

# CONTRACT REPORT

## Bicycle Crash Prediction Model - Data Collection

Project No: 006575

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for Department of Transport and Main Roads



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for Department of Transport and Main Roads

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## BICYCLE CRASH PREDICTION MODEL - DATA COLLECTION

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## SUMMARY

This report describes the data collection and coding processes undertaken for obtaining, modifying and collating the data to enable the development of the Queensland modification factors for the existing bicycle crash prediction models developed by Beca Infrastructure Limited (Beca).

It is concluded that:

- The availability of bicycle count data is not consistent amongst TMR regions.
- Local authorities treat their bicycle counting programs differently.
- Amongst the various data sources, Gold Coast City Council is the only jurisdiction that consistently applied Austroads classifications for its counting program.
- Most of the TMR counting locations do not coincide with major cycle routes.
- There is no consistent approach for presenting vehicular and traffic data in Queensland.
- Availability of as-constructed drawings is limited.
- Some data sources require high-level approval and signing of non-disclosure agreements before being release for use.
- A partnership agreement between TMR and local authorities is necessary to encourage sharing of data and allowing data to be made available without restrictions.

It is recommended that TMR should consider:

- standardising the data collection practices among of regions
- undertaking future counts using the ARX classification
- allocating funding to enable data to be collected consistently on an ongoing basis
- undertaking a review of the available infrastructure data and whether business needs are being met
- exploring the feasibility of collaborating further with local authorities in areas of traffic and infrastructure data sharing.



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# 1 INTRODUCTION

During the data collection process, it was determined that there may be difficulties in obtaining sufficient data for building crash prediction models from scratch. Hence it was agreed to develop Queensland modification factors for existing bicycle crash prediction models.

This report describes the data collection and coding processes undertaken for obtaining, modifying and collating the data to enable the development of the Queensland modification factors for the existing bicycle crash prediction models developed by Beca Infrastructure Limited (Beca).

## 2 DATA REQUIREMENTS

This section presents data requirements for the Beca cycling models.

### 2.1 Signalised Intersection Model

The signalised intersection model developed by Beca for Austroads has a number of models and sub-models (Austroads 2011):

- right turn against crashes
- right angle crashes
- same direction crashes
- left turn side swipe crashes – cyclists straight through
- left turn versus straight crashes – cyclists straight through
- other crash types.

The following data requirements were identified:

- number of intersection approaches
- type of elemental cycle treatments at each leg of the intersection, i.e. transition, approach, storage, through departure
- lane widths for through cycle lane and right turn cycle lane
- lane widths for through traffic lane, kerbside lane and right turn lane
- type of kerbside lane
- number of lanes for through lanes and right turn lanes
- depth of advanced cycle lane/bike box, intersection depth
- type of lane layout
- total approach width
- cycle movement counts, including weather conditions, volume of cycles (does not have to be full time count) for each movement, percent of cycles ridden by school age children or teenagers – adjustments required for non-continuous count data
- individual crash reports, as crashes had to be coded to New Zealand collision types for the model (using Queensland police descriptions).

### 2.2 Mid-block Model

There are three cyclist-related mid-block models (Turner et al. 2009a):

- cyclist v motor vehicle, mid-block turning crashes
- cyclist v motor vehicle, non-turning crashes
- cyclist v motor vehicle, mid-block crashes.

The following data requirements were identified:

- parking
- parking utilisation (not turnover)



- operating speed (mean vehicle speed in km/h)
- cycle and traffic lane widths
- type of kerbside lane
- number of through lanes, total vehicle through lane widths
- flush or painted median
- length of mid-block section
- number and type of accesses/driveways (conflict points)
- individual crash reports, as crashes had to be coded to New Zealand collision types (using Queensland police descriptions).

## 2.3 Roundabout Model

There are two cyclist roundabout models (Turner et al. 2009b):

- model for crashes where the motorist is entering the roundabout versus circulating cyclist
- other cyclist model (the crash types that are included in the dataset involving both cyclists and motor vehicle but exclude crashes where the cyclist is circulating and the motor vehicle is entering)

The following data requirements were identified:

- vehicle counts, including
  - entering volume for each approach
  - circulating flow perpendicular to the entering flow
  - approach flow (sum of entering and exiting flows for each approach)
- cyclist counts
- intersection layout, including
  - road markings
  - diameter
  - superelevation direction of circulating lanes (inward or outward)
  - direction of the gradient of approaches
  - location of lighting
  - pedestrian and cycle facilities provided
  - surrounding land use
  - features that obstruct visibility
- visibility, including
  - visibility from the limit line to vehicles turning right or travelling through the roundabout from their right
  - visibility from 10 m back from the limit line to vehicles turning right or travelling through the roundabout from their right
  - visibility from 40 m back from the limit line to vehicles turning right or travelling through the roundabout from their right

- speed, including
  - average free mean speed of entering vehicles travelling through the roundabout at the limit line
  - average free mean speed of circulating vehicles travelling through the roundabout as they pass each approach (adjacent to splitter island)
  - standard deviation of free speeds of entering vehicles at the limit line
  - standard deviation of free speeds of circulating vehicles as they pass the approach being modelled
- geometric data, including
  - average diameter of central island
  - difference between the maximum and minimum diameter
  - entry path radius
  - exist path radius
  - circulating path radius
  - total width of approach traffic lanes
  - distance to the upstream approach
- individual crash reports, as crashes had to be coded to New Zealand collision types (using Queensland police descriptions).

## 3 DATA SOURCES AND CODING PROCESSES

Attempts were made to obtain bicycle and vehicle count and infrastructure data from various sources, including:

- Gold Coast City Council
- Sunshine Coast Regional Council
- Department of Transport and Main Roads (TMR).

### 3.1 Data for All Models

#### 3.1.1 Crash Data

The bicycle crash data was supplied to ARRB by TMR in two formats:

- the crash listing with crash ID, AGD66 co-ordinates in comma separated values format (CSV)
- police crash reports in portable document format (PDF).

The data included all bicycle crash data recorded in Queensland from 1 January 1992 to 30 June 2010, comprising 16,403 bicycle crashes. The crash data was mapped enabling the identification of crashes at a site.

Each of the police crash reports was reviewed and coded as per the New Zealand crash coding form (Appendix A).

#### 3.1.2 Traffic Count Data

Count data were requested from various jurisdictions. It was found that high-level approval was required in order to get access to some jurisdictions' data. Due to the time constraint, data from these jurisdictions were not used.

Traffic count data were supplied by Gold Coast City Council and Sunshine Coast Regional Council. Additional data were obtained from the TMR traffic census on its 13 19 40 website. The full listings of counts with cycle data obtained are provided in Appendix B.

#### 3.1.3 Infrastructure Data

Infrastructure data was supplied by TMR for the state-controlled road network. These included lane widths, shoulder widths, intersections and speed limits. Further information regarding roundabout geometry was also obtained from TMR.

The information was considered to be useful, but supplementary data were also collected using Google Earth and local authorities.

### 3.2 Addressing Data Gaps

The following techniques were used to address data gaps:

- using data from a combination of data sources
- obtaining measurements from Google Earth and council aerial photography websites
- using a nearby site to approximate traffic profiles

- site visits to assess operating speed.

### 3.3 Site Selection

#### 3.3.1 Site Selection Criteria

As the objective of the project was to develop Queensland modification factors for the existing models, the following were considered when selecting the sites:

- data availability – if the data could not be made available by 15 May 2013, the site was excluded
- site suitability – sites with zero or low cycle counts (<10 a day) were not selected due to concerns regarding skewing of the outcome
- compatibility with existing models – sites significantly different to the base models were not selected
- cycle crash history – there were sites with cycle counts and vehicle counts, but no crashes; only a small number of these were included in the model due to concerns regarding skewing of the outcome
- construction projects – sites that were affected by capital works from 2005 – 2010 were excluded.

#### 3.3.2 Signalised Intersection Model

The following sites were selected based on data availability and suitability:

- Musgrave Road / Kumbari Road
- Guineas Creek Road / K.P McGrath Drive
- Markeri Street / Rio Vista Boulevard
- Sunshine Boulevard / Oceanic Drive
- Wardoo Street / Benowa Road
- Ashmore Road / Racecourse Drive
- Benowa Road / Heeb Street
- Musgrave Avenue / Turpin Road
- Mooloolaba Esplanade / Venning Street
- Nicklin Way / Lake Kawana Road
- Caloundra Road / Pierce Avenue
- Alexandra Road / Okinja Road
- Nicklin Way / Point Cartwright Road
- Elkhorn Road / Riverview Road / Ferny Road (coded, but excluded from the modelling as an outlier)
- Maroochydore Road / Evans Road (coded, but excluded from the modelling as an outlier).

The signalised intersection model required the coding of the following data in accordance with Appendix C and Appendix D:

- number of intersecting legs

- cycle treatment at the site
- form of transition
- approach type
- storage design
- through and departure treatments
- through cycle lane width
- kerbside lane width
- type of kerbside lane
- number of through lanes
- total through lane width
- right turn cycle lane
- number of right turn lanes
- depth of advanced cycle lane/bicycle box
- intersection depth
- lane layout type
- total approach width
- crash coding
- vehicle count by movement
- cycle count by movement
- special features, including
  - shared right turn lane
  - shared left turn lane
  - shared lanes
  - transition treatments
  - approach treatments
  - storage treatments
  - painted/coloured cycle lane/facilities
  - protected right turn
  - right turn at opposite side of the road.

Additional information was collected using Google Earth and local authorities' aerial photo systems.

### **3.3.3 Mid-block Model**

The following sites were selected based on data availability and suitability:

- Main Road, Maroochydore
- McKenzie Bridge

- Nicklin Way, Wurtulla
- Alexandra Parade
- Bayview Street, Runaway Bay
- Christine Avenue, Burleigh Waters
- 16 Johnston Street, Southport
- 103 Johnston Street, Southport
- 130 Johnston Street, Southport
- Kumbari Avenue
- Main Beach Parade site 1, Main Beach
- Main Beach Parade site 2, Main Beach
- Main Beach Parade site 3, Main Beach

The mid-block model required the coding of the following data:

- motor vehicle count and bicycle count
- directional operating speed
- number of residential accesses
- number of education accesses
- number of commercial accesses
- number of industrial accesses
- number of side streets
- parking utilisation classified into
  - 0 – 25%
  - 25% – 50%
  - 50% – 75%
  - 75% – 100%
- median type
  - centreline
  - flush/painted
  - solid
- cycle facility
- cycle width
- lane width
- cycle intersection crashes
- cycle mid-block crashes.

The data were collated and summarised in a spreadsheet for use in the modelling.

The relatively small sample size is due to the lack of suitable sites as most of the TMR mid-block counting locations do not have cycle counts. In most situations, a combination of council supplied cycle count data and TMR vehicle count data were used.

### **3.3.4 Roundabout Model**

The following sites were selected based on data availability and suitability:

- Hammel Street / James Street/ Milne Street/ Lehmans Road
- Sandgate Road / Toombul Road
- Bracken Ridge Road / Gateway Mwy Off Ramp / Barfoot Street
- Laidley Plainland Road/ Donaldson Road, Plainland
- Birkdale Road / Main Road
- Tallebudgera Connection Road / Guineas Creek Road
- Pacific Highway / Elysium Road Interchange, Carrara - western roundabout
- Pacific Highway / Elysium Road Interchange, Carrara - eastern roundabout
- Pacific Highway / Nielsens Road Interchange, Nerang - eastern roundabout
- Pacific Motorway on and off ramps / Days Road/ Abraham Road
- Labrador Carrara Road / Cotlew Street
- Hope Island Road / Lae Drive / Pine Ridge Road
- Nerang Southport Road / Bailey Crescent / Hinde Street.

The roundabout model required the coding of the following data:

- entering flow (motor vehicles) at each approach
- entering flow (bicycles) at each approach
- circulating flow (motor vehicles) at each approach
- circulating flow (bicycles) at each approach
- vehicle entering versus circulating cyclist crashes at each approach
- other cyclist crashes at each approach.

These features were collated and summarised in a spreadsheet. At most sites, the circulation flows at each approach were worked out using the movement count, which was a time-consuming process.

However, at sites with count information that included circulation flows, random checks were undertaken for accuracy and reliability. This inconsistency in formatting increased the effort in coding the data for use in the modelling process.

The geometric features of the roundabouts were collected, but not utilised in the modelling process, as a simpler model was used.

## 4 LESSONS LEARNT

During the data collection process, a number of issues were identified, including:

- availability of bicycle counts
- format of count data
- counting program and consistency
- availability of infrastructure data
- collaboration with local authorities.

### 4.1 Availability of Bicycle Counts

The availability of bicycle counts is inconsistent even amongst TMR districts. For example, the following districts appeared to have different policies for cycle counts:

- North Coast Region does not have cycle counts at intersections and coverage count sites.
- Approximately 50% of the South Coast Region intersection counts have cycle counts, even though most locations have zero cycle or very low cycle counts.
- Approximately 34% of the Metropolitan Region intersection counts have cycle counts, even though most locations have zero cycle or very low cycle counts.

It appears that the collection of cycle data on the state roads network is not done consistently; a consistent approach may enable TMR to have a better understanding of cycling activities on the network.

The local authorities also treat bicycle counts quite differently. For example, Gold Coast City Council started counting bicycles as part of its traffic counting program from 2012 (as ARX classification class 1a). In contrast, Sunshine Coast Regional Council treats its bicycle counting program separately to its vehicle counting program.

Some collaborative efforts may be required to enable sharing of information in a consistent manner.

### 4.2 Format of Count Data

The count data obtained are generally in MS Excel spreadsheets. However, the format for intersections can vary significantly. The TMR data sets were not consistent among of regions; differing practices include intersection movement numbering conventions, table structures and classification of vehicles by type.

The data from local authorities also have different structures, likely to be the result of different classification systems used. Amongst the various data sources, Gold Coast City Council is the only jurisdiction that consistently follows the Austroads classifications for its counting program.

There would be merit if counts were classified using the ARX classification.

### 4.3 Counting Program and Consistency

The traffic census in TMR regions does not appear to follow a set program, i.e. counting the same locations each year or counting different locations at set intervals. An overview document outlining



the availability of data, the counting program and the dates of counts would be helpful to users of the data.

Most of the TMR counting locations do not appear to coincide with major cycle routes, which means collaboration with local authorities to concentrate data collection efforts to optimise available resources may be necessary.

#### **4.4 Availability of Infrastructure Data**

The availability of as-constructed drawings appeared to be limited. This is not ideal from an asset management perspective. The state roads infrastructure data at intersections also require significant efforts in interpretation. The data also lack movement details and treatment information.

#### **4.5 Collaboration with Local Authorities**

Collaboration with local authorities is necessary for TMR and other practitioners to develop a better understanding of cycle demands in Queensland. The streamlining and standardisation of data collection processes are likely to lower data collection costs for future projects of a similar nature.

It was unforeseen that the release of data from some local authorities would require high-level approval and signing of non-disclosure agreements. Due to the time constraints, these data sources were not pursued.

It is considered that a partnership agreement between TMR and the local authorities is necessary to encourage sharing of data and allowing data to be made available without restrictions. The unrestricted availability of data is likely to encourage innovation and enhance existing practices through transfer of knowledge to benefit all road users.

## 5 CONCLUSIONS AND RECOMMENDATIONS

It is concluded that:

- The availability of bicycle count data is not consistent amongst TMR regions.
- Local authorities treat their bicycle counting programs differently.
- Amongst the various data sources, Gold Coast City Council is the only jurisdiction that consistently applied Austroads classifications for its counting program.
- Most of the TMR counting locations do not coincide with major cycle routes.
- There is no consistent approach for presenting vehicular and traffic data in Queensland.
- Availability of as-constructed drawings is limited.
- Some data sources require high-level approval and signing of non-disclosure agreements before being release for use.
- A partnership agreement between TMR and local authorities is necessary to encourage sharing of data and allowing data to be made available without restrictions.

It is recommended that TMR should consider:

- standardising the data collection practices among of regions
- undertaking future counts using the ARX classification
- allocating funding to enable data to be collected consistently on an ongoing basis
- undertaking a review of the available infrastructure data and whether business needs are being met
- exploring the feasibility of collaborating further with local authorities in areas of traffic and infrastructure data sharing.

## REFERENCES

Austrroads 2011, *Effectiveness and Selection of Treatments for Cyclists at Signalised Intersections*, Austrroads, Sydney, NSW.

Turner, SA, Binder, SI & Roozenburg, AP 2009a, *Cycle safety: reducing the crash risk*, research report 389, NZ Transport Agency, Wellington, New Zealand.

Turner, SA, Roozenburg, AP & Smith, AW 2009b, *Roundabout crash prediction models*, NZ Transport Agency, Wellington, New Zealand.

# APPENDIX A NEW ZEALAND CRASH CODING

TYPE	A	B	C	D	E	F	G	O
<b>A</b>	OVERTAKING AND LANE CHANGE  PULLING OUT OR CHANGING LANE TO RIGHT	HEAD ON  HEAD ON	CUTTING IN OR CHANGING LANE TO LEFT  CUTTING IN OR CHANGING LANE TO LEFT	LOST CONTROL (OVERTAKING VEHICLE)  LOST CONTROL (OVERTAKING VEHICLE)	SIDE ROAD  SIDE ROAD	LOST CONTROL (OVERTAKEN VEHICLE)  LOST CONTROL (OVERTAKEN VEHICLE)	WEAVING IN HEAVY TRAFFIC  WEAVING IN HEAVY TRAFFIC	OTHER
<b>B</b>	ON STRAIGHT  ON STRAIGHT	CUTTING CORNER  CUTTING CORNER	SWINGING WIDE  SWINGING WIDE	* BOTH OR UNKNOWN  * BOTH OR UNKNOWN	LOST CONTROL ON STRAIGHT  LOST CONTROL ON STRAIGHT	LOST CONTROL ON CURVE  LOST CONTROL ON CURVE		OTHER
<b>C</b>	LOST CONTROL OR OFF ROAD (STRAIGHT ROADS)  LOST CONTROL OR OFF ROAD (STRAIGHT ROADS)	OFF ROADWAY TO LEFT  OFF ROADWAY TO LEFT	OFF ROADWAY TO RIGHT  OFF ROADWAY TO RIGHT					OTHER
<b>D</b>	CORNERING  CORNERING	LOST CONTROL TURNING LEFT  LOST CONTROL TURNING LEFT	MISSED INTERSECTION OR END OF ROAD  MISSED INTERSECTION OR END OF ROAD					OTHER
<b>E</b>	COLLISION WITH OBSTRUCTION  COLLISION WITH OBSTRUCTION	PARKED VEHICLE  PARKED VEHICLE	CRASH OR BROKEN DOWN  CRASH OR BROKEN DOWN	NON VEHICULAR OBSTRUCTIONS (INCLUDING ANIMALS)  NON VEHICULAR OBSTRUCTIONS (INCLUDING ANIMALS)	WORKMANS VEHICLE  WORKMANS VEHICLE	OPENING DOOR  OPENING DOOR		OTHER
<b>F</b>	REAR END  REAR END	SLOW VEHICLE  SLOW VEHICLE	CROSS TRAFFIC  CROSS TRAFFIC	PEDESTRIAN  PEDESTRIAN	QUEUE  QUEUE	SIGNALS  SIGNALS	OTHER  OTHER	OTHER
<b>G</b>	TURNING VERSUS SAME DIRECTION  TURNING VERSUS SAME DIRECTION	REAR OF LEFT TURNING VEHICLE  REAR OF LEFT TURNING VEHICLE	LEFT TURN SIDE SWIPE  LEFT TURN SIDE SWIPE	STOPPED OR TURNING FROM LEFT SIDE  STOPPED OR TURNING FROM LEFT SIDE	NEAR CENTRE LINE  NEAR CENTRE LINE	OVERTAKING VEHICLE  OVERTAKING VEHICLE	TWO TURNING  TWO TURNING	OTHER
<b>H</b>	CROSSING (NO TURNS)  RIGHT ANGLE (70° TO 110°)							OTHER
<b>J</b>	CROSSING (VEHICLE TURNING)  RIGHT TURN RIGHT SIDE	OBSOLETE	TWO TURNING  TWO TURNING					OTHER
<b>K</b>	MERGING  LEFT TURN IN	RIGHT TURN IN  RIGHT TURN IN	TWO TURNING  TWO TURNING					OTHER
<b>L</b>	RIGHT TURN AGAINST  STOPPED WAITING TO TURN	MAKING TURN  MAKING TURN						OTHER
<b>M</b>	MANOEUVRING  PARKING OR LEAVING	"U" TURN  "U" TURN	"U" TURN  "U" TURN	DRIVEWAY MANOEUVRE  DRIVEWAY MANOEUVRE	PARKING OPPOSITE  PARKING OPPOSITE	ANGLE PARKING  ANGLE PARKING	REVERSING ALONG ROAD  REVERSING ALONG ROAD	OTHER
<b>N</b>	PEDESTRIANS CROSSING ROAD  LEFT SIDE	RIGHT SIDE  RIGHT SIDE	LEFT TURN LEFT SIDE  LEFT TURN LEFT SIDE	RIGHT TURN RIGHT SIDE  RIGHT TURN RIGHT SIDE	LEFT TURN RIGHT SIDE  LEFT TURN RIGHT SIDE	RIGHT TURN LEFT SIDE  RIGHT TURN LEFT SIDE	MANOEUVRING VEHICLE  MANOEUVRING VEHICLE	OTHER
<b>P</b>	PEDESTRIANS OTHER  WALKING WITH TRAFFIC	WALKING FACING TRAFFIC  WALKING FACING TRAFFIC	WALKING ON FOOTPATH  WALKING ON FOOTPATH	CHILD PLAYING (TRICYCLE)  CHILD PLAYING (TRICYCLE)	ATTENDING TO VEHICLE  ATTENDING TO VEHICLE	ENTERING OR LEAVING VEHICLE  ENTERING OR LEAVING VEHICLE		OTHER
<b>Q</b>	MISCELLANEOUS  FELL WHILE BOARDING OR ALIGHTING	FELL FROM MOVING VEHICLE  FELL FROM MOVING VEHICLE	TRAIN  TRAIN	PARKED VEHICLE RAN AWAY  PARKED VEHICLE RAN AWAY	EQUESTRIAN  EQUESTRIAN	FELL INSIDE VEHICLE  FELL INSIDE VEHICLE	TRAILER OR LOAD  TRAILER OR LOAD	OTHER

\* = Movement applies for left and right hand bends, curves or turns

Figure A 1: New Zealand vehicle movement coding sheet

## APPENDIX B TRAFFIC DATA LISTING

### B.1 Sunshine Coast 2011 Data

The Sunshine Coast data consist of cycle counts only.

- Site 1 AM - TAFE entrance & Cooroy Noosa Rd & St Andrews Dr.xlsx
- Site 2 AM - Sidon St & Poinciana Ave.xlsx
- Site 3 AM - Memorial Ave.xlsx
- Site 3 PM - Memorial Ave.xlsx
- Site 4 AM - Gympie Tce & Eumundi Noosa Rd.xlsx
- Site 4 PM - Gympie Tce & Eumundi Noosa Rd.xlsx
- Site 4 Sat - Gympie Tce & Eumundi Noosa Rd.xlsx
- Site 5 AM - Wayba Rd & Reef St.xlsx
- Site 6 AM - Eumundi Noosa Rd & Goodchap St.xlsx
- Site 7 AM - Noosa Pde.xlsx
- Site 8 AM - Noosa Dr.xlsx
- Site 8 PM - Noosa Dr.xlsx
- Site 8 Sat - Noosa Dr.xlsx
- Site 9 AM - Honeysuckle La & David Low Way & Cooyar St.xlsx
- Site 10 AM - Ben Lexen Dr & Heathland Dr.xlsx
- Site 11 AM - Eumundi Noosa Rd\_Beckmans Rd.xlsx
- Site 12 AM - Reef St & Eenie Creek Rd.xlsx
- Site 12 Sat - Reef St & Eenie Creek Rd.xlsx
- Site 13 AM - Eenie Creek Dr\_Langura St.xlsx
- Site 14 AM - Hill St\_David Low Way\_Heathland Dr\_Edward St.xlsx
- Site 14 Sat - Hill St\_David Low Way\_Heathland Dr\_Edward St.xlsx
- Site 18 AM - Heron St\_David Low Way.xlsx
- Site 19 AM - Havana St East\_David Low Way.xlsx
- Site 19 Sat - Havana St East\_David Low Way.xlsx
- Site 20 AM - Yandina Coolum Rd\_ South Coolum Rd.xlsx
- Site 21 AM - David Low Way\_Beach Rd.xlsx
- Site 21 PM - David Low Way\_Beach Rd.xlsx
- Site 21 Sat - David Low Way\_Beach Rd.xlsx
- Site 23 AM - David Low Way\_Tanah St East\_Tanah St West.xlsx
- Site 23 Sat - David Low Way\_Tanah St East\_Tanah St West.xlsx
- Site 24 AM - William St\_Howard St.xlsx

- Site 24 PM - William St\_Howard St.xlsx
- Site 25 AM - Park Rd\_Lamington Tce\_Arundell Ave\_Currie St.xlsx
- Site 26 AM - Mudjimba Beach Rd\_Mudjimba Esp.xlsx
- Site 26 PM - Mudjimba Beach Rd\_Mudjimba Esp.xlsx
- Site 26 Sat - Mudjimba Beach Rd\_Mudjimba Esp.xlsx
- Site 27 AM - David Low Way\_Ocean Dr\_David Low Way.xlsx
- Site 27 Sat - David Low Way\_Ocean Dr\_David Low Way.xlsx
- Site 28 AM - David Low Way\_Bli Bli Rd.xlsx
- Site 29 AM - Petrie Creek Rd\_David Low Way.xlsx
- Site 30 AM - Bradman Ave\_Fishermans Rd.xlsx
- Site 31 AM - Sunshine Mwy Bikeway.xlsx
- Site 32 AM - Main Rd.xlsx
- Site 33 AM - Sunshine Mwy bikeway\_Maroochydore Rd.xlsx
- Site 34 AM - Sunshine Mwy bikeway\_Maroochydore Rd.xlsx
- Site 35 AM - The Esplanade\_First Ave\_Duport Ave.xlsx
- Site 35 PM - The Esplanade\_First Ave\_Duport Ave.xlsx
- Site 36 AM - Maroochy Rd\_Wises Rd.xlsx
- Site 37 AM - Sugar Rd\_Wises Rd.xlsx
- Site 38 PM - Alexndra Pde\_Okinja Rd.xlsx
- Site 38 Sat - Alexndra Pde\_Okinja Rd.xlsx
- Site 39 AM - Mooloolaba Esp\_Venning St.xlsx
- Site 39 PM - Mooloolaba Esp\_Venning St.xlsx
- Site 39 Sat - Mooloolaba Esp\_Venning St.xlsx
- Site 41 AM - Mons Rd\_Owen Creek Rd.xlsx
- Site 42 AM - Dixon Rd\_Karawatha Dr\_Ballinger Rd.xlsx
- Site 43 AM - Sippy Downs Dr\_University Way.xlsx
- Site 44 AM - Stringybark Rd\_Sippy DownsDr.xlsx
- Site 45 AM - Motorway pathway\_Claymore rd\_Sippy Downs Dr\_Dixon Rd.xlsx
- Site 46 AM - Pathway end\_Lady Musgrave Dr.xlsx
- Site 46 PM - Pathway end\_Lady Musgrave Dr.xlsx
- Site 47 AM - Prelude Dr\_Karawatha Dr\_Lady Musgrave Dr.xlsx
- Site 48 AM - Seriate Way\_Bundilla Bvd\_Karawatha Dr.xlsx
- Site 49 AM - Brisbane Rd\_River Esp.xlsx
- Site 50 AM - McKenzie Bridge.xlsx
- Site 50 Sat - McKenzie Bridge.xlsx
- Site 51 AM - Kawana Island Bvd\_Kawana Way.xlsx

- Site 52 AM - Nicklin Way\_Palkana Dr\_Kawana Island Bvd.xlsx
- Site 53 AM - Oceanic Dr\_Palkana Dr.xlsx
- Site 53 PM - Oceanic Dr\_Palkana Dr.xlsx
- Site 53 Sat - Oceanic Dr\_Palkana Dr.xlsx
- Site 54 AM - Creekside Bvd\_Corbould Way\_Kawana Way.xlsx
- Site 55 AM - Main Dr\_Sportsman Pde.xlsx
- Site 56 AM - Lake Kawana Bvd\_Nicklin Way.xlsx
- Site 56 Sat - Lake Kawana Bvd\_Nicklin Way.xlsx
- Site 57 AM - Nicklin Way.xlsx
- Site 57 Sat - Nicklin Way.xlsx
- Site 58 AM - Coongarra Esp\_Bareki St.xlsx
- Site 58 PM - Coongarra Esp\_Bareki St.xlsx
- Site 59 AM - Parklands Bvd\_Caloundra Rd\_Peirce Ave.xlsx
- Site 60 AM - Meridan Way\_Parklands Bvd.xlsx
- Site 61 AM - Cooroy St\_Beerburrum St.xlsx
- Site 62 AM - Elizabeth St\_Buccleugh St.xlsx
- Site 62 PM - Elizabeth St\_Buccleugh St.xlsx
- Site 63 AM - Queen St\_Sugar Bag Rd\_Golf Club Access\_Path to South.xlsx
- Site 64\_1 AM - Bowman Rd\_First Ave\_Park Pl.xlsx
- Site 64\_1 Sat - Bowman Rd\_First Ave\_Park Pl.xlsx
- Site 64\_2 AM - Bowman Rd\_Bulcock St.xlsx
- Site 64\_2 Sat - Bowman Rd\_Bulcock St.xlsx
- Site 65 AM - Dingle Ave.xlsx
- Site 65 PM - Dingle Ave.xlsx
- Site 65 Sat - Dingle Ave.xlsx
- Site 66 AM - Esplanade Golden Beach\_Wills Ave.xlsx
- Site 66 PM - Esplanade Golden Beach\_Wills Ave.xlsx
- Site 67 AM - Henderson St\_Hill St\_Pacific Ave.xlsx
- Site 67 PM - Henderson St\_Hill St\_Pacific Ave.xlsx
- Site 67 Sat - Henderson St\_Hill St\_Pacific Ave.xlsx
- Site 68 AM - David Low Way\_Peregian Esp\_Lowry St.xlsx
- Site 68 PM- David Low Way\_Peregian Esp\_Lowry St.xlsx
- Site 68 Sat - David Low Way\_Peregian Esp\_Lowry St.xlsx
- Site 69 AM - Alexandra Pde.xlsx
- Site 69 PM - Alexandra Pde.xlsx
- Site 69 Sat - Alexandra Pde.xlsx

- Site 70 AM - Nicklin Way\_Point Cartwright Dr.xlsx
- Site 70 Sat - Nicklin Way\_Point Cartwright Dr.xlsx

## **B.2 Sunshine Coast 2012 Data**

The Sunshine Coast data consist of cycle counts only.

- Q819 Site 20 Sat - Yandina Coolum Rd\_ South Coolum Rd.xlsx
- Q819 Site 21 AM - David Low Way\_Beach Rd.xlsx
- Q819 Site 21 PM - David Low Way\_Beach Rd.xlsx
- Q819 Site 21 Sat - David Low Way\_Beach Rd.xlsx
- Q819 Site 24 AM - William St\_Howard St.xlsx
- Q819 Site 24 PM - William St\_Howard St.xlsx
- Q819 Site 24 Sat - William St\_Howard St.xlsx
- Q819 Site 38 AM - Alexndra Pde\_Okinja Rd.xlsx
- Q819 Site 38 PM - Alexndra Pde\_Okinja Rd.xlsx
- Q819 Site 38 Sat - Alexndra Pde\_Okinja Rd.xlsx
- Q819 Site 39 AM - Mooloolaba Esp\_Venning St.xlsx
- Q819 Site 39 PM - Mooloolaba Esp\_Venning St.xlsx
- Q819 Site 39 Sat - Mooloolaba Esp\_Venning St.xlsx
- Q819 Site 41 AM - Mons Rd\_Owen Creek Rd.xlsx
- Q819 Site 41 PM - Mons Rd\_Owen Creek Rd.xlsx
- Q819 Site 41 Sat - Mons Rd\_Owen Creek Rd.xlsx
- Q819 Site 45 AM - Motorway pathway\_Claymore rd\_Sippy Downs Dr\_Dixon Rd.xlsx
- Q819 Site 45 PM - Motorway pathway\_Claymore rd\_Sippy Downs Dr\_Dixon Rd.xlsx
- Q819 Site 45 Sat - Motorway pathway\_Claymore rd\_Sippy Downs Dr\_Dixon Rd.xlsx
- Q819 Site 47 AM - Prelude Dr\_Karawatha Dr\_Lady Musgrave Dr.xlsx
- Q819 Site 47 PM - Prelude Dr\_Karawatha Dr\_Lady Musgrave Dr.xlsx
- Q819 Site 47 Sat - Prelude Dr\_Karawatha Dr\_Lady Musgrave Dr.xlsx
- Q819 Site 50 AM - McKenzie Bridge.xlsx
- Q819 Site 50 PM - McKenzie Bridge.xlsx
- Q819 Site 50 Sat - McKenzie Bridge.xlsx
- Q819 Site 54 AM - Creekside Bvd\_Corbould Way\_Kawana Way.xlsx
- Q819 Site 54 PM - Creekside Bvd\_Corbould Way\_Kawana Way.xlsx
- Q819 Site 54 Sat - Creekside Bvd\_Corbould Way\_Kawana Way.xlsx
- Q819 Site 56 AM - Lake Kawana Bvd\_Nicklin Way.xlsx
- Q819 Site 56 PM - Lake Kawana Bvd\_Nicklin Way.xlsx
- Q819 Site 56 Sat - Lake Kawana Bvd\_Nicklin Way.xlsx



- Q819 Site 57 AM - Nicklin Way.xlsx
- Q819 Site 57 PM - Nicklin Way.xlsx
- Q819 Site 57 Sat - Nicklin Way.xlsx
- Q819 Site 74 AM - David Low Way\_Springfield Av.xlsx
- Q819 Site 74 PM - David Low Way\_Springfield Av.xlsx
- Q819 Site 74 Sat - David Low Way\_Springfield Av.xlsx
- Q819 Site 77 AM - Yandina Coolum Rd\_Yungar St\_Central Av.xlsx
- Q819 Site 77 PM - Yandina Coolum Rd\_Yungar St\_Central Av.xlsx
- Q819 Site 77 Sat - Yandina Coolum Rd\_Yungar St\_Central Av.xlsx
- Q819 Site 78 AM - Havana Rd West.xlsx
- Q819 Site 78 PM - Havana Rd West.xlsx
- Q819 Site 78 Sat - Havana Rd West.xlsx
- Q819 Site 3 AM - Memorial Ave.xlsx
- Q819 Site 3 PM - Memorial Ave.xlsx
- Q819 Site 3 Sat - Memorial Ave.xlsx
- Q819 Site 19 AM - Havana St East\_David Low Way.xlsx
- Q819 Site 19 PM - Havana St East\_David Low Way.xlsx
- Q819 Site 19 Sat - Havana St East\_David Low Way.xlsx
- Q819 Site 20 AM - Yandina Coolum Rd\_ South Coolum Rd.xlsx
- Q819 Site 20 PM - Yandina Coolum Rd\_ South Coolum Rd.xlsx
- Site 8 AM - Noosa Dr.xlsx
- Site 8 PM - Noosa Dr.xlsx
- Site 8 Sat - Noosa Dr.xlsx
- Site 12 AM - Reef St & Eenie Creek Rd.xlsx
- Site 12 PM - Reef St & Eenie Creek Rd.xlsx
- Site 12 Sat - Reef St & Eenie Creek Rd.xlsx
- Site 23 AM - David Low Way\_Tanah St East\_Tanah St West.xlsx
- Site 23 PM - David Low Way\_Tanah St East\_Tanah St West.xlsx
- Site 23 Sat - David Low Way\_Tanah St East\_Tanah St West.xlsx
- Site 26 AM - Mudjimba Beach Rd\_Mudjimba Esp.xlsx
- Site 26 PM - Mudjimba Beach Rd\_Mudjimba Esp.xlsx
- Site 26 Sat - Mudjimba Beach Rd\_Mudjimba Esp.xlsx
- Site 27 AM - David Low Way\_Ocean Dr\_David Low Way.xlsx
- Site 27 PM - David Low Way\_Ocean Dr\_David Low Way.xlsx
- Site 27 Sat - David Low Way\_Ocean Dr\_David Low Way.xlsx
- Site 32 AM - Main Rd.xlsx

- Site 32 PM - Main Rd.xlsx
- Site 32 Sat - Main Rd.xlsx
- Site 59 AM - Parklands Bvd\_Caloundra Rd\_Peirce Ave.xlsx
- Site 59 PM - Parklands Bvd\_Caloundra Rd\_Peirce Ave.xlsx
- Site 59 Sat - Parklands Bvd\_Caloundra Rd\_Peirce Ave.xlsx
- Site 60 AM - Meridan Way\_Parklands Bvd.xlsx
- Site 60 PM - Meridan Way\_Parklands Bvd.xlsx
- Site 60 Sat - Meridan Way\_Parklands Bvd.xlsx
- Site 64 AM - Bowman Rd\_First Ave\_Park Pl.xlsx
- Site 64 PM - Bowman Rd\_First Ave\_Park Pl.xlsx
- Site 64 Sat - Bowman Rd\_First Ave\_Park Pl.xlsx
- Site 65 AM - Dingle Ave.xlsx
- Site 65 PM - Dingle Ave.xlsx
- Site 65 Sat - Dingle Ave.xlsx
- Site 70 AM - Nicklin Way\_Point Cartwright Dr.xlsx
- Site 70 PM - Nicklin Way\_Point Cartwright Dr.xlsx
- Site 70 Sat - Nicklin Way\_Point Cartwright Dr.xlsx
- Site 80 AM - Perwillowin Rd\_Windsor Rd.xlsx
- Site 80 PM - Perwillowin Rd\_Windsor Rd.xlsx
- Site 80 Sat - Perwillowin Rd\_Windsor Rd.xlsx
- Site 29 AM - Petrie Creek Rd\_David Low Way.xlsx
- Site 29 PM - Petrie Creek Rd\_David Low Way.xlsx
- Site 29 Sat - Petrie Creek Rd\_David Low Way.xlsx
- Site 31 AM - Sunshine Mwy Bikeway.xlsx
- Site 31 PM - Sunshine Mwy Bikeway.xlsx
- Site 31 Sat - Sunshine Mwy Bikeway.xlsx
- Site 33 AM - Sunshine Mwy bikeway\_Maroochydore Rd.xlsx
- Site 33 PM - Sunshine Mwy bikeway\_Maroochydore Rd.xlsx
- Site 33 Sat - Sunshine Mwy bikeway\_Maroochydore Rd.xlsx
- Site 34 AM - Sunshine Mwy bikeway\_Maroochydore Rd.xlsx
- Site 34 PM - Sunshine Mwy bikeway\_Maroochydore Rd.xlsx
- Site 34 Sat - Sunshine Mwy bikeway\_Maroochydore Rd.xlsx
- Site 35 AM - The Esplanade\_First Ave\_Duport Ave.xlsx
- Site 35 PM - The Esplanade\_First Ave\_Duport Ave.xlsx
- Site 35 Sat - The Esplanade\_First Ave\_Duport Ave.xlsx
- Site 36 AM - Maroochy Rd\_Wises Rd.xlsx

- Site 36 PM - Maroochy Rd\_Wises Rd.xlsx
- Site 36 Sat - Maroochy Rd\_Wises Rd.xlsx
- Site 49 AM - Brisbane Rd\_River Esp.xlsx
- Site 49 PM - Brisbane Rd\_River Esp.xlsx
- Site 49 Sat - Brisbane Rd\_River Esp.xlsx
- Site 62 AM - Elizabeth St\_Buccleugh St.xlsx
- Site 62 PM - Elizabeth St\_Buccleugh St.xlsx
- Site 62 Sat - Elizabeth St\_Buccleugh St.xlsx
- Site 69 AM - Alexandra Pde.xlsx
- Site 69 PM - Alexandra Pde.xlsx
- Site 69 Sat - Alexandra Pde.xlsx
- Site 71 AM - Maud St\_Trinder Av\_Sugar Rd\_Dalton Dr.xlsx
- Site 71 PM - Maud St\_Trinder Av\_Sugar Rd\_Dalton Dr.xlsx
- Site 71 Sat - Maud St\_Trinder Av\_Sugar Rd\_Dalton Dr.xlsx
- Site 72 AM - Duporth Av\_Ball St.xlsx
- Site 72 PM - Duporth Av\_Ball St.xlsx
- Site 72 Sat - Duporth Av\_Ball St.xlsx
- Site 73 AM - Maroochy Rd\_Evans St\_Broadmeadows Rd.xlsx
- Site 73 PM - Maroochy Rd\_Evans St\_Broadmeadows Rd.xlsx
- Site 73 Sat - Maroochy Rd\_Evans St\_Broadmeadows Rd.xlsx
- Site 75 AM - Cinnamon Av\_Banksia Av\_School Rd.xlsx
- Site 75 PM - Cinnamon Av\_Banksia Av\_School Rd.xlsx
- Site 75 Sat - Cinnamon Av\_Banksia Av\_School Rd.xlsx
- Site 76 AM - Yarrock St\_South Coolum Rd.xlsx
- Site 76 PM - Yarrock St\_South Coolum Rd.xlsx
- Site 76 Sat - Yarrock St\_South Coolum Rd.xlsx
- Site 79 AM - Landborough Rd\_pinelands Dr.xlsx
- Site 79 PM - Old Landborough Rd\_pinelands Dr.xlsx
- Site 79 Sat - Landborough Rd\_pinelands Dr.xlsx

### **B.3 Gold Coast Data**

The Gold Coast data consist of vehicle and cycle counts; most locations only had vehicle counts; cycle counting started in 2012.

- 2007 Musgrave Avenue Southport (at Kumbari Ave).pdf
- 2007 Tahiti Avenue Palm Beach.pdf
- 2008 Boyd Street Tugun.XLS

- 2008 Guineas Creek Road Elanora.XLS
- 2008 Turpin Road Labrador.XLS
- 2008 West Burleigh Road Burleigh Heads (at Tabilban Street).XLS
- 2009 Guineas Creek Road Elanora.XLS
- 2009 Musgrave Avenue Labrador (Botanical Dr to Kumbari Ave).XLS
- 2010 Coolangatta Road Coolangatta.XLS
- 2010 Dunkeith Avenue Benowa.pdf
- 2010 Dutton Street Coolangatta.XLS
- 2010 Musgrave Street Coolangatta.XLS
- 2010 Tahiti Avenue Palm Beach.pdf
- 2011 Central Street Labrador (at Turpin Road).XLS
- 2011 Marine Parade BIGGERA WATERS.xls
- 2011 Markeri Street MERMAID WATERS.xls
- 2011 Reserve Road Upper Coomera (at Abraham Road).xlsx
- 2012 Bayview St RUNAWAY BAY.xls
- 2012 Christine Ave BURLEIGH WATERS (near 148).xls
- 2012 Elkhorn Avenue Surfers Paradise (at Thomas Ferny & Riverview).xlsx
- 2012 Garfield Tce SURFERS PARADISE.xls
- 2012 Guineas Creek Rd Elanora (at K. P. McGrath Dr).xlsx
- 2012 Hedges Ave MERMAID BEACH (Alexandra Ave to Peerless Ave).xls
- 2012 Hedges Ave MERMAID BEACH (Arthur St to Seashell Ave).xls
- 2012 Hedges Ave Mermaid Beach (nr #3).xls
- 2012 Hedges Ave MERMAID BEACH (nr 255).xls
- 2012 Markeri St Meramid Waters (at Rio Vista Bvd).xlsx
- 2012 Musgrave Street COOLANGATTA (at Pacific Pde).xlsx
- 2012 Old Burleigh Rd SURFERS PARADISE (Fern St to Wharf Rd).xls
- 2012 Pacific Pde BILINGA.xls
- 2012 Queen Street Southport (Ward St to Mal Burke St).xls
- 2012 Sunshine Bvd Mermaid Waters (at Oceanic Dr).xlsx
- 2012 Tahiti Avenue Palm Beach (at Laguna Ave).xlsx
- 2012 The Esplanade PARADISE POINT (Donald Ave & Muscovey Ave).xls
- 2012 The Esplanade PARADISE POINT (Nankeen Ave & Abalone Ave).xls
- 2012 The Esplanade SURFERS PARADISE (Elkhorn Ave to Cavill Ave).xls
- 2012 The Esplanade SURFERS PARADISE (Higman St to Ocean Ave).xls
- 2012 Thomas Dr SURFERS PARADISE (eastern bridge to Stanhill Dr).xls
- 2012 Wardoo St Southport (at Benowa Rd).xlsx

- 2013 Ashmore Road Bundall (at Racecourse Drive).xlsx
- 2013 Benowa Road Ashmore (at Heeb Street).xlsx
- 2013 Johnston Street SOUTHPORT (near 103).xls
- 2013 Johnston Street SOUTHPORT (near 136).xls
- 2013 Johnston Street SOUTHPORT (near 16).xls
- 2013 Kumbari Avenue SOUTHPORT (Johnston Street to Woomera Cres).xls
- 2013 Main Beach Parade MAIN BEACH (Cable St to Ferny Ave).xls
- 2013 Main Beach Parade MAIN BEACH (Tedder Ave to Cunningham Ave).xls
- 2013 Main Beach Parade MAIN BEACH (Woodroffe Ave to Breaker St).xls
- 2013 Musgrave Avenue Southport (at Turpin Road).xlsx

#### **B.4 13 19 40 Metropolitan Region Data**

The following list consists of count sites with cycle counts only and includes locations with low cycle volume.

- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2008\_109\_1940FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2008\_109\_1961TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_1668FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_1958TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_1962FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_1963FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_7324-1 Redland Bay Rd & Colburn Avenue VICTORIA POINT.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_7324-2 Redland Bay Rd & Doublejump Rd VICTORIA POINT.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_7324-3A Redland Bay Rd & Giles Rd VICTORIA POINT.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_7324-3B Gordon Rd & Giles Rd VICTORIA POINT-RSC road.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_7324-3B Gordon Rd & Giles Rd VICTORIA POINT.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_109\_7324-4 Redland Bay Rd & German Church Rd VICTORIA POINT.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_18A\_461FW.xls

- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_18A\_7369 Warrego Hwy & Shaw Rd HATTON VALE.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_18A\_7475 Warrego Hwy & Moroney Rd COLLEGE VIEW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_18A\_752TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_18A\_7644-2 Crowley Vale Rd & Lake Clarendon Rd CROWLEY VALE.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_211\_1343TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_211\_1346FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_312\_GattonHelidonGattonLaidleyRoad17Mar09.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_314\_182TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_314\_371FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_314\_515TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_314\_706FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_314\_847TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U18A\_3407FWM.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U18A\_3407FWO.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U18A\_3412FWM.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U18A\_3412FWO.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U18A\_7359-7 Sumners Rd & Dandenong Rd SUMNER.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U18A\_7359-8 Sumners Rd & Spine St SUMNER.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U18A\_7656-3 Bullockhead St & Jijaws St SUMNER.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U19\_844FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U88\_170FW.xls

- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U94\_179FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U94\_3435TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U95\_183TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U95\_184FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U95\_611TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U95\_SamfordRdBreereStGaythorneRd11June2009.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U98\_CombinedMoretonBayRdOldClevelandRd06Oct09.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U98\_TollettStOldClevelandRd06Oct09 V2.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2009\_U98\_WrightStOldClevelandRd06Oct09.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_1082\_3474TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_1102\_1661FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_111\_1450TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_1122\_1661FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_1122\_1667TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_112\_1619FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_1248TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_1558FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_1735TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_18A12TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_18A\_Harm\_Dr\_Lake\_Clarendon\_Rd.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_461\_2FW.xls

- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_521\_1FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_521\_2FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_18A\_752TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_301\_1842TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_301\_1844FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_301\_1861FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_301\_301\_Briggs\_Rd\_and\_Parrott\_St.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_302\_1687\_2FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_3042\_1104FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_3042\_1687FW\_2.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_3042\_717FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_311\_481TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_311\_560FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_311\_565TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_311\_Laidley\_Plainland\_Cunningham\_Ave\_FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_311\_Laidley\_Plainland\_Gehrke\_ST\_FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_314\_630FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_403\_266FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_900\_266FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_900\_504FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_902\_3478FW.xls



- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_904\_1604FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_904\_1611FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_904\_1613FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_904\_1614TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_904\_1615TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_904\_3342TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_904\_3388FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_905\_1661FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_910\_Centenary\_Hwy\_And\_South\_Deebing\_Creek\_Rd\_YAMANTO\_FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U13C\_1046FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U13C\_68FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U13C\_729TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_1038TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_1047TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_1048TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_1054TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_735TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_736TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_738TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_740TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_741TD.xls

- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_742TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_743TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_744TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_745TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_746TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_748TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_749TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_750TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_76FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_77TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_80FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_81TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_826TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_827TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_828TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_82FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_83FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_86FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_88FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_89FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U14\_92FW.xls

- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U15\_1416FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U18B\_99FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U19\_127FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U19\_46FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U19\_52TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U19\_868FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U19\_874TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U20\_1526FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U20\_1528FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U20\_1709FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U20\_1725FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U20\_1727TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U20\_1728TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U88\_161\_1TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U88\_168FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U88\_170FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U88\_52TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U88\_53TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U90\_1709FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U91\_1475FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U91\_1709FW.xls

- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U91\_1712FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_185TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_186TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_187FW.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_3444TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_613TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_615TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_616TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_617TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_618TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_620TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_621TD.xls
- Traffic Census Data\_Metro Data\_2\_Traffic Counts\_3\_Intersection Counts\_2010\_U95\_624TD.xls

## **B.5 13 19 40 South Coast Region Data**

The following list consists of count sites with cycle counts only and includes locations with low cycle volume.

- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_1003\_1003\_Jacobs Well Rd & Rotary Park Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_1003\_1003\_Jacobs Well Rd & Quarry Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_1003\_1003\_Jacobs Well Rd & Quinns Hill Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_1003\_1003\_Jacobs Well Rd & Woolshed Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_1003\_1003\_Jacobs Well Rd & Yellowwood Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_105\_105\_Nerang-Broadbeach Rd & Alabaster Dr.xls

- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_105\_105\_Nerang Broadbeach & Garden Grove.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_105\_105\_Nerang-Broadbeach & Nielsens.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_105\_105\_Nerang-Broadbeach Rd & Lawrence Dr.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_105\_105\_Nerang-Broadbeach Road & Boulton Road.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_105\_105\_Nerang-Broadbeach Road & Chisholm Road - Lakeview Drive.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_114\_114 Siganto Dr - Dreamworld PKY & Hopelsland Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_118\_11B\_Gold Coast Hwy & Stewart Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_11B\_11B\_Gold Coast Hwy & U-Turn for Stewart Road.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_11B\_11B\_Gold Coast Hwy & Stewart Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_12A\_12A Hopelsland Rd & Pacific MWY Exit 57.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_12A\_208\_City Rd Roundabout & 12A Pacific Motorway ramps.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_202\_202\_Beaudesert Nerang Rd & Beechmont Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_202\_202\_Beaudesert Nerang Rd & Cemetery Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_203\_203\_Beaudesert Beenleigh Rd & Leach Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_206\_206 Old Pacific HWY & Hopelsland Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2008\_207\_207\_Waterford Tamborine Rd & PlunkettRd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_101\_101\_Smith Street Connection Road & Kumbari Av.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_101\_101\_Smith Street Connection Road & Parklands Dr.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_101\_101\_Smith Street Connection Road & Scarborough St.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_101\_101\_Smith Street Connection Road & Southport-Burleigh Rd Aug.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_101\_101\_Smith Street Connection Road & Southport-Burleigh Road Mar.xls

- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_105\_105\_Nerang-Broadbeach Road & Manchester Road.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_106\_106\_Southport-Nerang Road,Waverley St & Garden St.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_114\_114\_Hope Island Road & Anaheim Dr.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_114\_114\_Hope Island Road & River Links Bvd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_204\_204\_Brisbane-Beenleigh Road & Gardiner Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_204\_204\_Brisbane-Beenleigh Road & Harburg Dr.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_204\_204\_Brisbane-Beenleigh Road & Holmview Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_204\_204\_Brisbane-Beenleigh Road & Teys Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_204\_204\_Brisbane-Beenleigh Road, Castile Cr & Fletcher Rd.xls
- Traffic Census Data\_SCHD Data\_Intersection Counts\_2009\_204\_204\_Brisbane-Beenleigh Road, Spans Rd & Sunrise St.xls

## APPENDIX C INTERSECTION LAYOUT CODING

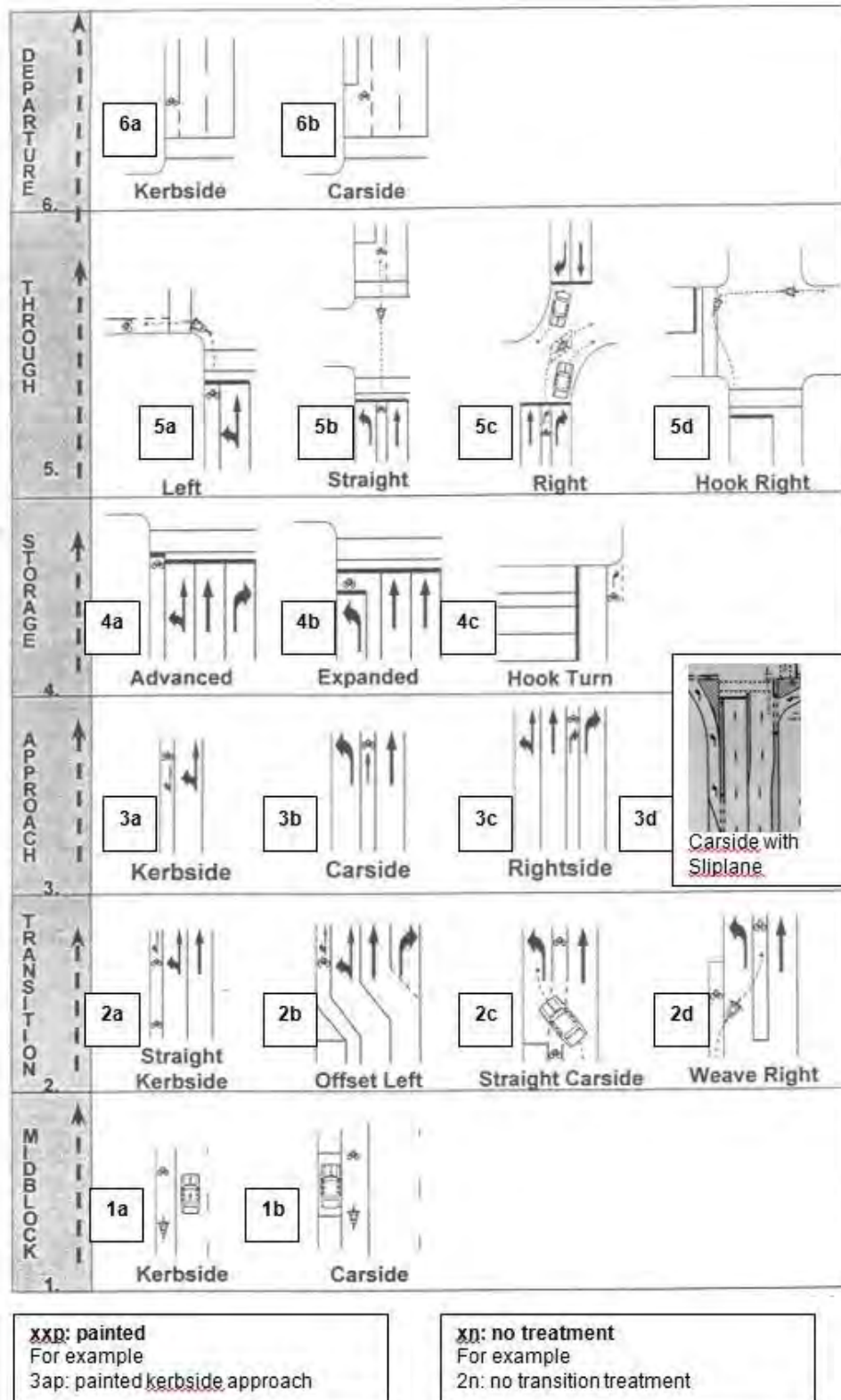


Figure C 2: Intersection layout coding sheet

## APPENDIX D INTERSECTION FEATURES CODING

On/Near Tram/Train System		Y	Yes					
		N	No					
Treatments	As per treatment codes sheet							
Lane Width	THR Cycle Lane		The width of through cycle lane					
	Kerbside Lane		The width of traffic lane immediate to the kerb. Exclude free left turn lane.					
	Type of Kerbside Lane	1	Standard					
		2	Bus lane					
	Ave THR Lane Width		Average width of the through lane(s). Exclude the kerbside lane					
	RT cycle lane	0	Width of right turn cycle lane, if any No right turn cycle lane					
	Ave RT Lane Width		Average width of the right turn traffic lane(s)					
	Total Approach Width		Do not include free left turn lane(s)					
Ped Treatment	Ped Phase	1	Yes					
		2	No					
	Left Turn Phase	0	No left turn phase					
		1	Standard					
		2	Early start for ped					
		3	Fully controlled					
		4	Free left Turn					
	Right Turn Phase	1	Standard					
		2	Right Turn Held					

Lane Layout Type	1		9	
	2		10	
	3		11	
	4		12	
	5		13	
	6		14	
	7		15	
	8		16	

Figure D 3: Intersection features coding sheet