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# Hummock Hill Island – Bruce Highway & Turkey Beach Road Intersection, Traffic Impact Assessment

*Prepared for East Wing Corporation*

May 2009

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Traffic Impact Assessment

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|---|---|---|---|---|---|
| | | Name | Initials | Name | Initials |
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## 1.0 INTRODUCTION

Cardno (Qld) Pty Ltd completed a report in August 2007 for East Wing Corporation to investigate the traffic impacts of the proposed development located at Hummock Hill Island, North of Miriam Vale and south of Gladstone in the (former) Shire of Miriam Vale, on the surrounding road network. The report addressed relevant issues as contained in the 'Terms of Reference for an Environmental Impact Statement' issued by the Queensland Government for the Hummock Hill Island Development.

Following a review of the Environmental Impact Statement (EIS) for the Hummock Hill Island Development, the Department of Main Roads advised in February 2008 that although they were generally supportive of the overall content, there was concern that a number of the EIS findings were based on inaccurate traffic projections and assumptions. The Department advised these issues need to be addressed in the project's supplementary EIS. This report addresses the key issues as identified by the Department of Main Roads and supersedes the analysis and recommendations for the intersection of Turkey Beach Road and the Bruce Highway dealt with in the August 2007 report for the Hummock Hill Island Development.

## 2.0 EXISTING SITUATION

The key issues identified by the Department of Main Roads in its review of the EIS for the Hummock Hill Island Development are summarised as follows:

- proximity of the intersection of the Bruce Highway/Turkey Beach Road intersection and the open level rail crossing regarding sufficient vehicle queue storage particularly for a planning horizon of 2033;
- accuracy of assumptions and traffic data used regarding the adopted growth rate, base traffic count data and percentage of heavy vehicles;
- accuracy of assumptions for percentage of external trips to the Bruce Highway and destination of trips;
- suitability of intersection treatment at Bruce Highway/Turkey Beach Road;
- report consistency and provision of all traffic count data and working calculations so traffic assessment methodology can be checked for accuracy and continuity.

The original August 2007 TIA Report for the EIS considered a development of 1,300 lots at Turkey Beach. This development is referred to as Seaview Beach. The application for the development at Seaview Beach was submitted to Gladstone Regional Council (previously Miriam Vale Shire Council). Since completion of the original August 2007 TIA Report for the EIS, it is now known that the Seaview Beach development includes 1,312 residential lots in addition to small scale commercial and community precincts which (according to it's Transport Master Plan) will generate in total, 1,054 vehicles during the peak hour. The Seaview Beach Transport Master Plan was prepared by consulting engineers GHD in May 2006. The Department of Main Roads has advised the Seaview Beach developer that the Hummock Hill Island TIA will be amended. As the May 2006 Seaview Beach Transport Master Plan bases some of the analysis on information contained in the Hummock Hill Island TIA, the Seaview Beach Transport Master Plan will need to be amended accordingly.

Plans at Appendix A show the respective development site locations in respect to the Bruce Highway. The traffic generated by the Seaview Beach development has been considered further herein, beyond the Seaview Beach Transport Master Plan, particularly in relation to traffic that is likely to access the facilities at Hummock Hill Island as opposed to travelling external to other facilities via the Bruce Highway. Currently, the May 2006 Seaview Beach Transport Master Plan assumes 75% of all traffic generated by Seaview Beach will travel external to the development (i.e. external to Turkey Beach or Hummock Hill). Analysing the trip attractors between the two developments and also the external trip attractors that would be accessed via the Highway provides a balanced view of the likely impacts on the intersection of the Bruce Highway and Turkey Beach Road.

In order to address the above issues, the following methodology was undertaken:

- additional count data from Main Roads to determine a suitable percentage of commercial vehicles was obtained;
- background growth scenario has been nominated by Main Roads;
- the number, frequency and types of train movements along the rail line and total time of stop lights at the existing Turkey Beach Road level crossing was investigated;
- a suitable percentage of external traffic generation for the Hummock Hill Island and proposed Seaview Beach development was determined;
- the impact of the level crossing on the queue at the Bruce Highway/Turkey Beach Road intersection has been considered;
- the Hummock Hill Island and Seaview Beach development impacts at the intersection of the Bruce Highway and Turkey Beach Road was assessed and mitigating works identified.

# 3.0 PROPOSED DEVELOPMENT

## 3.1 Description of Development

East Wing Corporation Pty Ltd proposes to develop land at a site located on Hummock Hill Island (HHI). The location of the site is shown at Appendix A. East Wing Corporation currently holds a development lease over the land, which was issued by the Department of Natural Resources and Mines in March 2005. The parcel of land covers approximately 40% of the island and is about 1,200 hectares in area.

The proposed community will comprise of the following:

- 2,042 dwellings including detached houses, apartments and townhouses;
- two 150 room hotels;
- marine centre;
- conference centre and motel;
- airstrip servicing light aircraft;
- tourist park;
- school recreational camp ground;
- education campus;
- community services;
- town centre;
- golf course and clubhouse.

The community is expected to be home to a population of about 1,597 people with an ability to sustain a tourist population of 2,271 accommodated for in the hotels, motel, tourist accommodation, tourist park and camp grounds. Across the various land uses proposed, commercial and retail floor space will total about 8,000sq.m. This will comprise a supermarket, bar, various food and specialty stores, restaurants and offices. The Land Use Plan is illustrated at Appendix A and shows the proposed layout of the community and the location of the various components.

Hummock Hill Island is currently accessed from the Bruce Highway via Turkey Beach Road which connects to Foreshores Road. Access to Hummock Hill Island from Foreshores Road is currently via an existing causeway. Access to the site will remain the same with the exception of possible upgrade works to the road and a bridge between the mainland and the island.

The external intersection of the Bruce Highway and Turkey Beach Road is the principal concern for this assessment. A layout of the existing intersection received from the Department of Main Roads is attached at Appendix E. It is currently a give-way controlled intersection with indented bus bays on both the northern and southern exit lanes of the Bruce Highway. The configuration and lane widths suggest that the intersection was built to a Main Roads Standard Rural Type "AU" layout with auxiliary right turn and left turn lane treatments on the Bruce Highway.

It should be noted that there is a railway line running roughly parallel to the Bruce Highway with an open level railway crossing at Turkey Beach Road near the intersection with the Bruce Highway. The open level railway crossing is approximately 100m away from the Bruce Highway intersection. Information provided by Queensland Rail (QR) indicates this section of track is used mainly for freight trains with a speed in both directions of 120km/h. Tilt trains also use this section of track and the speed in both directions is 150km/h. QR advises that there would be about 30 trains passing this crossing on a typical day.

For a boom gated crossing with flashing lights, QR advised that there is a warning time of 28 seconds and time taken for a train to pass the crossing (assuming train speed of 80km/h and train length of 1,000m) is 45 seconds. After allowing 10 seconds for boom gates to rise after the train has passed, the level crossing could be closed for approximately 90 seconds every time a train passes.

QR provided timetable information for Iveragh Station which is located approximately 4kms north of the level crossing on Turkey Beach Road. QR has recommended adjusting the Iveragh Station train times by three minutes for an indication of when the trains will pass through the level crossing. Analysis of the timetables provided for the Iveragh Station from 1 August to 7 August 2008 provided an indication of approximate passing times and number of trains especially in peak periods. Table 3.1 indicates a summary of the worst cases for the level crossing considering an AM peak of 7.15 to 8.15am and a PM peak of 3.30 to 4.30pm. Although two southbound trains that operate on Thursday and Friday close the level crossing outside the morning peak period (as reported in Table 3.1 below), the details were included as the time between the two trains is two minutes. This means once the first train has passed and the boom gates have opened, they will open for only thirty seconds before the warning light operates and the crossing closes once again. QR has confirmed this will occur in lieu of the boom gates remaining shut for the two trains passing through the crossing.

From the timetable data supplied, the maximum number of trains in any one peak period is two with a minimum of 15 mins separation between opening of boom gates for the first train and closing boom gates for the second train. However, this excludes the two trains outside the morning peak period which have a thirty second separation between opening of boom gates for the first train and closing boom gates for the second train.

***Table 3.1 Level Crossing Operation at Turkey Beach Road within Peak Periods***

| QR Train Number | Direction of Travel | Day | Approx Arrival at Xing | Approx Boom Gates Closing | Approx Boom Gates Opening |
|---|---|---|---|---|---|
| 82P5 | Northbound | Tuesday | 15:20:00 | 15:19:32 | 15:21:02 |
| 6786 | Southbound | Tuesday | 15:38:00 | 15:37:32 | 15:39:02 |
| P936 | Southbound | Wednesday | 7:20:00 | 7:19:32 | 7:21:02 |
| 87P2 | Southbound | Wednesday | 8:11:00 | 8:10:32 | 8:12:02 |
| 82P5 | Northbound | Wednesday | 15:31:00 | 15:30:32 | 15:32:02 |
| 87P4 | Southbound | Thursday | 8:31:00 | 8:30:32 | 8:32:02 |
| ZJ10 | Southbound | Thursday | 8:33:00 | 8:32:32 | 8:34:02 |
| 82P5 | Northbound | Thursday | 15:41:00 | 15:40:32 | 15:42:02 |
| P936 | Southbound | Friday | 7:20:00 | 7:19:32 | 7:21:02 |
| 87P4 | Southbound | Friday | 8:31:00 | 8:30:32 | 8:32:02 |
| ZJ10 | Southbound | Friday | 8:33:00 | 8:32:32 | 8:34:02 |
| 82P3 | Northbound | Friday | 15:17:00 | 15:16:32 | 15:18:02 |

### 3.2 Tourist and Commuter Peak Periods

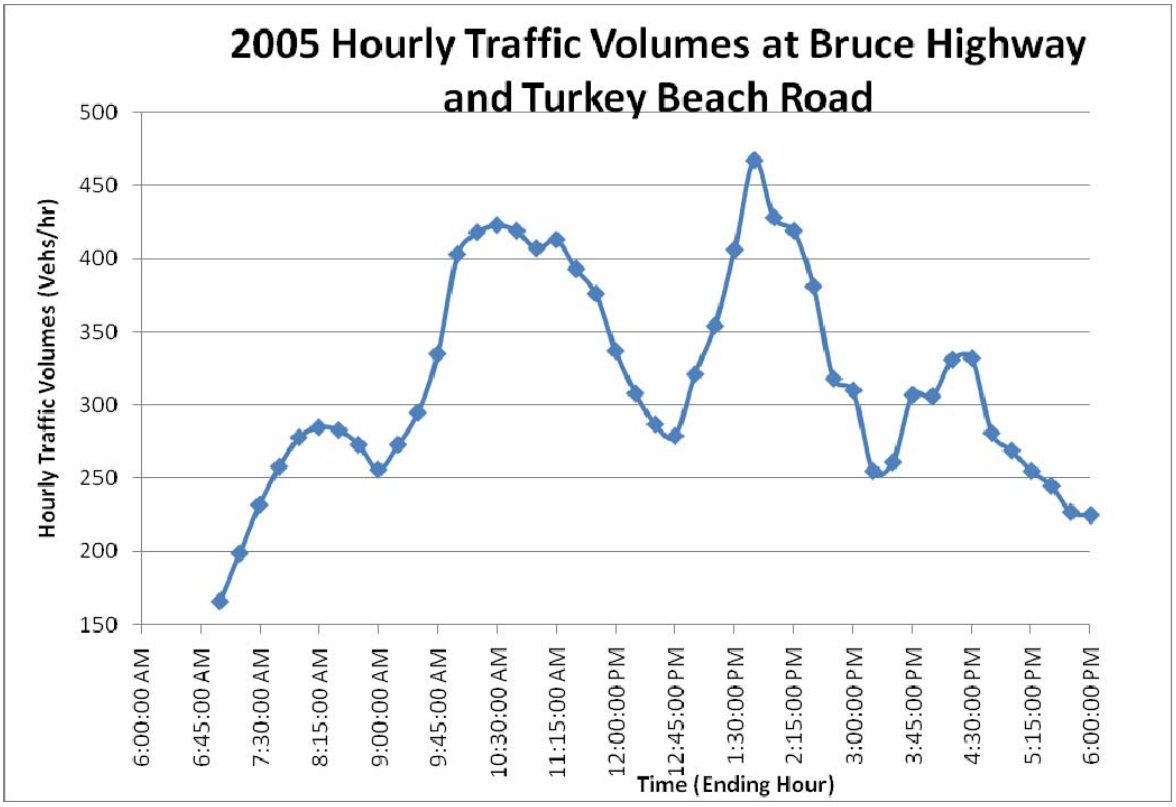
The Hummock Hill Island EIS advises that “a broad range of residences will be developed to meet a range of demands, markets and property price ranges” and is based on assuming 50-60% of residential properties will be holidays homes/apartments, 20-30% of properties will be owned or rented by people working locally and the remaining (up to 20%) will be owned by people living locally but working in the Gladstone Region.

It was adopted that 50% of residential properties will be holidays homes/apartments, 30% of properties will be owned or rented by people working locally and 20% will be owned by people living locally but commuting to work in the Gladstone Region.

As Hummock Hill Island will be made up of tourists and local residents, the peak times will vary as the trip purposes and times for trips will vary.

An August 2005 traffic count was obtained from the Department of Main Roads for the intersection of the Bruce Highway and Turkey Beach Road and is included at Appendix E. The graph on Figure 3.1 indicates four defined peak periods over the 12 hour count period. It is more consistent for an intersection to display a diurnal type pattern with only two peaks. The first AM peak from 7.15 to 8.15am and the second PM peak from 3.30 to 4.30pm are considered to be typical commuter peak times.

***Figure 3.1 2005 Hourly Traffic Volumes at Bruce Highway and Turkey Beach Road***




The second AM peak time from 9:30 to 10:30am is a peak time consistent with a destination that is predominantly tourism based (based on a number of Cardno Eppell Olsen Resort Travel Surveys). Although the first PM peak time from 12:45 to 1:45pm may reflect the current demographics of the area (high number of people aged over 55 from ABS), it has been adopted as a Tourist Peak as check in time for tourist accommodation is generally 2pm.

Information from the Australia Bureau of Statistics website (www. census.abs.gov.au) indicates for the census area covering Turkey Beach, 63.9% of the population is aged over 55 years old and of the persons aged 15 years and over, 59.5% are not employed. This possibly indicates a high number of retirees in the area although this could not be confirmed from the available ABS data. However, the Hummock Hill Island (HHI) and Seaview Beach developments will change the demographics of the area with the provision of additional permanent housing and the number of trips for school and work purposes will increase. As a result, this will maintain the four peak periods already observed at the intersection and therefore the adopted peak times are consistent with accepted peak times for work and school trips and tourist based trips. The background traffic volumes for the Tourist and Commuter Peaks were adopted respectively for the relevant peak.

However, it is likely that some Tourist trips will occur during the Commuter Peak and vice versa, some commuter trips will occur during the Tourist Peak. To cater for external highway trips that would be generated by tourists in the commuter peak period and by local residents in the tourist peak period, additional trips were added to the peak times for the external trips to the highway. For external highway tourist trips in the Commuter Peak, 50% of external generated highway trips from rental accommodation and 70% of generated trips from the resort accommodation in the Tourist Peak were assumed to be made in the Commuter Peak period. The 70% of generated trips was adopted as this is based on results from resort travel surveys carried out by Cardno Eppell Olsen in 1988 that indicated a typical AM or PM commuter peak is about 70% of peak resort generation.

However, for commuter trips generated in the Tourist Peak, it was assumed that of the residential dwellings for people locally employed or regionally employed 0.5 trips per hour per dwelling was adopted. This is consistent with the generally accepted number of trips outside peak periods.

As no other data is available on Seaview Beach regarding the proposed split of tourist and permanent residential accommodation, it was assumed the development would be 100% for permanent residents. Therefore, it was assumed all Seaview Beach generated traffic that made it to the highway would occur in the Commuter Peak. However, as for Hummock Hill Island, it was assumed that 0.5 trips per hour per dwelling was adopted for commuter trips to occur in the Tourist Peak.

### 3.3 Traffic Generation – Hummock Hill Island

Traffic generation rates are based predominantly on four sources:

- Appendix 3A of the Department of Main Roads' "Road Planning and Design Manual";
- The New South Wales Road and Traffic Authority's (RTA) "Guide to Traffic Generating Developments";
- The Institute of Transportation Engineers' "Trip Generation" manual (United States);
- "Resort Traffic Surveys" prepared by Eppell Consulting for the Department of Main Roads.

These sources suggest the following traffic generation rates for the various land uses of this proposed development:

Residential

- Detached dwelling:
  - Peak hour - 0.8 trips/hour/dwelling;
  - Daily - 8.0 trips/day/dwelling.
- Medium Density:
  - Peak hour - 0.6 trips/hour/dwelling;
  - Daily - 6.0 trips/day/dwelling.

Retail

- Service Station & convenience store - 0.66 trips/hour/sq.m GFA.
- Bulky goods store - 2.5 trips/hour/100sq.m GFA
- Restaurant - 5 trips/hour/100sq.m GFA.
- Shopping Centre:
  - 2 trips/hour/100sq.m GFA Slow Trade stores;
  - 5.1 trips/hour/100sq.m GFA Faster Trade stores;
  - 15.5 trips/hour/100sq.m GFA Supermarket;
  - 4.6 trips/hour/100sq.m GFA Specialty stores;
  - 2.2 trips/hour/100sq.m GFA Office and medical.

Commercial

- Professional Office - 0.8 trips/hour/employee.

Tourism

- Motel - 0.4 trips/hour/unit;
- Hotel - 0.35 to 0.4 trips/hour/room based on previous studies of traffic generated by resorts;
- Tourist park - 0.8 trips/hour/occupied unit;
- School camping grounds - 0.2 trips/hour/student based on expected number of buses and employees.

Education

- Primary school - 0.2 trips/hour/student.

Recreational

- Golf course and clubhouse - 0.74 trips/hour/hectare.

The above rates were used to forecast the volumes of traffic that would be generated by the various land uses in the proposed development at 2013 and 2023 based on staging information as summarised in Table 3.2.

***Table 3.2*** ***Traffic Generation of Proposed HHI Development***

| Land Use | | Amt | Unit | Staging(units) | | Peak Generation (trips/hour) | | Generates Trip to/from Highway? | Peak Period (Tourist or Commuter) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 2013 | 2023 | 2013 | 2023 | | |
| Marine Centre and Retail | Service Station and store | 180 | sq.m | 180 | 180 | 119 | 119 | No | - |
| | Professional office | 10 | Employees | 10 | 10 | 8 | 8 | No | - |
| | Landscape/hardware | 200 | sq.m GFA | 200 | 200 | 5 | 5 | No | - |
| | Food & beverage | 200 | sq.m GFA | 200 | 200 | 10 | 10 | No | - |
| | Service | 2 | Employees | 2 | 2 | 2 | 2 | No | - |
| Conference Centre and Motel | | 50 | Rooms | 0 | 50 | 0 | 20 | Yes | Tourist |
| | Food & beverage | 250 | sq.m GFA | 0 | 250 | 0 | 13 | No | - |
| | Lobby retail | 60 | sq.m GFA | 0 | 60 | Internal | Internal | No | - |
| Airstrip | | | | | | 10 | 10 | No | - |
| Headland Resort Hotel | | 150 | Rooms | 0 | 150 | 0 | 60 | Yes | Tourist |
| Beach Front Tourist Hotel | | 150 | Rooms | 0 | 150 | 0 | 52 | Yes | Tourist |
| Tourist Park | | 200 | Sites | 200 | 200 | 160 | 160 | Yes | Tourist |
| | Convenience store | 100 | sq.m GFA | 100 | 100 | Internal | Internal | No | - |
| School Recreational Camp Ground | | 20 | Employees | 20 | 20 | 20 | 20 | Yes | Tourist |
| Education Centre and Community Purpose | School | 240 | Students | 80 | 240 | 16 | 48 | Yes | Commuter |
| | Community centre | | | | | Internal | Internal | No | - |
| Hummock Hill Town Centre | Supermarket | 2,500 | sq.m GFA | 625 | 2500 | 97 | 388 | No | - |
| | Hair dressing/Beauty salon | 60 | sq.m GFA | 15 | 60 | 1 | 3 | No | - |
| | Retail | 1,000 | sq.m GFA | 250 | 1,000 | 5 | 20 | No | - |
| | Professional office | 500 | sq.m GFA | 125 | 500 | 3 | 11 | No | - |
| | Video Shop | 100 | sq.m GFA | 25 | 100 | 1 | 5 | No | - |
| | Butcher | 60 | sq.m GFA | 15 | 60 | 1 | 3 | No | - |
| | Fruit & vegetable | 60 | sq.m GFA | 15 | 60 | 1 | 3 | No | - |
| | Food & beverage | 350 | sq.m GFA | 875 | 350 | 4 | 16 | No | - |

***Table 3.2 Continued…***

| Land Use | Amt | Unit | Staging(units) | | Peak Generation (trips/hour) | | Generates Trip to/from Highway? | Peak Period (Tourist or Commuter) |
|---|---|---|---|---|---|---|---|---|
| | | | 2013 | 2023 | 2013 | 2023 | | |
| Golf Course & Clubhouse | 97.2 | Hectares | 0 | 97.2 | 0 | 72 | Yes | Tourist |
| Boyne Channel Home Offices | 10 | Dwellings | 0 | 10 | 0 | 6 | Yes | Both |
| Headland Resort Apartments | 116 | Units | 116 | 116 | 70 | 70 | Yes | Both |
| Headland Holiday Homes | 23 | Dwellings | 23 | 23 | 18 | 18 | Yes | Both |
| Beach Front Holiday Homes | 150 | Dwellings | 100 | 150 | 80 | 120 | Yes | Both |
| Beach front Apartments | 64 | Units | 64 | 64 | 38 | 38 | Yes | Both |
| Seaside Cottages | 150 | Dwellings | 50 | 150 | 41 | 120 | Yes | Both |
| Ridgetop Houses | 157 | Dwellings | 157 | 157 | 126 | 126 | Yes | Both |
| Hill Side Terraces | 206 | Dwellings | 69 | 260 | 55 | 165 | Yes | Both |
| Lagoon Villas | 124 | Dwellings | 83 | 124 | 66 | 99 | Yes | Both |
| Riparian Eco Houses | 135 | Dwellings | 0 | 136 | 0 | 109 | Yes | Both |
| Bushland Residential | 147 | Dwellings | 0 | 147 | 0 | 118 | Yes | Both |
| Resort Town Apartments | 92 | Units | 31 | 92 | 19 | 55 | Yes | Both |
| Resort Village Townhouses | 56 | Dwellings | 0 | 56 | 0 | 45 | Yes | Both |
| Golf Course Resort Homesites | 270 | Dwellings | 0 | 270 | 0 | 216 | Yes | Both |
| Golf Course Resort Apartments | 255 | Units | 0 | 255 | 0 | 153 | Yes | Both |
| Boyne Channel Apartments | 96 | Units | 0 | 96 | 0 | 58 | Yes | Both |
| | | | | **TOTAL** | **975** | **2564** | | |

Table 3.2 reports the peak hour generation of all land uses, on the assumption that those peak hours coincide for the various land uses. It also details the land uses, if the land use would generate a highway trip and the peak period the trip is assumed to occur in. The development is expected to generate predominantly light vehicle traffic as the bulk of the development is residential or tourism based in nature. Total trips generated are summarised in Table 3.3, along with the split of tourist and commuter trips.

***Table 3.3 Total Trips Generated from HHI Development***

| Year | No of Trips Generated from HHI Development | No of Tourist Peak Trips | Extra External Highway Commuter Trips in Tourist Peak | No of Commuter Peak Trips | Extra External Highway Tourist Trips in Commuter Peak | Development Stage |
|---|---|---|---|---|---|---|
| 2013 | 975 | 703 | 174 | 272 | 26 | HHI 50% Developed |
| 2018 | 1,822 | 1,262 | 355 | 560 | 62 | HHI 75% Developed |
| 2023 | 2,564 | 1,759 | 513 | 805 | 97 | HHI Full Development |

### 3.4 Traffic Generation – Seaview Beach

The May 2006 Seaview Beach Transport Master Plan by GHD advises the Seaview Beach development includes 1,312 residential lots in addition to small scale commercial and community precincts which will generate 1,054 vehicles during the peak hour. This number of generated trips was adopted herein for this traffic assessment. The total trips generated are summarised in Table 3.4.

***Table 3.4 Total Trips Generated from Seaview Beach Development***

| Year | No of Commuter Trips | Extra External Highway Commuter Trips Generated in Tourist Peak | Development Stage |
|---|---|---|---|
| 2013 | 527 | 104 | Seaview Beach 50% Developed |
| 2018 | 1,054 | 208 | Seaview Beach Full Development |

### 3.5 Traffic Distribution – Hummock Hill Island

The proposed Hummock Hill Island development is expected to be somewhat self-sustaining in the sense that most trips, especially during the peak periods and peak holiday seasons, will be contained within the development. This is a reasonable assumption given the resort style nature of the development, the diverse range of land uses and the distance of the site from major external trip attractors. Although a trip to Gladstone by car will require the driver to travel approximately 60km, it is expected this may still be undertaken especially for work and school trips given the finite work opportunities and education facilities within the proposed development, Seaview Beach development and Turkey Beach.

In order to determine the external trips for the development and of those trips, how many are likely to travel to and from the highway, a number of analyses were undertaken. To determine the impact of the proposed development on the external road network, the land uses in Table 3.2 were considered in terms of whether it would be a trip attractor to/from the highway. The land uses were also considered in terms of whether the trips generated would be carried out predominately by tourists, local residents or both. The trips made by local residents were further split into residents who resided on the Island but commuted to work via the highway or local residents who resided on the Island but worked locally (not via highway).

As discussed in Section 3.2, additional commuter trips generated in the Tourist Peak and additional tourist trips in the Commuter Peak were allowed and were added to the respective peak volumes. Refer to Tables 3.2 and 3.3.

As a result, Table 3.5 identifies the assumed trip attractors, percentage of trips to/from highway and the resulting number of trips to/from highway for both 2013 and 2023. In summary, approximately 15% of generated trips are estimated to be external to/from the Bruce Highway in 2013 and 18% in 2023.

Appendix F includes full details of the calculation of the results outlined in Table 3.5 for the Commuter and Tourist peak Hours.

***Table 3.5 HHI External Number of Trips To/From Highway for 2013 and 2023***

| Trip Attractor for Hummock Hill Island | Percentage of Trips To/From Highway | 2013 | | 2023 | |
|---|---|---|---|---|---|
| | | Peak Generation (Trips/hour) | No of Peak Hour Trips To/From Highway | Peak Generation (Trips/hour) | No of Peak Hour Trips To/From Highway |
| **Commuter Peak** | | | | | |
| Commuter Locally Employed -School | 10% | 10 | 1 | 29 | 3 |
| Commuter Regionally Employed - School | 10% | 6 | 1 | 19 | 2 |
| Commuter Locally Employed - Residential Dwellings | 20% (See Table 3.6) | 154 | 29 | 454 | 85 |
| Commuter Regionally Employed - Residential Houses | 40% (See Table 3.7) | 102 | 42 | 303 | 127 |
| Tourist Trips Generated in Commuter Peak (Highway Trips Only) | 20% or 40% (Locally or Regionally Employed) | 26 | 26 | 97 | 97 |
| **SUB TOTAL** | | **298** | **99** | **902** | **314** |
| **Tourist Peak** | | | | | |
| Supermarket, Retail Shops etc | 0% | 257 | 0 | 606 | 0 |
| Airstrip | 0% | 10 | 0 | 10 | 0 |
| Conference Centre and Motel | 50% | 0 | 0 | 20 | 10 |
| Two Hotels | 50% | 0 | 0 | 112 | 56 |
| Tourist Park | 10% | 160 | 16 | 160 | 16 |
| Camping Ground | 50% | 20 | 10 | 20 | 10 |
| Golf Course | 20% | 0 | 0 | 72 | 14 |
| Tourist - Rental Dwellings | 10% (See Table 3.6) | 256 | 26 | 759 | 76 |
| Commuter Trips Generated in Tourist Peak | 12% | 173 | 21 | 513 | 63 |
| **SUB TOTAL** | | **877** | **73** | **2,272** | **245** |
| **TOTAL** | | **1,175** | **172** | **3,174** | **559** |
| **Percentage of External Trips to Highway** | | **14.6%** | | **17.6%** | |

As further justification for the extended trip percentages in Table 3.5, Tables 3.6 to 3.7 reports the derivation of the percentage of trips to/from the highway estimated for the land uses of residential dwellings, based on assessing the total internal and external trips for each trip purpose. The percentage of trips for each trip purpose reflects the results of the 1992 SEQ Household Travel Survey and similar data from other areas in Australia.

Although people on holidays will not be making employment and education based trips, it is expected that the proportion of shopping, eating out, sightseeing and other social/recreation trips will increase with the majority occurring internally within the local area. Although some highway trips may be made for day trips, one trip will be made from the highway to check into holiday accommodation and one trip will be made to the highway after tourists check-out and leave the area. Therefore 10% of trips made by tourists make it to the highway was adopted.

***Table 3.6 HHI External Trip Purpose for Commuter Locally Employed Residential Dwellings for 2013 and 2023***

| Trip Purpose | Household Travel Survey Trip Purpose | Estimated Percentage of External Trips | Estimated Percentage of Internal Trips | Estimated Breakdown External Trips to/from Development |
|---|---|---|---|---|
| Home Based Employment | 20% | 0% | 100% | 0% |
| Home Based Education* | 15% | 50% | 50% | 8% |
| Home Based Shopping/Personal Business | 25% | 25% | 75% | 6% |
| Home Based Social/Recreation | 20% | 10% | 90% | 2% |
| Home Based Other | 20% | 20% | 80% | 4% |
| | | | **Total** | **20%** |

Note * Only a primary school provided and assumed to be state school. High school and TAFE facilities located outside area and some children may be sent to private schools located outside the area.

***Table 3.7 HHI External Trip Purpose for Commuter Regionally Employed Residential Dwellings for 2013 and 2023***

| Trip Purpose | Household Travel Survey Trip Purpose | Estimated Percentage of External Trips | Estimated Percentage of Internal Trips | Estimated Breakdown External Trips to/from Development |
|---|---|---|---|---|
| Home Based Employment | 20% | 100% | 0% | 20% |
| Home Based Education* | 15% | 50% | 50% | 8% |
| Home Based Shopping/Personal Business | 25% | 25% | 75% | 6% |
| Home Based Social/Recreation | 20% | 10% | 90% | 2% |
| Home Based Other | 20% | 20% | 80% | 4% |
| | | | **Total** | **40%** |

Note * Only a primary school provided and assumed to be state school. High school and TAFE facilities located outside area and some children may be sent to private schools located outside the area.

***Table 3.8 HHI External Trip Purpose for Tourist Accommodation for 2013 and 2023***

| Trip Purpose | Household Travel Survey Trip Purpose | Estimated Percentage of External Trips | Estimated Percentage of Internal Trips | Estimated Breakdown External Trips to/from Development |
|---|---|---|---|---|
| Home Based Employment | 0% | 0% | 0% | 0% |
| Home Based Education* | 0% | 0% | 0% | 0% |
| Home Based Shopping/Personal Business | 30% | 10% | 90% | 3% |
| Home Based Social/Recreation | 50% | 10% | 90% | 5% |
| Home Based Other | 20% | 10% | 90% | 2% |
| | | | **Total** | **10%** |

For completeness of the process, a similar trip purpose analysis was undertaken that estimated 1.1% of trips would not reach the Highway but would travel to Turkey Beach. Table 3.9 provides a summary of the generated internal and external traffic from the development and breaks down the traffic generated into Tourist related trips and permanent resident (commuter locally and regionally employed) traffic generation, again assuming peaks for different land uses coincide. This relates to the discussion in Section 3.2, and summaries the breakdown of the external/internal trip distribution patterns in support of the overall 14.6% and 17.6% external trip percentages to the Highway at 2013 and 2023 respectively.

For this analysis, it was assumed that there was no development at Seaview Beach. However, Section 3.7 details the external trips from Hummock Hill Island to Seaview Beach.

***Table 3.9 Summary of Internal and External Traffic Distribution for Hummock Hill Island (Assuming No development at Seaview Beach)***

| **Hummock Hill Island** | **Tourist Generated Trips** | | **Commuter Locally and Regionally Employed Generated Trips** | | **Total Trips** | |
|---|---|---|---|---|---|---|
| | **2013** | **2023** | **2013** | **2023** | **2013** | **2023** |
| Percentage of Internal Trips | 91.1% | 88.5% | 64.8% | 63.0% | 84.4% | 81.3% |
| Number of Internal Peak Hour Trips | 799 | 2011 | 193 | 568 | 992 | 2579 |
| Percentage of External Trips to Highway | 8.3% | 10.8% | 33.2% | 34.8% | 14.6% | 17.6% |
| Number of External Peak Hour Trips to Highway | 73 | 245 | 99 | 314 | 172 | 559 |
| Percentage of External Trips to Turkey Beach | 0.6% | 0.7% | 2.0% | 2.2% | 1.0% | 1.1% |
| Number of External Peak Hour Trips to Turkey Beach | 5 | 16 | 6 | 20 | 11 | 36 |
| **Total Peak Hour Trips** | **877** | **2,272** | **298** | **902** | **1,175** | **3,174** |

### 3.6 Traffic Distribution – Seaview Beach

The movement of traffic between the Hummock Hill Island and Seaview Beach developments has been considered herein. The proposed Seaview Beach is mostly residential dwellings. As no further information is available, it was assumed 100% of residential dwellings are for people working locally or in the Gladstone Region and also that all Seaview Beach trips are made during the Commuter Peak. Due to the wide range of shopping, educational and employment opportunities provided at the Hummock Hill Island development, there is potential for movement between the developments and a reduction in traffic from Seaview Beach travelling to/from the highway. Therefore, an internal and external review of trip purpose and distribution was undertaken to ensure the estimation of external trips to the Bruce Highway was complete for the area.

In the Seaview Beach Transport Master Plan, GHD conservatively adopted 25% of all Seaview Beach trips would be internal (excluding trips to/from Hummock Hill Island). A similar analysis as described above for the Hummock Hill Island development was undertaken and Table 3.10 reports the derivation of the percentage of trips to/from the highway based on assessing the total internal and external trips for each trip purpose. The percentage of trips for each trip purpose reflects the results of the 1992 SEQ Household Travel Survey and similar data from other areas in Australia.

As a result of the analysis, Table 3.10 shows the estimated external traffic is anticipated to be 65% using this process resulting in 35% of internal trips within the Seaview Beach development.

***Table 3.10*** ***Seaview Beach External Trip Purpose for Residential Dwellings***

| Trip Purpose | Household Travel Survey Trip Purpose | Estimated Percentage of External Trips | Estimated Percentage of Internal Trips | Estimated Breakdown External Trips to/from Development |
|---|---|---|---|---|
| Home Based Employment | 20% | 90% | 10% | 18% |
| Home Based Education* | 15% | 100% | 0% | 15% |
| Home Based Shopping/ Personal Business | 25% | 95% | 5% | 24% |
| Home Based Social/Recreation | 20% | 20% | 80% | 4% |
| Home Based Other | 20% | 20% | 80% | 4% |
| | | | **Totals** | **65%** |

However, further to the trip purpose consideration in Table 3.10, there is potential for trips from the Seaview Beach development to the Hummock Hill Island development given the distance to external trip attractors outside of Seaview Beach and the trip attractors of employment, education, shopping and social/recreation purposes at Hummock Hill Island that would normally have meant an external trip via the highway. This is applicable to the Commuter Peak only as this is when the bulk of the Seaview Beach trips are assumed to occur. Therefore, of the 65% of all external trips from the Seaview Beach development in the Commuter Peak, it was determined 78% of these trips would make it to the Highway as reported in Table 3.11.

***Table 3.11 Seaview Beach External Trip Purpose for 2013 and 2023***

| Trip Purpose | Household Travel Survey Trip Purpose | Estimated Percentage of External Trips that make it to the Highway | Estimated Percentage External Highway Trips |
|---|---|---|---|
| Home Based Employment | 20% | 90% | 18% |
| Home Based Education* | 15% | 50% | 8% |
| Home Based Shopping/ Personal Business | 25% | 75% | 19% |
| Home Based Social/Recreation | 20% | 90% | 18% |
| Home Based Other | 20% | 80% | 18% |
| | | | **78%** |

Considering the potential interaction between Hummock Hill Island and Seaview Beach, Table 3.12 provides a summary of the generated internal and external traffic from the Seaview Beach development which results in approximately 50.7% of Commuter Peak Hour Trips will travel to/from the Highway.

***Table 3.12 Summary of Internal and External Traffic Distribution for Seaview Beach***

| **Seaview Beach** | **2013** | **2018** |
|---|---|---|
| **Commuter Peak Trips** | | |
| Percentage of Internal Trips | 29.2% | 29.3% |
| Number of Internal Peak Hour Trips | 184 | 370 |
| Percentage of External Trips to Highway | 42.5% (50.8% of Commuter Peak) | 42.3% (50.7% of Commuter Peak) |
| Number of External Peak Hour Trips to Highway | 268 | 534 |
| Percentage of External Trips to Hummock Hill Island | 9.2% | 9.2% |
| Number of External Peak Hour Trips to Hummock Hill Island | 58 | 116 |
| Percentage of External Trips to Turkey Beach | 2.6% | 2.7% |
| Number of External Peak Hour Trips to Turkey Beach | 17 | 34 |
| **Subtotal** | **527** | **1054** |
| **Tourist Peak Trips** | | |
| Percentage of External Trips to Highway | 16.5% | 16.5% |
| Number of External Peak Hour Trips to Highway | 104 | 208 |
| **Total Peak Hour Trips** | **631** | **1262** |

### 3.7 Traffic Distribution – Hummock Hill Island with Development at Seaview Beach

In Section 3.4, the previous analysis of the Hummock Hill Island internal and external traffic distribution assumed no development at Seaview Beach. This section will readdress the internal and external traffic distribution assuming Seaview Beach is developed.

As discussed, the trip attractors for traffic from other areas to enter Seaview Beach are limited. Therefore the number of external trips to the highway from the Hummock Hill Island development will remain the same when Seaview Beach and Hummock Hill are considered in conjunction.

Table 3.13 provides a summary of the generated internal and external traffic from the Hummock Hill Island development assuming development at Seaview Beach and is a comparison against Table 3.9 for the effect of the potential interaction with the Seaview Beach development.

***Table 3.13 Summary of Internal and External Traffic Distribution for Hummock Hill Island (Assuming development at Seaview Beach)***

| Hummock Hill Island | Tourist Generated Trips | | Commuter Locally and Regionally Employed Generated Trips | | Total Trips | |
|---|---|---|---|---|---|---|
| | **2013** | **2023** | **2013** | **2023** | **2013** | **2023** |
| Percentage of Internal Trips | 85.6% | 82.5% | 68.8% | 65.5% | 81.4% | 77.7% |
| Number of Internal Peak Hour Trips | 751 | 1874 | 205 | 591 | 956 | 2465 |
| Percentage of External Trips to Highway | 11.3% | 13.8% | 24.5% | 27.2% | 14.6% | 17.6% |
| Number of External Peak Hour Trips to Highway | 99 | 314 | 73 | 245 | 172 | 559 |
| Percentage of External Trips to Seaview Beach | 2.2% | 2.6% | 4.7% | 5.2% | 2.8% | 3.4% |
| Number of External Peak Hour Trips to Seaview Beach | 19 | 60 | 14 | 47 | 33 | 107 |
| Percentage of External Trips to Turkey Beach | 0.9% | 1.1% | 2.0% | 2.1% | 1.2% | 1.3% |
| Number of External Peak Hour Trips to Turkey Beach | 8 | 24 | 6 | 19 | 14 | 43 |
| **Total Peak Hour Trips** | **877** | **2272** | **298** | **902** | **1,175** | **3,174** |

## 3.8 Traffic Assignment

A 70% outbound and 30% inbound split was adopted during the morning peak and vice versa during the evening peak. At the Bruce Highway and Turkey Beach Road intersection and based on the Main Roads count data, it was adopted that 70% travel north towards Gladstone with 30% travel south towards Miriam Vale. Figures 3.2 to 3.5 detail the peak hour traffic volumes for Hummock Hill Island whereas Figures 3.6 to 3.9 are for Seaview Beach. Peak hour traffic volumes for each development are contained at Appendix B.

***Figure 3.2*** ***2013 Hummock Hill Island Development Tourist Peak Hour Traffic Volumes at the Bruce Highway and Turkey Beach Road Intersection***

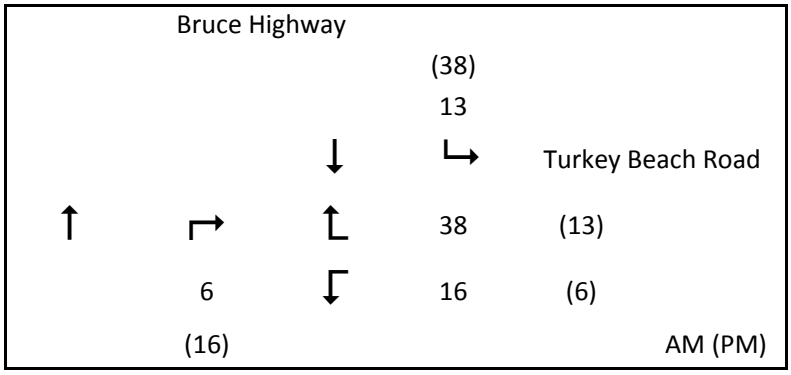



***Figure 3.3*** ***2023 Hummock Hill Island Development Tourist Peak Hour Traffic Volumes at the Bruce Highway and Turkey Beach Road Intersection***

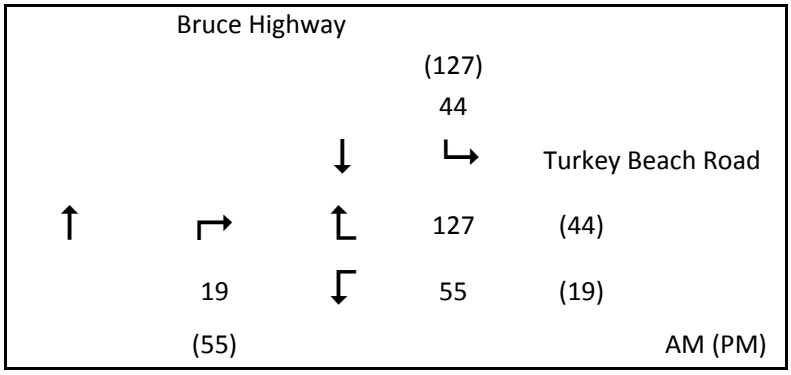



***Figure 3.4*** ***2013 Hummock Hill Island Development Commuter Peak Hour Traffic Volumes at the Bruce Highway and Turkey Beach Road Intersection***

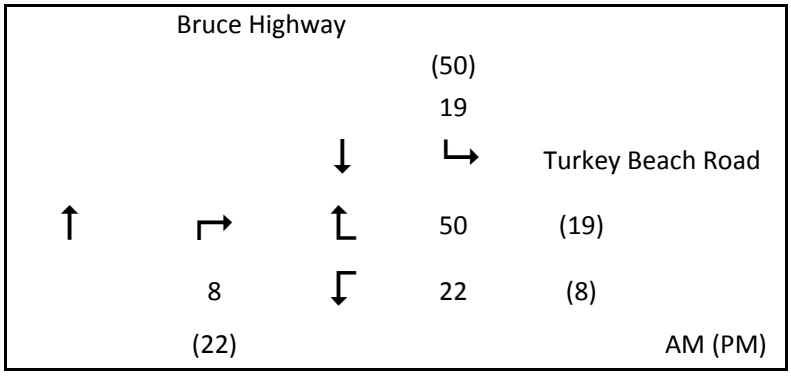


***Figure 3.5*** ***2023 Hummock Hill Island Development Commuter Peak Hour Traffic Volumes at the Bruce Highway and Turkey Beach Road Intersection***

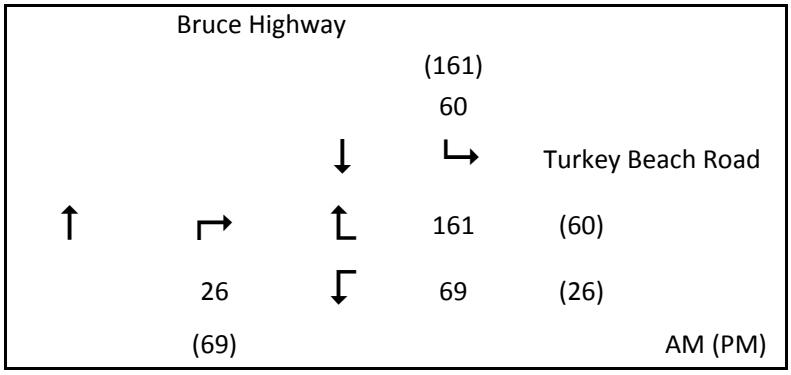



***Figure 3.6*** ***2013 Seaview Beach Development Tourist Peak Hour Traffic Volumes at the Bruce Highway and Turkey Beach Road Intersection***

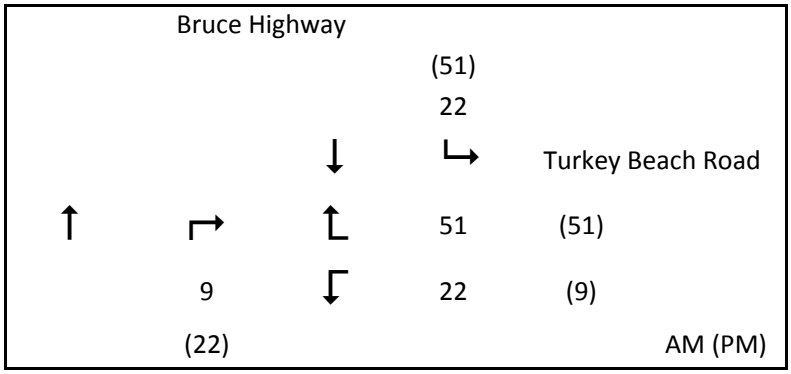



***Figure 3.7*** ***2018 Seaview Beach Development Tourist Peak Hour Traffic Volumes at the Bruce Highway and Turkey Beach Road Intersection***

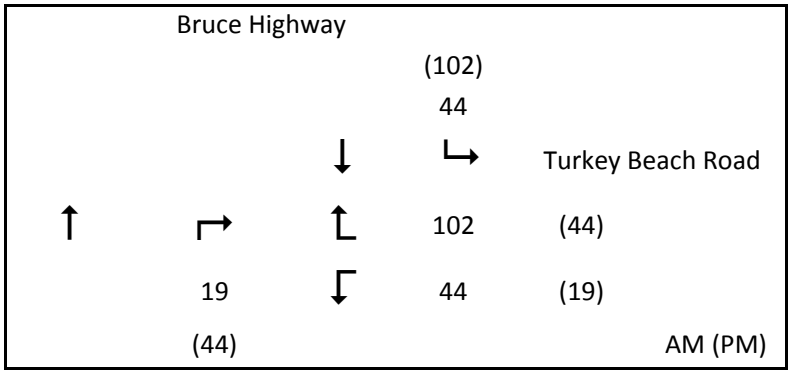


***Figure 3.8 2013 Seaview Beach Development Commuter Peak Hour Traffic Volumes at the Bruce Highway and Turkey Beach Road Intersection***

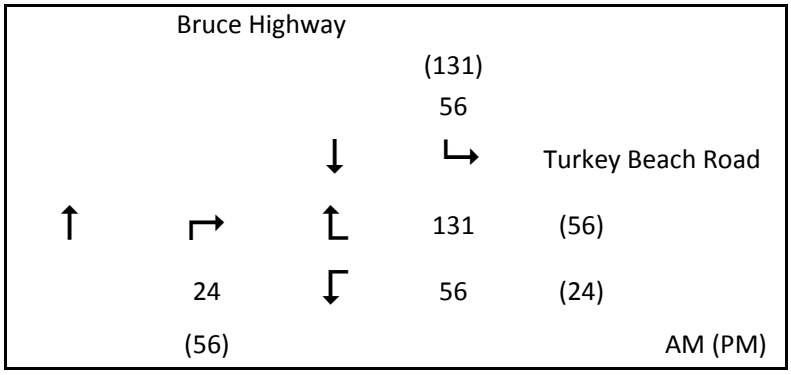
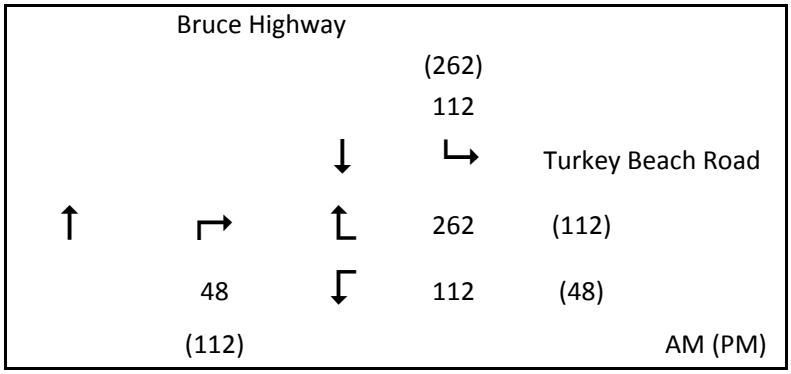



***Figure 3.9 2018 Seaview Beach Development Commuter Peak Hour Traffic Volumes at the Bruce Highway and Turkey Beach Road Intersection***



# 4.0 BACKGROUND TRAFFIC CONDITIONS

## 4.1 Background Growth

Traffic volume data was obtained from the Department of Main Roads for the intersection of the Bruce Highway and Turkey Beach Road. This count was performed in August 2005 and is included at Appendix E.

Analysis of the 2005 intersection count data indicated there were four peak periods (Refer Figure 3.1). An AM peak time from 7.15 to 8.15am and a PM peak time from 3.30 to 4.30pm are considered to be Commuter Peaks. However, two higher peaks with an AM peak time from 9:30 to 10:30am and a PM Peak time from 12:45 to 1:45pm is considered to be Tourist Peaks. This is discussed in detail in Section 3.2. These four peak times were adopted for the analysis for Commuter and Tourist Peaks and the actual volumes for these times were used.

The following percentages of heavy vehicles were adopted based on the 2005 intersection count.

***Table 4.1*** ***Adopted Percentages of Heavy Vehicles Based on the 2005 Intersection Count***

| Movement | AM Peak (7.15 - 8.15am) | PM Peak (3.30 - 4.30pm) |
|---|---|---|
| Through Southbound on Highway | 26% | 20% |
| Through Northbound on Highway | 52% | 9% |
| Left into Turkey Beach Road from North | 11% | 10% |
| Right into Turkey Beach Road from South | 0% | 25% |
| Right out of Turkey Beach Road | 22% | 13% |
| Left out of Turkey Beach Road | 0% | 0% |

To assist with determining an appropriate growth rate for the intersection, the Department of Main Roads provided traffic count data for 2005, 2006 and 2007 at permanent count site 60022 located on the Bruce Highway 100m north of Rodds Creek (approximately 11km north-west of Turkey Beach Road intersection) and permanent count site 60019 located at Colosseum Creek (approximately 39km south of the Turkey Beach Road intersection) on the Bruce Highway. Irrespective of this data, in an email dated 29 August 2008, the Department recommended a 5%pa (compound) growth rate up to 2018 and a 3%pa (compound) growth rate beyond 2018 for the Bruce Highway be adopted for this area.

Table 4.2 indicates how the forecast background traffic has been calculated based on the adopted growth rates from the Department of Main Roads.

***Table 4.2 Adopted Growth Rates and Calculation of Forecast Traffic***

| Forecast Year | Base Count Data | Adopted Growth Rate | Development Stage |
|---|---|---|---|
| 2008 | 2005 | 5% | Pre-development |
| 2013 | 2005 | 5% | HHI and Seaview Beach 50% Developed |
| 2018 | 2005 | 5% | HHI 75% Developed and Seaview Beach Full Development |
| 2023 | 2018 (Estimated) | 3% | HHI Full Development |
| 2028 | 2018 (Estimated) | 3% | Ten Year Design Horizon for Seaview Beach |
| 2033 | 2018 (Estimated) | 3% | Ten Year Design Horizon for HHI |

Based on the adopted growth rates in Table 4.2, the background peak hour traffic volumes at the intersection of the Bruce Highway and Turkey Beach Road were calculated and are contained at Appendix C.

## 4.2 Background Traffic Operations for 2008 to 2033

A SIDRA intersection analysis of the existing intersection was undertaken for 2008, 2013, 2018, 2023, 2028 and 2033 based on background traffic and the adopted compound growth rates as detailed in Table 4.2. Figure 4.1 shows the existing layout for the intersection of the Bruce Highway and Turkey Beach Road.

***Figure 4.1 Existing Layout at the Intersection of Bruce Highway and Turkey Beach Road***

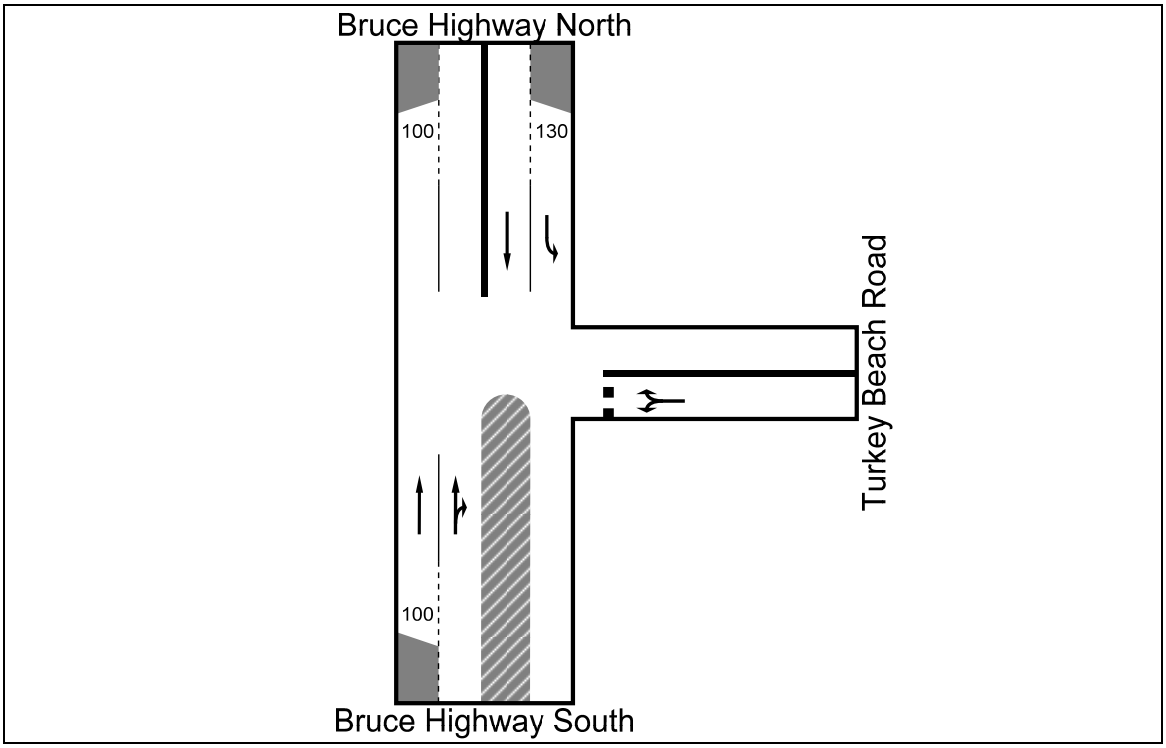


***Table 4.3 Background Traffic Operations Results for 2008 to 2033 for Existing Intersection Layout***

| Development Situation | Peak Period | Year | Peak | DOS | 95%ile longest queue (m) |
|---|---|---|---|---|---|
| Background | Tourist | 2008 | AM | 0.162 | 5m (S), 2m (E), 0m (N) |
| | | | PM | 0.137 | 9m (S), 1m (E), 0m (N) |
| | | 2013 | AM | 0.206 | 7m (S), 4m (E), 0m (N) |
| | | | PM | 0.177 | 13m (S), 1m (E), 0m (N) |
| | | 2018 | AM | 0.263 | 10m (S), 6m (E), 0m (N) |
| | | | PM | 0.227 | 18m (S), 1m (E), 0m (N) |
| | | 2023 | AM | 0.305 | 8m (S), 8m (E), 0m (N) |
| | | | PM | 0.265 | 23m (S), 2m (E), 0m (N) |
| | | 2028 | AM | 0.409 | 16m (S), 16m (E), 0m (N) |
| | | | PM | 0.309 | 29m (S), 3m (E), 0m (N) |
| | | 2033 | AM | 0.667 | 21m (S), 29m (E), 0m (N) |
| | | | PM | 0.362 | 43m (S), 5m (E), 0m (N) |
| | Commuter | 2008 | AM | 0.093 | 3m (S), 2m (E), 0m (N) |
| | | | PM | 0.085 | 5m (S), 0m (E), 0m (N) |
| | | 2013 | AM | 0.119 | 4m (S), 4m (E), 0m (N) |
| | | | PM | 0.108 | 7m (S), 1m (E), 0m (N) |
| | | 2018 | AM | 0.152 | 5m (S), 5m (E), 0m (N) |
| | | | PM | 0.138 | 9m (S), 1m (E), 0m (N) |
| | | 2023 | AM | 0.190 | 6m (S), 7m (E), 0m (N) |
| | | | PM | 0.160 | 11m (S), 1m (E), 0m (N) |
| | | 2028 | AM | 0.259 | 8m (S), 10m (E), 0m (N) |
| | | | PM | 0.185 | 15m (S), 2m (E), 0m (N) |
| | | 2033 | AM | 0.352 | 10m (S), 15m (E), 0m (N) |
| | | | PM | 0.215 | 18m (S), 3m (E), 0m (N) |

Table 4.3 details the results and indicates the existing intersection will operate satisfactorily beyond 2033 based on background traffic.

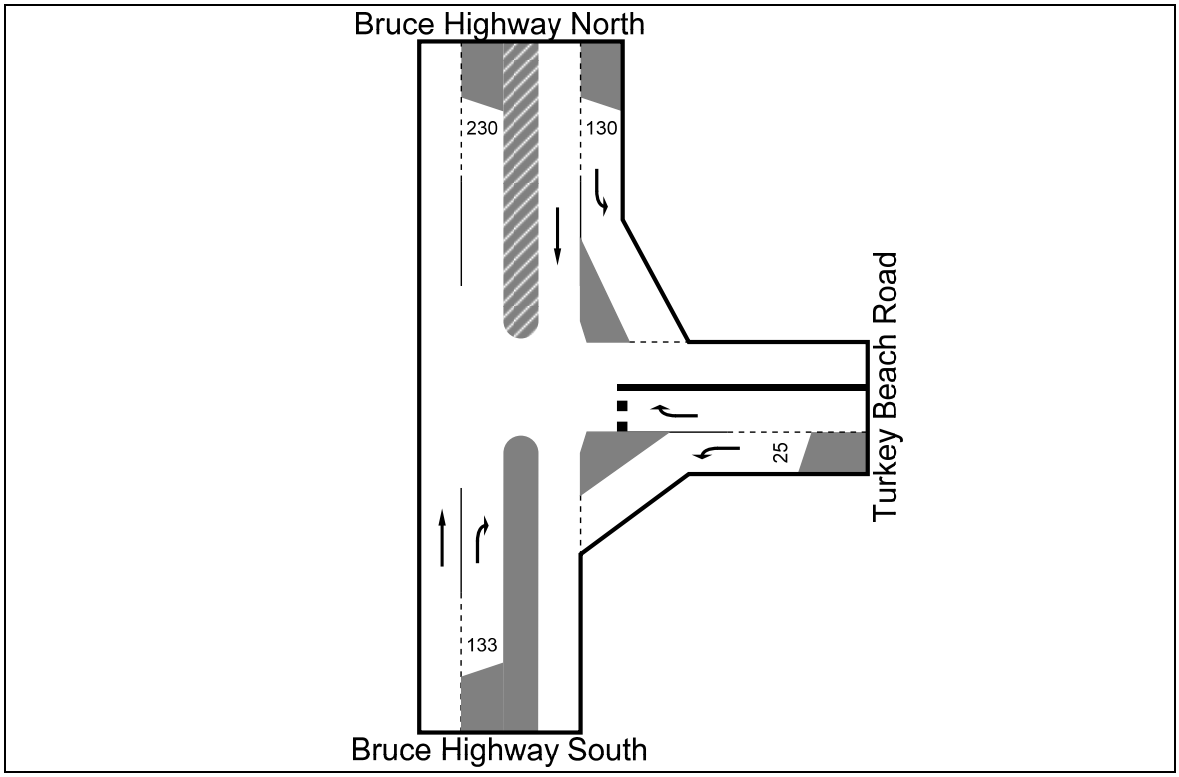
# 5.0 TOTAL TRAFFIC CONDITIONS

## 5.1 With Hummock Hill Island Development

SIDRA intersection analysis was undertaken of the future total traffic volumes, shown at Appendix D – Total Traffic Volumes. The volumes comprise the Hummock Hill Island development volumes added to the background traffic volumes. The analysis was undertaken for the existing intersection layout as per Figure 4.1 and a seagull layout as per Figure 5.1.

It is important to note that the modelling of a CHR layout at the intersection yielded exactly the same results for the existing intersection layout, therefore only the results for the existing layout are reported.

***Figure 5.1 Seagull Layout at the Intersection of Bruce Highway and Turkey Beach Road***




The results for the SIDRA intersection analysis are detailed in Table 5.1 and 5.2.

***Table 5.1 SIDRA Intersection Results for Hummock Hill Island Development for Existing Intersection Layout***

| Development Situation | Peak Period | Year | Peak | DOS | 95%ile longest queue (m) |
|---|---|---|---|---|---|
| Total with Hummock Hill Island Development (Existing Layout) | Tourist | 2013 | AM | 0.230 | 7m (S), 9m (E), 0m (N) |
| | | | PM | 0.187 | 14m (S), 2m(E), 0m (N) |
| | | 2018 | AM | 0.557 | 10m (S), 28m(E), 0m (N) |
| | | | PM | 0.252 | 21m (S), 5m(E), 0m (N) |
| | | 2023 | AM | 0.989 | 13m (S), 159m(E), 0m (N) |
| | | | PM | 0.310 | 31m (S), 11m(E), 0m (N) |
| | | 2028 | AM | 1.388 | 17m (S), 814m(E), 0m (N) |
| | | | PM | 0.339 | 42m (S), 15m(E), 0m (N) |
| | | 2033 | AM | 2.077 | 23m (S), 1,535m(E), 0m (N) |
| | | | PM | 0.571 | 59m (S), 22m(E), 0m (N) |
| | Commuter | 2013 | AM | 0.210 | 4m (S), 8m(E), 0m (N) |
| | | | PM | 0.108 | 7m (S), 2m(E), 0m (N) |
| | | 2018 | AM | 0.448 | 6m (S), 24m(E), 0m (N) |
| | | | PM | 0.152 | 12m (S), 5m(E), 0m (N) |
| | | 2023 | AM | 0.713 | 7m (S), 55m(E), 0m (N) |
| | | | PM | 0.258 | 15m (S), 10m(E), 0m (N) |
| | | 2028 | AM | 0.868 | 9m (S), 92m(E), 0m (N) |
| | | | PM | 0.311 | 19m (S), 12m(E), 0m (N) |
| | | 2033 | AM | 1.095 | 11m (S), 424m(E), 0m (N) |
| | | | PM | 0.400 | 25m (S), 16m(E), 0m (N) |

***Table 5.2 SIDRA Intersection Results for Hummock Hill Island Development for Seagull Intersection Layout***

| Development Situation | Peak Period | Year | Peak | DOS | 95%ile longest queue (m) |
|---|---|---|---|---|---|
| Total with Hummock Hill Island Development | Tourist | 2013 | AM | 0.206 | 0m (S), 5m(E), 0m (N) |
| | | | PM | 0.245 | 2m (S), 1m(E), 0m (N) |
| | | 2018 | AM | 0.263 | 1m (S), 11m(E), 0m (N) |
| | | | PM | 0.312 | 4m (S), 2m(E), 0m (N) |
| | | 2023 | AM | 0.411 | 1m (S), 21m(E), 0m (N) |
| | | | PM | 0.362 | 6m (S), 3m(E), 0m (N) |
| | | 2028 | AM | 0.504 | 1m (S), 27m(E), 0m (N) |
| | | | PM | 0.420 | 6m (S), 4m(E), 0m (N) |
| | | 2033 | AM | 0.634 | 2m (S), 36m(E), 0m (N) |
| | | | PM | 0.486 | 7m (S), 4m(E), 0m (N) |
| | Commuter | 2013 | AM | 0.131 | 1m (S), 5m(E), 0m (N) |
| | | | PM | 0.137 | 1m (S), 1m(E), 0m (N) |
| | | 2018 | AM | 0.258 | 1m (S), 11m(E), 0m (N) |
| | | | PM | 0.175 | 3m (S), 3m(E), 0m (N) |
| | | 2023 | AM | 0.338 | 1m (S), 21m(E), 0m (N) |
| | | | PM | 0.203 | 4m (S), 5m(E), 0m (N) |
| | | 2028 | AM | 0.441 | 1m (S), 26m(E), 0m (N) |
| | | | PM | 0.235 | 5m (S), 4m(E), 1m (N) |
| | | 2033 | AM | 0.551 | 2m (S), 32m(E), 0m (N) |
| | | | PM | 0.272 | 5m (S), 6m(E), 0m (N) |

Table 5.1 shows that in the Tourist Peak by 2021 the total traffic volumes through the existing intersection would exceed its capacity (i.e. desirable maximum degree of saturation (DOS) of 0.80). It is also around this time that queues from the intersection would extend back into Turkey Beach Road and over the rail level crossing. However, the Commuter Peak exceeds capacity around 2027 and queues from the intersection would extend back into Turkey Beach Road to within proximity of the rail level crossing.

If the intersection was upgraded to a seagull form, with an acceleration lane provided for right turn movements from Turkey Beach Road, such an upgrade would extend the life of the intersection beyond 2033 for both the Tourist and Commuter Peaks as detailed in Table 5.2. However, the critical peak period is the Tourist Peak although the queues would not reach back to the level crossing.

In both cases for the two different intersection layouts, the AM peak hour in the Tourist Peak is critical, with the ability for right turning vehicles to depart Turkey Beach Road being the primary constraint for the capacity of the intersection.

### 5.2 With Hummock Hill Island and Seaview Beach Developments

SIDRA intersection analysis was undertaken of the future total traffic volumes, shown at Appendix D – Total Traffic Volumes. The volumes comprise the Hummock Hill Island and Seaview Beach development volumes added to the background traffic volumes. The analysis was undertaken for the existing intersection layout as per Figure 4.1 and a seagull layout as per Figure 5.1.

The results for the SIDRA Intersection analysis are detailed in Table 5.3 and 5.4.

***Table 5.3 SIDRA Intersection Results for Hummock Hill Island and Seaview Beach Developments for Existing Intersection Layout***

| Development Situation | Peak Period | Year | Peak | DOS | 95%ile longest queue (m) |
|---|---|---|---|---|---|
| Total with Seaview Beach and Hummock Hill Island Developments | Tourist | 2013 | AM | 0.403 | 7m (S), 19m(E), 0m (N) |
| | | | PM | 0.202 | 15m (S), 4m(E), 0m (N) |
| | | 2018 | AM | 1.364 | 11m (S), 1,188m(E), 0m (N) |
| | | | PM | 0.418 | 31m (S), 17m(E), 0m (N) |
| | | 2023 | AM | 1.679 | 14m (S), 1,694m(E), 0m (N) |
| | | | PM | 0.602 | 40m (S), 27m(E), 0m (N) |
| | | 2028 | AM | 2.301 | 18m (S), 2,417m(E), 0m (N) |
| | | | PM | 0.827 | 53m (S), 48m(E), 0m (N) |
| | | 2033 | AM | 3.424 | 25m (S), 3,120m(E), 0m (N) |
| | | | PM | 1.187 | 71m (S), 297m(E), 0m (N) |
| | Commuter | 2013 | AM | 0.538 | 5m (S), 36m(E), 0m (N) |
| | | | PM | 0.220 | 10m (S), 8m(E), 0m (N) |
| | | 2018 | AM | 1.333 | 7m (S), 1,603m(E), 0m (N) |
| | | | PM | 0.665 | 17m (S), 38m(E), 0m (N) |
| | | 2023 | AM | 1.779 | 9m (S), 3,107m(E), 0m (N) |
| | | | PM | 0.945 | 21m (S), 111m(E), 0m (N) |
| | | 2028 | AM | 2.127 | 10m (S), 3,829m(E), 0m (N) |
| | | | PM | 1.145 | 26m (S), 402m(E), 0m (N) |
| | | 2033 | AM | 2.654 | 13m (S), 4,578m(E), 0m (N) |
| | | | PM | 1.434 | 31m (S), 847m(E), 0m (N) |

***Table 5.4 SIDRA Intersection Results for Hummock Hill Island and Seaview Beach Developments for Seagull Intersection Layout***

| Development Situation | Peak Period | Year | Peak | DOS | 95%ile longest queue (m) |
|---|---|---|---|---|---|
| Total with Seaview Beach and Hummock Hill Island Developments | Tourist | 2013 | AM | 0.209 | 1m (S), 8m(E), 0m (N) |
| | | | PM | 0.245 | 3m (S), 2m(E), 0m (N) |
| | | 2018 | AM | 0.631 | 2m (S), 45m(E), 0m (N) |
| | | | PM | 0.312 | 9m (S), 6m(E), 0m (N) |
| | | 2023 | AM | 0.701 | 2m (S), 51m(E), 0m (N) |
| | | | PM | 0.362 | 9m (S), 7m(E), 0m (N) |
| | | 2028 | AM | 0.837 | 2m (S), 76m(E), 0m (N) |
| | | | PM | 0.420 | 10m (S), 8m(E), 0m (N) |
| | | 2033 | AM | 1.043 | 3m (S), 266m(E), 0m (N) |
| | | | PM | 0.486 | 12m (S), 9m(E), 0m (N) |
| | Commuter | 2013 | AM | 0.330 | 1m (S), 17m(E), 0m (N) |
| | | | PM | 0.137 | 4m (S), 5m(E), 0m (N) |
| | | 2018 | AM | 0.759 | 3m (S), 81m(E), 0m (N) |
| | | | PM | 0.347 | 13m (S), 15m(E), 0m (N) |
| | | 2023 | AM | 0.955 | 3m (S), 215m(E), 0m (N) |
| | | | PM | 0.453 | 19m (S), 22m(E), 0m (N) |
| | | 2028 | AM | 1.066 | 4m (S), 512m(E), 0m (N) |
| | | | PM | 0.497 | 21m (S), 24m(E), 0m (N) |
| | | 2033 | AM | 1.211 | 4m (S), 1,048m(E), 0m (N) |
| | | | PM | 0.552 | 24m (S), 28m(E), 0m (N) |

With both developments contributing traffic to the intersection, the existing layout would reach capacity around 2015-2016. Upgrading the intersection to a seagull form would likely extend its life to around 2019. As for the analysis for the Hummock Hill Island volumes only, it is around these times that queues from the intersection would extend back to within proximity of the level crossing. As the Seaview Beach development was assumed to be purely residential with trips made in the Commuter Peak Period, this is the critical period for this development scenario.

## 6.0 IMPACTS OF DEVELOPMENT

Considering only the impacts of the Hummock Hill Island development, the existing intersection will be sufficient until 2021 or alternatively, the provision of a seagull treatment will be sufficient beyond 2033. A seagull layout provides a suitable treatment for the safe and efficient operation of the intersection.

The total traffic from the Hummock Hill Island and Seaview Beach developments results in the existing intersection treatment failing just after 2015 and a seagull treatment failing around 2019-2020 (50% developed for both developments is assumed by 2018).

Should neither development proceed, the background analysis shows that the existing intersection layout would have sufficient capacity beyond the 2033 horizon considered herein.

For the Hummock Hill Island development, a seagull intersection is adequate for its anticipated traffic volumes beyond the 2033 assessment horizon.

For both Hummock Hill Island and Seaview Beach developments to proceed, the intersection would need to be upgraded, at least to a seagull treatment initially, followed by a treatment capable of dealing with high right turning volumes from Turkey Beach Road, while managing the flow of highway traffic and addressing the issue of queuing to/from the rail level crossing on Turkey Beach Road.

The previous Cardno report recommended a roundabout at the intersection to deal with the anticipated traffic movements from both developments. Department of Main Roads (DMR) has however questioned the suitability of such a treatment.

Implementation of either roundabout or signal control at the Turkey Beach Road intersection would need to consider the following in detail:

- impact of slowing/stopping traffic on the Bruce Highway;
- visibility of the intersection;
- prospect for advance warning of the intersection;
- separation and queuing from the rail level crossing.

A grade separated interchange would accommodate the proposed traffic volumes with the greatest efficiency and safety through:

- merge and diverge highway operations as opposed to the current at-grade movements;
- avoiding the need to make highway traffic slow or stop;

- the potential to better manage queuing within Turkey Beach Road to deal with the rail level crossing.

It would appear that grade separation is a significant cost that likely would be beyond the expectations and abilities of each development in isolation. In addition, grade separation may be a premature treatment in this location, given that other locations on the Bruce Highway do not have grade separation.

In our view, given the longevity of the development horizon and ten year future horizon for both developments (i.e. up to 2033) it would be unrealistic to predict with certainty the traffic conditions at that time. A reasonable requirement for either of the developments, and to accommodate both developments, would be the implantation of a seagull island treatment at a nominated stage/year horizon.

Further discussions with the DMR are therefore warranted to agree upon a reasonable and relevant treatment in the event both developments proceed. Such discussion will need to take into account that a seagull intersection would be adequate for Hummock Hill Island on its own.

## 7.0 RECOMMENDATIONS

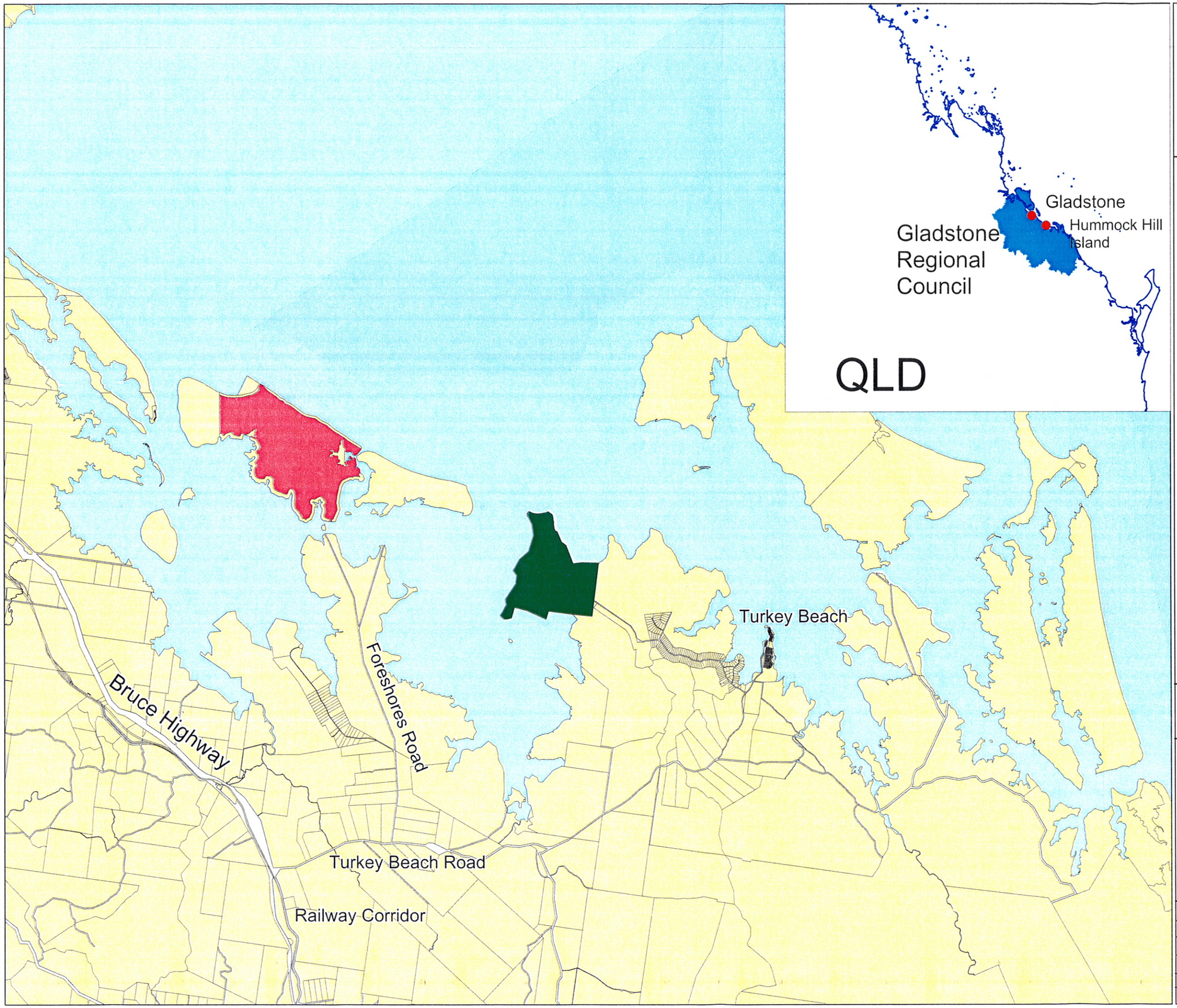
It is recommended that negotiations be held with the Department of Main Roads (DMR) in regard to an Infrastructure Agreement that considers:

- the preferred intersection treatment at the Bruce Highway/Turkey Beach Road;
- appropriate contribution, by Hummock Hill Island and Seaview Beach developments, to the agreed intersection treatment at Bruce Highway/Turkey Beach Road.

The aim of the negotiation would be to reach an agreement on a reasonable and relevant contribution by the Hummock Hill Island development.

***Appendix A***

***Locality Plan and Proposed Site Layout***




# Appendix A

## Hummock Hill Island

## Locality Plan

**LEGEND**

- Hummock Hill Island Development
- Seaview Beach Developmer
- Cadastre

N
W E
S

1300 0 1300 2600 3900
Metres
**Scale: 1:13,000**

Cardno
Shaping the Future
Cardno (QLD) Pty Ltd | ABN 57 051 074 992
1 Clifford Street
Toowoomba QLD 4350
Tel: 07 4633 9333 Fax: 07 4633 9355



| | |
|---|---|
| SHEET | A3 |
| Project No: | 7900-25 |
| Date: | 7 October 2008 |
| Revision Number: | 1 |
| Designed by: | P Sullivan |
| Client Name: | East Wing Corporation |

File Path: Z:\Projects\7900-25 Hummock Hill\MapInfo

LEGEND

| | |
|---|---|
| 1 | BRIDGE ENTRY TO HUMMOCK HILL |
| 2 | VILLAGE CENTRE |
| 3 | BOAT RAMP |
| 4 | BOYNE CHANNEL RESIDENTIAL |
| 5 | BOYNE CHANNEL APARTMENTS |
| 6 | SALT DRYING AREA |
| 7 | GOLF COURSE |
| 8 | GOLF COURSE RESIDENTIAL |
| 9 | GOLF COURSE APARTMENTS |
| 10 | GOLF CLUBHOUSE |
| 11 | DRIVING RANGE |
| 12 | GOLF MAINTENANCE FACILITIES |
| 13 | SEWAGE TREATMENT PLANT |
| 14 | AIR STRIP |
| 15 | HILLSIDE TERRACES |
| 16 | RIDGETOP RESIDENTIAL |
| 17 | EDUCATION CENTE / SPORTS / FACILITIES |
| 18 | TOWN CENTRE |
| 19 | VILLAGE TOWNHOUSES |
| 20 | SEASIDE COTTAGES |
| 21 | BEACHFRONT HOLIDAY HOMES |
| 22 | HEADLAND RESORT APARTMENTS |
| 23 | HEADLAND RESORT HOLIDAY HOMES |
| 24 | BEACHFRONT APARTMENTS |
| 25 | HEADLAND RESORT |
| 26 | RESORT TOWN APARTMENTS |
| 27 | PUBLIC FACILITIES |
| 28 | BEACHFRONT TOURIST HOTEL |
| 29 | RIPARIAN ECO HOME SITES |
| 30 | LAGOON VILLAS |
| 31 | SCHOOL RECREAIONAL CAMP GROUND |
| 32 | BUSHLAND RESIDENTIAL |
| 33 | TOURIST PARK |
| 34 | TO BOAT RAMP AT BOYNE CHANNEL |

Figure 3.3 - Hummock Hill Island Key Plan

JOB NO: 4489-01-C 26/7/2007 A-MP-00-07(C) SCALE: NTS

HUMMOCK HILL

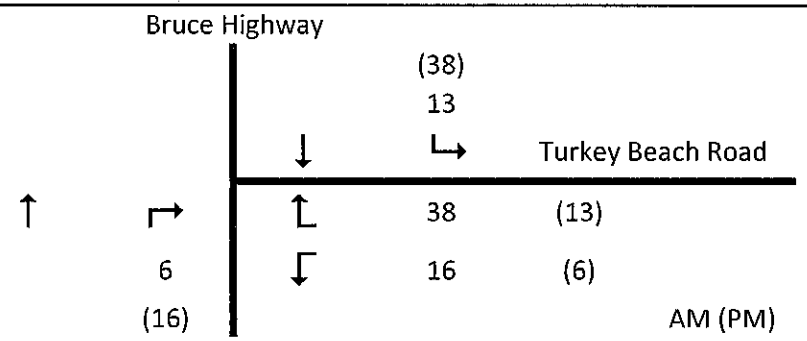
EATON Place Pty Ltd

ML Design
architects
planners
interior designers

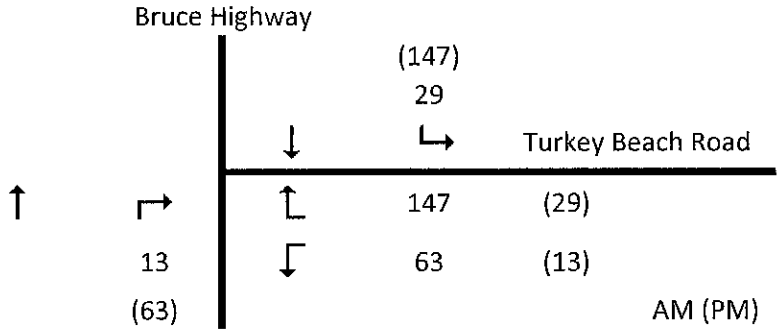
# *Appendix B*

# *Development Traffic Volumes*

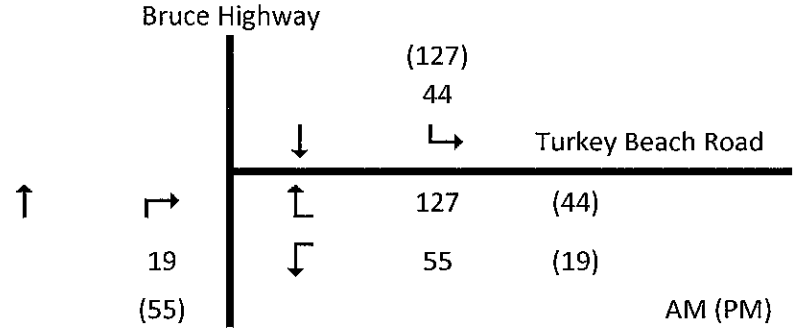
## 2013 Hummock Hill Island Tourist Peak



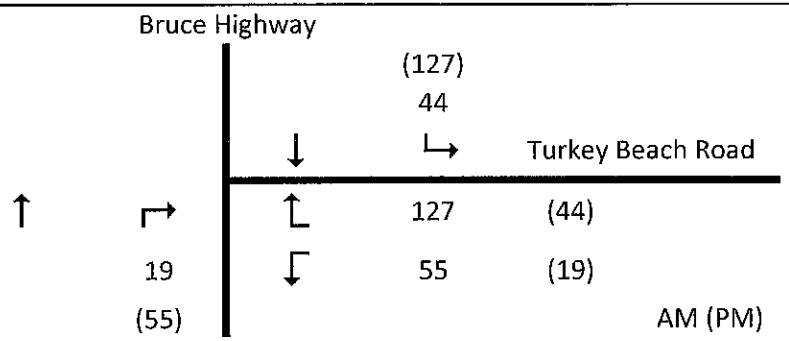

## 2018 Hummock Hill Island Tourist Peak



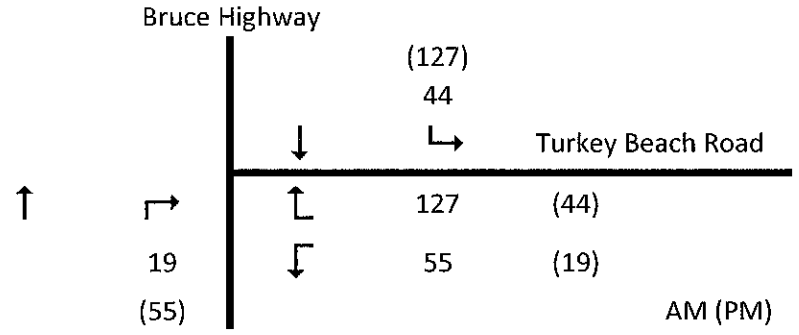

## 2023 Hummock Hill Island Tourist Peak



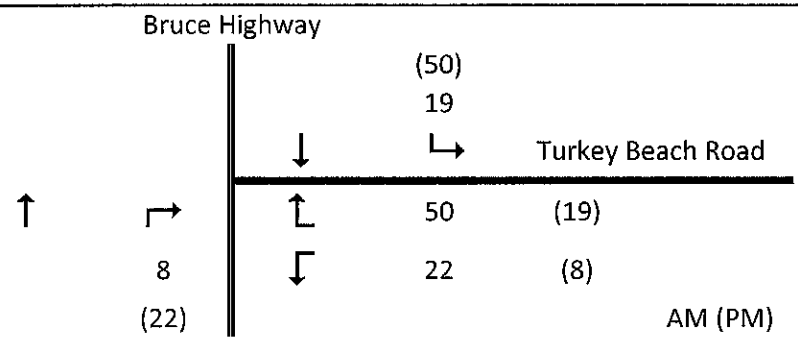

## 2028 Hummock Hill Island Tourist Peak



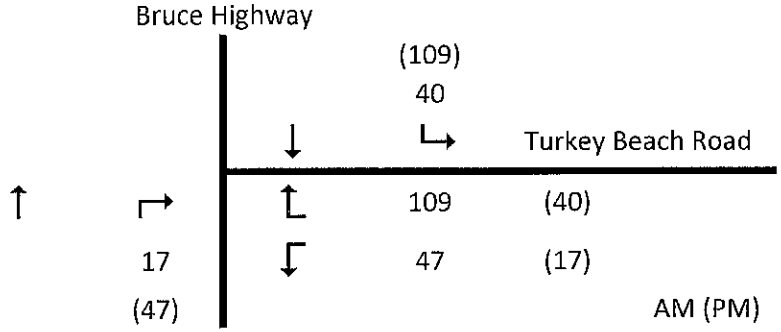

## 2033 Hummock Hill Island Tourist Peak



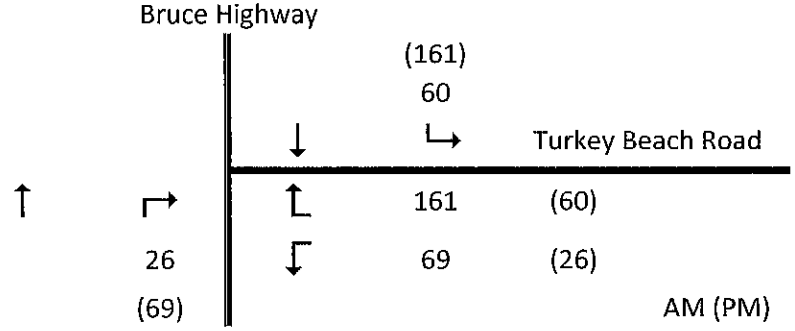
## 2013 Hummock Hill Island Commuter Peak



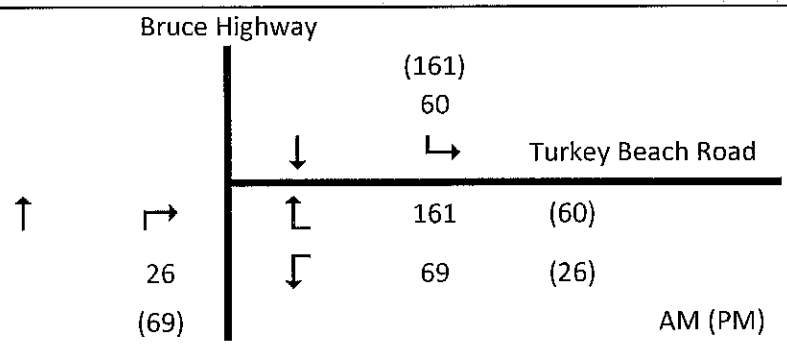

## 2018 Hummock Hill Island Commuter Peak



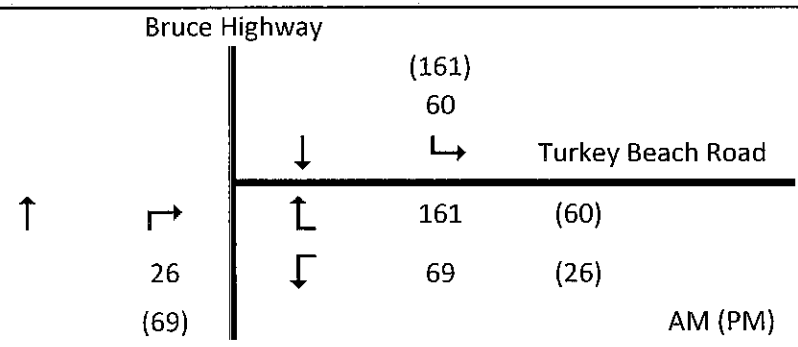

## 2023 Hummock Hill Island Commuter Peak



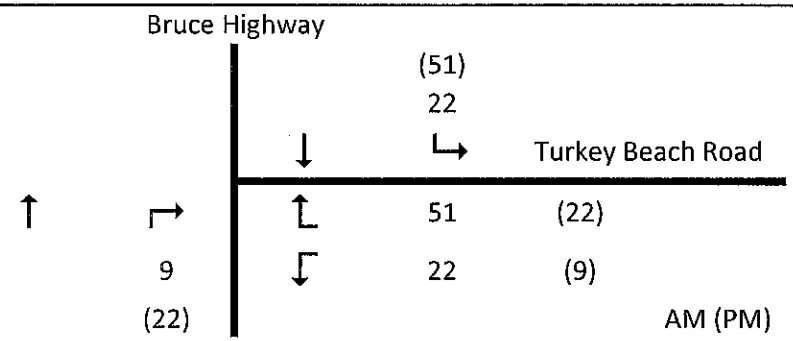

## 2028 Hummock Hill Island Commuter Peak



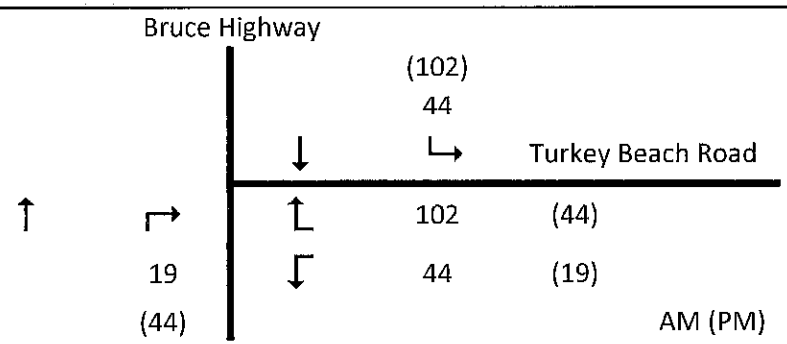

## 2033 Hummock Hill Island Commuter Peak



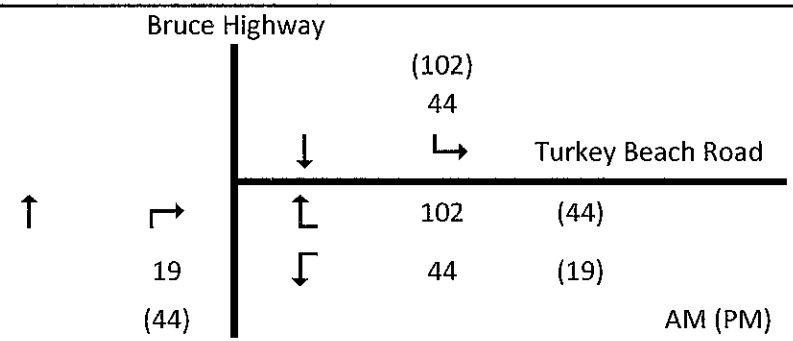
## 2013 Seaview Beach Tourist Peak



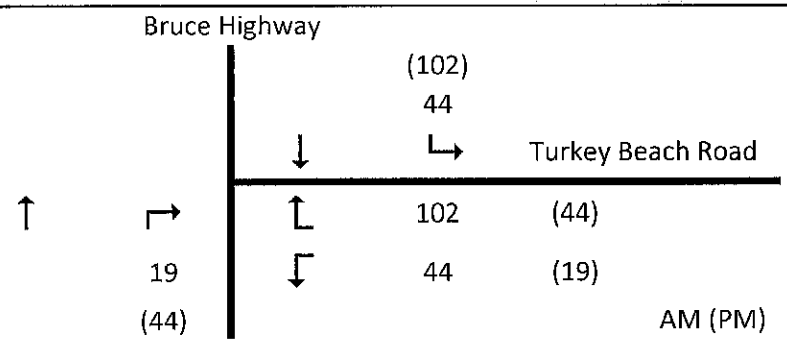

## 2018 Seaview Beach Tourist Peak



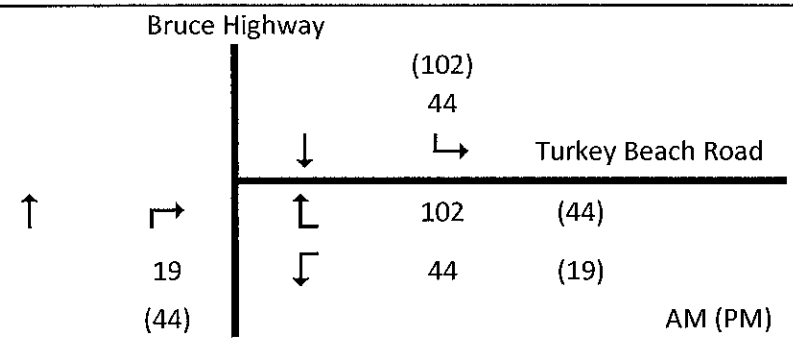

## 2023 Seaview Beach Tourist Peak



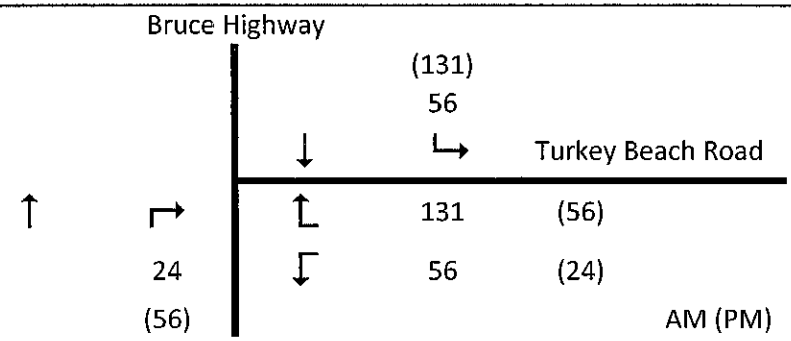

## 2028 Seaview Beach Tourist Peak



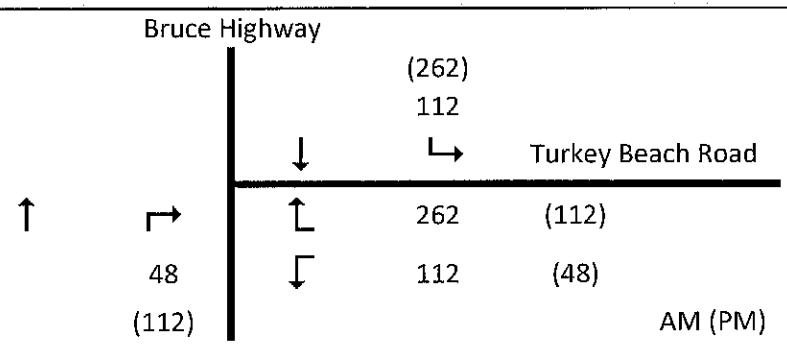

## 2033 Seaview Beach Tourist Peak



## 2013 Seaview Beach Commuter Peak




## 2018 Seaview Beach Commuter Peak

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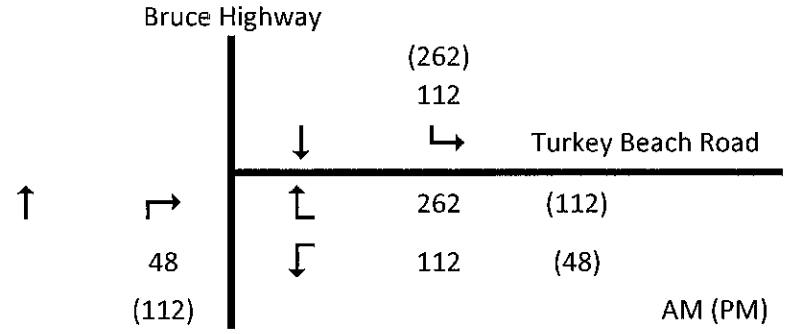


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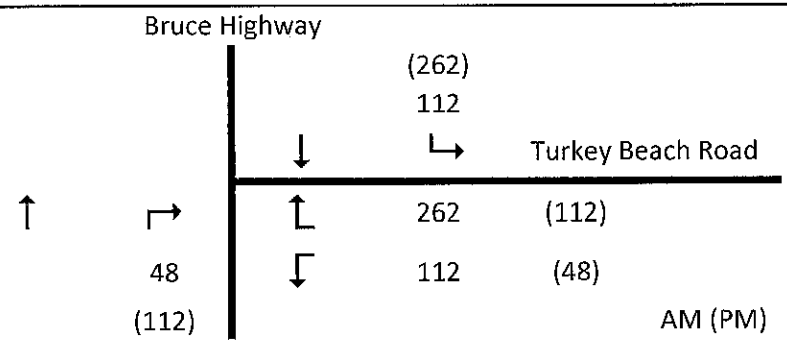


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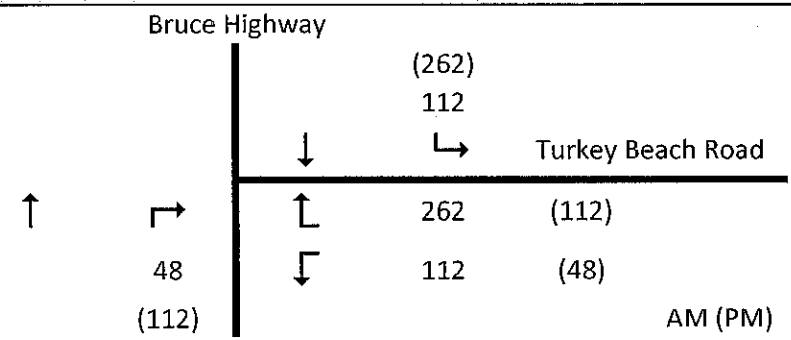
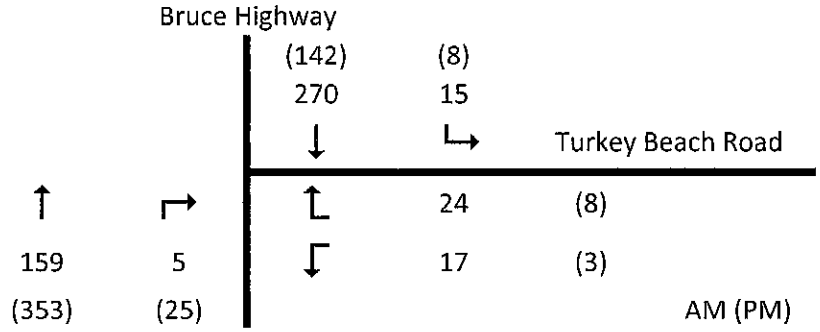


# *Appendix C*

# *Background Traffic Volumes*

## 2008 Background Tourist Peak

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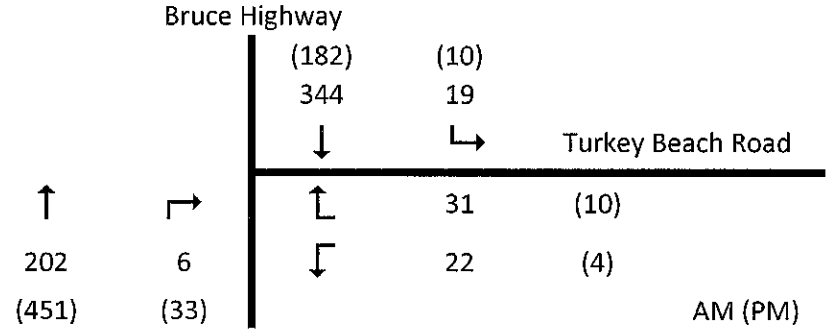
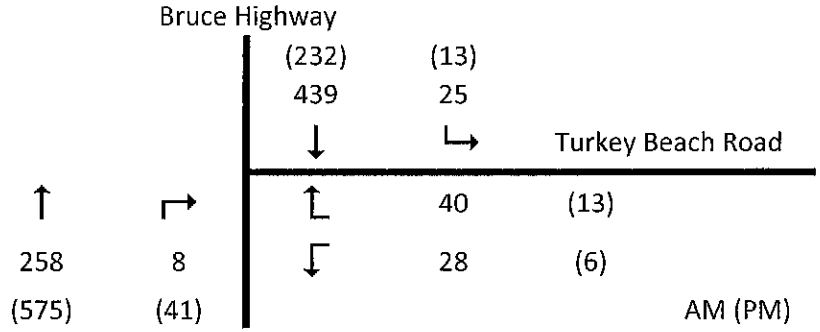
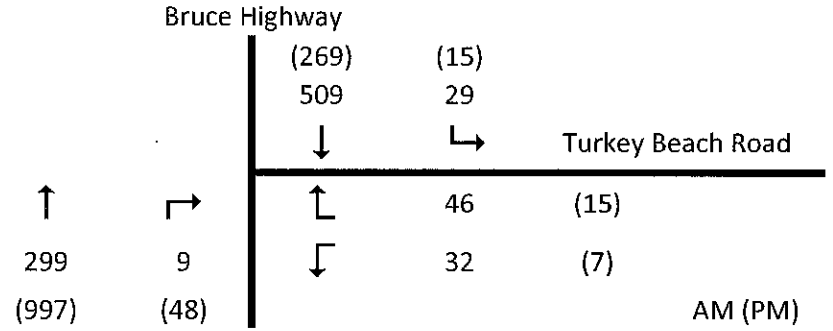


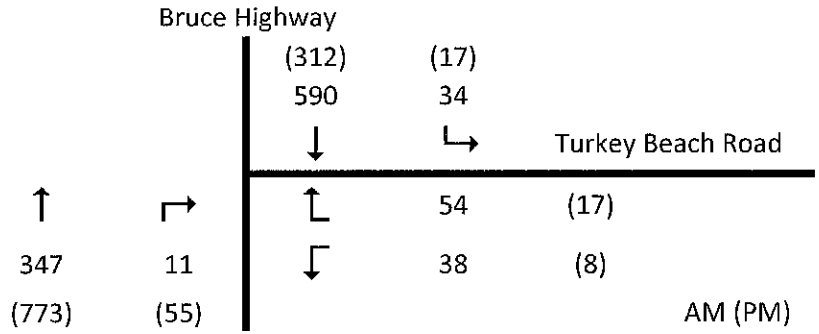

## 2018 Background Tourist Peak



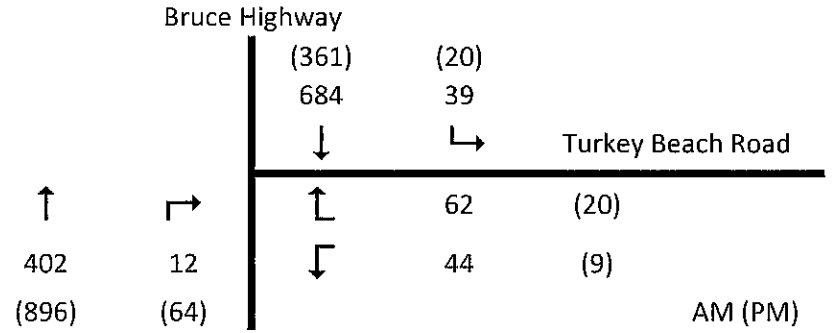

## 2023 Background Tourist Peak



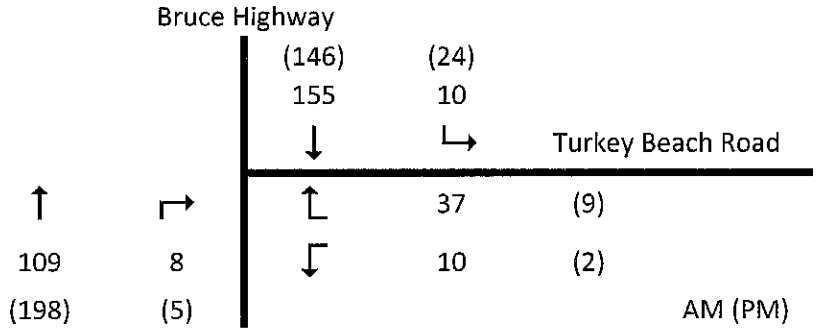

## 2028 Background Tourist Peak



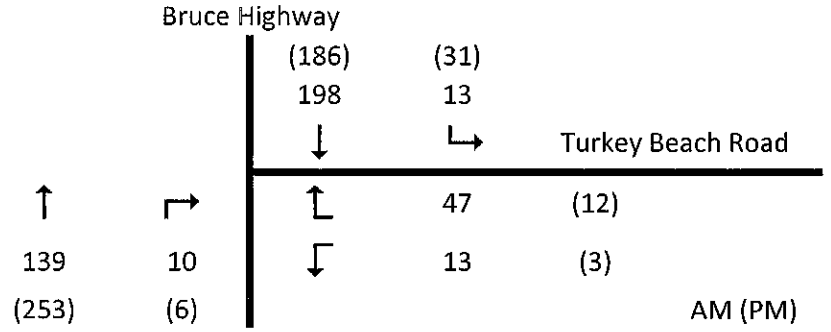

## 2033 Background Tourist Peak



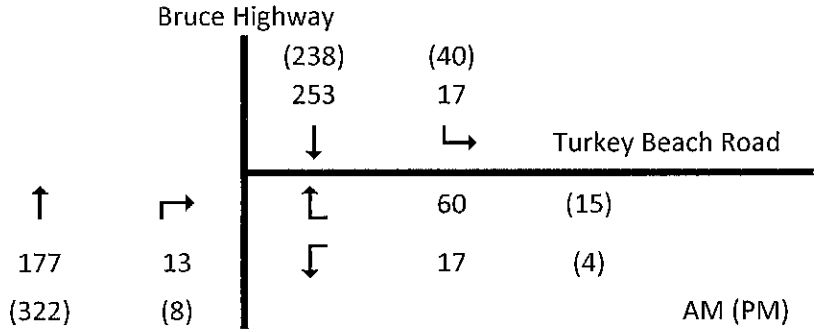
## 2008 Background Commuter Peak



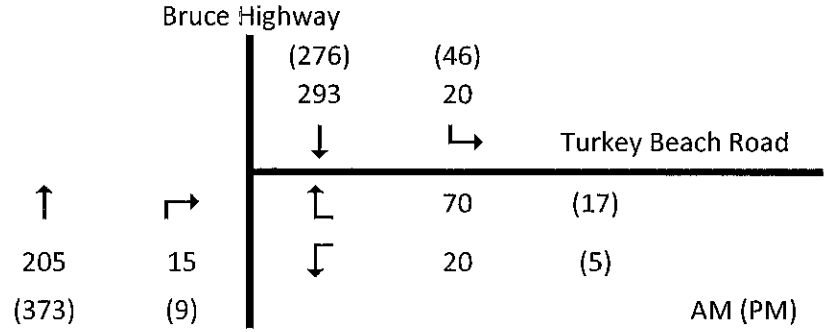

## 2013 Background Commuter Peak



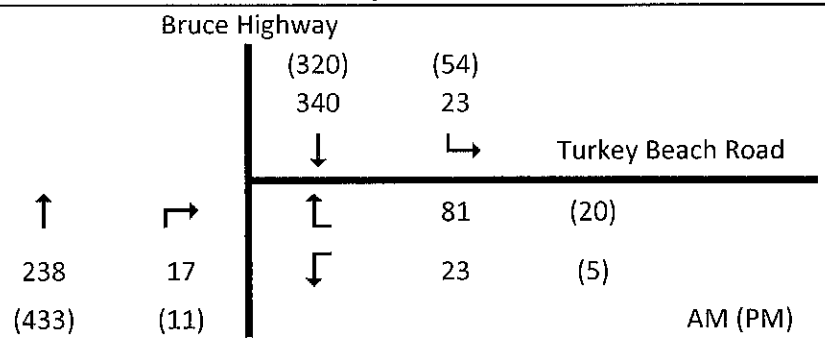

## 2018 Background Commuter Peak



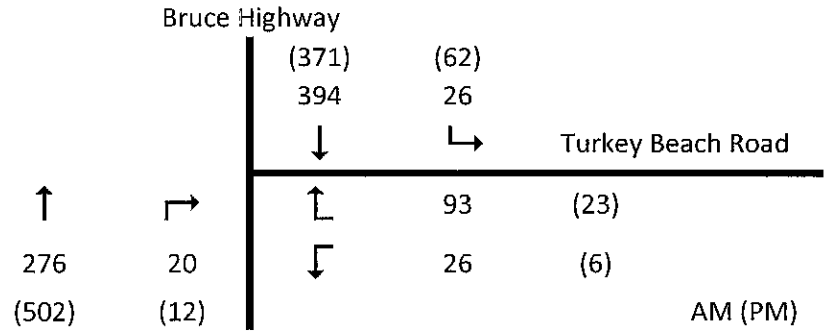

## 2023 Background Commuter Peak




## 2028 Background Commuter Peak



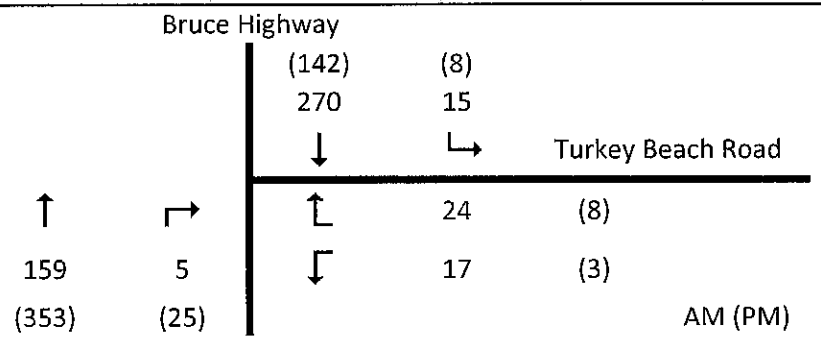

## 2033 Background Commuter Peak



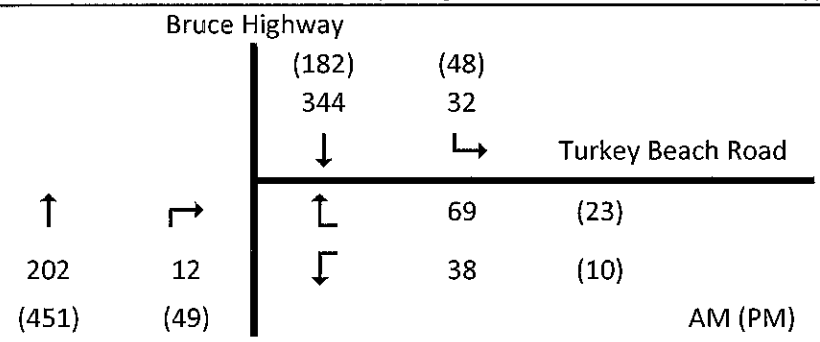
# *Appendix D*

# *Total Traffic Volumes*

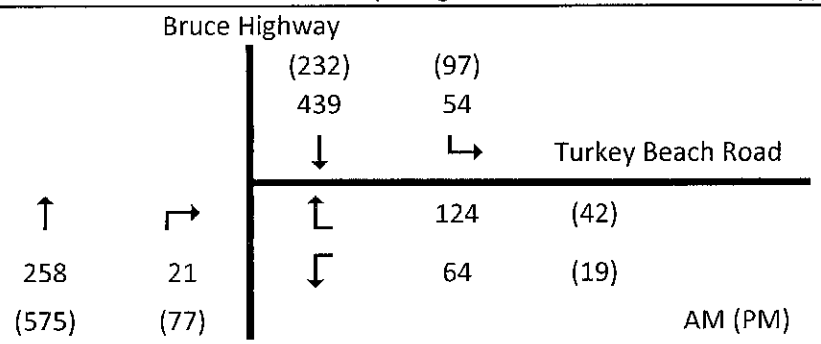
## 2008 Total Tourist Peak (Background and Hummock Hill Only)



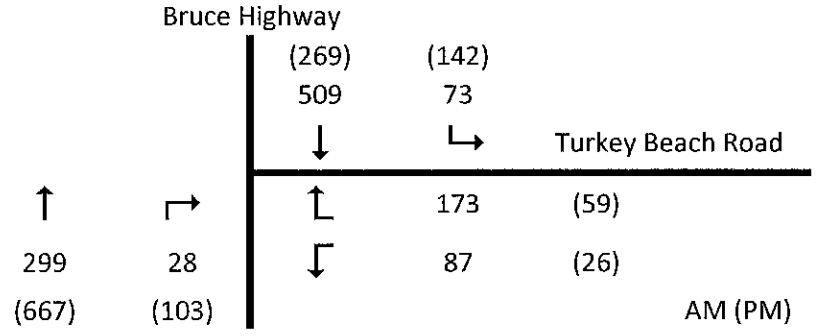

## 2013 Total Tourist Peak (Background and Hummock Hill Only)



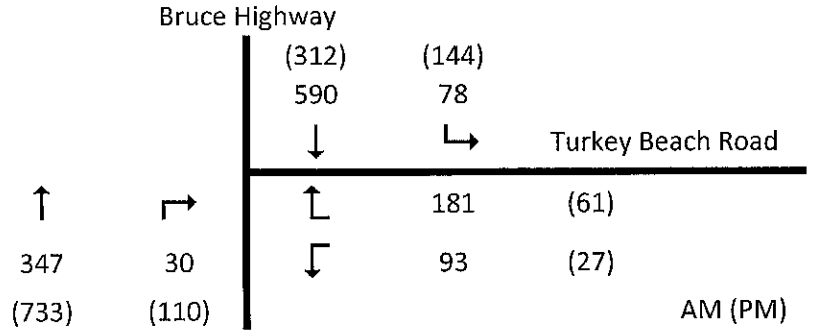

## 2018 Total Tourist Peak (Background and Hummock Hill Only)



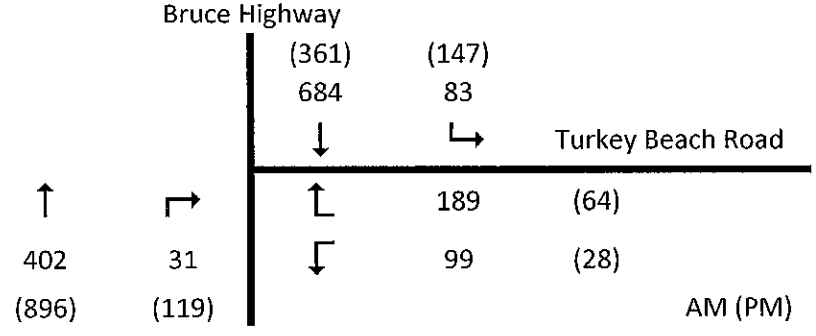

## 2023 Total Tourist Peak (Background and Hummock Hill Only)



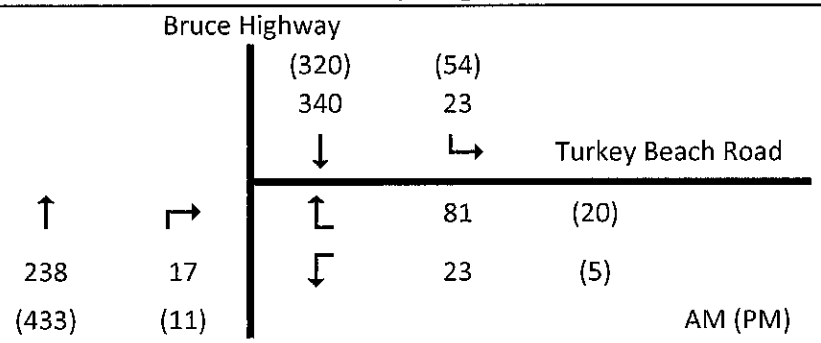

## 2028 Total Total Tourist Peak (Background and Hummock Hill Only)



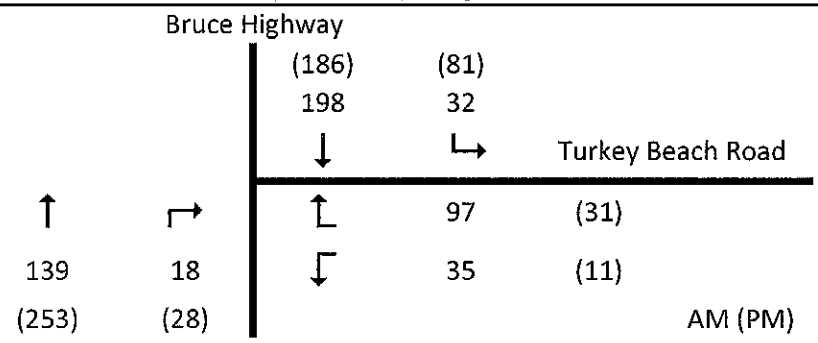

## 2033 Total Tourist Peak (Background and Hummock Hill Only)



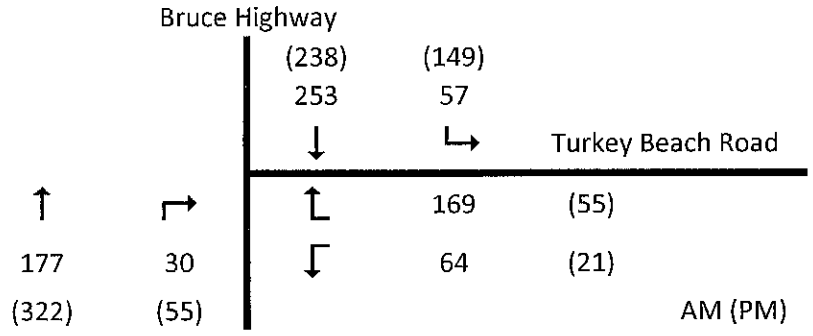
2008 Total Commuter Peak (Background and Hummock Hill Only)



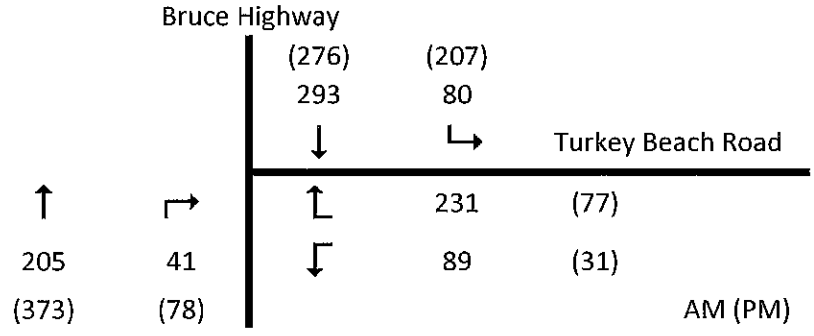

2013 Total Commuter Peak (Background and Hummock Hill Only)



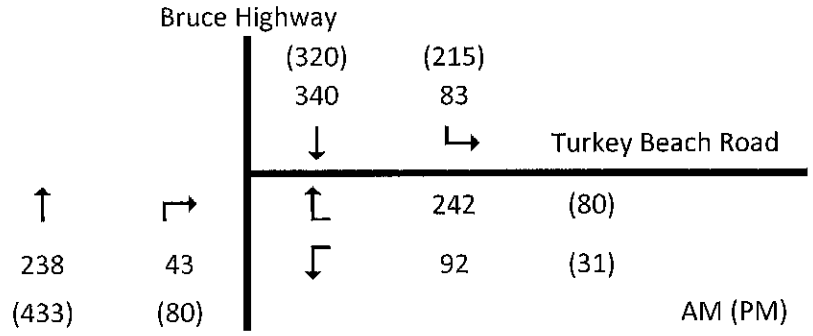

2018 Total Commuter Peak (Background and Hummock Hill Only)



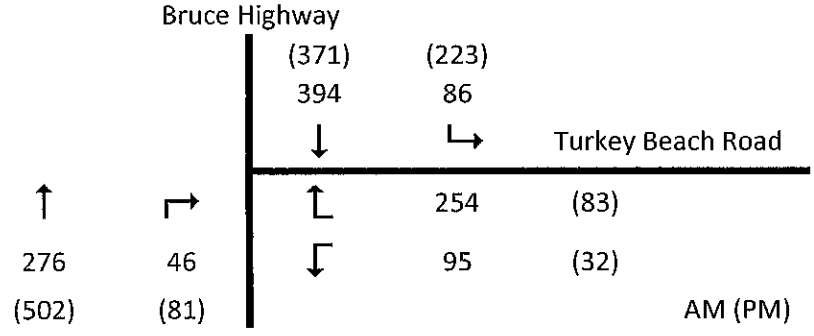

2023 Total Commuter Peak (Background and Hummock Hill Only)



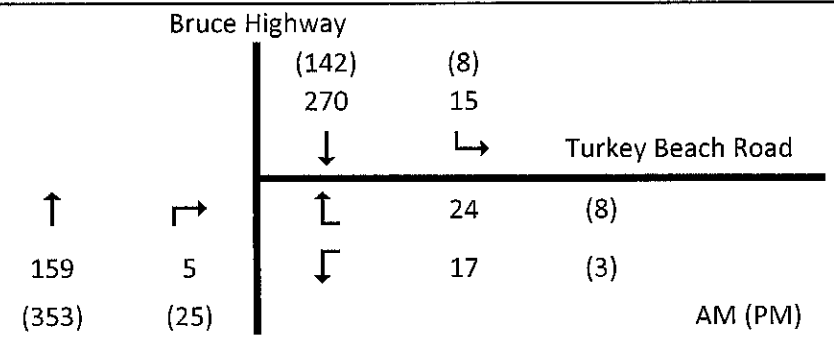

2028 Total Commuter Peak (Background and Hummock Hill Only)



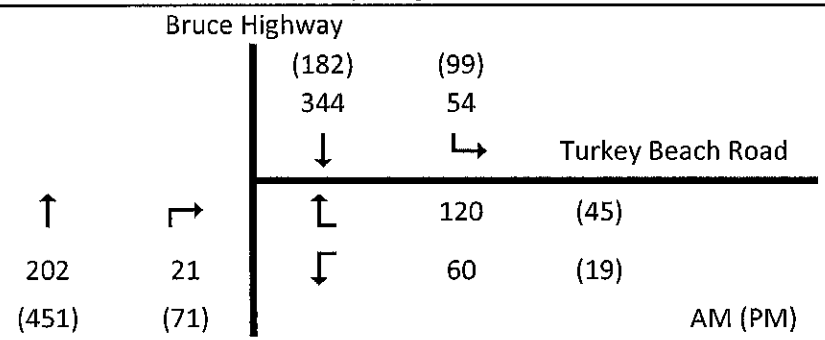

2033 Total Commuter Peak (Background and Hummock Hill Only)



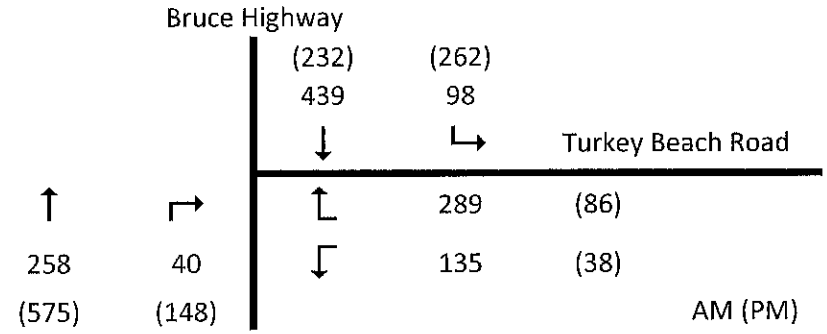
## 2008 Total Tourist Peak (Background, Hummock Hill and Seaview Beach)



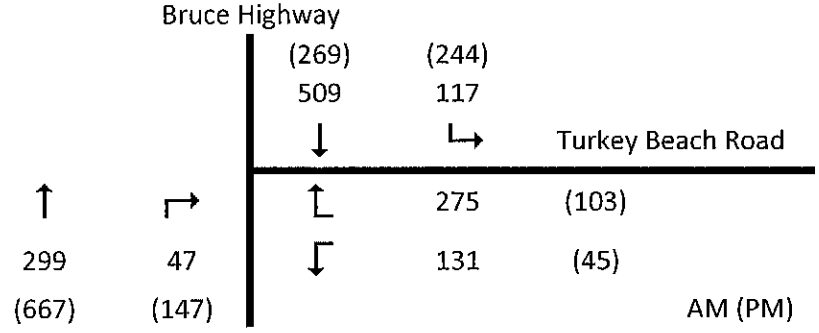

## 2013 Total Tourist Peak (Background, Hummock Hill and Seaview Beach)



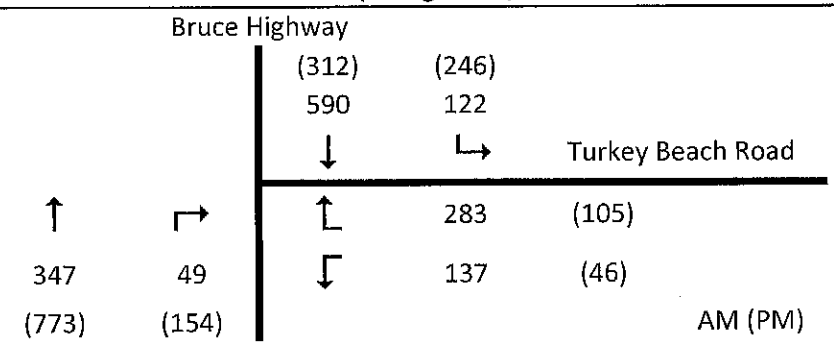

## 2018 Total Tourist Peak (Background, Hummock Hill and Seaview Beach)



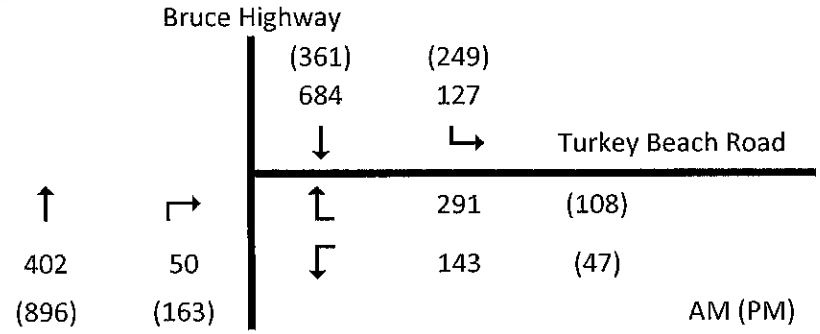

## 2023 Total Tourist Peak (Background, Hummock Hill and Seaview Beach)



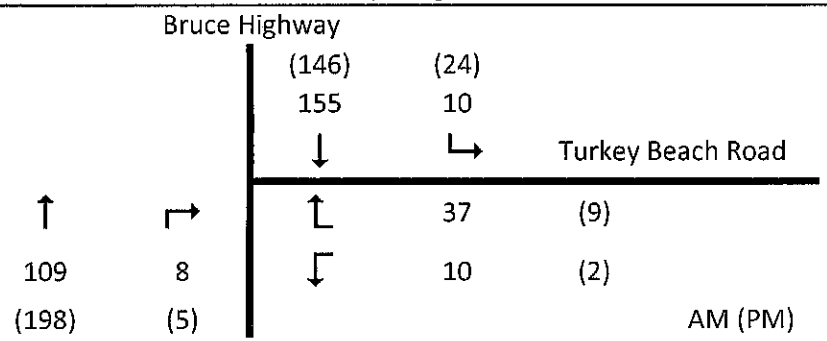

## 2028 Total Tourist Peak (Background, Hummock Hill and Seaview Beach)



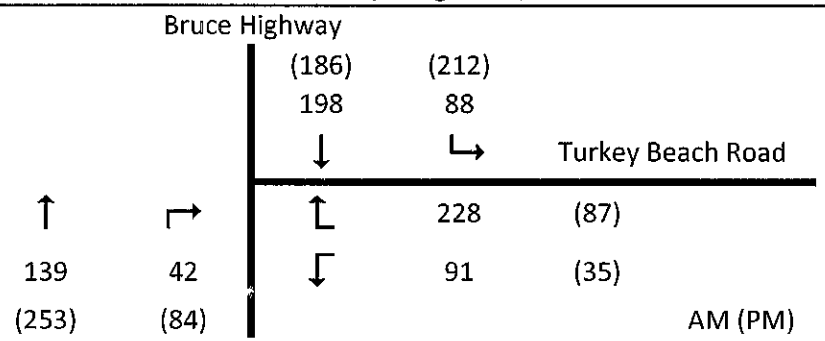

## 2033 Total Tourist Peak (Background, Hummock Hill and Seaview Beach)



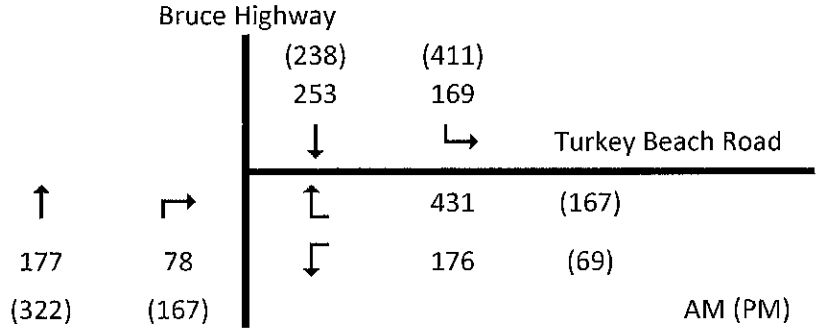
2008 Total Commuter Peak (Background, Hummock Hill and Seaview Beach)



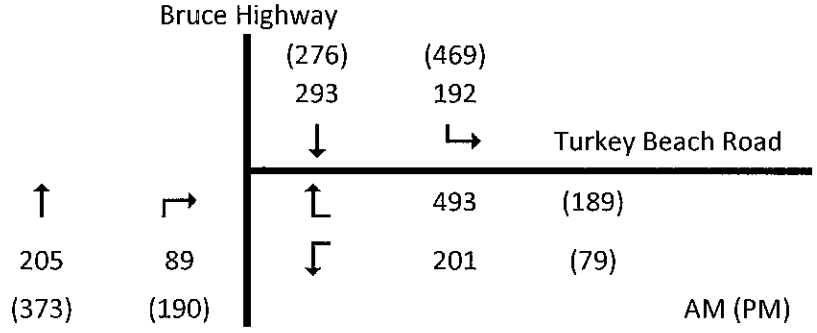

2013 Total Commuter Peak (Background, Hummock Hill and Seaview Beach)



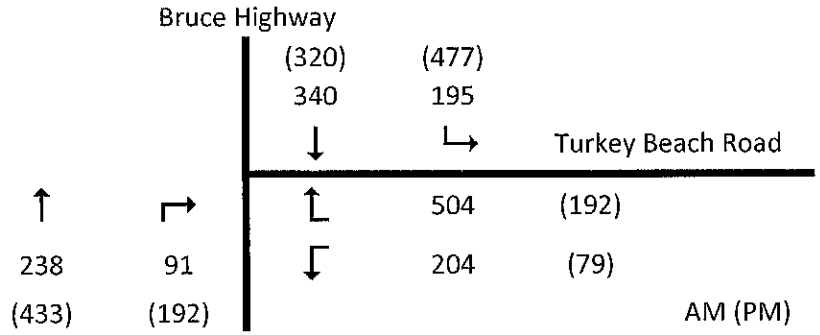

2018 Total Commuter Peak (Background, Hummock Hill and Seaview Beach)



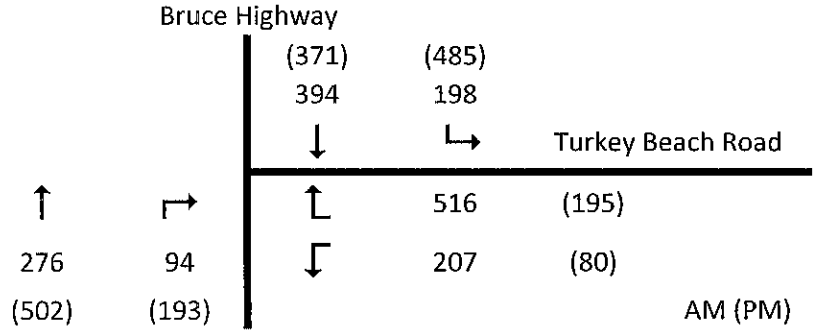

2023 Total Commuter Peak (Background, Hummock Hill and Seaview Beach)




2028 Total Commuter Peak (Background, Hummock Hill and Seaview Beach)




2033 Total Commuter Peak (Background, Hummock Hill and Seaview Beach)



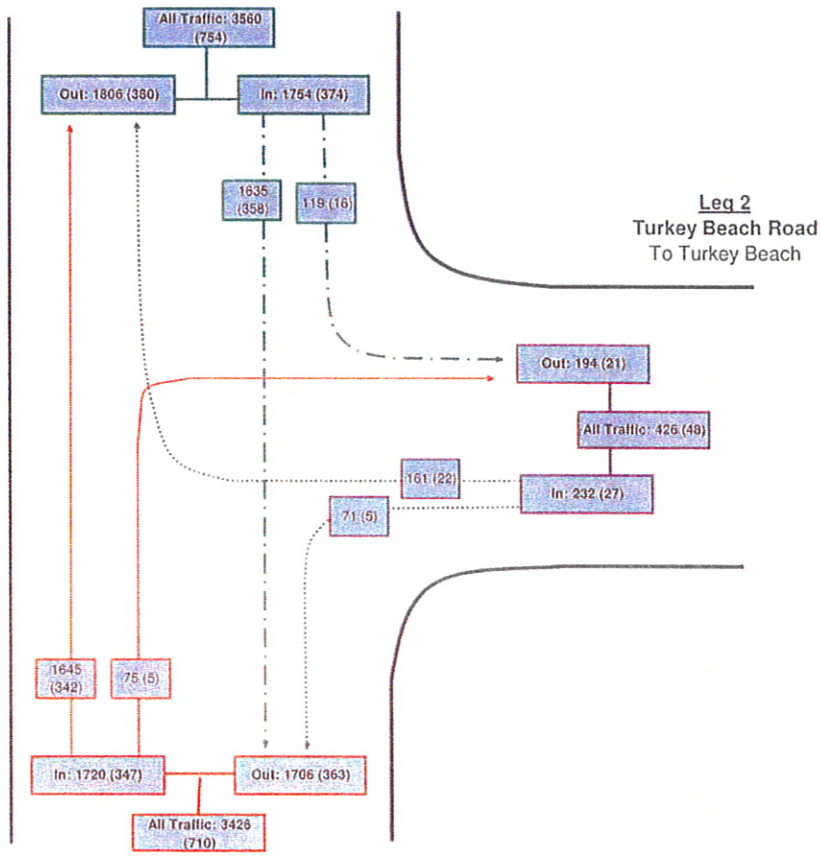
# *Appendix E*

# *Main Roads Traffic Count Data*

Queensland Government
Department of Main Roads

LOCATION: Bruce Hwy & Turkey Beach Road
ROAD No: 10D (Int. 1587 @ 122.489)
DATE: Tue, 02/08/05
TIME: 06:00 - 18:00

Queensland Government
Department of Main Roads



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## AADT SEGMENTS REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Year | 2005 |
| TDist | 99.281 147.145 Status C |
| Direction | All Directions |

Through Distance: 99.281 - 147.145

Site: 60022 100m N Rodds Ck

| Gaz Dir | AADT | % per Vehicle Class: Light Vehicle | Heavy Vehicle | Short Vehicle | Truck or Bus | Articulated Vehicle | Road Train | % Growth: 1 Yr | 5 Yr | 10 Yr |
|---|---|---|---|---|---|---|---|---|---|---|
| G | 2,176 | 79.94 | 20.06 | 79.94 | 5.69 | 9.69 | 4.68 | -1.00 | 3.79 | 4.39 |
| A | 2,117 | 79.80 | 20.20 | 79.80 | 6.34 | 9.29 | 4.57 | -3.82 | 2.86 | 4.67 |
| B | 4,293 | 79.88 | 20.12 | 79.88 | 6.01 | 9.49 | 4.62 | -2.41 | 3.32 | 4.52 |

* These values were updated manually or derived from previous years growth figures.

# Count Tally Sheet With Totals and Peak Flows.

Queensland Government
Department of Main Roads

**LOCATION:** Bruce Hwy & Turkey Beach Road
**ROAD No:** 10D (Int. 1587 @ 122.489)
**DATE:** Tue, 02/08/05
**TIME:** 06:00 - 18:00

Queensland Government
Department of Main Roads

| | Leg 1 | | | | | | Leg 2 | | | | | | Leg 4 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | | Right | | U-turn | Leg | Thru | | Right | | U-turn | Leg | Left | | Thru | | U-turn | Leg |
| Time | *Light* | *Heavy* | *Light* | *Heavy* | *All* | Total | *Light* | *Heavy* | *Light* | *Heavy* | *All* | Total | *Light* | *Heavy* | *Light* | *Heavy* | *All* | Total |
| 6:00 - 6:15 | 0 | 0 | 5 | 3 | | 8 | 0 | 0 | 1 | 0 | | 1 | 10 | 11 | 2 | 0 | | 23 |
| 6:15 - 6:30 | 1 | 0 | 7 | 4 | | 12 | 1 | 0 | 3 | 1 | | 5 | 10 | 10 | 1 | 0 | | 21 |
| 6:30 - 6:45 | 2 | 2 | 9 | 5 | | 18 | 1 | 0 | 7 | 1 | | 9 | 9 | 9 | 1 | 0 | | 19 |
| 6:45 - 7:00 | 1 | 1 | 11 | 8 | | 21 | 2 | 0 | 9 | 2 | | 13 | 8 | 7 | 1 | 0 | | 16 |
| 7:00 - 7:15 | 2 | 1 | 19 | 6 | | 28 | 1 | 1 | 4 | 1 | | 7 | 12 | 16 | 2 | 0 | | 30 |
| 7:15 - 7:30 | 2 | 0 | 21 | 8 | | 31 | 2 | 0 | 5 | 1 | | 8 | 13 | 18 | 1 | 0 | | 32 |
| 7:30 - 7:45 | 1 | 0 | 24 | 9 | | 34 | 2 | 0 | 8 | 2 | | 12 | 11 | 12 | 3 | 0 | | 26 |
| 7:45 - 8:00 | 3 | 1 | 26 | 7 | | 37 | 4 | 0 | 7 | 3 | | 14 | 9 | 10 | 0 | 0 | | 19 |
| 8:00 - 8:15 | 2 | 0 | 28 | 11 | | 41 | 1 | 0 | 5 | 1 | | 7 | 12 | 9 | 3 | 0 | | 24 |
| 8:15 - 8:30 | 2 | 1 | 29 | 14 | | 46 | 0 | 0 | 4 | 1 | | 5 | 10 | 6 | 2 | 0 | | 18 |
| 8:30 - 8:45 | 1 | 0 | 27 | 10 | | 38 | 0 | 0 | 2 | 0 | | 2 | 15 | 6 | 1 | 0 | | 22 |
| 8:45 - 9:00 | 0 | 0 | 25 | 7 | | 32 | 0 | 0 | 3 | 0 | | 3 | 13 | 4 | 1 | 0 | | 18 |
| 9:00 - 9:15 | 2 | 0 | 33 | 8 | | 43 | 2 | 0 | 4 | 0 | | 6 | 34 | 5 | 1 | 0 | | 40 |
| 9:15 - 9:30 | 2 | 0 | 39 | 9 | | 50 | 3 | 0 | 3 | 0 | | 6 | 30 | 4 | 1 | 0 | | 35 |
| 9:30 - 9:45 | 3 | 1 | 48 | 12 | | 64 | 4 | 1 | 4 | 1 | | 10 | 25 | 2 | 1 | 0 | | 28 |
| 9:45 - 10:00 | 4 | 0 | 59 | 14 | | 77 | 3 | 0 | 6 | 0 | | 9 | 29 | 5 | 1 | 0 | | 35 |
| 10:00 - 10:15 | 2 | 0 | 41 | 12 | | 55 | 4 | 1 | 4 | 1 | | 10 | 31 | 7 | 1 | 0 | | 39 |
| 10:15 - 10:30 | 3 | 0 | 38 | 9 | | 50 | 2 | 0 | 5 | 0 | | 7 | 33 | 5 | 1 | 0 | | 39 |
| 10:30 - 10:45 | 1 | 1 | 35 | 7 | | 44 | 4 | 1 | 6 | 0 | | 11 | 30 | 12 | 1 | 0 | | 43 |
| 10:45 - 11:00 | 2 | 0 | 37 | 10 | | 49 | 3 | 0 | 5 | 0 | | 8 | 35 | 15 | 2 | 0 | | 52 |
| 11:00 - 11:15 | 1 | 1 | 34 | 8 | | 44 | 2 | 1 | 4 | 1 | | 8 | 47 | 10 | 1 | 0 | | 58 |
| 11:15 - 11:30 | 1 | 0 | 31 | 7 | | 39 | 1 | 0 | 3 | 1 | | 5 | 26 | 5 | 1 | 0 | | 32 |
| 11:30 - 11:45 | 2 | 0 | 38 | 4 | | 44 | 1 | 0 | 1 | 0 | | 2 | 29 | 6 | 0 | 0 | | 35 |
| 11:45 - 12:00 | 1 | 0 | 37 | 1 | | 39 | 1 | 0 | 2 | 0 | | 3 | 20 | 6 | 2 | 0 | | 28 |

Data Collection Date: 05/08/2005
Compiled by: Kathryn Morris.

# Count Tally Sheet With Totals and Peak Flows.

Queensland Government
Department of Main Roads

**LOCATION:** Bruce Hwy & Turkey Beach Road
**ROAD No:** 10D (Int. 1587 @ 122.489)
**DATE:** Tue, 02/08/05
**TIME:** 06:00 - 18:00

Queensland Government
Department of Main Roads

| | Leg 1 | | | | | | Leg 2 | | | | | | Leg 4 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | | Right | | U-turn | Leg | Thru | | Right | | U-turn | Leg | Left | | Thru | | U-turn | Leg |
| Time | *Light* | *Heavy* | *Light* | *Heavy* | *All* | Total | *Light* | *Heavy* | *Light* | *Heavy* | *All* | Total | *Light* | *Heavy* | *Light* | *Heavy* | *All* | Total |
| 12:00 - 12:15 | 4 | 1 | 28 | 6 | | 39 | 0 | 0 | 1 | 0 | | 1 | 35 | 3 | 2 | 1 | | 41 |
| 12:15 - 12:30 | 3 | 1 | 25 | 3 | | 32 | 5 | 0 | 1 | 0 | | 6 | 14 | 3 | 0 | 0 | | 17 |
| 12:30 - 12:45 | 1 | 0 | 22 | 8 | | 31 | 2 | 0 | 1 | 1 | | 4 | 31 | 5 | 1 | 1 | | 38 |
| 12:45 - 13:00 | 1 | 0 | 27 | 9 | | 37 | 2 | 0 | 1 | 0 | | 3 | 57 | 9 | 5 | 1 | | 72 |
| 13:00 - 13:15 | 5 | 0 | 20 | 9 | | 34 | 0 | 0 | 4 | 0 | | 4 | 61 | 10 | 4 | 1 | | 76 |
| 13:15 - 13:30 | 1 | 0 | 21 | 10 | | 32 | 1 | 0 | 0 | 0 | | 1 | 55 | 14 | 5 | 0 | | 74 |
| 13:30 - 13:45 | 0 | 0 | 22 | 5 | | 27 | 0 | 0 | 1 | 1 | | 2 | 80 | 19 | 6 | 0 | | 105 |
| 13:45 - 14:00 | 2 | 0 | 26 | 8 | | 36 | 1 | 0 | 0 | 1 | | 2 | 28 | 5 | 2 | 0 | | 35 |
| 14:00 - 14:15 | 3 | 0 | 49 | 13 | | 65 | 2 | 0 | 3 | 1 | | 6 | 27 | 6 | 1 | 0 | | 34 |
| 14:15 - 14:30 | 0 | 0 | 27 | 11 | | 38 | 0 | 0 | 3 | 0 | | 3 | 26 | 2 | 0 | 0 | | 28 |
| 14:30 - 14:45 | 0 | 0 | 21 | 7 | | 28 | 1 | 0 | 2 | 0 | | 3 | 34 | 6 | 0 | 0 | | 40 |
| 14:45 - 15:00 | 1 | 0 | 27 | 5 | | 33 | 0 | 0 | 2 | 0 | | 2 | 17 | 11 | 2 | 0 | | 30 |
| 15:00 - 15:15 | 0 | 1 | 18 | 8 | | 27 | 0 | 0 | 2 | 0 | | 2 | 19 | 1 | 1 | 0 | | 21 |
| 15:15 - 15:30 | 1 | 1 | 20 | 5 | | 27 | 0 | 0 | 2 | 0 | | 2 | 38 | 8 | 0 | 0 | | 46 |
| 15:30 - 15:45 | 2 | 0 | 21 | 8 | | 31 | 0 | 0 | 2 | 0 | | 2 | 73 | 9 | 1 | 1 | | 84 |
| 15:45 - 16:00 | 5 | 1 | 24 | 5 | | 35 | 0 | 0 | 0 | 0 | | 0 | 25 | 4 | 0 | 0 | | 29 |
| 16:00 - 16:15 | 7 | 1 | 29 | 5 | | 42 | 0 | 0 | 2 | 1 | | 3 | 27 | 2 | 1 | 0 | | 30 |
| 16:15 - 16:30 | 5 | 0 | 27 | 7 | | 39 | 2 | 0 | 3 | 0 | | 5 | 30 | 1 | 1 | 0 | | 32 |
| 16:30 - 16:45 | 4 | 0 | 25 | 5 | | 34 | 0 | 0 | 2 | 0 | | 2 | 28 | 2 | 0 | 0 | | 30 |
| 16:45 - 17:00 | 3 | 0 | 15 | 2 | | 20 | 3 | 0 | 0 | 0 | | 3 | 19 | 10 | 0 | 0 | | 29 |
| 17:00 - 17:15 | 4 | 0 | 21 | 9 | | 34 | 0 | 0 | 1 | 0 | | 1 | 19 | 6 | 1 | 0 | | 26 |
| 17:15 - 17:30 | 4 | 1 | 23 | 4 | | 32 | 1 | 0 | 0 | 0 | | 1 | 27 | 4 | 2 | 0 | | 33 |
| 17:30 - 17:45 | 2 | 0 | 20 | 6 | | 28 | 2 | 0 | 0 | 0 | | 2 | 15 | 0 | 3 | 0 | | 18 |
| 17:45 - 18:00 | 4 | 0 | 18 | 7 | | 29 | 0 | 0 | 1 | 0 | | 1 | 17 | 2 | 1 | 0 | | 20 |
| Total: | 103 | 16 | 1277 | 358 | 0 | 1754 | 66 | 5 | 139 | 22 | 0 | 232 | 1303 | 342 | 70 | 5 | 0 | 1720 |
| Peak Count: | 21 | 4 | 187 | 47 | 0 | 246 | 14 | 2 | 26 | 7 | 0 | 41 | 253 | 56 | 20 | 3 | 0 | 327 |
| Peak Hour: | 15:45 to 16:45 | 06:15 to 07:15 | 09:15 to 10:15 | 09:15 to 10:15 | 06:00 to 07:00 | 09:15 to 10:15 | 09:15 to 10:15 | 09:15 to 10:15 | 06:45 to 07:45 | 07:00 to 08:00 | 06:00 to 07:00 | 07:00 to 08:00 | 12:45 to 13:45 | 07:00 to 08:00 | 12:45 to 13:45 | 12:00 to 13:00 | 06:00 to 07:00 | 12:45 to 13:45 |

Data Collection Date: 05/08/2005
Compiled by: Kathryn Morris.

Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## AADT SEGMENTS REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Year | 2007 |
| TDist | 51.17 — 99.28 |
| Status | C |
| Direction | All Directions |

Through Distance: 51.170 - 99.281

Site: 60019 Colosseum Creek on Bruce Hwy

| Gaz Dir | AADT | % per Vehicle Class: Light Vehicle | Heavy Vehicle | Short Vehicle | Truck or Bus | Articulated Vehicle | Road Train | % Growth: 1 Yr | 5 Yr | 10 Yr |
|---|---|---|---|---|---|---|---|---|---|---|
| G | 1,553 | 70.13 | 29.87 | 70.13 | 7.10 | 13.68 | 9.09 | 5.36 | 2.41 | 2.12 |
| A | 1,499 | 71.19 | 28.81 | 71.19 | 5.91 | 13.17 | 9.73 | 6.01 | 2.27 | 1.91 |
| B | 3,052 | 70.65 | 29.35 | 70.65 | 6.52 | 13.43 | 9.40 | 5.68 | 2.34 | 2.02 |

* These values were updated manually or derived from previous years growth figures.

Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60019 Colosseum Creek on Bruce Hwy |
| Type | PERMANENT |
| TDist | 83.136 |
| Site Stream | All Site Streams |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
01-JAN-2007
30-DEC-2007

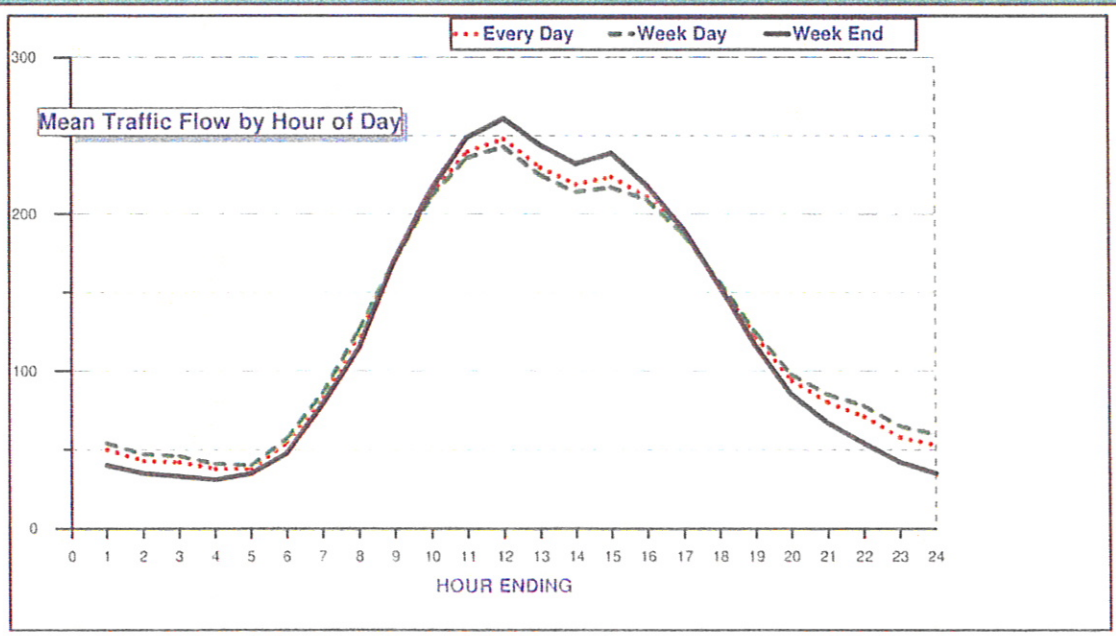
This data is affected by a Calendar Event.

| Hour | Monday | % | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Saturday | % | Surday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 27 | .9 | 58 | 2.1 | 59 | 2.1 | 58 | 1.8 | 66 | 1.8 | 54 | 1.9 | 26 | .8 | 54 | 1.7 | 40 | 1.3 | 50 | 1.6 |
| 01- 02 | 22 | .7 | 48 | 1.8 | 55 | 1.9 | 51 | 1.6 | 58 | 1.6 | 47 | 1.6 | 22 | .7 | 47 | 1.5 | 35 | 1.2 | 43 | 1.4 |
| 02- 03 | 21 | .7 | 48 | 1.8 | 49 | 1.7 | 53 | 1.7 | 58 | 1.6 | 47 | 1.6 | 18 | .6 | 46 | 1.5 | 33 | 1.1 | 42 | 1.4 |
| 03- 04 | 23 | .8 | 40 | 1.5 | 41 | 1.5 | 47 | 1.5 | 52 | 1.4 | 42 | 1.5 | 19 | .6 | 41 | 1.3 | 31 | 1.0 | 38 | 1.2 |
| 04- 05 | 31 | 1.0 | 36 | 1.3 | 40 | 1.4 | 42 | 1.3 | 51 | 1.4 | 45 | 1.6 | 24 | .8 | 40 | 1.3 | 35 | 1.2 | 38 | 1.3 |
| 05- 06 | 45 | 1.5 | 52 | 1.9 | 54 | 1.9 | 62 | 1.9 | 74 | 2.0 | 61 | 2.1 | 35 | 1.1 | 57 | 1.9 | 48 | 1.6 | 55 | 1.8 |
| 06- 07 | 74 | 2.5 | 78 | 2.9 | 81 | 2.9 | 90 | 2.8 | 109 | 3.0 | 95 | 3.5 | 59 | 1.9 | 86 | 2.8 | 79 | 2.7 | 84 | 2.8 |
| 07- 08 | 111 | 3.7 | 112 | 4.1 | 121 | 4.3 | 132 | 4.2 | 156 | 4.3 | 138 | 4.8 | 92 | 3.0 | 126 | 4.1 | 115 | 3.9 | 123 | 4.0 |
| 08- 09 | 161 | 5.4 | 147 | 5.4 | 160 | 5.7 | 176 | 5.5 | 208 | 5.7 | 192 | 6.7 | 149 | 4.8 | 170 | 5.5 | 171 | 5.7 | 170 | 5.6 |
| 09- 10 | 211 | 7.0 | 187 | 6.8 | 192 | 6.8 | 215 | 6.8 | 252 | 6.9 | 229 | 8.0 | 202 | 6.5 | 211 | 6.9 | 216 | 7.2 | 213 | 7.0 |
| 10- 11 | 245 | 8.1 | 207 | 7.6 | 214 | 7.6 | 236 | 7.4 | 278 | 7.6 | 247 | 8.6 | 250 | 8.1 | 236 | 7.7 | 249 | 8.3 | 240 | 7.9 |
| 11- 12 | 264 | 8.8 | 210 | 7.7 | 217 | 7.7 | 242 | 7.6 | 283 | 7.8 | 249 | 8.7 | 273 | 8.8 | 243 | 7.9 | 261 | 8.8 | 248 | 8.1 |
| 12- 13 | 243 | 8.1 | 192 | 7.0 | 201 | 7.1 | 227 | 7.1 | 260 | 7.1 | 224 | 7.8 | 264 | 8.5 | 225 | 7.3 | 244 | 8.2 | 230 | 7.5 |
| 13- 14 | 232 | 7.7 | 188 | 6.9 | 189 | 6.7 | 215 | 6.8 | 246 | 6.7 | 204 | 7.1 | 260 | 8.4 | 214 | 6.9 | 232 | 7.8 | 219 | 7.2 |
| 14- 15 | 232 | 7.7 | 192 | 7.0 | 193 | 6.8 | 218 | 6.9 | 252 | 6.9 | 203 | 7.1 | 275 | 8.9 | 217 | 7.1 | 239 | 8.0 | 224 | 7.3 |
| 15- 16 | 223 | 7.4 | 175 | 6.4 | 186 | 6.6 | 214 | 6.7 | 245 | 6.7 | 177 | 6.2 | 258 | 8.3 | 209 | 6.8 | 218 | 7.3 | 211 | 6.9 |
| 16- 17 | 193 | 6.4 | 160 | 5.9 | 164 | 5.8 | 194 | 6.1 | 226 | 6.2 | 149 | 5.2 | 230 | 7.4 | 187 | 6.1 | 190 | 6.4 | 188 | 6.2 |
| 17- 18 | 156 | 5.2 | 135 | 4.9 | 138 | 4.9 | 163 | 5.1 | 194 | 5.3 | 123 | 4.3 | 184 | 5.9 | 157 | 5.1 | 154 | 5.1 | 156 | 5.1 |
| 18- 19 | 121 | 4.0 | 108 | 4.0 | 106 | 3.7 | 130 | 4.1 | 160 | 4.4 | 91 | 3.2 | 140 | 4.5 | 125 | 4.1 | 116 | 3.9 | 122 | 4.0 |
| 19- 20 | 94 | 3.1 | 86 | 3.1 | 90 | 3.2 | 101 | 3.2 | 120 | 3.3 | 70 | 2.5 | 99 | 3.2 | 98 | 3.2 | 85 | 2.8 | 94 | 3.1 |
| 20- 21 | 83 | 2.8 | 79 | 2.9 | 78 | 2.8 | 90 | 2.8 | 97 | 2.7 | 53 | 1.9 | 80 | 2.6 | 85 | 2.8 | 67 | 2.2 | 80 | 2.6 |
| 21- 22 | 74 | 2.5 | 76 | 2.8 | 75 | 2.7 | 86 | 2.7 | 81 | 2.2 | 46 | 1.6 | 61 | 2.0 | 78 | 2.5 | 54 | 1.8 | 71 | 2.3 |
| 22- 23 | 64 | 2.1 | 60 | 2.2 | 63 | 2.2 | 71 | 2.2 | 67 | 1.8 | 36 | 1.3 | 47 | 1.5 | 65 | 2.1 | 42 | 1.4 | 58 | 1.9 |
| 23- 24 | 58 | 1.9 | 59 | 2.2 | 61 | 2.2 | 67 | 2.1 | 56 | 1.5 | 31 | 1.1 | 38 | 1.2 | 60 | 2.0 | 35 | 1.2 | 53 | 1.7 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 12:00 | 263 | 12:00 | 212 | 12:00 | 217 | 12:00 | 241 | 12:00 | 282 | 12:00 | 249 | 12:00 | 273 | 12:00 | 244 | 12:00 | 261 | 12:00 | 249 |
| PM | 13:00 | 242 | 15:00 | 192 | 13:00 | 201 | 13:00 | 224 | 13:00 | 260 | 13:00 | 224 | 15:00 | 275 | 13:00 | 224 | 13:00 | 244 | 13:00 | 230 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 2,392 | 79.5 | 2,013 | 73.7 | 2,081 | 73.6 | 2,362 | 74.3 | 2,760 | 75.6 | 2,226 | 77.9 | 2,577 | 83.0 | 2,322 | 75.4 | 2,402 | 80.6 | 2,344 | 76.8 |
| 16 Hour | 2,717 | 90.3 | 2,332 | 85.3 | 2,405 | 85.1 | 2,729 | 85.8 | 3,167 | 86.8 | 2,494 | 87.3 | 2,876 | 92.6 | 2,670 | 86.7 | 2,685 | 90.1 | 2,674 | 87.6 |
| 18 Hour | 2,839 | 94.4 | 2,451 | 89.7 | 2,529 | 89.5 | 2,867 | 90.2 | 3,290 | 90.2 | 2,561 | 89.6 | 2,961 | 95.4 | 2,795 | 90.8 | 2,761 | 92.6 | 2,785 | 91.3 |
| 24 Hour | 3,008 | 100.0 | 2,733 | 100.0 | 2,827 | 100.0 | 3,180 | 100.0 | 3,649 | 100.0 | 2,857 | 100.0 | 3,105 | 100.0 | 3,079 | 100.0 | 2,981 | 100.0 | 3,051 | 100.0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVG Week Day | | 97.7% | | 88.8% | | 91.8% | | 103.3% | | 118.5% | | | | | | 100.0% | | 96.8% | | 99.1% |
| AVG Week End | | | | | | | | | | | | 95.8% | | 104.2% | | 103.3% | | 100.0% | | 102.4% |
| AVG Day | | 98.6% | | 89.6% | | 92.6% | | 104.2% | | 119.6% | | 93.6% | | 101.8% | | 100.9% | | 97.7% | | 100.0% |



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60019 Colosseum Creek on Bruce Hwy |
| Type | PERMANENT |
| TDist | 83.136 |
| Site Stream | Gazettal Direction |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
01-JAN-2007
30-DEC-2007

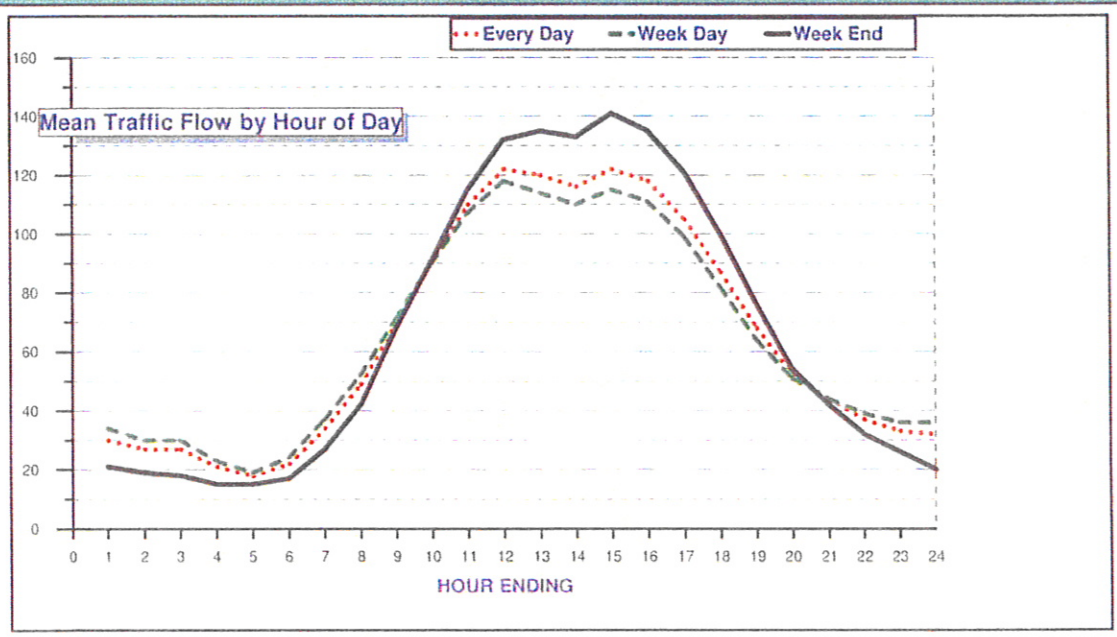
This data is affected by a Calendar Event.

| Hour | Monday | % | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Saturday | % | Sunday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00-01 | 16 | .9 | 39 | 2.7 | 37 | 2.6 | 37 | 2.5 | 39 | 2.4 | 30 | 2.1 | 12 | .7 | 34 | 2.2 | 21 | 1.3 | 30 | 1.9 |
| 01-02 | 12 | .7 | 32 | 2.2 | 36 | 2.5 | 34 | 2.3 | 37 | 2.3 | 27 | 1.9 | 10 | .6 | 30 | 2.0 | 19 | 1.2 | 27 | 1.7 |
| 02-03 | 11 | .6 | 35 | 2.4 | 34 | 2.4 | 35 | 2.3 | 36 | 2.2 | 29 | 2.0 | 7 | .4 | 30 | 2.0 | 18 | 1.1 | 27 | 1.7 |
| 03-04 | 11 | .6 | 25 | 1.7 | 24 | 1.7 | 27 | 1.8 | 27 | 1.7 | 21 | 1.5 | 9 | .5 | 23 | 1.5 | 15 | .9 | 21 | 1.3 |
| 04-05 | 17 | 1.0 | 19 | 1.3 | 19 | 1.3 | 20 | 1.3 | 21 | 1.3 | 18 | 1.3 | 11 | .6 | 19 | 1.3 | 15 | .9 | 18 | 1.2 |
| 05-06 | 22 | 1.3 | 24 | 1.7 | 24 | 1.7 | 26 | 1.7 | 26 | 1.6 | 20 | 1.4 | 13 | .7 | 24 | 1.6 | 17 | 1.0 | 22 | 1.4 |
| 06-07 | 36 | 2.1 | 36 | 2.5 | 35 | 2.5 | 37 | 2.5 | 39 | 2.4 | 31 | 2.2 | 22 | 1.3 | 37 | 2.4 | 27 | 1.7 | 34 | 2.2 |
| 07-08 | 52 | 3.0 | 49 | 3.4 | 52 | 3.7 | 52 | 3.5 | 54 | 3.4 | 48 | 3.4 | 35 | 2.0 | 52 | 3.4 | 42 | 2.6 | 49 | 3.2 |
| 08-09 | 76 | 4.4 | 68 | 4.7 | 69 | 4.9 | 69 | 4.6 | 73 | 4.5 | 75 | 5.3 | 61 | 3.5 | 71 | 4.6 | 68 | 4.3 | 70 | 4.5 |
| 09-10 | 99 | 5.7 | 85 | 5.9 | 83 | 5.9 | 86 | 5.8 | 96 | 6.0 | 96 | 6.7 | 86 | 4.9 | 90 | 5.9 | 91 | 5.7 | 90 | 5.8 |
| 10-11 | 123 | 7.1 | 99 | 6.9 | 97 | 6.9 | 101 | 6.8 | 117 | 7.3 | 114 | 8.0 | 116 | 6.6 | 107 | 7.0 | 115 | 7.2 | 110 | 7.1 |
| 11-12 | 145 | 8.4 | 106 | 7.4 | 105 | 7.4 | 108 | 7.2 | 124 | 7.7 | 127 | 8.9 | 137 | 7.8 | 118 | 7.7 | 132 | 8.3 | 122 | 7.9 |
| 12-13 | 142 | 8.2 | 102 | 7.1 | 100 | 7.1 | 105 | 7.0 | 121 | 7.5 | 121 | 8.5 | 148 | 8.4 | 114 | 7.4 | 135 | 8.5 | 120 | 7.7 |
| 13-14 | 139 | 8.1 | 101 | 7.0 | 93 | 6.6 | 102 | 6.8 | 113 | 7.0 | 111 | 7.8 | 154 | 8.8 | 110 | 7.1 | 133 | 8.3 | 116 | 7.5 |
| 14-15 | 146 | 8.5 | 105 | 7.3 | 99 | 7.0 | 108 | 7.2 | 115 | 7.2 | 113 | 7.9 | 168 | 9.6 | 115 | 7.5 | 141 | 8.8 | 122 | 7.9 |
| 15-16 | 143 | 8.3 | 98 | 6.8 | 96 | 6.8 | 105 | 7.0 | 112 | 7.0 | 103 | 7.2 | 167 | 9.5 | 111 | 7.2 | 135 | 8.5 | 118 | 7.6 |
| 16-17 | 127 | 7.4 | 89 | 6.2 | 85 | 6.0 | 92 | 6.2 | 100 | 6.2 | 87 | 6.1 | 154 | 8.8 | 99 | 6.4 | 121 | 7.6 | 105 | 6.8 |
| 17-18 | 99 | 5.7 | 76 | 5.3 | 72 | 5.1 | 77 | 5.2 | 84 | 5.2 | 72 | 5.1 | 128 | 7.3 | 82 | 5.3 | 100 | 6.3 | 87 | 5.6 |
| 18-19 | 77 | 4.5 | 58 | 4.0 | 57 | 4.0 | 61 | 4.1 | 69 | 4.3 | 54 | 3.8 | 97 | 5.5 | 64 | 4.2 | 76 | 4.8 | 68 | 4.4 |
| 19-20 | 59 | 3.4 | 47 | 3.3 | 47 | 3.3 | 47 | 3.2 | 54 | 3.4 | 39 | 2.7 | 69 | 3.9 | 51 | 3.3 | 54 | 3.4 | 52 | 3.3 |
| 20-21 | 49 | 2.8 | 42 | 2.9 | 41 | 2.9 | 44 | 3.0 | 46 | 2.9 | 30 | 2.1 | 54 | 3.1 | 44 | 2.9 | 42 | 2.6 | 44 | 2.8 |
| 21-22 | 43 | 2.5 | 37 | 2.6 | 36 | 2.5 | 40 | 2.7 | 39 | 2.4 | 25 | 1.8 | 39 | 2.2 | 39 | 2.5 | 32 | 2.0 | 37 | 2.4 |
| 22-23 | 40 | 2.3 | 34 | 2.4 | 34 | 2.4 | 38 | 2.6 | 34 | 2.1 | 19 | 1.3 | 32 | 1.8 | 36 | 2.3 | 26 | 1.6 | 33 | 2.1 |
| 23-24 | 39 | 2.3 | 35 | 2.4 | 38 | 2.7 | 39 | 2.6 | 31 | 1.9 | 15 | 1.1 | 24 | 1.4 | 36 | 2.4 | 20 | 1.2 | 32 | 2.0 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 12:00 | 146 | 12:00 | 107 | 12:00 | 105 | 12:00 | 108 | 12:00 | 124 | 12:00 | 127 | 12:00 | 137 | 12:00 | 118 | 12:00 | 132 | 12:00 | 122 |
| PM | 15:00 | 146 | 15:00 | 105 | 13:00 | 100 | 15:00 | 106 | 13:00 | 120 | 13:00 | 121 | 15:00 | 168 | 15:00 | 114 | 15:00 | 141 | 15:00 | 122 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 1,368 | 79.4 | 1,036 | 71.9 | 1,008 | 71.3 | 1,066 | 71.5 | 1,178 | 73.3 | 1,121 | 78.7 | 1,451 | 82.8 | 1,131 | 73.7 | 1,286 | 80.9 | 1,175 | 75.8 |
| 16 Hour | 1,555 | 90.2 | 1,198 | 83.1 | 1,167 | 82.6 | 1,234 | 82.8 | 1,356 | 84.4 | 1,246 | 87.4 | 1,635 | 93.3 | 1,302 | 84.8 | 1,441 | 90.7 | 1,342 | 86.5 |
| 18 Hour | 1,634 | 94.8 | 1,267 | 87.9 | 1,239 | 87.7 | 1,311 | 88.0 | 1,421 | 88.4 | 1,280 | 89.8 | 1,691 | 96.5 | 1,374 | 89.5 | 1,486 | 93.5 | 1,406 | 90.7 |
| 24 Hour | 1,723 | 100.0 | 1,441 | 100.0 | 1,413 | 100.0 | 1,490 | 100.0 | 1,607 | 100.0 | 1,425 | 100.0 | 1,753 | 100.0 | 1,535 | 100.0 | 1,589 | 100.0 | 1,550 | 100.0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVG Week Day | 112.3% | | 93.9% | | 92.1% | | 97.1% | | 104.7% | | | | | | 100.0% | | 103.5% | | 101.0% | |
| AVG Week End | | | | | | | | | | | 89.7% | | 110.3% | | 96.6% | | 100.0% | | 97.6% | |
| AVG Day | 111.1% | | 93.0% | | 91.1% | | 96.1% | | 103.7% | | 91.9% | | 113.1% | | 99.0% | | 102.5% | | 100.0% | |



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
# WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60019 Colosseum Creek on Bruce Hwy |
| Type | PERMANENT |
| TDist | 83.136 |
| Site Stream | Against Gazettal |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
02-JAN-2007
31-DEC-2007

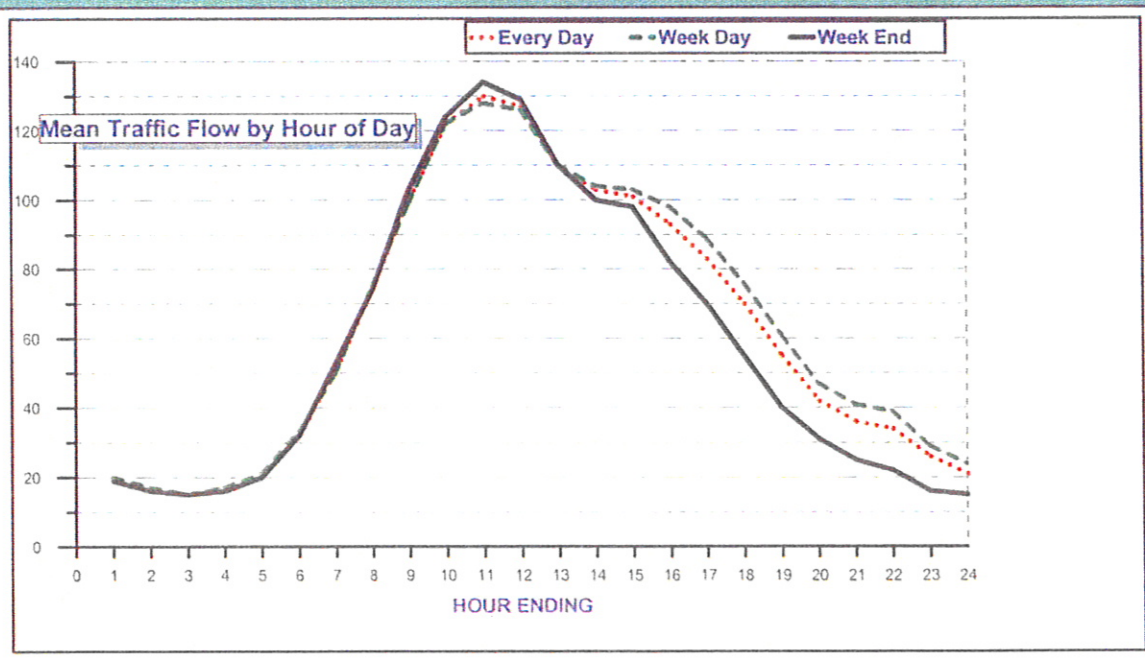
This data is affected by a Calendar Event.

| Hour | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Saturday | % | Sunday | % | Monday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 19 | 1.5 | 23 | 1.6 | 21 | 1.2 | 27 | 1.3 | 24 | 1.7 | 14 | 1.0 | 11 | .9 | 20 | 1.3 | 19 | 1.4 | 20 | 1.3 |
| 01- 02 | 16 | 1.2 | 18 | 1.3 | 17 | 1.0 | 22 | 1.1 | 20 | 1.4 | 12 | .9 | 10 | .8 | 17 | 1.1 | 16 | 1.1 | 16 | 1.1 |
| 02- 03 | 13 | 1.0 | 15 | 1.1 | 18 | 1.1 | 22 | 1.1 | 18 | 1.3 | 11 | .8 | 9 | .7 | 15 | 1.0 | 15 | 1.0 | 15 | 1.0 |
| 03- 04 | 15 | 1.2 | 17 | 1.2 | 20 | 1.2 | 24 | 1.2 | 21 | 1.5 | 10 | .7 | 11 | .9 | 17 | 1.1 | 16 | 1.1 | 17 | 1.1 |
| 04- 05 | 17 | 1.3 | 21 | 1.5 | 22 | 1.3 | 30 | 1.5 | 27 | 1.9 | 12 | .9 | 14 | 1.1 | 21 | 1.3 | 20 | 1.4 | 20 | 1.4 |
| 05- 06 | 28 | 2.2 | 30 | 2.1 | 36 | 2.1 | 47 | 2.3 | 41 | 2.9 | 22 | 1.6 | 23 | 1.8 | 33 | 2.1 | 32 | 2.3 | 32 | 2.2 |
| 06- 07 | 42 | 3.2 | 46 | 3.3 | 54 | 3.2 | 70 | 3.4 | 68 | 4.7 | 37 | 2.7 | 37 | 2.9 | 50 | 3.2 | 53 | 3.8 | 51 | 3.4 |
| 07- 08 | 63 | 4.9 | 69 | 4.9 | 80 | 4.7 | 102 | 5.0 | 90 | 6.3 | 57 | 4.2 | 60 | 4.7 | 75 | 4.8 | 74 | 5.3 | 74 | 5.0 |
| 08- 09 | 79 | 6.1 | 91 | 6.4 | 106 | 6.3 | 135 | 6.6 | 117 | 8.2 | 88 | 6.5 | 86 | 6.7 | 99 | 6.4 | 103 | 7.4 | 100 | 6.7 |
| 09- 10 | 102 | 7.9 | 109 | 7.7 | 129 | 7.6 | 156 | 7.7 | 133 | 9.3 | 115 | 8.5 | 113 | 8.8 | 122 | 7.9 | 124 | 8.9 | 122 | 8.2 |
| 10- 11 | 108 | 8.4 | 117 | 8.3 | 134 | 7.9 | 161 | 7.9 | 134 | 9.4 | 134 | 9.9 | 122 | 9.5 | 128 | 8.3 | 134 | 9.6 | 130 | 8.7 |
| 11- 12 | 104 | 8.0 | 112 | 7.9 | 134 | 7.9 | 159 | 7.8 | 122 | 8.5 | 136 | 10.1 | 120 | 9.3 | 126 | 8.1 | 129 | 9.3 | 127 | 8.4 |
| 12- 13 | 89 | 6.9 | 101 | 7.1 | 122 | 7.2 | 139 | 6.8 | 104 | 7.3 | 116 | 8.6 | 100 | 7.8 | 110 | 7.1 | 110 | 7.9 | 110 | 7.3 |
| 13- 14 | 87 | 6.7 | 96 | 6.8 | 113 | 6.7 | 133 | 6.5 | 93 | 6.5 | 106 | 7.9 | 93 | 7.2 | 104 | 6.8 | 100 | 7.2 | 103 | 6.9 |
| 14- 15 | 87 | 6.7 | 94 | 6.7 | 110 | 6.5 | 137 | 6.7 | 89 | 6.2 | 107 | 7.9 | 86 | 6.7 | 103 | 6.7 | 98 | 7.0 | 101 | 6.8 |
| 15- 16 | 78 | 6.0 | 90 | 6.4 | 109 | 6.4 | 133 | 6.5 | 73 | 5.1 | 91 | 6.7 | 79 | 6.2 | 98 | 6.3 | 82 | 5.9 | 93 | 6.2 |
| 16- 17 | 71 | 5.5 | 79 | 5.6 | 102 | 6.0 | 125 | 6.1 | 62 | 4.3 | 77 | 5.7 | 66 | 5.1 | 89 | 5.7 | 70 | 5.0 | 83 | 5.5 |
| 17- 18 | 59 | 4.6 | 66 | 4.7 | 86 | 5.1 | 110 | 5.4 | 52 | 3.6 | 57 | 4.2 | 57 | 4.4 | 76 | 4.9 | 55 | 3.9 | 70 | 4.6 |
| 18- 19 | 50 | 3.9 | 49 | 3.5 | 69 | 4.1 | 91 | 4.5 | 37 | 2.6 | 42 | 3.1 | 44 | 3.4 | 61 | 3.9 | 40 | 2.8 | 55 | 3.6 |
| 19- 20 | 39 | 3.0 | 43 | 3.0 | 54 | 3.2 | 65 | 3.2 | 31 | 2.2 | 30 | 2.2 | 35 | 2.7 | 47 | 3.1 | 31 | 2.2 | 42 | 2.8 |
| 20- 21 | 37 | 2.9 | 37 | 2.6 | 46 | 2.7 | 51 | 2.5 | 23 | 1.6 | 26 | 1.9 | 34 | 2.6 | 41 | 2.7 | 25 | 1.8 | 36 | 2.4 |
| 21- 22 | 39 | 3.0 | 38 | 2.7 | 46 | 2.7 | 42 | 2.1 | 21 | 1.5 | 22 | 1.6 | 31 | 2.4 | 39 | 2.5 | 22 | 1.5 | 34 | 2.3 |
| 22- 23 | 27 | 2.1 | 29 | 2.1 | 34 | 2.0 | 33 | 1.6 | 17 | 1.2 | 15 | 1.1 | 24 | 1.9 | 29 | 1.9 | 16 | 1.1 | 26 | 1.7 |
| 23- 24 | 24 | 1.9 | 23 | 1.6 | 28 | 1.7 | 24 | 1.2 | 16 | 1.1 | 13 | 1.0 | 19 | 1.5 | 24 | 1.5 | 15 | 1.0 | 21 | 1.4 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 11:00 | 109 | 11:00 | 117 | 12:00 | 134 | 11:00 | 161 | 11:00 | 134 | 12:00 | 136 | 11:00 | 121 | 11:00 | 129 | 11:00 | 134 | 11:00 | 130 |
| PM | 13:00 | 89 | 13:00 | 101 | 13:00 | 120 | 13:00 | 139 | 13:00 | 104 | 13:00 | 116 | 13:00 | 101 | 13:00 | 110 | 13:00 | 110 | 13:00 | 110 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 977 | 75.6 | 1,073 | 75.9 | 1,294 | 76.6 | 1,581 | 77.6 | 1,106 | 77.2 | 1,126 | 83.4 | 1,026 | 79.9 | 1,190 | 77.1 | 1,116 | 80.2 | 1,169 | 77.9 |
| 16 Hour | 1,134 | 87.7 | 1,237 | 87.5 | 1,494 | 88.4 | 1,809 | 88.8 | 1,249 | 87.2 | 1,241 | 91.9 | 1,163 | 90.6 | 1,367 | 88.6 | 1,245 | 89.5 | 1,332 | 88.8 |
| 18 Hour | 1,185 | 91.6 | 1,289 | 91.2 | 1,556 | 92.1 | 1,866 | 91.6 | 1,282 | 89.5 | 1,269 | 94.0 | 1,206 | 93.9 | 1,420 | 92.0 | 1,276 | 91.7 | 1,379 | 91.9 |
| 24 Hour | 1,293 | 100.0 | 1,413 | 100.0 | 1,690 | 100.0 | 2,038 | 100.0 | 1,433 | 100.0 | 1,350 | 100.0 | 1,284 | 100.0 | 1,544 | 100.0 | 1,392 | 100.0 | 1,500 | 100.0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVG Week Day | 83.8% | | 91.5% | | 109.5% | | 132.0% | | | | | | 83.2% | | 100.0% | | 90.1% | | 97.2% | |
| AVG Week End | | | | | | | | | 103.0% | | 97.0% | | | | 110.9% | | 100.0% | | 107.8% | |
| AVG Day | 86.2% | | 94.2% | | 112.7% | | 135.9% | | 95.5% | | 90.0% | | 85.6% | | 102.9% | | 92.8% | | 100.0% | |



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## AADT SEGMENTS REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Year | 2006 |
| TDist | 51.17 — 99.28 |
| Status | C |
| Direction | All Directions |

Through Distance: 51.170 - 99.281

Site: 60019 Colosseum Creek

| Gaz Dir | AADT | % per Vehicle Class: Light Vehicle | Heavy Vehicle | Short Vehicle | Truck or Bus | Articulated Vehicle | Road Train | % Growth: 1 Yr | 5 Yr | 10 Yr |
|---|---|---|---|---|---|---|---|---|---|---|
| G | 1,474 | 70.12 | 29.88 | 70.12 | 7.03 | 14.51 | 8.34 | 2.43 | 1.61 | 1.83 |
| A | 1,414 | 70.51 | 29.49 | 70.51 | 6.05 | 14.17 | 9.27 | 2.46 | 1.14 | 1.22 |
| B | 2,888 | 70.31 | 29.69 | 70.31 | 6.55 | 14.34 | 8.80 | 2.45 | 1.38 | 1.53 |

* These values were updated manually or derived from previous years growth figures.

Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60019 Colosseum Creek |
| Type | PERMANENT |
| TDist | 83.136 |
| Site Stream | All Site Streams |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
01-JAN-2006
30-DEC-2006

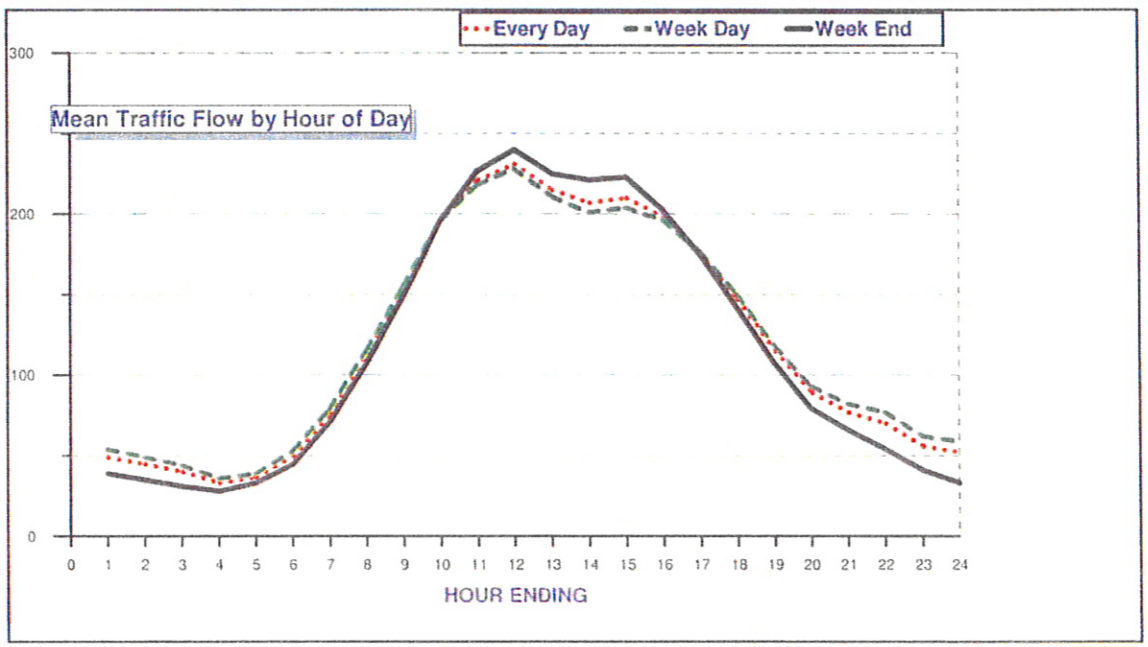
This data is affected by a Calendar Event.

| Hour | Sunday | % | Monday | % | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Saturday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 25 | .9 | 28 | 1.0 | 58 | 2.2 | 57 | 2.1 | 63 | 2.2 | 63 | 1.9 | 52 | 2.0 | 54 | 1.9 | 39 | 1.4 | 49 | 1.7 |
| 01- 02 | 21 | .7 | 20 | .7 | 56 | 2.1 | 56 | 2.1 | 56 | 1.9 | 57 | 1.7 | 49 | 1.9 | 49 | 1.7 | 35 | 1.3 | 45 | 1.6 |
| 02- 03 | 16 | .6 | 20 | .7 | 47 | 1.8 | 48 | 1.8 | 53 | 1.8 | 52 | 1.5 | 45 | 1.7 | 44 | 1.5 | 31 | 1.1 | 40 | 1.4 |
| 03- 04 | 17 | .6 | 21 | .7 | 36 | 1.4 | 38 | 1.4 | 40 | 1.4 | 43 | 1.3 | 39 | 1.5 | 36 | 1.2 | 28 | 1.0 | 33 | 1.2 |
| 04- 05 | 20 | .7 | 27 | .9 | 38 | 1.4 | 39 | 1.5 | 43 | 1.5 | 50 | 1.5 | 45 | 1.7 | 39 | 1.4 | 33 | 1.2 | 37 | 1.3 |
| 05- 06 | 31 | 1.1 | 44 | 1.5 | 47 | 1.8 | 51 | 1.9 | 55 | 1.9 | 66 | 2.0 | 58 | 2.2 | 53 | 1.8 | 45 | 1.6 | 50 | 1.8 |
| 06- 07 | 51 | 1.8 | 68 | 2.3 | 70 | 2.6 | 79 | 3.0 | 80 | 2.8 | 96 | 2.9 | 91 | 3.4 | 79 | 2.7 | 71 | 2.6 | 76 | 2.7 |
| 07- 08 | 81 | 2.8 | 103 | 3.5 | 104 | 3.9 | 108 | 4.1 | 118 | 4.1 | 141 | 4.2 | 133 | 5.0 | 115 | 4.0 | 107 | 3.9 | 113 | 3.9 |
| 08- 09 | 130 | 4.5 | 151 | 5.2 | 140 | 5.3 | 143 | 5.4 | 155 | 5.3 | 188 | 5.6 | 168 | 6.4 | 155 | 5.4 | 149 | 5.4 | 154 | 5.4 |
| 09- 10 | 182 | 6.3 | 206 | 7.1 | 177 | 6.7 | 176 | 6.6 | 190 | 6.5 | 231 | 6.9 | 210 | 7.9 | 196 | 6.8 | 196 | 7.1 | 196 | 6.9 |
| 10- 11 | 231 | 8.0 | 237 | 8.1 | 198 | 7.5 | 193 | 7.3 | 214 | 7.4 | 249 | 7.4 | 223 | 8.4 | 218 | 7.5 | 227 | 8.2 | 221 | 7.7 |
| 11- 12 | 250 | 8.7 | 248 | 8.5 | 207 | 7.8 | 209 | 7.9 | 222 | 7.6 | 254 | 7.6 | 229 | 8.7 | 228 | 7.9 | 240 | 8.7 | 231 | 8.1 |
| 12- 13 | 247 | 8.6 | 238 | 8.2 | 191 | 7.2 | 186 | 7.0 | 204 | 7.0 | 236 | 7.0 | 203 | 7.7 | 211 | 7.3 | 225 | 8.1 | 215 | 7.5 |
| 13- 14 | 243 | 8.4 | 225 | 7.7 | 184 | 7.0 | 177 | 6.7 | 193 | 6.6 | 228 | 6.8 | 198 | 7.5 | 201 | 7.0 | 221 | 8.0 | 207 | 7.2 |
| 14- 15 | 259 | 9.0 | 235 | 8.1 | 181 | 6.8 | 180 | 6.8 | 194 | 6.7 | 232 | 6.9 | 187 | 7.1 | 204 | 7.1 | 223 | 8.1 | 210 | 7.3 |
| 15- 16 | 244 | 8.5 | 215 | 7.4 | 176 | 6.7 | 176 | 6.6 | 184 | 6.3 | 230 | 6.8 | 160 | 6.1 | 196 | 6.8 | 202 | 7.3 | 198 | 6.9 |
| 16- 17 | 214 | 7.4 | 186 | 6.4 | 153 | 5.8 | 152 | 5.7 | 179 | 6.2 | 210 | 6.3 | 133 | 5.0 | 176 | 6.1 | 174 | 6.3 | 175 | 6.1 |
| 17- 18 | 174 | 6.0 | 152 | 5.2 | 132 | 5.0 | 132 | 5.0 | 150 | 5.2 | 184 | 5.5 | 108 | 4.1 | 150 | 5.2 | 141 | 5.1 | 147 | 5.2 |
| 18- 19 | 129 | 4.5 | 115 | 3.9 | 105 | 4.0 | 104 | 3.9 | 119 | 4.1 | 149 | 4.4 | 85 | 3.2 | 118 | 4.1 | 107 | 3.9 | 115 | 4.0 |
| 19- 20 | 94 | 3.3 | 92 | 3.2 | 84 | 3.2 | 85 | 3.2 | 96 | 3.3 | 110 | 3.3 | 64 | 2.4 | 93 | 3.2 | 79 | 2.9 | 89 | 3.1 |
| 20- 21 | 77 | 2.7 | 82 | 2.8 | 73 | 2.8 | 76 | 2.9 | 87 | 3.0 | 91 | 2.7 | 54 | 2.0 | 82 | 2.8 | 66 | 2.4 | 77 | 2.7 |
| 21- 22 | 62 | 2.2 | 77 | 2.6 | 71 | 2.7 | 73 | 2.7 | 80 | 2.8 | 83 | 2.5 | 45 | 1.7 | 77 | 2.7 | 54 | 1.9 | 70 | 2.5 |
| 22- 23 | 46 | 1.6 | 64 | 2.2 | 59 | 2.2 | 61 | 2.3 | 67 | 2.3 | 61 | 1.8 | 36 | 1.4 | 62 | 2.2 | 41 | 1.5 | 56 | 2.0 |
| 23- 24 | 37 | 1.3 | 59 | 2.0 | 59 | 2.2 | 61 | 2.3 | 63 | 2.2 | 54 | 1.6 | 29 | 1.1 | 59 | 2.0 | 33 | 1.2 | 52 | 1.8 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 12:00 | 250 | 12:00 | 244 | 12:00 | 203 | 12:00 | 208 | 12:00 | 222 | 12:00 | 254 | 12:00 | 229 | 12:00 | 227 | 12:00 | 239 | 12:00 | 230 |
| PM | 15:00 | 259 | 13:00 | 234 | 13:00 | 189 | 13:00 | 184 | 13:00 | 204 | 13:00 | 236 | 13:00 | 203 | 13:00 | 210 | 13:00 | 225 | 13:00 | 214 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 2,384 | 82.7 | 2,311 | 79.3 | 1,948 | 73.6 | 1,936 | 72.8 | 2,122 | 73.0 | 2,532 | 75.4 | 2,037 | 77.0 | 2,170 | 74.9 | 2,211 | 80.0 | 2,181 | 76.3 |
| 16 Hour | 2,668 | 92.6 | 2,630 | 90.3 | 2,246 | 84.9 | 2,249 | 84.5 | 2,465 | 84.9 | 2,912 | 86.7 | 2,291 | 86.6 | 2,500 | 86.3 | 2,480 | 89.8 | 2,494 | 87.3 |
| 18 Hour | 2,751 | 95.5 | 2,753 | 94.5 | 2,364 | 89.3 | 2,371 | 89.1 | 2,595 | 89.3 | 3,027 | 90.1 | 2,356 | 89.1 | 2,622 | 90.5 | 2,554 | 92.4 | 2,602 | 91.1 |
| 24 Hour | 2,881 | 100.0 | 2,913 | 100.0 | 2,646 | 100.0 | 2,660 | 100.0 | 2,905 | 100.0 | 3,358 | 100.0 | 2,644 | 100.0 | 2,896 | 100.0 | 2,763 | 100.0 | 2,858 | 100.0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVG Week Day | | | | 100.6% | | 91.4% | | 91.8% | | 100.3% | | 115.9% | | | | 100.0% | | 95.4% | | 98.7% |
| AVG Week End | | 104.3% | | | | | | | | | | | | 95.7% | | 104.8% | | 100.0% | | 103.5% |
| AVG Day | | 100.8% | | 101.9% | | 92.6% | | 93.1% | | 101.6% | | 117.5% | | 92.5% | | 101.3% | | 96.7% | | 100.0% |



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## AADT SEGMENTS REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Year | 2005 |
| TDist | 51.17 — 99.28 |
| Status | C |
| Direction | All Directions |

Through Distance: 51.170 - 99.281

Site: 60019 Colosseum Creek

| Gaz Dir | AADT | % per Vehicle Class: Light Vehicle | Heavy Vehicle | Short Vehicle | Truck or Bus | Articulated Vehicle | Road Train | % Growth: 1 Yr | 5 Yr | 10 Yr |
|---|---|---|---|---|---|---|---|---|---|---|
| G | 1,439 | 74.18 | 25.82 | 74.18 | 5.33 | 13.55 | 6.94 | -1.24 | 1.32 | 2.48 |
| A | 1,380 | 74.07 | 25.93 | 74.07 | 5.38 | 12.96 | 7.59 | -2.13 | .82 | 1.17 |
| B | 2,819 | 74.10 | 25.90 | 74.10 | 5.36 | 13.27 | 7.27 | -1.67 | 1.07 | 1.80 |

* These values were updated manually or derived from previous years growth figures.

Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60019 Colosseum Creek |
| Type | PERMANENT |
| TDist | 83.136 |
| Site Stream | All Site Streams |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
01-JAN-2005
30-DEC-2005

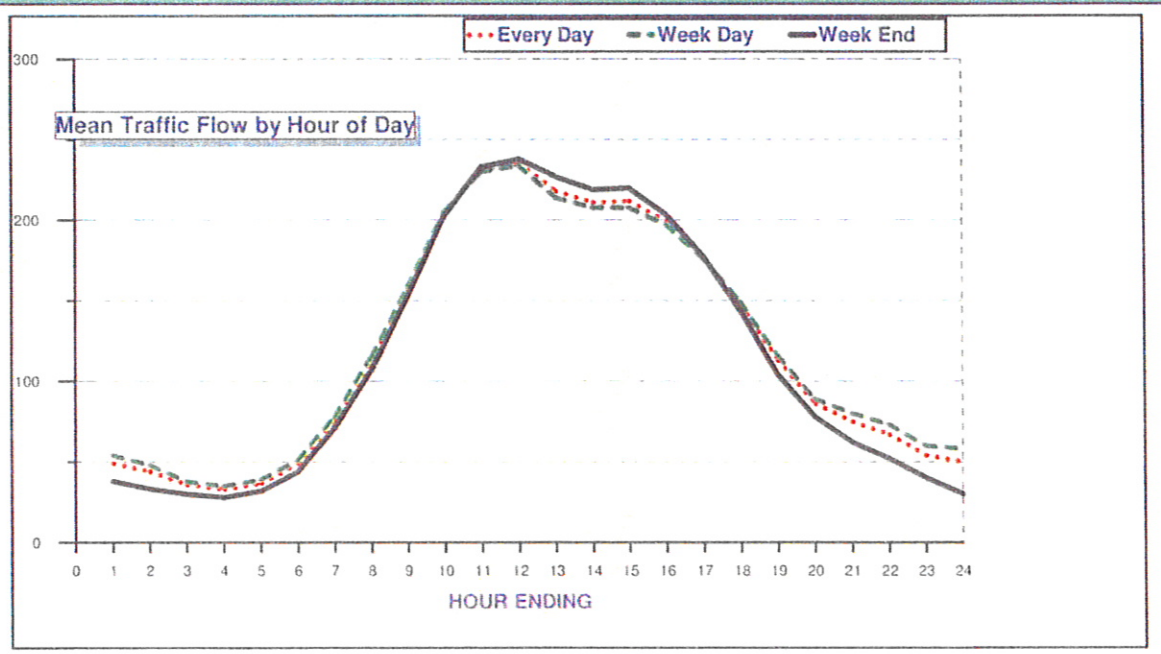
This data is affected by a Calendar Event.

| Hour | Saturday | % | Sunday | % | Monday | % | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 52 | 1.9 | 24 | .9 | 26 | .9 | 54 | 2.0 | 60 | 2.2 | 61 | 2.1 | 68 | 2.0 | 54 | 1.8 | 38 | 1.4 | 49 | 1.7 |
| 01- 02 | 46 | 1.7 | 20 | .7 | 22 | .8 | 49 | 1.8 | 55 | 2.1 | 54 | 1.9 | 59 | 1.7 | 48 | 1.6 | 33 | 1.2 | 44 | 1.5 |
| 02- 03 | 44 | 1.6 | 15 | .5 | 17 | .6 | 39 | 1.5 | 44 | 1.6 | 44 | 1.5 | 48 | 1.4 | 38 | 1.3 | 30 | 1.1 | 36 | 1.2 |
| 03- 04 | 40 | 1.5 | 16 | .6 | 22 | .8 | 35 | 1.3 | 38 | 1.4 | 40 | 1.4 | 42 | 1.2 | 35 | 1.2 | 28 | 1.0 | 33 | 1.2 |
| 04- 05 | 43 | 1.6 | 20 | .7 | 28 | 1.0 | 38 | 1.4 | 37 | 1.4 | 42 | 1.4 | 48 | 1.4 | 39 | 1.3 | 32 | 1.1 | 37 | 1.3 |
| 05- 06 | 57 | 2.1 | 30 | 1.1 | 41 | 1.4 | 49 | 1.8 | 50 | 1.9 | 52 | 1.8 | 65 | 1.9 | 51 | 1.8 | 44 | 1.6 | 49 | 1.7 |
| 06- 07 | 91 | 3.4 | 50 | 1.8 | 66 | 2.3 | 73 | 2.7 | 73 | 2.7 | 80 | 2.7 | 100 | 2.9 | 78 | 2.7 | 71 | 2.6 | 76 | 2.7 |
| 07- 08 | 130 | 4.8 | 84 | 3.0 | 105 | 3.6 | 110 | 4.1 | 107 | 4.0 | 117 | 4.0 | 138 | 4.1 | 115 | 4.0 | 107 | 3.9 | 113 | 3.9 |
| 08- 09 | 174 | 6.5 | 131 | 4.6 | 150 | 5.2 | 145 | 5.4 | 144 | 5.4 | 156 | 5.3 | 194 | 5.7 | 158 | 5.4 | 153 | 5.5 | 156 | 5.4 |
| 09- 10 | 219 | 8.1 | 186 | 6.6 | 206 | 7.1 | 189 | 7.1 | 186 | 7.0 | 202 | 6.9 | 241 | 7.1 | 205 | 7.0 | 203 | 7.3 | 204 | 7.1 |
| 10- 11 | 237 | 8.8 | 228 | 8.1 | 250 | 8.6 | 210 | 7.9 | 208 | 7.8 | 217 | 7.4 | 264 | 7.7 | 230 | 7.9 | 233 | 8.4 | 231 | 8.0 |
| 11- 12 | 229 | 8.5 | 246 | 8.7 | 253 | 8.7 | 216 | 8.1 | 209 | 7.8 | 222 | 7.6 | 271 | 8.0 | 234 | 8.0 | 238 | 8.6 | 235 | 8.2 |
| 12- 13 | 210 | 7.8 | 244 | 8.6 | 243 | 8.3 | 193 | 7.2 | 190 | 7.1 | 201 | 6.9 | 244 | 7.2 | 214 | 7.3 | 227 | 8.2 | 218 | 7.6 |
| 13- 14 | 195 | 7.2 | 242 | 8.6 | 235 | 8.1 | 189 | 7.1 | 181 | 6.8 | 198 | 6.8 | 238 | 7.0 | 208 | 7.1 | 219 | 7.9 | 211 | 7.4 |
| 14- 15 | 187 | 6.9 | 253 | 9.0 | 229 | 7.9 | 190 | 7.1 | 185 | 6.9 | 200 | 6.9 | 237 | 7.0 | 208 | 7.1 | 220 | 8.0 | 212 | 7.4 |
| 15- 16 | 168 | 6.2 | 238 | 8.4 | 216 | 7.4 | 176 | 6.6 | 172 | 6.4 | 197 | 6.8 | 224 | 6.6 | 197 | 6.8 | 203 | 7.4 | 199 | 6.9 |
| 16- 17 | 144 | 5.3 | 210 | 7.4 | 192 | 6.6 | 154 | 5.8 | 152 | 5.7 | 175 | 6.0 | 209 | 6.1 | 176 | 6.1 | 177 | 6.4 | 177 | 6.2 |
| 17- 18 | 115 | 4.3 | 170 | 6.0 | 154 | 5.3 | 129 | 4.8 | 129 | 4.8 | 154 | 5.3 | 180 | 5.3 | 149 | 5.1 | 143 | 5.2 | 147 | 5.1 |
| 18- 19 | 87 | 3.2 | 121 | 4.3 | 114 | 3.9 | 102 | 3.8 | 103 | 3.9 | 119 | 4.1 | 142 | 4.2 | 116 | 4.0 | 104 | 3.8 | 113 | 3.9 |
| 19- 20 | 66 | 2.4 | 90 | 3.2 | 82 | 2.8 | 78 | 2.9 | 80 | 3.0 | 95 | 3.3 | 109 | 3.2 | 89 | 3.0 | 78 | 2.8 | 86 | 3.0 |
| 20- 21 | 52 | 1.9 | 71 | 2.5 | 77 | 2.6 | 70 | 2.6 | 77 | 2.9 | 86 | 2.9 | 92 | 2.7 | 80 | 2.8 | 62 | 2.2 | 75 | 2.6 |
| 21- 22 | 45 | 1.7 | 58 | 2.1 | 67 | 2.3 | 70 | 2.6 | 71 | 2.7 | 78 | 2.7 | 79 | 2.3 | 73 | 2.5 | 52 | 1.9 | 67 | 2.3 |
| 22- 23 | 36 | 1.3 | 45 | 1.6 | 59 | 2.0 | 57 | 2.1 | 59 | 2.2 | 65 | 2.2 | 60 | 1.8 | 60 | 2.1 | 40 | 1.4 | 54 | 1.9 |
| 23- 24 | 29 | 1.1 | 31 | 1.1 | 58 | 2.0 | 55 | 2.1 | 60 | 2.2 | 61 | 2.1 | 55 | 1.6 | 58 | 2.0 | 30 | 1.1 | 50 | 1.7 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 11:00 | 237 | 12:00 | 246 | 12:00 | 252 | 12:00 | 216 | 12:00 | 209 | 12:00 | 222 | 12:00 | 271 | 12:00 | 234 | 12:00 | 237 | 12:00 | 235 |
| PM | 13:00 | 210 | 15:00 | 253 | 13:00 | 243 | 13:00 | 193 | 13:00 | 191 | 13:00 | 201 | 13:00 | 244 | 13:00 | 214 | 13:00 | 227 | 13:00 | 218 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 2,095 | 77.7 | 2,353 | 83.4 | 2,347 | 80.6 | 2,003 | 75.0 | 1,966 | 73.6 | 2,158 | 74.0 | 2,582 | 75.8 | 2,211 | 75.9 | 2,224 | 80.6 | 2,215 | 77.2 |
| 16 Hour | 2,349 | 87.2 | 2,622 | 92.9 | 2,639 | 90.6 | 2,294 | 85.9 | 2,267 | 84.9 | 2,497 | 85.6 | 2,962 | 86.9 | 2,532 | 86.9 | 2,486 | 90.1 | 2,519 | 87.7 |
| 18 Hour | 2,413 | 89.5 | 2,698 | 95.6 | 2,756 | 94.6 | 2,406 | 90.1 | 2,386 | 89.4 | 2,623 | 90.0 | 3,077 | 90.3 | 2,650 | 90.9 | 2,556 | 92.6 | 2,623 | 91.4 |
| 24 Hour | 2,695 | 100.0 | 2,823 | 100.0 | 2,912 | 100.0 | 2,670 | 100.0 | 2,670 | 100.0 | 2,916 | 100.0 | 3,407 | 100.0 | 2,915 | 100.0 | 2,759 | 100.0 | 2,870 | 100.0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVG Week Day | | | | | | 99.9% | | 91.6% | | 91.6% | | 100.0% | | 116.9% | | 100.0% | | 94.6% | | 98.5% |
| AVG Week End | | 97.7% | | 102.3% | | | | | | | | | | | | 105.7% | | 100.0% | | 104.0% |
| AVG Day | | 93.9% | | 98.3% | | 101.4% | | 93.0% | | 93.0% | | 101.6% | | 118.7% | | 101.6% | | 96.1% | | 100.0% |



Queensland Government
Department of Main Roads

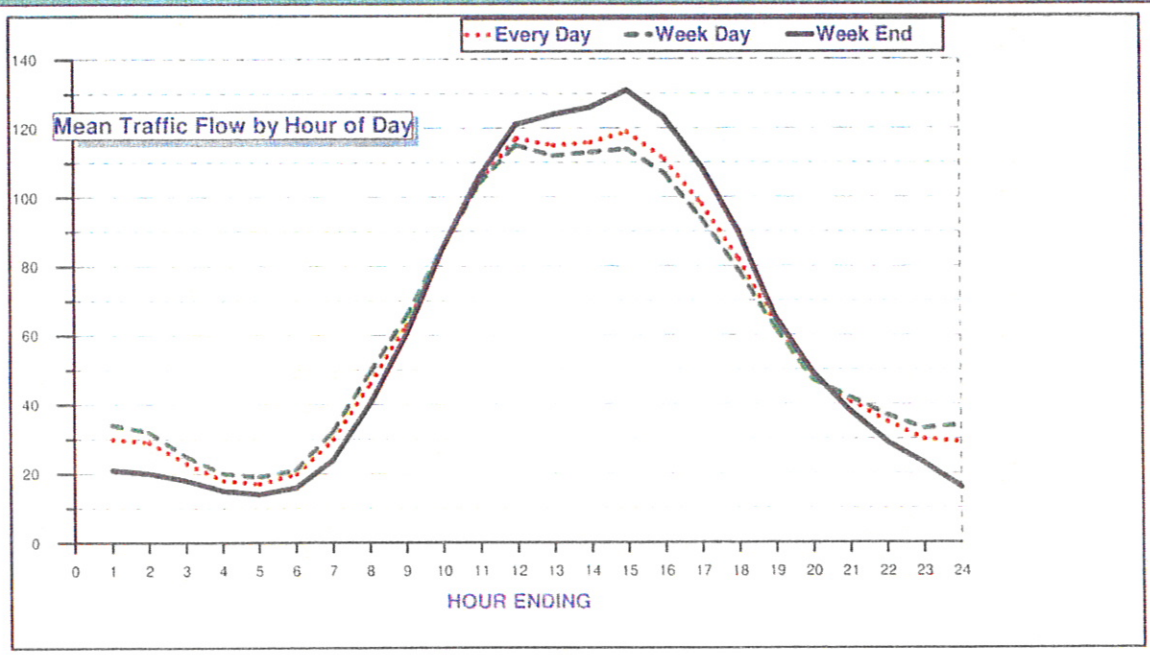
# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60019 Colosseum Creek |
| Type | PERMANENT |
| TDist | 83.136 |
| Site Stream | Gazettal Direction |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
01-JAN-2005
30-DEC-2005

This data is affected by a Calendar Event.

| Hour | Saturday | % | Sunday | % | Monday | % | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 30 | 2.2 | 12 | .8 | 15 | .9 | 37 | 2.6 | 37 | 2.7 | 39 | 2.8 | 41 | 2.6 | 34 | 2.3 | 21 | 1.4 | 30 | 2.1 |
| 01- 02 | 28 | 2.1 | 11 | .7 | 11 | .7 | 35 | 2.5 | 38 | 2.8 | 38 | 2.7 | 40 | 2.5 | 32 | 2.2 | 20 | 1.3 | 29 | 2.0 |
| 02- 03 | 28 | 2.1 | 7 | .4 | 8 | .5 | 27 | 1.9 | 29 | 2.2 | 30 | 2.1 | 31 | 2.0 | 25 | 1.7 | 18 | 1.2 | 23 | 1.6 |
| 03- 04 | 21 | 1.6 | 8 | .5 | 11 | .7 | 21 | 1.5 | 22 | 1.6 | 25 | 1.8 | 21 | 1.3 | 20 | 1.4 | 15 | 1.0 | 18 | 1.3 |
| 04- 05 | 18 | 1.3 | 9 | .6 | 16 | 1.0 | 20 | 1.4 | 18 | 1.3 | 20 | 1.4 | 20 | 1.3 | 19 | 1.3 | 14 | .9 | 17 | 1.2 |
| 05- 06 | 19 | 1.4 | 12 | .8 | 19 | 1.2 | 23 | 1.6 | 21 | 1.6 | 20 | 1.4 | 24 | 1.5 | 21 | 1.5 | 16 | 1.1 | 20 | 1.3 |
| 06- 07 | 30 | 2.2 | 18 | 1.2 | 30 | 1.8 | 33 | 2.3 | 30 | 2.2 | 34 | 2.4 | 35 | 2.2 | 32 | 2.2 | 24 | 1.6 | 30 | 2.0 |
| 07- 08 | 47 | 3.5 | 33 | 2.1 | 47 | 2.9 | 51 | 3.6 | 45 | 3.3 | 47 | 3.3 | 53 | 3.4 | 49 | 3.3 | 40 | 2.7 | 46 | 3.1 |
| 08- 09 | 67 | 5.0 | 52 | 3.3 | 65 | 4.0 | 64 | 4.5 | 62 | 4.6 | 64 | 4.5 | 69 | 4.4 | 65 | 4.4 | 60 | 4.1 | 63 | 4.3 |
| 09- 10 | 93 | 6.9 | 77 | 4.9 | 90 | 5.5 | 83 | 5.9 | 80 | 5.9 | 79 | 5.6 | 91 | 5.8 | 85 | 5.7 | 85 | 5.8 | 85 | 5.8 |
| 10- 11 | 109 | 8.1 | 103 | 6.6 | 120 | 7.3 | 100 | 7.1 | 94 | 7.0 | 95 | 6.7 | 111 | 7.0 | 104 | 7.0 | 106 | 7.3 | 105 | 7.1 |
| 11- 12 | 118 | 8.7 | 124 | 7.9 | 135 | 8.3 | 109 | 7.7 | 101 | 7.5 | 105 | 7.4 | 126 | 8.0 | 115 | 7.8 | 121 | 8.3 | 117 | 8.0 |
| 12- 13 | 115 | 8.5 | 132 | 8.5 | 143 | 8.8 | 104 | 7.4 | 96 | 7.1 | 97 | 6.9 | 120 | 7.6 | 112 | 7.6 | 124 | 8.5 | 115 | 7.8 |
| 13- 14 | 109 | 8.1 | 142 | 9.1 | 146 | 8.9 | 103 | 7.3 | 96 | 7.1 | 101 | 7.2 | 117 | 7.4 | 113 | 7.6 | 126 | 8.6 | 116 | 7.9 |
| 14- 15 | 107 | 7.9 | 154 | 9.9 | 143 | 8.8 | 108 | 7.7 | 97 | 7.2 | 102 | 7.2 | 119 | 7.6 | 114 | 7.7 | 131 | 9.0 | 119 | 8.1 |
| 15- 16 | 98 | 7.3 | 147 | 9.4 | 137 | 8.4 | 98 | 7.0 | 90 | 6.7 | 100 | 7.1 | 110 | 7.0 | 107 | 7.3 | 123 | 8.4 | 111 | 7.6 |
| 16- 17 | 82 | 6.1 | 135 | 8.7 | 123 | 7.5 | 84 | 6.0 | 80 | 5.9 | 86 | 6.1 | 96 | 6.1 | 94 | 6.4 | 109 | 7.5 | 98 | 6.7 |
| 17- 18 | 65 | 4.8 | 114 | 7.3 | 98 | 6.0 | 71 | 5.0 | 67 | 5.0 | 75 | 5.3 | 84 | 5.3 | 79 | 5.4 | 90 | 6.1 | 82 | 5.6 |
| 18- 19 | 49 | 3.6 | 81 | 5.2 | 71 | 4.3 | 59 | 4.2 | 56 | 4.2 | 56 | 4.0 | 68 | 4.3 | 62 | 4.2 | 65 | 4.5 | 63 | 4.3 |
| 19- 20 | 36 | 2.7 | 61 | 3.9 | 52 | 3.2 | 43 | 3.1 | 43 | 3.2 | 47 | 3.3 | 52 | 3.3 | 47 | 3.2 | 49 | 3.3 | 48 | 3.2 |
| 20- 21 | 29 | 2.1 | 46 | 2.9 | 45 | 2.8 | 38 | 2.7 | 40 | 3.0 | 41 | 2.9 | 46 | 2.9 | 42 | 2.8 | 38 | 2.6 | 41 | 2.8 |
| 21- 22 | 22 | 1.6 | 36 | 2.3 | 37 | 2.3 | 36 | 2.6 | 36 | 2.7 | 39 | 2.8 | 39 | 2.5 | 37 | 2.5 | 29 | 2.0 | 35 | 2.4 |
| 22- 23 | 17 | 1.3 | 28 | 1.8 | 35 | 2.1 | 31 | 2.2 | 32 | 2.4 | 35 | 2.5 | 32 | 2.0 | 33 | 2.2 | 23 | 1.5 | 30 | 2.0 |
| 23- 24 | 14 | 1.0 | 18 | 1.2 | 37 | 2.3 | 31 | 2.2 | 36 | 2.7 | 36 | 2.6 | 31 | 2.0 | 34 | 2.3 | 16 | 1.1 | 29 | 2.0 |
| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
| AM | 12:00 | 118 | 12:00 | 124 | 12:00 | 134 | 12:00 | 109 | 12:00 | 100 | 12:00 | 105 | 12:00 | 126 | 12:00 | 115 | 12:00 | 121 | 12:00 | 117 |
| PM | 13:00 | 115 | 15:00 | 154 | 14:00 | 146 | 15:00 | 107 | 15:00 | 97 | 15:00 | 102 | 13:00 | 120 | 15:00 | 113 | 15:00 | 130 | 15:00 | 118 |
| 12 Hour | 1,059 | 78.4 | 1,294 | 82.9 | 1,318 | 80.7 | 1,034 | 73.4 | 964 | 71.6 | 1,007 | 71.4 | 1,164 | 73.9 | 1,097 | 74.4 | 1,177 | 80.8 | 1,120 | 76.2 |
| 16 Hour | 1,176 | 87.0 | 1,455 | 93.3 | 1,482 | 90.7 | 1,184 | 84.0 | 1,113 | 82.7 | 1,168 | 82.8 | 1,336 | 84.8 | 1,257 | 85.2 | 1,316 | 90.4 | 1,273 | 86.7 |
| 18 Hour | 1,207 | 89.3 | 1,501 | 96.2 | 1,554 | 95.1 | 1,246 | 88.4 | 1,181 | 87.7 | 1,239 | 87.8 | 1,399 | 88.8 | 1,324 | 89.7 | 1,354 | 93.0 | 1,332 | 90.7 |
| 24 Hour | 1,351 | 100.0 | 1,560 | 100.0 | 1,634 | 100.0 | 1,409 | 100.0 | 1,346 | 100.0 | 1,411 | 100.0 | 1,576 | 100.0 | 1,475 | 100.0 | 1,456 | 100.0 | 1,470 | 100.0 |
| AVG Week Day | | | | | | 110.8% | | 95.5% | | 91.2% | | 95.6% | | 106.8% | | 100.0% | | 98.7% | | 99.6% |
| AVG Week End | | 92.8% | | 107.2% | | | | | | | | | | | | 101.4% | | 100.0% | | 101.0% |
| AVG Day | | 91.9% | | 106.2% | | 111.2% | | 95.9% | | 91.6% | | 96.0% | | 107.2% | | 100.4% | | 99.0% | | 100.0% |



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60019 Colosseum Creek |
| Type | PERMANENT |
| TDist | 83.136 |
| Site Stream | Against Gazettal |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
01-JAN-2005
30-DEC-2005

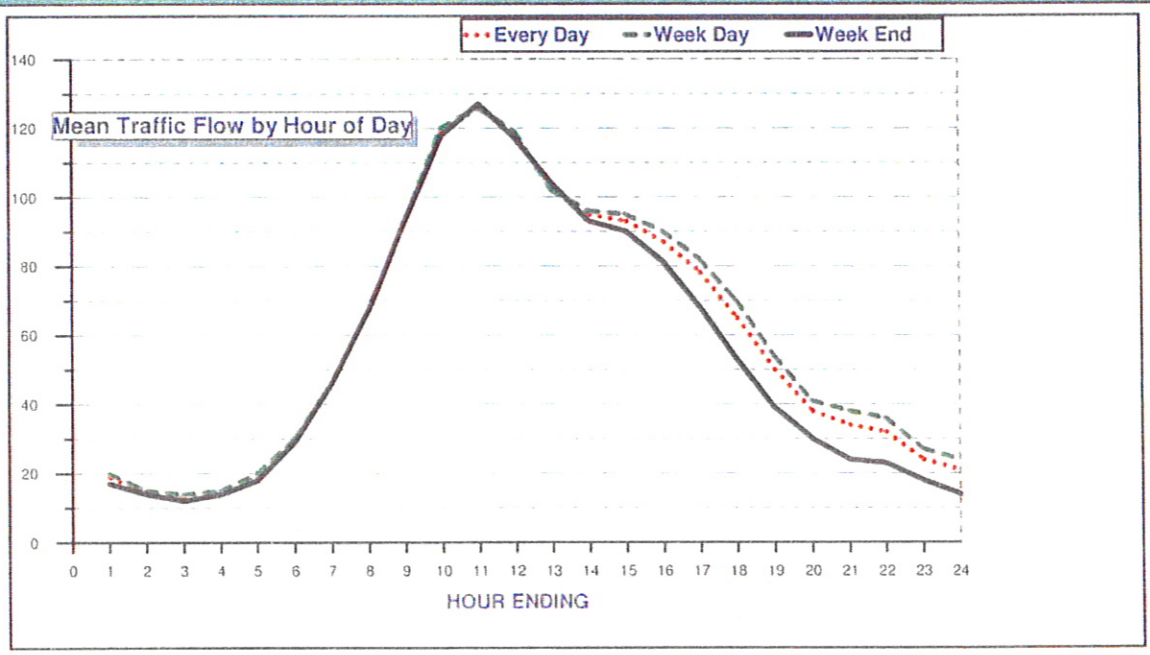
This data is affected by a Calendar Event.

| Hour | Saturday | % | Sunday | % | Monday | % | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 22 | 1.6 | 12 | .9 | 11 | .9 | 17 | 1.3 | 23 | 1.7 | 22 | 1.5 | 26 | 1.4 | 20 | 1.4 | 17 | 1.3 | 19 | 1.4 |
| 01- 02 | 18 | 1.3 | 10 | .8 | 10 | .8 | 13 | 1.0 | 17 | 1.3 | 17 | 1.1 | 19 | 1.0 | 15 | 1.1 | 14 | 1.1 | 15 | 1.1 |
| 02- 03 | 15 | 1.1 | 8 | .6 | 9 | .7 | 13 | 1.0 | 15 | 1.1 | 14 | .9 | 17 | .9 | 14 | .9 | 12 | .9 | 13 | .9 |
| 03- 04 | 19 | 1.4 | 8 | .6 | 11 | .9 | 14 | 1.1 | 16 | 1.2 | 15 | 1.0 | 20 | 1.1 | 15 | 1.1 | 14 | 1.0 | 15 | 1.1 |
| 04- 05 | 25 | 1.9 | 11 | .9 | 12 | .9 | 18 | 1.4 | 19 | 1.4 | 22 | 1.5 | 28 | 1.5 | 20 | 1.4 | 18 | 1.4 | 19 | 1.4 |
| 05- 06 | 39 | 2.9 | 19 | 1.5 | 22 | 1.7 | 26 | 2.1 | 29 | 2.2 | 31 | 2.1 | 41 | 2.2 | 30 | 2.1 | 29 | 2.2 | 30 | 2.1 |
| 06- 07 | 60 | 4.5 | 31 | 2.4 | 36 | 2.8 | 40 | 3.2 | 42 | 3.2 | 46 | 3.0 | 64 | 3.5 | 46 | 3.2 | 46 | 3.5 | 46 | 3.3 |
| 07- 08 | 83 | 6.2 | 51 | 4.0 | 58 | 4.5 | 59 | 4.7 | 62 | 4.7 | 70 | 4.6 | 86 | 4.7 | 67 | 4.7 | 67 | 5.1 | 67 | 4.8 |
| 08- 09 | 107 | 8.0 | 79 | 6.2 | 85 | 6.6 | 81 | 6.4 | 82 | 6.2 | 92 | 6.1 | 125 | 6.8 | 93 | 6.5 | 93 | 7.1 | 93 | 6.6 |
| 09- 10 | 126 | 9.4 | 109 | 8.6 | 116 | 9.1 | 106 | 8.4 | 106 | 8.0 | 123 | 8.2 | 149 | 8.2 | 120 | 8.3 | 118 | 9.0 | 119 | 8.5 |
| 10- 11 | 128 | 9.5 | 126 | 10.0 | 130 | 10.2 | 110 | 8.7 | 114 | 8.6 | 122 | 8.1 | 153 | 8.4 | 126 | 8.7 | 127 | 9.7 | 126 | 9.0 |
| 11- 12 | 111 | 8.3 | 122 | 9.6 | 118 | 9.2 | 107 | 8.5 | 108 | 8.2 | 117 | 7.8 | 145 | 7.9 | 119 | 8.3 | 117 | 8.9 | 118 | 8.4 |
| 12- 13 | 95 | 7.1 | 112 | 8.8 | 100 | 7.8 | 89 | 7.1 | 95 | 7.2 | 104 | 6.9 | 124 | 6.8 | 102 | 7.1 | 104 | 7.9 | 103 | 7.3 |
| 13- 14 | 86 | 6.4 | 100 | 7.9 | 89 | 7.0 | 85 | 6.7 | 85 | 6.4 | 98 | 6.5 | 121 | 6.6 | 96 | 6.6 | 93 | 7.1 | 95 | 6.8 |
| 14- 15 | 81 | 6.0 | 99 | 7.8 | 87 | 6.8 | 82 | 6.5 | 88 | 6.6 | 99 | 6.6 | 118 | 6.5 | 95 | 6.6 | 90 | 6.9 | 93 | 6.7 |
| 15- 16 | 70 | 5.2 | 91 | 7.2 | 80 | 6.3 | 78 | 6.2 | 82 | 6.2 | 97 | 6.4 | 114 | 6.2 | 90 | 6.3 | 81 | 6.2 | 87 | 6.2 |
| 16- 17 | 61 | 4.5 | 75 | 5.9 | 69 | 5.4 | 70 | 5.6 | 71 | 5.4 | 89 | 5.9 | 113 | 6.2 | 82 | 5.7 | 68 | 5.2 | 78 | 5.6 |
| 17- 18 | 50 | 3.7 | 56 | 4.4 | 56 | 4.4 | 59 | 4.7 | 62 | 4.7 | 79 | 5.2 | 96 | 5.3 | 70 | 4.9 | 53 | 4.1 | 65 | 4.7 |
| 18- 19 | 38 | 2.8 | 40 | 3.2 | 43 | 3.4 | 43 | 3.4 | 47 | 3.5 | 63 | 4.2 | 74 | 4.1 | 54 | 3.8 | 39 | 3.0 | 50 | 3.5 |
| 19- 20 | 30 | 2.2 | 29 | 2.3 | 30 | 2.3 | 35 | 2.8 | 37 | 2.8 | 48 | 3.2 | 56 | 3.1 | 41 | 2.9 | 30 | 2.3 | 38 | 2.7 |
| 20- 21 | 23 | 1.7 | 25 | 2.0 | 32 | 2.5 | 32 | 2.5 | 37 | 2.8 | 45 | 3.0 | 45 | 2.5 | 38 | 2.7 | 24 | 1.8 | 34 | 2.4 |
| 21- 22 | 23 | 1.7 | 23 | 1.8 | 30 | 2.3 | 34 | 2.7 | 35 | 2.6 | 40 | 2.7 | 39 | 2.1 | 36 | 2.5 | 23 | 1.8 | 32 | 2.3 |
| 22- 23 | 19 | 1.4 | 17 | 1.3 | 24 | 1.9 | 26 | 2.1 | 27 | 2.0 | 30 | 2.0 | 28 | 1.5 | 27 | 1.9 | 18 | 1.4 | 24 | 1.7 |
| 23- 24 | 15 | 1.1 | 13 | 1.0 | 21 | 1.6 | 23 | 1.8 | 25 | 1.9 | 26 | 1.7 | 25 | 1.4 | 24 | 1.7 | 14 | 1.1 | 21 | 1.5 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 11:00 | 128 | 11:00 | 126 | 11:00 | 129 | 11:00 | 111 | 11:00 | 113 | 10:00 | 124 | 11:00 | 153 | 11:00 | 126 | 11:00 | 127 | 11:00 | 126 |
| PM | 13:00 | 95 | 13:00 | 112 | 13:00 | 100 | 13:00 | 89 | 13:00 | 95 | 13:00 | 104 | 13:00 | 124 | 13:00 | 102 | 13:00 | 103 | 13:00 | 103 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 1,036 | 77.1 | 1,060 | 83.7 | 1,031 | 80.6 | 969 | 76.9 | 1,002 | 75.7 | 1,153 | 76.4 | 1,418 | 77.7 | 1,115 | 77.4 | 1,048 | 80.3 | 1,096 | 78.2 |
| 16 Hour | 1,172 | 87.2 | 1,168 | 92.3 | 1,159 | 90.6 | 1,110 | 88.1 | 1,153 | 87.1 | 1,332 | 88.3 | 1,622 | 88.8 | 1,275 | 88.6 | 1,170 | 89.7 | 1,245 | 88.9 |
| 18 Hour | 1,206 | 89.7 | 1,198 | 94.6 | 1,204 | 94.1 | 1,159 | 92.0 | 1,205 | 91.0 | 1,388 | 92.0 | 1,675 | 91.7 | 1,326 | 92.1 | 1,202 | 92.1 | 1,291 | 92.1 |
| 24 Hour | 1,344 | 100.0 | 1,266 | 100.0 | 1,279 | 100.0 | 1,260 | 100.0 | 1,324 | 100.0 | 1,509 | 100.0 | 1,826 | 100.0 | 1,440 | 100.0 | 1,305 | 100.0 | 1,401 | 100.0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVG Week Day | | | | | | 88.8% | | 87.5% | | 92.0% | | 104.8% | | 126.8% | | 100.0% | | 90.7% | | 97.3% |
| AVG Week End | | 103.0% | | 97.0% | | | | | | | | | | | | 110.3% | | 100.0% | | 107.4% |
| AVG Day | | 95.9% | | 90.4% | | 91.3% | | 89.9% | | 94.5% | | 107.7% | | 130.3% | | 102.7% | | 93.1% | | 100.0% |



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## AADT SEGMENTS REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Year | 2007 |
| TDist | 99.281 — 147.144 |
| Status | C |
| Direction | All Directions |

Through Distance: 99.281 - 147.145

Site: 60022 100m Nth Rodds Ck on Bruce Hwy

| Gaz Dir | AADT | % per Vehicle Class: Light Vehicle | Heavy Vehicle | Short Vehicle | Truck or Bus | Articulated Vehicle | Road Train | % Growth: 1 Yr | 5 Yr | 10 Yr |
|---|---|---|---|---|---|---|---|---|---|---|
| G | 2,503 | 75.85 | 24.15 | 75.85 | 6.56 | 10.86 | 6.73 | 17.18 | 5.11 | 5.13 |
| A | 2,465 | 77.64 | 22.36 | 77.64 | 6.53 | 9.54 | 6.29 | 13.54 | 4.83 | 5.49 |
| B | 4,968 | 76.72 | 23.28 | 76.72 | 6.55 | 10.21 | 6.52 | 15.35 | 4.97 | 5.30 |

* These values were updated manually or derived from previous years growth figures.

Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60022 100m Nth Rodds Ck on Bruce Hwy |
| Type | COVERAGE |
| TDist | 133.085 |
| Site Stream | All Site Streams |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

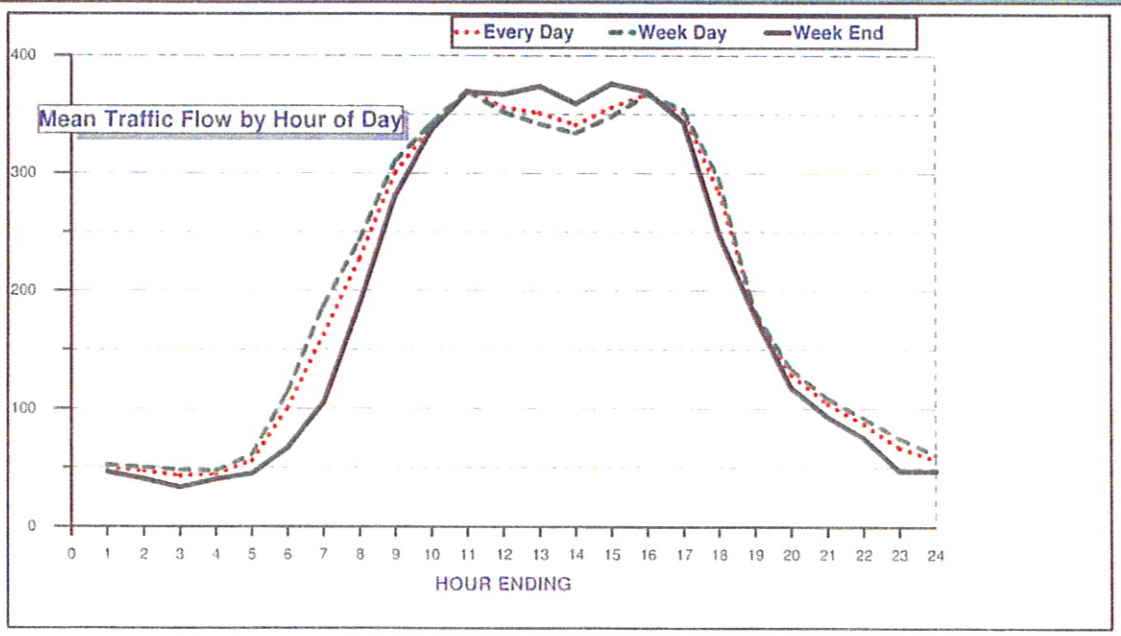
Mean Counts for
14-AUG-2007
27-AUG-2007

| Hour | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Saturday | % | Sunday | % | Monday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 46 | 1.0 | 60 | 1.3 | 60 | 1.2 | 62 | 1.1 | 62 | 1.5 | 29 | .6 | 31 | .6 | 52 | 1.1 | 46 | 1.0 | 50 | 1.0 |
| 01- 02 | 61 | 1.3 | 57 | 1.2 | 50 | 1.0 | 61 | 1.1 | 52 | 1.2 | 28 | .6 | 21 | .4 | 50 | 1.0 | 40 | .9 | 47 | 1.0 |
| 02- 03 | 59 | 1.3 | 47 | 1.0 | 49 | 1.0 | 59 | 1.1 | 47 | 1.1 | 19 | .4 | 24 | .5 | 48 | 1.0 | 33 | .7 | 43 | .9 |
| 03- 04 | 41 | .9 | 59 | 1.3 | 50 | 1.0 | 54 | 1.0 | 53 | 1.2 | 26 | .5 | 32 | .7 | 47 | 1.0 | 40 | .9 | 45 | .9 |
| 04- 05 | 67 | 1.5 | 63 | 1.3 | 58 | 1.2 | 64 | 1.2 | 58 | 1.4 | 31 | .6 | 52 | 1.1 | 61 | 1.2 | 45 | 1.0 | 56 | 1.2 |
| 05- 06 | 114 | 2.5 | 111 | 2.4 | 109 | 2.2 | 123 | 2.2 | 85 | 2.0 | 48 | 1.0 | 115 | 2.4 | 114 | 2.3 | 67 | 1.5 | 101 | 2.1 |
| 06- 07 | 208 | 4.6 | 190 | 4.1 | 173 | 3.5 | 195 | 3.6 | 131 | 3.1 | 78 | 1.6 | 167 | 3.5 | 187 | 3.8 | 105 | 2.3 | 163 | 3.4 |
| 07- 08 | 240 | 5.3 | 220 | 4.7 | 251 | 5.1 | 259 | 4.7 | 238 | 5.6 | 140 | 2.9 | 246 | 5.2 | 243 | 5.0 | 189 | 4.2 | 228 | 4.8 |
| 08- 09 | 303 | 6.7 | 294 | 6.3 | 306 | 6.3 | 338 | 6.2 | 320 | 7.5 | 242 | 5.0 | 307 | 6.4 | 310 | 6.4 | 281 | 6.2 | 301 | 6.3 |
| 09- 10 | 303 | 6.7 | 359 | 7.7 | 339 | 6.9 | 358 | 6.5 | 347 | 8.1 | 326 | 6.8 | 349 | 7.3 | 342 | 7.0 | 337 | 7.4 | 340 | 7.1 |
| 10- 11 | 332 | 7.3 | 335 | 7.1 | 370 | 7.6 | 443 | 8.1 | 388 | 9.1 | 349 | 7.2 | 372 | 7.8 | 370 | 7.6 | 369 | 8.1 | 370 | 7.7 |
| 11- 12 | 317 | 7.0 | 331 | 7.1 | 351 | 7.2 | 385 | 7.0 | 329 | 7.7 | 405 | 8.4 | 376 | 7.9 | 352 | 7.2 | 367 | 8.1 | 356 | 7.5 |
| 12- 13 | 278 | 6.1 | 333 | 7.1 | 340 | 7.0 | 371 | 6.8 | 337 | 7.9 | 411 | 8.5 | 390 | 8.2 | 342 | 7.0 | 374 | 8.2 | 351 | 7.4 |
| 13- 14 | 272 | 6.0 | 318 | 6.8 | 352 | 7.2 | 396 | 7.2 | 314 | 7.4 | 403 | 8.4 | 330 | 6.9 | 334 | 6.8 | 359 | 7.9 | 341 | 7.1 |
| 14- 15 | 319 | 7.0 | 328 | 7.0 | 353 | 7.2 | 397 | 7.2 | 309 | 7.3 | 443 | 9.2 | 344 | 7.2 | 348 | 7.1 | 376 | 8.3 | 356 | 7.5 |
| 15- 16 | 334 | 7.4 | 348 | 7.4 | 371 | 7.6 | 435 | 7.9 | 281 | 6.6 | 456 | 9.5 | 349 | 7.3 | 367 | 7.5 | 369 | 8.1 | 368 | 7.7 |
| 16- 17 | 345 | 7.6 | 347 | 7.4 | 331 | 6.8 | 404 | 7.4 | 259 | 6.1 | 426 | 8.8 | 344 | 7.2 | 354 | 7.3 | 343 | 7.5 | 351 | 7.3 |
| 17- 18 | 288 | 6.4 | 279 | 6.0 | 294 | 6.0 | 337 | 6.2 | 193 | 4.5 | 303 | 6.3 | 284 | 6.0 | 296 | 6.1 | 248 | 5.5 | 283 | 5.9 |
| 18- 19 | 158 | 3.5 | 158 | 3.4 | 192 | 3.9 | 231 | 4.2 | 132 | 3.1 | 224 | 4.6 | 176 | 3.7 | 183 | 3.8 | 178 | 3.9 | 182 | 3.8 |
| 19- 20 | 123 | 2.7 | 128 | 2.7 | 136 | 2.8 | 156 | 2.8 | 89 | 2.1 | 147 | 3.1 | 125 | 2.6 | 134 | 2.7 | 118 | 2.6 | 129 | 2.7 |
| 20- 21 | 105 | 2.3 | 104 | 2.2 | 102 | 2.1 | 115 | 2.1 | 80 | 1.9 | 105 | 2.2 | 117 | 2.5 | 109 | 2.2 | 93 | 2.0 | 104 | 2.2 |
| 21- 22 | 86 | 1.9 | 80 | 1.7 | 104 | 2.1 | 96 | 1.8 | 68 | 1.6 | 81 | 1.7 | 93 | 1.9 | 92 | 1.9 | 75 | 1.6 | 87 | 1.8 |
| 22- 23 | 74 | 1.6 | 78 | 1.7 | 76 | 1.6 | 78 | 1.4 | 43 | 1.0 | 50 | 1.0 | 70 | 1.5 | 75 | 1.5 | 47 | 1.0 | 67 | 1.4 |
| 23- 24 | 59 | 1.3 | 62 | 1.3 | 69 | 1.4 | 59 | 1.1 | 45 | 1.1 | 48 | 1.0 | 58 | 1.2 | 61 | 1.3 | 47 | 1.0 | 57 | 1.2 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 11:00 | 332 | 10:00 | 359 | 11:00 | 370 | 11:00 | 443 | 11:00 | 388 | 12:00 | 405 | 12:00 | 376 | 11:00 | 374 | 11:00 | 369 | 11:00 | 373 |
| PM | 17:00 | 328 | 16:00 | 348 | 16:00 | 371 | 16:00 | 435 | 13:00 | 337 | 16:00 | 456 | 13:00 | 390 | 16:00 | 366 | 15:00 | 376 | 16:00 | 366 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 3,489 | 77.0 | 3,650 | 77.8 | 3,850 | 78.8 | 4,354 | 79.5 | 3,447 | 80.9 | 4,128 | 85.7 | 3,867 | 81.0 | 3,842 | 78.9 | 3,788 | 83.4 | 3,826 | 80.1 |
| 16 Hour | 4,011 | 88.5 | 4,152 | 88.5 | 4,365 | 89.3 | 4,916 | 89.8 | 3,815 | 89.6 | 4,539 | 94.2 | 4,369 | 91.6 | 4,363 | 89.6 | 4,177 | 92.0 | 4,310 | 90.2 |
| 18 Hour | 4,144 | 91.4 | 4,292 | 91.5 | 4,510 | 92.3 | 5,053 | 92.3 | 3,903 | 91.6 | 4,637 | 96.2 | 4,497 | 94.2 | 4,499 | 92.4 | 4,270 | 94.1 | 4,434 | 92.8 |
| 24 Hour | 4,532 | 100.0 | 4,689 | 100.0 | 4,886 | 100.0 | 5,476 | 100.0 | 4,260 | 100.0 | 4,818 | 100.0 | 4,772 | 100.0 | 4,871 | 100.0 | 4,539 | 100.0 | 4,776 | 100.0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVG Week Day | | 93.0% | | 96.3% | | 100.3% | | 112.4% | | | | | | 98.0% | | 100.0% | | 93.2% | | 98.1% |
| AVG Week End | | | | | | | | | | 93.9% | | 106.1% | | | | 107.3% | | 100.0% | | 105.2% |
| AVG Day | | 94.9% | | 98.2% | | 102.3% | | 114.7% | | 89.2% | | 100.9% | | 99.9% | | 102.0% | | 95.0% | | 100.0% |



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

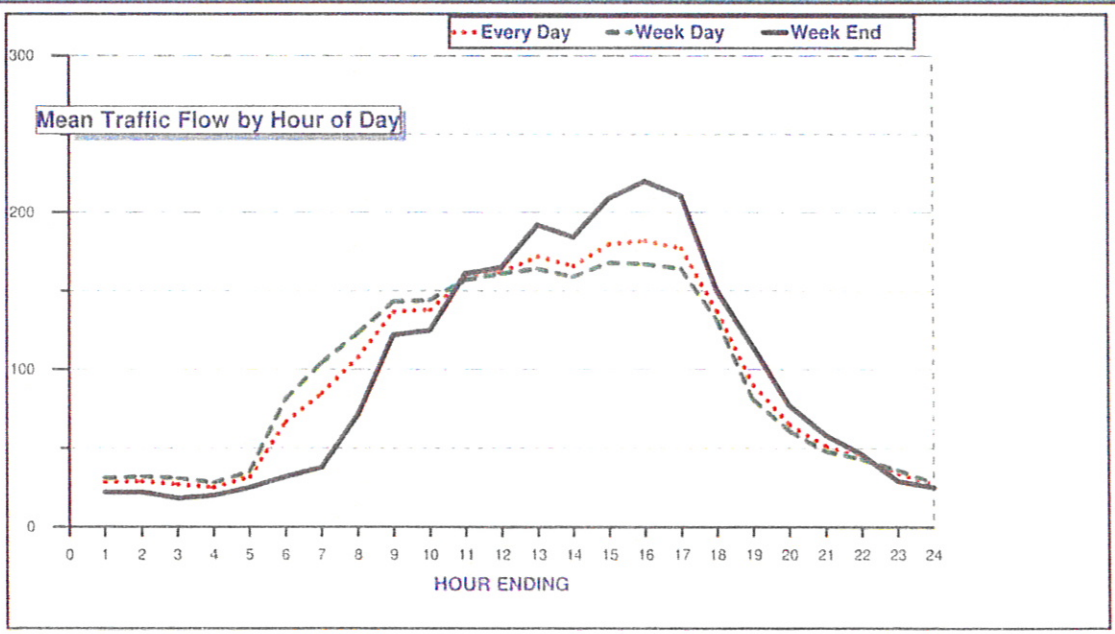
| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60022 100m Nth Rodds Ck on Bruce Hwy |
| Type | COVERAGE |
| TDist | 133.085 |
| Site Stream | Gazettal Direction |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
14-AUG-2007
27-AUG-2007

| Hour | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Saturday | % | Sunday | % | Monday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 31 | 1.4 | 36 | 1.6 | 35 | 1.6 | 36 | 1.5 | 30 | 1.5 | 14 | .5 | 19 | .8 | 31 | 1.4 | 22 | .9 | 29 | 1.2 |
| 01- 02 | 40 | 1.8 | 37 | 1.6 | 32 | 1.4 | 38 | 1.6 | 31 | 1.5 | 12 | .5 | 15 | .6 | 32 | 1.4 | 22 | .9 | 29 | 1.3 |
| 02- 03 | 45 | 2.0 | 33 | 1.5 | 28 | 1.3 | 36 | 1.5 | 26 | 1.3 | 9 | .3 | 14 | .6 | 31 | 1.3 | 18 | .8 | 27 | 1.2 |
| 03- 04 | 27 | 1.2 | 38 | 1.7 | 29 | 1.3 | 30 | 1.3 | 29 | 1.4 | 10 | .4 | 15 | .6 | 28 | 1.2 | 20 | .8 | 25 | 1.1 |
| 04- 05 | 40 | 1.8 | 36 | 1.6 | 31 | 1.4 | 35 | 1.5 | 27 | 1.3 | 22 | .8 | 33 | 1.3 | 35 | 1.5 | 25 | 1.1 | 32 | 1.4 |
| 05- 06 | 90 | 3.9 | 75 | 3.3 | 73 | 3.3 | 77 | 3.3 | 36 | 1.8 | 27 | 1.0 | 92 | 3.6 | 81 | 3.5 | 32 | 1.4 | 67 | 2.9 |
| 06- 07 | 118 | 5.2 | 107 | 4.7 | 89 | 4.0 | 103 | 4.4 | 45 | 2.2 | 31 | 1.2 | 105 | 4.1 | 104 | 4.5 | 38 | 1.6 | 85 | 3.7 |
| 07- 08 | 133 | 5.8 | 117 | 5.2 | 124 | 5.6 | 107 | 4.6 | 85 | 4.2 | 56 | 2.1 | 135 | 5.3 | 123 | 5.3 | 71 | 3.0 | 108 | 4.7 |
| 08- 09 | 146 | 6.4 | 145 | 6.4 | 132 | 6.0 | 146 | 6.2 | 136 | 6.7 | 108 | 4.1 | 144 | 5.7 | 143 | 6.1 | 122 | 5.2 | 137 | 5.9 |
| 09- 10 | 128 | 5.6 | 152 | 6.7 | 146 | 6.6 | 139 | 5.9 | 128 | 6.3 | 122 | 4.6 | 153 | 6.0 | 144 | 6.2 | 125 | 5.4 | 138 | 6.0 |
| 10- 11 | 140 | 6.1 | 147 | 6.5 | 161 | 7.3 | 177 | 7.6 | 174 | 8.6 | 147 | 5.6 | 162 | 6.4 | 157 | 6.8 | 161 | 6.9 | 158 | 6.8 |
| 11- 12 | 165 | 7.2 | 150 | 6.7 | 146 | 6.6 | 158 | 6.8 | 133 | 6.6 | 197 | 7.5 | 186 | 7.3 | 161 | 6.9 | 165 | 7.1 | 162 | 7.0 |
| 12- 13 | 137 | 6.0 | 160 | 7.1 | 147 | 6.7 | 164 | 7.0 | 162 | 8.0 | 223 | 8.4 | 211 | 8.3 | 164 | 7.1 | 192 | 8.3 | 172 | 7.4 |
| 13- 14 | 138 | 6.1 | 146 | 6.5 | 155 | 7.0 | 170 | 7.3 | 150 | 7.4 | 218 | 8.3 | 184 | 7.3 | 159 | 6.8 | 184 | 7.9 | 166 | 7.1 |
| 14- 15 | 155 | 6.8 | 166 | 7.4 | 163 | 7.4 | 167 | 7.1 | 168 | 8.3 | 250 | 9.5 | 191 | 7.5 | 168 | 7.3 | 209 | 9.0 | 180 | 7.7 |
| 15- 16 | 166 | 7.3 | 158 | 7.0 | 161 | 7.3 | 159 | 6.8 | 169 | 8.4 | 270 | 10.3 | 190 | 7.5 | 167 | 7.2 | 220 | 9.4 | 182 | 7.8 |
| 16- 17 | 166 | 7.3 | 161 | 7.1 | 140 | 6.3 | 158 | 6.8 | 133 | 6.6 | 286 | 10.9 | 195 | 7.7 | 164 | 7.1 | 210 | 9.0 | 177 | 7.6 |
| 17- 18 | 144 | 6.3 | 119 | 5.3 | 120 | 5.4 | 136 | 5.8 | 100 | 4.9 | 199 | 7.6 | 143 | 5.6 | 132 | 5.7 | 150 | 6.4 | 137 | 5.9 |
| 18- 19 | 81 | 3.6 | 70 | 3.1 | 77 | 3.5 | 83 | 3.5 | 78 | 3.9 | 149 | 5.7 | 92 | 3.6 | 81 | 3.5 | 114 | 4.9 | 90 | 3.9 |
| 19- 20 | 54 | 2.4 | 54 | 2.4 | 59 | 2.7 | 68 | 2.9 | 49 | 2.4 | 104 | 4.0 | 68 | 2.7 | 61 | 2.6 | 77 | 3.3 | 65 | 2.8 |
| 20- 21 | 41 | 1.8 | 42 | 1.9 | 47 | 2.1 | 45 | 1.9 | 48 | 2.4 | 67 | 2.5 | 66 | 2.6 | 48 | 2.1 | 58 | 2.5 | 51 | 2.2 |
| 21- 22 | 39 | 1.7 | 35 | 1.6 | 46 | 2.1 | 42 | 1.8 | 41 | 2.0 | 50 | 1.9 | 54 | 2.1 | 43 | 1.9 | 46 | 2.0 | 44 | 1.9 |
| 22- 23 | 38 | 1.7 | 37 | 1.6 | 38 | 1.7 | 36 | 1.5 | 24 | 1.2 | 33 | 1.3 | 31 | 1.2 | 36 | 1.6 | 29 | 1.2 | 34 | 1.5 |
| 23- 24 | 18 | .8 | 32 | 1.4 | 30 | 1.4 | 29 | 1.2 | 20 | 1.0 | 29 | 1.1 | 33 | 1.3 | 28 | 1.2 | 25 | 1.1 | 27 | 1.2 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 12:00 | 165 | 10:00 | 152 | 11:00 | 161 | 11:00 | 177 | 11:00 | 174 | 12:00 | 197 | 12:00 | 186 | 12:00 | 160 | 12:00 | 165 | 12:00 | 162 |
| PM | 16:00 | 167 | 15:00 | 166 | 15:00 | 163 | 14:00 | 170 | 16:00 | 169 | 17:00 | 286 | 13:00 | 211 | 16:00 | 167 | 16:00 | 219 | 16:00 | 182 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 1,699 | 74.5 | 1,691 | 75.1 | 1,672 | 75.7 | 1,764 | 75.4 | 1,616 | 79.9 | 2,224 | 84.5 | 1,986 | 78.5 | 1,762 | 75.9 | 1,920 | 82.5 | 1,807 | 77.8 |
| 16 Hour | 1,951 | 85.6 | 1,929 | 85.6 | 1,913 | 86.6 | 2,022 | 86.4 | 1,799 | 89.0 | 2,476 | 94.1 | 2,279 | 90.0 | 2,019 | 86.9 | 2,138 | 91.9 | 2,053 | 88.3 |
| 18 Hour | 2,007 | 88.0 | 1,998 | 88.7 | 1,981 | 89.7 | 2,087 | 89.2 | 1,843 | 91.1 | 2,538 | 96.4 | 2,343 | 92.6 | 2,083 | 89.7 | 2,191 | 94.1 | 2,114 | 91.0 |
| 24 Hour | 2,280 | 100.0 | 2,253 | 100.0 | 2,209 | 100.0 | 2,339 | 100.0 | 2,022 | 100.0 | 2,632 | 100.0 | 2,531 | 100.0 | 2,322 | 100.0 | 2,327 | 100.0 | 2,324 | 100.0 |
| AVG Week Day | | 98.2% | | 97.0% | | 95.1% | | 100.7% | | | | | | 109.0% | | 100.0% | | 100.2% | | 100.1% |
| AVG Week End | | | | | | | | | | 86.9% | | 113.1% | | | | 99.8% | | 100.0% | | 99.9% |
| AVG Day | | 98.1% | | 97.0% | | 95.1% | | 100.7% | | 87.0% | | 113.3% | | 108.9% | | 99.9% | | 100.1% | | 100.0% |



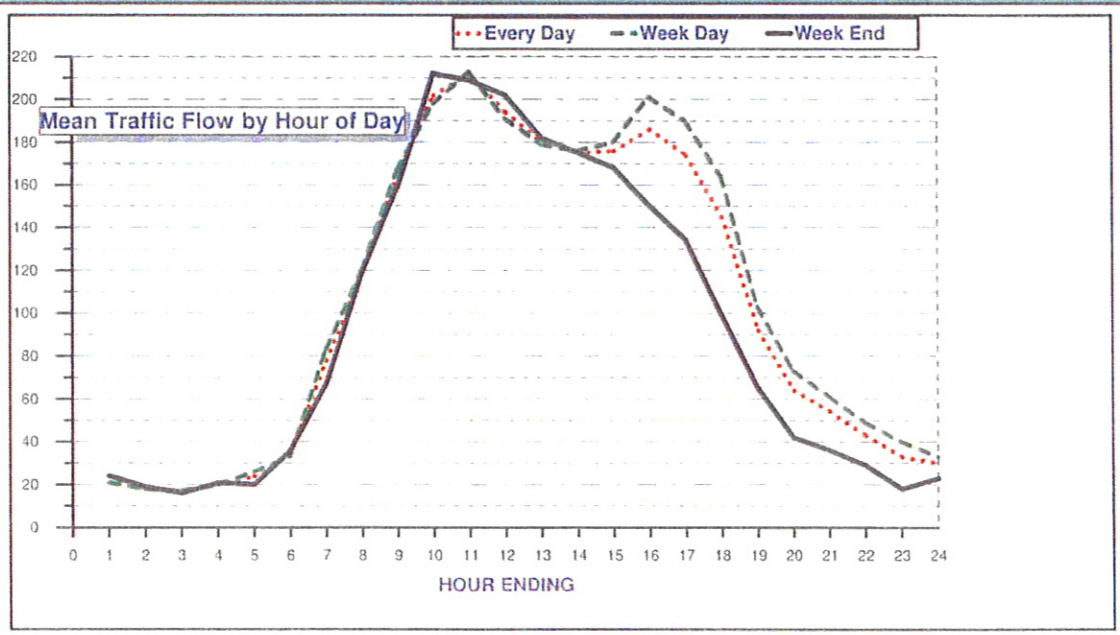
Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60022 100m Nth Rodds Ck on Bruce Hwy |
| Type | COVERAGE |
| TDist | 133.085 |
| Site Stream | Against Gazettal |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

Mean Counts for
14-AUG-2007
27-AUG-2007

| Hour | Tuesday | % | Wednesday | % | Thursday | % | Friday | % | Saturday | % | Sunday | % | Monday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 15 | .7 | 25 | 1.0 | 25 | .9 | 26 | .8 | 32 | 1.4 | 15 | .7 | 12 | .5 | 21 | .8 | 24 | 1.1 | 21 | .9 |
| 01- 02 | 21 | .9 | 20 | .8 | 19 | .7 | 23 | .7 | 22 | 1.0 | 16 | .7 | 7 | .3 | 18 | .7 | 19 | .9 | 18 | .7 |
| 02- 03 | 14 | .6 | 15 | .6 | 22 | .8 | 23 | .7 | 21 | .9 | 10 | .5 | 11 | .5 | 17 | .7 | 16 | .7 | 17 | .7 |
| 03- 04 | 14 | .6 | 21 | .9 | 22 | .8 | 24 | .8 | 24 | 1.1 | 17 | .8 | 17 | .8 | 20 | .8 | 21 | .9 | 20 | .8 |
| 04- 05 | 27 | 1.2 | 27 | 1.1 | 27 | 1.0 | 29 | .9 | 31 | 1.4 | 9 | .4 | 19 | .8 | 26 | 1.0 | 20 | .9 | 24 | 1.0 |
| 05- 06 | 24 | 1.1 | 36 | 1.5 | 37 | 1.4 | 46 | 1.5 | 49 | 2.2 | 22 | 1.0 | 23 | 1.0 | 33 | 1.3 | 36 | 1.6 | 34 | 1.4 |
| 06- 07 | 90 | 4.0 | 84 | 3.4 | 84 | 3.1 | 92 | 2.9 | 86 | 3.8 | 47 | 2.1 | 63 | 2.8 | 83 | 3.2 | 67 | 3.0 | 78 | 3.2 |
| 07- 08 | 107 | 4.8 | 103 | 4.2 | 127 | 4.7 | 153 | 4.9 | 153 | 6.8 | 85 | 3.9 | 112 | 5.0 | 120 | 4.7 | 119 | 5.4 | 120 | 4.9 |
| 08- 09 | 157 | 7.0 | 149 | 6.1 | 174 | 6.5 | 192 | 6.1 | 184 | 8.2 | 134 | 6.1 | 164 | 7.3 | 167 | 6.5 | 159 | 7.2 | 165 | 6.7 |
| 09- 10 | 175 | 7.8 | 207 | 8.5 | 193 | 7.2 | 219 | 7.0 | 219 | 9.8 | 204 | 9.3 | 196 | 8.7 | 198 | 7.8 | 212 | 9.5 | 202 | 8.2 |
| 10- 11 | 192 | 8.5 | 189 | 7.7 | 209 | 7.8 | 266 | 8.5 | 214 | 9.5 | 203 | 9.3 | 210 | 9.3 | 213 | 8.3 | 209 | 9.4 | 212 | 8.6 |
| 11- 12 | 152 | 6.7 | 182 | 7.4 | 205 | 7.6 | 227 | 7.2 | 196 | 8.7 | 208 | 9.5 | 190 | 8.5 | 191 | 7.5 | 202 | 9.1 | 194 | 7.9 |
| 12- 13 | 141 | 6.3 | 174 | 7.1 | 193 | 7.2 | 208 | 6.6 | 175 | 7.8 | 189 | 8.6 | 179 | 8.0 | 179 | 7.0 | 182 | 8.2 | 180 | 7.3 |
| 13- 14 | 134 | 6.0 | 173 | 7.1 | 198 | 7.4 | 227 | 7.2 | 165 | 7.4 | 185 | 8.4 | 146 | 6.5 | 176 | 6.9 | 175 | 7.9 | 175 | 7.1 |
| 14- 15 | 164 | 7.3 | 162 | 6.6 | 190 | 7.1 | 231 | 7.4 | 141 | 6.3 | 194 | 8.9 | 153 | 6.8 | 180 | 7.0 | 168 | 7.6 | 176 | 7.2 |
| 15- 16 | 168 | 7.5 | 191 | 7.8 | 210 | 7.8 | 276 | 8.8 | 113 | 5.0 | 186 | 8.5 | 159 | 7.1 | 201 | 7.9 | 150 | 6.7 | 186 | 7.6 |
| 16- 17 | 179 | 7.9 | 186 | 7.6 | 191 | 7.1 | 247 | 7.9 | 127 | 5.7 | 140 | 6.4 | 149 | 6.6 | 190 | 7.5 | 134 | 6.0 | 174 | 7.1 |
| 17- 18 | 144 | 6.4 | 160 | 6.5 | 174 | 6.5 | 201 | 6.4 | 93 | 4.1 | 104 | 4.7 | 142 | 6.3 | 164 | 6.4 | 99 | 4.4 | 145 | 5.9 |
| 18- 19 | 77 | 3.4 | 89 | 3.6 | 115 | 4.3 | 148 | 4.7 | 54 | 2.4 | 75 | 3.4 | 84 | 3.7 | 103 | 4.0 | 65 | 2.9 | 92 | 3.7 |
| 19- 20 | 69 | 3.1 | 75 | 3.1 | 77 | 2.9 | 88 | 2.8 | 40 | 1.8 | 43 | 2.0 | 57 | 2.5 | 73 | 2.9 | 42 | 1.9 | 64 | 2.6 |
| 20- 21 | 64 | 2.8 | 63 | 2.6 | 55 | 2.0 | 70 | 2.2 | 33 | 1.5 | 39 | 1.8 | 51 | 2.3 | 61 | 2.4 | 36 | 1.6 | 54 | 2.2 |
| 21- 22 | 47 | 2.1 | 45 | 1.8 | 58 | 2.2 | 54 | 1.7 | 27 | 1.2 | 31 | 1.4 | 39 | 1.7 | 49 | 1.9 | 29 | 1.3 | 43 | 1.7 |
| 22- 23 | 36 | 1.6 | 42 | 1.7 | 39 | 1.5 | 42 | 1.3 | 19 | .8 | 17 | .8 | 39 | 1.7 | 40 | 1.6 | 18 | .8 | 33 | 1.4 |
| 23- 24 | 41 | 1.8 | 30 | 1.2 | 39 | 1.5 | 30 | 1.0 | 26 | 1.2 | 19 | .9 | 26 | 1.2 | 33 | 1.3 | 23 | 1.0 | 30 | 1.2 |
| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
| AM | 11:00 | 192 | 10:00 | 207 | 11:00 | 209 | 11:00 | 266 | 10:00 | 219 | 12:00 | 208 | 11:00 | 210 | 11:00 | 215 | 10:00 | 211 | 11:00 | 213 |
| PM | 17:00 | 171 | 16:00 | 191 | 16:00 | 210 | 16:00 | 276 | 13:00 | 175 | 15:00 | 194 | 13:00 | 179 | 16:00 | 199 | 13:00 | 182 | 16:00 | 185 |
| 12 Hour | 1,790 | 79.5 | 1,965 | 80.3 | 2,179 | 81.2 | 2,595 | 82.6 | 1,834 | 81.7 | 1,907 | 87.0 | 1,884 | 83.8 | 2,083 | 81.5 | 1,871 | 84.3 | 2,022 | 82.2 |
| 16 Hour | 2,060 | 91.5 | 2,232 | 91.2 | 2,453 | 91.4 | 2,899 | 92.3 | 2,020 | 90.0 | 2,067 | 94.3 | 2,094 | 93.1 | 2,348 | 91.9 | 2,044 | 92.1 | 2,261 | 92.0 |
| 18 Hour | 2,137 | 94.9 | 2,304 | 94.1 | 2,531 | 94.3 | 2,971 | 94.6 | 2,065 | 92.0 | 2,103 | 95.9 | 2,159 | 96.0 | 2,420 | 94.7 | 2,084 | 94.0 | 2,324 | 94.5 |
| 24 Hour | 2,252 | 100.0 | 2,448 | 100.0 | 2,683 | 100.0 | 3,142 | 100.0 | 2,244 | 100.0 | 2,192 | 100.0 | 2,248 | 100.0 | 2,555 | 100.0 | 2,218 | 100.0 | 2,458 | 100.0 |
| AVG Week Day | 88.2% | | 95.8% | | 105.0% | | 123.0% | | | | | | 88.0% | | 100.0% | | 86.8% | | 96.2% | |
| AVG Week End | | | | | | | | | 101.2% | | 98.8% | | | | 115.2% | | 100.0% | | 110.8% | |
| AVG Day | 91.6% | | 99.6% | | 109.1% | | 127.8% | | 91.3% | | 89.2% | | 91.4% | | 103.9% | | 90.2% | | 100.0% | |



Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## AADT SEGMENTS REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Year | 2006 |
| TDist | 99.281 — 147.144 Status C |
| Direction | All Directions |

Through Distance: 99.281 - 147.145

Site: 60022 100m N Rodds Ck

| Gaz Dir | AADT | % per Vehicle Class: Light Vehicle | Heavy Vehicle | Short Vehicle | Truck or Bus | Articulated Vehicle | Road Train | % Growth: 1 Yr | 5 Yr | 10 Yr |
|---|---|---|---|---|---|---|---|---|---|---|
| G | 2,136 | 79.24 | 20.76 | 79.24 | 5.91 | 9.76 | 5.09 | -1.84 | 1.93 | 3.32 |
| A | 2,171 | 78.71 | 21.29 | 78.71 | 5.92 | 9.68 | 5.69 | 2.55 | 1.98 | 3.99 |
| B | 4,307 | 78.99 | 21.01 | 78.99 | 5.92 | 9.71 | 5.38 | .33 | 1.95 | 3.64 |

* These values were updated manually or derived from previous years growth figures.

Queensland Government
Department of Main Roads

# Traffic Analysis and Reporting System
## WEEKLY SUMMARY REPORT

| | |
|---|---|
| District | 6 CENTRAL DISTRICT |
| Road Section | 10D GIN GIN - BENARABY |
| Site | 60022 100m N Rodds Ck |
| Type | COVERAGE |
| TDist | 133.085 |
| Site Stream | All Site Streams |
| Traffic Class | 00 All Vehicles |
| Data Class | 0 Volume |
| Range | 0 |

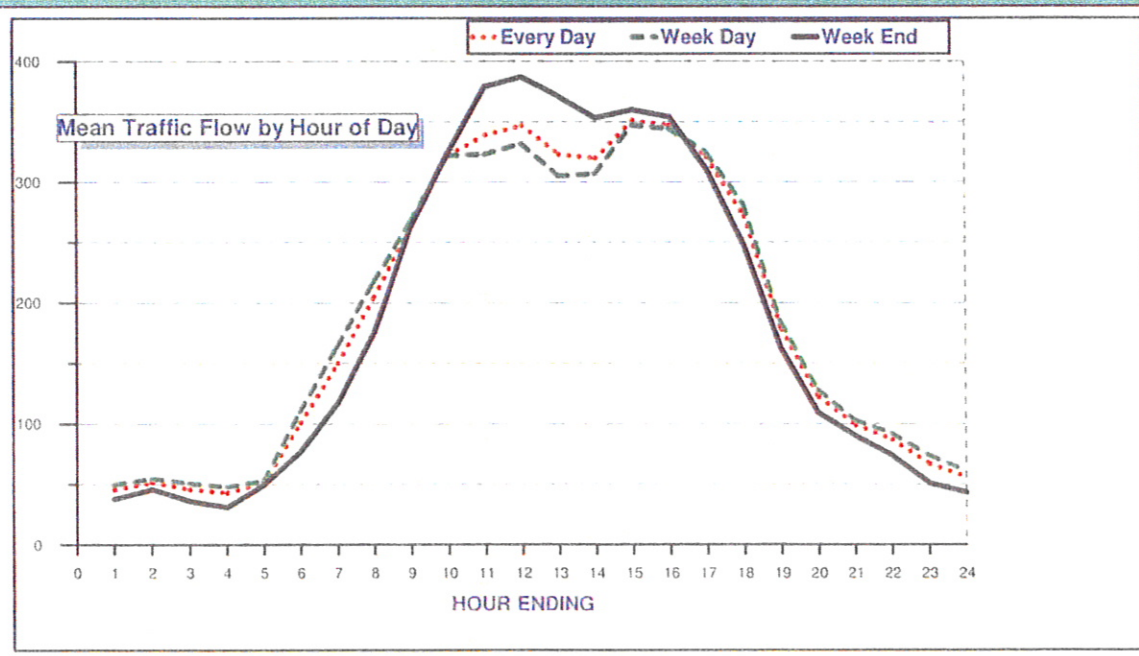
Mean Counts for
14-JUN-2006
27-JUN-2006

| Hour | Wednesday | % | Thursday | % | Friday | % | Saturday | % | Sunday | % | Monday | % | Tuesday | % | Average Week Day | % | Average Week End | % | Average Day | % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00- 01 | 48 | 1.2 | 58 | 1.3 | 56 | 1.1 | 45 | 1.0 | 30 | .7 | 28 | .6 | 59 | 1.4 | 50 | 1.1 | 38 | .8 | 46 | 1.0 |
| 01- 02 | 56 | 1.4 | 60 | 1.3 | 66 | 1.2 | 60 | 1.4 | 31 | .7 | 26 | .6 | 66 | 1.6 | 55 | 1.2 | 46 | 1.0 | 52 | 1.2 |
| 02- 03 | 47 | 1.1 | 60 | 1.3 | 62 | 1.2 | 43 | 1.0 | 28 | .6 | 30 | .7 | 54 | 1.3 | 51 | 1.1 | 36 | .8 | 46 | 1.0 |
| 03- 04 | 46 | 1.1 | 49 | 1.1 | 62 | 1.2 | 42 | 1.0 | 19 | .4 | 26 | .6 | 57 | 1.4 | 48 | 1.1 | 31 | .7 | 43 | 1.0 |
| 04- 05 | 49 | 1.2 | 52 | 1.2 | 69 | 1.3 | 68 | 1.5 | 32 | .7 | 41 | .9 | 55 | 1.3 | 53 | 1.2 | 50 | 1.1 | 52 | 1.2 |
| 05- 06 | 98 | 2.4 | 105 | 2.3 | 123 | 2.3 | 98 | 2.2 | 55 | 1.2 | 117 | 2.6 | 109 | 2.6 | 110 | 2.4 | 77 | 1.7 | 101 | 2.2 |
| 06- 07 | 162 | 3.9 | 160 | 3.6 | 171 | 3.2 | 152 | 3.4 | 81 | 1.8 | 181 | 4.0 | 146 | 3.5 | 164 | 3.6 | 117 | 2.6 | 150 | 3.3 |
| 07- 08 | 214 | 5.2 | 208 | 4.6 | 253 | 4.7 | 217 | 4.9 | 133 | 3.0 | 215 | 4.7 | 197 | 4.7 | 217 | 4.8 | 175 | 3.9 | 205 | 4.5 |
| 08- 09 | 244 | 5.9 | 256 | 5.7 | 290 | 5.4 | 306 | 6.9 | 220 | 4.9 | 258 | 5.7 | 285 | 6.8 | 267 | 5.9 | 263 | 5.9 | 266 | 5.9 |
| 09- 10 | 325 | 7.9 | 307 | 6.8 | 349 | 6.6 | 352 | 8.0 | 295 | 6.6 | 328 | 7.2 | 299 | 7.1 | 322 | 7.1 | 324 | 7.3 | 322 | 7.1 |
| 10- 11 | 297 | 7.2 | 315 | 7.0 | 344 | 6.5 | 380 | 8.6 | 377 | 8.4 | 367 | 8.1 | 291 | 6.9 | 323 | 7.1 | 379 | 8.5 | 339 | 7.5 |
| 11- 12 | 316 | 7.6 | 308 | 6.9 | 369 | 6.9 | 377 | 8.6 | 396 | 8.8 | 362 | 8.0 | 304 | 7.2 | 332 | 7.3 | 387 | 8.7 | 347 | 7.7 |
| 12- 13 | 282 | 6.8 | 276 | 6.1 | 332 | 6.2 | 389 | 8.8 | 352 | 7.9 | 337 | 7.4 | 296 | 7.0 | 305 | 6.7 | 371 | 8.3 | 323 | 7.2 |
| 13- 14 | 292 | 7.1 | 277 | 6.2 | 378 | 7.1 | 321 | 7.3 | 384 | 8.6 | 310 | 6.8 | 277 | 6.6 | 307 | 6.8 | 353 | 7.9 | 320 | 7.1 |
| 14- 15 | 304 | 7.4 | 348 | 7.7 | 406 | 7.6 | 308 | 7.0 | 411 | 9.2 | 357 | 7.9 | 320 | 7.6 | 347 | 7.6 | 360 | 8.1 | 351 | 7.8 |
| 15- 16 | 323 | 7.8 | 302 | 6.7 | 434 | 8.1 | 295 | 6.7 | 413 | 9.2 | 344 | 7.6 | 316 | 7.5 | 344 | 7.6 | 354 | 8.0 | 347 | 7.7 |
| 16- 17 | 270 | 6.5 | 345 | 7.7 | 436 | 8.2 | 268 | 6.1 | 354 | 7.9 | 311 | 6.8 | 265 | 6.3 | 325 | 7.2 | 311 | 7.0 | 321 | 7.1 |
| 17- 18 | 202 | 4.9 | 318 | 7.1 | 345 | 6.5 | 211 | 4.8 | 285 | 6.4 | 295 | 6.5 | 248 | 5.9 | 282 | 6.2 | 248 | 5.6 | 272 | 6.0 |
| 18- 19 | 161 | 3.9 | 201 | 4.5 | 246 | 4.6 | 127 | 2.9 | 197 | 4.4 | 163 | 3.6 | 150 | 3.6 | 184 | 4.1 | 162 | 3.6 | 178 | 3.9 |
| 19- 20 | 105 | 2.5 | 134 | 3.0 | 159 | 3.0 | 105 | 2.4 | 112 | 2.5 | 136 | 3.0 | 105 | 2.5 | 128 | 2.8 | 109 | 2.4 | 122 | 2.7 |
| 20- 21 | 81 | 2.0 | 104 | 2.3 | 119 | 2.2 | 76 | 1.7 | 104 | 2.3 | 96 | 2.1 | 115 | 2.7 | 103 | 2.3 | 90 | 2.0 | 99 | 2.2 |
| 21- 22 | 70 | 1.7 | 99 | 2.2 | 119 | 2.2 | 72 | 1.6 | 75 | 1.7 | 90 | 2.0 | 83 | 2.0 | 92 | 2.0 | 74 | 1.7 | 87 | 1.9 |
| 22- 23 | 79 | 1.9 | 87 | 1.9 | 69 | 1.3 | 52 | 1.2 | 49 | 1.1 | 71 | 1.6 | 64 | 1.5 | 74 | 1.6 | 51 | 1.1 | 67 | 1.5 |
| 23- 24 | 65 | 1.6 | 64 | 1.4 | 70 | 1.3 | 42 | 1.0 | 43 | 1.0 | 58 | 1.3 | 50 | 1.2 | 61 | 1.4 | 43 | 1.0 | 56 | 1.2 |

| Peaks | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value | Time | Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AM | 10:00 | 325 | 11:00 | 315 | 12:00 | 369 | 11:00 | 380 | 12:00 | 396 | 11:00 | 367 | 12:00 | 304 | 12:00 | 333 | 12:00 | 386 | 12:00 | 349 |
| PM | 15:00 | 304 | 15:00 | 348 | 17:00 | 436 | 13:00 | 389 | 16:00 | 413 | 15:00 | 357 | 15:00 | 320 | 15:00 | 352 | 13:00 | 370 | 15:00 | 354 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 Hour | 3,230 | 78.1 | 3,461 | 77.0 | 4,182 | 78.5 | 3,551 | 80.6 | 3,817 | 85.3 | 3,647 | 80.2 | 3,248 | 77.1 | 3,554 | 78.2 | 3,684 | 83.0 | 3,591 | 79.6 |
| 16 Hour | 3,648 | 88.2 | 3,958 | 88.1 | 4,750 | 89.2 | 3,956 | 89.8 | 4,189 | 93.6 | 4,150 | 91.3 | 3,697 | 87.8 | 4,041 | 88.9 | 4,073 | 91.7 | 4,050 | 89.7 |
| 18 Hour | 3,792 | 91.7 | 4,109 | 91.5 | 4,889 | 91.8 | 4,050 | 91.9 | 4,281 | 95.6 | 4,279 | 94.1 | 3,811 | 90.5 | 4,176 | 91.9 | 4,166 | 93.8 | 4,173 | 92.5 |
| 24 Hour | 4,136 | 100.0 | 4,493 | 100.0 | 5,327 | 100.0 | 4,406 | 100.0 | 4,476 | 100.0 | 4,547 | 100.0 | 4,211 | 100.0 | 4,543 | 100.0 | 4,441 | 100.0 | 4,514 | 100.0 |

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AVG Week Day | | 91.0% | | 98.9% | | 117.3% | | | | | | 100.1% | | 92.7% | | 100.0% | | 97.8% | | 99.4% |
| AVG Week End | | | | | | | | 99.2% | | 100.8% | | | | | | 102.3% | | 100.0% | | 101.6% |
| AVG Day | | 91.6% | | 99.5% | | 118.0% | | 97.6% | | 99.2% | | 100.7% | | 93.3% | | 100.6% | | 98.4% | | 100.0% |



# *Appendix F*

# *Traffic Calculations*

## GENERATION FOR TOURIST PEAK

| Land Use | Amount | Unit | Phasing (units) | | | Peak Generation (trips/hour) | | | Rates | Require trip to highway | % TO/FROM highway | Total External (trips/hour) | | | Split (PM) | AM - 2013 | | PM - 2013 | | AM - 2018 | | PM - 2018 | | AM - 2023 | | PM - 2023 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 2013 | 2018 | 2023 | 2013 | 2018 | 2023 | | | | 2013 | 2018 | 2023 | | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT |
| Marine Centre and Retail | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Service Station & Store | 180 | m2 | 180 | 180 | 180 | 119 | 119 | 119 | 0.66 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Professional Office | 10 | employees | 10 | 10 | 10 | 8 | 8 | 8 | 0.8 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Landscape/Hardware | 200 | m2 GFA | 200 | 200 | 200 | 5 | 5 | 5 | 2.5 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Food & Beverage | 200 | m2 GFA | 200 | 200 | 200 | 10 | 10 | 10 | 5 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Service | 2 | employees | 2 | 2 | 2 | 2 | 2 | 2 | 1 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Conference Centre & Motel | 50 | rooms | 0 | 25 | 50 | 0 | 10 | 20 | 0.4 | Y | 50% | 0 | 5 | 10 | 80/20 | 0 | 0 | 0 | 0 | 1 | 4 | 4 | 1 | 2 | 8 | 8 | 2 |
| Food & Beverage | 250 | m2 GFA | 0 | 120 | 250 | 0 | 6 | 13 | 5 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Lobby Retail | 60 | m2 GFA | 0 | 30 | 60 | Internal | Internal | Internal | | N | 0% | | | | | | | | | | | | | | | | |
| Airstrip | | | | | | 10 | 10 | 10 | | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Headland Resort Hotel | 150 | rooms | 0 | 75 | 150 | 0 | 30 | 60 | 0.4 | Y | 50% | 0 | 15 | 30 | 80/20 | 0 | 0 | 0 | 0 | 3 | 12 | 12 | 3 | 6 | 24 | 24 | 6 |
| Beach Front Tourist Hotel | 150 | rooms | 0 | 75 | 150 | 0 | 26 | 53 | 0.35 | Y | 50% | 0 | 13 | 26 | 80/20 | 0 | 0 | 0 | 0 | 3 | 11 | 11 | 3 | 5 | 21 | 21 | 5 |
| Tourist Park | 200 | sites | 200 | 200 | 200 | 160 | 160 | 160 | 0.8 | Y | 10% | 16 | 16 | 16 | 80/20 | 3 | 13 | 13 | 3 | 3 | 13 | 13 | 3 | 3 | 13 | 13 | 3 |
| Convenience Store | 100 | m2 GFA | 100 | 100 | 100 | Internal | Internal | Internal | | N | 0% | | | | | | | | | | | | | | | | |
| School Recreational Camp Ground | 20 | employees | 20 | 20 | 20 | 20 | 20 | 20 | 1 | Y | 50% | 10 | 10 | 10 | 80/20 | 2 | 8 | 8 | 2 | 2 | 8 | 8 | 2 | 2 | 8 | 8 | 2 |
| Hummock Town Centre | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Supermarket | 2500 | m2 GFA | 625 | 1653 | 2500 | 97 | 256 | 388 | 15.5 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Hair dressing / Beauty Salon | 60 | m2 GFA | 15 | 45 | 60 | 1 | 2 | 3 | 5.1 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Retail | 1000 | m2 GFA | 250 | 750 | 1000 | 5 | 15 | 20 | 2.0 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Professional Office | 500 | m2 GFA | 125 | 300 | 500 | 3 | 7 | 11 | 2.2 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Video Shop | 100 | m2 GFA | 25 | 75 | 100 | 1 | 4 | 5 | 5.1 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Butcher | 60 | m2 GFA | 15 | 45 | 60 | 1 | 2 | 3 | 5.1 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Fruit & Vegetable | 60 | m2 GFA | 15 | 45 | 60 | 1 | 2 | 3 | 5.1 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Food & Beverage | 350 | m2 GFA | 87.5 | 200 | 350 | 4 | 10 | 18 | 5.0 | N | 0% | 0 | 0 | 0 | | | | | | | | | | | | | |
| Golf Course & Clubhouse | 97 | hectares | 0 | 45 | 97 | 0 | 33 | 72 | 0.74 | Y | 20% | 0 | 7 | 14 | 80/20 | 0 | 0 | 0 | 0 | 1 | 5 | 5 | 1 | 3 | 12 | 12 | 3 |
| Boyne Channel Home Offices | 5 | dwellings | 0 | 3 | 5 | 0 | 1.8 | 3 | 0.6 | Y | 10% | 0 | 0 | 0 | 70/30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Headland Resort Apartments | 58 | units | 58 | 58 | 58 | 35 | 35 | 35 | 0.6 | Y | 10% | 3 | 3 | 3 | 70/30 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 |
| Headland Holiday Homes | 12 | dwellings | 12 | 12 | 12 | 9 | 9 | 9 | 0.8 | Y | 10% | 1 | 1 | 1 | 70/30 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 |
| Beach Front Holiday Homes | 75 | dwellings | 50 | 61 | 75 | 40 | 49 | 60 | 0.8 | Y | 10% | 4 | 5 | 6 | 70/30 | 1 | 3 | 3 | 1 | 1 | 3 | 3 | 1 | 2 | 4 | 4 | 2 |
| Beach Front Apartments | 32 | units | 32 | 32 | 32 | 19 | 19 | 19 | 0.6 | Y | 10% | 2 | 2 | 2 | 70/30 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Seaside Cottages | 75 | dwellings | 25 | 50 | 75 | 19.6 | 40 | 60 | 0.8 | Y | 10% | 2 | 4 | 6 | 70/30 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 2 | 4 | 4 | 2 |
| Ridgetop Houses | 79 | dwellings | 79 | 79 | 79 | 63 | 63 | 63 | 0.8 | Y | 10% | 6 | 6 | 6 | 70/30 | 2 | 4 | 4 | 2 | 2 | 4 | 4 | 2 | 2 | 4 | 4 | 2 |
| Hill Side Terraces | 103 | dwellings | 35 | 90 | 103 | 28 | 72 | 82 | 0.8 | Y | 10% | 3 | 7 | 8 | 70/30 | 1 | 2 | 2 | 1 | 2 | 5 | 5 | 2 | 2 | 6 | 6 | 2 |
| Lagoon Villas | 62 | dwellings | 42 | 50 | 62 | 33 | 40 | 50 | 0.8 | Y | 10% | 3 | 4 | 5 | 70/30 | 1 | 2 | 2 | 1 | 1 | 3 | 3 | 1 | 1 | 3 | 3 | 1 |
| Riparian Eco houses | 68 | dwellings | 0 | 33 | 68 | 0 | 26 | 54 | 0.8 | Y | 10% | 0 | 3 | 5 | 70/30 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 4 | 4 | 2 |
| Bushland Residential | 74 | dwellings | 0 | 36 | 74 | 0 | 29 | 59 | 0.8 | Y | 10% | 0 | 3 | 6 | 70/30 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 4 | 4 | 2 |
| Resort Town Apartments | 46 | units | 16 | 38 | 46 | 10 | 23 | 28 | 0.6 | Y | 10% | 1 | 2 | 3 | 70/30 | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 |
| Resort Village Townhouses | 28 | dwellings | 0 | 13 | 28 | 0 | 10 | 22 | 0.8 | Y | 10% | 0 | 1 | 2 | 70/30 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 1 |
| Golf Course Resort Homesites | 135 | dwellings | 0 | 68 | 135 | 0 | 54 | 108 | 0.8 | Y | 10% | 0 | 5 | 11 | 70/30 | 0 | 0 | 0 | 0 | 2 | 4 | 4 | 2 | 3 | 8 | 8 | 3 |
| Golf Course Resort Apartments | 128 | units | 0 | 64 | 128 | 0 | 38 | 77 | 0.6 | Y | 10% | 0 | 4 | 8 | 70/30 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 2 | 5 | 5 | 2 |
| Boyne Channel Apartments | 48 | units | 0 | 23 | 48 | 0 | 14 | 29 | 0.6 | Y | 10% | 0 | 1 | 3 | 70/30 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 2 | 2 | 1 |
| Commuter Trips generated in Tourist Peak | | | 347 | 709 | 1027 | 174 | 355 | 513 | 0.5 | y | 12% | 21 | 43 | 63 | 70/30 | 6 | 15 | 15 | 6 | 13 | 30 | 30 | 13 | 19 | 44 | 44 | 19 |
| **TOTAL Excluding Commuter Trips** | | | | | | **703** | **1262** | **1759** | | | | **52** | **118** | **182** | | **13** | **39** | **39** | **13** | **29** | **89** | **89** | **29** | **44** | **138** | **138** | **44** |
| **TOTAL Including Commuter Trips** | | | | | | **876** | **1616** | **2272** | | | | **73** | **162** | **245** | | **19** | **54** | **54** | **19** | **42** | **120** | **120** | **42** | **63** | **182** | **182** | **63** |
| | | | | | | **% External Trips to Highway excluding commuter trips** | | | | | | **7%** | **9%** | **10%** | | **7%** | | **7%** | | **9%** | | **9%** | | **10%** | | **10%** | |
| | | | | | | **% External Trips to Highway including commuter trips** | | | | | | **8%** | **10%** | **11%** | | **10%** | | **10%** | | **13%** | | **13%** | | **14%** | | **14%** | |

| |
|---|
| Residenital Component |
| 50% |
| 70% of Peak Tourist trips occur during the commuter road peak hour |
| 0.7 |

## GENERATION FOR COMMUTER PEAK

| Land Use | % Residents working in Region | % Residents working locally | Amount | Unit | Phasing (units) | | | Peak Generation (trips/hour) | | | Rates | Require trip to highway | % TO/FROM highway Commuter | % TO/FROM highway Local | Commuter Regional Total External (trips/hour) | | | Commuter Local Total External (trips/hour) | | | Total Trips | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | Total External (trips/hour) | | | Split (PM) | AM - 2013 | | PM - 2013 | | AM - 2018 | | PM - 2018 | | AM - 2023 | | PM - 2023 | |
| | | | | | 2013 | 2018 | 2023 | 2013 | 2018 | 2023 | | | | | 2013 | 2018 | 2023 | 2013 | 2018 | 2023 | 2013 | 2018 | 2023 | | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT |
| School | 40% | 60% | 240 | students | 80 | 180 | 240 | 16 | 36 | 48 | 0.2 | Y | 10% | 10% | 1 | 1 | 2 | 1 | 2 | 3 | 2 | 4 | 5 | 80/20 | 0 | 1 | 1 | 0 | 1 | 3 | 3 | 1 | 1 | 4 | 4 | 1 |
| Community Centre | | | | | | | | Internal | Internal | Internal | | | | | | | | | | | | | | | | | | | | | | | | |
| Boyne Channel Home Offices | 40% | 60% | 5 | dwellings | 0 | 3 | 5 | 0 | 2 | 3 | 0.6 | Y | 40% | 20% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 70/30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 |
| Headland Resort Apartments | 40% | 60% | 58 | units | 58 | 58 | 58 | 35 | 35 | 35 | 0.6 | Y | 40% | 20% | 6 | 6 | 6 | 4 | 4 | 4 | 10 | 10 | 10 | 70/30 | 3 | 7 | 7 | 3 | 3 | 7 | 7 | 3 | 3 | 7 | 7 | 3 |
| Headland Holiday Homes | 40% | 60% | 12 | dwellings | 12 | 12 | 12 | 9 | 9 | 9 | 0.8 | Y | 40% | 20% | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 3 | 70/30 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 1 |
| Beach Front Holiday Homes | 40% | 60% | 75 | dwellings | 50 | 61 | 75 | 40 | 49 | 60 | 0.8 | Y | 40% | 20% | 6 | 8 | 10 | 5 | 6 | 7 | 11 | 14 | 17 | 70/30 | 3 | 8 | 8 | 3 | 4 | 10 | 10 | 4 | 5 | 12 | 12 | 5 |
| Beach Front Apartments | 40% | 60% | 32 | units | 32 | 32 | 32 | 19 | 19 | 19 | 0.6 | Y | 40% | 20% | 3 | 3 | 3 | 2 | 2 | 2 | 5 | 5 | 5 | 70/30 | 2 | 4 | 4 | 2 | 2 | 4 | 4 | 2 | 2 | 4 | 4 | 2 |
| Seaside Cottages | 40% | 60% | 75 | dwellings | 25 | 50 | 75 | 20 | 40 | 60 | 0.8 | Y | 40% | 20% | 3 | 6 | 10 | 2 | 5 | 7 | 5 | 11 | 17 | 70/30 | 2 | 4 | 4 | 2 | 3 | 8 | 8 | 3 | 5 | 12 | 12 | 5 |
| Ridgetop Houses | 40% | 60% | 79 | dwellings | 79 | 79 | 79 | 63 | 63 | 63 | 0.8 | Y | 40% | 20% | 10 | 10 | 10 | 8 | 8 | 8 | 18 | 18 | 18 | 70/30 | 5 | 12 | 12 | 5 | 5 | 12 | 12 | 5 | 5 | 12 | 12 | 5 |
| Hill Side Terraces | 40% | 60% | 103 | dwellings | 35 | 90 | 103 | 28 | 72 | 82 | 0.8 | Y | 40% | 20% | 4 | 12 | 13 | 3 | 9 | 10 | 8 | 20 | 23 | 70/30 | 2 | 5 | 5 | 2 | 6 | 14 | 14 | 6 | 7 | 16 | 16 | 7 |
| Lagoon Villas | 40% | 60% | 62 | dwellings | 42 | 50 | 62 | 33 | 40 | 50 | 0.8 | Y | 40% | 20% | 5 | 6 | 8 | 4 | 5 | 6 | 9 | 11 | 14 | 70/30 | 3 | 7 | 7 | 3 | 3 | 8 | 8 | 3 | 4 | 10 | 10 | 4 |
| Riparian Eco houses | 40% | 60% | 68 | dwellings | 0 | 33 | 68 | 0 | 26 | 54 | 0.8 | Y | 40% | 20% | 0 | 4 | 9 | 0 | 3 | 7 | 0 | 7 | 15 | 70/30 | 0 | 0 | 0 | 0 | 2 | 5 | 5 | 2 | 5 | 11 | 11 | 5 |
| Bushland Residential | 40% | 60% | 74 | dwellings | 0 | 36 | 74 | 0 | 29 | 59 | 0.8 | Y | 40% | 20% | 0 | 5 | 9 | 0 | 3 | 7 | 0 | 8 | 16 | 70/30 | 0 | 0 | 0 | 0 | 2 | 6 | 6 | 2 | 5 | 12 | 12 | 5 |
| Resort Town Apartments | 40% | 60% | 46 | units | 16 | 38 | 46 | 10 | 23 | 28 | 0.6 | Y | 40% | 20% | 2 | 4 | 4 | 1 | 3 | 3 | 3 | 6 | 8 | 70/30 | 1 | 2 | 2 | 1 | 2 | 4 | 4 | 2 | 2 | 5 | 5 | 2 |
| Resort Village Townhouses | 40% | 60% | 28 | dwellings | 0 | 13 | 28 | 0 | 10 | 22 | 0.8 | Y | 40% | 20% | 0 | 2 | 4 | 0 | 1 | 3 | 0 | 3 | 6 | 70/30 | 0 | 0 | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 4 | 4 | 2 |
| Golf Course Resort Homesites | 40% | 60% | 135 | dwellings | 0 | 68 | 135 | 0 | 54 | 108 | 0.8 | Y | 40% | 20% | 0 | 9 | 17 | 0 | 7 | 13 | 0 | 15 | 30 | 70/30 | 0 | 0 | 0 | 0 | 5 | 11 | 11 | 5 | 9 | 21 | 21 | 9 |
| Golf Course Resort Apartments | 40% | 60% | 128 | units | 0 | 64 | 127 | 0 | 38 | 76 | 0.6 | Y | 40% | 20% | 0 | 6 | 12 | 0 | 5 | 9 | 0 | 11 | 21 | 70/30 | 0 | 0 | 0 | 0 | 3 | 8 | 8 | 3 | 6 | 15 | 15 | 6 |
| Boyne Channel Apartments | 40% | 60% | 48 | units | 0 | 23 | 48 | 0 | 14 | 29 | 0.6 | Y | 40% | 20% | 0 | 2 | 5 | 0 | 2 | 3 | 0 | 4 | 8 | 70/30 | 0 | 0 | 0 | 0 | 1 | 3 | 3 | 1 | 2 | 6 | 6 | 2 |
| Tourist Trips Generated in Commuter Peak | | | | | | | | | | | | | | | | | | | | | 26 | 62 | 97 | 80/20 | 5 | 21 | 21 | 5 | 12 | 50 | 50 | 12 | 19 | 78 | 78 | 19 |
| **TOTAL Excluding Tourist Trips** | | | | | | | | **272** | **560** | **805** | | | | | **42** | **85** | **123** | **32** | **65** | **94** | **73** | **150** | **217** | | **22** | **52** | **52** | **22** | **45** | **106** | **106** | **45** | **65** | **152** | **152** | **65** |
| **TOTAL Including Tourist Trips** | | | | | | | | | | | | | | | | | | | | | **99** | **213** | **314** | | **27** | **72** | **72** | **27** | **57** | **155** | **155** | **57** | **85** | **230** | **230** | **85** |
| **% External Trips to Highway excluding tourist trips** | | | | | | | | | | | | | | | | | | | | | **27%** | **27%** | **27%** | | **27%** | | **27%** | | **27%** | | **27%** | | **27%** | | **27%** | |
| **% External Trips to Highway including tourist trips** | | | | | | | | | | | | | | | | | | | | | **36%** | **38%** | **39%** | | **36%** | | **36%** | | **38%** | | **38%** | | **39%** | | **39%** | |

Commuter Peak