

Proposed Torrens Title Industrial Subdivision

**121-133 Blaikie Road,
Jamisontown**

TRAFFIC AND PARKING ASSESSMENT REPORT

4 May 2020

Ref 19282



Suite 6, 20 Young Street, Neutral Bay NSW 2089 - PO Box 1868, Neutral Bay NSW 2089 Ph: 9904 3224

TABLE OF CONTENTS

1. INTRODUCTION	1
2. PROPOSED DEVELOPMENT	5
3. TRAFFIC ASSESSMENT	9
4. PARKING ASSESSMENT	16

APPENDIX A	TRAFFIC SURVEY DATA
APPENDIX B	SIDRA MOVEMENT SUMMARIES

LIST OF ILLUSTRATIONS

Figure 1	Location
Figure 2	Site
Figure 3	Road Hierarchy
Figure 4	Existing Traffic Controls

1. INTRODUCTION

This report has been prepared to accompany a development application to Penrith City Council for a Torrens title industrial subdivision proposal located at 121-133 Blaikie Road, Jamisontown (Figures 1 and 2).

The proposed development involves the Torrens title subdivision of the site into 15 individual allotments and associated engineering works.

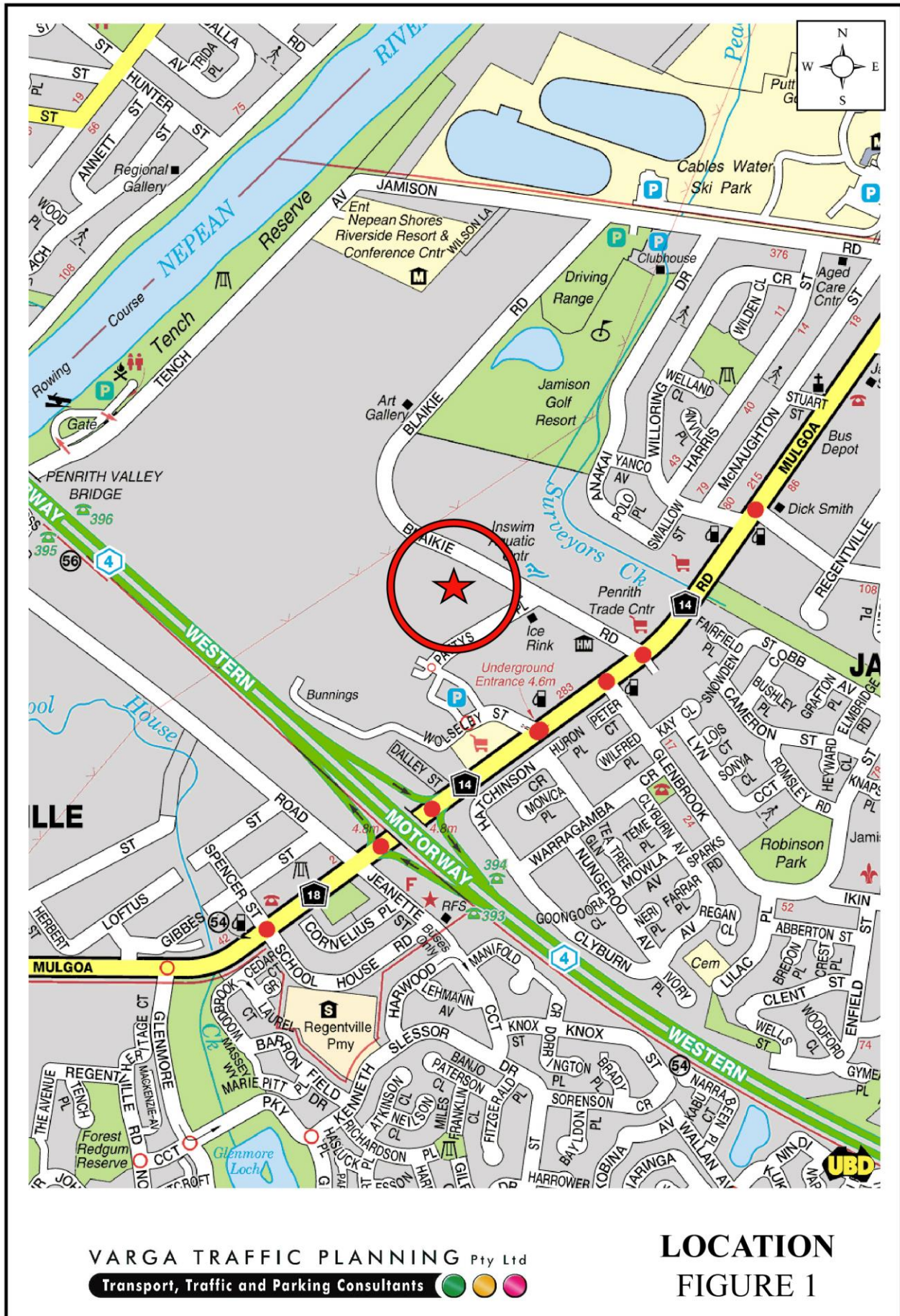
A new 13m wide public local road connecting between Blaikie Road and Pattys Place is also proposed to be constructed through the site to service half of the future lots, in accordance with Council's *PDCP 2014* road design requirements. The remaining future lots will be accessed directly via Blaikie Road or Pattys Place.

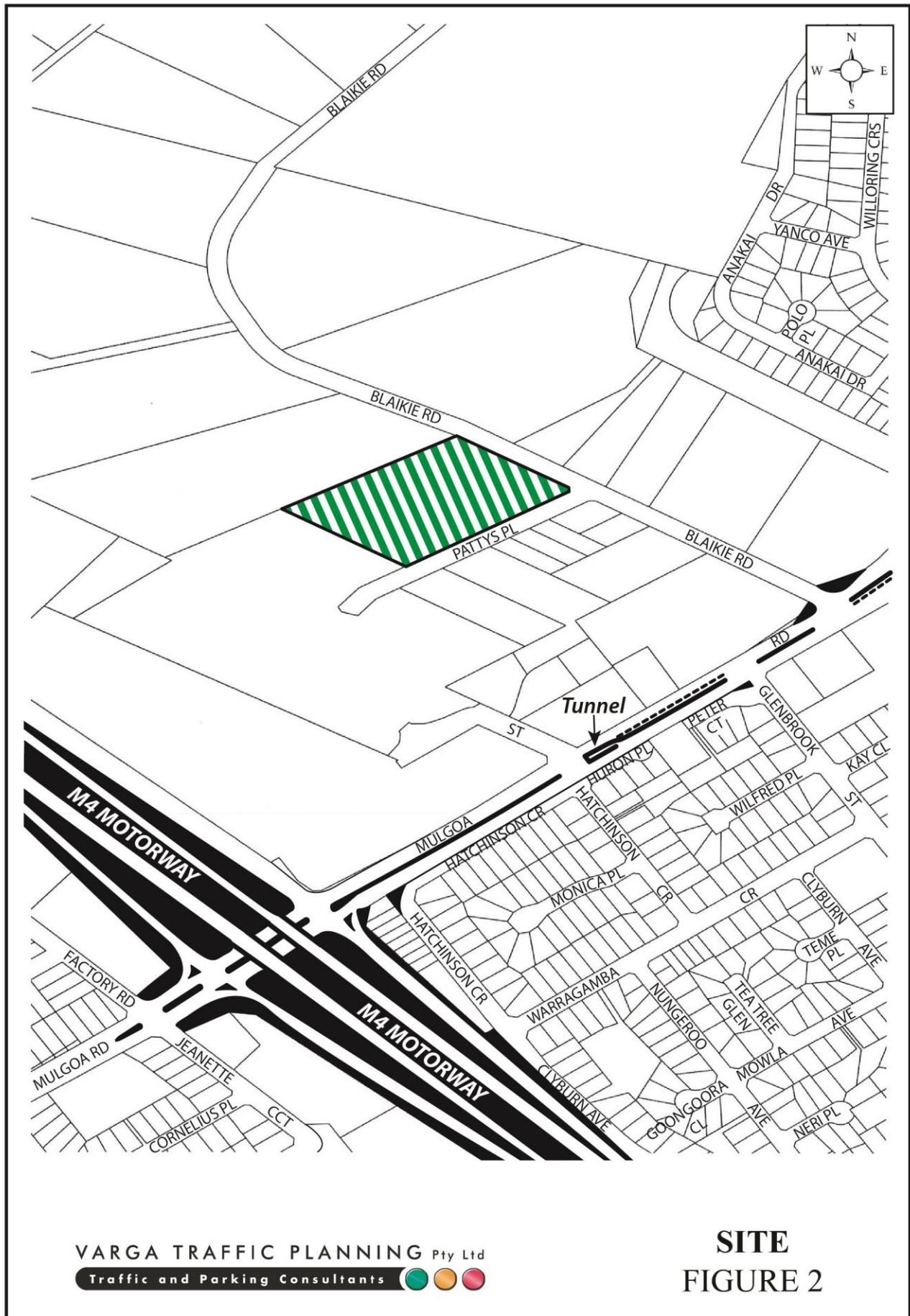
Off-street parking and loading will ultimately be provided within each of the respective lots, subject to future development applications, and comply with Council's numerical requirements.

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 for compliance with the relevant codes and standards
- assesses the adequacy and suitability of the quantum of off-street car parking and loading to be provided on the site





2. PROPOSED DEVELOPMENT

Site

The subject site is located on the western corner of the Blaikie Road and Pattys Place intersection, in the suburb of Jamisontown.

The site has street frontages approximately 128 metres in length to Blaikie Road, approximately 190 metres in length to Pattys Place and occupies an area of approximately 2.6 hectares.

The subject site is zoned *B5 Business Development* and is currently vacant.

A recent aerial image of the site and its surroundings is shown below:



Courtesy of Nearmap Imagery 2019

Proposed Development

The proposed development seeks approval to subdivide the site to create 15 industrial lots, ranging in size from 1,000m² up to 1,081m², with an average of 1,010m².

A new public local road connecting between Blaikie Road and Pattys Place is also proposed to be constructed through the site in accordance with Council's *PDCP 2014* road design requirements. The east-west section of the new road will have a carriageway width of 13m wide whilst the north-south section of the new road will have two 6.5m wide carriageways with a 2m wide central median island.

A concept plan of the proposed subdivision and building layout is reproduced at the end of this chapter. The concept plan includes 15 indicative building footprints, ranging in size from 390m² up to 537m², with an average of 484m².

LOT SCHEDULE

LOT NUMBER	LOT AREA	BUILDING AREA	PARKING	ACCESSIBLE
LOT 1	1,000 m ²	500 m ²	23 Spaces	2 Spaces
LOT 2	1,000 m ²	500 m ²		
LOT 3	1,000 m ²	500 m ²		
LOT 4	1,000 m ²	390 m ²	22 Spaces	2 Spaces
LOT 5	1,000 m ²	500 m ²		
LOT 6	1,081 m ²	440 m ²		
LOT 7	1,000 m ²	500 m ²	20 Spaces	2 Spaces
LOT 8	1,000 m ²	500 m ²		
LOT 9	1,000 m ²	400 m ²		
LOT 10	1,000 m ²	500 m ²	15 Spaces	2 Spaces
LOT 11	1,000 m ²	500 m ²		
LOT 12	1,000 m ²	500 m ²	32 Spaces	2 Spaces
LOT 13	1,000 m ²	500 m ²		
LOT 14	1,000 m ²	500 m ²		
LOT 15	1,075 m ²	537m ²		

The concept plan indicates that the buildings will be attached and grouped together in groups of two, three and four.

Off-street car parking will ultimately be accommodated on each lot in accordance with Council's numerical requirements, subject to a separate development application to be lodged for each new industrial development.

In order to minimise the number of driveways and retain as much on-street parking as possible, adjoining lots will share driveways and internal circulation areas, accessed via separate entry and exit driveways located off either Blaikie Road, Pattys Place or the new internal road.

Each building will ultimately have an internal loading bay capable of accommodating an 8.8m long medium rigid truck.

Notwithstanding, the vehicular access driveways and internal circulation areas have been designed to accommodate larger vehicles up to 12.5m long large rigid trucks.

- NOTES:
- ALL PARKING SPACES TO BE A MINIMUM 5.5m x 2.5m.
 - ALL ACCESSIBLE PARKING SPACES TO AS/NZ 2890.1:2005



LOT SCHEDULE

LOT NUMBER	LOT AREA	BUILDING AREA	PARKING	ACCESSIBLE
LOT 1	1,000 m ²	500 m ²	23 Spaces	2 Spaces
LOT 2	1,000 m ²	500 m ²	23 Spaces	2 Spaces
LOT 3	1,000 m ²	500 m ²	23 Spaces	2 Spaces
LOT 4	1,000 m ²	390 m ²	22 Spaces	2 Spaces
LOT 5	1,000 m ²	500 m ²	22 Spaces	2 Spaces
LOT 6	1,081 m ²	440 m ²	20 Spaces	2 Spaces
LOT 7	1,000 m ²	500 m ²	20 Spaces	2 Spaces
LOT 8	1,000 m ²	500 m ²	20 Spaces	2 Spaces
LOT 9	1,000 m ²	400 m ²	15 Spaces	2 Spaces
LOT 10	1,000 m ²	500 m ²	15 Spaces	2 Spaces
LOT 11	1,000 m ²	500 m ²	32 Spaces	2 Spaces
LOT 12	1,000 m ²	500 m ²	32 Spaces	2 Spaces
LOT 13	1,000 m ²	500 m ²	32 Spaces	2 Spaces
LOT 14	1,000 m ²	500 m ²	32 Spaces	2 Spaces
LOT 15	1,075 m ²	537 m ²	32 Spaces	2 Spaces

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 M4 Western Motorway is classified by the RMS as a *State Road* and provides the key east-west road link in the area, linking Haberfield and Glenbrook. It typically carries two to three traffic lanes in each direction in the vicinity of the site with opposing traffic flows separated by a wide central landscape strip.

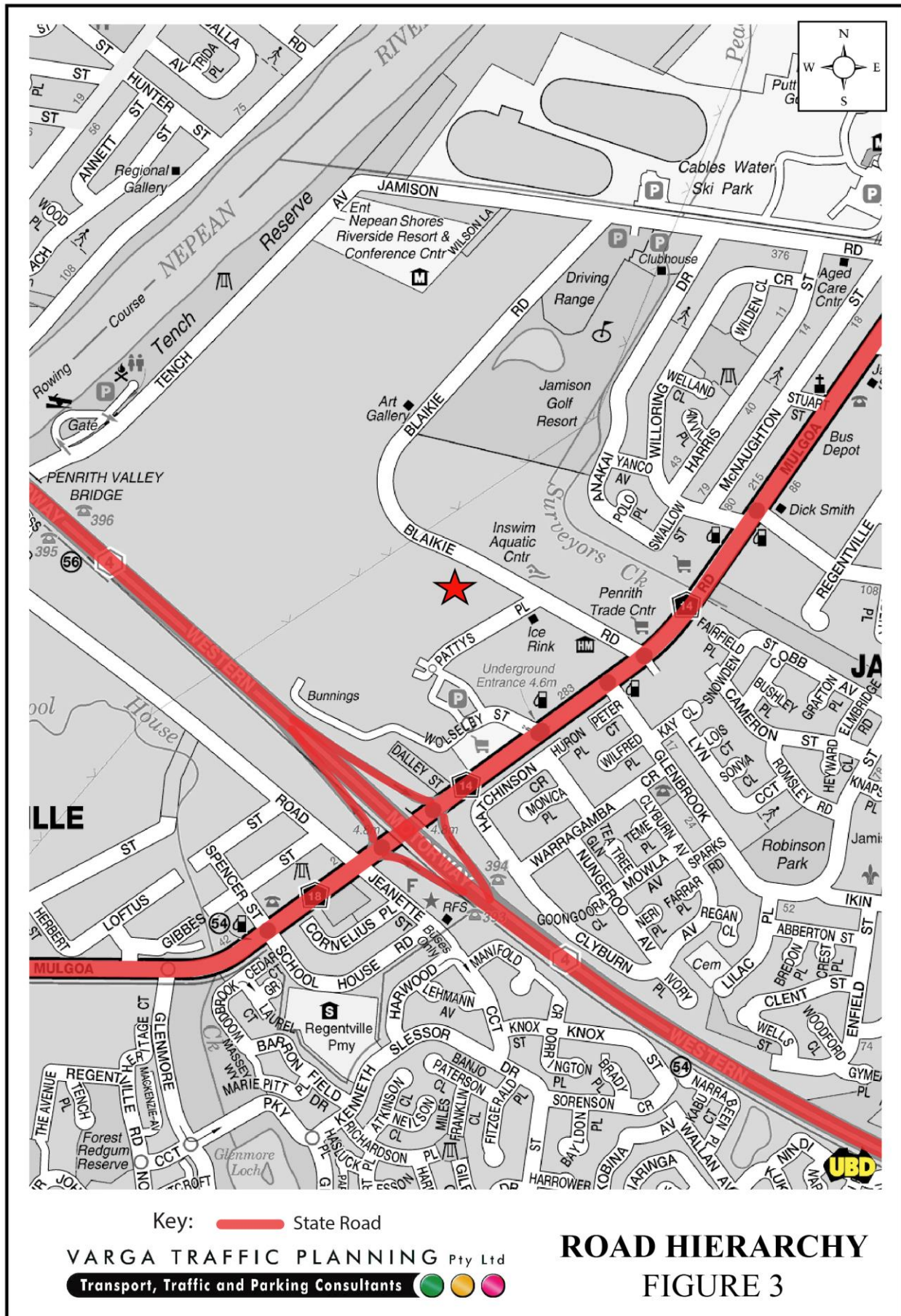
Mulgoa Road is also classified by the RMS as a *State Road* and provides the key north-south road link in the area, linking Penrith and Wallacia. It typically carries two traffic lanes in each direction in the vicinity of the site with opposing traffic flows separated by a central median island. Turning lanes are provided at key locations.

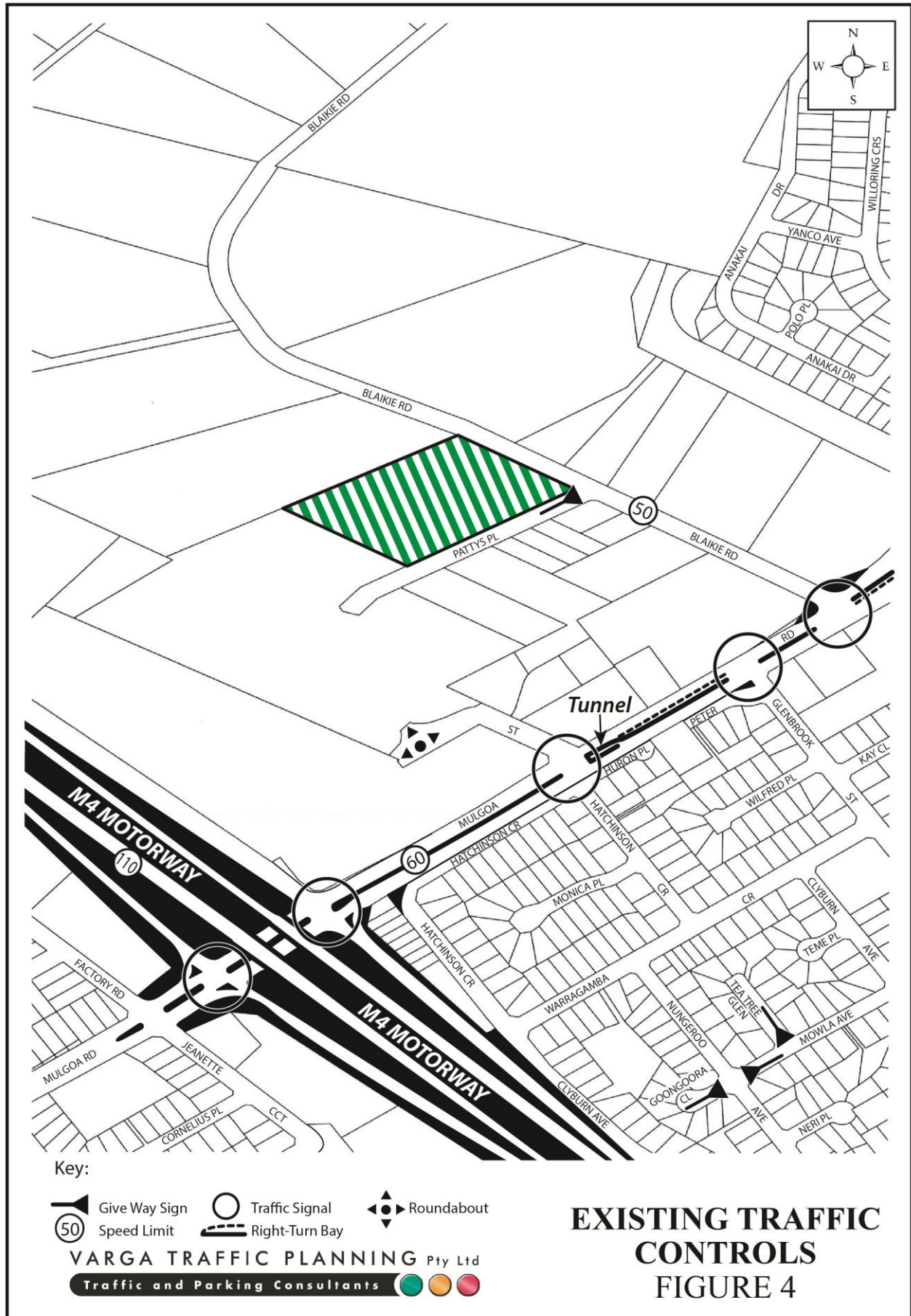
Blaikie Road and Pattys Place are local, unclassified roads that are primarily used to provide vehicular and pedestrian access to frontage properties. Unrestricted kerbside parking is generally permitted on both sides of both roads in the vicinity of the site.

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 110 km/h SPEED LIMIT which applies to M4 Western Motorway
- a 60 km/h SPEED LIMIT which applies to Mulgoa Road
- a 50 km/h SPEED LIMIT which applies to Blaikie Road, Pattys Place and all other local roads in the area





- TRAFFIC SIGNALS in Mulgoa Road where it intersects with Blaikie Road, Glenbrook Street, Wolseley Street and the M4 Interchange.

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 at the intersection of Blaikie Road and Pattys Place on Friday 21st June 2019 between 7:00am-9:00am and 4:30pm-6:30pm.

The results of the traffic surveys are reproduced in full in Appendix A and reveal that:

- two-way traffic flows in Blaikie Road are typically in the order of 90-120 vehicles per hour (vph) during the AM peak hour, increasing to 240-380 vph in the PM peak hour
- two-way traffic flows in Pattys Place are typically in the order of 60 vph in the AM peak hour, increasing to 310 vph in the PM peak hour.

Projected Traffic Generation

The traffic implications of development proposals primarily concern the effects of the *additional* traffic flows generated as a result of a development and its impact on the operational performance of the adjacent road network during the weekday morning and afternoon commuter peak periods.

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

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

Industrial – Factory

1 peak hour vehicle trip per 100m² GFA

Industrial – Warehouse

0.5 peak hour vehicle trips per 100m² GFA

As the future uses of the respective lots are not yet known, for the purposes of providing a more rigorous assessment, the higher *industrial – factory* traffic generation rate has been adopted.

Application of the above *industrial – factory* traffic generation rate to the cumulative indicative building area of 7,267m² yields a traffic generation potential of 73 vehicle trips per hour (vph) during the weekday morning and afternoon peak periods (IN and OUT, combined).

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, as is demonstrated by the traffic modelling provided in the following section of this report.

Traffic Implications - Road Network Capacity

The traffic implications of those *additional* traffic flows on the operational performance of the nearby road network has been assessed using the SIDRA INTERSECTION 8 program which is widely used by the RMS and many LGA's. Criteria for evaluating the results of SIDRA analysis are reproduced in the following pages.

The SIDRA analysis for the Blaikie Road and Pattys Place intersection is summarised in the table below, revealing that:

- the intersection currently operates at *Level of Service "A"* under the existing traffic demands during both the AM and PM peak hour, with total average vehicle delays in the order of 2-3 seconds/vehicle

- under the projected future traffic demands expected to be generated by the subdivision proposal, the intersection is expected to continue to operate at *Level of Service “A”* during both the AM and PM peak hour, with increases in total average vehicle delays of *less than 2 seconds/vehicle*.

SIDRA Modelling Results

Intersection	Key Indicators	<u>Existing</u>		<u>Projected</u>	
		AM	PM	AM	PM
Blaikie Rd & Pattys Place	LoS	A	A	A	A
	DoS	0.038	0.100	0.076	0.110
	Avg. Delay	2.1	3.3	3.2	3.6

LoS = Levels of Service

DoS = Degree of Saturation

Delay = Total average vehicle delay (seconds per vehicle)

The detailed SIDRA *movements summaries* are reproduced in full in Appendix B.

In summary, the SIDRA capacity analysis demonstrates that the subdivision proposal will not have any unacceptable traffic implications, and that no road improvements or intersection upgrades are required as a consequence of the development proposal.

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 AVD's 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 signals¹ 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

Off-Street Parking Provisions

The relevant off-street parking requirements applicable to industrial developments are specified in Council's *Penrith Development Control Plan 2014, C10 Transport Access and Parking* document in the following terms:

Freight Transport Facilities

1 space per transport vehicle present at peak vehicle accumulation, *plus* 1 space per 2 employees

Industries, including ancillary office

1 space per 75m² of gross floor area *or* 1 space per 2 employees, whichever is the greater

Vehicle Body Repair Workshops / Vehicle Repair Stations

3 spaces per 100m² of gross floor area *or* 6 spaces per work bay, whichever is the greater

Warehouses or distributions centres, including ancillary office

1 space per 100m² of gross floor area

Other Uses

In accordance with RMS Guidelines, or if there are no parking guidelines for a specific use, then a site-specific car parking analysis will be required. This may require the applicant to submit a car parking report from a suitably qualified traffic consultant.

Whilst the final detailed designs of the future developments are not yet known, the above car parking requirements will ultimately be accommodated within each industrial lot, subject to separate development applications submitted at a later date which will provide details of the proposed parking and access arrangements.

Notwithstanding, the concept plan illustrates a potential parking layout that achieves a total of 112 off-street car parking spaces, equating to *1 space per 65m²*, which exceeds each of the above rates.

The geometric design layout of the future off-street car parking facilities will be ultimately designed to comply with the relevant requirements specified in the Standards Australia publication "*Parking Facilities Part 1 - Off-Street Car Parking AS/NZS2890.1*".

Loading / Servicing Provisions

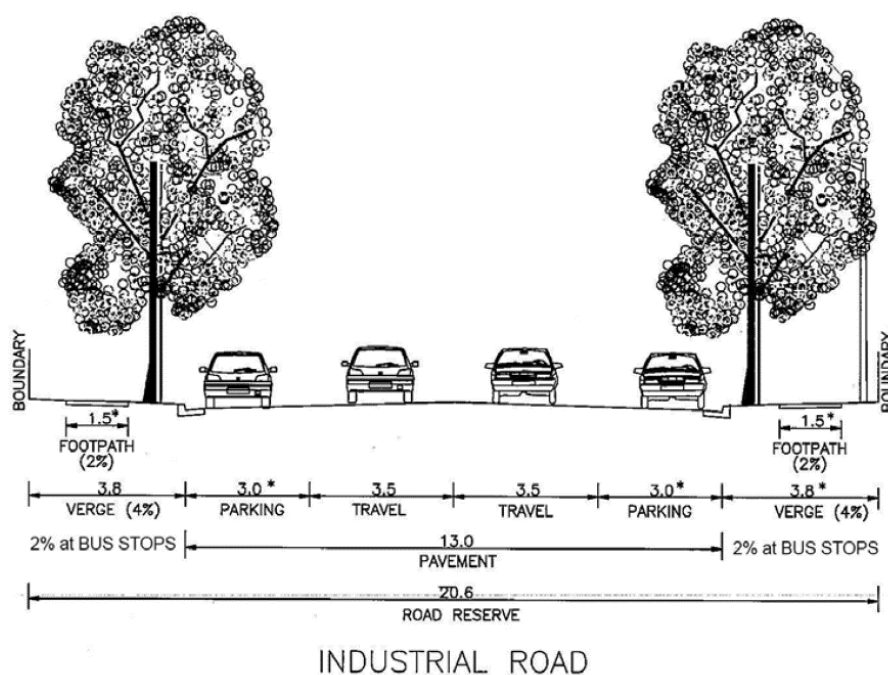
The proposed development is expected to be serviced by a variety of commercial vehicles up to and including 8.8m MRV trucks, with each future building having their own respective internal loading bay. Notwithstanding, concept vehicular access driveways and internal circulation areas have been designed to accommodate 12.5m HRV trucks. Importantly, all commercial vehicles will have the ability to enter and exit each lot in a forward direction at all times.

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*.

Internal Local Road Layout Considerations

As noted in the foregoing, a new public local road connecting between Blaikie Road and Pattys Place is also proposed to be constructed through the site in accordance with Council's *PDCP 2014* road design requirements.

Figure C10.5: Industrial Road



The east-west section of the new road will have a carriageway width of 13m wide whilst the north-south section of the new road will have two 6.5m wide carriageways with a 2m wide central median island.

The proposed new intersection radii and internal road has been designed to accommodate the swept turn path requirements of a 12.5m HRV truck, allowing them to circulate through the site in a forward direction and whilst remaining on the correct side of the road at all times.

Furthermore, the location of the proposed new intersections with Blaikie Road and Pattys Place are considered satisfactory on the basis of:

- Pattys Place has a general straight alignment and flat topography, providing optimal visibility in both directions
- there are minimal trees and shrubs on both sides of the Pattys Place.
- the proposed new intersection with Blaikie Road provides in excess of 200m visibility in both directions.

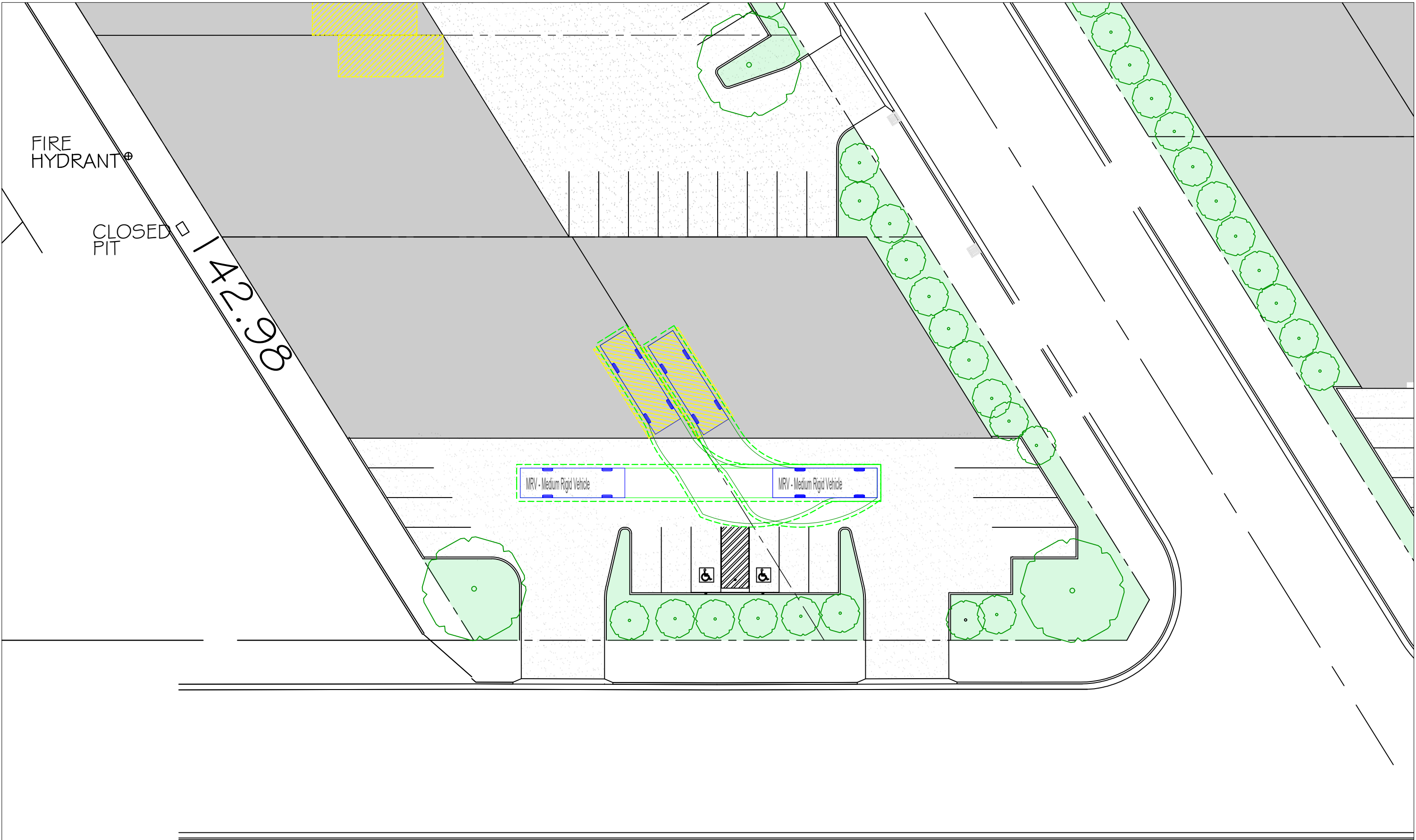
Conclusion

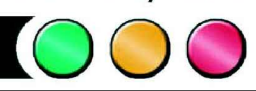
In summary, the foregoing analysis has found that:

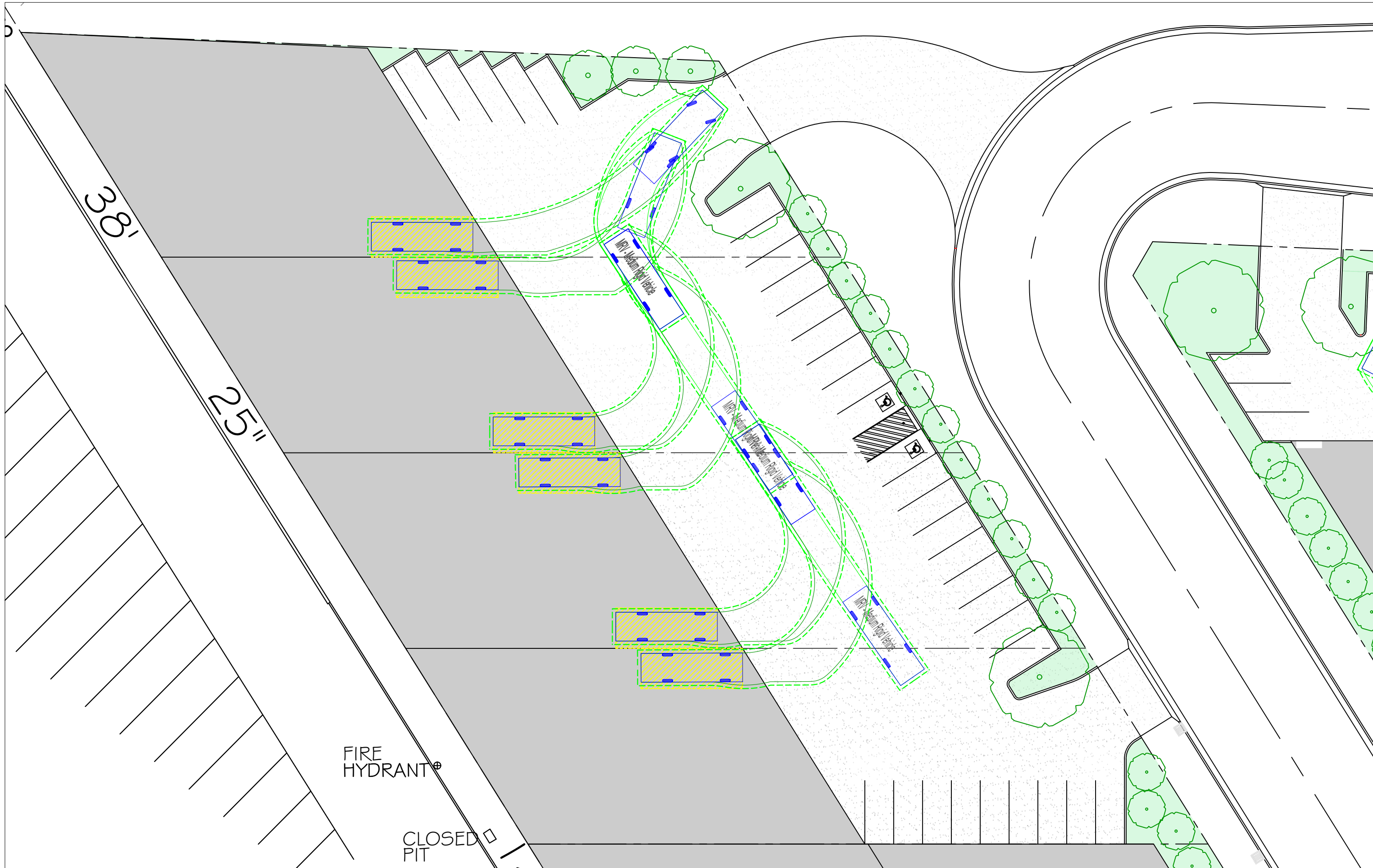
- the SIDRA capacity analysis demonstrates that the proposed development will not have any unacceptable traffic implications, and that no road improvements or intersection upgrades are required as a consequence of the subdivision proposal.
- the proposed new internal local road and cul-de-sac has been designed in accordance with Council requirements
- the proposed new intersection with Pattys Place is optimally positioned to provide maximum visibility in both directions

- the proposed new intersection with Blaikie Road provides in excess of 200m visibility in both directions
- each industrial lot will ultimately accommodate off-street parking and loading facilities in accordance with Council requirements, and will be designed to comply with the relevant codes and standards.

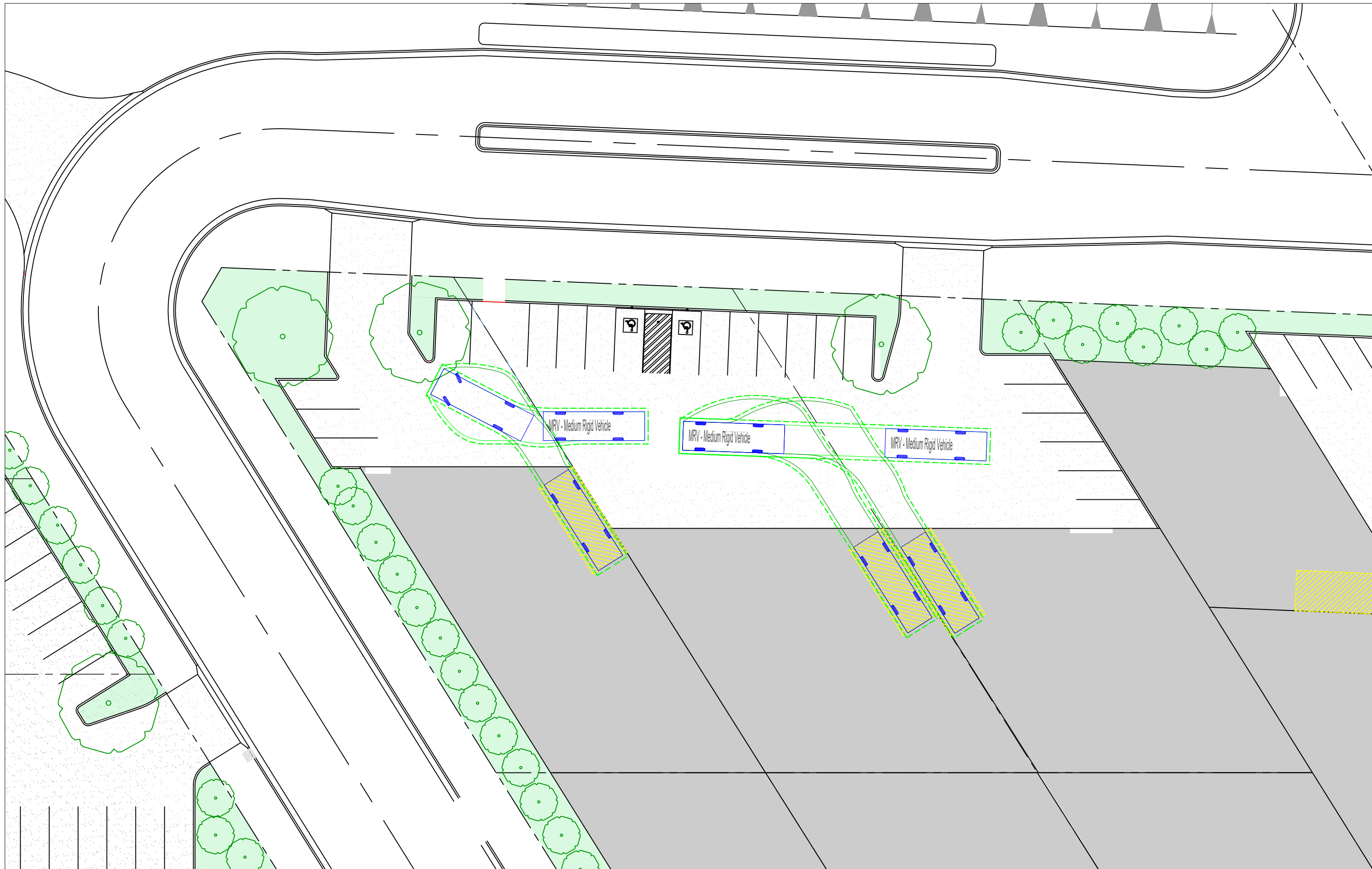
It is therefore reasonable to conclude that the proposed industrial subdivision will not have any unacceptable implications in terms of road network capacity, off-street parking/loading or access requirements.



VARGA TRAFFIC PLANNING Pty Ltd ABN 88 071 762 537 Suite 6, Level 1 20 Young Street Neutral Bay, NSW 2089 Phone +61 2 9904 3224 PO Box 1868 Neutral Bay, NSW 2089 www.vargattraffic.com.au Sydney, Australia PROJECT PROPOSED SUBDIVISION	DRAWING TITLE Unit10-11_8.8mMRV_DockAccess ADDRESS 121-133 BLAIKIE ROAD JAMISONTOWN NSW 2750	PROJECT NO. 19282 REVIEWED CP	1:300 @ A3 DATE DRAWN 2020-4-23 PREPARED TY	VARGA TRAFFIC PLANNING Pty Ltd Transport, Traffic and Parking Consultants 
--	---	---	--	---



VARGA TRAFFIC PLANNING Pty Ltd ABN 88 071 762 537 Suite 6, Level 1 20 Young Street Neutral Bay, NSW 2089 Phone +61 2 9904 3224 PO Box 1868 Neutral Bay, NSW 2089 www.vargattraffic.com.au Sydney, Australia	DRAWING TITLE Unit12-15_8.8mMRV_DockAccess ADDRESS 121-133 BLAIKIE ROAD JAMISONTOWN NSW 2750	PROJECT NO. 19282 REVIEWED CP	1:300 @ A3 DATE DRAWN 2020-4-23 PREPARED TY	VARGA TRAFFIC PLANNING Pty Ltd Transport, Traffic and Parking Consultants
PROJECT PROPOSED SUBDIVISION				



VARGA TRAFFIC PLANNING Pty Ltd
ABN 88 071 762 537
Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatrafic.com.au
Sydney, Australia

PROJECT
PROPOSED SUBDIVISION

DRAWING TITLE
Unit1-3_8.8mMRV_DockAccess

ADDRESS
121-133 BLAIKIE ROAD
JAMISONTOWN NSW 2750

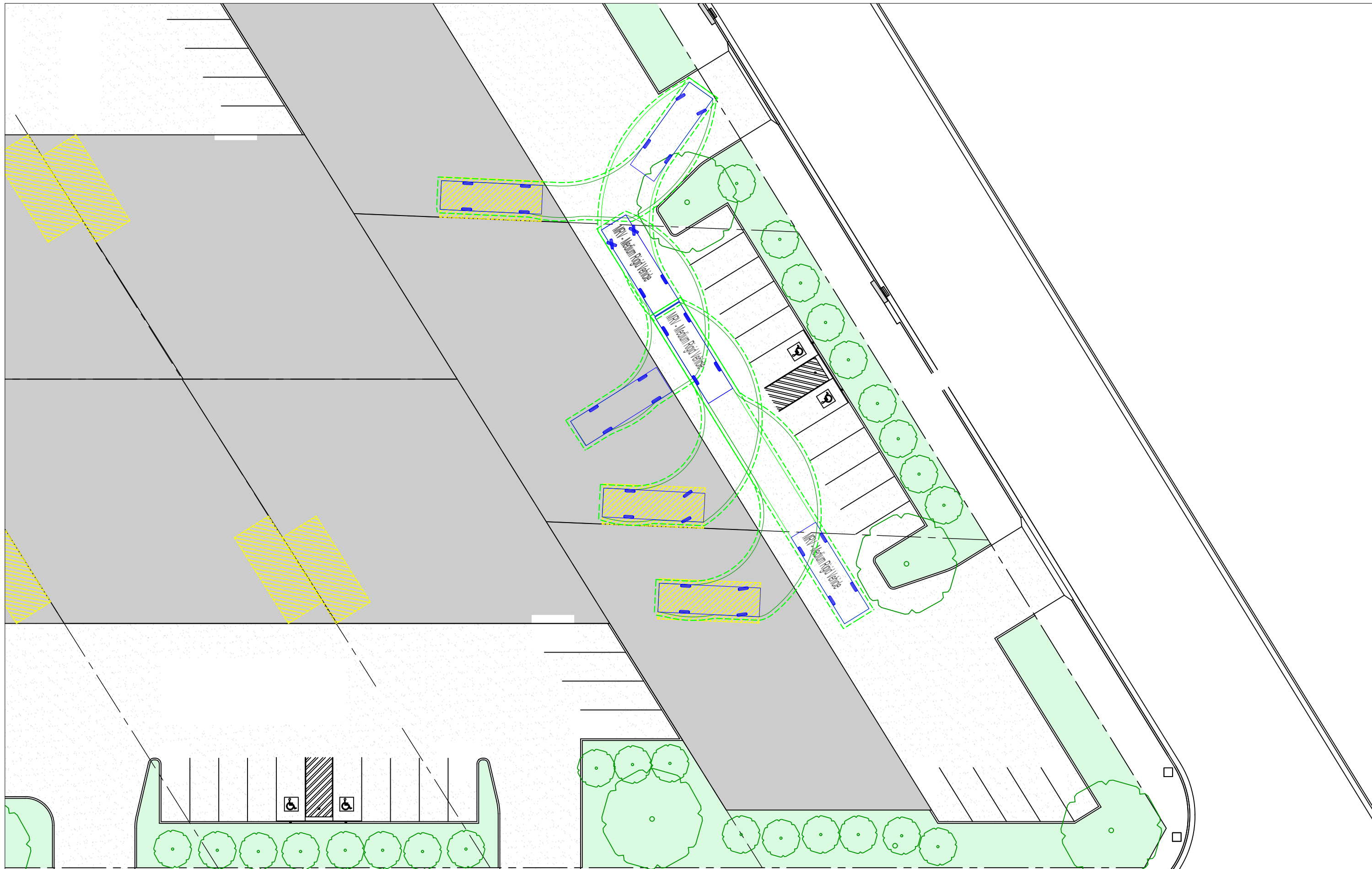
PROJECT NO.
19282
REVIEWED
CP

1300 @ A3

DATE DRAWN
2020-4-23
PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants





VARGA TRAFFIC PLANNING Pty Ltd
ABN 88 071 762 537
Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargattraffic.com.au
Sydney, Australia

PROJECT
PROPOSED SUBDIVISION

DRAWING TITLE
Unit4-6_8.8mMRV_DockAccess

ADDRESS
121-133 BLAIKIE ROAD
JAMISONTOWN NSW 2750

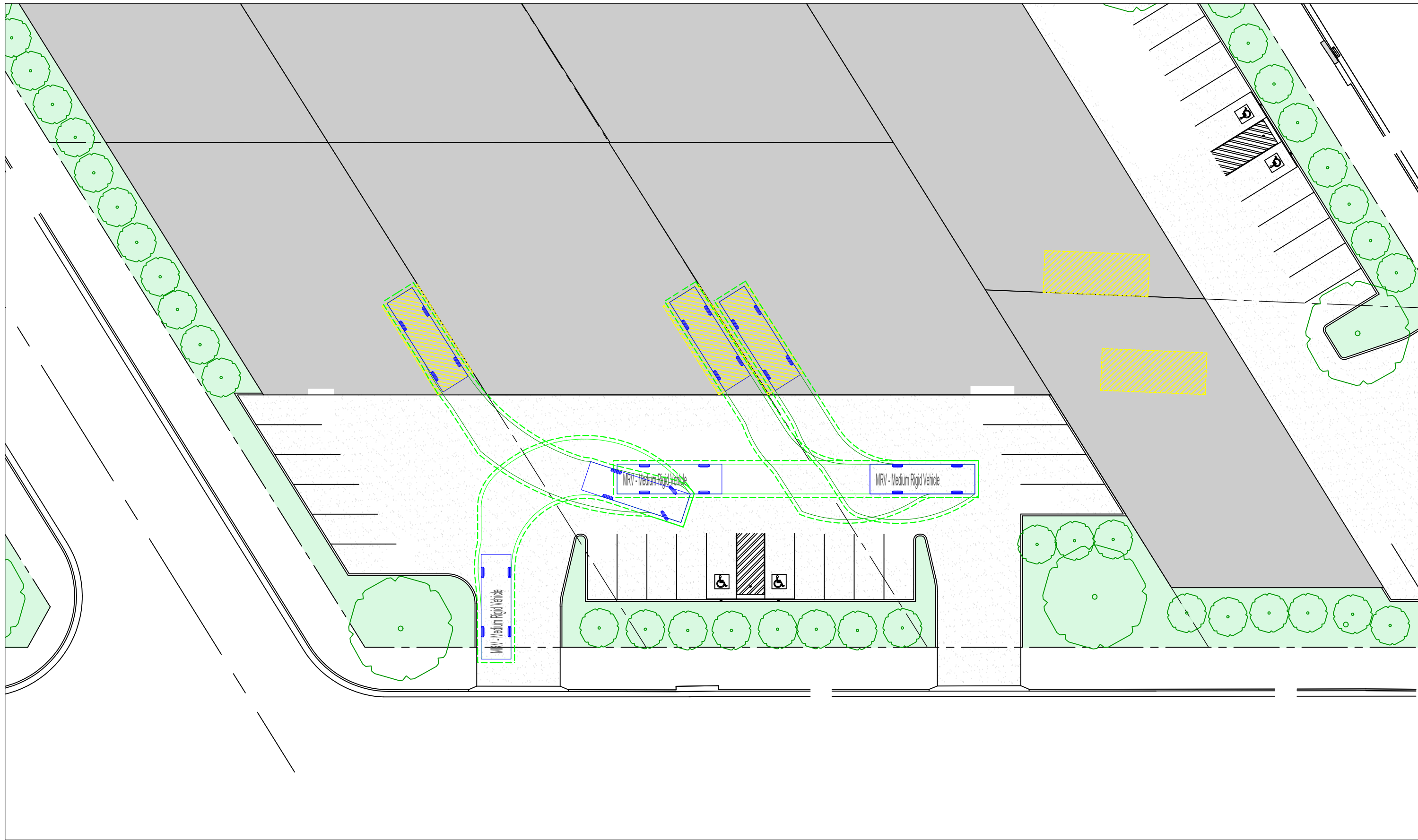
PROJECT NO.
19282
REVIEWED
CP

1:300 @ A3

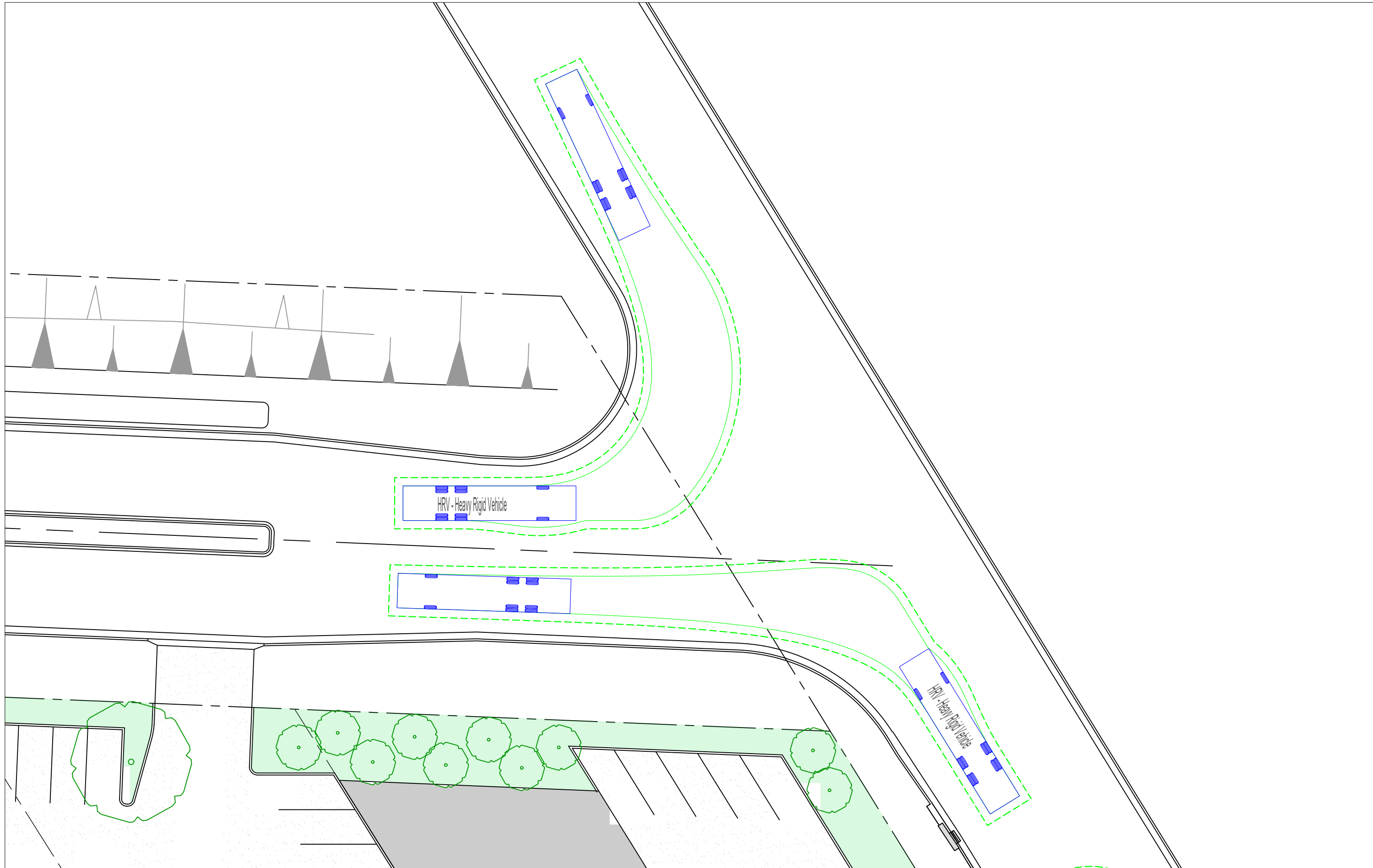
DATE DRAWN
2020-4-23
PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants





VARGA TRAFFIC PLANNING Pty Ltd ABN 88 071 762 537 Suite 6, Level 1 20 Young Street Neutral Bay, NSW 2089 Phone +61 2 9904 3224 PO Box 1868 Neutral Bay, NSW 2089 www.vargattraffic.com.au Sydney, Australia	DRAWING TITLE Unit7-9_8.8mMRV_DockAccess ADDRESS 121-133 BLAIKIE ROAD JAMISONTOWN NSW 2750	PROJECT NO. 19282 REVIEWED CP	1:300 @ A3 DATE DRAWN 2020-4-23 PREPARED TY	VARGA TRAFFIC PLANNING Pty Ltd Transport, Traffic and Parking Consultants
PROJECT PROPOSED SUBDIVISION				



VARGA TRAFFIC PLANNING Pty Ltd
ABN 88 071 762 537
Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargattraffic.com.au
Sydney, Australia

PROJECT
PROPOSED SUBDIVISION

DRAWING TITLE
TURNING PATHS 200424

ADDRESS
121-133 BLAIKIE ROAD
JAMISONTOWN NSW 2750

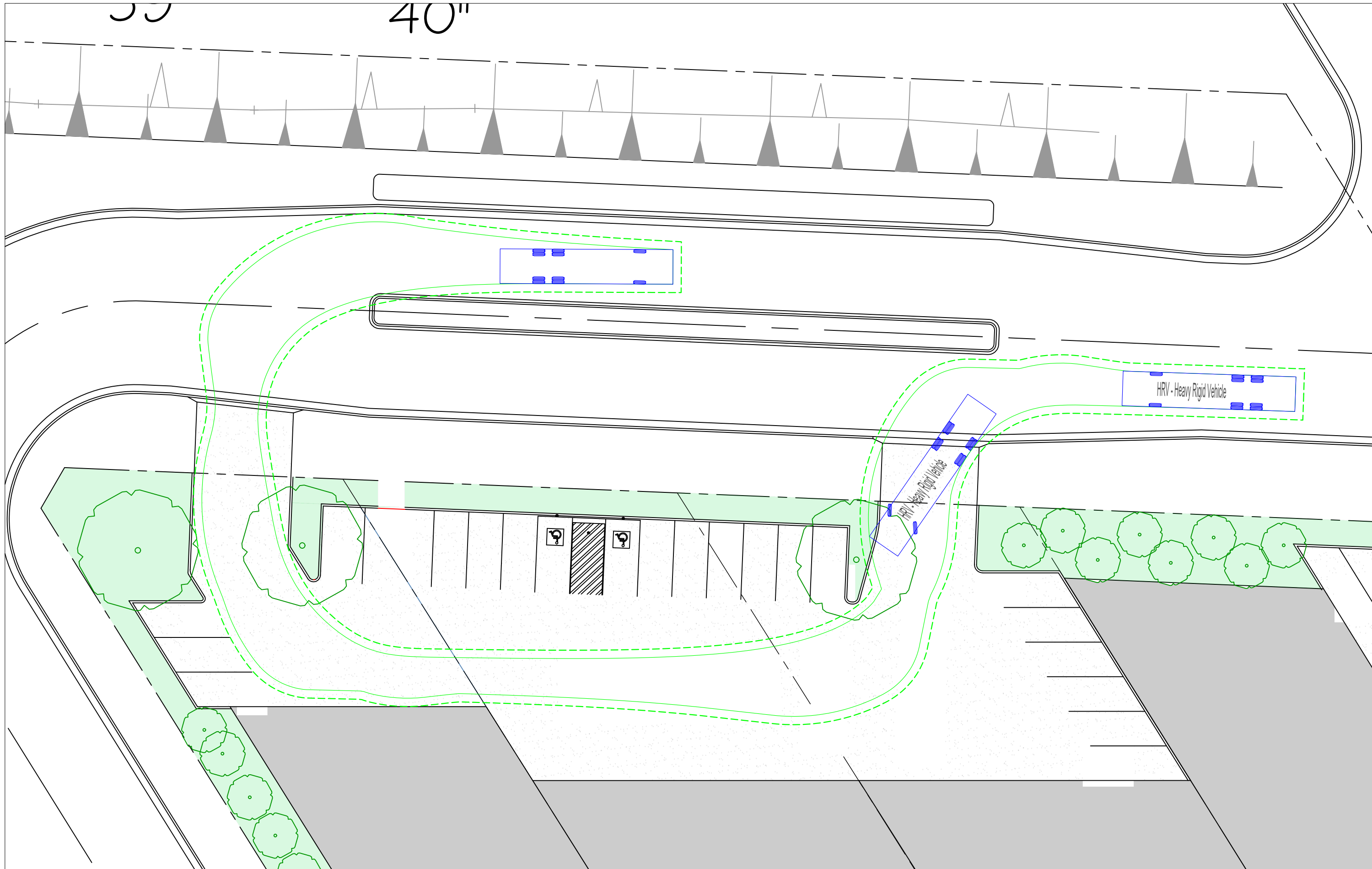
PROJECT NO.
19282
REVIEWED
CP

1:250 @ A3

DATE DRAWN
2020-4-24
PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants





VARGA TRAFFIC PLANNING Pty Ltd
ABN 88 071 762 537
Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatrafic.com.au
Sydney, Australia

PROJECT
PROPOSED SUBDIVISION

DRAWING TITLE
TURNING PATHS 200424

ADDRESS
121-133 BLAIKIE ROAD
JAMISONTOWN NSW 2750

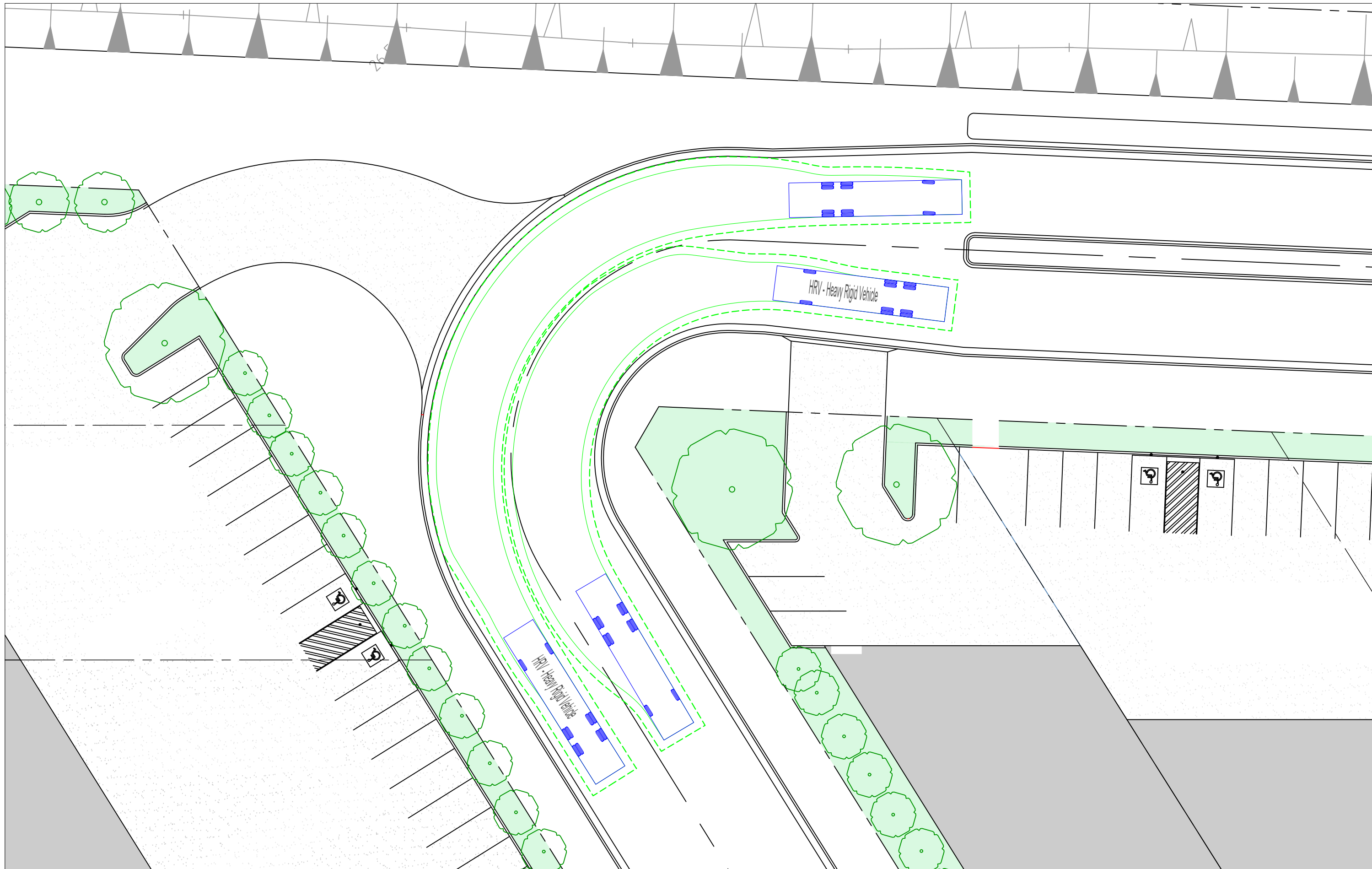
PROJECT NO.
19282
REVIEWED
CP

1:250 @ A3

DATE DRAWN
2020-4-24
PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants





VARGA TRAFFIC PLANNING Pty Ltd
ABN 88 071 762 537
Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatrafic.com.au
Sydney, Australia

PROJECT
PROPOSED SUBDIVISION

DRAWING TITLE
TURNING PATHS 200424

ADDRESS
121-133 BLAIKIE ROAD
JAMISONTOWN NSW 2750

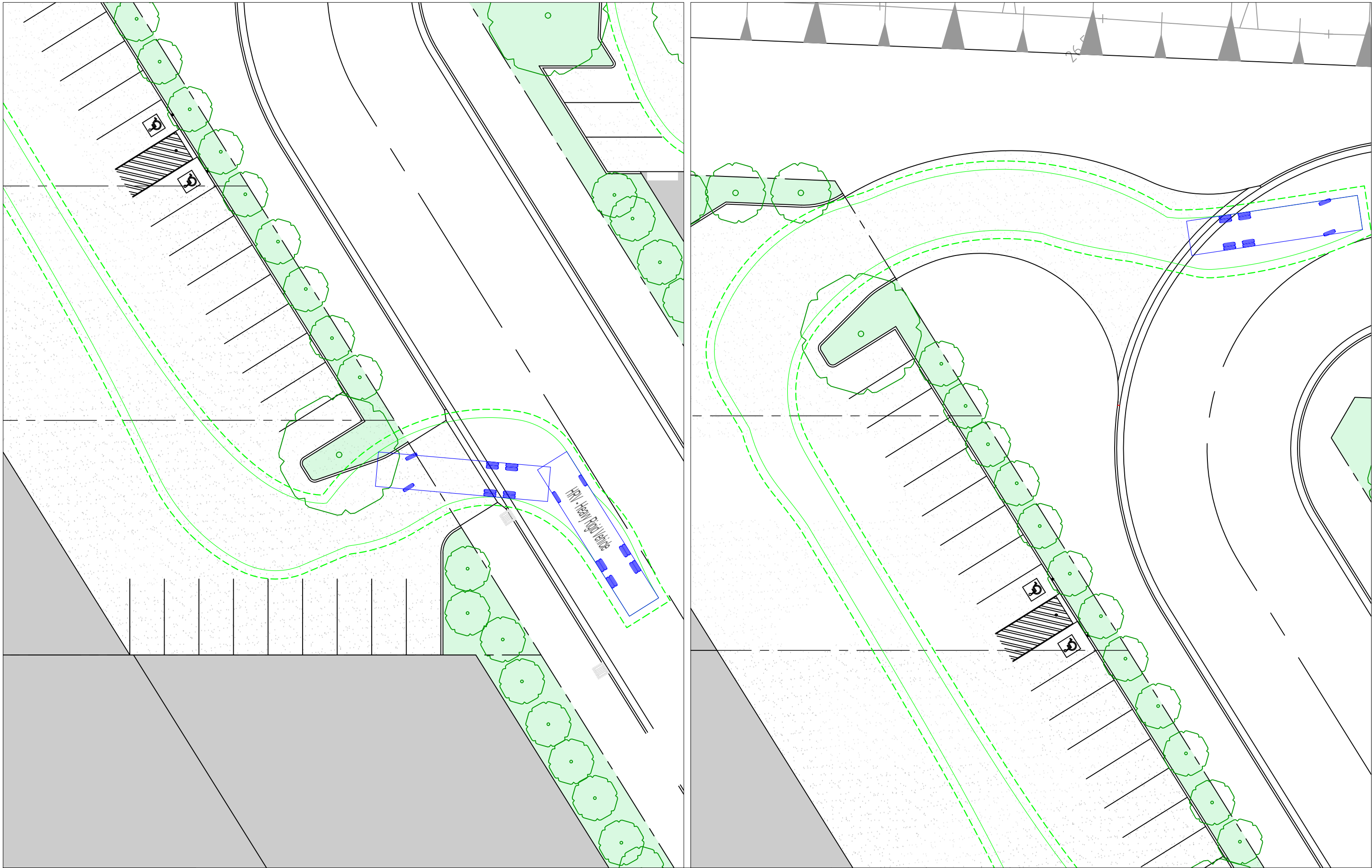
PROJECT NO.
19282
REVIEWED
CP

1:250 @ A3

DATE DRAWN
2020-4-24
PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants





VARGA TRAFFIC PLANNING Pty Ltd
ABN 88 071 762 537
Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatrafic.com.au
Sydney, Australia

PROJECT
PROPOSED SUBDIVISION

DRAWING TITLE
TURNING PATHS 200424

ADDRESS
121-133 BLAIE ROAD
JAMISONTOWN NSW 2750

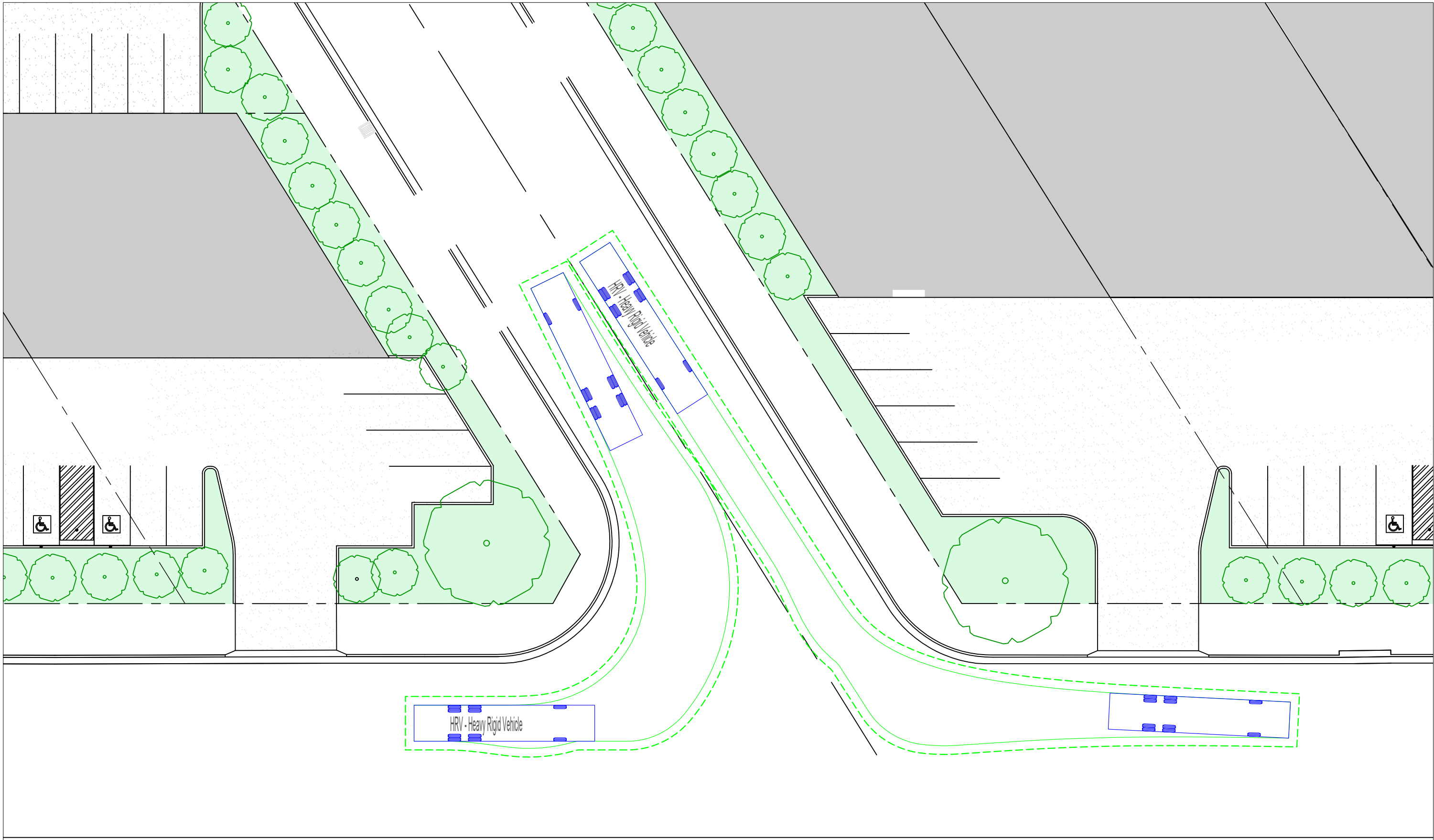
PROJECT NO.
19282
REVIEWED
CP

1:250 @ A3

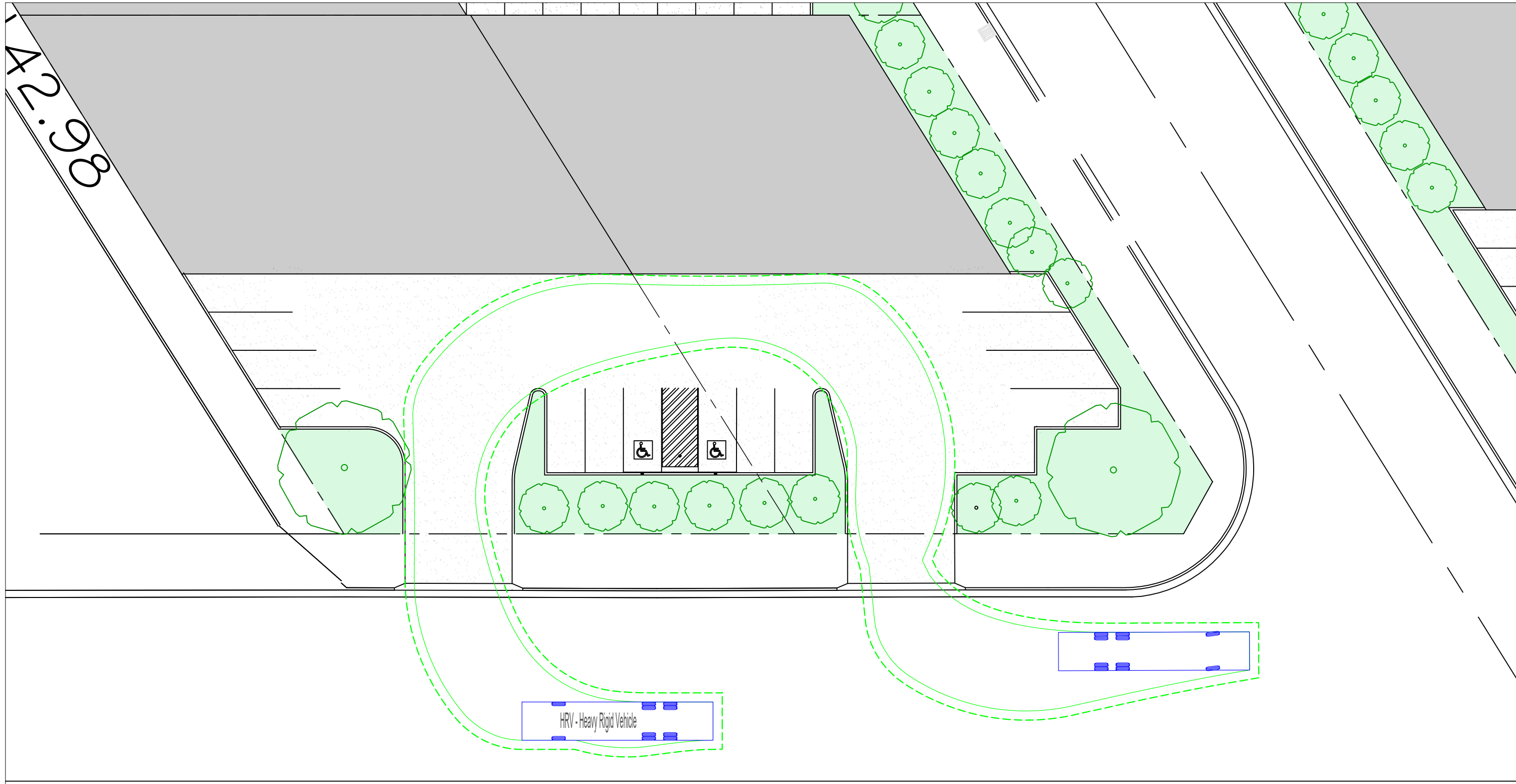
DATE DRAWN
2020-4-24
PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants





VARGA TRAFFIC PLANNING Pty Ltd ABN 88 071 762 537 Suite 6, Level 1 20 Young Street Neutral Bay, NSW 2089 Phone +61 2 9904 3224 PO Box 1868 Neutral Bay, NSW 2089 www.vargattraffic.com.au Sydney, Australia	DRAWING TITLE TURNING PATHS 200424 ADDRESS 121-133 BLAIKIE ROAD JAMISONTOWN NSW 2750	PROJECT NO. 19282 REVIEWED CP	1:250 @ A3 DATE DRAWN 2020-4-24 PREPARED TY	VARGA TRAFFIC PLANNING Pty Ltd Transport, Traffic and Parking Consultants
PROJECT PROPOSED SUBDIVISION				



VARGA TRAFFIC PLANNING Pty Ltd
ABN 88 071 762 537
Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargatrafic.com.au
Sydney, Australia

PROJECT
PROPOSED SUBDIVISION

DRAWING TITLE
TURNING PATHS 200424

ADDRESS
121-133 BLAIKIE ROAD
JAMISONTOWN NSW 2750

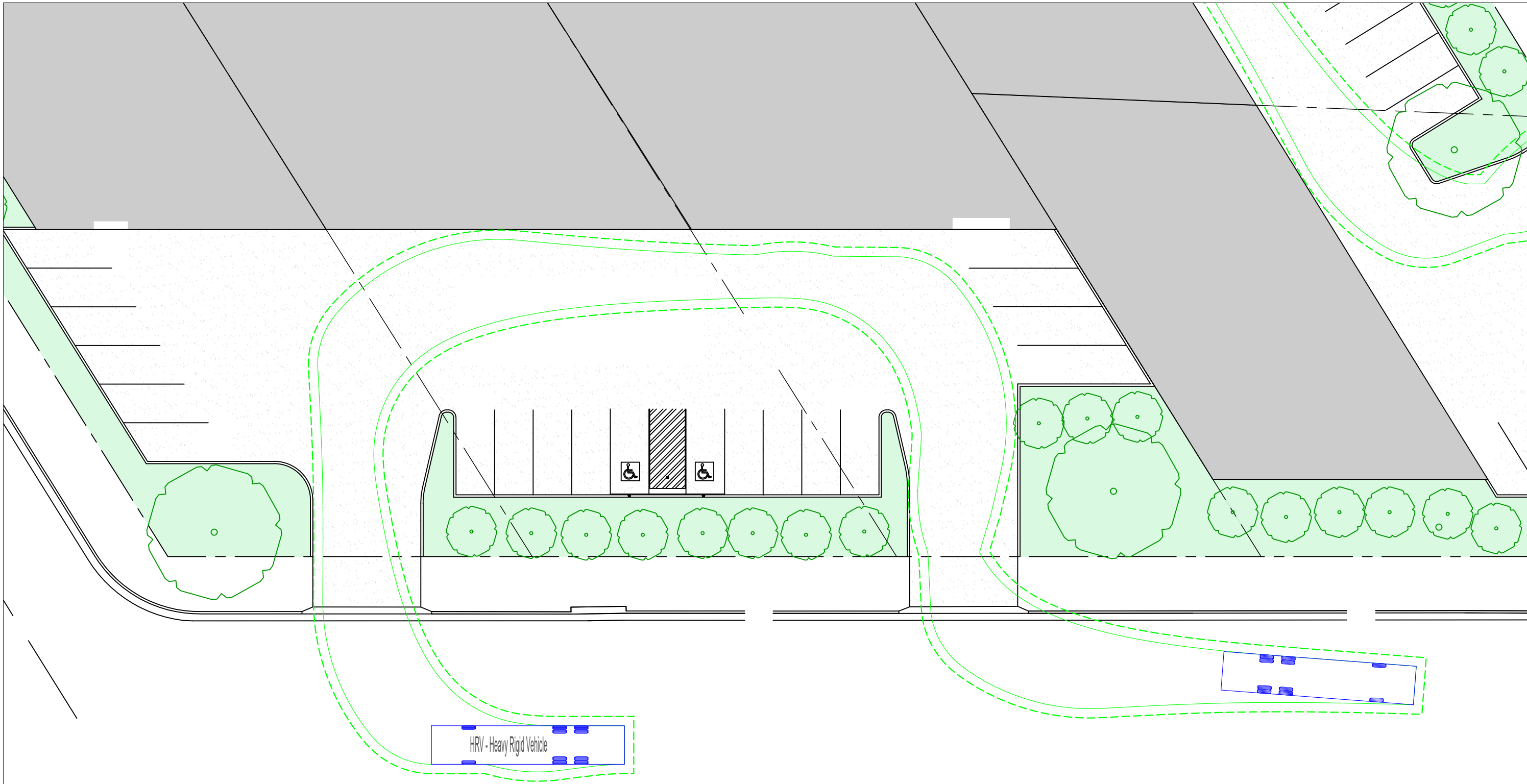
PROJECT NO.
19282
REVIEWED
CP

1:250 @ A3

DATE DRAWN
2020-4-24
PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants





VARGA TRAFFIC PLANNING Pty Ltd
ABN 88 071 762 537
Suite 6, Level 1
20 Young Street
Neutral Bay, NSW 2089

Phone +61 2 9904 3224
PO Box 1868
Neutral Bay, NSW 2089
www.vargattraffic.com.au
Sydney, Australia

PROJECT
PROPOSED SUBDIVISION

DRAWING TITLE
TURNING PATHS 200424

ADDRESS
121-133 BLAIE ROAD
JAMISONTOWN NSW 2750

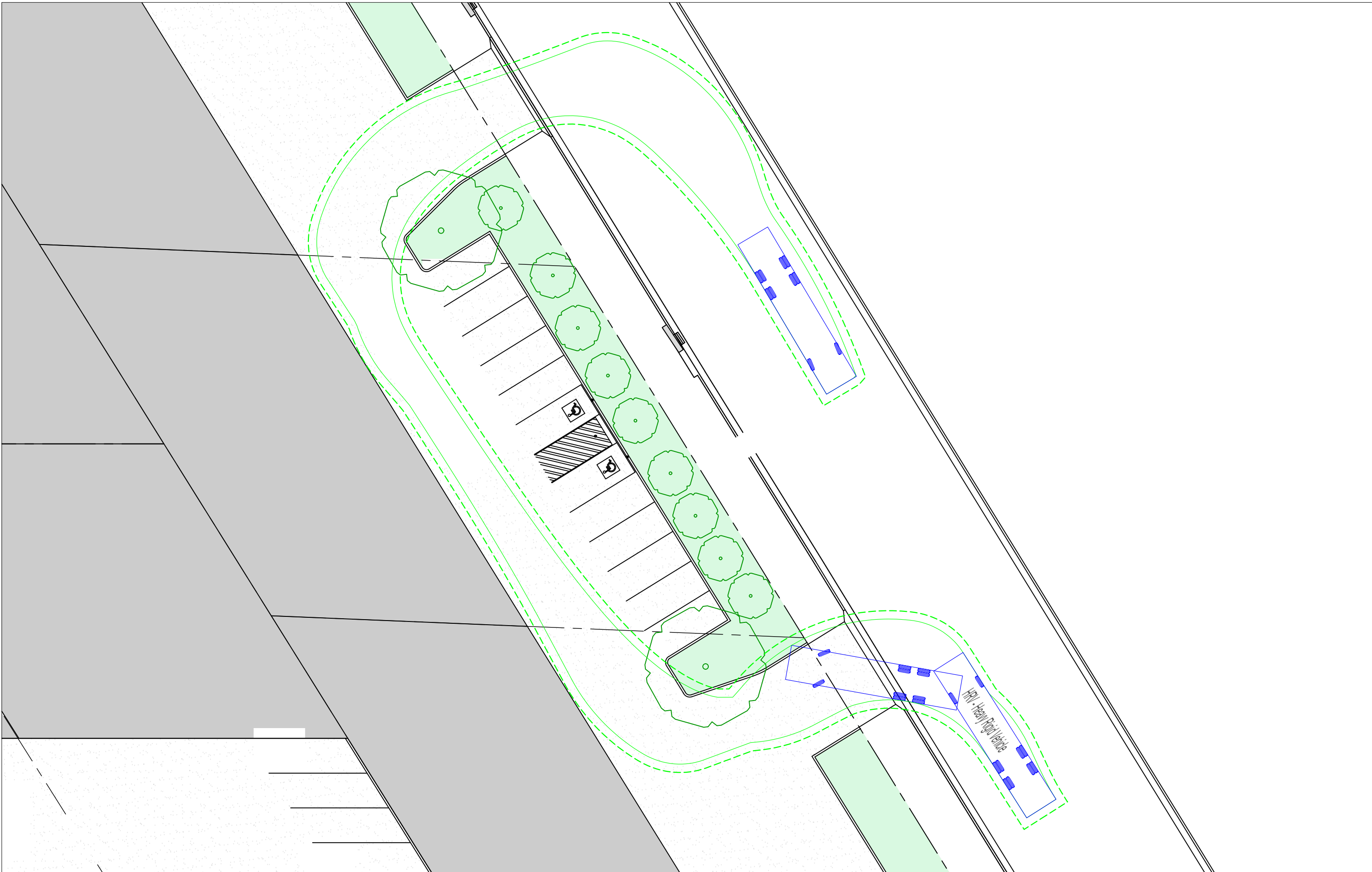
PROJECT NO.
19282
REVIEWED
CP

1:250 @ A3

DATE DRAWN
2020-4-24
PREPARED
TY

VARGA TRAFFIC PLANNING Pty Ltd
Transport, Traffic and Parking Consultants





VARGA TRAFFIC PLANNING Pty Ltd ABN 88 071 762 537 Suite 6, Level 1 20 Young Street Neutral Bay, NSW 2089 Phone +61 2 9904 3224 PO Box 1868 Neutral Bay, NSW 2089 www.vargattraffic.com.au Sydney, Australia	DRAWING TITLE TURNING PATHS 200424 ADDRESS 121-133 BLAIKIE ROAD JAMISONTOWN NSW 2750	PROJECT NO. 19282 REVIEWED CP	1:250 @ A3 DATE DRAWN 2020-4-24 PREPARED TY	VARGA TRAFFIC PLANNING Pty Ltd Transport, Traffic and Parking Consultants
PROJECT PROPOSED SUBDIVISION				

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 : 7121 JAMISONTOWN Pattys Place

Day/Date : Friday 21st June 2019

Lights	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	I	R	L	R	L	I	TOT
0700 - 0715	8	0	0	2	3	10	23
0715 - 0730	4	5	0	6	7	8	30
0730 - 0745	6	0	0	1	2	1	10
0745 - 0800	8	0	0	5	5	8	26
0800 - 0815	10	3	1	2	5	10	31
0815 - 0830	7	4	1	5	5	12	34
0830 - 0845	7	5	0	5	10	9	36
0845 - 0900	6	7	2	3	28	15	61
Per End	56	24	4	29	65	73	251

Heavies	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	I	R	L	R	L	I	TOT
0700 - 0715	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0
0745 - 0800	2	0	1	0	1	0	4
0800 - 0815	0	0	0	0	0	1	1
0815 - 0830	1	0	0	0	2	0	3
0830 - 0845	0	0	1	0	0	1	2
0845 - 0900	1	1	0	1	0	0	3
Per End	4	1	2	1	3	2	13

Combined	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	I	R	L	R	L	I	TOT
0700 - 0715	8	0	0	2	3	10	23
0715 - 0730	4	5	0	6	7	8	30
0730 - 0745	6	0	0	1	2	1	10
0745 - 0800	10	0	1	5	6	8	30
0800 - 0815	10	3	1	2	5	11	32
0815 - 0830	8	4	1	5	7	12	37
0830 - 0845	7	5	1	5	10	10	38
0845 - 0900	7	8	2	4	28	15	64
Per End	60	25	6	30	68	75	264

Lights	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Peak Per	I	R	L	R	L	I	TOT
0700 - 0800	26	5	0	14	17	27	89
0715 - 0815	28	8	1	14	19	27	97
0730 - 0830	31	7	2	13	17	31	101
0745 - 0845	32	12	2	17	25	39	127
0800 - 0900	30	19	4	15	48	46	162

Heavies	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Peak Per	I	R	L	R	L	I	TOT
0700 - 0800	2	0	1	0	1	0	4
0715 - 0815	2	0	1	0	1	1	5
0730 - 0830	3	0	1	0	3	1	8
0745 - 0845	3	0	2	0	3	2	10
0800 - 0900	2	1	1	1	2	2	9

Combined	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Peak Per	I	R	L	R	L	I	TOT
0700 - 0800	28	5	1	14	18	27	93
0715 - 0815	30	8	2	14	20	28	102
0730 - 0830	34	7	3	13	20	32	109
0745 - 0845	35	12	4	17	28	41	137
0800 - 0900	32	20	5	16	50	48	171

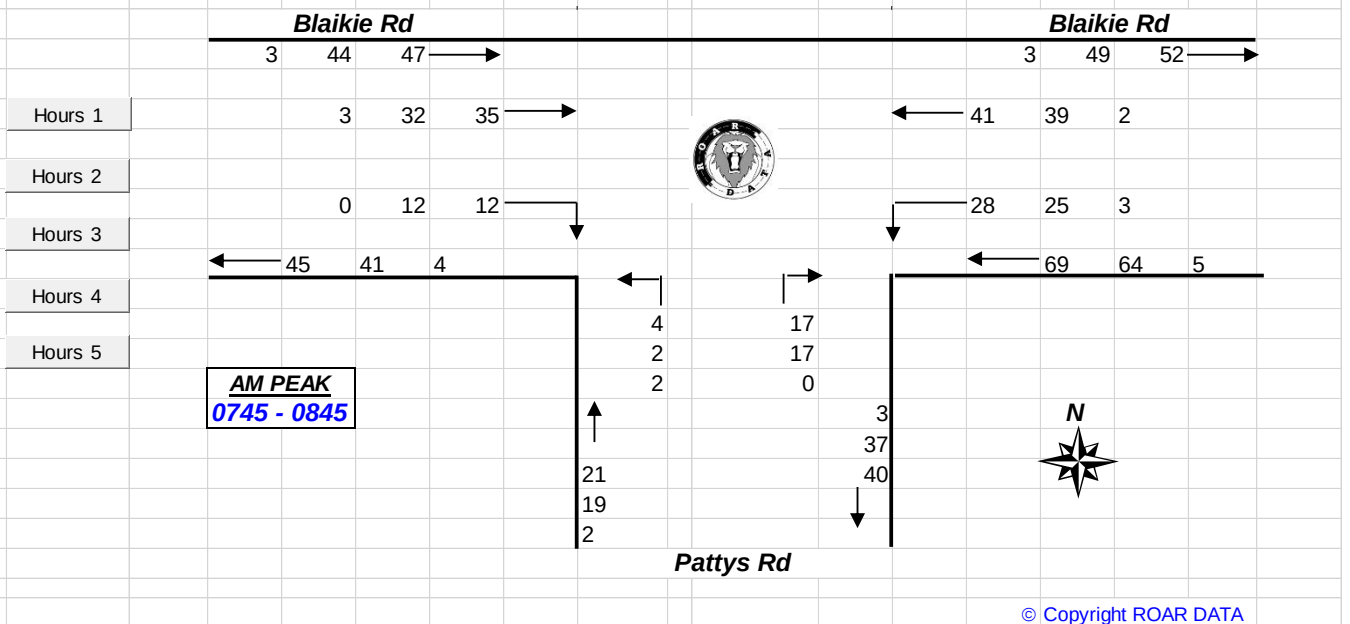
PEAK HR	32	12	2	17	25	39	127
---------	----	----	---	----	----	----	-----

PEAK HR	3	0	2	0	3	2	10
---------	---	---	---	---	---	---	----

PEAK HR	35	12	4	17	28	41	137
---------	----	----	---	----	----	----	-----

Peds	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	I	R	L	R	L	I	TOT
0700 - 0715	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0
Per End	0	0	0	0	0	0	0

Peak Per	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	I	R	L	R	L	I	TOT
0700 - 0800	0	0	0	0	0	0	0
0715 - 0815	0	0	0	0	0	0	0
0730 - 0830	0	0	0	0	0	0	0
0745 - 0845	0	0	0	0	0	0	0
0800 - 0900	0	0	0	0	0	0	0
PEAK HR	0	0	0	0	0	0	0





R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847,Mob.0418-239019

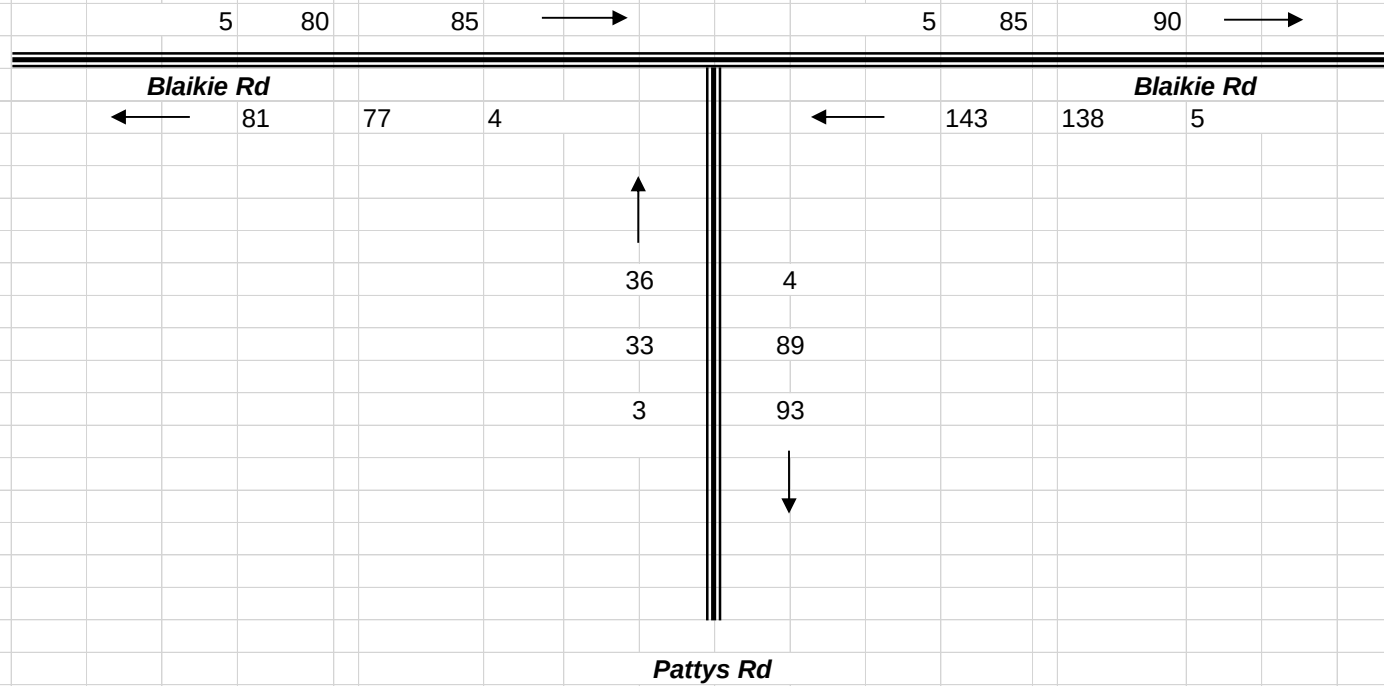
Client : Varga Traffic Planning

Job No/Name : 7121 JAMISONTOWN Pattys Place

Day/Date : Friday 21st June 2019

TOTAL VOLUMES
FOR COUNT
PERIOD

AM





R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

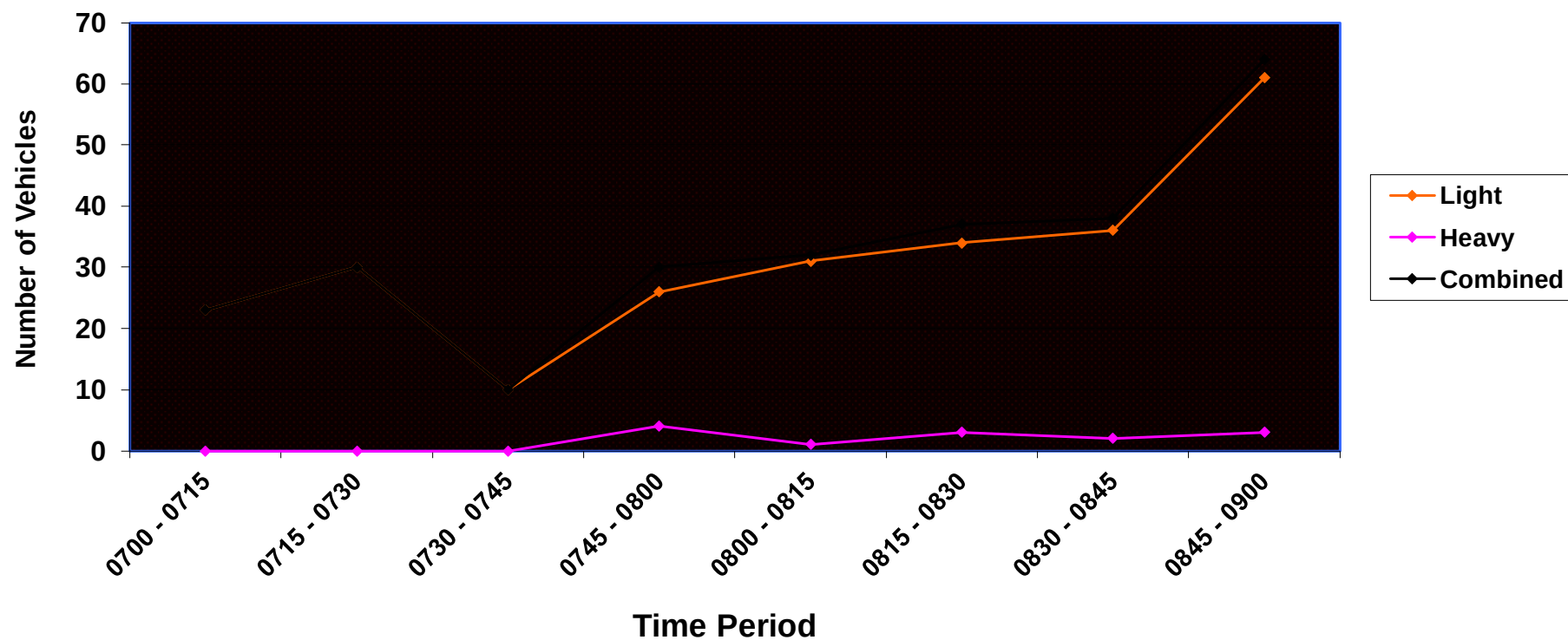
Client : Varga Traffic Planning

Job No/Name : 7121 JAMISONTOWN Pattys Place

Day/Date : Friday 21st June 2019

AM

Pattys Place & Blaikie Rd





R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847,Mob.0418-239019

Client : Varga Traffic Planning

Job No/Name : 7121 JAMISONTOWN Pattys Place

Day/Date : Friday 21st June 2019

Lights	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	T	R	L	R	L	T	TOT
1630 - 1645	15	10	4	28	27	16	100
1645 - 1700	21	26	10	22	31	23	133
1700 - 1715	21	11	6	32	35	18	123
1715 - 1730	24	17	5	21	27	12	106
1730 - 1745	23	7	2	32	17	12	93
1745 - 1800	22	5	3	12	11	7	60
1800 - 1815	12	7	5	17	6	6	53
1815 - 1830	10	2	2	15	4	6	39
Per End	148	85	37	179	158	100	707

Heavies	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	T	R	L	R	L	T	TOT
1630 - 1645	0	2	0	0	0	0	2
1645 - 1700	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0
1715 - 1730	0	0	0	1	0	0	1
1730 - 1745	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0
1800 - 1815	0	0	0	0	0	1	1
1815 - 1830	0	0	0	0	0	0	0
Per End	0	2	0	1	0	1	4

Combined	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	T	R	L	R	L	T	TOT
1630 - 1645	15	12	4	28	27	16	102
1645 - 1700	21	26	10	22	31	23	133
1700 - 1715	21	11	6	32	35	18	123
1715 - 1730	24	17	5	22	27	12	107
1730 - 1745	23	7	2	32	17	12	93
1745 - 1800	22	5	3	12	11	7	60
1800 - 1815	12	7	5	17	6	7	54
1815 - 1830	10	2	2	15	4	6	39
Per End	148	87	37	180	158	101	711

Lights	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Peak Per	T	R	L	R	L	T	TOT
1630 - 1730	81	64	25	103	120	69	462
1645 - 1745	89	61	23	107	110	65	455
1700 - 1800	90	40	16	97	90	49	382
1715 - 1815	81	36	15	82	61	37	312
1730 - 1830	67	21	12	76	38	31	245

Heavies	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Peak Per	T	R	L	R	L	T	TOT
1630 - 1730	0	2	0	1	0	0	3
1645 - 1745	0	0	0	1	0	0	1
1700 - 1800	0	0	0	1	0	0	1
1715 - 1815	0	0	0	1	0	1	2
1730 - 1830	0	0	0	0	0	1	1

Combined	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Peak Per	T	R	L	R	L	T	TOT
1630 - 1730	81	66	25	104	120	69	465
1645 - 1745	89	61	23	108	110	65	456
1700 - 1800	90	40	16	98	90	49	383
1715 - 1815	81	36	15	83	61	38	314
1730 - 1830	67	21	12	76	38	32	246

PEAK HR	81	64	25	103	120	69	462
---------	----	----	----	-----	-----	----	-----

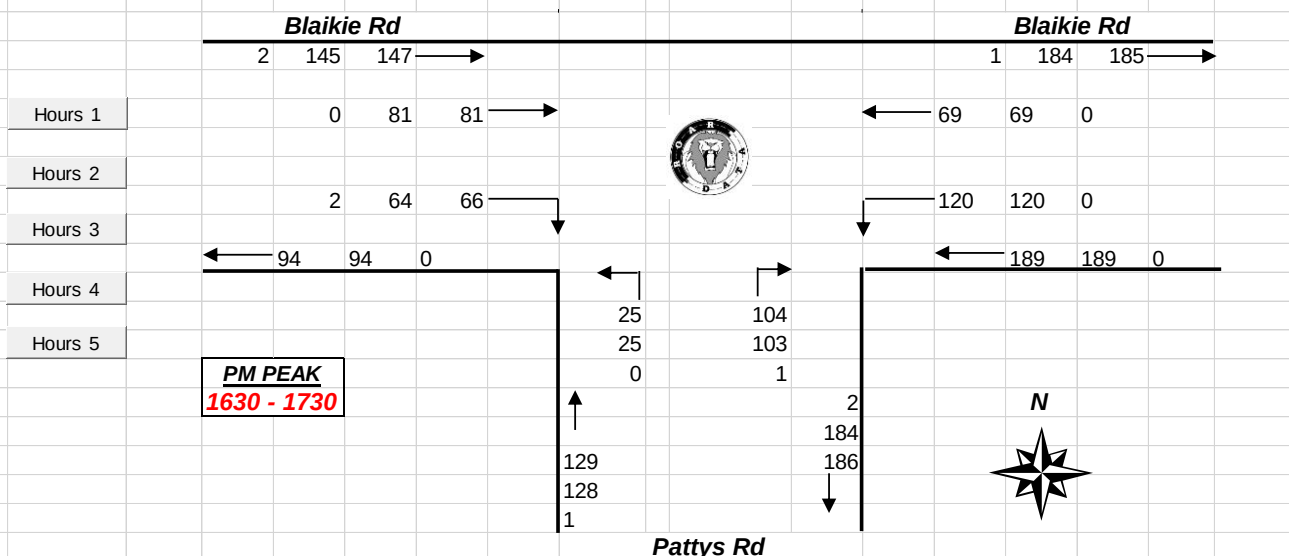
PEAK HR	0	2	0	1	0	0	3
---------	---	---	---	---	---	---	---

PEAK HR	81	66	25	104	120	69	465
---------	----	----	----	-----	-----	----	-----

Peds	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
Time Per	Blaikie Rd		Pattys Rd		Blaikie Rd		TOT
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

Peak Per	WEST		SOUTH		EAST		
	Blaikie Rd		Pattys Rd		Blaikie Rd		
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	0	0	0
---------	---	---	---	---	---	---	---





R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847,Mob.0418-239019

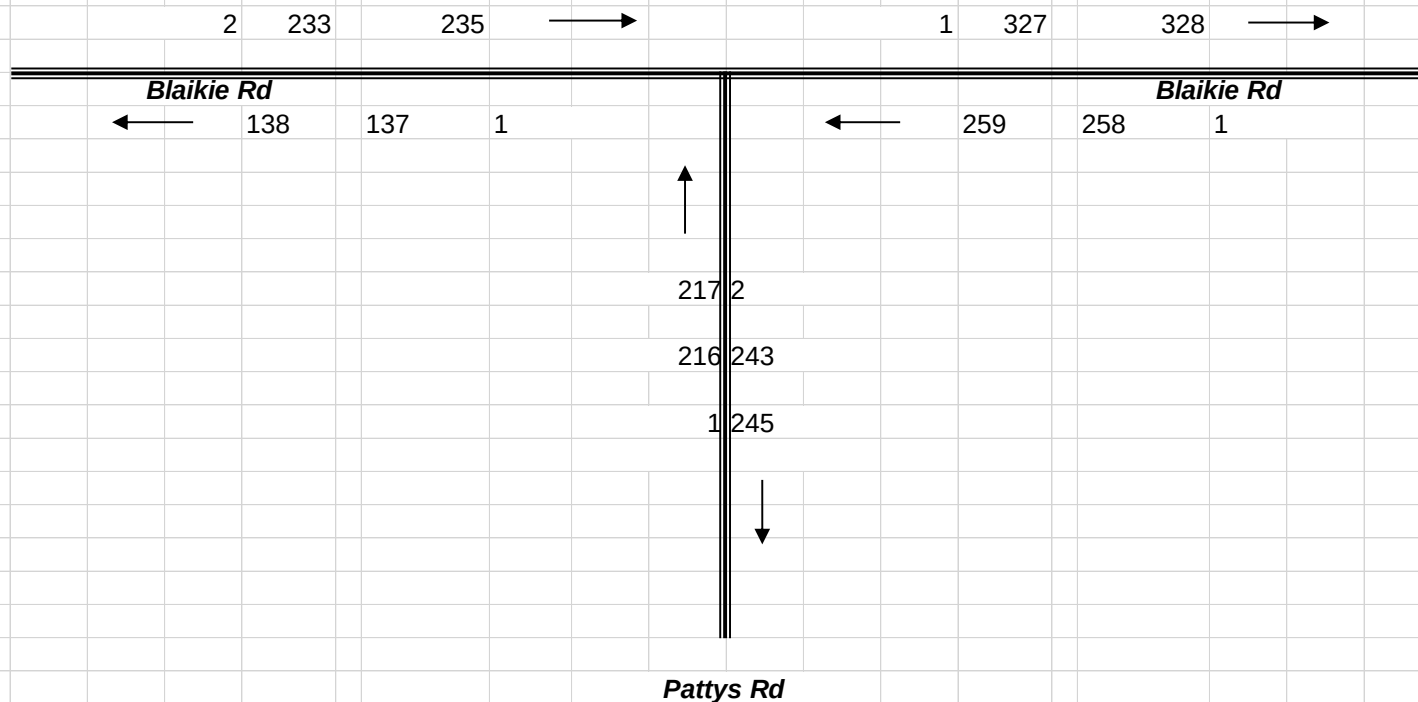
Client : Varga Traffic Planning

Job No/Name : 7121 JAMISONTOWN Pattys Place

Day/Date : Friday 21st June 2019

PM

TOTAL VOLUMES
FOR COUNT
PERIOD



Pattys Rd



R.O.A.R DATA

Reliable, Original & Authentic Results

Ph.88196847, Mob.0418-239019

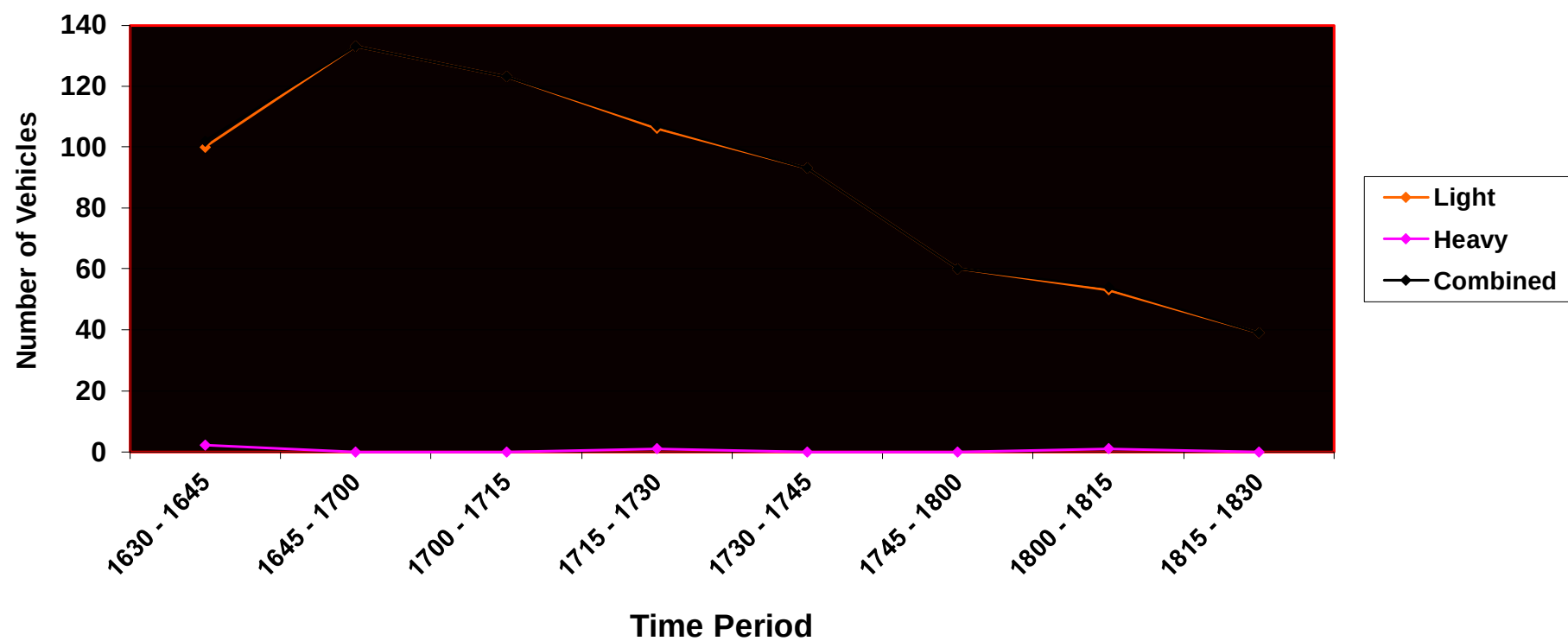
Client : Varga Traffic Planning

Job No/Name : 7121 JAMISONTOWN Pattys Place

Day/Date : Friday 21st June 2019

PM

Pattys Place & Blaikie Rd





R.O.A.R. DATA

Reliable, Original & Authentic Results

Ph.88196847,Mob.0418-239019

Client : Varga Traffic Planning
Job No/Name : 7121 JAMISONTOWN Pattys Place
Day/Date : Friday 21st June 2019

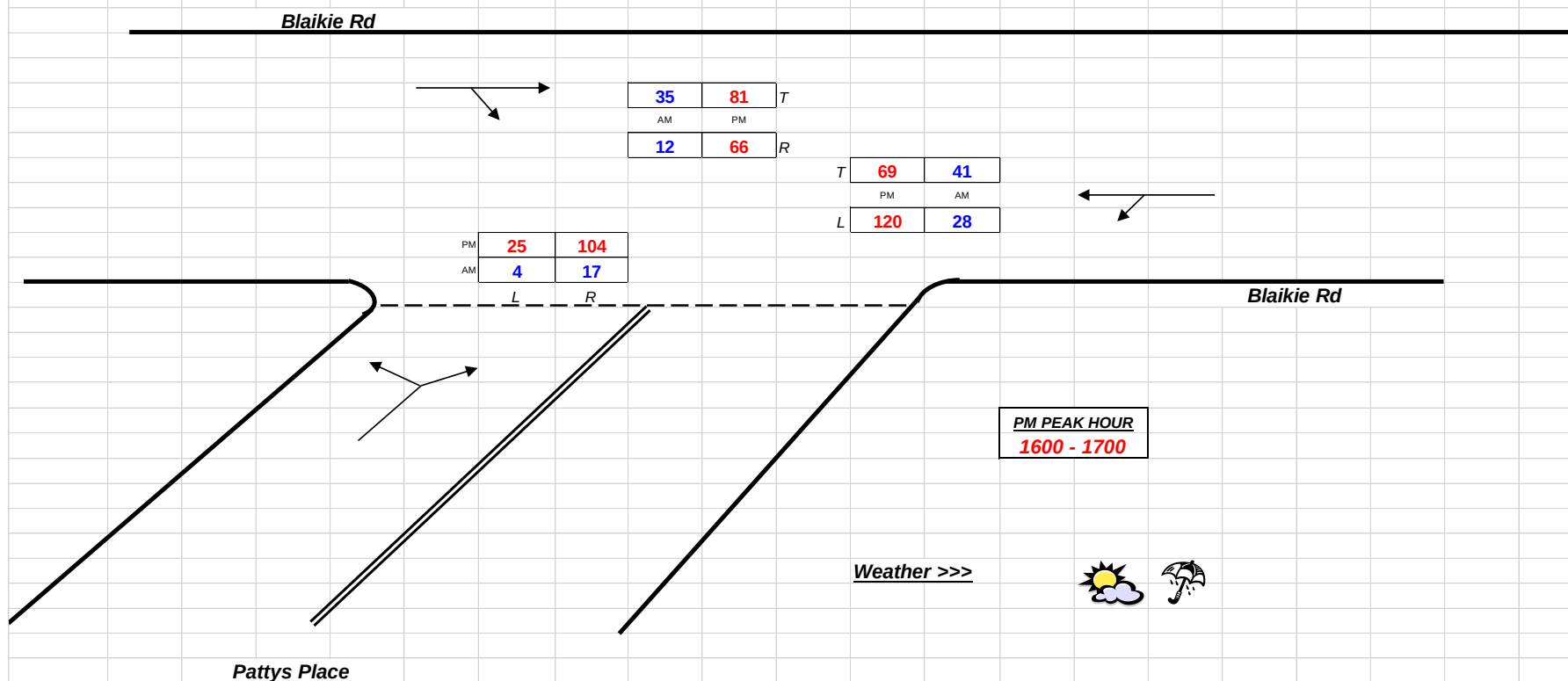
Intersection Details

Obtained via satellite

May be incorrect

AM PEAK HOUR
0745 - 0845

Combined Figures only



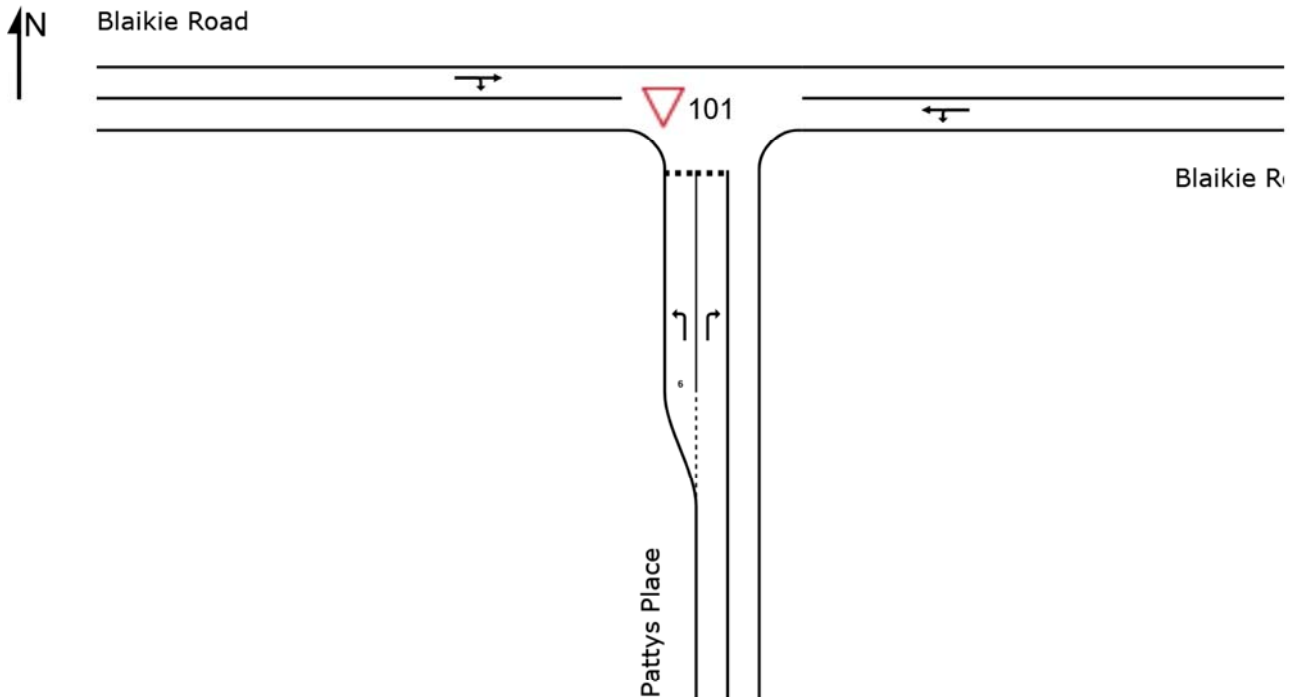
APPENDIX B

SIDRA MOVEMENT SUMMARIES

SITE LAYOUT

▽ Site: 101 [Existing AM]

Blaikie Road & Pattys Place Intersection
Site Category: (None)
Giveway / Yield (Two-Way)



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

Organisation: VARGA TRAFFIC PLANNING | Created: Monday, 29 July, 2019 9:51:28 AM

Project: Z:\DATA\Data\Jobs01\Jobs\19work\19282Y_121-133BlaikieRdJamisontown\SIDRA\190729\BlaikieRd_PattysPI_Intsn.sip8

MOVEMENT SUMMARY

▽ Site: 101 [Existing AM]

Blaikie Road & Pattys Place Intersection
 Site Category: (None)
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pattys Place												
1	L2	4	50.0	0.003	5.2	LOS A	0.0	0.1	0.12	0.48	0.12	45.6
3	R2	17	0.0	0.009	4.7	LOS A	0.0	0.2	0.10	0.53	0.10	46.0
Approach		21	9.5	0.009	4.7	LOS A	0.0	0.2	0.11	0.52	0.11	45.9
East: Blaikie Road												
4	L2	28	10.7	0.038	4.7	LOS A	0.0	0.0	0.00	0.22	0.00	48.2
5	T1	41	4.9	0.038	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	48.8
Approach		69	7.2	0.038	1.9	NA	0.0	0.0	0.00	0.22	0.00	48.5
West: Blaikie Road												
11	T1	35	8.6	0.024	0.1	LOS A	0.1	0.5	0.09	0.14	0.09	48.9
12	R2	12	0.0	0.024	4.7	LOS A	0.1	0.5	0.09	0.14	0.09	48.2
Approach		47	6.4	0.024	1.2	NA	0.1	0.5	0.09	0.14	0.09	48.7
All Vehicles		137	7.3	0.038	2.1	NA	0.1	0.5	0.05	0.24	0.05	48.2

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

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

Organisation: VARGA TRAFFIC PLANNING | Processed: Monday, 29 July, 2019 9:25:29 AM

Project: Z:\DATA\Data\Jobs01\Jobs\19work\19282Y_121-133BlaikieRdJamisontown\SIDRA\190729\BlaikieRd_PattysPl_Intsn.sip8

MOVEMENT SUMMARY

▽ Site: 101 [Existing PM]

Blaikie Road & Pattys Place Intersection
 Site Category: (None)
 Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pattys Place												
1	L2	25	0.0	0.016	4.8	LOS A	0.1	0.5	0.15	0.49	0.15	46.3
3	R2	104	1.0	0.058	4.8	LOS A	0.2	1.1	0.19	0.56	0.19	45.8
Approach		129	0.8	0.058	4.8	LOS A	0.2	1.1	0.18	0.54	0.18	45.9
East: Blaikie Road												
4	L2	120	0.0	0.100	4.6	LOS A	0.0	0.0	0.00	0.34	0.00	47.6
5	T1	69	0.0	0.100	0.0	LOS A	0.0	0.0	0.00	0.34	0.00	48.1
Approach		189	0.0	0.100	2.9	NA	0.0	0.0	0.00	0.34	0.00	47.8
West: Blaikie Road												
11	T1	81	0.0	0.075	0.3	LOS A	0.4	2.6	0.26	0.23	0.26	48.0
12	R2	66	3.0	0.075	5.1	LOS A	0.4	2.6	0.26	0.23	0.26	47.3
Approach		147	1.4	0.075	2.5	NA	0.4	2.6	0.26	0.23	0.26	47.7
All Vehicles		465	0.6	0.100	3.3	NA	0.4	2.6	0.13	0.36	0.13	47.2

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

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

Organisation: VARGA TRAFFIC PLANNING | Processed: Monday, 29 July, 2019 9:44:24 AM

Project: Z:\DATA\Data\Jobs01\Jobs\19work\19282Y_121-133BlaikieRdJamisontown\SIDRA\190729\BlaikieRd_PattysPl_Intsn.sip8

MOVEMENT SUMMARY

▽ Site: 101 [Proposed AM]

Blaikie Road & Pattys Place Intersection
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pattys Place												
1	L2	6	33.3	0.004	5.0	LOS A	0.0	0.2	0.12	0.49	0.12	45.9
3	R2	35	0.0	0.019	4.7	LOS A	0.0	0.3	0.13	0.54	0.13	45.9
Approach		41	4.9	0.019	4.7	LOS A	0.0	0.3	0.13	0.53	0.13	45.9
East: Blaikie Road												
4	L2	98	3.1	0.076	4.6	LOS A	0.0	0.0	0.00	0.38	0.00	47.4
5	T1	41	4.9	0.076	0.0	LOS A	0.0	0.0	0.00	0.38	0.00	47.9
Approach		139	3.6	0.076	3.2	NA	0.0	0.0	0.00	0.38	0.00	47.5
West: Blaikie Road												
11	T1	35	8.6	0.028	0.2	LOS A	0.1	0.8	0.18	0.19	0.18	48.3
12	R2	20	0.0	0.028	4.9	LOS A	0.1	0.8	0.18	0.19	0.18	47.7
Approach		55	5.5	0.028	1.9	NA	0.1	0.8	0.18	0.19	0.18	48.1
All Vehicles		235	4.3	0.076	3.2	NA	0.1	0.8	0.06	0.36	0.06	47.4

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

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

Organisation: VARGA TRAFFIC PLANNING | Processed: Monday, 5 August 2019 11:00:10 AM

Project: Z:\DATA\Data\Jobs01\Jobs\19work\19282Y_121-133BlaikieRdJamisontown\SIDRA\190729\BlaikieRd_PattysPl_Intsn.sip8

MOVEMENT SUMMARY

▽ Site: 101 [Proposed PM]

Blaikie Road & Pattys Place Intersection
Site Category: (None)
Giveway / Yield (Two-Way)

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Pattys Place												
1	L2	33	0.0	0.021	4.8	LOS A	0.1	0.7	0.15	0.49	0.15	46.3
3	R2	174	0.6	0.098	4.9	LOS A	0.3	1.8	0.20	0.56	0.20	45.8
Approach		207	0.5	0.098	4.9	LOS A	0.3	1.8	0.19	0.55	0.19	45.8
East: Blaikie Road												
4	L2	138	0.0	0.110	4.6	LOS A	0.0	0.0	0.00	0.36	0.00	47.5
5	T1	69	0.0	0.110	0.0	LOS A	0.0	0.0	0.00	0.36	0.00	48.0
Approach		207	0.0	0.110	3.1	NA	0.0	0.0	0.00	0.36	0.00	47.7
West: Blaikie Road												
11	T1	81	0.0	0.077	0.4	LOS A	0.4	2.7	0.28	0.24	0.28	47.9
12	R2	68	2.9	0.077	5.1	LOS A	0.4	2.7	0.28	0.24	0.28	47.2
Approach		149	1.3	0.077	2.5	NA	0.4	2.7	0.28	0.24	0.28	47.6
All Vehicles		563	0.5	0.110	3.6	NA	0.4	2.7	0.14	0.40	0.14	47.0

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

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

Organisation: VARGA TRAFFIC PLANNING | Processed: Monday, 5 August 2019 11:00:10 AM

Project: Z:\DATA\Data\Jobs01\Jobs\19work\19282Y_121-133BlaikieRdJamisontown\SIDRA\190729\BlaikieRd_PattysPI_Intsn.sip8