Proposed Subdivision

# 1141 Elizabeth Drive, Cecil Park

**TRAFFIC AND PARKING ASSESSMENT REPORT**

6 September 2018

Ref 17330

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

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# 1. INTRODUCTION

This report has been prepared to accompany an Environmental Impact Statement for the proposed subdivision of 1111-1141 Elizabeth Drive, Cecil Park (Figures 1 and 2).

The proposed development involves the subdivision of the site to create 14 lots, comprising a range of uses including industrial, large format retail (bulky goods), short-term accommodation (motel) and highway services (service station and fast food restaurants with drive-thru). The north-western portion of the site will be dedicated as a vegetation reserve.

A new public local road is also proposed to be constructed to serve these future lots which will connect to Cecil Road, in accordance with Fairfield Council's *DCP 2013* road design requirements.

In addition, a new service road is also proposed to be constructed *within* the southern boundary of the site (i.e. the Elizabeth Drive site frontage) to access the highway service lots, in accordance with RMS requirements. There will be *no through access* between the highway service lots and the proposed new internal local road.

Off-street parking for the various lots will ultimately be provided within the respective lot and comply with Council and/or RMS's numerical requirements.

The purpose of this report is to assess the traffic and parking implications of the development proposal and to that end this report:

- describes the site and provides details of the subdivision proposal

- reviews the road network in the vicinity of the site, and the traffic conditions on that road network

- estimates the traffic generation potential of the subdivision proposal and assigns that traffic generation to the road network serving the site

- assesses the traffic implications of the development proposal in terms of road network capacity

- reviews the geometric design features of the proposed subdivision's local road and service road for compliance with the relevant codes and standards

- assesses the intersection treatments to/from the arterial road network as well as to/from the local road network

- assesses the adequacy and suitability of the quantum of off-street car parking provided on the site.


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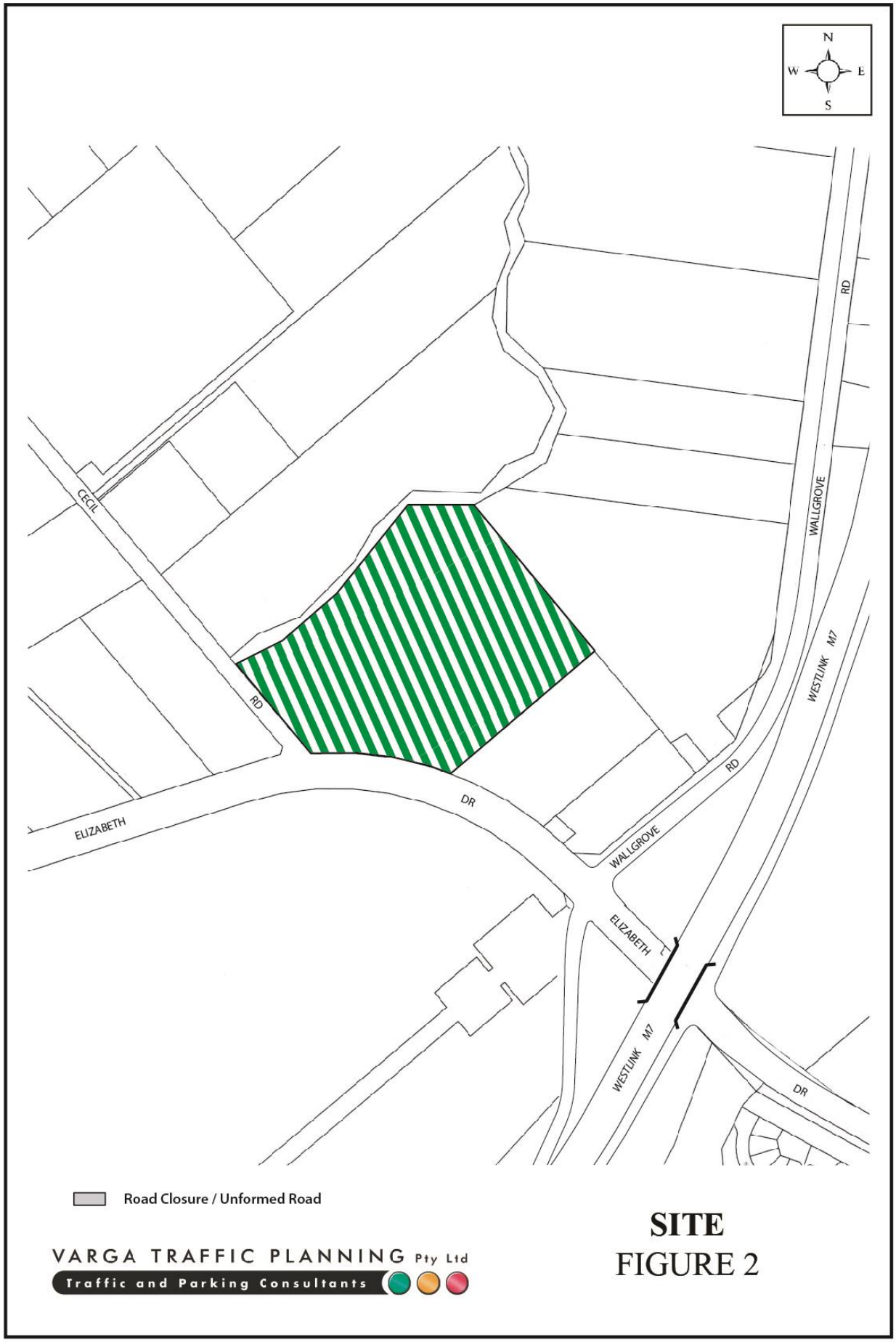
**LOCATION**
FIGURE 1


N
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ELIZABETH
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WALLGROVE
ELIZABETH
WESTLINK M7
DR
Road Closure / Unformed Road
VARGA TRAFFIC PLANNING Pty Ltd
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SITE
FIGURE 2

# 2. PROPOSED DEVELOPMENT

**Site**

The subject site is located on the north-eastern corner of the Elizabeth Drive and Cecil Road intersection. The site has a street frontage approximately 163m in length to Elizabeth Drive, approximately 134m in length to Cecil Road and occupies an area of approximately 7.38ha.

The subject site is currently occupied by a single dwelling house with a number of associated outbuildings. The remainder of the site consists of maintained lawn, established trees and part of a dam.

Vehicular access to the site is provided via two separate gates located off the Elizabeth Drive site frontage. There is no existing vehicular access provided via Cecil Road.

A recent aerial image of the site is reproduced below.

**Source: Nearmap**

It should be noted that the subject site is located within close proximity to the future M12 Motorway investigation corridor. The M12 Motorway is proposed by the NSW Government as part of the *Western Sydney Infrastructure Plan* and will provide direct access from Sydney's current motorway network to the future Western Sydney Airport at Badgerys's Creek. The M12 motorway is expected to increase road capacity, reduce congestion and travel time along neighbouring existing roads such as Elizabeth Drive. At this stage however it is unknown as to whether the M12 Motorway will have any effect on the road configuration of Elizabeth Drive in the immediate vicinity of the site.

**Proposed Development**

The proposed development involves the subdivision of the site to create 14 lots, with an average lot size of approximately 3,257m². The proposed uses of the new lots as well as indicative floor areas are indicated in the table below:

**Table 1.1: Indicative Yield**

| Lot | Site Area (sqm) | Indicative GFA (sqm) | Land Use |
|---|---|---|---|
| 1 | 3,021 | 759 | Industrial/Urban Services |
| 2 | 3,540 | 1,119 | Highway Service Centre<br>- service station<br>- fast food outlets |
| 3 | 2,372 | 391 | |
| 4 | 4,047 | 348 | |
| 5 | 3,762 | 1,080 | Large Format Retail |
| 6 | 4,267 | 1,169 | |
| 7 | 5,056 | 1,313 | Short-term Accommodation (Motel) |
| 8 | 4,448 | 1,231 | |
| 9 | 2,701 | 1,121 | Industrial/Urban Services |
| 10 | 2,460 | 933 | |
| 11 | 2,482 | 544 | |
| 12 | 2,430 | 562 | |
| 13 | 2,576 | 983 | |
| 14 | 2,430 | 765 | |
| **Total** | **45,592** | **12,324** | |

Source: AEC/ae design partnership

The north-western portion of the site will be dedicated as a vegetation reserve with an area of approximately 1.36ha.

Off-street parking for the 14 lots is to be accommodated within each of the respective lots and will ultimately comply with Council's requirements, subject to a separate development application for each new development.

Vehicular access to Lot 1 & Lots 5-14 is to be provided via the construction of a new local road through the site which will connect to Cecil Road towards the far northern end of the site frontage. The proposed new local road will have a road reservation width of 20m, with a carriageway width of 13m, consistent with the Council's *DCP 2013* requirements for "industrial" subdivision roads.

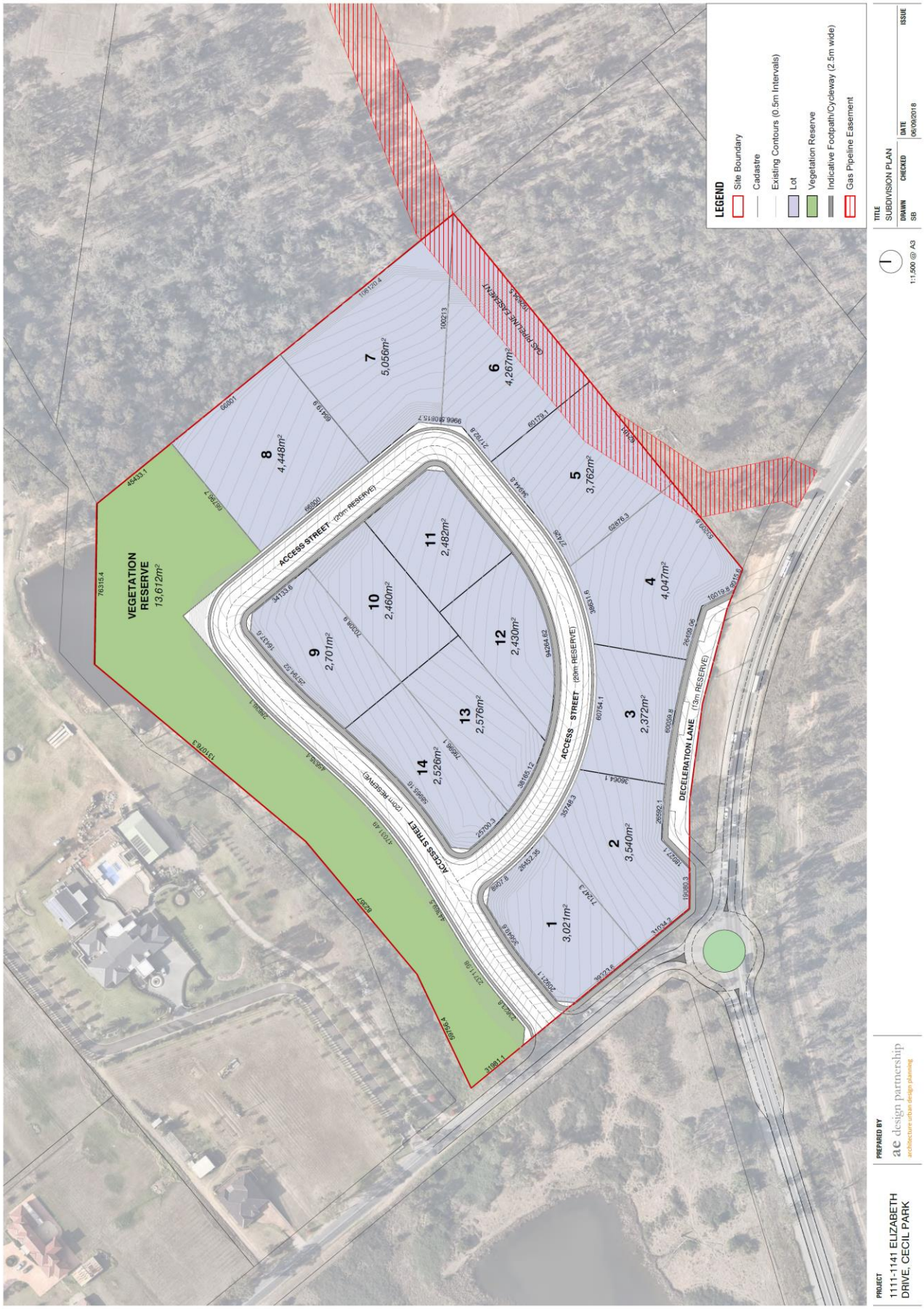
Vehicular access to the highway service centre Lots 2-4 is to be provided via the construction of a new service road *within* the southern boundary of the site which connects directly from/to Elizabeth Drive.

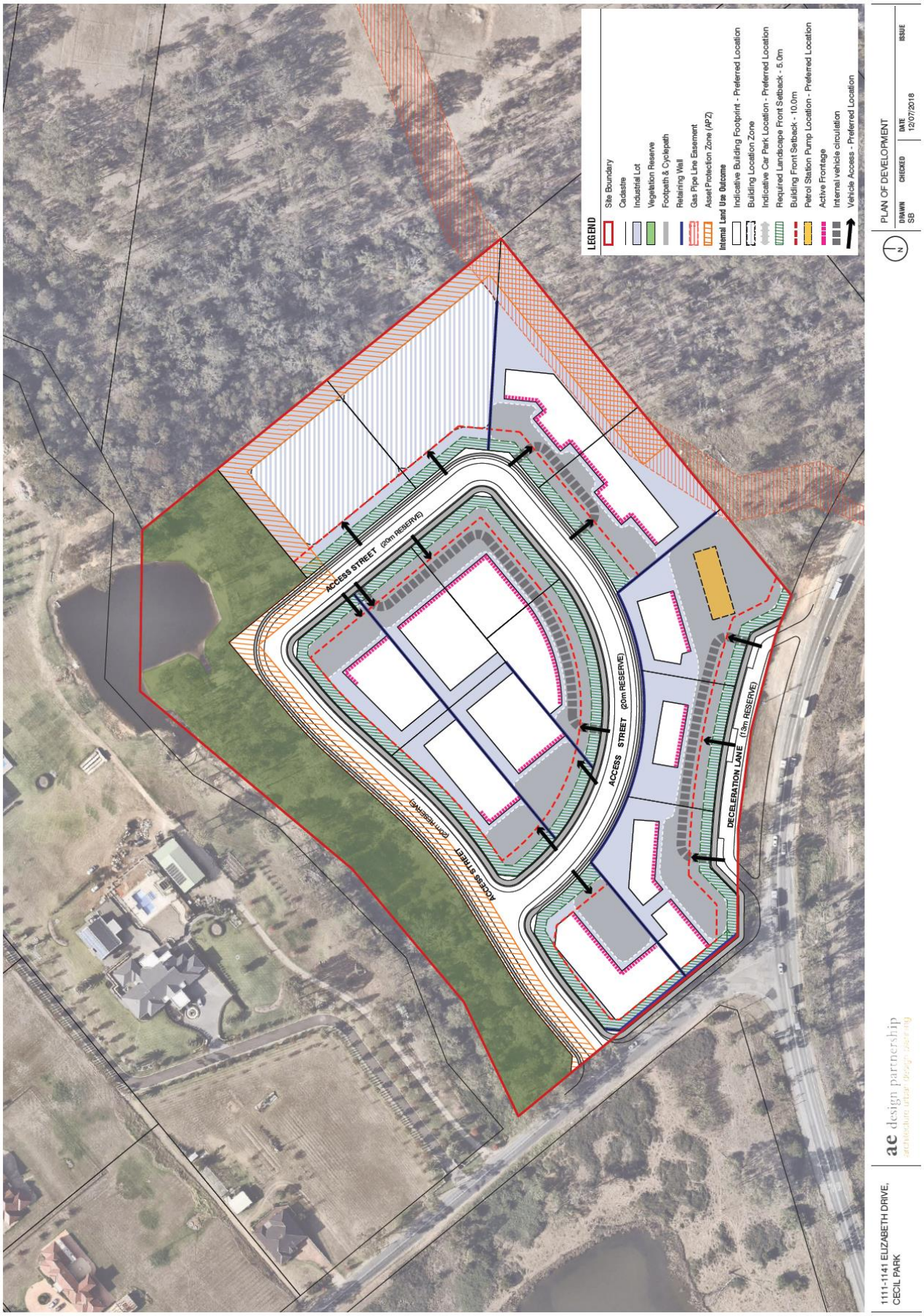
It is pertinent to note in this regard that despite Clause 101(2a) of *SEPP (Infrastructure) 2007* which states that the consent authority must not grant consent to development on land that has a frontage to a classified road unless it is satisfied that, *"where practicable, vehicular access to the land is provided by a road other than the classified road"*, RMS would provide *"in principle" support to a left-in/left-out access arrangement on Elizabeth Drive to the potential future service station and fast food premises only, given that service centres cater primarily for passing traffic….on the condition that there is no vehicular connection from the proposed service station and fast food premises to other developments proposed on the site.*

Loading/servicing for the proposed development is expected to be undertaken by a variety of commercial vehicles including small, medium and large rigid trucks, depending on the land use. Appropriate loading facilities will ultimately be provided for the respective uses and comply with Australian Standards.

Fuel deliveries will likely be made by articulated tankers, with the precise location of the fuelling point subject to future design at development application stage. The future arrangement should allow tankers to undertake deliveries to the site without disrupting other vehicle movements on the site.

Plans of the proposed development have been prepared by *ae Design Partnership*, and are reproduced in the following pages.


LEGEND
Site Boundary
Cadastre
Existing Contours (0.5m Intervals)
Lot
Vegetation Reserve
Indicative Footpath/Cycleway (2.5m wide)
Gas Pipeline Easement
VEGETATION RESERVE 13,612m²
ACCESS STREET (20m RESERVE)
ACCESS STREET (20m RESERVE)
ACCESS STREET (20m RESERVE)
DECELERATION LANE (13m RESERVE)
GAS PIPELINE EASEMENT
1 3,021m²
2 3,540m²
3 2,372m²
4 4,047m²
5 3,762m²
6 4,267m²
7 5,056m²
8 4,448m²
9 2,701m²
10 2,460m²
11 2,482m²
12 2,430m²
13 2,576m²
14 2,526m²
TITLE
SUBDIVISION PLAN
DRAWN SB
CHECKED
DATE 06/09/2018
ISSUE
1:1,500 @ A3
PREPARED BY
ae design partnership
architecture urban design planning
PROJECT
1111-1141 ELIZABETH DRIVE, CECIL PARK


LEGEND
Site Boundary
Cadastre
Industrial Lot
Vegetation Reserve
Footpath & Cyclepath
Retaining Wall
Gas Pipe Line Easement
Asset Protection Zone (APZ)
Internal Land Use Outcome
Indicative Building Footprint - Preferred Location
Building Location Zone
Indicative Car Park Location - Preferred Location
Required Landscape Front Setback - 5.0m
Building Front Setback - 10.0m
Petrol Station Pump Location - Preferred Location
Active Frontage
Internal vehicle circulation
Vehicle Access - Preferred Location
ACCESS STREET (20m RESERVE)
ACCESS STREET (20m RESERVE)
ACCESS STREET (20m RESERVE)
DECELERATION LANE (13m RESERVE)
PLAN OF DEVELOPMENT
DRAWN SB
CHECKED
DATE 12/07/2018
ISSUE
1111-1141 ELIZABETH DRIVE, CECIL PARK
ae design partnership
architecture urban design planning


ILLUSTRATIVE PLAN
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1111-1141 ELIZABETH DRIVE, CECIL PARK
ae design partnership
architecture urban design planning

# 3. TRAFFIC ASSESSMENT

**Road Hierarchy**

The road hierarchy allocated to the road network in the vicinity of the site by the Roads and Maritime Services is illustrated on Figure 3.

The M7 Motorway is classified by the RMS as a *State Road* which provides the key road link between the M2 Motorway, the M4 Motorway and the M5 Motorway. It typically carries two traffic lanes in each direction in the vicinity of the site, with opposing traffic flows separated by a wide landscaped central median island. All intersections with the M7 Motorway are grade-separated.

Wallgrove Road is also classified by the RMS as a *State Road* and provides the key north-south road link in the area, linking Eastern Creek to Cecil Park. It typically carries one traffic lane in each direction in the vicinity of the site with additional lanes provided at key locations.

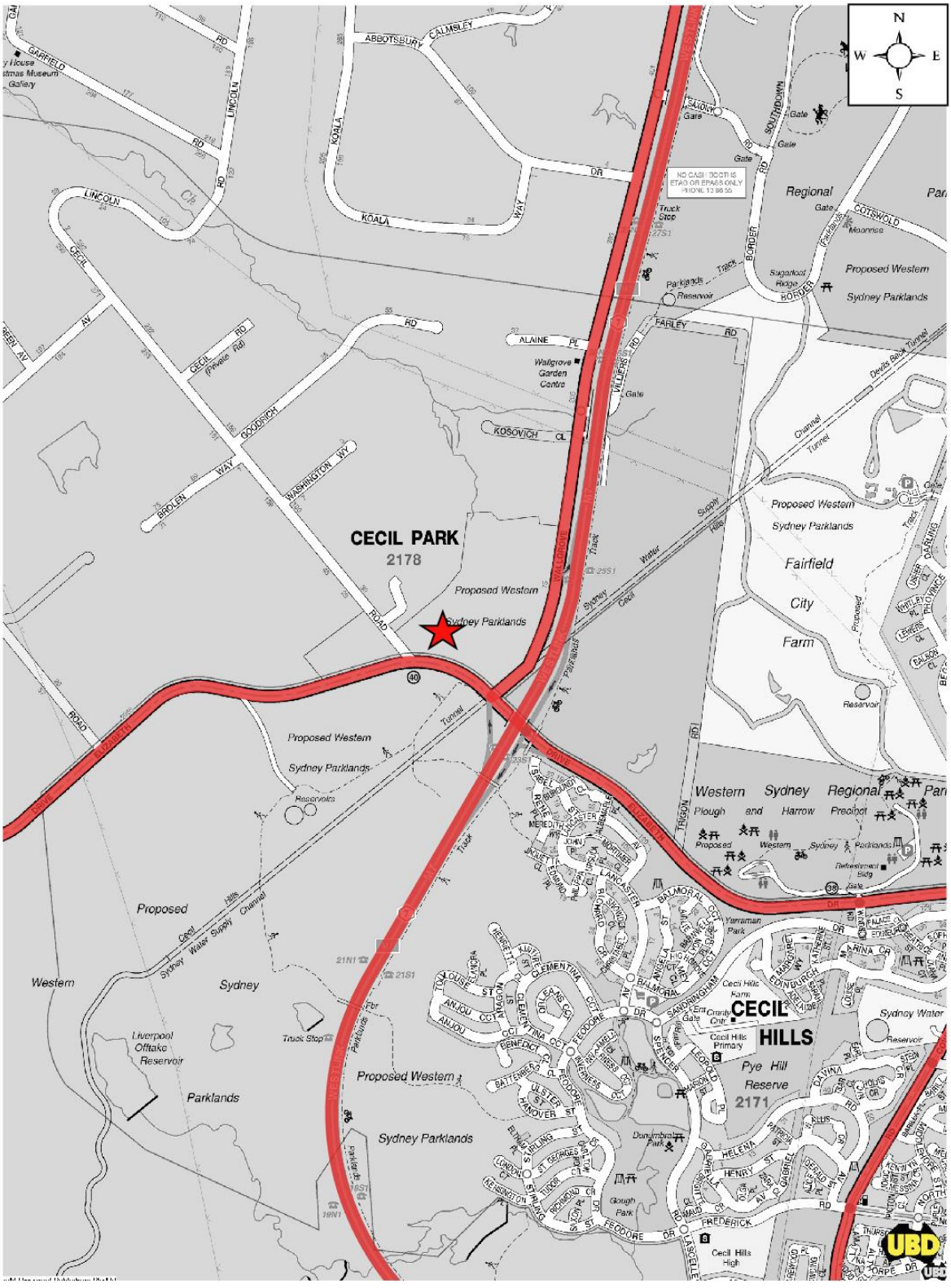
Elizabeth Drive is also classified by the RMS as a *State Road* and provides the key east-west road link in the area, linking Luddenham to Liverpool. It typically carries one to two traffic lanes in each direction in the vicinity of the site with turning bays provided at key locations.

Cecil Road is a local, unclassified semi-rural road which is primarily used to provide vehicular and pedestrian access to frontage properties. Kerbside parking is generally permitted on both sides of the road.

**Existing Traffic Controls**

The existing traffic controls which apply to the road network in the vicinity of the site are illustrated on Figure 4. Key features of those traffic controls are:

- a 100 km/h SPEED LIMIT which applies to the M7 Motorway

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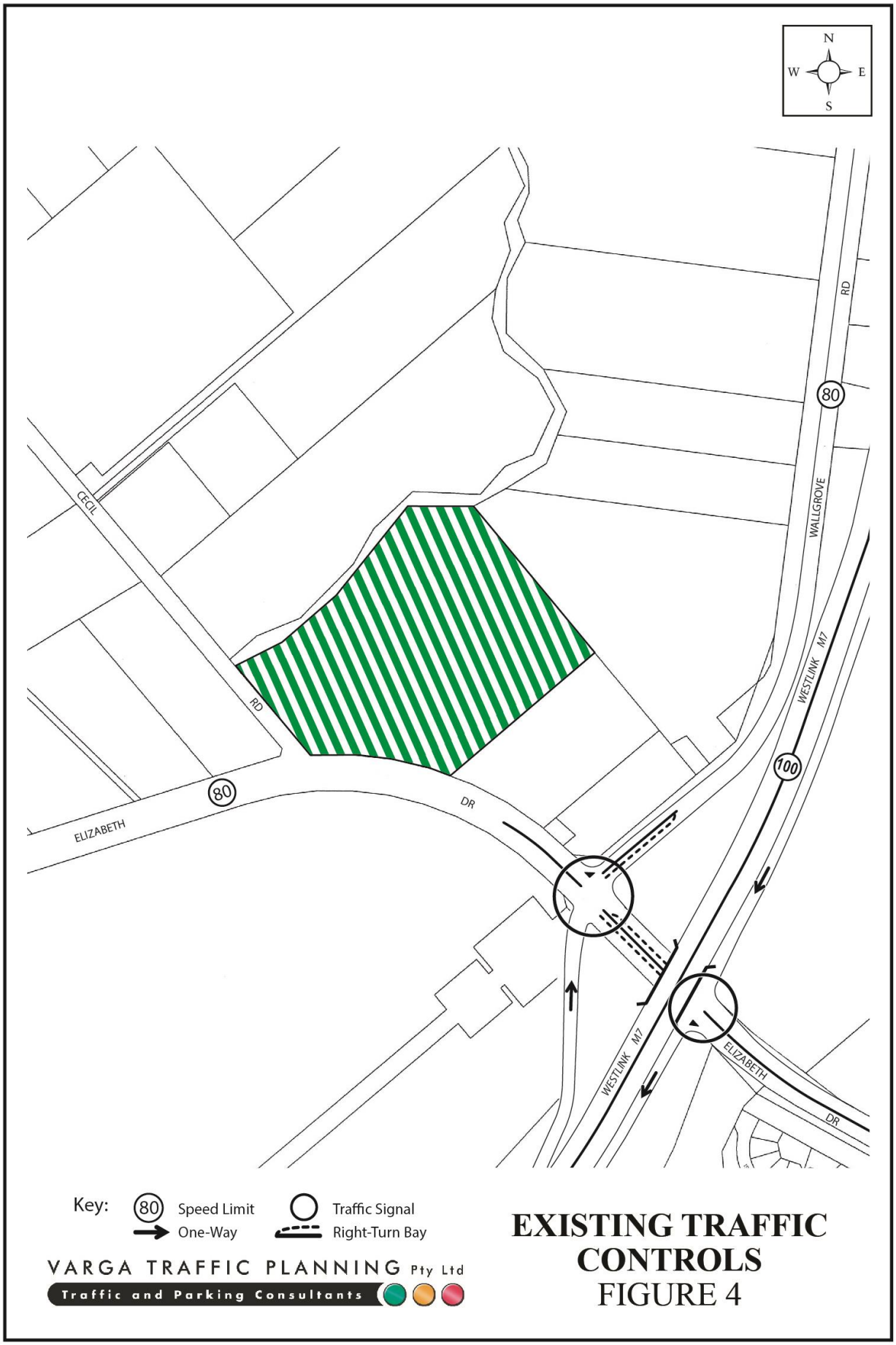
**ROAD HIERARCHY**
FIGURE 3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WALLGROVE
RD
WESTLINK M7
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ELIZABETH
80
DR
WESTLINK M7
ELIZABETH
DR
Key:
80 Speed Limit
One-Way
Traffic Signal
Right-Turn Bay
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EXISTING TRAFFIC CONTROLS
FIGURE 4

- an 80 km/h SPEED LIMIT which applies to Wallgrove Road and Elizabeth Drive, west of Cecil Road

- a 70 km/h SPEED LIMIT which applies to Elizabeth Drive, east of Cecil Road

- a 60 km/h SPEED LIMIT which applies to Cecil Road and all other local roads in the surrounding area

- TRAFFIC SIGNALS in Elizabeth Drive where it intersects with Wallgrove Road and the Elizabeth Drive M7 Off-Ramp.

**Existing Traffic Conditions**

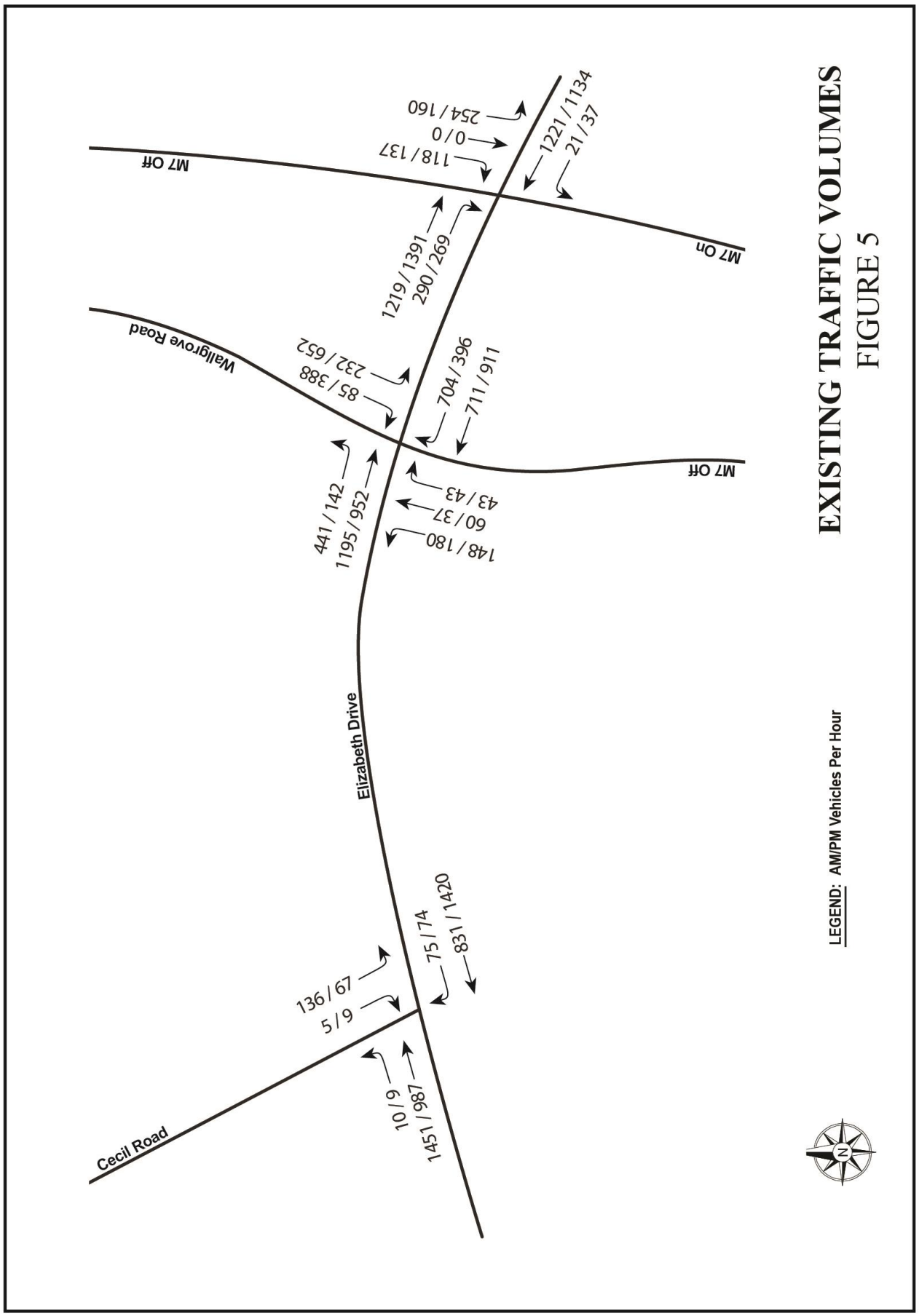
An indication of the existing traffic conditions on the road network in the vicinity of the site is provided by peak period traffic surveys undertaken as part of this traffic study. The traffic surveys were undertaken on Wednesday 9th August 2017 in Elizabeth Drive where it intersects with Cecil Road, Wallgrove Road and the M7 On/Off Ramps, with the volumes summarised in Figure 5. In accordance with industry practice, the traffic surveys were undertaken during school term. The results of the traffic surveys are reproduced in full in Appendix A and reveal that:

- the morning network peak hour occurred between 7:45am and 8:45am whilst the afternoon peak hour occurred between 4:45pm and 5:45pm

- two-way traffic flows in Elizabeth Drive past the site frontage are typically in the order of 2,500 vehicles per hour (vph) during the weekday commuter peak periods

- two-way traffic flows in Elizabeth Drive in the vicinity of the Wallgrove Road and M7 Motorway interchange are typically in the order of 3,000 vph during weekday commuter peak periods

- two-way traffic flows in Cecil Road past the site frontage are significantly lower, typically in the order of 160-220 vph during the weekday peak periods.


EXISTING TRAFFIC VOLUMES
FIGURE 5
LEGEND: AM/PM Vehicles Per Hour
M7 On
M7 Off
M7 Off
Wallgrove Road
Elizabeth Drive
Cecil Road
254 / 160
0 / 0
118 / 137
1221 / 1134
21 / 37
1219 / 1391
290 / 269
704 / 396
711 / 911
85 / 388
232 / 652
441 / 142
1195 / 952
43 / 43
60 / 37
148 / 180
75 / 74
831 / 1420
136 / 67
5 / 9
10 / 9
1451 / 987
N

**Existing Public Transport Services**

There are currently two bus services which operate in the vicinity of the site, with the nearest bus stops located directly outside the site on Elizabeth Drive and also Cecil Road.

The 801 service operates Monday to Friday between Badgerys Creek and Liverpool via Kemps Creek, Cecil Park, Bonnyrigg and Cabramatta.

The 813 service operates 7 days per week between Bonnyrigg and Fairfield via Cecil Park, Horsley Park, Wetherill Park and Smithfield.

The abovementioned bus services can also be used to interchange with connecting train services at Fairfield and Liverpool railway stations.

Whilst existing public transport options are limited, given the semi-rural nature of the area, this is likely to change in coming years as the surrounding greater area is redeveloped.

**Bicycle Network**

There are a number of on-road and off-road bicycle routes that are readily accessible from the subject site to/from the greater local Fairfield and Liverpool area, including along Elizabeth Drive (east of the M7 Motorway) and also the Westlink M7 shared path.

In order to enhance the *active* transport options available to future occupants of the site, consideration could be given to constructing a new shared pathway along the northern side of Elizabeth Drive, past the site frontage, connecting to the Westlink M7 shared path which is located approximately 500m east of the site along Elizabeth Drive.

In order to further enhance the *active* transport options available to future occupants of the site, consideration should also be given to including end-of-trip facilities and suitable bike storage areas.

## Projected Traffic Generation Potential

An indication of the traffic generation potential of the subdivision proposal is provided by reference to the Roads and Maritime Services publication *Guide to Traffic Generating Developments, Section 3 – Land Use Traffic Generation (October 2002).*

The RMS *Guidelines* are based on extensive surveys of a wide range of land uses, and nominate the following peak hour traffic generation rates which are applicable to the development proposal:

**Service Stations**

0.66A(F) evening peak hour vehicle trips, including approximately 90% passing trade (assumed)
where A(F) = GFA of convenience store

**Take-Away Food Restaurant**

180 peak hour vehicle trips per hour (hamburger-type), including approximately 35% passing trade
100 peak hour vehicle trips per hour (chicken type), including approximately 50% passing trade

**Industrial Premises**

1 peak hour vehicle trip per 100m$^2$ GFA

**Bulky Goods**

2.5 peak hour vehicle trip per 100m$^2$ GFA

**Motels:**

0.4 peak hour vehicle trips per unit

It is also pertinent to note that there is likely to be a proportion of *multi-purpose trips* to the site whereby visitors to the service station, employees of the industrial units, customers of the large format retail, guests of the motel may also be customers of the fast food outlet, and vice-versa.

Furthermore, *passing trade* occurs when a person might visit the proposed fast food restaurants on the site on their way home from work. That person is already travelling on the nearby road network, thereby not incurring an additional vehicle trip.

In any event, application of the above traffic generation rates to the various components outlined in the subdivision proposal yields a traffic generation potential of 653 vph during commuter peak periods (*including* approximately 320 vph "passing trade") as set out below:

**Projected Future Traffic Generation Potential**

| | |
|---|---|
| Lot 1 – Industrial (759m$^2$): | 8 peak hour vehicle trips |
| Lot 5 – Large Format Retail (1,080m$^2$): | 27 peak hour vehicle trips$^+$ |
| Lot 6 – Large Format Retail (1,169m$^2$): | 29 peak hour vehicle trips$^+$ |
| Lot 7 – Motel (38 rooms): | 15 peak hour vehicle trips |
| Lot 8 – Motel (38 rooms): | 15 peak hour vehicle trips |
| Lot 9 – Industrial (1,124m$^2$): | 11 peak hour vehicle trips |
| Lot 10 – Industrial (933m$^2$): | 9 peak hour vehicle trips |
| Lot 11 – Industrial (544m$^2$): | 5 peak hour vehicle trips |
| Lot 12 – Industrial (562m$^2$): | 6 peak hour vehicle trips |
| Lot 13 – Industrial (983m$^2$): | 10 peak hour vehicle trips |
| Lot 14 – Industrial (765m$^2$): | 8 peak hour vehicle trips |
| **Sub-Total Traffic Generation Potential via Cecil Road:** | **143 peak hour vehicle trips** |
| Lot 2 – Fast Food (1,119m$^2$): | 180 peak hour vehicle trips* |
| Lot 3 – Fast Food (391m$^2$): | 100 peak hour vehicle trips* |
| Lot 4 – Service Station (348m$^2$): | 230 peak hour vehicle trips* |
| **Sub-Total Traffic Generation Potential via Service Road:** | **510 peak hour vehicle trips*** |
| **TOTAL TRAFFIC GENERATION POTENTIAL:** | **653 peak hour vehicle trips*** |

* including approximately 320 vph passing trade

$^+$ AM = 50%PM

That projected increase in traffic activity as a consequence of the subdivision proposal will not have any unacceptable traffic implications in terms of road network capacity, subject to recommended upgrade works, as is demonstrated by the following section of this report.

## Existing Intersection Treatment

The existing Elizabeth Drive and Cecil Road intersection currently comprises a Basic Right Turn Treatment (BAR), as indicated on the aerial image below. The road reservation width of Elizabeth Drive in the vicinity of the site is in the order of 40.5m, whilst Cecil Road is in the order of 20m – i.e. property boundary to property boundary. Elizabeth Drive in the vicinity of Cecil Road comprises one traffic lane in each direction with gravel shoulders, widening to two lanes in each direction on approach to the Wallgrove Road signalised intersection.

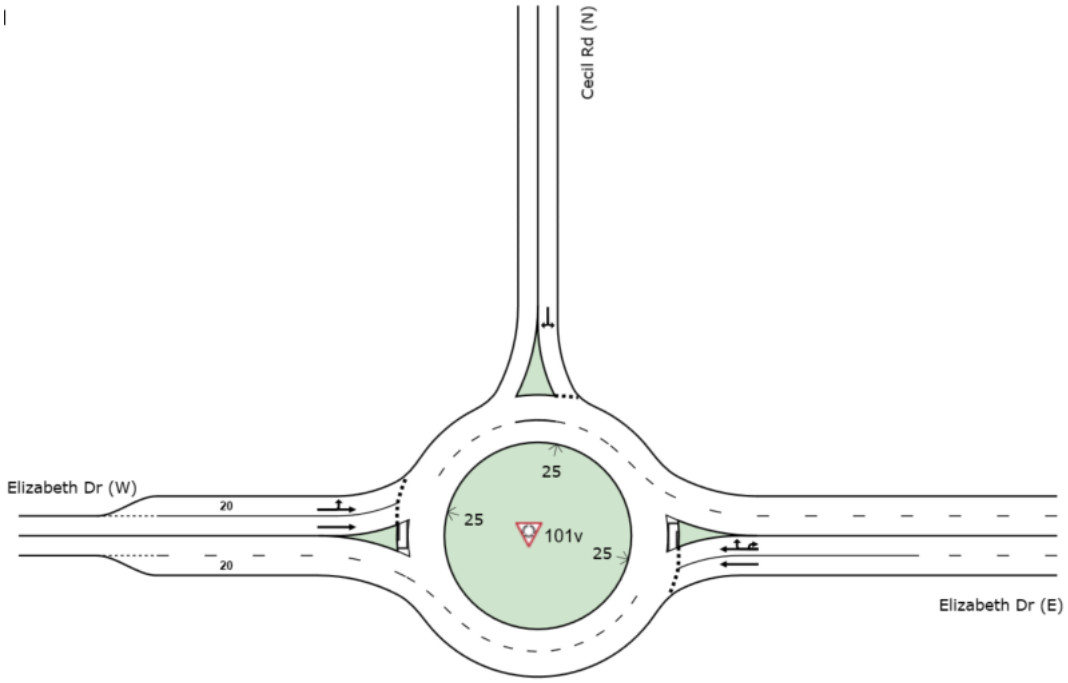

Cecil Road currently comprises a carriageway width of approximately 7m with one traffic lane in each direction, gravel shoulders and large radii corners to accommodate truck movements.

**Recommended Intersection Treatment**

Whilst the future treatment of the Elizabeth Drive and Cecil Road intersection is not yet known, the traffic modelling undertaken as part of this assessment has indicated that the existing configuration results in long waiting times for vehicles exiting Cecil Road onto Elizabeth Drive. Consideration could therefore be given to constructing a new roundabout, similar to other intersection treatments along Elizabeth Drive, which would assist turning movements into/out of Cecil Road however also allow vehicles heading west along Elizabeth Drive to undertake a u-turn manoeuvre in order to access the service station and/or fast food restaurants.

Notwithstanding, in order for a roundabout to operate with optimum efficiency, it is recommended that the Elizabeth Drive carriageway, in between Cecil Road and Wallgrove Road, be widened to two lanes in each direction – i.e. the two existing lanes in each direction on the western leg of the Elizabeth Drive and Wallgrove Road intersection should be extended to meet with the eastern leg of the Elizabeth Drive and Cecil Road intersection. Elizabeth Drive would then return to a single lane in each direction, west of Cecil Road.

A concept design of the roundabout is illustrated below.




The traffic modelling undertaken as part of this assessment indicates that a standard priority-controlled "give way" intersection at the future intersection of Cecil Road and the proposed new subdivision access is adequate due to the relatively modest level of traffic along Cecil Road and also into/out of the proposed subdivision. The precise design of the intersection will be determined at a later stage however it will have sufficient turn radii to accommodate the largest vehicle expected to service the subdivision and be designed in accordance with Council's industrial subdivision requirements.

**Subdivision Proposal Traffic Implications - Road Network Capacity**

The traffic implications of development proposals primarily concern the effects that the *additional* traffic flows the development may generate will have on the operational performance of the adjacent road network.

Those effects can be assessed using the SIDRA INTERSECTION 8.0 NETWORK capacity analysis program as is widely used by the RMS and many LGAs for this purpose. Criteria for evaluating the results of SIDRA analysis are reproduced in the following pages. SIDRA movement summaries are reproduced in Appendix B, with criteria for evaluating the results of the analysis reproduced in the following pages.

The results of the SIDRA capacity analysis of the Elizabeth Drive/Cecil Road intersection are summarised on Table 3.1 below, revealing that:

- the existing priority-controlled Elizabeth Drive/Cecil Road intersection currently operates at an overall *Level of Service "C"* under the existing *morning* traffic demands with total average vehicle delays in the order of 33 seconds/vehicle. Notwithstanding, turning movements out of Cecil Road as well as the right turn movements into Cecil Road operate at *Level of Service "F".* Under the existing *afternoon* traffic demands the intersection operates at an overall *Level of Service "A"* with total average vehicle delays in the order of 2 seconds/vehicle.

- under the projected future traffic demands expected to be generated by the development proposal, a hypothetical roundabout at the Elizabeth Drive/Cecil Road intersection could be expected to operate at *Level of Service "A",* with average vehicle delays of 6-7 seconds/vehicle, with minimal delays on all approaches.

The results of the SIDRA capacity analysis of the Elizabeth Drive/Wallgrove Road/M7 Off Ramp intersection are summarised on Table 3.2 below, revealing that:

- the Elizabeth Drive/Wallgrove Road/M7 Off Ramp intersection currently operates at *Level of Service "C"* under the existing *morning* traffic demands with total average vehicle delays in the order of 36 seconds/vehicle, and *Level of Service "D"* under the existing *afternoon* traffic demands with total average vehicle delays in the order of 48 seconds/vehicle

- under the projected future traffic demands expected to be generated by the development proposal, the hypothetical upgraded Elizabeth Drive/Wallgrove Road/M7 Off Ramp intersection will continue to operate at *Levels of Service "C/D",* with increases in average vehicle delays in the order of 4-7 seconds/vehicle.

The results of the SIDRA capacity analysis of the Elizabeth Drive/M7 On Ramp/M7 Off Ramp intersection are summarised on Table 3.3 below, revealing that:

- the Elizabeth Drive/M7 On Ramp/M7 Off Ramp intersection currently operates at *Level of Service "B"* under the existing traffic demands with total average vehicle delays in the order of 19-21 seconds/vehicle

- under the projected future traffic demands expected to be generated by the development proposal, the Elizabeth Drive/M7 On Ramp/M7 Off Ramp intersection will continue to operate at *Level of Service "B",* with increases in average vehicle delays of 1-2 seconds/vehicle.

The results of the SIDRA analysis of the Cecil Road/proposed subdivision access road intersection are summarised on Table 3.4 below, revealing that under the projected future traffic demands expected to be generated by the development proposal, the proposed new subdivision access intersection is expected to operate at *Level of Service "A",* with average vehicle delays of 2-3 seconds/vehicle.

**TABLE 3.1 - RESULTS OF SIDRA ANALYSIS OF ELIZABETH DRIVE/CECIL ROAD**

| Key Indicators | Existing Traffic Demand (Give Way) | | Projected Development Traffic Demand (Roundabout) | |
|---|---|---|---|---|
| | AM | PM | AM | PM |
| **Level of Service** | C | A | A | A |
| **Degree of Saturation** | 1.343 | 0.707 | 0.563 | 0.730 |
| **Average Vehicle Delay (secs/veh)** | 33.3 | 2.3 | 10.4 | 6.2 |

**TABLE 3.2 - RESULTS OF SIDRA ANALYSIS OF ELIZABETH DRIVE/WALLGROVE ROAD/M7 OFF RAMP**

| Key Indicators | Existing Traffic Demand | | Projected Development Traffic Demand | |
|---|---|---|---|---|
| | AM | PM | AM | PM |
| **Level of Service** | C | D | C | D |
| **Degree of Saturation** | 0.860 | 0.936 | 0.952 | 0.985 |
| **Average Vehicle Delay (secs/veh)** | 36.4 | 47.5 | 39.5 | 55.6 |

**TABLE 3.3 - RESULTS OF SIDRA ANALYSIS OF ELIZABETH DRIVE/M7 OFF RAMP/M7 ON RAMP**

| Key Indicators | Existing Traffic Demand | | Projected Development Traffic Demand | |
|---|---|---|---|---|
| | AM | PM | AM | PM |
| **Level of Service** | B | B | B | B |
| **Degree of Saturation** | 0.729 | 0.551 | 0.833 | 0.584 |
| **Average Vehicle Delay (secs/veh)** | 21.7 | 19.0 | 24.0 | 19.0 |

| TABLE 3.4 - RESULTS OF SIDRA ANALYSIS OF CECIL ROAD/PROPOSED SUBDIVISION ACCESS | | |
|---|---|---|
| **Key Indicators** | **Projected Development Traffic Demand** | |
| | **AM** | **PM** |
| **Level of Service** | A | A |
| **Degree of Saturation** | 0.096 | 0.079 |
| **Average Vehicle Delay (secs/veh)** | 2.0 | 2.7 |

## Traffic Implications during Construction Activities

The construction activities associated with the proposed subdivision – i.e. site establishment, road construction etc. – are expected to be undertaken over a period of approximately 6-8 months with all material deliveries to be undertaken wholly within the site using a variety of truck types and sizes. Truck and construction staff vehicular movements during construction are expected to be relatively minor and in any event are not expected to exceed the projected truck movements of the operating subdivision.

The site is located a significant distance from residential properties and therefore any disturbance from dust, noise or construction traffic will be *negligible*, if any.

# Criteria for Interpreting Results of SIDRA Analysis

## *1. Level of Service (LOS)*

| LOS | Traffic Signals and Roundabouts | Give Way and Stop Signs |
|---|---|---|
| 'A' | Good operation. | Good operation. |
| 'B' | Good with acceptable delays and spare capacity. | Acceptable delays and spare capacity. |
| 'C' | Satisfactory. | Satisfactory but accident study required. |
| 'D' | Operating near capacity. | Near capacity and accident study required. |
| 'E' | At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode. | At capacity and requires other control mode. |
| 'F' | Unsatisfactory and requires additional capacity. | Unsatisfactory and requires other control mode. |

## *2. Average Vehicle Delay (AVD)*

The AVD provides a measure of the operational performance of an intersection as indicated on the table below which relates AVD to LOS. The AVDs listed in the table should be taken as a guide only as longer delays could be tolerated in some locations (ie inner city conditions) and on some roads (ie minor side street intersecting with a major arterial route).

| Level of Service | Average Delay per Vehicle (secs/veh) | Traffic Signals, Roundabout | Give Way and Stop Signs |
|---|---|---|---|
| A | less than 14 | Good operation. | Good operation. |
| B | 15 to 28 | Good with acceptable delays and spare capacity. | Acceptable delays and spare capacity. |
| C | 29 to 42 | Satisfactory. | Satisfactory but accident study required. |
| D | 43 to 56 | Operating near capacity. | Near capacity and accident study required. |
| E | 57 to 70 | At capacity; at signals incidents will cause excessive delays. Roundabouts require other control mode. | At capacity and requires other control mode. |

## *3. Degree of Saturation (DS)*

The DS is another measure of the operational performance of individual intersections.

For intersections controlled by traffic signals[1] both queue length and delay increase rapidly as DS approaches 1, and it is usual to attempt to keep DS to less than 0.9. Values of DS in the order of 0.7 generally represent satisfactory intersection operation. When DS exceeds 0.9 queues can be anticipated.

For intersections controlled by a roundabout or GIVE WAY or STOP signs, satisfactory intersection operation is indicated by a DS of 0.8 or less.

1 *The values of DS for intersections under traffic signal control are only valid for cycle length of 120 secs.*

# 4. PARKING IMPLICATIONS

## Existing Kerbside Parking Restrictions

The existing kerbside parking restrictions which apply to the road network in the vicinity of the site comprise:

- NO STOPPING restrictions in the vicinity of the Elizabeth Drive and Cecil Road intersection

- BUS STOPS located along both sides of Elizabeth Drive and Cecil Road, including directly outside the Elizabeth Drive site frontage

- generally UNRESTRICTED kerbside parking elsewhere throughout the local semi-rural rural area.

## Off-Street Parking Provisions

The off-street parking requirements applicable to the planning proposal are specified in Council's *Development Control Plan – Section 12.1.1 Car Parking Rates* document in the following terms:

**Light Industry**
1 space per 70m² GLA

**Service Station**
1 space per 25m² GLA of convenience store

**Restaurant / Take Away Food and Drink Premises / Pub**
1 space per 7m² GLA

**Bulky Goods**
1 space per 50m² GLA

**Motel Accommodation**
1 space per motel room, *plus*
1 space per 2 employees

Whilst it is acknowledged that Council's *DCP* nominates an off-street parking rate for take away food and drink premises of *1 space per 7m$^2$ GLA*, it is also the same parking rate required for restaurants and pubs. As such, it is considered that a more suitable parking rate for the proposed fast food restaurants is specified in the RMS *Guidelines*, which specifies a parking rate of *1 space per 3 seats (internal and external)* for drive-in take away food outlets.

Application therefore of the above parking requirements to the various components outlined in the development proposal yields an off-street parking requirement of 248 spaces as set out below:

| | |
|---|---|
| Lot 1 – Industrial (759m$^2$): | 11 spaces |
| Lot 2 – Fast Food (~69 seats): | 23 spaces |
| Lot 3 – Fast Food (~75 seats): | 25 spaces |
| Lot 4 – Service Station (348m$^2$): | 14 spaces |
| Lot 5 – Large Format Retail (1,080m$^2$): | 22 spaces |
| Lot 6 – Large Format Retail (1,169m$^2$): | 23 spaces |
| Lot 7 – Motel (38 rooms & 3 staff): | 40 spaces |
| Lot 8 – Motel (38 rooms & 3 staff): | 40 spaces |
| Lot 9 – Industrial (1,124m$^2$): | 16 spaces |
| Lot 10 – Industrial (933m$^2$): | 13 spaces |
| Lot 11 – Industrial (544m$^2$): | 8 spaces |
| Lot 12 – Industrial (562m$^2$): | 8 spaces |
| Lot 13 – Industrial (983m$^2$): | 14 spaces |
| Lot 14 – Industrial (765m$^2$): | 11 spaces |
| **TOTAL:** | **248 spaces** |

Whilst the final detailed designs of the future developments are not yet known, off-street car parking for each lot will be the subject of separate development applications. The Illustrative Parking Plan prepared by *ae Design* indicates that the proposed subdivision could accommodate in the order of 300 off-street parking spaces, thereby satisfying the above requirements.

As noted in the foregoing however, there is likely to be a proportion of *multi-purpose trips* to the site whereby visitors to the service station, employees of the industrial units, customers of the large format retail, guests of the motel may also be customers of the fast food outlet, and vice-versa, such that they only require one parking space. The total peak parking demand

associated with the various uses within the proposed subdivision will therefore likely be somewhat *less* than the cumulative parking requirement detailed above.

Furthermore, the future vehicular access and off-street car parking arrangements will be designed in accordance with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 1 - Off-Street Car Parking AS2890.1.2004.*

**Loading/Servicing Provisions**

The proposed development is expected to be serviced by a variety of commercial vehicles. Whilst the details are not yet known, it is expected that loading/servicing component of the developments will also ultimately comply with Council's requirements, allowing all commercial vehicles to enter and exit each lot in a forward direction at all times, as illustrated on the attached swept turning path diagrams which are reproduced in the following pages.

The geometric design layout of the proposed loading facilities will ultimately comply with the relevant requirements specified in the Standards Australia publication *Parking Facilities Part 2 - Off-Street Commercial Vehicle Facilities AS2890.2:2002.*

**Conclusion**

The foregoing has found that in order to maintain satisfactory *Levels of Service*, consideration should be given to constructing a new roundabout at the Elizabeth Drive and Cecil Road intersection as well as widening Elizabeth Drive to two-lane/two-way between Cecil Road and Wallgrove Road.

In accordance with sound traffic engineering principles, the proposed access point into the subdivision is to be located on the lower order road – i.e. Cecil Road – and as far back from the major road as possible – i.e. Elizabeth Drive. Furthermore, the proposed service road that will serve the two fast food restaurants and service station is to be located *within* the property boundary of the site in accordance with RMS requirements, and there will be *no* connection through to the new local loop road through the subdivision.

Furthermore, the proposed subdivision will ultimately satisfy Council's off-street parking and loading requirements whilst the design of the vehicular access and car parking/loading facilities will ultimately be designed in accordance with Australian Standards requirements.

Construction vehicle activity will also be managed and it is recommended that a detailed Construction Traffic Management Plan be included as part of any development consent issued for the subdivision.

In the circumstances, it is therefore reasonable to conclude that the proposed subdivision will not have any unacceptable implications in terms of road network capacity or off-street parking/loading/access requirements.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PO Box 1868
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www.vargatraffic.com.au
Sydney, Australia

PROJECT
SUBDIVISION DEVELOPMENT

DRAWING TITLE
12.5m HRV Truck
Swept Turning Path

1:400 @ A0

ADDRESS
1141 Elizabeth Drive,
Cecil Park

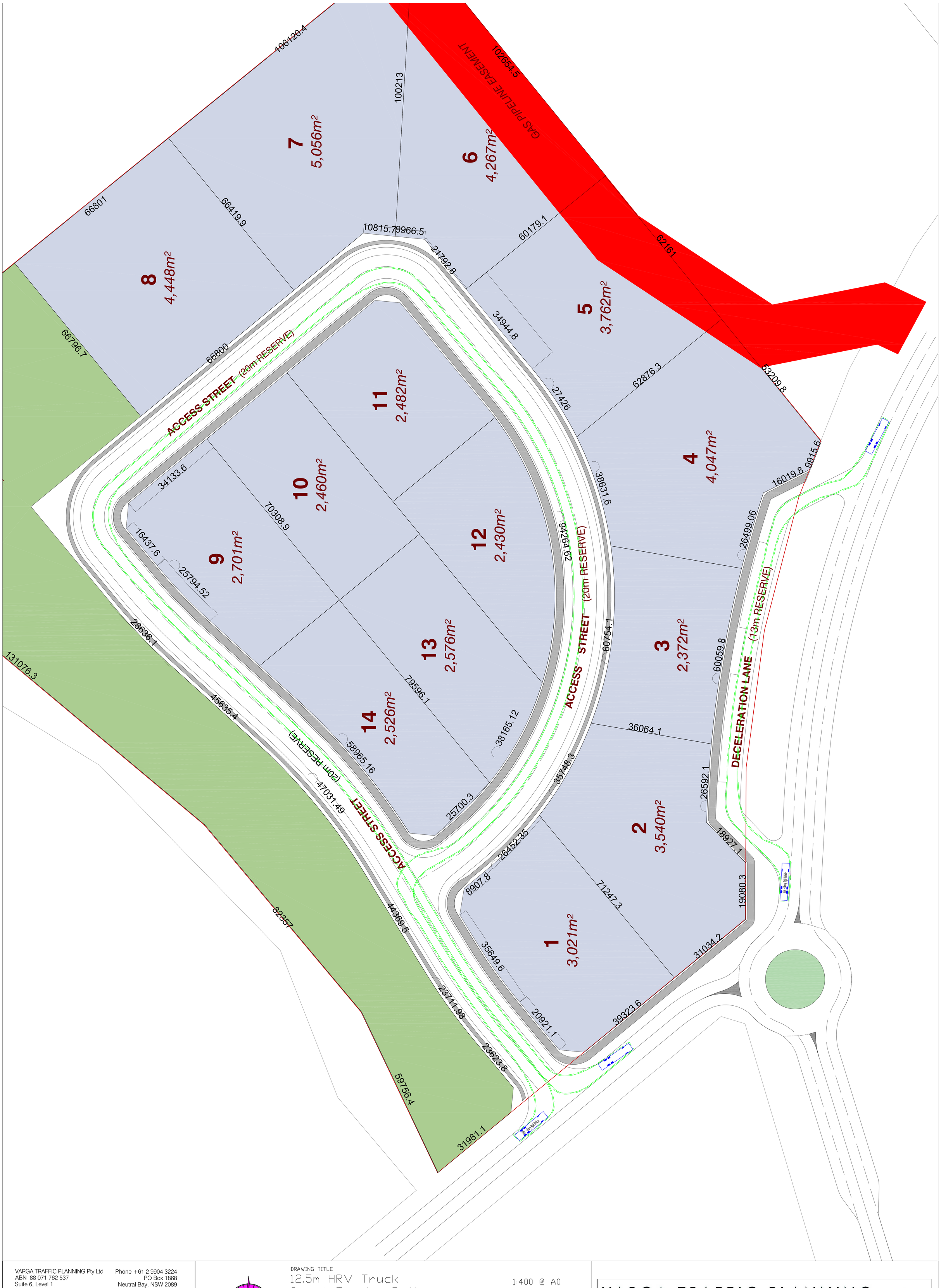
PROJECT NO.
17330

DATE DRAWN
2018-9-6

REVIEWED
CP

PREPARED
TN

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants




| | | | |
|---|---|---|---|
| VARGA TRAFFIC PLANNING Pty Ltd<br>ABN 88 071 762 537<br>Suite 6, Level 1<br>20 Young Street<br>Neutral Bay, NSW 2089 | Phone +61 2 9904 3224<br>PO Box 1868<br>Neutral Bay, NSW 2089<br>www.vargatraffic.com.au<br>Sydney, Australia | DRAWING TITLE<br>12.5m HRV Truck<br>Swept Turning Path | 1:400 @ A0 |
| PROJECT<br>SUBDIVISION DEVELOPMENT | N | ADDRESS<br>1141 Elizabeth Drive,<br>Cecil Park | PROJECT NO.<br>17330<br>DATE DRAWN<br>2018-9-6<br>REVIEWED<br>CP<br>PREPARED<br>TN |

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants


VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants

1:300 @ A0

DATE DRAWN
2018-9-6

PREPARED
TN

PROJECT NO.
17330

REVIEWED
CP

DRAWING TITLE
19m Semi Truck
Swept Turning Path

ADDRESS
1141 Elizabeth Drive,
Cecil Park

N

VARGA TRAFFIC PLANNING Pty Ltd
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PROJECT
SUBDIVISION DEVELOPMENT

# APPENDIX A

# TRAFFIC SURVEY DATA

# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 6536 CECIL PARK Elizabeth Dr
Day/Date : Wednesday 9th August 2017

| PEDS | WEST | NORTH | EAST | |
|---|---|---|---|---|
| Time Per | *Elizabeth Dr* | *Cecil Rd* | *Elizabeth Dr* | TOT |
| 0630 - 0645 | 0 | 0 | 0 | **0** |
| 0645 - 0700 | 0 | 0 | 0 | **0** |
| 0700 - 0715 | 0 | 0 | 0 | **0** |
| 0715 - 0730 | 0 | 0 | 0 | **0** |
| 0730 - 0745 | 0 | 0 | 0 | **0** |
| 0745 - 0800 | 0 | 0 | 0 | **0** |
| 0800 - 0815 | 0 | 0 | 0 | **0** |
| 0815 - 0830 | 0 | 0 | 0 | **0** |
| 0830 - 0845 | 0 | 0 | 0 | **0** |
| 0845 - 0900 | 0 | 0 | 0 | **0** |
| 0900 - 0915 | 0 | 0 | 0 | **0** |
| 0915 - 0930 | 0 | 0 | 0 | **0** |
| **Per End** | **0** | **0** | **0** | **0** |

| PEDS | WEST | NORTH | EAST | |
|---|---|---|---|---|
| Peak Per | *Elizabeth Dr* | *Cecil Rd* | *Elizabeth Dr* | TOT |
| 0630 - 0730 | 0 | 0 | 0 | **0** |
| 0645 - 0745 | 0 | 0 | 0 | **0** |
| 0700 - 0800 | 0 | 0 | 0 | **0** |
| 0715 - 0815 | 0 | 0 | 0 | **0** |
| 0730 - 0830 | 0 | 0 | 0 | **0** |
| 0745 - 0845 | 0 | 0 | 0 | **0** |
| **0800 - 0900** | 0 | 0 | 0 | **0** |
| 0815 - 0915 | 0 | 0 | 0 | **0** |
| 0830 - 0930 | 0 | 0 | 0 | **0** |
| **PEAK HR** | **0** | **0** | **0** | **0** |

| Lights | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Time Per | T | L | R | L | R | T | TOT |
| 0630 - 0645 | 274 | 2 | 1 | 11 | 9 | 222 | **519** |
| 0645 - 0700 | 246 | 1 | 3 | 14 | 10 | 167 | **441** |
| 0700 - 0715 | 298 | 4 | 0 | 12 | 10 | 147 | **471** |
| 0715 - 0730 | 362 | 3 | 0 | 16 | 16 | 168 | **565** |
| 0730 - 0745 | 355 | 0 | 0 | 20 | 14 | 195 | **584** |
| 0745 - 0800 | 325 | 2 | 0 | 20 | 11 | 188 | **546** |
| 0800 - 0815 | 342 | 0 | 0 | 33 | 14 | 158 | **547** |
| 0815 - 0830 | 323 | 2 | 0 | 41 | 12 | 167 | **545** |
| 0830 - 0845 | 346 | 1 | 1 | 26 | 13 | 202 | **589** |
| 0845 - 0900 | 348 | 2 | 1 | 13 | 12 | 191 | **567** |
| 0900 - 0915 | 207 | 1 | 0 | 13 | 9 | 121 | **351** |
| 0915 - 0930 | 162 | 1 | 0 | 8 | 6 | 138 | **315** |
| **Per End** | **3588** | **19** | **6** | **227** | **136** | **2064** | **6040** |

| Heavies | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Time Per | T | L | R | L | R | T | TOT |
| 0630 - 0645 | 36 | 0 | 0 | 2 | 2 | 29 | **69** |
| 0645 - 0700 | 26 | 1 | 0 | 3 | 2 | 16 | **48** |
| 0700 - 0715 | 32 | 0 | 0 | 0 | 0 | 24 | **56** |
| 0715 - 0730 | 17 | 2 | 1 | 0 | 0 | 21 | **41** |
| 0730 - 0745 | 26 | 1 | 1 | 2 | 2 | 22 | **54** |
| 0745 - 0800 | 30 | 0 | 1 | 4 | 5 | 31 | **71** |
| 0800 - 0815 | 25 | 1 | 1 | 2 | 7 | 35 | **71** |
| 0815 - 0830 | 31 | 2 | 1 | 5 | 9 | 25 | **73** |
| 0830 - 0845 | 29 | 2 | 1 | 5 | 4 | 25 | **66** |
| 0845 - 0900 | 38 | 2 | 2 | 7 | 4 | 27 | **80** |
| 0900 - 0915 | 32 | 1 | 2 | 5 | 1 | 37 | **78** |
| 0915 - 0930 | 26 | 2 | 1 | 3 | 4 | 32 | **68** |
| **Per End** | **348** | **14** | **11** | **38** | **40** | **324** | **775** |

| Combined | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Time Per | T | L | R | L | R | T | TOT |
| 0630 - 0645 | 310 | 2 | 1 | 13 | 11 | 251 | **588** |
| 0645 - 0700 | 272 | 2 | 3 | 17 | 12 | 183 | **489** |
| 0700 - 0715 | 330 | 4 | 0 | 12 | 10 | 171 | **527** |
| 0715 - 0730 | 379 | 5 | 1 | 16 | 16 | 189 | **606** |
| 0730 - 0745 | 381 | 1 | 1 | 22 | 16 | 217 | **638** |
| 0745 - 0800 | 355 | 2 | 1 | 24 | 16 | 219 | **617** |
| 0800 - 0815 | 367 | 1 | 1 | 35 | 21 | 193 | **618** |
| 0815 - 0830 | 354 | 4 | 1 | 46 | 21 | 192 | **618** |
| 0830 - 0845 | 375 | 3 | 2 | 31 | 17 | 227 | **655** |
| 0845 - 0900 | 386 | 4 | 3 | 20 | 16 | 218 | **647** |
| 0900 - 0915 | 239 | 2 | 2 | 18 | 10 | 158 | **429** |
| 0915 - 0930 | 188 | 3 | 1 | 11 | 10 | 170 | **383** |
| **Per End** | **3936** | **33** | **17** | **265** | **176** | **2388** | **6815** |

| Lights | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Peak Per | T | L | R | L | R | T | TOT |
| 0630 - 0730 | 1180 | 10 | 4 | 53 | 45 | 704 | **1996** |
| 0645 - 0745 | 1261 | 8 | 3 | 62 | 50 | 677 | **2061** |
| 0700 - 0800 | 1340 | 9 | 0 | 68 | 51 | 698 | **2166** |
| 0715 - 0815 | 1384 | 5 | 0 | 89 | 55 | 709 | **2242** |
| 0730 - 0830 | 1345 | 4 | 0 | 114 | 51 | 708 | **2222** |
| 0745 - 0845 | 1336 | 5 | 1 | 120 | 50 | 715 | **2227** |
| **0800 - 0900** | 1359 | 5 | 2 | 113 | 51 | 718 | **2248** |
| 0815 - 0915 | 1224 | 6 | 2 | 93 | 46 | 681 | **2052** |
| 0830 - 0930 | 1063 | 5 | 2 | 60 | 40 | 652 | **1822** |
| **PEAK HR** | **1359** | **5** | **2** | **113** | **51** | **718** | **2248** |

| Heavies | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Peak Per | T | L | R | L | R | T | TOT |
| 0630 - 0730 | 111 | 3 | 1 | 5 | 4 | 90 | **214** |
| 0645 - 0745 | 101 | 4 | 2 | 5 | 4 | 83 | **199** |
| 0700 - 0800 | 105 | 3 | 3 | 6 | 7 | 98 | **222** |
| 0715 - 0815 | 98 | 4 | 4 | 8 | 14 | 109 | **237** |
| 0730 - 0830 | 112 | 4 | 4 | 13 | 23 | 113 | **269** |
| 0745 - 0845 | 115 | 5 | 4 | 16 | 25 | 116 | **281** |
| **0800 - 0900** | 123 | 7 | 5 | 19 | 24 | 112 | **290** |
| 0815 - 0915 | 130 | 7 | 6 | 22 | 18 | 114 | **297** |
| 0830 - 0930 | 125 | 7 | 6 | 20 | 13 | 121 | **292** |
| **PEAK HR** | **123** | **7** | **5** | **19** | **24** | **112** | **290** |

| Combined | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Peak Per | T | L | R | L | R | T | TOT |
| 0630 - 0730 | 1291 | 13 | 5 | 58 | 49 | 794 | **2210** |
| 0645 - 0745 | 1362 | 12 | 5 | 67 | 54 | 760 | **2260** |
| 0700 - 0800 | 1445 | 12 | 3 | 74 | 58 | 796 | **2388** |
| 0715 - 0815 | 1482 | 9 | 4 | 97 | 69 | 818 | **2479** |
| 0730 - 0830 | 1457 | 8 | 4 | 127 | 74 | 821 | **2491** |
| 0745 - 0845 | 1451 | 10 | 5 | 136 | 75 | 831 | **2508** |
| **0800 - 0900** | 1482 | 12 | 7 | 132 | 75 | 830 | **2538** |
| 0815 - 0915 | 1354 | 13 | 8 | 115 | 64 | 795 | **2349** |
| 0830 - 0930 | 1188 | 12 | 8 | 80 | 53 | 773 | **2114** |
| **PEAK HR** | **1482** | **12** | **7** | **132** | **75** | **830** | **2538** |

# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

| | |
|---|---|
| Client | : Varga Traffic Planning |
| Job No/Name | : 6536 CECIL PARK Elizabeth Dr |
| Day/Date | : Wednesday 9th August 2017 |

1 2 3

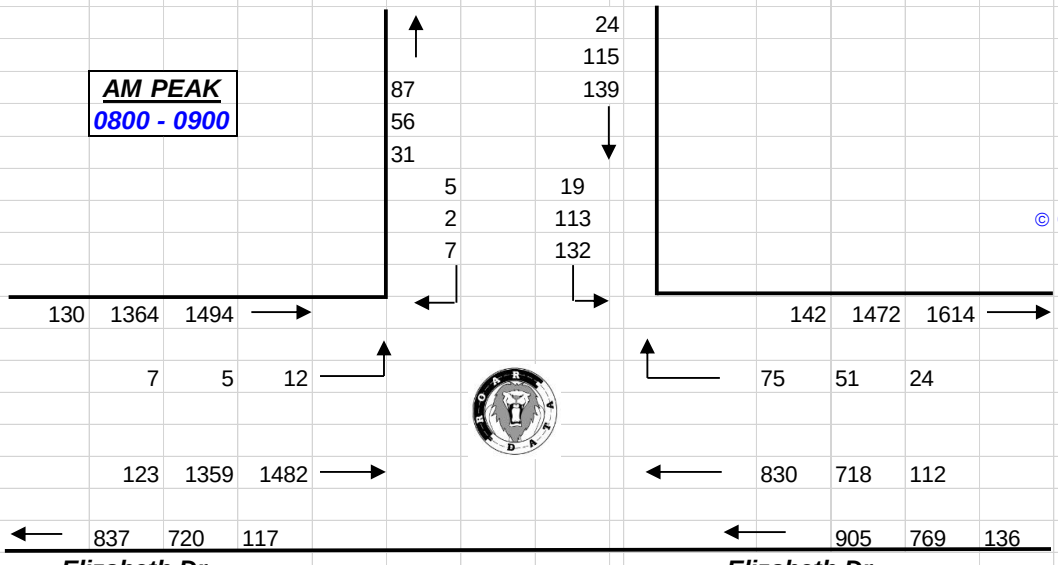
4 5 6

7 8 9

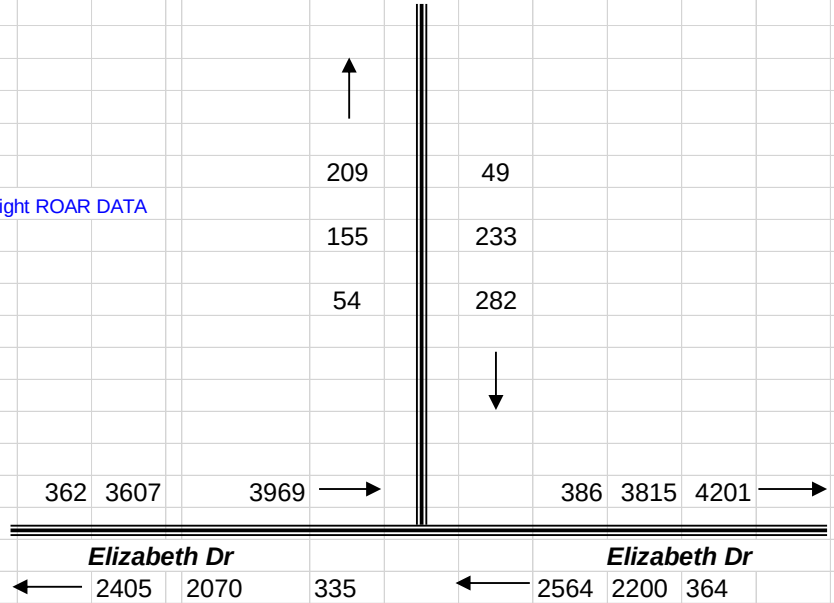
N

**TOTAL VOLUMES FOR COUNT PERIOD**

***AM PEAK***
***0800 - 0900***





# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 6536 CECIL PARK Elizabeth Dr
Day/Date : Wednesday 9th August 2017

| PEDS | WEST | NORTH | EAST | |
|---|---|---|---|---|
| Time Per | *Elizabeth Dr* | *Cecil Rd* | *Elizabeth Dr* | TOT |
| 1530 - 1545 | 0 | 0 | 0 | **0** |
| 1545 - 1600 | 0 | 0 | 0 | **0** |
| 1600 - 1615 | 0 | 0 | 0 | **0** |
| 1615 - 1630 | 0 | 0 | 0 | **0** |
| 1630 - 1645 | 0 | 0 | 0 | **0** |
| 1645 - 1700 | 0 | 0 | 0 | **0** |
| 1700 - 1715 | 0 | 0 | 0 | **0** |
| 1715 - 1730 | 0 | 0 | 0 | **0** |
| 1730 - 1745 | 0 | 0 | 0 | **0** |
| 1745 - 1800 | 0 | 0 | 0 | **0** |
| 1800 - 1815 | 0 | 0 | 0 | **0** |
| 1815 - 1830 | 0 | 0 | 0 | **0** |
| **Per End** | **0** | **0** | **0** | **0** |

| PEDS | WEST | NORTH | EAST | |
|---|---|---|---|---|
| Peak Per | *Elizabeth Dr* | *Cecil Rd* | *Elizabeth Dr* | TOT |
| 1530 - 1630 | 0 | 0 | 0 | **0** |
| 1545 - 1645 | 0 | 0 | 0 | **0** |
| 1600 - 1700 | 0 | 0 | 0 | **0** |
| 1615 - 1715 | 0 | 0 | 0 | **0** |
| 1630 - 1730 | 0 | 0 | 0 | **0** |
| 1645 - 1745 | 0 | 0 | 0 | **0** |
| 1700 - 1800 | 0 | 0 | 0 | **0** |
| 1715 - 1815 | 0 | 0 | 0 | **0** |
| 1730 - 1830 | 0 | 0 | 0 | **0** |
| **PEAK HR** | **0** | **0** | **0** | **0** |

| Lights | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Time Per | T | L | R | L | R | T | TOT |
| 1530 - 1545 | 255 | 3 | 0 | 9 | 18 | 288 | **573** |
| 1545 - 1600 | 212 | 3 | 3 | 14 | 10 | 294 | **536** |
| 1600 - 1615 | 200 | 3 | 1 | 22 | 7 | 312 | **545** |
| 1615 - 1630 | 255 | 4 | 2 | 15 | 13 | 342 | **631** |
| 1630 - 1645 | 191 | 0 | 3 | 19 | 16 | 310 | **539** |
| 1645 - 1700 | 202 | 3 | 3 | 10 | 20 | 352 | **590** |
| 1700 - 1715 | 274 | 2 | 0 | 19 | 13 | 329 | **637** |
| 1715 - 1730 | 226 | 2 | 2 | 16 | 17 | 339 | **602** |
| 1730 - 1745 | 228 | 1 | 1 | 14 | 16 | 345 | **605** |
| 1745 - 1800 | 207 | 2 | 1 | 18 | 24 | 303 | **555** |
| 1800 - 1815 | 174 | 2 | 0 | 17 | 14 | 257 | **464** |
| 1815 - 1830 | 160 | 2 | 2 | 10 | 20 | 243 | **437** |
| **Per End** | **2584** | **27** | **18** | **183** | **188** | **3714** | **6714** |

| Heavies | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Time Per | T | L | R | L | R | T | TOT |
| 1530 - 1545 | 8 | 1 | 1 | 1 | 3 | 30 | **44** |
| 1545 - 1600 | 18 | 0 | 2 | 2 | 4 | 11 | **37** |
| 1600 - 1615 | 20 | 2 | 0 | 3 | 1 | 30 | **56** |
| 1615 - 1630 | 16 | 0 | 1 | 2 | 1 | 20 | **40** |
| 1630 - 1645 | 16 | 1 | 0 | 1 | 1 | 20 | **39** |
| 1645 - 1700 | 16 | 1 | 2 | 1 | 4 | 13 | **37** |
| 1700 - 1715 | 15 | 0 | 0 | 2 | 4 | 17 | **38** |
| 1715 - 1730 | 16 | 0 | 1 | 3 | 0 | 14 | **34** |
| 1730 - 1745 | 10 | 0 | 0 | 2 | 0 | 11 | **23** |
| 1745 - 1800 | 5 | 0 | 1 | 0 | 1 | 18 | **25** |
| 1800 - 1815 | 4 | 0 | 0 | 0 | 0 | 6 | **10** |
| 1815 - 1830 | 6 | 0 | 0 | 1 | 1 | 9 | **17** |
| **Per End** | **150** | **5** | **8** | **18** | **20** | **199** | **400** |

| Combined | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Time Per | T | L | R | L | R | T | TOT |
| 1530 - 1545 | 263 | 4 | 1 | 10 | 21 | 318 | **617** |
| 1545 - 1600 | 230 | 3 | 5 | 16 | 14 | 305 | **573** |
| 1600 - 1615 | 220 | 5 | 1 | 25 | 8 | 342 | **601** |
| 1615 - 1630 | 271 | 4 | 3 | 17 | 14 | 362 | **671** |
| 1630 - 1645 | 207 | 1 | 3 | 20 | 17 | 330 | **578** |
| 1645 - 1700 | 218 | 4 | 5 | 11 | 24 | 365 | **627** |
| 1700 - 1715 | 289 | 2 | 0 | 21 | 17 | 346 | **675** |
| 1715 - 1730 | 242 | 2 | 3 | 19 | 17 | 353 | **636** |
| 1730 - 1745 | 238 | 1 | 1 | 16 | 16 | 356 | **628** |
| 1745 - 1800 | 212 | 2 | 2 | 18 | 25 | 321 | **580** |
| 1800 - 1815 | 178 | 2 | 0 | 17 | 14 | 263 | **474** |
| 1815 - 1830 | 166 | 2 | 2 | 11 | 21 | 252 | **454** |
| **Per End** | **2734** | **32** | **26** | **201** | **208** | **3913** | **7114** |

| Lights | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Peak Per | T | L | R | L | R | T | TOT |
| 1530 - 1630 | 922 | 13 | 6 | 60 | 48 | 1236 | **2285** |
| 1545 - 1645 | 858 | 10 | 9 | 70 | 46 | 1258 | **2251** |
| 1600 - 1700 | 848 | 10 | 9 | 66 | 56 | 1316 | **2305** |
| 1615 - 1715 | 922 | 9 | 8 | 63 | 62 | 1333 | **2397** |
| 1630 - 1730 | 893 | 7 | 8 | 64 | 66 | 1330 | **2368** |
| 1645 - 1745 | 930 | 8 | 6 | 59 | 66 | 1365 | **2434** |
| 1700 - 1800 | 935 | 7 | 4 | 67 | 70 | 1316 | **2399** |
| 1715 - 1815 | 835 | 7 | 4 | 65 | 71 | 1244 | **2226** |
| 1730 - 1830 | 769 | 7 | 4 | 59 | 74 | 1148 | **2061** |
| **PEAK HR** | **930** | **8** | **6** | **59** | **66** | **1365** | **2434** |

| Heavies | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Peak Per | T | L | R | L | R | T | TOT |
| 1530 - 1630 | 62 | 3 | 4 | 8 | 9 | 91 | **177** |
| 1545 - 1645 | 70 | 3 | 3 | 8 | 7 | 81 | **172** |
| 1600 - 1700 | 68 | 4 | 3 | 7 | 7 | 83 | **172** |
| 1615 - 1715 | 63 | 2 | 3 | 6 | 10 | 70 | **154** |
| 1630 - 1730 | 63 | 2 | 3 | 7 | 9 | 64 | **148** |
| 1645 - 1745 | 57 | 1 | 3 | 8 | 8 | 55 | **132** |
| 1700 - 1800 | 46 | 0 | 2 | 7 | 5 | 60 | **120** |
| 1715 - 1815 | 35 | 0 | 2 | 5 | 1 | 49 | **92** |
| 1730 - 1830 | 25 | 0 | 1 | 3 | 2 | 44 | **75** |
| **PEAK HR** | **57** | **1** | **3** | **8** | **8** | **55** | **132** |

| Combined | WEST | | NORTH | | EAST | | |
|---|---|---|---|---|---|---|---|
| | *Elizabeth Dr* | | *Cecil Rd* | | *Elizabeth Dr* | | |
| Peak Per | T | L | R | L | R | T | TOT |
| 1530 - 1630 | 984 | 16 | 10 | 68 | 57 | 1327 | **2462** |
| 1545 - 1645 | 928 | 13 | 12 | 78 | 53 | 1339 | **2423** |
| 1600 - 1700 | 916 | 14 | 12 | 73 | 63 | 1399 | **2477** |
| 1615 - 1715 | 985 | 11 | 11 | 69 | 72 | 1403 | **2551** |
| 1630 - 1730 | 956 | 9 | 11 | 71 | 75 | 1394 | **2516** |
| 1645 - 1745 | 987 | 9 | 9 | 67 | 74 | 1420 | **2566** |
| 1700 - 1800 | 981 | 7 | 6 | 74 | 75 | 1376 | **2519** |
| 1715 - 1815 | 870 | 7 | 6 | 70 | 72 | 1293 | **2318** |
| 1730 - 1830 | 794 | 7 | 5 | 62 | 76 | 1192 | **2136** |
| **PEAK HR** | **987** | **9** | **9** | **67** | **74** | **1420** | **2566** |

# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

| | |
|---|---|
| Client | : Varga Traffic Planning |
| Job No/Name | : 6536 CECIL PARK Elizabeth Dr |
| Day/Date | : Wednesday 9th August 2017 |

1 2 3

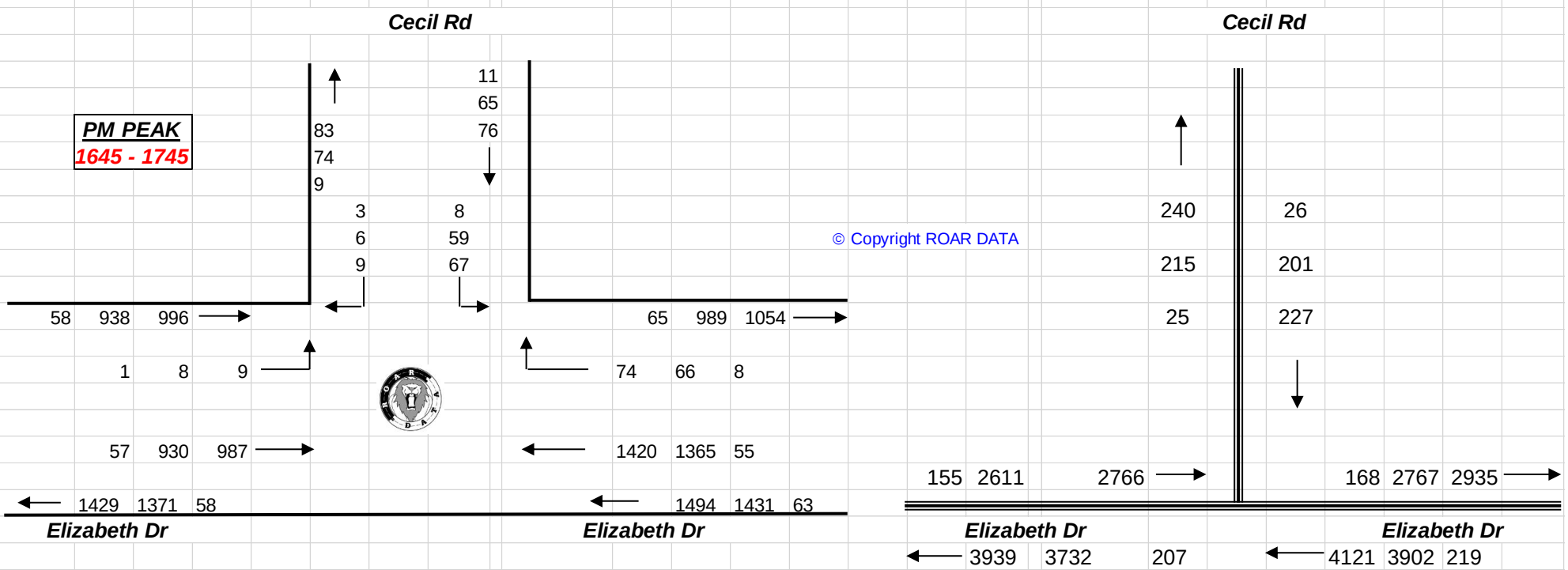
4 5 6

7 8 9

**TOTAL VOLUMES FOR COUNT PERIOD**

***N***

***PM PEAK***
***1645 - 1745***



# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Fax 88196849, Mob.0418-239019

| | |
|---|---|
| Client | : Varga Traffic Planning |
| Job No/Name | : 6536 CECIL PARK Elizabeth Dr |
| Day/Date | : Wednesday 9th August 2017 |

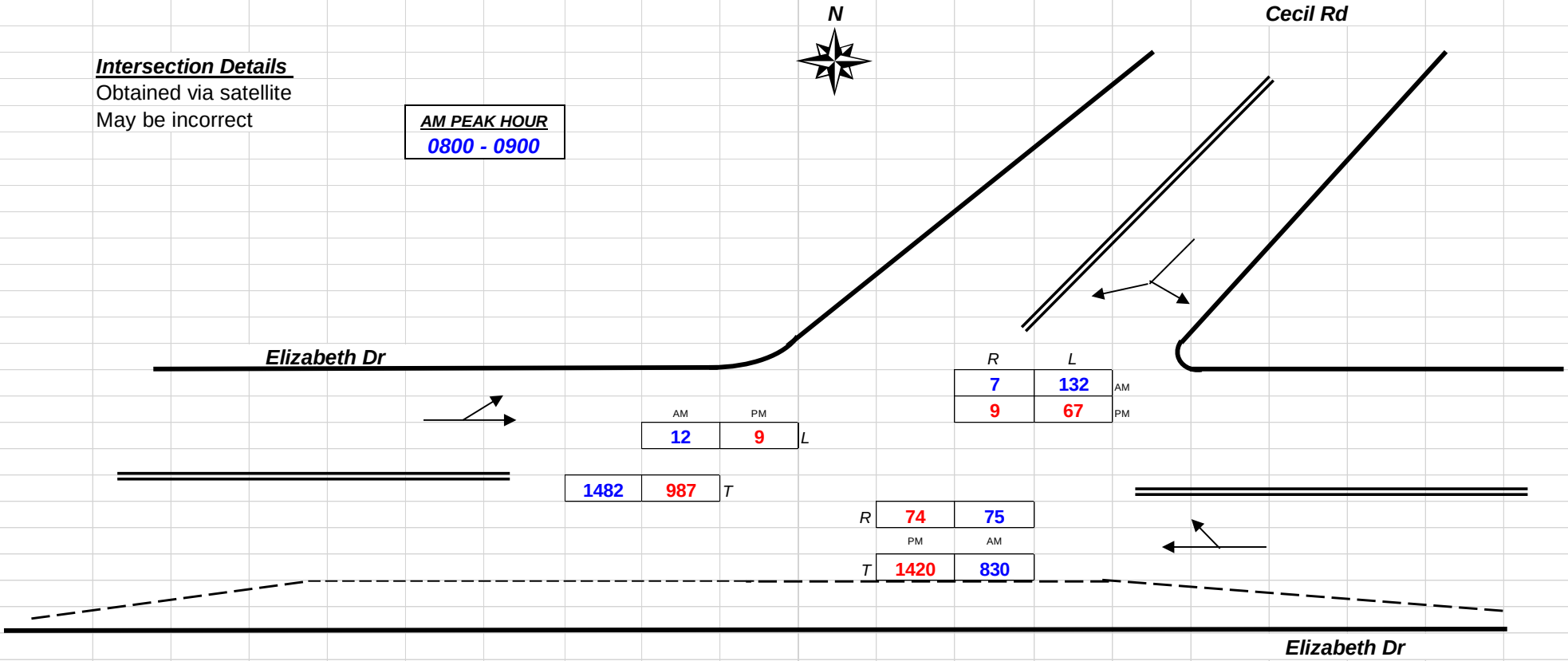
***Intersection Details***

Obtained via satellite

May be incorrect

***AM PEAK HOUR***

***0800 - 0900***




***Combined figures only***

***PM PEAK HOUR***

***1645 - 1745***

***Weather >>>***

# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 6536 CECIL PARK Elizabeth Dr
Day/Date : Wednesday 9th August 2017

| Lights | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M7 Off Ramp* | | | *Elizabeth Dr* | | | *M7 On Ramp* | | | *Elizabeth Dr* | | | |
| **Time Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0645 | 36 | 0 | 18 | 0 | 247 | 42 | 0 | 0 | 0 | 4 | 348 | 0 | **695** |
| 0645 - 0700 | 52 | 0 | 11 | 0 | 232 | 37 | 0 | 0 | 0 | 3 | 282 | 0 | **617** |
| 0700 - 0715 | 43 | 0 | 10 | 0 | 228 | 57 | 0 | 0 | 0 | 2 | 269 | 0 | **609** |
| 0715 - 0730 | 21 | 0 | 17 | 0 | 279 | 60 | 0 | 0 | 0 | 4 | 269 | 0 | **650** |
| 0730 - 0745 | 53 | 0 | 12 | 0 | 250 | 76 | 0 | 0 | 0 | 4 | 327 | 0 | **722** |
| 0745 - 0800 | 61 | 0 | 12 | 0 | 301 | 61 | 0 | 0 | 0 | 2 | 315 | 0 | **752** |
| 0800 - 0815 | 70 | 0 | 8 | 0 | 312 | 57 | 0 | 0 | 0 | 4 | 271 | 0 | **722** |
| 0815 - 0830 | 56 | 0 | 16 | 0 | 282 | 70 | 0 | 0 | 0 | 9 | 270 | 0 | **703** |
| 0830 - 0845 | 56 | 0 | 23 | 0 | 278 | 61 | 0 | 0 | 0 | 4 | 329 | 0 | **751** |
| 0845 - 0900 | 42 | 0 | 21 | 0 | 245 | 43 | 0 | 0 | 0 | 4 | 271 | 0 | **626** |
| 0900 - 0915 | 40 | 0 | 16 | 0 | 248 | 43 | 0 | 0 | 0 | 8 | 208 | 0 | **563** |
| 0915 - 0930 | 46 | 0 | 12 | 0 | 144 | 35 | 0 | 0 | 0 | 2 | 203 | 0 | **442** |
| **Period End** | **576** | **0** | **176** | **0** | **3046** | **642** | **0** | **0** | **0** | **50** | **3362** | **0** | **7852** |

| Lights | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M7 Off Ramp* | | | *Elizabeth Dr* | | | *M7 On Ramp* | | | *Elizabeth Dr* | | | |
| **Peak Time** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0730 | 152 | 0 | 56 | 0 | 986 | 196 | 0 | 0 | 0 | 13 | 1168 | 0 | **2571** |
| 0645 - 0745 | 169 | 0 | 50 | 0 | 989 | 230 | 0 | 0 | 0 | 13 | 1147 | 0 | **2598** |
| 0700 - 0800 | 178 | 0 | 51 | 0 | 1058 | 254 | 0 | 0 | 0 | 12 | 1180 | 0 | **2733** |
| 0715 - 0815 | 205 | 0 | 49 | 0 | 1142 | 254 | 0 | 0 | 0 | 14 | 1182 | 0 | **2846** |
| 0730 - 0830 | 240 | 0 | 48 | 0 | 1145 | 264 | 0 | 0 | 0 | 19 | 1183 | 0 | **2899** |
| **0745 - 0845** | 243 | 0 | 59 | 0 | 1173 | 249 | 0 | 0 | 0 | 19 | 1185 | 0 | **2928** |
| 0800 - 0900 | 224 | 0 | 68 | 0 | 1117 | 231 | 0 | 0 | 0 | 21 | 1141 | 0 | **2802** |
| 0815 - 0915 | 194 | 0 | 76 | 0 | 1053 | 217 | 0 | 0 | 0 | 25 | 1078 | 0 | **2643** |
| 0830 - 0930 | 184 | 0 | 72 | 0 | 915 | 182 | 0 | 0 | 0 | 18 | 1011 | 0 | **2382** |
| **PEAK HOUR** | **243** | **0** | **59** | **0** | **1173** | **249** | **0** | **0** | **0** | **19** | **1185** | **0** | **2928** |

| Heavies | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M7 Off Ramp* | | | *Elizabeth Dr* | | | *M7 On Ramp* | | | *Elizabeth Dr* | | | |
| **Time Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0645 | 4 | 0 | 10 | 0 | 8 | 12 | 0 | 0 | 0 | 0 | 15 | 0 | **49** |
| 0645 - 0700 | 1 | 0 | 3 | 0 | 11 | 14 | 0 | 0 | 0 | 0 | 7 | 0 | **36** |
| 0700 - 0715 | 1 | 0 | 6 | 0 | 6 | 8 | 0 | 0 | 0 | 0 | 13 | 0 | **34** |
| 0715 - 0730 | 6 | 0 | 6 | 0 | 4 | 7 | 0 | 0 | 0 | 0 | 8 | 0 | **31** |
| 0730 - 0745 | 0 | 0 | 9 | 0 | 10 | 9 | 0 | 0 | 0 | 0 | 6 | 0 | **34** |
| 0745 - 0800 | 5 | 0 | 15 | 0 | 14 | 12 | 0 | 0 | 0 | 0 | 11 | 0 | **57** |
| 0800 - 0815 | 0 | 0 | 22 | 0 | 6 | 11 | 0 | 0 | 0 | 0 | 10 | 0 | **49** |
| 0815 - 0830 | 4 | 0 | 9 | 0 | 17 | 8 | 0 | 0 | 0 | 0 | 13 | 0 | **51** |
| 0830 - 0845 | 2 | 0 | 13 | 0 | 9 | 10 | 0 | 0 | 0 | 2 | 2 | 0 | **38** |
| 0845 - 0900 | 0 | 0 | 13 | 0 | 13 | 12 | 0 | 0 | 0 | 4 | 13 | 0 | **55** |
| 0900 - 0915 | 2 | 0 | 13 | 0 | 12 | 15 | 0 | 0 | 0 | 0 | 13 | 0 | **55** |
| 0915 - 0930 | 1 | 0 | 13 | 0 | 13 | 8 | 0 | 0 | 0 | 0 | 6 | 0 | **41** |
| **Period End** | **26** | **0** | **132** | **0** | **123** | **126** | **0** | **0** | **0** | **6** | **117** | **0** | **530** |

| Heavies | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M7 Off Ramp* | | | *Elizabeth Dr* | | | *M7 On Ramp* | | | *Elizabeth Dr* | | | |
| **Peak Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0730 | 12 | 0 | 25 | 0 | 29 | 41 | 0 | 0 | 0 | 0 | 43 | 0 | **150** |
| 0645 - 0745 | 8 | 0 | 24 | 0 | 31 | 38 | 0 | 0 | 0 | 0 | 34 | 0 | **135** |
| 0700 - 0800 | 12 | 0 | 36 | 0 | 34 | 36 | 0 | 0 | 0 | 0 | 38 | 0 | **156** |
| 0715 - 0815 | 11 | 0 | 52 | 0 | 34 | 39 | 0 | 0 | 0 | 0 | 35 | 0 | **171** |
| 0730 - 0830 | 9 | 0 | 55 | 0 | 47 | 40 | 0 | 0 | 0 | 0 | 40 | 0 | **191** |
| **0745 - 0845** | 11 | 0 | 59 | 0 | 46 | 41 | 0 | 0 | 0 | 2 | 36 | 0 | **195** |
| 0800 - 0900 | 6 | 0 | 57 | 0 | 45 | 41 | 0 | 0 | 0 | 6 | 38 | 0 | **193** |
| 0815 - 0915 | 8 | 0 | 48 | 0 | 51 | 45 | 0 | 0 | 0 | 6 | 41 | 0 | **199** |
| 0830 - 0930 | 5 | 0 | 52 | 0 | 47 | 45 | 0 | 0 | 0 | 6 | 34 | 0 | **189** |
| **PEAK HOUR** | **11** | **0** | **59** | **0** | **46** | **41** | **0** | **0** | **0** | **2** | **36** | **0** | **195** |

| Combined | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M7 Off Ramp* | | | *Elizabeth Dr* | | | *M7 On Ramp* | | | *Elizabeth Dr* | | | |
| **Time Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0645 | 40 | 0 | 28 | 0 | 255 | 54 | 0 | 0 | 0 | 4 | 363 | 0 | **744** |
| 0645 - 0700 | 53 | 0 | 14 | 0 | 243 | 51 | 0 | 0 | 0 | 3 | 289 | 0 | **653** |
| 0700 - 0715 | 44 | 0 | 16 | 0 | 234 | 65 | 0 | 0 | 0 | 2 | 282 | 0 | **643** |
| 0715 - 0730 | 27 | 0 | 23 | 0 | 283 | 67 | 0 | 0 | 0 | 4 | 277 | 0 | **681** |
| 0730 - 0745 | 53 | 0 | 21 | 0 | 260 | 85 | 0 | 0 | 0 | 4 | 333 | 0 | **756** |
| 0745 - 0800 | 66 | 0 | 27 | 0 | 315 | 73 | 0 | 0 | 0 | 2 | 326 | 0 | **809** |
| 0800 - 0815 | 70 | 0 | 30 | 0 | 318 | 68 | 0 | 0 | 0 | 4 | 281 | 0 | **771** |
| 0815 - 0830 | 60 | 0 | 25 | 0 | 299 | 78 | 0 | 0 | 0 | 9 | 283 | 0 | **754** |
| 0830 - 0845 | 58 | 0 | 36 | 0 | 287 | 71 | 0 | 0 | 0 | 6 | 331 | 0 | **789** |
| 0845 - 0900 | 42 | 0 | 34 | 0 | 258 | 55 | 0 | 0 | 0 | 8 | 284 | 0 | **681** |
| 0900 - 0915 | 42 | 0 | 29 | 0 | 260 | 58 | 0 | 0 | 0 | 8 | 221 | 0 | **618** |
| 0915 - 0930 | 47 | 0 | 25 | 0 | 157 | 43 | 0 | 0 | 0 | 2 | 209 | 0 | **483** |
| **Period End** | **602** | **0** | **308** | **0** | **3169** | **768** | **0** | **0** | **0** | **56** | **3479** | **0** | **8382** |

| Combined | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *M7 Off Ramp* | | | *Elizabeth Dr* | | | *M7 On Ramp* | | | *Elizabeth Dr* | | | |
| **Peak Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0730 | 164 | 0 | 81 | 0 | 1015 | 237 | 0 | 0 | 0 | 13 | 1211 | 0 | **2721** |
| 0645 - 0745 | 177 | 0 | 74 | 0 | 1020 | 268 | 0 | 0 | 0 | 13 | 1181 | 0 | **2733** |
| 0700 - 0800 | 190 | 0 | 87 | 0 | 1092 | 290 | 0 | 0 | 0 | 12 | 1218 | 0 | **2889** |
| 0715 - 0815 | 216 | 0 | 101 | 0 | 1176 | 293 | 0 | 0 | 0 | 14 | 1217 | 0 | **3017** |
| 0730 - 0830 | 249 | 0 | 103 | 0 | 1192 | 304 | 0 | 0 | 0 | 19 | 1223 | 0 | **3090** |
| **0745 - 0845** | 254 | 0 | 118 | 0 | 1219 | 290 | 0 | 0 | 0 | 21 | 1221 | 0 | **3123** |
| 0800 - 0900 | 230 | 0 | 125 | 0 | 1162 | 272 | 0 | 0 | 0 | 27 | 1179 | 0 | **2995** |
| 0815 - 0915 | 202 | 0 | 124 | 0 | 1104 | 262 | 0 | 0 | 0 | 31 | 1119 | 0 | **2842** |
| 0830 - 0930 | 189 | 0 | 124 | 0 | 962 | 227 | 0 | 0 | 0 | 24 | 1045 | 0 | **2571** |
| **PEAK HOUR** | **254** | **0** | **118** | **0** | **1219** | **290** | **0** | **0** | **0** | **21** | **1221** | **0** | **3123** |

# R.O.A.R DATA

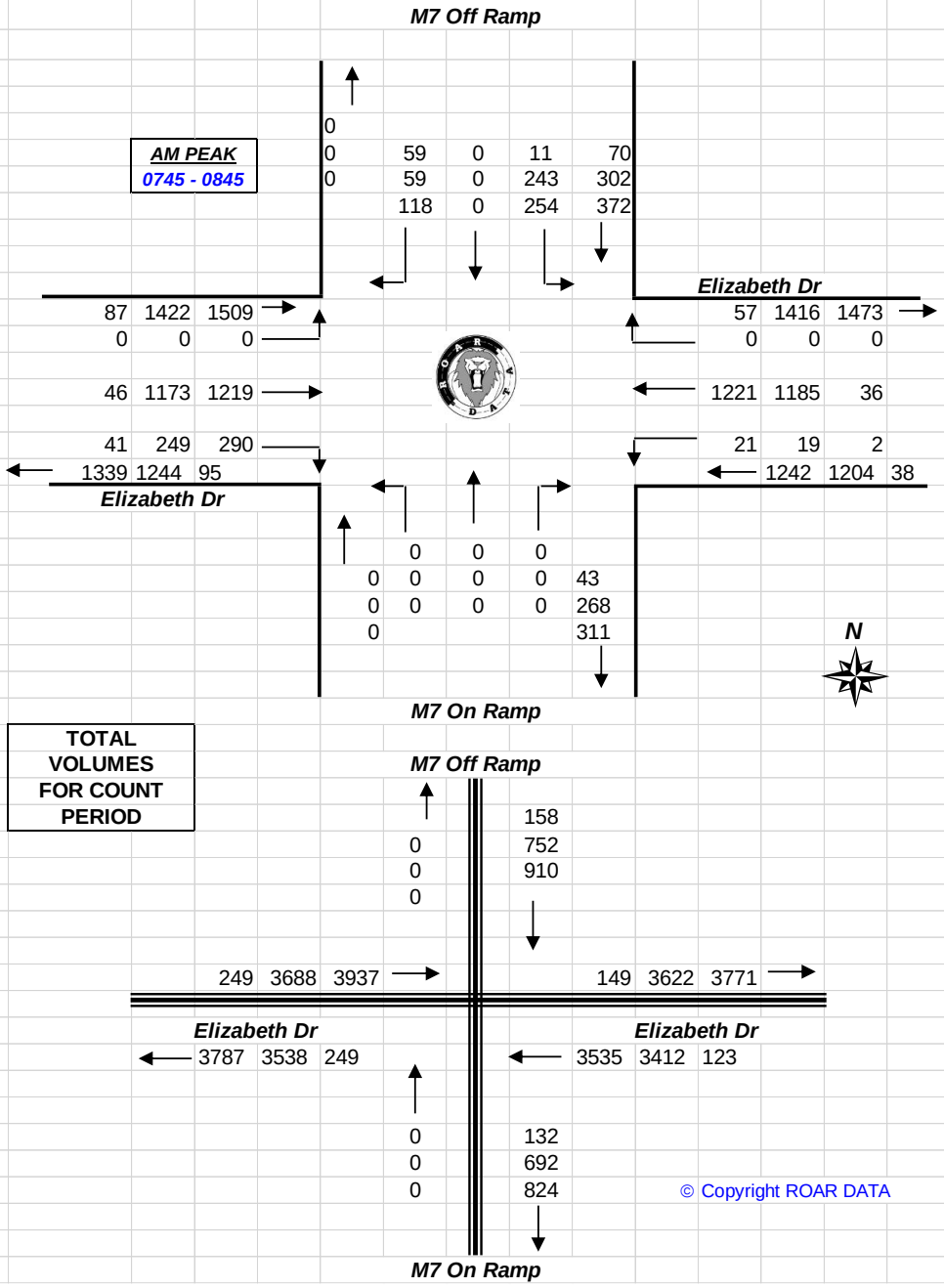
***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

| | |
|---|---|
| Client | : Varga Traffic Planning |
| Job No/Name | : 6536 CECIL PARK Elizabeth Dr |
| Day/Date | : Wednesday 9th August 2017 |

| Peds | NORTH | WEST | SOUTH | EAST | |
|---|---|---|---|---|---|
| | *M7 Off Ramp* | *Elizabeth Dr* | *M7 On Ramp* | *Elizabeth Dr* | |
| Time Per | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | TOT |
| 0630 - 0645 | 0 | 0 | 0 | 0 | **0** |
| 0645 - 0700 | 0 | 0 | 0 | 0 | **0** |
| 0700 - 0715 | 0 | 0 | 0 | 0 | **0** |
| 0715 - 0730 | 0 | 0 | 0 | 0 | **0** |
| 0730 - 0745 | 0 | 0 | 0 | 0 | **0** |
| 0745 - 0800 | 0 | 0 | 0 | 0 | **0** |
| 0800 - 0815 | 0 | 0 | 0 | 0 | **0** |
| 0815 - 0830 | 0 | 0 | 0 | 0 | **0** |
| 0830 - 0845 | 0 | 0 | 0 | 0 | **0** |
| 0845 - 0900 | 0 | 0 | 0 | 0 | **0** |
| 0900 - 0915 | 0 | 0 | 0 | 0 | **0** |
| 0915 - 0930 | 0 | 0 | 0 | 0 | **0** |
| **Period End** | **0** | **0** | **0** | **0** | **0** |

| Peds | NORTH | WEST | SOUTH | EAST | |
|---|---|---|---|---|---|
| | *M7 Off Ramp* | *Elizabeth Dr* | *M7 On Ramp* | *Elizabeth Dr* | |
| Peak Per | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | TOT |
| 0630 - 0730 | 0 | 0 | 0 | 0 | **0** |
| 0645 - 0745 | 0 | 0 | 0 | 0 | **0** |
| 0700 - 0800 | 0 | 0 | 0 | 0 | **0** |
| 0715 - 0815 | 0 | 0 | 0 | 0 | **0** |
| 0730 - 0830 | 0 | 0 | 0 | 0 | **0** |
| 0745 - 0845 | 0 | 0 | 0 | 0 | **0** |
| 0800 - 0900 | 0 | 0 | 0 | 0 | **0** |
| 0815 - 0915 | 0 | 0 | 0 | 0 | **0** |
| 0830 - 0930 | 0 | 0 | 0 | 0 | **0** |
| **PEAK HR** | **0** | **0** | **0** | **0** | **0** |



# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 6536 CECIL PARK Elizabeth Dr
Day/Date : Wednesday 9th August 2017

**Lights**

| Time Per | NORTH M7 Off Ramp L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 On Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1545 | 56 | 0 | 19 | 0 | 307 | 50 | 0 | 0 | 0 | 7 | 300 | 0 | **739** |
| 1545 - 1600 | 52 | 0 | 26 | 0 | 356 | 35 | 0 | 0 | 0 | 10 | 314 | 0 | **793** |
| 1600 - 1615 | 49 | 0 | 23 | 0 | 314 | 51 | 0 | 0 | 0 | 5 | 280 | 0 | **722** |
| 1615 - 1630 | 50 | 0 | 36 | 0 | 337 | 63 | 0 | 0 | 0 | 15 | 280 | 0 | **781** |
| 1630 - 1645 | 36 | 0 | 36 | 0 | 344 | 57 | 0 | 0 | 0 | 6 | 302 | 0 | **781** |
| 1645 - 1700 | 26 | 0 | 21 | 0 | 290 | 53 | 0 | 0 | 0 | 14 | 275 | 0 | **679** |
| 1700 - 1715 | 48 | 0 | 33 | 0 | 330 | 65 | 0 | 0 | 0 | 7 | 260 | 0 | **743** |
| 1715 - 1730 | 41 | 0 | 30 | 0 | 374 | 62 | 0 | 0 | 0 | 7 | 297 | 0 | **811** |
| 1730 - 1745 | 43 | 0 | 34 | 0 | 359 | 61 | 0 | 0 | 0 | 7 | 283 | 0 | **787** |
| 1745 - 1800 | 59 | 0 | 28 | 0 | 331 | 74 | 0 | 0 | 0 | 6 | 276 | 0 | **774** |
| 1800 - 1815 | 55 | 0 | 32 | 0 | 268 | 56 | 0 | 0 | 0 | 5 | 256 | 0 | **672** |
| 1815 - 1830 | 46 | 0 | 20 | 0 | 250 | 36 | 0 | 0 | 0 | 7 | 227 | 0 | **586** |
| **Period End** | **561** | **0** | **338** | **0** | **3860** | **663** | **0** | **0** | **0** | **96** | **3350** | **0** | **8868** |

**Lights**

| Peak Time | NORTH M7 Off Ramp L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 On Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1630 | 207 | 0 | 104 | 0 | 1314 | 199 | 0 | 0 | 0 | 37 | 1174 | 0 | **3035** |
| 1545 - 1645 | 187 | 0 | 121 | 0 | 1351 | 206 | 0 | 0 | 0 | 36 | 1176 | 0 | **3077** |
| 1600 - 1700 | 161 | 0 | 116 | 0 | 1285 | 224 | 0 | 0 | 0 | 40 | 1137 | 0 | **2963** |
| 1615 - 1715 | 160 | 0 | 126 | 0 | 1301 | 238 | 0 | 0 | 0 | 42 | 1117 | 0 | **2984** |
| 1630 - 1730 | 151 | 0 | 120 | 0 | 1338 | 237 | 0 | 0 | 0 | 34 | 1134 | 0 | **3014** |
| 1645 - 1745 | 158 | 0 | 118 | 0 | 1353 | 241 | 0 | 0 | 0 | 35 | 1115 | 0 | **3020** |
| 1700 - 1800 | 191 | 0 | 125 | 0 | 1394 | 262 | 0 | 0 | 0 | 27 | 1116 | 0 | **3115** |
| 1715 - 1815 | 198 | 0 | 124 | 0 | 1332 | 253 | 0 | 0 | 0 | 25 | 1112 | 0 | **3044** |
| 1730 - 1830 | 203 | 0 | 114 | 0 | 1208 | 227 | 0 | 0 | 0 | 25 | 1042 | 0 | **2819** |
| **PEAK HOUR** | **191** | **0** | **125** | **0** | **1394** | **262** | **0** | **0** | **0** | **27** | **1116** | **0** | **3115** |

**Heavies**

| Time Per | NORTH M7 Off Ramp L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 On Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1545 | 2 | 0 | 12 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 7 | 0 | **29** |
| 1545 - 1600 | 0 | 0 | 4 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 3 | 0 | **25** |
| 1600 - 1615 | 0 | 0 | 7 | 0 | 10 | 6 | 0 | 0 | 0 | 0 | 11 | 0 | **34** |
| 1615 - 1630 | 0 | 0 | 4 | 0 | 11 | 9 | 0 | 0 | 0 | 0 | 4 | 0 | **28** |
| 1630 - 1645 | 0 | 0 | 7 | 0 | 5 | 8 | 0 | 0 | 0 | 0 | 8 | 0 | **28** |
| 1645 - 1700 | 0 | 0 | 3 | 0 | 18 | 7 | 0 | 0 | 0 | 1 | 3 | 0 | **32** |
| 1700 - 1715 | 2 | 0 | 6 | 0 | 6 | 10 | 0 | 0 | 0 | 0 | 5 | 0 | **29** |
| 1715 - 1730 | 0 | 0 | 6 | 0 | 11 | 8 | 0 | 0 | 0 | 1 | 7 | 0 | **33** |
| 1730 - 1745 | 0 | 0 | 4 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 4 | 0 | **14** |
| 1745 - 1800 | 3 | 0 | 5 | 0 | -1 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | **17** |
| 1800 - 1815 | 1 | 0 | 4 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | **10** |
| 1815 - 1830 | 1 | 0 | 6 | 0 | 5 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | **14** |
| **Period End** | **9** | **0** | **68** | **0** | **81** | **73** | **0** | **0** | **0** | **2** | **60** | **0** | **293** |

**Heavies**

| Peak Per | NORTH M7 Off Ramp L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 On Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1630 | 2 | 0 | 27 | 0 | 32 | 30 | 0 | 0 | 0 | 0 | 25 | 0 | **116** |
| 1545 - 1645 | 0 | 0 | 22 | 0 | 35 | 32 | 0 | 0 | 0 | 0 | 26 | 0 | **115** |
| 1600 - 1700 | 0 | 0 | 21 | 0 | 44 | 30 | 0 | 0 | 0 | 1 | 26 | 0 | **122** |
| 1615 - 1715 | 2 | 0 | 20 | 0 | 40 | 34 | 0 | 0 | 0 | 1 | 20 | 0 | **117** |
| 1630 - 1730 | 2 | 0 | 22 | 0 | 40 | 33 | 0 | 0 | 0 | 2 | 23 | 0 | **122** |
| 1645 - 1745 | 2 | 0 | 19 | 0 | 38 | 28 | 0 | 0 | 0 | 2 | 19 | 0 | **108** |
| 1700 - 1800 | 5 | 0 | 21 | 0 | 19 | 26 | 0 | 0 | 0 | 1 | 21 | 0 | **93** |
| 1715 - 1815 | 4 | 0 | 19 | 0 | 15 | 17 | 0 | 0 | 0 | 1 | 18 | 0 | **74** |
| 1730 - 1830 | 5 | 0 | 19 | 0 | 9 | 10 | 0 | 0 | 0 | 0 | 12 | 0 | **55** |
| **PEAK HOUR** | **5** | **0** | **21** | **0** | **19** | **26** | **0** | **0** | **0** | **1** | **21** | **0** | **93** |

**Combined**

| Time Per | NORTH M7 Off Ramp L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 On Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1545 | 58 | 0 | 31 | 0 | 309 | 56 | 0 | 0 | 0 | 7 | 307 | 0 | **768** |
| 1545 - 1600 | 52 | 0 | 30 | 0 | 365 | 44 | 0 | 0 | 0 | 10 | 317 | 0 | **818** |
| 1600 - 1615 | 49 | 0 | 30 | 0 | 324 | 57 | 0 | 0 | 0 | 5 | 291 | 0 | **756** |
| 1615 - 1630 | 50 | 0 | 40 | 0 | 348 | 72 | 0 | 0 | 0 | 15 | 284 | 0 | **809** |
| 1630 - 1645 | 36 | 0 | 43 | 0 | 349 | 65 | 0 | 0 | 0 | 6 | 310 | 0 | **809** |
| 1645 - 1700 | 26 | 0 | 24 | 0 | 308 | 60 | 0 | 0 | 0 | 15 | 278 | 0 | **711** |
| 1700 - 1715 | 50 | 0 | 39 | 0 | 336 | 75 | 0 | 0 | 0 | 7 | 265 | 0 | **772** |
| 1715 - 1730 | 41 | 0 | 36 | 0 | 385 | 70 | 0 | 0 | 0 | 8 | 304 | 0 | **844** |
| 1730 - 1745 | 43 | 0 | 38 | 0 | 362 | 64 | 0 | 0 | 0 | 7 | 287 | 0 | **801** |
| 1745 - 1800 | 62 | 0 | 33 | 0 | 330 | 79 | 0 | 0 | 0 | 6 | 281 | 0 | **791** |
| 1800 - 1815 | 56 | 0 | 36 | 0 | 270 | 57 | 0 | 0 | 0 | 5 | 258 | 0 | **682** |
| 1815 - 1830 | 47 | 0 | 26 | 0 | 255 | 37 | 0 | 0 | 0 | 7 | 228 | 0 | **600** |
| **Period End** | **570** | **0** | **406** | **0** | **3941** | **736** | **0** | **0** | **0** | **98** | **3410** | **0** | **9161** |

**Combined**

| Peak Per | NORTH M7 Off Ramp L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 On Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1630 | 209 | 0 | 131 | 0 | 1346 | 229 | 0 | 0 | 0 | 37 | 1199 | 0 | **3151** |
| 1545 - 1645 | 187 | 0 | 143 | 0 | 1386 | 238 | 0 | 0 | 0 | 36 | 1202 | 0 | **3192** |
| 1600 - 1700 | 161 | 0 | 137 | 0 | 1329 | 254 | 0 | 0 | 0 | 41 | 1163 | 0 | **3085** |
| 1615 - 1715 | 162 | 0 | 146 | 0 | 1341 | 272 | 0 | 0 | 0 | 43 | 1137 | 0 | **3101** |
| 1630 - 1730 | 153 | 0 | 142 | 0 | 1378 | 270 | 0 | 0 | 0 | 36 | 1157 | 0 | **3136** |
| 1645 - 1745 | 160 | 0 | 137 | 0 | 1391 | 269 | 0 | 0 | 0 | 37 | 1134 | 0 | **3128** |
| 1700 - 1800 | 196 | 0 | 146 | 0 | 1413 | 288 | 0 | 0 | 0 | 28 | 1137 | 0 | **3208** |
| 1715 - 1815 | 202 | 0 | 143 | 0 | 1347 | 270 | 0 | 0 | 0 | 26 | 1130 | 0 | **3118** |
| 1730 - 1830 | 208 | 0 | 133 | 0 | 1217 | 237 | 0 | 0 | 0 | 25 | 1054 | 0 | **2874** |
| **PEAK HOUR** | **196** | **0** | **146** | **0** | **1413** | **288** | **0** | **0** | **0** | **28** | **1137** | **0** | **3208** |

# R.O.A.R DATA

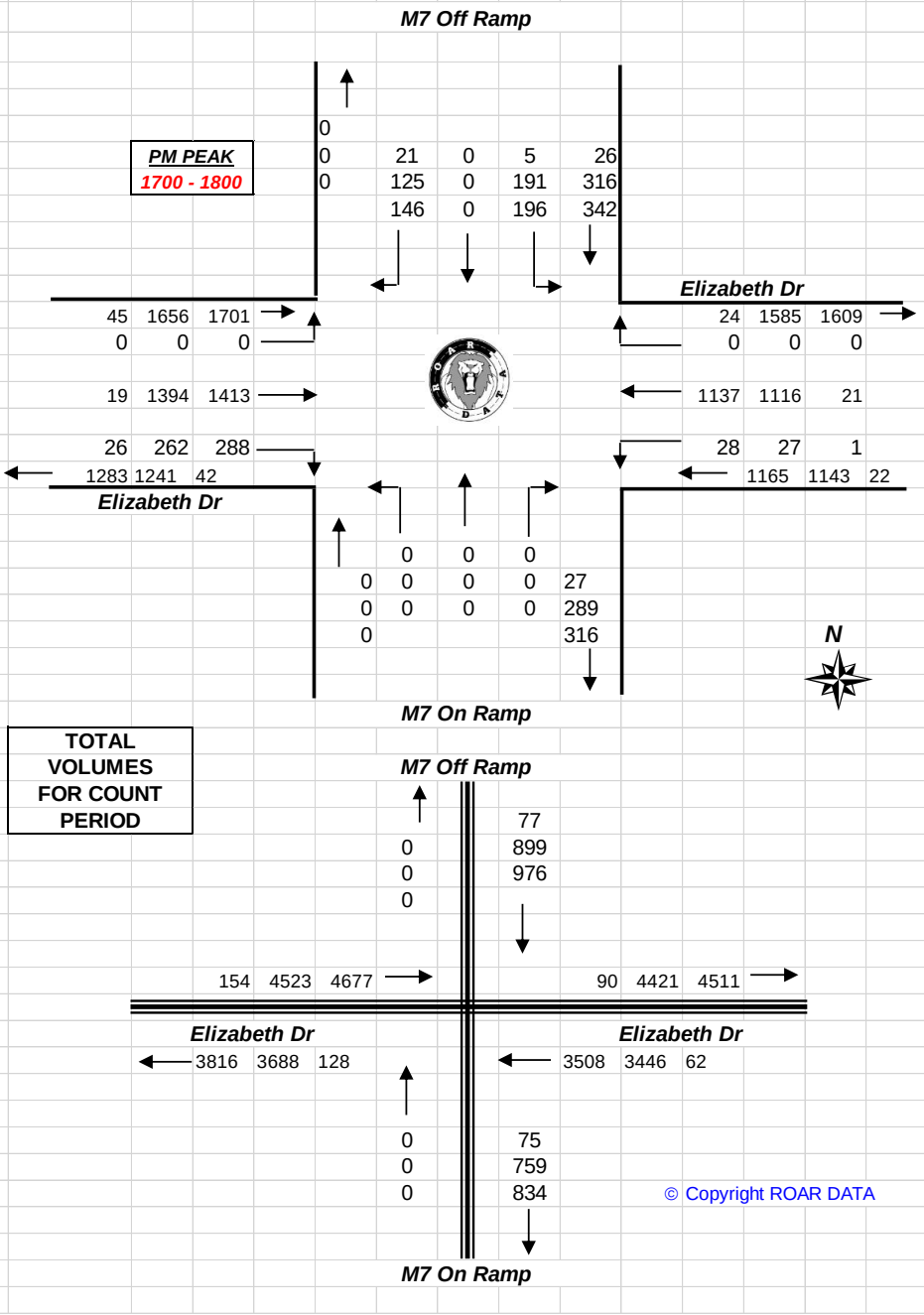
***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

| | |
|---|---|
| Client | : Varga Traffic Planning |
| Job No/Name | : 6536 CECIL PARK Elizabeth Dr |
| Day/Date | : Wednesday 9th August 2017 |

| Peds | NORTH | WEST | SOUTH | EAST | |
|---|---|---|---|---|---|
| | *M7 Off Ramp* | *Elizabeth Dr* | *M7 On Ramp* | *Elizabeth Dr* | |
| Time Per | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | TOT |
| 1530 - 1545 | 0 | 0 | 0 | 0 | **0** |
| 1545 - 1600 | 0 | 0 | 0 | 0 | **0** |
| 1600 - 1615 | 0 | 0 | 0 | 0 | **0** |
| 1615 - 1630 | 0 | 0 | 0 | 0 | **0** |
| 1630 - 1645 | 0 | 0 | 0 | 0 | **0** |
| 1645 - 1700 | 0 | 0 | 0 | 0 | **0** |
| 1700 - 1715 | 0 | 0 | 0 | 0 | **0** |
| 1715 - 1730 | 0 | 0 | 0 | 0 | **0** |
| 1730 - 1745 | 0 | 0 | 0 | 0 | **0** |
| 1745 - 1800 | 0 | 0 | 0 | 0 | **0** |
| 1800 - 1815 | 0 | 0 | 0 | 0 | **0** |
| 1815 - 1830 | 0 | 0 | 0 | 0 | **0** |
| **Period End** | **0** | **0** | **0** | **0** | **0** |

| Peds | NORTH | WEST | SOUTH | EAST | |
|---|---|---|---|---|---|
| | *M7 Off Ramp* | *Elizabeth Dr* | *M7 On Ramp* | *Elizabeth Dr* | |
| Peak Per | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | TOT |
| 1530 - 1630 | 0 | 0 | 0 | 0 | **0** |
| 1545 - 1645 | 0 | 0 | 0 | 0 | **0** |
| 1600 - 1700 | 0 | 0 | 0 | 0 | **0** |
| 1615 - 1715 | 0 | 0 | 0 | 0 | **0** |
| 1630 - 1730 | 0 | 0 | 0 | 0 | **0** |
| 1645 - 1745 | 0 | 0 | 0 | 0 | **0** |
| **1700 - 1800** | 0 | 0 | 0 | 0 | **0** |
| 1715 - 1815 | 0 | 0 | 0 | 0 | **0** |
| 1730 - 1830 | 0 | 0 | 0 | 0 | **0** |
| | | | | | |
| **PEAK HR** | **0** | **0** | **0** | **0** | **0** |



# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

| | |
|---|---|
| Client | : Varga Traffic Planning |
| Job No/Name | : 6536 CECIL PARK Elizabeth Dr |
| Day/Date | : Wednesday 9th August 2017 |

***Intersection Details***

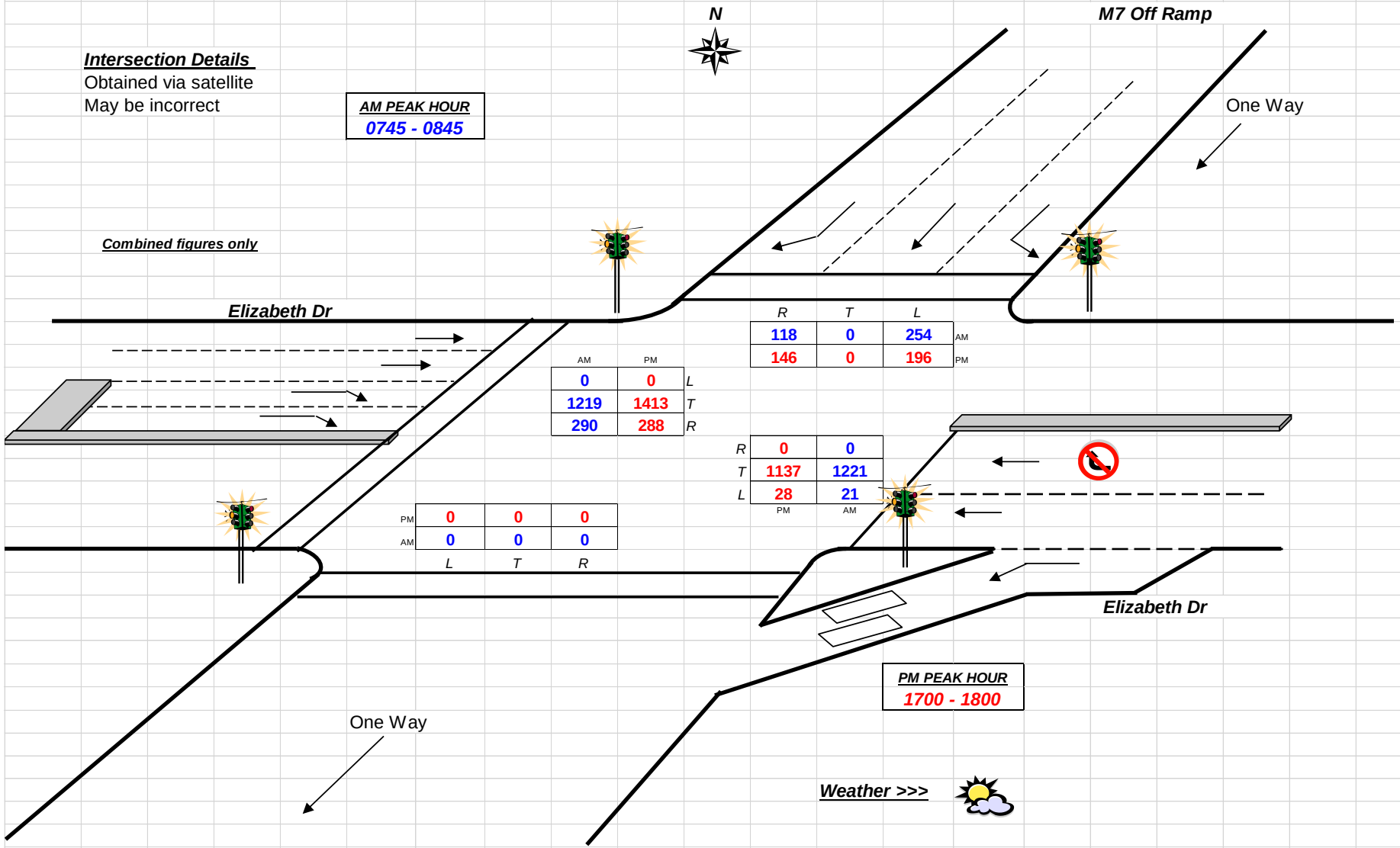
Obtained via satellite

May be incorrect

***AM PEAK HOUR***

***0745 - 0845***

***Combined figures only***




| | R | T | L | |
|---|---|---|---|---|
| AM | 118 | 0 | 254 | AM |
| PM | 146 | 0 | 196 | PM |

| AM | PM | |
|---|---|---|
| 0 | 0 | L |
| 1219 | 1413 | T |
| 290 | 288 | R |

| | R | T | L |
|---|---|---|---|
| R | 0 | 0 | |
| T | 1137 | 1221 | |
| L | 28 | 21 | |
| | PM | AM | |

| | L | T | R |
|---|---|---|---|
| PM | 0 | 0 | 0 |
| AM | 0 | 0 | 0 |

***PM PEAK HOUR***

***1700 - 1800***

***Weather >>>***

# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 6536 CECIL PARK Elizabeth Dr
Day/Date : Wednesday 9th August 2017

**Lights**

| | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Wallgrove Rd* | | | *Elizabeth Dr* | | | *M7 Off Ramp* | | | *Elizabeth Dr* | | | |
| **Time Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0645 | 68 | 0 | 18 | 78 | 211 | 0 | 18 | 8 | 4 | 0 | 163 | 175 | **743** |
| 0645 - 0700 | 45 | 0 | 16 | 88 | 206 | 0 | 23 | 14 | 6 | 0 | 155 | 162 | **715** |
| 0700 - 0715 | 60 | 0 | 16 | 100 | 211 | 0 | 19 | 9 | 1 | 0 | 116 | 176 | **708** |
| 0715 - 0730 | 66 | 0 | 9 | 118 | 271 | 0 | 20 | 16 | 2 | 0 | 148 | 153 | **803** |
| 0730 - 0745 | 68 | 0 | 6 | 93 | 255 | 0 | 23 | 18 | 1 | 0 | 158 | 193 | **815** |
| 0745 - 0800 | 59 | 0 | 20 | 83 | 281 | 0 | 28 | 17 | 6 | 0 | 162 | 188 | **844** |
| 0800 - 0815 | 54 | 0 | 20 | 94 | 289 | 0 | 24 | 18 | 12 | 0 | 139 | 170 | **820** |
| 0815 - 0830 | 54 | 0 | 17 | 96 | 285 | 0 | 29 | 12 | 13 | 0 | 135 | 150 | **791** |
| 0830 - 0845 | 58 | 0 | 18 | 118 | 262 | 0 | 20 | 9 | 11 | 0 | 185 | 182 | **863** |
| 0845 - 0900 | 51 | 0 | 12 | 130 | 232 | 0 | 21 | 11 | 8 | 0 | 156 | 147 | **768** |
| 0900 - 0915 | 57 | 0 | 9 | 59 | 215 | 0 | 16 | 10 | 9 | 0 | 122 | 119 | **616** |
| 0915 - 0930 | 38 | 0 | 11 | 30 | 143 | 0 | 23 | 6 | 4 | 0 | 108 | 104 | **467** |
| **Period End** | **678** | **0** | **172** | **1087** | **2861** | **0** | **264** | **148** | **77** | **0** | **1747** | **1919** | **8953** |

**Lights**

| | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Wallgrove Rd* | | | *Elizabeth Dr* | | | *M7 Off Ramp* | | | *Elizabeth Dr* | | | |
| **Peak Time** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0730 | 239 | 0 | 59 | 384 | 899 | 0 | 80 | 47 | 13 | 0 | 582 | 666 | **2969** |
| 0645 - 0745 | 239 | 0 | 47 | 399 | 943 | 0 | 85 | 57 | 10 | 0 | 577 | 684 | **3041** |
| 0700 - 0800 | 253 | 0 | 51 | 394 | 1018 | 0 | 90 | 60 | 10 | 0 | 584 | 710 | **3170** |
| 0715 - 0815 | 247 | 0 | 55 | 388 | 1096 | 0 | 95 | 69 | 21 | 0 | 607 | 704 | **3282** |
| 0730 - 0830 | 235 | 0 | 63 | 366 | 1110 | 0 | 104 | 65 | 32 | 0 | 594 | 701 | **3270** |
| **0745 - 0845** | 225 | 0 | 75 | 391 | 1117 | 0 | 101 | 56 | 42 | 0 | 621 | 690 | **3318** |
| 0800 - 0900 | 217 | 0 | 67 | 438 | 1068 | 0 | 94 | 50 | 44 | 0 | 615 | 649 | **3242** |
| 0815 - 0915 | 220 | 0 | 56 | 403 | 994 | 0 | 86 | 42 | 41 | 0 | 598 | 598 | **3038** |
| 0830 - 0930 | 204 | 0 | 50 | 337 | 852 | 0 | 80 | 36 | 32 | 0 | 571 | 552 | **2714** |
| **PEAK HOUR** | **225** | **0** | **75** | **391** | **1117** | **0** | **101** | **56** | **42** | **0** | **621** | **690** | **3318** |

**Heavies**

| | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Wallgrove Rd* | | | *Elizabeth Dr* | | | *M7 Off Ramp* | | | *Elizabeth Dr* | | | |
| **Time Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0645 | 1 | 0 | 5 | 23 | 20 | 0 | 6 | 0 | 1 | 0 | 10 | 7 | **73** |
| 0645 - 0700 | 3 | 0 | 2 | 10 | 22 | 0 | 8 | 0 | 1 | 0 | 6 | 3 | **55** |
| 0700 - 0715 | 3 | 0 | 2 | 21 | 13 | 0 | 6 | 1 | 0 | 0 | 14 | 4 | **64** |
| 0715 - 0730 | 1 | 0 | 4 | 4 | 9 | 0 | 6 | 0 | 0 | 0 | 10 | 5 | **39** |
| 0730 - 0745 | 4 | 0 | 3 | 12 | 14 | 0 | 9 | 1 | 0 | 0 | 12 | 4 | **59** |
| 0745 - 0800 | 2 | 0 | 3 | 11 | 23 | 0 | 10 | 1 | 0 | 0 | 23 | 2 | **75** |
| 0800 - 0815 | 1 | 0 | 3 | 9 | 17 | 0 | 13 | 2 | 1 | 0 | 32 | 4 | **82** |
| 0815 - 0830 | 2 | 0 | 2 | 13 | 22 | 0 | 14 | 0 | 0 | 0 | 18 | 4 | **75** |
| 0830 - 0845 | 2 | 0 | 2 | 17 | 16 | 0 | 10 | 1 | 0 | 0 | 17 | 4 | **69** |
| 0845 - 0900 | 7 | 0 | 3 | 19 | 16 | 0 | 13 | 1 | 0 | 0 | 15 | 6 | **80** |
| 0900 - 0915 | 2 | 0 | 4 | 21 | 24 | 0 | 12 | 0 | 2 | 0 | 19 | 5 | **89** |
| 0915 - 0930 | 7 | 0 | 5 | 14 | 14 | 0 | 16 | 4 | 1 | 0 | 17 | 3 | **81** |
| **Period End** | **35** | **0** | **38** | **174** | **210** | **0** | **123** | **11** | **6** | **0** | **193** | **51** | **841** |

**Heavies**

| | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Wallgrove Rd* | | | *Elizabeth Dr* | | | *M7 Off Ramp* | | | *Elizabeth Dr* | | | |
| **Peak Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0730 | 8 | 0 | 13 | 58 | 64 | 0 | 26 | 1 | 2 | 0 | 40 | 19 | **231** |
| 0645 - 0745 | 11 | 0 | 11 | 47 | 58 | 0 | 29 | 2 | 1 | 0 | 42 | 16 | **217** |
| 0700 - 0800 | 10 | 0 | 12 | 48 | 59 | 0 | 31 | 3 | 0 | 0 | 59 | 15 | **237** |
| 0715 - 0815 | 8 | 0 | 13 | 36 | 63 | 0 | 38 | 4 | 1 | 0 | 77 | 15 | **255** |
| 0730 - 0830 | 9 | 0 | 11 | 45 | 76 | 0 | 46 | 4 | 1 | 0 | 85 | 14 | **291** |
| **0745 - 0845** | 7 | 0 | 10 | 50 | 78 | 0 | 47 | 4 | 1 | 0 | 90 | 14 | **301** |
| 0800 - 0900 | 12 | 0 | 10 | 58 | 71 | 0 | 50 | 4 | 1 | 0 | 82 | 18 | **306** |
| 0815 - 0915 | 13 | 0 | 11 | 70 | 78 | 0 | 49 | 2 | 2 | 0 | 69 | 19 | **313** |
| 0830 - 0930 | 18 | 0 | 14 | 71 | 70 | 0 | 51 | 6 | 3 | 0 | 68 | 18 | **319** |
| **PEAK HOUR** | **7** | **0** | **10** | **50** | **78** | **0** | **47** | **4** | **1** | **0** | **90** | **14** | **301** |

**Combined**

| | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Wallgrove Rd* | | | *Elizabeth Dr* | | | *M7 Off Ramp* | | | *Elizabeth Dr* | | | |
| **Time Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0645 | 69 | 0 | 23 | 101 | 231 | 0 | 24 | 8 | 5 | 0 | 173 | 182 | **816** |
| 0645 - 0700 | 48 | 0 | 18 | 98 | 228 | 0 | 31 | 14 | 7 | 0 | 161 | 165 | **770** |
| 0700 - 0715 | 63 | 0 | 18 | 121 | 224 | 0 | 25 | 10 | 1 | 0 | 130 | 180 | **772** |
| 0715 - 0730 | 67 | 0 | 13 | 122 | 280 | 0 | 26 | 16 | 2 | 0 | 158 | 158 | **842** |
| 0730 - 0745 | 72 | 0 | 9 | 105 | 269 | 0 | 32 | 19 | 1 | 0 | 170 | 197 | **874** |
| 0745 - 0800 | 61 | 0 | 23 | 94 | 304 | 0 | 38 | 18 | 6 | 0 | 185 | 190 | **919** |
| 0800 - 0815 | 55 | 0 | 23 | 103 | 306 | 0 | 37 | 20 | 13 | 0 | 171 | 174 | **902** |
| 0815 - 0830 | 56 | 0 | 19 | 109 | 307 | 0 | 43 | 12 | 13 | 0 | 153 | 154 | **866** |
| 0830 - 0845 | 60 | 0 | 20 | 135 | 278 | 0 | 30 | 10 | 11 | 0 | 202 | 186 | **932** |
| 0845 - 0900 | 58 | 0 | 15 | 149 | 248 | 0 | 34 | 12 | 8 | 0 | 171 | 153 | **848** |
| 0900 - 0915 | 59 | 0 | 13 | 80 | 239 | 0 | 28 | 10 | 11 | 0 | 141 | 124 | **705** |
| 0915 - 0930 | 45 | 0 | 16 | 44 | 157 | 0 | 39 | 10 | 5 | 0 | 125 | 107 | **548** |
| **Period End** | **713** | **0** | **210** | **1261** | **3071** | **0** | **387** | **159** | **83** | **0** | **1940** | **1970** | **9794** |

**Combined**

| | NORTH | | | WEST | | | SOUTH | | | EAST | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Wallgrove Rd* | | | *Elizabeth Dr* | | | *M7 Off Ramp* | | | *Elizabeth Dr* | | | |
| **Peak Per** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **L** | **T** | **R** | **TOT** |
| 0630 - 0730 | 247 | 0 | 72 | 442 | 963 | 0 | 106 | 48 | 15 | 0 | 622 | 685 | **3200** |
| 0645 - 0745 | 250 | 0 | 58 | 446 | 1001 | 0 | 114 | 59 | 11 | 0 | 619 | 700 | **3258** |
| 0700 - 0800 | 263 | 0 | 63 | 442 | 1077 | 0 | 121 | 63 | 10 | 0 | 643 | 725 | **3407** |
| 0715 - 0815 | 255 | 0 | 68 | 424 | 1159 | 0 | 133 | 73 | 22 | 0 | 684 | 719 | **3537** |
| 0730 - 0830 | 244 | 0 | 74 | 411 | 1186 | 0 | 150 | 69 | 33 | 0 | 679 | 715 | **3561** |
| **0745 - 0845** | 232 | 0 | 85 | 441 | 1195 | 0 | 148 | 60 | 43 | 0 | 711 | 704 | **3619** |
| 0800 - 0900 | 229 | 0 | 77 | 496 | 1139 | 0 | 144 | 54 | 45 | 0 | 697 | 667 | **3548** |
| 0815 - 0915 | 233 | 0 | 67 | 473 | 1072 | 0 | 135 | 44 | 43 | 0 | 667 | 617 | **3351** |
| 0830 - 0930 | 222 | 0 | 64 | 408 | 922 | 0 | 131 | 42 | 35 | 0 | 639 | 570 | **3033** |
| **PEAK HOUR** | **232** | **0** | **85** | **441** | **1195** | **0** | **148** | **60** | **43** | **0** | **711** | **704** | **3619** |

# R.O.A.R DATA

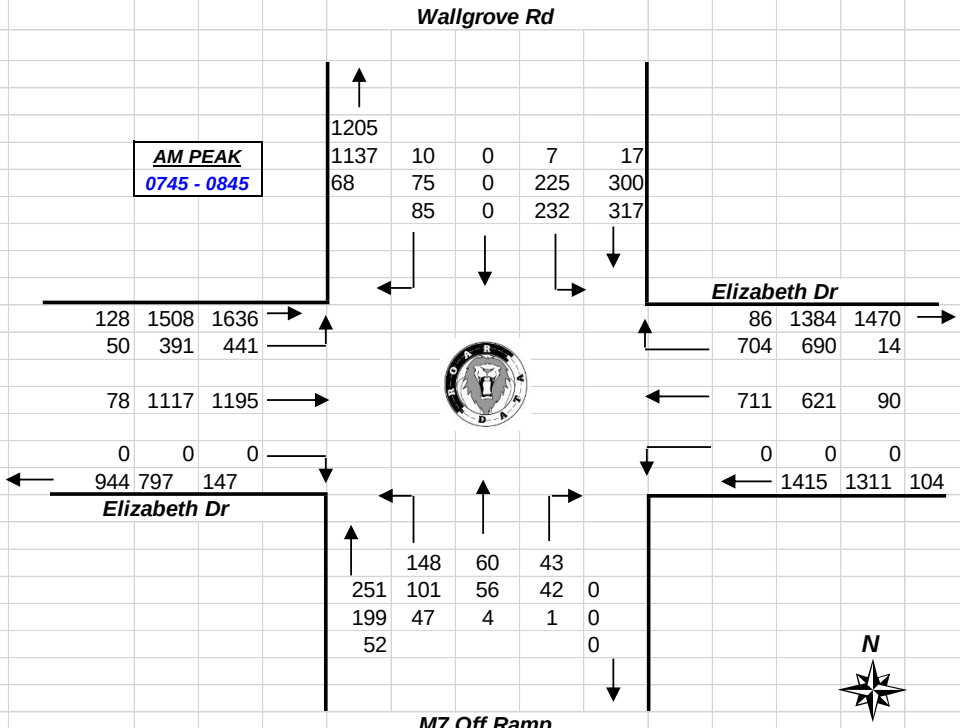
***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

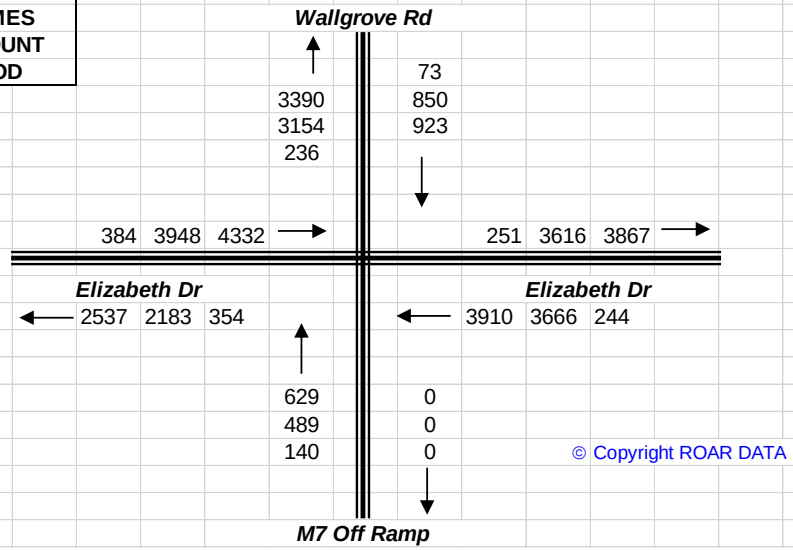
| | |
|---|---|
| Client | : Varga Traffic Planning |
| Job No/Name | : 6536 CECIL PARK Elizabeth Dr |
| Day/Date | : Wednesday 9th August 2017 |

| Peds | NORTH | WEST | SOUTH | EAST | |
|---|---|---|---|---|---|
| | *Wallgrove Rd* | *Elizabeth Dr* | *M7 Off Ramp* | *Elizabeth Dr* | |
| **Time Per** | **UNCLASSIFIED** | **UNCLASSIFIED** | **UNCLASSIFIED** | **UNCLASSIFIED** | **TOT** |
| 0630 - 0645 | 0 | 0 | 0 | 0 | **0** |
| 0645 - 0700 | 0 | 0 | 0 | 0 | **0** |
| 0700 - 0715 | 0 | 0 | 0 | 0 | **0** |
| 0715 - 0730 | 0 | 0 | 0 | 0 | **0** |
| 0730 - 0745 | 0 | 0 | 0 | 0 | **0** |
| 0745 - 0800 | 0 | 0 | 0 | 0 | **0** |
| 0800 - 0815 | 0 | 0 | 0 | 0 | **0** |
| 0815 - 0830 | 0 | 0 | 0 | 0 | **0** |
| 0830 - 0845 | 0 | 0 | 0 | 0 | **0** |
| 0845 - 0900 | 0 | 0 | 0 | 0 | **0** |
| 0900 - 0915 | 0 | 0 | 0 | 0 | **0** |
| 0915 - 0930 | 0 | 0 | 0 | 0 | **0** |
| **Period End** | **0** | **0** | **0** | **0** | **0** |

| Peds | NORTH | WEST | SOUTH | EAST | |
|---|---|---|---|---|---|
| | *Wallgrove Rd* | *Elizabeth Dr* | *M7 Off Ramp* | *Elizabeth Dr* | |
| **Peak Per** | **UNCLASSIFIED** | **UNCLASSIFIED** | **UNCLASSIFIED** | **UNCLASSIFIED** | **TOT** |
| 0630 - 0730 | 0 | 0 | 0 | 0 | **0** |
| 0645 - 0745 | 0 | 0 | 0 | 0 | **0** |
| 0700 - 0800 | 0 | 0 | 0 | 0 | **0** |
| 0715 - 0815 | 0 | 0 | 0 | 0 | **0** |
| 0730 - 0830 | 0 | 0 | 0 | 0 | **0** |
| **0745 - 0845** | 0 | 0 | 0 | 0 | **0** |
| 0800 - 0900 | 0 | 0 | 0 | 0 | **0** |
| 0815 - 0915 | 0 | 0 | 0 | 0 | **0** |
| 0830 - 0930 | 0 | 0 | 0 | 0 | **0** |
| **PEAK HR** | **0** | **0** | **0** | **0** | **0** |




**TOTAL VOLUMES FOR COUNT PERIOD**



# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 6536 CECIL PARK Elizabeth Dr
Day/Date : Wednesday 9th August 2017

**Lights**

| Time Per | NORTH Wallgrove Rd L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 Off Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1545 | 134 | 0 | 51 | 44 | 209 | 0 | 30 | 7 | 6 | 0 | 212 | 106 | **799** |
| 1545 - 1600 | 153 | 0 | 61 | 39 | 217 | 0 | 43 | 2 | 13 | 0 | 207 | 103 | **838** |
| 1600 - 1615 | 112 | 0 | 67 | 28 | 243 | 0 | 41 | 3 | 13 | 0 | 193 | 72 | **772** |
| 1615 - 1630 | 150 | 0 | 86 | 34 | 236 | 0 | 57 | 11 | 8 | 0 | 199 | 107 | **888** |
| 1630 - 1645 | 162 | 0 | 78 | 23 | 222 | 0 | 30 | 2 | 11 | 0 | 222 | 109 | **859** |
| 1645 - 1700 | 130 | 0 | 106 | 22 | 205 | 0 | 43 | 9 | 10 | 0 | 221 | 75 | **821** |
| 1700 - 1715 | 131 | 0 | 70 | 38 | 259 | 0 | 37 | 6 | 9 | 0 | 203 | 97 | **850** |
| 1715 - 1730 | 198 | 0 | 110 | 33 | 218 | 0 | 47 | 14 | 9 | 0 | 231 | 114 | **974** |
| 1730 - 1745 | 178 | 0 | 89 | 30 | 218 | 0 | 33 | 4 | 15 | 0 | 224 | 106 | **897** |
| 1745 - 1800 | 164 | 0 | 77 | 19 | 221 | 0 | 39 | 4 | 14 | 0 | 211 | 87 | **836** |
| 1800 - 1815 | 145 | 0 | 63 | 16 | 180 | 0 | 28 | 3 | 5 | 0 | 230 | 87 | **757** |
| 1815 - 1830 | 111 | 0 | 55 | 20 | 171 | 0 | 41 | 3 | 8 | 0 | 154 | 88 | **651** |
| **Period End** | **1768** | **0** | **913** | **346** | **2599** | **0** | **469** | **68** | **121** | **0** | **2507** | **1151** | **9942** |

**Lights**

| Peak Time | NORTH Wallgrove Rd L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 Off Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1630 | 549 | 0 | 265 | 145 | 905 | 0 | 171 | 23 | 40 | 0 | 811 | 388 | **3297** |
| 1545 - 1645 | 577 | 0 | 292 | 124 | 918 | 0 | 171 | 18 | 45 | 0 | 821 | 391 | **3357** |
| 1600 - 1700 | 554 | 0 | 337 | 107 | 906 | 0 | 171 | 25 | 42 | 0 | 835 | 363 | **3340** |
| 1615 - 1715 | 573 | 0 | 340 | 117 | 922 | 0 | 167 | 28 | 38 | 0 | 845 | 388 | **3418** |
| 1630 - 1730 | 621 | 0 | 364 | 116 | 904 | 0 | 157 | 31 | 39 | 0 | 877 | 395 | **3504** |
| 1645 - 1745 | 637 | 0 | 375 | 123 | 900 | 0 | 160 | 33 | 43 | 0 | 879 | 392 | **3542** |
| 1700 - 1800 | 671 | 0 | 346 | 120 | 916 | 0 | 156 | 28 | 47 | 0 | 869 | 404 | **3557** |
| 1715 - 1815 | 685 | 0 | 339 | 98 | 837 | 0 | 147 | 25 | 43 | 0 | 896 | 394 | **3464** |
| 1730 - 1830 | 598 | 0 | 284 | 85 | 790 | 0 | 141 | 14 | 42 | 0 | 819 | 368 | **3141** |
| **PEAK HOUR** | **637** | **0** | **375** | **123** | **900** | **0** | **160** | **33** | **43** | **0** | **879** | **392** | **3542** |

**Heavies**

| Time Per | NORTH Wallgrove Rd L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 Off Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1545 | 2 | 0 | 7 | 2 | 6 | 0 | 12 | 1 | 1 | 0 | 13 | 5 | **49** |
| 1545 - 1600 | 3 | 0 | 2 | 7 | 12 | 0 | 6 | 0 | 1 | 0 | 7 | 0 | **38** |
| 1600 - 1615 | 1 | 0 | 5 | 5 | 14 | 0 | 11 | 1 | 1 | 0 | 12 | 4 | **54** |
| 1615 - 1630 | 3 | 0 | 5 | 4 | 18 | 0 | 14 | 2 | 1 | 0 | 10 | 1 | **58** |
| 1630 - 1645 | 4 | 0 | 3 | 7 | 7 | 0 | 7 | 1 | 0 | 0 | 9 | 4 | **42** |
| 1645 - 1700 | 7 | 0 | 4 | 6 | 21 | 0 | 7 | 0 | 0 | 0 | 6 | 1 | **52** |
| 1700 - 1715 | 4 | 0 | 5 | 4 | 11 | 0 | 2 | 2 | 0 | 0 | 8 | 2 | **38** |
| 1715 - 1730 | 4 | 0 | 2 | 6 | 13 | 0 | 6 | 1 | 0 | 0 | 12 | 1 | **45** |
| 1730 - 1745 | 0 | 0 | 2 | 3 | 7 | 0 | 5 | 1 | 0 | 0 | 6 | 0 | **24** |
| 1745 - 1800 | 0 | 0 | 2 | 2 | 5 | 0 | 12 | 0 | 0 | 0 | 8 | 1 | **30** |
| 1800 - 1815 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 1 | 1 | 0 | 6 | 0 | **14** |
| 1815 - 1830 | 2 | 0 | 2 | 3 | 5 | 0 | 3 | 0 | 0 | 0 | 7 | 1 | **23** |
| **Period End** | **30** | **0** | **39** | **51** | **122** | **0** | **86** | **10** | **5** | **0** | **104** | **20** | **467** |

**Heavies**

| Peak Per | NORTH Wallgrove Rd L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 Off Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1630 | 9 | 0 | 19 | 18 | 50 | 0 | 43 | 4 | 4 | 0 | 42 | 10 | **199** |
| 1545 - 1645 | 11 | 0 | 15 | 23 | 51 | 0 | 38 | 4 | 3 | 0 | 38 | 9 | **192** |
| 1600 - 1700 | 15 | 0 | 17 | 22 | 60 | 0 | 39 | 4 | 2 | 0 | 37 | 10 | **206** |
| 1615 - 1715 | 18 | 0 | 17 | 21 | 57 | 0 | 30 | 5 | 1 | 0 | 33 | 8 | **190** |
| 1630 - 1730 | 19 | 0 | 14 | 23 | 52 | 0 | 22 | 4 | 0 | 0 | 35 | 8 | **177** |
| 1645 - 1745 | 15 | 0 | 13 | 19 | 52 | 0 | 20 | 4 | 0 | 0 | 32 | 4 | **159** |
| 1700 - 1800 | 8 | 0 | 11 | 15 | 36 | 0 | 25 | 4 | 0 | 0 | 34 | 4 | **137** |
| 1715 - 1815 | 4 | 0 | 6 | 13 | 28 | 0 | 24 | 3 | 1 | 0 | 32 | 2 | **113** |
| 1730 - 1830 | 2 | 0 | 6 | 10 | 20 | 0 | 21 | 2 | 1 | 0 | 27 | 2 | **91** |
| **PEAK HOUR** | **15** | **0** | **13** | **19** | **52** | **0** | **20** | **4** | **0** | **0** | **32** | **4** | **159** |

**Combined**

| Time Per | NORTH Wallgrove Rd L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 Off Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1545 | 136 | 0 | 58 | 46 | 215 | 0 | 42 | 8 | 7 | 0 | 225 | 111 | **848** |
| 1545 - 1600 | 156 | 0 | 63 | 46 | 229 | 0 | 49 | 2 | 14 | 0 | 214 | 103 | **876** |
| 1600 - 1615 | 113 | 0 | 72 | 33 | 257 | 0 | 52 | 4 | 14 | 0 | 205 | 76 | **826** |
| 1615 - 1630 | 153 | 0 | 91 | 38 | 254 | 0 | 71 | 13 | 9 | 0 | 209 | 108 | **946** |
| 1630 - 1645 | 166 | 0 | 81 | 30 | 229 | 0 | 37 | 3 | 11 | 0 | 231 | 113 | **901** |
| 1645 - 1700 | 137 | 0 | 110 | 28 | 226 | 0 | 50 | 9 | 10 | 0 | 227 | 76 | **873** |
| 1700 - 1715 | 135 | 0 | 75 | 42 | 270 | 0 | 39 | 8 | 9 | 0 | 211 | 99 | **888** |
| 1715 - 1730 | 202 | 0 | 112 | 39 | 231 | 0 | 53 | 15 | 9 | 0 | 243 | 115 | **1019** |
| 1730 - 1745 | 178 | 0 | 91 | 33 | 225 | 0 | 38 | 5 | 15 | 0 | 230 | 106 | **921** |
| 1745 - 1800 | 164 | 0 | 79 | 21 | 226 | 0 | 51 | 4 | 14 | 0 | 219 | 88 | **866** |
| 1800 - 1815 | 145 | 0 | 63 | 18 | 183 | 0 | 29 | 4 | 6 | 0 | 236 | 87 | **771** |
| 1815 - 1830 | 113 | 0 | 57 | 23 | 176 | 0 | 44 | 3 | 8 | 0 | 161 | 89 | **674** |
| **Period End** | **1798** | **0** | **952** | **397** | **2721** | **0** | **555** | **78** | **126** | **0** | **2611** | **1171** | **10409** |

**Combined**

| Peak Per | NORTH Wallgrove Rd L | T | R | WEST Elizabeth Dr L | T | R | SOUTH M7 Off Ramp L | T | R | EAST Elizabeth Dr L | T | R | TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1530 - 1630 | 558 | 0 | 284 | 163 | 955 | 0 | 214 | 27 | 44 | 0 | 853 | 398 | **3496** |
| 1545 - 1645 | 588 | 0 | 307 | 147 | 969 | 0 | 209 | 22 | 48 | 0 | 859 | 400 | **3549** |
| 1600 - 1700 | 569 | 0 | 354 | 129 | 966 | 0 | 210 | 29 | 44 | 0 | 872 | 373 | **3546** |
| 1615 - 1715 | 591 | 0 | 357 | 138 | 979 | 0 | 197 | 33 | 39 | 0 | 878 | 396 | **3608** |
| 1630 - 1730 | 640 | 0 | 378 | 139 | 956 | 0 | 179 | 35 | 39 | 0 | 912 | 403 | **3681** |
| 1645 - 1745 | 652 | 0 | 388 | 142 | 952 | 0 | 180 | 37 | 43 | 0 | 911 | 396 | **3701** |
| 1700 - 1800 | 679 | 0 | 357 | 135 | 952 | 0 | 181 | 32 | 47 | 0 | 903 | 408 | **3694** |
| 1715 - 1815 | 689 | 0 | 345 | 111 | 865 | 0 | 171 | 28 | 44 | 0 | 928 | 396 | **3577** |
| 1730 - 1830 | 600 | 0 | 290 | 95 | 810 | 0 | 162 | 16 | 43 | 0 | 846 | 370 | **3232** |
| **PEAK HOUR** | **652** | **0** | **388** | **142** | **952** | **0** | **180** | **37** | **43** | **0** | **911** | **396** | **3701** |

# R.O.A.R DATA

***Reliable, Original & Authentic Results***

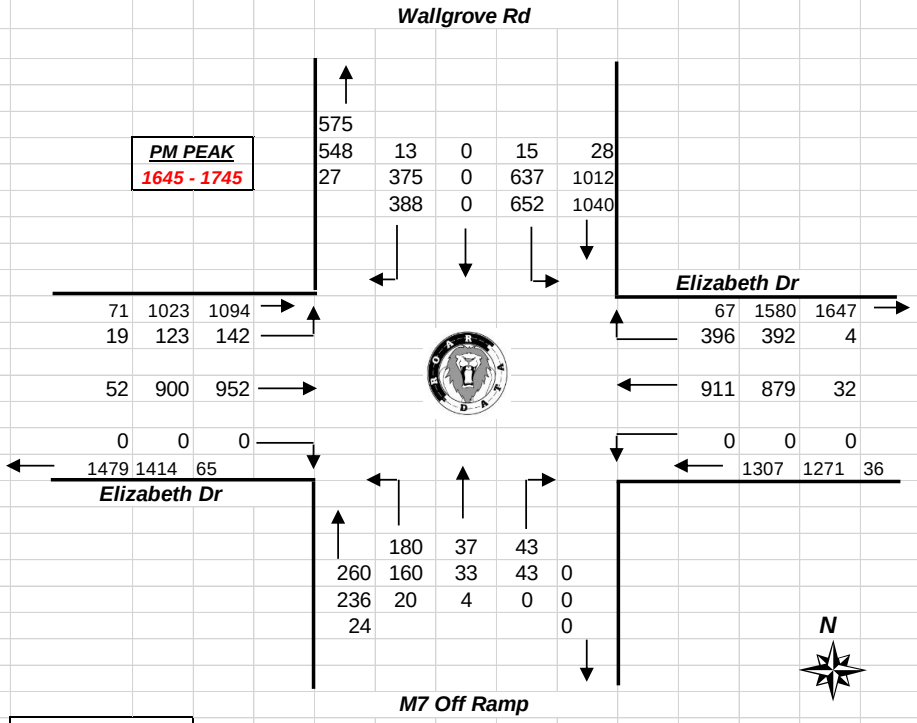
Ph.88196847, Mob.0418-239019

| | |
|---|---|
| Client | : Varga Traffic Planning |
| Job No/Name | : 6536 CECIL PARK Elizabeth Dr |
| Day/Date | : Wednesday 9th August 2017 |

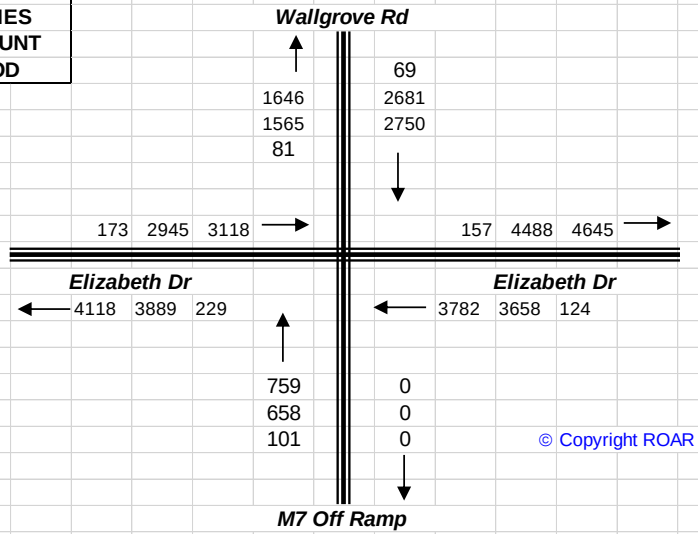
| Peds | NORTH | WEST | SOUTH | EAST | |
|---|---|---|---|---|---|
| | *Wallgrove Rd* | *Elizabeth Dr* | *M7 Off Ramp* | *Elizabeth Dr* | |
| Time Per | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | TOT |
| 1530 - 1545 | 0 | 0 | 0 | 0 | **0** |
| 1545 - 1600 | 0 | 0 | 0 | 0 | **0** |
| 1600 - 1615 | 0 | 0 | 0 | 0 | **0** |
| 1615 - 1630 | 0 | 0 | 0 | 0 | **0** |
| 1630 - 1645 | 0 | 0 | 0 | 0 | **0** |
| 1645 - 1700 | 0 | 0 | 0 | 0 | **0** |
| 1700 - 1715 | 0 | 0 | 0 | 0 | **0** |
| 1715 - 1730 | 0 | 0 | 0 | 0 | **0** |
| 1730 - 1745 | 0 | 0 | 0 | 0 | **0** |
| 1745 - 1800 | 0 | 0 | 0 | 0 | **0** |
| 1800 - 1815 | 0 | 0 | 0 | 0 | **0** |
| 1815 - 1830 | 0 | 0 | 0 | 0 | **0** |
| **Period End** | **0** | **0** | **0** | **0** | **0** |

| Peds | NORTH | WEST | SOUTH | EAST | |
|---|---|---|---|---|---|
| | *Wallgrove Rd* | *Elizabeth Dr* | *M7 Off Ramp* | *Elizabeth Dr* | |
| Peak Per | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | UNCLASSIFIED | TOT |
| 1530 - 1630 | 0 | 0 | 0 | 0 | **0** |
| 1545 - 1645 | 0 | 0 | 0 | 0 | **0** |
| 1600 - 1700 | 0 | 0 | 0 | 0 | **0** |
| 1615 - 1715 | 0 | 0 | 0 | 0 | **0** |
| 1630 - 1730 | 0 | 0 | 0 | 0 | **0** |
| **1645 - 1745** | 0 | 0 | 0 | 0 | **0** |
| 1700 - 1800 | 0 | 0 | 0 | 0 | **0** |
| 1715 - 1815 | 0 | 0 | 0 | 0 | **0** |
| 1730 - 1830 | 0 | 0 | 0 | 0 | **0** |
| **PEAK HR** | **0** | **0** | **0** | **0** | **0** |

1 2 3




**TOTAL VOLUMES FOR COUNT PERIOD**



# R.O.A.R. DATA

***Reliable, Original & Authentic Results***

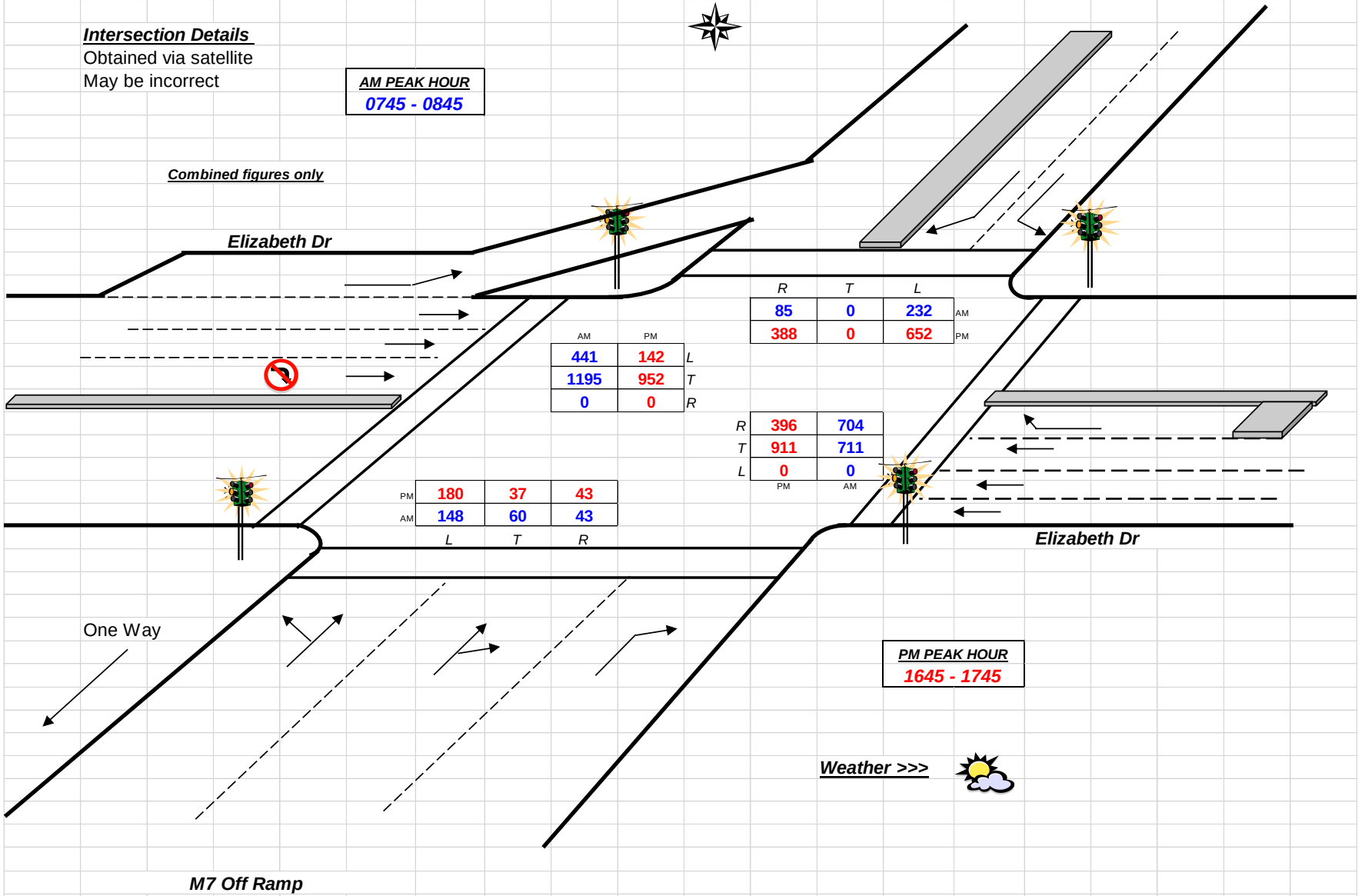
Ph.88196847, Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 6536 CECIL PARK Elizabeth Dr
Day/Date : Wednesday 9th August 2017

***Intersection Details***
Obtained via satellite
May be incorrect

***AM PEAK HOUR***
***0745 - 0845***

***Combined figures only***




***PM PEAK HOUR***
***1645 - 1745***

***Weather >>>***

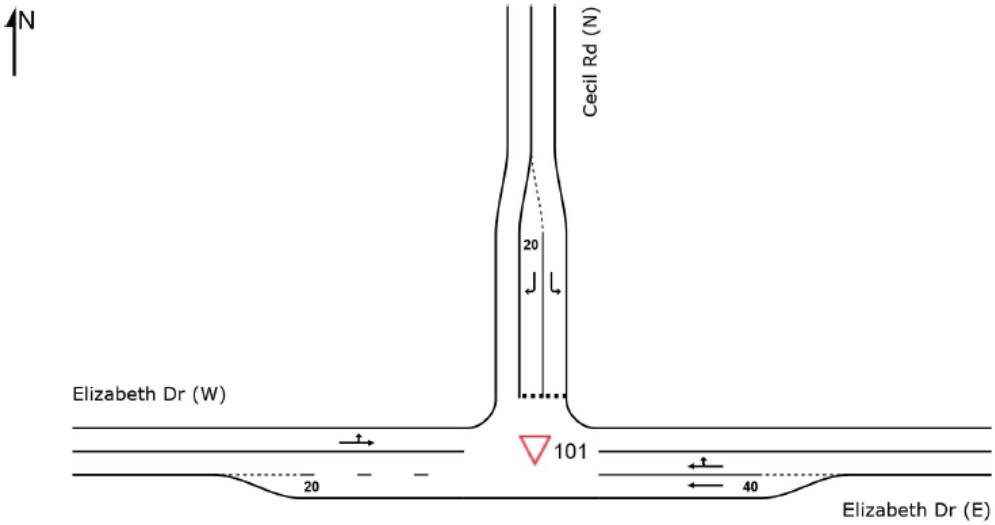
# APPENDIX B

# SIDRA MOVEMENT SUMMARIES

# SITE LAYOUT

## Site: 101 [ELI_CEC Existing AM]

Elizabeth Dr & Cecil Rd
Site Category: (None)
Giveway / Yield (Two-Way)





Organisation: VARGA TRAFFIC PLANNING | Created: Tuesday, 17 July 2018 3:28:48 PM
Project: Z:\DATA\Data\Jobs01\Jobs\17work\17330_1141ElizabethDrCecilPark\SIDRA\180717\Existing Network.sip8

# MOVEMENT SUMMARY

## Site: 101 [ELI_CEC Existing AM]

## Network: N101 [Existing Network AM]

Elizabeth Dr & Cecil Rd
Site Category: (None)
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 5 | T1 | 831 | 14.0 | 831 | 14.0 | 0.864 | 30.0 | LOS C | 8.8 | 70.1 | 0.62 | 0.08 | 1.50 | 41.0 |
| 6 | R2 | 75 | 33.3 | 75 | 33.3 | 0.864 | 73.5 | LOS F | 8.8 | 70.1 | 1.00 | 0.13 | 2.44 | 28.6 |
| Approach | | 906 | 15.6 | 906 | 15.6 | 0.864 | 33.6 | NA | 8.8 | 70.1 | 0.65 | 0.09 | 1.58 | 39.5 |
| North: Cecil Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 136 | 11.8 | 136 | 11.8 | 1.343 | 381.6 | LOS F | 10.6 | 81.7 | 1.00 | 2.52 | 8.44 | 4.4 |
| 9 | R2 | 5 | 80.0 | 5 | 80.0 | 0.137 | 95.6 | LOS F | 0.1 | 1.6 | 0.98 | 0.99 | 0.98 | 20.8 |
| Approach | | 141 | 14.2 | 141 | 14.2 | 1.343 | 371.4 | LOS F | 10.6 | 81.7 | 1.00 | 2.47 | 8.17 | 4.7 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 10 | L2 | 10 | 50.0 | 10 | 50.0 | 0.790 | 7.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 51.6 |
| 11 | T1 | 1451 | 7.9 | 1451 | 7.9 | 0.790 | 0.3 | LOS A | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 69.1 |
| Approach | | 1461 | 8.2 | 1461 | 8.2 | 0.790 | 0.4 | NA | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 68.8 |
| All Vehicles | | 2508 | 11.2 | 2508 | 11.2 | 1.343 | 33.3 | NA | 10.6 | 81.7 | 0.29 | 0.17 | 1.03 | 34.5 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## Site: 101 [ELI_CEC Existing PM ]

## Network: N101 [Existing Network PM]

Elizabeth Dr & Cecil Rd
Site Category: (None)
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

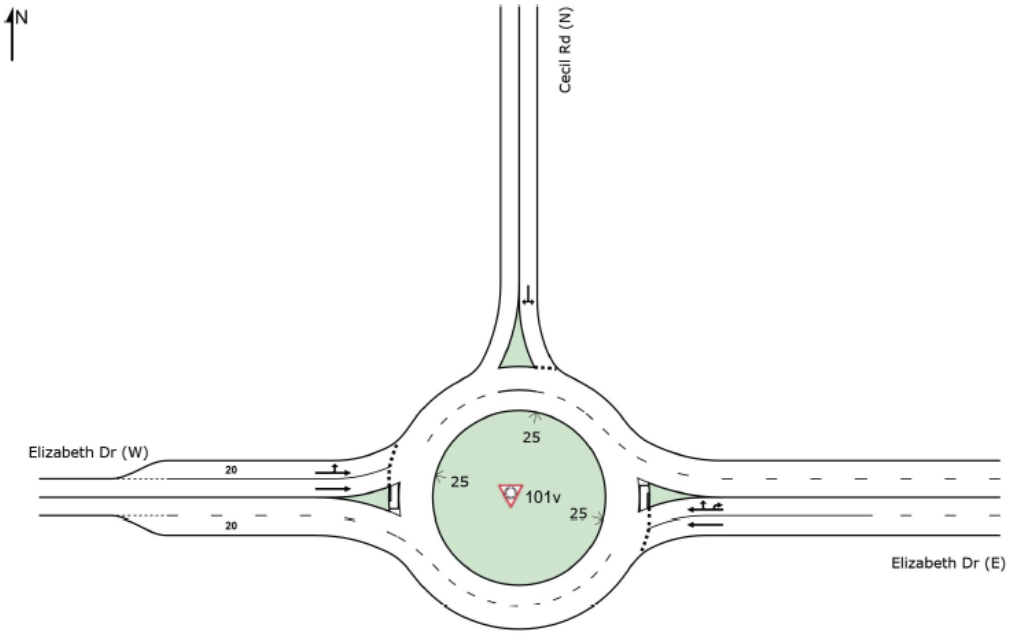
| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 5 | T1 | 1420 | 3.9 | 1420 | 3.9 | 0.707 | 2.0 | LOS A | 1.6 | 11.7 | 0.29 | 0.04 | 0.47 | 65.8 |
| 6 | R2 | 74 | 10.8 | 74 | 10.8 | 0.707 | 21.6 | LOS B | 1.6 | 11.7 | 0.36 | 0.05 | 0.59 | 57.4 |
| Approach | | 1494 | 4.2 | 1494 | 4.2 | 0.707 | 2.9 | NA | 1.6 | 11.7 | 0.30 | 0.04 | 0.48 | 65.3 |
| North: Cecil Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 67 | 11.9 | 67 | 11.9 | 0.153 | 14.1 | LOS A | 0.2 | 1.6 | 0.77 | 0.91 | 0.77 | 45.9 |
| 9 | R2 | 9 | 33.3 | 9 | 33.3 | 0.077 | 35.1 | LOS C | 0.1 | 0.8 | 0.94 | 0.98 | 0.94 | 36.3 |
| Approach | | 76 | 14.5 | 76 | 14.5 | 0.153 | 16.6 | LOS B | 0.2 | 1.6 | 0.79 | 0.92 | 0.79 | 43.5 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 10 | L2 | 9 | 11.1 | 9 | 11.1 | 0.530 | 6.6 | LOS A | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 62.5 |
| 11 | T1 | 987 | 5.8 | 987 | 5.8 | 0.530 | 0.1 | LOS A | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 69.6 |
| Approach | | 996 | 5.8 | 996 | 5.8 | 0.530 | 0.2 | NA | 0.0 | 0.0 | 0.00 | 0.01 | 0.00 | 69.5 |
| All Vehicles | | 2566 | 5.1 | 2566 | 5.1 | 0.707 | 2.3 | NA | 1.6 | 11.7 | 0.20 | 0.05 | 0.30 | 65.6 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# SITE LAYOUT

## Site: 101v [ELI_CEC Proposed AM - RAB Conversion]

Elizabeth Dr & Cecil Rd
Site Category: (None)
Roundabout



# MOVEMENT SUMMARY

**Site: 101v [ELI_CEC Proposed AM - RAB Conversion]**

**Network: N101 [Proposed Network AM]**

Elizabeth Dr & Cecil Rd
Site Category: (None)
Roundabout

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 5 | T1 | 831 | 14.0 | 831 | 14.0 | 0.490 | 5.2 | LOS A | 2.1 | 16.6 | 0.13 | 0.47 | 0.13 | 60.5 |
| 6 | R2 | 131 | 19.1 | 131 | 19.1 | 0.490 | 10.6 | LOS A | 2.1 | 16.6 | 0.13 | 0.48 | 0.13 | 51.7 |
| 6u | U | 69 | 0.0 | 69 | 0.0 | 0.490 | 12.8 | LOS A | 2.1 | 16.6 | 0.13 | 0.48 | 0.13 | 51.7 |
| Approach | | 1031 | 13.7 | 1031 | 13.7 | 0.490 | 6.4 | LOS A | 2.1 | 16.6 | 0.13 | 0.47 | 0.13 | 59.5 |
| North: Cecil Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 170 | 9.4 | 170 | 9.4 | 0.457 | 12.9 | LOS A | 1.0 | 7.8 | 0.86 | 0.98 | 1.05 | 19.4 |
| 9 | R2 | 12 | 33.3 | 12 | 33.3 | 0.457 | 20.3 | LOS B | 1.0 | 7.8 | 0.86 | 0.98 | 1.05 | 40.3 |
| Approach | | 182 | 11.0 | 182 | 11.0 | 0.457 | 13.4 | LOS A | 1.0 | 7.8 | 0.86 | 0.98 | 1.05 | 23.0 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 10 | L2 | 26 | 19.2 | 26 | 19.2 | 0.563 | 6.8 | LOS A | 2.3 | 17.6 | 0.60 | 0.54 | 0.60 | 53.1 |
| 11 | T1 | 1470 | 7.8 | 1470 | 7.8 | 0.563 | 7.0 | LOS A | 2.3 | 17.6 | 0.62 | 0.55 | 0.62 | 53.0 |
| Approach | | 1496 | 8.0 | 1496 | 8.0 | 0.563 | 7.0 | LOS A | 2.3 | 17.6 | 0.62 | 0.55 | 0.62 | 53.0 |
| All Vehicles | | 2709 | 10.4 | 2709 | 10.4 | 0.563 | 7.2 | LOS A | 2.3 | 17.6 | 0.45 | 0.55 | 0.46 | 55.0 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

**Site: 101v [ELI_CEC Proposed PM - RAB Conversion]** **Network: N101 [Proposed Network PM]**

Elizabeth Dr & Cecil Rd
Site Category: (None)
Roundabout

**Movement Performance - Vehicles**

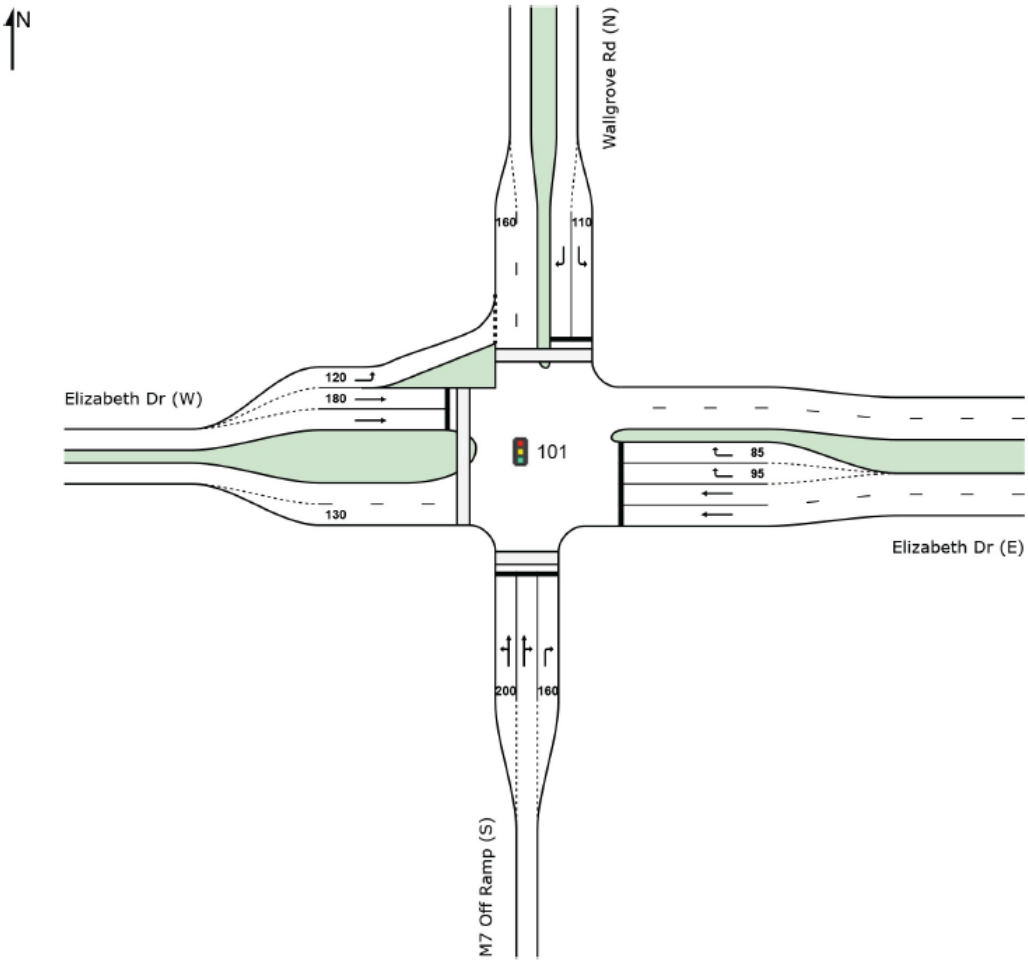
| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 5 | T1 | 1420 | 3.9 | 1420 | 3.9 | 0.730 | 5.4 | LOS A | 5.5 | 39.5 | 0.24 | 0.44 | 0.24 | 61.0 |
| 6 | R2 | 118 | 6.8 | 118 | 6.8 | 0.730 | 10.7 | LOS A | 5.5 | 39.5 | 0.26 | 0.44 | 0.26 | 51.7 |
| 6u | U | 46 | 0.0 | 46 | 0.0 | 0.730 | 13.1 | LOS A | 5.5 | 39.5 | 0.26 | 0.44 | 0.26 | 51.7 |
| Approach | | 1584 | 4.0 | 1584 | 4.0 | 0.730 | 6.0 | LOS A | 5.5 | 39.5 | 0.24 | 0.44 | 0.24 | 60.5 |
| North: Cecil Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 133 | 6.0 | 133 | 6.0 | 0.272 | 8.1 | LOS A | 0.5 | 3.8 | 0.73 | 0.87 | 0.73 | 26.2 |
| 9 | R2 | 25 | 12.0 | 25 | 12.0 | 0.272 | 14.0 | LOS A | 0.5 | 3.8 | 0.73 | 0.87 | 0.73 | 50.4 |
| Approach | | 158 | 7.0 | 158 | 7.0 | 0.272 | 9.0 | LOS A | 0.5 | 3.8 | 0.73 | 0.87 | 0.73 | 35.0 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 10 | L2 | 22 | 4.5 | 22 | 4.5 | 0.372 | 5.8 | LOS A | 1.3 | 9.3 | 0.45 | 0.49 | 0.45 | 54.6 |
| 11 | T1 | 1006 | 5.7 | 1006 | 5.7 | 0.372 | 6.2 | LOS A | 1.3 | 9.3 | 0.46 | 0.50 | 0.46 | 54.4 |
| Approach | | 1028 | 5.6 | 1028 | 5.6 | 0.372 | 6.2 | LOS A | 1.3 | 9.3 | 0.46 | 0.50 | 0.46 | 54.4 |
| All Vehicles | | 2770 | 4.8 | 2770 | 4.8 | 0.730 | 6.2 | LOS A | 5.5 | 39.5 | 0.35 | 0.48 | 0.35 | 58.0 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# SITE LAYOUT

## Site: 101 [ELI_WAL_M7 Existing AM]

Elizabeth Dr, Wallgrove Rd & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Isolated



# MOVEMENT SUMMARY

## Site: 101 [ELI_WAL_M7 Existing PM]

## Network: N101 [Existing Network PM]

Elizabeth Dr, Wallgrove Rd & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: M7 Off Ramp (S) | | | | | | | | | | | | | | |
| 1 | L2 | 180 | 11.1 | 180 | 11.1 | 0.897 | 76.8 | LOS F | 7.5 | 57.3 | 1.00 | 0.96 | 1.41 | 18.0 |
| 2 | T1 | 37 | 10.8 | 37 | 10.8 | 0.174 | 52.7 | LOS D | 1.2 | 9.4 | 0.94 | 0.69 | 0.94 | 35.0 |
| 3 | R2 | 43 | 0.0 | 43 | 0.0 | 0.198 | 59.3 | LOS E | 1.4 | 10.0 | 0.94 | 0.74 | 0.94 | 21.7 |
| Approach | | 260 | 9.2 | 260 | 9.2 | 0.897 | 70.4 | LOS E | 7.5 | 57.3 | 0.98 | 0.89 | 1.26 | 21.1 |
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 5 | T1 | 911 | 3.5 | 911 | 3.5 | 0.599 | 10.5 | LOS A | 9.3 | 66.9 | 0.42 | 0.37 | 0.42 | 28.0 |
| 6 | R2 | 396 | 1.0 | 396 | 1.0 | 0.813 | 64.2 | LOS E | 8.1 | 57.2 | 1.00 | 0.87 | 1.13 | 22.9 |
| Approach | | 1307 | 2.8 | 1307 | 2.8 | 0.813 | 26.8 | LOS B | 9.3 | 66.9 | 0.60 | 0.52 | 0.64 | 24.4 |
| North: Wallgrove Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 652 | 2.3 | 652 | 2.3 | 0.936 | 61.3 | LOS E | 26.6 | 190.0 | 0.91 | 0.98 | 1.19 | 21.1 |
| 9 | R2 | 388 | 3.4 | 388 | 3.4 | 0.802 | 54.7 | LOS D | 13.8 | 99.6 | 1.00 | 0.90 | 1.09 | 22.9 |
| Approach | | 1040 | 2.7 | 1040 | 2.7 | 0.936 | 58.9 | LOS E | 26.6 | 190.0 | 0.94 | 0.95 | 1.15 | 21.8 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 10 | L2 | 142 | 13.4 | 142 | 13.4 | 0.110 | 9.0 | LOS A | 1.0 | 7.5 | 0.26 | 0.65 | 0.26 | 52.8 |
| 11 | T1 | 952 | 5.5 | 952 | 5.5 | 0.919 | 63.1 | LOS E | 20.2 | 148.2 | 1.00 | 1.08 | 1.29 | 16.4 |
| Approach | | 1094 | 6.5 | 1094 | 6.5 | 0.919 | 56.1 | LOS D | 20.2 | 148.2 | 0.90 | 1.02 | 1.16 | 20.0 |
| All Vehicles | | 3701 | 4.3 | 3701 | 4.3 | 0.936 | 47.5 | LOS D | 26.6 | 190.0 | 0.81 | 0.82 | 0.98 | 21.7 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Movement Performance - Pedestrians**

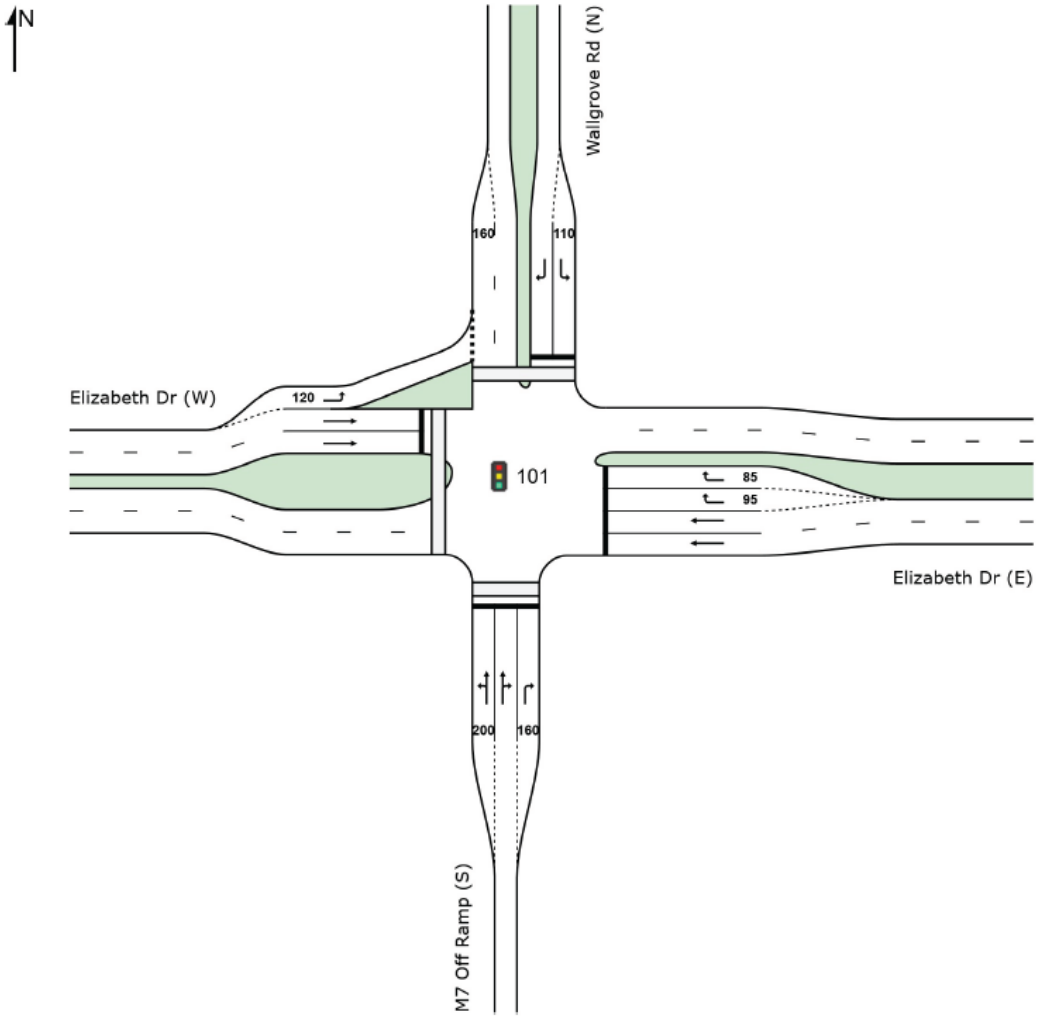
| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P3 | North Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P4 | West Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| All Pedestrians | | 3 | 54.2 | LOS E | | | 0.95 | 0.95 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# SITE LAYOUT

## Site: 101 [ELI_WAL_M7 Proposed AM]

Elizabeth Dr, Wallgrove Rd & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Isolated



# MOVEMENT SUMMARY

## Site: 101 [ELI_WAL_M7 Proposed AM]

## Network: N101 [Proposed Network AM]

Elizabeth Dr, Wallgrove Rd & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: M7 Off Ramp (S) | | | | | | | | | | | | | | |
| 1 | L2 | 153 | 30.7 | 153 | 30.7 | 0.927 | 84.2 | LOS F | 6.7 | 59.3 | 1.00 | 1.01 | 1.54 | 16.8 |
| 2 | T1 | 60 | 6.7 | 60 | 6.7 | 0.296 | 54.7 | LOS D | 2.0 | 15.1 | 0.96 | 0.73 | 0.96 | 34.3 |
| 3 | R2 | 43 | 2.3 | 43 | 2.3 | 0.217 | 60.6 | LOS E | 1.4 | 10.3 | 0.95 | 0.74 | 0.95 | 21.4 |
| Approach | | 256 | 20.3 | 256 | 20.3 | 0.927 | 73.3 | LOS F | 6.7 | 59.3 | 0.98 | 0.90 | 1.30 | 21.6 |
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 5 | T1 | 817 | 11.0 | 817 | 11.0 | 0.329 | 3.0 | LOS A | 2.9 | 22.5 | 0.15 | 0.13 | 0.15 | 49.2 |
| 6 | R2 | 704 | 2.0 | 704 | 2.0 | 0.929 | 66.2 | LOS E | 15.8 | 112.4 | 1.00 | 0.93 | 1.20 | 22.4 |
| Approach | | 1521 | 6.8 | 1521 | 6.8 | 0.929 | 32.2 | LOS C | 15.8 | 112.4 | 0.54 | 0.50 | 0.64 | 25.1 |
| North: Wallgrove Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 232 | 3.0 | 232 | 3.0 | 0.383 | 39.2 | LOS C | 6.3 | 45.5 | 0.81 | 0.80 | 0.81 | 28.3 |
| 9 | R2 | 96 | 10.4 | 96 | 10.4 | 0.952 | 89.8 | LOS F | 4.3 | 32.6 | 1.00 | 1.02 | 1.70 | 16.0 |
| Approach | | 328 | 5.2 | 328 | 5.2 | 0.952 | 54.0 | LOS D | 6.3 | 45.5 | 0.87 | 0.87 | 1.07 | 23.1 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 10 | L2 | 456 | 11.0 | 456 | 11.0 | 0.401 | 13.8 | LOS A | 6.3 | 48.5 | 0.48 | 0.72 | 0.48 | 49.5 |
| 11 | T1 | 1299 | 6.0 | 1299 | 6.0 | 0.894 | 46.9 | LOS D | 26.6 | 195.7 | 0.98 | 1.01 | 1.14 | 20.5 |
| Approach | | 1755 | 7.3 | 1755 | 7.3 | 0.894 | 38.3 | LOS C | 26.6 | 195.7 | 0.85 | 0.93 | 0.97 | 27.8 |
| All Vehicles | | 3860 | 7.8 | 3860 | 7.8 | 0.952 | 39.5 | LOS C | 26.6 | 195.7 | 0.74 | 0.76 | 0.87 | 25.8 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Movement Performance - Pedestrians**

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P3 | North Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P4 | West Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| All Pedestrians | | 3 | 54.2 | LOS E | | | 0.95 | 0.95 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# MOVEMENT SUMMARY

**Site: 101 [ELI_WAL_M7 Proposed PM]**

**Network: N101 [Proposed Network PM]**

Elizabeth Dr, Wallgrove Rd & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: M7 Off Ramp (S) | | | | | | | | | | | | | | |
| 1 | L2 | 184 | 10.9 | 184 | 10.9 | 0.985 | 101.2 | LOS F | 9.0 | 68.9 | 1.00 | 1.07 | 1.71 | 14.5 |
| 2 | T1 | 37 | 10.8 | 37 | 10.8 | 0.187 | 53.8 | LOS D | 1.2 | 9.5 | 0.95 | 0.70 | 0.95 | 34.6 |
| 3 | R2 | 43 | 0.0 | 43 | 0.0 | 0.214 | 60.5 | LOS E | 1.4 | 10.1 | 0.95 | 0.74 | 0.95 | 21.4 |
| Approach | | 264 | 9.1 | 264 | 9.1 | 0.985 | 88.0 | LOS F | 9.0 | 68.9 | 0.98 | 0.97 | 1.48 | 17.9 |
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 5 | T1 | 1000 | 3.2 | 1000 | 3.2 | 0.542 | 9.5 | LOS A | 8.0 | 57.7 | 0.39 | 0.35 | 0.39 | 29.7 |
| 6 | R2 | 396 | 1.0 | 396 | 1.0 | 0.864 | 67.7 | LOS E | 8.5 | 59.8 | 1.00 | 0.90 | 1.21 | 22.1 |
| Approach | | 1396 | 2.6 | 1396 | 2.6 | 0.864 | 26.1 | LOS B | 8.5 | 59.8 | 0.57 | 0.51 | 0.63 | 24.3 |
| North: Wallgrove Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 652 | 2.3 | 652 | 2.3 | 0.966 | 75.3 | LOS F | 29.7 | 211.9 | 0.94 | 1.02 | 1.33 | 18.2 |
| 9 | R2 | 404 | 3.2 | 404 | 3.2 | 0.861 | 61.0 | LOS E | 15.6 | 112.0 | 1.00 | 0.94 | 1.18 | 21.3 |
| Approach | | 1056 | 2.7 | 1056 | 2.7 | 0.966 | 69.9 | LOS E | 29.7 | 211.9 | 0.96 | 0.99 | 1.27 | 19.3 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 10 | L2 | 157 | 12.1 | 157 | 12.1 | 0.120 | 9.1 | LOS A | 1.1 | 8.3 | 0.26 | 0.65 | 0.26 | 53.2 |
| 11 | T1 | 1088 | 4.8 | 1088 | 4.8 | 0.970 | 78.6 | LOS F | 26.6 | 193.8 | 1.00 | 1.19 | 1.43 | 13.8 |
| Approach | | 1245 | 5.7 | 1245 | 5.7 | 0.970 | 69.8 | LOS E | 26.6 | 193.8 | 0.91 | 1.12 | 1.29 | 17.0 |
| All Vehicles | | 3961 | 4.0 | 3961 | 4.0 | 0.985 | 55.6 | LOS D | 29.7 | 211.9 | 0.81 | 0.86 | 1.06 | 19.2 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Movement Performance - Pedestrians**

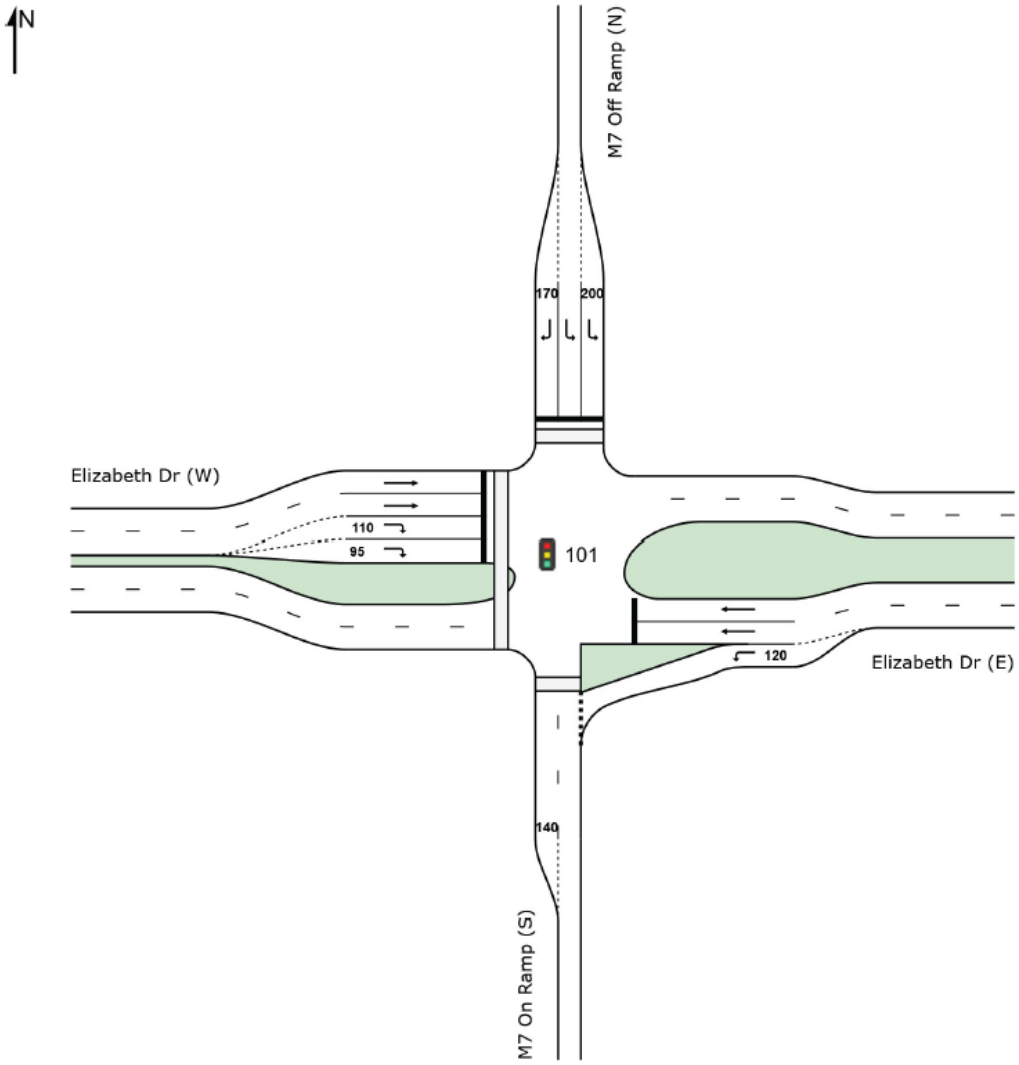
| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P3 | North Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P4 | West Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| All Pedestrians | | 3 | 54.2 | LOS E | | | 0.95 | 0.95 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

## SITE LAYOUT

### Site: 101 [ELI_M7 Existing AM]

Elizabeth Dr, M7 On Ramp & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Isolated



# MOVEMENT SUMMARY

**Site: 101 [ELI_M7 Existing AM]**

**Network: N101 [Existing Network AM]**

Elizabeth Dr, M7 On Ramp & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Aver. Back of Queue Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 4 | L2 | 21 | 9.5 | 21 | 9.5 | 0.016 | 8.2 | LOS A | 0.1 | 0.8 | 0.20 | 0.61 | 0.20 | 56.3 |
| 5 | T1 | 1221 | 2.9 | 1221 | 2.9 | 0.703 | 20.1 | LOS B | 19.0 | 136.4 | 0.75 | 0.67 | 0.75 | 39.7 |
| Approach | | 1242 | 3.1 | 1242 | 3.1 | 0.703 | 19.9 | LOS B | 19.0 | 136.4 | 0.74 | 0.67 | 0.74 | 40.1 |
| North: M7 Off Ramp (N) | | | | | | | | | | | | | | |
| 7 | L2 | 254 | 4.3 | 254 | 4.3 | 0.403 | 54.5 | LOS D | 4.1 | 29.9 | 0.93 | 0.79 | 0.93 | 33.0 |
| 9 | R2 | 118 | 50.0 | 118 | 50.0 | 0.726 | 60.0 | LOS E | 4.1 | 41.3 | 0.95 | 0.85 | 1.11 | 21.7 |
| Approach | | 372 | 18.8 | 372 | 18.8 | 0.726 | 56.3 | LOS D | 4.1 | 41.3 | 0.94 | 0.81 | 0.99 | 30.0 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 11 | T1 | 1219 | 3.8 | 1199 | 3.7 | 0.434 | 1.6 | LOS A | 2.3 | 16.9 | 0.10 | 0.09 | 0.10 | 66.7 |
| 12 | R2 | 290 | 14.1 | 285 | 14.0 | 0.729 | 68.9 | LOS E | 6.2 | 48.2 | 1.00 | 0.82 | 1.03 | 20.9 |
| Approach | | 1509 | 5.8 | 1484[N1] | 5.7 | 0.729 | 14.5 | LOS B | 6.2 | 48.2 | 0.27 | 0.23 | 0.28 | 47.0 |
| All Vehicles | | 3123 | 6.2 | 3098[N1] | 6.3 | 0.729 | 21.7 | LOS B | 19.0 | 136.4 | 0.54 | 0.48 | 0.55 | 40.8 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

N1 Arrival Flow value is reduced due to capacity constraint at oversaturated upstream lanes.

**Movement Performance - Pedestrians**

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Average Back of Queue Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P3 | North Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P4 | West Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| All Pedestrians | | 3 | 54.2 | LOS E | | | 0.95 | 0.95 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# MOVEMENT SUMMARY

**Site: 101 [ELI_M7 Existing PM]**

**Network: N101 [Existing Network PM]**

Elizabeth Dr, M7 On Ramp & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 4 | L2 | 37 | 5.4 | 37 | 5.4 | 0.027 | 8.0 | LOS A | 0.2 | 1.3 | 0.20 | 0.62 | 0.20 | 57.5 |
| 5 | T1 | 1134 | 1.7 | 1134 | 1.7 | 0.551 | 19.6 | LOS B | 13.2 | 94.1 | 0.71 | 0.64 | 0.71 | 40.1 |
| Approach | | 1171 | 1.8 | 1171 | 1.8 | 0.551 | 19.3 | LOS B | 13.2 | 94.1 | 0.70 | 0.64 | 0.70 | 40.9 |
| North: M7 Off Ramp (N) | | | | | | | | | | | | | | |
| 7 | L2 | 160 | 1.3 | 160 | 1.3 | 0.290 | 56.1 | LOS D | 2.6 | 18.4 | 0.93 | 0.77 | 0.93 | 32.9 |
| 9 | R2 | 137 | 13.9 | 137 | 13.9 | 0.540 | 58.9 | LOS E | 4.7 | 36.6 | 0.97 | 0.80 | 0.97 | 21.9 |
| Approach | | 297 | 7.1 | 297 | 7.1 | 0.540 | 57.4 | LOS E | 4.7 | 36.6 | 0.95 | 0.78 | 0.95 | 28.5 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 11 | T1 | 1391 | 2.7 | 1391 | 2.7 | 0.484 | 3.4 | LOS A | 5.5 | 39.5 | 0.22 | 0.21 | 0.22 | 63.4 |
| 12 | R2 | 269 | 10.4 | 269 | 10.4 | 0.538 | 56.6 | LOS E | 5.4 | 41.4 | 1.00 | 0.81 | 1.00 | 23.8 |
| Approach | | 1660 | 4.0 | 1660 | 4.0 | 0.538 | 12.0 | LOS A | 5.5 | 41.4 | 0.35 | 0.30 | 0.35 | 50.0 |
| All Vehicles | | 3128 | 3.5 | 3128 | 3.5 | 0.551 | 19.0 | LOS B | 13.2 | 94.1 | 0.54 | 0.47 | 0.54 | 42.9 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Movement Performance - Pedestrians**

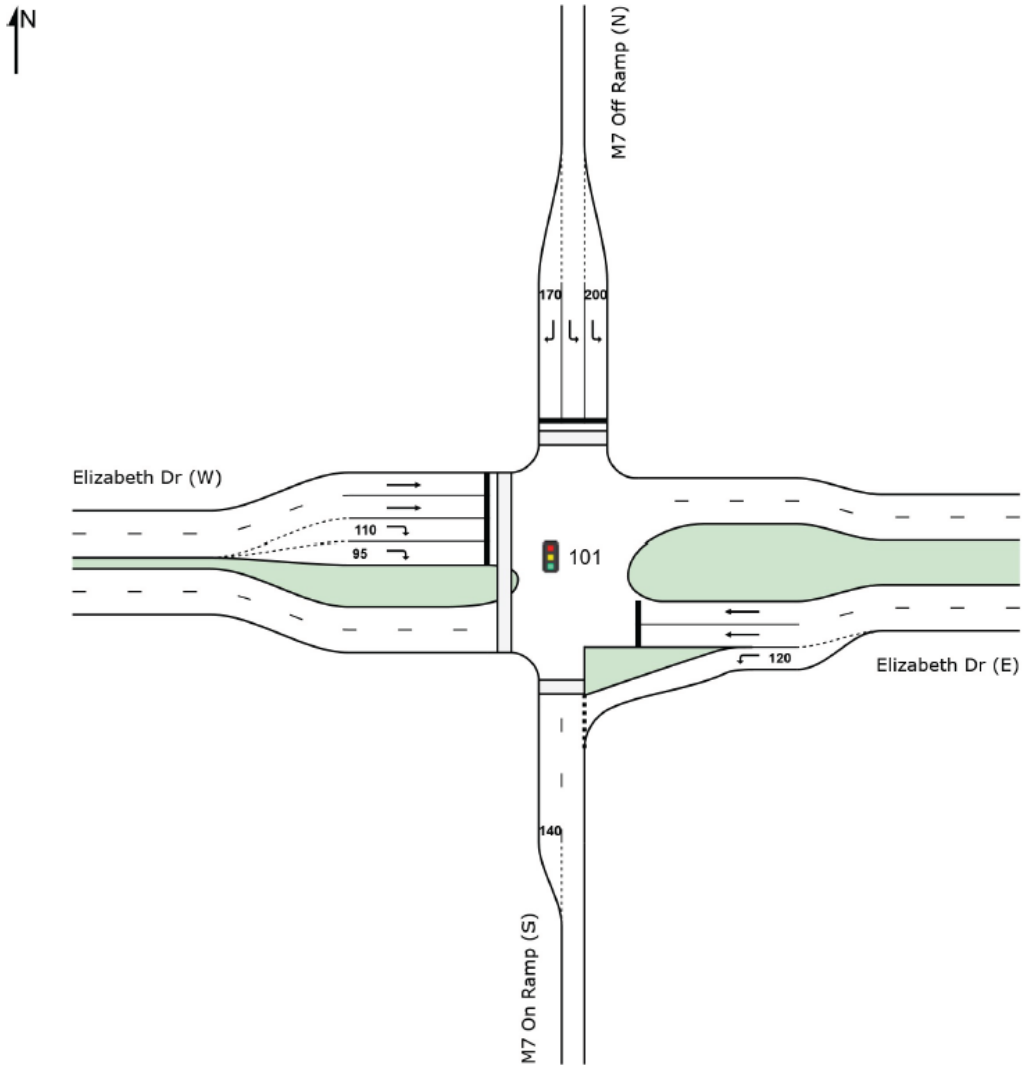
| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P3 | North Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P4 | West Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| All Pedestrians | | 3 | 54.2 | LOS E | | | 0.95 | 0.95 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

## SITE LAYOUT

### Site: 101 [ELI_M7 Proposed AM]

Elizabeth Dr, M7 On Ramp & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Isolated



# MOVEMENT SUMMARY

**Site: 101 [ELI_M7 Proposed AM]**

**Network: N101 [Proposed Network AM]**

Elizabeth Dr, M7 On Ramp & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 4 | L2 | 21 | 9.5 | 21 | 9.5 | 0.016 | 8.2 | LOS A | 0.1 | 0.8 | 0.20 | 0.61 | 0.20 | 56.3 |
| 5 | T1 | 1323 | 2.7 | 1323 | 2.7 | 0.833 | 26.9 | LOS B | 25.8 | 185.0 | 0.82 | 0.78 | 0.88 | 34.7 |
| Approach | | 1344 | 2.8 | 1344 | 2.8 | 0.833 | 26.6 | LOS B | 25.8 | 185.0 | 0.81 | 0.78 | 0.87 | 35.1 |
| North: M7 Off Ramp (N) | | | | | | | | | | | | | | |
| 7 | L2 | 254 | 4.3 | 254 | 4.3 | 0.368 | 52.4 | LOS D | 4.0 | 29.1 | 0.92 | 0.79 | 0.92 | 33.7 |
| 9 | R2 | 122 | 48.4 | 122 | 48.4 | 0.821 | 64.6 | LOS E | 4.5 | 44.5 | 0.93 | 0.92 | 1.27 | 20.6 |
| Approach | | 376 | 18.6 | 376 | 18.6 | 0.821 | 56.4 | LOS D | 4.5 | 44.5 | 0.92 | 0.83 | 1.03 | 29.9 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 11 | T1 | 1319 | 3.5 | 1319 | 3.5 | 0.488 | 1.8 | LOS A | 2.6 | 19.0 | 0.11 | 0.10 | 0.11 | 66.3 |
| 12 | R2 | 294 | 13.9 | 294 | 13.9 | 0.802 | 70.0 | LOS E | 6.5 | 50.6 | 1.00 | 0.83 | 1.06 | 20.7 |
| Approach | | 1613 | 5.4 | 1613 | 5.4 | 0.802 | 14.2 | LOS A | 6.5 | 50.6 | 0.27 | 0.23 | 0.28 | 47.3 |
| All Vehicles | | 3333 | 5.9 | 3333 | 5.9 | 0.833 | 24.0 | LOS B | 25.8 | 185.0 | 0.56 | 0.52 | 0.60 | 39.1 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Movement Performance - Pedestrians**

| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P3 | North Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P4 | West Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| All Pedestrians | | 3 | 54.2 | LOS E | | | 0.95 | 0.95 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# MOVEMENT SUMMARY

**Site: 101 [ELI_M7 Proposed PM]**

**Network: N101 [Proposed Network PM]**

Elizabeth Dr, M7 On Ramp & M7 Off Ramp
Site Category: (None)
Signals - Fixed Time Coordinated Cycle Time = 120 seconds (Network User-Given Cycle Time)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| East: Elizabeth Dr (E) | | | | | | | | | | | | | | |
| 4 | L2 | 37 | 5.4 | 37 | 5.4 | 0.027 | 8.0 | LOS A | 0.2 | 1.3 | 0.20 | 0.62 | 0.20 | 57.5 |
| 5 | T1 | 1220 | 1.6 | 1220 | 1.6 | 0.575 | 18.8 | LOS B | 14.2 | 100.6 | 0.71 | 0.64 | 0.71 | 40.9 |
| Approach | | 1257 | 1.7 | 1257 | 1.7 | 0.575 | 18.5 | LOS B | 14.2 | 100.6 | 0.69 | 0.64 | 0.69 | 41.5 |
| North: M7 Off Ramp (N) | | | | | | | | | | | | | | |
| 7 | L2 | 160 | 1.3 | 160 | 1.3 | 0.307 | 57.2 | LOS E | 2.6 | 18.6 | 0.94 | 0.77 | 0.94 | 32.5 |
| 9 | R2 | 140 | 13.6 | 140 | 13.6 | 0.584 | 60.2 | LOS E | 4.8 | 37.9 | 0.98 | 0.80 | 0.98 | 21.5 |
| Approach | | 300 | 7.0 | 300 | 7.0 | 0.584 | 58.6 | LOS E | 4.8 | 37.9 | 0.96 | 0.79 | 0.96 | 28.1 |
| West: Elizabeth Dr (W) | | | | | | | | | | | | | | |
| 11 | T1 | 1519 | 2.5 | 1519 | 2.5 | 0.522 | 3.8 | LOS A | 7.4 | 52.8 | 0.26 | 0.24 | 0.26 | 62.6 |
| 12 | R2 | 277 | 10.1 | 277 | 10.1 | 0.582 | 62.2 | LOS E | 5.7 | 43.2 | 1.00 | 0.81 | 1.00 | 22.5 |
| Approach | | 1796 | 3.7 | 1796 | 3.7 | 0.582 | 12.8 | LOS A | 7.4 | 52.8 | 0.37 | 0.33 | 0.37 | 49.2 |
| All Vehicles | | 3353 | 3.2 | 3353 | 3.2 | 0.584 | 19.0 | LOS B | 14.2 | 100.6 | 0.55 | 0.49 | 0.55 | 42.9 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

**Movement Performance - Pedestrians**

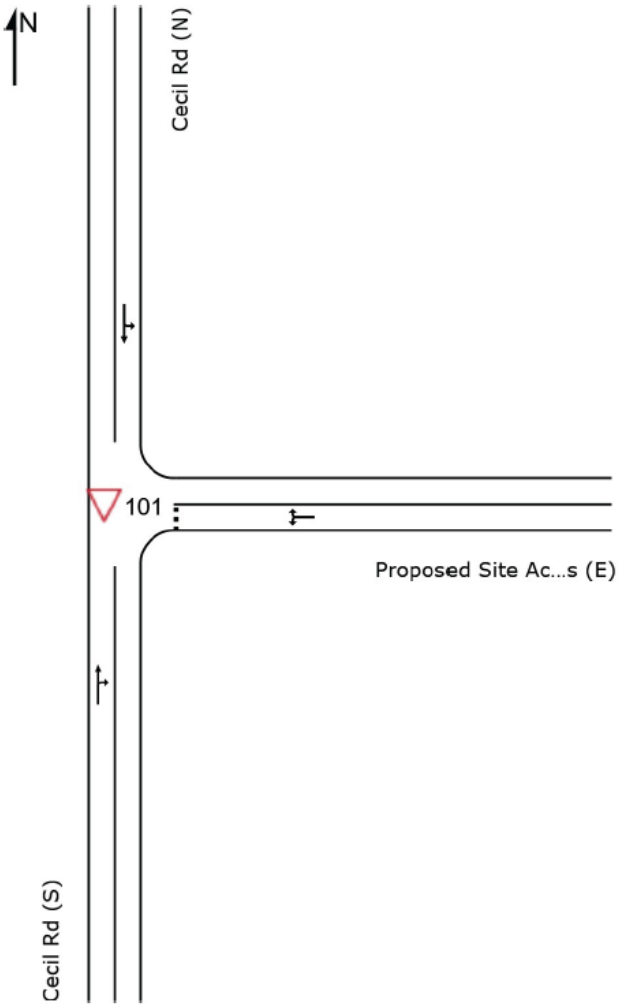
| Mov ID | Description | Demand Flow ped/h | Average Delay sec | Level of Service | Average Back of Queue Pedestrian ped | Distance m | Prop. Queued | Effective Stop Rate |
|---|---|---|---|---|---|---|---|---|
| P1 | South Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P3 | North Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| P4 | West Full Crossing | 1 | 54.2 | LOS E | 0.0 | 0.0 | 0.95 | 0.95 |
| All Pedestrians | | 3 | 54.2 | LOS E | | | 0.95 | 0.95 |

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)
Pedestrian movement LOS values are based on average delay per pedestrian movement.
Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

# SITE LAYOUT

## ▽ Site: 101 [CEC_ACC Proposed AM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)



# MOVEMENT SUMMARY

## ▽ Site: 101 [CEC_ACC Proposed AM]

## ⧓ Network: N101 [Proposed Network AM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Cecil Rd (S) | | | | | | | | | | | | | | |
| 2 | T1 | 85 | 35.3 | 85 | 35.3 | 0.096 | 0.3 | LOS A | 0.2 | 1.3 | 0.23 | 0.28 | 0.23 | 54.3 |
| 3 | R2 | 72 | 0.0 | 72 | 0.0 | 0.096 | 5.6 | LOS A | 0.2 | 1.3 | 0.23 | 0.28 | 0.23 | 51.2 |
| Approach | | 157 | 19.1 | 157 | 19.1 | 0.096 | 2.8 | NA | 0.2 | 1.3 | 0.23 | 0.28 | 0.23 | 52.8 |
| East: Proposed Site Access (E) | | | | | | | | | | | | | | |
| 4 | L2 | 31 | 0.0 | 31 | 0.0 | 0.026 | 6.0 | LOS A | 0.0 | 0.3 | 0.24 | 0.55 | 0.24 | 49.6 |
| 6 | R2 | 4 | 0.0 | 4 | 0.0 | 0.026 | 6.6 | LOS A | 0.0 | 0.3 | 0.24 | 0.55 | 0.24 | 52.4 |
| Approach | | 35 | 0.0 | 35 | 0.0 | 0.026 | 6.1 | LOS A | 0.0 | 0.3 | 0.24 | 0.55 | 0.24 | 50.1 |
| North: Cecil Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 8 | 0.0 | 8 | 0.0 | 0.083 | 5.5 | LOS A | 0.0 | 0.0 | 0.00 | 0.03 | 0.00 | 58.0 |
| 8 | T1 | 141 | 14.2 | 141 | 14.2 | 0.083 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.03 | 0.00 | 59.3 |
| Approach | | 149 | 13.4 | 149 | 13.4 | 0.083 | 0.3 | NA | 0.0 | 0.0 | 0.00 | 0.03 | 0.00 | 59.2 |
| All Vehicles | | 341 | 14.7 | 341 | 14.7 | 0.096 | 2.0 | NA | 0.2 | 1.3 | 0.13 | 0.20 | 0.13 | 55.0 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

# MOVEMENT SUMMARY

## ▽ Site: 101 [CEC_ACC Proposed PM]

## Network: N101 [Proposed Network PM]

New Site
Site Category: (None)
Giveway / Yield (Two-Way)

**Movement Performance - Vehicles**

| Mov ID | Turn | Demand Flows Total veh/h | HV % | Arrival Flows Total veh/h | HV % | Deg. Satn v/c | Average Delay sec | Level of Service | Aver. Back of Queue Vehicles veh | Distance m | Prop. Queued | Effective Stop Rate | Aver. No. Cycles | Average Speed km/h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South: Cecil Rd (S) | | | | | | | | | | | | | | |
| 2 | T1 | 83 | 10.8 | 83 | 10.8 | 0.079 | 0.2 | LOS A | 0.1 | 0.9 | 0.15 | 0.24 | 0.15 | 55.6 |
| 3 | R2 | 57 | 0.0 | 57 | 0.0 | 0.079 | 5.4 | LOS A | 0.1 | 0.9 | 0.15 | 0.24 | 0.15 | 52.4 |
| Approach | | 140 | 6.4 | 140 | 6.4 | 0.079 | 2.3 | NA | 0.1 | 0.9 | 0.15 | 0.24 | 0.15 | 54.3 |
| East: Proposed Site Access (E) | | | | | | | | | | | | | | |
| 4 | L2 | 72 | 0.0 | 72 | 0.0 | 0.055 | 5.8 | LOS A | 0.1 | 0.6 | 0.17 | 0.55 | 0.17 | 50.0 |
| 6 | R2 | 8 | 0.0 | 8 | 0.0 | 0.055 | 6.3 | LOS A | 0.1 | 0.6 | 0.17 | 0.55 | 0.17 | 52.6 |
| Approach | | 80 | 0.0 | 80 | 0.0 | 0.055 | 5.8 | LOS A | 0.1 | 0.6 | 0.17 | 0.55 | 0.17 | 50.4 |
| North: Cecil Rd (N) | | | | | | | | | | | | | | |
| 7 | L2 | 6 | 0.0 | 6 | 0.0 | 0.046 | 5.5 | LOS A | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 57.9 |
| 8 | T1 | 76 | 14.5 | 76 | 14.5 | 0.046 | 0.0 | LOS A | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 59.1 |
| Approach | | 82 | 13.4 | 82 | 13.4 | 0.046 | 0.4 | NA | 0.0 | 0.0 | 0.00 | 0.04 | 0.00 | 58.9 |
| All Vehicles | | 302 | 6.6 | 302 | 6.6 | 0.079 | 2.7 | NA | 0.1 | 0.9 | 0.11 | 0.27 | 0.11 | 54.3 |

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Network Data dialog (Network tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.