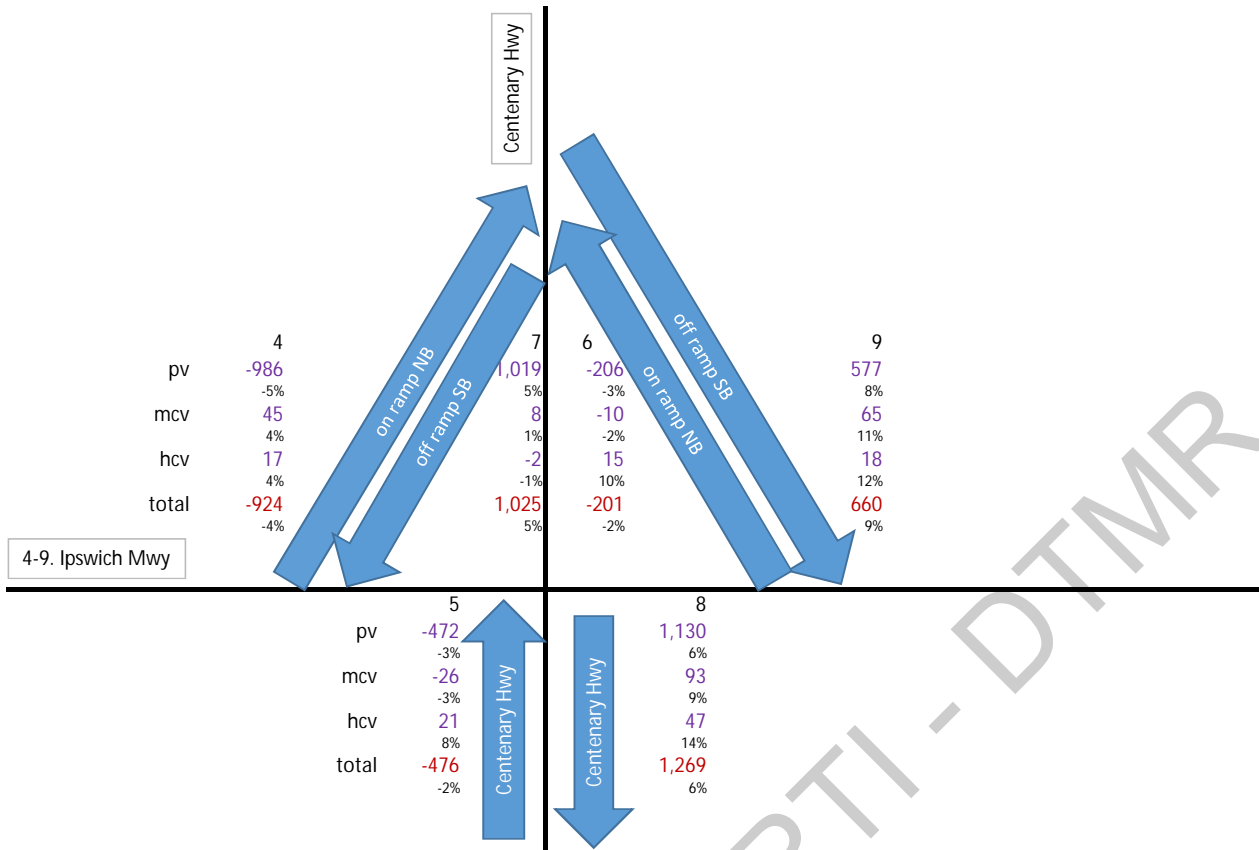
Released under RTI - DTMR





Released under RTI - DTMR





Released under RTI - DTMR

## Appendix B. Toll fares and ASC values

Released under RTI - DTMR

2016 Validation toll fares and ASC values

Route	Direction	Toll fare (\$)			Toll fare (mins)			Original Toll fare (\$)			AM ASC			Original AM ASC			OP ASC			Original OP ASC			PM ASC			Original PM ASC			EV ASC			Original EV ASC		
		PV	MCV	HCV	PV	MCV	HCV	PV	MCV	HCV	PV	MCV	HCV	PV	MCV	HCV	PV	MCV	HCV	PV	MCV	HCV	PV	MCV	HCV	PV	MCV	HCV	PV	MCV	HCV			
Logan Motorway at Heathwood	EB	1.69	4.47	4.47	9.04	11.04	4.58	1.79	2.68	4.74	-4.80	-5.83	-4.58	-5.74	-3.90	-3.90	-7.30	-8.58	-4.58	-7.18	-3.90	-3.90	-5.05	-7.83	-4.58	-5.74	-3.90	-3.90	-7.30	-8.58	-4.58	-7.18	-3.90	-3.90
	WB	1.69	4.47	4.47	9.04	11.04	4.58	1.79	2.68	4.74	-5.25	-6.83	-4.58	-5.74	-3.90	-3.90	-7.30	-8.58	-4.58	-7.18	-3.90	-3.90	-5.05	-6.83	-4.58	-5.74	-3.90	-3.90	-7.30	-8.58	-4.58	-7.18	-3.90	-3.90
Logan Motorway ramp at Heathwood	EB	1.69	4.47	4.47	9.04	11.04	4.58	1.79	2.68	4.74	-4.80	-5.83	-4.58	-5.74	-3.90	-3.90	-7.30	-8.58	-4.58	-7.18	-3.90	-3.90	-5.05	-7.83	-4.58	-5.74	-3.90	-3.90	-7.30	-8.58	-4.58	-7.18	-3.90	-3.90
	WB	1.69	4.47	4.47	9.04	11.04	4.58	1.79	2.68	4.74	-5.25	-6.83	-4.58	-5.74	-3.90	-3.90	-7.30	-8.58	-4.58	-7.18	-3.90	-3.90	-5.05	-6.83	-4.58	-5.74	-3.90	-3.90	-7.30	-8.58	-4.58	-7.18	-3.90	-3.90
Logan Motorway at Paradise Road	EB	1.69	4.47	4.47	9.04	11.04	4.58	1.79	2.68	4.74	-5.03	-4.40	-3.81	-5.74	-3.90	-3.90	-6.83	-6.40	-4.58	-7.18	-3.90	-3.90	-5.13	-4.40	-3.81	-5.74	-3.90	-3.90	-6.83	-6.40	-4.58	-7.18	-3.90	-3.90
	WB	1.69	4.47	4.47	9.04	11.04	4.58	1.79	2.68	4.74	-5.23	-4.40	-3.81	-5.74	-3.90	-3.90	-6.83	-6.40	-4.58	-7.18	-3.90	-3.90	-5.13	-4.40	-3.81	-5.74	-3.90	-3.90	-6.83	-6.40	-4.58	-7.18	-3.90	-3.90
Logan Motorway at Loganlea	EB	1.02	2.72	2.72	5.45	6.72	2.78	1.09	1.63	2.89	-2.11	-2.61	-1.86	-2.45	-1.95	-1.95	-2.41	-6.58	-2.78	-2.74	-1.95	-1.95	-2.11	-2.61	-1.86	-2.45	-1.95	-1.95	-2.41	-6.58	-2.78	-2.74	-1.95	-1.95
	WB	1.02	2.72	2.72	5.45	6.72	2.78	1.09	1.63	2.89	-2.11	-2.61	-1.86	-2.45	-1.95	-1.95	-2.41	-6.61	-2.78	-2.74	-1.95	-1.95	-2.11	-2.61	-1.86	-2.45	-1.95	-1.95	-2.41	-6.61	-2.78	-2.74	-1.95	-1.95
Logan Motorway ramp at Loganlea	EB	1.02	2.72	2.72	5.45	6.72	2.78	1.09	1.63	2.89	-2.11	-2.61	-1.86	-2.45	-1.95	-1.95	-2.41	-6.58	-2.78	-2.74	-1.95	-1.95	-2.11	-2.61	-1.86	-2.45	-1.95	-1.95	-2.41	-6.58	-2.78	-2.74	-1.95	-1.95
	WB	1.02	2.72	2.72	5.45	6.72	2.78	1.09	1.63	2.89	-2.11	-2.61	-1.86	-2.45	-1.95	-1.95	-2.41	-6.61	-2.78	-2.74	-1.95	-1.95	-2.11	-2.61	-1.86	-2.45	-1.95	-1.95	-2.41	-6.61	-2.78	-2.74	-1.95	-1.95
Gateway Motorway at Kuraby	NB	1.60	4.23	4.23	8.56	10.44	4.33	1.69	2.54	4.49	-6.30	-5.37	-4.33	-6.78	-3.90	-3.90	-7.05	-7.37	-4.33	-7.23	-3.90	-3.90	-6.30	-5.37	-4.33	-6.78	-3.90	-3.90	-7.05	-7.37	-4.33	-7.23	-3.90	-3.90
	SB	1.60	4.23	4.23	8.56	10.44	4.33	1.69	2.54	4.49	-6.30	-5.37	-4.33	-6.78	-3.90	-3.90	-7.05	-7.37	-4.33	-7.23	-3.90	-3.90	-6.30	-5.37	-4.33	-6.78	-3.90	-3.90	-7.05	-7.37	-4.33	-7.23	-3.90	-3.90
Gateway Bridge	NB	2.70	7.16	7.16	14.44	17.68	7.33	2.87	4.31	7.61	0.90	-6.71	-7.02	-1.14	-7.84	-7.84	-2.10	-8.91	-7.32	-1.71	-7.92	-7.92	0.40	-5.41	-6.27	-1.22	-8.37	-8.37	-2.10	-8.91	-7.32	-1.71	-7.92	-7.92
	SB	2.70	7.16	7.16	14.44	17.68	7.33	2.87	4.31	7.61	0.40	-6.86	-7.02	-2.91	-7.38	-7.38	-2.10	-8.91	-7.32	-2.83	-7.79	-7.79	2.90	-5.41	-6.27	-1.50	-8.29	-8.29	-2.10	-8.91	-7.32	-2.83	-7.79	-7.79
Clem7 Tunnel	NB	3.04	8.05	8.05	16.26	19.88	8.24	2.87	4.83	8.54	-8.00	-11.45	-4.43	-8.06	-8.17	-8.17	-11.00	-14.50	-2.93	-10.47	-8.93	-8.93	-10.65	-11.75	-5.48	-8.81	-8.41	-8.41	-11.00	-14.50	-2.93	-10.47	-8.93	-8.93
	SB	3.04	8.05	8.05	16.26	19.88	8.24	2.87	4.83	8.54	-10.50	-11.45	-4.43	-10.31	-9.14	-9.14	-10.90	-14.60	-2.93	-10.62	-9.13	-9.13	-9.95	-11.75	-5.43	-7.00	-8.39	-8.39	-10.90	-14.60	-2.93	-10.62	-9.13	-9.13
Go Between Bridge	NB	1.90	5.03	5.03	10.16	12.42	5.15	1.88	1.88	3.77	-8.00	-9.18	-5.09	-9.13	-4.98	-4.98	-8.40	-11.58	-3.69	-8.74	-4.35	-4.35	-7.15	-9.10	-5.09	-8.17	-4.59	-4.59	-8.40	-11.58	-3.69	-8.74	-4.35	-4.35
	SB	1.90	5.03	5.03	10.16	12.42	5.15	1.88	1.88	3.77	-7.65	-9.18	-5.14	-8.73	-4.79	-4.79	-8.76	-11.68	-3.79	-9.13	-3.97	-3.97	-9.20	-9.50	-5.09	-8.30	-4.83	-4.83	-8.76	-11.68	-3.79	-9.13	-3.97	-3.97
Airport Link (South to NE)	NB	3.26	8.65	8.65	17.43	21.36	8.85	2.01	3.46	6.85	-14.20	-17.76	-4.52	-7.71	-5.28	-5.28	-14.45	-18.71	-5.52	-7.47	-5.60	-5.60	-14.55	-17.80	-2.92	-3.53	-5.18	-5.18	-14.45	-18.71	-5.52	-7.47	-5.60	-5.60
	SB	3.26	8.65	8.65	17.43	21.36	8.85	2.01	3.46	6.85	-13.05	-17.86	-4.52	-3.77	-5.28	-5.28	-14.65	-18.66	-5.52	-7.14	-6.41	-6.41	-14.00	-17.86	-3.02	-6.23	-6.09	-6.09	-14.65	-18.66	-5.52	-7.14	-6.41	-6.41
Airport Link (South to NW)	NB	3.26	8.65	8.65	17.43	21.36	8.85	2.01	3.46	6.85	-14.20	-17.76	-4.52	-6.59	-4.35	-4.35	-14.45	-18.71	-5.52	-7.88	-6.70	-6.70	-14.55	-17.80	-2.92	-8.66	-6.45	-6.45	-14.45	-18.71	-5.52	-7.88	-6.70	-6.70
	SB	3.26	8.65	8.65	17.43	21.36	8.85	2.01	3.46	6.85	-13.05	-17.86	-4.52	-8.22	-3.97	-3.97	-14.65	-18.66	-5.52	-8.16	-5.87	-5.87	-14.00	-17.86	-3.02	-6.70	-7.32	-7.32	-14.65	-18.66	-5.52	-8.16	-5.87	-5.87
Airport Link (East to West)	NB	2.45	6.49	6.49	13.10	16.02	6.64	2.60	4.33	9.14	-10.62	-16.00	-2.69	-10.98	-5.83	-5.83	-10.22	-16.00	-4.69	-11.15	-8.00	-8.00	-7.65	-16.00	-1.59	-9.59	-7.83	-7.83	-10.22	-16.00	-4.69	-11.15	-8.00	-8.00
	SB	2.45	6.49	6.49	13.10	16.02	6.64	2.60	4.33	9.14	-8.62	-16.00	-2.69	-9.37	-5.77	-5.77	-10.62	-16.00	-4.69	-10.89	-7.86	-7.86	-9.42	-16.00	-1.69	-9.52	-9.18	-9.18	-10.62	-16.00	-4.69	-10.89	-7.86	-7.86
Legacy Way Tunnel	NB	3.04	8.06	8.06	16.26	19.90	8.25	3.08	4.62	6.16	-10.55	-13.94	-3.93	-10.59	-5.16	-5.16	-11.45	-15.14	-3.93	-13.16	-6.10	-6.10	-11.20	-14.20	-5.93	10.36	-5.41	-5.41	-11.45	-15.14	-3.93	-13.16	-6.10	-6.10
	SB	3.04	8.06	8.06	16.26	19.90	8.25	3.08	4.62	6.16	-9.85	-14.04	-3.93	-10.67	-4.62	-4.62	-11.45	-15.37	-3.93	-12.85	-6.04	-6.04	-11.15	-14.00	-5.93	11.27	-5.92	-5.92	-11.45	-15.37	-3.93	-12.85	-6.04	-6.04

\*Note - Post Gateway Sale MCV tolls = HCV tolls. Also note incorrect Anodes/Bnodes were originally applied for Airport Link therefore tolls did not work correctly.

Released under OIA





## Appendix C. Detailed network assumptions

Released under RTI - DTMR

Year	Area	Program	Scheme	Project	Description
2015	BCC	BCC Program	Milton_Fry	Milton Ferry Terminal	Addition of ferry terminal at Park Road, Milton
2015	BCC	BCC Program	BCC_427_1	Telegraph Road Corridor	Stage 1 - New rail overpass and to Norris Road - New 4 lane connection over rail line (Norris to Lacey) and upgrade to 4 lanes divided to Norris
2015	ICC	ICC-IGO Transport Plan	ICC_001	Collingwood Drive Extension (Woodlinks Wy to Redbank Plains Rd)	New 2 lane suburban
2015	LCC	LCC-PIP (2011)	LCC_012	Third Avenue (Fourth Avenue to Bardon Road)	2-lane suburban realigned
2015	MBRC	MBRC Program	MBC_002	Brown St bridge (Pettigrew St to Jensen Rd)	New 2 lane district
2015	TMR	QTRIP 2012/13 - 15/16	LegacyWay	Legacy Way (Toowong to ICB)	New road tunnel
2015	TMR	QTRIP 2015/16 - 18/19	Wrgl_Grn	Warrigal Rd Greenlink (Bus, ped, cyc)	New bus only link
2016	BCC	BCC Program	BCC_430A	Boundary Road (Tile St to Blunder Rd)	New 2 lane connection through Wacol Army Barracks (Bukulla St to Fulcrum St)
2016	MBRC	MBRC Program	MBC_003	Dohles Rocks Road (Ogg Rd to School Road)	Upgrade to 4 lanes suburban
2016	MBRC	MBRC Program	MBC_004	Old North Road (Kremzow Rd to South Pine Rd)	Upgrade to 4 lanes arterial
2016	MBRC	MBRC Program	MBC_005	South Pine Road (Camelia Av to Queens Rd)	Upgrade to 4 lanes suburban
2016	TMR	QTRIP 2012/13 - 15/16	MgC_B2G	Mt Gravatt Capalaba Rd (Broadwater Rd to Gardner Rd)	Upgrade from 4L to 6L
2017	TMR	QTRIP 2012/13 - 15/16	KR_Rail	Moreton Bay Rail Link (Petrie to Kippa Ring)	New rail line
2018	BCC	BCC Program	RIC-RC-002	Progress Road Stage 4 (Teraba Rd to Boundary Rd)	4 lane divided upgrade
2018	BCC	BCC Program	BCC_427_2	Telegraph Road Corridor	Stage 2 - Norris Rd to Mustang St - Upgrade to 4 lanes divided.
2018	BCC	BCC Program	ICB_upgrade	Inner City Bypass Upgrade	Upgrade to 4L between Legacy Way and RNA showgrounds tunnel, including new westbound on ramp
2019	BCC	BCC Program	KSD_Stg2	Kingsford Smith Drive	Stage 2 - Riverview Tce to Woonah Ave - Upgrade to 6 lanes
2019	BCC	BCC Program	KSD_Stg3	Kingsford Smith Drive	Stage 3 - Breakfast Creek Rd - Riverview Tce - 4 to 6 lane widening
2019	TMR	QTRIP 2015/16 - 18/19	Gwy_DD	Gateway Mwy (Deagon Deviation)	Upgrade to Two-way Deagon Deviation
2019	TMR	QTRIP 2015/16 - 18/19	Gwy_N2BR	Gateway Mwy (Nudgee to Bracken Ridge)	Upgrade whole section to 6L, upgrade Nudgee Rd interchange, Nudgee Rd on/off ramps
2019	TMR	QTRIP 2015/16 - 18/19	WatTam_H2A	Waterford-Tamborine Rd (Hotz Road to Anzac Ave)	Upgrade to 4 Lanes
2021	BCC	BCC Program	BCC_416_1	Green Camp Road (Manly Rd to New Cleveland Rd)	Stage 1 - Manly Rd to Rickertt Rd - Upgrade to 4 lanes divided.
2021	BCC	BCC PIP Model	BCC_416_2	Green Camp Road (Manly Rd to New Cleveland Rd)	Stage 2 - Rickertt Rd to New Cleveland Rd - Upgrade to 4 lanes divided.
2021	BCC	BCC Program	BCC_450_2	Murphy Road (Gympie Road to Butt Street)	Upgrade to 4 lane arterial
2021	BCC	BCC PIP Model	BCC_464_1	Stapylton Road (Wadeville St to Johnson Rd)	Stage 1 - Wadeville St to Logan Mwy - Upgrade to 4 lanes divided.
2021	BCC	BCC Program	BCC_427_4	Depot Road (Gateway Mwy northbound ramps to Lemke Road)	Upgrade to 4 lanes arterial
2021	ICC	ICC-IGO Transport Plan	ICC_004	Brisbane St (Hooper St to Burnett St)	Upgrade to 4 lanes
2021	ICC	ICC-IGO Transport Plan	ICC_007	Old Toowoomba Rd (Lobb St to Toongarra Rd)	Upgrade to 4 lanes
2021	ICC	ICC-IGO Transport Plan	ICC_011_m	Springfield Greenbank Arterial (Sinnothamby Boulevard to Springfield Parkway)	Upgrade to 4 lanes
2021	LCC	LCC-PIP (2011)	LCC_001	Chambers Flat Road (Entrance Street to Park Ridge Road)	4-lane arterial
2021	MBRC	MBRC Program	MBC_001	Albany Forest Drive (Jagora Dr to Old Northern Rd)	Upgrade to 4 lanes district
2021	MBRC	MBRC Program	MBC_006	Mango Hill Ring Rd (Kinsellas Rd West to Capestone Blvd)	New 2 lane suburban
2021	MBRC	MBRC Program	MBC_007	North South Urban Arterial (Endeavour Bvd to Discovery Dr)	New 4 lanes arterial
2021	MBRC	MBRC Program	MBC_008	Old North Road (Brisbane Rd to Everest St)	Upgrade to 4 lanes arterial
2021	MBRC	MBRC Program	MBC_009	Old North Road (Stanley Rd to Lavarack Rd)	Upgrade to 4 lanes arterial
2021	MBRC	MBRC Program	MBC_011	Youngs Crossing Rd (Francis Rd to Todds Rd)	Upgrade to 4 lanes arterial
2021	MBRC	MBRC Program	MBC_012	Youngs Crossing Rd (Oxford Rd to Francis Rd)	Upgrade to 4 lanes arterial
2021	MBRC	MBRC Program	MBC_013	Youngs Crossing Rd (Protheroe Rd to Dayboro Rd)	Upgrade to 4 lanes arterial
2021	MBRC	MBRC Program	MBC_014	Youngs Crossing Rd (Todds Rd to Protheroe Rd)	Upgrade to 4 lanes arterial
2021	TMR	QTRIP 2015/16 - 18/19	IpsMwy_R2D	Ipswich Motorway (Rockley to Darra)	Upgrade to 6 Lanes
2021	TMR		PoBMwy_P2B	Port of Brisbane Motorway (Pritchard St to Boat Passage)	Upgrade to 4 Lanes
2021	TMR		LEP_m	Logan Enhancement Project	
2021	TMR		WemS1	Logan Enhancement Project	
2021	TMR		WemS2	Logan Enhancement Project	
2021	TMR		WemS3	Logan Enhancement Project	
2021	BCC		BCC_481	Wynnum Road & Lytton Road (Wellington Road to Laidlaw Parade)	Upgrade to 6 lane arterial
2021	BCC		BCC_479	Wacol Station Road (Sumner Road to Wolston Road)	Upgrade to 4-lane sub-arterial
2021	ICC		ICC_060	Mount Juillerat Drive extension (Centenary Highway to School Road)	Extension of Mount Juillerat Drive as 2 lane collector
2021	ICC	Qtrip 18/19	ICC_059	Redbank Plains Road (Jansen Street to Shannon Street)	Upgrade to 4 lanes
2018	BCC		BCC_R30	Stapylton Road (Logan Motorway to Wadeville Street)	Upgrade to 4 lane arterial
2021			Sumner_Int	Sumners Rd overpass	Upgraded to 2 lanes each way

Year	Area	Program	Scheme	Project	Description
2026	BCC	BCC Program	BCC_438_m	Beams Road (Carselgrove Avenue to Handford Road)	Upgrade to 4 lane arterial
2026	BCC	BCC Program	BCC_433	Beatty Road / Sherbrooke Road (Granard Rd to King Ave)	Upgrade to 4 lanes.
2026	BCC	BCC Program	BCC_430c	Boundary Road (Kimberley Street to Blunder Road)	Upgrade to 4 lane arterial
2026	BCC	BCC PIP Model	TIN-RC-005	Manly Road (Wynnum Road to New Cleveland Road)	6 lane divided upgrade
2026	BCC	BCC Program	BCC_472	Nottingham Rd (Algester Rd to Beaudesert Rd)	Upgrade to 4 lanes.
2026	ICC	ICC-IGO Transport Plan	ICC_014	Glebe Rd (Chermside Rd)	Close connection
2026	ICC	ICC-IGO Transport Plan	ICC_017_m	Norman St Bridge (Norman St to Lawrence St)	New 2 lane bridge
2026	ICC	ICC-IGO Transport Plan	ICC_021	Waterworks Rd (Warrego Hwy to Pine Mountain Rd)	Upgrade to 4 lanes
2026	MBRC	MBRC Program	MBC_016	Leitchs Rd diversion (Nicol Way to Livingstone St)	New 2 lane district
2026	MBRC	MBRC Program	MBC_017	North South Urban Arterial (Mango Hill to Griffin)	New 2 lane arterial
2026	RCC	RCC - LGIP	RCC_004	Wellington Street (Russell St to Enterprise St)	Upgrade to 4 lanes
2026	TMR	Funded	InrCtyRail	Cross River Rail (from Dutton Park to Bowen Hills)	New rail tunnel
2026	ICC	ICC-IGO Transport Plan	ICC_012	Springfield Parkway (Old Logan Rd to Centenary Mwy)	Upgrade to 4 lanes
2026	ICC	ICC-IGO Transport Plan	ICC_002	Albion St (Sydney St to Workshop St)	Upgrade to 4 lanes
2026	BCC	BCC Program	BCC_418	Inala Ave (Blunder Rd to Watson Rd)	Inala Avenue-King Avenue-Learoyd Road (Blunder Road to Watson Road) - Upgrade to 4 lanes divided
2026	ICC	ICC-IGO Transport Plan	ICC_003	Augusta Parkway (Centenary Hwy Overpass) (Main St to Eden Station Dr)	Upgrade to 4 lanes
2026	BCC		BCC_R61	Moggill Road (Coonan Road to Union Street) and Morrow Street (Beatrice Street to Moggill Road)	Upgrade to 3 lanes each way on Moggill Road and upgrade to 2 lanes southbound via Morrow Street
2026	LCC		LCC_028_m	Third Avenue Extension (Gilmore Road to Wembley Road), Wembley Road (Arshad Drive to Australand Drive)	Extension of Third Avenue and connections, upgrade of Wembley Road to arterial
2026	ICC		ICC-050_m	Extension of Mt Juillerat Drive (two lane collector) from Augusta Parkway to Santa Monica Drive	
2026	ICC		ICC_R03	Cunningham Highway (including Amberley Interchange) from Coopers Road to Warwick Road: upgrade to 4 lane road	
2026	BCC		BCC_480	Boundary Road extension (Blunder Road to Ipswich Motorway)	Extension of Boundary Road as two lane sub-arterial
2026	Otrip		TMR_RedB	Redbank Plains Rd (Keidges Rd to Kruger Pde)	Duplicate from 2 to 4 lanes
2026	Otrip		TMR_M1M3	Gateway Mwy/Pacific Mwy	Construction of additional SB lanes on merge between Gateway Mwy and Pacific Mwy

Released under RTI-DTMR

## Appendix D. Not committed network schemes

### D.1 Details of not committed network schemes included in model

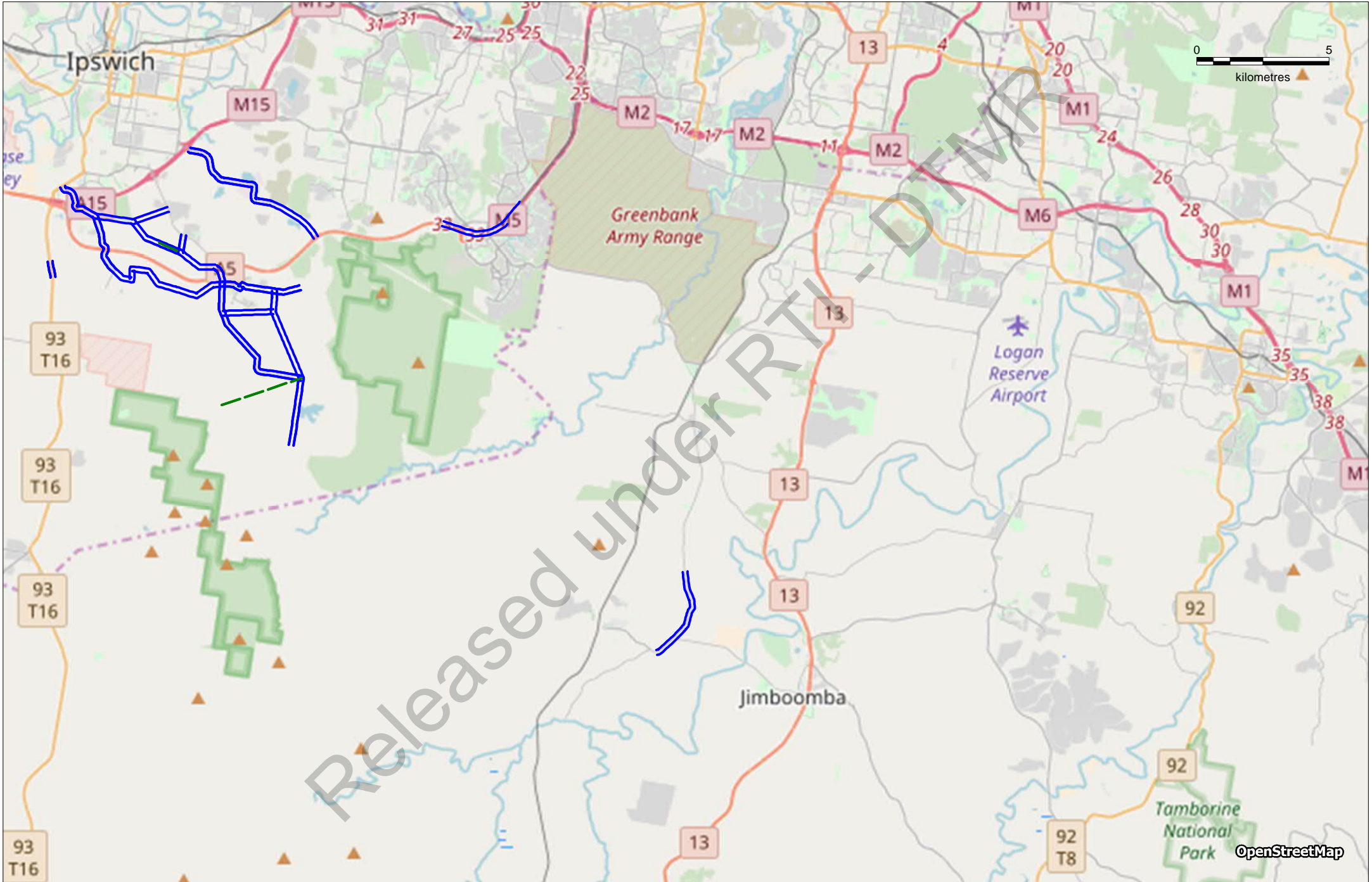
Year	Scheme	Details	Comments
2026	2021\RIP_Flag_2021v3	<ul style="list-style-type: none"> <li>Hierarchy upgrade to sections of Ipswich Boonah Road, Pisasale Drive / Grampian Drive, Wensley Road, Swanbank Road, Ripley Road, Providence Parade, Barrams Road</li> </ul>	Improves model convergence / stability
	2026\RIP_Flag_2026v2	<ul style="list-style-type: none"> <li>Increased speed on Centenary Highway at Springfield</li> <li>New roads connecting                             <ul style="list-style-type: none"> <li>Ripley Road, Pisasale Drive &amp; Bryants Road</li> <li>Swanbank Road &amp; Centenary Highway</li> <li>Ripley Road &amp; Grampian Drive</li> <li>Ripley Road &amp; Morwell Street</li> </ul> </li> <li>Upgrade to four lanes on section of Teviot Road</li> </ul>	Improves model convergence / stability
2031	2021\Yarra_2021	<ul style="list-style-type: none"> <li>Hierarchy upgrade on Plunkett Road and sections of Waterford-Tamborine Road and Beaudesert Beenleigh Road</li> <li>Upgrade to four lanes on section of Stanmore Road</li> </ul>	Improves model convergence / stability
	2026\Yarra_2026	<ul style="list-style-type: none"> <li>Upgrade to four lanes on section of Waterford-Tamborine Road</li> </ul>	Improves model convergence / stability
	2031\Yarra_2031	<ul style="list-style-type: none"> <li>Upgrade to four lanes on section of Beaudesert Beenleigh Road</li> </ul>	Improves model convergence / stability
	2031\RIP_Flag_26to31	<ul style="list-style-type: none"> <li>Upgrade to four lanes on Grampian Drive and Wensley Road</li> <li>Upgrade to four/six lanes on sections of Ripley Road</li> <li>Upgrade to four lanes on Homestead Drive</li> </ul>	Improves model convergence / stability
2036	2041\LCC_061	<ul style="list-style-type: none"> <li>New road (Steele Road) connection to Quinzeh Creek Road</li> </ul>	Improves model convergence / stability
	2041\LCC_069	<ul style="list-style-type: none"> <li>New roads connections at Yarrabilba, connecting Yarrabilba Drive, Railway Parade and Plunkett Road</li> </ul>	Improves model convergence / stability
	2036\RIP_Flag_31to36	<ul style="list-style-type: none"> <li>Upgrade to four lanes on new roads coded in 2026 scheme</li> <li>New road from Ripley Road to Swanbank Road extension</li> </ul>	Improves model convergence / stability
	2021\LCC_010	<ul style="list-style-type: none"> <li>Upgrade to section of Teviot Road</li> </ul>	Improves VoC

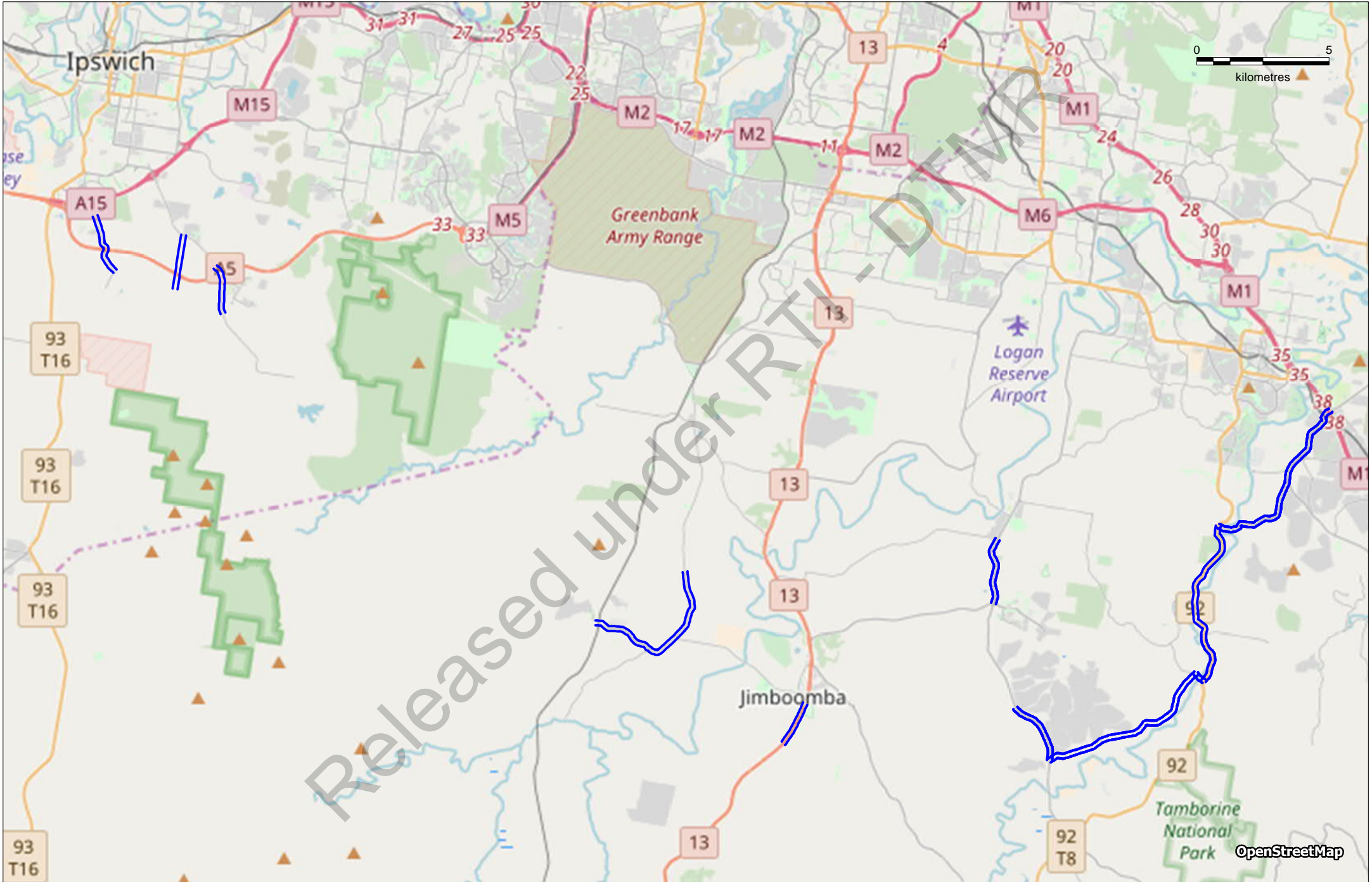


**D.2 Plots of not committed network schemes**

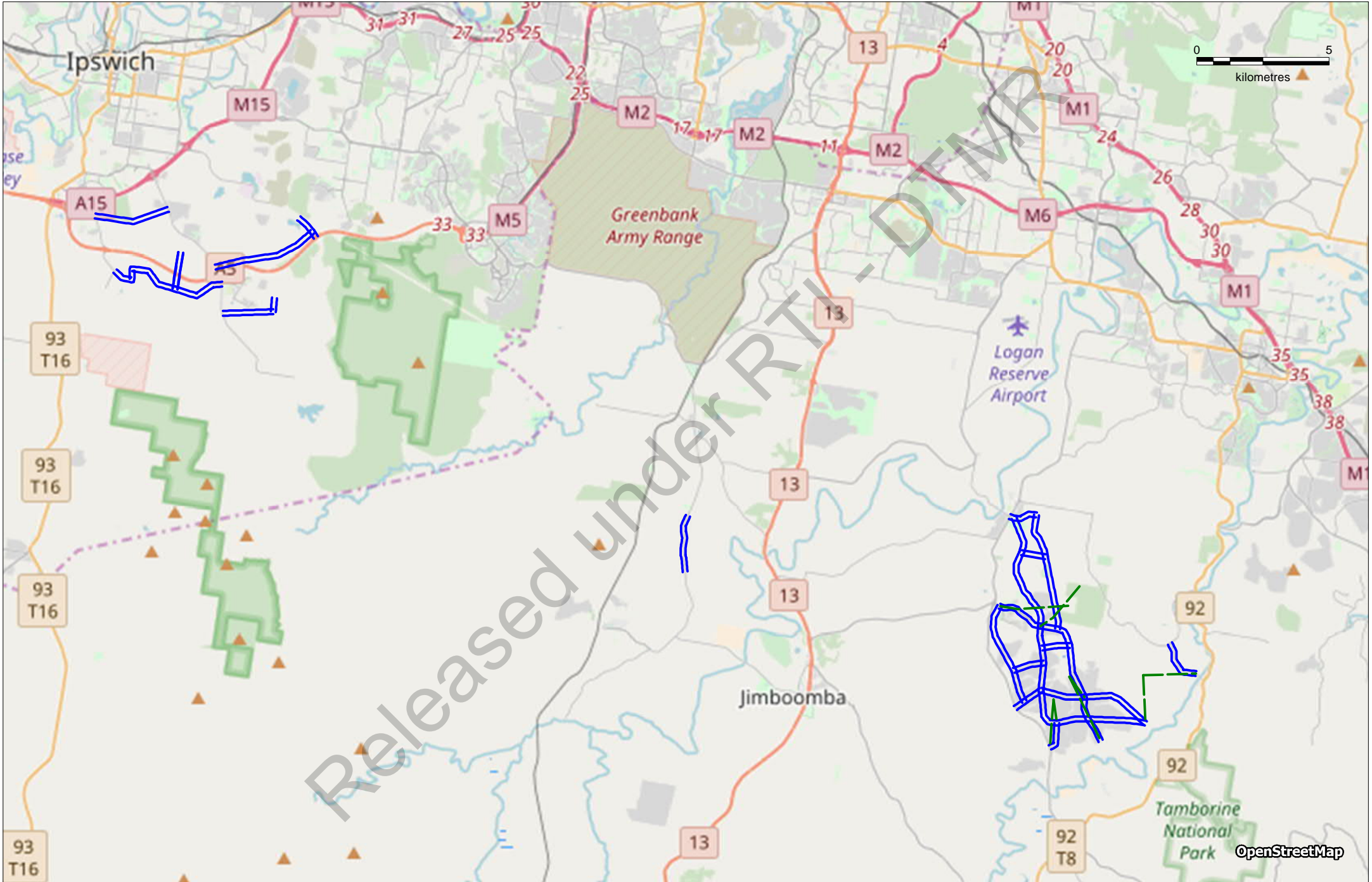
Released under RTI - DTMR













**Appendix E. Detailed economic outputs**

Released under RTI - DTMR

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2021\_BN004\_CM401

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	6,367,198	6,142,741	76,845	12,586,784
	Project Case	6,374,810	6,144,489	76,921	12,596,219
	Difference	7,612	1,748	75	9,435
Passenger hours	Base Case	150,528	179,448	5,825	335,802
	Project Case	150,675	179,534	5,830	336,039
	Difference	147	86	5	238
Service Kilometres	Base Case	44,893	343,323	6,905	395,121
	Project Case	44,893	343,323	6,905	395,121
	Difference	0	0	0	0
Total PT Trips	Base Case				833,285
	Project Case				833,897
	Difference				612

PT Benefits

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Total PT Trips <i>number</i>	Base Case	2,086	319,351	488,663	1,501	5,714	15,970							
	Project Case	2,086	319,464	489,162	1,501	5,714	15,970	0	113	499	0	0	0	
	Difference	0	113	499	0	0	0							
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	5,698	626,573	1,108,547	5,500	20,936	58,515							
	Project Case	5,698	626,767	1,109,720	5,500	20,936	58,515	0	194	1,173	0	0	0	
	Difference	0	194	1,173	0	0	0							
PT In-vehicle time <i>minutes</i>	Base Case	34,135	6,966,949	9,939,130	77,136	293,640	820,694							
	Project Case							-3	1,307	11,942	0	0	0	
	Difference													
PT In-vehicle time <i>minutes</i>	Benefit	-2	1,405	765	0	0	1	0	2	-2	0	0	0	
	Base Case	8,054	1,160,370	3,014,209	11,617	44,222	123,596							
	Project Case							-1	530	1,556	0	0	0	
PT wait time <i>minutes</i>	Difference													
	Benefit	0	-7	52	0	0	0	0	0	-0	0	0	0	
	Base Case	14,282	2,532,865	4,595,636	11,678	44,455	124,247							
PT interchange/boarding <i>minutes</i>	Project Case							-3	841	4,638	0	0	0	
	Difference													
	Benefit	1	-38	30	0	0	0	0	2	2	0	0	0	
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	24,776	4,817,751	9,897,402	72,303	275,242	769,273							
	Project Case							8	2,171	8,756	0	0	0	
	Difference													
PT Walk access/transfer/egress time <i>minutes</i>	Benefit	-1	33	-261	0	0	0	-0	-5	1	0	0	0	



CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2021\_BN004\_CM401

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	66,369,808	5,937,807	72,307,615
	Project Case	66,366,216	5,937,988	72,304,204
	Difference	-3,592	181	-3,412
Vehicle hours	Base Case	1,191,095	93,897	1,284,992
	Project Case	1,191,184	93,919	1,285,103
	Difference	89	22	110
Average speed	Base Case	55.72	63.24	56.27
	Project Case	55.71	63.22	56.26
Total Trips (Private = car driver+ passe	Base Case	7,254,667	208,916	7,463,584
	Project Case	7,253,745	208,916	7,462,662
	Difference	-922	0	-922

Car Drivers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Driver Trips number	Base Case	314,967	1,199,017	3,351,131	19,087	72,662	203,084						
	Project Case	314,957	1,199,095	3,350,338	19,087	72,662	203,084	-10	78	-793	0	0	0
	Difference	-10	78	-793	0	0	0						
Car Driver IVT minutes	Base Case	6,145,913	27,899,156	47,723,468	591,400	2,251,347	6,292,284						
	Project Case							1,439	5,195	-10,572	0	0	0
	Difference												
	Benefit	148	7,397	-2,896	45	172	482	36	-567	-1,376	0	0	0
Car Driver Parking number	Base Case	54,384	67,778	191,464	563	2,145	5,995						
	Project Case	54,375	67,770	191,450	563	2,145	5,995	-9	-8	-14	0	0	0
	Difference	-9	-8	-14	0	0	0						

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	15,825	184,754	1,793,238	6,532	24,868	69,502						
	Project Case	15,825	184,608	1,793,188	6,532	24,868	69,502	0	-146	-50	0	0	0
	Difference	0	-146	-50	0	0	0						
Car passenger IVT minutes	Base Case	305,426	3,971,719	23,913,430	275,204	1,047,648	2,928,071						
	Project Case							68	-5,291	-1,049	0	0	0
	Difference												
	Benefit	84	1,981	-2,064	-11	-42	-117	2	-14	-340	0	0	0

Commercial Vehicles

		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	117,545	49,821	25,893	15,657				
	Project Case	117,545	49,821	25,893	15,657	-0	0	0	0
	Difference	-0	0	0	0				
CV IVT minutes	Base Case	2,807,470	1,253,435	1,142,776	678,662				
	Project Case					53	-2	0	0
	Difference								
	Benefit	138	-26	16	12	0	-0	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	24,931,256	3,033,761	2,998,141	30,963,158				
	Project Case	24,930,736	3,033,799	2,998,139	30,962,674	-520	38	-2	-484
	Difference	-520	38	-2	-484				
Perceived (Fuel) VOC \$?	Base Case	12,360,001	1,879,067	2,376,066	16,615,134				
	Project Case					-448	23	-2	-427
	Difference								
	Benefit	182	-59	-377	-254	8	0	0	8
VOC Misperception \$?	Base Case	-12,571,238	-1,154,696	-622,075	-14,348,009				
	Project Case	-12,571,166	-1,154,711	-622,075	-14,347,952	72	-15	0	57
	Difference	72	-15	0	57				

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2021\_BN004\_CM402

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	6,367,198	6,142,741	76,845	12,586,784
	Project Case	6,369,765	6,143,200	76,830	12,589,795
	Difference	2,567	459	-15	3,011
Passenger hours	Base Case	150,528	179,448	5,825	335,802
	Project Case	150,586	179,431	5,830	335,847
	Difference	58	-17	4	45
Service Kilometres	Base Case	44,893	343,323	6,905	395,121
	Project Case	44,893	343,341	6,905	395,139
	Difference	0	18	0	18
Total PT Trips	Base Case				833,285
	Project Case				833,301
	Difference				16

PT Benefits

		Existing Users						Diverted Users							
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other		
Total PT Trips <i>number</i>	Base Case	2,086	319,351	488,663	1,501	5,714	15,970								
	Project Case	2,086	319,269	488,761	1,501	5,714	15,970	-0	-82	98	0	0	0		
	Difference	-0	-82	98	0	0	0								
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	5,698	626,575	1,108,547	5,500	20,936	58,515								
	Project Case	5,698	626,440	1,108,741	5,500	20,936	58,515	-0	-135	193	0	0	0		
	Difference	-0	-135	193	0	0	0								
PT In-vehicle time <i>minutes</i>	Base Case	34,135	6,966,949	9,939,130	77,136	293,640	820,694								
	Project Case							3	-1,641	4,228	0	0	0		
	Difference														
PT wait time <i>minutes</i>	Base Case	8,054	1,160,370	3,014,209	11,617	44,222	123,596								
	Project Case							1	-280	25	0	0	0		
	Difference														
PT interchange/boarding <i>minutes</i>	Base Case	14,282	2,532,865	4,595,636	11,678	44,455	124,247								
	Project Case							-3	-502	-1,323	0	0	0		
	Difference														
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	24,776	4,817,751	9,897,402	72,303	275,242	769,273								
	Project Case							-7	-918	-941	0	0	0		
	Difference														
	Benefit	1	-691	-207	0	0	0	0	21	-27	0	0	0		
	Benefit	-3	337	334	0	0	0	-1	68	-103	0	0	0		

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2021\_BN004\_CM402

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	66,369,808	5,937,807	72,307,615
	Project Case	66,366,404	5,937,323	72,303,727
	Difference	-3,404	-485	-3,889
Vehicle hours	Base Case	1,191,095	93,897	1,284,992
	Project Case	1,191,513	93,904	1,285,417
	Difference	418	7	425
Average speed	Base Case	55.72	63.24	56.27
	Project Case	55.70	63.23	56.25
Total Trips (Private = car driver+ passe	Base Case	7,254,686	208,916	7,463,603
	Project Case	7,254,324	208,916	7,463,240
	Difference	-363	0	-363

Car Drivers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Driver Trips number	Base Case	314,967	1,199,017	3,351,131	19,087	72,662	203,084						
	Project Case	314,952	1,199,085	3,350,535	19,087	72,662	203,084	-14	68	-596	0	0	0
	Difference	-14	68	-596	0	0	0						
Car Driver IVT minutes	Base Case	6,145,913	27,899,156	47,723,468	591,359	2,251,191	6,291,849						
	Project Case							430	9,913	-8,991	0	0	0
	Difference												
	Benefit	3,683	14,756	4,577	189	719	2,010	-9	-420	-1,394	0	0	0
Car Driver Parking number	Base Case	54,384	67,778	191,464	563	2,145	5,995						
	Project Case	54,376	67,835	191,530	563	2,145	5,995	-8	58	66	0	0	0
	Difference	-8	58	66	0	0	0						

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	15,825	184,754	1,793,238	6,534	24,872	69,515						
	Project Case	15,824	184,802	1,793,370	6,534	24,872	69,515	-0	48	132	0	0	0
	Difference	-0	48	132	0	0	0						
Car passenger IVT minutes	Base Case	305,426	3,971,719	23,913,430	275,259	1,047,858	2,928,655						
	Project Case							26	1,744	4,467	0	0	0
	Difference												
	Benefit	179	2,625	3,680	63	238	666	2	6	-447	0	0	0

Commercial Vehicles

		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	117,545	49,821	25,893	15,657				
	Project Case	117,545	49,821	25,893	15,657	0	-0	0	0
	Difference	0	-0	0	0				
CV IVT minutes	Base Case	2,807,470	1,253,435	1,142,776	678,662				
	Project Case					-607	-108	0	0
	Difference								
	Benefit	1,516	364	338	252	-13	-2	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	24,931,256	3,033,761	2,998,141	30,963,158				
	Project Case	24,931,718	3,033,282	2,997,945	30,962,944	462	-479	-197	-214
	Difference	462	-479	-197	-214				
Perceived (Fuel) VOC \$?	Base Case	12,360,001	1,879,067	2,376,066	16,615,134				
	Project Case					187	-310	-156	-279
	Difference								
	Benefit	501	-10	-211	280	3	-1	-0	2
VOC Misperception \$?	Base Case	-12,571,238	-1,154,696	-622,075	-14,348,009				
	Project Case	-12,571,512	-1,154,527	-622,035	-14,348,074	-274	169	40	-65
	Difference	-274	169	40	-65				

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2026\_BN005\_CM401

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	7,453,626	6,691,197	82,678	14,227,501
	Project Case	7,446,997	6,693,830	82,777	14,223,604
	Difference	-6,629	2,633	99	-3,897
Passenger hours	Base Case	174,238	198,285	6,267	378,790
	Project Case	174,145	198,341	6,273	378,759
	Difference	-93	56	6	-31
Service Kilometres	Base Case	46,362	344,469	6,905	397,736
	Project Case	46,362	344,469	6,905	397,736
	Difference	0	0	0	0
Total PT Trips	Base Case				930,238
	Project Case				930,297
	Difference				59

PT Benefits

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Total PT Trips <i>number</i>	Base Case	2,324	360,728	541,707	1,672	6,305	17,503							
	Project Case	2,324	360,760	541,733	1,672	6,305	17,503	0	32	27	0	0	0	
	Difference	0	32	27	0	0	0							
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	6,548	712,148	1,242,261	6,126	23,104	64,132							
	Project Case	6,549	712,213	1,242,037	6,126	23,104	64,132	1	65	-225	0	0	0	
	Difference	1	65	-225	0	0	0							
PT In-vehicle time <i>minutes</i>	Base Case	38,620	7,945,290	11,217,764	86,519	326,299	905,764							
	Project Case							1	1,010	-3,226	0	0	0	
	Difference													
PT wait time <i>minutes</i>	Base Case	8,971	1,279,732	3,322,877	12,751	48,090	133,493							
	Project Case							1	172	-679	0	0	0	
	Difference													
PT interchange/boarding <i>minutes</i>	Base Case	15,937	2,852,386	5,070,325	13,010	49,066	136,200							
	Project Case							1	303	1,822	0	0	0	
	Difference													
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	27,708	5,516,396	10,886,527	80,445	303,392	842,177							
	Project Case							7	21	-2,862	0	0	0	
	Difference													
	Benefit	-0	-17	5	0	0	0	0	0	-2	0	0	0	
	Benefit	-1	-59	-154	0	0	0	-0	-0	3	0	0	0	

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2026\_BN005\_CM401

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	73,892,488	6,549,394	80,441,882
	Project Case	73,891,376	6,549,738	80,441,114
	Difference	-1,112	344	-769
Vehicle hours	Base Case	1,348,726	105,218	1,453,944
	Project Case	1,348,524	105,207	1,453,731
	Difference	-202	-11	-213
Average speed	Base Case	54.79	62.25	55.33
	Project Case	54.79	62.26	55.33
Total Trips (Private = car driver+ passe	Base Case	7,859,032	229,641	8,088,673
	Project Case	7,858,822	229,641	8,088,463
	Difference	-211	0	-211

Car Drivers

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Car Driver Trips number	Base Case	345,630	1,303,520	3,618,400	21,250	80,144	222,468							
	Project Case	345,619	1,303,457	3,618,335	21,250	80,144	222,468	-11	-62	-65	0	0	0	
	Difference	-11	-62	-65	0	0	0							
Car Driver IVT minutes	Base Case	6,894,933	31,753,698	53,197,592	683,320	2,577,095	7,153,684							
	Project Case							-320	-6,883	6,385	0	0	0	
	Difference													
	Benefit	-654	-1,541	-3,242	-170	-641	-1,780	-44	-747	-439	0	0	0	
Car Driver Parking number	Base Case	60,398	71,867	211,269	664	2,505	6,953							
	Project Case	60,388	71,814	211,353	664	2,505	6,953	-10	-53	84	0	0	0	
	Difference	-10	-53	84	0	0	0							

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	17,405	205,115	1,934,048	7,287	27,481	76,285						
	Project Case	17,405	205,135	1,933,956	7,287	27,481	76,285	-0	20	-92	0	0	0
	Difference	-0	20	-92	0	0	0						
Car passenger IVT minutes	Base Case	345,000	4,475,426	26,462,964	312,472	1,178,468	3,271,273						
	Project Case							-5	1,078	-998	0	0	0
	Difference												
	Benefit	1	1,248	-786	-72	-273	-756	0	-14	-386	0	0	0

Commercial Vehicles

		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	128,360	55,206	28,646	17,428				
	Project Case	128,360	55,206	28,646	17,428	0	-0	0	0
	Difference	0	-0	0	0				
CV IVT minutes	Base Case	3,162,372	1,442,271	1,297,815	772,167				
	Project Case					192	37	0	0
	Difference								
	Benefit	-472	-223	-260	-160	-0	-0	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	28,053,064	3,340,518	3,388,582	34,782,163				
	Project Case	28,052,653	3,340,656	3,388,646	34,781,956	-411	139	65	-207
	Difference	-411	139	65	-207				
Perceived (Fuel) VOC \$?	Base Case	13,824,177	2,058,720	2,671,659	18,554,556				
	Project Case					-169	88	52	-30
	Difference								
	Benefit	-558	-144	-574	-1,277	5	-0	-0	5
VOC Misperception \$?	Base Case	-14,228,896	-1,281,797	-716,923	-16,227,616				
	Project Case	-14,228,654	-1,281,848	-716,936	-16,227,439	242	-51	-13	178
	Difference	242	-51	-13	178				



CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2026\_BN005\_CM402

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	7,453,626	6,691,197	82,678	14,227,501
	Project Case	7,430,769	6,692,500	82,635	14,205,904
	Difference	-22,857	1,303	-43	-21,597
Passenger hours	Base Case	174,238	198,285	6,267	378,790
	Project Case	173,778	198,001	6,266	378,046
	Difference	-460	-283	-1	-744
Service Kilometres	Base Case	46,362	344,469	6,905	397,736
	Project Case	46,362	344,487	6,905	397,754
	Difference	0	18	0	18
Total PT Trips	Base Case				930,238
	Project Case				929,412
	Difference				-826

PT Benefits

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Total PT Trips <i>number</i>	Base Case	2,324	360,728	541,707	1,672	6,305	17,503							
	Project Case	2,326	360,637	540,969	1,672	6,305	17,503	2	-91	-737	0	0	0	
	Difference	2	-91	-737	0	0	0							
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	6,548	712,147	1,242,260	6,126	23,104	64,132							
	Project Case	6,553	711,845	1,240,106	6,126	23,104	64,132	5	-302	-2,154	0	0	0	
	Difference	5	-302	-2,154	0	0	0							
PT In-vehicle time <i>minutes</i>	Base Case	38,620	7,945,290	11,217,764	86,519	326,299	905,764							
	Project Case							39	-3,495	-25,360	0	0	0	
	Difference													
PT wait time <i>minutes</i>	Base Case	8,971	1,279,732	3,322,877	12,751	48,090	133,493							
	Project Case							9	-275	-2,778	0	0	0	
	Difference													
PT interchange/boarding <i>minutes</i>	Base Case	15,937	2,852,386	5,070,325	13,010	49,066	136,200							
	Project Case							13	-1,093	-8,065	0	0	0	
	Difference													
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	27,708	5,516,396	10,886,527	80,445	303,392	842,177							
	Project Case							36	16	-16,672	0	0	0	
	Difference													
	Benefit													
	Benefit	-1	1,280	767	-0	-0	-1	0	-52	79	0	0	0	
	Benefit	1	-322	446	0	0	0	0	26	-28	0	0	0	
	Benefit													
	Benefit	-5	-955	-2,219	0	0	0	-1	-2	-119	0	0	0	
	Benefit													

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2026\_BN005\_CM402

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	73,892,488	6,549,394	80,441,882
	Project Case	73,901,176	6,553,396	80,454,572
	Difference	8,688	4,002	12,690
Vehicle hours	Base Case	1,348,726	105,218	1,453,944
	Project Case	1,347,627	105,168	1,452,795
	Difference	-1,098	-51	-1,149
Average speed	Base Case	54.79	62.25	55.33
	Project Case	54.84	62.31	55.38
Total Trips (Private = car driver+ passe	Base Case	7,859,082	229,641	8,088,723
	Project Case	7,858,762	229,641	8,088,403
	Difference	-320	0	-320

Car Drivers

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Car Driver Trips number	Base Case	345,630	1,303,520	3,618,400	21,250	80,144	222,468							
	Project Case	345,618	1,303,216	3,617,879	21,250	80,144	222,468	-12	-304	-521	0	0	0	
	Difference	-12	-304	-521	0	0	0							
Car Driver IVT minutes	Base Case	6,894,933	31,753,698	53,197,592	683,234	2,576,774	7,152,784							
	Project Case							-1,680	-349	4,290	0	0	0	
	Difference													
	Benefit	-6,863	-2,322	-38,346	-722	-2,723	-7,560	-33	-1,068	-4,554	0	0	0	
Car Driver Parking number	Base Case	60,398	71,867	211,269	664	2,504	6,952							
	Project Case	60,405	71,828	211,556	664	2,504	6,952	7	-39	286	0	0	0	
	Difference	7	-39	286	0	0	0							

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	17,405	205,115	1,934,048	7,290	27,494	76,319						
	Project Case	17,406	205,281	1,934,398	7,290	27,494	76,319	1	166	350	0	0	0
	Difference	1	166	350	0	0	0						
Car passenger IVT minutes	Base Case	345,000	4,475,426	26,462,964	312,619	1,179,021	3,272,811						
	Project Case							12	7,843	12,841	0	0	0
	Difference												
	Benefit	-286	-71	-12,890	-403	-1,521	-4,221	3	-91	-2,006	0	0	0

Commercial Vehicles

		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	128,360	55,206	28,646	17,428				
	Project Case	128,360	55,206	28,646	17,428	0	0	0	0
	Difference	0	0	0	0				
CV IVT minutes	Base Case	3,162,372	1,442,271	1,297,815	772,167				
	Project Case					2,335	323	0	0
	Difference								
	Benefit	-2,774	-1,026	-1,915	-1,295	-56	-9	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	28,053,064	3,340,518	3,388,582	34,782,163				
	Project Case	28,056,172	3,342,244	3,389,150	34,787,565	3,108	1,726	568	5,402
	Difference	3,108	1,726	568	5,402				
Perceived (Fuel) VOC \$?	Base Case	13,824,177	2,058,720	2,671,659	18,554,556				
	Project Case					1,588	1,104	451	3,143
	Difference								
	Benefit	-3,440	-501	-1,974	-5,915	-74	-2	-1	-77
VOC Misperception \$?	Base Case	-14,228,896	-1,281,797	-716,923	-16,227,616				
	Project Case	-14,230,415	-1,282,420	-717,040	-16,229,875	-1,519	-623	-117	-2,259
	Difference	-1,519	-623	-117	-2,259				

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2026\_BN005\_CM403

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	7,453,626	6,691,197	82,678	14,227,501
	Project Case	7,432,849	6,689,689	82,641	14,205,179
	Difference	-20,777	-1,509	-37	-22,322
Passenger hours	Base Case	174,238	198,285	6,267	378,790
	Project Case	173,793	197,866	6,267	377,926
	Difference	-445	-419	-0	-864
Service Kilometres	Base Case	46,362	344,469	6,905	397,736
	Project Case	46,362	344,487	6,905	397,754
	Difference	0	18	0	18
Total PT Trips	Base Case				930,238
	Project Case				929,374
	Difference				-865

PT Benefits

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Total PT Trips <i>number</i>	Base Case	2,324	360,728	541,707	1,672	6,305	17,503							
	Project Case	2,326	360,584	540,984	1,672	6,305	17,503	2	-144	-722	0	0	0	
	Difference	2	-144	-722	0	0	0							
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	6,548	712,148	1,242,261	6,126	23,104	64,132							
	Project Case	6,553	711,818	1,240,165	6,126	23,104	64,132	5	-330	-2,096	0	0	0	
	Difference	5	-330	-2,096	0	0	0							
PT In-vehicle time <i>minutes</i>	Base Case	38,620	7,945,290	11,217,764	86,519	326,299	905,764							
	Project Case							26	-2,400	-28,533	0	0	0	
	Difference													
PT In-vehicle time <i>Benefit</i>		-26	-5,791	-10,723	-0	-2	-5	0	-101	-127	0	0	0	
	Base Case	8,971	1,279,732	3,322,877	12,751	48,090	133,493							
	Project Case							8	-332	-3,973	0	0	0	
PT wait time <i>minutes</i>	Base Case	8,971	1,279,732	3,322,877	12,751	48,090	133,493							
	Project Case													
	Difference													
PT wait time <i>Benefit</i>		1	1,268	2,044	0	0	0	0	-53	68	0	0	0	
	Base Case	15,937	2,852,386	5,070,325	13,010	49,066	136,200							
	Project Case							8	-1,424	-9,015	0	0	0	
PT interchange/boarding <i>minutes</i>	Base Case	15,937	2,852,386	5,070,325	13,010	49,066	136,200							
	Project Case													
	Difference													
PT interchange/boarding <i>Benefit</i>		1	-303	1,249	0	0	0	0	26	-40	0	0	0	
	Base Case	27,708	5,516,396	10,886,527	80,445	303,392	842,177							
	Project Case							33	-1,563	-16,106	0	0	0	
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	27,708	5,516,396	10,886,527	80,445	303,392	842,177							
	Project Case													
	Difference													
PT Walk access/transfer/egress time <i>Benefit</i>		-6	-1,005	-3,906	0	0	0	-1	-4	-87	0	0	0	

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2026\_BN005\_CM403

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	73,892,488	6,549,394	80,441,882
	Project Case	73,888,512	6,553,104	80,441,616
	Difference	-3,976	3,710	-266
Vehicle hours	Base Case	1,348,726	105,218	1,453,944
	Project Case	1,346,468	105,112	1,451,580
	Difference	-2,257	-106	-2,364
Average speed	Base Case	54.79	62.25	55.33
	Project Case	54.88	62.34	55.42
Total Trips (Private = car driver+ passe	Base Case	7,859,097	229,641	8,088,738
	Project Case	7,858,621	229,641	8,088,262
	Difference	-476	0	-476

Car Drivers

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Car Driver Trips number	Base Case	345,630	1,303,520	3,618,400	21,250	80,144	222,468							
	Project Case	345,605	1,303,186	3,617,645	21,250	80,144	222,468	-24	-334	-755	0	0	0	
	Difference	-24	-334	-755	0	0	0							
Car Driver IVT minutes	Base Case	6,894,933	31,753,698	53,197,592	683,214	2,576,695	7,152,568							
	Project Case							-4,585	8,803	-23,663	0	0	0	
	Difference													
	Benefit	-11,469	-20,347	-62,500	-1,005	-3,791	-10,522	32	-849	-944	0	0	0	
Car Driver Parking number	Base Case	60,398	71,867	211,269	664	2,504	6,952							
	Project Case	60,395	71,838	211,539	664	2,504	6,952	-2	-28	269	0	0	0	
	Difference	-2	-28	269	0	0	0							

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	17,405	205,115	1,934,048	7,291	27,497	76,329						
	Project Case	17,405	205,296	1,934,504	7,291	27,497	76,329	0	181	456	0	0	0
	Difference	0	181	456	0	0	0						
Car passenger IVT minutes	Base Case	345,000	4,475,426	26,462,964	312,661	1,179,179	3,273,250						
	Project Case							-100	9,118	9,067	0	0	0
	Difference												
	Benefit	-530	-2,989	-27,821	-534	-2,013	-5,588	9	-163	-624	0	0	0

Commercial Vehicles

		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	128,360	55,206	28,646	17,428				
	Project Case	128,360	55,206	28,646	17,428	0	-0	0	0
	Difference	0	-0	0	0				
CV IVT minutes	Base Case	3,162,372	1,442,271	1,297,815	772,167				
	Project Case					2,903	372	0	0
	Difference								
	Benefit	-5,757	-2,199	-2,799	-1,869	-108	-18	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	28,053,064	3,340,518	3,388,582	34,782,163				
	Project Case	28,047,855	3,342,720	3,389,257	34,779,832	-5,209	2,203	675	-2,331
	Difference	-5,209	2,203	675	-2,331				
Perceived (Fuel) VOC \$?	Base Case	13,824,177	2,058,720	2,671,659	18,554,556				
	Project Case					-2,500	1,425	541	-534
	Difference								
	Benefit	-4,335	-156	114	-4,377	-195	-3	-1	-200
VOC Misperception \$?	Base Case	-14,228,896	-1,281,797	-716,923	-16,227,616				
	Project Case	-14,226,187	-1,282,575	-717,057	-16,225,819	2,709	-777	-134	1,797
	Difference	2,709	-777	-134	1,797				

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2031\_BN005\_CM401

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	8,769,624	7,239,787	89,961	16,099,372
	Project Case	8,766,235	7,237,740	90,058	16,094,032
	Difference	-3,389	-2,048	97	-5,340
Passenger hours	Base Case	202,476	218,806	6,833	428,115
	Project Case	202,298	218,748	6,833	427,879
	Difference	-178	-58	0	-235
Service Kilometres	Base Case	46,951	345,276	6,905	399,132
	Project Case	46,951	345,276	6,905	399,132
	Difference	0	0	0	0
Total PT Trips	Base Case				1,036,801
	Project Case				1,036,502
	Difference				-300

PT Benefits

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Total PT Trips <i>number</i>	Base Case	2,612	406,654	599,533	1,863	6,966	19,173							
	Project Case	2,610	406,663	599,226	1,863	6,966	19,173	-2	9	-307	0	0	0	
	Difference	-2	9	-307	0	0	0							
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	7,520	808,223	1,389,405	6,826	25,527	70,255							
	Project Case	7,517	808,416	1,388,502	6,826	25,527	70,255	-3	193	-903	0	0	0	
	Difference	-3	193	-903	0	0	0							
PT In-vehicle time <i>minutes</i>	Base Case	43,954	9,047,284	12,722,182	96,570	361,119	993,874							
	Project Case							-12	6,028	-13,464	0	0	0	
	Difference													
PT In-vehicle time <i>minutes</i>	Benefit	-8	-2,397	-3,628	-3	-10	-27	0	1	3	0	0	0	
	Base Case	10,039	1,417,988	3,687,378	14,164	52,965	145,772							
	Project Case							-5	455	-1,213	0	0	0	
PT In-vehicle time <i>minutes</i>	Difference													
	Benefit	1	687	352	0	0	0	0	0	1	0	0	0	
	Base Case	17,947	3,209,240	5,627,913	14,500	54,223	149,232							
PT interchange/boarding <i>minutes</i>	Project Case							-6	421	-4,525	0	0	0	
	Difference													
	Benefit	2	3,707	102	0	0	0	0	-1	-0	0	0	0	
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	31,069	6,268,752	12,002,652	89,541	334,834	921,531							
	Project Case							-35	-167	-1,998	0	0	0	
	Difference													
PT Walk access/transfer/egress time <i>minutes</i>	Benefit	-6	-6,476	-1,085	0	0	0	-0	-1	-3	0	0	0	



CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2031\_BN005\_CM401

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	81,981,416	7,245,934	89,227,350
	Project Case	81,988,872	7,246,351	89,235,223
	Difference	7,456	418	7,874
Vehicle hours	Base Case	1,561,139	120,873	1,682,012
	Project Case	1,560,580	120,851	1,681,430
	Difference	-559	-22	-581
Average speed	Base Case	52.51	59.95	53.05
	Project Case	52.54	59.96	53.07
Total Trips (Private = car driver+ passe	Base Case	8,497,845	253,011	8,750,856
	Project Case	8,498,351	253,011	8,751,362
	Difference	506	0	506

Car Drivers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Driver Trips number	Base Case	379,547	1,419,299	3,906,203	23,691	88,592	243,824						
	Project Case	379,564	1,419,301	3,906,517	23,691	88,592	243,824	16	2	314	0	0	0
	Difference	16	2	314	0	0	0						
Car Driver IVT minutes	Base Case	7,858,146	37,126,720	60,228,520	818,391	3,060,335	8,422,665						
	Project Case							1,061	-8,096	14,440	0	0	0
	Difference												
	Benefit	-3,083	-15,918	-15,958	-221	-828	-2,279	2	-399	404	0	0	0
Car Driver Parking number	Base Case	64,979	73,223	229,183	762	2,848	7,839						
	Project Case	64,983	73,218	229,275	762	2,848	7,839	3	-6	92	0	0	0
	Difference	3	-6	92	0	0	0						

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	19,065	225,148	2,070,941	8,085	30,235	83,214						
	Project Case	19,065	225,222	2,071,041	8,085	30,235	83,214	-0	73	100	0	0	0
	Difference	-0	73	100	0	0	0						
Car passenger IVT minutes	Base Case	394,488	5,048,260	29,488,270	361,134	1,350,442	3,716,693						
	Project Case							18	2,732	5,056	0	0	0
	Difference												
	Benefit	-128	-2,271	-7,429	-123	-460	-1,267	0	1	764	0	0	0

Commercial Vehicles

		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	140,549	61,325	31,719	19,418				
	Project Case	140,549	61,325	31,719	19,418	0	0	0	0
	Difference	0	0	0	0				
CV IVT minutes	Base Case	3,643,285	1,697,486	1,519,002	906,716				
	Project Case					363	23	0	0
	Difference								
	Benefit	-787	-215	-491	-411	-4	-1	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	31,971,504	3,722,692	3,869,015	39,563,211				
	Project Case	31,974,355	3,722,880	3,869,015	39,566,249	2,851	188	0	3,039
	Difference	2,851	188	0	3,039				
Perceived (Fuel) VOC \$?	Base Case	15,518,622	2,265,167	3,012,558	20,796,347				
	Project Case					1,455	105	-7	1,553
	Difference								
	Benefit	-2,006	-142	-169	-2,318	2	-0	-0	2
VOC Misperception \$?	Base Case	-16,452,878	-1,457,526	-856,459	-18,766,863				
	Project Case	-16,454,273	-1,457,609	-856,467	-18,768,349	-1,395	-83	-7	-1,486
	Difference	-1,395	-83	-7	-1,486				

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2031\_BN005\_CM402

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	8,769,624	7,239,787	89,961	16,099,372
	Project Case	8,721,634	7,251,625	89,987	16,063,246
	Difference	-47,990	11,838	26	-36,126
Passenger hours	Base Case	202,476	218,806	6,833	428,115
	Project Case	201,423	218,176	6,836	426,435
	Difference	-1,053	-630	3	-1,680
Service Kilometres	Base Case	46,951	345,276	6,905	399,132
	Project Case	46,951	345,293	6,905	399,150
	Difference	0	18	0	18
Total PT Trips	Base Case				1,036,801
	Project Case				1,035,248
	Difference				-1,553

PT Benefits

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Total PT Trips <i>number</i>	Base Case	2,612	406,654	599,533	1,863	6,966	19,173							
	Project Case	2,611	406,093	598,542	1,863	6,966	19,173	-1	-562	-991	0	0	0	
	Difference	-1	-562	-991	0	0	0							
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	7,520	808,226	1,389,413	6,826	25,527	70,255							
	Project Case	7,519	806,753	1,386,471	6,826	25,527	70,255	-0	-1,474	-2,942	0	0	0	
	Difference	-0	-1,474	-2,942	0	0	0							
PT In-vehicle time <i>minutes</i>	Base Case	43,954	9,047,284	12,722,182	96,570	361,119	993,874							
	Project Case							38	-18,177	-26,223	0	0	0	
	Difference													
PT wait time <i>minutes</i>	Base Case	10,039	1,417,988	3,687,378	14,164	52,965	145,772							
	Project Case							9	-1,094	-4,383	0	0	0	
	Difference													
PT interchange/boarding <i>minutes</i>	Base Case	17,947	3,209,240	5,627,913	14,500	54,223	149,232							
	Project Case							9	-3,826	-8,515	0	0	0	
	Difference													
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	31,069	6,268,752	12,002,652	89,541	334,834	921,531							
	Project Case							-13	-5,210	-26,607	0	0	0	
	Difference													
	Benefit													
	Benefit	-18	-3,063	-7,495	0	0	0	-1	-86	-470	0	0	0	

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2031\_BN005\_CM402

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	81,981,416	7,245,934	89,227,350
	Project Case	82,024,736	7,248,741	89,273,477
	Difference	43,320	2,808	46,128
Vehicle hours	Base Case	1,561,139	120,873	1,682,012
	Project Case	1,554,244	120,529	1,674,774
	Difference	-6,894	-344	-7,238
Average speed	Base Case	52.51	59.95	53.05
	Project Case	52.77	60.14	53.30
Total Trips (Private = car driver+ passe	Base Case	8,497,969	253,011	8,750,980
	Project Case	8,497,682	253,011	8,750,693
	Difference	-287	0	-287

Car Drivers

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Car Driver Trips number	Base Case	379,547	1,419,299	3,906,203	23,691	88,592	243,824							
	Project Case	379,548	1,418,523	3,905,070	23,691	88,592	243,824	1	-776	-1,132	0	0	0	
	Difference	1	-776	-1,132	0	0	0							
Car Driver IVT minutes	Base Case	7,858,146	37,126,720	60,228,520	818,204	3,059,633	8,420,740							
	Project Case							1,198	15,392	-12,169	0	0	0	
	Difference													
	Benefit	-44,357	-92,830	-221,373	-2,262	-8,458	-23,277	62	-2,203	-572	0	0	0	
Car Driver Parking number	Base Case	64,979	73,223	229,183	761	2,848	7,837							
	Project Case	64,999	73,291	229,349	761	2,848	7,837	20	68	166	0	0	0	
	Difference	20	68	166	0	0	0							

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	19,065	225,148	2,070,941	8,094	30,266	83,299						
	Project Case	19,066	225,401	2,072,307	8,094	30,266	83,299	1	253	1,366	0	0	0
	Difference	1	253	1,366	0	0	0						
Car passenger IVT minutes	Base Case	394,488	5,048,260	29,488,270	361,503	1,351,822	3,720,494						
	Project Case							143	12,913	49,048	0	0	0
	Difference												
	Benefit	-1,827	-18,302	-89,969	-1,539	-5,755	-15,838	5	-444	-2,676	0	0	0

Commercial Vehicles

		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	140,549	61,325	31,719	19,418				
	Project Case	140,549	61,325	31,719	19,418	0	0	0	0
	Difference	0	0	0	0				
CV IVT minutes	Base Case	3,643,285	1,697,486	1,519,002	906,716				
	Project Case					7,698	991	0	0
	Difference								
	Benefit	-17,426	-7,167	-7,335	-5,587	-911	-143	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	31,971,504	3,722,692	3,869,015	39,563,211				
	Project Case	31,980,525	3,727,576	3,870,470	39,578,571	9,021	4,884	1,455	15,361
	Difference	9,021	4,884	1,455	15,361				
Perceived (Fuel) VOC \$?	Base Case	15,518,622	2,265,167	3,012,558	20,796,347				
	Project Case					3,991	3,068	1,119	8,178
	Difference								
	Benefit	-17,399	-838	-2,955	-21,191	-408	-40	-18	-466
VOC Misperception \$?	Base Case	-16,452,878	-1,457,526	-856,459	-18,766,863				
	Project Case	-16,457,908	-1,459,342	-856,796	-18,774,046	-5,030	-1,816	-336	-7,183
	Difference	-5,030	-1,816	-336	-7,183				

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2031\_BN005\_CM403

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	8,769,624	7,239,787	89,961	16,099,372
	Project Case	8,734,863	7,246,493	89,883	16,071,238
	Difference	-34,761	6,706	-78	-28,134
Passenger hours	Base Case	202,476	218,806	6,833	428,115
	Project Case	201,612	217,960	6,837	426,409
	Difference	-864	-847	5	-1,706
Service Kilometres	Base Case	46,951	345,276	6,905	399,132
	Project Case	46,951	345,293	6,905	399,150
	Difference	0	18	0	18
Total PT Trips	Base Case				1,036,801
	Project Case				1,035,408
	Difference				-1,393

PT Benefits

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Total PT Trips <i>number</i>	Base Case	2,612	406,654	599,533	1,863	6,966	19,173							
	Project Case	2,611	406,521	598,273	1,863	6,966	19,173	-0	-134	-1,259	0	0	0	
	Difference	-0	-134	-1,259	0	0	0							
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	7,520	808,224	1,389,415	6,826	25,527	70,255							
	Project Case	7,519	808,050	1,385,780	6,826	25,527	70,255	-0	-174	-3,634	0	0	0	
	Difference	-0	-174	-3,634	0	0	0							
PT In-vehicle time <i>minutes</i>	Base Case	43,954	9,047,284	12,722,182	96,570	361,119	993,874							
	Project Case							22	1,936	-38,723	0	0	0	
	Difference													
PT wait time <i>minutes</i>	Base Case	10,039	1,417,988	3,687,378	14,164	52,965	145,772							
	Project Case							5	642	-6,872	0	0	0	
	Difference													
PT interchange/boarding <i>minutes</i>	Base Case	17,947	3,209,240	5,627,913	14,500	54,223	149,232							
	Project Case							4	-30	-13,867	0	0	0	
	Difference													
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	31,069	6,268,752	12,002,652	89,541	334,834	921,531							
	Project Case							4	-627	-28,322	0	0	0	
	Difference													
	Benefit													
	Benefit	-14	-2,315	-7,615	0	0	0	-1	-80	-498	0	0	0	

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2031\_BN005\_CM403

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	81,981,416	7,245,934	89,227,350
	Project Case	82,002,400	7,252,524	89,254,924
	Difference	20,984	6,591	27,575
Vehicle hours	Base Case	1,561,139	120,873	1,682,012
	Project Case	1,549,951	120,327	1,670,277
	Difference	-11,188	-546	-11,734
Average speed	Base Case	52.51	59.95	53.05
	Project Case	52.91	60.27	53.44
Total Trips (Private = car driver+ passe	Base Case	8,498,024	253,011	8,751,035
	Project Case	8,496,777	253,011	8,749,789
	Difference	-1,247	0	-1,247

Car Drivers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Driver Trips number	Base Case	379,547	1,419,299	3,906,203	23,691	88,592	243,824						
	Project Case	379,521	1,418,435	3,903,777	23,691	88,592	243,824	-26	-864	-2,425	0	0	0
	Difference	-26	-864	-2,425	0	0	0						
Car Driver IVT minutes	Base Case	7,858,146	37,126,720	60,228,520	818,138	3,059,385	8,420,060						
	Project Case							-1,569	-4,712	-57,010	0	0	0
	Difference												
Car Driver Parking number	Base Case	64,979	73,223	229,183	761	2,847	7,836						
	Project Case	64,998	73,211	229,315	761	2,847	7,836	19	-12	132	0	0	0
	Difference	19	-12	132	0	0	0						

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	19,065	225,148	2,070,941	8,097	30,280	83,336						
	Project Case	19,066	225,260	2,072,897	8,097	30,280	83,336	1	112	1,956	0	0	0
	Difference	1	112	1,956	0	0	0						
Car passenger IVT minutes	Base Case	394,488	5,048,260	29,488,270	361,657	1,352,399	3,722,080						
	Project Case							71	7,428	56,412	0	0	0
	Difference												
Benefit	Base Case												
	Project Case												
	Difference	-2,612	-23,896	-125,317	-2,426	-9,072	-24,968	28	-741	-2,690	0	0	0

Commercial Vehicles

		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	140,549	61,325	31,719	19,418				
	Project Case	140,549	61,325	31,719	19,418	0	0	0	0
	Difference	0	0	0	0				
CV IVT minutes	Base Case	3,643,285	1,697,486	1,519,002	906,716				
	Project Case					10,339	1,291	0	0
	Difference								
Benefit	Base Case								
	Project Case								
	Difference	-25,776	-10,495	-10,842	-8,413	-1,708	-278	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	31,971,504	3,722,692	3,869,015	39,563,211				
	Project Case	31,963,876	3,729,880	3,871,164	39,564,919	-7,628	7,187	2,149	1,708
	Difference	-7,628	7,187	2,149	1,708				
Perceived (Fuel) VOC \$?	Base Case	15,518,622	2,265,167	3,012,558	20,796,347				
	Project Case					-4,970	4,680	1,721	1,431
	Difference								
Benefit	Base Case								
	Project Case								
	Difference	-23,455	-773	-2,643	-26,871	-614	-54	-19	-688
VOC Misperception \$?	Base Case	-16,452,878	-1,457,526	-856,459	-18,766,863				
	Project Case	-16,450,220	-1,460,034	-856,887	-18,767,141	2,658	-2,508	-428	-278
	Difference	2,658	-2,508	-428	-278				



CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - PT USERS

Model:

CEN\_EC\_2036\_BN006\_CM404

Global statistics

		Rail	Bus	Ferry	TOTAL
Passenger Kilometres	Base Case	10,302,356	8,119,848	96,917	18,519,120
	Project Case	10,246,797	8,133,761	97,298	18,477,856
	Difference	-55,559	13,914	381	-41,264
Passenger hours	Base Case	235,021	248,660	7,339	491,019
	Project Case	233,668	247,651	7,360	488,679
	Difference	-1,352	-1,008	21	-2,340
Service Kilometres	Base Case	47,983	359,017	6,905	413,904
	Project Case	47,983	359,035	6,905	413,922
	Difference	0	18	0	18
Total PT Trips	Base Case				1,166,019
	Project Case				1,164,246
	Difference				-1,774

PT Benefits

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Total PT Trips <i>number</i>	Base Case	2,990	459,874	672,379	2,074	7,719	20,983							
	Project Case	2,991	459,685	670,794	2,074	7,719	20,983	1	-190	-1,585	0	0	0	
	Difference	1	-190	-1,585	0	0	0							
PT Fare <i>\$ constant prices - no inflation</i>	Base Case	8,808	920,688	1,584,871	7,599	28,285	76,889							
	Project Case	8,810	920,329	1,579,992	7,599	28,285	76,889	2	-359	-4,879	0	0	0	
	Difference	2	-359	-4,879	0	0	0							
PT In-vehicle time <i>minutes</i>	Base Case	50,386	10,336,099	14,801,756	108,604	404,271	1,098,946							
	Project Case							60	-1,088	-47,360	0	0	0	
	Difference													
PT wait time <i>minutes</i>	Base Case	11,383	1,586,991	4,237,354	14,315	53,286	144,850							
	Project Case							14	401	-8,926	0	0	0	
	Difference													
PT interchange/boarding <i>minutes</i>	Base Case	20,483	3,636,738	6,408,411	16,267	60,552	164,602							
	Project Case							16	-191	-15,867	0	0	0	
	Difference													
PT Walk access/transfer/egress time <i>minutes</i>	Base Case	35,555	7,118,994	13,541,584	99,451	370,200	1,006,330							
	Project Case							28	-759	-35,731	0	0	0	
	Difference													
	Benefit													
	Benefit	-19	-2,534	-10,823	0	0	0	-2	-27	-550	0	0	0	

CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES

INPUTS TO ECONOMICS - HWY USERS

Model:

CEN\_EC\_2036\_BN006\_CM404

Global statistics

		Private	CV	TOTAL
Vehicle Kilometres	Base Case	90,823,672	8,044,537	98,868,209
	Project Case	90,851,296	8,042,263	98,893,559
	Difference	27,624	-2,275	25,350
Vehicle hours	Base Case	1,820,496	139,365	1,959,860
	Project Case	1,803,592	138,645	1,942,237
	Difference	-16,903	-720	-17,623
Average speed	Base Case	49.89	57.72	50.45
	Project Case	50.37	58.01	50.92
Total Trips (Private = car driver+ passe	Base Case	9,148,995	278,188	9,427,183
	Project Case	9,148,997	278,188	9,427,184
	Difference	2	-0	2

Car Drivers

		Existing Users						Diverted Users						
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	
Car Driver Trips number	Base Case	414,548	1,543,131	4,194,756	26,409	98,305	267,227							
	Project Case	414,520	1,542,094	4,193,066	26,409	98,305	267,227	-27	-1,037	-1,689	0	0	0	
	Difference	-27	-1,037	-1,689	0	0	0							
Car Driver IVT minutes	Base Case	8,850,185	44,410,288	68,123,392	969,930	3,610,511	9,814,607							
	Project Case							-982	-15,051	-45,830	0	0	0	
	Difference													
	Benefit	-85,507	-269,125	-473,017	-4,929	-18,349	-49,878	486	-2,768	1,059	0	0	0	
Car Driver Parking number	Base Case	70,120	74,662	246,520	874	3,252	8,841							
	Project Case	70,142	74,631	246,729	874	3,252	8,841	22	-30	209	0	0	0	
	Difference	22	-30	209	0	0	0							

Car Passengers

		Existing Users						Diverted Users					
		Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other	Internal Business	Internal Commuter	Internal Other	External Business	External Commuter	External Other
Car Passenger Trips number	Base Case	20,808	243,706	2,206,725	8,987	33,454	90,940						
	Project Case	20,810	243,952	2,209,233	8,987	33,454	90,940	2	245	2,508	0	0	0
	Difference	2	245	2,508	0	0	0						
Car passenger IVT minutes	Base Case	447,156	5,633,781	32,778,460	415,919	1,548,235	4,208,633						
	Project Case							170	12,616	78,655	0	0	0
	Difference												
	Benefit	-3,618	-41,048	-188,731	-3,104	-11,556	-31,413	25	-767	-5,904	0	0	0

Commercial Vehicles

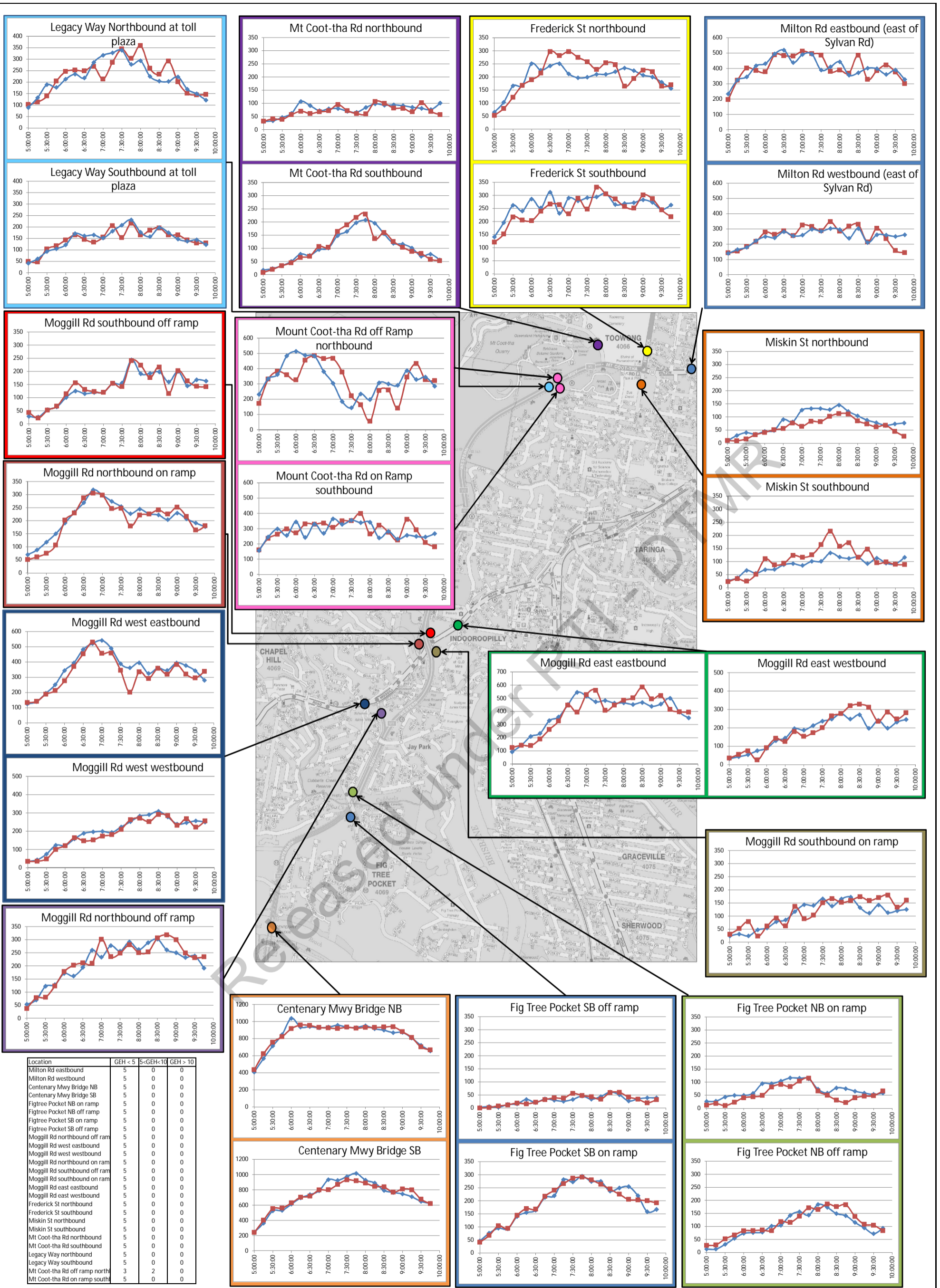
		Existing				Diverted Users			
		Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)	Internal Medium (Austroads class 3-5)	Internal Heavy (Austroads class 6-12)	External Medium (Austroads class 3-5)	External Heavy (Austroads class 6-12)
CV Trips number	Base Case	153,814	67,548	35,148	21,678				
	Project Case	153,814	67,548	35,148	21,678	-0	-0	0	0
	Difference	-0	-0	0	0				
CV IVT minutes	Base Case	4,179,812	1,984,349	1,774,575	1,067,277				
	Project Case					12,358	1,530	0	0
	Difference								
	Benefit	-34,377	-14,294	-14,219	-11,236	-2,624	-459	0	0

Vehicle Operating Cost

		Existing				Diverted Users			
		Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total	Private	Medium CV (Austroads class 3-5)	Heavy CV (Austroads class 6-12)	Total
Resource VOC \$?	Base Case	36,610,080	4,167,851	4,440,876	45,218,807				
	Project Case	36,602,065	4,176,227	4,443,384	45,221,676	-8,015	8,376	2,508	2,869
	Difference	-8,015	8,376	2,508	2,869				
Perceived (Fuel) VOC \$?	Base Case	17,446,772	2,504,466	3,415,353	23,366,591				
	Project Case					-4,765	5,419	2,030	2,684
	Difference								
	Benefit	-38,717	-1,544	-2,508	-42,769	-774	-119	-56	-948
VOC Misperception \$?	Base Case	-19,163,300	-1,663,387	-1,025,524	-21,852,211				
	Project Case	-19,160,050	-1,666,344	-1,026,002	-21,852,396	3,250	-2,957	-477	-185
	Difference	3,250	-2,957	-477	-185				

## Appendix F. Paramics model calibration results

Released under RTI - DTMR



Location	GEH < 5	5 < GEH < 10	GEH > 10
Milton Rd eastbound	5	0	0
Milton Rd westbound	5	0	0
Centenary Mwy Bridge NB	5	0	0
Centenary Mwy Bridge SB	5	0	0
Figtree Pocket NB on ramp	5	0	0
Figtree Pocket NB off ramp	5	0	0
Figtree Pocket SB on ramp	5	0	0
Figtree Pocket SB off ramp	5	0	0
Moggill Rd northbound off ramp	5	0	0
Moggill Rd west eastbound	5	0	0
Moggill Rd west westbound	5	0	0
Moggill Rd northbound on ramp	5	0	0
Moggill Rd southbound off ramp	5	0	0
Moggill Rd southbound on ramp	5	0	0
Moggill Rd east eastbound	5	0	0
Moggill Rd east westbound	5	0	0
Frederick St northbound	5	0	0
Frederick St southbound	5	0	0
Miskin St northbound	5	0	0
Miskin St southbound	5	0	0
Mt Coot-tha Rd northbound	5	0	0
Mt Coot-tha Rd southbound	5	0	0
Legacy Way northbound	5	0	0
Legacy Way southbound	5	0	0
Mt Coot-tha Rd off ramp north	3	2	0
Mt Coot-tha Rd on ramp south	5	0	0

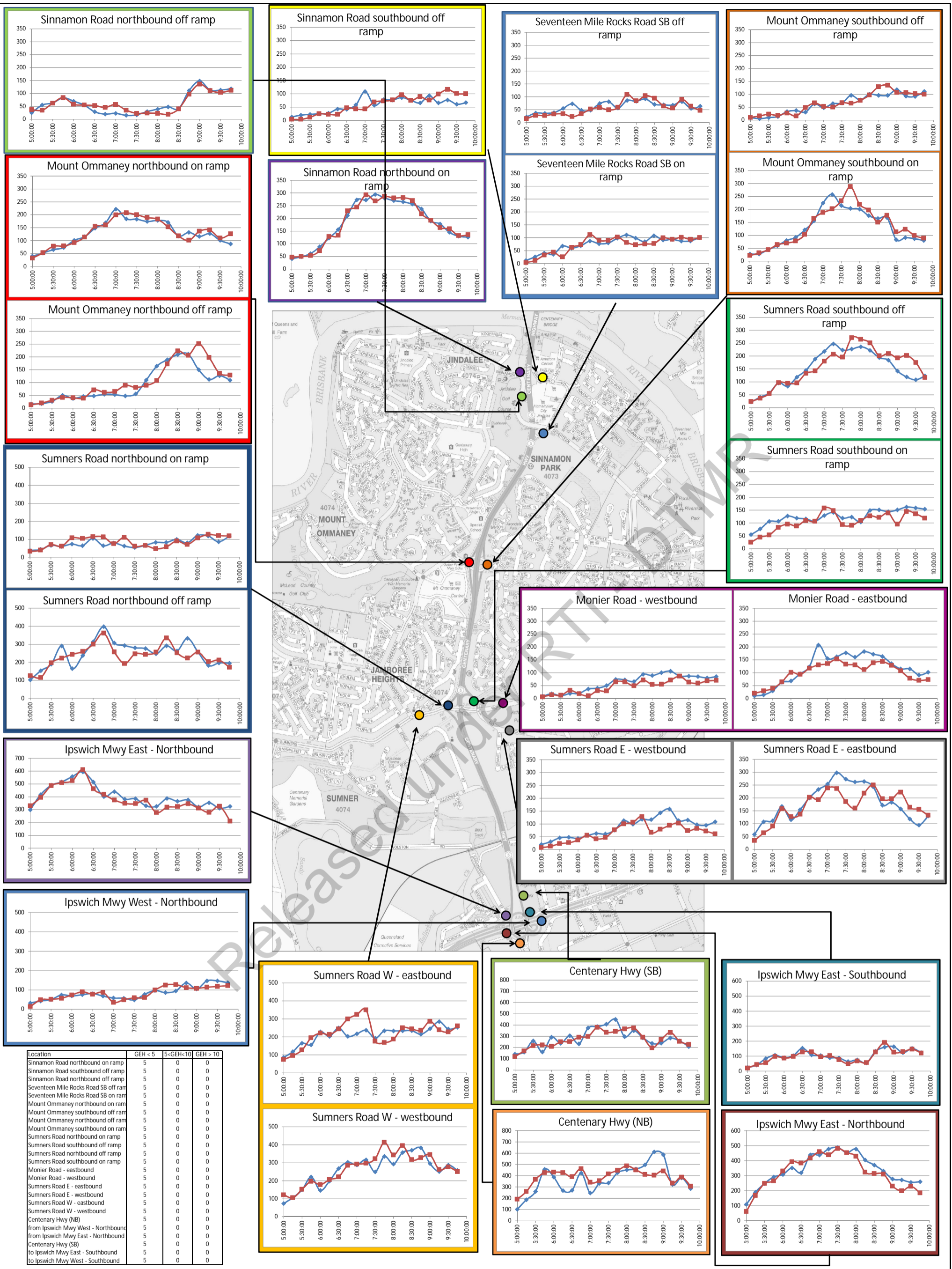
201/G001/901 / IH11700 Centenary Motorway Planning Study - Medium Staged Upgrades  
 Preliminary Evaluation + On-Q Business Case Lite  
**Morning peak (5-10am) model performance - Base**  
 (North of Brisbane River)

LEGEND  
 — 2017 observed count at 15 minute intervals  
 — Paramics modelled volume at 15 minute intervals

Model time period: 5:00 AM to 10:00 AM  
 Model name: 2017 AM base full model\_20170830







Location	GEH < 5	5-GEH-10	GEH > 10
Sinnamon Road northbound on ramp	5	0	0
Sinnamon Road southbound off ramp	5	0	0
Sinnamon Road northbound off ramp	5	0	0
Seventeen Mile Rocks Road SB off ramp	5	0	0
Seventeen Mile Rocks Road SB on ramp	5	0	0
Mount Ommaney northbound on ramp	5	0	0
Mount Ommaney southbound off ramp	5	0	0
Mount Ommaney northbound off ramp	5	0	0
Mount Ommaney southbound on ramp	5	0	0
Sumners Road northbound on ramp	5	0	0
Sumners Road southbound off ramp	5	0	0
Sumners Road northbound off ramp	5	0	0
Sumners Road southbound on ramp	5	0	0
Monier Road - eastbound	5	0	0
Monier Road - westbound	5	0	0
Sumners Road E - eastbound	5	0	0
Sumners Road E - westbound	5	0	0
Sumners Road W - eastbound	5	0	0
Sumners Road W - westbound	5	0	0
Centenary Hwy (NB)	5	0	0
from Ipswich Mwy West - Northbound	5	0	0
from Ipswich Mwy East - Northbound	5	0	0
Centenary Hwy (SB)	5	0	0
to Ipswich Mwy East - Southbound	5	0	0
to Ipswich Mwy West - Southbound	5	0	0

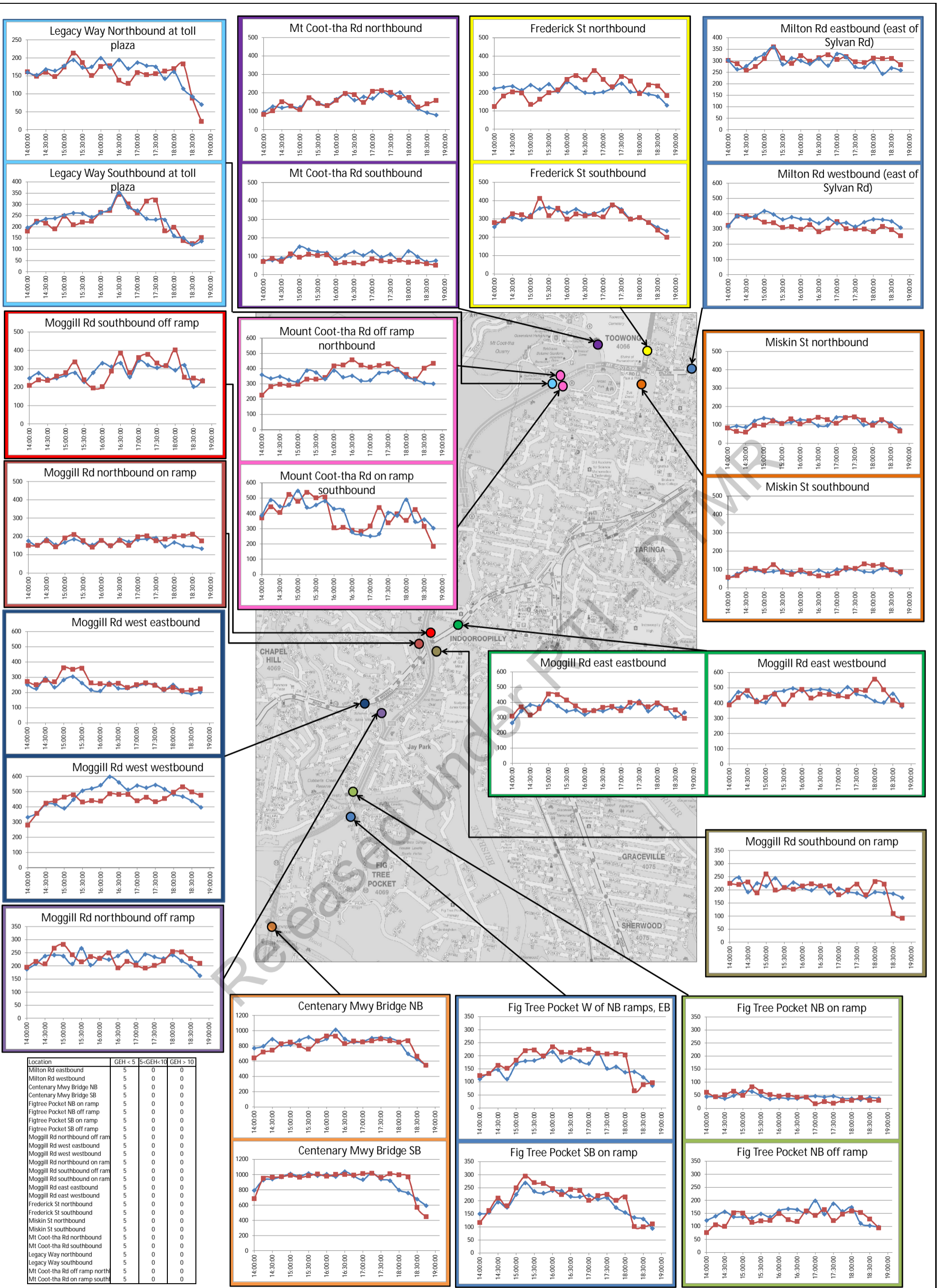
201/G001/901 / IH11700 Centenary Motorway Planning Study - Medium Staged Upgrades  
 Preliminary Evaluation + On-Q Business Case Lite  
**Morning peak (5-10am) model performance - Base**  
 (South of Brisbane River)

LEGEND  
 — 2017 observed count at 15 minute intervals  
 — Paramics modelled volume at 15 minute intervals

Model time period : 5:00 AM to 10:00 AM  
 Model name: 2017 AM base full model\_20170830







Location	GEH < 5	5 < GEH < 10	GEH > 10
Milton Rd eastbound	5	0	0
Milton Rd westbound	5	0	0
Centenary Mwy Bridge NB	5	0	0
Centenary Mwy Bridge SB	5	0	0
Figtree Pocket NB on ramp	5	0	0
Figtree Pocket NB off ramp	5	0	0
Figtree Pocket SB on ramp	5	0	0
Figtree Pocket SB off ramp	5	0	0
Moggill Rd northbound off ramp	5	0	0
Moggill Rd west eastbound	5	0	0
Moggill Rd west westbound	5	0	0
Moggill Rd northbound on ramp	5	0	0
Moggill Rd southbound off ramp	5	0	0
Moggill Rd southbound on ramp	5	0	0
Moggill Rd east eastbound	5	0	0
Moggill Rd east westbound	5	0	0
Frederick St northbound	5	0	0
Frederick St southbound	5	0	0
Miskin St northbound	5	0	0
Miskin St southbound	5	0	0
Mt Coot-tha Rd northbound	5	0	0
Mt Coot-tha Rd southbound	5	0	0
Legacy Way northbound	5	0	0
Legacy Way southbound	5	0	0
Mt Coot-tha Rd off ramp north	5	0	0
Mt Coot-tha Rd on ramp south	5	0	0

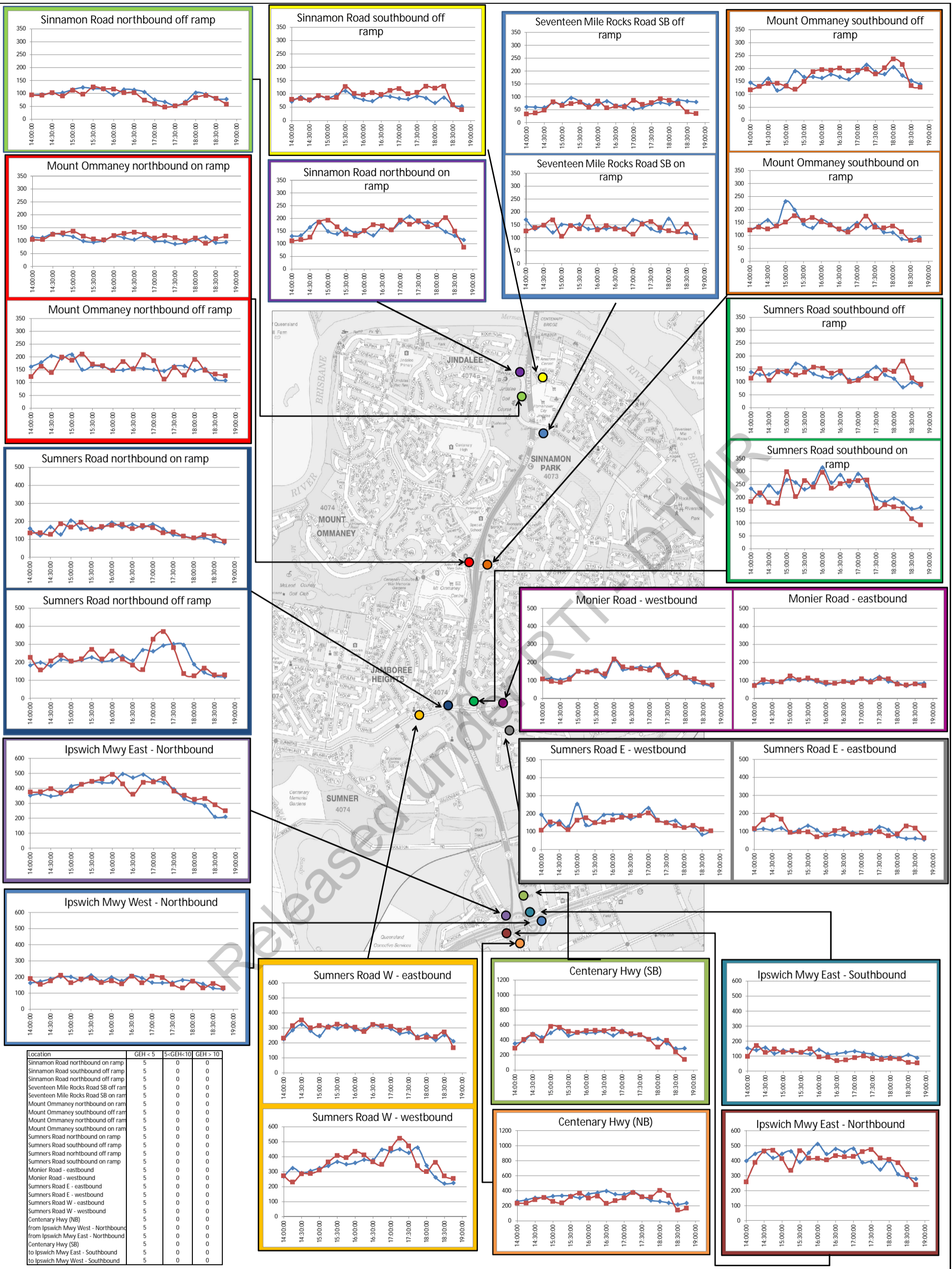
201/G001/901 / IH11700 Centenary Motorway Planning Study - Medium Staged Upgrades  
 Preliminary Evaluation + On-Q Business Case Lite  
**Evening peak (2-7pm) model performance - Base**  
 (North of Brisbane River)

**LEGEND**  
 — 2017 observed count at 15 minute intervals  
 — TARS Data  
 — Paramics modelled volume at 15 minute intervals

Model time period: 2:00 PM to 7:00 PM  
 Model name: 2017 PM base full model\_20170825







Location	GEH < 5	5 < GEH < 10	GEH > 10
Sinnamon Road northbound on ramp	5	0	0
Sinnamon Road southbound off ramp	5	0	0
Sinnamon Road northbound off ramp	5	0	0
Seventeen Mile Rocks Road SB off ramp	5	0	0
Seventeen Mile Rocks Road SB on ramp	5	0	0
Mount Ommaney northbound on ramp	5	0	0
Mount Ommaney southbound off ramp	5	0	0
Mount Ommaney northbound off ramp	5	0	0
Mount Ommaney southbound on ramp	5	0	0
Sumners Road northbound on ramp	5	0	0
Sumners Road southbound off ramp	5	0	0
Sumners Road northbound off ramp	5	0	0
Sumners Road southbound on ramp	5	0	0
Monier Road - eastbound	5	0	0
Monier Road - westbound	5	0	0
Sumners Road E - eastbound	5	0	0
Sumners Road E - westbound	5	0	0
Sumners Road W - eastbound	5	0	0
Sumners Road W - westbound	5	0	0
Centenary Hwy (NB)	5	0	0
from Ipswich Mwy West - Northbound	5	0	0
from Ipswich Mwy East - Northbound	5	0	0
Centenary Hwy (SB)	5	0	0
to Ipswich Mwy East - Southbound	5	0	0
to Ipswich Mwy West - Southbound	5	0	0

201/G001/901 / IH11700 Centenary Motorway Planning Study - Medium Staged Upgrades  
 Preliminary Evaluation + On-Q Business Case Lite  
 Evening peak (2-7pm) model performance - Base  
 (South of Brisbane River)

LEGEND  
 — 2017 observed count at 15 minute intervals  
 — Paramics matrix totals at 15 minute intervals

Model time period : 2:00 PM to 7:00 PM  
 Model name: 2017 PM base full model\_20170825



**CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES**  
**PARAMICS 2017 CALIBRATION RESULTS**

Location			5:00:00	6:00:00	7:00:00	8:00:00	9:00:00
Milton Rd eastbound (east of Sylvan Rd)	Observed	Observed	1320	1883	1783	1572	1476
Milton Rd eastbound (east of Sylvan Rd)	Modelled	Modelled	1308	1831	1876	1573	1484
Milton Rd eastbound (east of Sylvan Rd)		Difference	-12	-52	93	1	8
Milton Rd eastbound (east of Sylvan Rd)		GEH	0.17	0.60	1.09	0.01	0.10
Milton Rd westbound (east of Sylvan Rd)	Observed	Observed	708	1029	1146	1049	1035
Milton Rd westbound (east of Sylvan Rd)	Modelled	Modelled	699	1086	1274	1145	842
Milton Rd westbound (east of Sylvan Rd)		Difference	-9	57	128	96	-193
Milton Rd westbound (east of Sylvan Rd)		GEH	0.17	0.88	1.84	1.45	3.15
Sylvan Rd Northbound	Observed	Observed	67	137	159	204	233
Sylvan Rd Northbound	Modelled	Modelled	39	124	203	178	130
Sylvan Rd Northbound		Difference	-28	-13	44	-26	-103
Sylvan Rd Northbound		GEH	1.92	0.57	1.64	0.94	3.82
Sylvan Rd Southbound	Observed	Observed	3	28	46	36	36
Sylvan Rd Southbound	Modelled	Modelled	33	68	55	40	4
Sylvan Rd Southbound		Difference	30	40	9	4	-32
Sylvan Rd Southbound		GEH	3.54	2.89	0.63	0.32	3.58
Centenary Mwy Bridge NB	Observed	Observed	2535	3840	3754	3634	3057
Centenary Mwy Bridge NB	Modelled	Modelled	2634	3759	3699	3735	3062
Centenary Mwy Bridge NB		Difference	99	-81	-55	101	5
Centenary Mwy Bridge NB		GEH	0.97	0.66	0.45	0.83	0.05
Centenary Mwy Bridge SB	Observed	Observed	1663	2831	3847	3376	2725
Centenary Mwy Bridge SB	Modelled	Modelled	1756	2841	3515	3337	2902
Centenary Mwy Bridge SB		Difference	93	10	-332	-39	177
Centenary Mwy Bridge SB		GEH	1.12	0.09	2.74	0.34	1.67
Fig Tree Pocket NB on ramp	Observed	Observed	145	294	448	284	234
Fig Tree Pocket NB on ramp	Modelled	Modelled	63	214	393	169	200
Fig Tree Pocket NB on ramp		Difference	-82	-80	-55	-115	-34
Fig Tree Pocket NB on ramp		GEH	4.02	2.51	1.34	3.82	1.15
Fig Tree Pocket NB off ramp	Observed	Observed	111	328	545	647	374
Fig Tree Pocket NB off ramp	Modelled	Modelled	175	337	543	710	434
Fig Tree Pocket NB off ramp		Difference	64	9	-2	63	60
Fig Tree Pocket NB off ramp		GEH	2.68	0.25	0.04	1.21	1.49
Fig Tree Pocket SB on ramp	Observed	Observed	310	672	1066	1034	798
Fig Tree Pocket SB on ramp	Modelled	Modelled	306	699	1081	1013	800
Fig Tree Pocket SB on ramp		Difference	-4	27	15	-21	2
Fig Tree Pocket SB on ramp		GEH	0.11	0.52	0.23	0.33	0.04
Fig Tree Pocket SB off ramp	Observed	Observed	25	105	135	190	140
Fig Tree Pocket SB off ramp	Modelled	Modelled	22	89	181	196	128
Fig Tree Pocket SB off ramp		Difference	-3	-16	46	6	-12
Fig Tree Pocket SB off ramp		GEH	0.31	0.81	1.83	0.22	0.52
Moggill Rd northbound off ramp	Observed	Observed	373	786	1057	1113	911
Moggill Rd northbound off ramp	Modelled	Modelled	318	800	1064	1127	1013
Moggill Rd northbound off ramp		Difference	-55	14	7	14	102
Moggill Rd northbound off ramp		GEH	1.48	0.25	0.11	0.21	1.64
Moggill Rd west eastbound	Observed	Observed	711	1742	1783	1426	1394
Moggill Rd west eastbound	Modelled	Modelled	674	1629	1461	1303	1336
Moggill Rd west eastbound		Difference	-37	-113	-322	-123	-58
Moggill Rd west eastbound		GEH	0.70	1.38	4.00	1.66	0.78
Moggill Rd west westbound	Observed	Observed	276	663	867	1160	991
Moggill Rd west westbound	Modelled	Modelled	219	584	827	1099	978
Moggill Rd west westbound		Difference	-57	-79	-40	-61	-13
Moggill Rd west westbound		GEH	1.81	1.58	0.69	0.91	0.21
Moggill Rd northbound on ramp	Observed	Observed	426	1011	1053	896	804
Moggill Rd northbound on ramp	Modelled	Modelled	293	1023	969	912	811
Moggill Rd northbound on ramp		Difference	-133	12	-84	16	7
Moggill Rd northbound on ramp		GEH	3.51	0.19	1.32	0.27	0.12

**CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES**  
**PARAMICS 2017 CALIBRATION RESULTS**

Location			5:00:00	6:00:00	7:00:00	8:00:00	9:00:00
Moggill Rd southbound off ramp	Observed	Observed	174	461	675	741	676
Moggill Rd southbound off ramp	Modelled	Modelled	184	524	656	730	649
Moggill Rd southbound off ramp		Difference	10	63	-19	-11	-27
Moggill Rd southbound off ramp		GEH	0.37	1.42	0.37	0.20	0.52
Moggill Rd southbound on ramp	Observed	Observed	126	334	587	580	500
Moggill Rd southbound on ramp	Modelled	Modelled	183	351	508	643	642
Moggill Rd southbound on ramp		Difference	57	17	-79	63	142
Moggill Rd southbound on ramp		GEH	2.29	0.46	1.69	1.27	2.97
Moggill Rd east eastbound	Observed	Observed	679	1684	1934	1825	1701
Moggill Rd east eastbound	Modelled	Modelled	597	1432	1945	2068	1726
Moggill Rd east eastbound		Difference	-82	-252	11	243	25
Moggill Rd east eastbound		GEH	1.62	3.19	0.12	2.75	0.30
Moggill Rd east westbound	Observed	Observed	204	557	882	991	914
Moggill Rd east westbound	Modelled	Modelled	189	537	790	1234	1047
Moggill Rd east westbound		Difference	-15	-20	-92	243	133
Moggill Rd east westbound		GEH	0.54	0.43	1.59	3.64	2.12
Frederick St northbound	Observed	Observed	502	970	818	888	743
Frederick St northbound	Modelled	Modelled	422	983	1059	860	781
Frederick St northbound		Difference	-80	13	241	-28	38
Frederick St northbound		GEH	1.86	0.21	3.93	0.47	0.69
Frederick St southbound	Observed	Observed	839	1081	1154	1113	1065
Frederick St southbound	Modelled	Modelled	695	972	1095	1099	1050
Frederick St southbound		Difference	-144	-109	-59	-14	-15
Frederick St southbound		GEH	2.60	1.70	0.88	0.21	0.23
Miskin St northbound	Observed	Observed	112	264	518	458	296
Miskin St northbound	Modelled	Modelled	67	225	331	382	201
Miskin St northbound		Difference	-45	-39	-187	-76	-95
Miskin St northbound		GEH	2.38	1.25	4.54	1.85	3.01
Miskin St southbound	Observed	Observed	186	319	420	438	414
Miskin St southbound	Modelled	Modelled	133	413	620	592	370
Miskin St southbound		Difference	-53	94	200	154	-44
Miskin St southbound		GEH	2.10	2.46	4.39	3.39	1.11
Mt Coot-tha Rd northbound	Observed	Observed	173	349	300	376	343
Mt Coot-tha Rd northbound	Modelled	Modelled	169	271	288	370	296
Mt Coot-tha Rd northbound		Difference	-4	-78	-12	-6	-47
Mt Coot-tha Rd northbound		GEH	0.15	2.22	0.35	0.16	1.31
Mt Coot-tha Rd southbound	Observed	Observed	124	347	716	585	305
Mt Coot-tha Rd southbound	Modelled	Modelled	107	346	800	527	279
Mt Coot-tha Rd southbound		Difference	-17	-1	84	-58	-26
Mt Coot-tha Rd southbound		GEH	0.79	0.03	1.53	1.23	0.76
Legacy Way Northbound at toll plaza	Observed	Observed	587	952	1261	925	662
Legacy Way Northbound at toll plaza	Modelled	Modelled	558	1015	1146	1144	642
Legacy Way Northbound at toll plaza		Difference	-29	63	-115	219	-20
Legacy Way Northbound at toll plaza		GEH	0.61	1.00	1.66	3.40	0.39
Legacy Way Southbound at toll plaza	Observed	Observed	301	619	773	707	552
Legacy Way Southbound at toll plaza	Modelled	Modelled	320	588	732	712	568
Legacy Way Southbound at toll plaza		Difference	19	-31	-41	5	16
Legacy Way Southbound at toll plaza		GEH	0.54	0.63	0.75	0.09	0.34
Mount Coot-tha Rd off Ramp northbound	Observed	Observed	1410	1863	866	1095	1346
Mount Coot-tha Rd off Ramp northbound	Modelled	Modelled	1243	1729	1226	711	1425
Mount Coot-tha Rd off Ramp northbound		Difference	-167	-134	360	-384	79
Mount Coot-tha Rd off Ramp northbound		GEH	2.29	1.58	5.57	6.39	1.06
Mount Coot-tha Rd on Ramp southbound	Observed	Observed	955	1185	1386	1093	1017
Mount Coot-tha Rd on Ramp southbound	Modelled	Modelled	958	1268	1410	1088	1042
Mount Coot-tha Rd on Ramp southbound		Difference	3	83	24	-5	25
Mount Coot-tha Rd on Ramp southbound		GEH	0.05	1.18	0.32	0.08	0.39



**CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES**  
**PARAMICS 2017 CALIBRATION RESULTS**

Location			5:00:00	6:00:00	7:00:00	8:00:00	9:00:00
Sinnamon Rd northbound on ramp	Observed	Observed	239	762	1116	947	579
Sinnamon Rd northbound on ramp	Modelled	Modelled	222	734	1126	960	588
Sinnamon Rd northbound on ramp		Difference	-17	-28	10	13	9
Sinnamon Rd northbound on ramp		GEH	0.56	0.51	0.15	0.21	0.19
Sinnamon Rd southbound off ramp	Observed	Observed	81	171	321	321	271
Sinnamon Rd southbound off ramp	Modelled	Modelled	45	136	262	336	416
Sinnamon Rd southbound off ramp		Difference	-36	-35	-59	15	145
Sinnamon Rd southbound off ramp		GEH	2.27	1.41	1.73	0.41	3.91
Sinnamon Rd northbound off ramp	Observed	Observed	226	174	85	239	492
Sinnamon Rd northbound off ramp	Modelled	Modelled	218	212	139	179	463
Sinnamon Rd northbound off ramp		Difference	-8	38	54	-60	-29
Sinnamon Rd northbound off ramp		GEH	0.27	1.37	2.55	2.08	0.66
Seventeen Mile Rocks Rd SB off ramp	Observed	Observed	134	224	297	315	268
Seventeen Mile Rocks Rd SB off ramp	Modelled	Modelled	103	143	275	346	256
Seventeen Mile Rocks Rd SB off ramp		Difference	-31	-81	-22	31	-12
Seventeen Mile Rocks Rd SB off ramp		GEH	1.42	2.99	0.65	0.85	0.37
Seventeen Mile Rocks Rd SB on ramp	Observed	Observed	115	284	366	383	370
Seventeen Mile Rocks Rd SB on ramp	Modelled	Modelled	93	275	365	327	391
Seventeen Mile Rocks Rd SB on ramp		Difference	-22	-9	-1	-56	21
Seventeen Mile Rocks Rd SB on ramp		GEH	1.08	0.27	0.03	1.49	0.54
Mount Ommaney northbound on ramp	Observed	Observed	230	533	763	599	431
Mount Ommaney northbound on ramp	Modelled	Modelled	242	520	795	555	513
Mount Ommaney northbound on ramp		Difference	12	-13	32	-44	82
Mount Ommaney northbound on ramp		GEH	0.39	0.28	0.57	0.92	1.89
Mount Ommaney southbound off ramp	Observed	Observed	40	164	274	370	414
Mount Ommaney southbound off ramp	Modelled	Modelled	67	157	235	437	415
Mount Ommaney southbound off ramp		Difference	27	-7	-39	67	1
Mount Ommaney southbound off ramp		GEH	1.85	0.28	1.22	1.67	0.02
Mount Ommaney northbound off ramp	Observed	Observed	111	186	267	773	498
Mount Ommaney northbound off ramp	Modelled	Modelled	106	213	324	710	715
Mount Ommaney northbound off ramp		Difference	-5	27	57	-63	217
Mount Ommaney northbound off ramp		GEH	0.24	0.96	1.66	1.16	4.41
Mount Ommaney southbound on ramp	Observed	Observed	161	449	902	710	341
Mount Ommaney southbound on ramp	Modelled	Modelled	162	416	911	743	424
Mount Ommaney southbound on ramp		Difference	1	-33	9	33	83
Mount Ommaney southbound on ramp		GEH	0.04	0.79	0.15	0.61	2.12
Sumners Rd northbound on ramp	Observed	Observed	210	309	265	347	445
Sumners Rd northbound on ramp	Modelled	Modelled	206	441	315	269	474
Sumners Rd northbound on ramp		Difference	-4	132	50	-78	29
Sumners Rd northbound on ramp		GEH	0.14	3.41	1.47	2.22	0.68
Sumners Rd southbound off ramp	Observed	Observed	216	534	915	836	492
Sumners Rd southbound off ramp	Modelled	Modelled	213	467	854	927	687
Sumners Rd southbound off ramp		Difference	-3	-67	-61	91	195
Sumners Rd southbound off ramp		GEH	0.10	1.50	1.03	1.53	4.02
Sumners Rd northbound off ramp	Observed	Observed	735	1114	1156	1134	830
Sumners Rd northbound off ramp	Modelled	Modelled	662	1166	942	1068	844
Sumners Rd northbound off ramp		Difference	-73	52	-214	-66	14
Sumners Rd northbound off ramp		GEH	1.38	0.77	3.30	0.99	0.24
Sumners Rd southbound on ramp	Observed	Observed	345	469	512	548	626
Sumners Rd southbound on ramp	Modelled	Modelled	207	402	491	499	496
Sumners Rd southbound on ramp		Difference		-67	-21	-49	-130
Sumners Rd southbound on ramp		GEH	4.15	1.61	0.47	1.07	2.74
Monier Rd - eastbound	Observed	Observed	117	494	655	652	423
Monier Rd - eastbound	Modelled	Modelled	152	441	551	521	328
Monier Rd - eastbound		Difference	35	-53	-104	-131	-95
Monier Rd - eastbound		GEH	1.51	1.23	2.12	2.70	2.45



**CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES**  
**PARAMICS 2017 CALIBRATION RESULTS**

Location			5:00:00	6:00:00	7:00:00	8:00:00	9:00:00
Monier Rd - westbound	Observed	Observed	57	147	306	382	337
	Modelled	Modelled	63	87	248	266	260
		Difference	6	-60	-58	-116	-77
		GEH	0.39	2.77	1.74	3.22	2.23
Sumners Rd E - southbound	Observed	Observed	443	702	1087	862	499
	Modelled	Modelled	346	658	819	860	672
		Difference	-97	-44	-268	-2	173
		GEH	2.44	0.84	4.34	0.03	3.57
Sumners Rd E - northbound	Observed	Observed	145	223	406	531	415
	Modelled	Modelled	71	182	411	343	289
		Difference	-74	-41	5	-188	-126
		GEH	3.56	1.44	0.12	4.50	3.36
Sumners Rd W - eastbound	Observed	Observed	525	884	881	917	1029
	Modelled	Modelled	492	977	1018	917	1013
		Difference	-33	93	137	0	-16
		GEH	0.73	1.52	2.22	0.00	0.25
Sumners Rd W - westbound	Observed	Observed	549	915	1188	1402	1090
	Modelled	Modelled	574	890	1324	1382	1132
		Difference	25	-25	136	-20	42
		GEH	0.53	0.42	1.92	0.27	0.63
Centenary Hwy (NB)	Observed	Observed	1006	1349	1341	2019	1574
	Modelled	Modelled	1248	1712	1561	1756	1471
		Difference	242	363	220	-263	-103
		GEH	3.60	4.64	2.89	3.03	1.32
Ipswich Mwy off ramp (WB)	Observed	Observed	199	293	240	414	536
	Modelled	Modelled	171	329	205	463	462
		Difference	-28	36	-35	49	-74
		GEH	1.03	1.02	1.17	1.17	1.66
Ipswich Mwy off ramp (EB)	Observed	Observed	1723	2068	1537	1454	1312
	Modelled	Modelled	1720	2016	1442	1263	1127
		Difference	-3	-52	-95	-191	-185
		GEH	0.04	0.58	1.23	2.59	2.65
Centenary Hwy (SB)	Observed	Observed	719	1068	1618	1169	991
	Modelled	Modelled	730	1006	1355	1229	1088
		Difference	11	-62	-263	60	97
		GEH	0.20	0.96	3.41	0.87	1.50
Centenary Mwy southbound off ramp to Ipswich Mwy EB	Observed	Observed	255	453	344	421	560
	Modelled	Modelled	215	438	322	440	521
		Difference	-40	-15	-22	19	-39
		GEH	1.30	0.36	0.60	0.46	0.84
Centenary Mwy southbound off ramp to Ipswich Mwy WB	Observed	Observed	839	1419	1858	1585	1066
	Modelled	Modelled	742	1526	1833	1376	843
		Difference	-97	107	-25	-209	-223
		GEH	1.73	1.39	0.29	2.72	3.61

**CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES**  
**PARAMICS 2017 CALIBRATION RESULTS**

Location			14:00:00	15:00:00	16:00:00	17:00:00	18:00:00
Milton Rd eastbound (east of Sylvan Rd)	Observed	Observed	1151	1283	1174	1189	1063
Milton Rd eastbound (east of Sylvan Rd)	Modelled	Modelled	1122	1269	1259	1210	1213
Milton Rd eastbound (east of Sylvan Rd)		Difference	-29	-14	85	21	150
Milton Rd eastbound (east of Sylvan Rd)		GEH	0.43	0.20	1.22	0.30	2.22
Milton Rd westbound (east of Sylvan Rd)	Observed	Observed	1457	1551	1430	1336	1381
Milton Rd westbound (east of Sylvan Rd)	Modelled	Modelled	1464	1303	1208	1246	1147
Milton Rd westbound (east of Sylvan Rd)		Difference	7	-248	-222	-90	-234
Milton Rd westbound (east of Sylvan Rd)		GEH	0.09	3.28	3.06	1.25	3.29
Sylvan Road Northbound	Observed	Observed	332	345	314	372	286
Sylvan Road Northbound	Modelled	Modelled	270	327	312	354	262
Sylvan Road Northbound		Difference	-62	-18	-2	-18	-24
Sylvan Road Northbound		GEH	1.79	0.49	0.06	0.47	0.72
Sylvan Road Southbound	Observed	Observed	26	26	8	12	16
Sylvan Road Southbound	Modelled	Modelled	52	34	0	5	15
Sylvan Road Southbound		Difference	26	8	-8	-7	-1
Sylvan Road Southbound		GEH	2.08	0.73	2.00	1.20	0.13
Centenary Mwy Bridge NB	Observed	Observed	3263	3460	3645	3563	2714
Centenary Mwy Bridge NB	Modelled	Modelled	2925	3267	3541	3468	2918
Centenary Mwy Bridge NB		Difference	-338	-193	-104	-95	204
Centenary Mwy Bridge NB		GEH	3.04	1.66	0.87	0.80	1.92
Centenary Mwy Bridge SB	Observed	Observed	3631	3988	3998	3812	2826
Centenary Mwy Bridge SB	Modelled	Modelled	3565	3943	3969	3997	2978
Centenary Mwy Bridge SB		Difference	-66	-45	-29	185	152
Centenary Mwy Bridge SB		GEH	0.55	0.36	0.23	1.48	1.41
Fig Tree Pocket NB on ramp	Observed	Observed	173	211	157	172	148
Fig Tree Pocket NB on ramp	Modelled	Modelled	221	247	180	90	130
Fig Tree Pocket NB on ramp		Difference	48	36	23	-82	-18
Fig Tree Pocket NB on ramp		GEH	1.71	1.19	0.89	3.58	0.76
Fig Tree Pocket NB off ramp	Observed	Observed	555	552	644	690	486
Fig Tree Pocket NB off ramp	Modelled	Modelled	434	510	553	575	534
Fig Tree Pocket NB off ramp		Difference	-121	-42	-91	-115	48
Fig Tree Pocket NB off ramp		GEH	2.72	0.91	1.86	2.29	1.06
Fig Tree Pocket SB on ramp	Observed	Observed	675	957	907	812	515
Fig Tree Pocket SB on ramp	Modelled	Modelled	668	1078	951	845	526
Fig Tree Pocket SB on ramp		Difference	-7	121	44	33	11
Fig Tree Pocket SB on ramp		GEH	0.14	1.90	0.72	0.57	0.24
Fig Tree Pocket SB off ramp	Observed	Observed	190	135	75	156	255
Fig Tree Pocket SB off ramp	Modelled	Modelled	211	164	153	195	224
Fig Tree Pocket SB off ramp		Difference	21	29	78	39	-31
Fig Tree Pocket SB off ramp		GEH	0.74	1.19	3.65	1.47	1.00
Moggill Rd northbound off ramp	Observed	Observed	873	914	947	919	820
Moggill Rd northbound off ramp	Modelled	Modelled	884	973	885	812	942
Moggill Rd northbound off ramp		Difference	11	59	-62	-107	122
Moggill Rd northbound off ramp		GEH	0.19	0.96	1.02	1.82	2.06
Moggill Rd west eastbound	Observed	Observed	1004	1065	928	965	847
Moggill Rd west eastbound	Modelled	Modelled	1069	1332	1000	978	880
Moggill Rd west eastbound		Difference	65	267	72	13	33
Moggill Rd west eastbound		GEH	1.01	3.86	1.16	0.21	0.56
Moggill Rd west westbound	Observed	Observed	1522	1862	2211	2123	1782
Moggill Rd west westbound	Modelled	Modelled	1498	1812	1884	1788	1997
Moggill Rd west westbound		Difference	-24	-50	-327	-335	215
Moggill Rd west westbound		GEH	0.31	0.58	3.61	3.79	2.47
Moggill Rd northbound on ramp	Observed	Observed	663	670	677	704	592
Moggill Rd northbound on ramp	Modelled	Modelled	616	715	652	758	785
Moggill Rd northbound on ramp		Difference	-47	45	-25	54	193
Moggill Rd northbound on ramp		GEH	0.93	0.86	0.48	1.00	3.68

**CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES**  
**PARAMICS 2017 CALIBRATION RESULTS**

Location			14:00:00	15:00:00	16:00:00	17:00:00	18:00:00
Moggill Rd southbound off ramp	Observed	Observed	1018	1050	1227	1288	1052
Moggill Rd southbound off ramp	Modelled	Modelled	941	1047	1151	1383	1134
Moggill Rd southbound off ramp		Difference	-77	-3	-76	95	82
Moggill Rd southbound off ramp		GEH	1.23	0.05	1.10	1.30	1.24
Moggill Rd southbound on ramp	Observed	Observed	889	894	811	758	734
Moggill Rd southbound on ramp	Modelled	Modelled	861	868	864	779	652
Moggill Rd southbound on ramp		Difference	-28	-26	53	21	-82
Moggill Rd southbound on ramp		GEH	0.47	0.44	0.92	0.38	1.56
Moggill Rd east eastbound	Observed	Observed	1365	1480	1377	1483	1381
Moggill Rd east eastbound	Modelled	Modelled	1355	1698	1431	1511	1402
Moggill Rd east eastbound		Difference	-10	218	54	28	21
Moggill Rd east eastbound		GEH	0.14	2.73	0.72	0.36	0.28
Moggill Rd east westbound	Observed	Observed	1740	1848	1937	1867	1653
Moggill Rd east westbound	Modelled	Modelled	1711	1737	1835	1852	1848
Moggill Rd east westbound		Difference	-29	-111	-102	-15	195
Moggill Rd east westbound		GEH	0.35	1.31	1.17	0.17	2.33
Frederick St northbound	Observed	Observed	902	910	882	883	705
Frederick St northbound	Modelled	Modelled	707	715	1155	1055	857
Frederick St northbound		Difference	-195	-195	273	172	152
Frederick St northbound		GEH	3.44	3.42	4.28	2.76	2.72
Frederick St southbound	Observed	Observed	1159	1388	1345	1373	1075
Frederick St southbound	Modelled	Modelled	1216	1396	1264	1324	1023
Frederick St southbound		Difference	57	8	-81	-49	-52
Frederick St southbound		GEH	0.83	0.11	1.12	0.67	0.80
Miskin St northbound	Observed	Observed	382	488	439	521	418
Miskin St northbound	Modelled	Modelled	302	456	495	515	386
Miskin St northbound		Difference	-80	-32	56	-6	-32
Miskin St northbound		GEH	2.16	0.74	1.30	0.13	0.80
Miskin St southbound	Observed	Observed	315	354	335	386	363
Miskin St southbound	Modelled	Modelled	326	373	301	419	429
Miskin St southbound		Difference	11	19	-34	33	66
Miskin St southbound		GEH	0.31	0.50	0.95	0.82	1.66
Mt Coot-tha Rd northbound	Observed	Observed	465	571	696	760	438
Mt Coot-tha Rd northbound	Modelled	Modelled	463	554	693	796	595
Mt Coot-tha Rd northbound		Difference	-2	-17	-3	36	157
Mt Coot-tha Rd northbound		GEH	0.05	0.36	0.06	0.65	3.45
Mt Coot-tha Rd southbound	Observed	Observed	343	529	417	411	370
Mt Coot-tha Rd southbound	Modelled	Modelled	343	415	248	309	245
Mt Coot-tha Rd southbound		Difference	0	-114	-169	-102	-125
Mt Coot-tha Rd southbound		GEH	0.00	2.62	4.63	2.69	3.56
Legacy Way Northbound at toll plaza	Observed	Observed	644	720	736	682	437
Legacy Way Northbound at toll plaza	Modelled	Modelled	618	725	621	631	464
Legacy Way Northbound at toll plaza	Matrix sum	Difference	-26	5	-115	-51	27
Legacy Way Northbound at toll plaza	modelled v. m	GEH	0.52	0.09	2.21	1.00	0.64
Legacy Way Southbound at toll plaza	Observed	Observed	887	1015	1182	971	568
Legacy Way Southbound at toll plaza	Modelled	Modelled	813	902	1183	1077	614
Legacy Way Southbound at toll plaza		Difference	-74	-113	1	106	46
Legacy Way Southbound at toll plaza		GEH	1.27	1.82	0.01	1.66	0.95
Mount Coot-tha Rd off ramp northbound	Observed	Observed	1370	1413	1406	1462	1279
Mount Coot-tha Rd off ramp northbound	Modelled	Modelled	1092	1298	1718	1655	1529
Mount Coot-tha Rd off ramp northbound		Difference	-278	-115	312	193	250
Mount Coot-tha Rd off ramp northbound		GEH	3.96	1.56	3.95	2.44	3.34
Mount Coot-tha Rd on ramp southbound	Observed	Observed	1778	1921	1390	1306	1497
Mount Coot-tha Rd on ramp southbound	Modelled	Modelled	1742	2022	1183	1490	1277
Mount Coot-tha Rd on ramp southbound		Difference	-36	101	-207	184	-220
Mount Coot-tha Rd on ramp southbound		GEH	0.43	1.14	2.89	2.46	2.95

**CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES**  
**PARAMICS 2017 CALIBRATION RESULTS**

Location			14:00:00	15:00:00	16:00:00	17:00:00	18:00:00
Sinnamon Road northbound on ramp	Observed	Observed	615	589	601	760	563
	Modelled	Modelled	536	627	649	723	612
		Difference	-79	38	48	-37	49
		GEH	1.65	0.77	0.96	0.68	1.01
Sinnamon Road southbound off ramp	Observed	Observed	324	380	332	338	262
	Modelled	Modelled	331	398	409	452	348
		Difference	7	18	77	114	86
		GEH	0.19	0.46	2.00	2.87	2.46
Sinnamon Road northbound off ramp	Observed	Observed	394	473	429	264	357
	Modelled	Modelled	380	452	397	221	315
		Difference	-14	-21	-32	-43	-42
		GEH	0.36	0.49	0.79	1.38	1.15
Seventeen Mile Rocks Road SB off ramp	Observed	Observed	257	319	286	261	322
	Modelled	Modelled	198	277	264	325	235
		Difference	-59	-42	-22	64	-87
		GEH	1.96	1.22	0.66	1.87	2.61
Seventeen Mile Rocks Road SB on ramp	Observed	Observed	574	585	549	587	527
	Modelled	Modelled	583	569	545	569	504
		Difference	9	-16	-4	-18	-23
		GEH	0.19	0.33	0.09	0.37	0.51
Mount Ommaney northbound on ramp	Observed	Observed	474	407	451	374	402
	Modelled	Modelled	461	461	502	438	422
		Difference	-13	54	51	64	20
		GEH	0.30	1.30	1.17	1.59	0.49
Mount Ommaney southbound off ramp	Observed	Observed	552	661	665	762	670
	Modelled	Modelled	530	586	779	770	711
		Difference	-22	-75	114	8	41
		GEH	0.47	1.50	2.12	0.14	0.78
Mount Ommaney northbound off ramp	Observed	Observed	739	685	611	623	521
	Modelled	Modelled	624	736	690	586	598
		Difference	-115	51	79	-37	77
		GEH	2.20	0.96	1.55	0.75	1.63
Mount Ommaney southbound on ramp	Observed	Observed	556	703	550	530	373
	Modelled	Modelled	510	651	527	568	409
		Difference	-46	-52	-23	38	36
		GEH	1.00	1.00	0.50	0.81	0.91
Sumners Road northbound on ramp	Observed	Observed	579	690	710	585	387
	Modelled	Modelled	584	688	694	557	439
		Difference	5	-2	-16	-28	52
		GEH	0.10	0.04	0.30	0.59	1.28
Sumners Road southbound off ramp	Observed	Observed	540	587	477	534	372
	Modelled	Modelled	510	563	530	489	526
		Difference	-30	-24	53	-45	154
		GEH	0.65	0.50	1.18	0.99	3.63
Sumners Road northbound off ramp	Observed	Observed	777	850	923	1151	575
	Modelled	Modelled	830	914	822	1116	552
		Difference	53	64	-101	-35	-23
		GEH	0.93	1.08	1.71	0.52	0.48
Sumners Road southbound on ramp	Observed	Observed	904	1011	1103	914	691
	Modelled	Modelled	758	1007	1048	860	528
		Difference	-146	-4	-55	-54	-163
		GEH	2.53	0.06	0.84	0.91	3.30
Monier Road - eastbound	Observed	Observed	341	406	349	422	325
	Modelled	Modelled	357	438	351	416	304
		Difference	16	32	2	-6	-21
		GEH	0.43	0.78	0.05	0.15	0.59

**CENTENARY MOTORWAY PLANNING STUDY - MEDIUM STAGED UPGRADES**  
**PARAMICS 2017 CALIBRATION RESULTS**

Location			14:00:00	15:00:00	16:00:00	17:00:00	18:00:00
Monier Road - westbound	Observed	Observed	441	576	718	601	354
	Modelled	Modelled	396	584	724	613	384
		Difference	-45	8	6	12	30
		GEH	1.10	0.17	0.11	0.24	0.78
Summers Road E - southbound	Observed	Observed	448	442	329	408	248
	Modelled	Modelled	635	356	380	363	394
		Difference	187	-86	51	-45	146
		GEH	4.02	2.15	1.35	1.15	4.07
Summers Road E - northbound	Observed	Observed	614	737	756	711	442
	Modelled	Modelled	511	640	717	646	473
		Difference	-103	-97	-39	-65	31
		GEH	2.17	1.85	0.72	1.25	0.72
Summers Road W - eastbound	Observed	Observed	1114	1177	1200	1069	940
	Modelled	Modelled	1197	1253	1214	1123	916
		Difference	83	76	14	54	-24
		GEH	1.22	1.09	0.20	0.82	0.39
Summers Road W - westbound	Observed	Observed	1188	1379	1564	1773	1049
	Modelled	Modelled	1074	1474	1559	1786	1186
		Difference	-114	95	-5	13	137
		GEH	1.69	1.26	0.06	0.15	2.05
Centenary Hwy (NB)	Observed	Observed	1151	1299	1477	1334	951
	Modelled	Modelled	1063	1185	1131	1316	1052
		Difference	-88	-114	-346	-18	101
		GEH	1.32	1.62	4.79	0.25	1.60
Ipswich Mwy off ramp (WB)	Observed	Observed	725	765	776	677	587
	Modelled	Modelled	731	711	702	688	597
		Difference	6	-54	-74	11	10
		GEH	0.11	0.99	1.36	0.21	0.21
Ipswich Mwy off ramp (EB)	Observed	Observed	1421	1722	1897	1612	1006
	Modelled	Modelled	1514	1714	1716	1637	1193
		Difference	93	-8	-181	25	187
		GEH	1.21	0.10	2.13	0.31	2.82
Centenary Hwy (SB)	Observed	Observed	1662	2008	1966	1868	1352
	Modelled	Modelled	1562	2168	2127	1874	1084
		Difference	-100	160	161	6	-268
		GEH	1.25	1.75	1.78	0.07	3.84
Centenary Mwy southbound off ramp to Ipswich Mwy EB	Observed	Observed	567	503	498	459	382
	Modelled	Modelled	539	533	329	348	276
		Difference	-28	30	-169	-111	-106
		GEH	0.60	0.66	4.16	2.76	2.92
Centenary Mwy southbound off ramp to Ipswich Mwy WB	Observed	Observed	1725	1754	1893	1605	1279
	Modelled	Modelled	1579	1630	1679	1780	1340
		Difference	-146	-124	-214	175	61
		GEH	1.80	1.51	2.53	2.13	0.84



Hour starting	Hour ending	Total trips started at end hour	Veh in network at end hour	Veh trips complete at end hour	This Hour veh entering	This Hour veh exiting	Total VKT at end hour	Total VHT at end hour	This Hour VKT	This Hour VHT	This Hour VKT/veh	This Hour VHT/veh	This Hour Ave Speed (km/hr)	Total Ave Speed (km/hr)
4:30:00	5:00:00	1,696	326	1,370	1,696	1,370	11,188	134	11,188	134	7.3	0.087	83.7	83.7
5:00:00	6:00:00	10,185	1,071	9,114	8,489	7,744	72,824	921	61,636	787	7.3	0.093	78.3	79.1
6:00:00	7:00:00	25,316	2,100	23,216	15,131	14,102	167,733	2,529	94,909	1,608	6.0	0.103	59.0	66.3
7:00:00	8:00:00	43,942	2,572	41,370	18,626	18,154	267,282	4,909	99,550	2,380	4.9	0.116	41.8	54.4
8:00:00	9:00:00	62,289	1,767	60,522	18,347	19,152	362,404	7,217	95,122	2,308	4.5	0.108	41.2	50.2
9:00:00	10:00:00	77,555	1,061	76,494	15,266	15,972	446,276	8,572	83,872	1,355	4.8	0.078	61.9	52.1
5 Hour total		75,859	1,061	75,124			435,088	8,438			5.7	0.111	51.6	51.6

Zone Blocking

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
Blocked at end of model time	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
First blocked 15 min starting	0:00	0:00	0:00	0:00	0:00	7:15	0:00	8:00	0:00	0:00	6:45	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	8:15	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	
Max blocked	0	0	0	0	0	92	0	107	0	0	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0
Max blocked 15 min starting	0:00	0:00	0:00	0:00	0:00	7:45	0:00	9:15	0:00	0:00	7:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	8:15	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	

Released under RTI-2127

TOTAL RELEASES

15 min start	TP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	TOTAL
4:30	1	36	5	1	1	12	19	8	28	5	3	84	0	2	7	14	54	6	5	5	8	12	16	6	5	0	113	16	161	57	35	21	15	0	0	0	58	0	818
4:45	2	42	6	5	2	16	27	9	29	3	4	87	0	2	19	7	52	15	3	10	5	13	7	6	10	0	142	25	151	61	38	25	16	0	0	0	41	0	878
5:00	3	147	1	10	0	36	18	13	43	5	6	136	0	3	16	8	121	34	9	5	5	24	24	6	8	0	193	13	332	76	35	33	35	0	0	0	56	0	1451
5:15	4	153	10	9	0	54	30	11	65	3	7	142	0	3	14	20	156	41	5	7	8	21	38	14	13	0	262	49	394	93	63	37	52	0	0	0	43	0	1817
5:30	5	184	11	17	3	74	51	10	81	4	4	188	0	1	24	35	218	44	5	12	12	36	39	13	23	0	366	51	488	129	99	72	65	0	0	0	110	0	2469
5:45	6	227	17	31	1	95	54	25	72	9	10	209	0	4	25	45	205	55	5	14	13	45	44	30	27	0	430	58	512	199	100	66	79	0	0	0	116	0	2752
6:00	7	271	24	41	11	93	116	16	113	4	10	282	1	10	34	64	204	40	6	20	10	60	48	19	37	0	433	76	526	220	149	23	98	0	0	0	146	0	3205
6:15	8	270	44	52	14	141	131	31	137	4	21	372	2	5	25	70	242	49	13	12	14	75	67	9	56	0	428	87	611	211	180	17	103	0	0	0	164	0	3657
6:30	9	282	22	55	7	124	136	27	132	3	27	452	16	20	68	108	260	42	13	21	16	73	67	30	42	0	390	82	457	245	226	27	209	0	0	0	146	0	3825
6:45	10	266	34	77	13	181	198	28	190	6	25	560	11	15	73	105	264	53	24	22	25	136	91	29	47	0	457	84	418	342	270	46	201	0	0	0	131	0	4422
7:00	11	311	34	66	6	151	285	21	161	5	29	458	14	26	131	164	231	82	31	22	38	149	150	64	77	0	340	35	377	342	309	43	199	0	0	0	163	0	4514
7:15	12	331	44	82	8	175	296	18	158	4	39	453	20	14	91	191	286	43	21	21	24	156	189	64	100	0	356	50	348	289	288	53	225	0	0	0	207	0	4644
7:30	13	274	64	81	11	198	308	25	201	3	39	298	14	13	87	214	252	62	22	34	21	155	182	49	109	0	414	58	347	173	390	53	224	0	0	0	151	0	4526
7:45	14	364	63	103	9	260	302	22	203	1	45	206	27	35	108	232	329	56	11	19	25	168	176	72	127	0	448	62	375	168	391	71	201	0	0	0	220	0	4899
8:00	15	269	61	112	22	277	294	24	177	3	58	337	25	19	95	137	305	54	15	18	31	180	168	54	65	0	490	99	301	186	335	99	126	0	0	0	154	0	4590
8:15	16	322	53	112	32	318	282	33	203	1	63	291	14	35	87	161	286	49	23	25	27	177	178	56	79	0	447	127	334	253	279	118	212	0	0	0	193	0	4870
8:30	17	322	34	84	13	326	184	18	142	2	68	359	15	21	94	124	255	47	21	28	34	173	210	69	96	0	414	125	314	245	222	96	219	0	0	0	195	0	4569
8:45	18	218	28	74	25	310	148	17	142	3	81	316	5	19	64	105	255	65	24	24	47	189	228	86	101	0	405	115	311	234	237	96	166	0	0	0	160	0	4298
9:00	19	297	27	61	15	231	151	23	169	3	79	381	12	14	62	88	298	42	26	29	38	148	90	63	75	0	440	104	312	285	252	81	131	0	0	0	169	0	4196
9:15	20	249	31	68	16	284	170	31	148	5	61	327	0	8	40	77	287	50	25	25	35	117	91	61	83	0	331	118	276	238	260	64	148	0	0	0	139	0	3863
9:30	21	146	35	46	20	243	137	31	170	4	52	288	7	10	40	60	244	70	30	28	41	115	78	66	70	0	384	114	325	227	210	56	178	0	0	0	138	0	3663
9:45	22	151	37	27	9	279	123	30	193	7	72	336	2	4	53	51	222	48	25	28	28	116	109	71	63	0	306	126	212	258	184	42	186	0	0	0	127	0	3525
TOTAL		5132	685	1214	238	3808	3460	471	2957	87	803	6562	185	283	1257	2080	5026	1047	362	429	505	2338	2290	937	1313	0	7989	1674	7882	4531	4552	1239	3088	0	0	0	3027	0	77451

BLOCKED (END)

15 min start	TP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	TOTAL	
4:30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00	19	0	0	0	0	0																																		

Hour starting	Hour ending	Total trips started at end hour	Veh in network at end hour	Veh trips complete at end hour	This Hour veh entering	This Hour veh exiting	Total VKT at end hour	Total VHT at end hour	This Hour VKT	This Hour VHT	This Hour VKT/veh	This Hour VHT/veh	This Hour Ave Speed (km/hr)	Total Ave Speed (km/hr)
13:30:00	14:00:00	5,787	847	4,940	5,787	4,940	27,981	379	27,981	379	5.2	0.071	73.8	73.8
14:00:00	15:00:00	23,014	1,772	21,242	17,227	16,302	123,262	1,839	95,281	1,460	5.4	0.083	65.3	67.0
15:00:00	16:00:00	43,028	2,437	40,591	20,014	19,349	229,813	3,917	106,552	2,077	5.0	0.097	51.3	58.7
16:00:00	17:00:00	62,547	2,322	60,225	19,519	19,634	337,371	6,357	107,557	2,440	4.9	0.111	44.1	53.1
17:00:00	18:00:00	82,190	1,956	80,234	19,643	20,009	444,273	8,670	106,902	2,313	4.8	0.104	46.2	51.2
18:00:00	19:00:00	97,722	934	96,788	15,532	16,554	528,762	10,040	84,489	1,370	4.7	0.076	61.6	52.7
	5 Hour total	91,935	934	91,848			500,781	9,661			5.4	0.104	51.8	51.8

Zone Blocking

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	
Blocked at end of model time	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
First blocked 15 min starting	0:00	0:00	0:00	0:00	15:30	0:00	0:00	16:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00
Max blocked	0	0	0	0	106	0	0	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max blocked 15 min starting	0:00	0:00	0:00	0:00	15:45	0:00	0:00	17:45	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00	0:00



TOTAL RELEASES table with columns for 15 min start, TP, and 37 zones (1-37) plus a TOTAL column. Rows include time slots from 13:30 to 18:45.

North 608 631 1017 1149 1338 1382 1424 1244 1210 1200 1321 1273 1099 1027 874 808 24069

BLOCKED (END) table with columns for 15 min start, TP, and 37 zones (1-37) plus a TOTAL column. Rows include time slots from 13:30 to 18:45.

Total Attempts 6599 1662 2297 471 9599 3274 497 3830 125 1097 5659 38 291 1231 1681 6686 1025 1199 843 760 2965 1470 2821 3180 0 6034 3729 8264 6120 5104 1429 2954 0 0 0 4673 0 97607

End Model % Blocked 0%

Total Matrix Demands table with columns for 15 min start, TP, and 37 zones (1-37) plus a TOTAL column. Rows include time slots from 13:30 to 18:45.

Difference = Total Demands-Total Attempts Difference 179 179 -54 8 -60 -43 27 -40 2 6 30 -6 -6 -13 69 36 52 54 42 -9 0 66 82 -7 0 122 112 -91 22 -54 22 25 0 0 0 -74 0 524 % Difference vs Mx 2.6% 0.9% -2.0% 1.7% -0.6% -1.3% 5.2% -1.1% 1.6% 0.5% 0.5% -18.8% -2.1% -1.1% 3.9% 0.5% 4.8% 4.3% 4.7% -1.2% 0.0% 4.3% 2.8% -0.2% 2.0% 2.9% -1.1% 0.4% -1.1% 1.5% 0.8% -1.6% 0.5%