APPENDIX 7 TRAFFIC IMPACT ASSESSMENT AP07

RMA Engineers

TRAFFIC IMPACT ASSESSMENT

Project 4G – Integrated Egg Laying Operation

Traffic Engineering Report

Client McLean Farms Australia Pty Ltd
Project Number 25E-0010

REPORT CONTROL SHEET

Report Details	
Report Title:	Traffic Impact Assessment – Project 4G – Integrated Egg Laying Operation
Project No.:	25E-0010
Site:	Torrumbarry, Victoria
Authors:	Christian Tedman Angel Baker Isobella Kerridge

Document Control					
Revision	**Author**	**Reviewer**	**Approved for Issue**		
			Name	**Signature**	**Date**
1	C Tedman A Baker I Kerridge	A Baker A Gwatking	Adam Gwatking	 CPEng, NER, RPEV: PE0017373 RPEQ: 15158	14 / 08 / 2025
2	A Baker	A Baker A Gwatking	Adam Gwatking	 CPEng, NER, RPEV: PE0017373 RPEQ: 15158	15 / 10 / 2025

**Revision 2 – updates have been completed to address comments / feedback received from the Department of Transport and Planning (DTP) and referral agencies as part of the draft planning permit application submission in September 2025.*

Disclaimer:

RMA Engineers has undertaken this report based on accepted traffic engineering practices, standards, and information available at the time of writing. It is not intended as a quote, guarantee or warranty and does not cover any latent defects. RMA Engineers do not accept any responsibility for the authentication of accuracy of supplied information or validation of data that is outside the scope of works. RMA Engineers are not accountable for any changes to the standards, physical infrastructure conditions or planning impacts that occur after the completion date of the assessment.

The conclusions in this report should not be read in isolation. We recommend that its contents be reviewed in person with the author so that the assumptions and available information can be discussed in detail to enable the reader to make their own risk assessment in conjunction with information from other sources.

The document is produced by RMA Engineers for the sole benefit and use by the client in accordance with the contracted terms. RMA Engineers does not assume responsibility or liability to any third party arising from any use or reliance on the content of this document.

Contents

1. Introduction

RMA Engineers has been engaged by McLean Farms Australia Pty Ltd (the Client) to undertake a Traffic Impact Assessment (TIA) in support of development applications for a proposed poultry Integrated Egg Laying operation located in Torrumbarry, Victoria.

The proposed development is located within the Campaspe Shire Council (CSC) and includes the following sites:

- Chick rearing farm, referred to as Pollock's Block Rearing Farm (720,000 birds)
- Cage-free laying farm, referred to as Warwick's Block Cage Free Layer Farm (1,280,000 birds)
- Free-range laying farm, referred to as T-Block Free Range Layer Farm (800,000 birds)
- Composting facility, referred to as 'Organic Nutrients' Composting Facility

The proposed infrastructure will include a total of 36 laying sheds, 16 cage-free and 20 free-range, and 18 rearing sheds with associated ancillary infrastructure.

This report has been prepared in support of the development applications for the proposed Integrated Egg Laying operation. Three separate development applications will be lodged concurrently for assessment by the Victorian Minister for Planning.

Given the level of integration of traffic movements associated between the different proposed sites, the traffic assessment has been considered for the entire Integrated Egg Laying operation (all sites). This report considers the traffic impacts of the ultimate development scenario.

This traffic impact assessment has been undertaken in general accordance with the road transport related requirements identified in Austroads Guide to Traffic Management – Part 12: *Integrated Transport Assessments for Developments (2020).*

1.1 Report objectives and scope

The purpose of this traffic impact assessment (TIA) is to document an investigation of traffic and transport impacts of the proposed development on the surrounding road network.

The assessment considers the following:

- Estimation of traffic generation by the development and distribution on the surrounding road network.
- Review of potential operational impacts at the key intersections with the proposed development influence at the year of completion and ten year design horizon.
- Review of key intersection layouts and turn warrants.
- Safety considerations, review of historical crash data and commentary on required mitigation measures.
- Assessment of sight distance in accordance with Austroads requirements.
- High level review of the proposed development layout against relevant standards.

Where required, this report makes recommendations for the mitigation of development impacts.

1.2 Reference material

In preparing this report, reference has been made to the following:

- Austroads Guide to Traffic Management – Part 12: *Integrated Transport Assessments for Developments (2020).*
- Australian Standard AS28901.1 *Off Street Car Parking* (2004)
- Austroads Guide to Road Design, Part 3: *Geometric Design* (2023)
- Austroads Guide to Road Design, Part 4A: *Unsignalised and Signalised Intersections* (2023)
- Institute of Public Works Engineering Australasia (IPWEAQ) *Lower Order Roads Design Guidelines* (2016)
- CSC *Planning Scheme* (last updated 4 July 2025)
- Other documents as referenced within this report, including information supplied by the client.

2. Proposed development

2.1 Location and descriptions

2.1.1 Ultimate operation

The ultimate proposed development will comprise of a Rearing Farm, a Cage Free Layer Farm, a Free Range Layer Farm and an ancillary Composting Facility, to establish an Integrated Egg Laying operation.

Refer to **Figure 2-1** and **Appendix A** for the proposed concept plan of the overall operation.

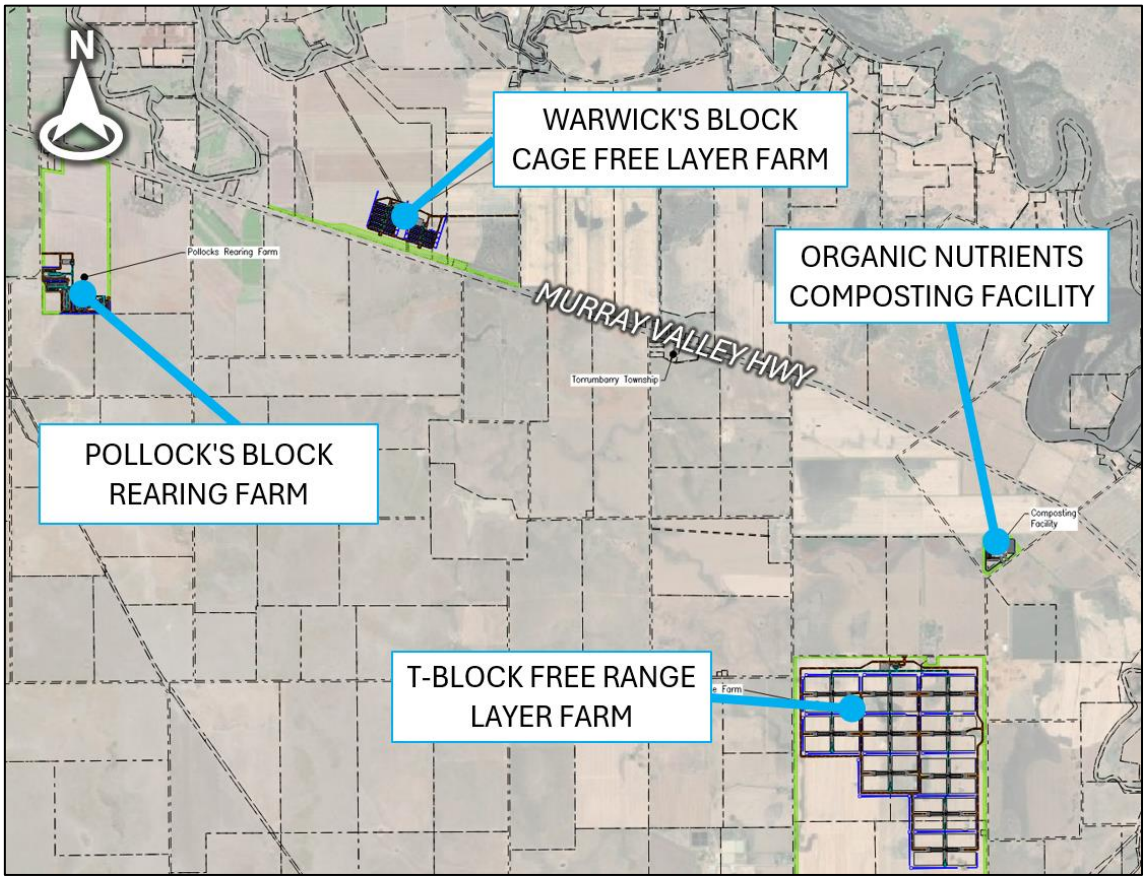


Figure 2-1: Ultimate concept layout plan

The following subsections outline the locations and descriptions of each site operation.

2.1.2 Pollock's Block Rearing Farm

The proposed Pollock's Block Rearing Farm is located on the Murray Valley Highway on land described as Lot 4 on LP206281.

The site is approximately 124.16ha in area and is located within the Farming Zone under the CSC Planning Scheme. The site is current farmland (cropping/grazing) and has minimal tree coverage.

The property is bounded by the Murray Valley Highway along the northern boundary and Davis Road along the western boundary.

The Pollock's Block Rearing Farm site locality is shown in **Figure 2-2.**

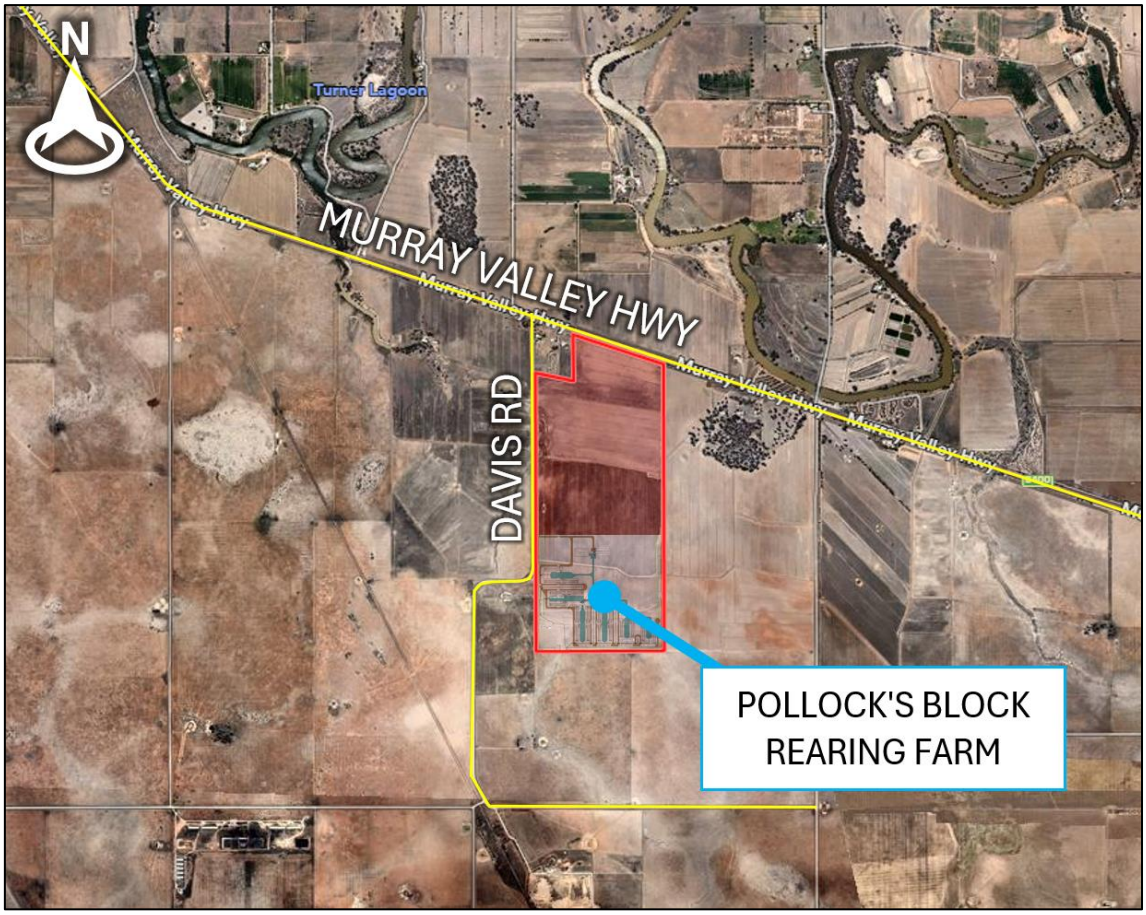


Figure 2-2: Pollock's Block Rearing Farm site locality

The proposed access to the Pollock's Block Rearing Farm is shown in **Figure 2-3.** The access and is located approximately 20 m north of the existing farm access location and will provide access to the proposed poultry sheds (for chick delivery / collection, feed delivery and manure collection).

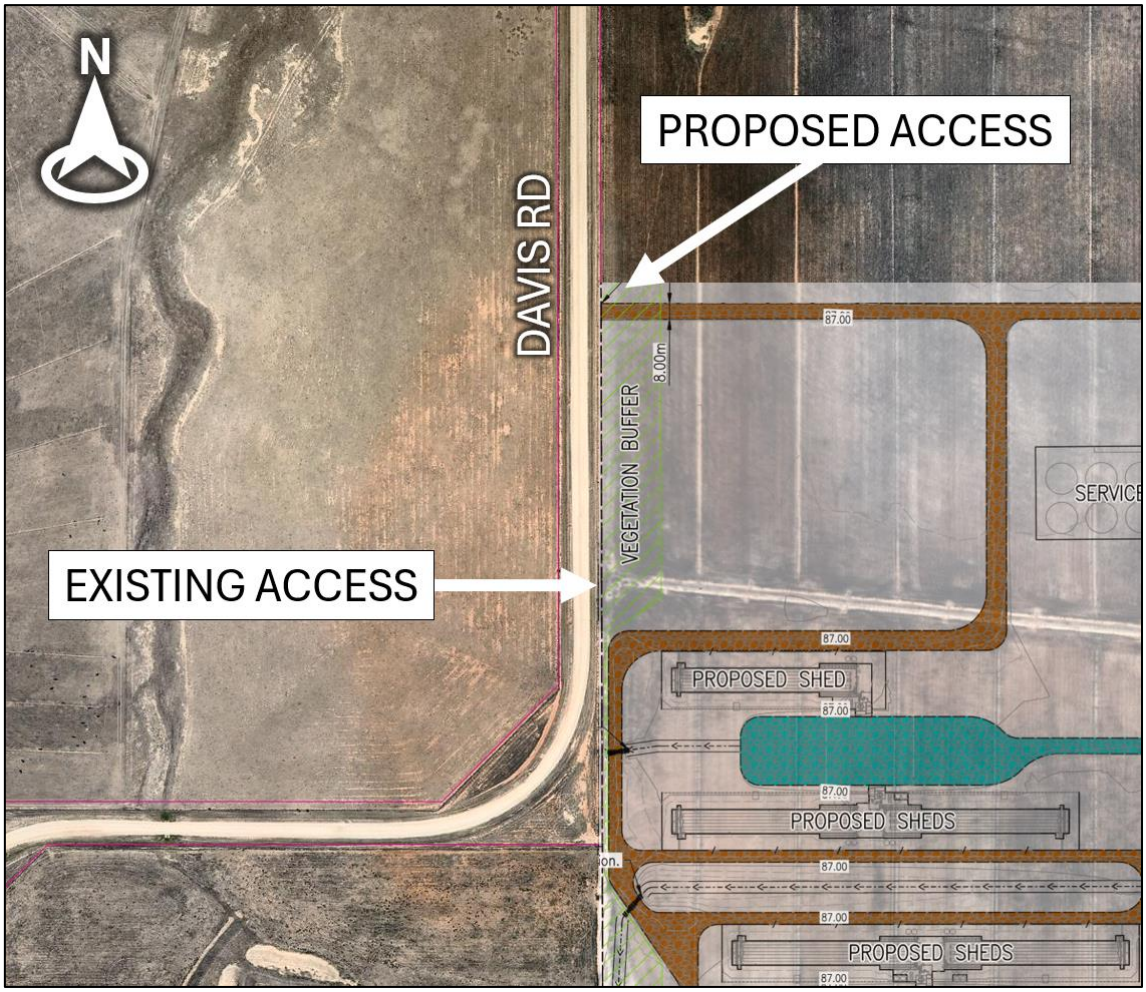


Figure 2-3: Pollock's Block Rearing Farm site access

2.1.3 Warwick's Block Cage-Free Layer Farm

The proposed Warwick's Block Cage-Free Layer Farm development is located on the Murray Valley Highway on land described by the following lots:

- Lot 16~7 on PP3663
- Lot 16A~7 on PP3663
- Lot 18~7 on PP3663
- Lot 19~7 on PP3663
- Lot 12~7 on PP3663
- Lot 12A~7 on PP3663
- Lot 2 on PS429220
- Unmade road reserve

The site is approximately 549.18ha in area and and is located within the Farming Zone under the CSC Planning Scheme. The site is current farmland (cropping/grazing) and has minimal tree coverage. The property is bounded by the Murray Valley Highway along the southern boundary, Heppell Road along the eastern boundary, and Gunbower Creek to the north and west.

The Warwick's Block Cage-Free Layer Farm site locality is shown in **Figure 2-4.**

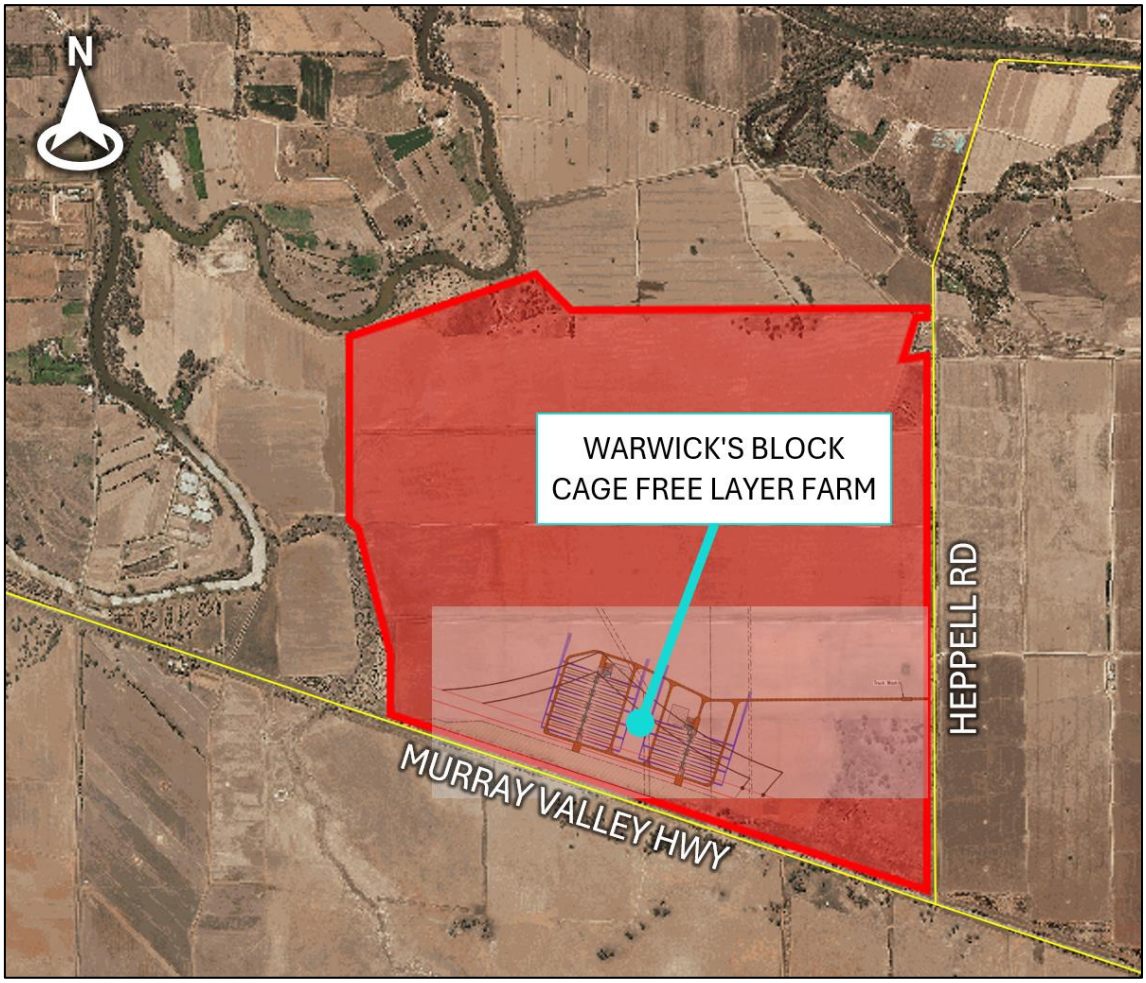


Figure 2-4: Warwick's Block Cage-Free Layer Farm site locality

The proposed access shown in **Figure 2-5** will be located approximately 800 m north of the Heppell Road/Murray Valley Highway intersection and will provide access to the proposed poultry sheds (for pullet delivery / hen collection, feed delivery, egg collection and manure collection).

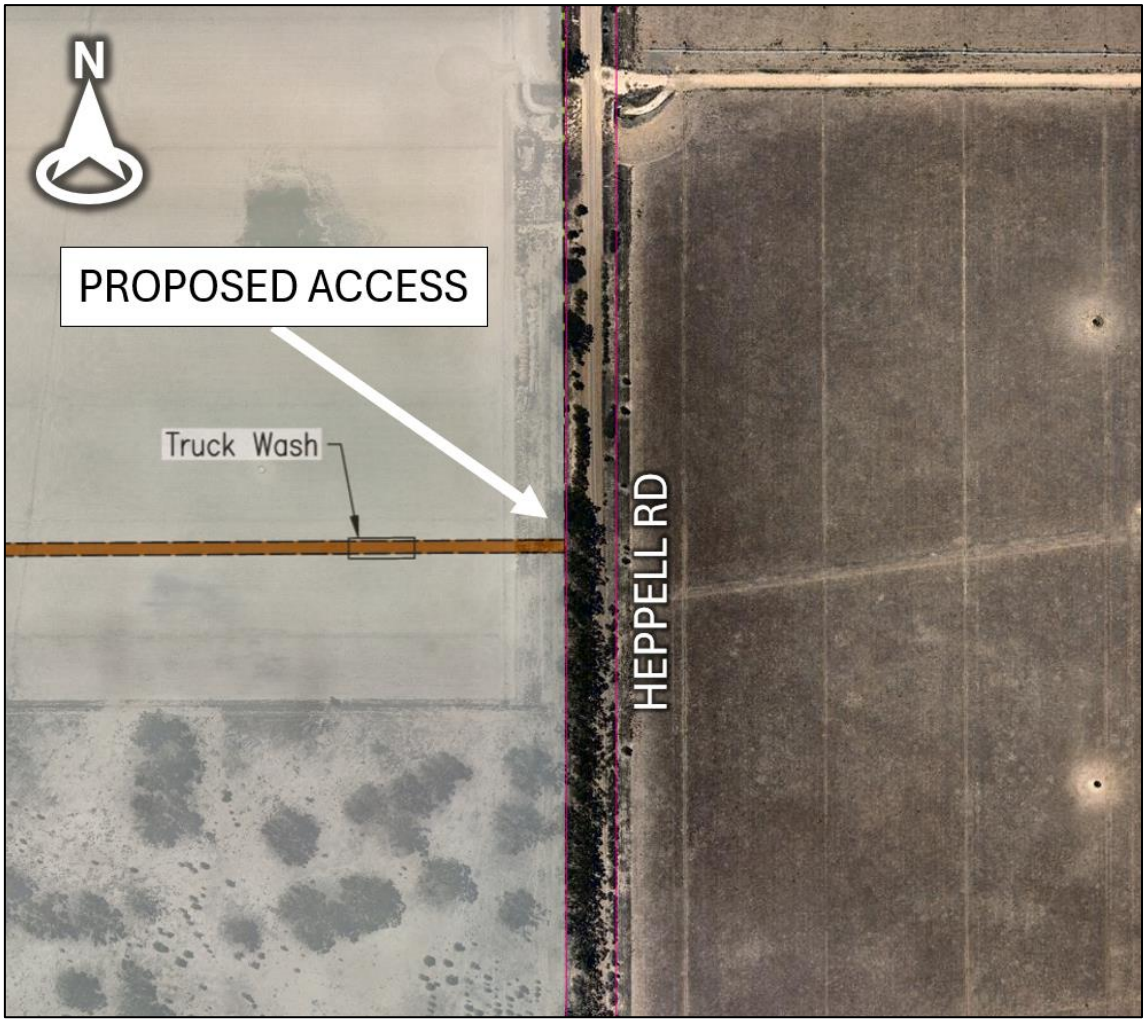


Figure 2-5: Warwick's Block Cage Free Layer Farm site access

2.1.4 T-Block Free-Range Layer Farm and 'Organic Nutrients' Composting Facility

The proposed T-Block Free-Range Layer Farm and 'Organic Nutrients' Composting Facility is located on the Murray Valley Highway on land described by the following lots:

- Lot 1 on PS403267
- Lot 2 on PS403267
- Lot 1 on LP86931
- Lot 1 on PS547702
- Lot 2 on PS547702
- Lot 2 on PS404891
- Lot 23~3 on PP3663
- Lot 24~3 on PP3663
- Lot 18A~3 on PP3663

The site is approximately 1136.02ha in area and is located within the Farming Zone under the CSC Planning Scheme. The site is current farmland (cropping/grazing) and has minimal tree coverage. The development is bounded by the Murray Valley Highway to the north, Baillieu Road to the east and Roslynmead Road to the west.

The T-Block Free-Range Layer Farm and the 'Organic Nutrients' Composting Facility site locality is shown in **Figure 2-6.**

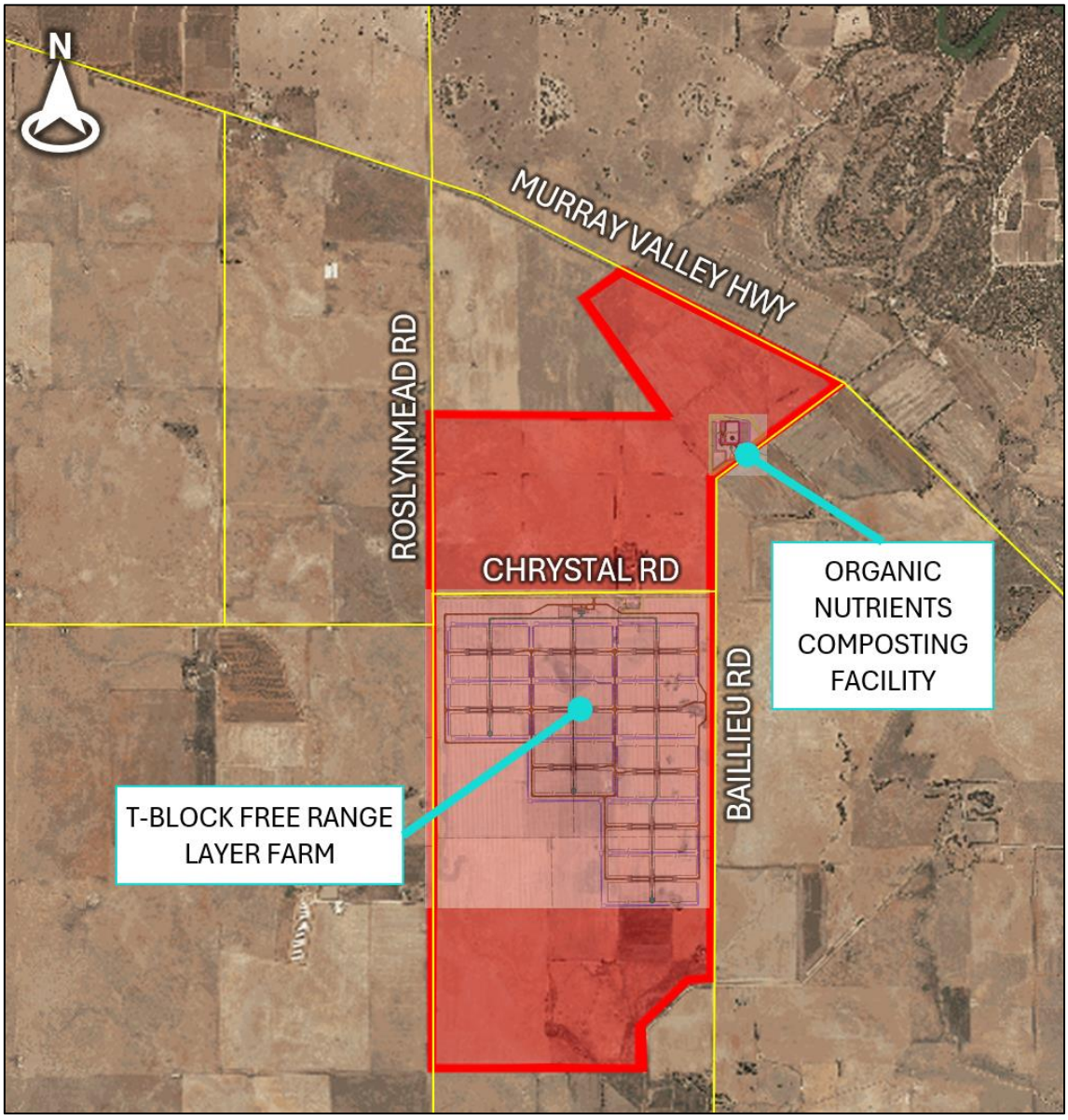


Figure 2-6: T-Block Free-Range Layer Farm and 'Organic Nutrients' Composting Facility locality

Access to the T-Block Free-Range Layer Farm is proposed via Chrystal Road, shown in **Figure 2-7**, which will provide access to the proposed poultry sheds (for pullet delivery / hen collection, feed delivery, egg collection and manure collection).

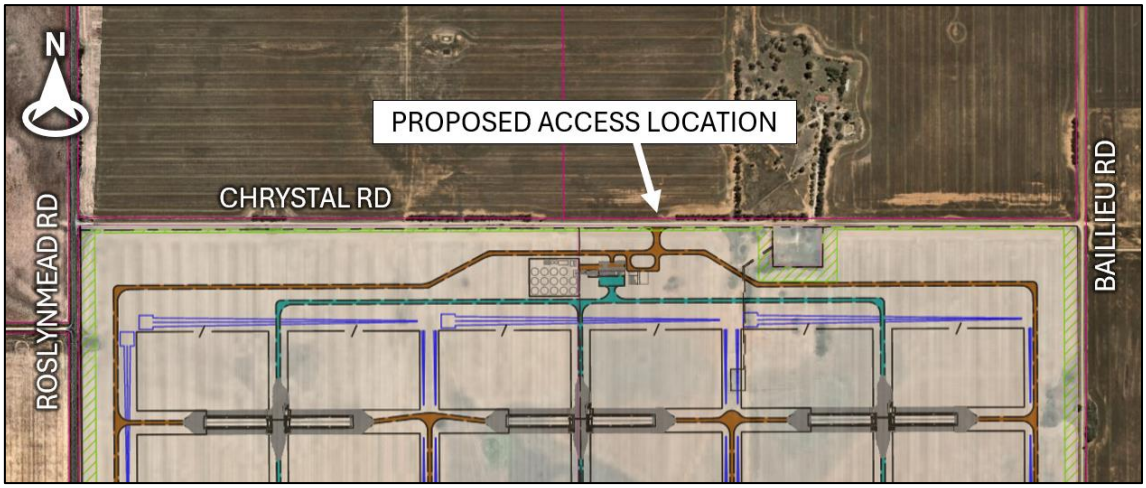


Figure 2-7: T-Block Free Range Layer Farm site access

Access to the 'Organic Nutrients' Composting Facility is proposed via Baillieu Road, approximately 1km north of the Baillieu Road / Chrystal Road intersection, as shown in **Figure 2-8**.

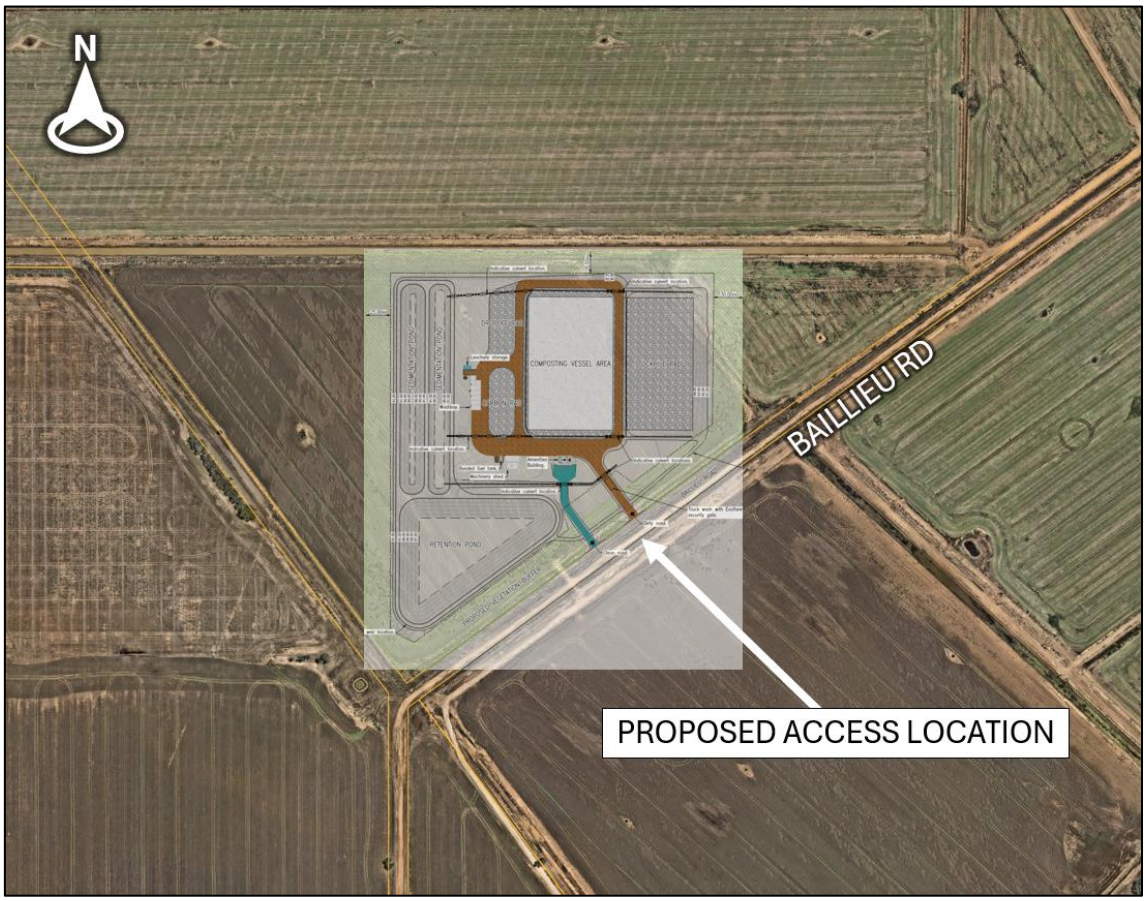


Figure 2-8: 'Organic Nutrients' Composting Facility site access

3. Development details

The proposed Integrated Egg Laying operation consists of the following sites:

- Pollock's Block Rearing Farm (720,000 birds),
- Warwick's Block Cage Free Layer Farm (1,280,000 birds),
- T-Block Free Range Layer Farm (800,000 birds) and,
- 'Organic Nutrients' Composting Facility.

The development will operate between the hours of 6am and 5pm, seven days a week. Relevant operational details of the farms are discussed below.

3.1 Pollock's Block Rearing Farm

3.1.1 Operational and staging details

The proposed development involves the construction of a new poultry rearing farm which is used for the rearing of laying birds from day-old chicks until they reach point-of-lay (around 17 weeks). At this age, the birds are collected from the farm and transferred to the Applicant's proposed egg laying farms also to be constructed within Torrumbarry. While being reared, the birds will be wholly contained within the proposed sheds at all times.

A maximum of 720,000 birds are proposed to be reared on the farm within 18 purpose built, best practice rearing sheds. These sheds will be delivered in two stages:

- Stage One: consisting of twelve sheds, commencing full operation in April 2028.
- Stage Two: consisting of six sheds, commencing full operation in January 2040.

The proposed sheds will be supported by ancillary services and infrastructure including a staff office and amenities building, workshop, water treatment, feed silos, and truck wash. The farm will also include construction of an access driveway connecting to Davis Road, internal driveways, parking and manoeuvring areas, and an extension of the electricity network.

3.1.2 Expected traffic movements and design vehicles

Details regarding the vehicle movements associated with the Pollock's Block Rearing Farm development are provided below. It is noted that the information below considers the proposed ultimate form (i.e. all stages combined).

Staff

A total of 20 full time staff will be employed to carry out the site operations seven days a week.

The staff will arrive for their shift no later than 6am and leave the site when their shift ends, at approximately 2pm.

It is understood that staff members will travel to and from surrounding townships such as Echuca, Moama, Gunbower and Wharparilla in private (light) vehicles. As multiple staff may travel together, a carpooling rate of 10%-20% has been adopted for this assessment.

Deliveries

The deliveries to and from the site are expected to involve the following operational activities and associated vehicle movements:

- Chick delivery: One semi-trailer will deliver chicks to the development site once per fortnight (i.e. every two weeks). The semi-trailer will travel from Bendigo, Victoria. These deliveries are expected to occur on any given time and day between 7am to 1pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Pullet collection: 21 semi-trailers will collect pullets from the development site every three weeks (over a one week period), totalling 364 loads per year. The semi-trailers will deliver the pullets to T-Block and Warwick's Block (associated laying farms). These deliveries are expected to occur on any given time and day between 6am to 4pm from Monday to Friday Collections can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Feed delivery: Nine semi-trailers will deliver feed to the development site each week. The semi-trailers will travel from Colbinabbin. These deliveries are expected to occur between 7am to 5pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Manure collection: 7 semi-trailers will deliver manure to the 'Organic Nutrients' Composting Facility each week. These deliveries are expected to occur between 6am to 4pm from Monday to Friday. The collection can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.

Table 3-1 and **Table 3-2** provide a summary of the anticipated daily development traffic volumes based on the operational details above.

Table 3-1: Expected traffic movements (staff) – Pollock's Block Rearing Farm

Trip type	Arrival time	Departure time	Day(s)	No. of Staff	Origin / Destination	Traffic Generation	Average development traffic generation (ultimate scenario)		
							Estimated annual traffic generation (no. vehicles)	Estimated weekly traffic generation (no. vehicles)	Estimated daily traffic generation (no. vehicles)
Poultry staff	6-7am	3-4pm	Everyday	**All Stages:** 20 full time staff	Echuca/Moama/Gunbower/Wharparilla	**All Stages:** 18 vehicles per day, 7 days a week	6,552	126	18
Total							**6,552**	**126**	**18**

Table 3-2: Expected traffic movements and design vehicles (deliveries and collections) – Pollock's Block Rearing Farm

Trip type	Arrival time	Departure time	Vehicle Type	Day(s)	Origin / Destination	Traffic Generation	Average development traffic generation (ultimate scenario)		
							Estimated annual traffic generation (no. vehicles)	Estimated weekly traffic generation (no. vehicles)	Estimated daily traffic generation (no. vehicles)
Chicks in	7am-1pm (varies)	7am-1pm (varies)	19m semi	Mon – Fri	Bendigo	**All Stages:** 1 vehicle, every 2 weeks	26	0.5	0.10
Pullet collection	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	T-Block and Warwick's Block Farms *NOTE: Truck is stationed at T-Block when not in use.*	**All Stages:** 21 vehicles over a week, every 3 weeks *Note: Trucks will arrive staggered over the course of one week.*	364	7	1.40
Feed delivery	7am-5pm (varies)	7am-5pm (varies)	19m semi	Mon – Fri	Colbinabbin	**All Stages:** 9 vehicles per week, every week	468	9	1.80
Manure collection	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	'Organic Nutrients' Composting Facility *NOTE: Truck is stationed on-site when not in use.*	**All Stages:** 7 vehicles per week, every week	364	7	1.40
Total							**1,222**	**23.5**	**4.70**

From **Table 3-1** and **Table 3-2**, it is identified that the development will generate low daily traffic volumes, consisting of an average of five heavy vehicles and 18 light vehicles per day. This equates to a combined average of 46 vehicle trips per day (i.e. 23 vehicles per day).

3.2 Warwick's Block Cage-Free Layer Farm

3.2.1 Operational and staging details

The proposed development involves the construction of a new poultry layer farm which is used for production of eggs intended for human consumption. The proposed farm will accommodate a maximum of 1,280,000 layer birds within 16 purpose built, best practice layer sheds. These sheds will be delivered in two stages:

- Stage One: consisting of eight sheds, commencing full operation in April 2028.
- Stage Two: consisting of eight sheds, commencing full operation in January 2040.

The areas of the subject site outside of the proposed poultry farm will continue to be used for cropping purposes.

The proposed sheds will be supported by ancillary services and infrastructure including a staff office and amenities building, egg collection infrastructure and holding rooms, workshop, water treatment, feed silos and truck wash. The farm will also include construction of an access driveway connecting to Heppell Road, internal driveways, parking and manoeuvring areas, and an extension of the electricity network. Water supply will be provided by extension of the existing arrangements and licenses servicing the site.

The proposed farm will house layer birds that are placed within the sheds at around 17 weeks of age. Once placed the typical laying cycle will last for around 68 weeks, including 66 weeks of production, and 2 weeks of down time allocated for shed cleaning, and set up prior to the next batch. As a cage free farm, the birds will be free to move around but will always be contained within the sheds.

3.2.2 Expected traffic movements and design vehicles

Details regarding the vehicle movements associated with the Warwick's Block Cage Free Layer Farm development are provided below. It is noted that the information below considers the proposed ultimate form (i.e. all stages combined).

Staff

A total of 44 full time staff will be employed to carry out the site operations seven days a week.

The staff will arrive for their shift no later than 6am and leave the site when their shift ends, at approximately 2pm.

It is understood that staff members will travel to and from surrounding townships such as Echuca, Moama, Gunbower and Wharparilla in private (light) vehicles. As multiple staff may travel together, a carpooling rate of 10%-20% has been adopted for this assessment.

Deliveries

The deliveries to and from the site are expected to involve the following operational activities and associated vehicle movements:

- Pullet delivery: 18 semi-trailer's will deliver pullets to the development site every three weeks (during a one week period). The semi-trailer's will travel from Pollock's Block Rearing Farm. These deliveries are expected to occur on any given time and day between 6am to 4pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Hen collection: Seven semi-trailer loads will be required to collect hens from each shed at the end of each cycle. It is anticipated that 24 sheds will be serviced per year, totalling 168 loads per year. The semi-trailers will deliver the hens to the 'Organic Nutrients' Composting Facility. These collections / deliveries are expected to occur between 7pm to 3am from Monday to Friday.
- Feed delivery: 48 semi-trailers will deliver feed to the development site each week. The semi-trailers will travel from Colbinabbin. These deliveries are expected to occur between 6am to 5pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Egg collection: 6 semi-trailers will collect eggs from the development site each day. The semi-trailers will travel to/from Merrifield. These deliveries are expected to occur between 6am to 4pm from Monday to Friday. The collection can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Manure collection: 24 semi-trailers will deliver manure to the 'Organic Nutrients' Composting Facility each week. These deliveries are expected to occur between 6am to 4pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.

Table 3-3 and **Table 3-4** provide a summary of the anticipated daily development traffic volumes based on the operational details above.

Table 3-3: Expected traffic movements (staff) – Warwick's Block Cage Free Layer Farm

Trip type	Arrival time	Departure time	Day(s)	No. of Staff	Origin / Destination	Traffic Generation	Average development traffic generation (ultimate scenario)		
							Estimated annual traffic generation (no. vehicles)	Estimated weekly traffic generation (no. vehicles)	Estimated daily traffic generation (no. vehicles)
Poultry staff	5-6am	2-3pm	Everyday	**All Stages:** 44 full time staff	Echuca/Moama/Gunbower/Wharparilla	**All Stages:** 40 vehicles per day, 7 days a week	14,560	280	40
Total							**14,560**	**280**	**40**

Table 3-4: Expected traffic movements and design vehicles (deliveries and collections) – Warwick's Block Cage Free Layer Farm

Trip type	Arrival time	Departure time	Vehicle Type	Day(s)	Origin / Destination	Traffic Generation	Average development traffic generation (ultimate scenario)		
							Estimated annual traffic generation (no. vehicles)	Estimated weekly traffic generation (no. vehicles)	Estimated daily traffic generation (no. vehicles)
Pullet delivery	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	Pollock's Block Rearing Farm *NOTE: Truck is stationed at T-Block when not in use.*	**All Stages:** 18 vehicles, every 3 weeks	312	6	1.20
Hen collection	7pm-3am (varies)	7pm-3am (varies)	19m semi	Mon – Fri	'Organic Nutrients' Composting Facility *NOTE: Truck is stationed at T-Block when not in use.*	**All Stages:** 168 vehicles per year *Note: Hens are removed over the course of 2 days.* *24 sheds x 7 loads = 168 trips removed over 2 days.*	168	3.2	0.65
Feed delivery	6am-5pm (varies)	6am-5pm (varies)	19m semi	Mon – Fri	Colbinabbin	**All Stages:** 48 vehicles per week, every week	2,496	48	9.60
Egg collection	6am-4pm (varies)	6am-4pm (varies)	19m semi	Every day	Merrifield	**All Stages:** 6 vehicles per day, 7 days a week	2,184	42	6.00
Manure collection	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	'Organic Nutrients' Composting Facility *NOTE: Truck is stationed on-site when not in use.*	**All Stages:** 24 vehicles per week, every week	1,248	24	4.80
Total							**6,408**	**123.2**	**22.25**

From **Table 3-3** and **Table 3-4**, it is identified that the development will generate an average of 22 heavy vehicles and 40 light vehicles per day. This equates to a combined average of 124 vehicle trips per day (i.e. 62 vehicles per day).

3.3 T-Block Free Range Layer Farm

3.3.1 Operation and staging details

The proposed development involves the construction of a new poultry layer farm which is used for production of eggs intended for human consumption. The proposed farm will accommodate a maximum of 800,000 layer birds within 20 purpose built, best practice layer sheds. These sheds will be constructed in 2 stages:

- Stage One: consisting of 10 sheds, commencing full operation in April 2028.
- Stage Two: consisting of 10 sheds, commencing full operation in January 2042.

The areas of the subject site outside of the proposed poultry farm will continue to be used for cropping purposes.

The proposed sheds will be supported by ancillary services and infrastructure including a staff office and amenities building, egg collection infrastructure and holding rooms, workshop, water treatment, feed silos, truck wash, perimeter fencing, and internal range areas. The farm will also include construction of an access driveway connecting to Baillieu Road, internal driveways, parking and manoeuvring areas, and an extension of the electricity network. Water supply will be provided by extension of the existing arrangements and licenses servicing the site.

The proposed farm will house layer birds that are placed within the sheds at around 17 weeks of age. Once placed the typical laying cycle will last for around 68 weeks, including 66 weeks of production, and 2 weeks of down time allocated for shed cleaning, and set up prior to the next batch. The farm is intended to operate as a free-range layer farm whereby the birds are provided with daily access to the range areas. However, the sheds will be constructed to allow them to operate as free range or cage free sheds as required.

3.3.2 Expected traffic movements and design vehicles

Details regarding the vehicle movements associated with the T-Block Free Range Layer Farm development are provided below. It is noted that the information below considers the proposed ultimate form (i.e. all stages combined).

Staff

A total of 48 full time staff will be employed to carry out the site operations seven days a week,

The staff will arrive for their shift no later than 6am and leave the site when their shift ends, at approximately 2pm.

It is understood that staff members will travel to and from surrounding townships such as Echuca, Moama, Gunbower and Wharparilla in private (light) vehicles. As multiple staff may travel together, a carpooling rate of 10%-20% has been adopted for this assessment.

Deliveries

The deliveries to and from the site are expected to involve the following operational activities and associated vehicle movements:

- Pullet delivery: 10 semi-trailer's will deliver pullets to the development site every three weeks (during one week). The semi-trailer's will travel from Pollock's Block Rearing Farm. These deliveries are expected to occur on any given time and day between 6am to 4pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Hen collection: Seven semi-trailer loads will be required to collect hens from each shed at the end of each cycle. It is anticipated that 16 sheds will be serviced per year, totalling 112 loads per year. The semi-trailers will deliver the hens to the 'Organic Nutrients' Composting Facility. These collections / deliveries are expected to occur between 7pm to 3am from Monday to Friday.
- Feed delivery: 30 semi-trailers will deliver feed to the development site each week. The semi-trailers will travel from Colbinabbin. These deliveries are expected to occur between 6am to 5pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Egg collection: Four semi-trailers will collect eggs from the development site each day. The semi-trailers will travel to/from Merrifield. These deliveries are expected to occur between 6am to 5pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Manure collection: 14 semi-trailers will deliver manure to the 'Organic Nutrients' Composting Facility each week. These deliveries are expected to occur between 6am to 4pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.

Table 3-5 and **Table 3-6** provide a summary of the anticipated daily development traffic volumes based on the operational details above.

Table 3-5: Expected traffic movements (staff) – T-Block Free Range Layer Farm

Trip type	Arrival time	Departure time	Day(s)	No. of Staff	Origin / Destination	Traffic Generation	Average development traffic generation (ultimate scenario)		
							Estimated annual traffic generation (no. vehicles)	Estimated weekly traffic generation (no. vehicles)	Estimated daily traffic generation (no. vehicles)
Poultry staff	5-6am	2-3pm	Everyday	**All Stages:** 48 full time staff	Echuca/Moama/Gunbower/Wharparilla	**All Stages:** 44 vehicles per day, 7 days a week	16,016	308	44
Total							**16,016**	**308**	**44**

Table 3-6: Expected traffic movements and design vehicles (deliveries and collections) – T-Block Free Range Layer Farm

Trip type	Arrival time	Departure time	Vehicle Type	Day(s)	Origin / Destination	Traffic Generation	Average development traffic generation (ultimate scenario)		
							Estimated annual traffic generation (no. vehicles)	Estimated weekly traffic generation (no. vehicles)	Estimated daily traffic generation (no. vehicles)
Pullet delivery	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	Pollock's Block Rearing Farm *NOTE: Truck is stationed at T-Block when not in use.*	**All Stages:** 10 vehicles, every 3 weeks	174	3.3	0.67
Hen collection	7pm-3am (varies)	7pm-3am (varies)	19m semi	Mon – Fri	'Organic Nutrients' Composting Facility *NOTE: Truck is stationed at T-Block when not in use.*	**All Stages:** 112 vehicles per year	112	2.15	0.43
Feed delivery	6am-5pm (varies)	6am-5pm (varies)	19m semi	Mon – Fri	Colbinabbin	**All Stages:** 30 vehicles per week, every week	1,560	30	6.00
Egg collection	6am-4pm (varies)	6am-4pm (varies)	19m semi	Every day	Merrifield	**All Stages:** 4 vehicles per day, 7 days a week	1,456	28	4.00
Manure collection	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	'Organic Nutrients' Composting Facility *NOTE: Trucks is stationed on-site when not in use.*	**All Stages:** 14 vehicles per week, every week	728	14	2.80
Total							**4,030**	**77.5**	**13.90**

From **Table 3-5** and **Table 3-6**, it is identified that the development will generate an average of 14 heavy vehicles and 44 light vehicles per day. This equates to a combined average of 116 vehicle trips per day (i.e. 58 vehicles per day).

3.4 Organic Nutrients Composting Facility

3.4.1 Operational details and staging

The T-Block Free Range Layer Farm development application also includes an ancillary composting facility located on Lot 2 on PS404891. This 'Organic Nutrients' Composting Facility is located directly to the north-east of T-Block Free Range Layer Farm and will be sized to accept manure and floor litter directly from the poultry farms (T-Block, Warwick's Block and Pollock's Block) which is then composted to create a soil conditioner and fertilizer product which will be used for own use off site.

3.4.2 Expected traffic movements and design vehicles

Details regarding the vehicle movements associated with the Organic Nutrients Composting Facility development are provided below. It is noted that the information below considers the proposed ultimate form (i.e. all stages combined).

Staff

A total of five full time staff will be employed to carry out the site operations seven days a week. The staff travelling to and from the site will arrive for their shift at approximately 7am and leave the site when their shift ends, at approximately 3pm.

It is understood that all staff members will travel to and from surrounding townships such as Echuca, Moama, Gunbower and Wharparilla in private (light) vehicles. It is noted that multiple staff may travel in the same light vehicle, however for a conservative assessment it has been assumed that each staff member will travel separately.

Deliveries

The deliveries to and from the site are expected to involve the following operational activities and associated vehicle movements:

- Carbon source: Nine semi-trailers will deliver carbon source to the development site every week. The semi-trailers will travel from various locations within Victoria. These deliveries are expected to occur on any given time and day between 6am to 4pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Manure delivery: 45 semi-trailers will deliver manure from the other farm sites (Pollock's Block, Warwick's Block, T-Block) each week. These deliveries are expected to occur on any given time and day between 6am to 4pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.
- Composting: 29 semi-trailers will deliver compost to other farm sites (Warwick's Block and T-Block) each week. These deliveries are expected to occur on any given time and day between 6am to 4pm from Monday to Friday. The delivery can be arranged so that it doesn't coincide with any other deliveries or collections occurring on the site.

Table 3-7 and **Table 3-8** provide a summary of the anticipated daily development traffic volumes based on the operational details above.

Table 3-7: Expected traffic movements (staff) – Organic Nutrients composting Facility

Trip type	Arrival time	Departure time	Day(s)	No. of Staff	Origin / Destination	Traffic Generation	Average development traffic generation (ultimate scenario)		
							Estimated annual traffic generation (no. vehicles)	Estimated weekly traffic generation (no. vehicles)	Estimated daily traffic generation (no. vehicles)
Composting Facility staff	6-7am	3-4pm	Everyday	**All Stages:** 5 full time staff	Echuca/Moama/Gunbower/Wharparilla	**All Stages:** 5 vehicles per day, 5 days a week	1,300	25	5
Total							**1,300**	**25**	**5**

Table 3-8: Expected traffic movements and design vehicles (deliveries and collections) - Organic Nutrients composting Facility

Trip type	Arrival time	Departure time	Vehicle Type	Day(s)	Origin / Destination	Traffic Generation	Average development traffic generation (ultimate scenario)		
							Estimated annual traffic generation (no. vehicles)	Estimated weekly traffic generation (no. vehicles)	Estimated daily traffic generation (no. vehicles)
Carbon source	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	Various	**All Stages:** 9 vehicles per week, every weeks	468	9	1.80
Manure delivery	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	Pollock's Block, Warwick's Block and T-Block Farms	**All Stages:** 45 vehicles per week, every week	2,340[1]	45[1]	9.00[1]
Composting	6am-4pm (varies)	6am-4pm (varies)	19m semi	Mon – Fri	Warwick's Block T-Block	**All Stages:** 29 vehicles per week, every week	1,508	29	5.80
Total							**4,316**	**83**	**16.60**

[1] *These movements are already accounted for in each of the farm generation tables above (*Table 3-2, Table 3-4 and Table 3-6*)*

From **Table 3-7** and **Table 3-8**, it is identified that the development will generate low daily traffic volumes, consisting of an average of 17 heavy vehicles and 5 light vehicles per day. This equates to a combined average of 44 vehicle trips per day (i.e. 22 vehicles per day).

3.5 Summary

Table 3-9 summarises the estimated daily traffic generation for the development as a whole.

Table 3-9: Estimated daily traffic generation summary – total development (all sites)

Site	Estimated daily traffic generation (no. vehicles)	
	Staff	Heavy vehicles
Pollock's Block Rearing Farm	18	5.7
Warwick's Block Cage Free Layer Farm	40	21.9
T-Block Free Range Layer Farm	44	13.9
'Organic Nutrients' Composting Facility	5	7.6[1]
Total	**107**	**48.5**

[1]*A total of 9 vehicle trips have been excluded from the composting site's heavy vehicle trip count, as these trips are already accounted for within the respective farm heavy vehicle traffic volumes presented in this table.*

As indicated above, the development as a whole is expected to generate 107 light vehicles and 49 heavy vehicles per day. These vehicles will be dispersed between the four sites, and the arrival/departure of heavy vehicles will be distributed throughout the day.

The maximum number of vehicles proposed to enter and exit the development site per hour are associated with staff vehicle movements as the heavy vehicle movements is distributed evenly throughout the day.

3.5.1 Servicing and visitors

In addition to the above, the proposed development sites are expected to have other ad-hoc trips associated with servicing (such as maintenance, contractors and small deliveries), as well as visitors. On average, these volumes are expected to be low in comparison with the operation of the sites and will occur so that they don't coincide with any other deliveries or peak hours. Because of this, these types of trips have not been included in the assessment.

3.5.2 Waste and refuse collection

It is anticipated that there will be a number of additional heavy vehicles associated with waste collection at each of the development sites. All solid waste not being transferred to the composting facility (i.e. general refuse and cardboard) will be transported via a refuse collection vehicle (10.5m long rigid vehicle) to an approved waste disposal facility by a licensed contractor. General waste will be transported to the Veolia Patho Landfill site on Davis Road (to the south of the Pollock's Block Rearing Farm), and cardboard will be transported to a sorting/recycling facility in Echuca. The expected waste collection details for the total development (all stages) are outlined in the **Table 3-10** below.

Table 3-10: Estimated waste collection traffic generation

Site	Estimated refuse collection vehicle traffic generation	
	Weekly (no. vehicles)	**Daily (no. vehicles)**
Pollock's Block Rearing Farm	1 (general refuse) 1 (cardboard/recyclables)	0.2 (general refuse) 0.2 (cardboard/recyclables)
Warwick's Block Cage Free Layer Farm	1 (general refuse) 1 (cardboard/recyclables)	0.2 (general refuse) 0.2 (cardboard/recyclables)
T-Block Free Range Layer Farm	1 (general refuse) 1 (cardboard/recyclables)	0.2 (general refuse) 0.2 (cardboard/recyclables)
'Organic Nutrients' Composting Facility	1 (general refuse)	0.2 (general refuse)
Total	**4 (general refuse)** **3 (cardboard/recyclables)**	**0.8 (general refuse)** **0.6 (cardboard/recyclables)**

The waste collection traffic can be managed to occur during off-peak periods within normal business hours, from Monday to Friday. The average number of daily trips generated by the waste collection is deemed minimal with less than one vehicle for general waste collection and less than one vehicle for cardboard collection per day. Because of this, the waste collection trips have not been included in the assessment as they will not impact upon the peak hour assessment periods discussed in **Section 4.5.5.**

4. Existing transport environment

4.1 Surrounding road network

The primary traffic network providing access to the subject sites is via the following roads:

- Murray Valley Highway (all sites)
- Roslynmead Road
- Heppell Road
- Davis Road
- Chrystal Road
- Baillieu Road

The primary traffic network is shown in **Figure 4-1**. The specific travel routes associated with each site is provided in **Appendix B**.

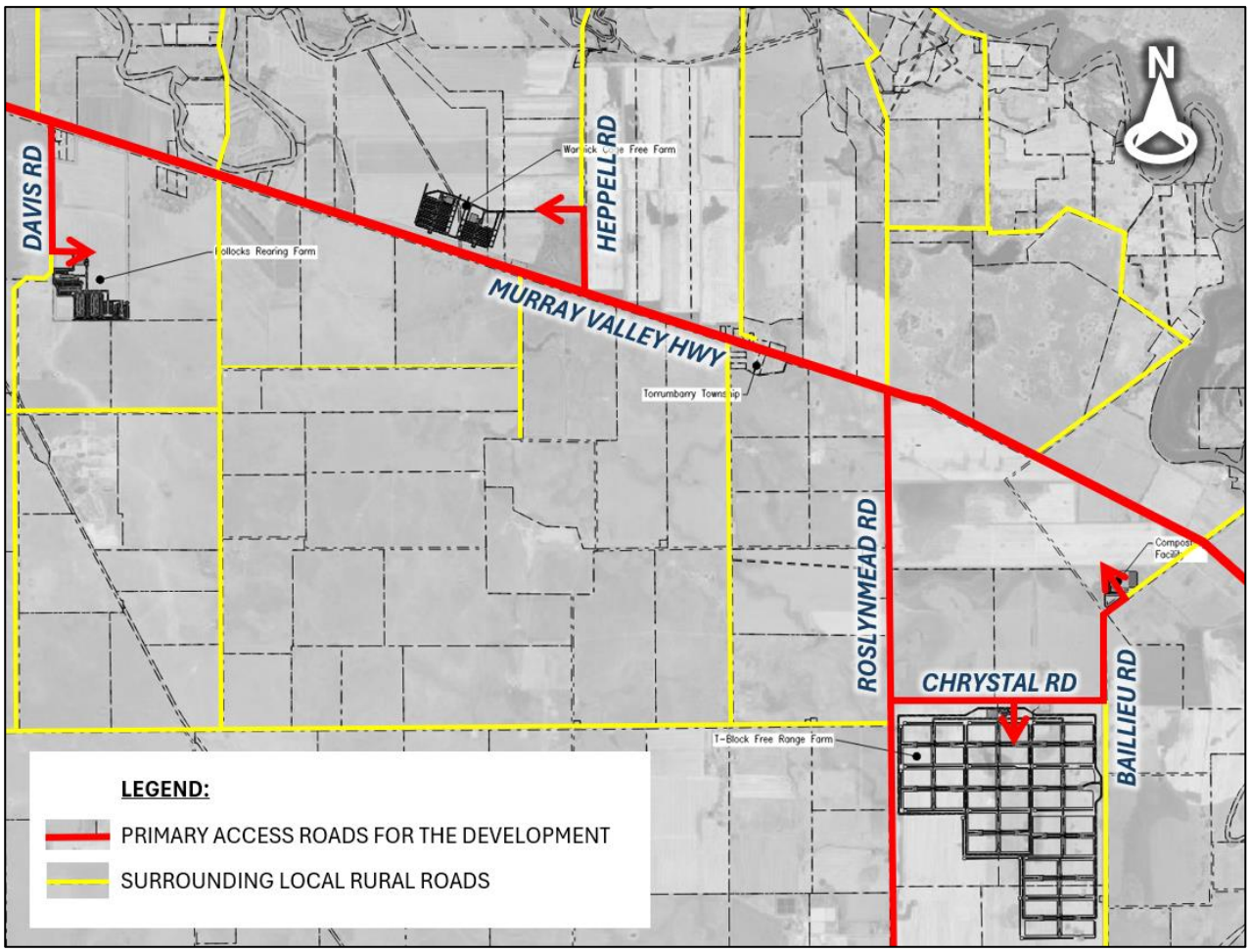


Figure 4-1: Primary access roads

The key roads and intersections are discussed further in the following sections.

4.2 Key roads

4.2.1 Murray Valley Highway

The Murray Valley Highway is a State Controlled Arterial Road (SCR) under the Victorian Planning Scheme.

The highway predominantly follows the state border line of Victoria (VIC) and New South Wales (NSW) between Euston, NSW in the west and Corryong, VIC in the east (approximately 663 kilometres in length).

Within the vicinity of the subject sites, the Murray Valley Highway has the following characteristics (refer **Figure 4-2**):

- Two-way, two-lane configuration
- Sealed carriageway width of approximately 9-10m
- 3.5m wide lanes
- 1.5m wide shoulders
- Road reserve width of 60m
- Posted speed limit of 100km/h
- 2025 daily traffic volumes of approximately 3,500 vehicles per day (vpd)

Figure 4-2: Murray Valley Highway (facing east from Davis Road)

4.2.2 Roslynmead Road

Roslynmead Road runs predominantly north-south and connects the Murray Valley Highway in the north with Mount Terrick Road in the south. It is classified as a Collector – Rural road, as per the CSC *Register of Public Roads*.

Within the vicinity of the subject sites, Roslynmead Road has the following characteristics (refer **Figure 4-3**):

- Two-way, two-lane configuration
- Sealed carriageway width of approximately 6.5 m
- 3.3m wide lanes
- Gravel/grassed shoulders
- Road reserve width of 20 m
- Unsigned rural default speed limit (100 km/h)
- 2025 daily traffic volumes of approximately 340 vpd

Figure 4-3: Roslynmead Road (looking south from the Murray Valley Highway)

4.2.3 Heppell Road

Heppell Road runs predominantly north-south and connects National Channel Road in the north with the Murray Valley Highway in the south. It is classified as an earth Access Rural Road in the vicinity of the subject site, as per the CSC *Register of Public Roads*.

In the vicinity of the subject site, Heppell Road has the following characteristics (refer to **Figure 4-4**):

- Two-way, undivided configuration
- 5m wide earth Access Rural Road
- Traversable grassed verges (varying between 1 m to 5 m)
- Road reserve width of approximately 20 m
- Unsigned rural default speed limit (100 km/h)
- Traffic counts of 17vpd at 20% CV (information supplied by CSC in September 2025)

Figure 4-4: Heppell Road (facing north from the Murray Valley Highway)

4.2.4 Davis Road

Davis Road is a two-way undivided road that runs predominantly north- south and connects the Murray Valley Highway in the north with Mount Terrick Road in the south. It is classified as an Access Rural Road, as per the CSC *Register of Public Roads*.

Davis Road provides access to the Veolia Patho Landfill site to the south of the proposed Pollock's Block Rearing Farm site. Davis Road experiences a high proportion of heavy vehicle traffic associated with the landfill site.

In the vicinity of the subject site, Davis Road has the following characteristics (refer to **Figure 4-5**):

- Two-way configuration
- Partially sealed carriageway (sealed approximately 300 m from the Murray Valley Highway) with a sealed pavement width varying between approximately 4-6 m, and gravel shoulders ranging between 1-3 m
- Approximately 7-10 m unsealed gravel carriageway continuing to the south of the paved section
- Traversable verges (varying between 1-5 m)
- No line marking
- Road reserve width of approximately 20 m
- Unsigned rural default speed limit (100 km/h)
- 2025 daily traffic volumes of approximately 110vpd (with 75% heavy vehicle proportion)

Figure 4-5: Davis Road (looking south from the Murray Valley Highway)

4.2.5 Chrystal Road

Chrystal Road is a two-way undivided road that runs predominantly east-west and connects Baillieu Road in the east with Roslynmead Road in the west. It is classified as a gravel/unsealed Collector Road, as per the CSC *Register of Public Roads*.

In the vicinity of the subject site, Chrystal Road has the following characteristics (refer to **Figure 4-6**):

- Two-way configuration
- Unsealed gravel/dirt carriageway width varying between approximately 4-6 m
- Traversable verges (varying between 1-5 m)
- Road reserve width of approximately 18 m
- Unsigned rural default speed limit (100 km/h)
- Traffic counts of 10vpd at 15% CV (information supplied by CSC in September 2025)

Figure 4-6: Chrystal Road (looking east from Roslynmead Road)

4.2.6 Baillieu Road

Baillieu Road is a two-way undivided road that runs predominantly north-south and intersects the Murray Valley Highway in the north with Reserve Road in the south. It is classified as an earth Access Rural Road, as per the CSC *Register of Public Roads*.

In the vicinity of the subject site, Baillieu Road has the following characteristics (refer to **Figure 4-7**):

- Two-way configuration
- Unsealed gravel/dirt carriageway width varying between approximately 4-6 m
- Dry weather road unsealed pavement
- Traversable verges (varying between 1 m to 10 m)
- Road reserve width of approximately 18 m
- Unsigned rural default speed limit (100 km/h)
- Traffic counts of 5vpd (information supplied by CSC in September 2025)

Figure 4-7: Baillieu Road (looking southwest from Murray Valley Highway)

4.3 Key intersections

The following key intersections are located near and most relevant to the site:

- Murray Valley Highway / Roslynmead Road / Bail Road
- Murray Valley Highway / Heppell Road
- Murray Valley Highway / Davis Road
- Roslynmead Road / Chrystal Road
- Baillieu Road / Chrystal Road

These intersections are shown on **Figure 4-8** and are detailed further the following sections.

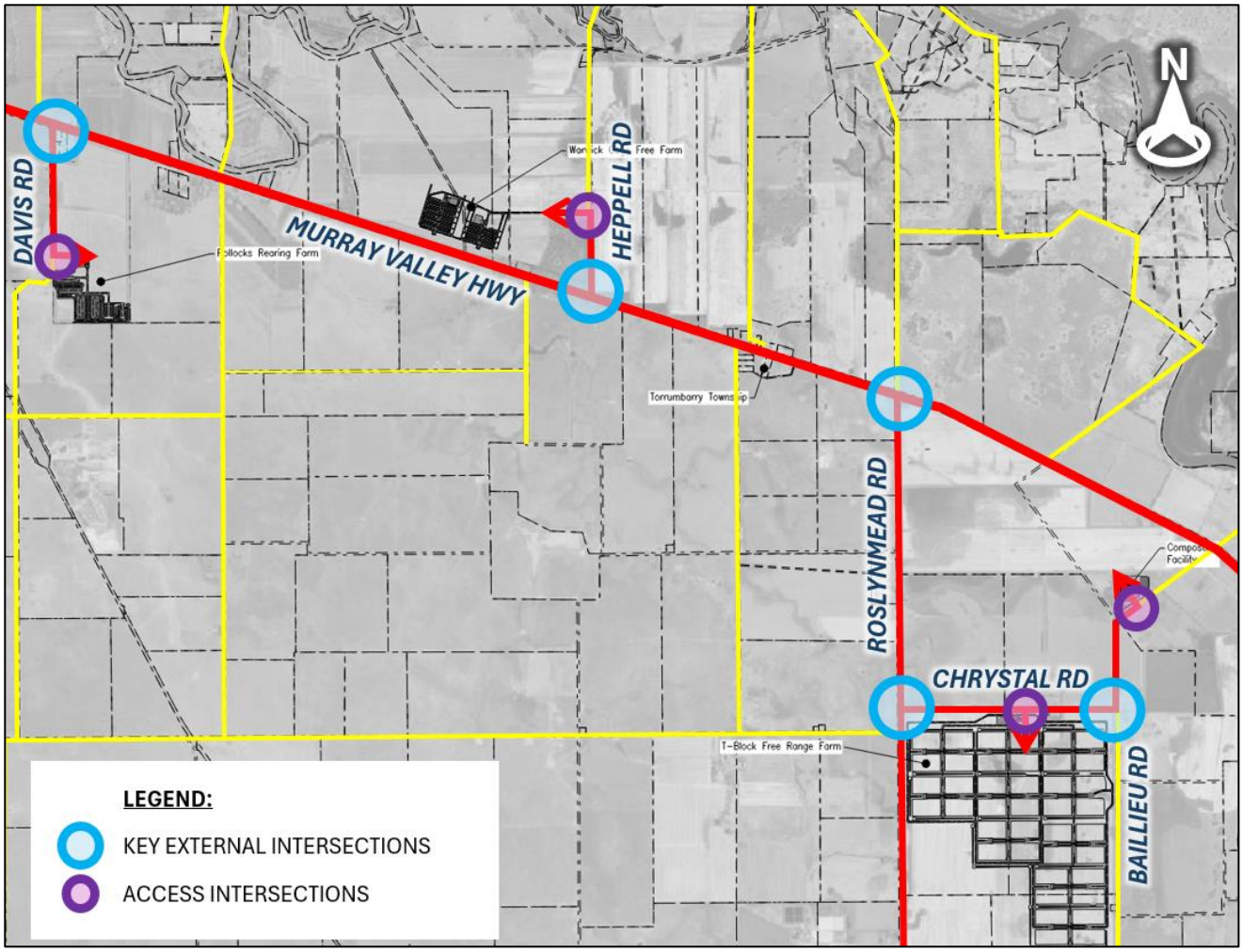


Figure 4-8: Key intersections

It is noted that there are other intersections in the vicinity of the site that may be utilised by the development traffic, however, due to the location and expected distribution of development traffic, the above intersections are the only intersections where the impact of the development is considered of significance (i.e. development traffic being more than five per cent of the background traffic).

4.3.1 Murray Valley Highway / Roslynmead Road / Bail Road

The intersection of the Murray Valley Highway / Roslynmead Road / Bail Road consists of a priority controlled four leg intersection (refer to **Figure 4-9**), with 'Give-Way' signage and line-marking on the Roslynmead Road and Bail Road legs. Each leg of the intersection consists of one approach lane and one departure lane.

The intersection allows all turning movements and has shoulders that act as quasi basic left turn and basic right turn provisions. The shoulder line on the western approach on Murray Valley Highway is denoted by continuity (dashed) line marking which suggests that this approach may be for left turning provisions.

The Roslynmead Road leg has recently been upgraded to a widened seal.

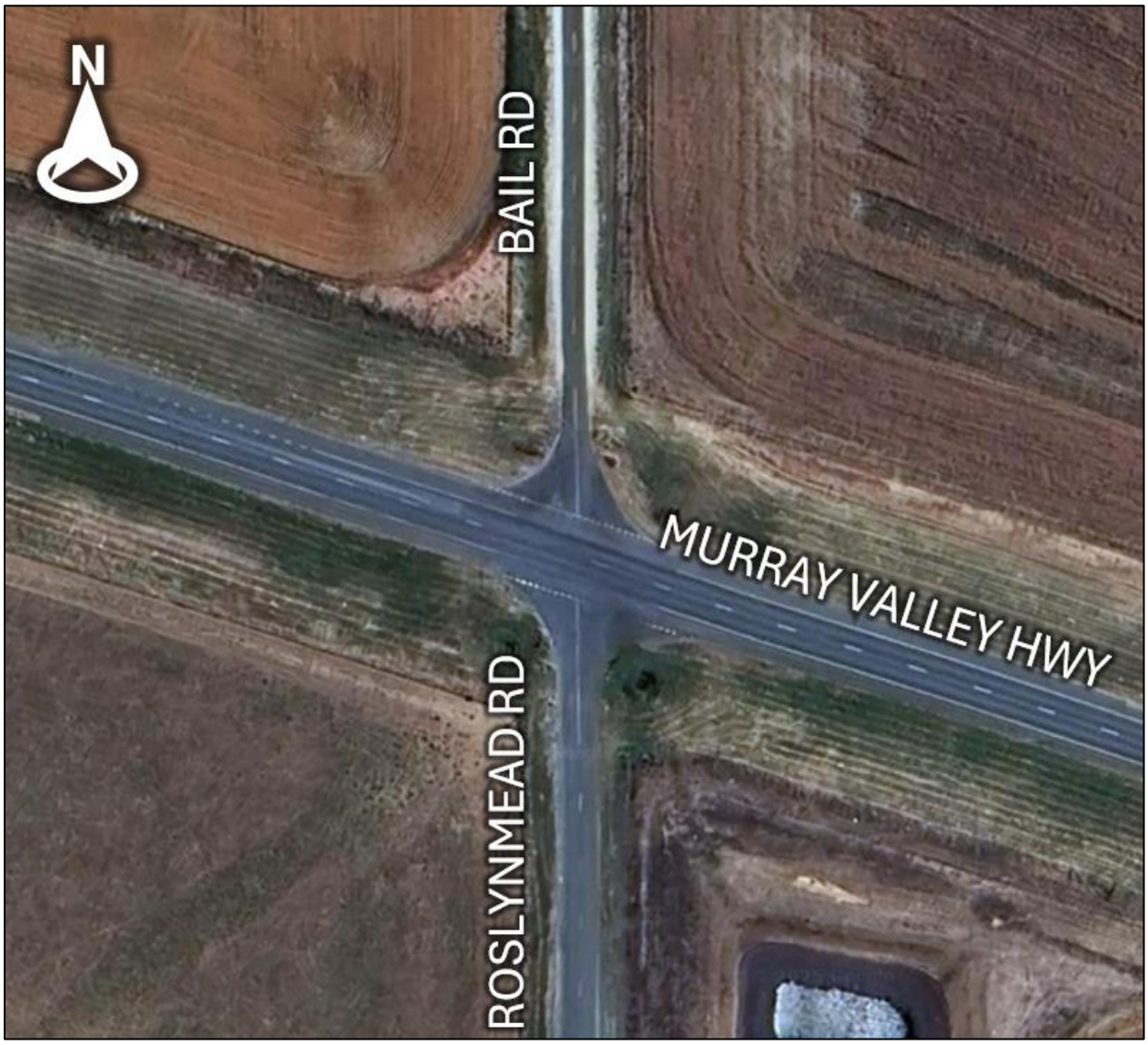


Figure 4-9: Murray Valley Highway / Roslynmead Road / Bail Road intersection

4.3.2 Murray Valley Highway / Heppell Road

The intersection of the Murray Valley Highway / Heppel Road consists of a priority controlled T intersection (refer to **Figure 4-10**), with 'Give-Way' signage on the Heppell Road leg. Each leg of the intersection consists of one approach lane and one departure lane. The Heppell Road leg is unsealed gravel formation.

The intersection allows all turning movements and does not have any dedicated turning lanes.

Figure 4-10: Murray Valley Highway / Heppell Road intersection

4.3.3 Murray Valley Highway / Davis Road

The intersection of the Murray Valley Highway / Davis Road consists of a priority controlled T intersection (refer to **Figure 4-11**), with 'Give-Way' signage on the Davis Road leg. Each leg of the intersection consists of one approach lane and one departure lane.

The intersection allows all turning movements and has shoulder on the eastern approach that act as quasi basic left turn provisions.

Figure 4-11: Murray Valley Highway / Davis Road intersection

4.3.4 Roslynmead Road / Chrystal Road

The intersection of Roslynmead Road / Chrystal Road consists of a priority controlled T intersection (refer to **Figure 4-12**), with no signage or line-marking on the Chrystal Road minor leg. Each leg of the intersection consists of one approach lane and one departure lane. The Chrystal Road leg is unsealed gravel formation.

The intersection allows all turning movements and does not have any dedicated turning lanes.

Figure 4-12: Roslynmead Road / Chrystal Road intersection

4.3.5 Baillieu Road / Chrystal Road

The intersection of the Baillieu Road / Chrystal Road consists of a priority controlled T intersection (refer to **Figure 4-13**), with no signage or line-marking on the Chrystal Road minor leg. It is noted that there is a private driveway opposite the Chrystal Road minor leg. Each leg of the intersection consists of one approach lane and one departure lane. All legs of the intersection are unsealed gravel formation.

The intersection allows all turning movements and does not have any dedicated turning lanes.

Figure 4-13: Baillieu Road / Chrystal Road intersection

4.4 Crash data

4.4.1 Crash data for past 5 year period

Transport Victoria crash data was reviewed for the previous 5 years from 1 January 2019 until present. Data was obtained from *Transport Victoria (Victorian road crash data) ODP mapping*.

Findings indicate that there were four recorded crashes in the immediate vicinity of the site and associated key intersections.

The recorded crash locations are illustrated in **Figure 4-14**, with details of the recorded crashes summarised in **Table 4-1**.

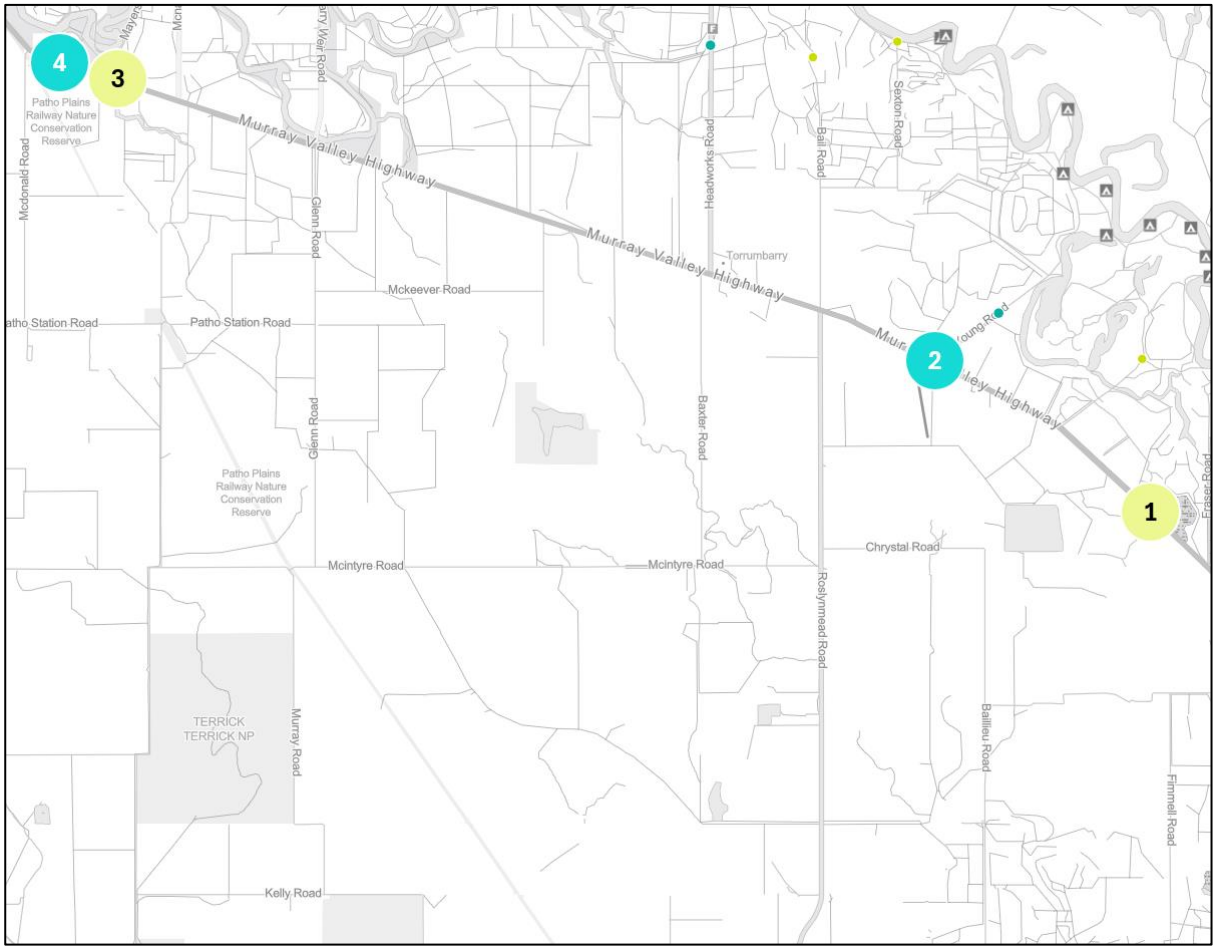


Figure 4-14: Historical crash locations for past 5 year period (from *Transport Victoria (Victorian road crash data) ODP mapping)*

Table 4-1: Crash data for past 5 year period

No.	Crash year	Severity	DCA code	DCA description	Light condition
1	2022	Other injury accident	173	Right off carriageway into object/parked vehicle	Daylight
2	2021	Serious injury accident	152	Pulling out (overtaking)	Daylight
3	2023	Other injury accident	111	Right far (intersections only)	Daylight
4	2021	Serious injury accident	171	Left off carriageway into object/parked vehicle	Daylight

The recorded crash data indicates that each crash is different in location and nature, and therefore no crash patterns could be determined from the review.

Further commentary regarding the suitability of the existing road network is detailed in **Section 8.4**.

4.4.2 Crash data for past 15-year period

As part of the draft planning permit application review process, Transport for Victoria indicated that a 15-year period is preferred for crash data assessments.

In response, it is important to note that crash data is commonly examined for the previous 5 year period, per Austroads guidelines and considered standard practice. Extending the review period beyond this is deemed to be outdated due to the following reasons:

1) Road features and conditions may have changed significantly over time.
2) Mitigation for crashes in the preceding periods should have been appropriately addressed by the relevant road authority.

Nevertheless, in alignment with Transport for Victoria's request, crash data has been reviewed for the previous 15 years from 1 January 2010 until present. This data, provided by Transport for Victoria in September 2025, is included in **Appendix I**.

The recorded crash locations are illustrated in **Figure 4-15**, with details of the recorded crashes summarised in **Table 4-2**

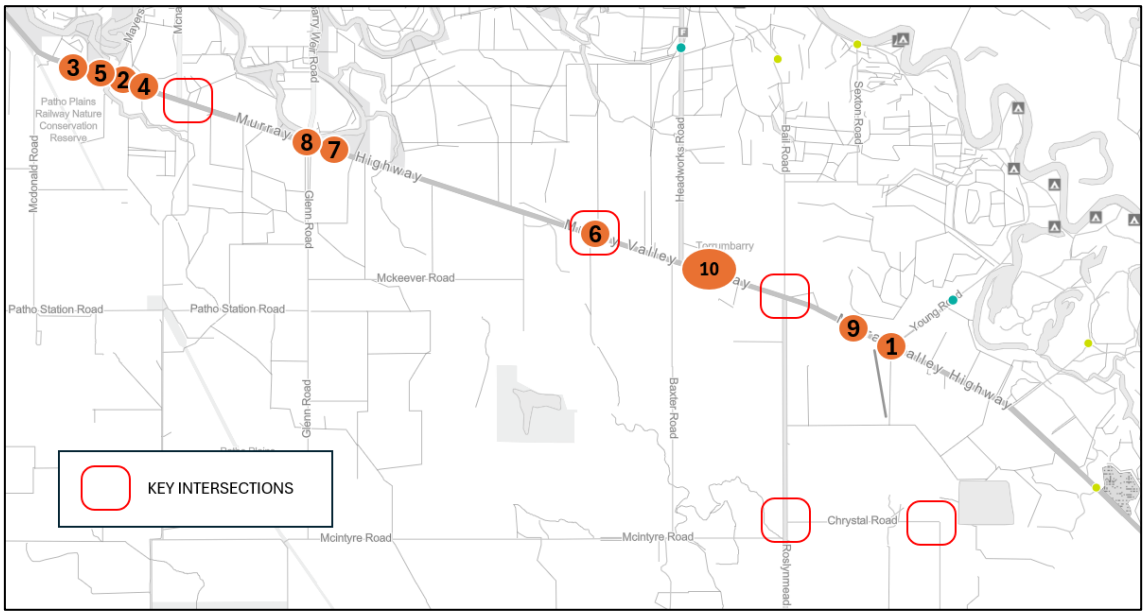


Figure 4-15: Historical crash locations for past 15 year period

Table 4-2: Crash data for past 15 year period

No.	Crash year	Severity	DCA code	DCA description	Light condition
1	2021	Serious injury accident	152	Pulling out (overtaking)	Daylight
2	2023	Other injury accident	111	Right far (intersections only)	Daylight
3	2021	Serious injury accident	171	Left off carriageway into object/parked vehicle	Daylight
4	2010	Serious injury accident	172	Off carriageway to right	Dusk
5	2012	Fatal accident	179	Other accident-off path on straight	Daylight
6	2013	Other injury accident	171	Left off carriageway into object/parked vehicle	Dark-not lighted
7	2016	Serious injury accident	129	Other opposing manoeuvres	Dark-lighted
8	2017	Serious injury accident	132	Right rear end	Daylight
9	2015	Other injury accident	171	Left off carriageway into object/parked vehicle	Daylight
10	2017	Serious injury accident	120	Head on (not overtaking)	Daylight

Findings indicate that there were 10 recorded crashes along Murray Valley highway between Patho School Road and Young Road. Of the 10 crashes:

- 5 were single vehicles crashes (lost control/off carriageway)
- 2 were midblock (head-on, pulling out from side of the highway)
- 3 were intersection crashes (all at different intersections/driveways not associated with our development including School Road, Torrumbarry Weir Road and a private driveway access).

No pattern of intersection crashes can be identified from this data. A pattern of run-off road incidents could be argued for the length of the corridor but these occurred through the area and were not concentrated to a specific location.

Furthermore, it should also be noted that a concentration of crashes occurred in the vicinity of Patho School Road (3 out of the 10 crashes). However, this intersection and bridge have since been upgraded within the crash reporting time period.

Therefore, from review of the historical crash data, no mitigation or upgrades are required.

Further commentary regarding the suitability of the existing road network is detailed in **Section 8.4**.

4.5 Existing traffic volumes

Traffic data was obtained from manual intersection traffic movement surveys, as well as via a first principles assessment, to identify the existing traffic volumes of the surrounding road network.

4.5.1 Survey data

Manual traffic survey data was undertaken by Austraffic at the following key intersections:

- Murray Valley Highway / McNaught Road
- Murray Valley Highway / Davis Road
- Murray Valley Highway / Roslynmead Road / Bail Road

A summary of the survey data peak periods are shown below in **Table 4-3**. The count surveys from Austraffic are provided in **Appendix C**.

Table 4-3: Traffic survey data

Intersection	Date	AM peak hour	PM peak hour
Murray Valley Highway / McNaught Road	Wednesday, 7 May 2025	8:45-9:45am	3:45-4:45pm
Murray Valley Highway / Davis Road	Wednesday, 7 May 2025	8:45-9:45am	3:45-4:45pm
Murray Valley Highway / Roslynmead Road / Bail Road	Wednesday, 7 May 2025	9:15-10:15am	3:30-4:30pm

The traffic count surveys indicate a background AM and PM network peak hour period of 9:00-10:00am and 3:45-4:45pm respectively.

4.5.2 First principles assessment – Heppell Road and Chrystal Road traffic volumes

Background traffic volumes for Heppell Road and Chrystal Road have been nominated based on a first principal assessment for rural residential land uses.

Heppell Road

Heppell Road is a dry weather road with a limited catchment of approximately four residential dwellings. The estimated traffic generation of the existing Heppell Road catchment shown in **Table 4-4**, was determined using the following parameters (based from the *NSW RTA Guide to Traffic Generating Developments (2002)*):

- Traffic generation rate of 0.85 trips per dwelling in the AM and PM peak hour periods.
- In / out splits of 30 per cent / 70 per cent for the AM peak and 70 per cent / 30 per cent for the PM peak.

Table 4-4: Estimated peak hour traffic generation (existing Heppell Road catchment)

Total number of dwellings	Total peak hour trips	AM		PM	
		In	Out	In	Out
4	3	1	2	2	1

Note: trips rounded to the nearest number

In the absence of intersection turning volume data, the above traffic volumes and a directional distribution split of 80 per cent east and 20 per cent west via the Murray Valley Highway were adopted to determine turning movements at the Murray Valley Highway / Heppell Road intersection. The estimated external distributions assumed have been based on consideration of local surrounding attractors, and traffic survey data of nearby intersections.

Given the low peak hour volumes, the application of the in/out splits and distribution results in less than one vehicle trip for each movement. Therefore, for the assessment, one vehicle trip has been adopted on each movement at the Murray Valley Highway / Heppell Road intersection for the AM and PM peak hours.

Chrystal Road

Chrystal Road is a dry weather road with a limited catchment of one residential dwelling. There are no major origins or destinations along this section of road (only farmland), and it is not considered to be a major connecting road as there are other more direct routes in the network. Therefore, as per Heppell Road above, for the assessment, one vehicle trip has been adopted on each movement at the Roslynmead Road / Chrystal Road intersection for the AM and PM peak hours.

4.5.3 Historical growth rate

Historical growth of the network was approximated by the VicRoads daily traffic count data available for the Murray Valley Highway in the vicinity of the development sites. The historic five-year growth and ten-year growth both equate to approximately three per cent per annum.

Therefore, a compound growth rate of three per cent per annum has been adopted for the assessment for all key roads and intersections.

4.5.4 Heavy vehicle percentages

The following heavy vehicle percentages have been adopted for the background traffic volumes based from the 2025 manual traffic counts:

- Murray Valley Highway – 20% heavy vehicles
- Davis Road – 70% heavy vehicles
- Roslynmead Road – 25% heavy vehicles
- Other minor rural roads – 20% heavy vehicles

4.5.5 Assessment scenarios

From the abovementioned operational data, and the above count data, it was identified that the external road network peak hours (AM and PM) do not coincide with the peak hours of the development traffic movements at the key intersections. For the purpose of the operational analysis and turn warrant assessment, the following assessment scenarios have been considered for the different peak hours throughout the weekday:

- Network Peak period → associated with the background traffic peak periods:
  - AM – 9:00-10:00am
  - PM – 3:45-4:45pm
- Development Peak 1 → associated with staff movements for Warwick's Block and T-Block:
  - AM – 5:00-6:00am
  - PM – 2:00-3:00pm
- Development Peak 2 → associated with staff movements for Pollock's Block and the Composting Facility:
  - AM – 6:00-7:00am
  - PM – 3:00-4:00pm

The assessment years for each of the above scenarios include:

- Development completion (ultimate for all stages) → 2042
- Ten year design horizon → 2052

From the above, the adopted background traffic volumes for each of the above scenarios are illustrated in **Appendix D**.

5. Planning considerations

From a review of online mapping, no planned state or local government road upgrades are proposed within the vicinity of the site.

It is understood that Davis Road may be upgraded in future to a sealed and widened cross section to accommodate heavy vehicle movements to and from the Veolia Patho Landfill site. It is understood that Council currently have plans for this road upgrade, however, no funding has been granted at the time of writing this report.

6. Development traffic volumes

From the operational details (refer to **Section 3**), the estimated peak hour 'development' traffic volumes and 'background with development' traffic volumes are illustrated in **Appendix E** for the Network Peak period, Development Peak 1 and Development Peak 2 scenarios, for each assessment year (2042 completion year and the 2052 design horizon). The development traffic volumes represent the total ultimate development of each site (all stages).

7. Development traffic impact on external road network

Table 7-1 provides information relating to the typical maximum traffic volume combinations for uninterrupted traffic flow conditions. These combinations provide guidance for unsignalised intersections carrying light crossing and turning volumes. Where the volumes are less than that illustrated in **Table 7-1**, it is considered unnecessary to flare intersection approaches or carry out an intersection analysis.

Table 7-1: Intersection capacity – uninterrupted flow conditions

Major road type[1]	Major road flow (vph)[2]	Minor road flow (vph)[3]
Two-lane	400	250
	500	200
	650	100

1. *Major road is the through road i.e. has priority*
2. *Major road design volumes include through and turning movements*
3. *Minor road design volumes include through and turning volumes*

The anticipated ultimate 2052 'background with development' traffic volumes detailed in **Appendix E** do not exceed the hourly volume combinations shown in **Table 7-1** for the key intersections. Therefore, intersection analysis is not deemed warranted for the key intersection locations. It is expected that these key intersections will operate under practical capacity with the proposed development volumes.

Although operational analysis is therefore not deemed warranted for the key intersections, analysis has nevertheless been undertaken in consideration of turning movement provision and associated potential saturation and delay of the Murray Valley Highway intersections to illustrate the operational impact.

7.1 Intersection operational assessment

7.1.1 Assessment area

The assessment area includes the key intersections of Murray Valley Highway, as follows:

- Murray Valley Highway / Roslynmead Road / Bail Road
- Murray Valley Highway / Heppell Road
- Murray Valley Highway / Davis Road

7.1.2 Assessment scenarios

As stated in **Section 4.5.5**, for the purpose of this assessment the following scenarios have been assessed for the ultimate development (all stages) with "background with development" traffic volumes:

- 2052 AM Network Peak period
- 2052 PM Network Peak period
- 2052 AM Development Peak 1
- 2052 PM Development Peak 1
- 2052 AM Development Peak 2
- 2052 PM Development Peak 2

7.1.3 Intersection modelling parameters

The key Murray Valley Highway intersections were assessed using SIDRA 10.0 intersection analysis program. This program calculates the operational performance of intersections based on input parameters such as geometry and traffic volumes. Output values that have been recorded include the degree of saturation (DOS), queue lengths (in metres) and delay times (in seconds). The DOS is a commonly used value, which is principally a volume to capacity ratio.

The typical desired standards of service (DSS) values for DOS and intersection performance are summarised in **Table 7-2**. A DOS exceeding these values indicates that the intersection is exceeding its practical capacity and users of the intersection are likely to experience unsatisfactory queuing and delays.

Table 7-2: Typical acceptable DOS for intersections

Intersection type	Maximum DOS
Signalised intersection	90 – 95% (0.90 – 0.95)
Roundabout	85% (0.85)
Unsignalised intersections	80% (0.80)

These values are also recommended by Austroads Guide to Traffic Management – Part 12.

7.2 Intersection operational assessment results

A summary of the traffic assessment results is shown below in **Table 7-3**. SIDRA intersection layouts and detailed results are included in **Appendix F**.

Table 7-3: SIDRA analysis results (2052 Background with Development traffic)

Intersection	Peak	Demand flow (vph)	SIDRA output			
			Degree of saturation (DOS)	Max. avg. delay (s)*	LoS	95%ile queue (m)*
Murray Valley Highway / Roslynmead Road / Bail Road	Network AM	621	0.21	17	C	3
	Network PM	636	0.18	12	B	2
	Dev Peak 1 AM	199	0.07	10	B	1
	Dev Peak 1 PM	678	0.22	19	C	3
	Dev Peak 2 AM	354	0.10	10	B	2
	Dev Peak 2 PM	638	0.19	15	C	2
Murray Valley Highway / Heppell Road	Network AM	615	0.20	13	B	1
	Network PM	621	0.19	12	B	1
	Dev Peak 1 AM	164	0.05	9	A	2
	Dev Peak 1 PM	638	0.19	14	B	2
	Dev Peak 2 AM	340	0.12	11	B	1
	Dev Peak 2 PM	627	0.21	12	B	1
Murray Valley Highway / Davis Road	Network AM	568	0.18	17	C	2
	Network PM	593	0.17	14	B	1
	Dev Peak 1 AM	123	0.04	10	B	<1
	Dev Peak 1 PM	557	0.16	16	C	2
	Dev Peak 2 AM	286	0.10	12	B	1
	Dev Peak 2 PM	572	0.17	12	B	2

** rounded to the nearest whole number*

The SIDRA models shows that all the key Murray Valley Highway intersections operate within performance standards for the 2052 ultimate scenario, for the three key peaks. Table 7-3 indicates that the intersections operate well below the DSS with minimal saturation, delays and queues. In addition to this, no individual movements exceed the 42-second delay threshold for unacceptable delay related to priority-controlled intersections.

It is recognised that the other key intersections of Roslynmead Road / Chrystal Road, and Baillieu Road / Chrystal Road, as well as all the proposed development accesses, will also operate well within the DSS given the lower vehicular demands compared to the Murray Valley Highway intersections.

From the above, the development impact on the key external intersections do not cause any adverse operational issues. The intersections operate well within performance thresholds and therefore, no mitigation of operational impacts or upgrades are required for the key external intersections.

7.3 Mid-block assessment (link level of service)

Level of service (LoS) values for midblock locations on urban roads with interrupted flow conditions are described in **Table 7-4**.

Peak hour traffic flow ranges are based on broad assumptions and could potentially change depending on the width of traffic lanes, adjacent intersection arrangements and other factors. Typically, mid-block LoS E and LoS F would require upgrades with additional through lanes, or duplication, to increase capacity.

Table 7-4: Midblock level of service description

Level of service		Peak hour traffic flow (veh per hour per lane)	
		From	To
A	Free flow – drivers are virtually unaffected by other drivers in the traffic stream	0	200
B	Stable flow – drivers have reasonable freedom to manoeuvre and select their desired speed	200	380
C	Stable flow – drivers are restricted to some extent in their freedom to manoeuvre and select their desired speed	380	600
D	Approaching unstable flow – drivers are severely restricted in their freedom to manoeuvre and select their desired speed	600	900
E	Unstable flow – traffic volumes at or close to capacity, drivers have virtually no freedom to manoeuvre or select their desired speed	900	1,400
F	Forced flow – traffic volumes over capacity with flow breakdown, queueing and delays	Greater than 1,400	

Source: Guide to Traffic Generating Developments (NSW RMS, 2002)

The mid-block level of service for Murray Valley Highway with the future ultimate development demands (i.e. 2052 Background with Development volumes) is LoS B with a maximum peak hour traffic flow of approximately 360vph per lane in each direction. All other key roads are expected to operate with a peak hour traffic flow of less than 70vph per direction which results in a mid-block LoS A.

Therefore, the key roads operate within the mid-block requirements for the existing lane capacities. No upgrades are required on the surrounding external road network with regards to operational capacity.

8. Safety considerations

8.1 Crash data

As per **Section 4.4**, the recorded crash data indicates that each crash is different in location and nature, and therefore no crash patterns could be determined from the review. It is recommended that ongoing monitoring of crashes in the area be conducted by the relevant road authority to determine crash patterns and relevant mitigation measures in the future.

8.2 Turn warrant assessment

Turn warrants are used to identify the need to provide separate turning provisions from a functionality and safety perspective. The warrants are essentially the relationship between the turning volumes versus the major road traffic volumes.

In accordance with Austroads, turn warrants are based on the construction of new roads (i.e. greenfield sites) and is also used as a reference for intervention levels for updating existing intersection turn treatments. Turn warrant assessment is usually undertaken at these intersections to determine if protected turning lanes (i.e. channelisation) are required from a safety perspective.

Table 8-1 summarises the warrant treatments required at the key intersections with respect to traffic volumes provided in **Appendix D** and **Appendix E**. Detailed turn warrant graphs are provided at **Appendix G**.

Table 8-1: Turn warrant summary results (2052)

Intersection	Peak	Background		Background with Development	
		Left turn treatment triggered*	Right turn treatment triggered*	Left turn treatment triggered*	Right turn treatment triggered*
Murray Valley Highway / Roslynmead Road	Network AM	BAL	CHR	BAL	CHR
	Network PM	BAL	CHR(S)	BAL	CHR
	Dev Peak 1 AM	BAL	BAR	BAL	BAR
	Dev Peak 1 PM	BAL	CHR	BAL	CHR
	Dev Peak 2 AM	BAL	CHR(S)	BAL	CHR(S)
	Dev Peak 2 PM	BAL	CHR	BAL	CHR
Murray Valley Highway / Heppell Road	Network AM	BAL	BAR	BAL	BAR
	Network PM	BAL	BAR	BAL	BAR
	Dev Peak 1 AM	BAL	BAR	BAL	BAR
	Dev Peak 1 PM	BAL	BAR	BAL	BAR
	Dev Peak 2 AM	BAL	BAR	BAL	BAR
	Dev Peak 2 PM	BAL	BAR	BAL	BAR

Murray Valley Highway / Davis Road	Network AM	BAL	BAR	BAL	BAR
	Network PM	BAL	BAR	BAL	BAR
	Dev Peak 1 AM	BAL	BAR	BAL	BAR
	Dev Peak 1 PM	BAL	BAR	BAL	BAR
	Dev Peak 2 AM	BAL	BAR	BAL	BAR
	Dev Peak 2 PM	BAL	BAR	BAL	BAR
Roslynmead Road / Chrystal Road	Network AM	BAL	BAR	BAL	BAR
	Network PM	BAL	BAR	BAL	BAR
	Dev Peak 1 AM	BAL	BAR	BAL	BAR
	Dev Peak 1 PM	BAL	BAR	BAL	BAR
	Dev Peak 2 AM	BAL	BAR	BAL	BAR
	Dev Peak 2 PM	BAL	BAR	BAL	BAR
Pollock's Block Access (Davis Road)	Network AM	-	-	BAL	BAR
	Network PM	-	-	BAL	BAR
	Dev Peak 1 AM	-	-	BAL	BAR
	Dev Peak 1 PM	-	-	BAL	BAR
	Dev Peak 2 AM	-	-	BAL	BAR
	Dev Peak 2 PM	-	-	BAL	BAR
T-Block Access (Chrystal Road)	Network AM	-	-	BAL	BAR
	Network PM	-	-	BAL	BAR
	Dev Peak 1 AM	-	-	BAL	BAR
	Dev Peak 1 PM	-	-	BAL	BAR
	Dev Peak 2 AM	-	-	BAL	BAR
	Dev Peak 2 PM	-	-	BAL	BAR

** BAR – Basic right turn treatment, CHR(S) – Channelised right turn (short) treatment, CHR - Channelised right turn (full) treatment*

** BAL – Basic left turn treatment*

From the assessment, the turning movements at the key intersections fall within basic turn treatment thresholds (i.e. BAL and BAR), with the exception of Murray Valley Highway / Roslynmead Road which triggers a CHR turn treatment in the background scenario, regardless of the development. It is noted that this is similar for the 2042 completion year where the background volumes trigger CHR(S) turn treatment and the addition of the development traffic does not trigger any treatment greater than this.

Therefore, no mitigation measures are triggered by the development at the external key intersections as the development does not cause the requirement for additional turning treatments above what is already required by the background traffic volumes.

As per the turn warrant outcomes, all new accesses and intersections should be constructed with consideration of basic turning treatments (BAL and BAR).

8.3 Safe intersection sight distance assessment

8.3.1 Safe intersection sight distance

Safe intersection sight distance has been reviewed for the existing key intersections. The review was completed to confirm applicable sight distance requirements in accordance with Austroads guidelines. The sight distance requirements at the intersections are derived from the formulae (Equation 2) specified in *Guide to Road Design - Part 4a, as follows:*

$$SISD = \frac{D_T \times V}{3.6} + \frac{V^2}{254 \times (d + 0.01 \times a)}$$

Table 8-2 summarises the variables used for this calculation. It is noted that all key roads are either signed as 100km/h (posted speed limits) or are unsigned, and therefore a rural unposted default speed limit of 100km/h applies.

Table 8-2: Variables adopted for sight distance assessment

Variable symbol	Description	Value adopted for assessment		Unit of Measure
		Truck	Car	
All key intersections				
DT	Decision time (s) = observation time (3 s) + reaction time (s)	5.5	5.5	seconds
V	Operating (85th percentile) speed	110	110	km/h
d	Coefficient of deceleration for cars / trucks *(Guide to Road Design – Part 3: Geometric Design (Austroads 2009a))*	0.29	0.36	
a	Longitudinal grade in % (in direction of travel: positive for uphill grade, negative for downhill grade)	0	0	%
R_T	Perception/reaction time *(Guide to Road Design – Part 3: Geometric Design (Austroads 2009a))*	2.5	2.5	seconds

The outcomes of this sight distance review are summarised in **Table 8-3**. The available sight distance is based on a desktop review of the intersections using Google Street View imagery.

Table 8-3: SISD review summary

Intersection	Approach leg	Vehicle type	Travel Direction	Available SISD	Required SISD	Compliance
Murray Valley Highway / Roslynmead Road / Bail Road	Murray Valley Highway	Truck	Westbound	>400m	332m	Compliant
			Eastbound	>400m	332m	Compliant
		Car	Westbound	>400m	300m	Compliant
			Eastbound	>400m	300m	Compliant
Murray Valley Highway / Heppell Road	Murray Valley Highway	Truck	Westbound	>400m	332m	Compliant
			Eastbound	>400m	332m	Compliant
		Car	Westbound	>400m	300m	Compliant
			Eastbound	>400m	300m	Compliant
Murray Valley Highway / Davis Road	Murray Valley Highway	Truck	Westbound	>400m	332m	Compliant
			Eastbound	>400m	332m	Compliant
		Car	Westbound	>400m	300m	Compliant
			Eastbound	>400m	300m	Compliant
Roslynmead Road / Chrystal Road	Roslynmead Road	Truck	Northbound	>400m	332m	Compliant
			Southbound	>400m	332m	Compliant
		Car	Northbound	>400m	300m	Compliant
			Southbound	>400m	300m	Compliant
Baillieu Road / Chrystal Road	Baillieu Road	Truck	Northbound	>400m*	332m	Compliant
			Southbound	>400m*	332m	Compliant
		Car	Northbound	>400m*	300m	Compliant
			Southbound	>400m*	300m	Compliant

** estimated sight distance based from land survey given the flat terrain, minimal roadside vegetation and relatively flat grades of the roads.*

The review indicates that the sight distance available at the key external intersections is satisfactory and meets the minimum SISD requirements for all approaches.

Given the relatively flat terrain and surrounding topography of the area, it is expected that the sight distance at each access location would meet relevant sight distance requirements. The sight distance of these accesses can be confirmed and appropriately designed during future detailed design phase of the development for each site.

8.4 Suitability of surrounding road network

An assessment has been undertaken to investigate and identify any possible safety concerns along the proposed key roads and traffic routes providing access to the proposed development sites in order to determine the suitability of the surrounding road network. Details of the suitability of the surrounding road network are provided in the sections below.

8.4.1 Murray Valley Highway

The Murray Valley Highway has suitable road geometry and sufficient sight lines available along the length of the road corridor, in the vicinity of the subject sites. The width of the pavement carriageway is approximately 9-10m, with 3.5m wide travel lanes and approximately 1.5m wide sealed shoulders on both sides of the road. From a desktop review, the existing cross section, pavement and road environment along the Murray Valley Highway is deemed suitable for development traffic.

Therefore, no mitigation measures or upgrades are deemed to be required by the development along the subject length of the Murray Valley Highway.

8.4.2 Roslynmead Road

Roslynmead Road pavement appears to be in good condition for a rural collector road. The road has suitable road geometry and sufficient sight lines available along the length of the road corridor, in the vicinity of the subject sites .

The width of the sealed pavement is approximately 6.5m, comprising two 3.3m wide lanes. There are no sealed road shoulders and as a result, minor edgewear is evident at intermittent locations along the corridor. From a desktop review, the existing cross section, pavement and road environment along Roslynmead Road is deemed suitable for development traffic.

It is recommended that the condition of Roslynmead Road be monitored. At this time, no mitigation measures or upgrades are deemed to be required by the development along the subject length of Roslynmead Road.

8.4.3 Heppell Road

Heppell Road is currently signed as a ‘Dry Weather Road Only’ and comprises an unsealed gravel/dirt carriageway. The terrain is flat, with sufficient sight lines available along the entire length of the road between the Murray Valley Highway and the proposed site access to Warwick’s Block Cage Free Layer Farm. The unsealed pavement at the intersection with the Murray Valley Highway has deep wheel rutting and ponding which is not suitable for safe traffic movement.

As the Warwick’s Block Cage Free Layer Farm intends to operate year round, with an average daily demand of over 150 vehicles per day, it is recommended the developer upgrades Heppell Road to a rural access road, including a 6.2m wide seal with 1.5m shoulders, suitable for traffic in all weather conditions (refer **Figure 8-1**). This upgrade is to be undertaken between the Murray Valley Highway and the proposed site access to Warwick’s Block Cage Free Layer Farm. This upgrade is inline with the Campaspe Shire Council requirements of the Local Government Infrastructure Design Manual (Version 5.5 June 2025) - Table 6: *Rural Road Characteristics* and Standard Drawing 610: *Typical Road Profiles Low Density Rural Access*.

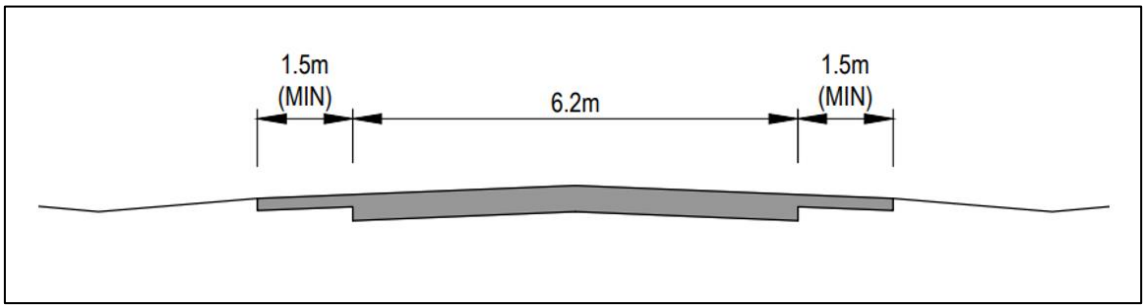


Figure 8-1: Heppell Road – Proposed cross section

8.4.4 Davis Road

The existing form of Davis Road comprises a sealed carriageway for approximately 300 m from the Murray Valley Highway with a width varying between approximately 4-6m, and gravel shoulders varying between 0.5-1.5m wide. Past this location, Davis Road is an unsealed gravel road, approximately 7m wide.

The existing 300m sealed portion reduces the amount of gravel migration from Davis Road to the Murray Valley Highway, however it is evident that some dust/gravel can migrate on the Highway. Therefore, it is recommended that this be monitored as the development operates.

The existing form of the gravel portion of Davis Road appears to be in good condition, with suitable road geometry and sufficient sight lines available along the entire length of the road between the Murray Valley Highway and the proposed site access for Pollock's Block Rearing Farm.

Given that this road is used by heavy vehicles accessing the Veolia Patho Landfill site, and that the background volumes at the 2042 design year will be greater than 150 vehicles per day (vpd), it is recommended that Council upgrade Davis Road to a rural access road (with 6.2m wide seal with 1.5m shoulders), inline with the Campaspe Shire Council requirements of the Local Government Infrastructure Design Manual (Version 5.5 June 2025) - Table 6: *Rural Road Characteristics* and Standard Drawing 610: *Typical Road Profiles Low Density Rural Access*. This recommended upgrade is deemed required regardless of the proposed development.

Therefore, no mitigation measures or upgrades are deemed to be required by the development along the subject length of Davis Road.

8.4.5 Chrystal Road

The existing form of Chrystal Road is an unsealed gravel/dirt carriageway varying between approximately 4-6m wide. The terrain is flat, with sufficient sight lines available along the entire length of the road between Roslynmead Road and Baillieu Road.

Chrystal Road is the primary access road to the T-Block Free Range Layer Farm and the 'Organic Nutrients' Composting Facility and similar to Heppell Road, it is recommended that Chrystal Road is upgraded to local access road standards.

Given that the western section of Chrystal Road, between Roslynmead Road and the T-Block Free Range Layer Farm access, will have approximately 180vpd at the ultimate 2052 background with development scenario, it is recommended that this section of road be upgraded to a 6.2m wide seal with 1.5m shoulders, suitable for traffic in all weather conditions (refer **Figure 8-2**).

This upgrade is inline with the Campaspe Shire Council requirements of the Local Government Infrastructure Design Manual (Version 5.5 June 2025) - Table 6: *Rural Road Characteristics* and Standard Drawing 610: *Typical Road Profiles Low Density Rural Access*.

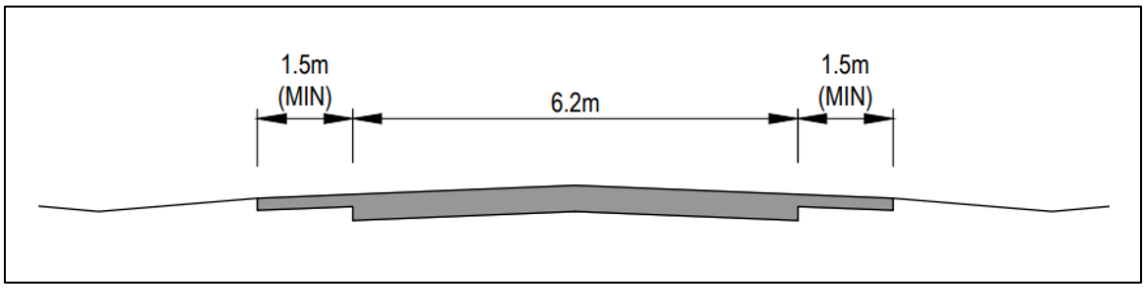


Figure 8-2: Chrystal Road – Proposed cross section (western section)

The eastern section of Chrystal Road, between the T-Block Free Range Layer Farm access and Baillieu Road is expected to have minimal traffic demands less than 100vpd at the ultimate 2052 background with development scenario. This section of road is recommended to be upgraded to a 4.0m wide single lane sealed pavement and 1.5m gravel shoulders, suitable for traffic in all weather conditions (refer **Figure 8-3**). This upgrade is inline with the Campaspe Shire Council requirements of the Local Government Infrastructure Design Manual (Version 5.5 June 2025) - Table 6: *Rural Road Characteristics*.

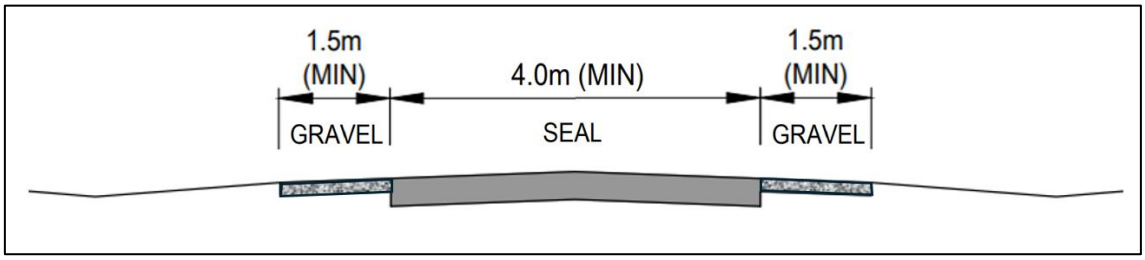


Figure 8-3: Chrystal Road – Proposed cross section (eastern section)

8.4.6 Baillieu Road

The existing form of Baillieu Road is an unsealed gravel/dirt carriageway varying between approximately 4-6m wide. The terrain is flat, with sufficient sight lines available along the entire length of the road between the Chrystal Road and the site access to the 'Organic Nutrients' Composting Facility.

All manure collections from the associated farms are expected to travel to the 'Organic Nutrients' Composting Facility via Baillieu Road resulting in relatively low traffic volumes of less than 100vpd along Baillieu Road (i.e. similar to Chrystal Road (eastern section)). Therefore, it is recommended that Baillieu Road is upgraded to rural access road standards, including a 4.0m wide single lane sealed pavement and 1.5m gravel shoulders, suitable for traffic in all weather conditions (refer **Figure 8-4**). This upgrade is proposed for the section of Baillieu Road between Chrystal Road and the 'Organic Nutrients' Composting Facility access. This upgrade is inline with the Campaspe Shire Council requirements of the Local Government Infrastructure Design Manual (Version 5.5 June 2025) - Table 6: *Rural Road Characteristics*.

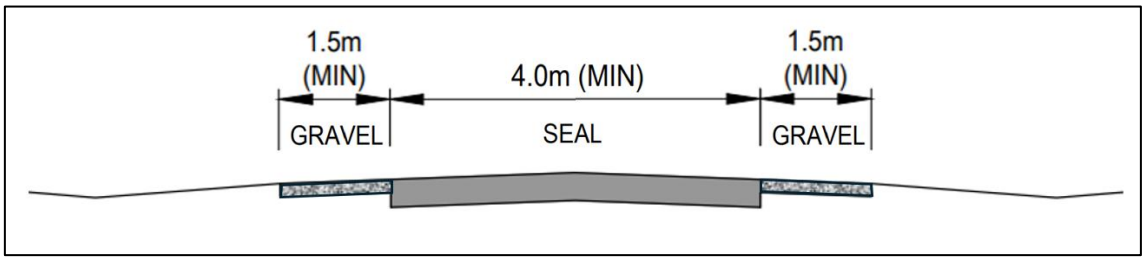


Figure 8-4: Baillieu Road – Proposed cross section

It is noted that there is a 120 degree curve in Baillieu Road located approximately 850m north of Chrystal Road. It is recommended that the pavement at this location be widened from the 4m carriageway width to accommodate two vehicles passing with applicable curve widening. This has been assessed with the provision of swept paths of two articulated vehicles (19m semi-trailers) passing each other at the curve location and is shown in **Figure 8-5** below.

Figure 8-5: 19m AV turn path – Baillieu Road curve widening

8.5 Suitability of surrounding intersections (swept path assessment)

A swept path assessment was undertaken for the largest design vehicle (19m semi-trailer) that will be utilising the key external intersections. The assessment was undertaken on the upgraded form of the intersections with the implementation of the turn warrant requirements (refer to **Section 8.2**) and the formation widths as described in the previous section (**Section 8.4**). The intersections have been checked and designed to adequately cater for two design vehicles (19m semi-trailers) to turn simultaneously without impact each other. The design vehicle dimensions are illustrated in **Figure 8-6** and the assessment includes 500mm buffer offsets from the truck body. The positioning of the Give Way holding line has also been considered as well as existing constraints. The intersection concept sketch drawings and associated swept path drawings are provided in **Appendix H**.

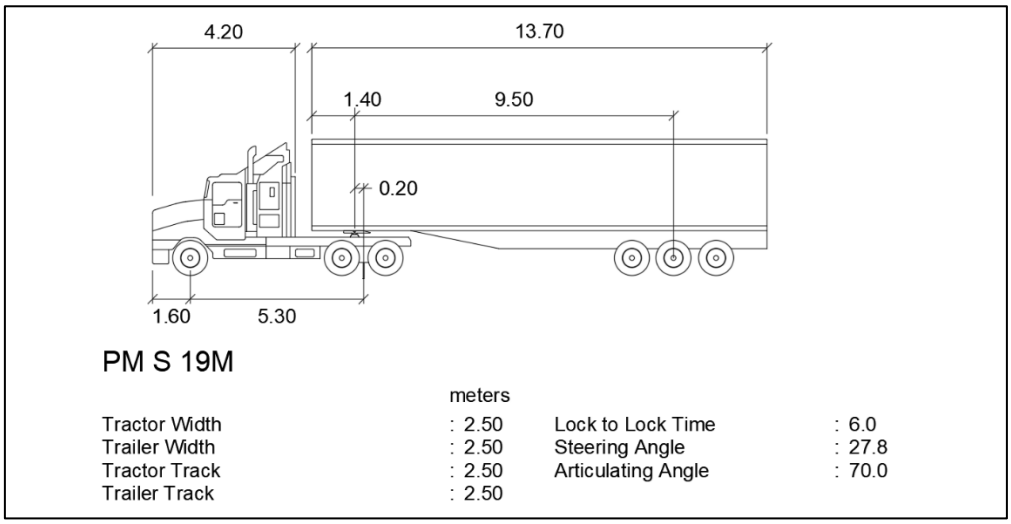


Figure 8-6: 19m AV design vehicle profile – 2023 Austroads Standards

It should be noted that the formation and geometry of each proposed access will be designed with respect to the applicable design vehicles in future detailed design stages and are not provided as part of the swept path assessment.

8.5.1 Murray Valley Highway / Davis Road

The Murray Valley Highway / Davis Road intersection has been sketched with the turn warrant provisions of a BAL and BAR. As described in **Section 8.4.4**, the Davis Road carriageway is narrow and will need to be upgraded to a sealed 6.2m carriageway with 1.5m shoulders. The narrow carriageway, and associated small radius turnout at the Murray Valley Highway, has led to vehicles tracking over the verge to turn left in and right out of Davis Road. This is evident in **Figure 8-7** below.

Figure 8-7: Evidence of vehicles tracking over verge at Davis Road turnout

Therefore, the concept sketch layout for the intersection provided at **Appendix H** provides larger radius turnouts that have been widened to accommodate the design vehicles. The radius matches in with the current observations of vehicle trajectories at the intersection. Furthermore, it is also recognised that the existing culvert may need to be extended to provide for these larger turnouts and widening of Davis Road carriageway.

The recommended intersection geometry and swept paths for the Murray Valley Highway / Davis Road intersection are shown in **Figure 8-8**, **Figure 8-9** and **Figure 8-10**.

Figure 8-8: Murray Valley Highway / Davis Road intersection upgrade concept sketch

Figure 8-9: Murray Valley Highway / Davis Road – 19m AV turn path – Right In / Left Out

Figure 8-10: Murray Valley Highway / Davis Road – 19m AV turn path – Left In / Right Out

From the above figures, the recommended design geometry of the Murray Valley Highway / Davis Road intersection can adequately cater for the design vehicle movements.

8.5.2 Murray Valley Highway / Heppell Road

The Murray Valley Highway / Heppell Road intersection has been sketched with the turn warrant provisions of a BAL and BAR. As described in **Section 8.4.3**, the Heppell Road carriageway will be upgraded to a 6.2m sealed carriageway with 1.5m shoulders.

The proposed intersection geometry and swept paths for the Murray Valley Highway / Heppell Road intersection are shown in **Figure 8-11**, **Figure 8-12** and **Figure 8-13**.

Figure 8-11: Murray Valley Highway / Heppell Road intersection upgrade concept sketch

Figure 8-12: Murray Valley Highway / Heppell Road – 19m AV turn path – Right In / Left Out

Figure 8-13: Murray Valley Highway / Heppell Road – 19m AV turn path – Left In / Right Out

From the above figures, the proposed design geometry of the Murray Valley Highway / Heppell Road intersection can adequately cater for the design vehicle movements.

8.5.3 Murray Valley Highway / Roslynmead Road / Bail Road

The Murray Valley Highway / Roslynmead Road / Bail Road intersection has been sketched with the turn warrant assessment outcomes of a full CHR and BAL for the Roslynmead Road leg. The Bail Road leg consists of a short CHR(S) and BAL turning provisions to compliment the design.

The concept sketch layout for the intersection provided at **Appendix H** provides larger radius turnouts for the Roslynmead leg to accommodate the design vehicles. No swept path assessment or upgrades have been provided for the Bail Road leg as no information regarding the traffic type or traffic demands is available, this leg is not utilised by the proposed development and the existing formation has been retained. It is recommended that Council consider the geometry of the northern Bail Road leg as part of the intersection design process.

The recommended intersection geometry and swept paths for the Murray Valley Highway / Roslynmead Road / Bail Road intersection are shown in **Figure 8-14**, **Figure 8-15** and **Figure 8-16**.

Figure 8-14: Murray Valley Highway / Roslynmead Road intersection upgrade concept sketch

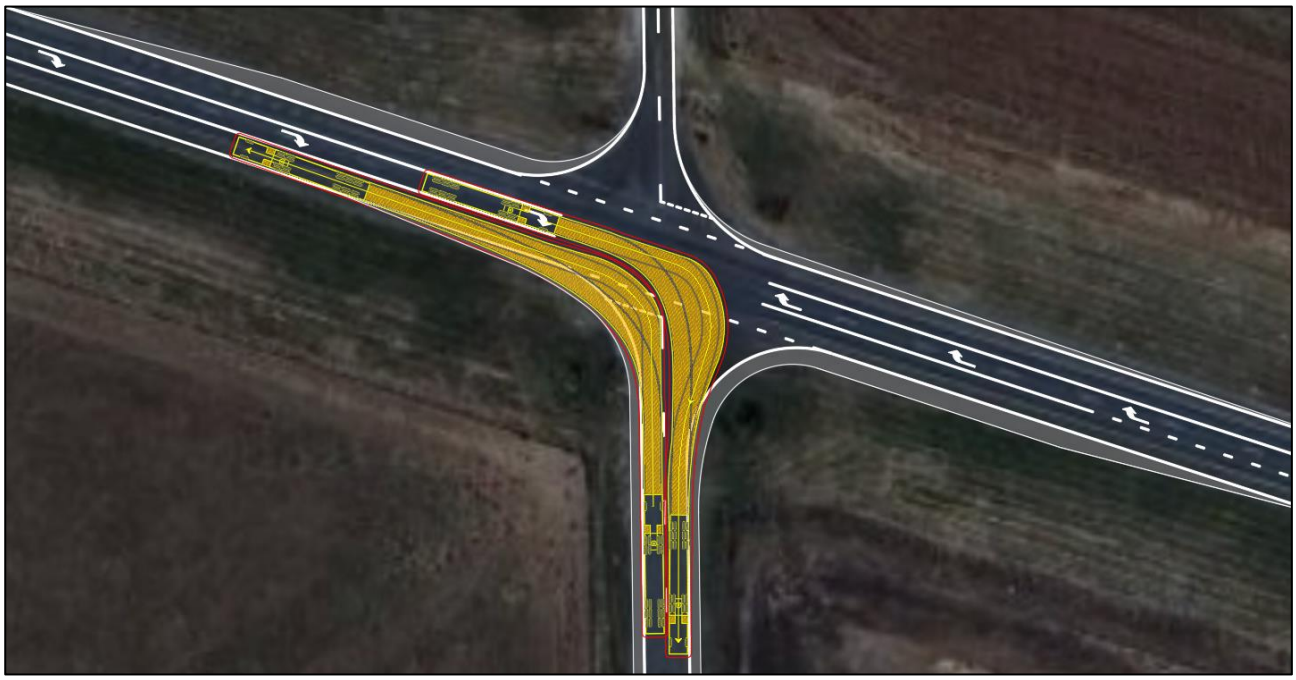


Figure 8-15: Murray Valley Highway / Roslynmead Road – 19m AV turn path – Right In / Left Out

Figure 8-16: Murray Valley Highway / Roslynmead Road – 19m AV turn path – Left In / Right Out

From the above figures, the proposed design geometry of the Murray Valley Highway / Roslynmead Road intersection can adequately cater for the design vehicle movements.

8.5.4 Roslynmead Road / Chrystal Road

The Roslynmead Road / Chrystal Road intersection has been sketched with the turn warrant provisions of a BAL and BAR. As described in **Section 8.4.5**, the western portion of the Chrystal Road carriageway will be upgraded to a 6.2m sealed carriageway with 1.5m shoulders.

The proposed intersection geometry and swept paths for the Roslynmead Road / Chrystal Road intersection are shown in **Figure 8-17**, **Figure 8-18** and **Figure 8-19**.

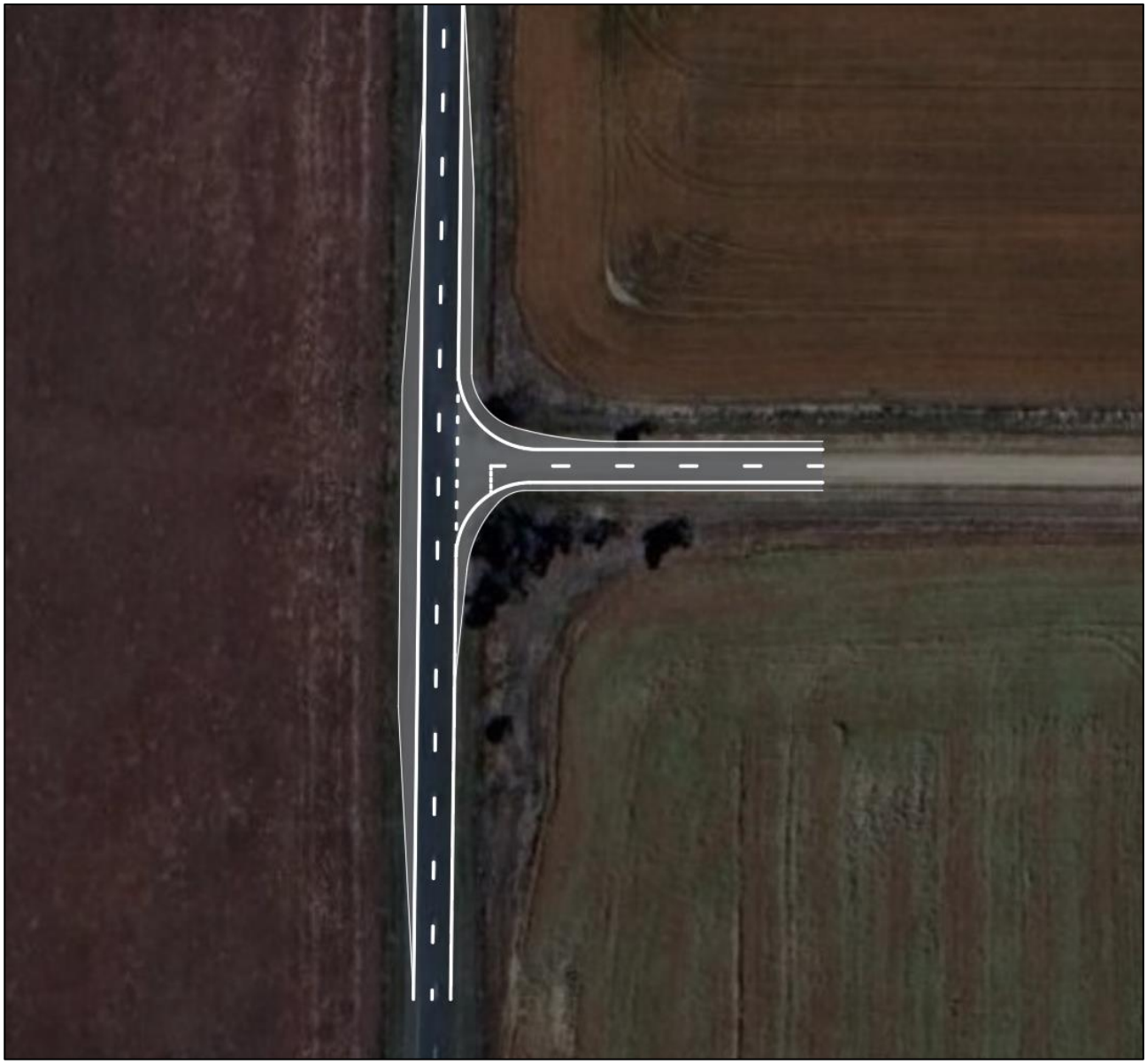


Figure 8-17: Roslynmead Road / Chrystal Road intersection upgrade concept sketch

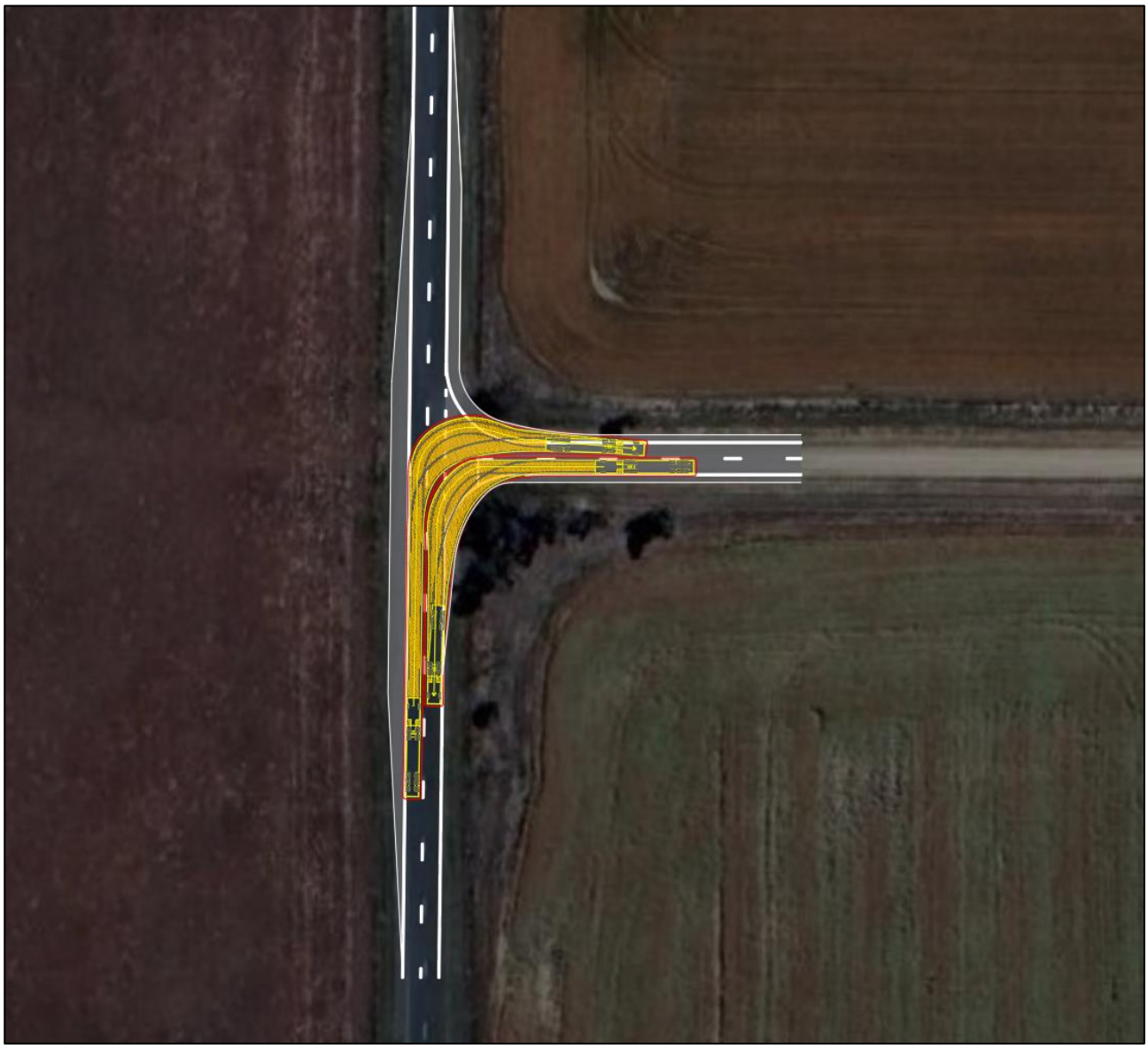


Figure 8-18: Roslynmead Road / Chrystal Road – 19m AV turn path – Right In / Left Out

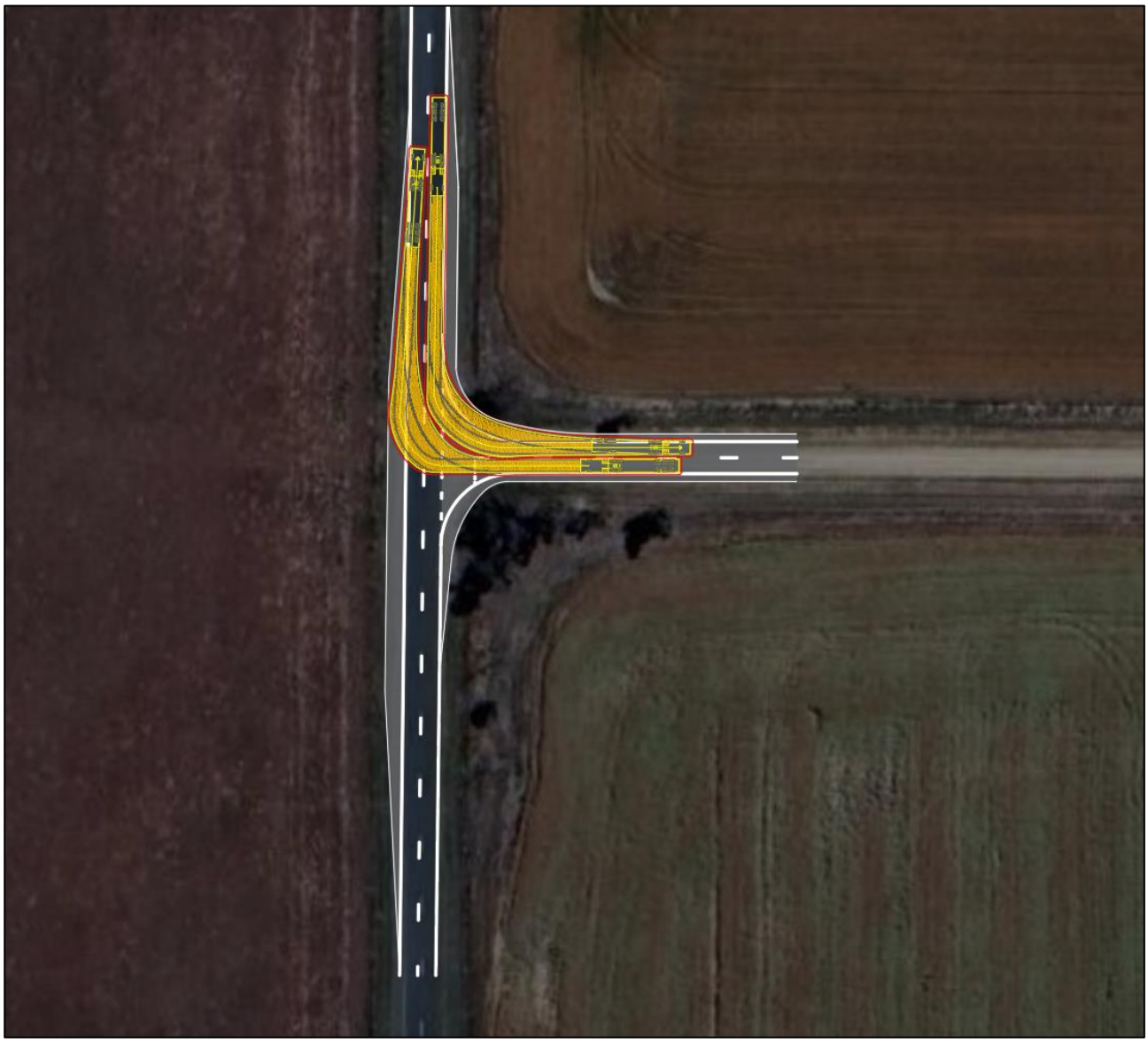


Figure 8-19: Roslynmead Road / Chrystal Road – 19m AV turn path – Left In / Right Out

From the above figures, the proposed design geometry of the Roslynmead Road / Chrystal Road intersection can adequately cater for the design vehicle movements.

8.5.5 Baillieu Road / Chrystal Road

The Baillieu Road / Chrystal Road intersection has been sketched to cater for simple turning movements to cater for two 19m semi-trailers passing each other. As described in **Section 8.4.5**, the eastern portion of the Chrystal Road carriageway, and Baillieu Road carriageway, will be upgraded to a 4m wide single lane sealed pavement and 1.5m gravel shoulders.

The proposed intersection geometry and swept paths for the Baillieu Road / Chrystal Road intersection are shown in **Figure 8-20** and **Figure 8-21**.

Figure 8-20: Baillieu Road / Chrystal Road intersection upgrade concept sketch

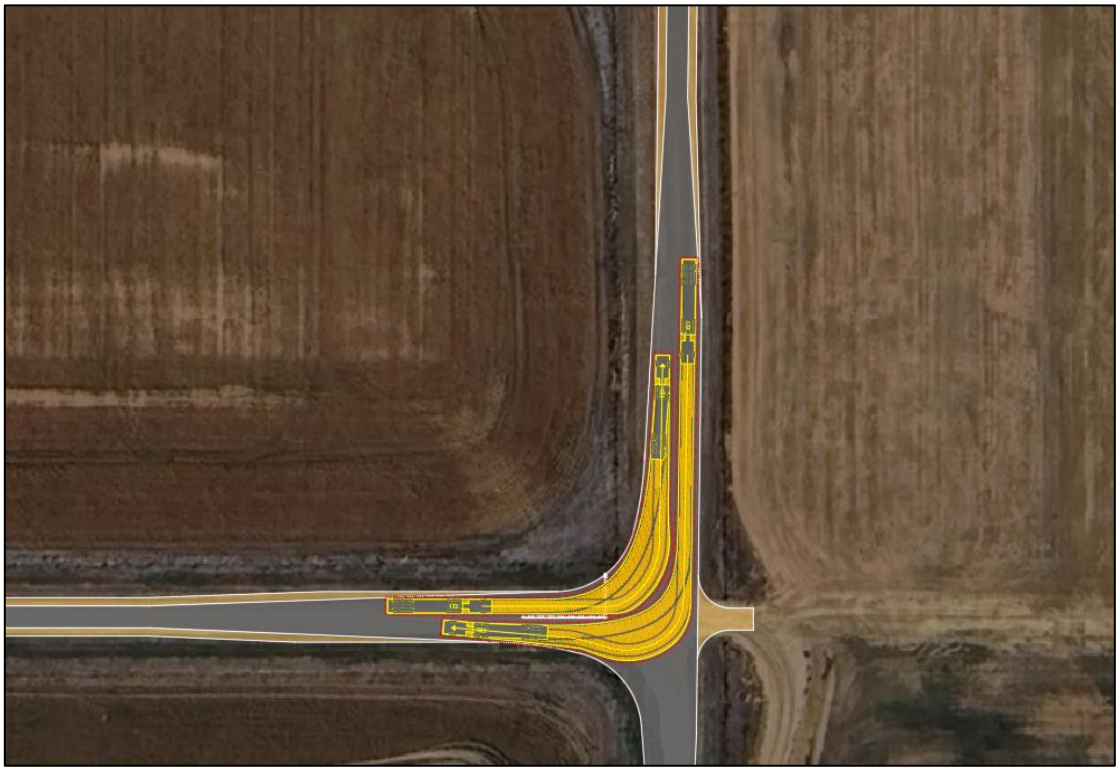


Figure 8-21: Baillieu Road / Chrystal Road – 19m AV turn path – Right In / Left Out

From the above figures, the proposed design geometry of the Baillieu Road / Chrystal Road intersection can adequately cater for the design vehicle movements.

8.6 Risk assessment

A risk assessment examining the increase in traffic movements relating to the proposed development operation at the relevant key intersections and along the principal traffic route has been considered. The safety risk score matrix used for the assessment is shown in **Figure 8-22**.

		Potential consequence				
		Property only (1)	Minor injury (2)	Medical treatment (3)	Hospitalisation (4)	Fatality (5)
Potential likelihood	Almost certain (5)	M	M	H	H	H
	Likely (4)	M	M	M	H	H
	Moderate (3)	L	M	M	M	H
	Unlikely (2)	L	L	M	M	M
	Rare (1)	L	L	L	M	M

Figure 8-22: Safety risk score matrix

With the implementation of the abovementioned intersection provisions, turn warrants outcomes, and road corridor upgrades, and with consideration of the available sight distance and crash data review, no high-risk items or adverse safety issues have been identified that would require further mitigation measures by the development.

9. Site layout review

The proposed layout plans for the development sites are detailed at **Appendix A**. The location of the access for each site is illustrated previously in **Section 2.1**. These accesses are separated from adjacent key intersections by a minimum of 800m, well exceeding separation requirements for driveways and intersections on rural access roads.

Gravel access roads and manoeuvring areas are proposed for each of the development sites, to provide internal connections between each of the sheds and associated facilities on site. The proposed internal gravel access roads are 6m wide carriageway with 1m wide shoulders (total 8m formation width). This is considered satisfactory for the required servicing movements of heavy vehicles and traffic volumes associated with the development.

The internal road network is divided into 'clean' and 'dirty' roads which are separated and do not connect to each other for biosecurity provisions.

9.1 Site access review

Each of the different development sites propose a sealed intersection throat and turnouts at the intersections with the external road network. These accesses are proposed to be utilised for all vehicle movements into and out of the development site, without any turning restrictions. Sealing the approach, throat and turnouts of the access intersection will mitigate pavement edge wear and migration of gravel onto the adjacent external road through lanes. This will result in lower maintenance requirements at the access locations and also increase safety for motorists utilising the accesses.

It should be noted that the Pollock's Block Rearing Farm access to Davis Road will initially be constructed with a gravel pavement to tie in with the existing form of the Davis Road carriageway. At the time when Davis Road is upgraded to a sealed formation, then it is recommended that the Pollock's Block Rearing Farm access intersection approach, throat and turnouts also be sealed to tie in with the upgraded sealed formation and width of Davis Road.

The accesses will be designed and constructed to Council and IDM standard and to suitably cater for articulated vehicle movements. This will be confirmed during the detailed design phase of the development.

As the sites cater for generally low traffic volumes and no access gate is proposed in the vicinity of the external road network, queuing at each of the sites' accesses are not anticipated to be an issue.

All site accesses are proposed onto Council managed roads, with no access onto DPT roads. It is assumed these access points will be used throughout the development of the site (construction works) as well as for ongoing maintenance access. Site accesses have been proposed to be sealed to mitigate pavement edge wear and transfer of gravel into the road lanes – this is considered a suitable proposal.

9.2 Car parking review

9.2.1 Car parking requirements

The Campaspe Shire Council Planning Scheme – Clause 52.06-5 stipulates the car parking provisions required for various land uses. However, due to the lack of published parking rates for a poultry Integrated Egg Laying operation within the local planning scheme, the number of required car parking spaces has been conducted through the use of first principles for each of the development sites.

The staff entering the site require one space each (assuming a 20% carpooling rate occurs between staff). Additional provisions have been considered for visitor use at each site.

The proposed parking provided for each site is illustrated in **Table 9-1**.

Table 9-1: Parking provisions

Site	Parking Demand (Staff x 20% carpooling)	Parking supply	Surplus
Pollock's Block Rearing Farm	16 spaces (20 staff)	18 spaces	2 spaces
Warwick's Block Cage Free Layer Farm	32 spaces (40 staff)	40 spaces	8 spaces
T-Block Free Range Layer Farm	35 spaces (44 staff)	36 spaces	1 space
'Organic Nutrients' Composting Facility	4 spaces (5 staff)	7 spaces	3 spaces
Total	**87 spaces (109 staff)**	**101 spaces**	**14 spaces**

Table 9-1 shows that the parking provision can adequately cater for the expected employee demand for each site with extra surplus spaces that can be used for visitor parking demands. Given the low amount of surplus parking provisions for the T-Block Free Range Layer Farm site, it is recommended that the T-Block Free Range Layer Farm parking be monitored and increased (if required) to allow for additional visitor parking if required in the future.

It is noted that additional car parking is provided internal the site for the 'clean' roads and vehicles fleet that remain within the different sites. In addition to this, individual parking locations could also be accommodated near each individual shed locations for operation and maintenance of the sheds.

9.2.2 Car parking geometry

The car parking geometry and associated space and aisle dimensions generally comply with the Australian Standards AS2890.1. It is expected to that the car parking layouts be refined further in the detailed design stage for each site.

9.2.3 Provisions for persons with disabilities (PWD)

In accordance with the National Construction Code (Part D3.4 – Access for people with a disability) 2022, providing PWD parking for the development would not be applicable of the use and purpose of the development i.e. employment and work which is physically demanding in nature for a poultry Integrated Egg Laying operation. This type of work also could pose a risk for

people with a disability.

As such, no PWD parking spaces are proposed for the development, which is considered acceptable. It is noted however that the parking requirements for the development should be monitored and upgraded to suit any future changes in operation (if any) that allowed opportunity for persons with disabilities to be employed.

9.2.4 Car parking summary

The proposed car parking facilities are deemed adequate for the proposed development.

Due to the size and greenfield nature of the development land, additional parking could also be accommodated in the vicinity of the proposed car parking areas, as well within other areas of the development sites, if required.

10. Implementation plan

This section of the report outlines the identified infrastructure upgrade requirements and designated delivery responsibility. The required upgrades, timing and responsibility of the respective infrastructure items are summarised in **Table 10-1**.

Table 10-1: Implementation plan – transport infrastructure

Item	Identified infrastructure upgrade requirement	Timing[1]	Responsibility	Additional commentary and final recommendations[3]
Development infrastructure				
1	Site accesses: ▪ Pollock's Block Rearing Farm – Construct site access on Davis Road (standard to match Davis Road formation at the time of construction) - (access to include basic left (BAL) and basic right (BAR) turning provisions). ▪ Warwick's Block Cage-Free Layer Farm – Construct site access on Heppell Road with sealed geometry and turnouts (access to include simple turning provisions). ▪ T-Block Free Range Layer Farm – Construct site access on Chrystal Road with sealed geometry and turnouts (access to include basic left (BAL) and basic right (BAR) turning provisions). ▪ 'Organic Nutrients' Composting Facility – Construct site access on Baillieu Road with sealed geometry and turnouts (access to include simple turning provisions).	At commencement of use of each applicable site (est. 2028)	Developer	**COMMENTS:** Nil **RECOMMENDATION:** Infrastructure upgrade works to be carried out *by the developer* in line with the 'identified infrastructure upgrade requirements' detailed in this table.
2	Construct internal unsealed road network and parking areas for each site	At commencement of use of each applicable site (est. 2028)	Developer	**COMMENTS:** Nil **RECOMMENDATION:** Infrastructure upgrade works to be carried out by *the developer* in line with the 'identified infrastructure upgrade requirements' detailed in this table.
3	Provide ongoing monitoring of operations of each site and: ▪ Maintain internal roads under appropriate schedules ▪ Upgrade parking provisions as required to meet staff and visitor demands.	Ongoing - as required	Developer	**COMMENTS:** Nil **RECOMMENDATION:** Infrastructure upgrade works to be carried out by *the developer* in line with the 'identified infrastructure upgrade requirements' detailed in this table.

External midblock road infrastructure				
4	Upgrade Davis Road to a sealed 6.2m formation with 1.5m wide shoulders as per Council's planning between Murray Valley Highway and the Pollocks Block Rearing Farm access.	TBC (this is currently required as at 2025)	Council (as per planning)	**COMMENTS:** As part of the draft application review process, Council acknowledged that while the existing conditions and usage have been correctly identified in this report, the proposed development will result in increased use of Davis Road. Accordingly, it is recommended that the road be upgraded by the developer to meet relevant Council standards. At a minimum, they advised the developer should provide a financial contribution toward future upgrade works. In response, it is acknowledged that the proposal will lead to increased use of the road. However, the operational and safety assessments undertaken as part of this Traffic Impact Assessment demonstrate that the additional traffic generated by the development does not introduce new / increased risks or trigger upgrade requirements beyond those already associated with existing traffic volumes. Therefore, the conclusions of the current assessment are considered fair and reasonable for all parties. Nonetheless, in consideration of Council's feedback and in the interest of project timing and outcomes, the developer is agreeable to providing a financial contribution toward future upgrade works. It is proposed that this contribution be calculated based on the proportion of development-generated traffic relative to total projected traffic volumes in 2052. This equates to approximately 20%, which is considered a fair and reasonable contribution. **RECOMMENDATION:** Infrastructure upgrade works to be carried out ***by Council*** in line with the 'identified infrastructure upgrade requirements' detailed in this table. A financial contribution of approximately 20% to be provided by the developer toward these future upgrade works. This contribution can be negotiated during later project stages and formalised through an infrastructure agreement.
5	Upgrade Heppell Road to a sealed 6.2m formation with 1.5m wide shoulders between the Murray Valley Highway and Warwick's Block Cage-Free Layer Farm access.	At commencement of use of Warwick's Block site (est. 2028)	Developer	**COMMENTS:** Nil **RECOMMENDATION:** Infrastructure upgrade works to be carried out by ***the developer*** in line with the 'identified infrastructure upgrade requirements' detailed in this table.
6	Upgrade Chrystal Road: ▪ To a sealed 6.2m formation with 1.5m wide shoulders between Roslynmead Road and T-Block Free Range Layer Farm access ▪ To a sealed 4m formation with 1.5m gravel shoulders between the T-Block Free Range Layer Farm access and Baillieu Road.	At commencement of use of T-Block and 'Organic Nutrients' Composting Facility sites (est 2028)	Developer	**COMMENTS:** Nil **RECOMMENDATION:** Infrastructure upgrade works to be carried out by ***the developer*** in line with the 'identified infrastructure upgrade requirements' detailed in this table.

7	Upgrade Baillieu Road to a sealed 4m formation with 1.5m gravel shoulders between Chrystal Road and the 'Organic Nutrients' Composting Facility site access. Include appropriate curve widening for the 120 degree curve in Baillieu Road.	At commencement of use of 'Organic Nutrients' Composting Facility site (est 2028)	Developer	**COMMENTS:** Nil **RECOMMENDATION:** Infrastructure upgrade works to be carried out by ***the developer*** in line with the 'identified infrastructure upgrade requirements' detailed in this table.
External intersection infrastructure				
8	Murray Valley Highway / Davis Road Upgrade intersection to include basic left (BAL) and basic right (BAR) turning provisions.	TBC (this is currently triggered as at 2025)	Transport for Victoria	**COMMENTS:** As part of the draft application review process, Council acknowledged that while the existing conditions and usage have been correctly identified in this report, the proposed development will result in increased use of Davis Road. Accordingly, they recommended that the Murray Valley Highway and Davis Road intersection be upgraded by the developer or at a minimum, they advised the developer should provide a financial contribution toward future intersection upgrade works. Transport for Victoria also indicated that provision for basic left turn treatment (BAL) into Davis Road should be provided at the Murray Valley Highway and Davis Road intersection. In response, it is acknowledged that the proposal will lead to increased use of the Murray Valley Highway and Davis Road intersection. However, the operational and safety assessments undertaken as part of this Traffic Impact Assessment demonstrate that the additional traffic generated by the development does not introduce new / increased risks or trigger upgrade requirements beyond those already associated with existing traffic volumes. Therefore, the conclusions of the current assessment are considered appropriate, and fair and reasonable for all parties. Nonetheless, in consideration of feedback from the referral agencies and in the interest of project timing and outcomes, the developer is agreeable to delivering the upgrade works as requested by Council and Transport for Victoria. **RECOMMENDATION:** Infrastructure upgrade works to be carried out ***by the developer*** in line with the 'identified infrastructure upgrade requirements' detailed in this table. Timing TBC in line with development delivery schedule.

9	Murray Valley Highway / Heppell Road Upgrade intersection to include basic left (BAL) and basic right (BAR) turning provisions.	At commencement of use of Warwick's Block site (est. 2028)	Developer	**COMMENTS:** As part of the draft application review process, Transport for Victoria indicated that provision of a channelised right-turn (CHR) treatment into Heppell Road should be considered for implementation by the developer. In response, it is considered that this requirement exceeds what is identified through the operational and safety assessments presented in this report. A review of crash data over the past 15 years does not reveal any patterns that would warrant full-length channelisation. In the absence of reactive safety concerns, turn treatment warrants have been used to determine the appropriate intersection upgrades. Based on these warrants, the recommended treatments—basic left-turn (BAL) and basic right-turn (BAR)—are considered to be fair and reasonable for all parties. Accordingly, it is maintained that these treatments represent an appropriate and proportionate response to the projected traffic demands. **RECOMMENDATION:** Infrastructure upgrade works to be carried out *by the developer* in line with the 'identified infrastructure upgrade requirements' detailed in this table.
10	Murray Valley Highway / Roslynmead Road / Bail Road Upgrade intersection to include a full channelised right turn (CHR) treatment into Roslynmead Road, a short channelised right turn (CHR(S)) treatment into Bail Road, and basic left turn (BAL) treatments on each Murray Valley Highway approach.	Existing provisions generally comply with BAR and BAL provisions for turning movements into Roslynmead Road. Channelisation of this intersection is triggered in 2031 without any development influence[2]	Transport for Victoria	**COMMENTS:** As part of the draft application review process, Transport for Victoria indicated that provision of a channelised left-turn (CHL) treatment into Roslynmead Road should be considered for implementation by the developer. In response, it is considered that this requirement exceeds what is identified through the operational and safety assessments presented in this report. A review of crash data over the past 15 years does not reveal any patterns that would warrant full-length channelisation. In the absence of reactive safety concerns, turn treatment warrants have been used to determine the appropriate intersection upgrades. Based on these warrants, the recommended treatments— full channelised right turn (CHR) treatment and basic left turn (BAL) into Roslynmead Road—are considered to be fair and reasonable for all parties. Accordingly, it is maintained that these treatments represent an appropriate and proportionate response to the projected traffic demands. Additionally, it is recognised that there is no funding available for the future upgrade works. Therefore, considering this along with the feedback from the referral agencies, and in the interest of project timing and outcomes, the developer is agreeable to delivering the future upgrade works in line with the 'identified infrastructure upgrade requirements' detailed in this table. i.e. Upgrade intersection in 2031 to include a full channelised right turn (CHR) treatment into Roslynmead Road, a short channelised right turn (CHR(S)) treatment into Bail Road, and basic left turn (BAL) treatments on each Murray Valley Highway approach. **RECOMMENDATION:** Infrastructure upgrade works to be carried out by *the developer* in line with the 'identified infrastructure upgrade requirements' detailed in this table. Timing TBC in line with development delivery schedule.

11	<u>Roslynmead Road / Chrystal Road</u> Upgrade intersection to include basic left (BAL) and basic right (BAR) turning provisions.	At commencement of use of T-Block and 'Organic Nutrients' Composting Facility sites (est 2028)	Developer	**COMMENTS:** Nil **RECOMMENDATION:** Infrastructure upgrade works to be carried out by ***<u>the developer</u>*** in line with the 'identified infrastructure upgrade requirements' detailed in this table.
12	<u>Baillieu Road / Chrystal Road</u> Upgrade intersection to a sealed geometry that caters for simple turning movements.	At commencement of use of 'Organic Nutrients' Composting Facility site (est 2028)	Developer	**COMMENTS:** Nil **RECOMMENDATION:** Infrastructure upgrade works to be carried out by ***<u>the developer</u>*** in line with the 'identified infrastructure upgrade requirements' detailed in this table.

[1]The accesses and construction staging of the development is subject to change. Therefore, the timing of the accesses and relevant development infrastructure will be dependent on the staging identified during the future detailed design stage and construction scheduling of the development.

[2] No mitigation measures are triggered by the development as the development does not cause the requirement for additional turning treatments above what is already required by the background traffic volumes.

[3] This information has been included to address feedback / comments provided by DTP and referral agencies as part of the draft planning permit application submission.

The above developer recommendations for the proposed development sites are illustrated in **Figure 10-1**, with reference to each applicable item in **Table 10-1**.

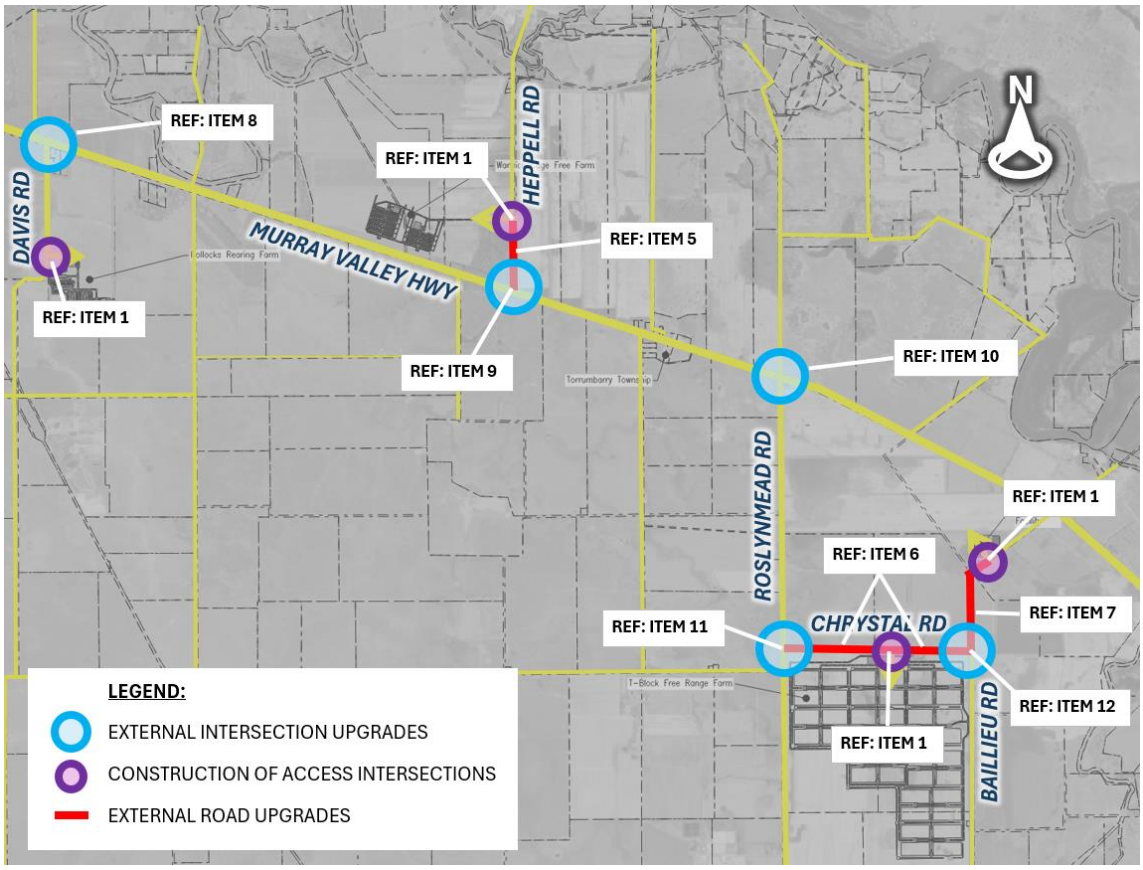


Figure 10-1: Recommended developer upgrades to the surrounding road network

11. Summary and recommendations

RMA Engineers has been engaged by McLean Farms Australia Pty Ltd (the Client) to undertake a Traffic Impact Assessment (TIA) in support of development applications for a proposed poultry Integrated Egg Laying operation located in Torrumbarry, Victoria.

The proposed development includes the following sites:

- Chick rearing farm, referred to as Pollock's Block Rearing Farm (720,000 birds)
- Cage-free laying farm, referred to as Warwick's Block Cage Free Layer Farm (1,280,000 birds)
- Free-range laying farm, referred to as T-Block Free Range Layer Farm (800,000 birds)
- Composting facility, referred to as 'Organic Nutrients' Composting Facility

The proposed infrastructure will include a total of 36 laying sheds, 16 cage-free and 20 free-range, and 18 rearing sheds with associated ancillary infrastructure.

This report has been prepared in support of the development applications for the proposed Integrated Egg Laying operation. Three separate development applications will be lodged concurrently for assessment by the Victorian Minister for Planning.

This traffic impact assessment has been undertaken in general accordance with the road transport related requirements identified in Austroads Guide to Traffic Management – Part 12: *Integrated Transport Assessments for Developments (2020).*

The following is a summary of the findings and recommendations of the TIA.

Operational impacts:

- The development as a whole is expected to generate 107 light vehicles and 49 heavy vehicles per day. These vehicles will be dispersed between the four sites, and the arrival/departure of heavy vehicles will be distributed throughout the day.
- It was identified that the external road network peak hours (AM and PM) do not coincide with the peak hours of the development traffic movements at the key intersections. For the purpose of the operational analysis and turn warrant assessment, three assessment scenarios were assessed for the different peak hours throughout the weekday: Network Peak (AM and PM), Development Peak 1 (AM and PM) and Development Peak 2 (AM and PM).
- Given the low anticipated ultimate 2052 'background with development' traffic volumes, intersection analysis is not deemed warranted for the key intersection locations.
- Regardless of the above, SIDRA analysis undertaken at the key intersection indicates that all intersections operate well below the DSS with minimal saturation, delays and queues for the 2052 ultimate development, for the three key peak scenarios. In addition to this, no individual movements exceed the 42-second delay threshold for unacceptable delay related to priority-controlled intersections.
- The development impact on the key external intersections do not cause any adverse operational issues. The intersections operate well within performance thresholds and therefore, no mitigation of operational impacts or upgrades are required for the key external intersections.

- The mid-block level of service for the surrounding road network is LoS B for the Murray Valley Highway and LoS A for all other key roads under the 2052 ultimate development scenarios. No upgrades are required on the surrounding external road network with regards to operational capacity.

Safety considerations:

- From a historical crash data review, no crash patterns or mitigation measures could be identified within the vicinity of the sites or along the primary traffic routes. It is recommended that ongoing monitoring of crashes in the area be conducted by the relevant road authority to determine crash patterns and relevant mitigation measures in the future.
- The turn warrant assessment suggests that:
  - All the key intersections fall within basic turn treatment thresholds (i.e. BAL and BAR), with the exception of Murray Valley Highway / Roslynmead Road / Bail Road which triggers a CHR turn treatment for vehicles turning into Roslynmead Road. This is required in the background scenario, regardless of the development. It is noted that this is similar for the 2042 completion year where the background volumes trigger CHR(S) turn treatment and the addition of the development traffic does not trigger any treatment greater than this.
  - No mitigation measures are triggered by the development at the existing external key intersections as the development does not cause the requirement for additional turning treatments above what is already required by the background traffic volumes.
  - As per the turn warrant assessment outcomes, all new accesses and intersections should be constructed with consideration of basic turning treatments (BAL and BAR).
- The sight distance assessment found that sight distance available at the key intersections is satisfactory and meets the minimum SISD requirements for all approaches.
- Given the relatively flat terrain and surrounding topography of the area, it is expected that the sight distance at each access location would meet relevant sight distance requirements. The sight distance of these accesses can be confirmed and appropriately designed during future detailed design phase of the development for each site.
- A review of the suitability of the surrounding road network indicates the following:
  - Murray Valley Highway - The Murray Valley Highway has suitable road geometry and sufficient sight lines available along the length of the road corridor, in the vicinity of the subject sites. From a desktop review, the existing cross section, pavement and road environment along the Murray Valley Highway is deemed suitable for development traffic. No mitigation measures or upgrades are deemed to be required by the development along the subject length of the Murray Valley Highway.
  - Roslynmead Road - Roslynmead Road pavement appears to be in good condition for a rural collector road. The road has suitable road geometry and sufficient sight lines available along the length of the road corridor, in the vicinity of the subject sites.

    Minor edgewear is evident at intermittent locations along the corridor. From a desktop review, the existing cross section, pavement and road environment along Roslynmead Road is deemed suitable for development traffic.

It is recommended that the condition of Roslynmead Road be monitored. At this time, no mitigation measures or upgrades are deemed to be required by the development along the subject length of Roslynmead Road.

- Heppell Road - Heppell Road is currently signed as a 'Dry Weather Road Only' and comprises an unsealed earth carriageway. The unsealed pavement at the intersection with the Murray Valley Highway has deep wheel rutting and ponding which is not suitable for safe traffic movement.

  It is recommended the developer upgrades Heppell Road to a rural access road, including a 6.2m wide seal with 1.5m shoulders in line with the Campaspe Shire Council requirements.

- Davis Road - The existing form of the gravel portion of Davis Road appears to be in good condition, with suitable road geometry and sufficient sight lines available along the entire length of the road between the Murray Valley Highway and the proposed site access for Pollock's Block Rearing Farm.

  Given that this road is used by heavy vehicles accessing the Veolia Patho Landfill site, and that the background volumes at the 2042 design year will be greater than 150 vehicles per day (vpd), it is recommended that Council upgrade Davis Road to a rural access road (with 6.2m wide seal with 1.5m shoulders), in line with the Campaspe Shire Council requirements. This is also consistent with Council's current plans and intent for the upgrade of Davis Road.

  Therefore, no mitigation measures or upgrades are deemed to be required by the development along the subject length of Davis Road.

- Chrystal Road - The existing form of Chrystal Road is an unsealed carriageway varying between approximately 4-6m wide. The terrain is flat, with sufficient sight lines available along the entire length of the road between the Roslynmead Road and Baillieu Road.

  Chrystal Road is the primary access road to the T-Block Free Range Layer Farm and the 'Organic Nutrients' Composting Facility and similar to Heppell Road, it is recommended that Chrystal Road is upgraded to local access road standards:

  - It is recommended that the western section of road be upgraded to a 6.2m wide seal with 1.5m shoulders, in line with the Campaspe Shire Council requirements.
  - It is recommended that the eastern section of road be upgraded to a 4m wide single lane sealed pavement and 1.5m gravel shoulders, inline with the Campaspe Shire Council requirements.

- Baillieu Road - The existing form of Baillieu Road is an unsealed carriageway varying between approximately 4-6m wide. The terrain is flat, with sufficient sight lines available along the entire length of the road.

  All manure collections from the associated farms are expected to travel to the 'Organic Nutrients' Composting Facility via Baillieu Road. Therefore, it is recommended that Baillieu Road is upgraded to a 4m wide single lane sealed pavement and 1.5m gravel shoulders, between Chrystal Road and the 'Organic Nutrients' Composting Facility access, inline with the Campaspe Shire Council requirements.

- It is noted that there is a 120 degree curve in Baillieu Road located approximately 850m north of Chrystal Road. It is recommended that the pavement at this location be widened to accommodate two vehicles passing.

- A review of the suitability of the surrounding intersections was undertaken with provision of the turn warrant outcomes and swept path assessment of a 19m AV. The recommended geometries and layouts illustrated in conceptual sketches in **Section 8.5** of this report (and detailed in **Appendix H**) can adequately cater for the design vehicle movements.
- From a risk assessment it was identified that with the implementation of the recommended intersection provisions, turn warrants outcomes, and road corridor upgrades, and with consideration of the available sight distance and crash data review, no high-risk items or adverse safety issues have been identified that would require further mitigation measures by the development.

Site layout review:

- The proposed access locations are separated from adjacent key intersections by a minimum of 800m, well exceeding separation requirements for driveways and intersections on rural access roads.
- Gravel access roads and manoeuvring areas are proposed for each of the development sites, to provide internal connections between each of the sheds and associated facilities on site. The proposed internal gravel access roads are considered satisfactory for the required servicing movements of heavy vehicles and traffic volumes associated with the development.
- The internal road network is divided into 'clean' and 'dirty' roads which are separated and do not connect to each other for biosecurity provisions.
- It is recommended that each access provide a sealed approach, throat and turnouts of the access intersection to help mitigate future pavement edge wear and migration of gravel onto the adjacent external road through lanes.
- The accesses will be designed and constructed to relevant Council and IDM standards, and to suitably cater for articulated vehicle movements. This will be confirmed during the detailed design phase of the development.
- As the sites cater for generally low traffic volumes and no access gate is proposed in the vicinity of the external road network, queuing at each of the sites' accesses is not anticipated to be an issue.
- The parking provision can adequately cater for the expected employee demand for each site with extra surplus spaces that can be used for visitor parking demands.
- Given the low amount of surplus parking provisions for the T-Block Free Range Layer Farm site, it is recommended that the T-Block Free Range Layer Farm parking be monitored and increased (if required) to allow for additional visitor parking if required in the future.
- It is noted that additional car parking is provided internal to the sites for the 'clean' roads and dedicated vehicle fleets within the different sites. In addition to this, individual parking locations could also be accommodated near each individual shed locations for operation and maintenance of the sheds.

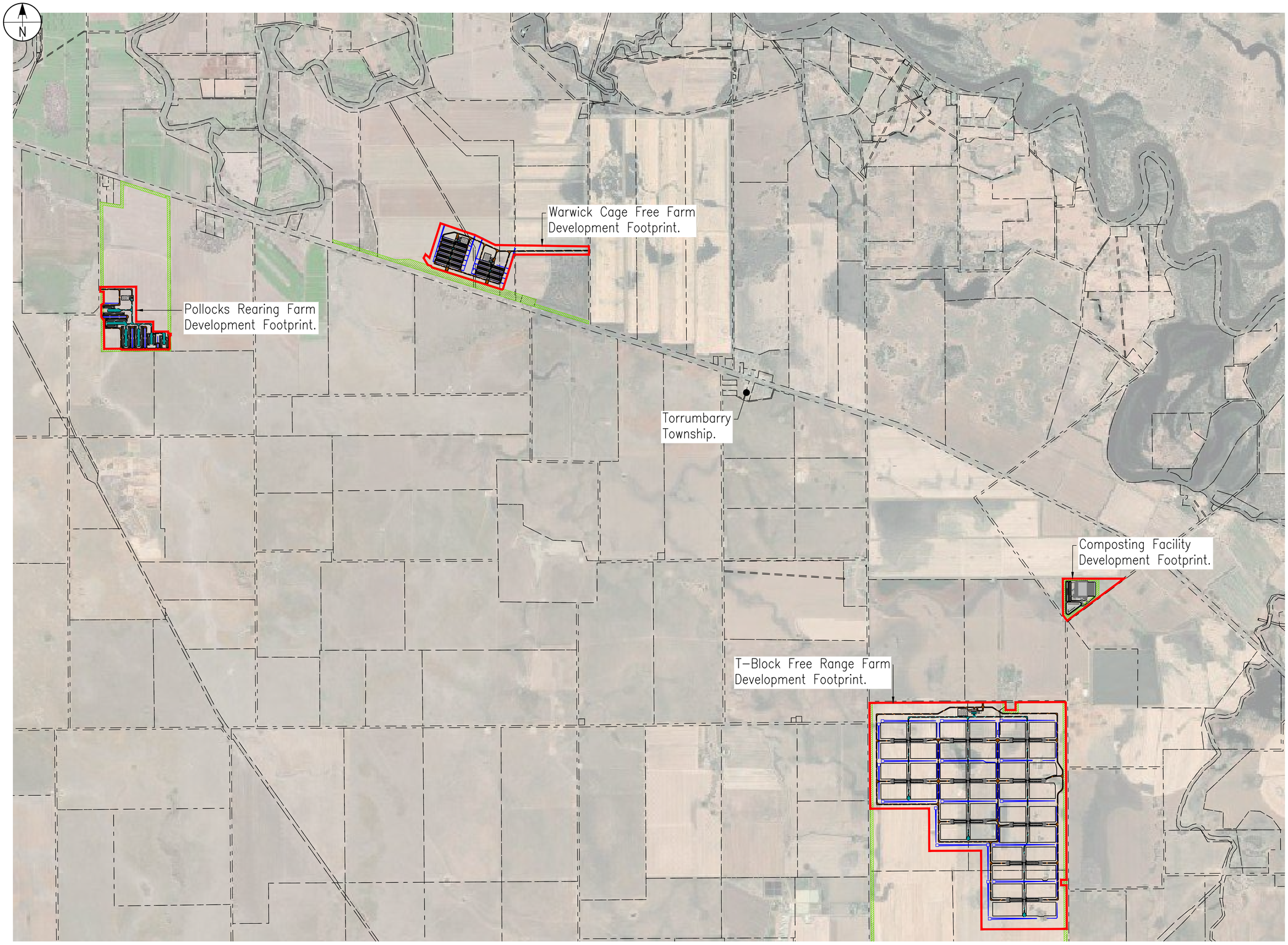
- The car parking geometry and associated space and aisle dimensions generally comply with the Australian Standards AS2890.1. It is expected that the car parking layouts will be refined further in the detailed design stage for each site.
- In accordance with the National Construction Code, no PWD parking spaces are proposed for the development, which is considered acceptable. It is noted however that the parking requirements for the development should be monitored and upgraded to suit any future changes in operation (if any) that allowed opportunity for persons with disabilities to be employed.
- The proposed car parking facilities are deemed adequate for the proposed development. Due to the size and greenfield nature of the development land, additional parking could also be accommodated in the vicinity of the proposed car parking areas, as well within other areas of the development sites, if required.

Implementation of identified infrastructure upgrades:

- The recommended upgrades, timing and responsibility of the respective infrastructure items are summarised in **Table 10-1**.
- **Figure 10-1** illustrates the recommended developer upgrades for the proposed development sites.

With respect to the above findings and implementation of the recommendations of this TIA report, the proposed development can proceed without any unacceptable or adverse impacts on the external road network. No traffic and transport engineering matters have been identified that should preclude approval of the proposed development at the specified locations.

Appendix A Development layout



LEGEND:
EXISTING

- Property Boundary
- Farm Development Footprints

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

OVERALL CONCEPT LAYOUT PLAN

Scale 1:20000 (A1)

0 200 400 600 800m
1:20000(A1) 1:40000(A3)

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
I	FOR INFORMATION	12/08/25	BLL	BLL	ALB	-
H	FOR INFORMATION	28/07/25	BLL	BLL	ASO	-
G	FOR INFORMATION	23/07/25	BLL	BLL	ALB	-
F	FOR COMMENT	21/07/25	LMB	BLL	ALB	-
E	FOR COMMENT	24/06/25	BLL	BLL	ALB	-
D	FOR COMMENT	24/06/25	LMB	BLL	ASO	-
C	FOR COMMENT	20/06/25	BLL	BLL	BLL	-
1	FOR APPROVAL	16/10/25	BLL	BLL	GS	-
0	FOR APPROVAL	15/08/25	BLL	BLL	GS	-

R.P.E.Q.

THIS DOCUMENT IS UNCONTROLLED AND IS NOT TO BE USED FOR CONSTRUCTION UNTIL THIS NOTE IS REMOVED AND A DIGITAL SIGNATURE PROVIDED IN ITS PLACE

RMA Engineers
www.rmaeng.com.au

CLIENT
MCLEAN FARMS AUSTRALIA PTY LTD
PO BOX 158
PITTSWORTH, QLD, 4356

PROJECT
INTEGRATED EGG LAYING OPERATION
MURRAY VALLEY HIGHWAY
TORRUMBARRY, VIC, 3562

TITLE
OVERALL CONCEPT LAYOUT PLAN

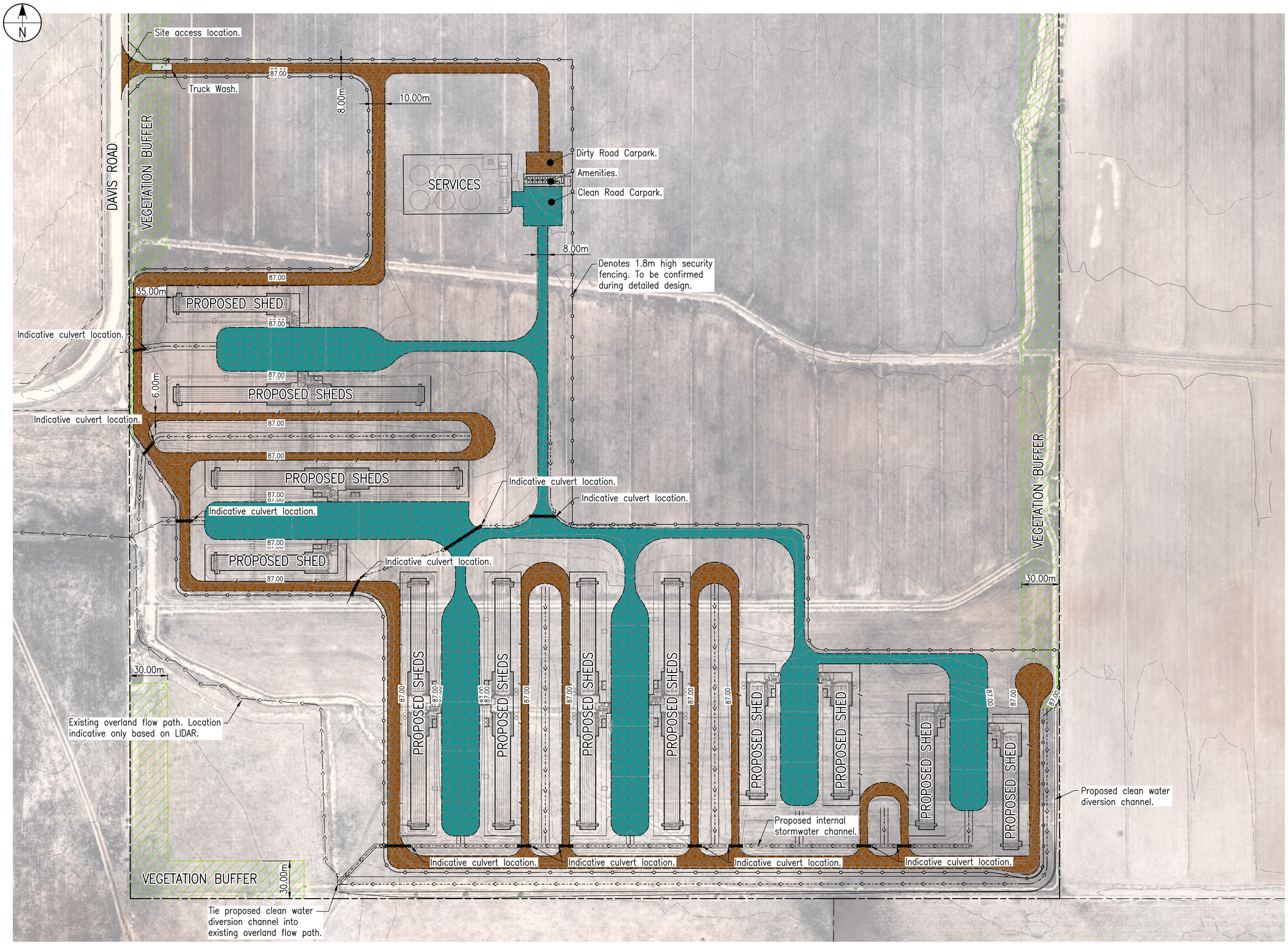
HEIGHT DATUM	MAP GRID	SIZE
AHD	VICGRID	A1

COUNCIL RAL/MCU NO.

COUNCIL OW NO.

PROJECT NO.	DRAWING NO.	ISSUE
25E-0010	C-SK0003	1

N:\Synergy\Projects\25E-0010 Poultry Farm - Torrumbarry\8 Civil Model and Doc\MASTER DOCUMENTATION\00 Prelim\Drafting\C-SK0001.dwg C-SK0003



POLLOCK'S BLOCK REARING FARM CONCEPT LAYOUT PLAN

Scale 1:1500 (A1)

0 15 30 45 60m

1:1500(A1) 1:3000(A3)

LEGEND:

EXISTING

- Invert
- Property Boundary

PROPOSED

- Clean Area Road Pavement
- Dirty Area Road Pavement
- Vegetation Buffer
- Property Boundary
- Minor Contours
- 609.00 Major Contours
- Invert
- --(D)---(D)-- Indicative Stormwater Culvert
- Fence

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.
P.2. Intervals between contours - 0.2m. Contours are design surface levels.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
1	FOR APPROVAL	16/10/25	LMB	LMB	GS	
0	FOR APPROVAL	15/08/25	LMB	LMB	GS	
A	FOR COMMENT	12/08/25	LMB	LMB	GS	

R.P.E.Q.

THIS DOCUMENT IS UNCONTROLLED AND IS NOT TO BE USED FOR CONSTRUCTION UNTIL THIS NOTE IS REMOVED AND A DIGITAL SIGNATURE PROVIDED IN ITS PLACE

RMA Engineers
www.rmaeng.com.au

CLIENT
MCLEAN FARMS AUSTRALIA PTY LTD
PO BOX 158
PITTSWORTH, QLD, 4356

PROJECT
INTEGRATED EGG LAYING OPERATION
MURRAY VALLEY HIGHWAY
TORRUMBARRY, VIC, 3562

TITLE
POLLOCK'S BLOCK REARING FARM CONCEPT LAYOUT PLAN

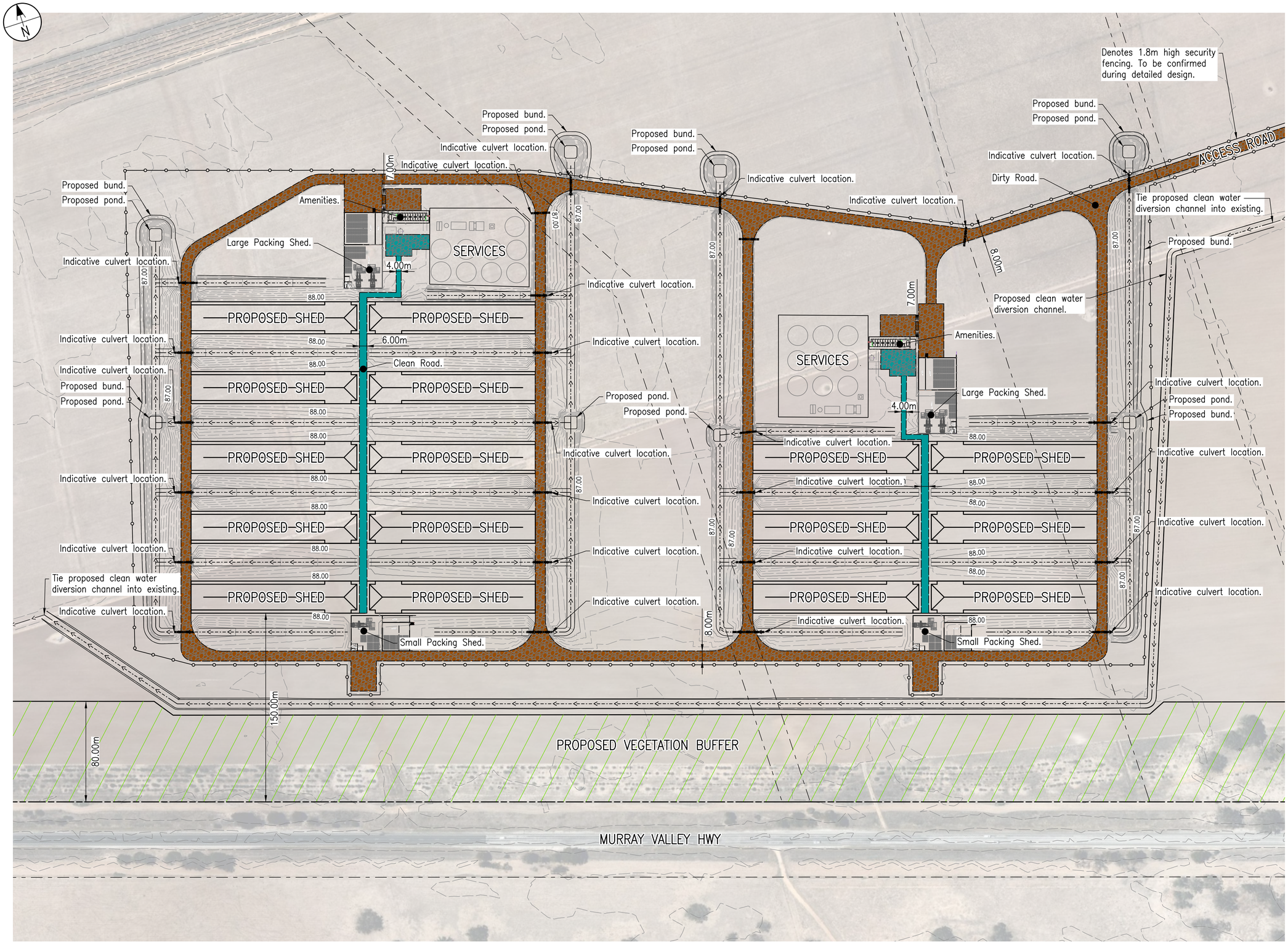
HEIGHT DATUM	MAP GRID	SIZE
AHD	VICGRID	A1

COUNCIL RAL/MCU NO.

COUNCIL OW NO.

PROJECT NO.	DRAWING NO.	ISSUE
25E-0010	P-SK1001	1

N:\Synergy\Projects\25E-0010 Poultry Farm – Torrumbarry\8 Civil Model and Doc\MASTER DOCUMENTATION\01 Package\Drafting\P-SK1001.dwg P-SK1001



WARWICK'S BLOCK CAGE FREE CONCEPT LAYOUT PLAN

Scale 1:1500 (A1)

0 15 30 45 60m

1:1500(A1) 1:3000(A3)

LEGEND:

EXISTING

- Invert
- Property Boundary

PROPOSED

- Clean Area Road Pavement
- Dirty Area Road Pavement
- Vegetation Buffer
- Property Boundary
- Minor Contours
- 609.00 Major Contours
- Invert
- Indicative Stormwater Culvert
- Fence

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.
P.2. Intervals between contours - 0.2m.
Contours are design surface levels.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
1	FOR APPROVAL	16/10/25	LMB	LMB	GS	
0	FOR APPROVAL	15/08/25	LMB	LMB	GS	
A	FOR COMMENT	08/08/25	LMB	LMB	GS	

R.P.E.Q.

THIS DOCUMENT IS UNCONTROLLED AND IS NOT TO BE USED FOR CONSTRUCTION UNTIL THIS NOTE IS REMOVED AND A DIGITAL SIGNATURE PROVIDED IN ITS PLACE

RMA Engineers
www.rmaeng.com.au

CLIENT
MCLEAN FARMS AUSTRALIA PTY LTD
PO BOX 158
PITTSWORTH, QLD, 4356

PROJECT
INTEGRATED EGG LAYING OPERATION
MURRAY VALLEY HIGHWAY
TORRUMBARRY, VIC, 3562

TITLE
WARWICK'S BLOCK CAGE FREE CONCEPT LAYOUT PLAN

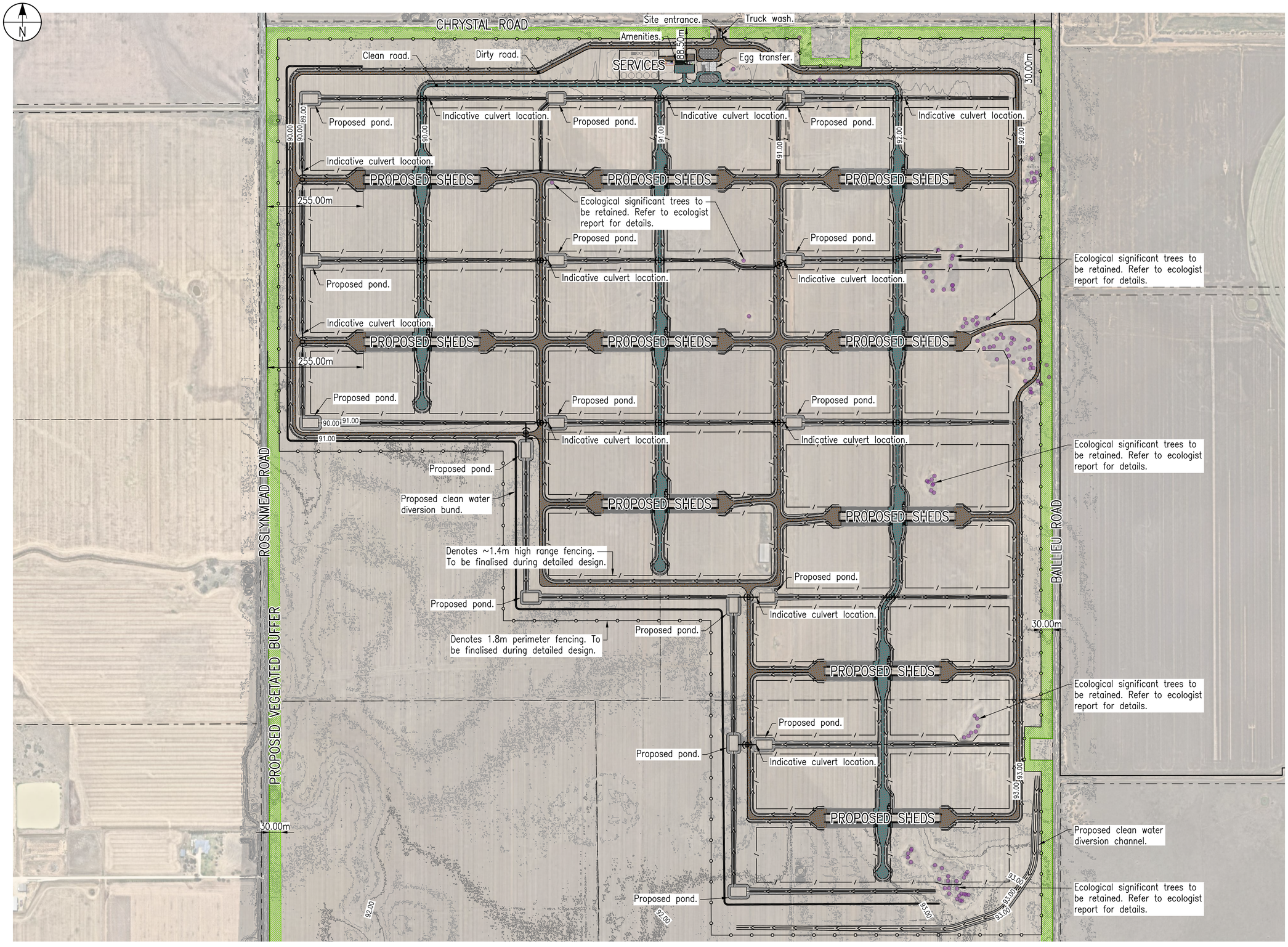
HEIGHT DATUM	MAP GRID	SIZE
AHD	VICGRID	A1

COUNCIL RAL/MCU NO.
-

COUNCIL OW NO.
-

PROJECT NO.	DRAWING NO.	ISSUE
25E-0010	P-SK2001	1

N:\Synergy\Projects\25E-0010 Poultry Farm - Torrumbarry\8 Civil Model and Doc\MASTER DOCUMENTATION\02 Package\Drafting\P-SK2001.dwg P-SK2001



T-BLOCK FREE RANGE CONCEPT LAYOUT PLAN

Scale 1:5000 (A1)

0 50 100 150 200m

1:5000(A1) 1:10000(A3)

LEGEND:

EXISTING

- Property Boundary
- Easement Boundary
- Ecologically Significant Tree

PROPOSED

- Ranging Fence
- Perimeter Fence
- Stormwater Invert
- Indicative Stormwater Line
- Vegetation Buffer
- Clean Area Road Pavement
- Dirty Area Road Pavement
- Gravel Pavement
- Concrete Pavement
- Minor Contours
- 609.00 Major Contours

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.
P.2. Intervals between contours - 0.2m.
Contours are design surface levels.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
1	FOR APPROVAL	16/10/25	BLL	BLL	GS	
0	FOR APPROVAL	15/08/25	BLL	BLL	GS	
A	FOR COMMENT	08/08/25	BLL	BLL	GS	

R.P.E.Q.

THIS DOCUMENT IS UNCONTROLLED AND IS NOT TO BE USED FOR CONSTRUCTION UNTIL THIS NOTE IS REMOVED AND A DIGITAL SIGNATURE PROVIDED IN ITS PLACE

RMA Engineers
www.rmaeng.com.au

CLIENT
MCLEAN FARMS AUSTRALIA PTY LTD
PO BOX 158
PITTSWORTH, QLD 4356

PROJECT
INTEGRATED EGG LAYING OPERATION
MURRAY VALLEY HIGHWAY
TORRUMBARRY, VIC 3562

TITLE
T-BLOCK FREE RANGE CONCEPT LAYOUT PLAN

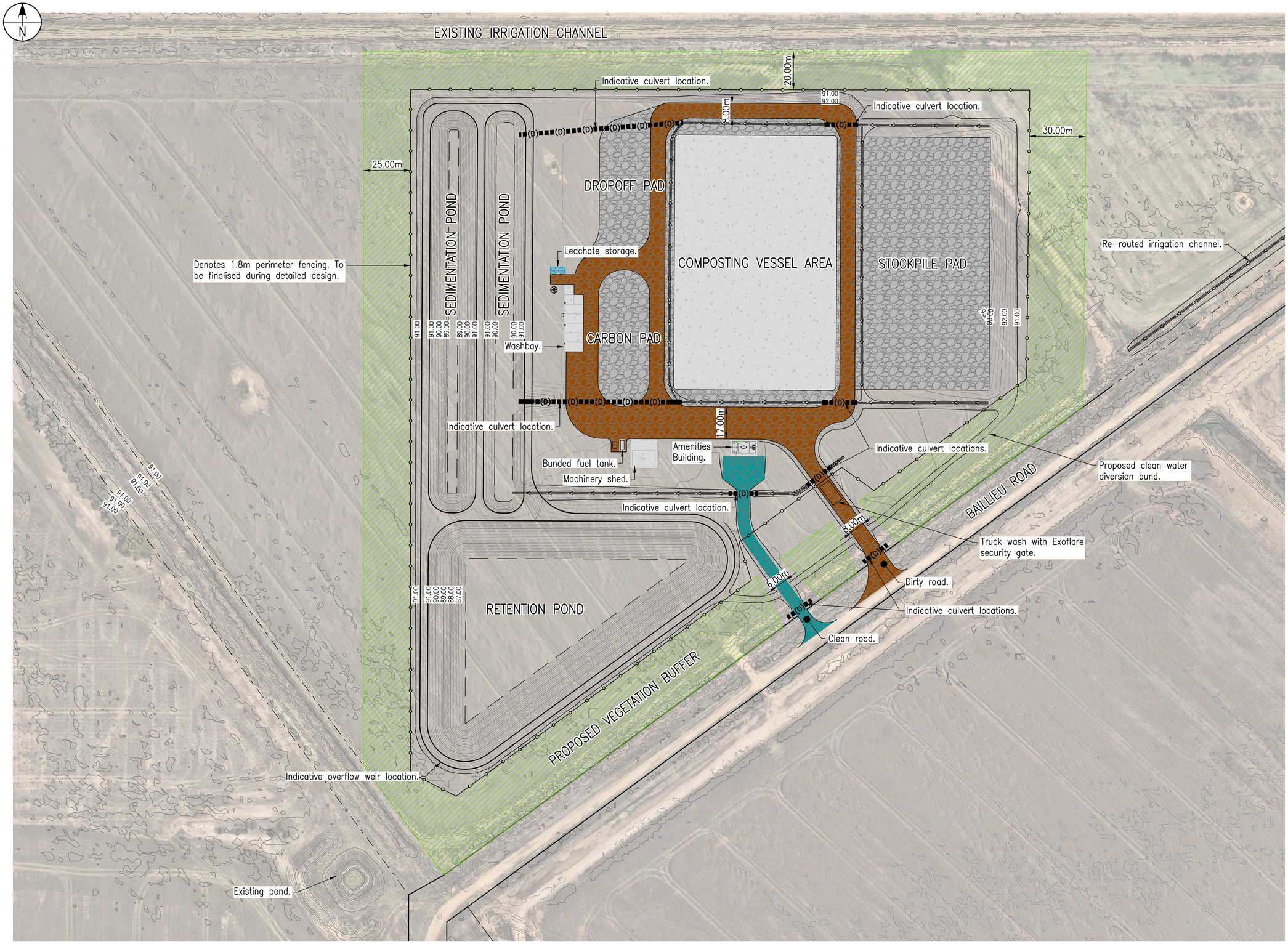
HEIGHT DATUM	MAP GRID	SIZE
AHD	VICGRID	A1

COUNCIL RAL/MCU NO.

COUNCIL OW NO.

PROJECT NO.	DRAWING NO.	ISSUE
25E-0010	P-SK3001	1

N:\Synergy\Projects\25E-0010 Poultry Farm - Torrumbarry\8 Civil Model and Doc\MASTER DOCUMENTATION\03 Package\Drafting\P-SK3001.dwg P-SK3001



COMPOSTING FACILITY CONCEPT LAYOUT PLAN

Scale 1:1000 (A1)

0 10 20 30 40m

1:1000(A1) 1:2000(A3)

LEGEND:

EXISTING

- Property Boundary

PROPOSED

- Perimeter Fence
- Stormwater Invert
- Indicative Stormwater Line
- Vegetation Buffer
- Clean Area Road Pavement
- Dirty Area Road Pavement
- Gravel Pavement
- Concrete Pavement
- Minor Contours
- 609.00 Major Contours

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.
P.2. Intervals between contours - 0.2m.
Contours are design surface levels.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

ISSUE	DESCRIPTION	DATE	DWN	DES	CHK	APP
1	FOR APPROVAL	16/10/25	BLL	BLL	GS	
0	FOR APPROVAL	15/08/25	BLL	BLL	GS	
A	FOR COMMENT	08/08/25	BLL	BLL	GS	

R.P.E.Q.

THIS DOCUMENT IS UNCONTROLLED AND IS NOT TO BE USED FOR CONSTRUCTION UNTIL THIS NOTE IS REMOVED AND A DIGITAL SIGNATURE PROVIDED IN ITS PLACE

RMA Engineers
www.rmaeng.com.au

CLIENT
MCLEAN FARMS AUSTRALIA PTY LTD
PO BOX 158
PITTSWORTH, QLD 4356

PROJECT
INTEGRATED EGG LAYING OPERATION
MURRAY VALLEY HIGHWAY
TORRUMBARRY, VIC 3562

TITLE
COMPOSTING FACILITY CONCEPT LAYOUT PLAN

HEIGHT DATUM	MAP GRID	SIZE
AHD	VICGRID	A1

COUNCIL RAL/MCU NO.

COUNCIL OW NO.

PROJECT NO.	DRAWING NO.	ISSUE
25E-0010	P-SK4001	1

N:\Synergy\Projects\25E-0010 Poultry Farm – Torrumbarry\8 Civil Model and Doc\MASTER DOCUMENTATION\04 Package\Drafting\P-SK4001.dwg P-SK4001

Appendix B Proposed travel route maps

N

Heppell Road

Warwick Cage Free Farm

Pollocks Rearing Farm

Davis Road

Torrumbarry Township

Murray Valley Highway

Facility

T-Block Free Range Farm

Roslynmead Road

Baillieu Road

LEGEND:

EXISTING

Property Boundary

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.
P.2. Intervals between contours - 0.1m.
Contours are design surface levels.
P.3.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

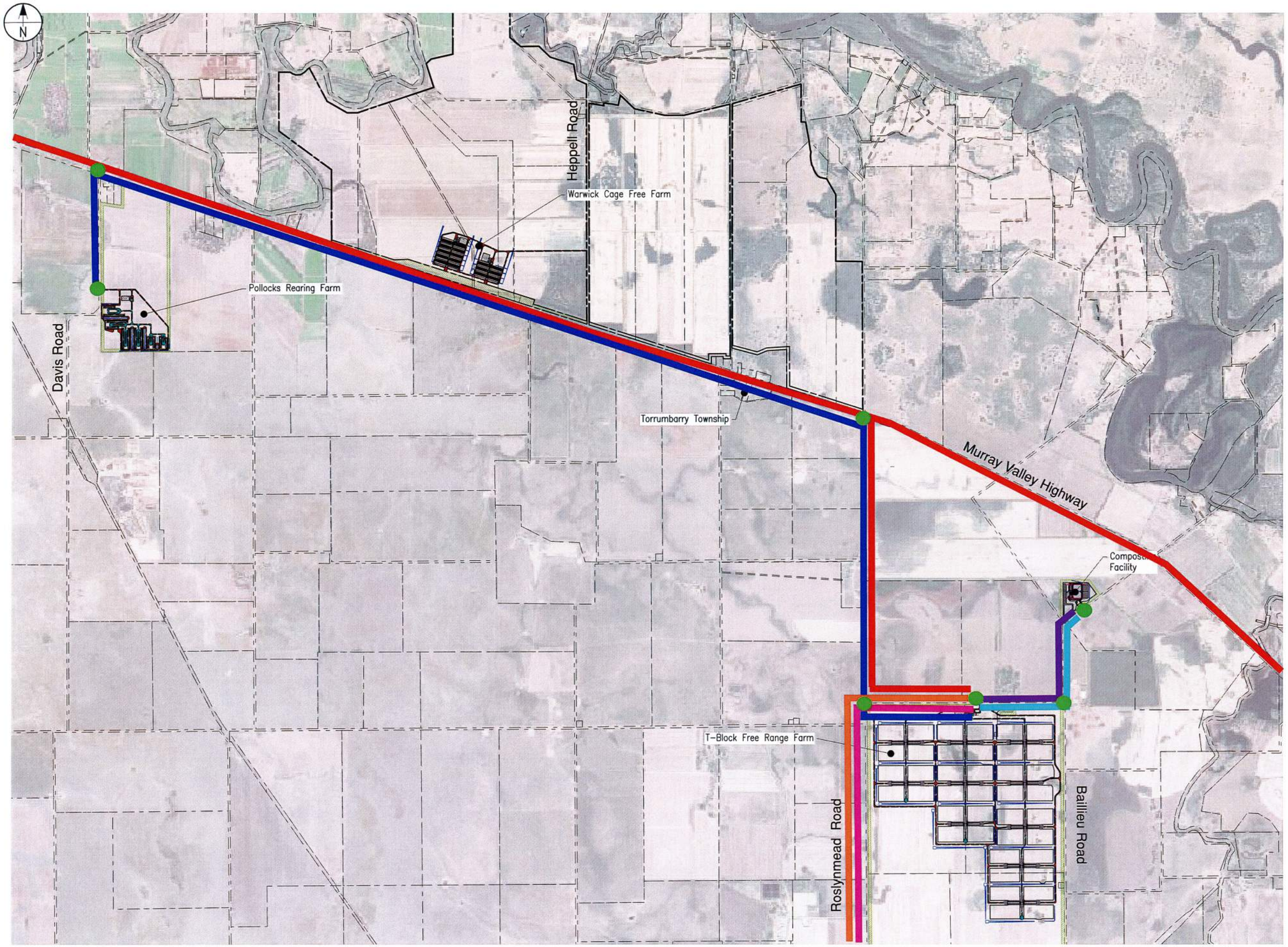
Staff Vehicle Movements
Chicks in
Pullets out (Warwick's Block)
Pullets out (T-Block Block)
Feed Delivery (Route 1)
Feed Delivery (Route 2)
Manure
Key Intersections

TRAVEL ROUTE MAP - POLLOCK'S BLOCK REARING FARM

Scale 1:20000 (A1)

0 200 400 600 800m
1:20000(A1) 1:40000(A3)

RMA Engineers
www.rmaeng.com.au



LEGEND:
EXISTING

- - — — - - Property Boundary

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.
P.2. Intervals between contours - 0.1m.
Contours are design surface levels.
P.3.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

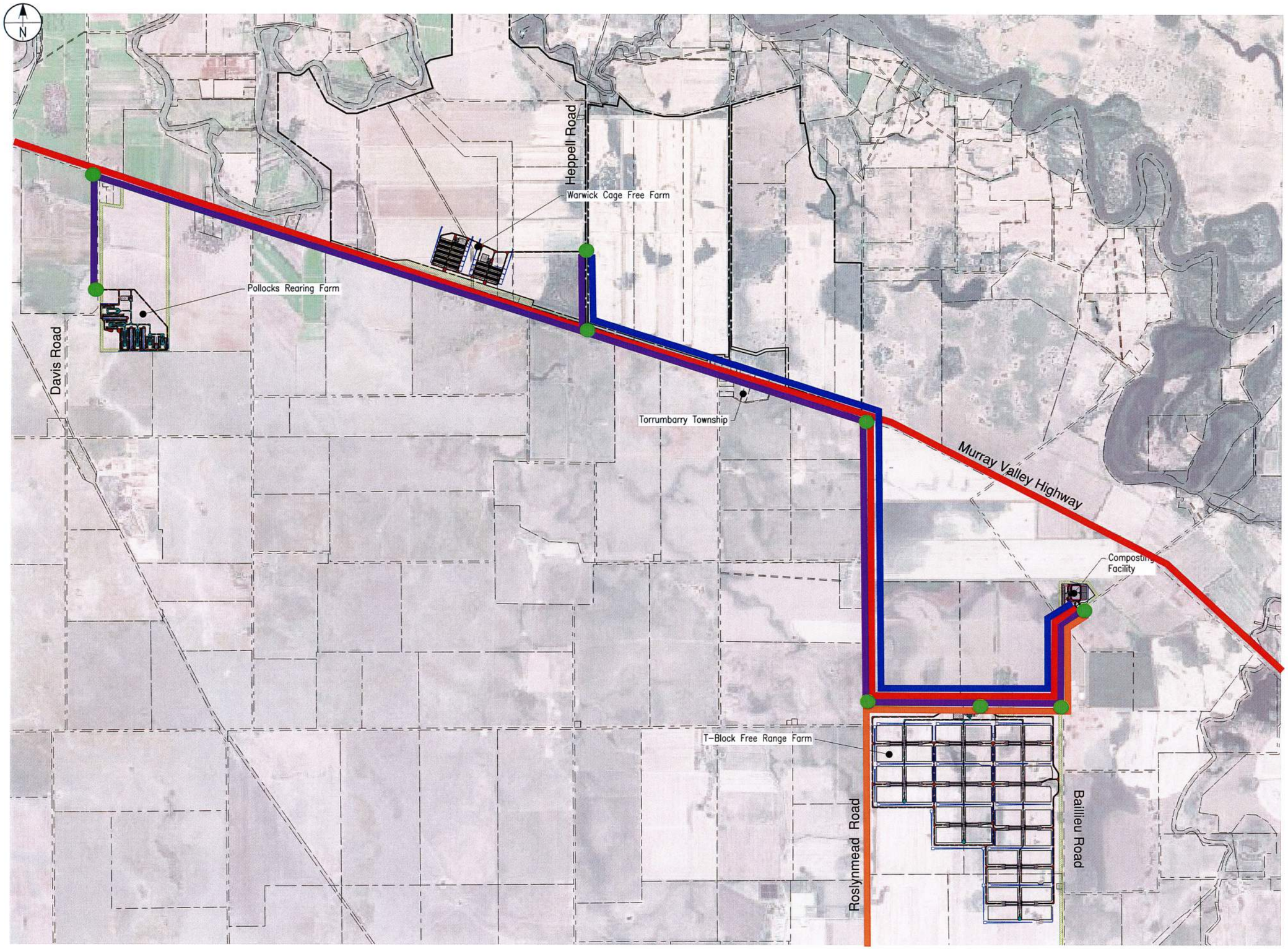
Staff Vehicle Movements
Pullets in
Hens out
Feed Delivery
Egg Collection
Manure
Key Intersections

TRAVEL ROUTE MAP - T-BLOCK FREE RANGE LAYER FARM

Scale 1:20000 (A1)

0 200 400 600 800m
1:20000(A1) 1:40000(A3)

RMA Engineers
www.rmaeng.com.au



LEGEND:
EXISTING

Property Boundary

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.
P.2. Intervals between contours - 0.1m.
Contours are design surface levels.
P.3.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

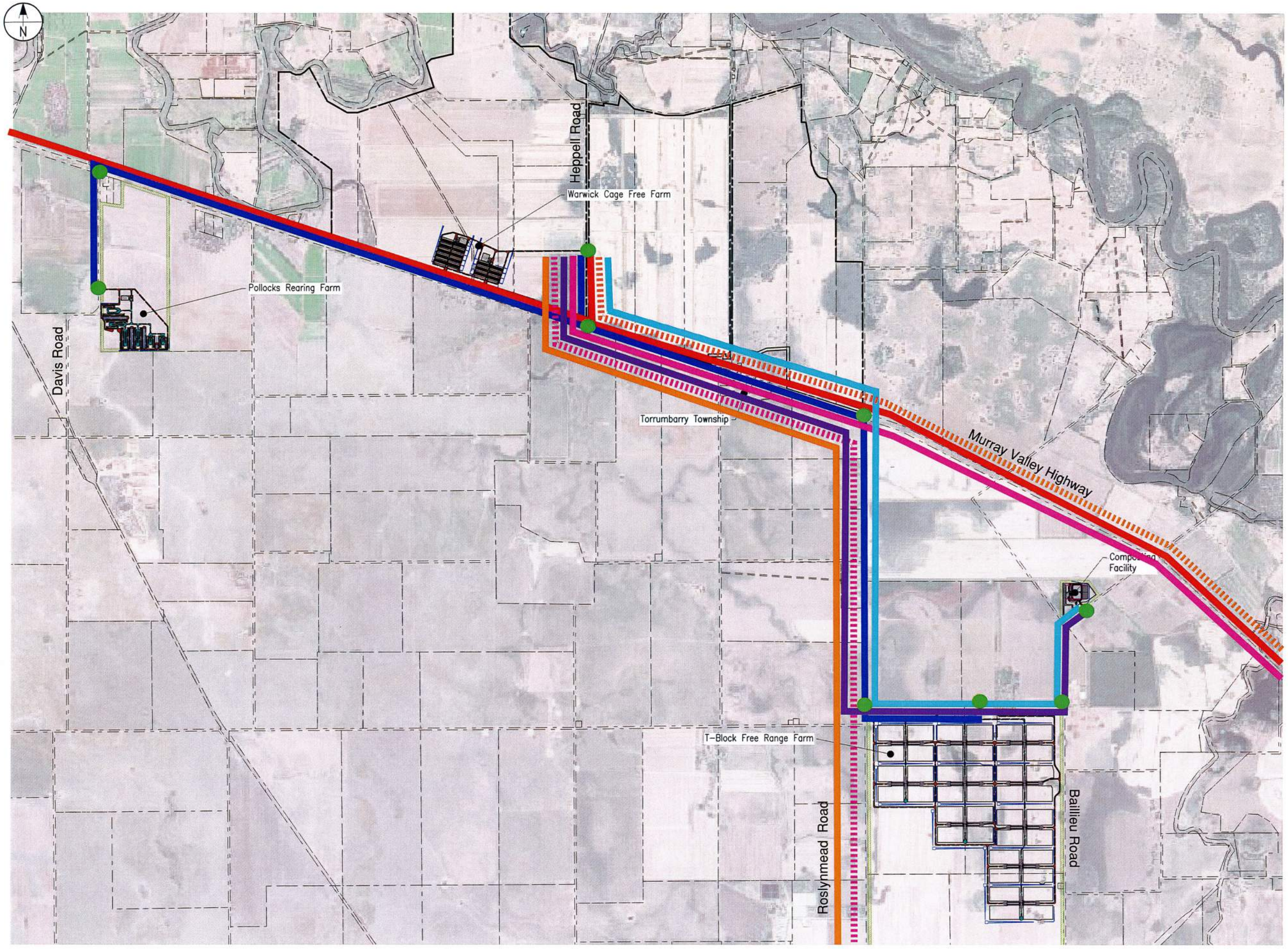
Staff Vehicle Movements
Composting
Carbon Source
Manure
Key Intersections

TRAVEL ROUTE MAP - COMPOSTING FACILITY

Scale 1:20000 (A1)

0 200 400 600 800m
1:20000(A1) 1:40000(A3)

RMA Engineers
www.rmaeng.com.au



LEGEND:
EXISTING

Property Boundary

PLAN NOTES:

P.1. Plan is intended to be viewed in colour.
P.2. Intervals between contours - 0.1m.
Contours are design surface levels.
P.3.

DISCLAIMER NOTES:

D.1. This is a sketch plan only and is conceptual only.
D.2. This sketch plan represents design intent and concepts only.
D.3. Information shown on these plans has been compiled from varying sources and may not be accurate and will need verifying. This includes imagery, existing infrastructure, property boundaries and natural surface data.
D.4. No reliance should be placed on the information on this plan for detailed design or any financial dealings involving this land.
D.5. This plan shall not be used for tendering, financing, ordering of materials, construction or any other unintended purpose.

- Staff Vehicle Movements
- Pullets in
- Hens out
- Feed Delivery (Route 1)
- Feed Delivery (Route 2)
- Egg Collection (Route 1)
- Egg Collection (Route 2)
- Manure
- Key Intersections

TRAVEL ROUTE MAP - WARWICK'S BLOCK CAGE FREE LAYER FARM

Scale 1:20000 (A1)

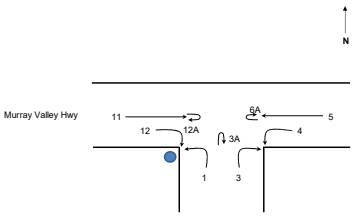
0 200 400 600 800m
1:20000(A1) 1:40000(A3)

RMA Engineers
www.rmaeng.com.au

Appendix C Traffic count data

EST. 1983
austraffic
TRAFFIC & TRANSPORT DATA SPECIALISTS

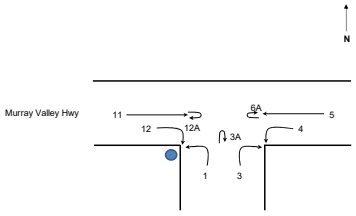
Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & Davis Rd
Weather : Fine



Time	Movement 1			Movement 3			Movement 3A			Movement 4			Movement 5			Movement 6A			Movement 11			Movement 12			Movement 12A			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
3:00 - 3:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	2	3:00 - 4:00	12
3:15 - 3:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	3	3:15 - 4:15	12
3:30 - 3:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	3	3:30 - 4:30	9
3:45 - 4:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	4	3:45 - 4:45	9
4:00 - 4:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	2	4:00 - 5:00	7
4:15 - 4:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	4:15 - 5:15	18
4:30 - 4:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	3	4:30 - 5:30	25
4:45 - 5:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	2	4:45 - 5:45	32
5:00 - 5:15	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	1	4	**5**	0	0	**0**	7	0	**7**	0	0	**0**	0	0	**0**	13	5:00 - 6:00	41
5:15 - 5:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	7	5:15 - 6:15	43
5:30 - 5:45	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	2	3	**5**	0	0	**0**	3	0	**3**	1	0	**1**	0	0	**0**	10	5:30 - 6:30	73
5:45 - 6:00	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	4	0	**4**	0	0	**0**	6	0	**6**	0	0	**0**	0	0	**0**	11	5:45 - 6:45	88
6:00 - 6:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	5	**6**	0	0	**0**	6	3	**9**	0	0	**0**	0	0	**0**	15	6:00 - 7:00	108
6:15 - 6:30	0	0	**0**	1	0	**1**	0	0	**0**	0	1	**1**	14	4	**18**	0	0	**0**	13	3	**16**	1	0	**1**	0	0	**0**	37	6:15 - 7:15	127
6:30 - 6:45	0	0	**0**	0	0	**0**	0	0	**0**	0	3	**3**	12	1	**13**	0	0	**0**	8	1	**9**	0	0	**0**	0	0	**0**	25	6:30 - 7:30	149
6:45 - 7:00	0	1	**1**	0	1	**1**	0	0	**0**	0	0	**0**	9	8	**17**	0	0	**0**	10	2	**12**	0	0	**0**	0	0	**0**	31	6:45 - 7:45	176
7:00 - 7:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10	6	**16**	0	0	**0**	17	1	**18**	0	0	**0**	0	0	**0**	34	7:00 - 8:00	207
7:15 - 7:30	0	0	**0**	0	4	**4**	0	0	**0**	0	0	**0**	22	7	**29**	0	0	**0**	21	5	**26**	0	0	**0**	0	0	**0**	59	7:15 - 8:15	224
7:30 - 7:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	25	4	**29**	0	0	**0**	21	2	**23**	0	0	**0**	0	0	**0**	52	7:30 - 8:30	232
7:45 - 8:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	29	5	**34**	0	0	**0**	23	5	**28**	0	0	**0**	0	0	**0**	62	7:45 - 8:45	229
8:00 - 8:15	0	0	**0**	1	0	**1**	0	0	**0**	0	1	**1**	20	10	**30**	0	0	**0**	16	3	**19**	0	0	**0**	0	0	**0**	51	8:00 - 9:00	221
8:15 - 8:30	0	0	**0**	0	0	**0**	0	0	**0**	2	2	**4**	27	8	**35**	0	0	**0**	25	3	**28**	0	0	**0**	0	0	**0**	67	8:15 - 9:15	224
8:30 - 8:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	15	9	**24**	0	0	**0**	19	6	**25**	0	0	**0**	0	0	**0**	49	8:30 - 9:30	217
8:45 - 9:00	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	22	4	**26**	0	0	**0**	24	1	**25**	0	0	**0**	0	0	**0**	54	8:45 - 9:45	238
9:00 - 9:15	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	11	6	**17**	0	0	**0**	33	1	**34**	0	0	**0**	0	0	**0**	54	9:00 - 10:00	236
9:15 - 9:30	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	14	4	**18**	0	0	**0**	34	6	**40**	1	0	**1**	0	0	**0**	60	9:15 - 10:15	227
9:30 - 9:45	1	0	**1**	0	1	**1**	0	0	**0**	0	1	**1**	27	6	**33**	0	0	**0**	32	2	**34**	0	0	**0**	0	0	**0**	70	9:30 - 10:30	227
9:45 - 10:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	17	7	**24**	0	0	**0**	25	3	**28**	0	0	**0**	0	0	**0**	52	9:45 - 10:45	214
10:00 - 10:15	0	1	**1**	0	1	**1**	0	0	**0**	0	0	**0**	18	4	**22**	0	0	**0**	17	4	**21**	0	0	**0**	0	0	**0**	45	10:00 - 11:00	219
10:15 - 10:30	0	0	**0**	1	2	**3**	0	0	**0**	0	1	**1**	15	5	**20**	0	0	**0**	33	3	**36**	0	0	**0**	0	0	**0**	60	10:15 - 11:15	219
10:30 - 10:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	19	8	**27**	0	0	**0**	26	3	**29**	0	1	**1**	0	0	**0**	57	10:30 - 11:30	222
10:45 - 11:00	0	1	**1**	0	0	**0**	0	0	**0**	0	0	**0**	22	5	**27**	0	0	**0**	25	4	**29**	0	0	**0**	0	0	**0**	57	10:45 - 11:45	220
11:00 - 11:15	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	16	1	**17**	0	0	**0**	22	4	**26**	0	1	**1**	0	0	**0**	45	11:00 - 12:00	217
11:15 - 11:30	0	0	**0**	0	1	**1**	0	0	**0**	0	2	**2**	31	4	**35**	0	0	**0**	18	6	**24**	0	1	**1**	0	0	**0**	63	11:15 - 12:15	210
11:30 - 11:45	0	1	**1**	0	1	**1**	0	0	**0**	0	0	**0**	24	4	**28**	0	0	**0**	19	6	**25**	0	0	**0**	0	0	**0**	55	11:30 - 12:30	206
11:45 - 12:00	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	16	4	**20**	0	0	**0**	25	7	**32**	0	0	**0**	0	0	**0**	54	11:45 - 12:45	200
12:00 - 12:15	0	1	**1**	0	1	**1**	0	0	**0**	0	1	**1**	12	1	**13**	0	0	**0**	11	11	**22**	0	0	**0**	0	0	**0**	38	12:00 - 13:00	189
12:15 - 12:30	1	1	**2**	0	0	**0**	0	0	**0**	0	1	**1**	22	5	**27**	0	0	**0**	20	8	**28**	0	1	**1**	0	0	**0**	59	12:15 - 13:15	214
12:30 - 12:45	0	0	**0**	0	3	**3**	0	0	**0**	0	0	**0**	18	3	**21**	0	0	**0**	19	5	**24**	0	0	**0**	1	0	**1**	49	12:30 - 13:30	199
12:45 - 13:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	19	1	**20**	0	0	**0**	15	8	**23**	0	0	**0**	0	0	**0**	43	12:45 - 13:45	195
13:00 - 13:15	0	1	**1**	1	1	**2**	0	0	**0**	0	2	**2**	22	3	**25**	0	0	**0**	23	10	**33**	0	0	**0**	0	0	**0**	63	13:00 - 14:00	211
13:15 - 13:30	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	10	4	**14**	0	0	**0**	20	7	**27**	0	1	**1**	0	0	**0**	44	13:15 - 14:15	204
13:30 - 13:45	0	2	**2**	0	0	**0**	0	0	**0**	0	2	**2**	16	1	**17**	0	0	**0**	16	8	**24**	0	0	**0**	0	0	**0**	45	13:30 - 14:30	230
13:45 - 14:00	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	29	2	**31**	0	0	**0**	22	4	**26**	0	0	**0**	0	0	**0**	59	13:45 - 14:45	226
14:00 - 14:15	0	0	**0**	0	3	**3**	0	0	**0**	0	0	**0**	25	5	**30**	0	0	**0**	16	7	**23**	0	0	**0**	0	0	**0**	56	14:00 - 15:00	223
14:15 - 14:30	0	0	**0**	0	0	**0**	0	0	**0**	0	1	**1**	29	3	**32**	0	0	**0**	28	9	**37**	0	0	**0**	0	0	**0**	70	14:15 - 15:15	219
14:30 - 14:45	0	0	**0**	0	1	**1**	0	0	**0**	0	1	**1**	12	1	**13**	0	0	**0**	23	3	**26**	0	0	**0**	0	0	**0**	41	14:30 - 15:30	201
14:45 - 15:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	24	3	**27**	0	0	**0**	26	3	**29**	0	0	**0**	0	0	**0**	56	14:45 - 15:45	214
15:00 - 15:15	0	0	**0**	1	0	**1**	0	0	**0**	0	1	**1**	23	2	**25**	0	0	**0**	22	3	**25**	0	0	**0**	0	0	**0**	52	15:00 - 16:00	229
15:15 - 15:30	0	0	**0**	0	2	**2**	0	0	**0**	0	0	**0**	24	1	**25**	0	0	**0**	18	7	**25**	0	0	**0**	0	0	**0**	52	15:15 - 16:15	242
15:30 - 15:45	0	0	**0**	0	1	**1**	0	0	**0**	0	0	**0**	27	3	**30**	0	0	**0**	21	2	**23**	0	0	**0**	0	0	**0**	54	15:30 - 16:30	239
15:45 - 16:00	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	38	6	**44**	0	0	**0**	19	6	**25**	0	0	**0**	0	0	**0**	71	15:45 - 16:45	248
16:00 - 16:15	2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**	27	5	**32**	0	0	**0**	27	4	**31**	0	0	**0**	0	0	**0**	65	16:00 - 17:00	221
16:15 - 16:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	18	4	**22**	0	0	**0**	22	5	**27**	0	0	**0**	0	0	**0**	49	16:15 - 17:15	206
16:30 - 16:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	27	2	**29**	0	0	**0**	29	5	**34**	0	0	**0**	0	0	**0**	63	16:30 - 17:30	199
16:45 - 17:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	19	1	**20**	0	0	**0**	20	4	**24**	0	0	**0**	0	0	**0**	44	16:45 - 17:45	177
17:00 - 17:15	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	29	0	**29**	0	0	**0**	16	4	**20**	0	0	**0**	0	0	**0**	50	17:00 - 18:00	190
17:15 - 17:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	14	6	**20**	0	0	**0**	21	1	**22**	0	0	**0**	0	0	**0**	42	17:15 - 18:15	180
17:30 - 17:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	19	4	**23**	0	0	**0**	13	4	**17**	0	0	**0**	0	0	**0**	41	17:30 - 18:30	167
17:45 - 18:00	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	18	1	**19**	0	0	**0**	26	10	**36**	1	0	**1**	0	0	**0**	57	17:45 - 18:45	153
18:00 - 18:15	1	0	**1**	0	0	**0**	0	0	**0**	0	0	**0**	18	2	**20**	0	0	**0**	13	6	**19**	0	0	**0**	0	0	**0**	40	18:00 - 19:00	111
18:15 - 18:30	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	14	1	**15**	0	0	**0**	11	1	**12**	0	0	**0**	0	0	**0**	29	18:15 - 19:15	85

EST. 1983
austraffic
TRAFFIC & TRANSPORT DATA SPECIALISTS

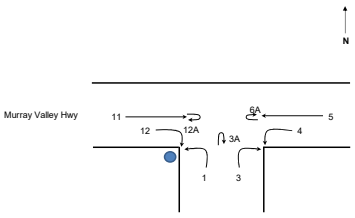
Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & Davis Rd
Weather : Fine



18:30 - 18:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	14	2	**16**	0	0	**0**	7	4	**11**	0	0	**0**	0	0	**0**	**27**	**18:30 - 19:30**	**67**
18:45 - 19:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	8	3	**11**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	**15**	**18:45 - 19:45**	**53**
19:00 - 19:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	9	3	**12**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	**14**	**19:00 - 20:00**	**51**
19:15 - 19:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	1	**5**	0	0	**0**	3	3	**6**	0	0	**0**	0	0	**0**	**11**	**19:15 - 20:15**	**46**
19:30 - 19:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	3	3	**6**	0	0	**0**	5	1	**6**	0	0	**0**	0	0	**0**	**13**	**19:30 - 20:30**	**44**
19:45 - 20:00	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	5	2	**7**	0	0	**0**	3	2	**5**	0	0	**0**	0	0	**0**	**13**	**19:45 - 20:45**	**43**
20:00 - 20:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	5	1	**6**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	**9**	**20:00 - 21:00**	**45**
20:15 - 20:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7	0	**7**	0	0	**0**	1	1	**2**	0	0	**0**	0	0	**0**	**9**	**AM Peak**	**238**
20:30 - 20:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	7	**10**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	**12**	**PM Peak**	**248**
20:45 - 21:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	6	2	**8**	0	0	**0**	4	3	**7**	0	0	**0**	0	0	**0**	**15**		
Total	**5**	**9**	**14**	**10**	**27**	**37**	**0**	**0**	**0**	**8**	**31**	**39**	**1063**	**241**	**1304**	**0**	**0**	**0**	**1086**	**248**	**1334**	**4**	**5**	**9**	**1**	**0**	**1**	**2738**		
AM Peak	**1**	**0**	**1**	**0**	**4**	**4**	**0**	**0**	**0**	**0**	**5**	**5**	**74**	**20**	**94**	**0**	**0**	**0**	**123**	**10**	**133**	**1**	**0**	**1**	**0**	**0**	**0**	**238**		
PM Peak	**2**	**0**	**2**	**2**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**110**	**17**	**127**	**0**	**0**	**0**	**97**	**20**	**117**	**0**	**0**	**0**	**0**	**0**	**0**	**248**		

EST. 1983
austraffic
TRAFFIC & TRANSPORT DATA SPECIALISTS

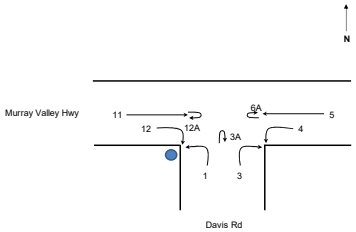
Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & Davis Rd
Weather : Fine



HOURLY FLOW

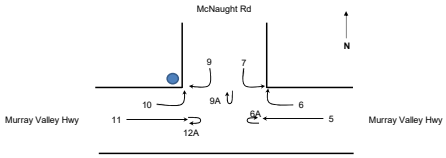
TIME PERIOD	Movement 1			Movement 3			Movement 3A			Movement 4			Movement 5			Movement 6A			Movement 11			Movement 12			Movement 12A			Grand Total		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
3:00 - 4:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	7	**8**	0	0	**0**	2	2	**4**	0	0	**0**	0	0	**0**	3	9	**12**
3:15 - 4:15	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	7	**8**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	4	8	**12**
3:30 - 4:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	5	**6**	0	0	**0**	3	0	**3**	0	0	**0**	0	0	**0**	4	5	**9**
3:45 - 4:45	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	4	**5**	0	0	**0**	4	0	**4**	0	0	**0**	0	0	**0**	5	4	**9**
4:00 - 5:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	0	0	**0**	3	1	**4**	0	0	**0**	0	0	**0**	4	3	**7**
4:15 - 5:15	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	2	5	**7**	0	0	**0**	9	1	**10**	0	0	**0**	0	0	**0**	12	6	**18**
4:30 - 5:30	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	3	7	**10**	0	0	**0**	12	2	**14**	0	0	**0**	0	0	**0**	16	9	**25**
4:45 - 5:45	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	4	10	**14**	0	0	**0**	13	2	**15**	1	0	**1**	0	0	**0**	19	13	**32**
5:00 - 6:00	0	0	**0**	0	0	**0**	0	0	**0**	1	2	**3**	8	9	**17**	0	0	**0**	19	1	**20**	1	0	**1**	0	0	**0**	29	12	**41**
5:15 - 6:15	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	8	10	**18**	0	0	**0**	18	4	**22**	1	0	**1**	0	0	**0**	27	16	**43**
5:30 - 6:30	0	0	**0**	1	0	**1**	0	0	**0**	0	3	**3**	21	12	**33**	0	0	**0**	28	6	**34**	2	0	**2**	0	0	**0**	52	21	**73**
5:45 - 6:45	0	0	**0**	1	0	**1**	0	0	**0**	0	5	**5**	31	10	**41**	0	0	**0**	33	7	**40**	1	0	**1**	0	0	**0**	66	22	**88**
6:00 - 7:00	0	1	**1**	1	1	**2**	0	0	**0**	0	4	**4**	36	18	**54**	0	0	**0**	37	9	**46**	1	0	**1**	0	0	**0**	75	33	**108**
6:15 - 7:15	0	1	**1**	1	1	**2**	0	0	**0**	0	4	**4**	45	19	**64**	0	0	**0**	48	7	**55**	1	0	**1**	0	0	**0**	95	32	**127**
6:30 - 7:30	0	1	**1**	0	5	**5**	0	0	**0**	0	3	**3**	53	22	**75**	0	0	**0**	56	9	**65**	0	0	**0**	0	0	**0**	109	40	**149**
6:45 - 7:45	0	1	**1**	0	5	**5**	0	0	**0**	0	0	**0**	66	25	**91**	0	0	**0**	69	10	**79**	0	0	**0**	0	0	**0**	135	41	**176**
7:00 - 8:00	0	0	**0**	0	4	**4**	0	0	**0**	0	0	**0**	86	22	**108**	0	0	**0**	82	13	**95**	0	0	**0**	0	0	**0**	168	39	**207**
7:15 - 8:15	0	0	**0**	1	4	**5**	0	0	**0**	0	1	**1**	96	26	**122**	0	0	**0**	81	15	**96**	0	0	**0**	0	0	**0**	178	46	**224**
7:30 - 8:30	0	0	**0**	1	0	**1**	0	0	**0**	2	3	**5**	101	27	**128**	0	0	**0**	85	13	**98**	0	0	**0**	0	0	**0**	189	43	**232**
7:45 - 8:45	0	0	**0**	1	0	**1**	0	0	**0**	2	3	**5**	91	32	**123**	0	0	**0**	83	17	**100**	0	0	**0**	0	0	**0**	177	52	**229**
8:00 - 9:00	0	0	**0**	1	1	**2**	0	0	**0**	2	5	**7**	84	31	**115**	0	0	**0**	84	13	**97**	0	0	**0**	0	0	**0**	171	50	**221**
8:15 - 9:15	0	0	**0**	0	2	**2**	0	0	**0**	2	6	**8**	75	27	**102**	0	0	**0**	101	11	**112**	0	0	**0**	0	0	**0**	178	46	**224**
8:30 - 9:30	0	0	**0**	0	3	**3**	0	0	**0**	0	4	**4**	62	23	**85**	0	0	**0**	110	14	**124**	1	0	**1**	0	0	**0**	173	44	**217**
8:45 - 9:45	1	0	**1**	0	4	**4**	0	0	**0**	0	5	**5**	74	20	**94**	0	0	**0**	123	10	**133**	1	0	**1**	0	0	**0**	199	39	**238**
9:00 - 10:00	1	0	**1**	0	3	**3**	0	0	**0**	0	3	**3**	69	23	**92**	0	0	**0**	124	12	**136**	1	0	**1**	0	0	**0**	195	41	**236**
9:15 - 10:15	1	1	**2**	0	3	**3**	0	0	**0**	0	1	**1**	76	21	**97**	0	0	**0**	108	15	**123**	1	0	**1**	0	0	**0**	186	41	**227**
9:30 - 10:30	1	1	**2**	1	4	**5**	0	0	**0**	0	2	**2**	77	22	**99**	0	0	**0**	107	12	**119**	0	0	**0**	0	0	**0**	186	41	**227**
9:45 - 10:45	0	1	**1**	1	3	**4**	0	0	**0**	0	1	**1**	69	24	**93**	0	0	**0**	101	13	**114**	0	1	**1**	0	0	**0**	171	43	**214**
10:00 - 11:00	0	2	**2**	1	3	**4**	0	0	**0**	0	1	**1**	74	22	**96**	0	0	**0**	101	14	**115**	0	1	**1**	0	0	**0**	176	43	**219**
10:15 - 11:15	0	1	**1**	1	2	**3**	0	0	**0**	0	2	**2**	72	19	**91**	0	0	**0**	106	14	**120**	0	2	**2**	0	0	**0**	179	40	**219**
10:30 - 11:30	0	1	**1**	0	1	**1**	0	0	**0**	0	3	**3**	88	18	**106**	0	0	**0**	91	17	**108**	0	3	**3**	0	0	**0**	179	43	**222**
10:45 - 11:45	0	2	**2**	0	2	**2**	0	0	**0**	0	3	**3**	93	14	**107**	0	0	**0**	84	20	**104**	0	2	**2**	0	0	**0**	177	43	**220**
11:00 - 12:00	0	1	**1**	0	2	**2**	0	0	**0**	0	5	**5**	87	13	**100**	0	0	**0**	84	23	**107**	0	2	**2**	0	0	**0**	171	46	**217**
11:15 - 12:15	0	2	**2**	0	3	**3**	0	0	**0**	0	5	**5**	83	13	**96**	0	0	**0**	73	30	**103**	0	1	**1**	0	0	**0**	156	54	**210**
11:30 - 12:30	1	3	**4**	0	2	**2**	0	0	**0**	0	4	**4**	74	14	**88**	0	0	**0**	75	32	**107**	0	1	**1**	0	0	**0**	150	56	**206**
11:45 - 12:45	1	2	**3**	0	4	**4**	0	0	**0**	0	4	**4**	68	13	**81**	0	0	**0**	75	31	**106**	0	1	**1**	1	0	**1**	145	55	**200**
12:00 - 13:00	1	2	**3**	0	4	**4**	0	0	**0**	0	2	**2**	71	10	**81**	0	0	**0**	65	32	**97**	0	1	**1**	1	0	**1**	138	51	**189**
12:15 - 13:15	1	2	**3**	1	4	**5**	0	0	**0**	0	3	**3**	81	12	**93**	0	0	**0**	77	31	**108**	0	1	**1**	1	0	**1**	161	53	**214**
12:30 - 13:30	0	1	**1**	1	4	**5**	0	0	**0**	1	3	**4**	69	11	**80**	0	0	**0**	77	30	**107**	0	1	**1**	1	0	**1**	149	50	**199**
12:45 - 13:45	0	3	**3**	1	1	**2**	0	0	**0**	1	5	**6**	67	9	**76**	0	0	**0**	74	33	**107**	0	1	**1**	0	0	**0**	143	52	**195**
13:00 - 14:00	0	3	**3**	1	2	**3**	0	0	**0**	1	6	**7**	77	10	**87**	0	0	**0**	81	29	**110**	0	1	**1**	0	0	**0**	160	51	**211**
13:15 - 14:15	0	2	**2**	0	4	**4**	0	0	**0**	1	4	**5**	80	12	**92**	0	0	**0**	74	26	**100**	0	1	**1**	0	0	**0**	155	49	**204**
13:30 - 14:30	0	2	**2**	0	4	**4**	0	0	**0**	0	4	**4**	99	11	**110**	0	0	**0**	82	28	**110**	0	0	**0**	0	0	**0**	181	49	**230**
13:45 - 14:45	0	0	**0**	0	5	**5**	0	0	**0**	0	3	**3**	95	11	**106**	0	0	**0**	89	23	**112**	0	0	**0**	0	0	**0**	184	42	**226**
14:00 - 15:00	0	0	**0**	0	4	**4**	0	0	**0**	0	2	**2**	90	12	**102**	0	0	**0**	93	22	**115**	0	0	**0**	0	0	**0**	183	40	**223**
14:15 - 15:15	0	0	**0**	1	1	**2**	0	0	**0**	0	3	**3**	88	9	**97**	0	0	**0**	99	18	**117**	0	0	**0**	0	0	**0**	188	31	**219**
14:30 - 15:30	0	0	**0**	1	3	**4**	0	0	**0**	0	2	**2**	83	7	**90**	0	0	**0**	89	16	**105**	0	0	**0**	0	0	**0**	173	28	**201**
14:45 - 15:45	0	0	**0**	1	3	**4**	0	0	**0**	0	1	**1**	98	9	**107**	0	0	**0**	87	15	**102**	0	0	**0**	0	0	**0**	186	28	**214**
15:00 - 16:00	0	0	**0**	3	3	**6**	0	0	**0**	0	1	**1**	112	12	**124**	0	0	**0**	80	18	**98**	0	0	**0**	0	0	**0**	195	34	**229**
15:15 - 16:15	2	0	**2**	2	3	**5**	0	0	**0**	0	0	**0**	116	15	**131**	0	0	**0**	85	19	**104**	0	0	**0**	0	0	**0**	205	37	**242**
15:30 - 16:30	2	0	**2**	2	1	**3**	0	0	**0**	0	0	**0**	110	18	**128**	0	0	**0**	89	17	**106**	0	0	**0**	0	0	**0**	203	36	**239**
15:45 - 16:45	2	0	**2**	2	0	**2**	0	0	**0**	0	0	**0**	110	17	**127**	0	0	**0**	97	20	**117**	0	0	**0**	0	0	**0**	211	37	**248**
16:00 - 17:00	2	0	**2**	0	0	**0**	0	0	**0**	0	0	**0**	91	12	**103**	0	0	**0**	98	18	**116**	0	0	**0**	0	0	**0**	191	30	**221**
16:15 - 17:15	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	93	7	**100**	0	0	**0**	87	18	**105**	0	0	**0**	0	0	**0**	181	25	**206**
16:30 - 17:30	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	89	9	**98**	0	0	**0**	86	14	**100**	0	0	**0**	0	0	**0**	176	23	**199**
16:45 - 17:45	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	81	11	**92**	0	0	**0**	70	13	**83**	0	0	**0**	0	0	**0**	153	24	**177**
17:00 - 18:00	0	0	**0**	1	0	**1**	0	0	**0**	2	0	**2**	80	11	**91**	0	0	**0**	76	19	**95**	1	0	**1**	0	0	**0**	160	30	**190**
17:15 - 18:15	1	0	**1**	1	0	**1**	0	0	**0**	1	0	**1**	69	13	**82**	0	0	**0**	73	21	**94**	1	0	**1**	0	0	**0**	146	34	**180**
17:30 - 18:30	1	0	**1**	2	0	**2**	0	0	**0**	2	0	**2**	69	8	**77**	0	0	**0**	63	21	**84**	1	0	**1**	0	0	**0**	138	29	**167**
17:45 - 18:45	1	0	**1**	2	0	**2**	0	0	**0**	1	0	**1**	64	6	**70**	0	0	**0**	57	21	**78**	1	0	**1**	0	0	**0**	126	27	**153**
18:00 - 19:00	1	0	**1**	1	0	**1**	0	0	**0**	1	0	**1**	54	8	**62**	0	0	**0**	34	12	**46**	0	0	**0**	0	0	**0**	91	20	**111**
18:15 - 19:15	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	45	9	**54**	0	0	**0**	23	6	**29**	0	0	**0**	0	0	**0**	70	15	**85**
18:30 - 19:30	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	35	9	**44**	0	0	**0**	15	8	**23**	0	0	**0**	0	0	**0**	50	17	**67**

Client	**: RMA Engineers**
Job	**: Torrumbarry & Patho Intersection Counts**
Day/Date	**: Wednesday, 7 May 2025**
Survey Location	**: Murray Valley Hwy & Davis Rd**
Weather	**: Fine**



18:45 - 19:45	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	24	10	**34**	0	0	**0**	13	5	**18**	0	0	**0**	0	0	**0**	38	15	**53**
19:00 - 20:00	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	21	9	**30**	0	0	**0**	13	6	**19**	0	0	**0**	0	0	**0**	36	15	**51**
19:15 - 20:15	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	17	7	**24**	0	0	**0**	14	6	**20**	0	0	**0**	0	0	**0**	33	13	**46**
19:30 - 20:30	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	20	6	**26**	0	0	**0**	12	4	**16**	0	0	**0**	0	0	**0**	34	10	**44**
19:45 - 20:45	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	20	10	**30**	0	0	**0**	9	3	**12**	0	0	**0**	0	0	**0**	30	13	**43**
20:00 - 21:00	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	21	10	**31**	0	0	**0**	10	4	**14**	0	0	**0**	0	0	**0**	31	14	**45**

EST. 1983
austraffic
TRAFFIC & TRANSPORT DATA SPECIALISTS

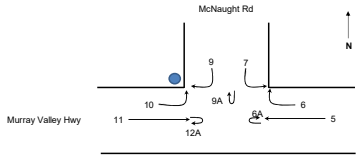


Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & McNaught Rd
Weather : Fine

Time	Movement 5			Movement 6			Movement 6A			Movement 7			Movement 9			Movement 9A			Movement 10			Movement 11			Movement 12A			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
3:00 - 3:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	3:00 - 4:00	12
3:15 - 3:30	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	4	3:15 - 4:15	12
3:30 - 3:45	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3:30 - 4:30	8
3:45 - 4:00	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	4	3:45 - 4:45	9
4:00 - 4:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	4:00 - 5:00	7
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4:15 - 5:15	17
4:30 - 4:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	3	4:30 - 5:30	25
4:45 - 5:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	4:45 - 5:45	32
5:00 - 5:15	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	0	0	0	12	5:00 - 6:00	40
5:15 - 5:30	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	1	4	0	0	0	8	5:15 - 6:15	43
5:30 - 5:45	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	4	0	4	0	0	0	10	5:30 - 6:30	69
5:45 - 6:00	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0	0	10	5:45 - 6:45	82
6:00 - 6:15	1	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	3	9	0	0	0	15	6:00 - 7:00	102
6:15 - 6:30	14	4	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	3	16	0	0	0	34	6:15 - 7:15	121
6:30 - 6:45	12	1	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	8	1	9	0	0	0	23	6:30 - 7:30	142
6:45 - 7:00	9	9	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2	12	0	0	0	30	6:45 - 7:45	172
7:00 - 7:15	9	6	15	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	1	18	0	0	0	34	7:00 - 8:00	204
7:15 - 7:30	22	7	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	5	26	0	0	0	55	7:15 - 8:15	219
7:30 - 7:45	26	4	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	2	23	0	0	0	53	7:30 - 8:30	228
7:45 - 8:00	29	5	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	5	28	0	0	0	62	7:45 - 8:45	223
8:00 - 8:15	20	10	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	3	19	0	0	0	49	8:00 - 9:00	213
8:15 - 8:30	26	8	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	26	3	29	0	0	0	64	8:15 - 9:15	215
8:30 - 8:45	15	8	23	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	17	6	23	0	0	0	48	8:30 - 9:30	212
8:45 - 9:00	23	5	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	1	24	0	0	0	52	8:45 - 9:45	230
9:00 - 9:15	11	5	16	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	1	34	0	0	0	51	9:00 - 10:00	230
9:15 - 9:30	14	4	18	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	35	7	42	0	0	0	61	9:15 - 10:15	223
9:30 - 9:45	27	6	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	1	33	0	0	0	66	9:30 - 10:30	219
9:45 - 10:00	17	7	24	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	24	3	27	0	0	0	52	9:45 - 10:45	211
10:00 - 10:15	18	5	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	4	21	0	0	0	44	10:00 - 11:00	216
10:15 - 10:30	15	5	20	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	32	3	35	0	0	0	57	10:15 - 11:15	217
10:30 - 10:45	19	8	27	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	26	4	30	0	0	0	58	10:30 - 11:30	223
10:45 - 11:00	22	6	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	4	29	0	0	0	57	10:45 - 11:45	221
11:00 - 11:15	15	1	16	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	22	5	27	0	0	0	45	11:00 - 12:00	218
11:15 - 11:30	31	4	35	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	1	0	1	18	7	25	0	0	0	63	11:15 - 12:15	210
11:30 - 11:45	23	5	28	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	1	1	19	6	25	0	0	0	56	11:30 - 12:30	208
11:45 - 12:00	17	4	21	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	24	7	31	0	0	0	54	11:45 - 12:45	196
12:00 - 12:15	12	2	14	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	11	10	21	0	0	0	37	12:00 - 13:00	185
12:15 - 12:30	23	6	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	22	9	31	0	0	0	61	12:15 - 13:15	207
12:30 - 12:45	18	3	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	5	23	0	0	0	44	12:30 - 13:30	191
12:45 - 13:00	18	1	19	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	8	23	0	0	0	43	12:45 - 13:45	188
13:00 - 13:15	22	4	26	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	22	10	32	0	0	0	59	13:00 - 14:00	204
13:15 - 13:30	9	4	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	22	9	31	0	0	0	45	13:15 - 14:15	200
13:30 - 13:45	15	3	18	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	7	22	0	0	0	41	13:30 - 14:30	224
13:45 - 14:00	30	2	32	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	21	4	25	0	0	0	59	13:45 - 14:45	223
14:00 - 14:15	26	5	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	16	7	23	0	0	0	55	14:00 - 15:00	220
14:15 - 14:30	29	3	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	9	37	0	0	0	69	14:15 - 15:15	214
14:30 - 14:45	12	1	13	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	23	3	26	0	0	0	40	14:30 - 15:30	197
14:45 - 15:00	24	3	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	3	29	0	0	0	56	14:45 - 15:45	210
15:00 - 15:15	22	2	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	3	25	0	0	0	49	15:00 - 16:00	224
15:15 - 15:30	25	1	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	18	7	25	0	0	0	52	15:15 - 16:15	239
15:30 - 15:45	27	3	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	2	23	0	0	0	53	15:30 - 16:30	238
15:45 - 16:00	38	6	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	19	6	25	0	0	0	70	15:45 - 16:45	248
16:00 - 16:15	28	5	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	4	31	0	0	0	64	16:00 - 17:00	222
16:15 - 16:30	18	4	22	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	22	5	27	0	0	0	51	16:15 - 17:15	206
16:30 - 16:45	27	2	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	5	34	0	0	0	63	16:30 - 17:30	198
16:45 - 17:00	19	1	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	4	24	0	0	0	44	16:45 - 17:45	175
17:00 - 17:15	28	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	4	20	0	0	0	48	17:00 - 18:00	187
17:15 - 17:30	15	6	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	1	22	0	0	0	43	17:15 - 18:15	179
17:30 - 17:45	19	4	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	4	17	0	0	0	40	17:30 - 18:30	163
17:45 - 18:00	18	1	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	10	37	0	0	0	56	17:45 - 18:45	150
18:00 - 18:15	19	2	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	6	19	0	0	0	40	18:00 - 19:00	111
18:15 - 18:30	14	1	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	1	12	0	0	0	27	18:15 - 19:15	88

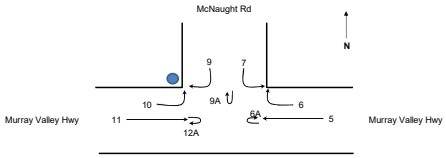
EST. 1983
austraffic
TRAFFIC & TRANSPORT DATA SPECIALISTS

Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & McNaught Rd
Weather : Fine



18:30 - 18:45	14	2	**16**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	7	4	**11**	0	0	**0**	27	**18:30 - 19:30**	**71**
18:45 - 19:00	8	3	**11**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	3	1	**4**	0	0	**0**	17	**18:45 - 19:45**	**57**
19:00 - 19:15	9	3	**12**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	0	0	**0**	2	1	**3**	0	0	**0**	17	**19:00 - 20:00**	**52**
19:15 - 19:30	4	1	**5**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	2	**5**	0	0	**0**	10	**19:15 - 20:15**	**45**
19:30 - 19:45	3	3	**6**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	5	1	**6**	0	0	**0**	13	**19:30 - 20:30**	**44**
19:45 - 20:00	4	2	**6**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	3	2	**5**	0	0	**0**	12	**19:45 - 20:45**	**43**
20:00 - 20:15	6	1	**7**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	10	**20:00 - 21:00**	**46**
20:15 - 20:30	7	0	**7**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	1	1	**2**	0	0	**0**	9	**AM Peak**	**230**
20:30 - 20:45	3	7	**10**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	2	0	**2**	0	0	**0**	12	**PM Peak**	**248**
20:45 - 21:00	6	2	**8**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	4	3	**7**	0	0	**0**	15		
Total	**1064**	**249**	**1313**	**5**	**1**	**6**	**1**	**0**	**1**	**6**	**1**	**7**	**10**	**4**	**14**	**0**	**0**	**0**	**13**	**3**	**16**	**1084**	**252**	**1336**	**0**	**0**	**0**	**2693**		
AM Peak	**75**	**20**	**95**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**123**	**10**	**133**	**0**	**0**	**0**	**230**		
PM Peak	**111**	**17**	**128**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**97**	**20**	**117**	**0**	**0**	**0**	**248**		

austraffic
EST. 1983
TRAFFIC & TRANSPORT DATA SPECIALISTS



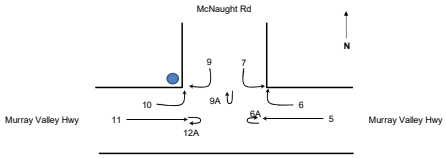
Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & McNaught Rd
Weather : Fine

HOURLY FLOW

TIME PERIOD	Movement 5			Movement 6			Movement 6A			Movement 7			Movement 9			Movement 9A			Movement 10			Movement 11			Movement 12A			Grand Total		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
3:00 - 4:00	1	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	4	0	0	0	3	9	12
3:15 - 4:15	1	7	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	4	8	12
3:30 - 4:30	1	5	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	3	5	8
3:45 - 4:45	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	5	4	9
4:00 - 5:00	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	4	3	7
4:15 - 5:15	2	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	1	10	0	0	0	11	6	17
4:30 - 5:30	3	7	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	12	2	14	0	0	0	16	9	25
4:45 - 5:45	4	10	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	14	2	16	0	0	0	20	12	32
5:00 - 6:00	8	9	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	20	1	21	0	0	0	30	10	40
5:15 - 6:15	8	10	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	19	4	23	0	0	0	29	14	43
5:30 - 6:30	21	12	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	29	6	35	0	0	0	51	18	69
5:45 - 6:45	31	10	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	33	7	40	0	0	0	65	17	82
6:00 - 7:00	36	19	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	37	9	46	0	0	0	74	28	102
6:15 - 7:15	44	20	64	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	48	7	55	0	0	0	94	27	121
6:30 - 7:30	52	23	75	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	56	9	65	0	0	0	110	32	142
6:45 - 7:45	66	26	92	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	10	79	0	0	0	136	36	172
7:00 - 8:00	86	22	108	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82	13	95	0	0	0	169	35	204
7:15 - 8:15	97	26	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	81	15	96	0	0	0	178	41	219
7:30 - 8:30	101	27	128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	86	13	99	0	0	0	188	40	228
7:45 - 8:45	90	31	121	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	1	82	17	99	0	0	0	175	48	223
8:00 - 9:00	84	31	115	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	1	82	13	95	0	0	0	169	44	213
8:15 - 9:15	75	26	101	0	1	1	0	0	0	2	0	2	0	0	0	0	0	0	1	0	1	99	11	110	0	0	0	177	38	215
8:30 - 9:30	63	22	85	0	1	1	0	0	0	2	0	2	1	0	1	0	0	0	0	0	0	108	15	123	0	0	0	174	38	212
8:45 - 9:45	75	20	95	0	1	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	123	10	133	0	0	0	199	31	230
9:00 - 10:00	69	22	91	0	1	1	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	124	12	136	0	0	0	195	35	230
9:15 - 10:15	76	22	98	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	108	15	123	0	0	0	186	37	223
9:30 - 10:30	77	23	100	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	1	0	1	105	11	116	0	0	0	185	34	219
9:45 - 10:45	69	25	94	0	0	0	1	0	1	1	0	1	0	1	1	0	0	0	1	0	1	99	14	113	0	0	0	171	40	211
10:00 - 11:00	74	24	98	0	0	0	0	0	0	1	0	1	0	1	1	0	0	0	1	0	1	100	15	115	0	0	0	176	40	216
10:15 - 11:15	71	20	91	1	0	1	0	0	0	1	0	1	0	1	1	0	0	0	1	1	2	105	16	121	0	0	0	179	38	217
10:30 - 11:30	87	19	106	1	0	1	0	0	0	0	0	0	1	2	3	0	0	0	1	1	2	91	20	111	0	0	0	181	42	223
10:45 - 11:45	91	16	107	1	0	1	0	0	0	0	0	0	3	1	4	0	0	0	1	2	3	84	22	106	0	0	0	180	41	221
11:00 - 12:00	86	14	100	1	0	1	0	0	0	1	0	1	3	2	5	0	0	0	1	2	3	83	25	108	0	0	0	175	43	218
11:15 - 12:15	83	15	98	0	0	0	0	0	0	1	1	2	3	2	5	0	0	0	2	1	3	72	30	102	0	0	0	161	49	210
11:30 - 12:30	75	17	92	0	0	0	0	0	0	1	1	2	2	1	3	0	0	0	2	1	3	76	32	108	0	0	0	156	52	208
11:45 - 12:45	70	15	85	0	0	0	0	0	0	1	1	2	0	1	1	0	0	0	2	0	2	75	31	106	0	0	0	148	48	196
12:00 - 13:00	71	12	83	1	0	1	0	0	0	0	1	1	0	0	0	0	0	0	2	0	2	66	32	98	0	0	0	140	45	185
12:15 - 13:15	81	14	95	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	77	32	109	0	0	0	161	46	207
12:30 - 13:30	67	12	79	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	77	32	109	0	0	0	147	44	191
12:45 - 13:45	64	12	76	2	0	2	0	0	0	1	0	1	0	0	0	0	0	0	1	0	1	74	34	108	0	0	0	142	46	188
13:00 - 14:00	76	13	89	1	0	1	0	0	0	2	0	2	1	0	1	0	0	0	1	0	1	80	30	110	0	0	0	161	43	204
13:15 - 14:15	80	14	94	1	0	1	0	0	0	1	0	1	1	0	1	0	0	0	1	1	2	74	27	101	0	0	0	158	42	200
13:30 - 14:30	100	13	113	1	0	1	0	0	0	1	0	1	1	0	1	0	0	0	0	1	1	80	27	107	0	0	0	183	41	224
13:45 - 14:45	97	11	108	0	0	0	0	0	0	1	0	1	2	0	2	0	0	0	0	1	1	88	23	111	0	0	0	188	35	223
14:00 - 15:00	91	12	103	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	93	22	115	0	0	0	185	35	220
14:15 - 15:15	87	9	96	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	99	18	117	0	0	0	187	27	214
14:30 - 15:30	83	7	90	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	89	16	105	0	0	0	174	23	197
14:45 - 15:45	98	9	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	87	15	102	0	0	0	186	24	210
15:00 - 16:00	112	12	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	80	18	98	0	0	0	194	30	224
15:15 - 16:15	118	15	133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	85	19	104	0	0	0	205	34	239
15:30 - 16:30	111	18	129	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	89	17	106	0	0	0	202	36	238
15:45 - 16:45	111	17	128	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	97	20	117	0	0	0	210	38	248
16:00 - 17:00	92	12	104	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	98	18	116	0	0	0	191	31	222
16:15 - 17:15	92	7	99	1	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	87	18	105	0	0	0	180	26	206
16:30 - 17:30	89	9	98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86	14	100	0	0	0	175	23	198
16:45 - 17:45	81	11	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	70	13	83	0	0	0	151	24	175
17:00 - 18:00	80	11	91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77	19	96	0	0	0	157	30	187
17:15 - 18:15	71	13	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	21	95	0	0	0	145	34	179
17:30 - 18:30	70	8	78	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	64	21	85	0	0	0	134	29	163
17:45 - 18:45	65	6	71	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	21	79	0	0	0	123	27	150
18:00 - 19:00	55	8	63	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	34	12	46	0	0	0	91	20	111
18:15 - 19:15	45	9	54	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	1	0	1	23	7	30	0	0	0	72	16	88
18:30 - 19:30	35	9	44	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	1	0	1	15	8	23	0	0	0	54	17	71

EST. 1983
austraffic
TRAFFIC & TRANSPORT DATA SPECIALISTS

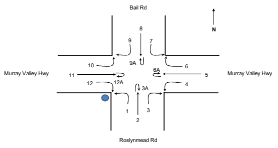
Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & McNaught Rd
Weather : Fine



18:45 - 19:45	24	10	**34**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	2	0	**2**	13	5	**18**	0	0	**0**	42	15	**57**
19:00 - 20:00	20	9	**29**	0	0	**0**	0	0	**0**	0	0	**0**	3	0	**3**	0	0	**0**	1	0	**1**	13	6	**19**	0	0	**0**	37	15	**52**
19:15 - 20:15	17	7	**24**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	14	5	**19**	0	0	**0**	33	12	**45**
19:30 - 20:30	20	6	**26**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	1	0	**1**	12	4	**16**	0	0	**0**	34	10	**44**
19:45 - 20:45	20	10	**30**	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**	0	0	**0**	0	0	**0**	9	3	**12**	0	0	**0**	30	13	**43**
20:00 - 21:00	22	10	**32**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	10	4	**14**	0	0	**0**	32	14	**46**

austraffic
EST. 1983
TRAFFIC & TRANSPORT DATA SPECIALISTS

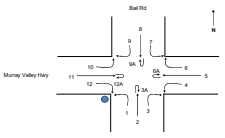
Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & Roslynmead Rd & Bail Rd
Weather : Fine



Time	Movement 1			Movement 2			Movement 3			Movement 3A			Movement 4			Movement 5			Movement 6			Movement 6A			Movement 7			Movement 8			Movement 9			Movement 9A			Movement 10			Movement 11			Movement 12			Movement 12A			Total of all Movements	Peak Hour Volume Determination	
Period	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total			
3:00 - 3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	3	3:00 - 4:00	14
3:15 - 3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	2	0	0	0	4	3:15 - 4:15	14
3:30 - 3:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	4	3:30 - 4:30	11
3:45 - 4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3:45 - 4:45	11
4:00 - 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	3	4:00 - 5:00	13
4:15 - 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	4:15 - 5:15	16
4:30 - 4:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	4	4:30 - 5:30	31
4:45 - 5:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	5	4:45 - 5:45	35
5:00 - 5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	6	5:00 - 6:00	43
5:15 - 5:30	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	2	1	3	0	0	0	16	5:15 - 6:15	54
5:30 - 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	6	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	8	5:30 - 6:30	76
5:45 - 6:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	1	0	1	0	0	0	13	5:45 - 6:45	107
6:00 - 6:15	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	6	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7	0	0	0	0	0	0	17	6:00 - 7:00	133
6:15 - 6:30	6	1	7	0	0	0	0	0	0	0	0	0	0	0	0	11	3	14	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	9	3	12	3	1	4	0	0	0	38	6:15 - 7:15	157
6:30 - 6:45	4	3	7	0	1	1	0	0	0	0	0	0	0	0	0	7	3	10	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	15	2	17	2	0	2	0	0	0	39	6:30 - 7:30	172
6:45 - 7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	10	22	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	11	3	14	1	0	1	0	0	0	39	6:45 - 7:45	198
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	4	16	0	0	0	0	0	0	2	0	2	1	0	1	1	0	1	0	0	0	0	0	0	18	1	19	2	0	2	0	0	0	41	7:00 - 8:00	221
7:15 - 7:30	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	18	3	21	1	0	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	19	3	22	2	3	5	0	0	0	53	7:15 - 8:15	239
7:30 - 7:45	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	27	6	33	1	0	1	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	24	0	24	0	3	3	0	0	0	65	7:30 - 8:30	253
7:45 - 8:00	1	1	2	1	0	1	0	0	0	0	0	0	0	0	0	23	7	30	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	24	2	26	1	1	2	0	0	0	62	7:45 - 8:45	250
8:00 - 8:15	0	0	0	2	1	3	0	0	0	0	0	0	0	0	0	19	7	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	4	25	4	1	5	0	0	0	59	8:00 - 9:00	245
8:15 - 8:30	5	1	6	1	0	1	0	0	0	0	0	0	0	0	0	20	6	26	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	26	3	29	3	1	4	0	0	0	67	8:15 - 9:15	238
8:30 - 8:45	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	19	10	29	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	1	1	22	3	25	1	1	2	0	0	0	62	8:30 - 9:30	237
8:45 - 9:00	1	1	2	0	1	1	0	0	0	0	0	0	0	0	0	18	6	24	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	22	3	25	4	0	4	0	0	0	57	8:45 - 9:45	246
9:00 - 9:15	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	9	4	13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	34	2	36	1	0	1	0	0	0	52	9:00 - 10:00	255
9:15 - 9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	6	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	5	34	5	1	6	0	0	0	66	9:15 - 10:15	256
9:30 - 9:45	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	18	6	24	0	0	0	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	0	0	0	34	4	38	1	1	2	0	0	0	71	9:30 - 10:30	246
9:45 - 10:00	5	0	5	0	0	0	0	0	0	0	0	0	1	0	1	20	6	26	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	3	32	1	0	1	0	0	0	66	9:45 - 10:45	241
10:00 - 10:15	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	17	4	21	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	4	21	5	0	5	0	0	0	53	10:00 - 11:00	235
10:15 - 10:30	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	16	5	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	26	4	30	2	0	2	0	0	0	56	10:15 - 11:15	240
10:30 - 10:45	5	1	6	0	0	0	0	0	0	0	0	0	0	0	0	20	6	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	1	30	0	4	4	0	0	0	66	10:30 - 11:30	253
10:45 - 11:00	4	0	4	0	0	0	1	0	1	0	0	0	0	0	0	19	5	24	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	23	3	26	4	0	4	0	0	0	60	10:45 - 11:45	246
11:00 - 11:15	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	19	1	20	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	27	6	33	2	0	2	0	0	0	58	11:00 - 12:00	238
11:15 - 11:30	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	33	6	39	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	1	0	1	21	2	23	2	0	2	0	0	0	69	11:15 - 12:15	232
11:30 - 11:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	22	3	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	24	6	30	0	0	0	0	0	0	59	11:30 - 12:30	218
11:45 - 12:00	1	1	2	0	0	0	0	0	0	0	0	0	1	0	1	12	5	17	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	3	24	3	4	7	0	0	0	52	11:45 - 12:45	224
12:00 - 12:15	2	0	2	1	1	2	0	0	0	0	0	0	1	0	1	16	1	17	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	1	3	15	7	22	1	1	2	0	0	0	52	12:00 - 13:00	215
12:15 - 12:30	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	20	5	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	9	27	0	0	0	0	0	0	55	12:15 - 13:15	223
12:30 - 12:45	2	1	3	0	0	0	0	0	0	0	0	0	1	0	1	25	2	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	6	30	1	3	4	0	0	0	65	12:30 - 13:30	219
12:45 - 13:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	16	2	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	5	18	2	0	2	0	0	0	43	12:45 - 13:45	199
13:00 - 13:15	2	2	4	0	0	0	0	0	0	0	0	0	0	0	0	20	4	24	0	0	0	0	0	0	2	0	2	0	1	1	0	1	1	0	0	0	0	0	0	14	12	26	2	0	2	0	0	0	60	13:00 - 14:00	230
13:15 - 13:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	13	2	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	9	32	2	1	3	0	0	0	51	13:15 - 14:15	229
13:30 - 13:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	19	4	23	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	12	6	18	1	0	1	0	0	0	45	13:30 - 14:30	237
13:45 - 14:00	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	35	3	38	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2	0	0	0	0	0	0	21	4	25	5	0	5	0	0	0	74	13:45 - 14:45	259
14:00 - 14:15	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	19	3	22	1	0	1	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	18	8	26	3	2	5	0	0	0	59	14:00 - 15:00	247
14:15 - 14:30	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	19	3	22	2	0	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	23	6	29	1	0	1	0	0	0	59	14:15 - 15:15	253
14:30 - 14:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	18	2	20	0	0	0	0	0	0	2	0	2	0	0	0	0	1	1	0	0	0	0	1	1	29	10	39	3	0	3	0	0	0	67	14:30 - 15:30	247
14:45 - 15:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	24	2	26	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	28	2	30	3	0	3	0	0	0	62	14:45 - 15:45	250
15:00 - 15:15	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	32	4	36	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	5	23	3	0	3	0	0	0	65	15:00 - 16:00	256
15:15 - 15:30	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	21	2	23	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	1	17	4	21	4	0	4	0	0	0	53	15:15 - 16:15	264
15:30 - 15:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	36	1	37	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	24	6	30	1	0	1	0	0	0	70	15:30 - 16:30	275
15:45 - 16:00	2	0	2	0	0	0	1	0	1	0	0	0	0	0	0	35	10	45	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	14	4	18	1	0	1	0	0	0	68	15:45 - 16:45	262
16:00 - 16:15	5	0	5	0	0	0	1	0	1	0	0	0	0	0	0	27	3	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	28	6	34	2	0	2	0	0	0	73	16:00 - 17:00	251
16:15 - 16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	3	32	1	1	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	21	7	28	0	0	0	0	0	0	64	16:15 - 17:15	231
16:30 - 16:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	17	3	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	4	33	3	0	3	0	0	0	57	16:30 - 17:30	216
16:45 - 17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	1	26	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	3	24	4	1	5	0	0	0	57	16:45 - 17:45	201
17:00 - 17:15	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	24	1	25	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	6	23	0	1	1	0	0	0	53	17:00 - 18:00	203
17:15 - 17:30	6	1	7	0	0	0	0	0	0	0	0	0	0	0	0	18	5	23	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	1	17	1	0	1	0	0	0	49	17:15 - 18:15	208
17:30 - 17:45	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	14	2	16	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	19	1	20	3	0	3	0	0	0	42	17:30 - 18:30	185
17:45 - 18:00	3	0	3	1	0	1	1	0	1	0	0	0	0	0	0	19	1	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	19	11	30	2	1	3	0	0	0	59	17:45 - 18:45	173
18:00 - 18:15	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	24	2	26	0	0	0	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	22	4	26	0	0	0	0	0	0	58	18:00 - 19:00	138
18:15 - 18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	4	12	1	0	1	0	0	0	26	18:15 - 19:15	96
18:30 - 18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	18	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	8	2	10	1	0	1	0	0	0	30	18:30 - 19:30	86
18:45 - 19:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	10	4	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8	1	0	1	0	0	0	24	18:45 - 19:45	72
19:00 - 19:15	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	8	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	2	0	2	0	0	0	16	19:00 - 20:00	61
19:15 - 19:30	2	0	2	1	0	1	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2	3	5	0	0	0	0	0	0	16	19:15 - 20:15	55
19:30 - 19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	1	8	0	0	0	0	0	0	16	19:30 - 20:30	50
19:45 - 20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	1	3	0	0	0	0	0	0	13	19:45 - 20:45	52
20:00 - 20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	2	0	2	0	0	0	10	20:00 - 21:00	53
20:15 - 20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	3	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	3	0	1	1	0	0	0	11	AM Peak	256
20:30 - 20:45	2	2	4	1	0	1	0	0	0	0	0	0	0	0	0	7	4	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	18	PM Peak	275
20:45 - 21:00	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	6	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	1	0	1	0	0	0	14		
Total	99	31	130	11	4	15	6	0	6	0	0	0	7	0	7	1075	240	1315	20	2	22	0	0	0	21	0	21	7	5	12	17	5	22	0	0	0	15	4	19	1100	239	1339	109	34	143	0	0	0	3051		
AM Peak	9	4	13	0	0	0	0	0	0	0	0	0	1	0	1	75	22	97	3	0	3	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	0	0	0	109	16	125	12	2	14	0	0	0	256		
PM Peak	7	0	7	0	0	0	2	0	2	0	0	0	1	0	1	127	17	144	1	1	2	0	0	0	3	0	3	0	0	0	1	0	1	0	0	0	1	0	1	87	23	110	4	0	4	0	0	0	275		

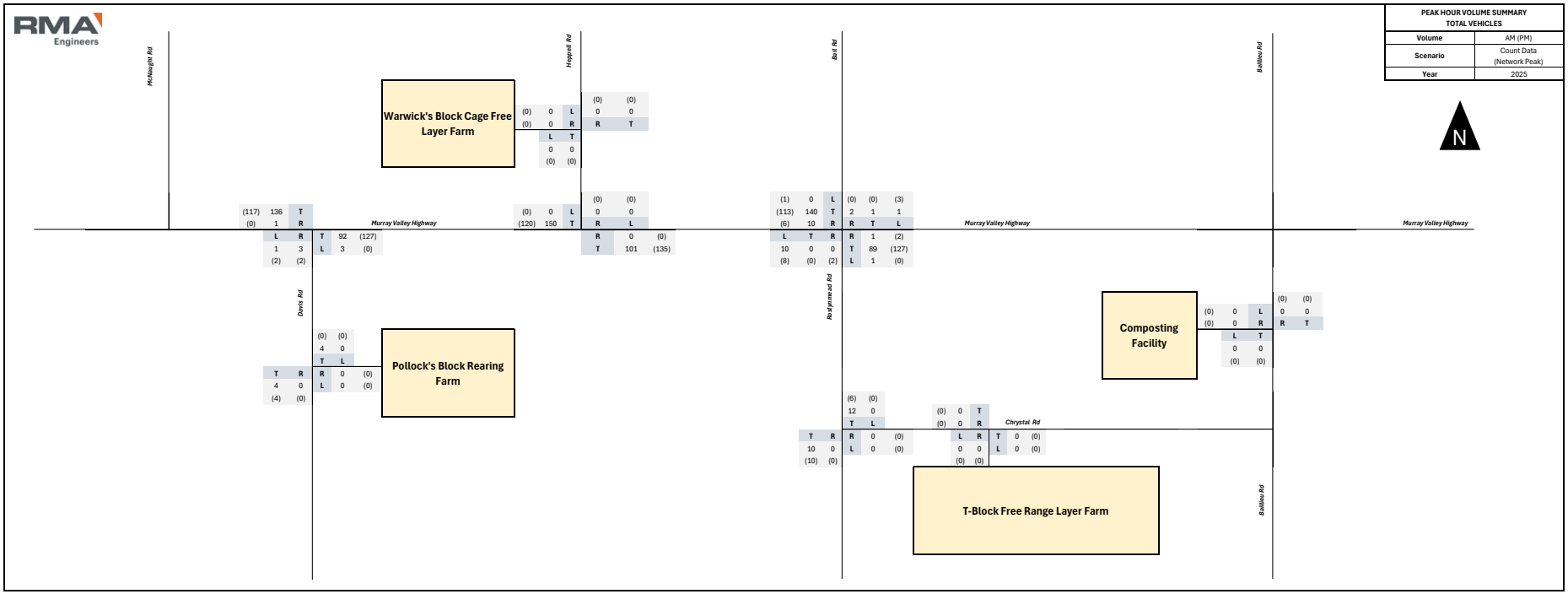
austraffic

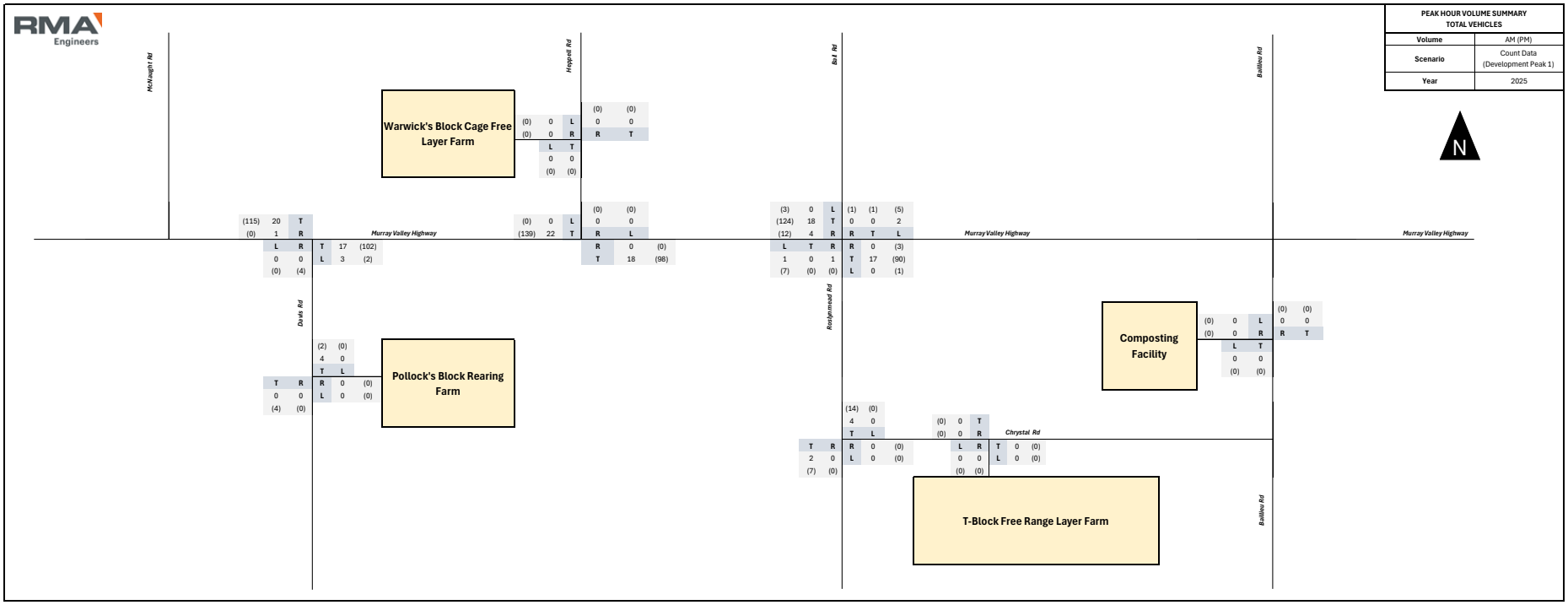
Client : RMA Engineers
Job : Torrumbarry & Patho Intersection Counts
Day/Date : Wednesday, 7 May 2025
Survey Location : Murray Valley Hwy & Roslynmead Rd & Bell Rd
Weather : Fine

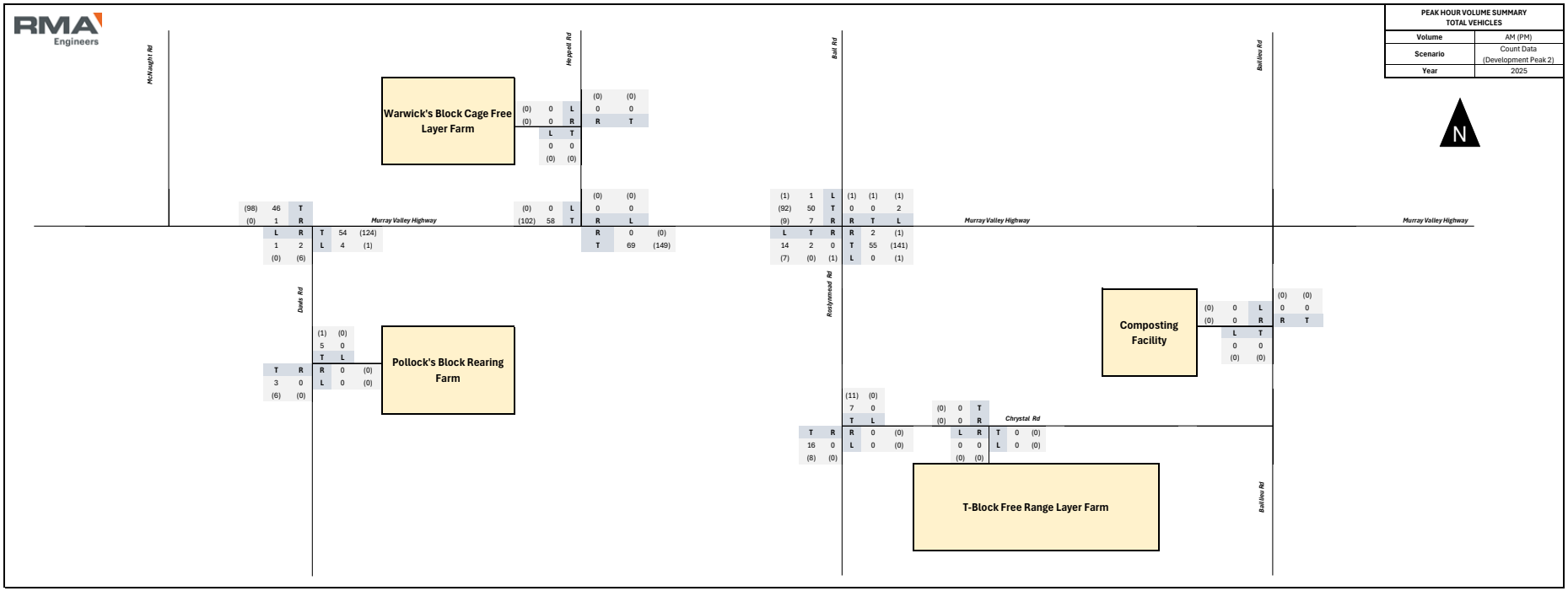


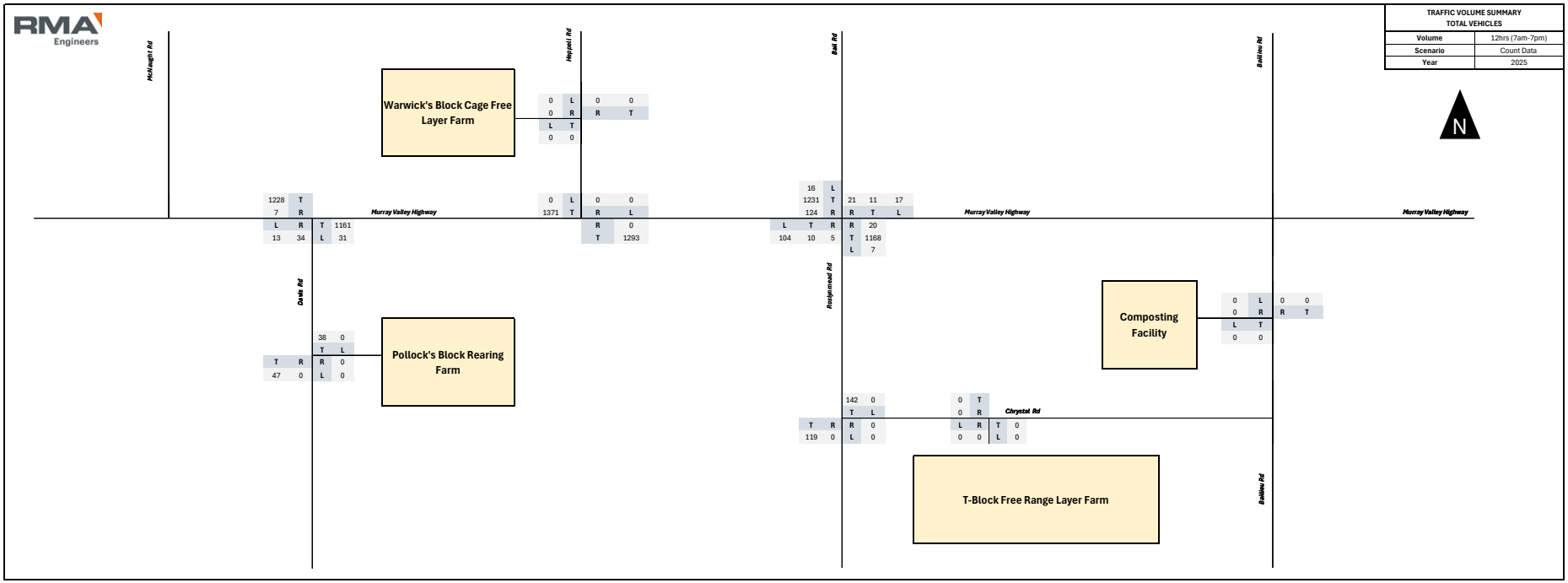
HOURLY FLOW

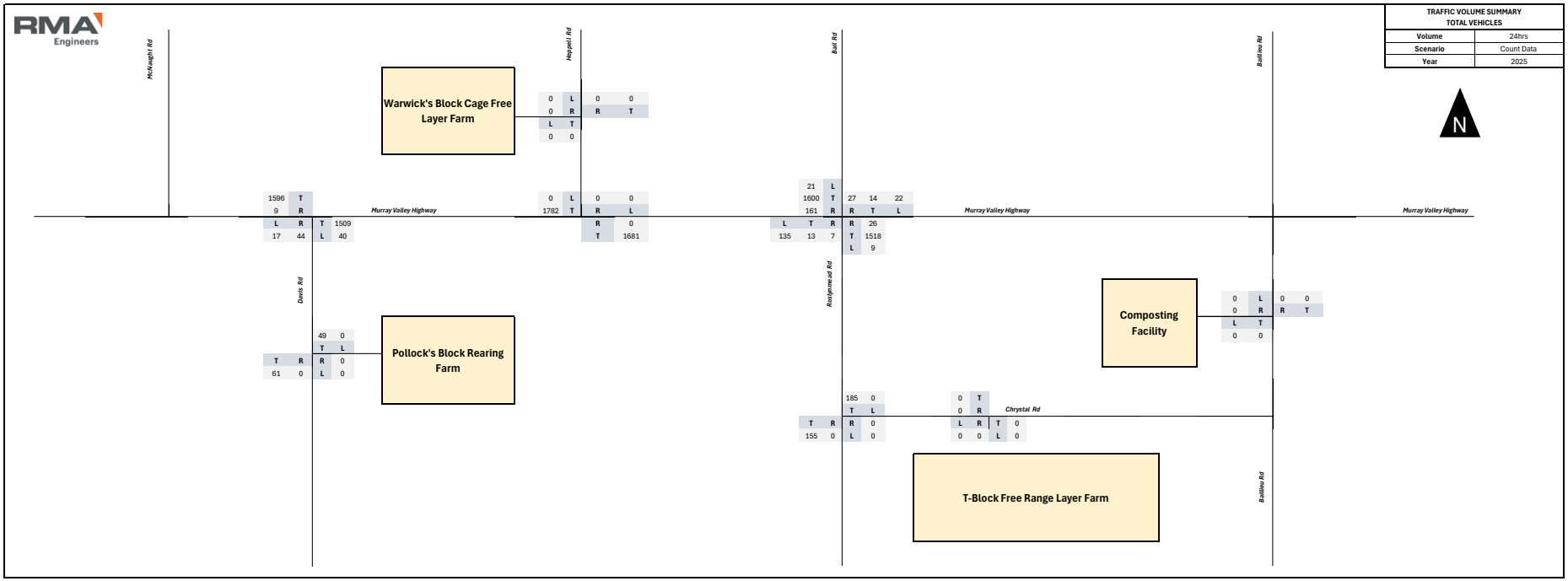
TIME PERIOD	Movement 1			Movement 2			Movement 3			Movement 3A			Movement 4			Movement 5			Movement 6			Movement 6A			Movement 7			Movement 8			Movement 9			Movement 9A			Movement 10			Movement 11			Movement 12			Movement 12A			Grand Total		
	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total	Light	Heavy	Total
3:00 - 4:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	4	1	1	2	0	0	0	3	11	14
3:15 - 4:15	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5	1	1	2	0	0	0	5	9	14
3:30 - 4:30	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	0	0	5	6	11
3:45 - 4:45	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	4	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	7	4	11
4:00 - 5:00	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	6	0	0	0	0	0	0	8	5	13
4:15 - 5:15	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	2	5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1	7	0	0	0	0	0	0	9	7	16
4:30 - 5:30	1	1	2	0	0	0	1	0	1	0	0	0	0	0	0	4	7	11	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	13	1	14	2	1	3	0	0	0	21	10	31
4:45 - 5:45	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	6	10	16	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	12	1	13	2	1	3	0	0	0	22	13	35
5:00 - 6:00	1	0	1	0	0	0	1	0	1	0	0	0	0	0	0	8	9	17	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	18	0	18	3	1	4	0	0	0	33	10	43
5:15 - 6:15	1	0	1	1	0	1	1	0	1	0	0	0	0	0	0	11	12	23	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	21	1	22	3	1	4	0	0	0	40	14	54
5:30 - 6:30	7	1	8	1	0	1	0	0	0	0	0	0	0	0	0	20	13	33	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	0	0	22	4	26	4	1	5	0	0	0	57	19	76
5:45 - 6:45	11	4	15	1	1	2	0	0	0	0	0	0	0	0	0	24	13	37	1	0	1	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	36	6	42	6	1	7	0	0	0	82	25	107
6:00 - 7:00	10	4	14	1	1	2	0	0	0	0	0	0	0	0	0	33	22	55	1	1	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	41	9	50	6	1	7	0	0	0	95	38	133
6:15 - 7:15	10	4	14	0	1	1	0	0	0	0	0	0	0	0	0	42	20	62	1	1	2	0	0	0	4	0	4	1	0	1	1	0	1	0	0	0	53	9	62	8	1	9	0	0	0	121	36	157
6:30 - 7:30	4	5	9	0	1	1	0	0	0	0	0	0	0	0	0	49	20	69	2	1	3	0	0	0	3	0	3	1	0	1	1	1	2	0	0	0	63	9	72	7	3	10	0	0	0	132	40	172
6:45 - 7:45	1	2	3	0	0	0	1	0	1	0	0	0	0	0	0	69	23	92	2	1	3	0	0	0	2	0	2	2	1	3	1	1	2	0	0	0	72	7	79	5	6	11	0	0	0	157	41	198
7:00 - 8:00	2	3	5	1	0	1	1	0	1	0	0	0	0	0	0	80	20	100	2	0	2	0	0	0	3	0	3	2	1	3	1	1	2	0	0	0	85	6	91	5	7	12	0	0	0	183	38	221
7:15 - 8:15	2	3	5	3	1	4	1	0	1	0	0	0	0	0	0	87	23	110	2	0	2	0	0	0	1	0	1	1	1	2	0	1	1	0	0	0	88	9	97	7	8	15	0	0	0	193	46	239
7:30 - 8:30	7	2	9	4	1	5	1	0	1	0	0	0	0	0	0	89	26	115	1	0	1	0	0	0	2	0	2	1	1	2	0	0	0	0	0	0	95	9	104	8	6	14	0	0	0	208	45	253
7:45 - 8:45	9	2	11	4	1	5	0	0	0	0	0	0	0	0	0	81	30	111	0	0	0	0	0	0	2	0	2	1	0	1	1	0	1	0	0	0	93	12	105	9	4	13	0	0	0	200	50	250
8:00 - 9:00	9	2	11	3	2	5	0	0	0	0	0	0	0	0	0	76	29	105	0	0	0	0	0	0	1	0	1	2	0	2	1	0	1	0	0	0	91	13	104	12	3	15	0	0	0	195	50	245
8:15 - 9:15	9	3	12	1	1	2	0	0	0	0	0	0	0	0	0	66	26	92	0	0	0	0	0	0	1	0	1	2	0	2	1	1	2	0	0	0	104	11	115	9	2	11	0	0	0	193	45	238
8:30 - 9:30	4	2	6	0	1	1	0	0	0	0	0	0	0	0	0	66	26	92	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	1	2	0	0	0	0	1	1	107	13	120	11	2	13	0	0	0	191	46	237
8:45 - 9:45	3	4	7	0	1	1	0	0	0	0	0	0	0	0	0	65	22	87	0	0	0	0	0	0	1	0	1	1	1	2	1	1	2	0	0	0	0	0	0	0	0	0	119	14	133	11	2	13	0	0	0	201	45	246
9:00 - 10:00	7	3	10	0	0	0	0	0	0	0	0	0	1	0	1	67	22	89	1	0	1	0	0	0	1	0	1	0	1	1	1	1	2	0	0	0	0	0	0	0	0	0	126	14	140	8	2	10	0	0	0	212	43	255
9:15 - 10:15	9	4	13	0	0	0	0	0	0	0	0	0	1	0	1	75	22	97	3	0	3	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	0	0	0	0	0	0	109	16	125	12	2	14	0	0	0	211	45	256
9:30 - 10:30	10	5	15	0	0	0	0	0	0	0	0	0	1	0	1	71	21	92	3	0	3	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	0	1	1	106	15	121	9	1	10	0	0	0	202	44	246
9:45 - 10:45	13	4	17	0	0	0	0	0	0	0	0	0	1	0	1	73	21	94	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	101	12	113	8	4	12	0	0	0	199	42	241
10:00 - 11:00	12	4	16	0	0	0	1	0	1	0	0	0	0	0	0	72	20	92	2	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	95	12	107	11	4	15	0	0	0	193	42	235
10:15 - 11:15	11	2	13	0	0	0	1	0	1	0	0	0	0	0	0	74	17	91	1	0	1	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	1	1	105	14	119	8	4	12	0	0	0	201	39	240
10:30 - 11:30	12	1	13	0	0	0	1	0	1	0	0	0	0	0	0	91	18	109	1	0	1	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	1	0	1	100	12	112	8	4	12	0	0	0	217	36	253
10:45 - 11:45	7	1	8	0	0	0	1	0	1	0	0	0	0	0	0	93	15	108	1	0	1	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	4	0	4	95	17	112	8	0	8	0	0	0	212	34	246
11:00 - 12:00	4	2	6	0	0	0	0	0	0	0	0	0	1	0	1	86	15	101	2	0	2	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	4	0	4	93	17	110	7	4	11	0	0	0	200	38	238
11:15 - 12:15	5	2	7	1	1	2	0	0	0	0	0	0	2	0	2	83	15	98	2	0	2	0	0	0	0	0	0	0	0	0	4	0	4	0	0	0	6	1	7	81	18	99	6	5	11	0	0	0	190	42	232
11:30 - 12:30	5	2	7	1	1	2	0	0	0	0	0	0	3	0	3	70	14	84	2	0	2	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	5	1	6	78	25	103	4	5	9	0	0	0	170	46	216
11:45 - 12:45	7	2	9	1	1	2	0	0	0	0	0	0	4	0	4	73	13	86	2	0	2	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	1	3	78	25	103	5	8	13	0	0	0	174	50	224
12:00 - 13:00	11	1	12	1	1	2	0	0	0	0	0	0	3	0	3	77	10	87	1	0	1	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	1	3	70	27	97	4	4	8	0	0	0	171	44	215
12:15 - 13:15	11	3	14	0	0	0	0	0	0	0	0	0	2	0	2	81	13	94	0	0	0	0	0	0	2	0	2	0	1	1	0	1	1	0	0	0	0	0	0	69	32	101	5	3	8	0	0	0	170	53	223
12:30 - 13:30	10	3	13	0	0	0	0	0	0	0	0	0	1	0	1	74	10	84	0	0	0	0	0	0	2	0	2	0	1	1	0	1	1	0	0	0	0	0	0	74	32	106	7	4	11	0	0	0	168	51	219
12:45 - 13:45	9	2	11	0	0	0	0	0	0	0	0	0	0	0	0	68	12	80	1	0	1	0	0	0	2	0	2	0	1	1	1	1	2	0	0	0	0	0	0	62	32	94	7	1	8	0	0	0	150	49	199
13:00 - 14:00	5	3	8	0	0	0	0	0	0	0	0	0	0	0	0	87	13	100	1	0	1	0	0	0	2	0	2	2	1	3	3	1	4	0	0	0	0	0	0	70	31	101	10	1	11	0	0	0	180	50	230
13:15 - 14:15	5	2	7	0	0	0	0	0	0	0	0	0	0	0	0	86	12	98	2	0	2	0	0	0	1	0	1	2	1	3	3	0	3	0	0	0	0	0	0	74	27	101	11	3	14	0	0	0	184	45	229
13:30 - 14:30	7	2	9	0	0	0	0	0	0	0	0	0	0	0	0	92	13	105	4	0	4	0	0	0	2	0	2	2	1	3	3	0	3	0	0	0	1	0	1	74	24	98	10	2	12	0	0	0	195	42	237
13:45 - 14:45	7	2	9	0	0	0	0	0	0	0	0	0	0	0	0	91	11	102	3	0	3	0	0	0	4	0	4	2	1	3	2	1	3	0	0	0	1	1	2	91	28	119	12	2	14	0	0	0	213	46	259
14:00 - 15:00	6	1	7	0	0	0	0	0	0	0	0	0	0	1	1	80	10	90	3	0	3	0	0	0	5	0	5	0	1	1	0	1	1	0	0	0	2	1	3	98	26	124	10	2	12	0	0	0	205	42	247
14:15 - 15:15	5	1	6	0	0	0	0	0	0	0	0	0	1	0	1	93	11	104	3	0	3	0	0	0	4	0	4	0	0	0	0	1	1	0	0	0	2	1	3	98	23	121	10	0	10	0	0	0	216	37	253
14:30 - 15:30	5	1	6	0	0	0	0	0	0	0	0	0	1	0	1	95	10	105	1	0	1	0	0	0	3	0	3	1	0	1	0	1	1	0	0	0	2	1	3	92	21	113	13	0	13	0	0	0	212	35	247
14:45 - 15:45	4	1	5	0	0	0	0	0	0	0	0	0	2	0	2	113	9	122	1	0	1	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	2	0	2	87	17	104	11	0	11	0	0	0	222	28	250
15:00 - 16:00	6	1	7	0	0	0	1	0	1	0	0	0	1	0	1	124	17	141	1	0	1	0	0	0	1	0	1	0	1	1	1	0	1	0	0	0	1	0	1	73	19	92	9	0	9	0	0	0	218	38	256
15:15 - 16:15	10	0	10	0	0	0	2	0	2	0	0	0	1	0	1	119	16	135	0	0	0	0	0	0	1	0	1	1	0	1	1	0	1	0	0	0	2	0	2	83	20	103	8	0	8	0	0	0	227	37	264
15:30 - 16:30	7	0	7	0	0	0	2	0	2	0	0	0	1	0	1	127	17	144	1	1	2	0	0	0	3	0	3	0	0	0	1	0	1	0	0	0	1	0	1	87	23	110	4	0	4	0	0	0	234	41	275
15:45 - 16:45	6	0	6	0	0	0	2	0	2	0	0	0	0	0	0	108	19	127	1	1	2	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0	1	0	1	92	21	113	6	0	6	0	0	0	221	41	262
16:00 - 17:00	6	0	6	0	0	0	1	0	1	0	0	0	0	0	0	98	10	108	3	1	4	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	1	99	20	119	9	1	10	0	0	0	219	32	251
16:15 - 17:15	3	1	4	0	0	0	0	0	0	0	0	0	0	0	0	95	8	103	4	1	5	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	88	20	108	7	2	9	0	0	0	199	32	231
16:30 - 17:30	9	2	11	0	0	0	0	0	0	0	0	0	0	0	0	84	10	94	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	83	14	97	8	2	10	0	0	0	188	28	216
16:45 - 17:45	8	2	10	1	0	1	0	0	0	0	0	0	0	0	0	81	9	90	5	0	5	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	73	11	84	8	2	10	0	0	0	177	24	201
17:00 - 18:00	11	2	13	2	0	2	1	0	1	0	0	0	0	0	0	75	9	84	3	0	3	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	71	19	90	6	2	8	0	0	0	171	32	203
17:15 - 18:15	10	2	12	2	0	2	1	0	1	0	0	0	0	0	0	75	10	85	2	0	2	0	0	0	2	0	2	0	0	0	3	0	3	0	0	0	1	0	1	76	17	93	6	1	7	0	0	0	178	30	208
17:30 - 18:30	4	1	5	2	0	2	1	0	1	0	0	0	0	0	0	68	7	75	1	0	1	0	0	0	2	0	2	0	0	0	3	0	3	0	0	0	1	0	1	68	20	88	6	1	7	0	0	0	156	29	185
17:45 - 18:45	4	1	5	1	0	1	1	0	1	0	0	0	0	0	0	72	5	77	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	3	0	3	0	0	0	1	0	1	57	21	78	4	1	5	0	0	0	145	28	173
18:00 - 19:00	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	63	8	71	0	0	0	0	0	0	2	0	2	0	0	0	3	0	3	0	0	0	0	0	0	44	12	56	3	0	3	0	0	0	116	22	138
18:15 - 19:15	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	47	7	54	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	24	9	33	5	0	5	0	0	0	79	17	96
18:30 - 19:30	4	1	5	1	0	1	0	0	0	0	0	0	0	0	0	40	8	48	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	18	8	26	4	0	4	0	0	0	69	17	86
18:45 - 19:45	4	1	5	1	0	1	0	0	0	0	0	0	0	0	0	28	10	38	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	17	7	24	3	0	3	0	0	0	54	18	72
19:00 - 20:00	4	0	4	1	0	1	0	0	0	0	0	0	0	0	0	26	7	33	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	1	13	6	19	2	0	2	0	0	0	48	13	61
19:15 - 20:15	2	0	2	1	0	1	0	0	0	0	0	0	0	0	0	22	7	29	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	0	0	0	0	1	1	13	5	18	2	0	2	0	0	0	43	12	55
19:30 - 20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	7	29	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	13	3	16	2	1	3	0	0	0	39	11	50
19:45 - 20:45	2	2	4	1	0	1	0	0	0	0	0	0	0	0	0	23	9	32	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	7	2	9	2	1	3	0	0	0	38	14	52
20:00 - 21:00	2	2	4	2	0	2	0	0	0	0	0	0	0	0	0	21	9	30	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	7	4	11	3	1	4	0	0	0	37	16	53

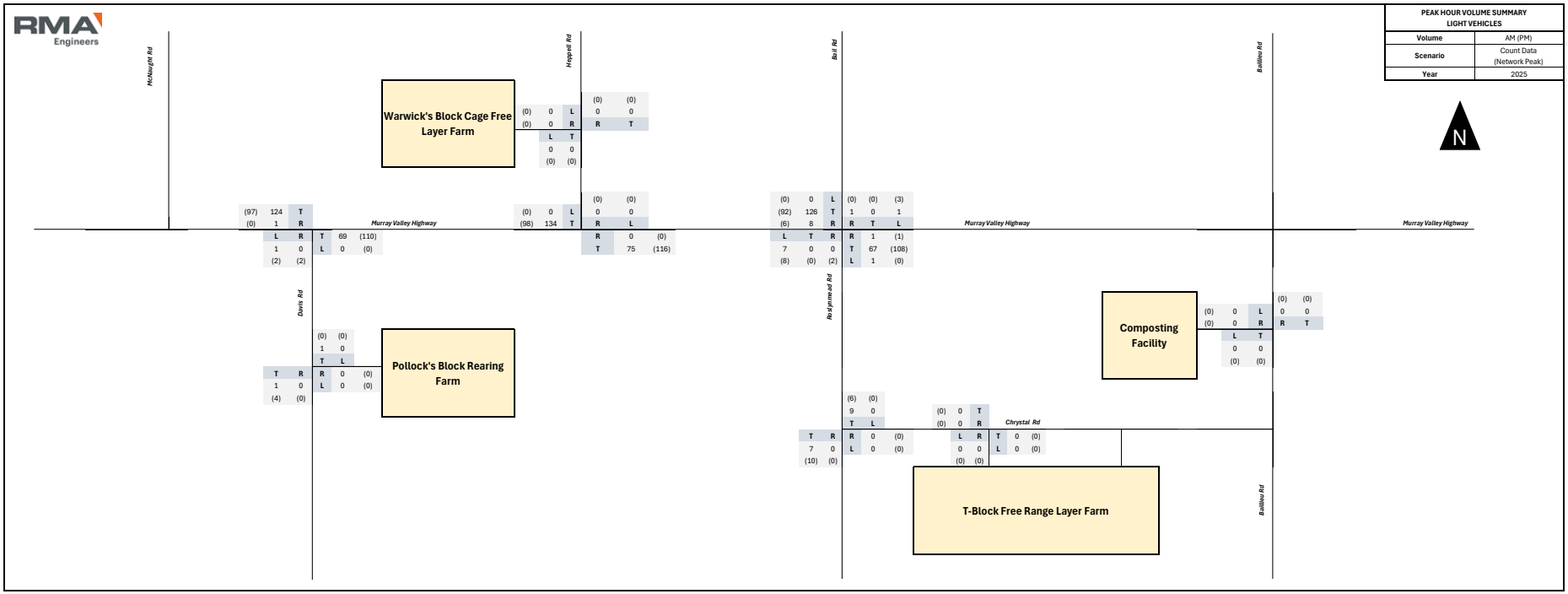

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume AM (PM)
Scenario Count Data (Network Peak)
Year 2025
N
McNaught Rd
Hospital Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Boundmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

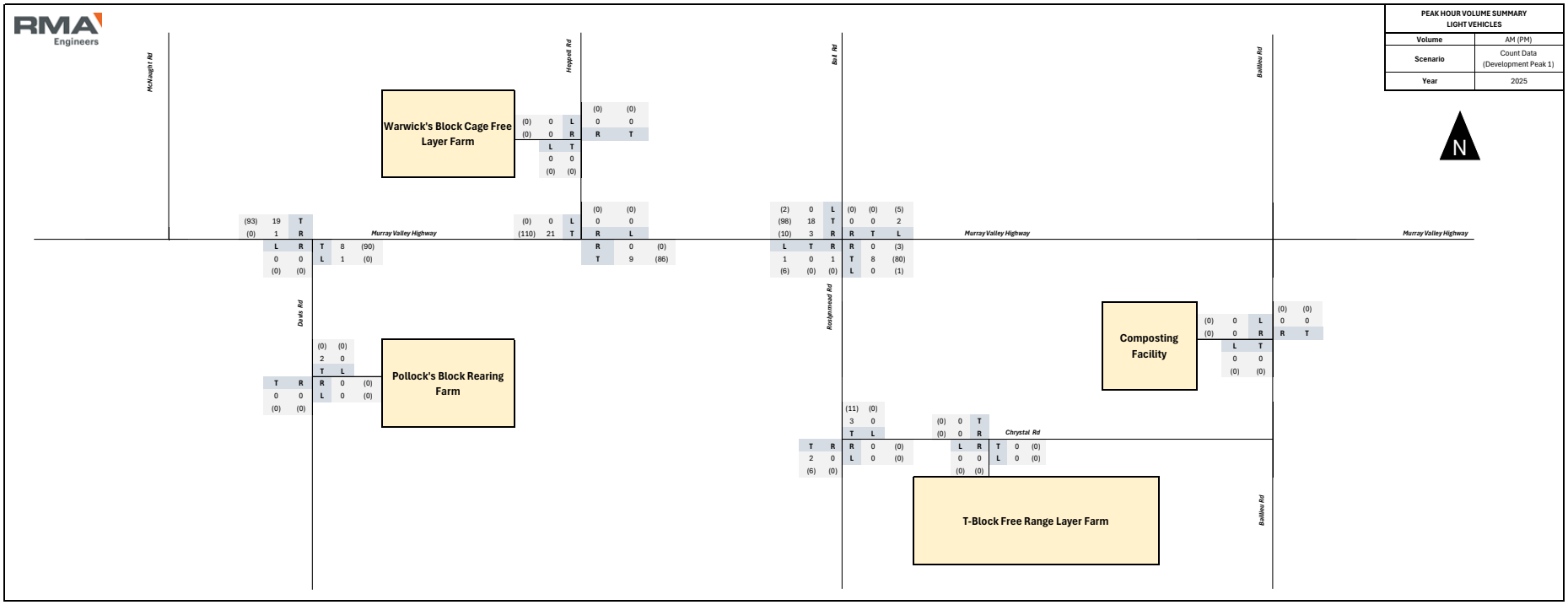

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Count Data (Development Peak 1)
Year
2025
N
McNaught Rd
Heppell Rd
Rd 1 Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Rosiynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

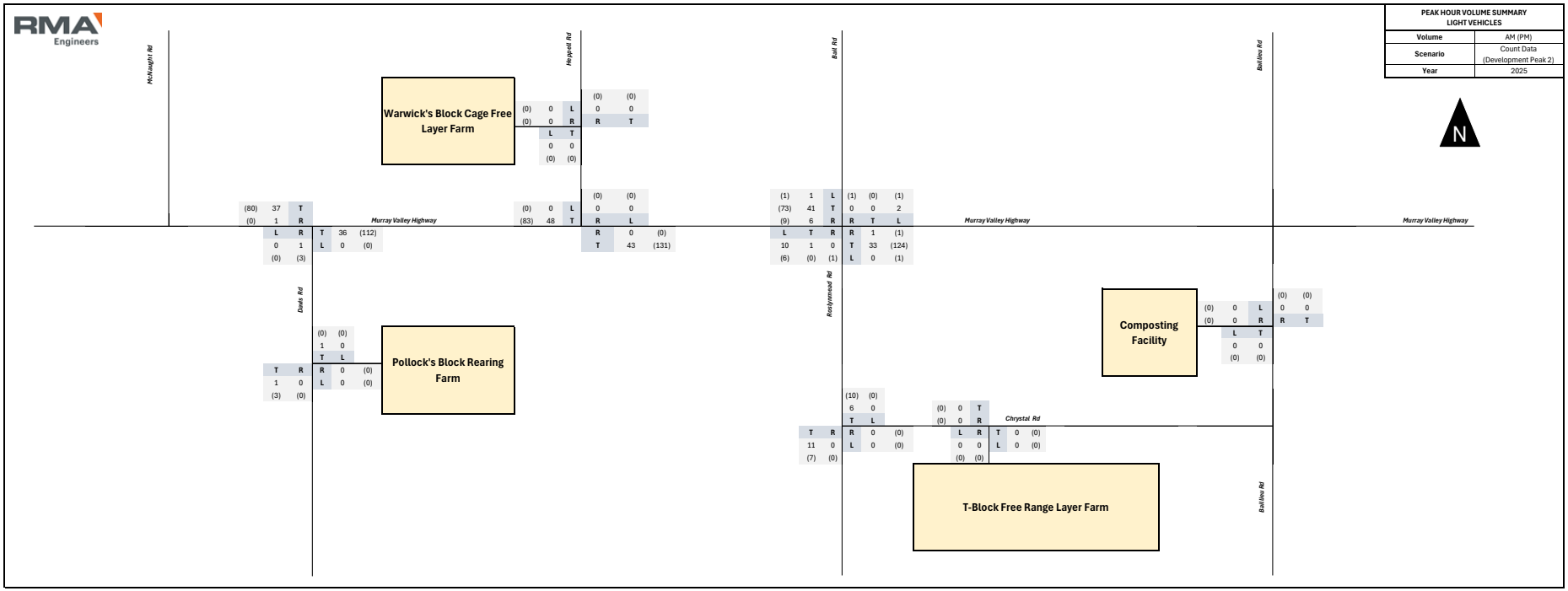

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume: AM (PM)
Scenario: Count Data (Development Peak 2)
Year: 2025
N
McHaugh't Rd
Heppell Rd
Ball Rd
Ballview Rd
Murray Valley Highway
Davis Rd
Rosslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

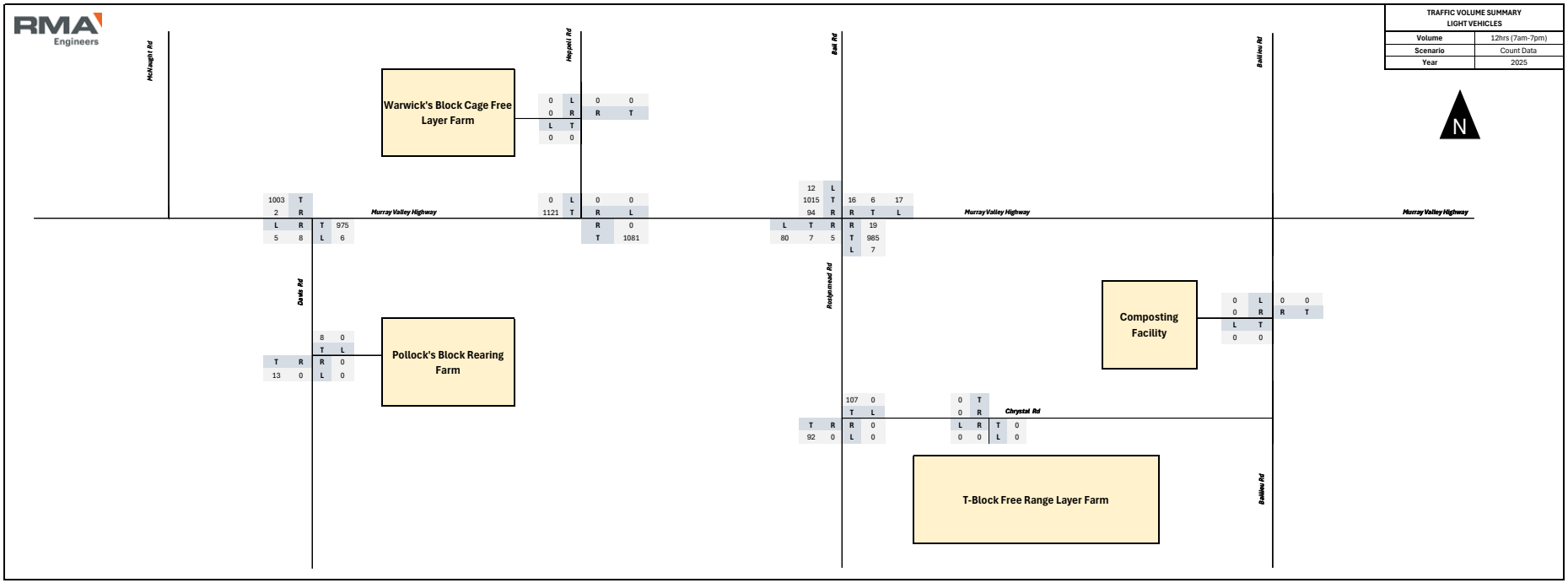

RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume 12hrs (7am-7pm)
Scenario Count Data
Year 2025
N
McKaught Rd
Heppell Rd
Bell Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rotgansnead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

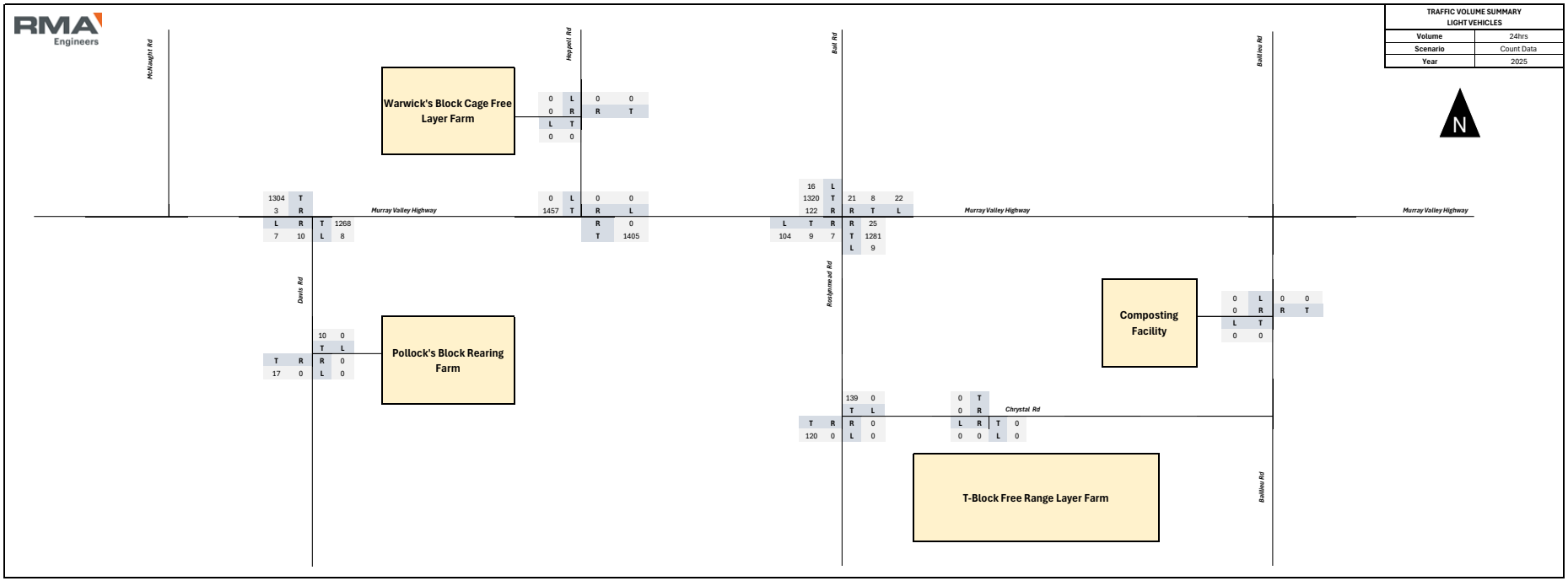

RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume 24hrs
Scenario Count Data
Year 2025
N
McNaught Rd
Heppell Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosignmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
1596 T
9 R
L R T 1509
17 44 L 40
0 L 0 0
0 R R T
L T
0 0
0 L 0 0
1782 T R L
R 0
T 1681
21 L
1600 T 27 14 22
161 R R T L
L T R R 26
135 13 7 T 1518
L 9
49 0
T L
T R R 0
61 0 L 0
185 0
T L
T R R 0
155 0 L 0
0 T
0 R
L R T 0
0 0 L 0
0 L 0 0
0 R R T
L T
0 0

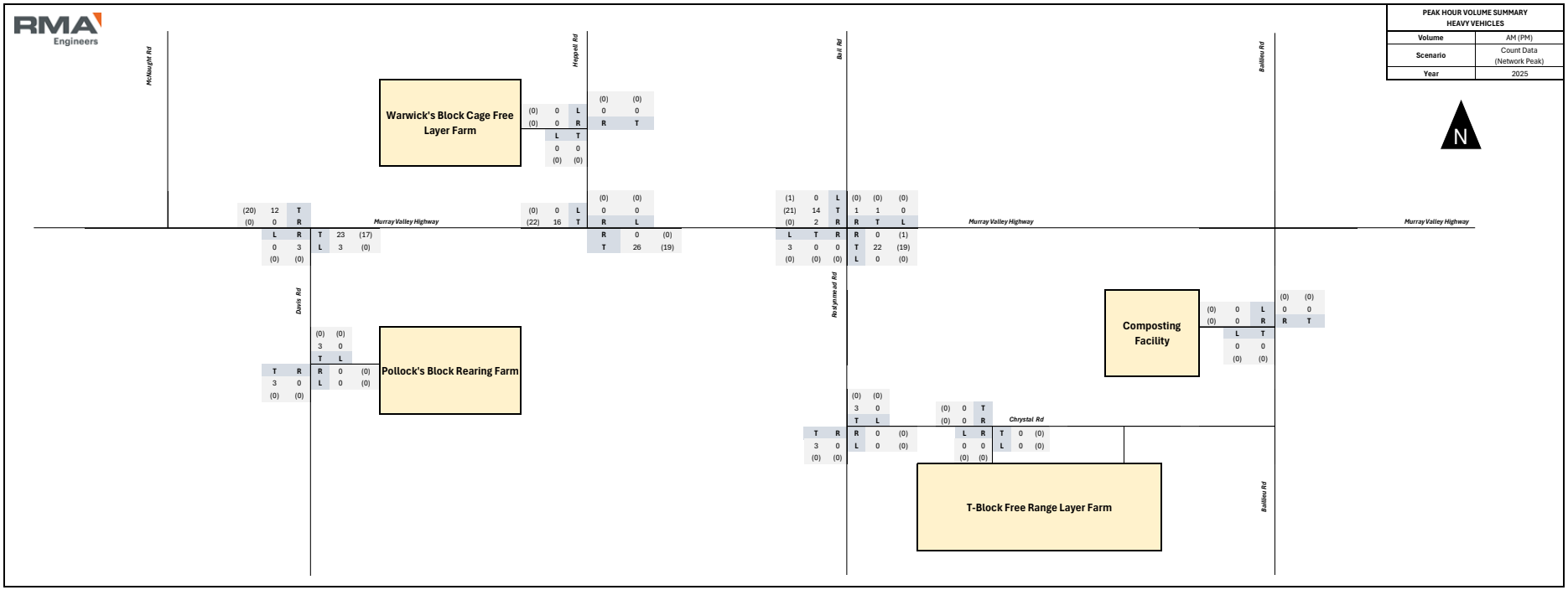

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Count Data (Network Peak)
Year
2025
N
McNaught Rd
Hogwall Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Boundmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

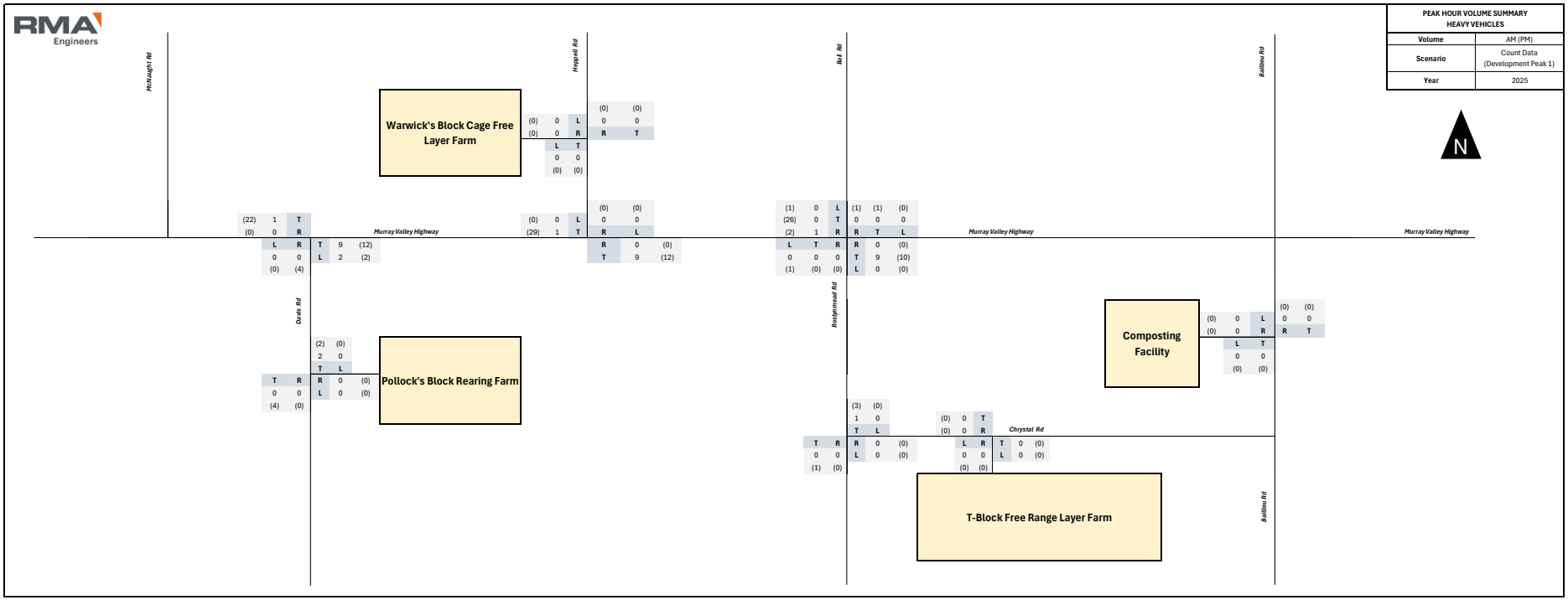

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Count Data (Development Peak 1)
Year
2025
N
McNaught Rd
Heppell Rd
Rd 1 Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosiynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

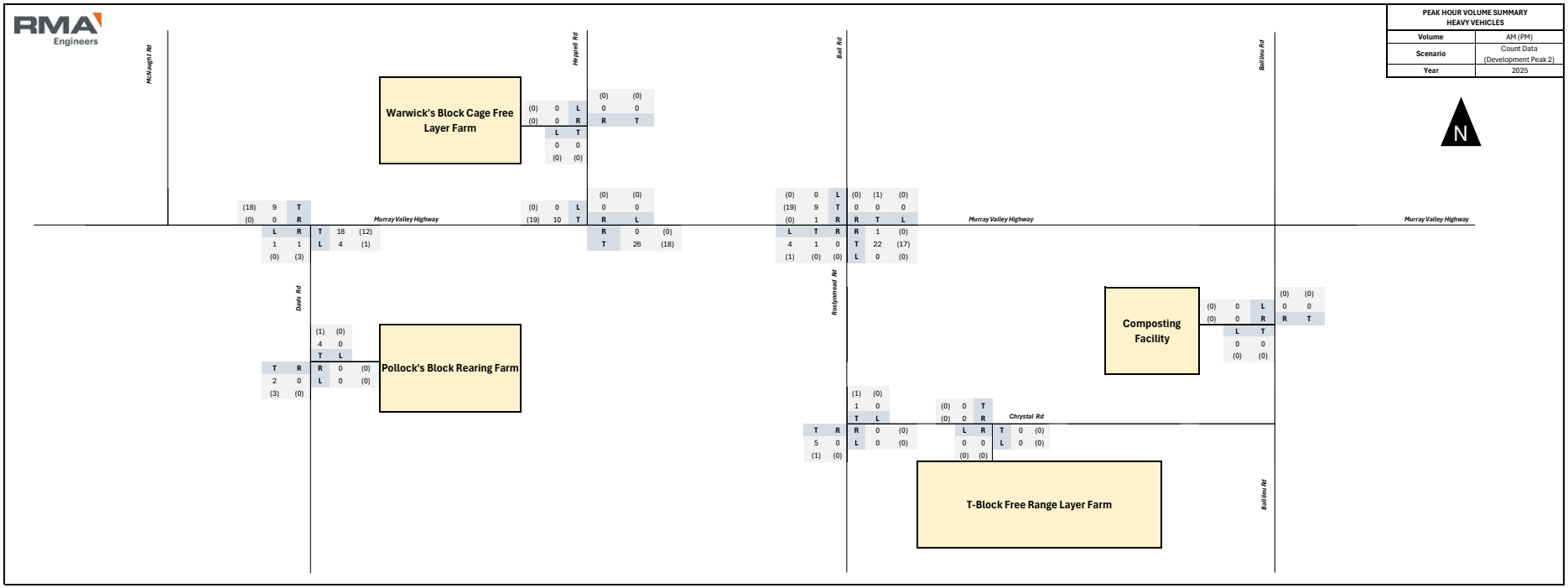

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume: AM (PM)
Scenario: Count Data (Development Peak 2)
Year: 2025
N
McHaugh't Rd
Heppell Rd
Ball Rd
Ballview Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosslynmead Rd
Chrystal Rd
Ballview Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

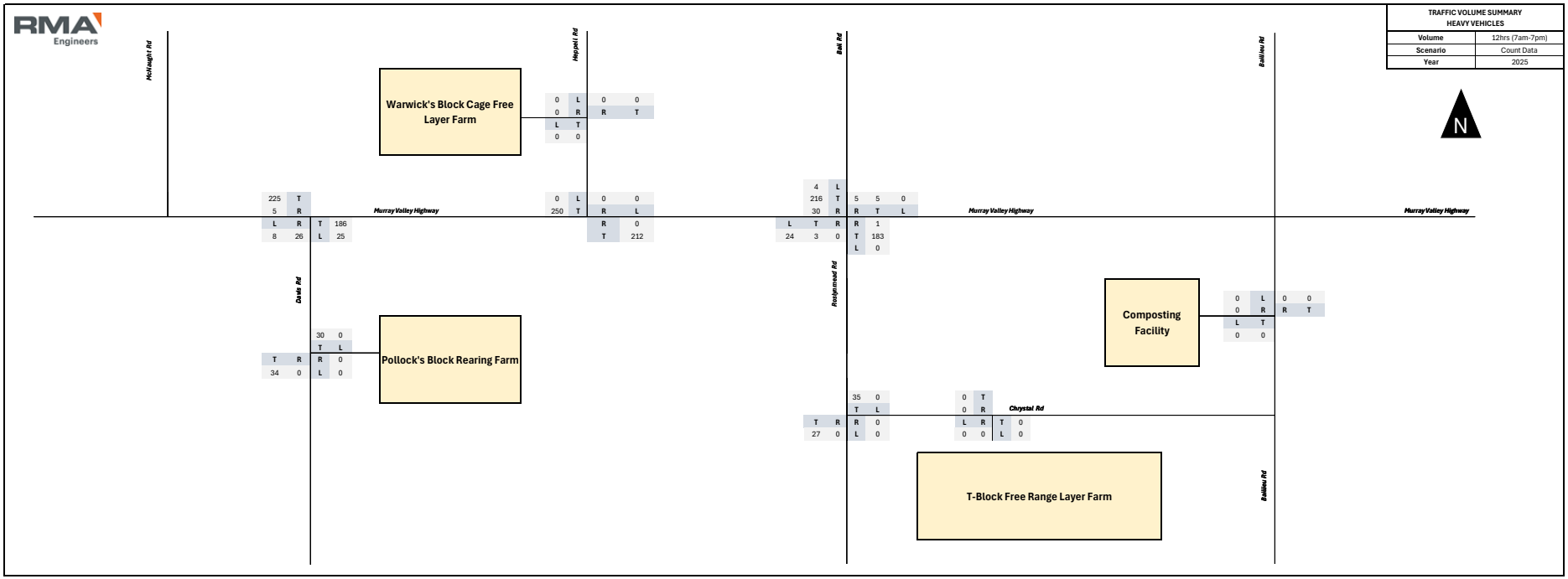

RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume 12hrs (7am-7pm)
Scenario Count Data
Year 2025
N
McKaughl Rd
Heppell Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rotgansnead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

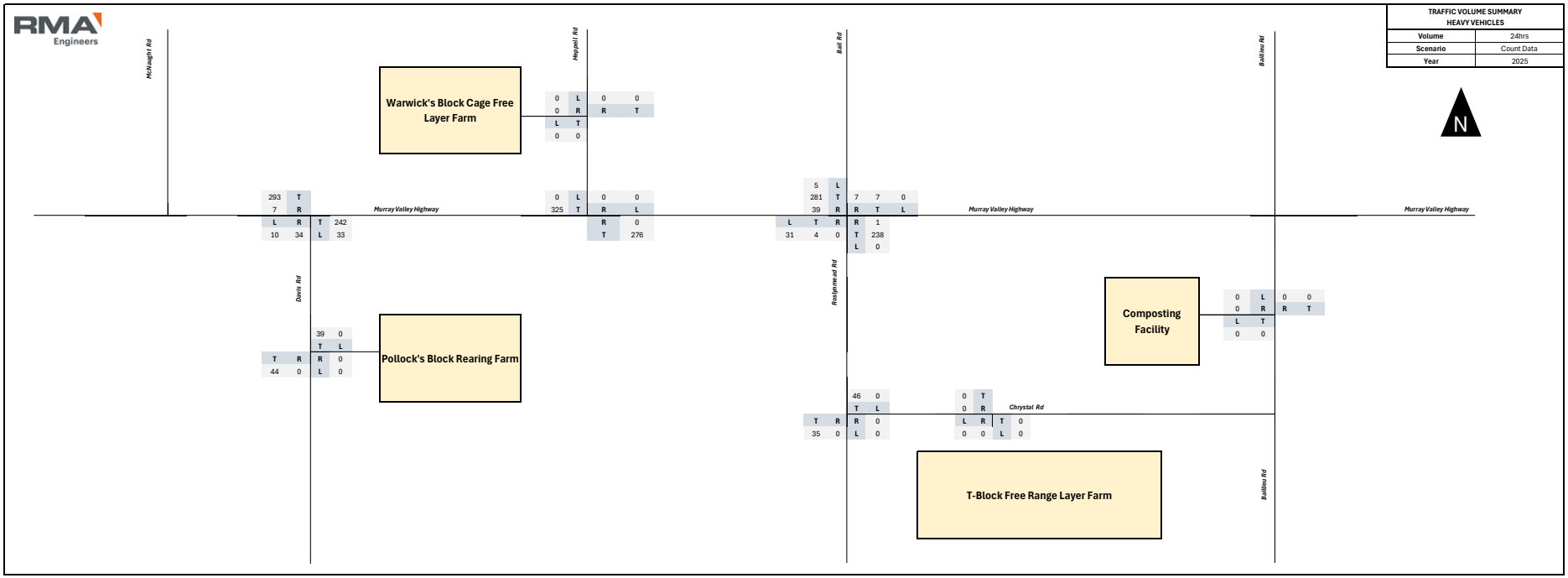

RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume 24hrs
Scenario Count Data
Year 2025
N
McNaught Rd
Heppell Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbyn mead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
1304 T
3 R
L R T 1268
7 10 L 8
0 L 0 0
0 R R T
L T
0 0
0 L 0 0
1457 T R L
R 0
T 1405
16 L
1320 T 21 8 22
122 R R T L
L T R R 25
104 9 7 T 1281
L 9
10 0
T L
T R R 0
17 0 L 0
0 L 0 0
0 R R T
L T
0 0
139 0
T L
T R R 0
120 0 L 0
0 T
0 R
L R T 0
0 0 L 0


RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume AM (PM)
Scenario Count Data (Network Peak)
Year 2025
N
McNaught Rd
Heggtveit Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roxanne Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

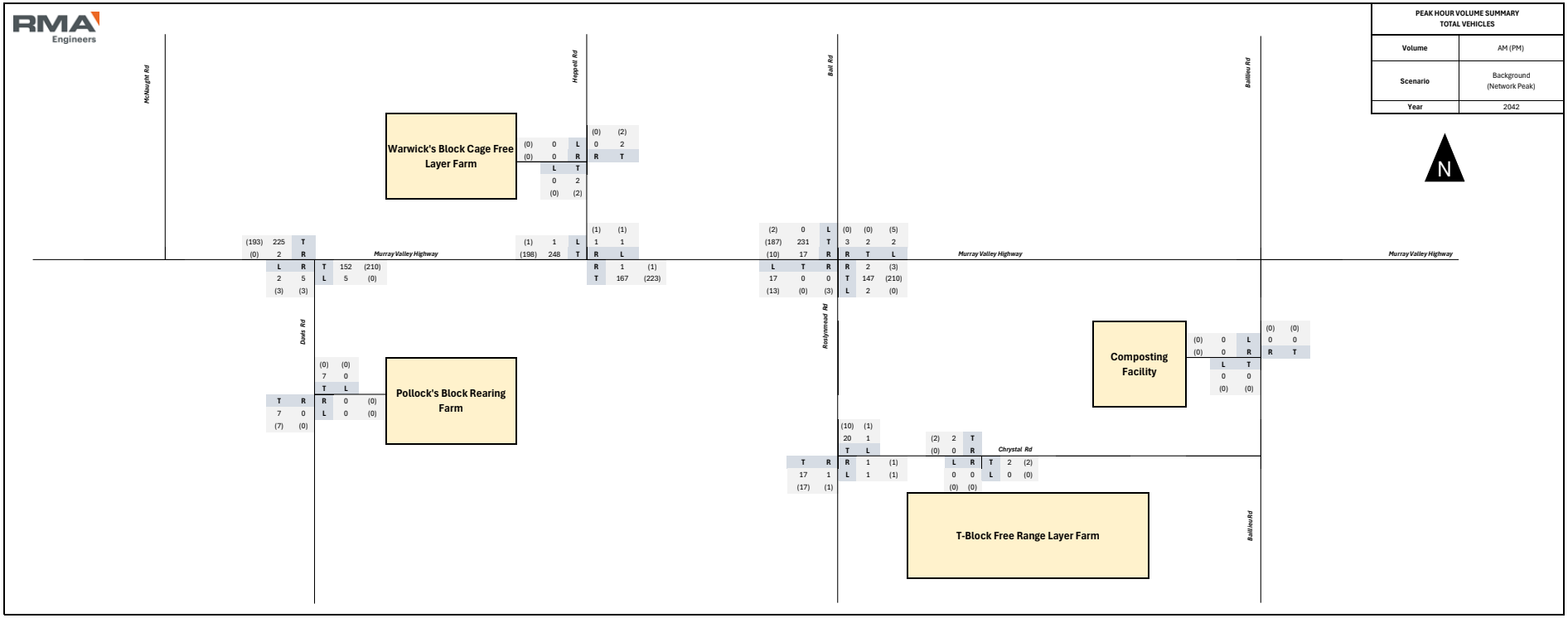

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Count Data (Development Peak 1)
Year
2025
N
McNaught Rd
Heppell Rd
Bol Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

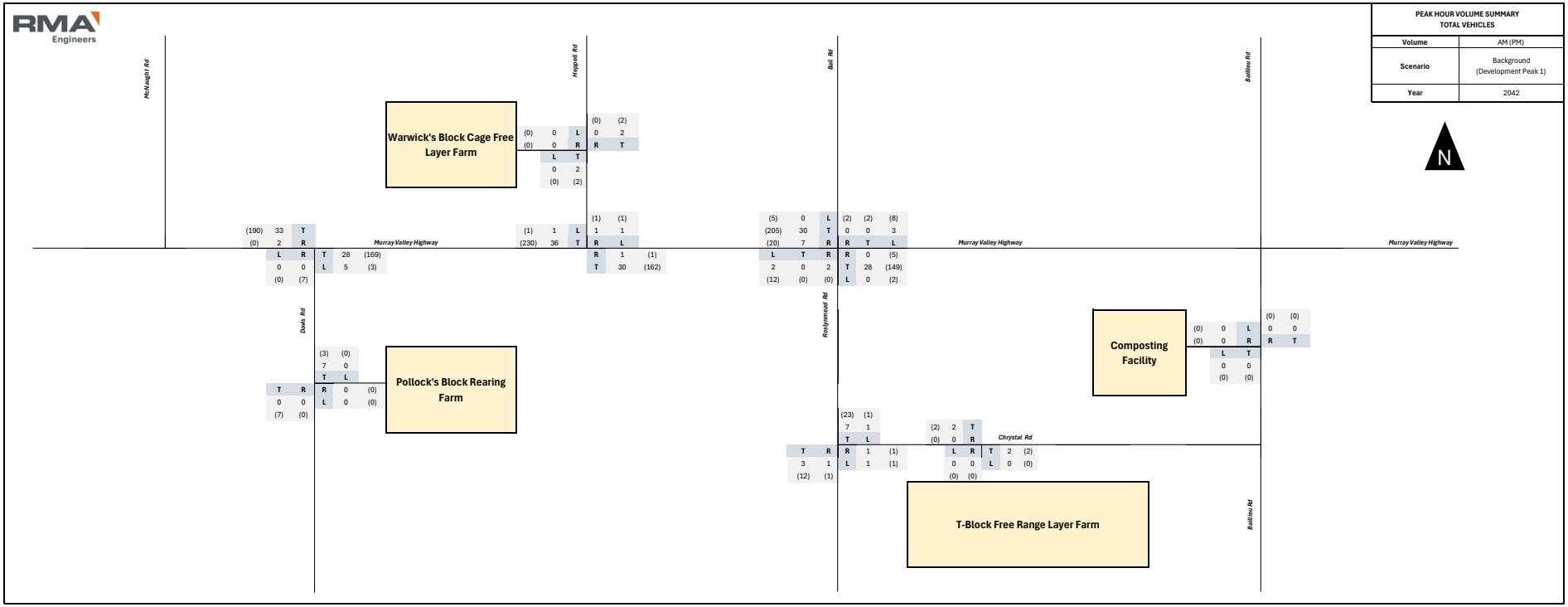

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Count Data
(Development Peak 2)
Year
2025
N
McHaugh's Rd
Heggstt Rd
Bail Rd
Ballalou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Warwick's Block Cage Free Layer Farm
Davis Rd
Pollock's Block Rearing Farm
Rosslynmead Rd
Composting Facility
Chrystal Rd
T-Block Free Range Layer Farm
Ballalou Rd


RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume 12hrs (7am-7pm)
Scenario Count Data
Year 2025
N
McKaughlt Rd
Hoppet Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rostgrmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

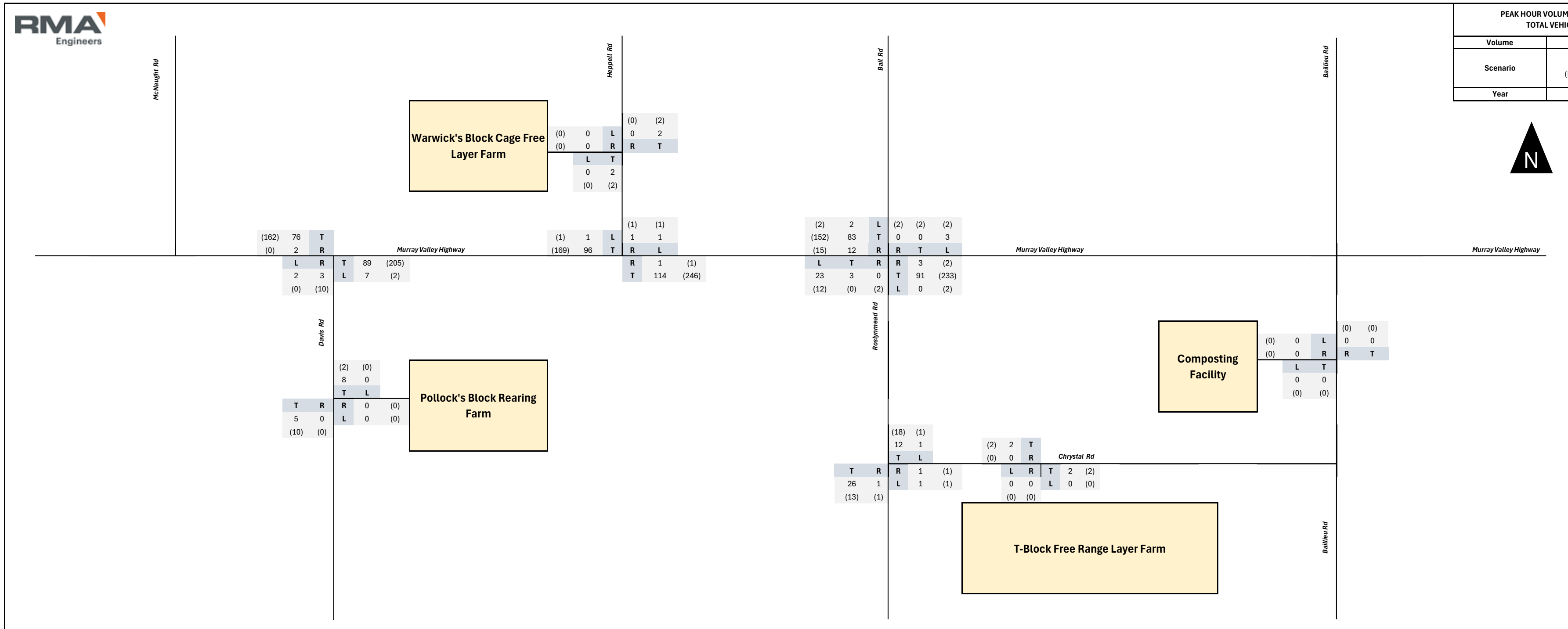

RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume 24hrs
Scenario Count Data
Year 2025
N
McNaught Rd
Heppell Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbyn-mead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

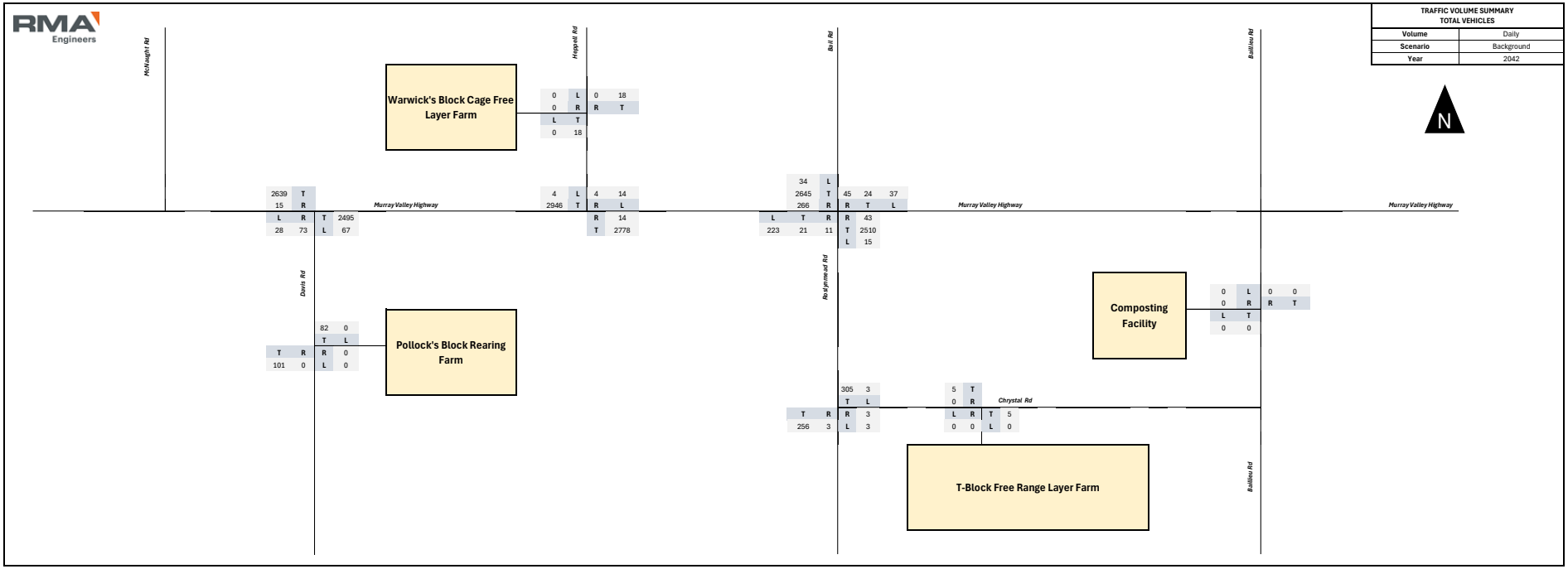
Appendix D Background traffic volumes

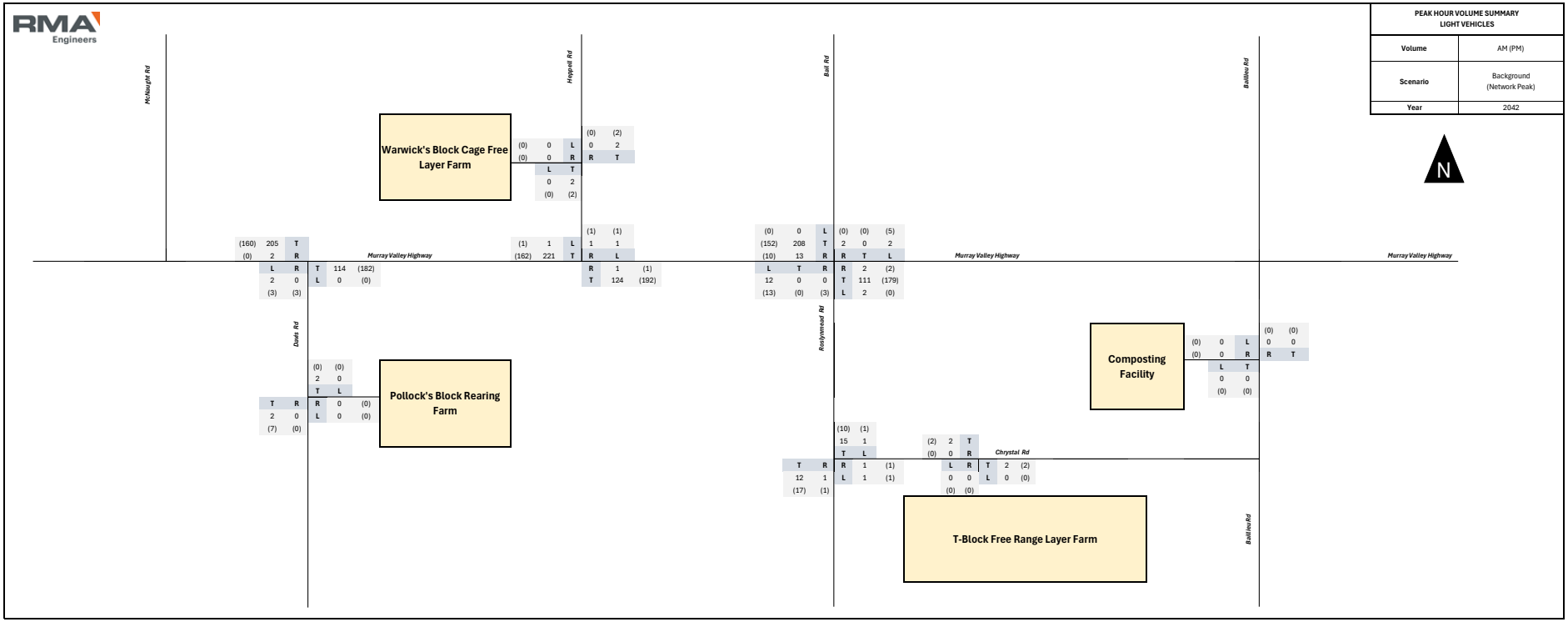

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background (Network Peak)
Year
2042
N
McNaught Rd
Hoppalt Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Duks Rd
Rosbynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

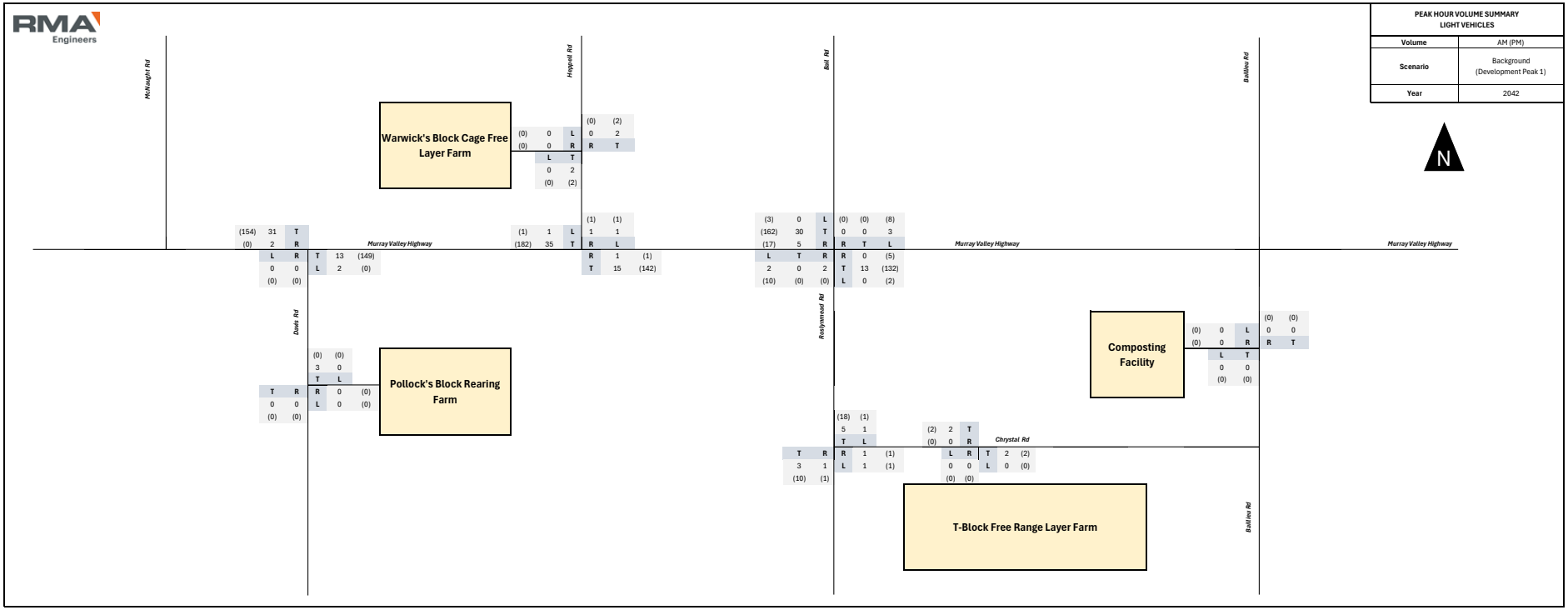

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background (Development Peak 1)
Year
2042
N
McVaughs Rd
Hoppel Rd
Bail Rd
Ballilou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dukes Rd
Rosbynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

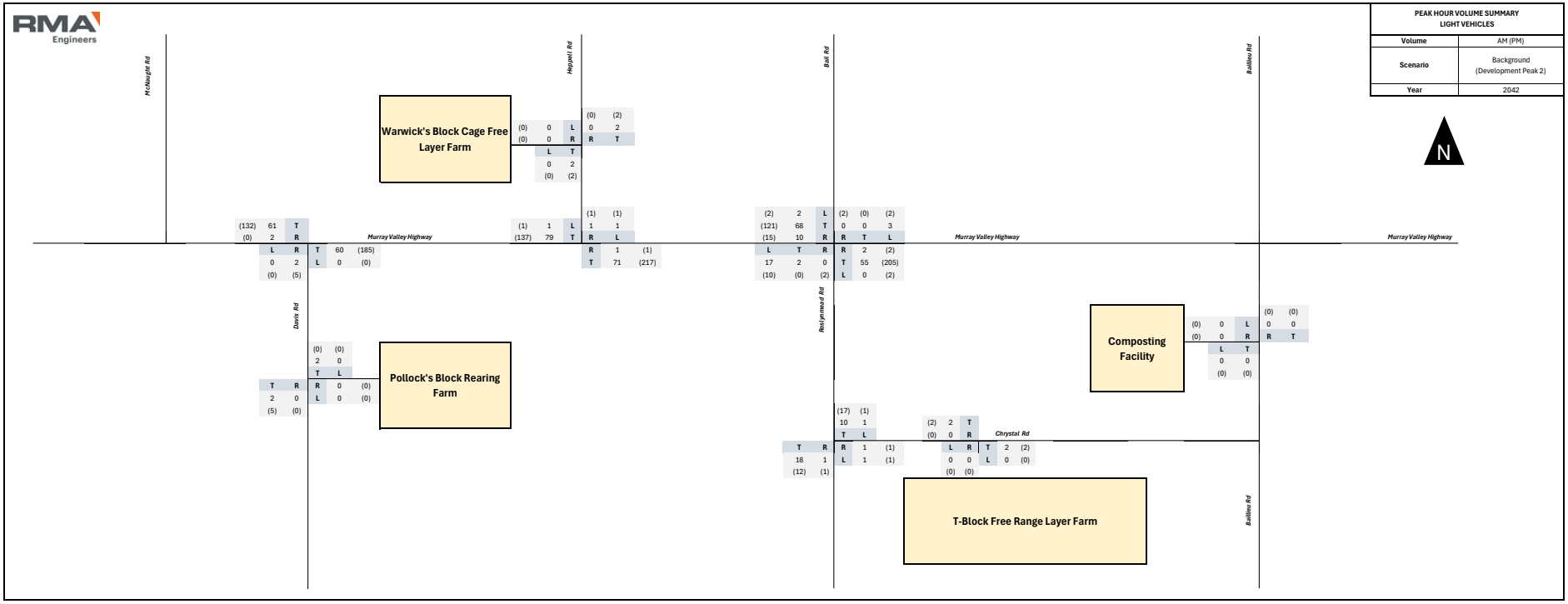
PEAK HOUR VOLUME SUMMARY TOTAL VEHICLES	
Volume	AM (PM)
Scenario	Background (Development Peak 2)
Year	2042

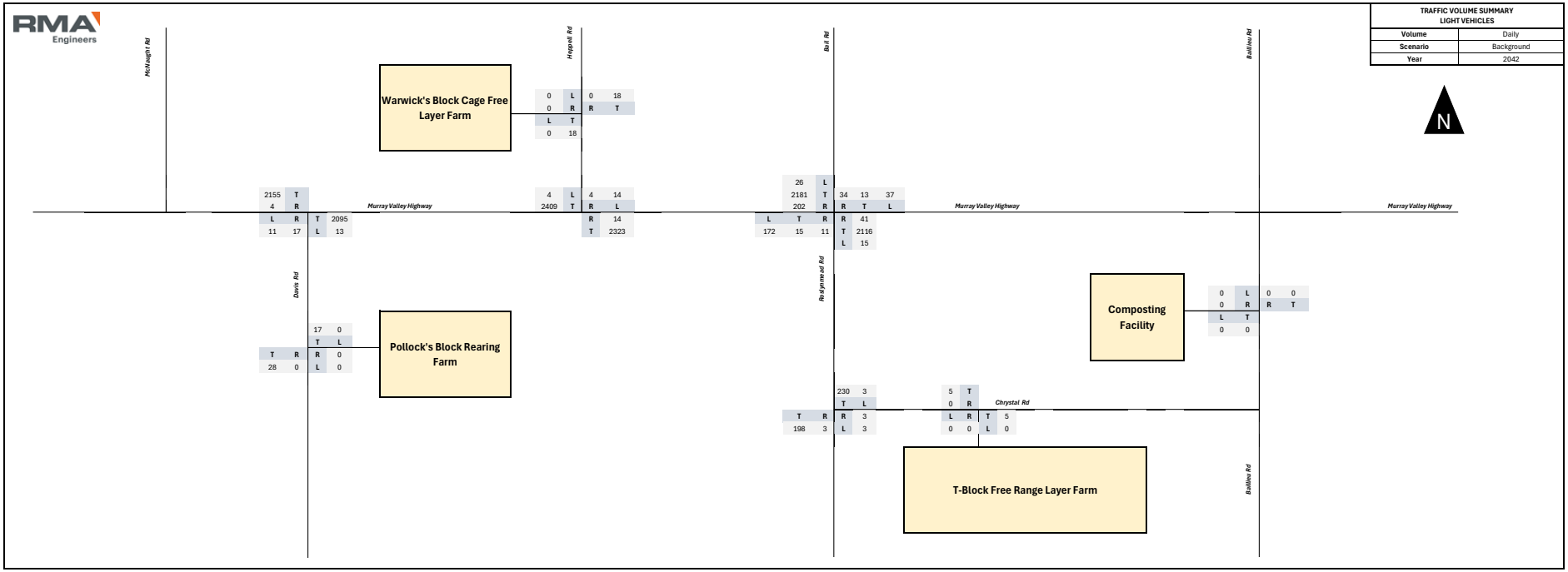



RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume Daily
Scenario Background
Year 2042
N
McHaugh's Rd
Heppell Rd
Bell Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Reymond Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
2639 T
15 R
L R T 2495
28 73 L 67
82 0
T L
T R R 0
101 0 L 0
0 L 0 18
0 R R T
L T
0 18
4 L 4 14
2946 T R L
R 14
T 2778
34 L
2645 T 45 24 37
266 R R T L
L T R R 43
223 21 11 T 2510
L 15
0 L 0 0
0 R R T
L T
0 0
305 3
T L
T R R 3
256 3 L 3
5 T
0 R
L R T 5
0 0 L 0


RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background (Network Peak)
Year
2042
N
McNaught Rd
Heppell Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dods Rd
Rostyn Head Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

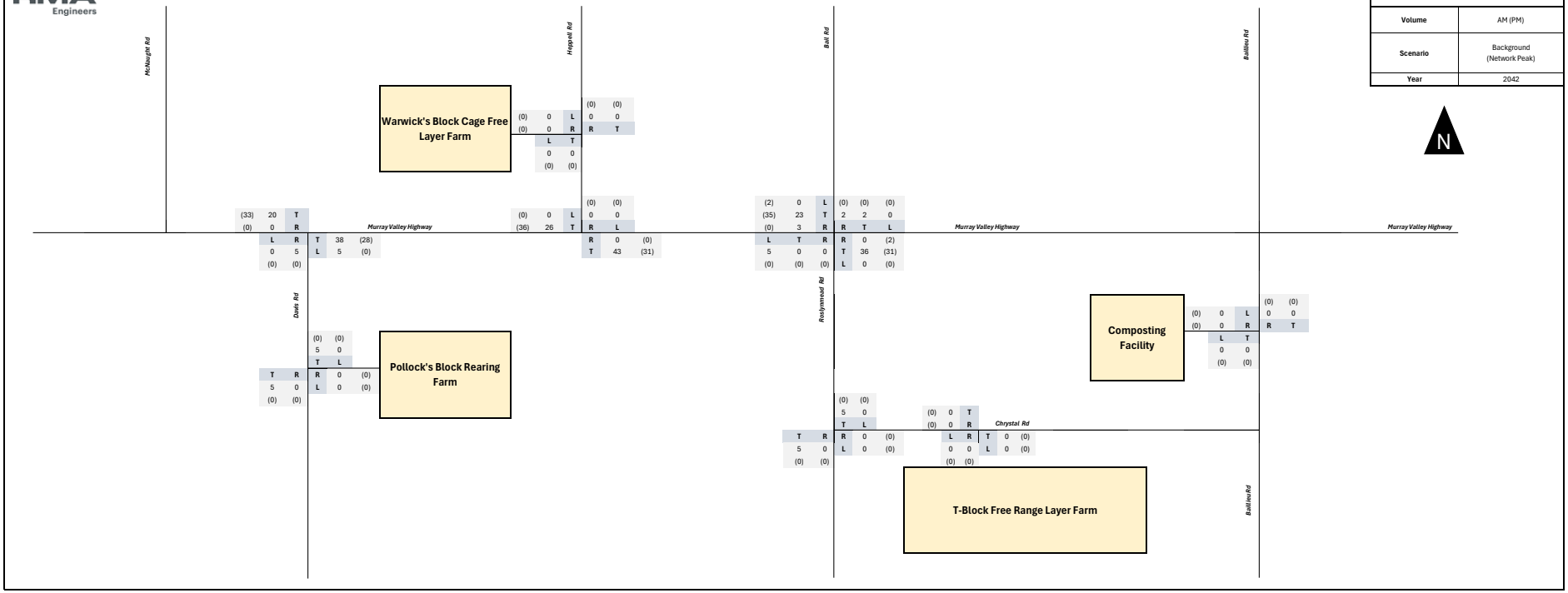

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background (Development Peak 1)
Year
2042
N
McVaughs Rd
Hoppal Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Dods Rd
Rostymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

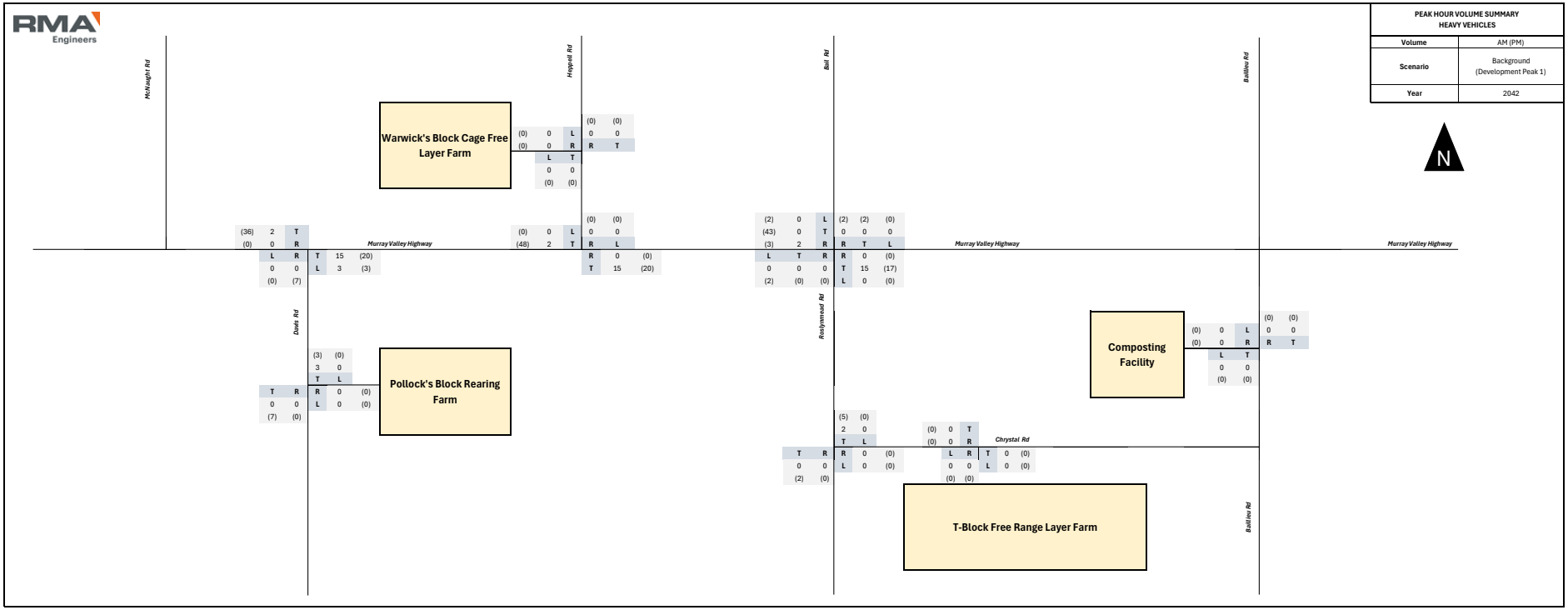

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background
(Development Peak 2)
Year
2042
N
McNaught Rd
Heppell Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Reinemuth Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

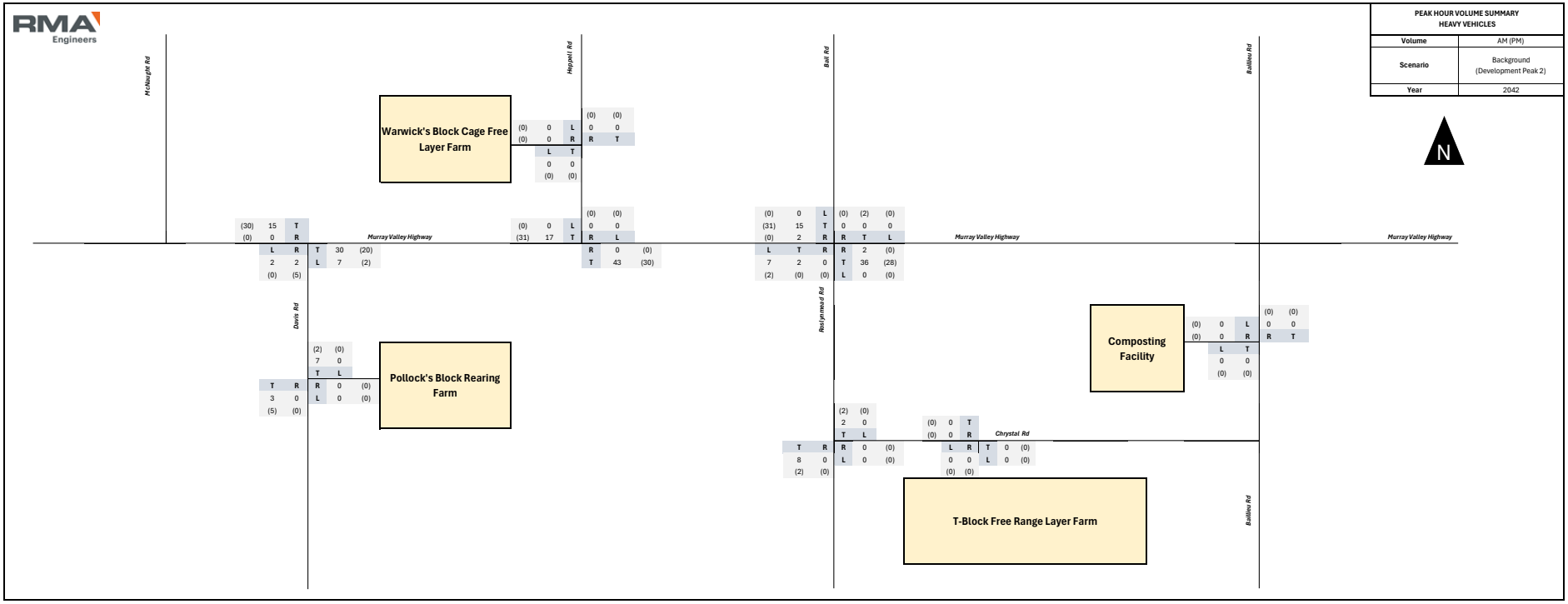

RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume Daily
Scenario Background
Year 2042
N
McHaugh's Rd
Heggarti Rd
Bell Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Reidymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
2155 T
4 R
L R T 2095
11 17 L 13
17 0
T L
T R R 0
28 0 L 0
0 L L 18
0 R R T
L T
0 18
4 L 4 14
2409 T R L
R 14
T 2323
26 L
2181 T 34 13 37
202 R R T L
L T R R 41
172 15 11 T 2116
L 15
230 3
T L
T R R 3
198 3 L 3
5 T
0 R
L R T 5
0 0 L 0
0 L 0 0
0 R R T
L T
0 0

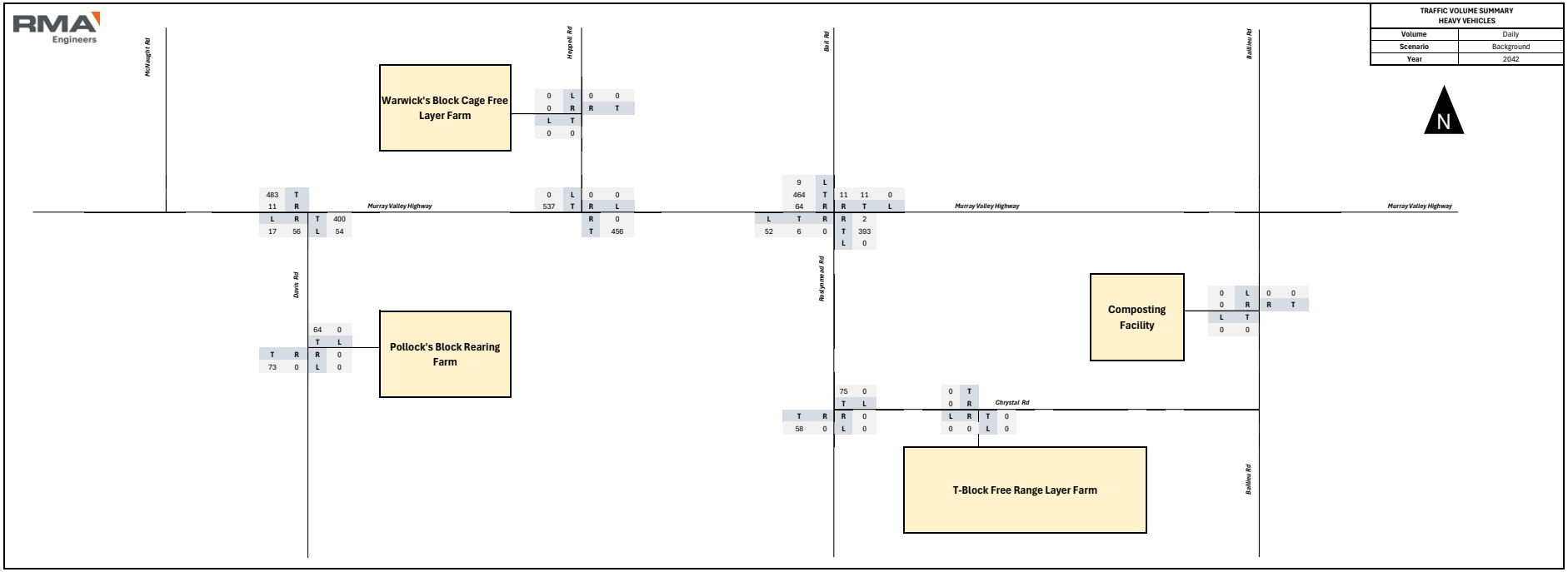
RMA Engineers

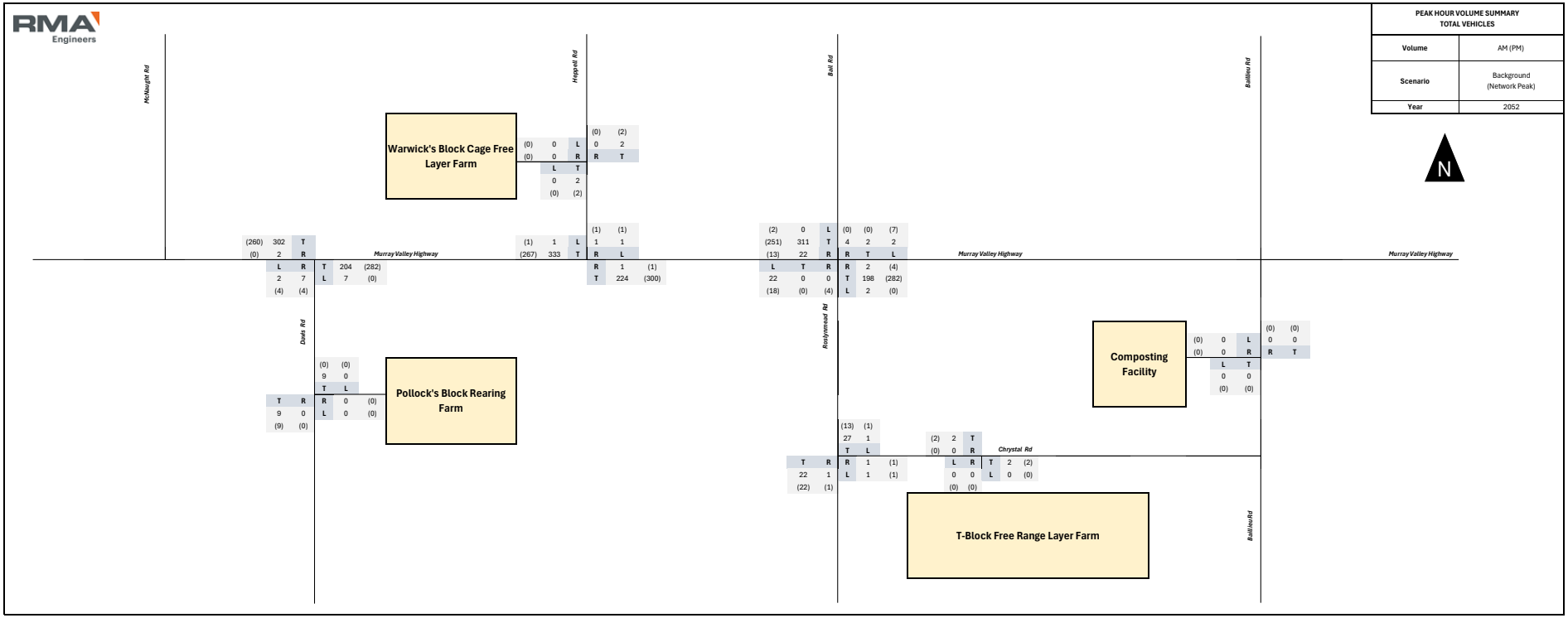
PEAK HOUR VOLUME SUMMARY HEAVY VEHICLES	
Volume	AM (PM)
Scenario	Background (Network Peak)
Year	2042

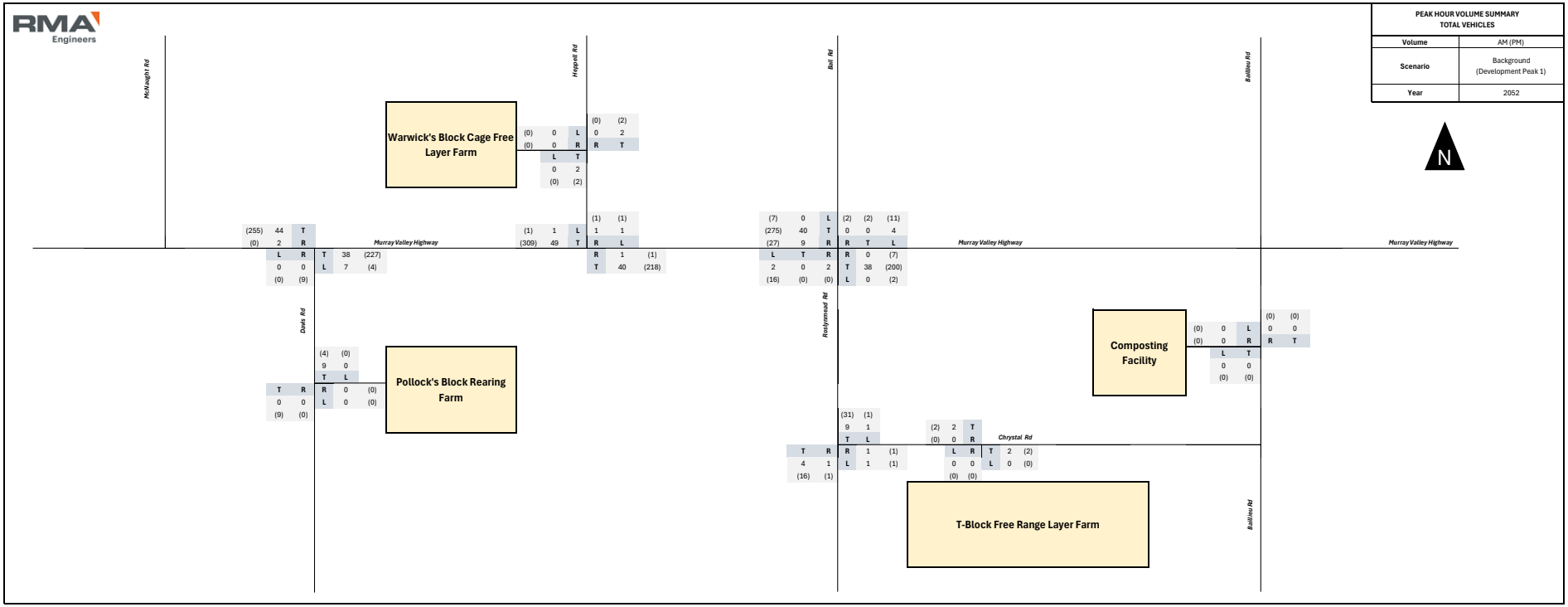


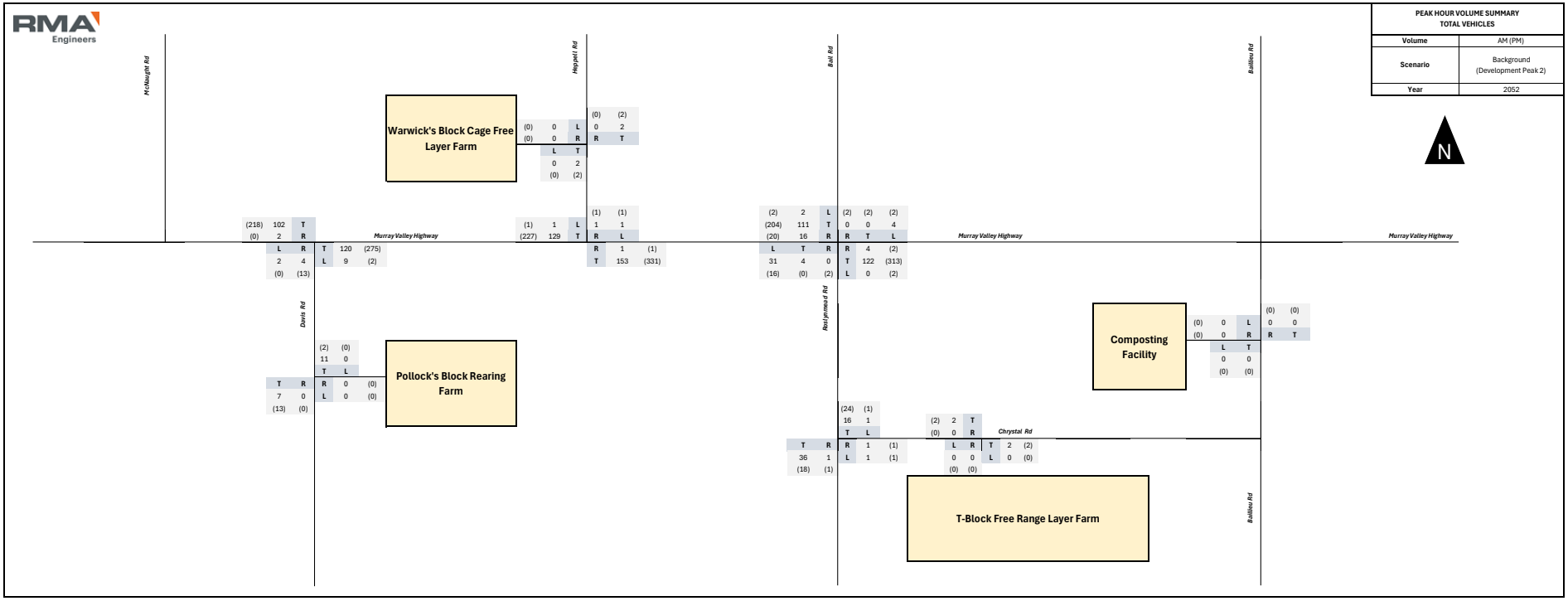

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background (Development Peak 1)
Year
2042
N
McNaughts Rd
Hoppal Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Duds Rd
Rostymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

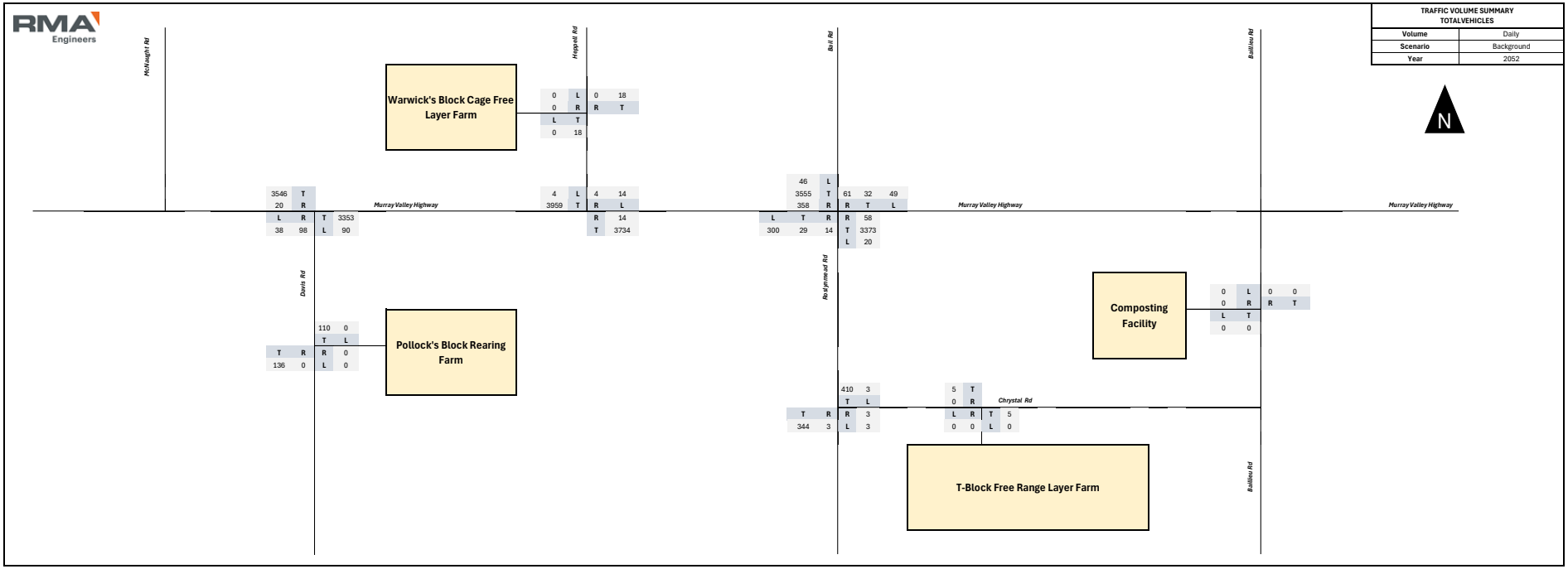

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background
(Development Peak 2)
Year
2042
N
Mclaughlin Rd
Heppell Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rasmussen Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

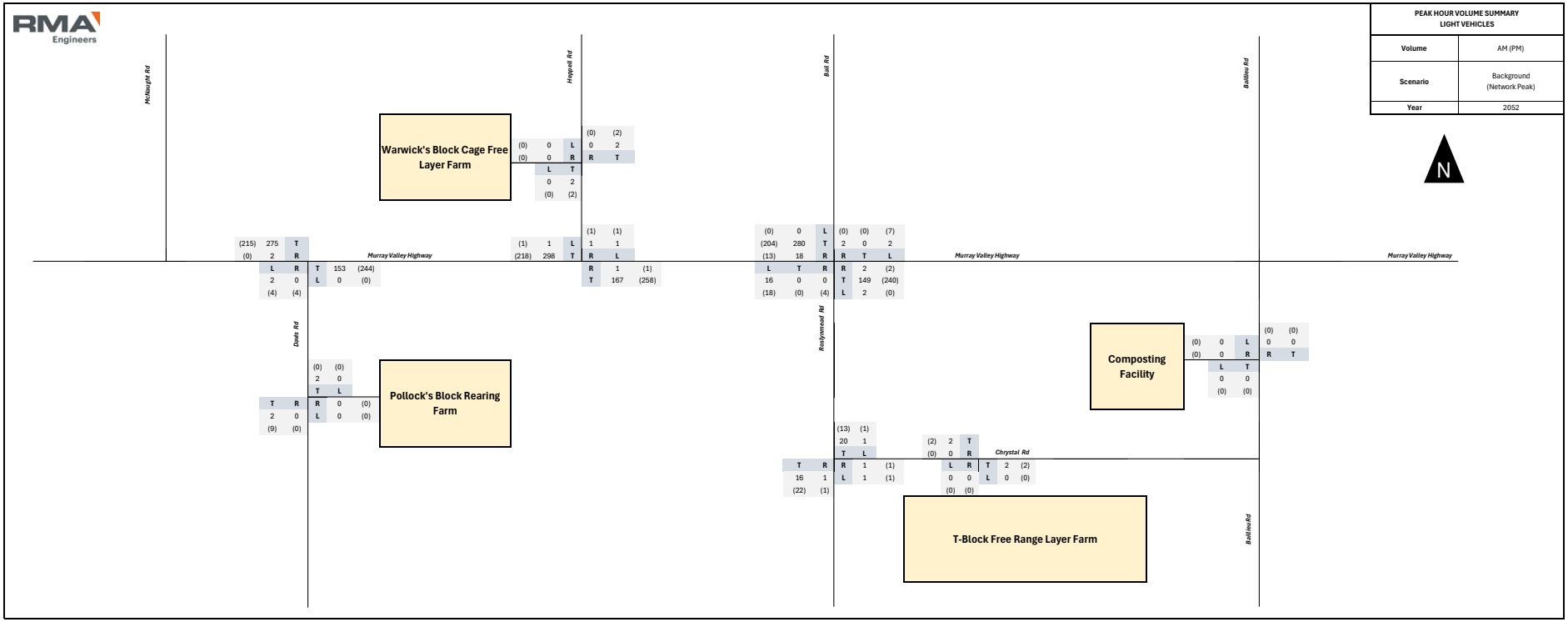

RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume Daily
Scenario Background
Year 2042
N
McHaugh's Rd
Heggarti Rd
Bell Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Redgrove Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
483 T
11 R
L R T 400
17 56 L 54
0 L 0 0
0 R R T
L T
0 0
0 L 0 0
537 T R L
R 0
T 456
9 L
464 T
64 R
L T R
52 6 0
11 11 0
R T L
R 2
T 393
L 0
64 0
T L
T R R 0
73 0 L 0
75 0
T L
T R R 0
58 0 L 0
0 T
0 R
L R T 0
0 0 L 0
0 L 0 0
0 R R T
L T
0 0

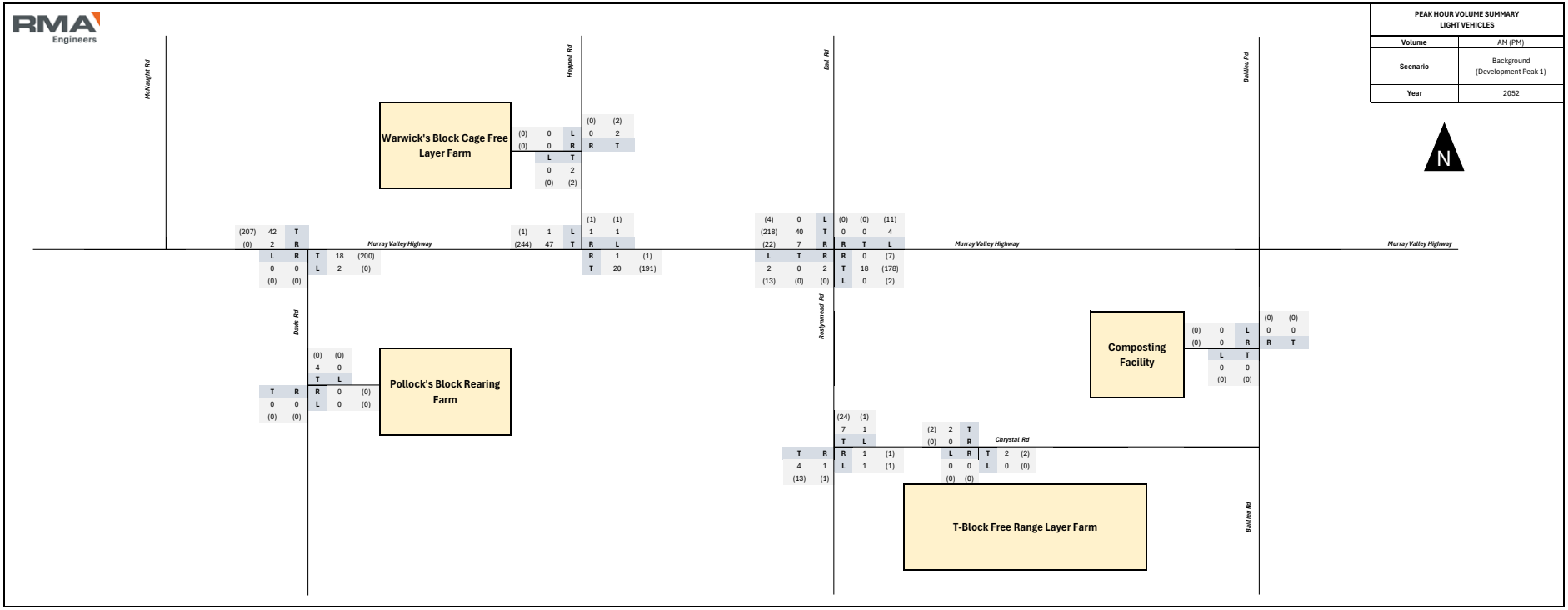

PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background (Network Peak)
Year
2052
N
McNaught Rd
Hoppell Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Duks Rd
Rosbynmead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

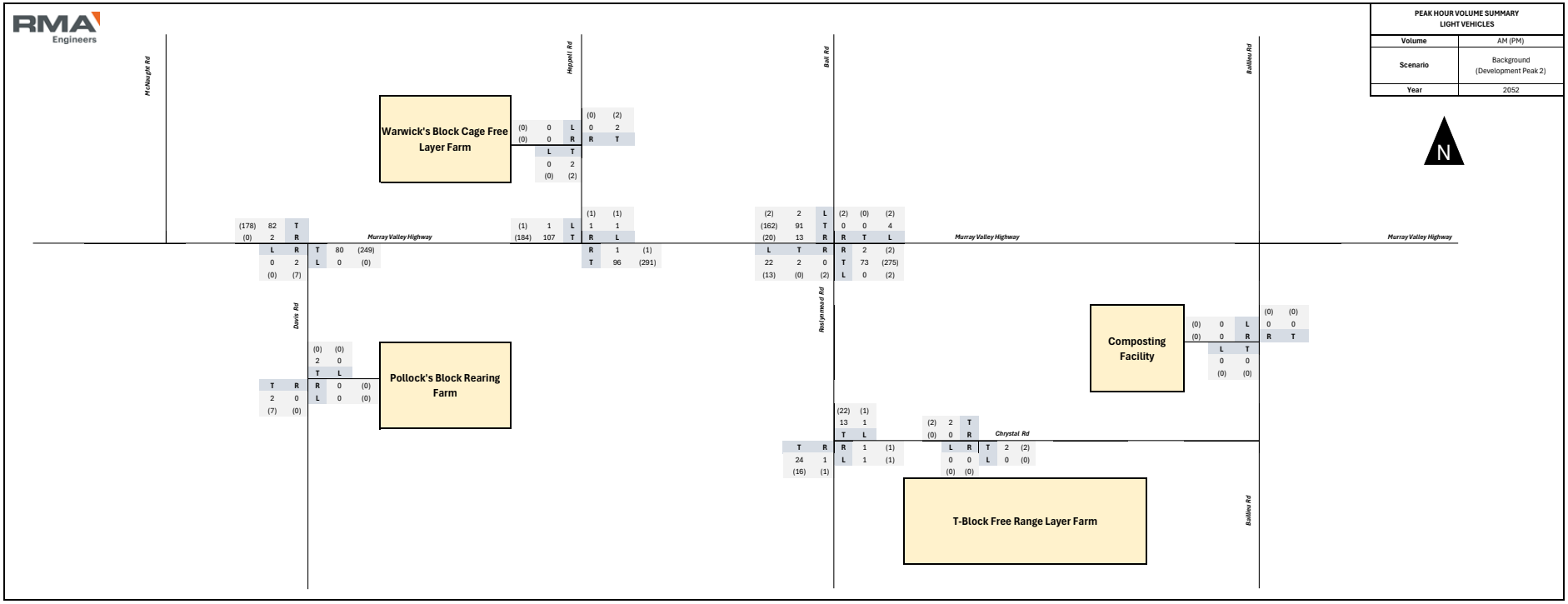

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background (Development Peak 1)
Year
2052
N
McVaughs Rd
Hoppel Rd
Bail Rd
Ballilou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dukes Rd
Rosbynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

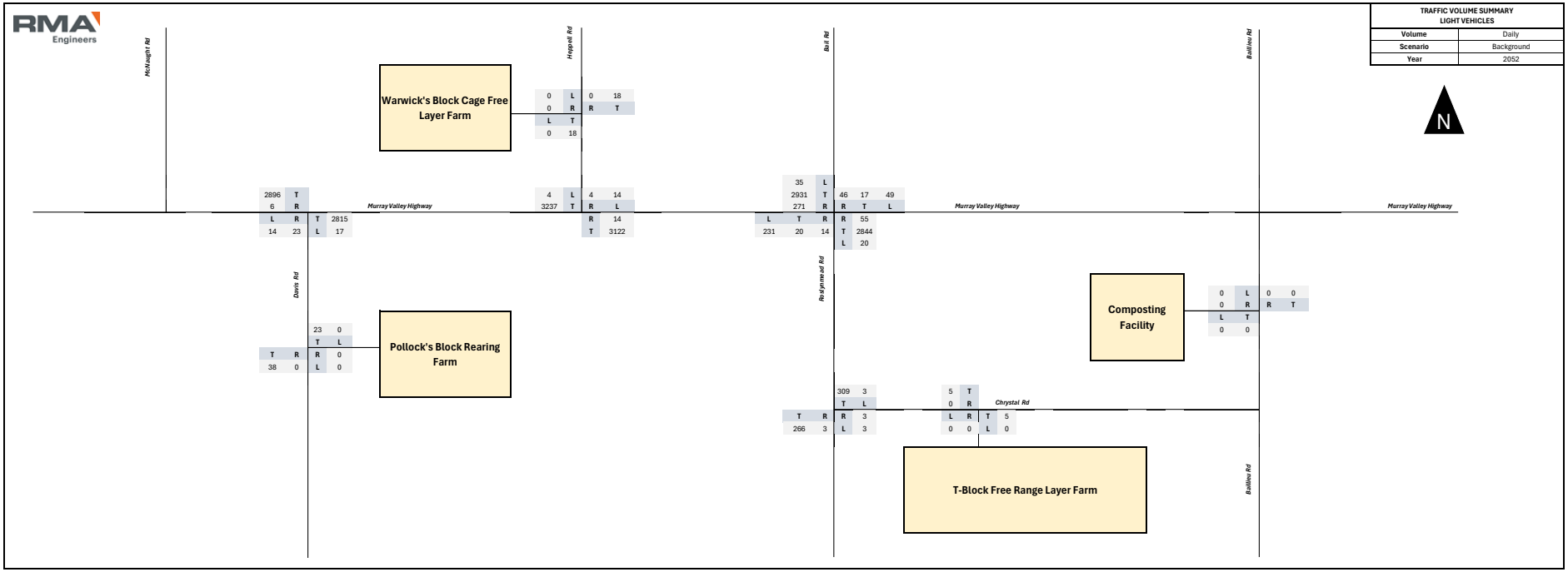

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume AM (PM)
Scenario Background (Development Peak 2)
Year 2052
N
McNaught Rd
Heptell Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Restymead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

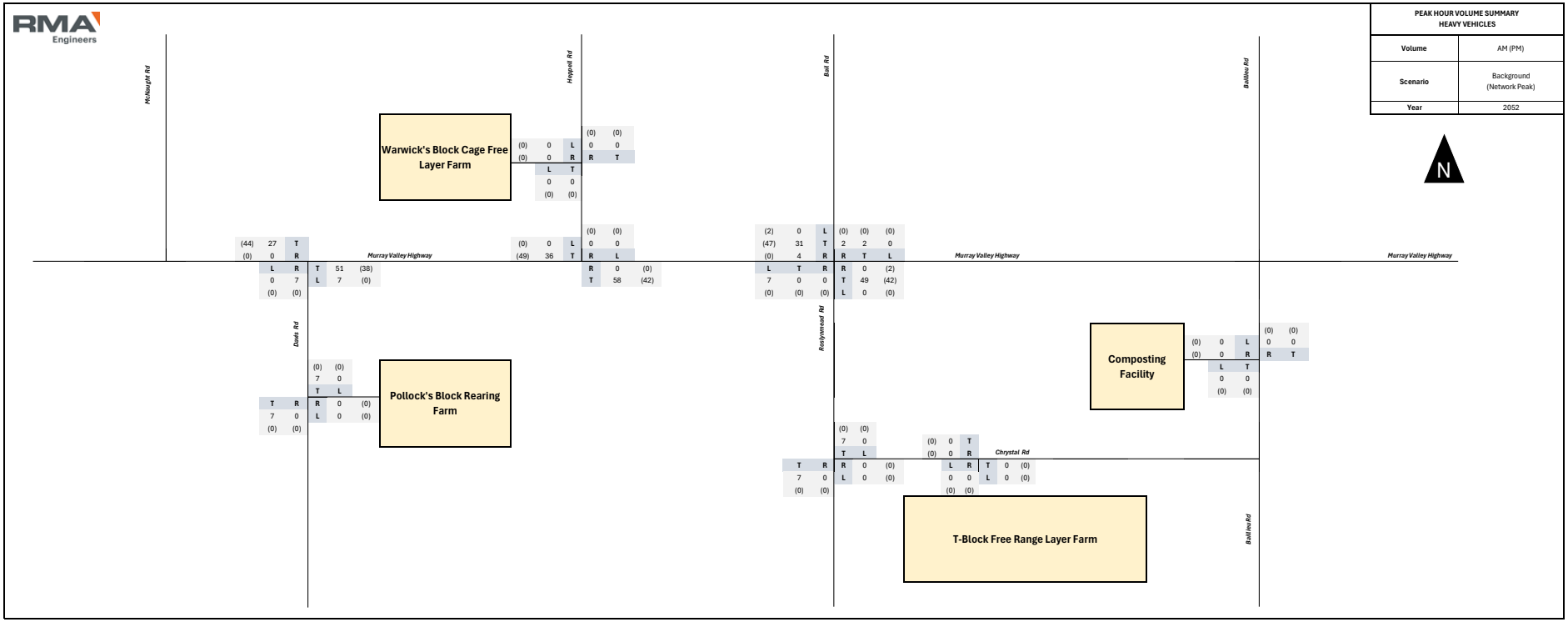

RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTALVEHICLES
Volume Daily
Scenario Background
Year 2052
N
McHaugh's Rd
Heppell Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Reymond Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
3546 T
20 R
L R T 3353
38 98 L 90
110 0
T L
T R R 0
136 0 L 0
0 L 0 18
0 R R T
L T
0 18
4 L 4 14
3959 T R L
R 14
T 3734
46 L
3555 T 61 32 49
358 R R T L
L T R R 58
300 29 14 T 3373
L 20
410 3
T L
T R R 3
344 3 L 3
5 T
0 R
L R T 5
0 0 L 0
0 L 0 0
0 R R T
L T
0 0

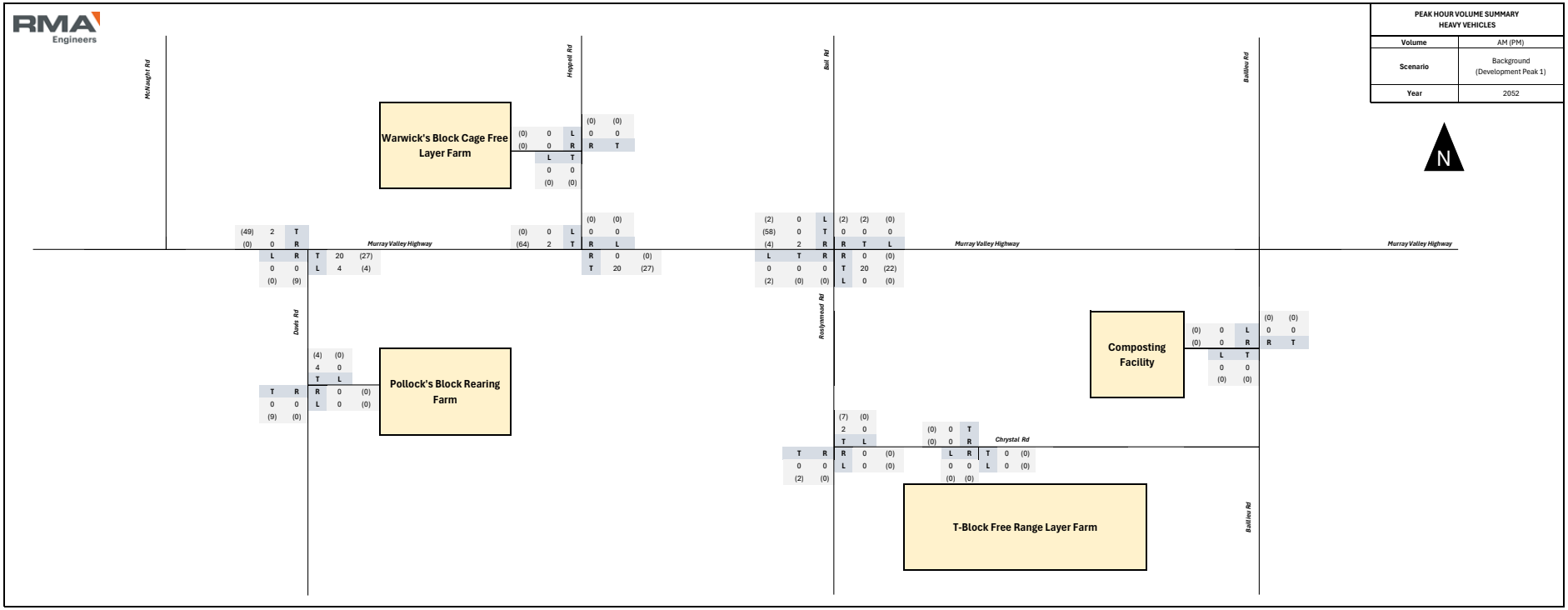

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background (Network Peak)
Year
2052
N
McNaught Rd
Heppell Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rostyn-mead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

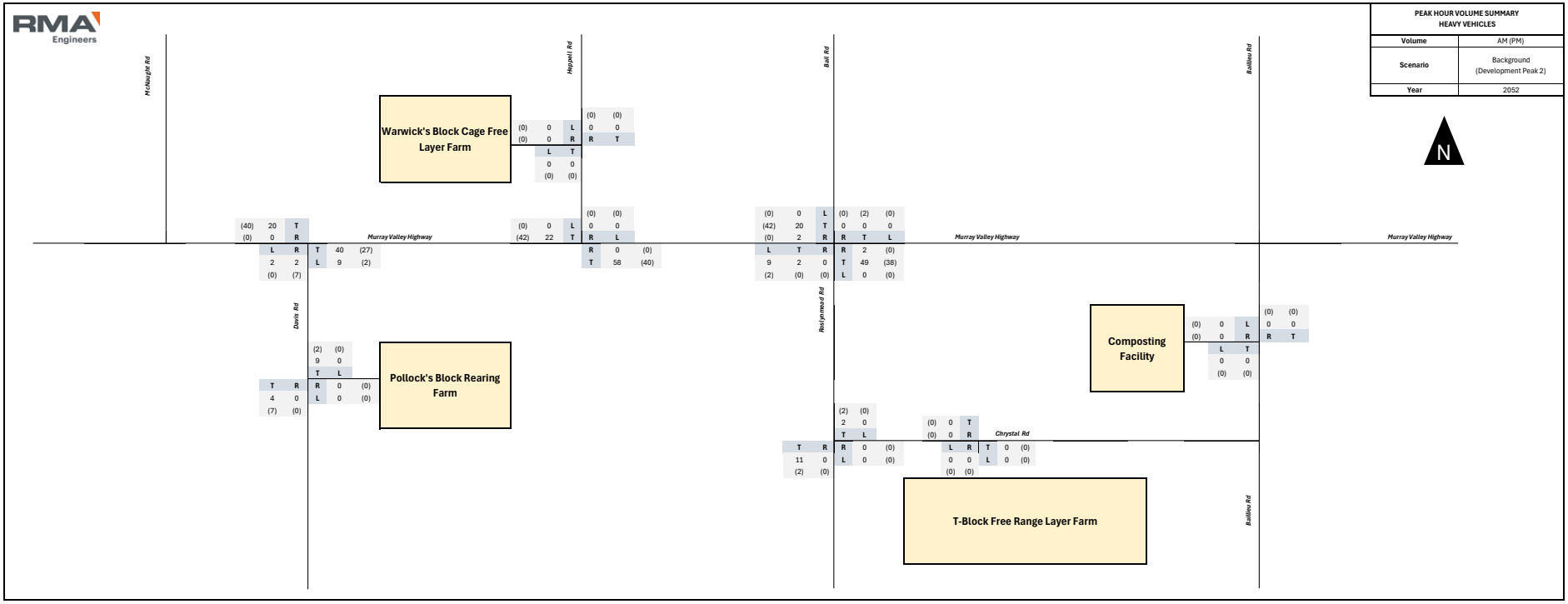

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background (Development Peak 1)
Year
2052
N
McVaughs Rd
Hoppal Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Dads Rd
Rostymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

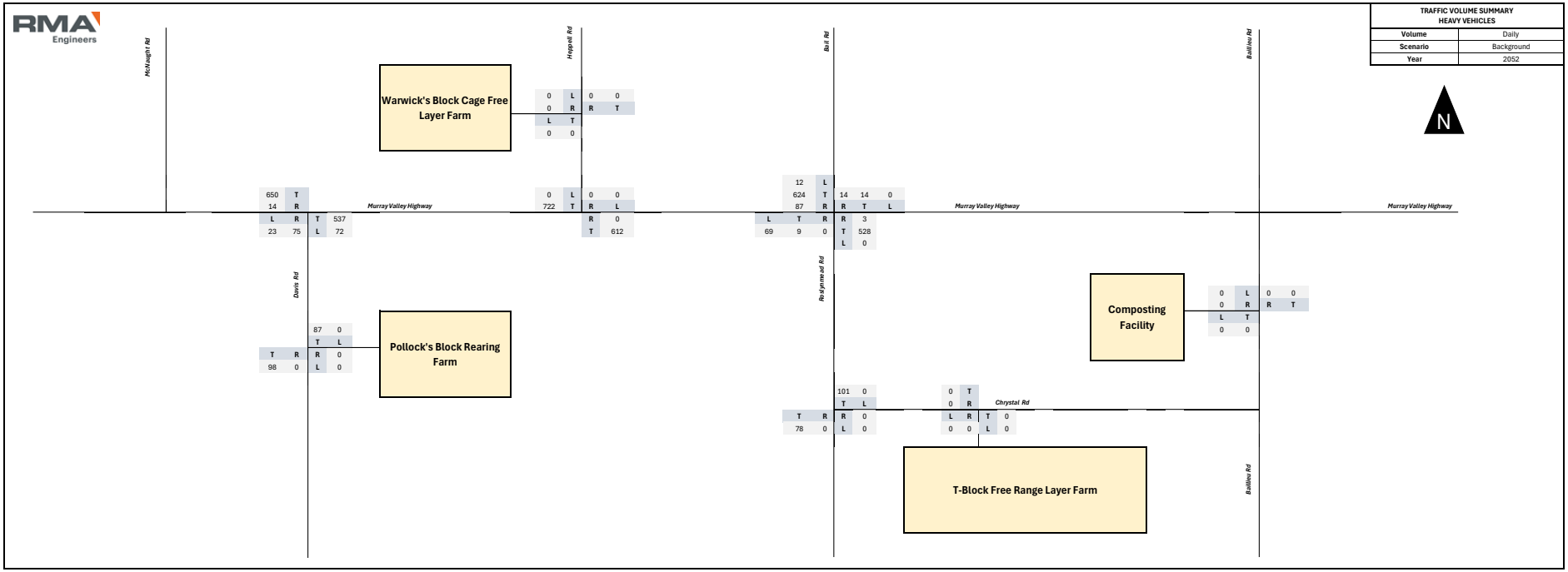

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background
(Development Peak 2)
Year
2052
N
Mclaughlt Rd
Heppell Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rentenmoud Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume Daily
Scenario Background
Year 2052
N
McHaugh's Rd
Heggarty Rd
Bell Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Redgrove Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
2896 T
6 R
L R T 2815
14 23 L 17
4 L 4 14
3237 T R L
R 14
T 3122
35 L
2931 T 46 17 49
271 R R T L
L T R R 55
231 20 14 T 2844
L 20
23 0
T L
T R R 0
38 0 L 0
0 L 0 0
0 R R T
L T
0 0
309 3
T L
T R R 3
266 3 L 3
5 T
0 R
L R T 5
0 0 L 0
0 L 0 18
0 R R T
L T
0 18

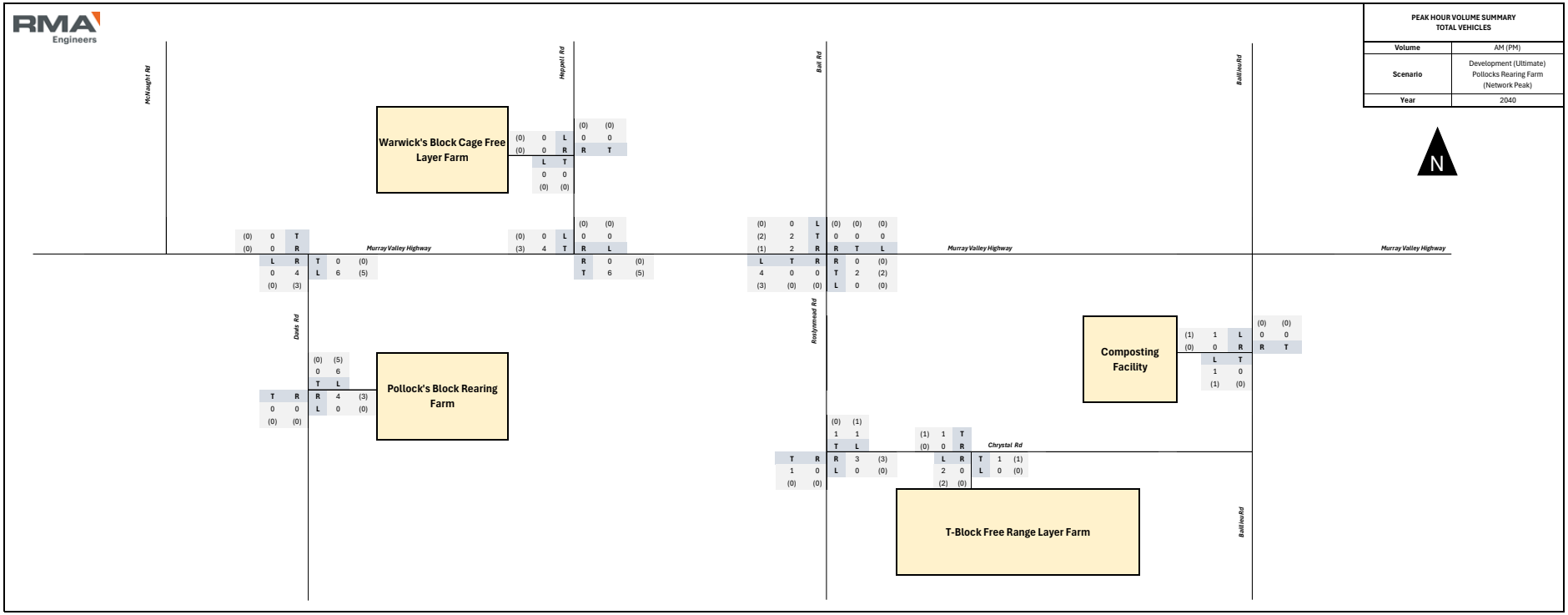

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background (Network Peak)
Year
2052
N
McNaught Rd
Heppell Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rostyn-mead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

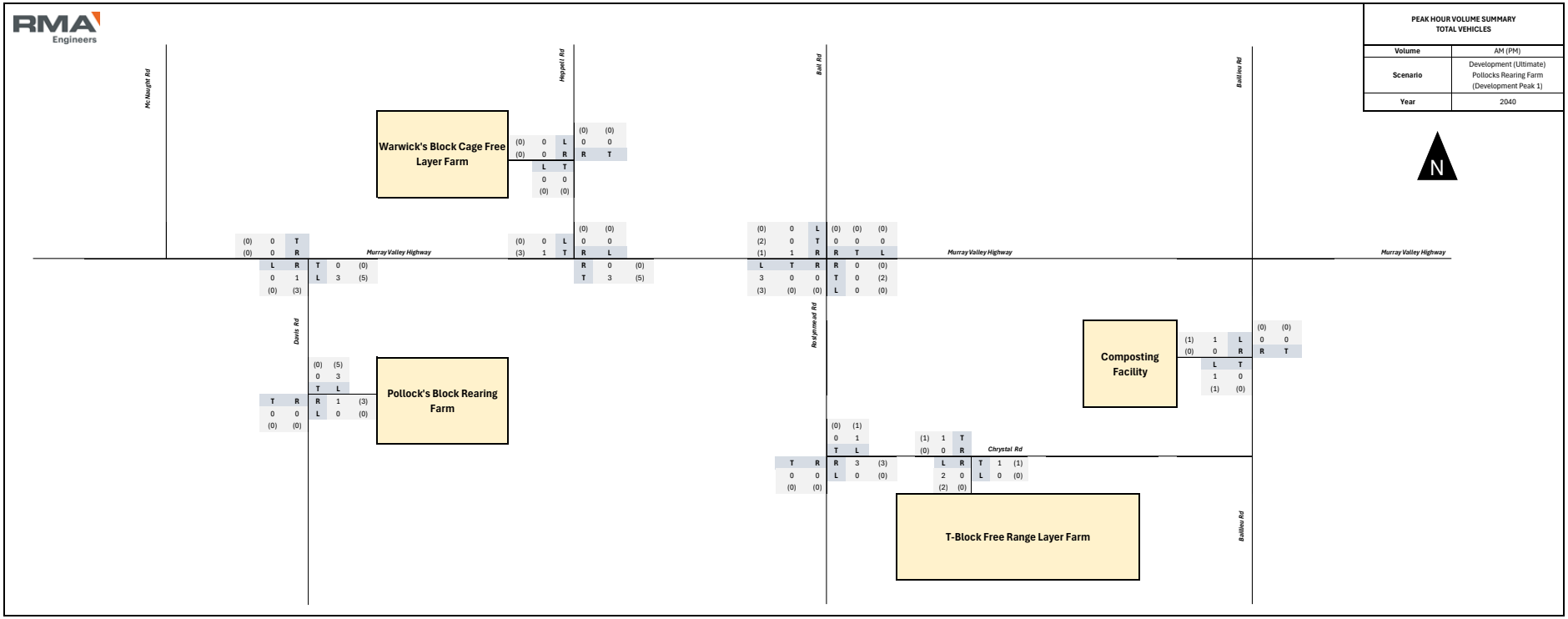

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background (Development Peak 1)
Year
2052
N
McNaughs Rd
Hoppal Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Duds Rd
Rostymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

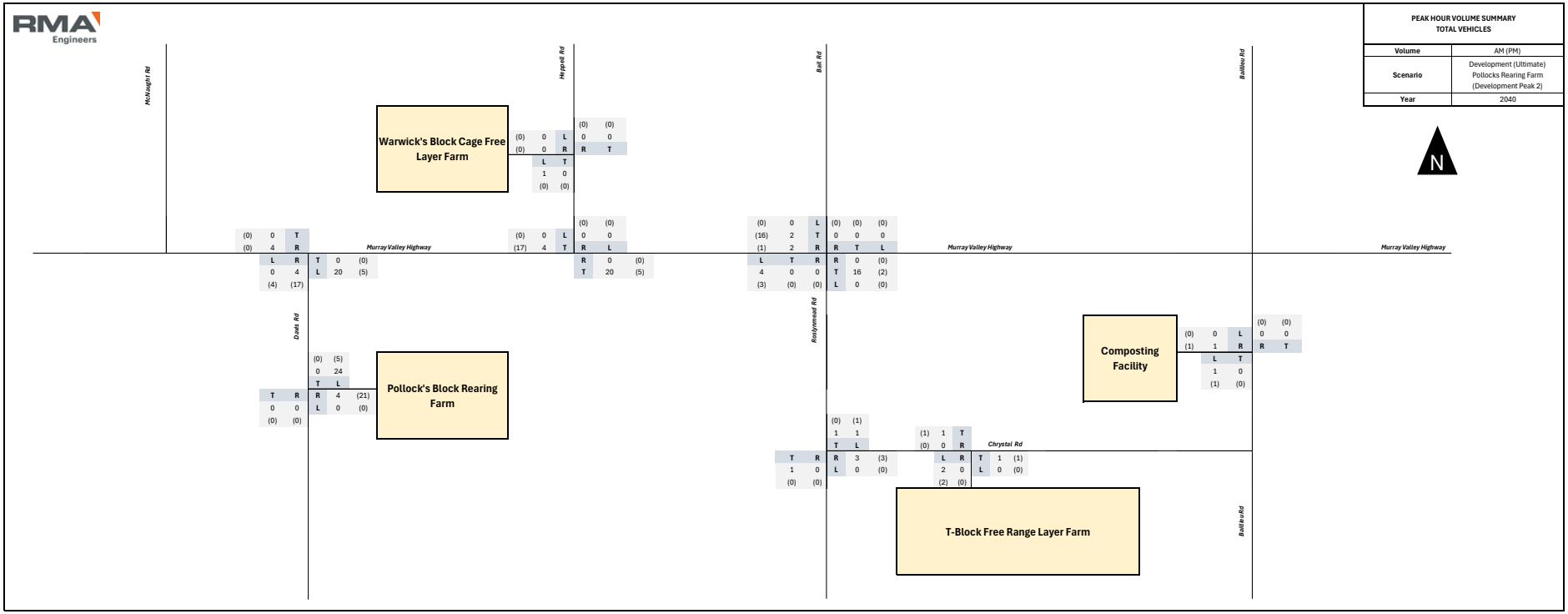

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background
(Development Peak 2)
Year
2052
N
McNaught Rd
Heppell Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rasmussen Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

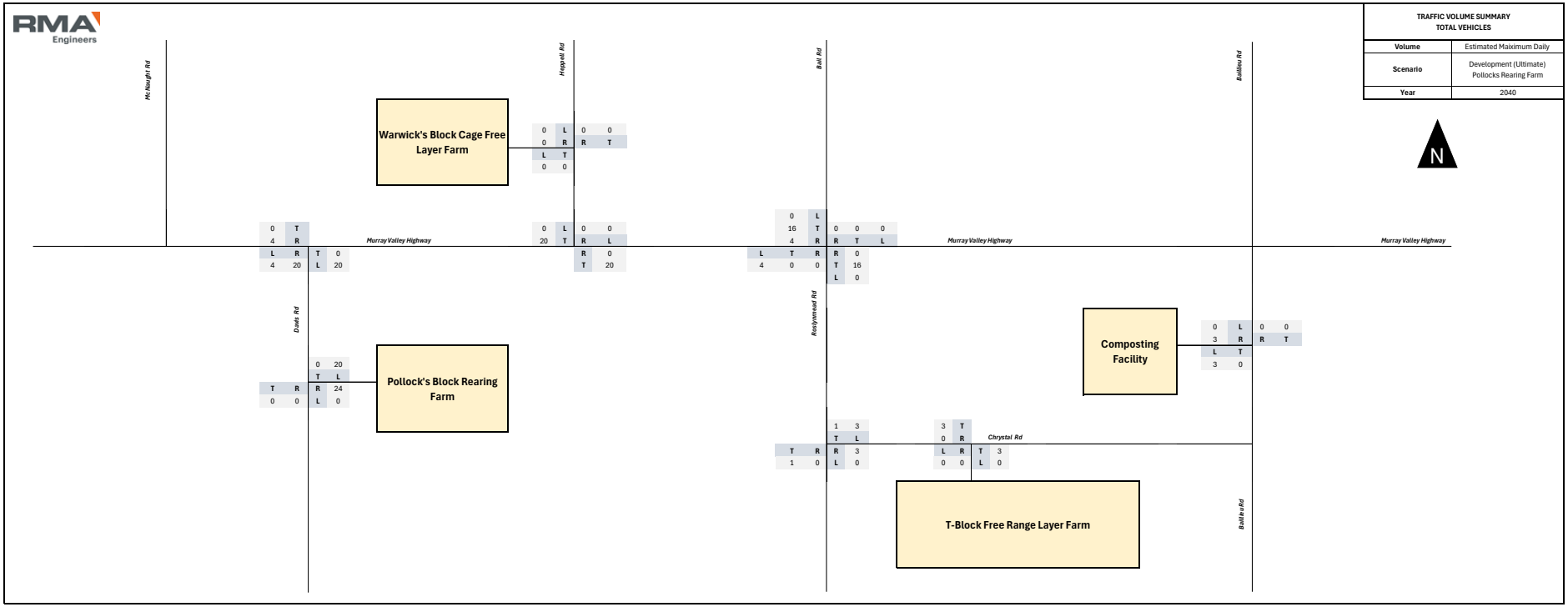

RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume Daily
Scenario Background
Year 2052
N
McHaugh's Rd
Heggarti Rd
Bell Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Reidymead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

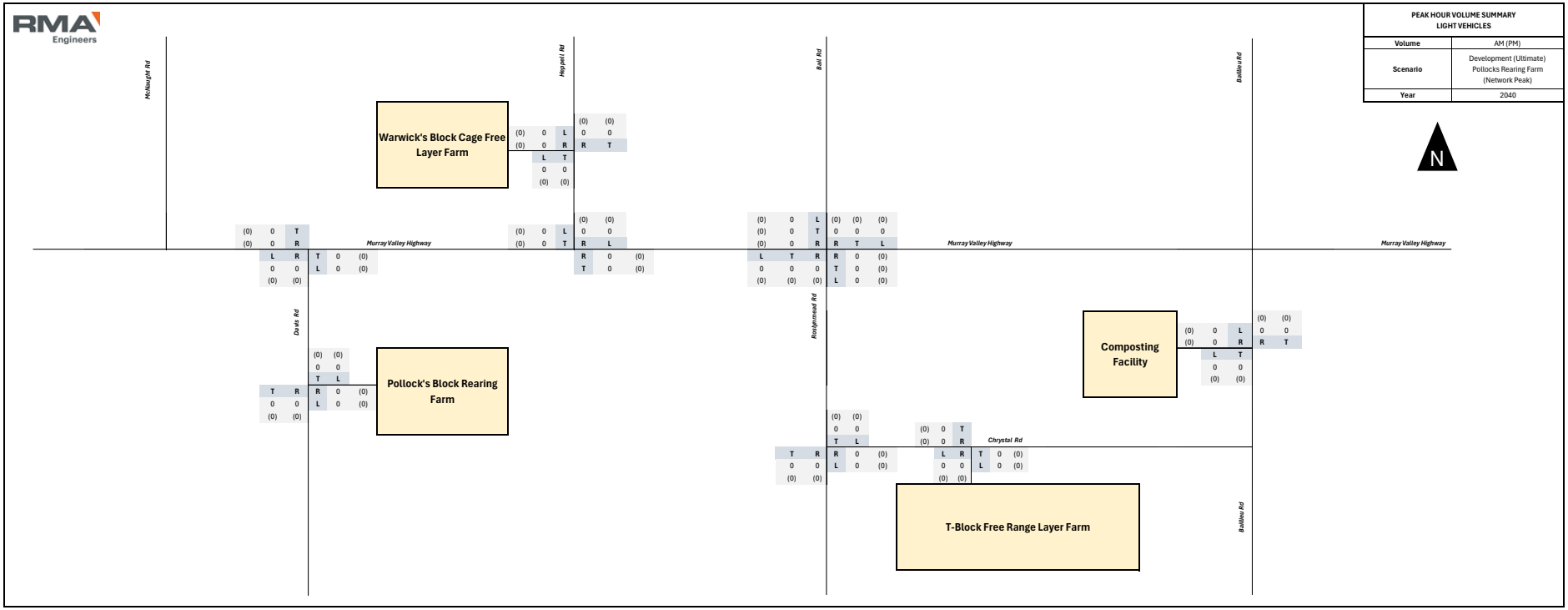
Appendix E Development traffic volumes

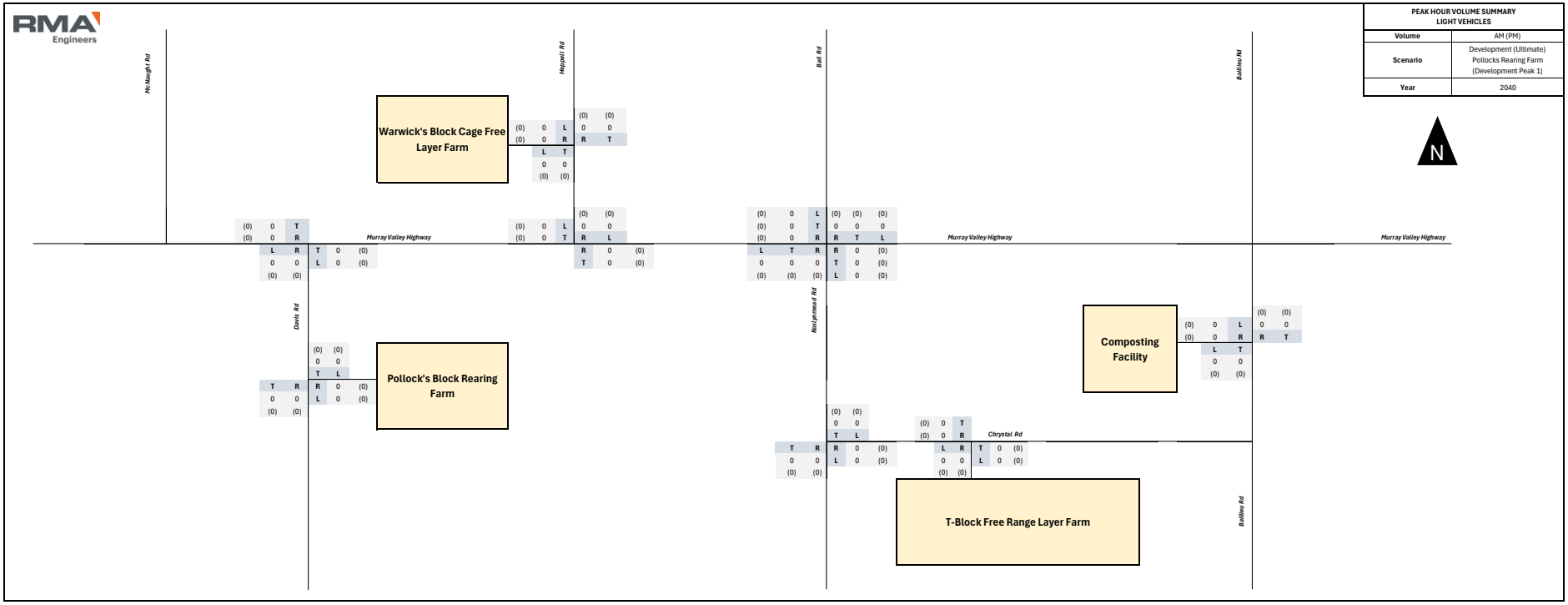

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Network Peak)
Year
2040
N
McKaughlin Rd
Heppell Rd
Bail Rd
Ballinau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rostyn mead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

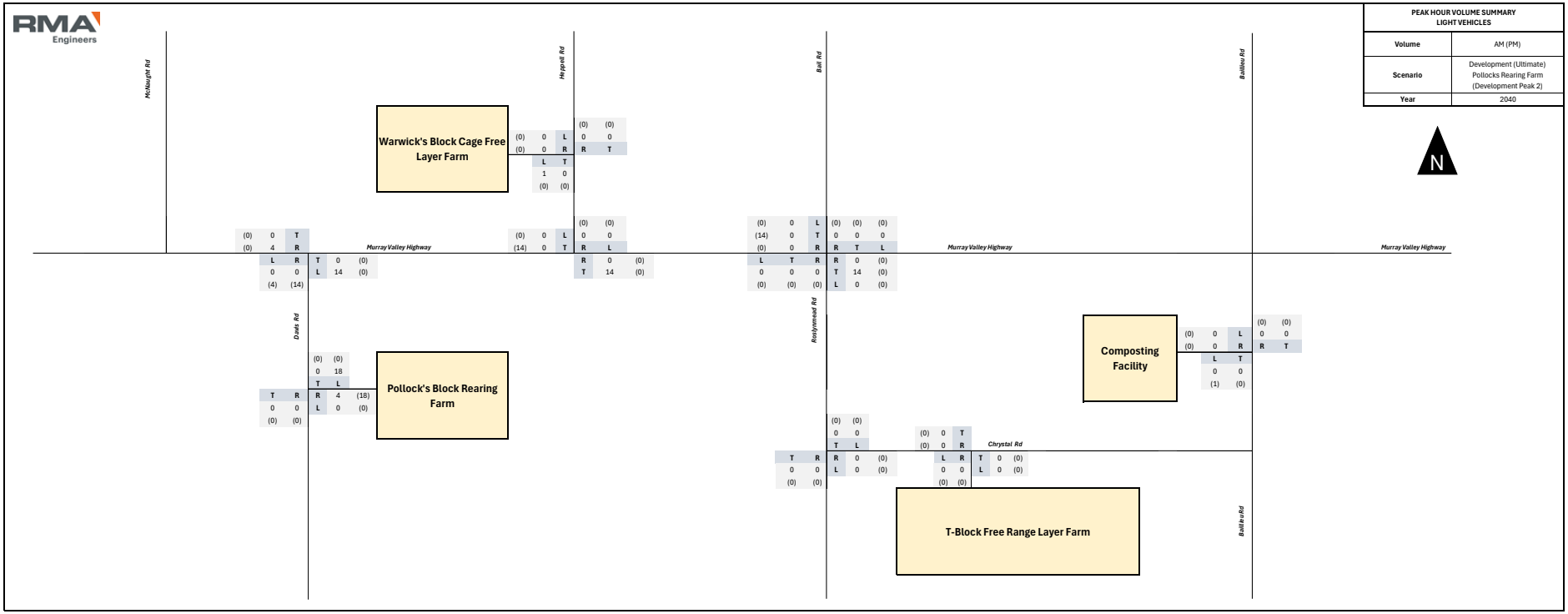

PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Development Peak 1)
Year
2040
N
McNaught Rd
Heppell Rd
Bail Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Murray Valley Highway
Davis Rd
Pollock's Block Rearing Farm
Redpath Rd
Composting Facility
Chrystal Rd
T-Block Free Range Layer Farm

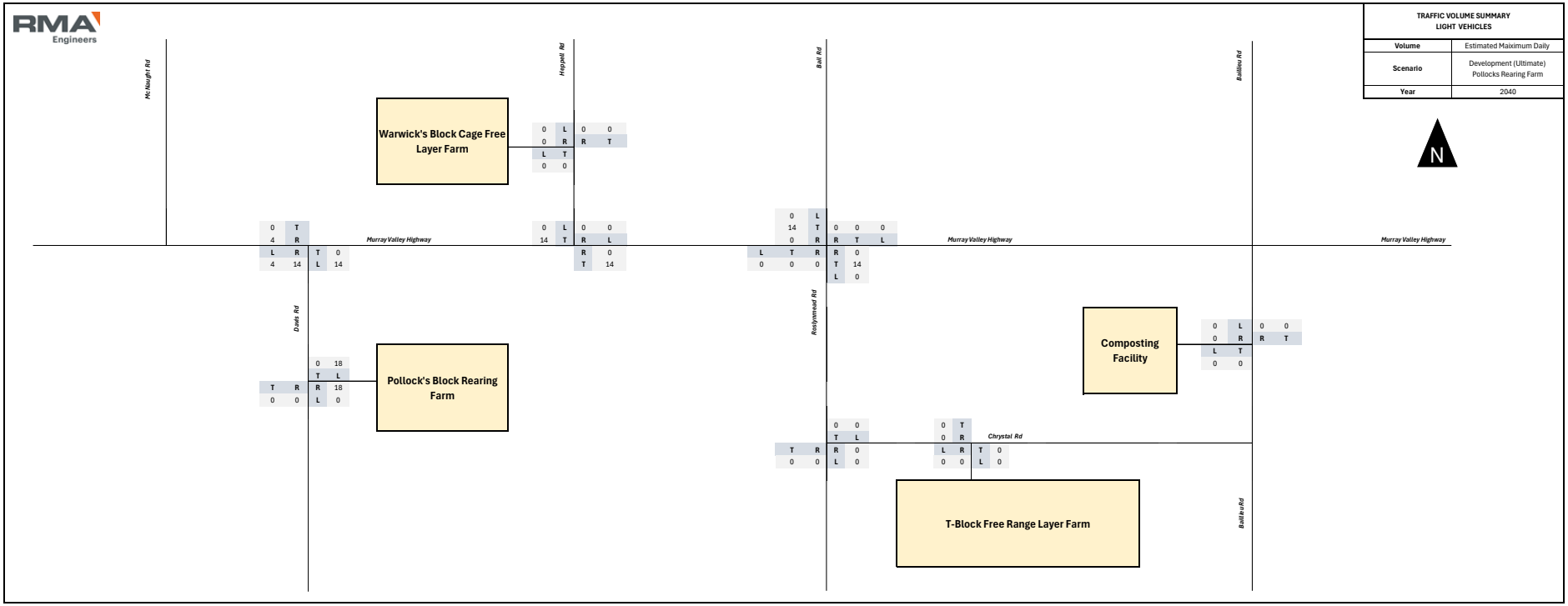

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Development Peak 2)
Year
2040
N
McLaughlin Rd
Heyvale Rd
Bail Rd
Ballilea Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbymead Rd
Chrystal Rd
Ballilea Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

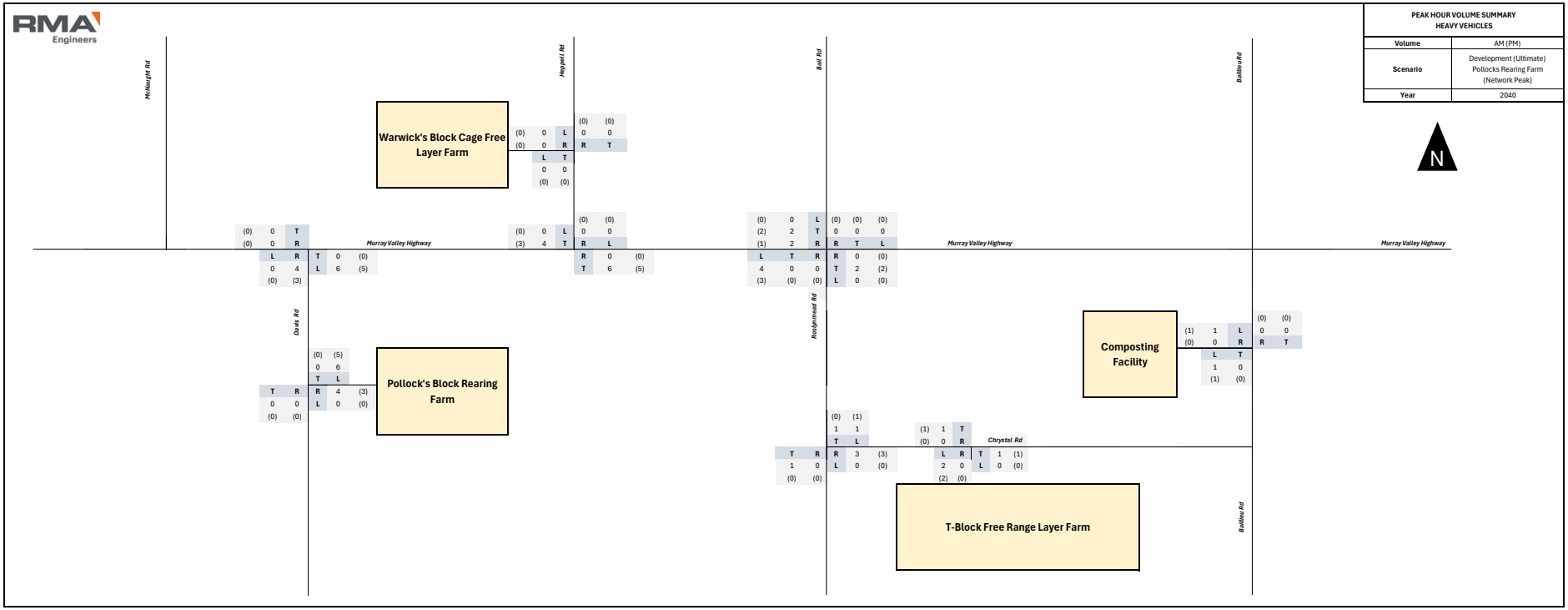

RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate) Pollocks Rearing Farm
Year
2040
N
Mc Naught Rd
Hoppoli Rd
Bali Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Warwick's Block Cage Free Layer Farm
Duits Rd
Pollock's Block Rearing Farm
Rosbynmead Rd
Composting Facility
Chrystal Rd
T-Block Free Range Layer Farm
Ballilau Rd

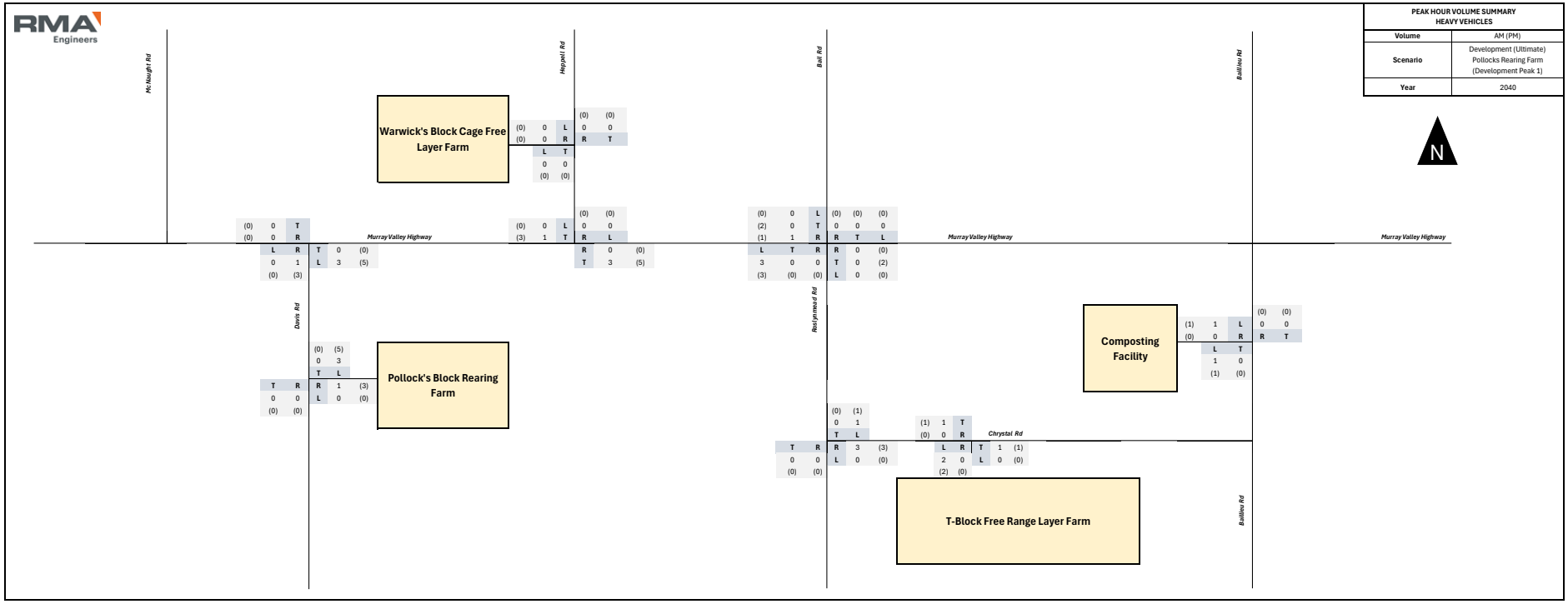

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Network Peak)
Year
2040
N
McNaught Rd
Heipel Rd
Bail Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

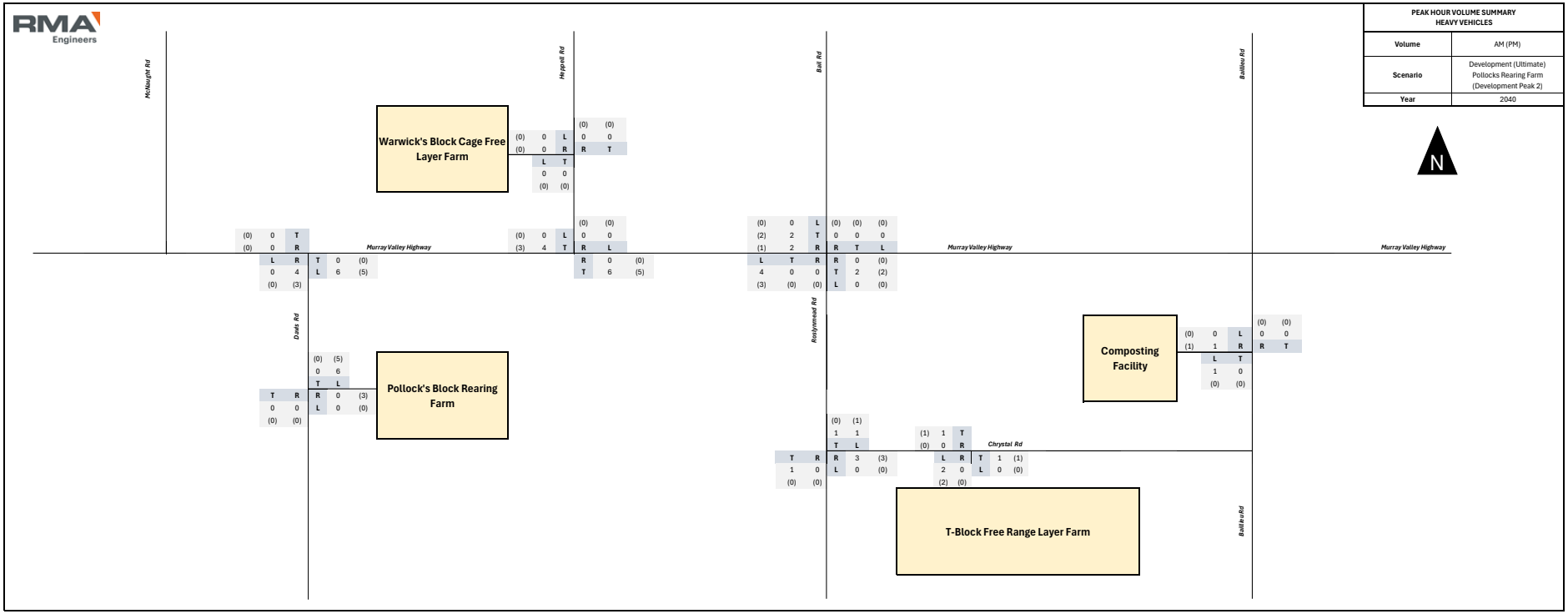

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Development Peak 1)
Year
2040
N
McNaught Rd
Heppell Rd
Bail Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rankins Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

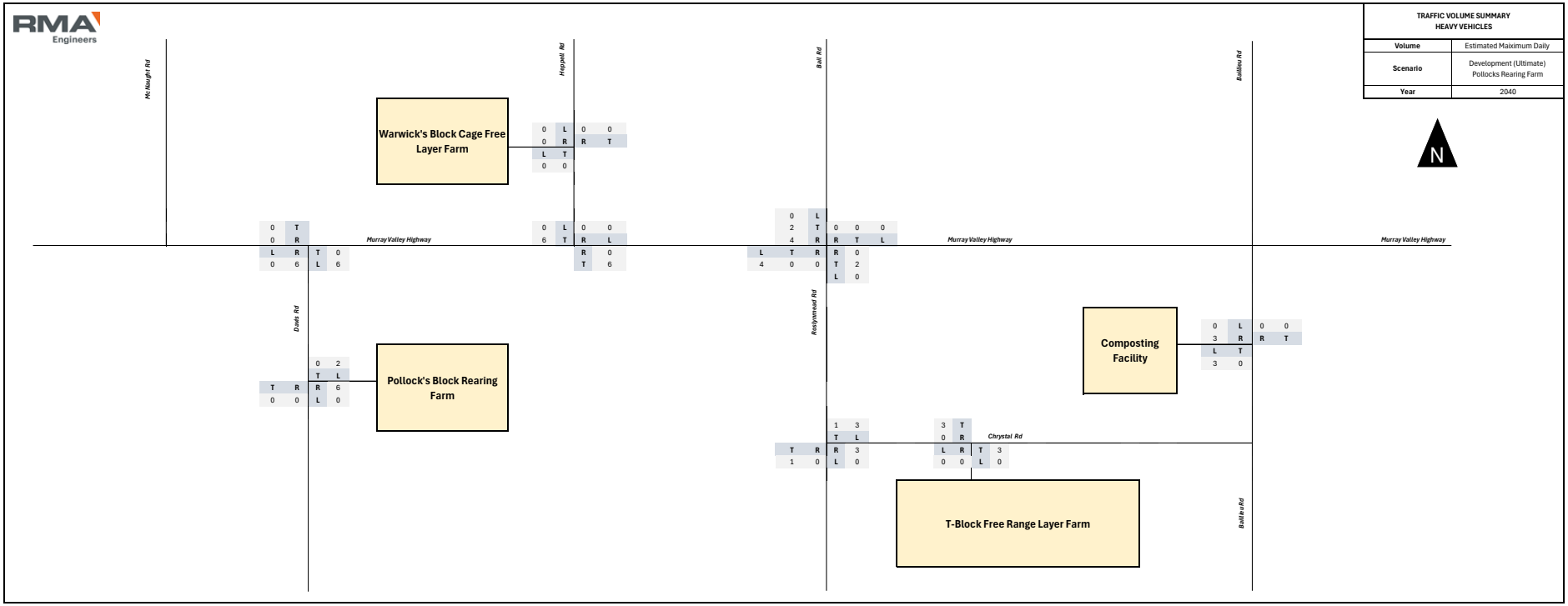

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Development Peak 2)
Year
2040
N
McNaught Rd
Heyvale Rd
Bail Rd
Ballilea Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbymead Rd
Chrystal Rd
Ballilea Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

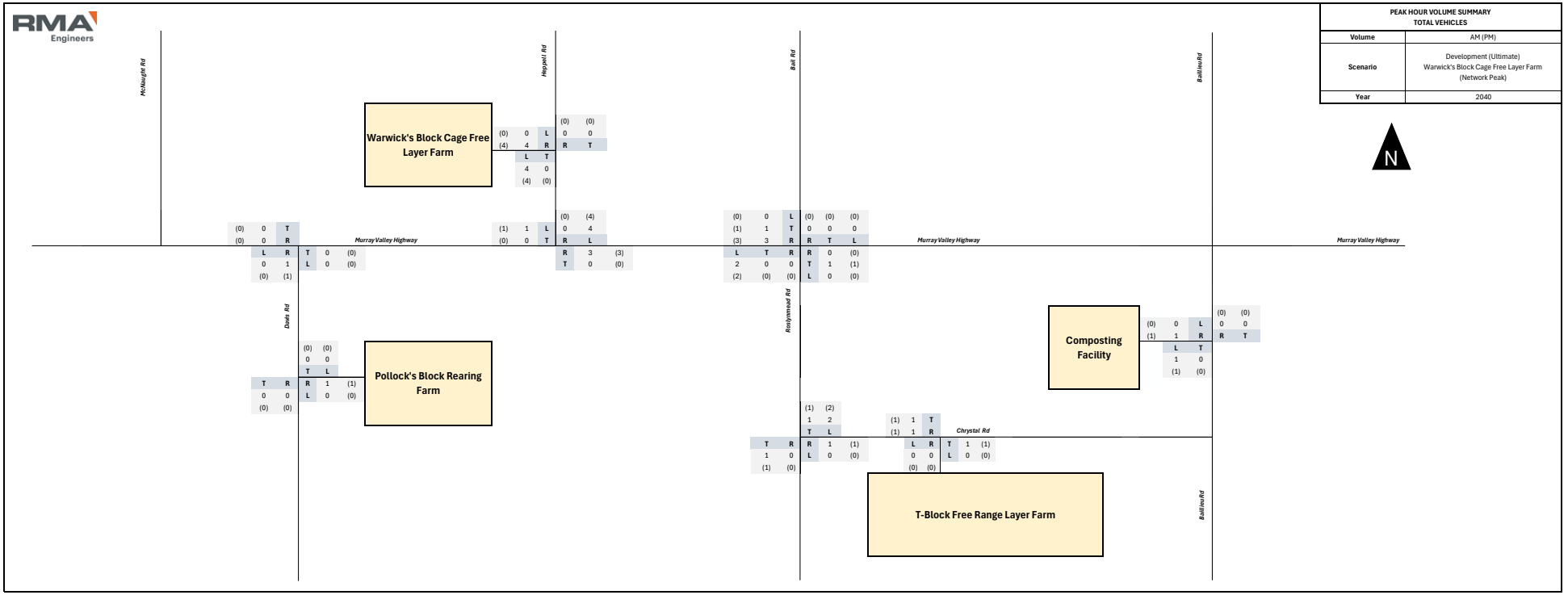

RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
Pollocks Rearing Farm
Year
2040
N
Mc Haugh Rd
Hoysall Rd
Ball Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Warwick's Block Cage Free Layer Farm
Composting Facility
Pollock's Block Rearing Farm
T-Block Free Range Layer Farm
Davis Rd
Rosbymead Rd
Chrystal Rd
Ballarat Rd

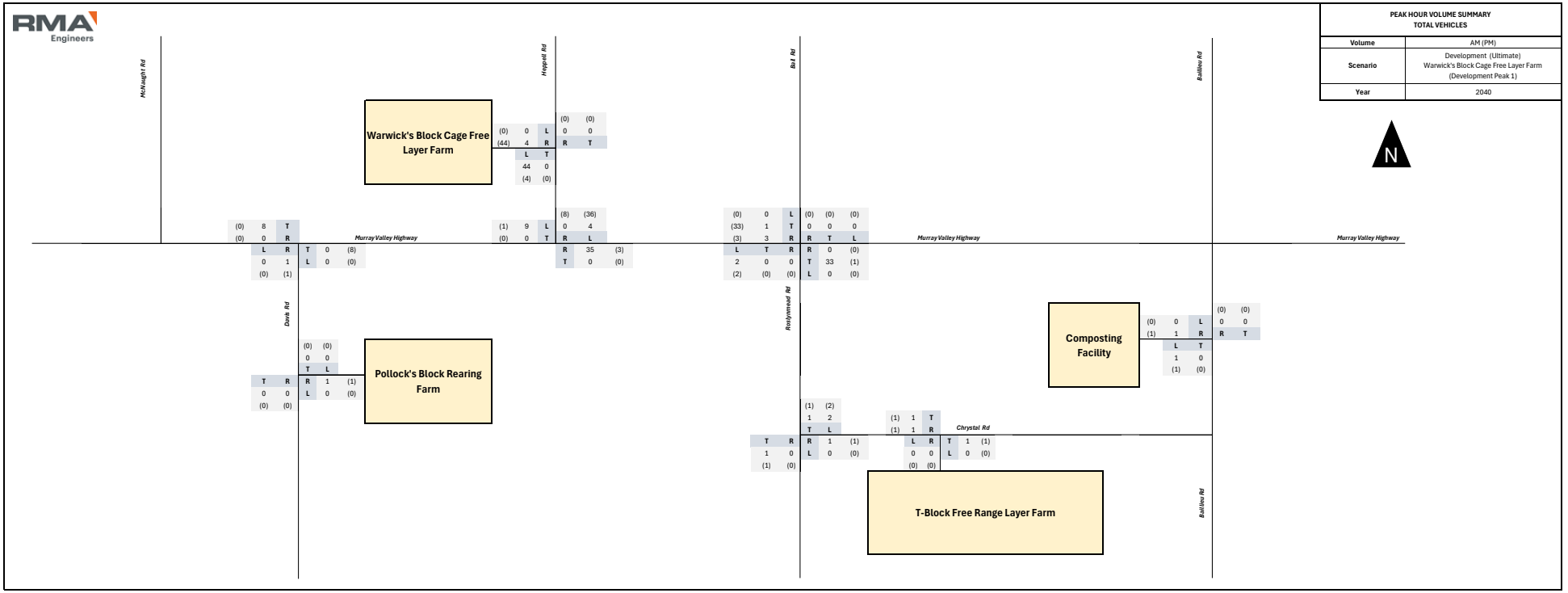

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Network Peak)
Year
2040
N
McNaught Rd
Heipel Rd
Bail Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

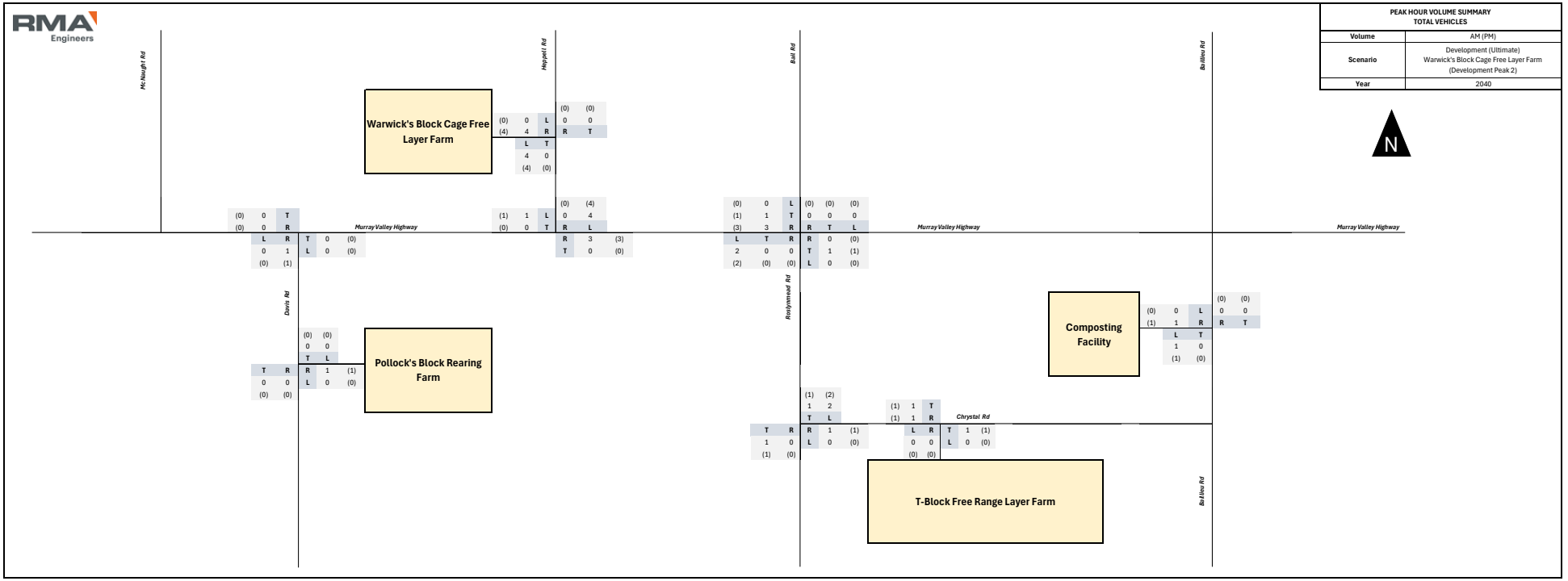

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Development Peak 1)
Year
2040
N
McNaught Rd
Heppell Rd
Bail Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Redjarmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

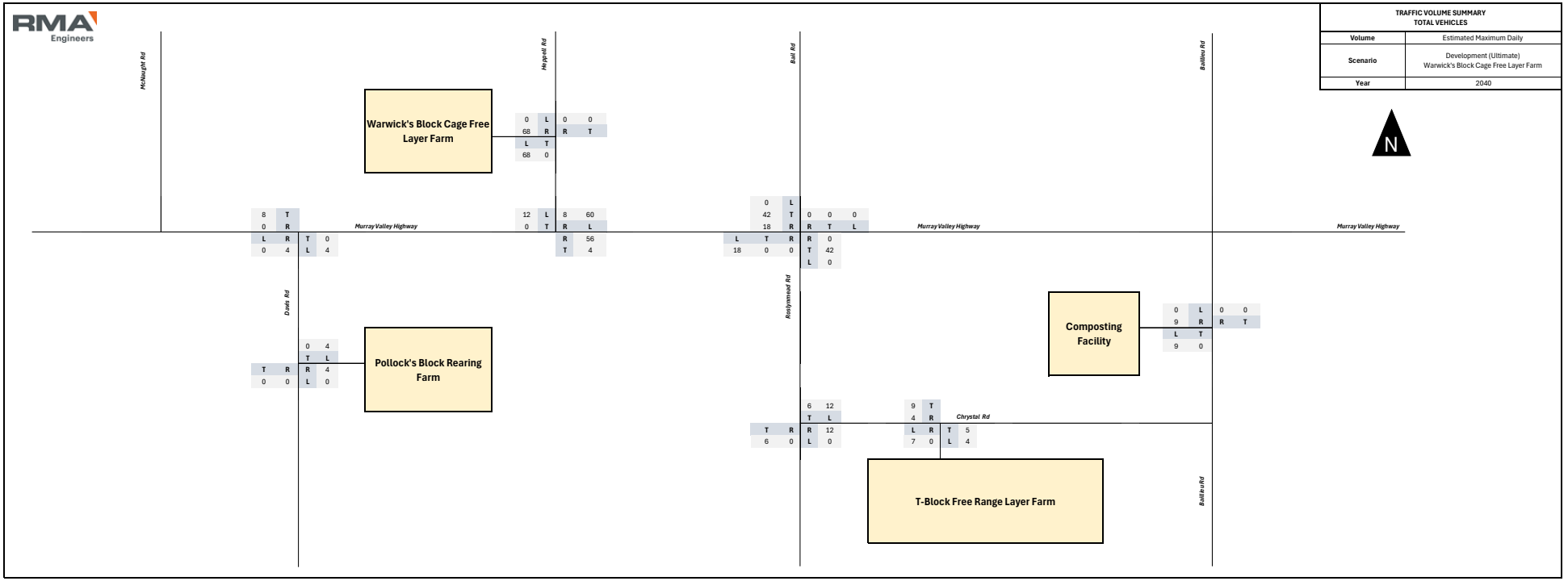

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Pollocks Rearing Farm
(Development Peak 2)
Year
2040
N
McNaught Rd
Heyvale Rd
Bail Rd
Ballilea Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbymead Rd
Chrystal Rd
Ballilea Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

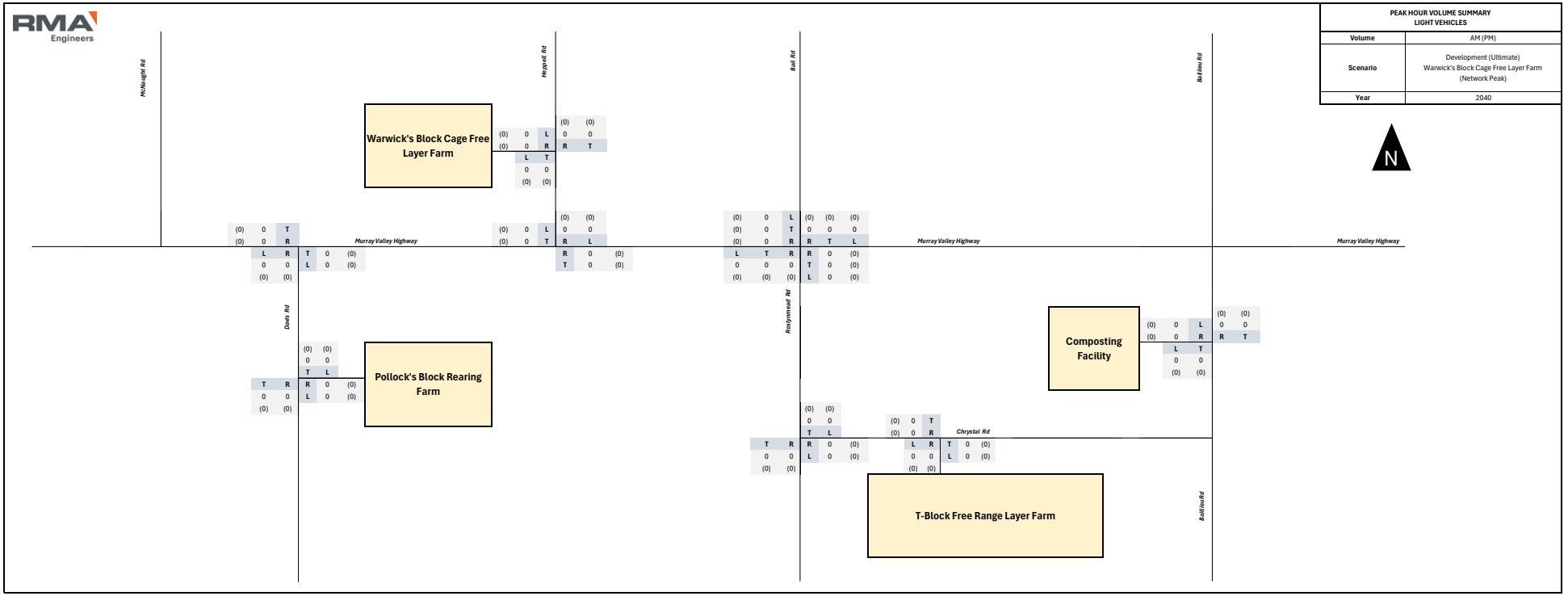

RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
Pollocks Rearing Farm
Year
2040
N
Mc Naught Rd
Haypell Rd
Ball Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Ballarat Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

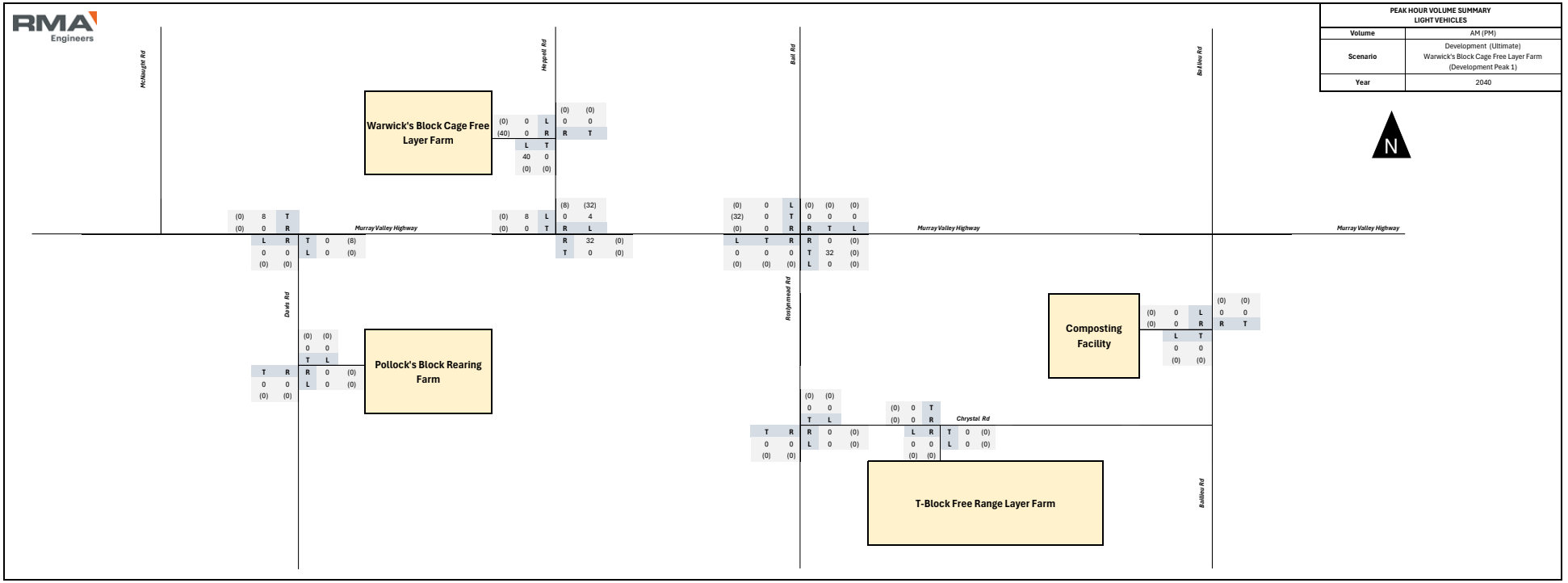

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
(Network Peak)
Year
2040
N
McNaught Rd
Heyell Rd
Bail Rd
Bail Hwy Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rostyn Head Rd
Chrystal Rd
Bail Hwy Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
(Development Peak 1)
Year
2040
N
Holdaught Rd
Heppell Rd
Bull Rd
Ballilau Rd
Murray Valley Highway
Dunk Rd
Rosbymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
(Development Peak 2)
Year
2040
N
Mc Naught Rd
Heppell Rd
Bail Rd
Ba Illou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Warwick's Block Cage Free Layer Farm
Davis Rd
Pollock's Block Rearing Farm
Rookyard Rd
Composting Facility
Chrystal Rd
T-Block Free Range Layer Farm
Ba Illou Rd


RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
Year
2040
N
McNaught Rd
Heyfield Rd
Bail Rd
Ballilou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dale Rd
Rosbymead Rd
Chrystal Rd
Ballilou Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

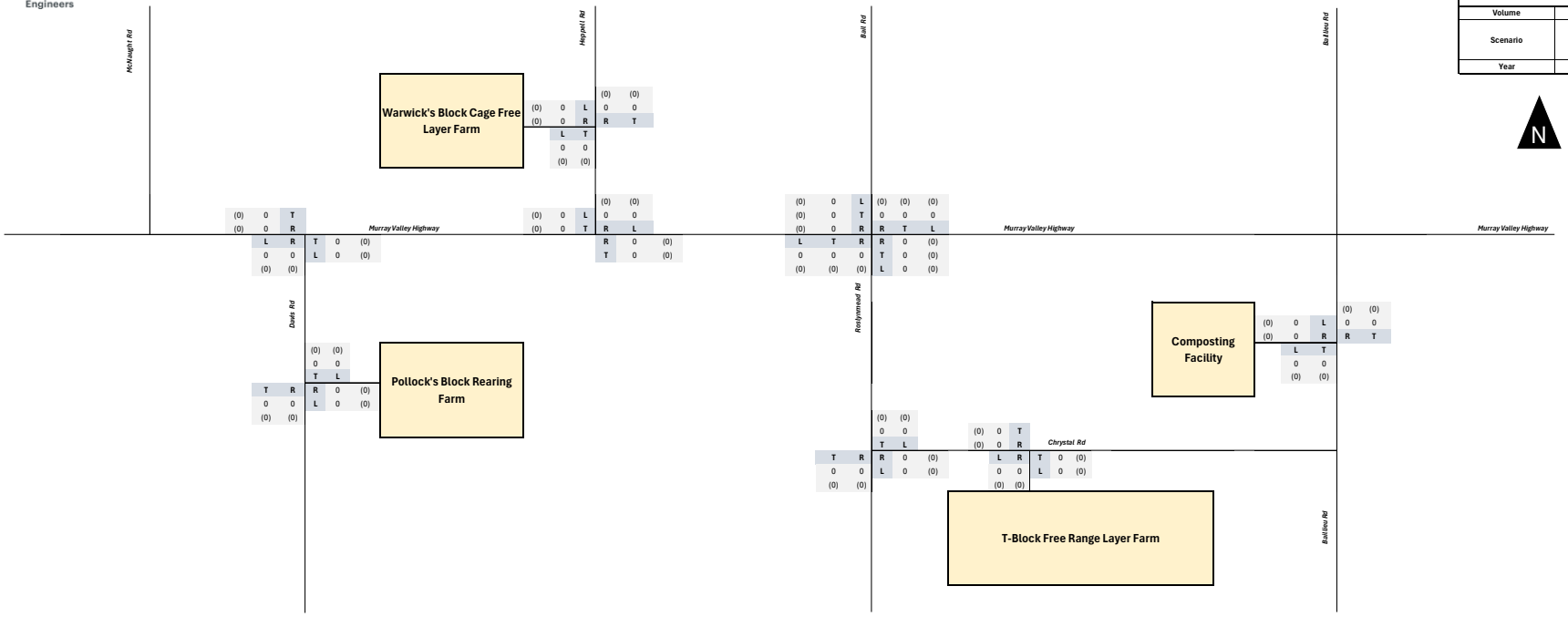

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
(Network Peak)
Year
2040
N
McNaught Rd
Heyend Rd
Ball Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dale Rd
Roslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

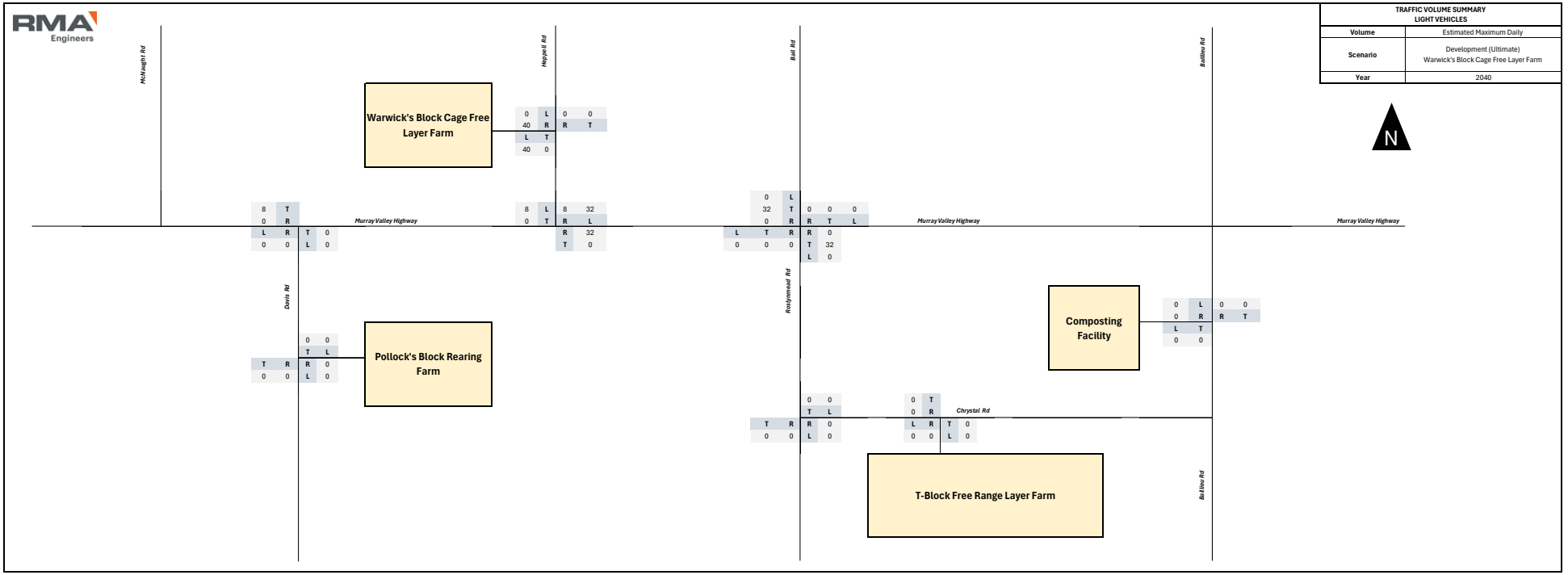

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
(Development Peak 1)
Year
2040
N
McNaught Rd
Heyknll Rd
Ball Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

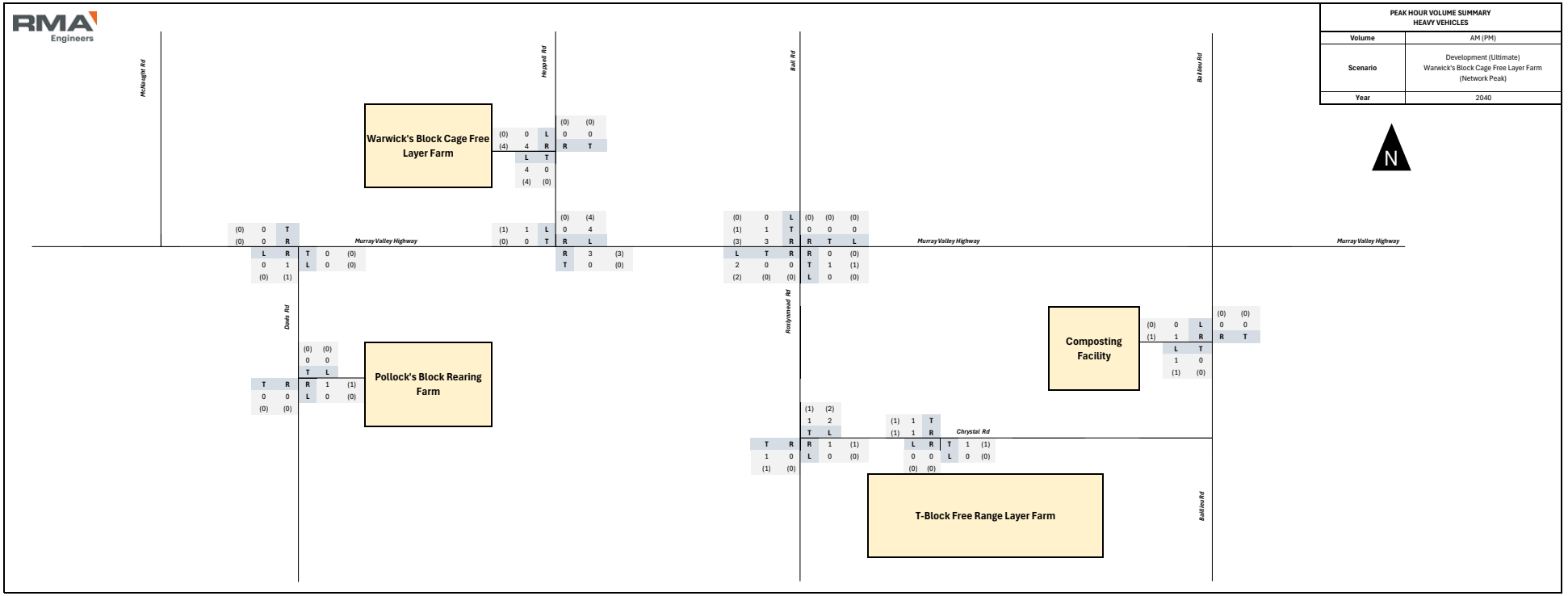
RMA Engineers

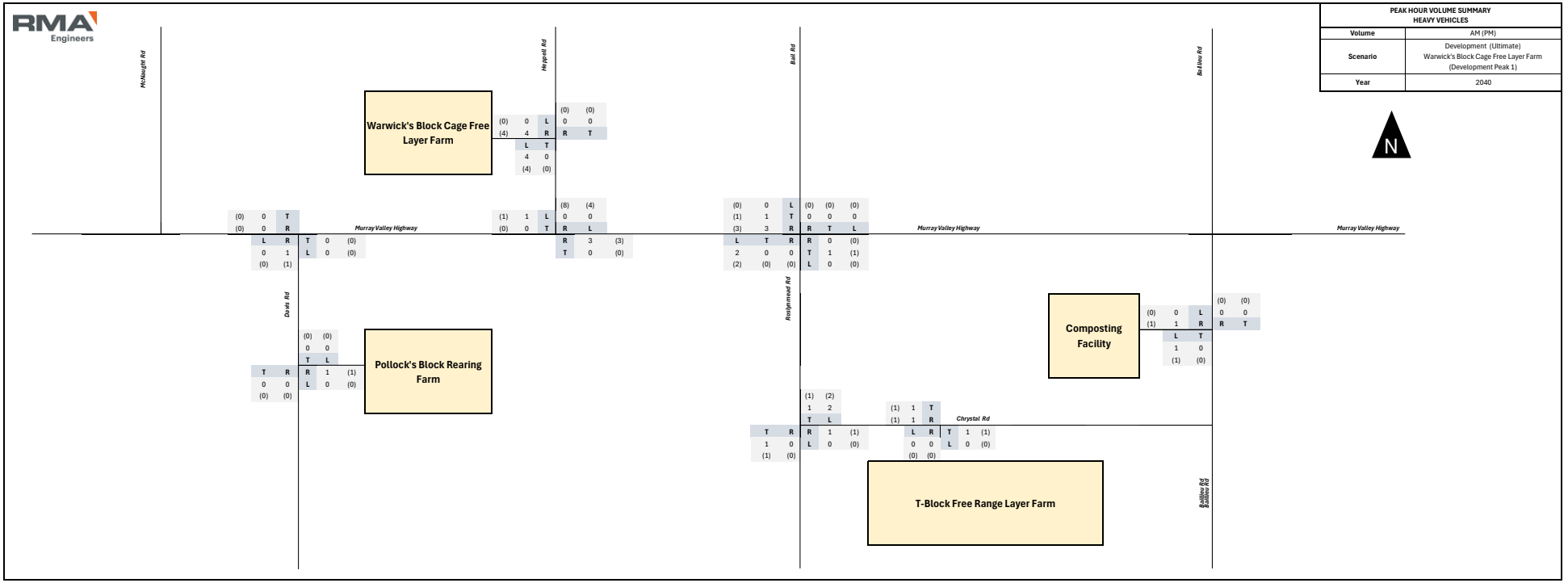
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES

Volume	AM (PM)
Scenario	Development (Ultimate) Warwick's Block Cage Free Layer Farm (Development Peak 2)
Year	2040




RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
Year
2040
N
McHaughs Rd
Heyers Rd
Bail Rd
Ballilieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Ballilieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

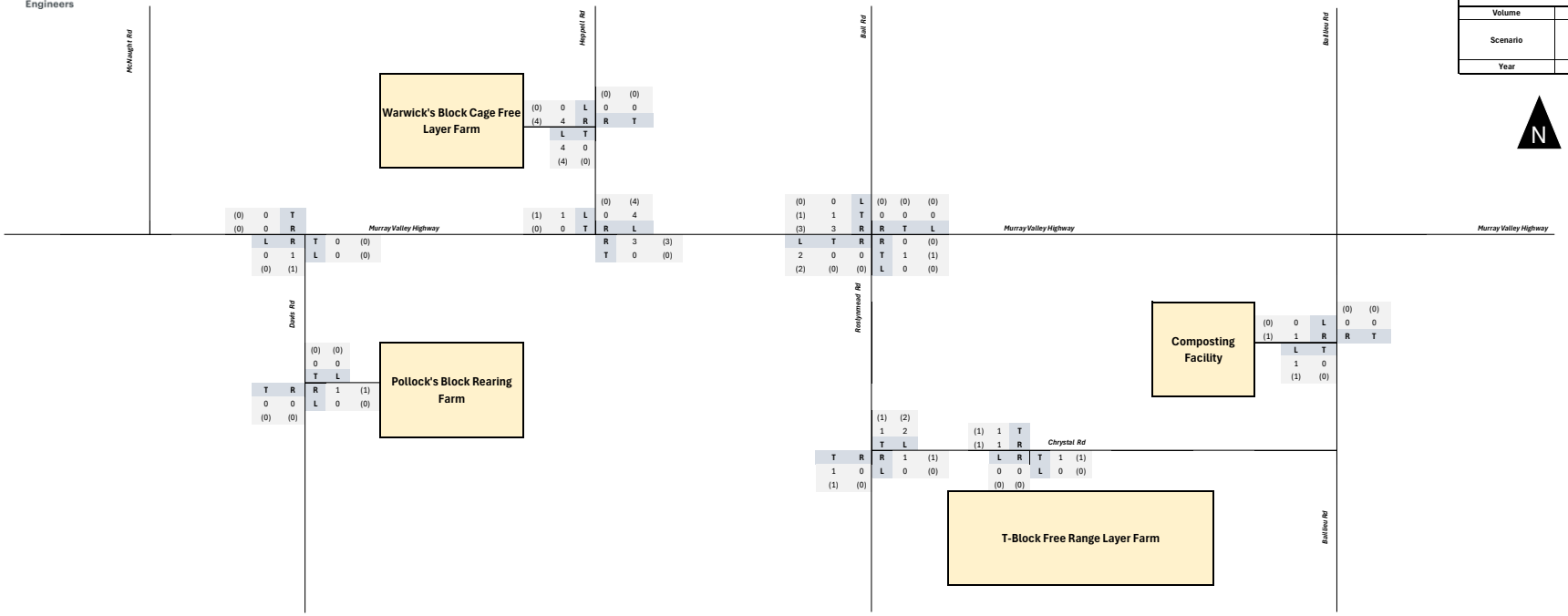

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
(Network Peak)
Year
2040
N
McNaught Rd
Heyvaert Rd
Ball Rd
Ball Hau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dunk Rd
Rostyniwsyj Rd
Chrystal Rd
Ball Hau Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

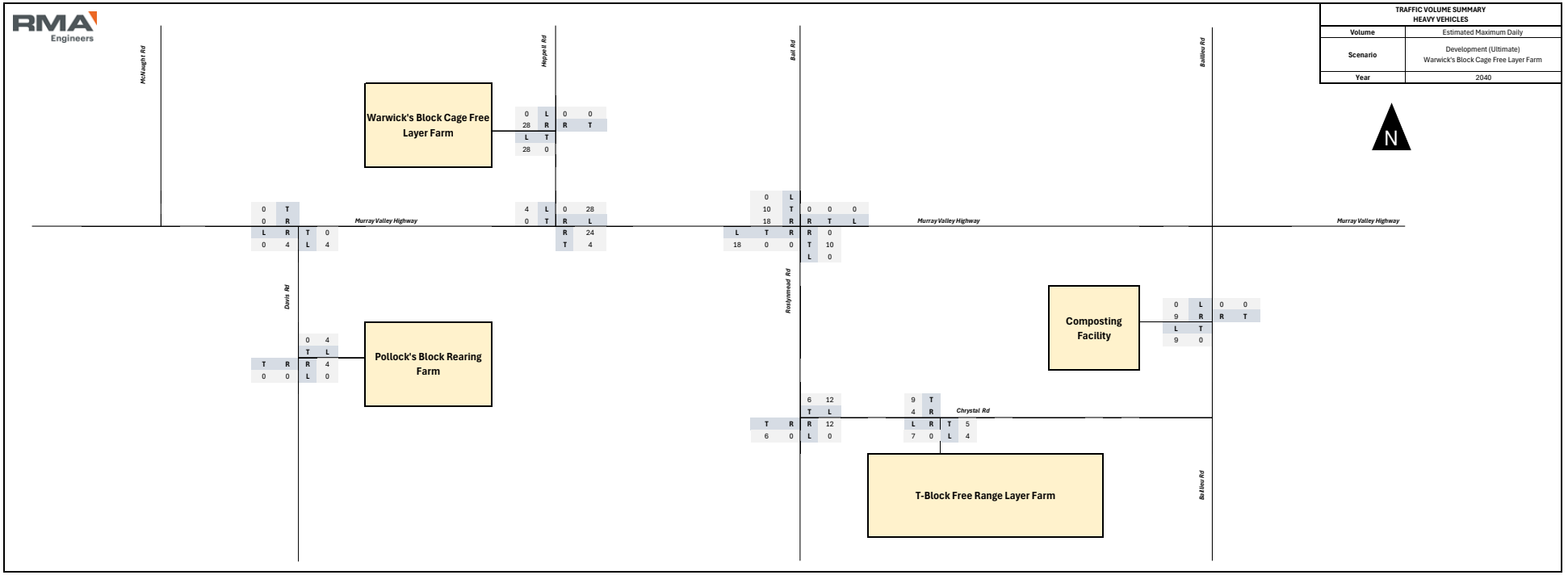

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
(Development Peak 1)
Year
2040
N
McNaught Rd
Heykoll Rd
Ball Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Ballieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

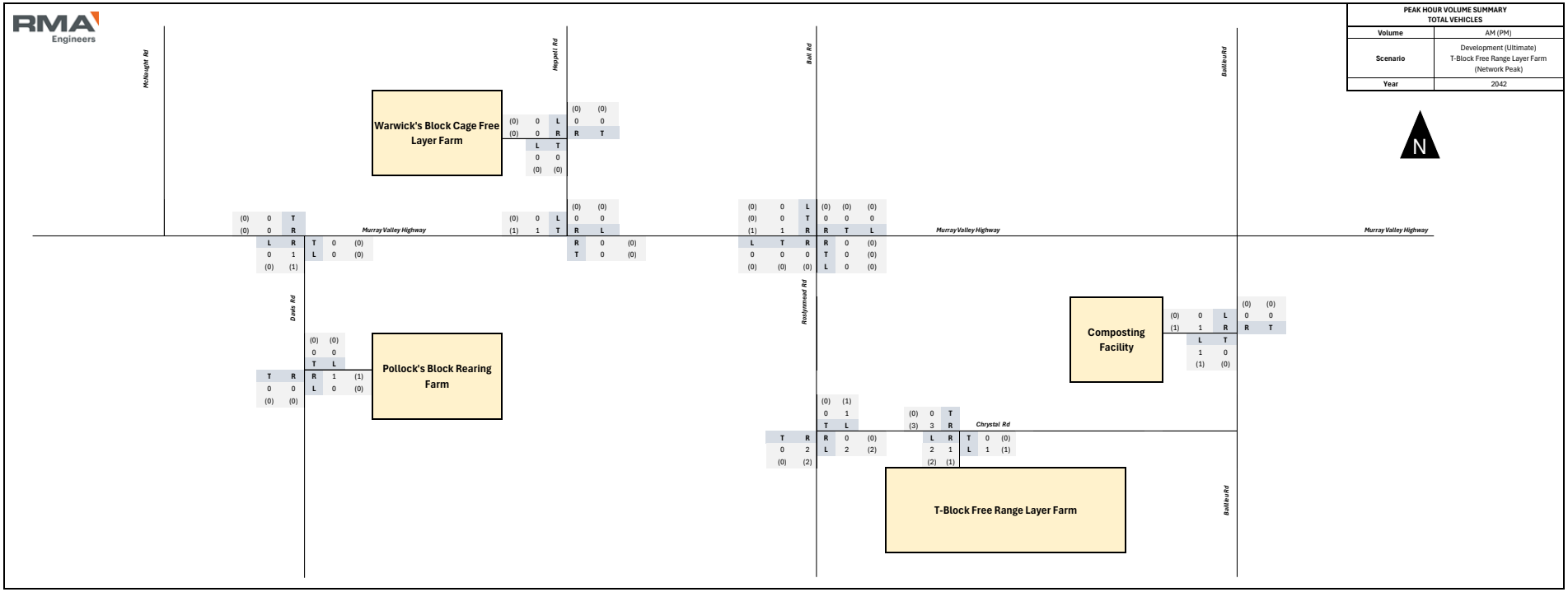
RMA Engineers

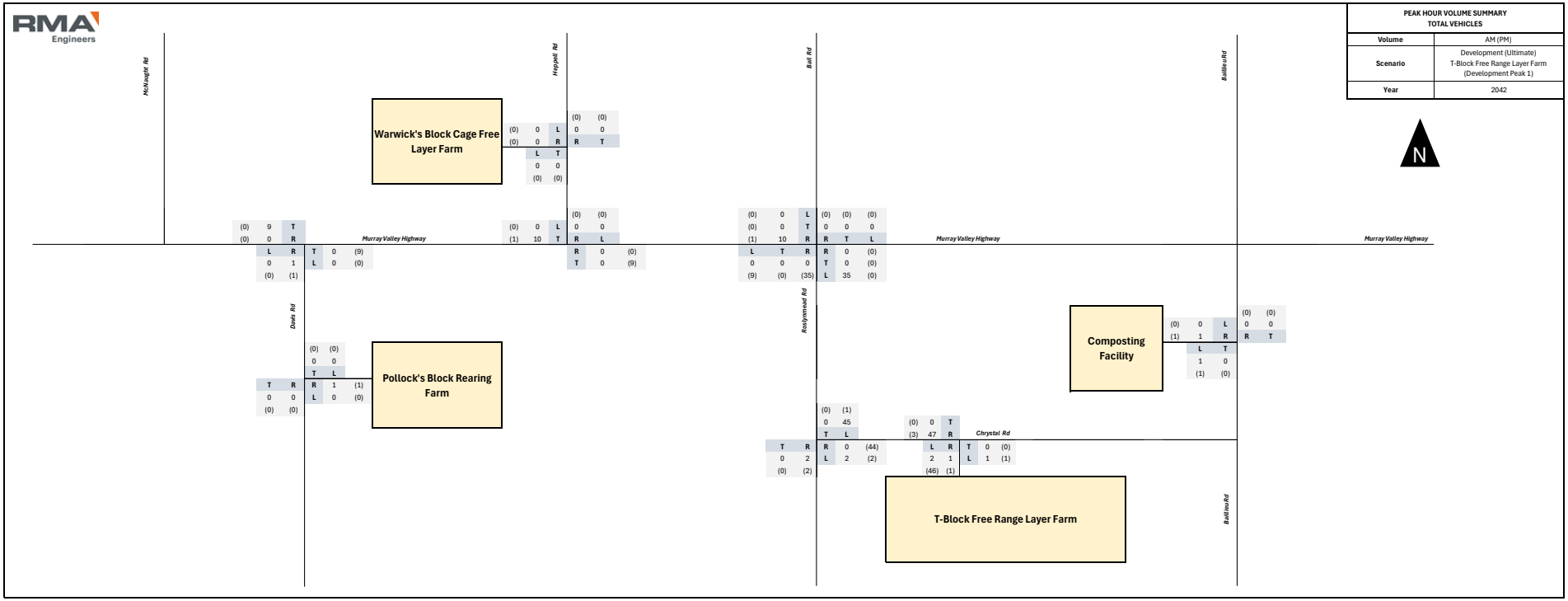
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES

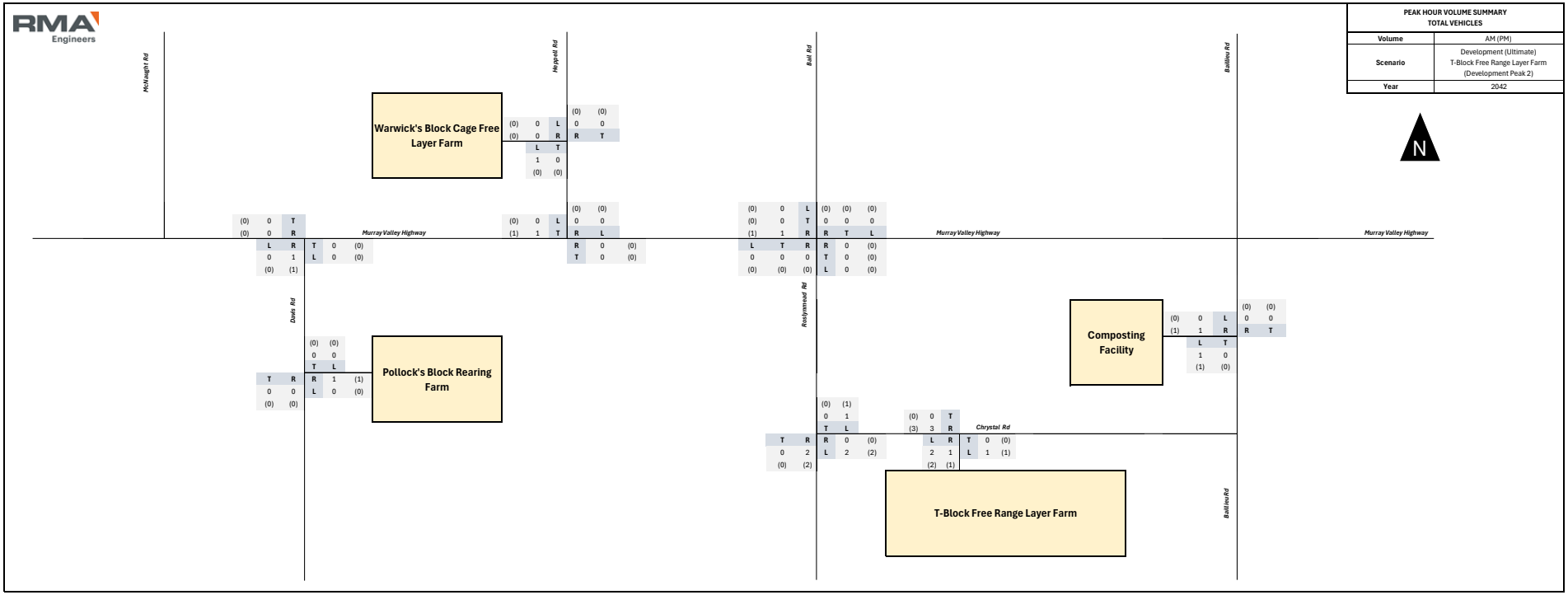
Volume	AM (PM)
Scenario	Development (Ultimate) Warwick's Block Cage Free Layer Farm (Development Peak 2)
Year	2040

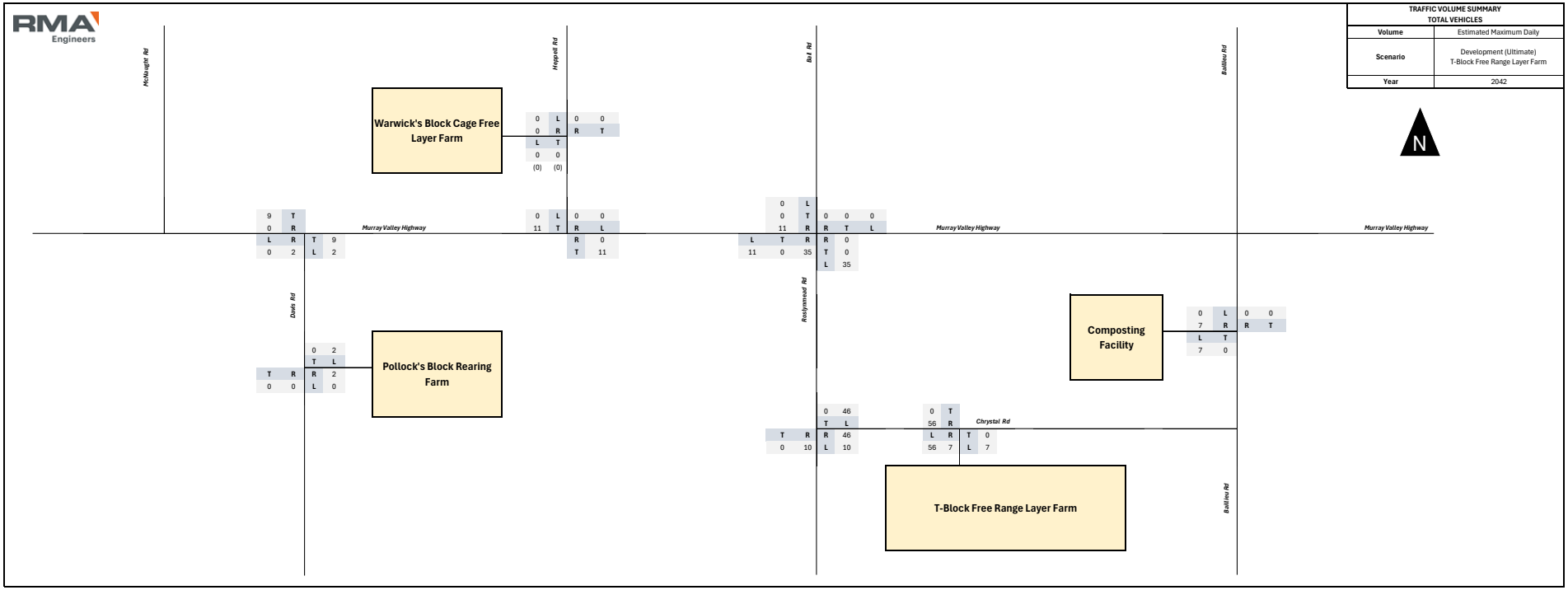


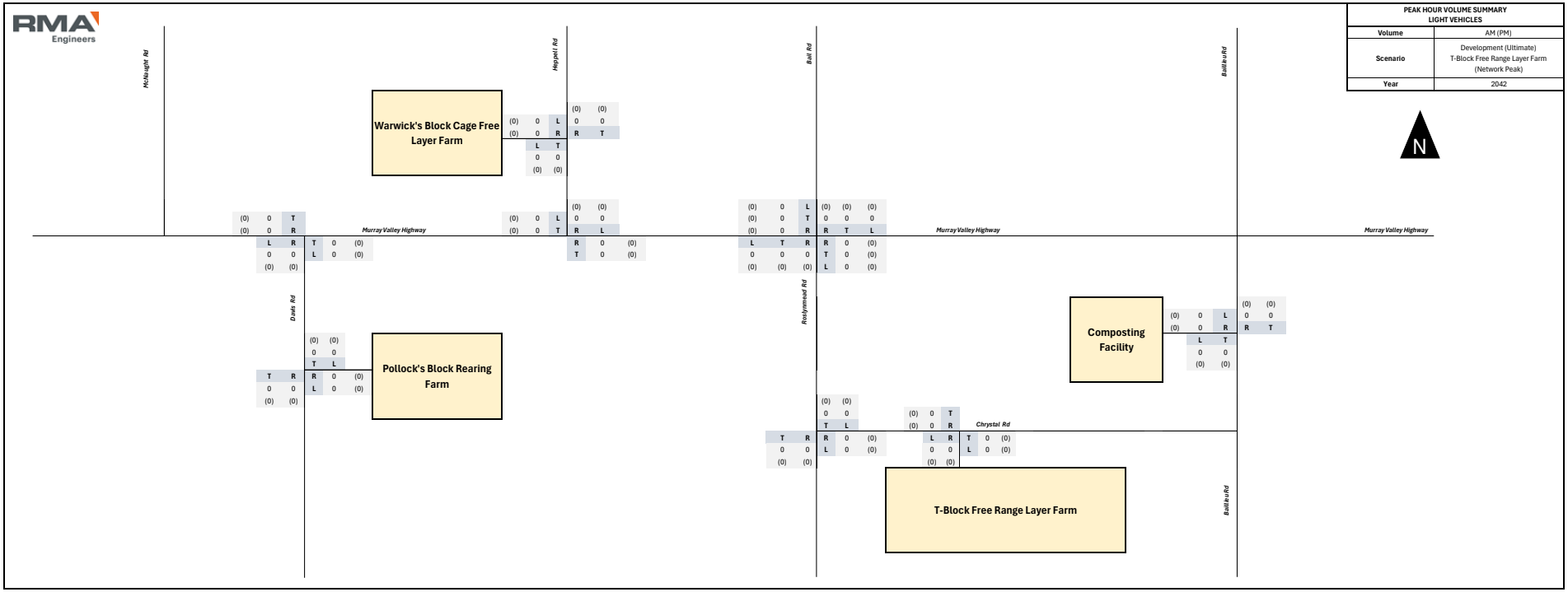

RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
Warwick's Block Cage Free Layer Farm
Year
2040
N
McVaughs Rd
Heyers Rd
Bail Rd
Ballilieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Warwick's Block Cage Free Layer Farm
Davis Rd
Pollock's Block Rearing Farm
Rosbymead Rd
Composting Facility
Chrystal Rd
T-Block Free Range Layer Farm
Ballilieu Rd

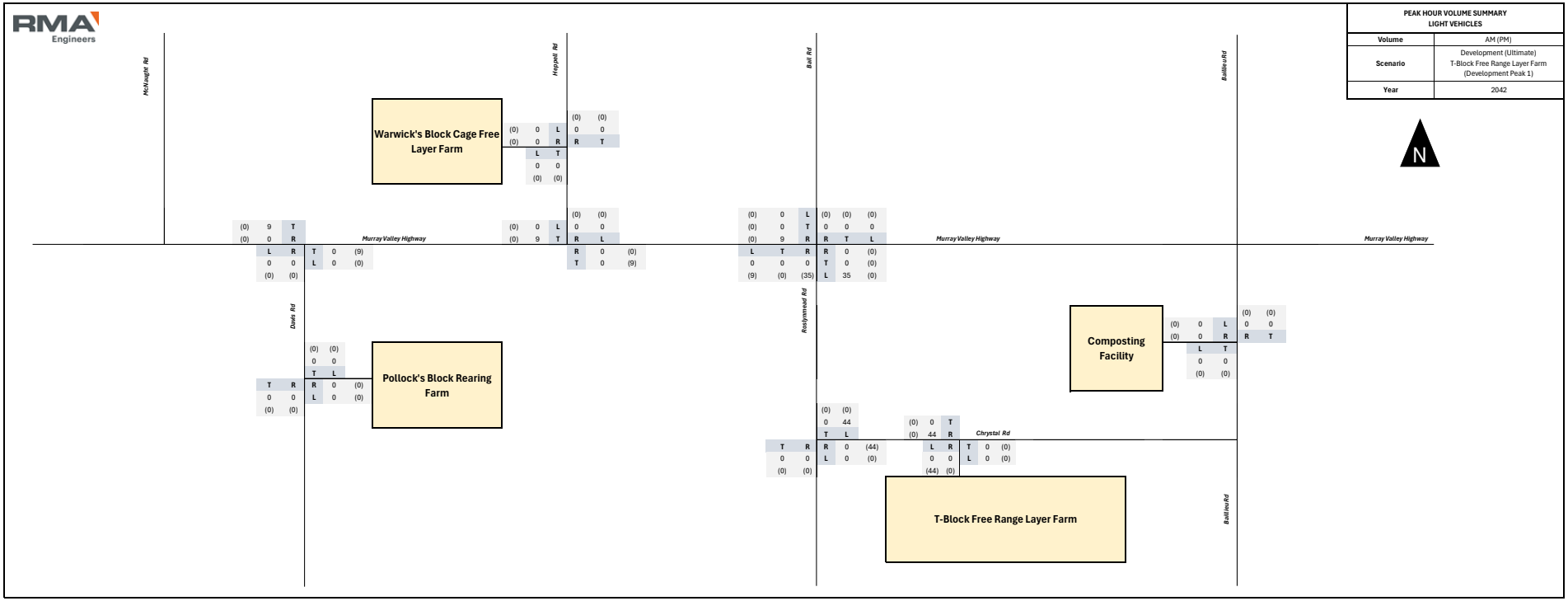

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Network Peak)
Year
2042
N
McNaught Rd
Heppell Rd
Bail Rd
Bailiku Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

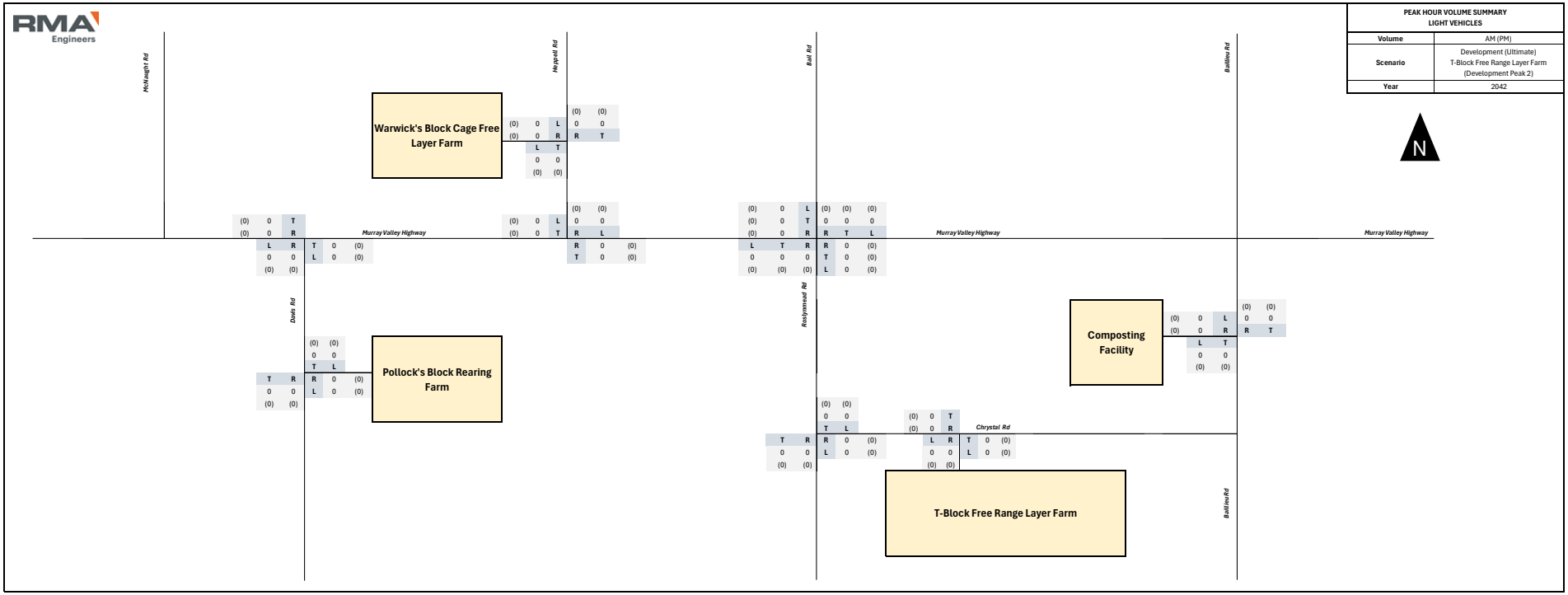

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Development Peak 1)
Year
2042
N
McNaught Rd
Harpley Rd
Bali Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Ballieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

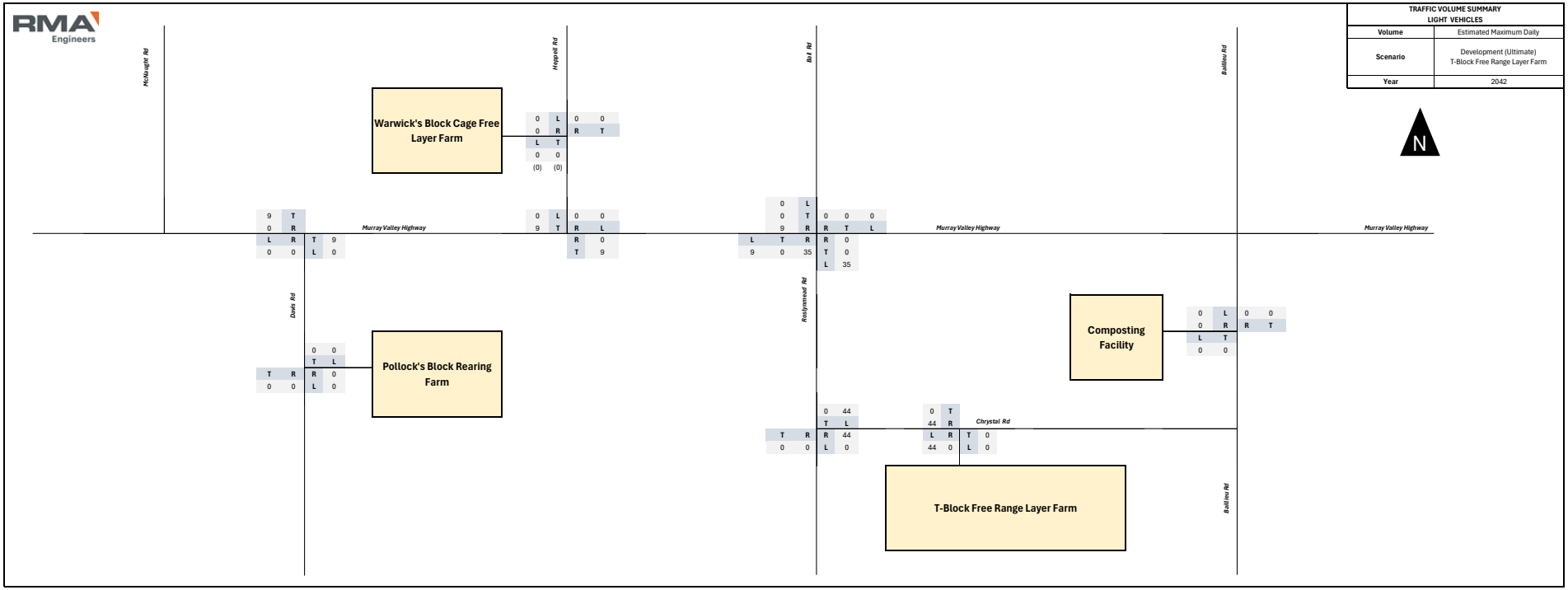

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Development Peak 2)
Year
2042
N
McLaughin Rd
Heykoll Rd
Ball Rd
Ballilou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbymoad Rd
Chrystal Rd
Ballilou Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

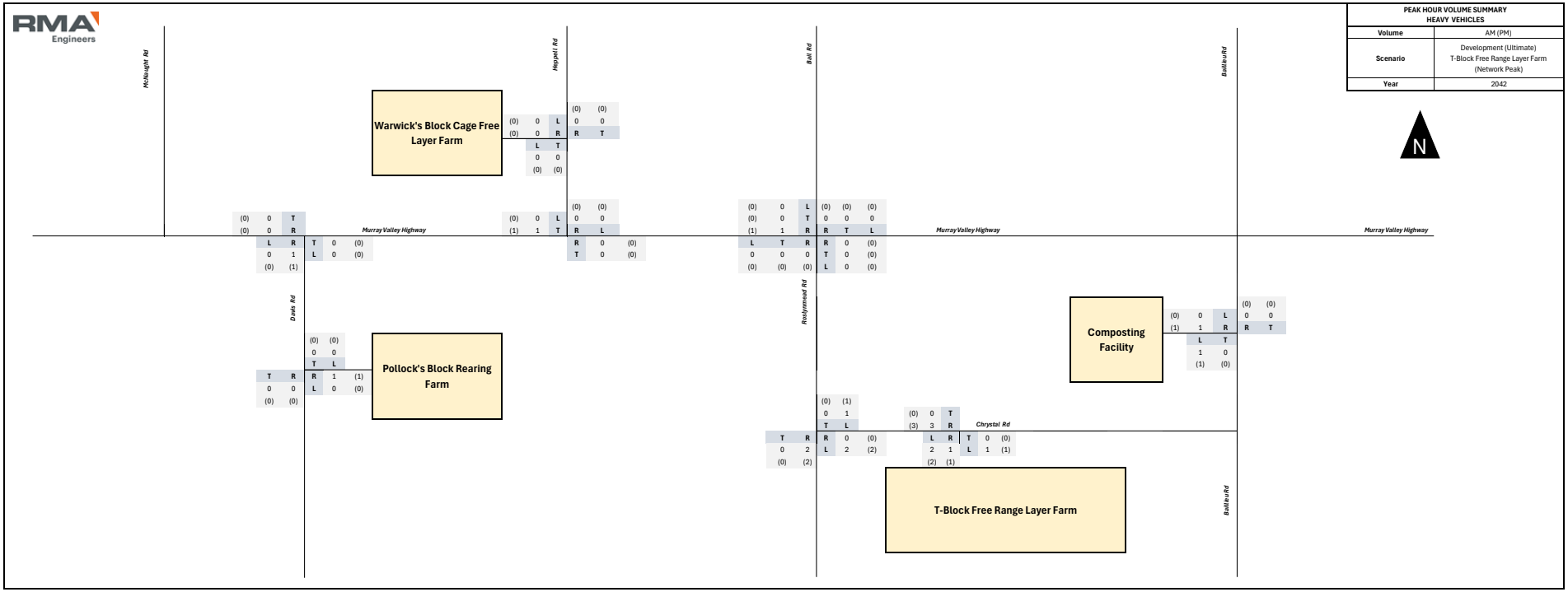

RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
Year
2042
N
McNaught Rd
Hogarth Rd
Bell Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dads Rd
Rockymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

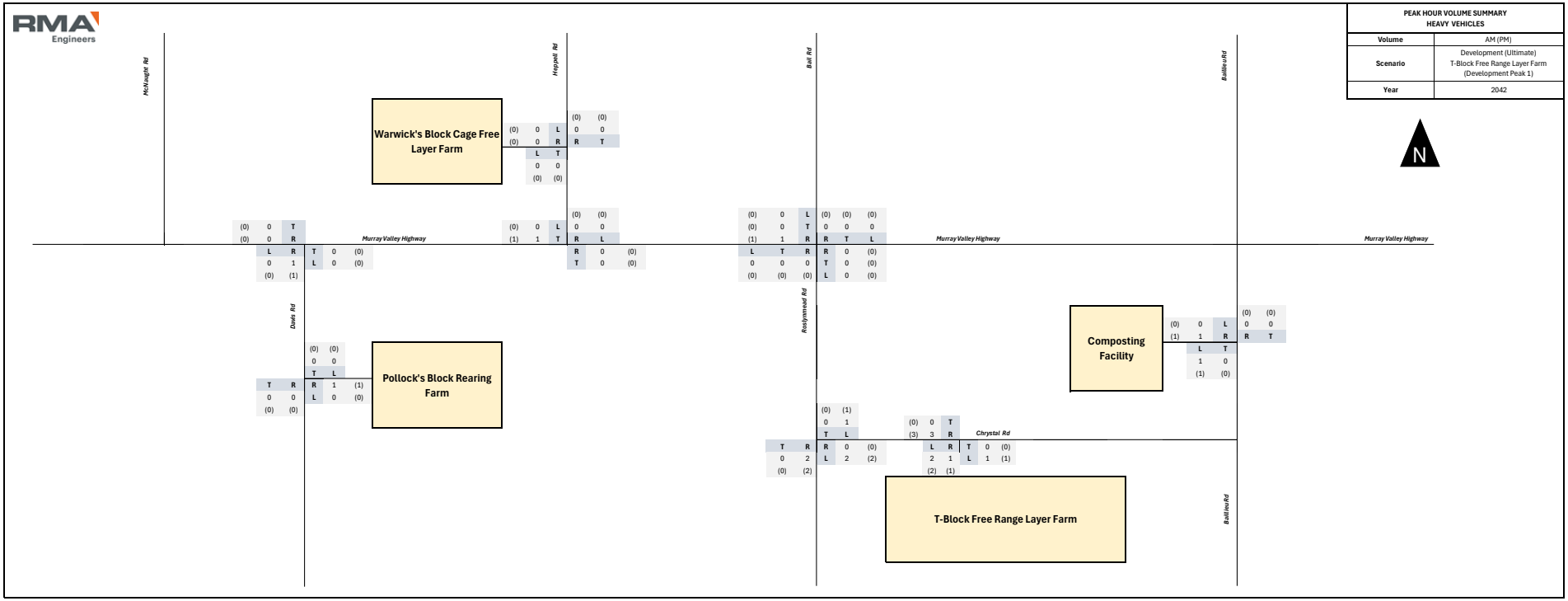

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Network Peak)
Year
2042
N
McNaught Rd
Heppell Rd
Bail Rd
Bailiku Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

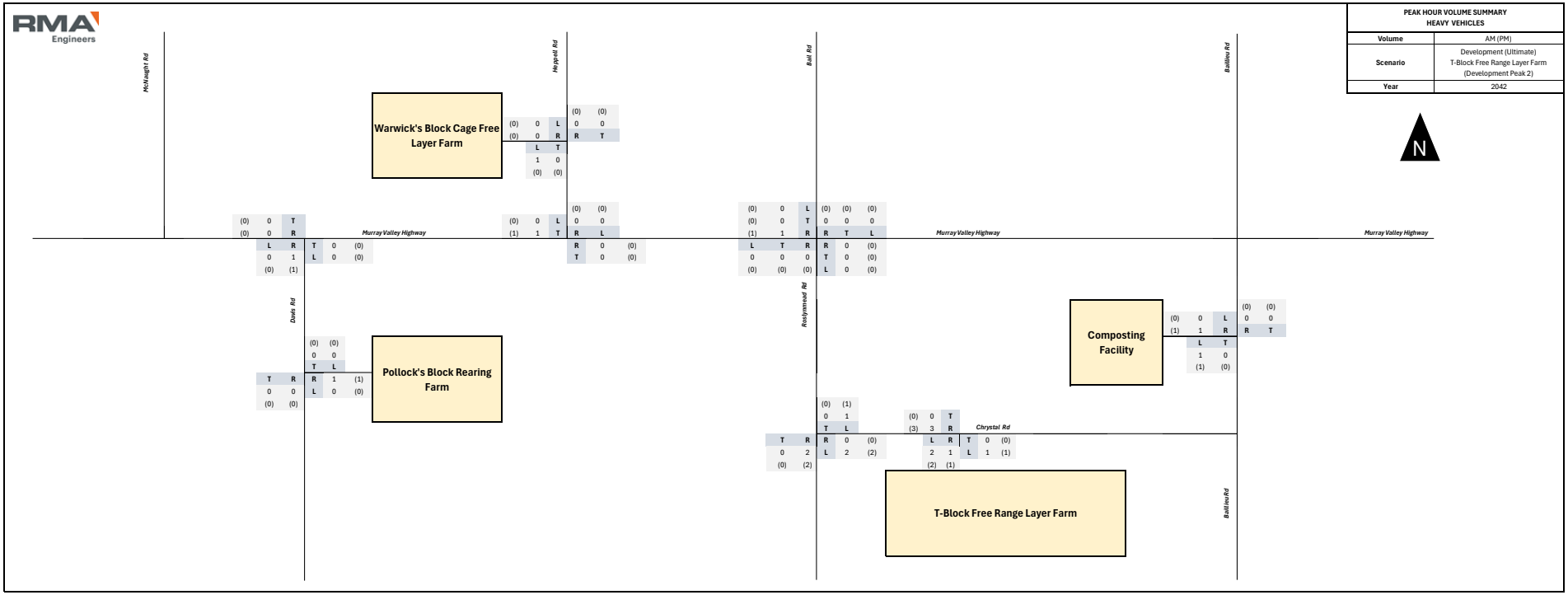

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Development Peak 1)
Year
2042
N
McNaught Rd
Harpole Rd
Bali Rd
Ballieu Rd
Warwick's Block Cage Free Layer Farm
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Pollock's Block Rearing Farm
Rosbynmead Rd
Composting Facility
Chrystal Rd
T-Block Free Range Layer Farm
Ballieu Rd

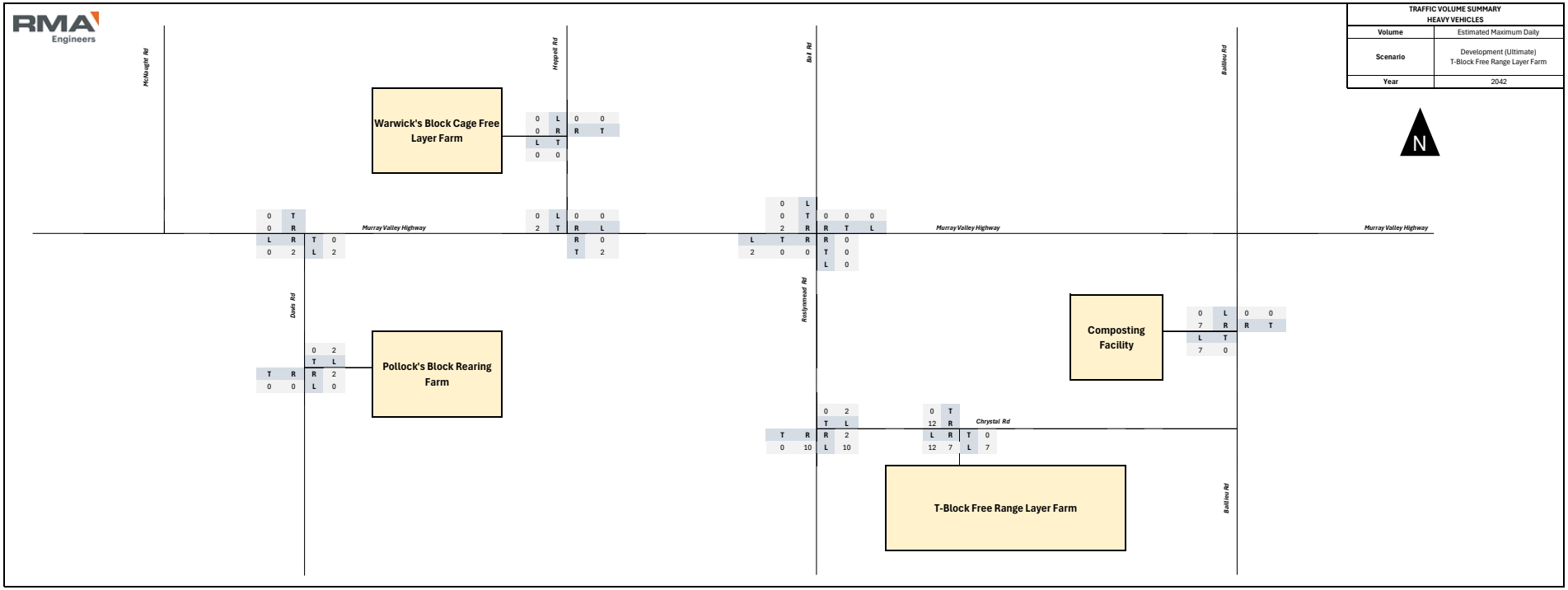

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Development Peak 2)
Year
2042
N
McLaughin Rd
Heykoll Rd
Ball Rd
Ballilou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Ballilou Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

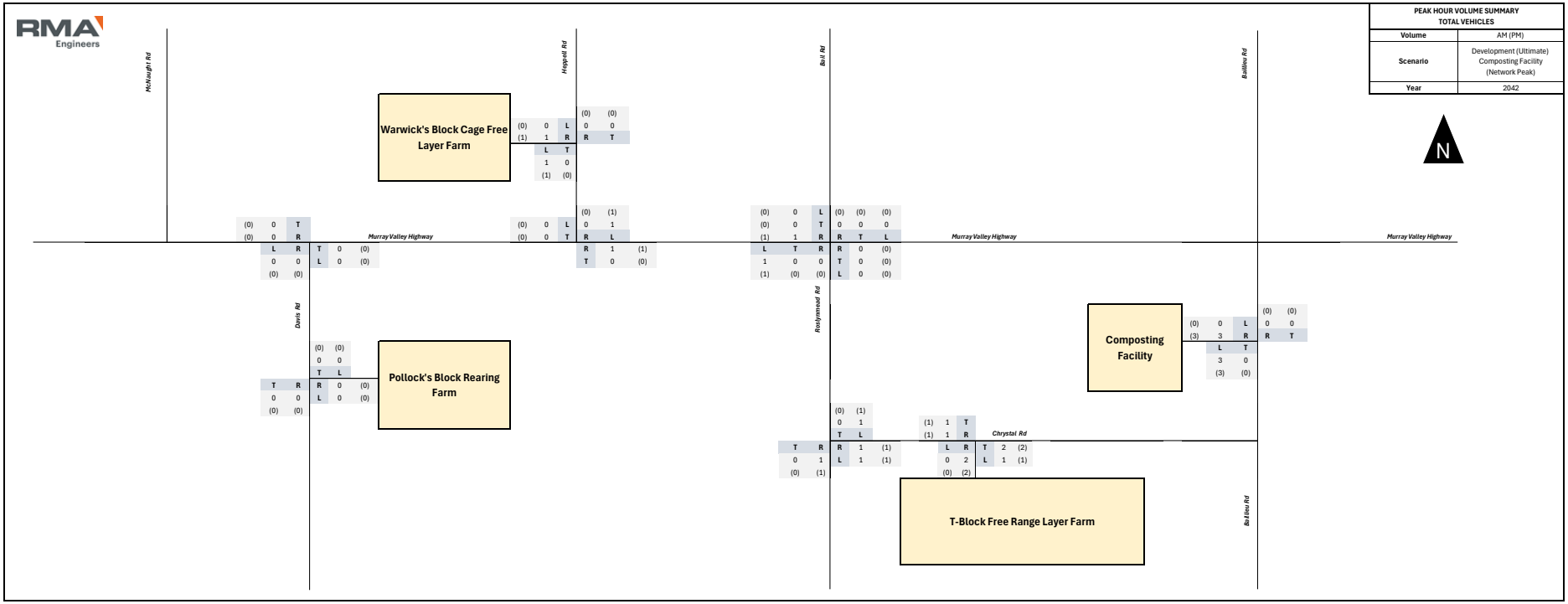

RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
Year
2042
N
McNaught Rd
Hogarth Rd
Bal I Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Duds Rd
Rockymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

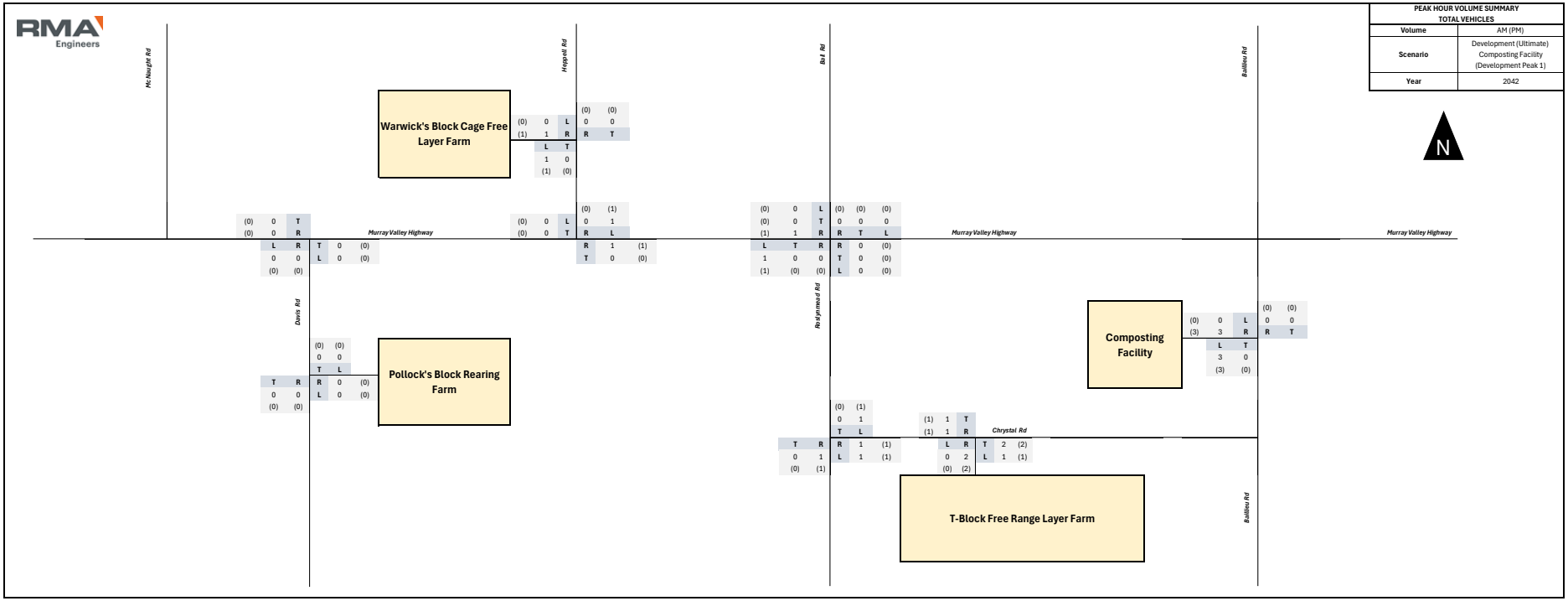

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Network Peak)
Year
2042
N
McNaught Rd
Heppell Rd
Bail Rd
Bailiku Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dads Rd
Rosbymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

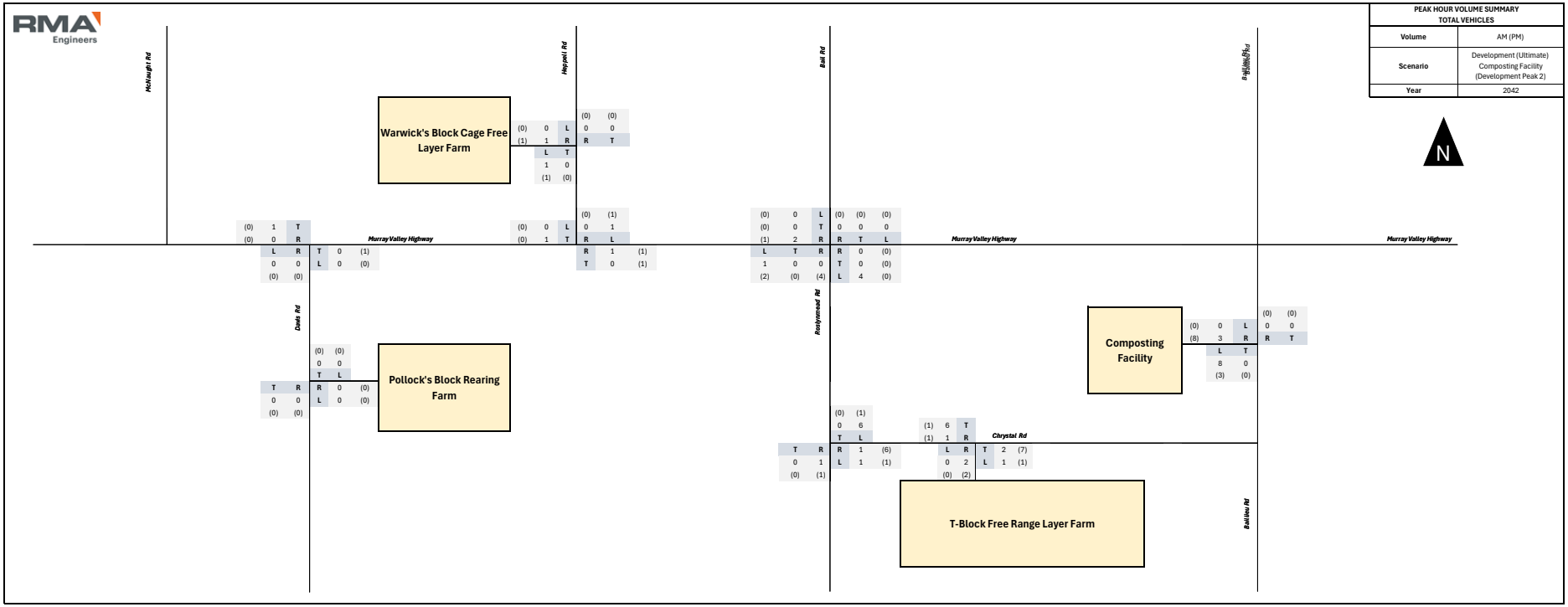

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Development Peak 1)
Year
2042
N
McNaught Rd
Harpley Rd
Bali Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Ballieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

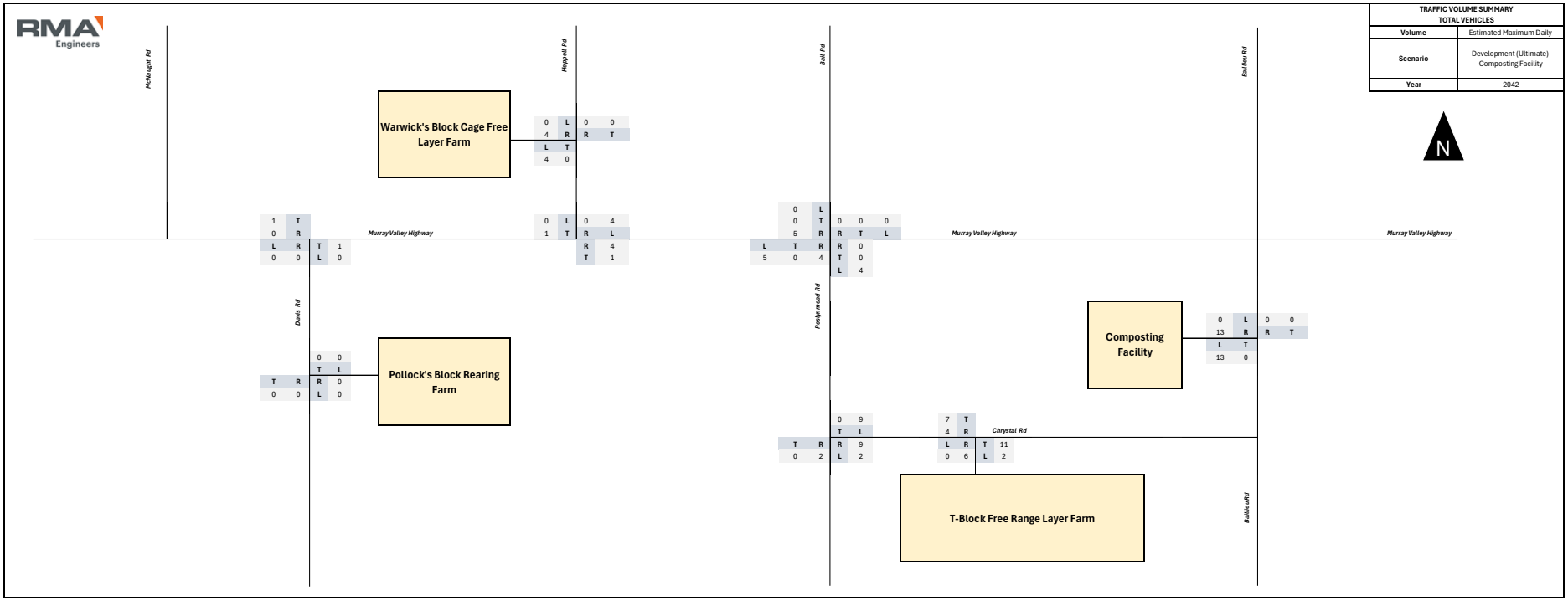

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
(Development Peak 2)
Year
2042
N
McLaughlin Rd
Heyknll Rd
Ball Rd
Ballilou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Ballilou Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

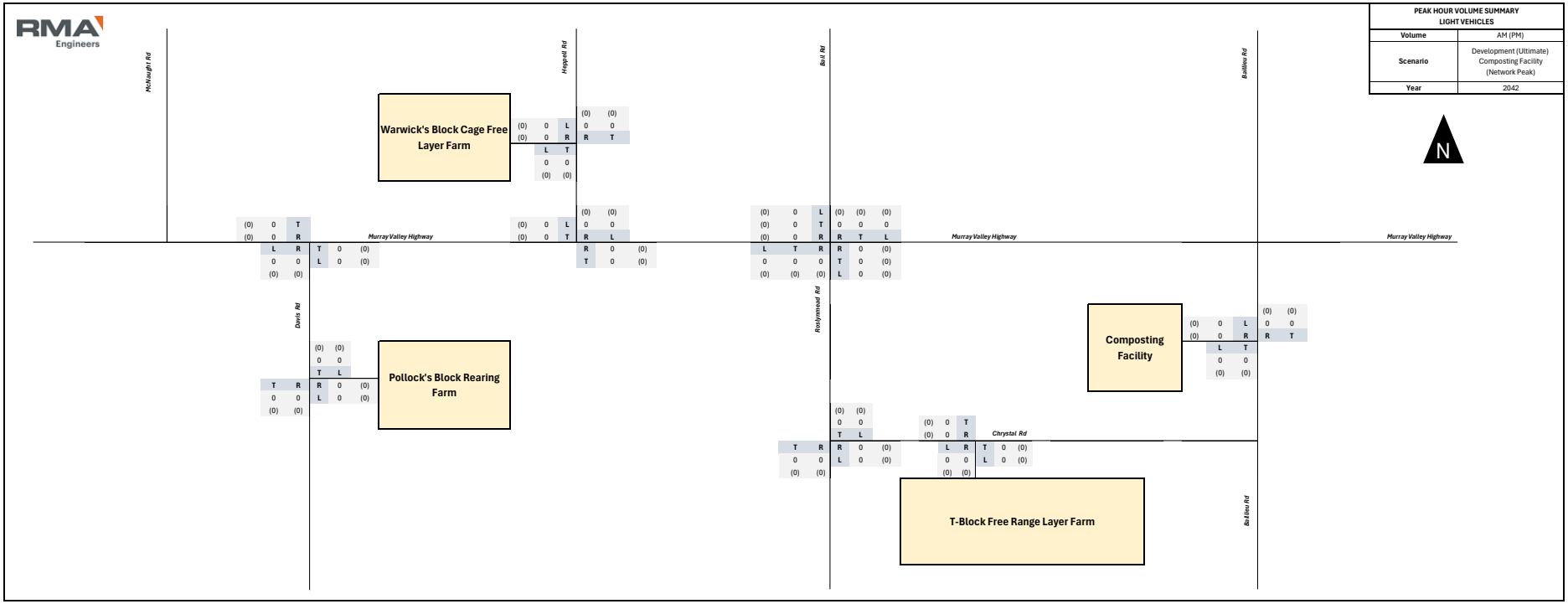

RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
T-Block Free Range Layer Farm
Year
2042
N
McNaught Rd
Hogarth Rd
Bal t Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Duds Rd
Rockymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

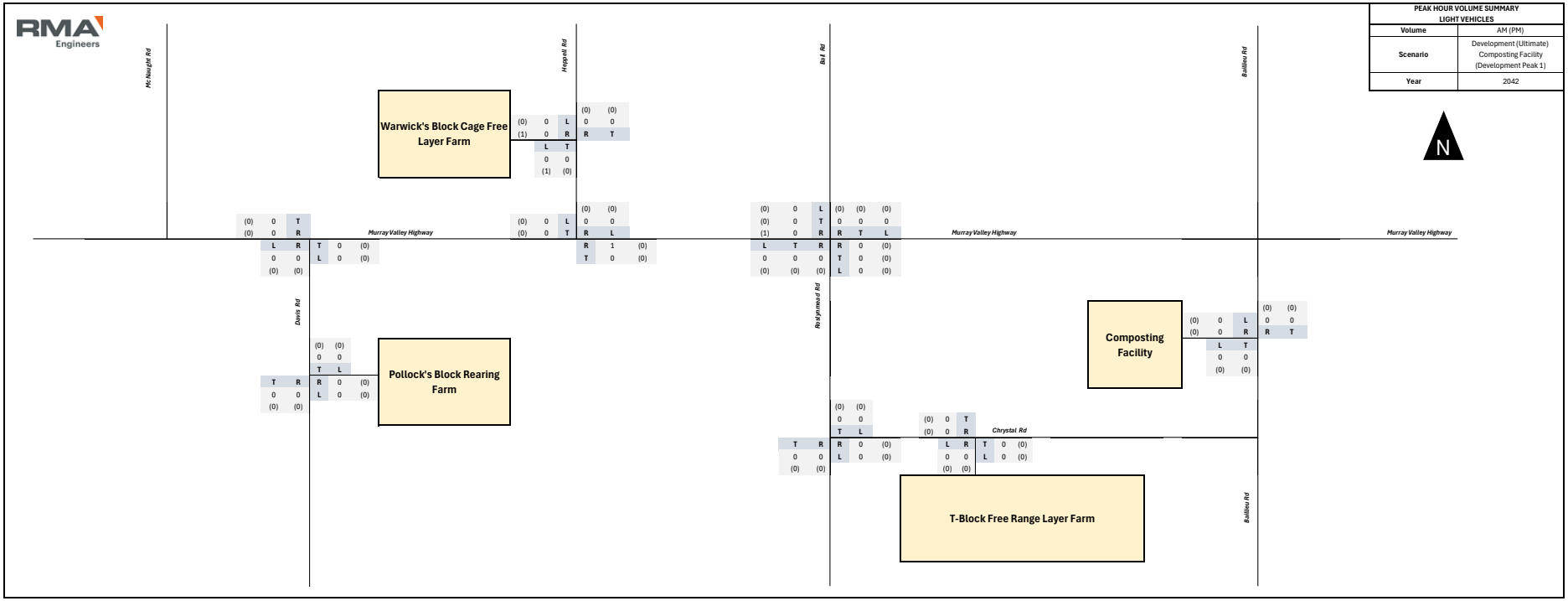

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate) Composting Facility (Network Peak)
Year
2042
N
McKaughlin Rd
Heppell Rd
Bull Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbymead Rd
Chrystal Rd
Ba Hau Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

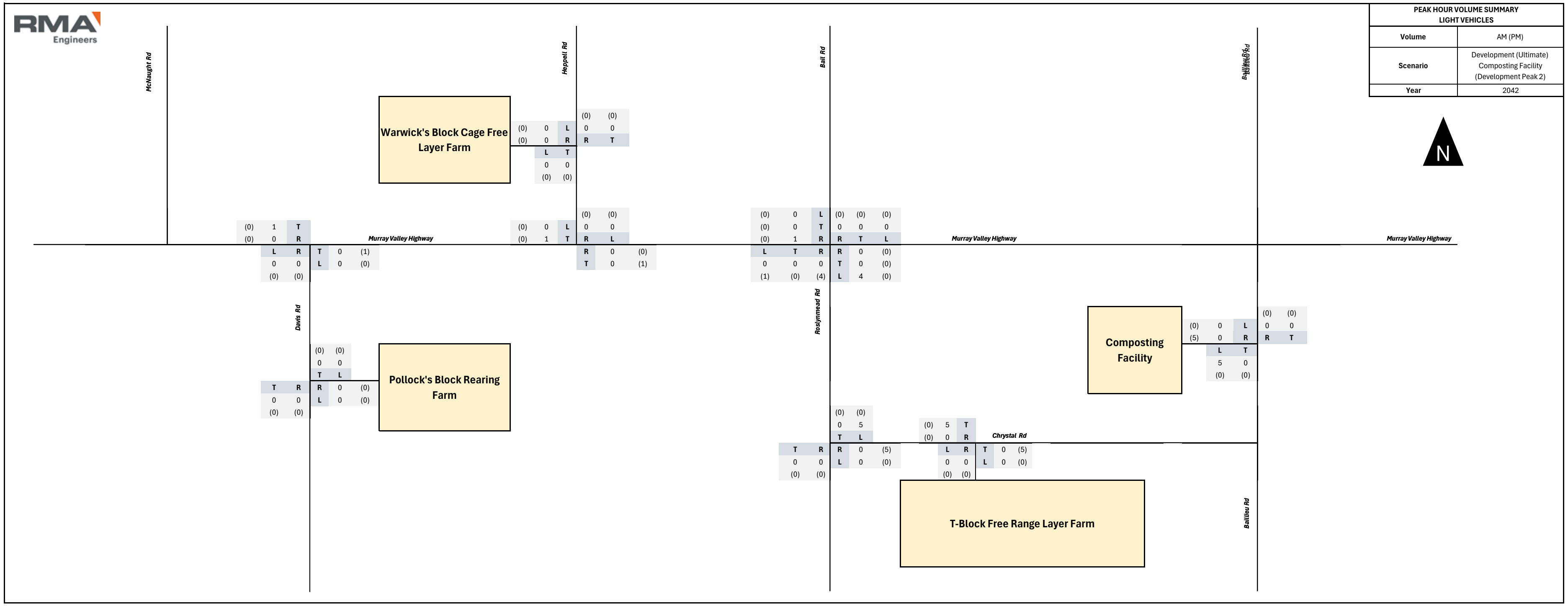

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Composting Facility
(Development Peak 1)
Year
2042
N
Mc Haught Rd
Hogarth Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Robinsons Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Composting Facility
(Development Peak 2)
Year
2042
N
McKaught Rd
Heipell Rd
Bail Rd
Ballilau Rd
Murray Valley Highway
Duke Rd
Rosbyanead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

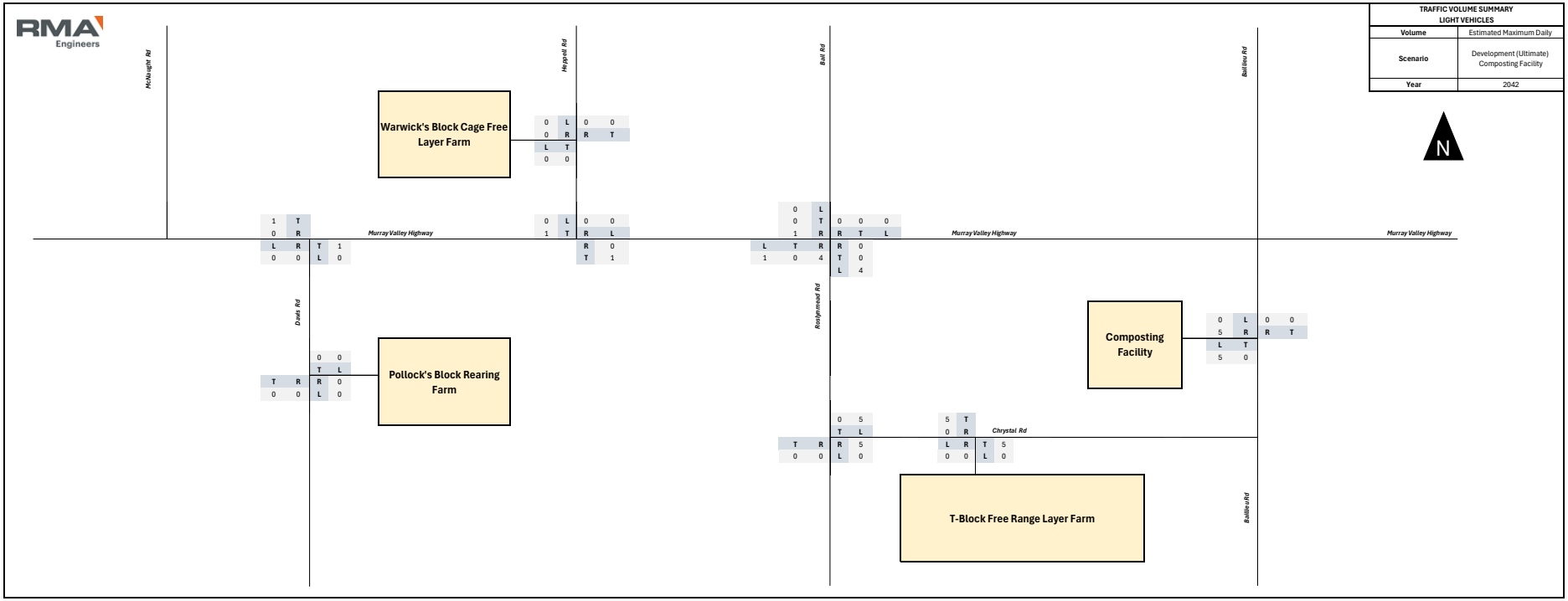

RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate) Composting Facility
Year
2042
N
McNaught Rd
Heygarth Rd
Bail Rd
Bailieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dads Rd
Rosbynmead Rd
Chrystal Rd
Bailieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

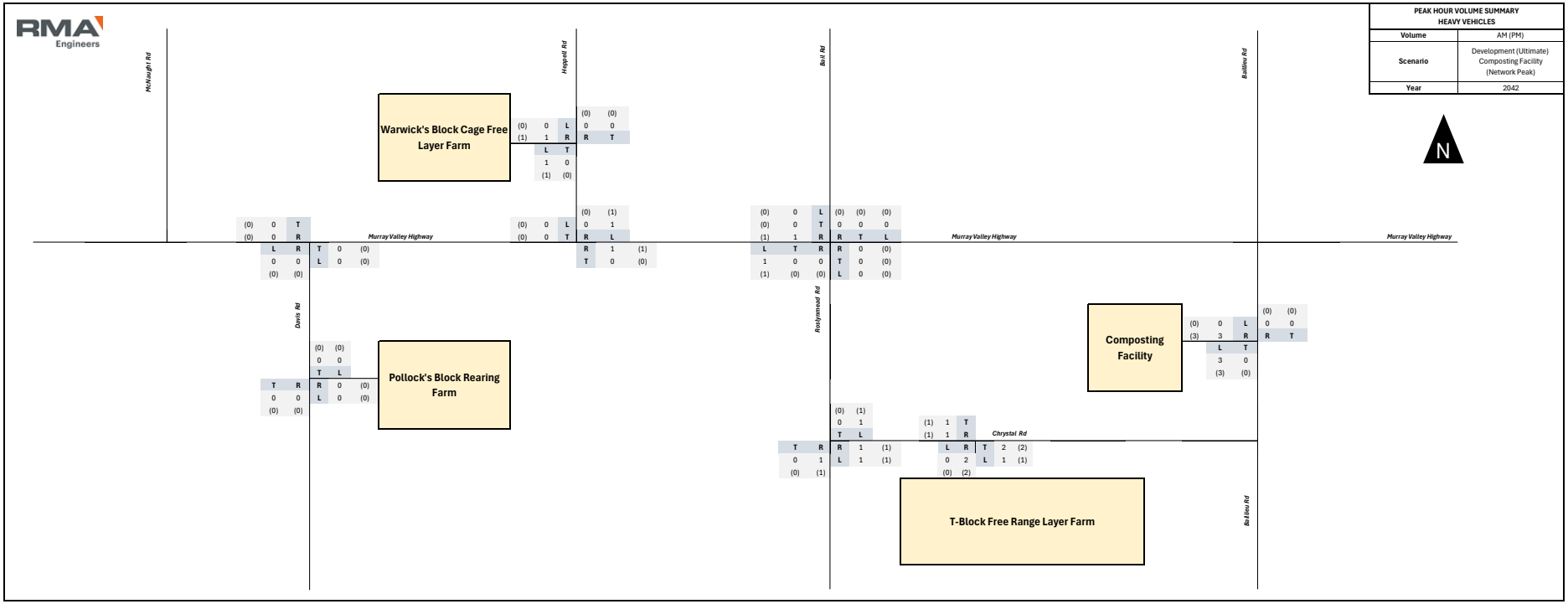

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Composting Facility
(Network Peak)
Year
2042
N
McKaughlt Rd
Heppell Rd
Bull Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Ba Hau Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

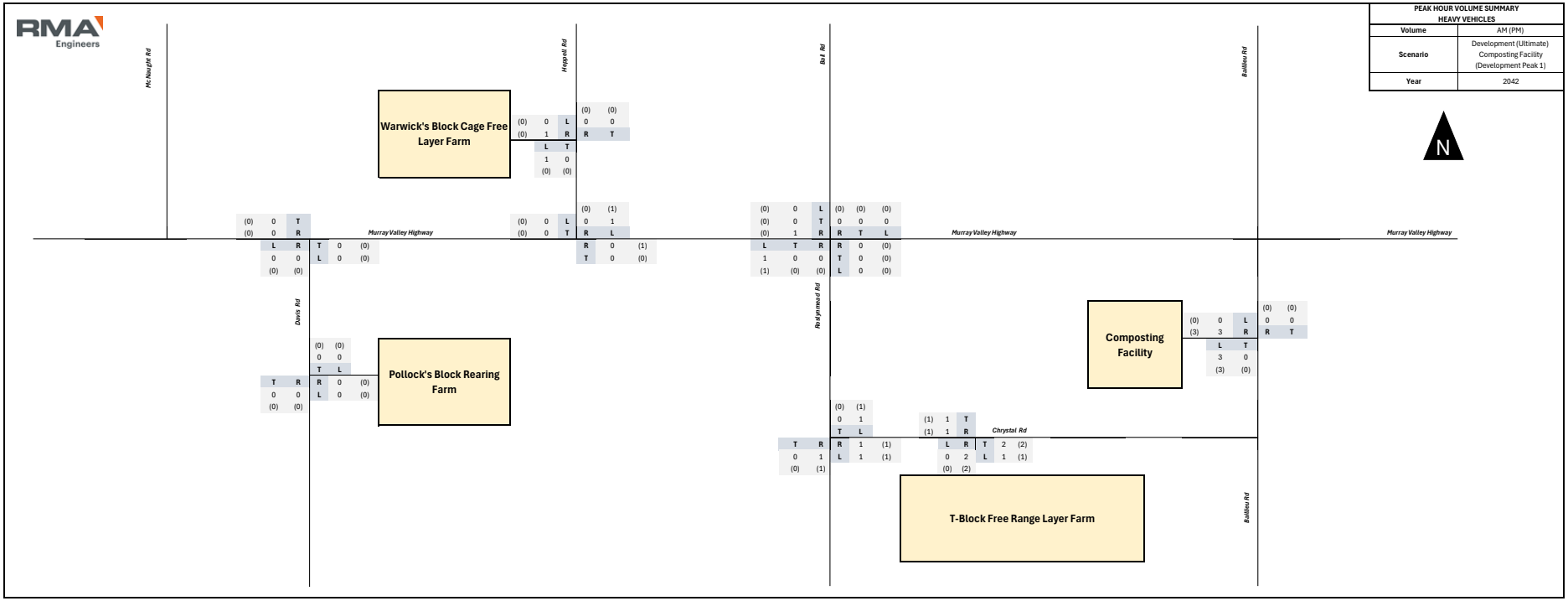

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Composting Facility
(Development Peak 1)
Year
2042
N
Mc Haught Rd
Hogarth Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Robinwood Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

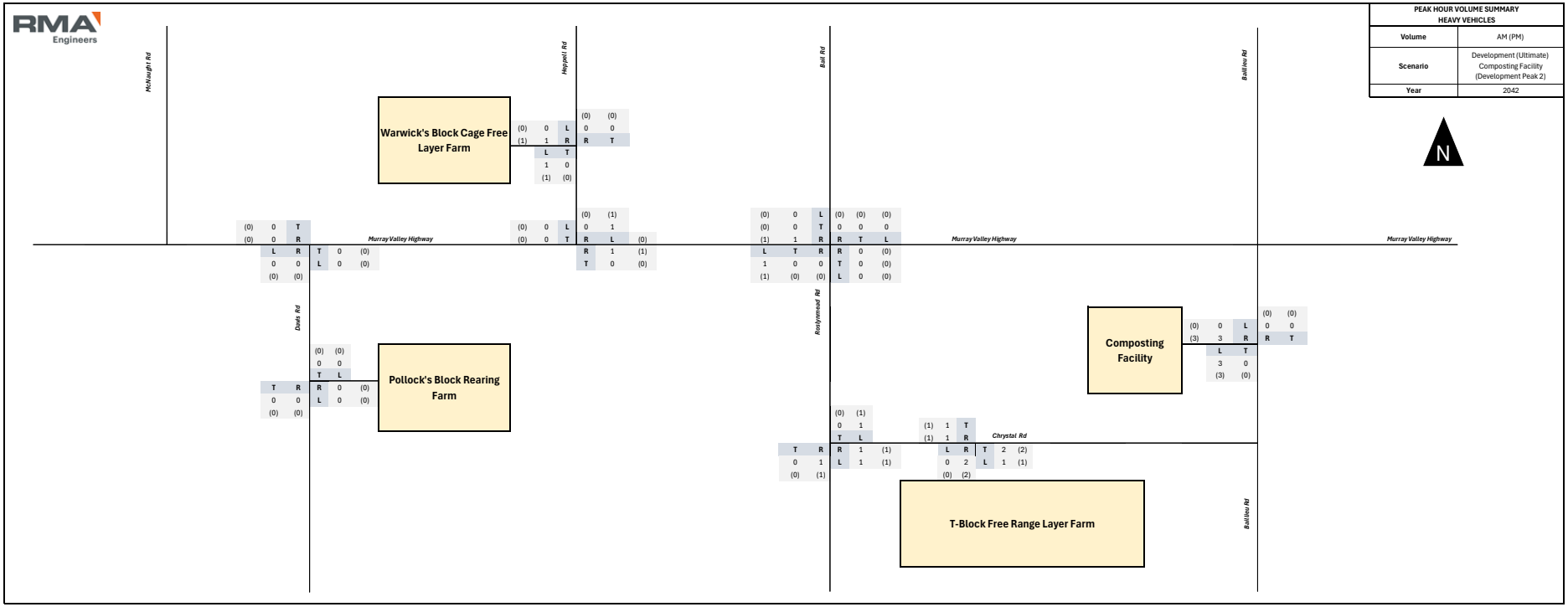


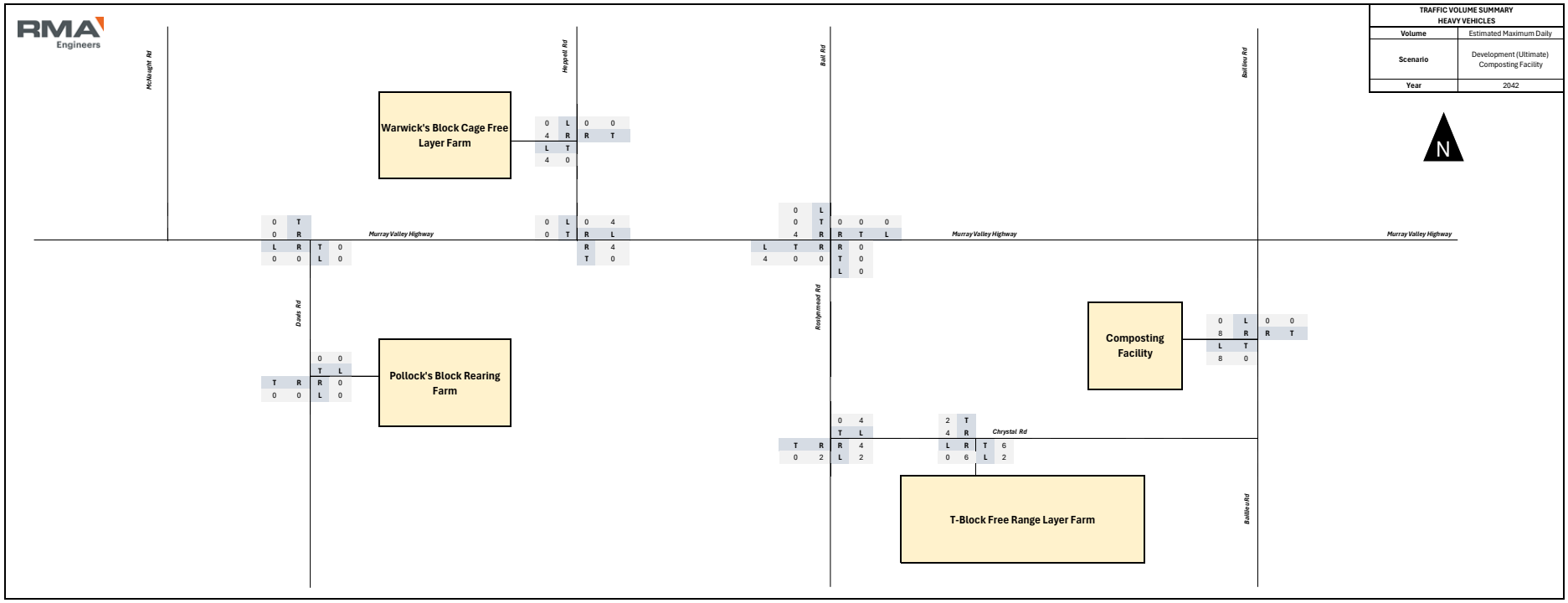
RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Composting Facility
(Development Peak 2)
Year
2042
N
McNaught Rd
Heppell Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

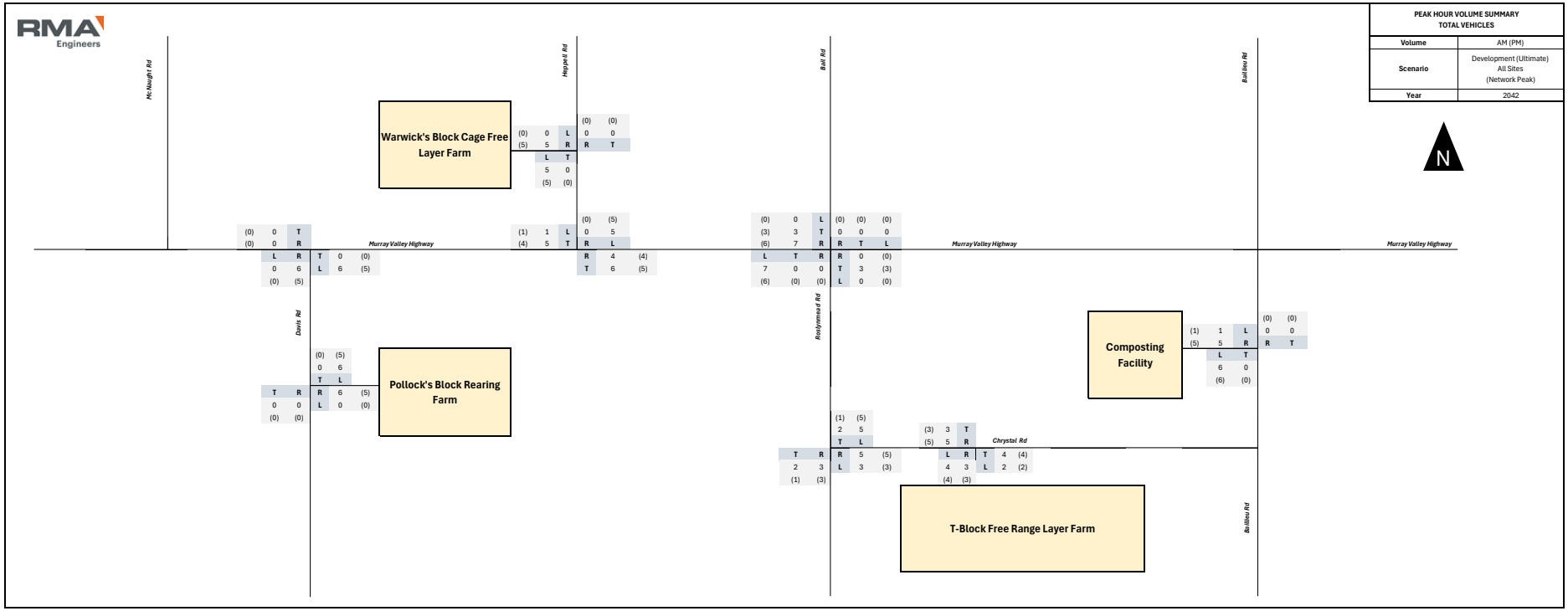

RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate) Composting Facility
Year
2042
N
McNaught Rd
Heygarth Rd
Bail Rd
Bailieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dads Rd
Rosbynmead Rd
Chrystal Rd
Bailieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

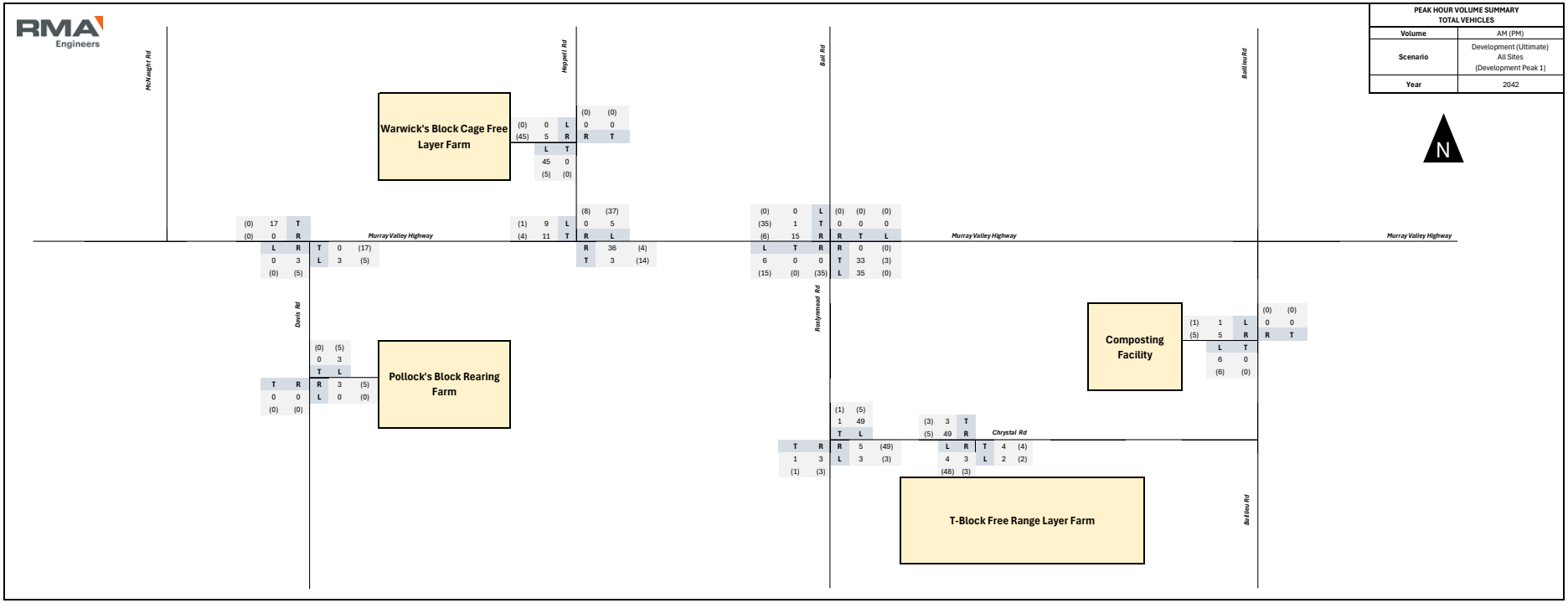

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Composting Facility
(Network Peak)
Year
2042
N
McKaughlin Rd
Heppell Rd
Bull Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Roslynmead Rd
Chrystal Rd
Ba Hau Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

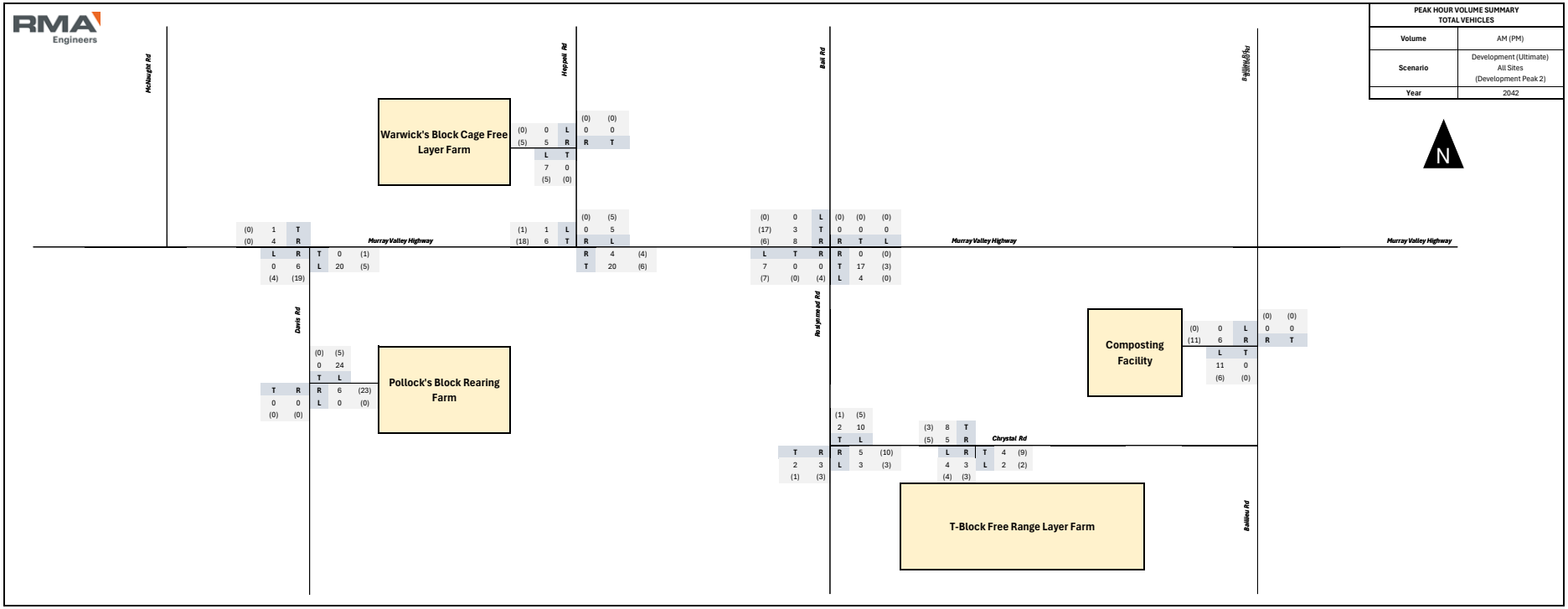

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Composting Facility
(Development Peak 1)
Year
2042
N
Mc Haught Rd
Hogarth Rd
Bail Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Robinsons Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

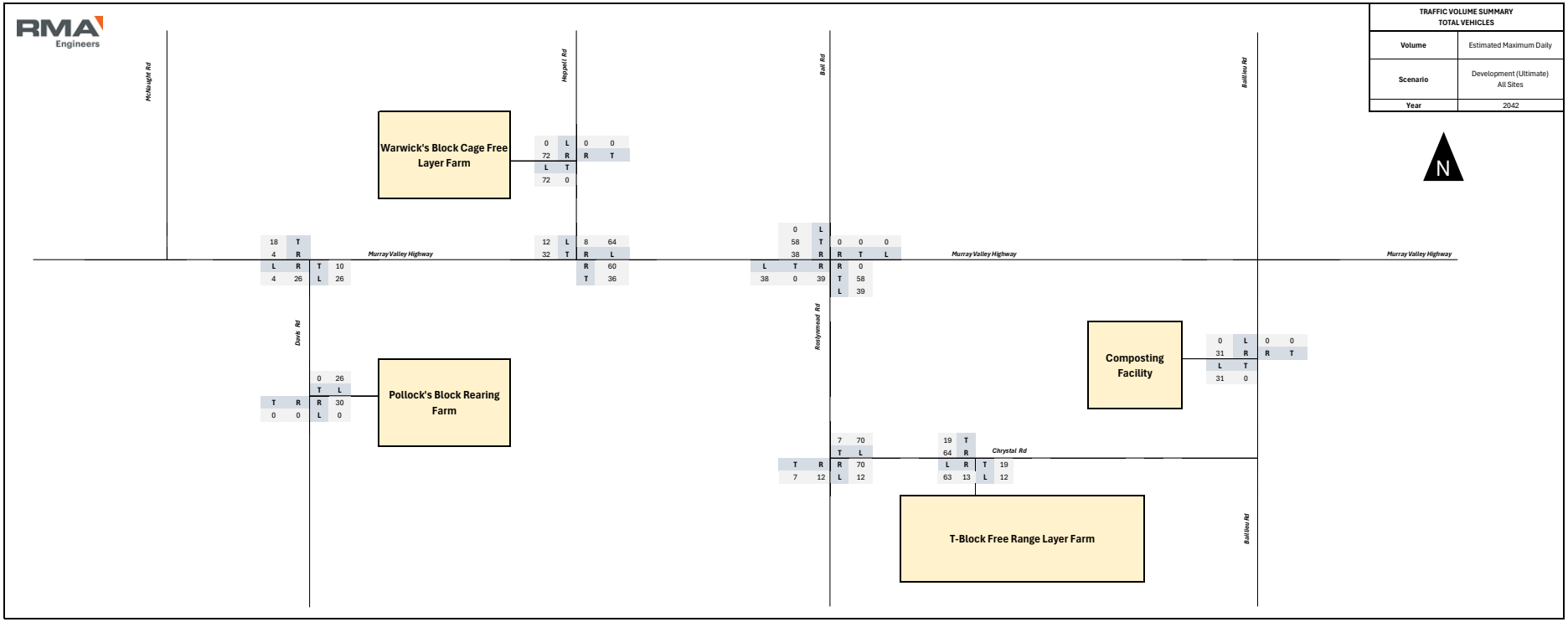

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
Composting Facility
(Development Peak 2)
Year
2042
N
McKaughan Rd
Heipell Rd
Bail Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dunk Rd
Roslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

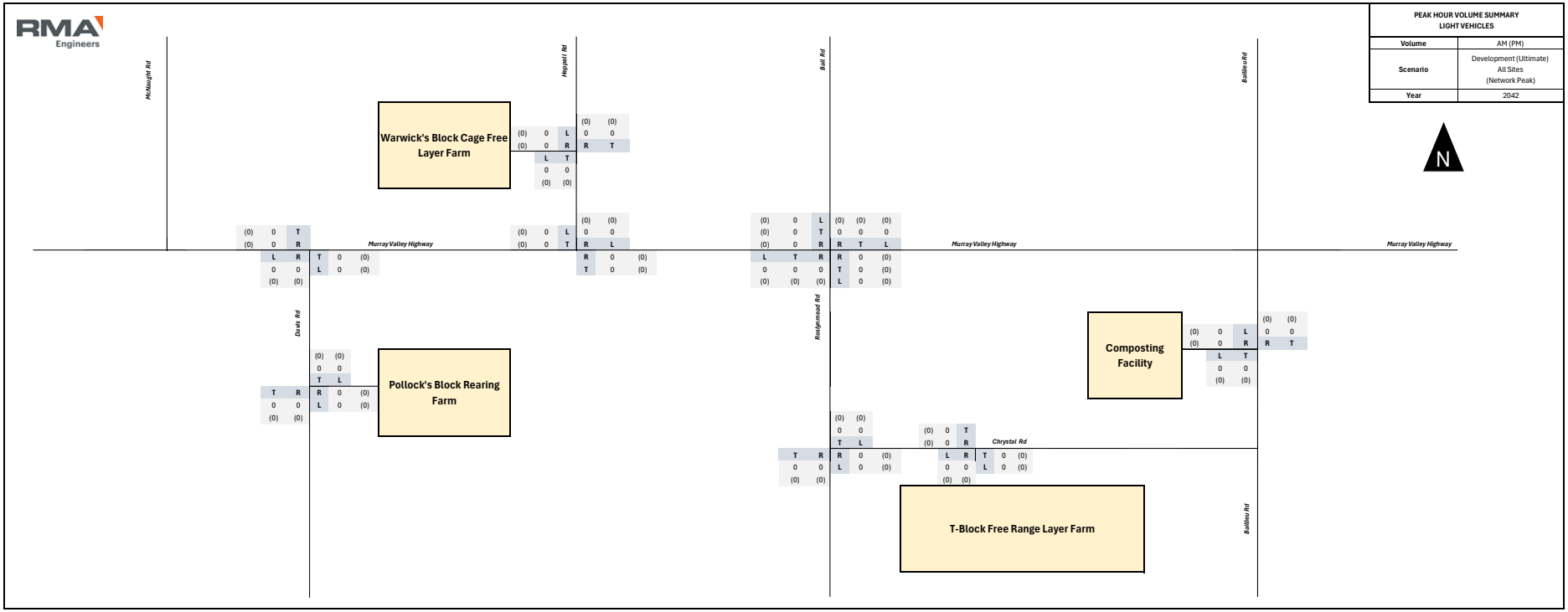

RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate) Composting Facility
Year
2042
N
McNaught Rd
Heygarth Rd
Bail Rd
Bailieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dads Rd
Rosbynmead Rd
Chrystal Rd
Bailieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

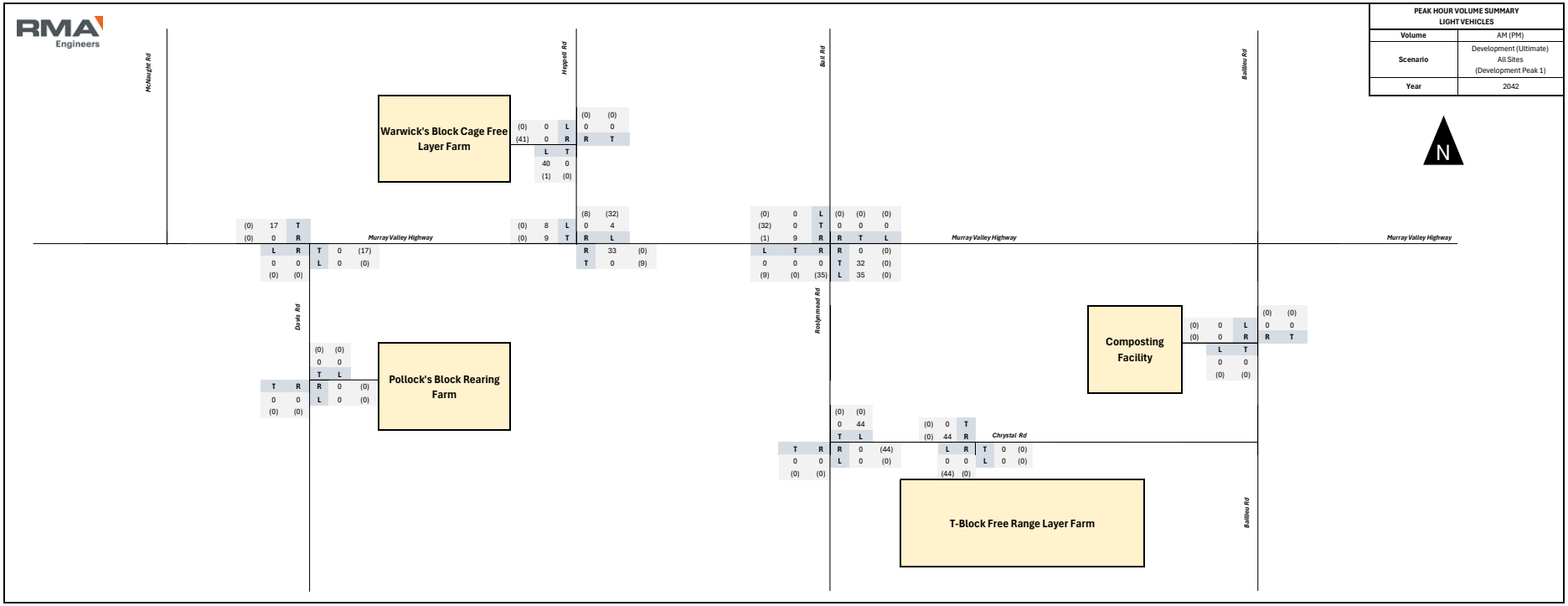

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
All Sites
(Network Peak)
Year
2042
N
Mc Haugh Rd
Hopkell Rd
Bail Rd
Ballliau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Warwick's Block Cage Free Layer Farm
Davis Rd
Pollock's Block Rearing Farm
Roslynmead Rd
Composting Facility
Chrystal Rd
T-Block Free Range Layer Farm
Ballliau Rd

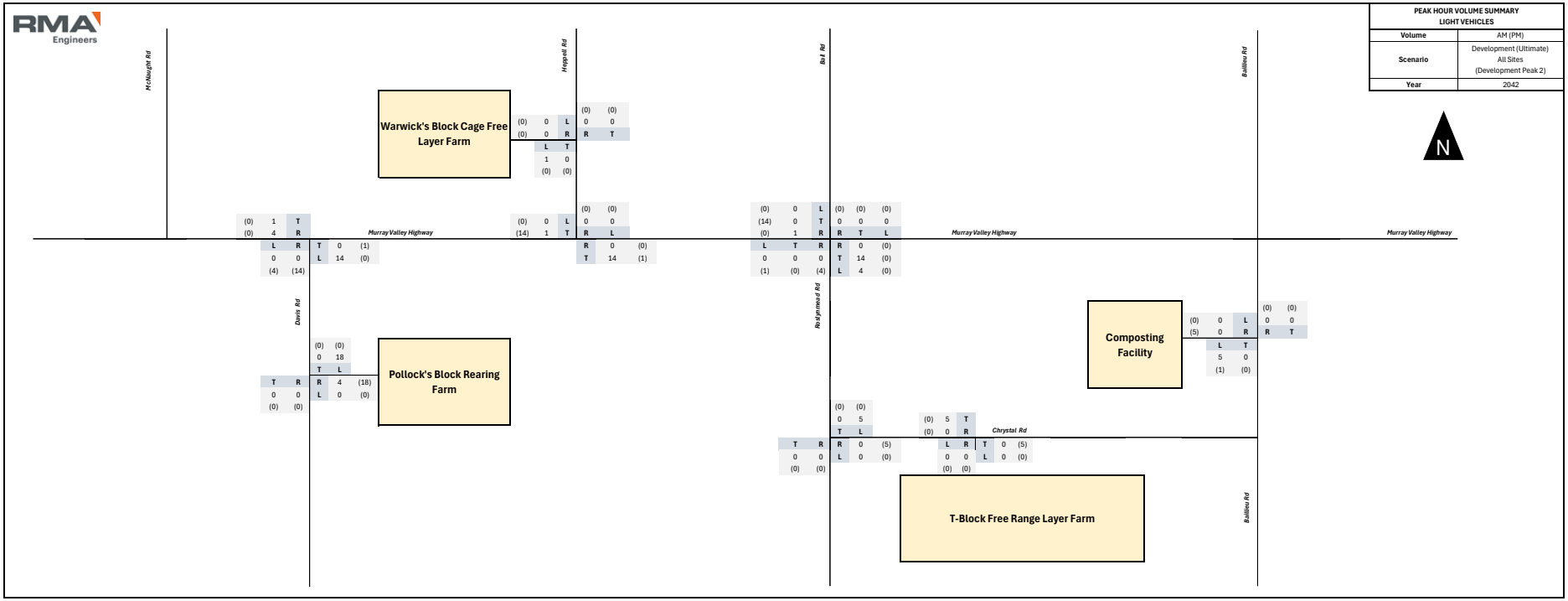

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
All Sites
(Development Peak 1)
Year
2042
N
McHaugh Rd
Heppell Rd
Ball Rd
Ball Hill Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rookyard Rd
Chrystal Rd
Ball Hill Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

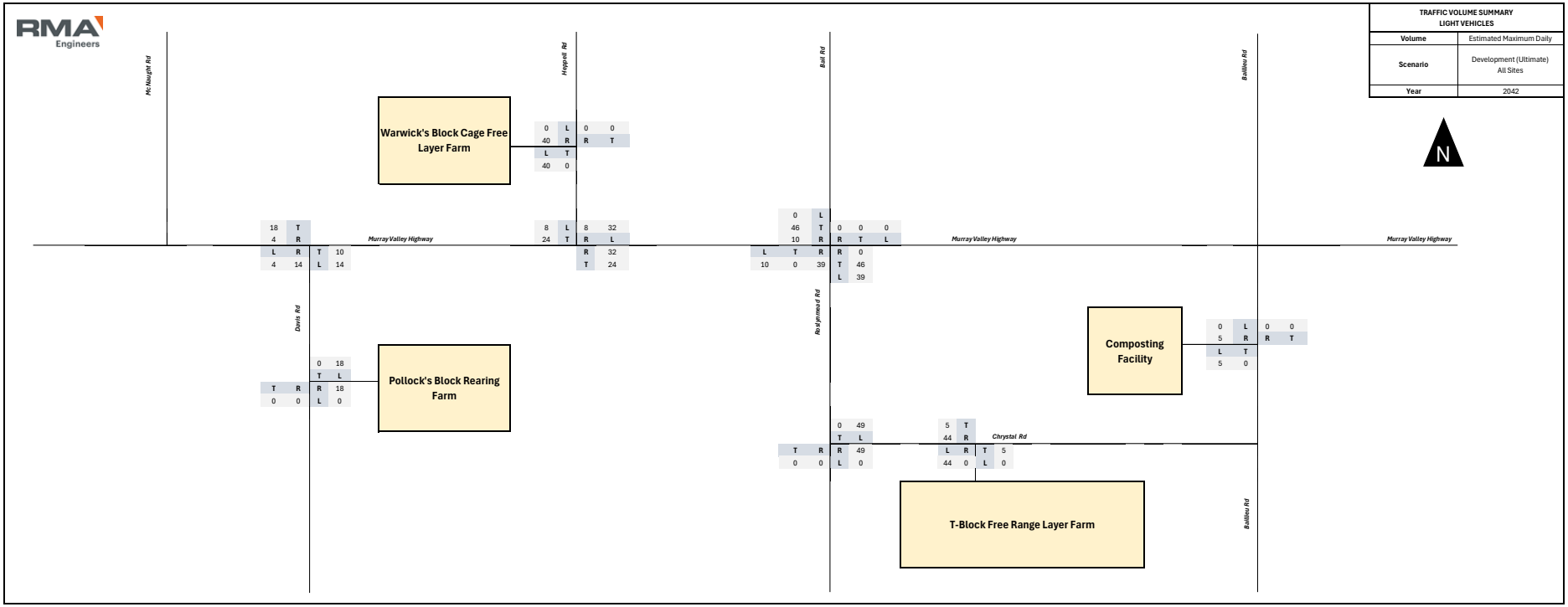

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
All Sites
(Development Peak 2)
Year
2042
N
McNaught Rd
Heyfield Rd
Bell Rd
Ballinlaw Rd
Murray Valley Highway
Davis Rd
Ruljarma Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
All Sites
Year
2042
N
McNaught Rd
Haypel Rd
Bail Rd
Bailliou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dunk Rd
Rosbynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
All Sites
(Network Peak)
Year
2042
N
McNaught Rd
Heinzel Rd
Bail Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dads Rd
Roslynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
All Sites
(Development Peak 1)
Year
2042
N
McNaught Rd
Heppell Rd
Bull Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rostyn Head Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

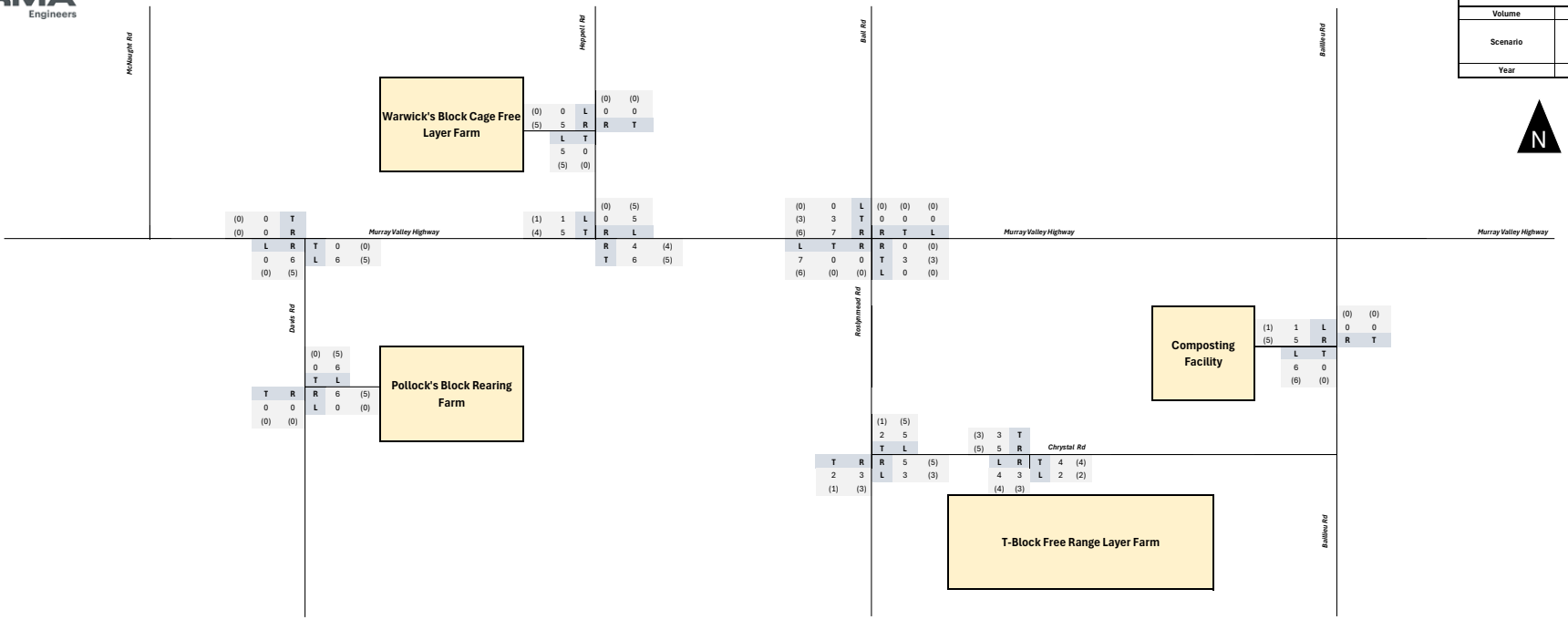

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
All Sites
(Development Peak 2)
Year
2042
N
McNaught Rd
Hogarth Rd
Bal Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Rosemead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

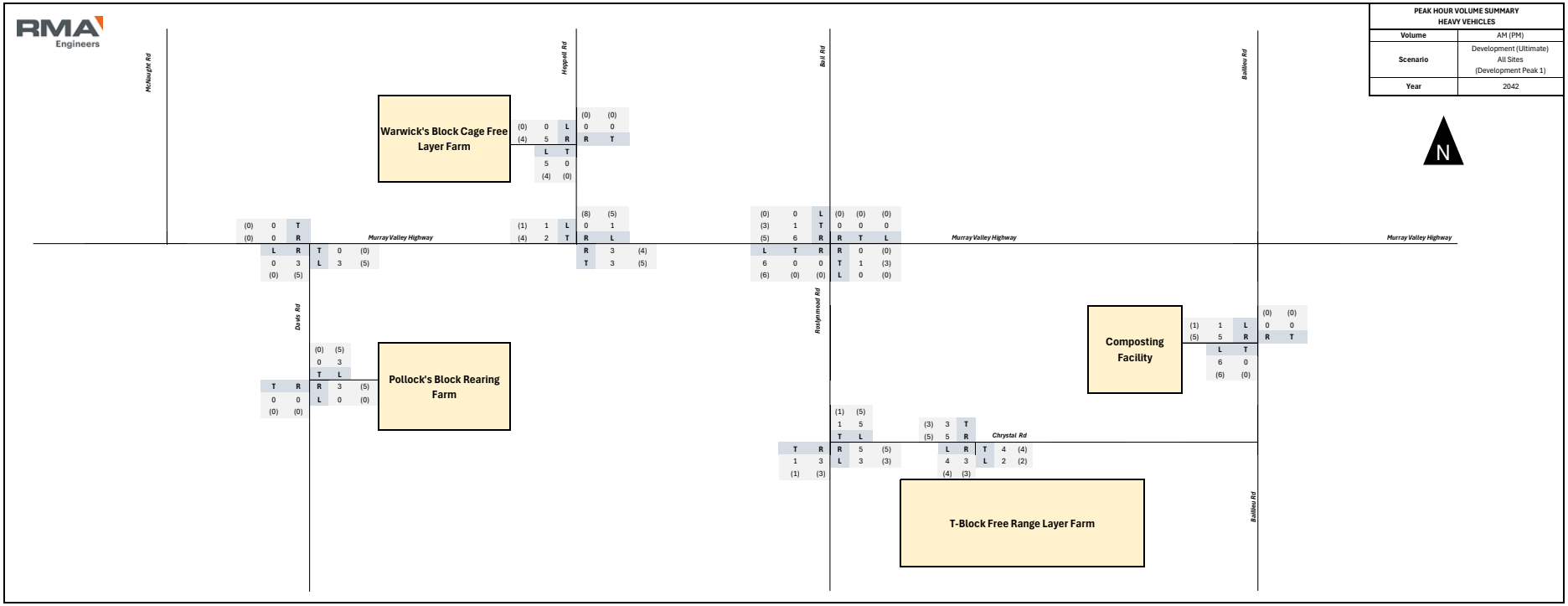

RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
All Sites
Year
2042
N
McNaught Rd
Heppell Rd
Bail Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Redgrimwood Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

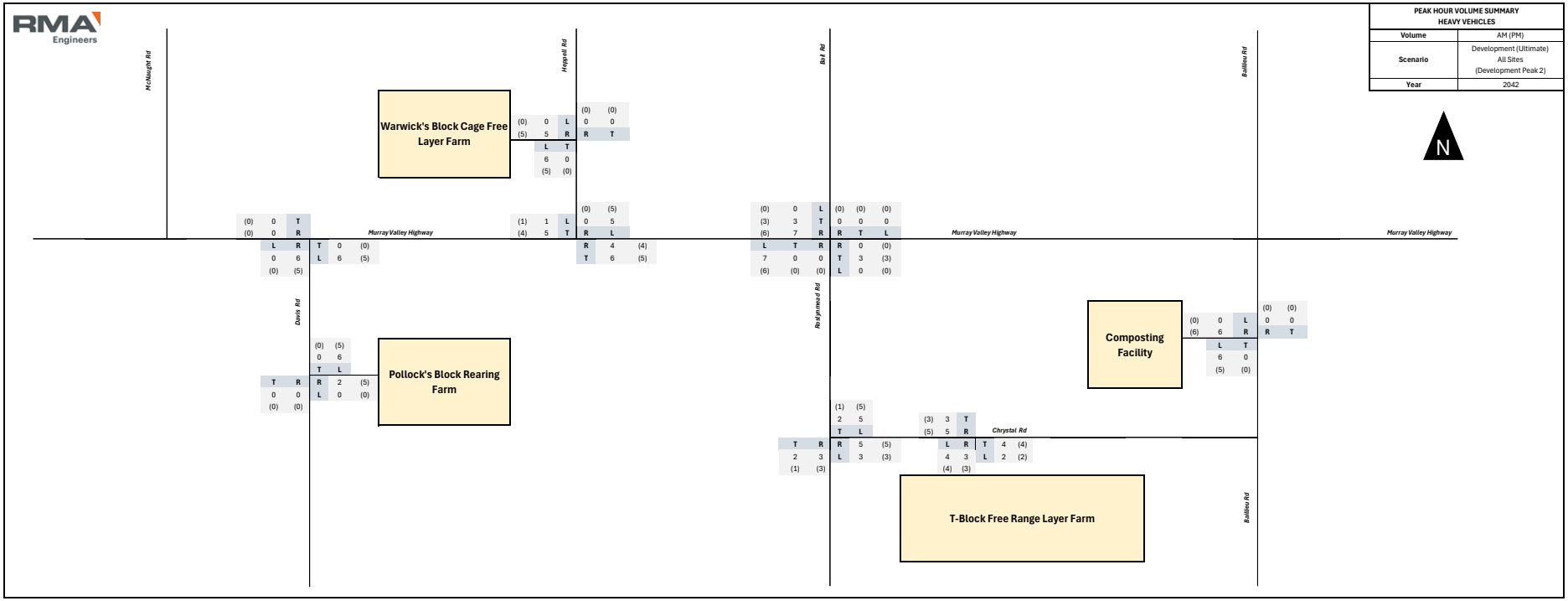
RMA Engineers

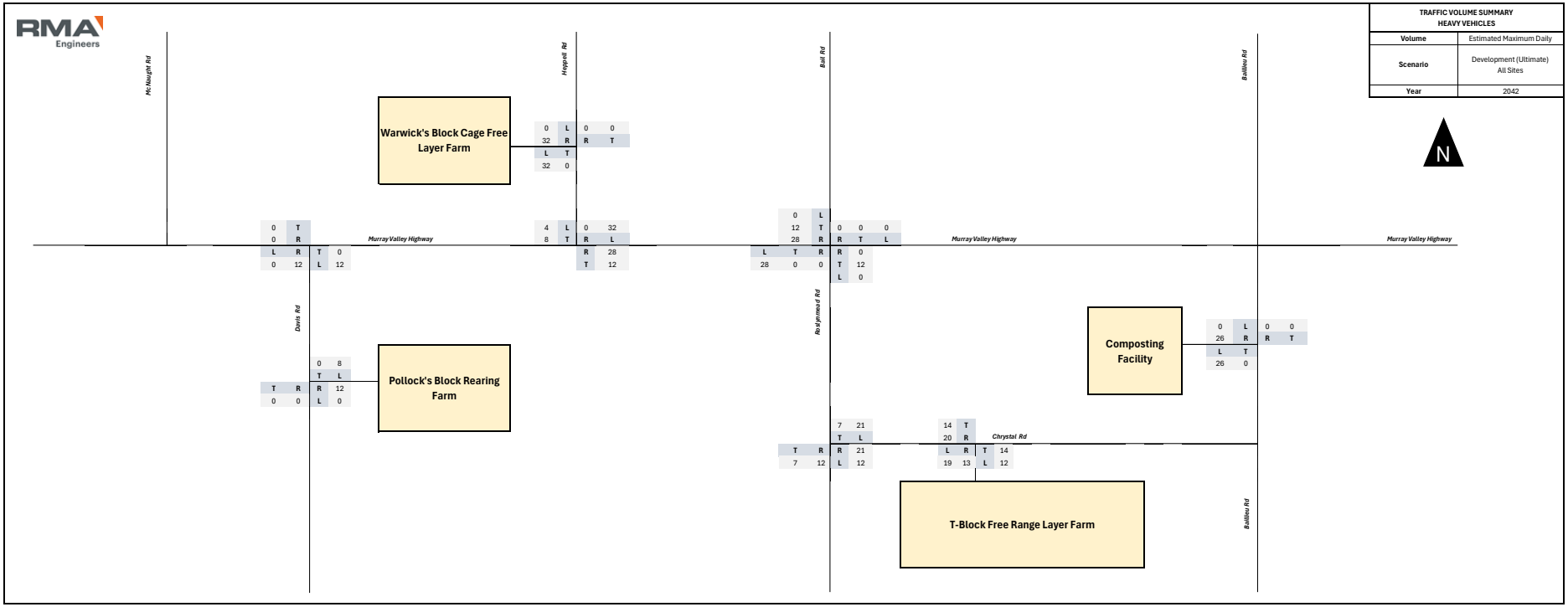
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES

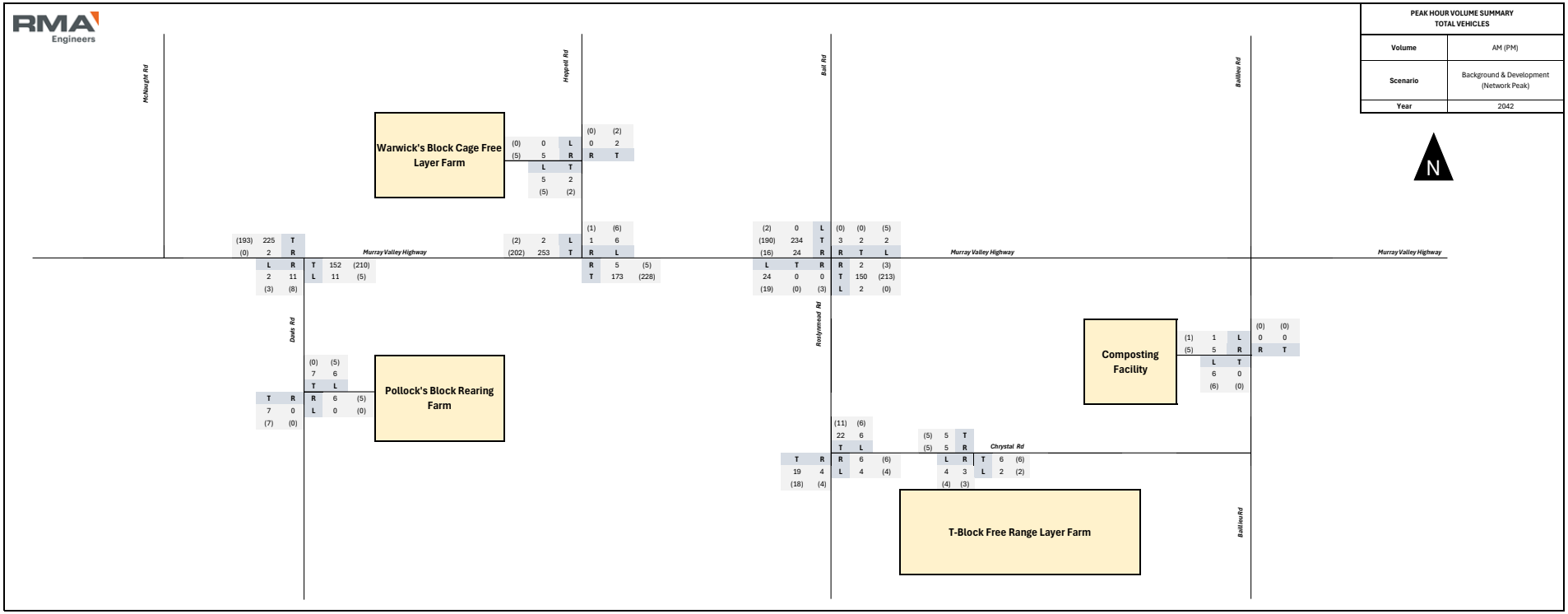
Volume	AM (PM)
Scenario	Development (Ultimate) All Sites (Network Peak)
Year	2042

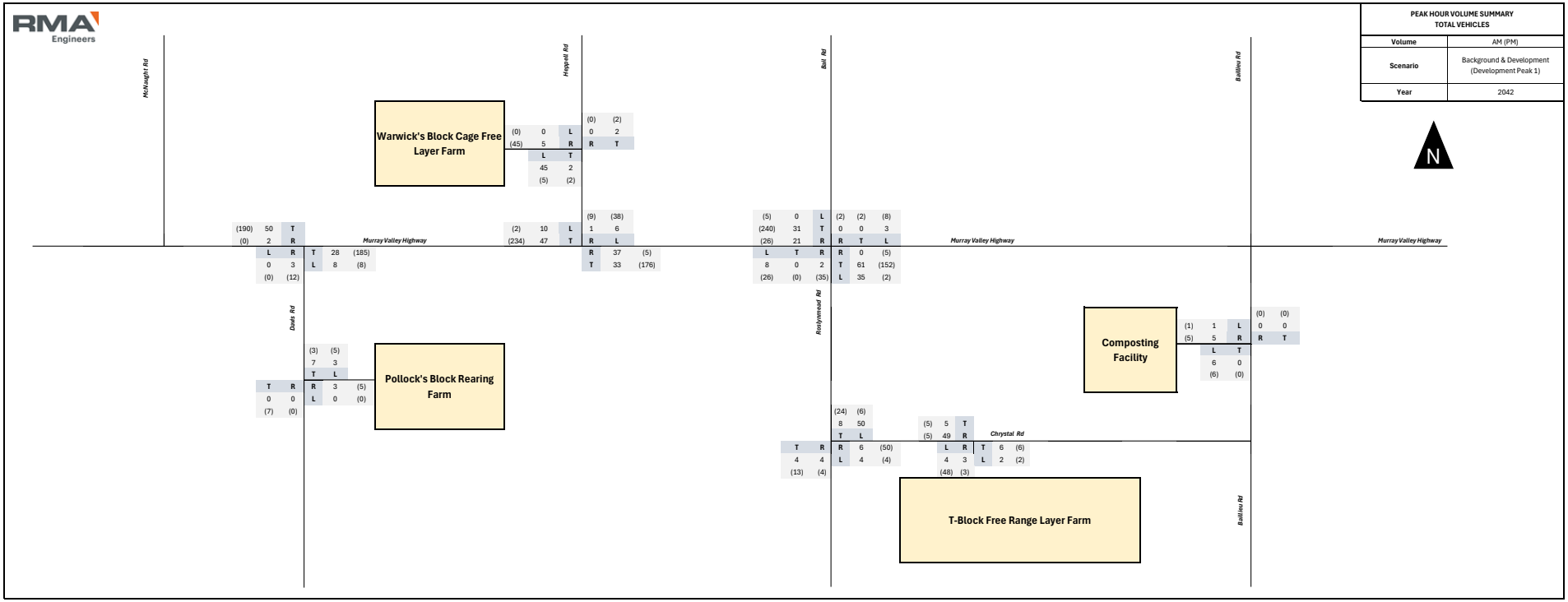


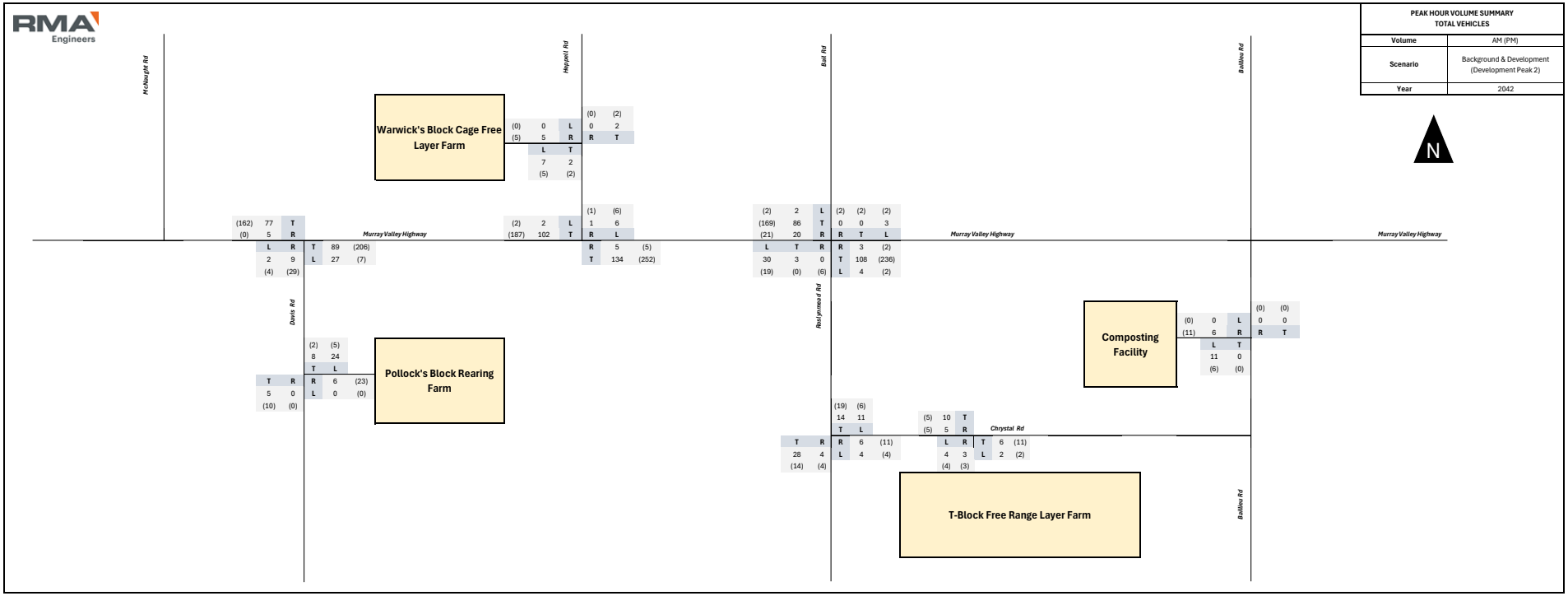

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
All Sites
(Development Peak 1)
Year
2042
N
McNaught Rd
Heppell Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Rostyn Mead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

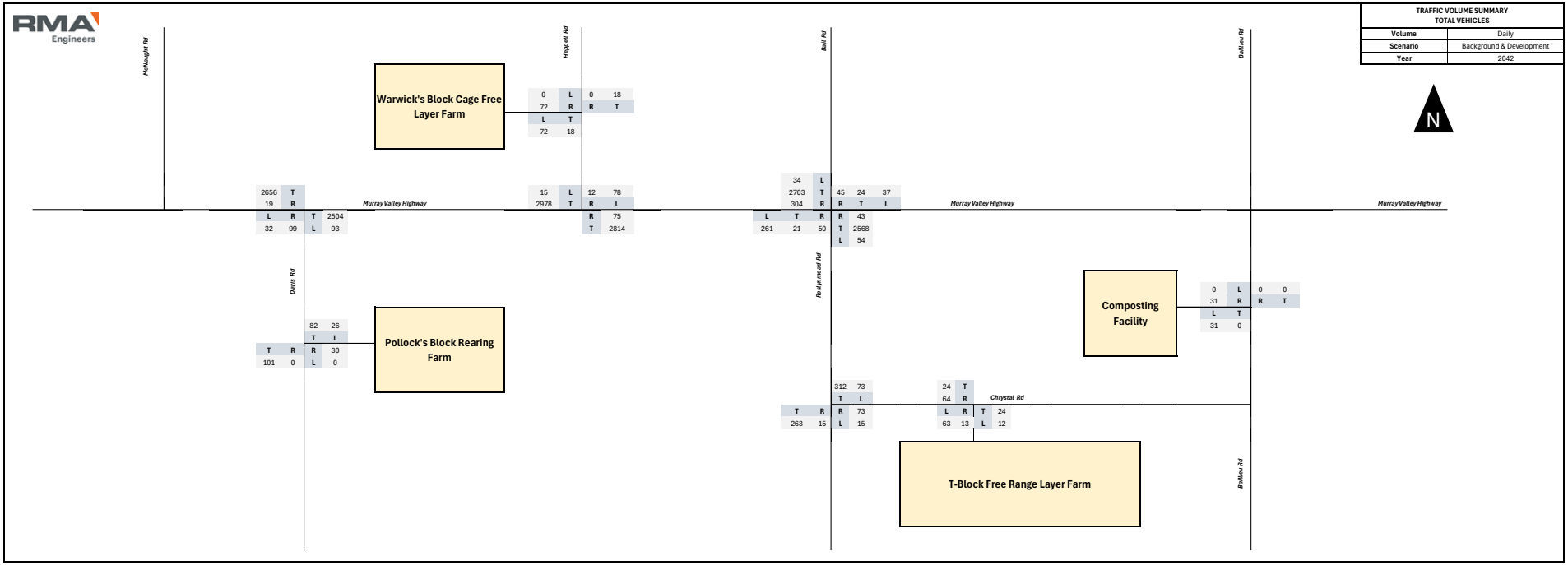

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Development (Ultimate)
All Sites
(Development Peak 2)
Year
2042
N
McNaught Rd
Hogarth Rd
Bal Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Rosamond Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

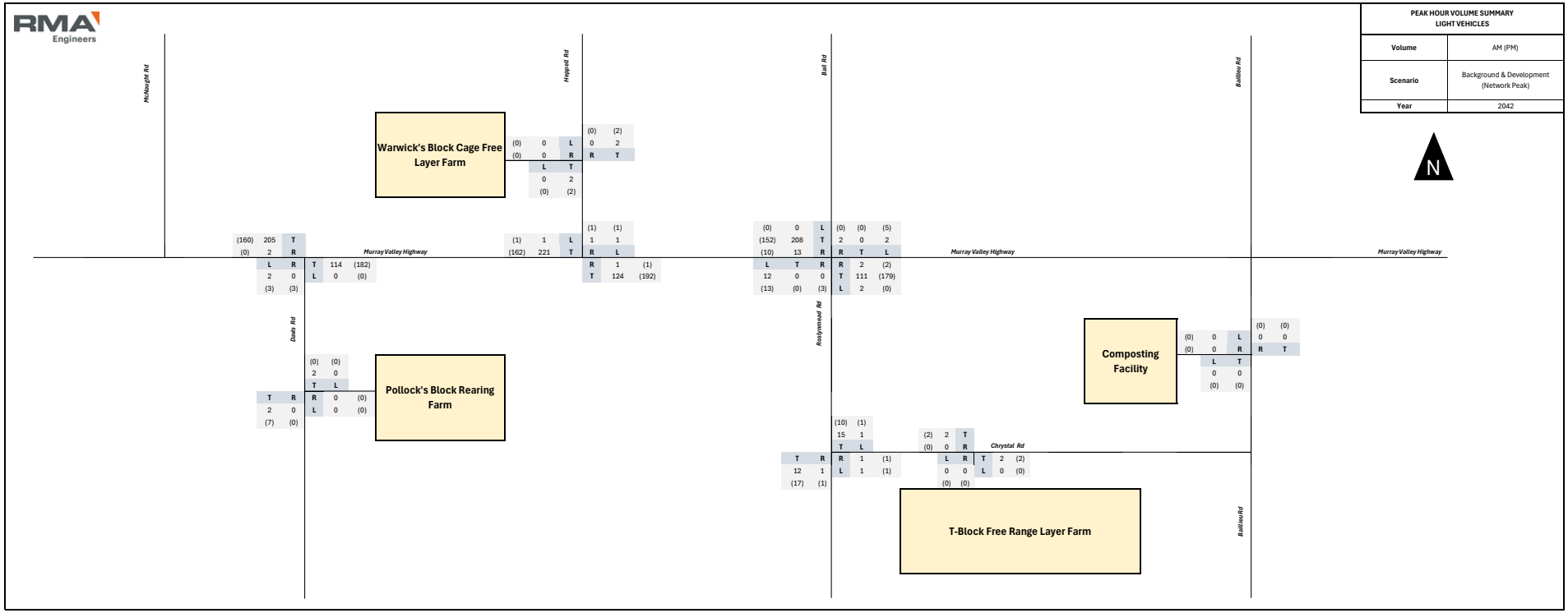

RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume
Estimated Maximum Daily
Scenario
Development (Ultimate)
All Sites
Year
2042
N
McNaught Rd
Hoppoll Rd
Bail Rd
Ballilau Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Redgrimes Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

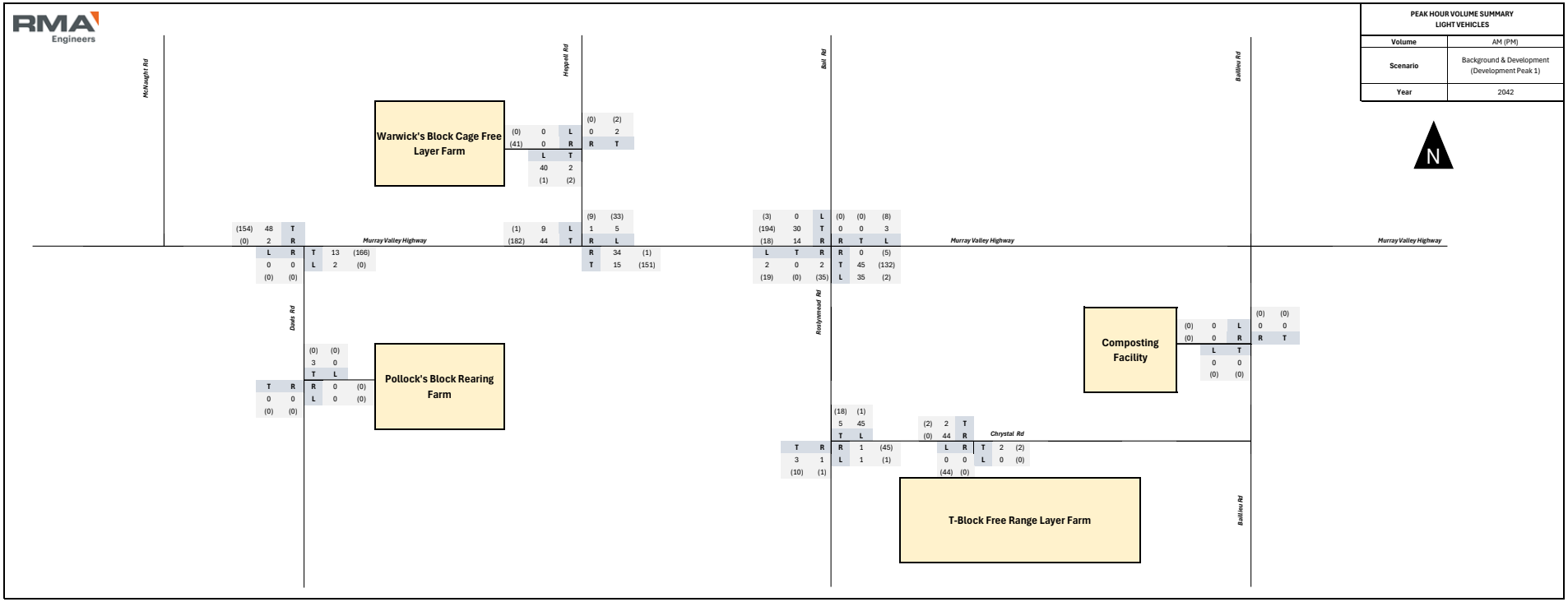

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Network Peak)
Year
2042
N
McNaught Rd
Hogarth Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

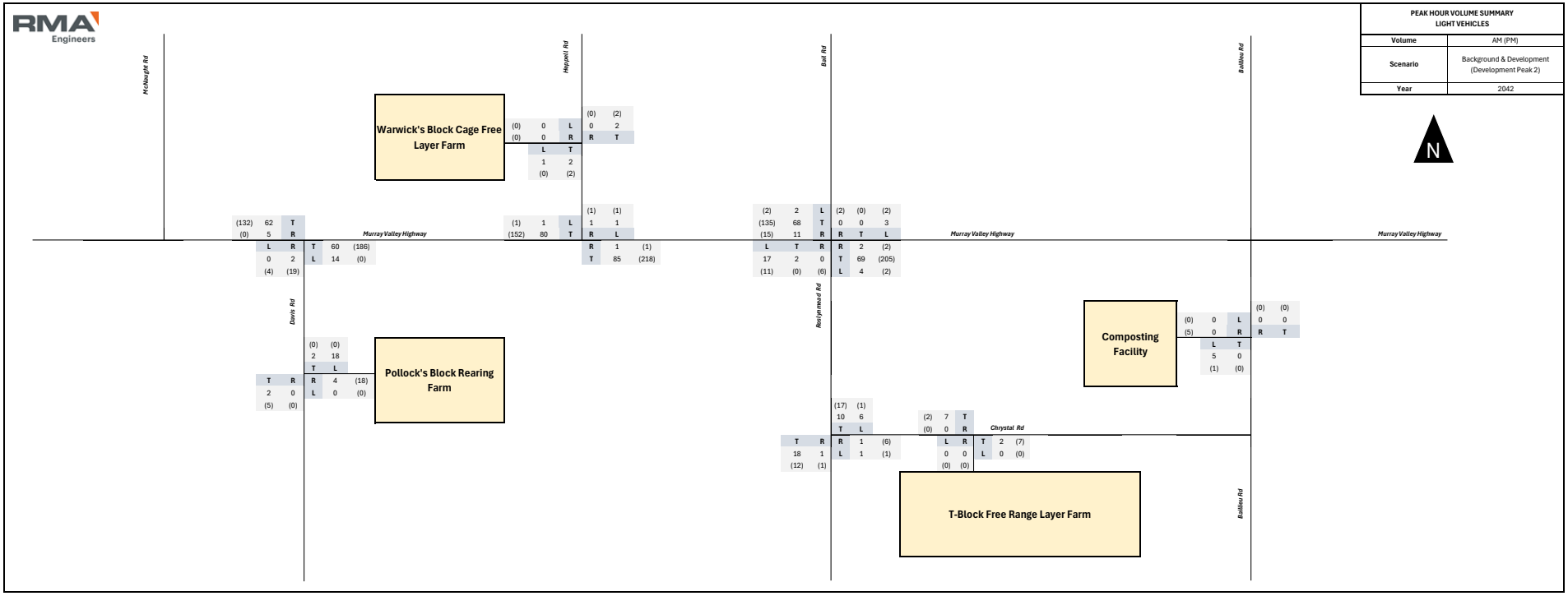

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 1)
Year
2042
N
McVaughs Rd
Hoppal Rd
Ball Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Ballieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

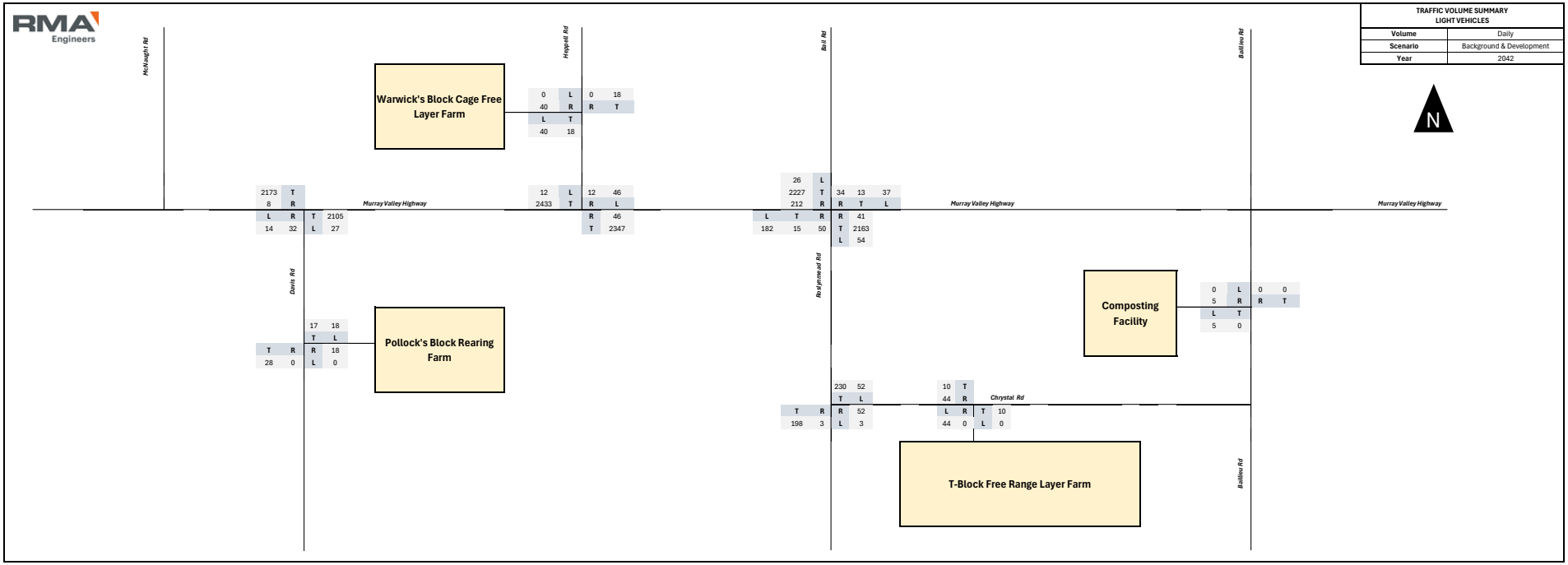

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 2)
Year
2042
N
McNaught Rd
Helpell Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbyrne Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

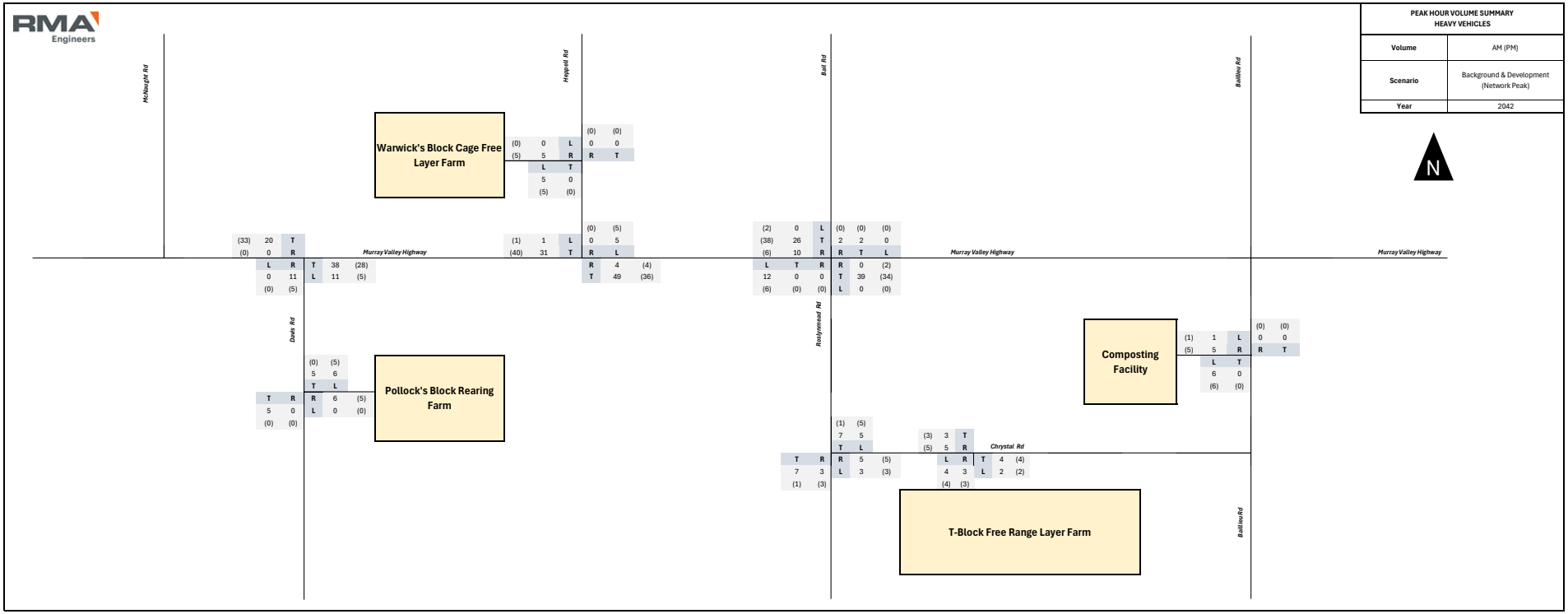

RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume: Daily
Scenario: Background & Development
Year: 2042
N
McVaughs Rd
Hopgrad Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Raymond Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

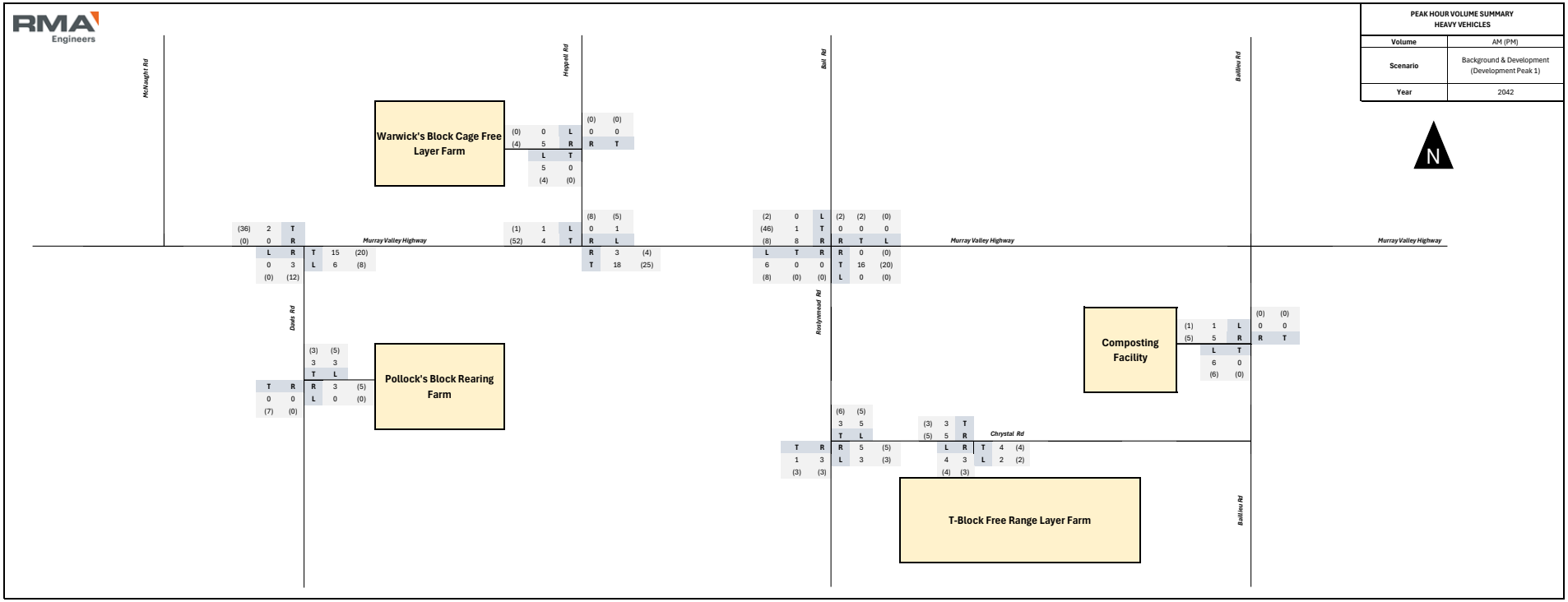

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Network Peak)
Year
2042
N
McNaught Rd
Hogarth Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

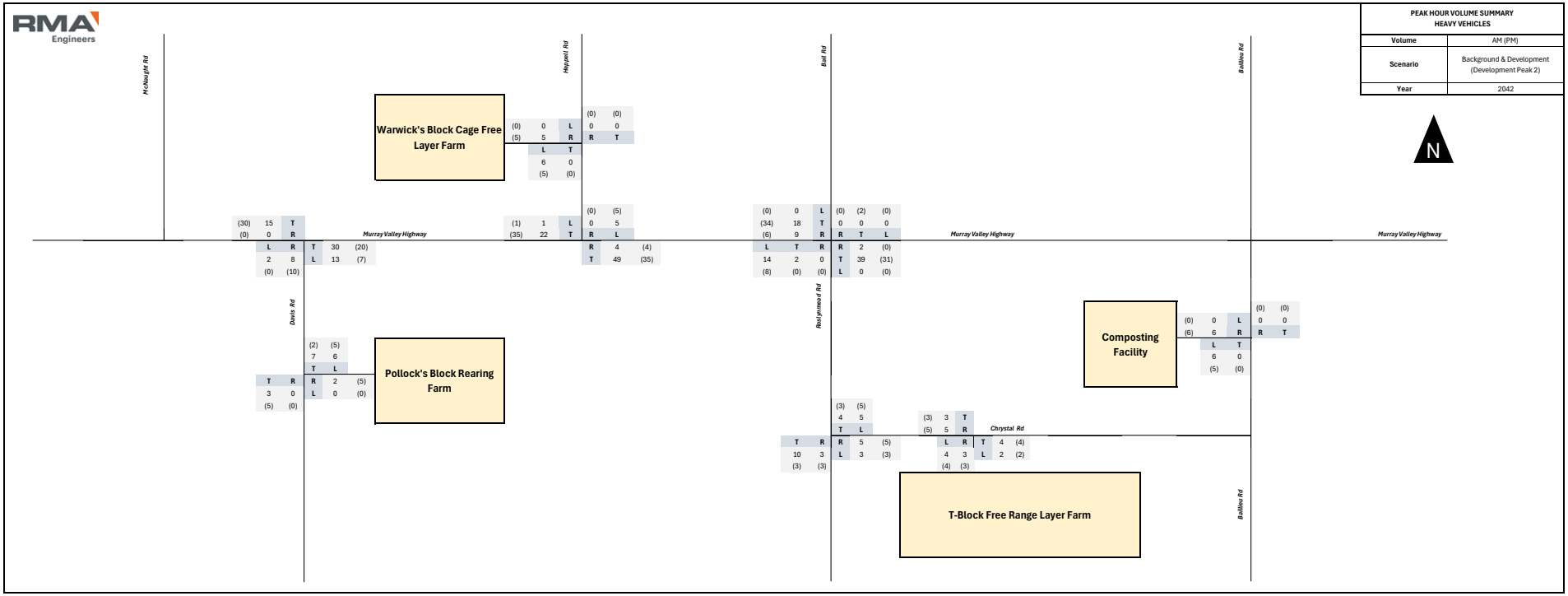

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 1)
Year
2042
N
McVaughs Rd
Hoppall Rd
Ball Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Ballieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

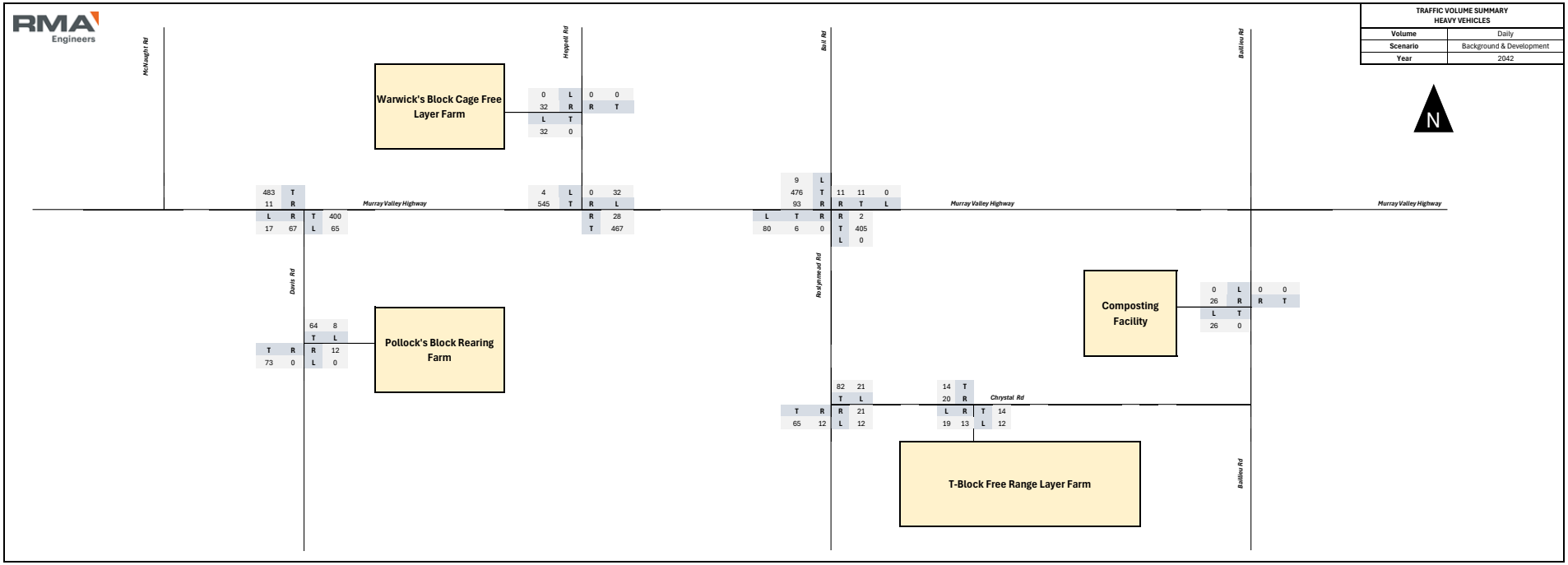

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 2)
Year
2042
N
McNaught Rd
Helpell Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Davis Rd
Rostyn mead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

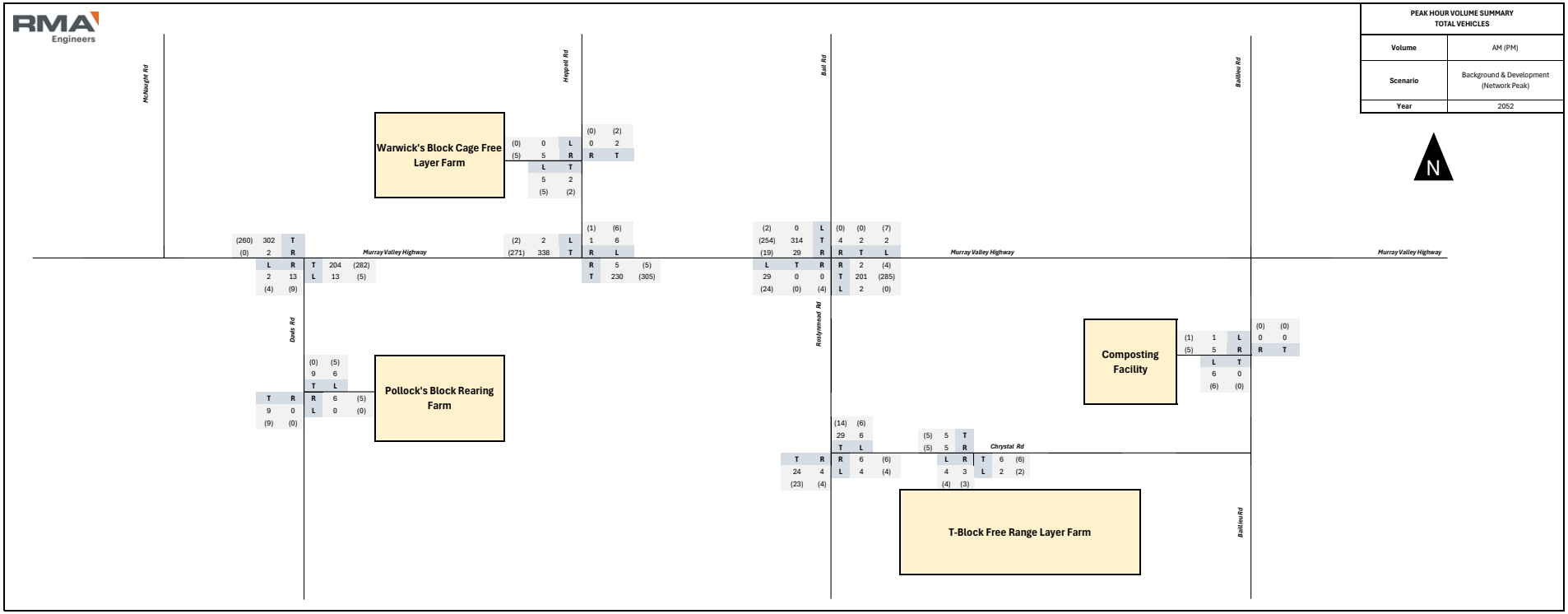

RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume Daily
Scenario Background & Development
Year 2042
N
McVaughs Rd
Hopgrad Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Raymond Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

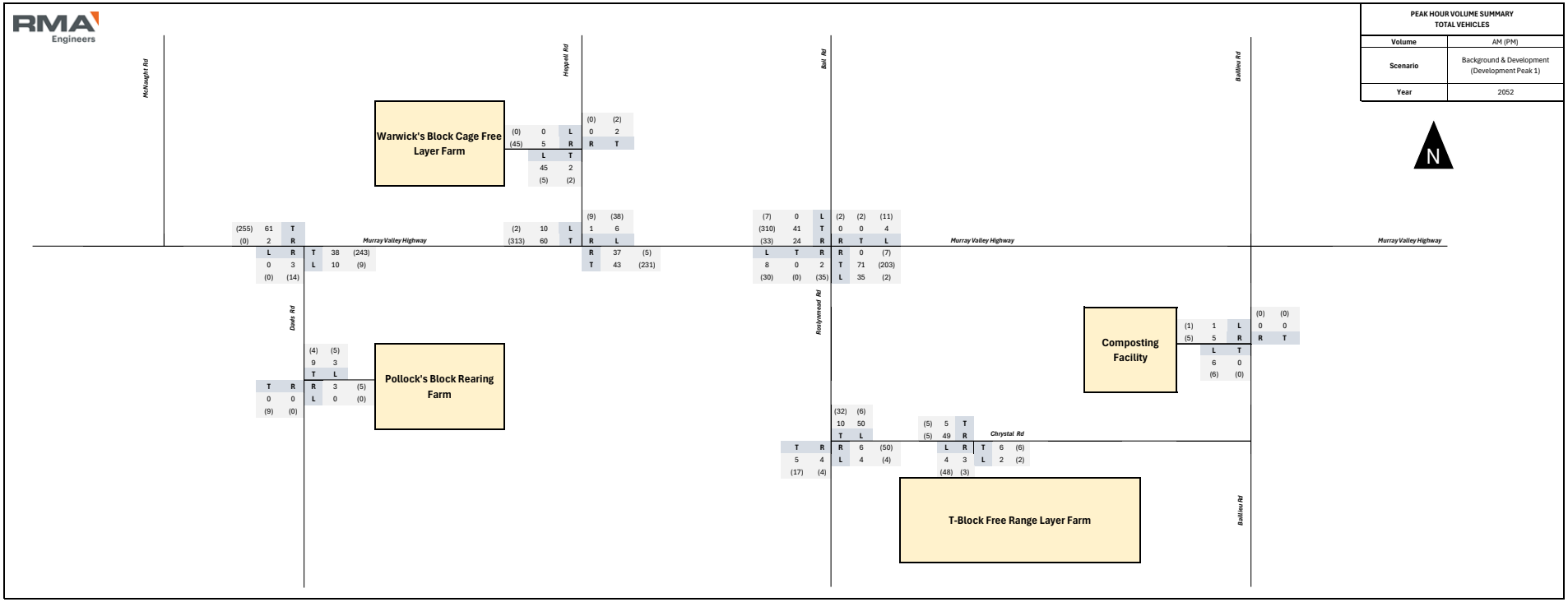

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Network Peak)
Year
2042
N
McNaught Rd
Hogarth Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

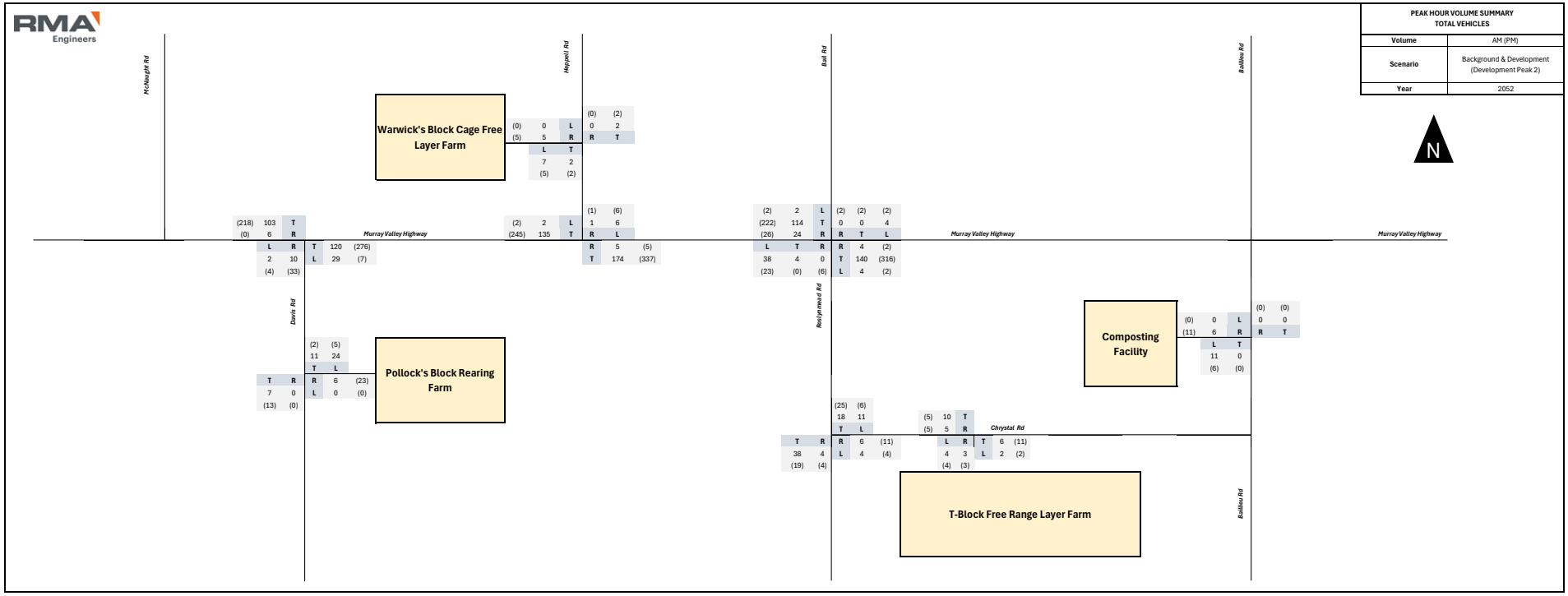

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 1)
Year
2042
N
McVaughs Rd
Hospital Rd
Bail Rd
Ballilou Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Warwick's Block Cage Free Layer Farm
Davis Rd
Pollock's Block Rearing Farm
Rosbynmead Rd
Composting Facility
Chrystal Rd
T-Block Free Range Layer Farm
Ballilou Rd

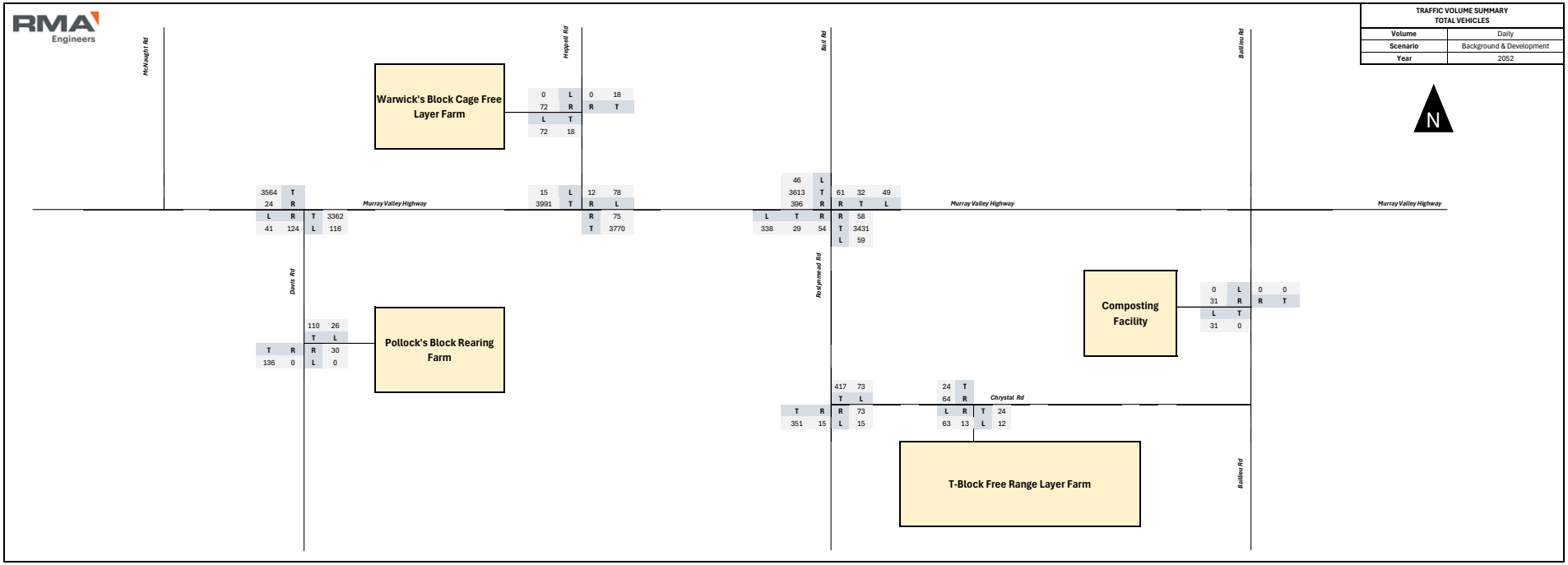

RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 2)
Year
2042
N
McNaught Rd
Helpell Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbrymead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume Daily
Scenario Background & Development
Year 2042
N
McVaughs Rd
Hopgrad Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Raymond Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Network Peak)
Year
2052
N
McNaught Rd
Hogarth Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

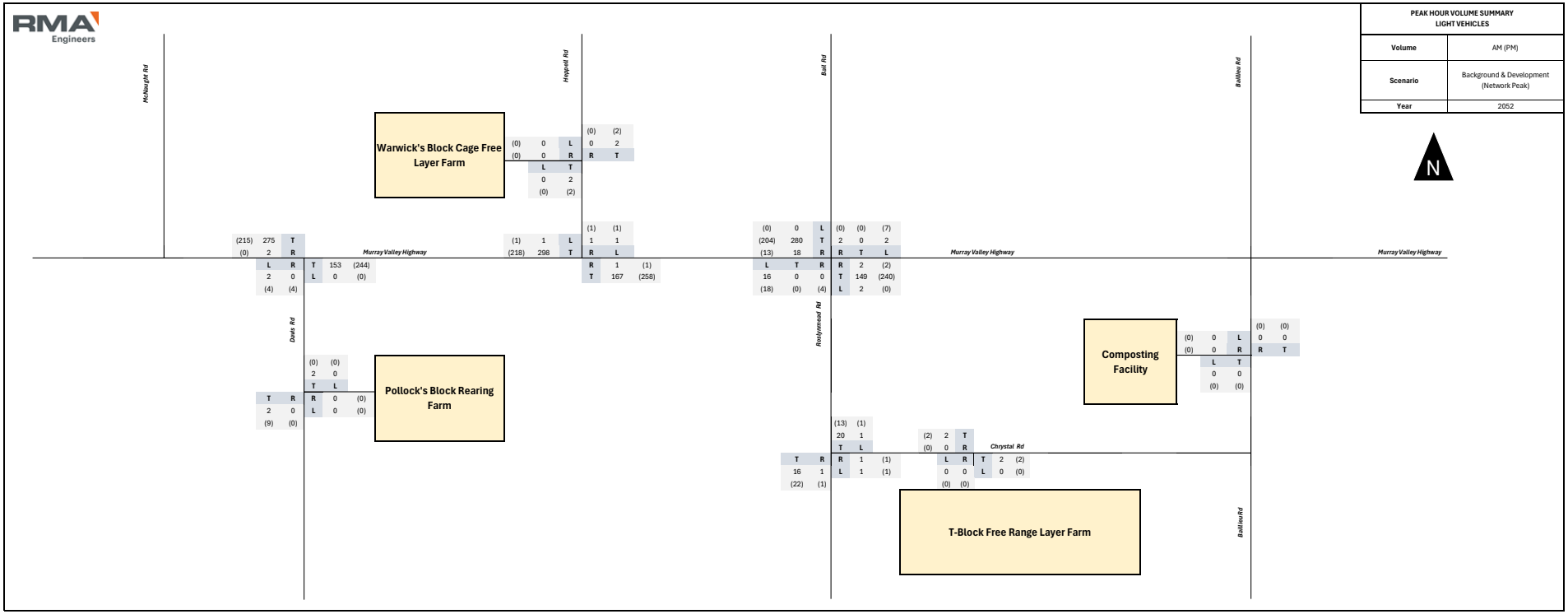

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 1)
Year
2052
N
McVaughs Rd
Hoppal Rd
Bail Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Ballieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

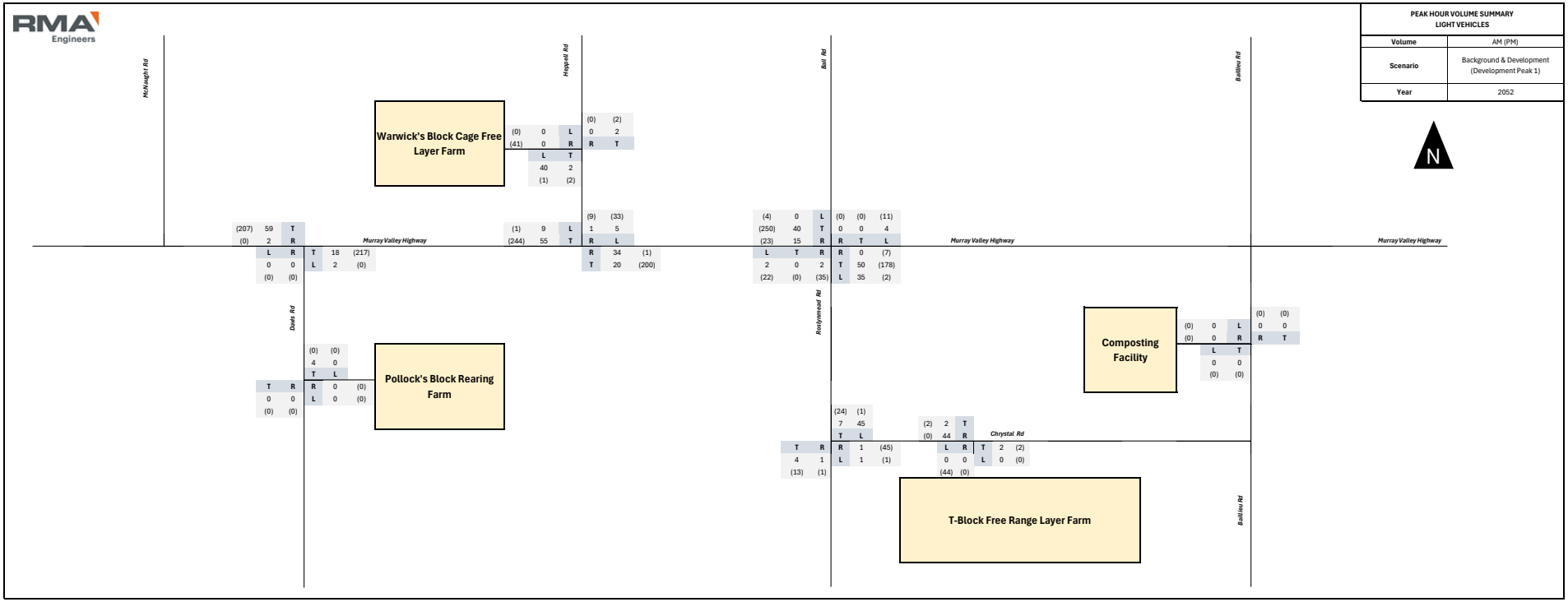

RMA Engineers
PEAK HOUR VOLUME SUMMARY
TOTAL VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 2)
Year
2052
N
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Helpfell Rd
Bull Rd
Ballillou Rd
Davis Rd
Rostyn mead Rd
Chrystal Rd
Ballillou Rd
(218) 103 T
(0) 6 R
L R T 120 (276)
2 10 L 29 (7)
(4) (33)
(0) 0 L
(5) 5 R
L T
7 2
(5) (2)
(0) (2)
0 2
R T
(2) 2 L
(245) 135 T
(1) (6)
1 6
R L
R 5 (5)
T 174 (337)
(2) 2 L
(222) 114 T
(26) 24 R
L T R
38 4 0
(23) (0) (6)
(2) (2) (2)
0 0 4
R T L
R 4 (2)
T 140 (316)
L 4 (2)
(0) 0 L
(11) 6 R
L T
11 0
(6) (0)
(0) (0)
0 0
R T
(2) (5)
11 24
T L
T R
7 0
(13) (0)
R 6 (23)
L 0 (0)
(25) (6)
18 11
T L
T R
38 4
(19) (4)
R 6 (11)
L 4 (4)
(5) 10 T
(5) 5 R
L R
4 3
(4) (3)
T 6 (11)
L 2 (2)

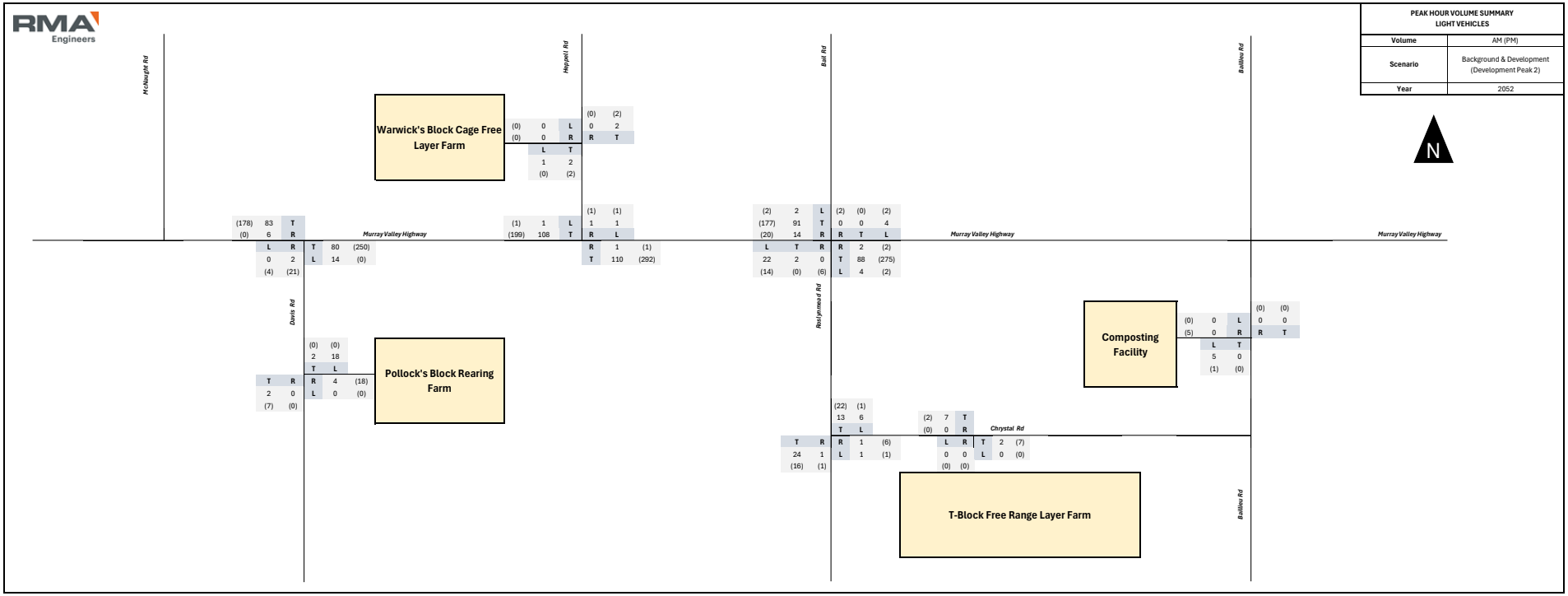

RMA Engineers
TRAFFIC VOLUME SUMMARY
TOTAL VEHICLES
Volume Daily
Scenario Background & Development
Year 2052
N
McVaughs Rd
Hopgrad Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Reaymonad Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

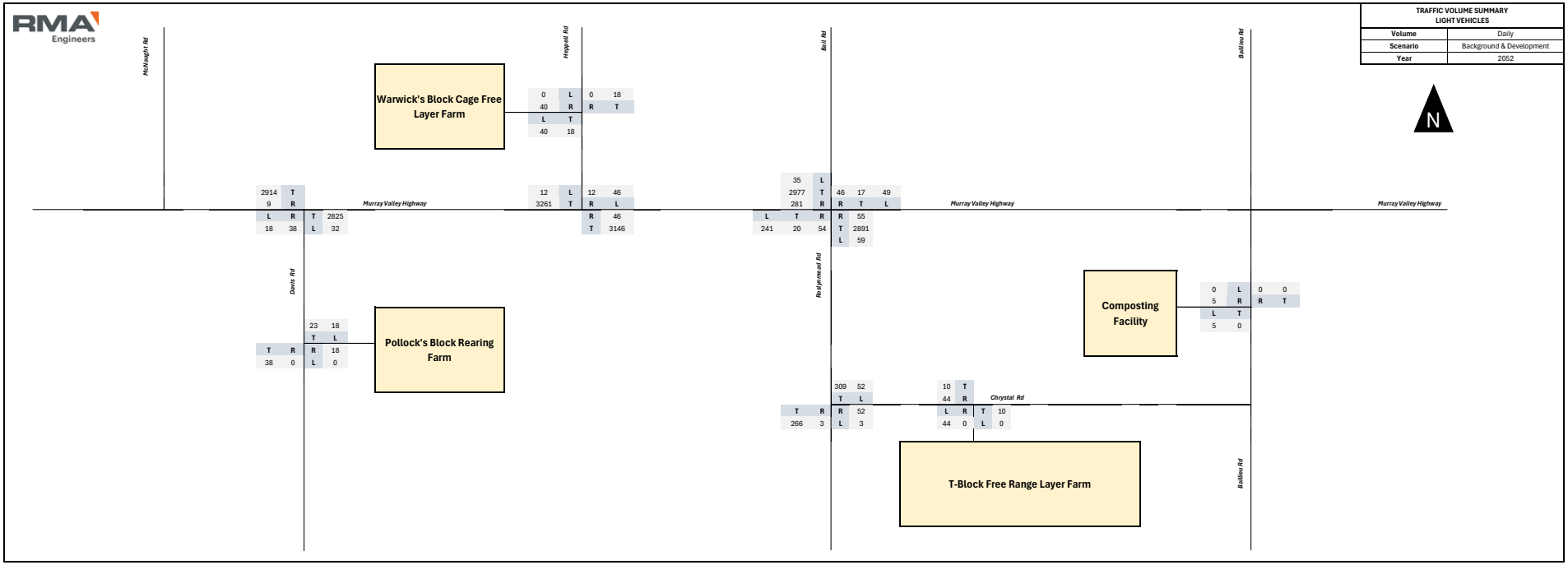
RMA Engineers

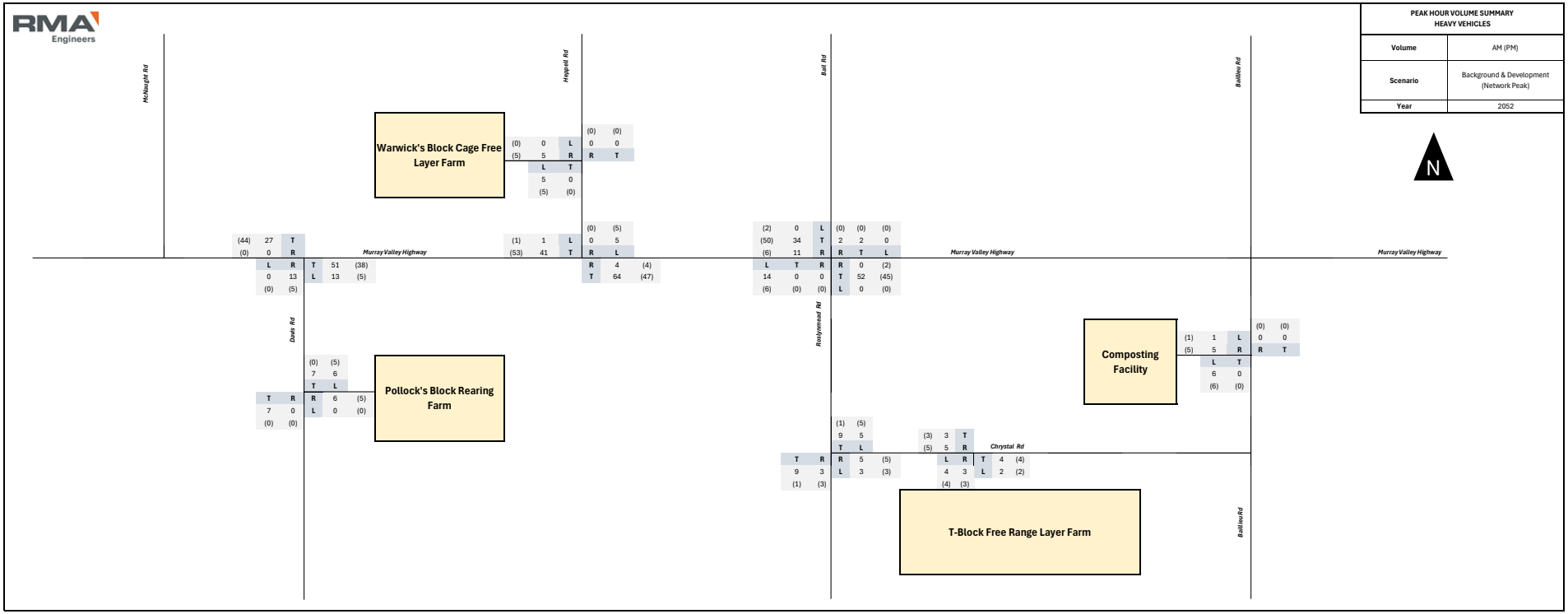
PEAK HOUR VOLUME SUMMARY LIGHT VEHICLES	
Volume	AM (PM)
Scenario	Background & Development (Network Peak)
Year	2052

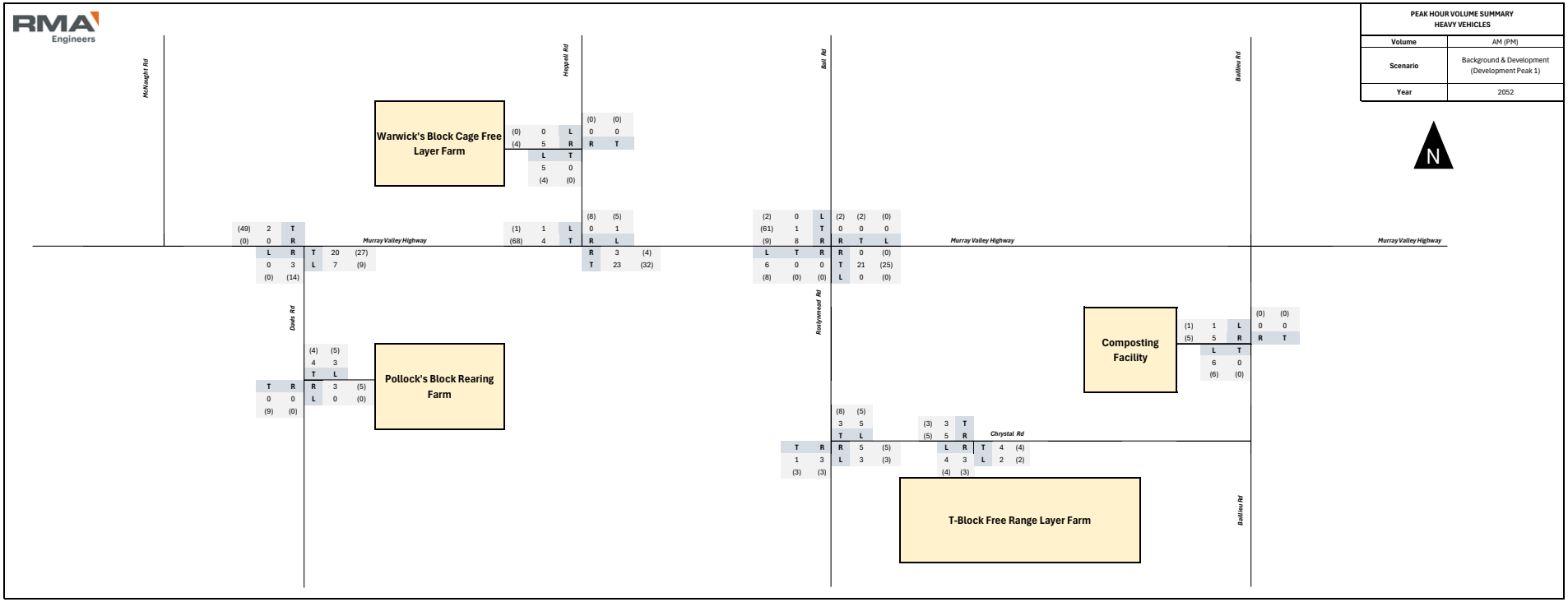


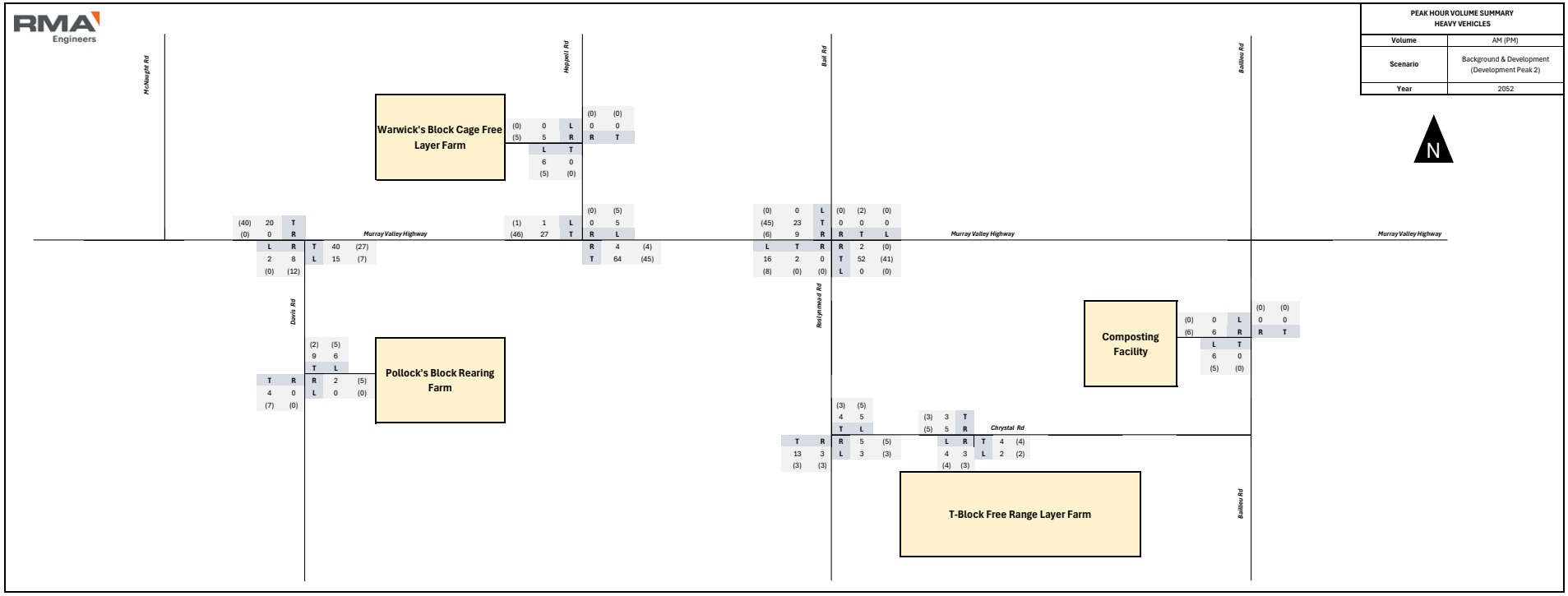

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 1)
Year
2052
N
McVaughs Rd
Hoppal Rd
Ball Rd
Ballieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rosbynmead Rd
Chrystal Rd
Ballieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

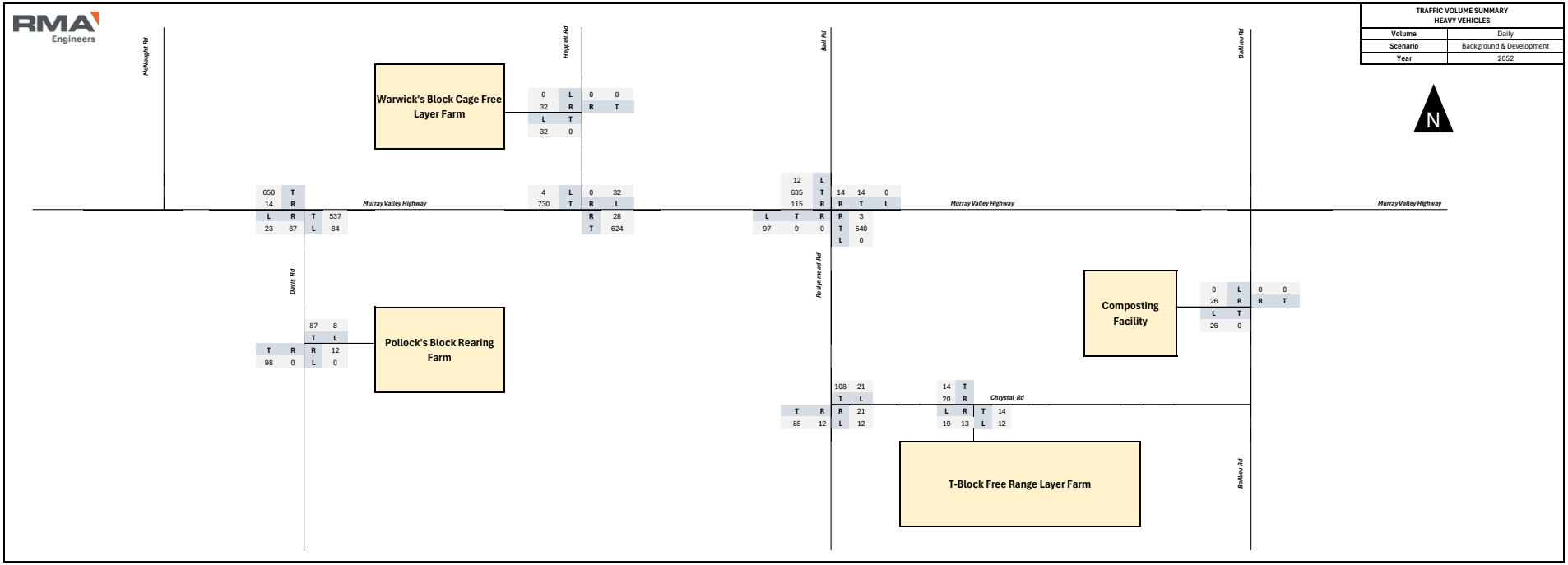

RMA Engineers
PEAK HOUR VOLUME SUMMARY
LIGHT VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 2)
Year
2052
N
McLaughlin Rd
Helpell Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Rostyn-mead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
TRAFFIC VOLUME SUMMARY
LIGHT VEHICLES
Volume Daily
Scenario Background & Development
Year 2052
N
McVaughs Rd
Hopgrad Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Raymond Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Network Peak)
Year
2052
N
McNaught Rd
Hogarth Rd
Ball Rd
Baillieu Rd
Murray Valley Highway
Dads Rd
Rosbynmead Rd
Chrystal Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 1)
Year
2052
N
McVaughs Rd
Hoppal Rd
Ball Rd
Ballilieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Dads Rd
Rosslynnead Rd
Chrystal Rd
Ballilieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm


RMA Engineers
PEAK HOUR VOLUME SUMMARY
HEAVY VEHICLES
Volume
AM (PM)
Scenario
Background & Development (Development Peak 2)
Year
2052
N
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Helpsell Rd
Bull Rd
Ballilau Rd
Davis Rd
Rostyn mead Rd
Chrystal Rd
Ballilau Rd
(40) 20 T
(0) 0 R
L R T 40 (27)
2 8 L 15 (7)
(0) (12)
(0) 0 L
(5) 5 R
L T
6 0
(5) (0)
(0) (0)
0 0
R T
(1) 1 L
(46) 27 T
(0) (5)
0 5
R L
R 4 (4)
T 64 (45)
(0) 0 L
(45) 23 T
(6) 9 R
L T R 2 (0)
16 2 0 T 52 (41)
(8) (0) (0) L 0 (0)
(0) (2) (0)
0 0 0
R T L
(0) 0 L
(6) 6 R
L T
6 0
(5) (0)
(0) (0)
0 0
R T
(2) (5)
9 6
T L
T R R 2 (5)
4 0 L 0 (0)
(7) (0)
(3) (5)
4 5
T L
T R R 5 (5)
13 3 L 3 (3)
(3) (3)
(3) 3 T
(5) 5 R
L R T 4 (4)
4 3 L 2 (2)
(4) (3)


RMA Engineers
TRAFFIC VOLUME SUMMARY
HEAVY VEHICLES
Volume Daily
Scenario Background & Development
Year 2052
N
McVaughs Rd
Hopgrad Rd
Bull Rd
Baillieu Rd
Murray Valley Highway
Murray Valley Highway
Murray Valley Highway
Davis Rd
Reaymonad Rd
Chrystal Rd
Baillieu Rd
Warwick's Block Cage Free Layer Farm
Pollock's Block Rearing Farm
Composting Facility
T-Block Free Range Layer Farm

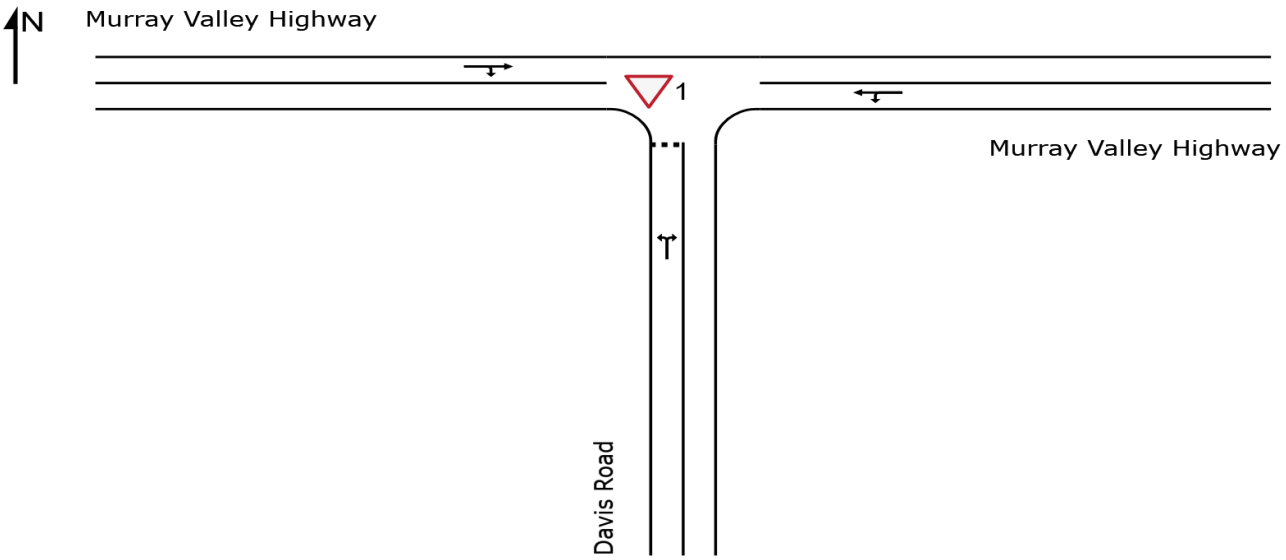
Appendix F SIDRA analysis results

SITE LAYOUT

Site: [1] 2052 AM BG-DEV (Network Peak) (Murray Valley Highway / Davis Road Intersection)

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Created: Monday, 21 July 2025 4:02:35 PM
Project: N:\Synergy\Projects\25E-0010 Poultry Farm - Torrumbarry\4 Design\Traffic\Sidra\Murray Valley Hwy - Davis Rd.sipx

MOVEMENT SUMMARY

Site: [1] 2052 AM BG-DEV (Network Peak) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Davis Road															
1	L2	All MCs	3	33.3	3	33.3	0.042	9.8	LOS A	0.1	1.6	0.54	0.79	0.54	57.5
3	R2	All MCs	15	92.9	15	92.9	0.042	16.6	LOS C	0.1	1.6	0.54	0.79	0.54	45.7
Approach			18	82.4	18	82.4	0.042	15.4	LOS C	0.1	1.6	0.54	0.79	0.54	47.4
East: Murray Valley Highway															
4	L2	All MCs	15	92.9	15	92.9	0.141	10.3	LOS B	0.0	0.0	0.00	0.04	0.00	56.0
5	T1	All MCs	215	25.0	215	25.0	0.141	0.0	LOS A	0.0	0.0	0.00	0.04	0.00	99.8
Approach			229	29.4	229	29.4	0.141	0.7	NA	0.0	0.0	0.00	0.04	0.00	95.0
West: Murray Valley Highway															
11	T1	All MCs	318	8.9	318	8.9	0.176	0.0	LOS A	0.0	0.3	0.01	0.01	0.01	99.7
12	R2	All MCs	3	33.3	3	33.3	0.176	8.8	LOS A	0.0	0.3	0.01	0.01	0.01	71.8
Approach			321	9.2	321	9.2	0.176	0.1	NA	0.0	0.3	0.01	0.01	0.01	99.3
All Vehicles			568	19.6	568	19.6	0.176	0.8	NA	0.1	1.6	0.02	0.05	0.02	94.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [2] 2052 AM BG-DEV (Development Peak 1) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Davis Road															
1	L2	All MCs	2	50.0	2	50.0	0.007	9.3	LOS A	0.0	0.3	0.19	0.62	0.19	58.3
3	R2	All MCs	4	75.0	4	75.0	0.007	10.2	LOS B	0.0	0.3	0.19	0.62	0.19	52.0
Approach			6	66.7	6	66.7	0.007	9.9	LOS A	0.0	0.3	0.19	0.62	0.19	54.0
East: Murray Valley Highway															
4	L2	All MCs	9	77.8	9	77.8	0.035	9.9	LOS A	0.0	0.0	0.00	0.13	0.00	58.8
5	T1	All MCs	40	52.6	40	52.6	0.035	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	97.9
Approach			49	57.4	49	57.4	0.035	1.9	NA	0.0	0.0	0.00	0.13	0.00	86.8
West: Murray Valley Highway															
11	T1	All MCs	64	3.3	64	3.3	0.036	0.0	LOS A	0.0	0.2	0.02	0.03	0.02	99.0
12	R2	All MCs	3	33.3	3	33.3	0.036	8.4	LOS A	0.0	0.2	0.02	0.03	0.02	71.5
Approach			67	4.7	67	4.7	0.036	0.4	NA	0.0	0.2	0.02	0.03	0.02	97.3
All Vehicles			123	29.1	123	29.1	0.036	1.5	NA	0.0	0.3	0.02	0.10	0.02	89.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [3] 2052 AM BG-DEV (Development Peak 2) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Davis Road															
1	L2	All MCs	3	66.7	3	66.7	0.020	10.4	LOS B	0.1	0.7	0.35	0.67	0.35	53.7
3	R2	All MCs	11	80.0	11	80.0	0.020	11.8	LOS B	0.1	0.7	0.35	0.67	0.35	50.3
Approach			14	76.9	14	76.9	0.020	11.5	LOS B	0.1	0.7	0.35	0.67	0.35	51.0
East: Murray Valley Highway															
4	L2	All MCs	31	51.7	31	51.7	0.101	9.2	LOS A	0.0	0.0	0.00	0.13	0.00	65.2
5	T1	All MCs	126	33.3	126	33.3	0.101	0.0	LOS A	0.0	0.0	0.00	0.13	0.00	96.8
Approach			157	36.9	157	36.9	0.101	1.8	NA	0.0	0.0	0.00	0.13	0.00	88.5
West: Murray Valley Highway															
11	T1	All MCs	108	19.4	108	19.4	0.068	0.1	LOS A	0.1	0.5	0.05	0.06	0.05	98.0
12	R2	All MCs	7	14.3	7	14.3	0.068	8.5	LOS A	0.1	0.5	0.05	0.06	0.05	78.7
Approach			116	19.1	116	19.1	0.068	0.6	NA	0.1	0.5	0.05	0.06	0.05	96.5
All Vehicles			286	31.6	286	31.6	0.101	1.8	NA	0.1	0.7	0.04	0.13	0.04	88.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [4] 2052 PM BG-DEV (Network Peak) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Davis Road															
1	L2	All MCs	5	20.0	5	20.0	0.026	9.7	LOS A	0.1	0.8	0.50	0.73	0.50	62.6
3	R2	All MCs	9	55.6	9	55.6	0.026	14.3	LOS B	0.1	0.8	0.50	0.73	0.50	53.6
Approach			15	42.9	15	42.9	0.026	12.6	LOS B	0.1	0.8	0.50	0.73	0.50	56.5
East: Murray Valley Highway															
4	L2	All MCs	6	83.3	6	83.3	0.171	10.0	LOS B	0.0	0.0	0.00	0.01	0.00	58.1
5	T1	All MCs	297	13.5	297	13.5	0.171	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	99.8
Approach			303	14.9	303	14.9	0.171	0.2	NA	0.0	0.0	0.00	0.01	0.00	98.4
West: Murray Valley Highway															
11	T1	All MCs	273	17.0	273	17.0	0.158	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	99.7
12	R2	All MCs	2	50.0	2	50.0	0.158	9.5	LOS A	0.0	0.2	0.01	0.01	0.01	66.0
Approach			275	17.2	275	17.2	0.158	0.1	NA	0.0	0.2	0.01	0.01	0.01	99.4
All Vehicles			593	16.7	593	16.7	0.171	0.5	NA	0.1	0.8	0.02	0.03	0.02	97.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [5] 2052 PM BG-DEV (Development Peak 1) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Davis Road															
1	L2	All MCs	2	50.0	2	50.0	0.043	10.6	LOS B	0.1	1.7	0.54	0.81	0.54	53.9
3	R2	All MCs	16	93.3	16	93.3	0.043	16.3	LOS C	0.1	1.7	0.54	0.81	0.54	45.6
Approach			18	88.2	18	88.2	0.043	15.7	LOS C	0.1	1.7	0.54	0.81	0.54	46.4
East: Murray Valley Highway															
4	L2	All MCs	11	90.0	11	90.0	0.150	10.2	LOS B	0.0	0.0	0.00	0.03	0.00	56.6
5	T1	All MCs	257	11.1	257	11.1	0.150	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	99.8
Approach			267	14.2	267	14.2	0.150	0.4	NA	0.0	0.0	0.00	0.03	0.00	96.9
West: Murray Valley Highway															
11	T1	All MCs	269	19.1	269	19.1	0.158	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	99.8
12	R2	All MCs	2	50.0	2	50.0	0.158	9.3	LOS A	0.0	0.2	0.01	0.01	0.01	66.1
Approach			272	19.4	272	19.4	0.158	0.1	NA	0.0	0.2	0.01	0.01	0.01	99.4
All Vehicles			557	19.1	557	19.1	0.158	0.7	NA	0.1	1.7	0.02	0.04	0.02	94.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [6] 2052 PM BG-DEV (Development Peak 2) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Davis Road															
1	L2	All MCs	5	20.0	5	20.0	0.068	9.7	LOS A	0.2	1.9	0.49	0.78	0.49	63.0
3	R2	All MCs	35	36.4	35	36.4	0.068	12.4	LOS B	0.2	1.9	0.49	0.78	0.49	58.2
Approach			40	34.2	40	34.2	0.068	12.1	LOS B	0.2	1.9	0.49	0.78	0.49	58.8
East: Murray Valley Highway															
4	L2	All MCs	8	87.5	8	87.5	0.166	10.1	LOS B	0.0	0.0	0.00	0.02	0.00	57.2
5	T1	All MCs	292	9.7	292	9.7	0.166	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	99.8
Approach			300	11.9	300	11.9	0.166	0.3	NA	0.0	0.0	0.00	0.02	0.00	97.8
West: Murray Valley Highway															
11	T1	All MCs	229	18.3	229	18.3	0.134	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	99.7
12	R2	All MCs	2	50.0	2	50.0	0.134	9.6	LOS A	0.0	0.2	0.01	0.01	0.01	66.0
Approach			232	18.6	232	18.6	0.134	0.1	NA	0.0	0.2	0.01	0.01	0.01	99.2
All Vehicles			572	16.2	572	16.2	0.166	1.0	NA	0.2	1.9	0.04	0.07	0.04	94.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

SIGN CONTROL ANALYSIS

Site: [1] 2052 AM BG-DEV (Network Peak) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Davis Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Davis Road												
1	East	R2	Y	543[14]	588[14]	1.00	0.037	1.46	6.30	174.0	4.10	0.65
1	West	L2	Y	215	242	1.80	0.027	1.17	4.67	129.6	2.57	0.55
East: Murray Valley Highway												
No opposed movements on this approach.												
West: Murray Valley Highway												
1	South	R2	Y	229[14]	263[14]	1.80	0.029	1.17	4.67	123.0	2.33	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road					
1	17.51	8.84	8.67	0.495	4.9
East: Murray Valley Highway					
No opposed movements on this approach.					
West: Murray Valley Highway					

1	17.81	4.41	13.41	0.753	0.0

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road							
West	L2	1	18.95	4.20	14.75	0.778	0.9
East	R2	1	17.21	9.84	7.37	0.428	5.7
East: Murray Valley Highway							
No opposed movements on this approach.							
West: Murray Valley Highway							
South	R2	1	17.81	4.41	13.41	0.753	1.0

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [2] 2052 AM BG-DEV (Development Peak 1) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Davis Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Davis Road												
1	East	R2	Y	112[14]	126[14]	0.97	0.007	1.38	5.91	160.2	3.85	0.65
1	West	L2	Y	40	51	1.80	0.005	1.25	5.00	138.9	2.75	0.55
East: Murray Valley Highway												
No opposed movements on this approach.												
West: Murray Valley Highway												
1	South	R2	Y	49[14]	64[14]	1.80	0.007	1.17	4.67	109.8	2.33	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road					
1	47.90	4.37	43.54	0.909	0.5
East: Murray Valley Highway					
No opposed movements on this approach.					
West: Murray Valley Highway					

1	59.94	3.68	56.26	0.939	0.0

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road							
West	L2	1	74.98	3.79	71.18	0.949	0.2
East	R2	1	34.36	4.65	29.71	0.865	0.7
East: Murray Valley Highway							
No opposed movements on this approach.							
West: Murray Valley Highway							
South	R2	1	59.94	3.68	56.26	0.939	0.2

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [3] 2052 AM BG-DEV (Development Peak 2) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Davis Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Davis Road												
1	East	R2	Y	257[14]	293[14]	0.99	0.017	1.40	6.02	163.0	3.92	0.65
1	West	L2	Y	126	147	1.80	0.016	1.33	5.33	148.1	2.93	0.55
East: Murray Valley Highway												
No opposed movements on this approach.												
West: Murray Valley Highway												
1	South	R2	Y	157[14]	186[14]	1.80	0.020	1.07	4.29	100.6	2.14	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road					
1	21.56	5.58	15.98	0.741	1.6
East: Murray Valley Highway					
No opposed movements on this approach.					
West: Murray Valley Highway					

1	22.71	3.70	19.01	0.837	0.1

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road							
West	L2	1	28.94	4.49	24.46	0.845	0.7
East	R2	1	19.35	5.91	13.43	0.694	1.9
East: Murray Valley Highway							
No opposed movements on this approach.							
West: Murray Valley Highway							
South	R2	1	22.71	3.70	19.01	0.837	0.6

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [4] 2052 PM BG-DEV (Network Peak) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Davis Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Davis Road												
1	East	R2	Y	575[14]	620[14]	0.93	0.037	1.28	5.49	152.2	3.58	0.65
1	West	L2	Y	297	317	1.80	0.036	1.10	4.40	122.2	2.42	0.55
East: Murray Valley Highway												
No opposed movements on this approach.												
West: Murray Valley Highway												
1	South	R2	Y	303[14]	326[14]	1.80	0.037	1.25	5.00	136.6	2.50	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road					
1	15.02	6.64	8.38	0.558	3.4
East: Murray Valley Highway					
No opposed movements on this approach.					
West: Murray Valley Highway					

1	16.02	5.16	10.86	0.678	0.0

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road							
West	L2	1	15.32	4.19	11.13	0.727	1.1
East	R2	1	14.85	7.99	6.86	0.462	4.7
East: Murray Valley Highway							
No opposed movements on this approach.							
West: Murray Valley Highway							
South	R2	1	16.02	5.16	10.86	0.678	1.6

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [5] 2052 PM BG-DEV (Development Peak 1) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Davis Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Davis Road												
1	East	R2	Y	534[14]	577[14]	0.92	0.034	1.47	6.31	174.6	4.11	0.65
1	West	L2	Y	257	271	1.80	0.030	1.25	5.00	138.9	2.75	0.55
East: Murray Valley Highway												
No opposed movements on this approach.												
West: Murray Valley Highway												
1	South	R2	Y	267[14]	286[14]	1.80	0.032	1.25	5.00	134.5	2.50	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road					
1	17.27	9.04	8.22	0.476	5.0
East: Murray Valley Highway					
No opposed movements on this approach.					
West: Murray Valley Highway					

1	17.32	4.94	12.38	0.715	0.0

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road							
West	L2	1	17.95	4.73	13.22	0.736	1.2
East	R2	1	17.18	9.62	7.56	0.440	5.5
East: Murray Valley Highway							
No opposed movements on this approach.							
West: Murray Valley Highway							
South	R2	1	17.32	4.94	12.38	0.715	1.3

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [6] 2052 PM BG-DEV (Development Peak 2) (Murray Valley Highway / Davis Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

Murray Valley Hwy/Davis Rd
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Davis Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Davis Road												
1	East	R2	Y	527[14]	565[14]	0.97	0.035	1.18	5.08	140.7	3.31	0.65
1	West	L2	Y	292	306	1.80	0.035	1.10	4.40	122.2	2.42	0.55
East: Murray Valley Highway												
No opposed movements on this approach.												
West: Murray Valley Highway												
1	South	R2	Y	300[14]	318[14]	1.80	0.036	1.25	5.00	135.8	2.50	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road					
1	14.02	6.20	7.81	0.558	3.1
East: Murray Valley Highway					
No opposed movements on this approach.					
West: Murray Valley Highway					

1	16.25	5.11	11.13	0.685	0.0

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Davis Road							
West	L2	1	15.69	4.14	11.54	0.736	1.1
East	R2	1	13.76	6.51	7.25	0.527	3.4
East: Murray Valley Highway							
No opposed movements on this approach.							
West: Murray Valley Highway							
South	R2	1	16.25	5.11	11.13	0.685	1.5

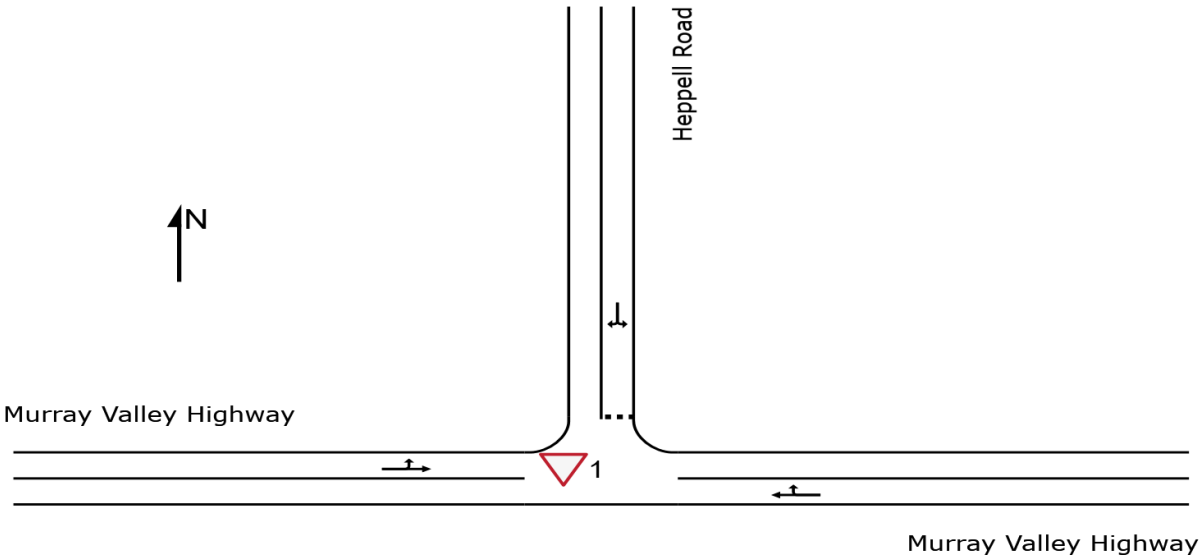
Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SITE LAYOUT

Site: [1] 2052 BG-DEV AM (Network Peak) (Murray Valley Highway / Heppell Road Intersection)

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



Organisation: RMA ENGINEERS PTY LTD | Licence: NETWORK / 1PC | Created: Monday, 21 July 2025 4:06:51 PM
Project: N:\Synergy\Projects\25E-0010 Poultry Farm - Torrumbarry\4 Design\Traffic\Sidra\Murray Valley Hwy - Heppell Rd.sipx

MOVEMENT SUMMARY

Site: [1] 2052 BG-DEV AM (Network Peak) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Murray Valley Highway															
5	T1	All MCs	243	27.7	243	27.7	0.155	0.1	LOS A	0.1	0.8	0.04	0.04	0.04	99.3
6	R2	All MCs	5	80.0	5	80.0	0.155	12.9	LOS B	0.1	0.8	0.04	0.04	0.04	57.5
Approach			248	28.8	248	28.8	0.155	0.4	NA	0.1	0.8	0.04	0.04	0.04	97.8
North: Heppell Road															
7	L2	All MCs	6	83.3	6	83.3	0.011	12.8	LOS B	0.0	0.4	0.48	0.67	0.48	49.9
9	R2	All MCs	1	0.0	1	0.0	0.011	10.4	LOS B	0.0	0.4	0.48	0.67	0.48	69.9
Approach			7	71.4	7	71.4	0.011	12.5	LOS B	0.0	0.4	0.48	0.67	0.48	52.1
West: Murray Valley Highway															
10	L2	All MCs	2	50.0	2	50.0	0.199	9.2	LOS A	0.0	0.0	0.00	0.00	0.00	67.1
11	T1	All MCs	357	12.1	357	12.1	0.199	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	99.8
Approach			359	12.3	359	12.3	0.199	0.1	NA	0.0	0.0	0.00	0.00	0.00	99.5
All Vehicles			615	19.7	615	19.7	0.199	0.4	NA	0.1	0.8	0.02	0.03	0.02	97.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (3)] 2052 BG-DEV AM (Development Peak 1) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Murray Valley Highway															
5	T1	All MCs	45	53.5	45	53.5	0.053	0.1	LOS A	0.2	1.7	0.14	0.32	0.14	87.4
6	R2	All MCs	39	8.1	39	8.1	0.053	7.9	LOS A	0.2	1.7	0.14	0.32	0.14	74.2
Approach			84	32.5	84	32.5	0.053	3.7	NA	0.2	1.7	0.14	0.32	0.14	80.8
North: Heppell Road															
7	L2	All MCs	6	16.7	6	16.7	0.005	8.5	LOS A	0.0	0.2	0.15	0.60	0.15	67.2
9	R2	All MCs	1	0.0	1	0.0	0.005	7.9	LOS A	0.0	0.2	0.15	0.60	0.15	72.8
Approach			7	14.3	7	14.3	0.005	8.4	LOS A	0.0	0.2	0.15	0.60	0.15	68.0
West: Murray Valley Highway															
10	L2	All MCs	11	10.0	11	10.0	0.039	8.1	LOS A	0.0	0.0	0.00	0.10	0.00	80.4
11	T1	All MCs	62	6.8	62	6.8	0.039	0.0	LOS A	0.0	0.0	0.00	0.10	0.00	97.0
Approach			73	7.2	73	7.2	0.039	1.2	NA	0.0	0.0	0.00	0.10	0.00	94.2
All Vehicles			164	20.5	164	20.5	0.053	2.8	NA	0.2	1.7	0.08	0.23	0.08	85.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (5)] 2052 BG-DEV AM (Development Peak 2) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Murray Valley Highway															
5	T1	All MCs	183	36.8	183	36.8	0.122	0.0	LOS A	0.1	0.6	0.03	0.03	0.03	99.4
6	R2	All MCs	5	80.0	5	80.0	0.122	10.3	LOS B	0.1	0.6	0.03	0.03	0.03	57.6
Approach			188	38.0	188	38.0	0.122	0.3	NA	0.1	0.6	0.03	0.03	0.03	97.5
North: Heppell Road															
7	L2	All MCs	6	83.3	6	83.3	0.008	10.9	LOS B	0.0	0.3	0.30	0.61	0.30	51.1
9	R2	All MCs	1	0.0	1	0.0	0.008	8.8	LOS A	0.0	0.3	0.30	0.61	0.30	72.2
Approach			7	71.4	7	71.4	0.008	10.6	LOS B	0.0	0.3	0.30	0.61	0.30	53.3
West: Murray Valley Highway															
10	L2	All MCs	2	50.0	2	50.0	0.084	9.1	LOS A	0.0	0.0	0.00	0.01	0.00	67.1
11	T1	All MCs	142	20.0	142	20.0	0.084	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	99.8
Approach			144	20.4	144	20.4	0.084	0.1	NA	0.0	0.0	0.00	0.01	0.00	99.1
All Vehicles			340	31.3	340	31.3	0.122	0.5	NA	0.1	0.6	0.02	0.03	0.02	96.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (2)] 2052 BG-DEV PM (Network Peak) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Murray Valley Highway															
5	T1	All MCs	321	15.4	321	15.4	0.189	0.1	LOS A	0.1	0.7	0.03	0.03	0.03	99.5
6	R2	All MCs	5	80.0	5	80.0	0.189	11.8	LOS B	0.1	0.7	0.03	0.03	0.03	57.6
Approach			326	16.5	326	16.5	0.189	0.3	NA	0.1	0.7	0.03	0.03	0.03	98.4
North: Heppell Road															
7	L2	All MCs	6	83.3	6	83.3	0.010	12.1	LOS B	0.0	0.4	0.44	0.65	0.44	50.3
9	R2	All MCs	1	0.0	1	0.0	0.010	10.4	LOS B	0.0	0.4	0.44	0.65	0.44	70.7
Approach			7	71.4	7	71.4	0.010	11.9	LOS B	0.0	0.4	0.44	0.65	0.44	52.5
West: Murray Valley Highway															
10	L2	All MCs	2	50.0	2	50.0	0.166	9.1	LOS A	0.0	0.0	0.00	0.00	0.00	67.1
11	T1	All MCs	285	19.6	285	19.6	0.166	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	99.8
Approach			287	19.8	287	19.8	0.166	0.1	NA	0.0	0.0	0.00	0.00	0.00	99.5
All Vehicles			621	18.6	621	18.6	0.189	0.3	NA	0.1	0.7	0.02	0.03	0.02	97.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (4)] 2052 BG-DEV PM (Development Peak 1) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Murray Valley Highway															
5	T1	All MCs	244	13.8	244	13.8	0.145	0.1	LOS A	0.1	0.7	0.04	0.04	0.04	99.3
6	R2	All MCs	5	80.0	5	80.0	0.145	12.7	LOS B	0.1	0.7	0.04	0.04	0.04	57.5
Approach			249	15.2	249	15.2	0.145	0.4	NA	0.1	0.7	0.04	0.04	0.04	97.8
North: Heppell Road															
7	L2	All MCs	40	13.2	40	13.2	0.077	9.7	LOS A	0.3	2.2	0.47	0.73	0.47	65.7
9	R2	All MCs	18	47.1	18	47.1	0.077	14.2	LOS B	0.3	2.2	0.47	0.73	0.47	56.3
Approach			58	23.6	58	23.6	0.077	11.1	LOS B	0.3	2.2	0.47	0.73	0.47	62.5
West: Murray Valley Highway															
10	L2	All MCs	2	50.0	2	50.0	0.194	9.2	LOS A	0.0	0.0	0.00	0.00	0.00	67.1
11	T1	All MCs	328	21.8	328	21.8	0.194	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	99.8
Approach			331	22.0	331	22.0	0.194	0.1	NA	0.0	0.0	0.00	0.00	0.00	99.5
All Vehicles			638	19.5	638	19.5	0.194	1.2	NA	0.3	2.2	0.06	0.08	0.06	93.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [1 (6)] 2052 BG-DEV PM (Development Peak 2) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
East: Murray Valley Highway															
5	T1	All MCs	355	13.4	355	13.4	0.205	0.0	LOS A	0.1	0.6	0.02	0.02	0.02	99.6
6	R2	All MCs	5	80.0	5	80.0	0.205	11.2	LOS B	0.1	0.6	0.02	0.02	0.02	57.6
Approach			360	14.3	360	14.3	0.205	0.2	NA	0.1	0.6	0.02	0.02	0.02	98.5
North: Heppell Road															
7	L2	All MCs	6	83.3	6	83.3	0.010	11.9	LOS B	0.0	0.4	0.42	0.64	0.42	50.5
9	R2	All MCs	1	0.0	1	0.0	0.010	10.5	LOS B	0.0	0.4	0.42	0.64	0.42	71.0
Approach			7	71.4	7	71.4	0.010	11.7	LOS B	0.0	0.4	0.42	0.64	0.42	52.7
West: Murray Valley Highway															
10	L2	All MCs	2	50.0	2	50.0	0.150	9.1	LOS A	0.0	0.0	0.00	0.01	0.00	67.1
11	T1	All MCs	258	18.8	258	18.8	0.150	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	99.8
Approach			260	19.0	260	19.0	0.150	0.1	NA	0.0	0.0	0.00	0.01	0.00	99.4
All Vehicles			627	16.9	627	16.9	0.205	0.3	NA	0.1	0.6	0.02	0.02	0.02	97.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

SIGN CONTROL ANALYSIS

Site: [1] 2052 BG-DEV AM (Network Peak) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters				
Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Heppell Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters												
Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
East: Murray Valley Highway												
1	North	R2	Y	359[14]	381[14]	1.80	0.045	1.40	5.60	154.8	2.80	0.50
North: Heppell Road												
1	East	L2	Y	357	378	1.80	0.045	1.42	5.67	157.4	3.12	0.55
1	West	R2	Y	606[14]	664[14]	1.00	0.043	1.00	4.30	118.6	2.80	0.65
West: Murray Valley Highway												
No opposed movements on this approach.												

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway					
1	15.90	6.49	9.41	0.592	0.2
North: Heppell Road					
1	15.43	6.32	9.12	0.591	2.5
West: Murray Valley Highway					

No opposed movements on this approach.

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway							
North	R2	1	15.90	6.49	9.41	0.592	2.5
North: Heppell Road							
East	L2	1	16.07	6.44	9.63	0.599	2.5
West	R2	1	11.57	5.55	6.02	0.520	2.7
West: Murray Valley Highway							

No opposed movements on this approach.

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [1 (3)] 2052 BG-DEV AM (Development Peak 1) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Heppell Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
East: Murray Valley Highway												
1	North	R2	Y	73[14]	75[14]	1.80	0.008	1.04	4.16	102.2	2.08	0.50
North: Heppell Road												
1	East	L2	Y	62	64	1.80	0.007	1.08	4.33	120.4	2.38	0.55
1	West	R2	Y	152[14]	168[14]	1.01	0.010	1.00	4.30	93.1	2.80	0.65
West: Murray Valley Highway												
No opposed movements on this approach.												

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway					
1	50.72	3.29	47.43	0.935	0.2
North: Heppell Road					
1	54.30	3.31	51.00	0.939	0.2
West: Murray Valley Highway					

No opposed movements on this approach.

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway							
North	R2	1	50.72	3.29	47.43	0.935	0.2
North: Heppell Road							
East	L2	1	59.12	3.30	55.82	0.944	0.2
West	R2	1	25.43	3.36	22.06	0.868	0.5
West: Murray Valley Highway							
No opposed movements on this approach.							

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [1 (5)] 2052 BG-DEV AM (Development Peak 2) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters				
Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Heppell Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters												
Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
East: Murray Valley Highway												
1	North	R2	Y	144[14]	159[14]	1.80	0.017	1.40	5.60	153.7	2.80	0.50
North: Heppell Road												
1	East	L2	Y	142	156	1.80	0.017	1.42	5.67	157.4	3.12	0.55
1	West	R2	Y	332[14]	382[14]	1.02	0.024	1.00	4.30	117.9	2.80	0.65
West: Murray Valley Highway												
No opposed movements on this approach.												

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway					
1	27.56	4.95	22.61	0.820	0.1
North: Heppell Road					
1	26.03	4.76	21.27	0.817	0.9
West: Murray Valley Highway					

No opposed movements on this approach.

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway							
North	R2	1	27.56	4.95	22.61	0.820	0.8
North: Heppell Road							
East	L2	1	28.01	4.87	23.15	0.826	0.8
West	R2	1	14.13	4.12	10.01	0.708	1.3
West: Murray Valley Highway							
No opposed movements on this approach.							

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [1 (2)] 2052 BG-DEV PM (Network Peak) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters				
Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Heppell Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters												
Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
East: Murray Valley Highway												
1	North	R2	Y	287[14]	316[14]	1.80	0.036	1.40	5.60	154.6	2.80	0.50
North: Heppell Road												
1	East	L2	Y	285	313	1.80	0.036	1.42	5.67	157.4	3.12	0.55
1	West	R2	Y	613[14]	668[14]	0.94	0.041	1.00	4.30	118.6	2.80	0.65
West: Murray Valley Highway												
No opposed movements on this approach.												

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway					
1	17.32	5.96	11.36	0.656	0.1
North: Heppell Road					
1	16.67	5.85	10.82	0.649	2.0
West: Murray Valley Highway					

No opposed movements on this approach.

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway							
North	R2	1	17.32	5.96	11.36	0.656	1.9
North: Heppell Road							
East	L2	1	17.51	5.90	11.61	0.663	1.9
West	R2	1	11.59	5.55	6.04	0.521	2.7
West: Murray Valley Highway							

No opposed movements on this approach.

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [1 (4)] 2052 BG-DEV PM (Development Peak 1) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters				
Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Heppell Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters												
Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
East: Murray Valley Highway												
1	North	R2	Y	331[14]	367[14]	1.80	0.043	1.40	5.60	154.8	2.80	0.50
North: Heppell Road												
1	East	L2	Y	328	364	1.80	0.043	1.07	4.26	118.4	2.34	0.55
1	West	R2	Y	579[14]	634[14]	1.00	0.041	1.24	5.31	146.4	3.46	0.65
West: Murray Valley Highway												
No opposed movements on this approach.												

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway					
1	16.14	6.37	9.77	0.605	0.2
North: Heppell Road					
1	13.98	5.29	8.69	0.621	2.3
West: Murray Valley Highway					

No opposed movements on this approach.

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway							
North	R2	1	16.14	6.37	9.77	0.605	2.3
North: Heppell Road							
East	L2	1	13.82	4.20	9.62	0.696	1.3
West	R2	1	14.33	7.73	6.60	0.461	4.5
West: Murray Valley Highway							
No opposed movements on this approach.							

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [1 (6)] 2052 BG-DEV PM (Development Peak 2) (Murray Valley Highway / Heppell Road Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Heppell Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
East: Murray Valley Highway												
1	North	R2	Y	260[14]	285[14]	1.80	0.032	1.40	5.60	154.6	2.80	0.50
North: Heppell Road												
1	East	L2	Y	258	282	1.80	0.032	1.42	5.67	157.4	3.12	0.55
1	West	R2	Y	619[14]	669[14]	1.00	0.044	1.00	4.30	118.6	2.80	0.65
West: Murray Valley Highway												
No opposed movements on this approach.												

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway					
1	18.34	5.73	12.60	0.687	0.1
North: Heppell Road					
1	17.55	5.66	11.89	0.678	1.8
West: Murray Valley Highway					

No opposed movements on this approach.

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
East: Murray Valley Highway							
North	R2	1	18.34	5.73	12.60	0.687	1.7
North: Heppell Road							
East	L2	1	18.55	5.67	12.88	0.694	1.7
West	R2	1	11.56	5.59	5.98	0.517	2.7
West: Murray Valley Highway							

No opposed movements on this approach.

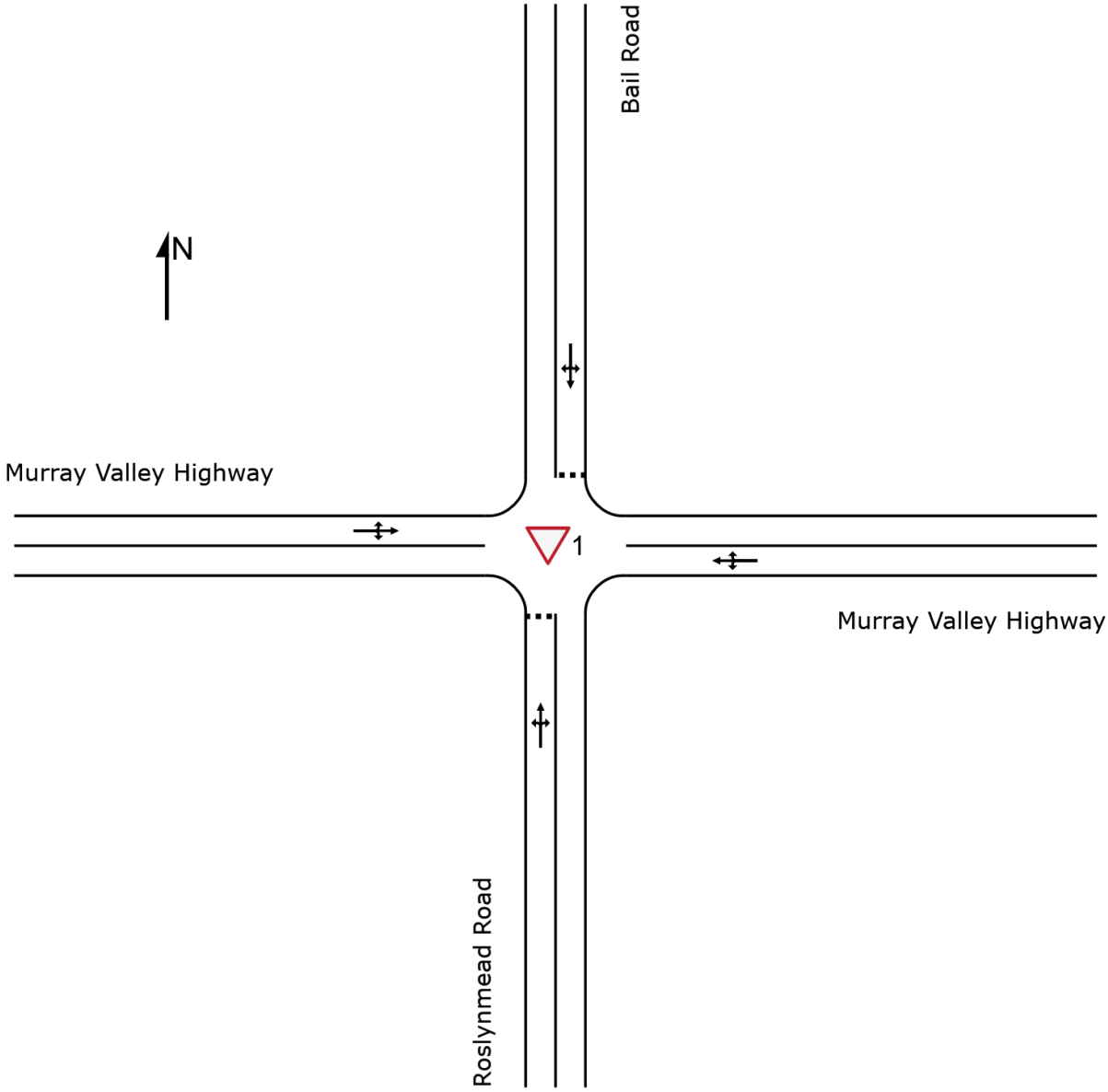
Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SITE LAYOUT

Site: [1] 2052 BG-DEV AM (Network Peak) (Murray Valley Hwy/ Roslynmead Rd/Bail Rd Intersection)

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



MOVEMENT SUMMARY

Site: [1] 2052 BG-DEV AM (Network Peak) (Murray Valley Hwy/ Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Roslynmead Road															
1	L2	All MCs	32	46.7	32	46.7	0.035	10.3	LOS B	0.1	1.3	0.36	0.64	0.36	58.3
2	T1	All MCs	1	0.0	1	0.0	0.035	9.9	LOS A	0.1	1.3	0.36	0.64	0.36	71.7
3	R2	All MCs	1	0.0	1	0.0	0.035	11.6	LOS B	0.1	1.3	0.36	0.64	0.36	71.6
Approach			34	43.8	34	43.8	0.035	10.3	LOS B	0.1	1.3	0.36	0.64	0.36	59.0
East: Murray Valley Highway															
4	L2	All MCs	2	0.0	2	0.0	0.129	8.1	LOS A	0.0	0.2	0.01	0.02	0.01	86.9
5	T1	All MCs	212	25.9	212	25.9	0.129	0.0	LOS A	0.0	0.2	0.01	0.02	0.01	99.3
6	R2	All MCs	2	0.0	2	0.0	0.129	7.9	LOS A	0.0	0.2	0.01	0.02	0.01	86.8
Approach			216	25.4	216	25.4	0.129	0.2	NA	0.0	0.2	0.01	0.02	0.01	99.0
North: Bail Road															
7	L2	All MCs	2	0.0	2	0.0	0.023	9.0	LOS A	0.1	0.7	0.56	0.76	0.56	65.9
8	T1	All MCs	3	66.7	3	66.7	0.023	15.0	LOS B	0.1	0.7	0.56	0.76	0.56	51.9
9	R2	All MCs	4	50.0	4	50.0	0.023	17.0	LOS C	0.1	0.7	0.56	0.76	0.56	53.1
Approach			9	44.4	9	44.4	0.023	14.5	LOS B	0.1	0.7	0.56	0.76	0.56	55.0
West: Murray Valley Highway															
10	L2	All MCs	1	0.0	1	0.0	0.212	9.2	LOS A	0.3	2.6	0.09	0.11	0.09	85.4
11	T1	All MCs	331	10.8	331	10.8	0.212	0.2	LOS A	0.3	2.6	0.09	0.11	0.09	97.4
12	R2	All MCs	31	37.9	31	37.9	0.212	9.9	LOS A	0.3	2.6	0.09	0.11	0.09	69.0
Approach			362	13.1	362	13.1	0.212	1.0	NA	0.3	2.6	0.09	0.11	0.09	94.1
All Vehicles			621	19.5	621	19.5	0.212	1.4	NA	0.3	2.6	0.09	0.12	0.09	91.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [2] 2052 BG-DEV AM (Development Peak 1) (Murray Valley Hwy/Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Roslynmead Road															
1	L2	All MCs	8	75.0	8	75.0	0.011	10.2	LOS B	0.0	0.4	0.21	0.61	0.21	53.0
2	T1	All MCs	1	0.0	1	0.0	0.011	7.3	LOS A	0.0	0.4	0.21	0.61	0.21	73.1
3	R2	All MCs	2	0.0	2	0.0	0.011	8.2	LOS A	0.0	0.4	0.21	0.61	0.21	73.0
Approach			12	54.5	12	54.5	0.011	9.6	LOS A	0.0	0.4	0.21	0.61	0.21	57.3
East: Murray Valley Highway															
4	L2	All MCs	37	0.0	37	0.0	0.066	7.8	LOS A	0.0	0.1	0.00	0.23	0.00	81.0
5	T1	All MCs	75	29.6	75	29.6	0.066	0.0	LOS A	0.0	0.1	0.00	0.23	0.00	91.7
6	R2	All MCs	1	0.0	1	0.0	0.066	7.4	LOS A	0.0	0.1	0.00	0.23	0.00	81.0
Approach			113	19.6	113	19.6	0.066	2.6	NA	0.0	0.1	0.00	0.23	0.00	87.8
North: Bail Road															
7	L2	All MCs	4	0.0	4	0.0	0.005	7.9	LOS A	0.0	0.1	0.14	0.60	0.14	74.0
8	T1	All MCs	1	0.0	1	0.0	0.005	7.3	LOS A	0.0	0.1	0.14	0.60	0.14	74.3
9	R2	All MCs	1	0.0	1	0.0	0.005	8.1	LOS A	0.0	0.1	0.14	0.60	0.14	73.8
Approach			6	0.0	6	0.0	0.005	7.9	LOS A	0.0	0.1	0.14	0.60	0.14	74.0
West: Murray Valley Highway															
10	L2	All MCs	1	0.0	1	0.0	0.043	8.3	LOS A	0.2	1.3	0.19	0.28	0.19	81.5
11	T1	All MCs	43	2.4	43	2.4	0.043	0.3	LOS A	0.2	1.3	0.19	0.28	0.19	92.3
12	R2	All MCs	24	34.8	24	34.8	0.043	8.9	LOS A	0.2	1.3	0.19	0.28	0.19	67.4
Approach			68	13.8	68	13.8	0.043	3.5	NA	0.2	1.3	0.19	0.28	0.19	81.5
All Vehicles			199	19.0	199	19.0	0.066	3.5	NA	0.2	1.3	0.08	0.28	0.08	82.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [3] 2052 BG-DEV AM (Development Peak 2) (Murray Valley Hwy/Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Roslynmead Road															
1	L2	All MCs	40	42.1	40	42.1	0.043	9.8	LOS A	0.2	1.6	0.31	0.63	0.31	59.6
2	T1	All MCs	4	50.0	4	50.0	0.043	10.3	LOS B	0.2	1.6	0.31	0.63	0.31	59.0
3	R2	All MCs	1	0.0	1	0.0	0.043	9.2	LOS A	0.2	1.6	0.31	0.63	0.31	72.0
Approach			45	41.9	45	41.9	0.043	9.8	LOS A	0.2	1.6	0.31	0.63	0.31	59.8
East: Murray Valley Highway															
4	L2	All MCs	4	0.0	4	0.0	0.100	8.1	LOS A	0.0	0.4	0.02	0.04	0.02	86.1
5	T1	All MCs	147	37.1	147	37.1	0.100	0.0	LOS A	0.0	0.4	0.02	0.04	0.02	98.3
6	R2	All MCs	4	50.0	4	50.0	0.100	9.2	LOS A	0.0	0.4	0.02	0.04	0.02	65.4
Approach			156	36.5	156	36.5	0.100	0.5	NA	0.0	0.4	0.02	0.04	0.02	96.6
North: Bail Road															
7	L2	All MCs	4	0.0	4	0.0	0.005	8.2	LOS A	0.0	0.1	0.26	0.59	0.26	73.3
8	T1	All MCs	1	0.0	1	0.0	0.005	8.0	LOS A	0.0	0.1	0.26	0.59	0.26	73.6
9	R2	All MCs	1	0.0	1	0.0	0.005	9.4	LOS A	0.0	0.1	0.26	0.59	0.26	73.1
Approach			6	0.0	6	0.0	0.005	8.4	LOS A	0.0	0.1	0.26	0.59	0.26	73.3
West: Murray Valley Highway															
10	L2	All MCs	2	0.0	2	0.0	0.093	8.7	LOS A	0.2	1.8	0.13	0.17	0.13	83.8
11	T1	All MCs	120	20.2	120	20.2	0.093	0.2	LOS A	0.2	1.8	0.13	0.17	0.13	95.3
12	R2	All MCs	24	39.1	24	39.1	0.093	9.4	LOS A	0.2	1.8	0.13	0.17	0.13	67.5
Approach			146	23.0	146	23.0	0.093	1.9	NA	0.2	1.8	0.13	0.17	0.13	89.1
All Vehicles			354	31.0	354	31.0	0.100	2.4	NA	0.2	1.8	0.11	0.18	0.11	86.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [4] 2052 BG-DEV PM (Network Peak) (Murray Valley Hwy/ Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Roslynmead Road															
1	L2	All MCs	25	25.0	25	25.0	0.034	9.9	LOS A	0.1	1.0	0.42	0.67	0.42	63.4
2	T1	All MCs	1	0.0	1	0.0	0.034	10.0	LOS A	0.1	1.0	0.42	0.67	0.42	71.1
3	R2	All MCs	4	0.0	4	0.0	0.034	11.7	LOS B	0.1	1.0	0.42	0.67	0.42	71.1
Approach			31	20.7	31	20.7	0.034	10.2	LOS B	0.1	1.0	0.42	0.67	0.42	64.6
East: Murray Valley Highway															
4	L2	All MCs	1	0.0	1	0.0	0.175	8.9	LOS A	0.1	0.5	0.02	0.02	0.02	87.0
5	T1	All MCs	300	15.8	300	15.8	0.175	0.0	LOS A	0.1	0.5	0.02	0.02	0.02	99.5
6	R2	All MCs	4	50.0	4	50.0	0.175	9.9	LOS A	0.1	0.5	0.02	0.02	0.02	65.9
Approach			305	16.2	305	16.2	0.175	0.2	NA	0.1	0.5	0.02	0.02	0.02	98.7
North: Bail Road															
7	L2	All MCs	7	0.0	7	0.0	0.009	8.7	LOS A	0.0	0.2	0.39	0.62	0.39	72.3
8	T1	All MCs	1	0.0	1	0.0	0.009	9.8	LOS A	0.0	0.2	0.39	0.62	0.39	72.6
9	R2	All MCs	1	0.0	1	0.0	0.009	11.7	LOS B	0.0	0.2	0.39	0.62	0.39	72.1
Approach			9	0.0	9	0.0	0.009	9.2	LOS A	0.0	0.2	0.39	0.62	0.39	72.4
West: Murray Valley Highway															
10	L2	All MCs	3	66.7	3	66.7	0.177	11.2	LOS B	0.2	1.9	0.09	0.11	0.09	61.4
11	T1	All MCs	267	19.7	267	19.7	0.177	0.2	LOS A	0.2	1.9	0.09	0.11	0.09	97.5
12	R2	All MCs	20	31.6	20	31.6	0.177	10.1	LOS B	0.2	1.9	0.09	0.11	0.09	71.3
Approach			291	21.0	291	21.0	0.177	1.0	NA	0.2	1.9	0.09	0.11	0.09	94.5
All Vehicles			636	18.4	636	18.4	0.177	1.2	NA	0.2	1.9	0.08	0.10	0.08	93.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [5] 2052 BG-DEV PM (Development Peak 1) (Murray Valley Hwy/Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Roslynmead Road															
1	L2	All MCs	32	26.7	32	26.7	0.098	9.5	LOS A	0.3	2.7	0.47	0.72	0.47	61.9
2	T1	All MCs	1	0.0	1	0.0	0.098	10.2	LOS B	0.3	2.7	0.47	0.72	0.47	69.9
3	R2	All MCs	37	0.0	37	0.0	0.098	12.0	LOS B	0.3	2.7	0.47	0.72	0.47	69.8
Approach			69	12.1	69	12.1	0.098	10.9	LOS B	0.3	2.7	0.47	0.72	0.47	66.0
East: Murray Valley Highway															
4	L2	All MCs	2	0.0	2	0.0	0.125	9.0	LOS A	0.1	0.5	0.04	0.05	0.04	86.2
5	T1	All MCs	214	12.3	214	12.3	0.125	0.1	LOS A	0.1	0.5	0.04	0.05	0.04	98.5
6	R2	All MCs	7	0.0	7	0.0	0.125	8.8	LOS A	0.1	0.5	0.04	0.05	0.04	86.2
Approach			223	11.8	223	11.8	0.125	0.4	NA	0.1	0.5	0.04	0.05	0.04	97.9
North: Bail Road															
7	L2	All MCs	12	0.0	12	0.0	0.029	9.0	LOS A	0.1	0.8	0.51	0.70	0.51	68.6
8	T1	All MCs	3	66.7	3	66.7	0.029	15.3	LOS C	0.1	0.8	0.51	0.70	0.51	53.5
9	R2	All MCs	3	66.7	3	66.7	0.029	19.1	LOS C	0.1	0.8	0.51	0.70	0.51	51.4
Approach			18	23.5	18	23.5	0.029	11.9	LOS B	0.1	0.8	0.51	0.70	0.51	61.9
West: Murray Valley Highway															
10	L2	All MCs	6	33.3	6	33.3	0.223	9.8	LOS A	0.3	2.9	0.10	0.12	0.10	71.1
11	T1	All MCs	327	19.6	327	19.6	0.223	0.2	LOS A	0.3	2.9	0.10	0.12	0.10	96.7
12	R2	All MCs	34	28.1	34	28.1	0.223	9.4	LOS A	0.3	2.9	0.10	0.12	0.10	72.2
Approach			367	20.6	367	20.6	0.223	1.2	NA	0.3	2.9	0.10	0.12	0.10	93.3
All Vehicles			678	16.9	678	16.9	0.223	2.2	NA	0.3	2.9	0.13	0.18	0.13	89.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: [6] 2052 BG-DEV PM (Development Peak 2) (Murray Valley Hwy/Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Vehicle Movement Performance

Mov ID	Turn	Mov Class	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh	Dist] m	Prop. Qued	Eff. Stop Rate	Number of Cycles to Depart	Aver. Speed km/h
South: Roslynmead Road															
1	L2	All MCs	23	36.4	23	36.4	0.039	10.6	LOS B	0.1	1.2	0.46	0.70	0.46	59.9
2	T1	All MCs	1	0.0	1	0.0	0.039	10.0	LOS B	0.1	1.2	0.46	0.70	0.46	70.5
3	R2	All MCs	6	0.0	6	0.0	0.039	11.7	LOS B	0.1	1.2	0.46	0.70	0.46	70.5
Approach			31	27.6	31	27.6	0.039	10.8	LOS B	0.1	1.2	0.46	0.70	0.46	62.2
East: Murray Valley Highway															
4	L2	All MCs	2	0.0	2	0.0	0.188	7.9	LOS A	0.0	0.2	0.01	0.01	0.01	87.1
5	T1	All MCs	333	13.0	333	13.0	0.188	0.0	LOS A	0.0	0.2	0.01	0.01	0.01	99.6
6	R2	All MCs	2	0.0	2	0.0	0.188	7.6	LOS A	0.0	0.2	0.01	0.01	0.01	87.1
Approach			337	12.8	337	12.8	0.188	0.1	NA	0.0	0.2	0.01	0.01	0.01	99.4
North: Bail Road															
7	L2	All MCs	2	0.0	2	0.0	0.014	8.6	LOS A	0.0	0.4	0.53	0.69	0.53	68.1
8	T1	All MCs	3	66.7	3	66.7	0.014	15.2	LOS C	0.0	0.4	0.53	0.69	0.53	53.2
9	R2	All MCs	2	0.0	2	0.0	0.014	11.7	LOS B	0.0	0.4	0.53	0.69	0.53	68.0
Approach			7	28.6	7	28.6	0.014	12.3	LOS B	0.0	0.4	0.53	0.69	0.53	60.8
West: Murray Valley Highway															
10	L2	All MCs	2	0.0	2	0.0	0.163	9.6	LOS A	0.3	2.4	0.13	0.16	0.13	84.4
11	T1	All MCs	234	20.3	234	20.3	0.163	0.3	LOS A	0.3	2.4	0.13	0.16	0.13	96.1
12	R2	All MCs	27	23.1	27	23.1	0.163	9.9	LOS A	0.3	2.4	0.13	0.16	0.13	73.8
Approach			263	20.4	263	20.4	0.163	1.4	NA	0.3	2.4	0.13	0.16	0.13	93.1
All Vehicles			638	16.8	638	16.8	0.188	1.3	NA	0.3	2.4	0.08	0.11	0.08	93.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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 (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

SIGN CONTROL ANALYSIS

Site: [1] 2052 BG-DEV AM (Network Peak) (Murray Valley Hwy/ Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters				
Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Roslynmead Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Bail Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters												
Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Roslynmead Road												
1	East	R2	Y	581[14]	633[14]	1.03	0.062	1.00	5.00	131.5	3.20	0.64
1	North	T1	Y	577[14]	628[14]	1.05	0.043	1.00	4.50	119.0	2.70	0.60
1	West	L2	Y	212	239	1.80	0.026	1.23	4.93	137.0	2.71	0.55
East: Murray Valley Highway												
1	North	R2	Y	332[14]	349[14]	1.80	0.041	1.00	4.00	110.8	2.00	0.50
North: Bail Road												
1	South	T1	Y	577[14]	628[14]	1.05	0.043	1.33	6.00	158.4	3.60	0.60
1	East	L2	Y	331	348	1.80	0.040	1.00	4.00	111.1	2.20	0.55
1	West	R2	Y	608[14]	666[14]	0.96	0.061	1.25	6.25	158.5	4.00	0.64
West: Murray Valley Highway												
1	South	R2	Y	214[14]	241[14]	1.80	0.027	1.19	4.76	131.1	2.38	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec

South: Roslynmead Road					
1	19.06	4.61	14.45	0.758	1.2
East: Murray Valley Highway					
1	13.76	3.90	9.86	0.716	0.0
North: Bail Road					
1	16.38	8.94	7.44	0.454	5.5
West: Murray Valley Highway					
1	19.11	4.42	14.68	0.769	0.2

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Roslynmead Road							
West	L2	1	19.48	4.49	14.98	0.769	1.0
North	T1	1	12.12	5.88	6.24	0.515	2.8
East	R2	1	13.49	6.92	6.57	0.487	3.6
East: Murray Valley Highway							
North	R2	1	13.76	3.90	9.86	0.716	1.0
North: Bail Road							
East	L2	1	13.79	3.80	9.99	0.725	1.0
South	T1	1	16.48	9.79	6.69	0.406	6.0
West	R2	1	17.60	10.87	6.73	0.382	7.3
West: Murray Valley Highway							
South	R2	1	19.11	4.42	14.68	0.769	1.0

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [2] 2052 BG-DEV AM (Development Peak 1) (Murray Valley Hwy/Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters				
Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Roslynmead Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Bail Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters												
Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Roslynmead Road												
1	East	R2	Y	167[14]	183[14]	0.97	0.015	1.00	5.00	115.4	3.20	0.64
1	North	T1	Y	163[14]	178[14]	1.02	0.011	1.00	4.50	106.1	2.70	0.60
1	West	L2	Y	75	86	1.80	0.009	1.38	5.50	152.8	3.02	0.55
East: Murray Valley Highway												
1	North	R2	Y	44[14]	45[14]	1.80	0.005	1.00	4.00	109.0	2.00	0.50
North: Bail Road												
1	South	T1	Y	181[14]	196[14]	1.07	0.012	1.00	4.50	90.1	2.70	0.60
1	East	L2	Y	43	44	1.80	0.004	1.00	4.00	111.1	2.20	0.55
1	West	R2	Y	153[14]	172[14]	0.87	0.013	1.00	5.00	113.0	3.20	0.64
West: Murray Valley Highway												
1	South	R2	Y	112[14]	123[14]	1.80	0.013	1.17	4.70	96.1	2.35	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec

South: Roslynmead Road					
1	40.45	4.25	36.20	0.895	0.5
East: Murray Valley Highway					
1	83.12	3.09	80.03	0.963	0.0
North: Bail Road					
1	64.80	3.29	61.50	0.949	0.3
West: Murray Valley Highway					
1	32.99	3.90	29.09	0.882	0.3

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Roslynmead Road							
West	L2	1	46.39	4.35	42.04	0.906	0.4
North	T1	1	24.41	3.70	20.71	0.849	0.6
East	R2	1	24.74	4.11	20.63	0.834	0.7
East: Murray Valley Highway							
North	R2	1	83.12	3.09	80.03	0.963	0.1
North: Bail Road							
East	L2	1	85.06	2.99	82.07	0.965	0.1
South	T1	1	22.59	3.76	18.83	0.834	0.6
West	R2	1	25.97	4.06	21.91	0.844	0.7
West: Murray Valley Highway							
South	R2	1	32.99	3.90	29.09	0.882	0.4

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [3] 2052 BG-DEV AM (Development Peak 2) (Murray Valley Hwy/Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Roslynmead Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Bail Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Roslynmead Road												
1	East	R2	Y	303[14]	348[14]	0.91	0.028	1.00	5.00	126.1	3.20	0.64
1	North	T1	Y	300[14]	345[14]	0.94	0.019	1.25	5.62	143.0	3.38	0.60
1	West	L2	Y	147	175	1.80	0.019	1.21	4.84	134.5	2.66	0.55
East: Murray Valley Highway												
1	North	R2	Y	122[14]	134[14]	1.80	0.014	1.25	5.00	137.0	2.50	0.50
North: Bail Road												
1	South	T1	Y	301[14]	346[14]	0.94	0.020	1.00	4.50	113.8	2.70	0.60
1	East	L2	Y	120	132	1.80	0.014	1.00	4.00	111.1	2.20	0.55
1	West	R2	Y	341[14]	396[14]	0.79	0.028	1.00	5.00	114.9	3.20	0.64
West: Murray Valley Highway												
1	South	R2	Y	152[14]	179[14]	1.80	0.019	1.20	4.78	129.9	2.39	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec

South: Roslynmead Road					
1	23.73	4.30	19.43	0.819	0.8
East: Murray Valley Highway					
1	30.87	4.23	26.63	0.863	0.0
North: Bail Road					
1	25.17	3.71	21.46	0.853	0.7
West: Murray Valley Highway					
1	24.06	4.19	19.87	0.826	0.3

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Roslynmead Road							
West	L2	1	24.61	4.12	20.49	0.833	0.7
North	T1	1	17.26	5.90	11.36	0.658	2.1
East	R2	1	16.21	4.92	11.29	0.697	1.5
East: Murray Valley Highway							
North	R2	1	30.87	4.23	26.63	0.863	0.5
North: Bail Road							
East	L2	1	30.10	3.18	26.91	0.894	0.3
South	T1	1	15.33	4.34	10.99	0.717	1.2
West	R2	1	15.31	5.17	10.14	0.662	1.8
West: Murray Valley Highway							
South	R2	1	24.06	4.19	19.87	0.826	0.7

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [4] 2052 BG-DEV PM (Network Peak) (Murray Valley Hwy/ Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters				
Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Roslynmead Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Bail Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters												
Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Roslynmead Road												
1	East	R2	Y	601[14]	655[14]	0.89	0.055	1.00	5.00	132.7	3.20	0.64
1	North	T1	Y	595[14]	651[14]	0.91	0.038	1.00	4.50	120.3	2.70	0.60
1	West	L2	Y	300	324	1.80	0.037	1.12	4.50	125.0	2.48	0.55
East: Murray Valley Highway												
1	North	R2	Y	271[14]	298[14]	1.80	0.034	1.25	5.00	137.6	2.50	0.50
North: Bail Road												
1	South	T1	Y	594[14]	649[14]	0.91	0.038	1.00	4.50	120.6	2.70	0.60
1	East	L2	Y	267	294	1.80	0.033	1.00	4.00	111.1	2.20	0.55
1	West	R2	Y	619[14]	677[14]	0.85	0.054	1.00	5.00	129.7	3.20	0.64
West: Murray Valley Highway												
1	South	R2	Y	301[14]	325[14]	1.80	0.037	1.16	4.63	128.3	2.32	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)					
Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec

South: Roslynmead Road					
1	14.92	4.78	10.14	0.680	1.6
East: Murray Valley Highway					
1	16.89	5.00	11.89	0.704	0.1
North: Bail Road					
1	14.94	4.28	10.66	0.713	1.4
West: Murray Valley Highway					
1	15.44	4.64	10.80	0.700	0.2

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Roslynmead Road							
West	L2	1	15.27	4.35	10.92	0.715	1.2
North	T1	1	12.14	5.98	6.16	0.507	2.9
East	R2	1	13.51	7.04	6.48	0.479	3.7
East: Murray Valley Highway							
North	R2	1	16.89	5.00	11.89	0.704	1.4
North: Bail Road							
East	L2	1	15.54	3.62	11.92	0.767	0.8
South	T1	1	12.14	5.97	6.17	0.508	2.9
West	R2	1	13.54	7.22	6.32	0.467	3.8
West: Murray Valley Highway							
South	R2	1	15.44	4.64	10.80	0.700	1.3

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [5] 2052 BG-DEV PM (Development Peak 1) (Murray Valley Hwy/Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Roslynmead Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Bail Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Roslynmead Road												
1	East	R2	Y	598[14]	649[14]	1.02	0.063	1.00	5.00	128.3	3.20	0.64
1	North	T1	Y	589[14]	641[14]	1.08	0.045	1.00	4.50	116.7	2.70	0.60
1	West	L2	Y	214	227	1.80	0.025	1.13	4.53	125.9	2.49	0.55
East: Murray Valley Highway												
1	North	R2	Y	334[14]	367[14]	1.80	0.043	1.00	4.00	109.4	2.00	0.50
North: Bail Road												
1	South	T1	Y	587[14]	638[14]	1.07	0.045	1.33	6.00	156.5	3.60	0.60
1	East	L2	Y	327	359	1.80	0.042	1.00	4.00	111.1	2.20	0.55
1	West	R2	Y	618[14]	673[14]	0.99	0.063	1.33	6.67	167.1	4.27	0.64
West: Murray Valley Highway												
1	South	R2	Y	216[14]	229[14]	1.80	0.025	1.14	4.56	125.8	2.28	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec

South: Roslynmead Road					
1	16.28	5.65	10.63	0.653	2.4
East: Murray Valley Highway					
1	13.34	3.96	9.37	0.703	0.1
North: Bail Road					
1	15.07	6.45	8.62	0.572	3.3
West: Murray Valley Highway					
1	19.57	4.15	15.42	0.788	0.2

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Roslynmead Road							
West	L2	1	19.67	3.99	15.68	0.797	0.8
North	T1	1	12.09	5.98	6.11	0.506	2.9
East	R2	1	13.49	7.06	6.43	0.477	3.7
East: Murray Valley Highway							
North	R2	1	13.34	3.96	9.37	0.703	1.1
North: Bail Road							
East	L2	1	13.51	3.84	9.67	0.716	1.0
South	T1	1	16.54	9.96	6.59	0.398	6.2
West	R2	1	19.33	12.53	6.80	0.352	8.6
West: Murray Valley Highway							
South	R2	1	19.57	4.15	15.42	0.788	0.8

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

SIGN CONTROL ANALYSIS

Site: [6] 2052 BG-DEV PM (Development Peak 2) (Murray Valley Hwy/Roslynmead Rd/Bail Rd Intersection)

Output produced by SIDRA INTERSECTION Version: 10.0.5.217

New Site
Site Category: (None)
Give-Way (Two-Way)
Site Scenario: 1 | Local Volumes

Sign Control Basic Parameters

Approach Control	Leg Geometry	App. Dist m	Prop Queued Upstr Signal	Extra Bunching %
South: Roslynmead Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
East: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]
North: Bail Road				
Give-Way	Two Way	500.0	NA[5]	0.0[3]
West: Murray Valley Highway				
Major Road	Two Way	500.0	NA[5]	0.0[3]

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

3 User-specified Extra Bunching
5 Not Applicable (single Site analysis or unconnected Site in Network analysis).

Gap Acceptance Parameters

Opposed Lane	Dest	Turn	Apply Calib	Opng Flow veh/h	Opng Flow pcu/h	In-Bunch Hdwy sec	Prop. Bunched	Gap Acc Factor	Critical Gap (tc) [Hdwy sec	Dist] m	Follow-up Hdwy (tf) sec	Ratio tf / tc
South: Roslynmead Road												
1	East	R2	Y	602[14]	652[14]	0.95	0.059	1.00	5.00	132.3	3.20	0.64
1	North	T1	Y	599[14]	647[14]	0.97	0.041	1.00	4.50	119.5	2.70	0.60
1	West	L2	Y	333	354	1.80	0.041	1.18	4.73	131.3	2.60	0.55
East: Murray Valley Highway												
1	North	R2	Y	236[14]	259[14]	1.80	0.029	1.00	4.00	110.3	2.00	0.50
North: Bail Road												
1	South	T1	Y	599[14]	647[14]	0.97	0.041	1.33	6.00	159.4	3.60	0.60
1	East	L2	Y	234	257	1.80	0.029	1.00	4.00	111.1	2.20	0.55
1	West	R2	Y	621[14]	674[14]	0.91	0.058	1.00	5.00	129.1	3.20	0.64
West: Murray Valley Highway												
1	South	R2	Y	335[14]	356[14]	1.80	0.042	1.12	4.46	123.3	2.23	0.50

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
Values in this table are adjusted for movement classes in the entry stream.
Use the Pedestrians and Priorities input dialogs to specify opposing pedestrian movements.

14 Percentage of exiting flow included in opposing vehicle flow

Gap Acceptance Cycle Parameters (Lanes)

Opposed Lane	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec

South: Roslynmead Road					
1	14.46	5.31	9.15	0.633	2.0
East: Murray Valley Highway					
1	17.05	3.62	13.43	0.788	0.0
North: Bail Road					
1	15.88	7.35	8.52	0.537	4.0
West: Murray Valley Highway					
1	14.33	4.55	9.78	0.682	0.4

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Gap Acceptance Cycle Parameters (Movements)

To Approach	Turn	Lane No	Cycle Time sec	Blocked Time sec	Unblocked Time sec	Unblocked Time Ratio	Minimum Delay sec
South: Roslynmead Road							
West	L2	1	14.83	4.80	10.02	0.676	1.6
North	T1	1	12.12	5.99	6.13	0.506	2.9
East	R2	1	13.50	7.05	6.46	0.478	3.7
East: Murray Valley Highway							
North	R2	1	17.05	3.62	13.43	0.788	0.7
North: Bail Road							
East	L2	1	17.16	3.51	13.65	0.795	0.7
South	T1	1	16.58	10.00	6.58	0.397	6.2
West	R2	1	13.53	7.22	6.31	0.466	3.8
West: Murray Valley Highway							
South	R2	1	14.33	4.55	9.78	0.682	1.4

Two-Way Sign Control Capacity Model: SIDRA Standard.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

Appendix G Turn warrant assessment

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (NETWORK PEAK)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Roslynmead Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	311	253	314	256
Major Road opposing through traffic flow	Q_{T2}	200	287	203	290
Right turn traffic flow	Q_R	22	13	29	19
Left turn traffic flow	Q_L	2	0	2	0
Major Road traffic volume for right turn	Q_M	513	540	519	546
Major Road traffic volume for left turn	Q_M	200	287	203	290

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

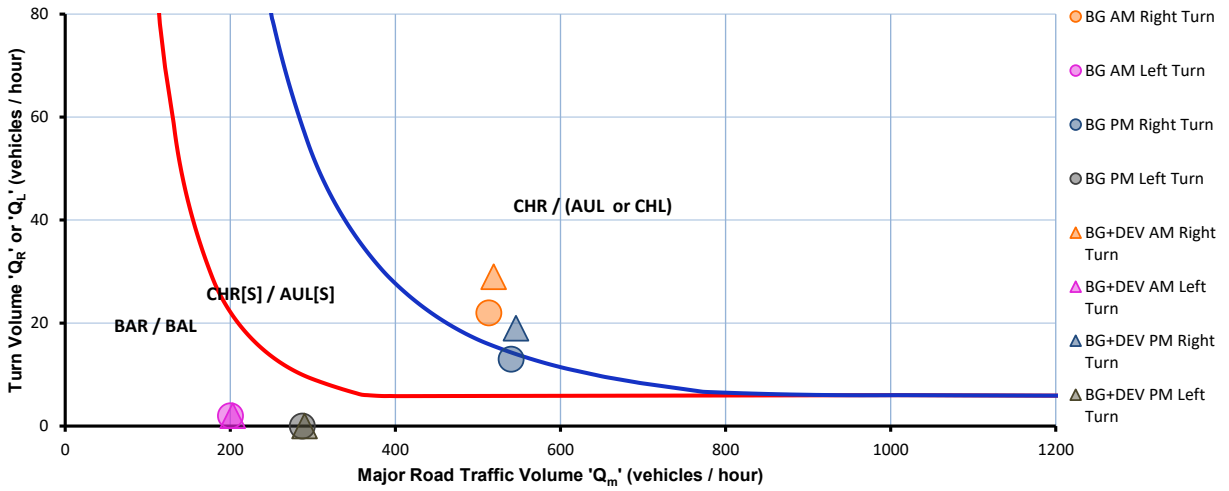
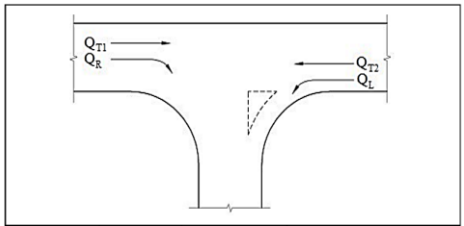


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	CHR	BAL
PM	CHR[S]	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	CHR	BAL
PM	CHR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 1)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Roslynmead Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	40	282	41	317
Major Road opposing through traffic flow	Q_{T2}	38	207	71	210
Right turn traffic flow	Q_R	9	27	24	33
Left turn traffic flow	Q_L	0	2	35	2
Major Road traffic volume for right turn	Q_M	78	491	147	529
Major Road traffic volume for left turn	Q_M	38	207	71	210

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

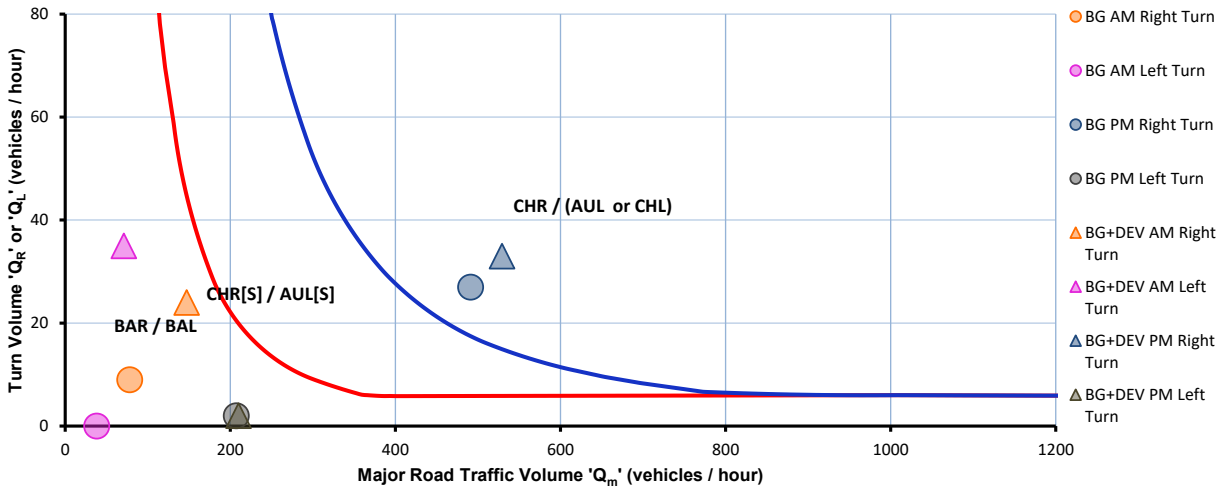
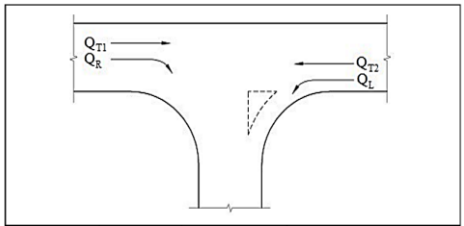


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	CHR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	CHR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 2)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Roslynmead Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	113	207	116	224
Major Road opposing through traffic flow	Q_{T2}	127	315	144	318
Right turn traffic flow	Q_R	16	20	24	26
Left turn traffic flow	Q_L	0	2	4	2
Major Road traffic volume for right turn	Q_M	240	524	264	544
Major Road traffic volume for left turn	Q_M	127	315	144	318

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

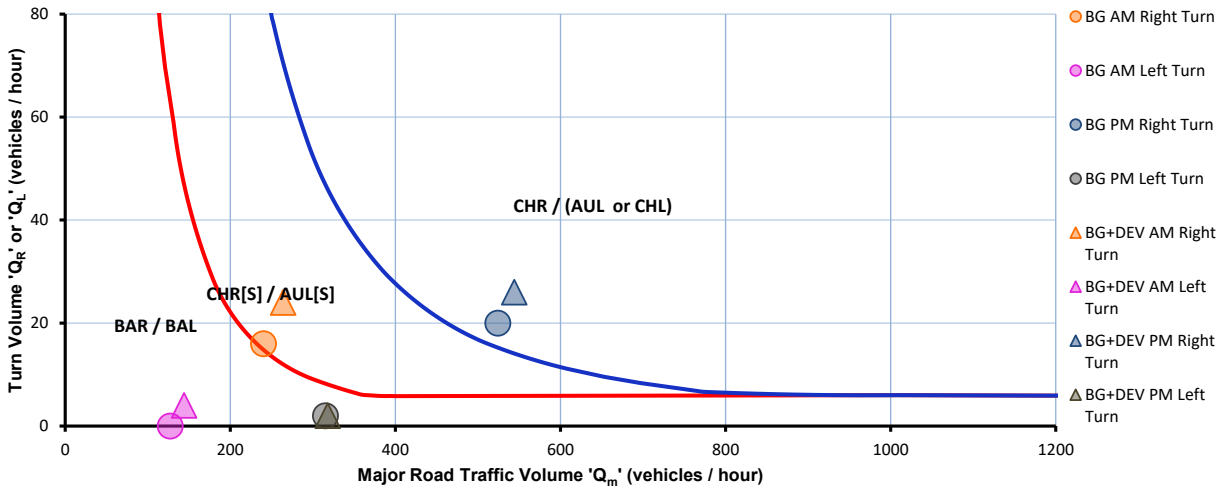
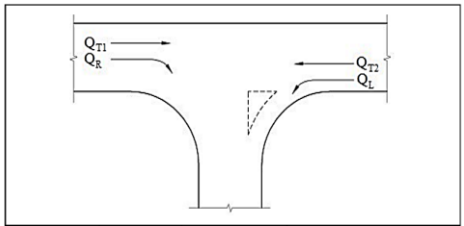


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	CHR[S]	BAL
PM	CHR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	CHR[S]	BAL
PM	CHR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Network Peak)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Heppell Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	224	300	230	305
Major Road opposing through traffic flow	Q_{T2}	333	267	338	271
Right turn traffic flow	Q_R	1	1	5	5
Left turn traffic flow	Q_L	1	1	2	2
Major Road traffic volume for right turn	Q_M	558	568	570	578
Major Road traffic volume for left turn	Q_M	333	267	338	271

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

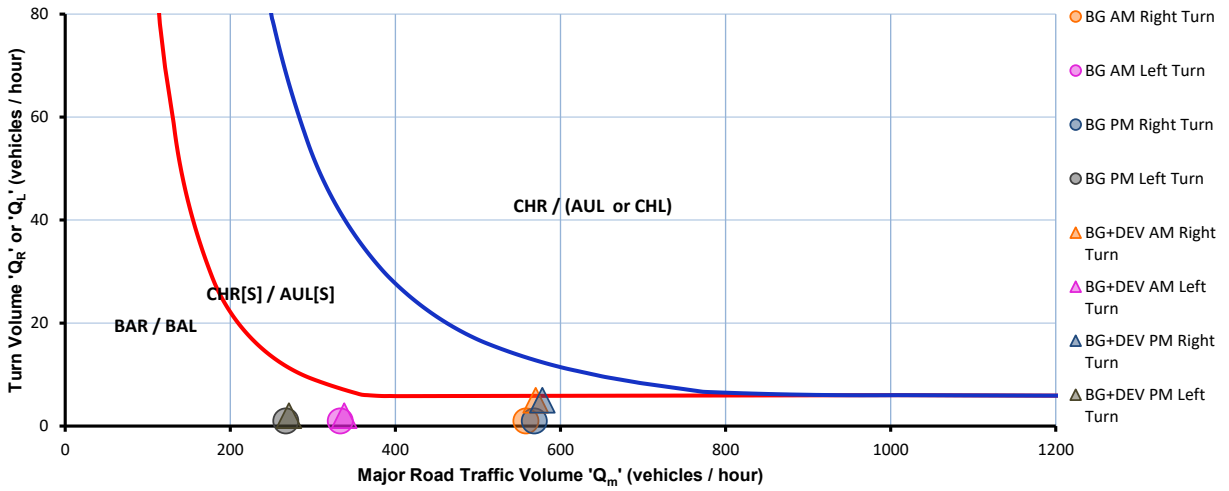
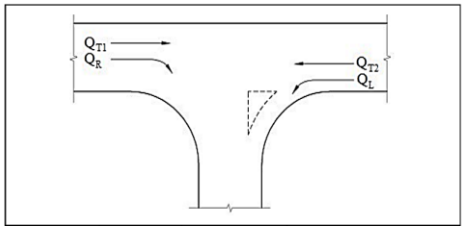


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 1)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Heppell Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	40	218	43	231
Major Road opposing through traffic flow	Q_{T2}	49	309	60	313
Right turn traffic flow	Q_R	1	1	37	5
Left turn traffic flow	Q_L	1	1	10	2
Major Road traffic volume for right turn	Q_M	90	528	113	546
Major Road traffic volume for left turn	Q_M	49	309	60	313

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

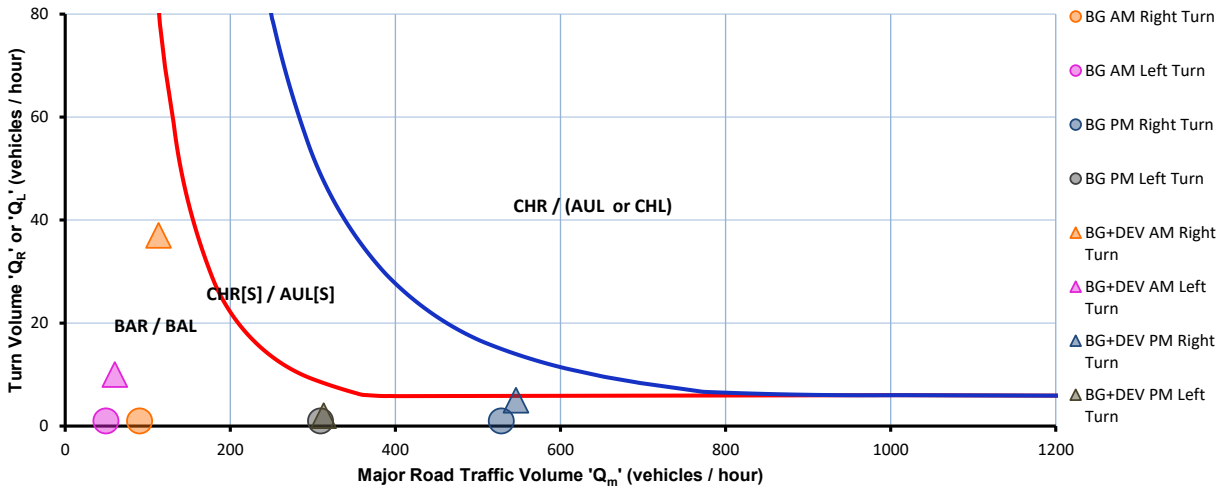
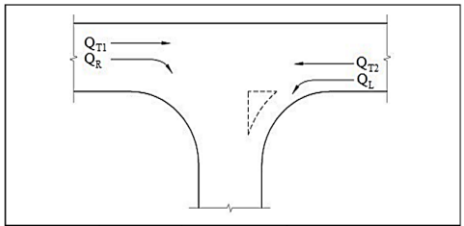


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 2)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Heppell Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	153	331	174	337
Major Road opposing through traffic flow	Q_{T2}	129	227	135	245
Right turn traffic flow	Q_R	1	1	5	5
Left turn traffic flow	Q_L	1	1	2	2
Major Road traffic volume for right turn	Q_M	283	559	311	584
Major Road traffic volume for left turn	Q_M	129	227	135	245

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

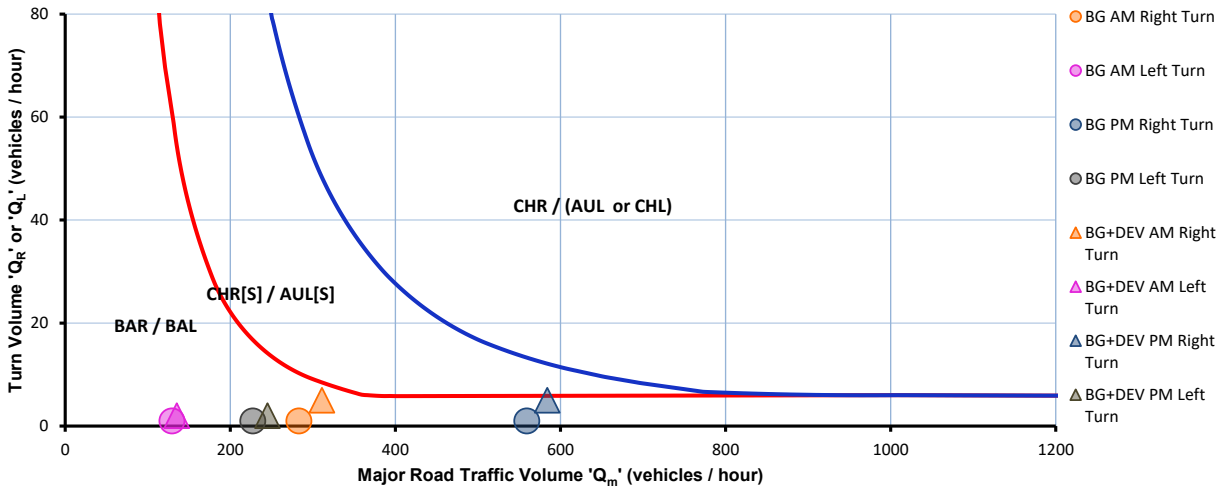
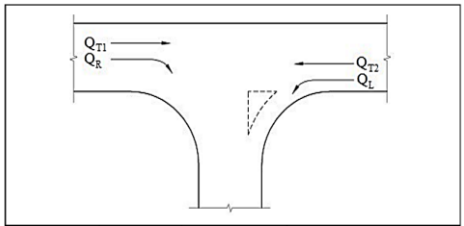


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Network Peak)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Davis Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	302	260	302	260
Major Road opposing through traffic flow	Q_{T2}	204	282	204	282
Right turn traffic flow	Q_R	2	0	2	0
Left turn traffic flow	Q_L	7	0	13	5
Major Road traffic volume for right turn	Q_M	513	542	519	547
Major Road traffic volume for left turn	Q_M	204	282	204	282

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

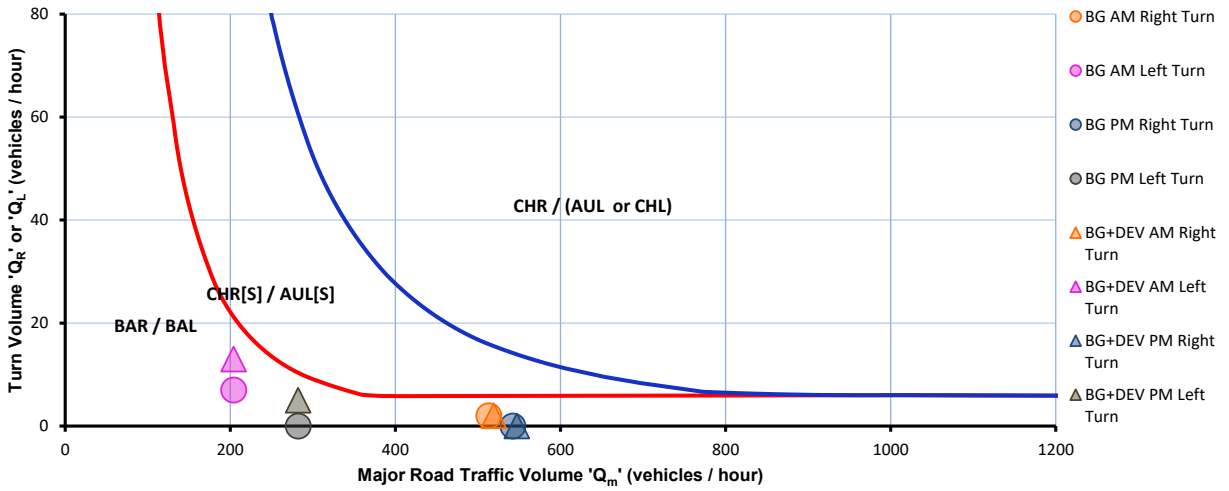
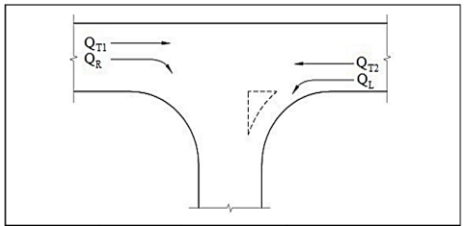


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 1)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Davis Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	44	255	61	255
Major Road opposing through traffic flow	Q_{T2}	38	227	38	243
Right turn traffic flow	Q_R	2	0	2	0
Left turn traffic flow	Q_L	7	4	10	9
Major Road traffic volume for right turn	Q_M	89	486	109	507
Major Road traffic volume for left turn	Q_M	38	227	38	243

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

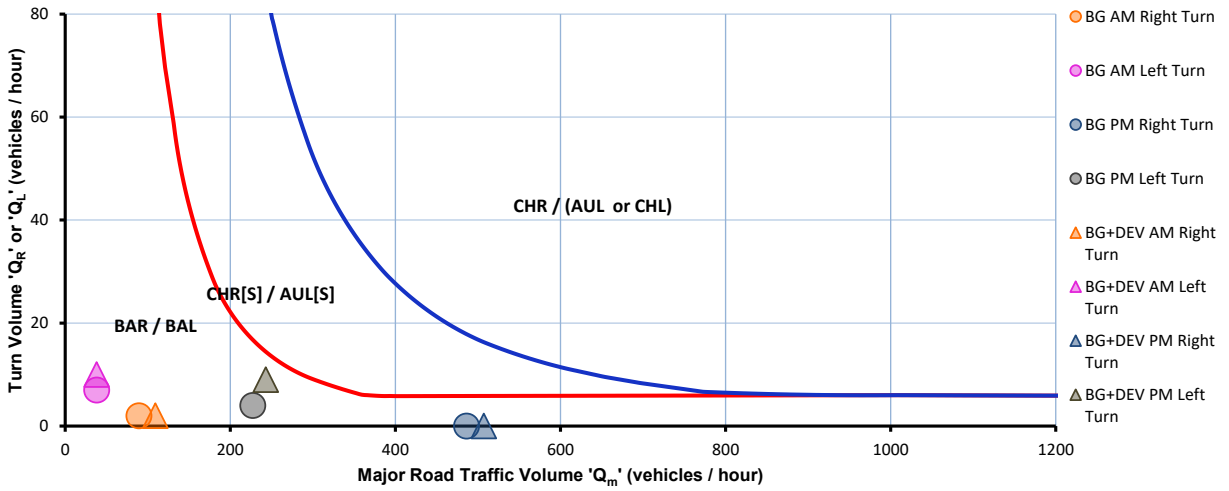
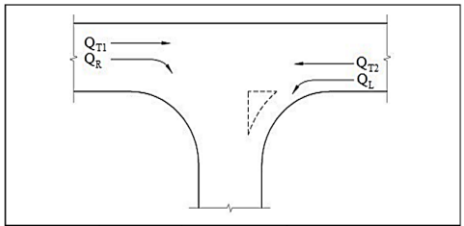


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 2)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Murray Valley Highway
Side Road		Davis Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	102	218	103	218
Major Road opposing through traffic flow	Q_{T2}	120	275	120	276
Right turn traffic flow	Q_R	2	0	6	0
Left turn traffic flow	Q_L	9	2	29	7
Major Road traffic volume for right turn	Q_M	231	495	252	501
Major Road traffic volume for left turn	Q_M	120	275	120	276

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

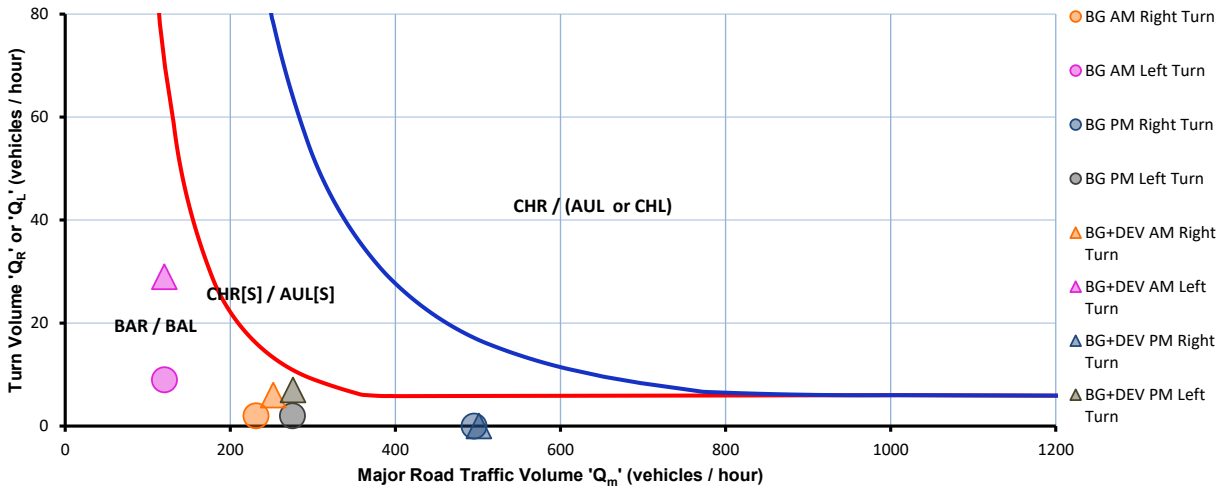
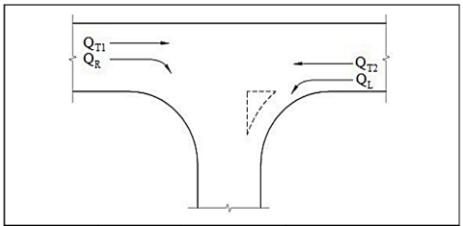


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Network Peak)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Roslynmead Road
Side Road		Chrystal Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	22	22	24	23
Major Road opposing through traffic flow	Q_{T2}	27	13	29	14
Right turn traffic flow	Q_R	1	1	4	4
Left turn traffic flow	Q_L	1	1	6	6
Major Road traffic volume for right turn	Q_M	50	36	59	43
Major Road traffic volume for left turn	Q_M	27	13	29	14

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

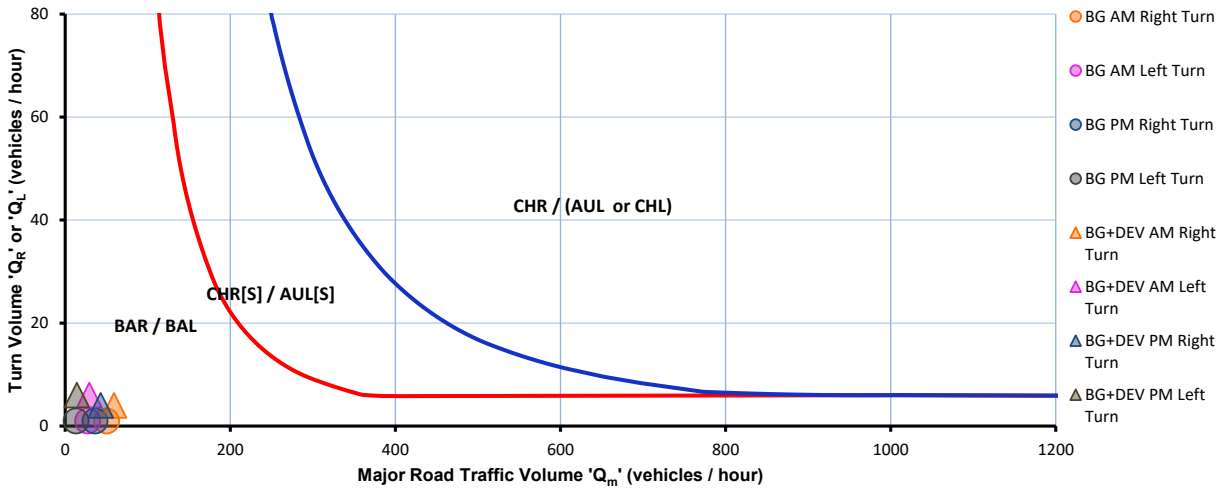
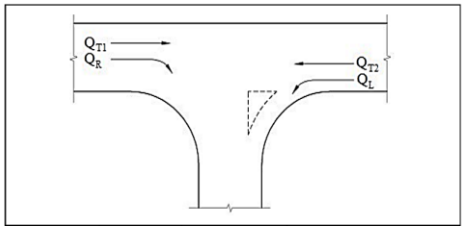


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 1)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Roslynmead Road
Side Road		Chrystal Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	4	16	5	17
Major Road opposing through traffic flow	Q_{T2}	9	31	10	32
Right turn traffic flow	Q_R	1	1	4	4
Left turn traffic flow	Q_L	1	1	50	6
Major Road traffic volume for right turn	Q_M	14	48	65	55
Major Road traffic volume for left turn	Q_M	9	31	10	32

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

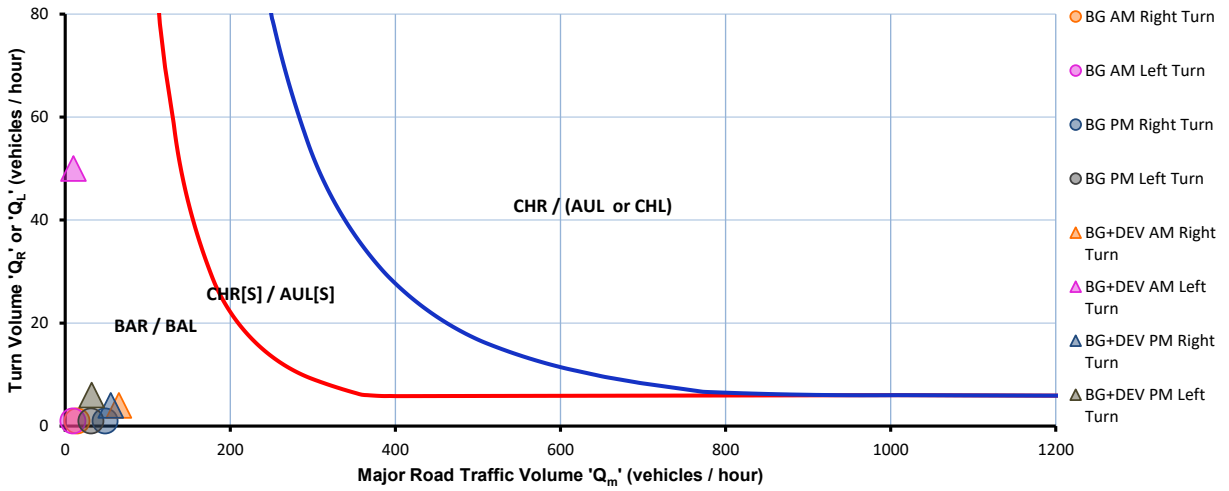
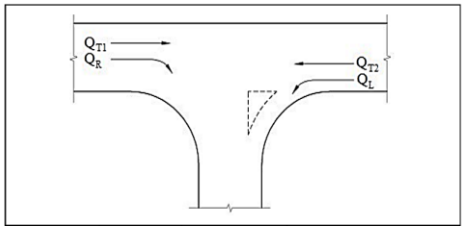


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 2)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Roslynmead Road
Side Road		Chrystal Road
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**BG**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	36	18	38	19
Major Road opposing through traffic flow	Q_{T2}	16	24	18	25
Right turn traffic flow	Q_R	1	1	4	4
Left turn traffic flow	Q_L	1	1	11	6
Major Road traffic volume for right turn	Q_M	53	43	67	50
Major Road traffic volume for left turn	Q_M	16	24	18	25

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

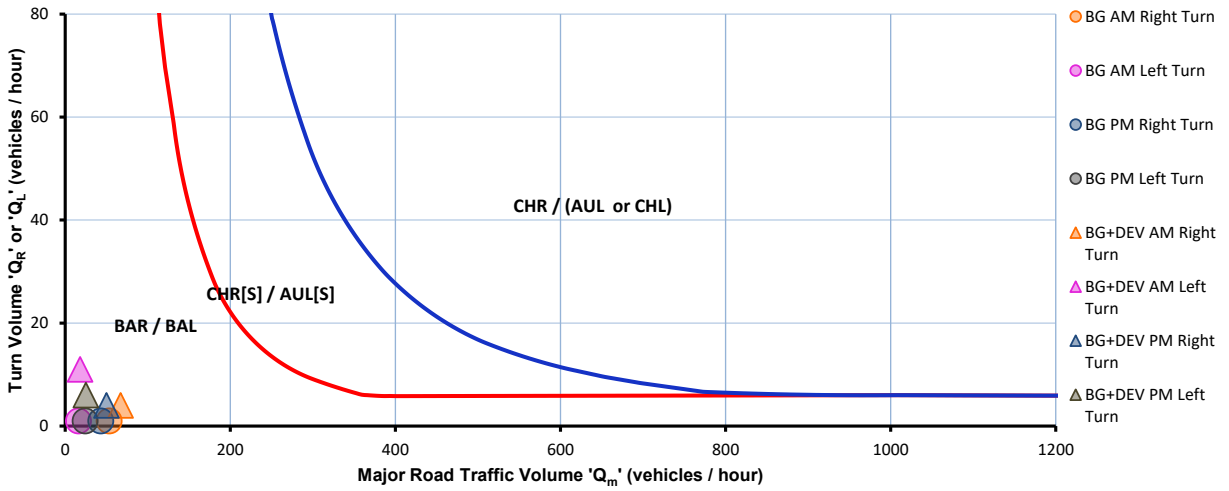
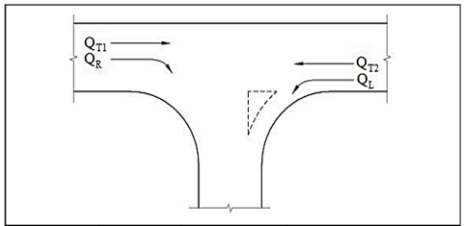


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

BG

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Network Peak)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Davis Road
Side Road		Site Access
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**0**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	0	0	9	9
Major Road opposing through traffic flow	Q_{T2}	0	0	9	0
Right turn traffic flow	Q_R	0	0	0	0
Left turn traffic flow	Q_L	0	0	6	5
Major Road traffic volume for right turn	Q_M	0	0	24	14
Major Road traffic volume for left turn	Q_M	0	0	9	0

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

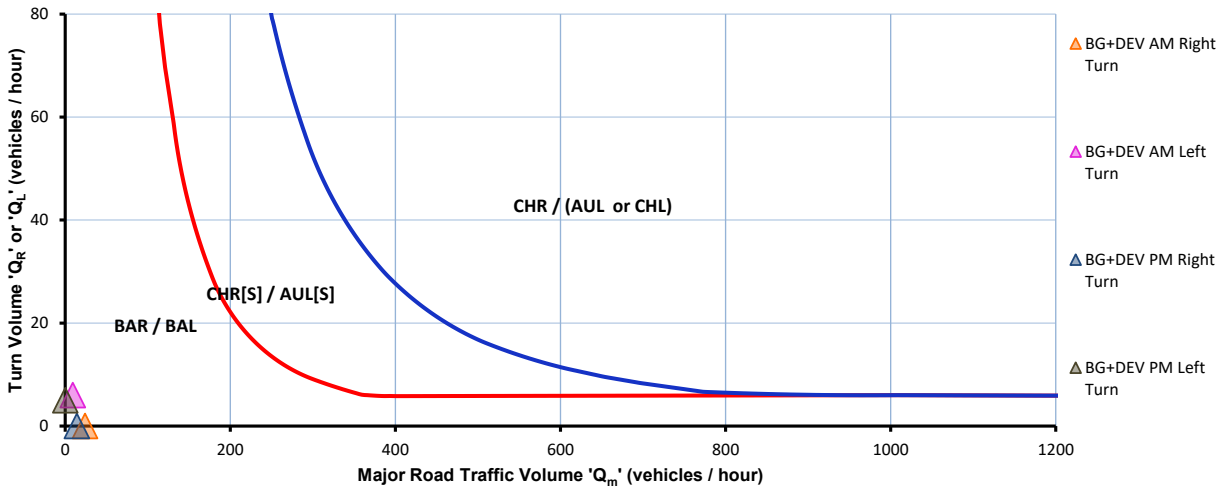
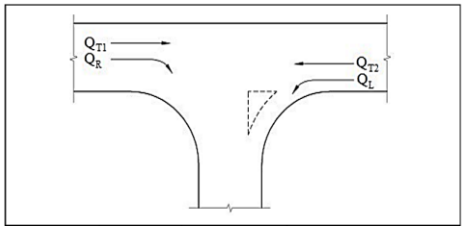


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

0

	Right turn treatment	Left turn treatment
AM		
PM		

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 1)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Davis Road
Side Road		Site Access
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**0**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	0	0	0	9
Major Road opposing through traffic flow	Q_{T2}	0	0	9	4
Right turn traffic flow	Q_R	0	0	0	0
Left turn traffic flow	Q_L	0	0	3	5
Major Road traffic volume for right turn	Q_M	0	0	12	18
Major Road traffic volume for left turn	Q_M	0	0	9	4

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

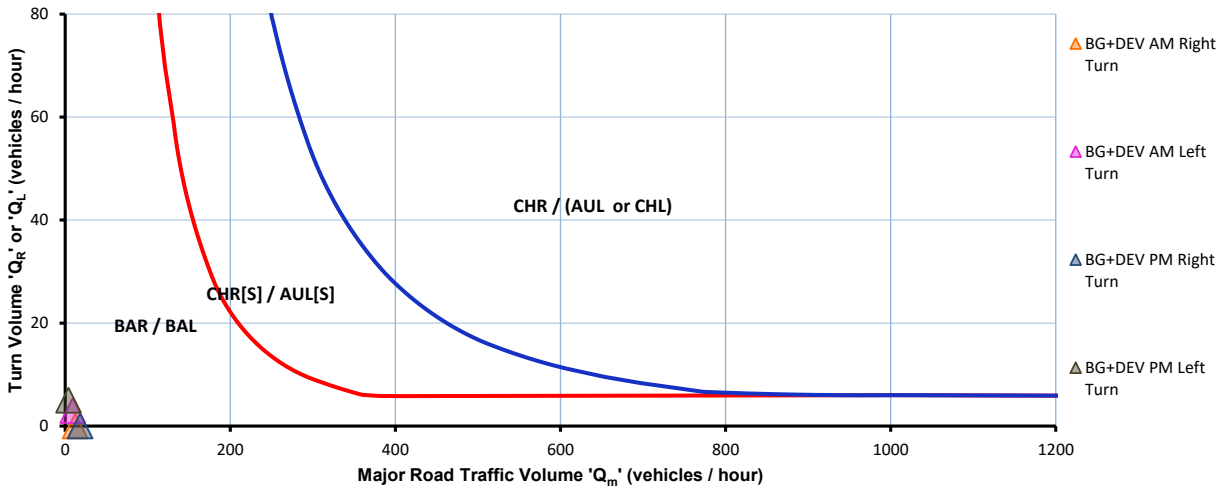
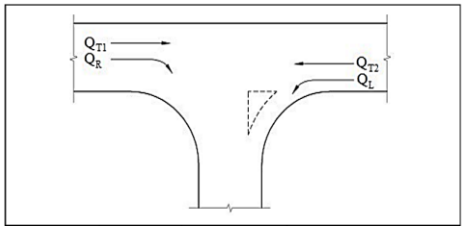


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

0

	Right turn treatment	Left turn treatment
AM		
PM		

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 2)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Davis Road
Side Road		Site Access
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**0**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	0	0	7	13
Major Road opposing through traffic flow	Q_{T2}	0	0	11	2
Right turn traffic flow	Q_R	0	0	0	0
Left turn traffic flow	Q_L	0	0	24	5
Major Road traffic volume for right turn	Q_M	0	0	42	20
Major Road traffic volume for left turn	Q_M	0	0	11	2

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

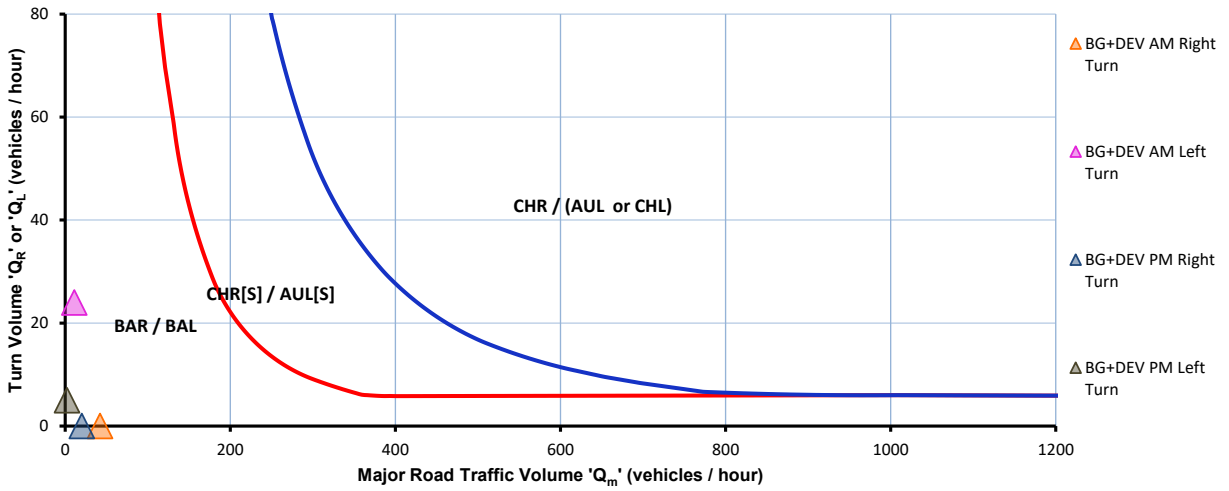
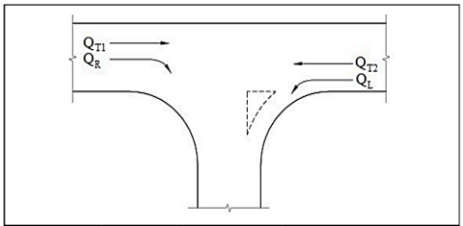


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

0

	Right turn treatment	Left turn treatment
AM		
PM		

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Network Peak)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Chrystal Road
Side Road		Site Access
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**0**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	0	0	5	5
Major Road opposing through traffic flow	Q_{T2}	0	0	6	6
Right turn traffic flow	Q_R	0	0	5	5
Left turn traffic flow	Q_L	0	0	2	2
Major Road traffic volume for right turn	Q_M	0	0	13	13
Major Road traffic volume for left turn	Q_M	0	0	6	6

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

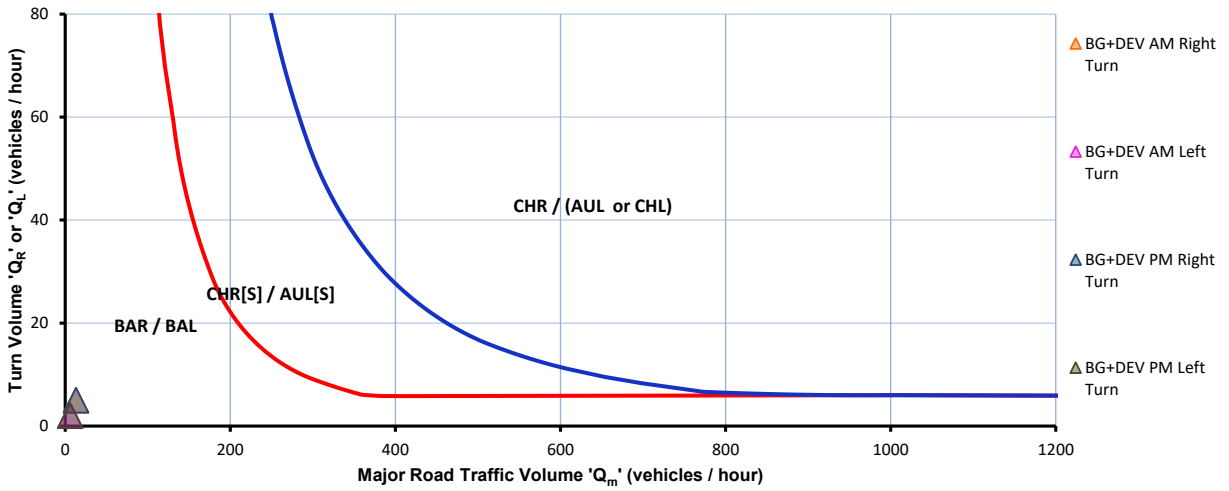
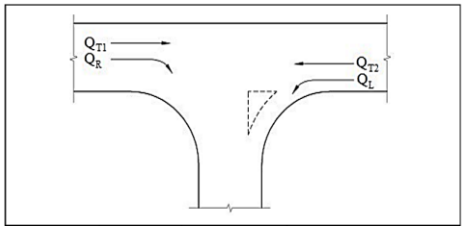


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

0

	Right turn treatment	Left turn treatment
AM		
PM		

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 1)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Chrystal Road
Side Road		Site Access
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**0**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	0	0	5	5
Major Road opposing through traffic flow	Q_{T2}	0	0	6	6
Right turn traffic flow	Q_R	0	0	49	5
Left turn traffic flow	Q_L	0	0	2	2
Major Road traffic volume for right turn	Q_M	0	0	13	13
Major Road traffic volume for left turn	Q_M	0	0	6	6

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

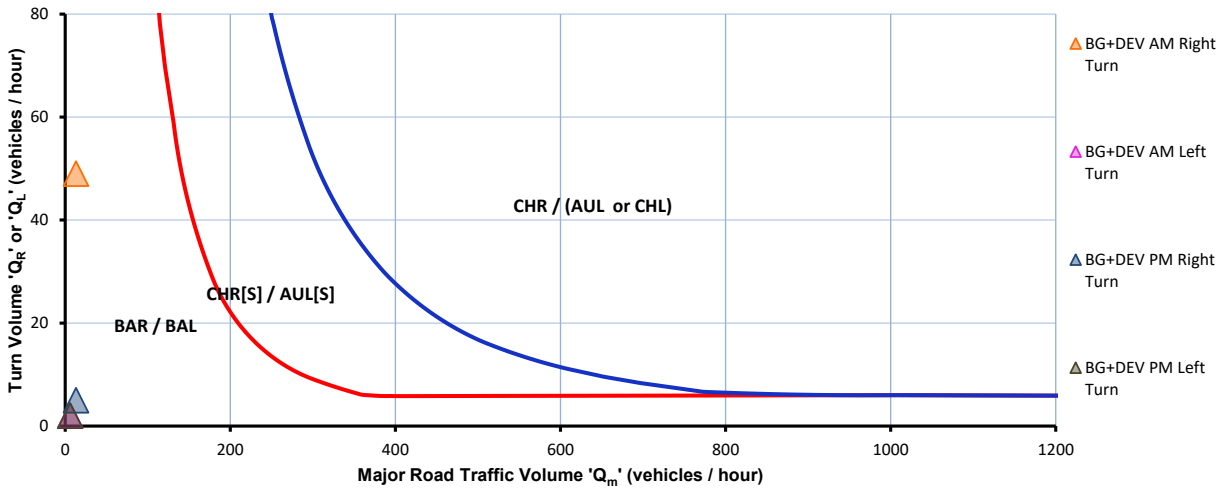
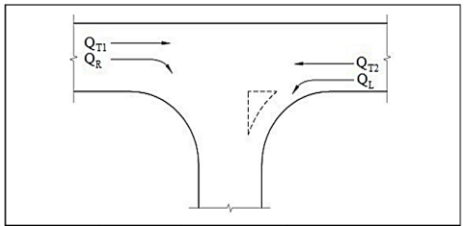


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

0

	Right turn treatment	Left turn treatment
AM		
PM		

BG+DEV

	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

WARRANTS FOR TURN TREATMENTS
PROJECT: 25E-0010 Poultry Farm - Torrumbarry
TITLE: 2052 PEAK HOUR TRAFFIC VOLUMES (Development Peak 2)

RMA Engineers

INTERSECTION DETAILS		
Major Road		Chrystal Road
Side Road		Site Access
Splitter Island on Major Road	Yes or No	No
Design Domain	NDD or EDD	NDD
Major Road Design Speed	(km/h)	More than/equal to 100

TRAFFIC VOLUMES (Vehicles/Hour)		**0**		**BG+DEV**	
		AM	**PM**	**AM**	**PM**
Major Road approaching through traffic flow	Q_{T1}	0	0	10	5
Major Road opposing through traffic flow	Q_{T2}	0	0	6	11
Right turn traffic flow	Q_R	0	0	5	5
Left turn traffic flow	Q_L	0	0	2	2
Major Road traffic volume for right turn	Q_M	0	0	18	18
Major Road traffic volume for left turn	Q_M	0	0	6	11

Turn Warrant Graph (as adapated from Figure 3.25 Austroads Guide to Traffic Management Part 6 2020)

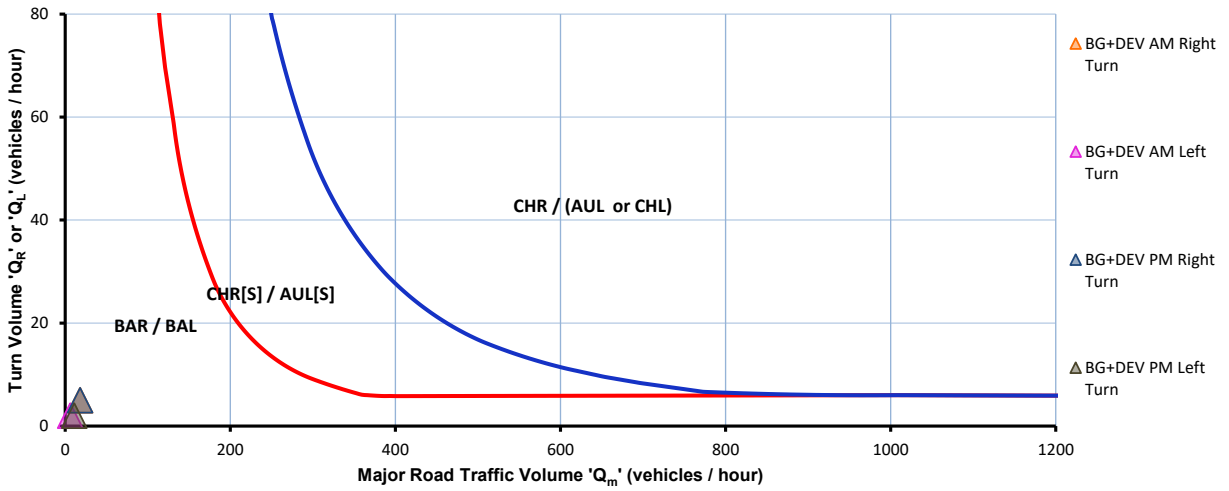
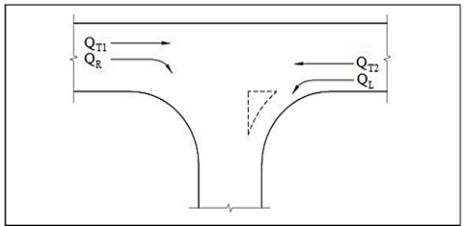


Figure 4A-A 4 - Calculation of the major road traffic volume parameter 'Q_M'



Road Type	Turn Type	Splitter Island	Q_M (veh/h)
2 Lane 2 Way	Right	No	= $Q_{T1} + Q_{T2} + Q_L$
		Yes	= $Q_{T1} + Q_{T2}$
	Left	Yes/No	= Q_{T2}

RESULTS:

0

	Right turn treatment	Left turn treatment
AM		
PM		

BG+DEV

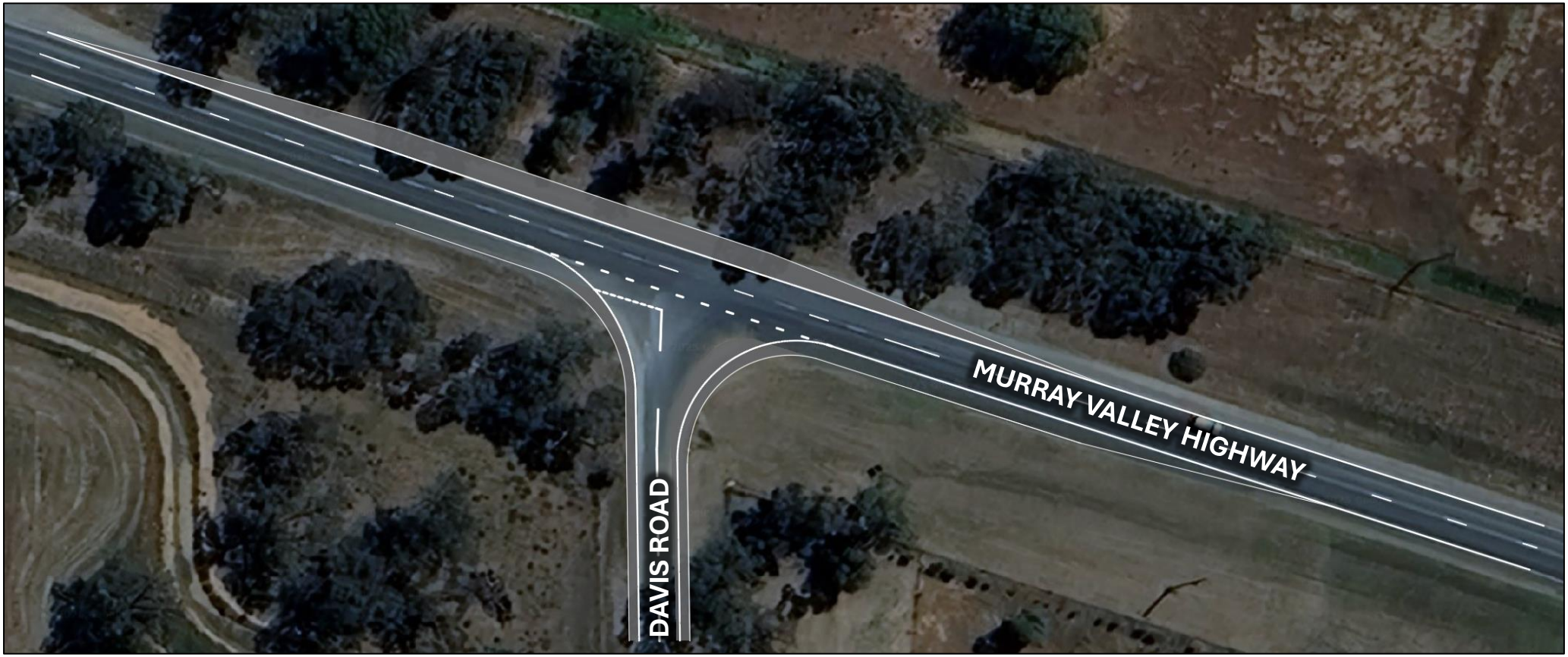
	Right turn treatment	Left turn treatment
AM	BAR	BAL
PM	BAR	BAL

NOTES:

Appendix H Intersection concept sketches and swept path assessment

25E-0010 – Murray Valley Highway / Davis Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

RMA Engineers



Murray Valley Highway / Davis Road intersection upgrade concept sketch (BAR / BAL layout)

25E-0010 – Murray Valley Highway / Davis Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

Murray Valley Highway / Davis Road – 19m AV turn path – Right In / Left Out

25E-0010 – Murray Valley Highway / Davis Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

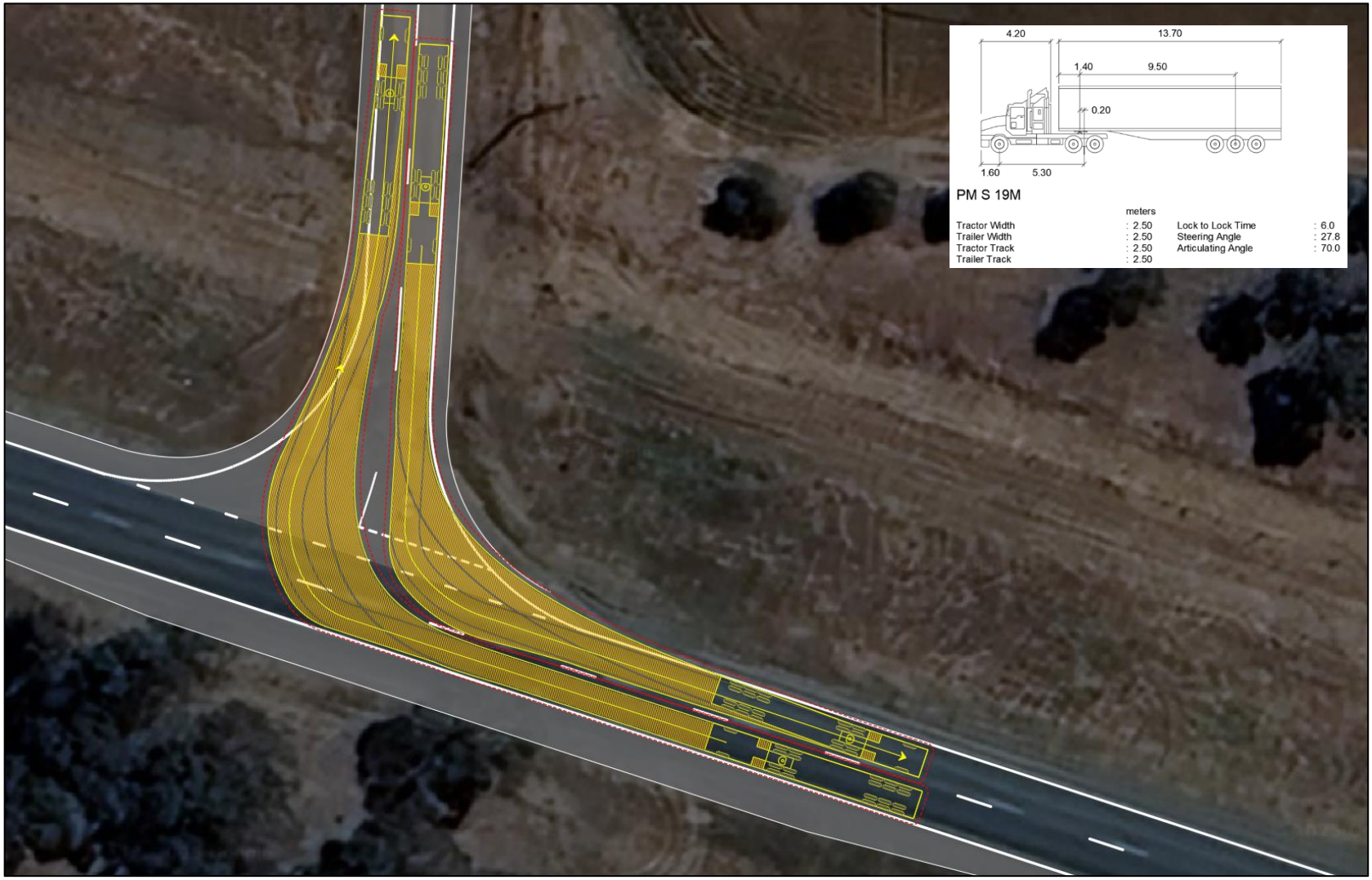
Murray Valley Highway / Davis Road – 19m AV turn path – Left In / Right Out

25E-0010 – Murray Valley Highway / Heppell Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

RMA Engineers

Murray Valley Highway / Heppell Road intersection upgrade concept sketch (BAR / BAL layout)

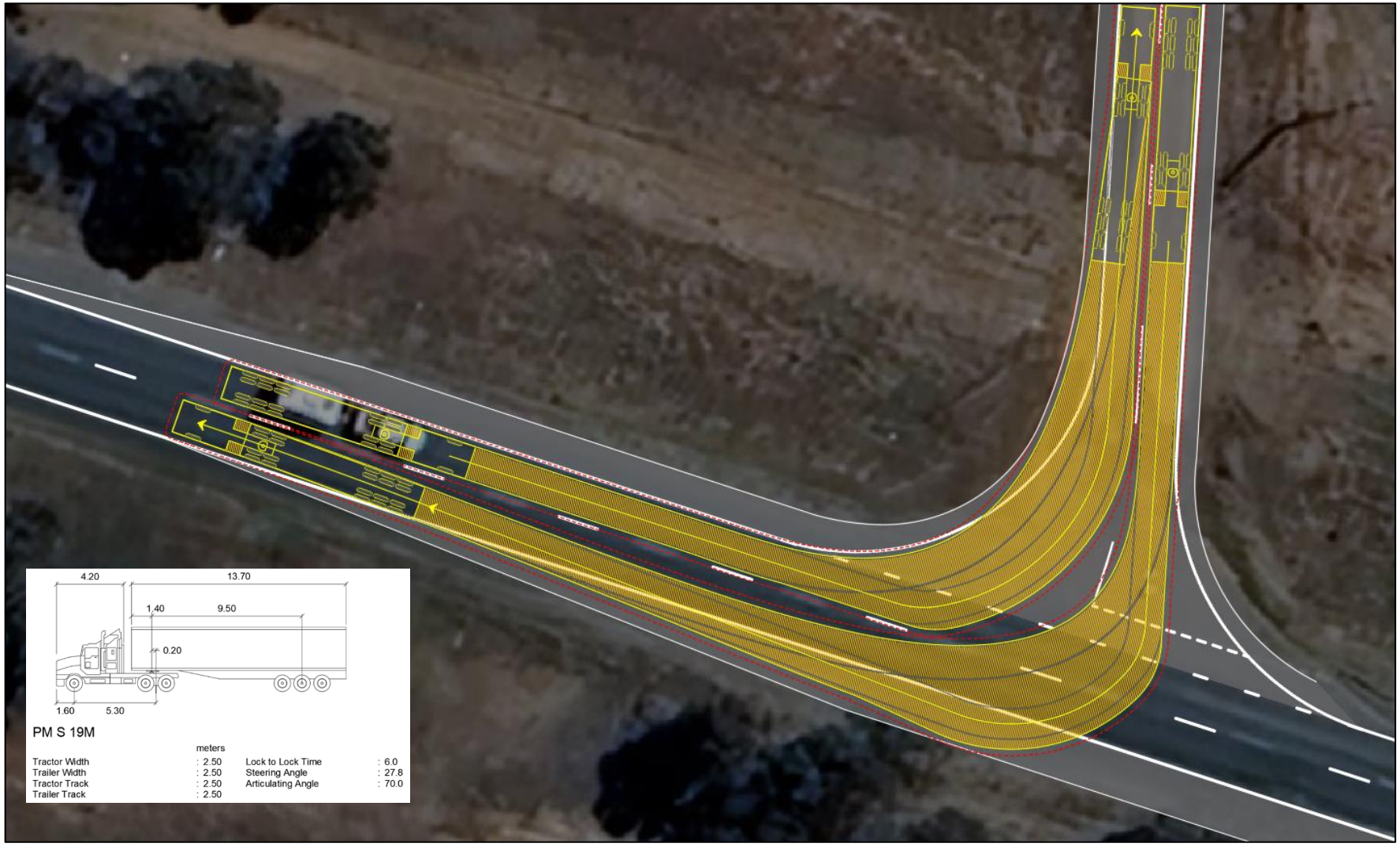
25E-0010 – Murray Valley Highway / Heppell Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)



Murray Valley Highway / Heppell Road – 19m AV turn path – Right In / Left Out

25E-0010 – Murray Valley Highway / Heppell Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

RMA Engineers

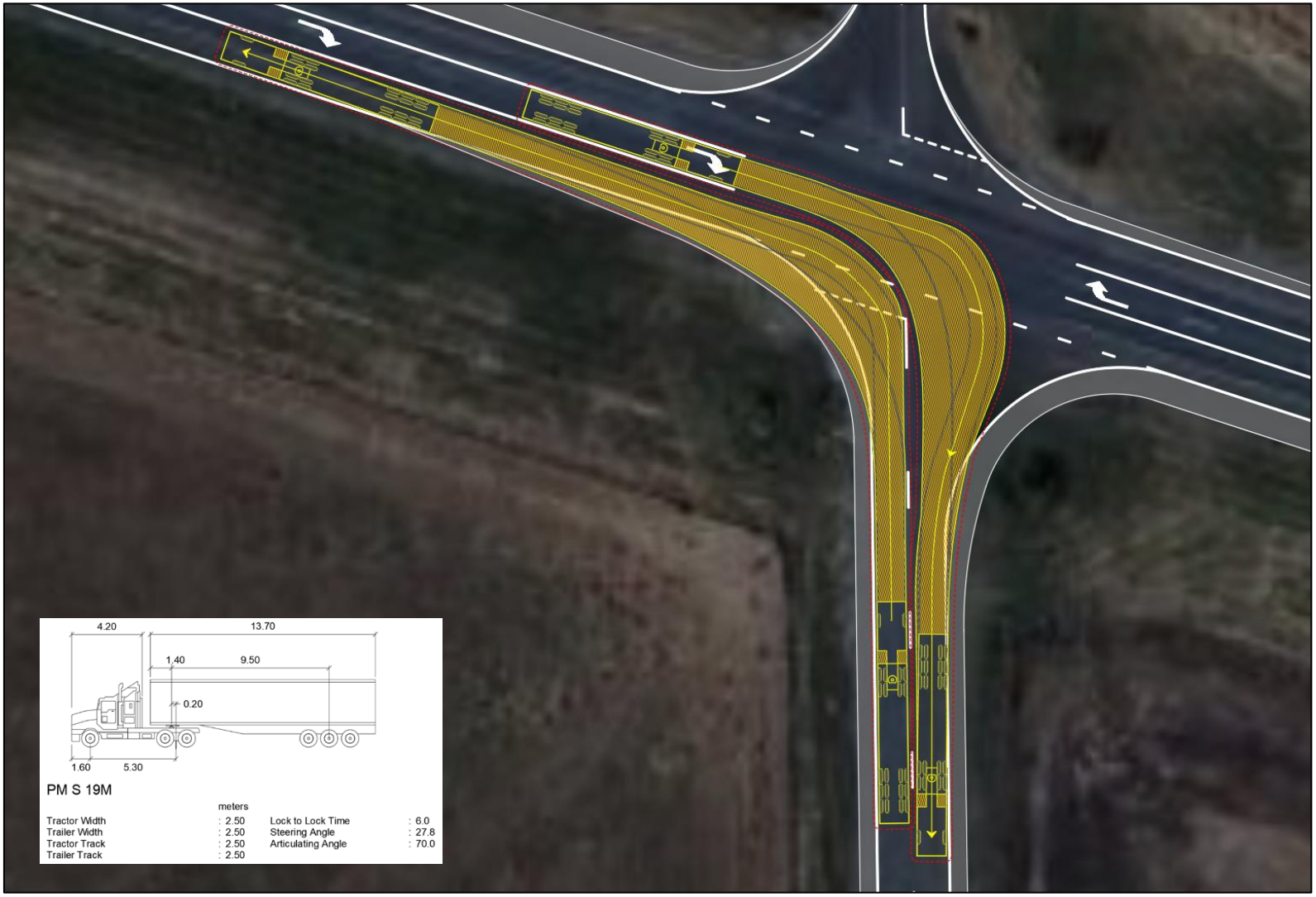


Murray Valley Highway / Heppell Road – 19m AV turn path – Left In / Right Out

25E-0010 – Murray Valley Highway / Roslynmead Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

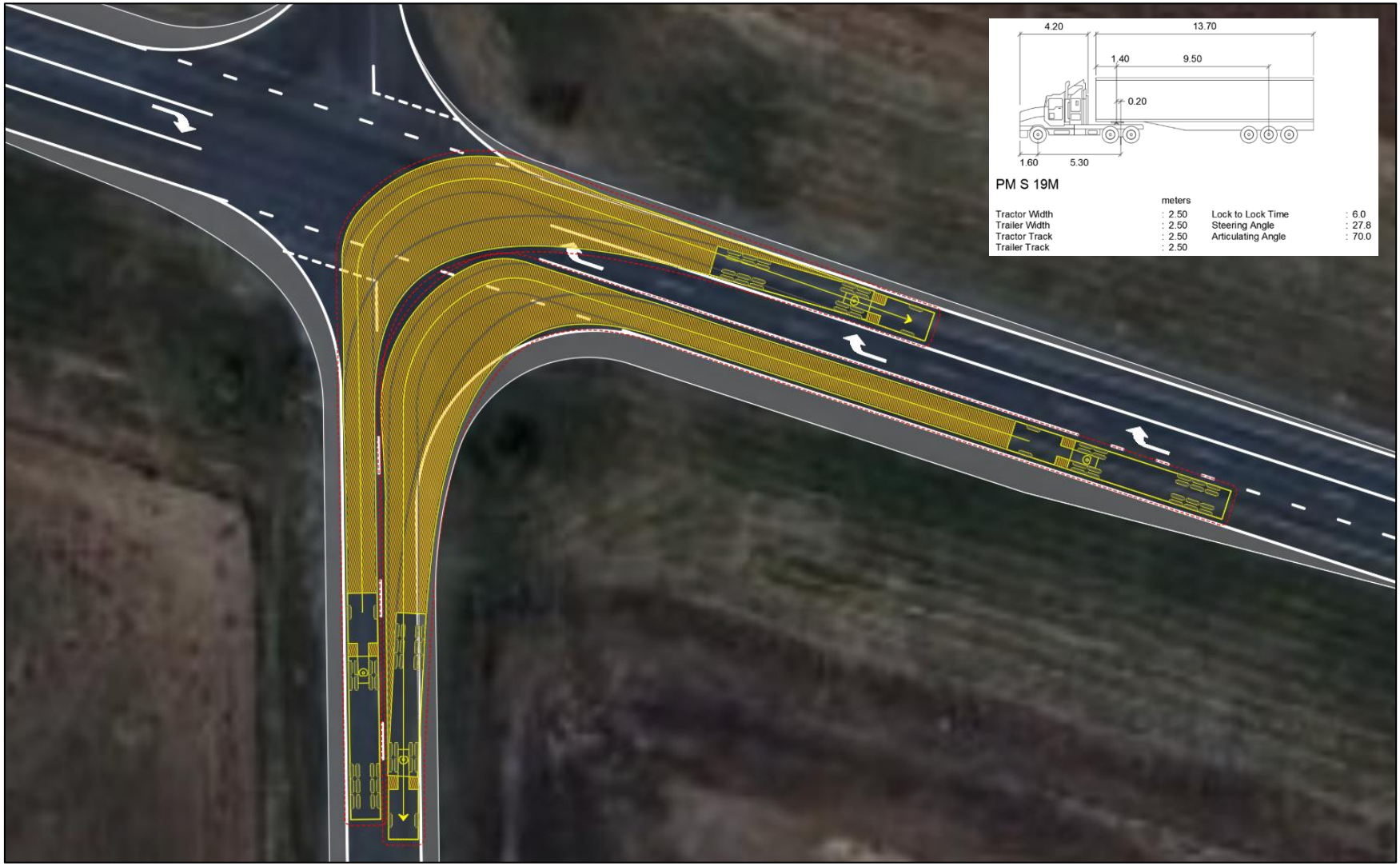
Murray Valley Highway / Roslynmead Road / Bail Road intersection upgrade concept sketch (CHR / CHR(S) / BAL layout)

25E-0010 – Murray Valley Highway / Roslynmead Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)



Murray Valley Highway / Roslynmead Road – 19m AV turn path – Right In / Left Out

25E-0010 – Murray Valley Highway / Roslynmead Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)



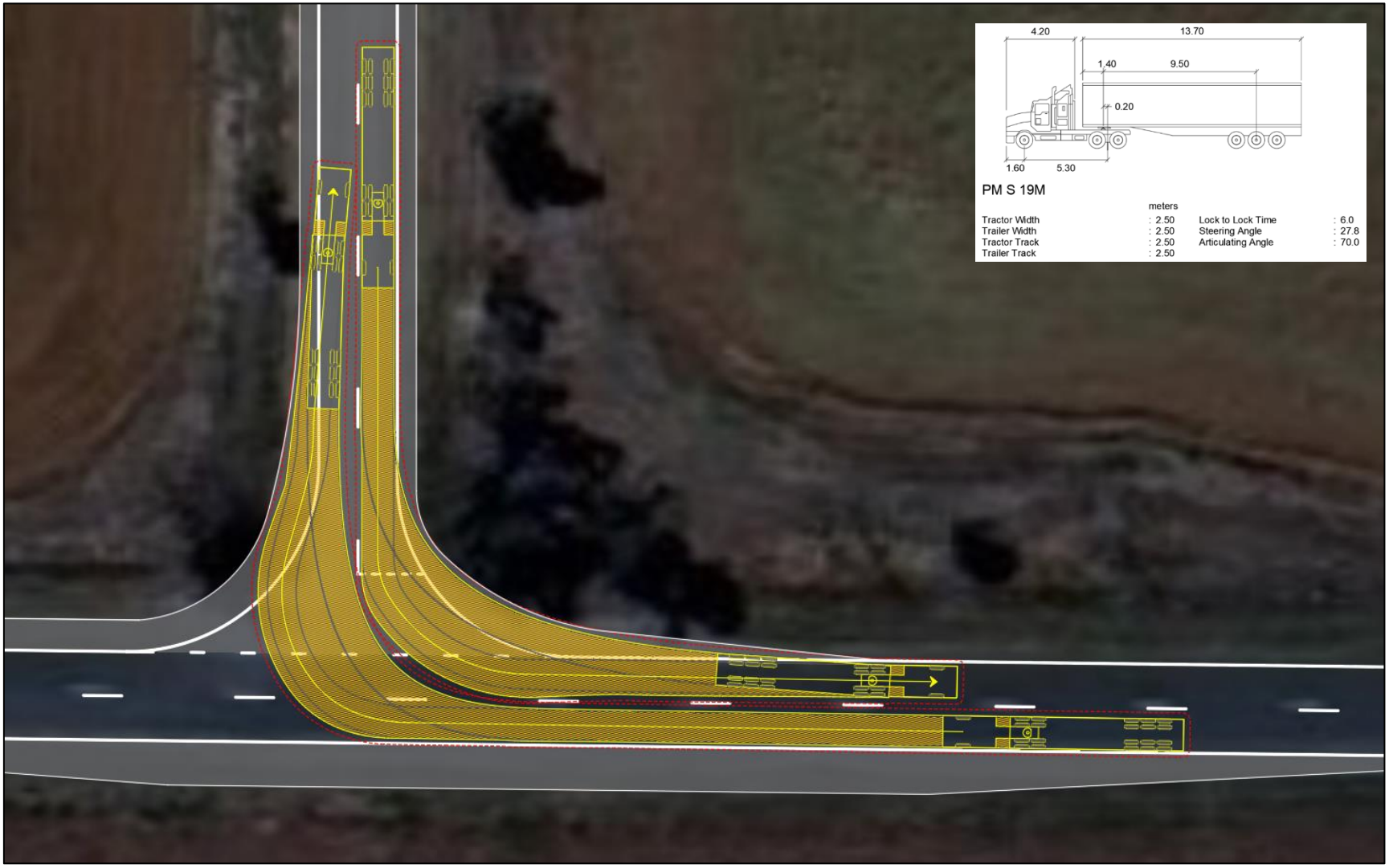
Murray Valley Highway / Roslynmead Road – 19m AV turn path – Left In / Right Out

25E-0010 – Roslynmead Road / Chrystal Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

RMA Engineers

Roslynmead Road / Chrystal Road intersection upgrade concept sketch (BAR / BAL layout)

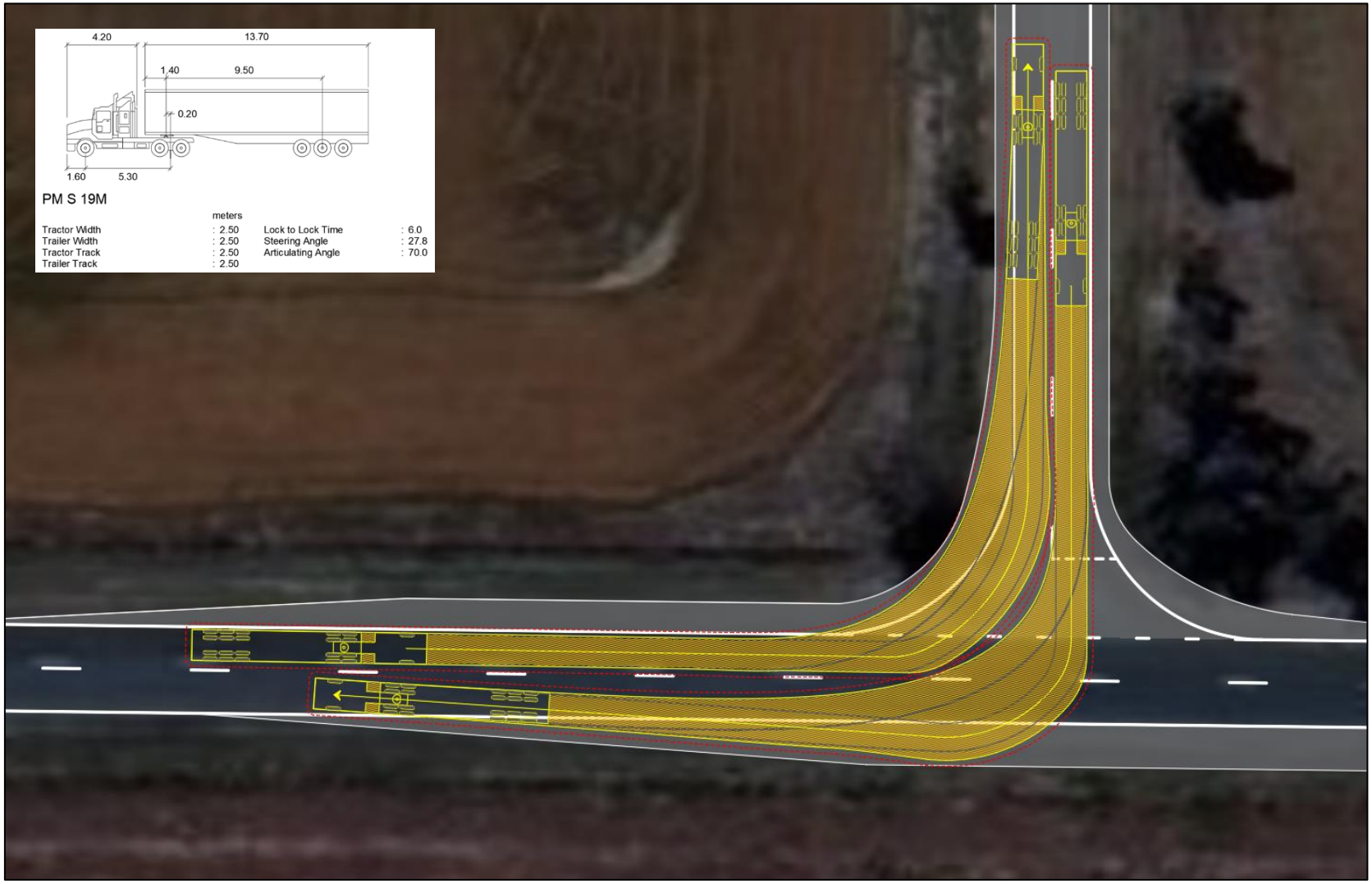
25E-0010 – Roslynmead Road / Chrystal Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)



Roslynmead Road / Chrystal Road – 19m AV turn path – Right In / Left Out

25E-0010 – Roslynmead Road / Chrystal Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

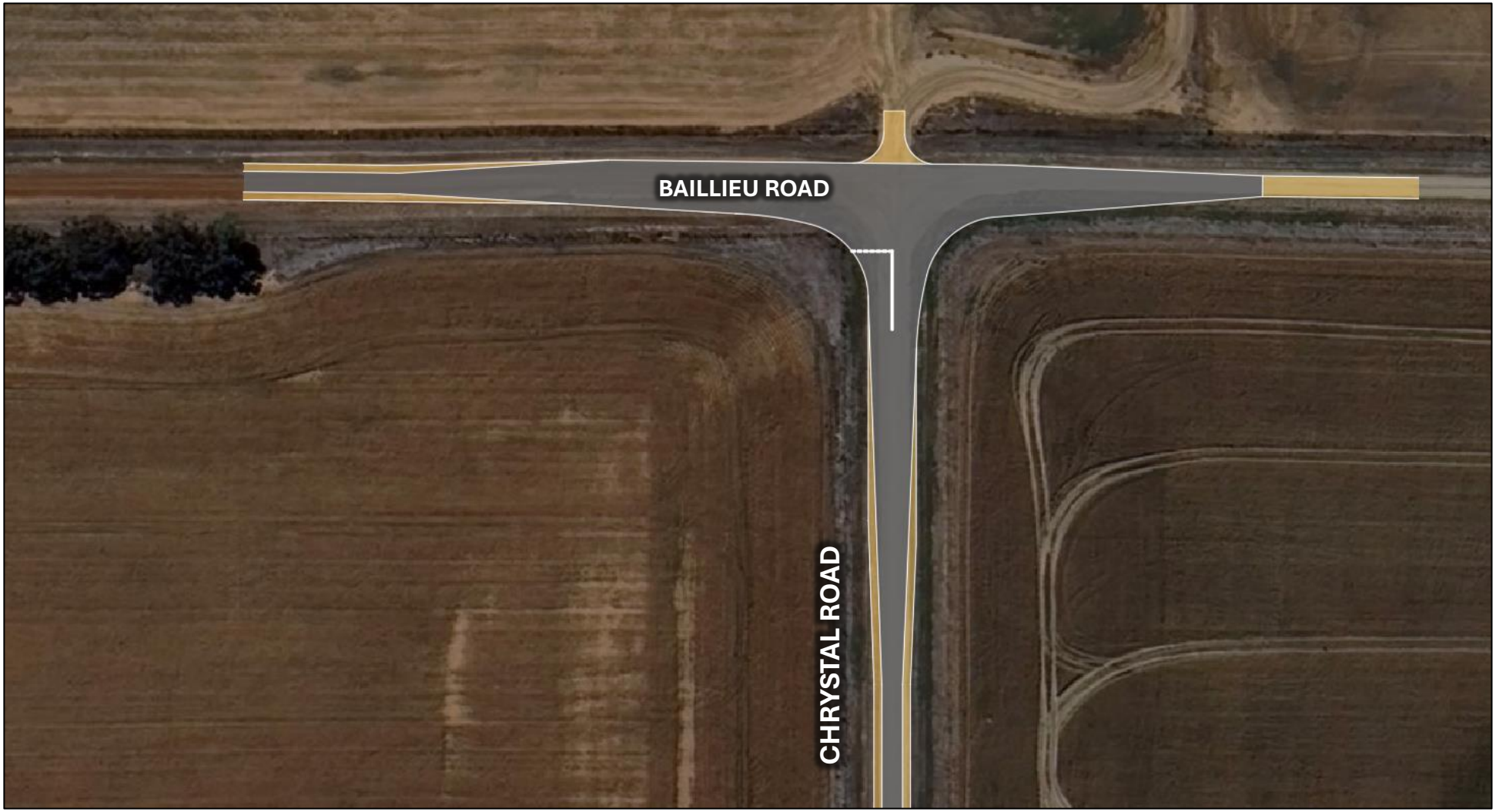
RMA Engineers



Roslynmead Road / Chrystal Road – 19m AV turn path – Left In / Right Out

25E-0010 – Baillieu Road / Chrystal Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

RMA Engineers



Baillieu Road / Chrystal Road intersection upgrade concept sketch (simple right and simple left layout)

25E-0010 – Baillieu Road / Chrystal Road
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

RMA Engineers

Baillieu Road / Chrystal Road – 19m AV turn path – Right In / Left Out

25E-0010 – Baillieu Road curve widening
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

RMA Engineers

Baillieu Road midblock curve upgrade concept sketch (curve widening)

25E-0010 – Baillieu Road curve widening
Sketch plan - Revision 1 (31 July 2025)
Plans are for discussion purposes only | not to scale
Drawn by: Adam Gwatking (PE0017373)

RMA Engineers

Baillieu Road curve widening – 19m AV turn path – passing movements

Appendix I Crash data provided by Transport for Victoria

ROAD CRASH INFORMATION SYSTEM

Location Formatted Report

UDA=User Defined Severity=All Casualty Date=01/01/2004 to 09/09/2025 ABS=ABS to receive accident

LGA	Map KM	Location	Severity K/SI/Inj Road User/Age/Sex/Injury	Date Time	Day DCA	Traf. Control Sub DCAs	Light Road	Veh Dir.	Units/ Object Hit	Accident No MF/Image
CAMPASPE	30 H2 405412	On MURRAY VALLEY HIGHWAY 232m E from Int PATHO SCHOOL ROAD	Serious injury 0/1/1 Pas/52/F/3 Pas/5/F/4 Pas/1/F/4 Dri/18/M/2	28/02/2010 19:50	Sun 172	No control V01	Dusk Dry	E*	Car/Not Applica	T20100007691 0/0
CAMPASPE	30 H2 405688	On MURRAY VALLEY HIGHWAY 44m W from Int PATHO SCHOOL ROAD	Fatal accident 1/1/0 Pas/85/M/1 Dri/74/F/2	20/01/2012 16:10	Fri 179	No control Q07	Day Dry	NW*	Station Wagon/G	T20120001497 0/0
CAMPASPE	30 H2 405644	At Int of MURRAY VALLEY HIGHWAY and PATHO SCHOOL ROAD	Other injury a 0/0/1 Dri/68/M/4 Dri/28/F/3	06/01/2023 06:55	Fri 111	No control NRQ	Day Dry	S* W^	LCVR <=4.5T/Not HV-RIGID > 4.5T	T20230000344 0/0
CAMPASPE	30 J2 5313	On GLENN ROAD 64m S from Int MURRAY VALLEY HIGHWAY	Other injury a 0/0/1 Mot/25/M/3	17/12/2005 09:00	Sat 182	No control V01 W01	Day Dry	N*	Motor Cycle/Not	T20060003213 0/0
CAMPASPE	30 J2 404418	On MURRAY VALLEY HIGHWAY 149m E from Int DAVIS ROAD	Fatal accident 1/0/0 Pas/64/F/4 Bic/52/F/1 Dri/67/M/4	28/11/2005 10:15	Mon 120	Other L03	Day Dry	E* W^	Bicycle/Not App Station Wagon	32005041949 0/0
CAMPASPE	30 J2 399134	On MURRAY VALLEY HIGHWAY 645m E from Int CAMERON ROAD	Other injury a 0/0/1 Dri/18/F/3	26/10/2013 01:05	Sat 171	No control Q02 V01	Dark Dry	NW*	Car/Tree (shrub	T20130022070 0/0
CAMPASPE	30 J2 402393	On MURRAY VALLEY HIGHWAY 460m E from Int GLENN ROAD	Serious injury 0/1/0 Pas/69/M/4 Dri/73/M/2 Dri/27/F/4 Dri/43/M/4	19/07/2016 19:35	Tue 129	Other NRQ	Dark Dry	W* E^ E	Utility/Roadwor Car Utility	T20160015775 0/0
CAMPASPE	30 J2 402876	At Int of MURRAY VALLEY HIGHWAY and TORRUMBARRY WEIR ROAD	Serious injury 0/2/4 Pas/67/F/2 Pas/32/F/3 Pas/0/M/3 Pas/17/F/2 Dri/72/M/3 Dri/55/F/3	26/12/2017 12:30	Tue 132	No control N01	Day Dry	NW* NW^	Car/Not Applica Car	T20170024679 0/0
CAMPASPE	31 A2 398313	On MURRAY VALLEY HIGHWAY 690m W from Int BAXTER ROAD	Other injury a 0/0/1 Dri/44/M/3	09/03/2004 23:20	Tue 173	No control Q03 V01	Dark Dry	W*	Car/Fence/Wall	32004008077 0/0
CAMPASPE	31 A2 394916	On MURRAY VALLEY HIGHWAY 485m NW from Int YOUNG ROAD	Other injury a 0/0/1 Dri/23/F/3	17/03/2015 15:55	Tue 171	No control Q02 V01	Day Dry	NW*	Car/Tree (shrub	T20150005689 0/0
CAMPASPE	31 A2 397321	On MURRAY VALLEY HIGHWAY 179m E from Int HEADWORKS ROAD	Serious injury 0/1/2 Pas/53/F/2 Dri/37/M/2 Dri/62/M/2	27/09/2017 09:09	Wed 120	No control L03	Day Dry	W* E^	Utility/Not App Station Wagon/N	T20170018471 0/0
CAMPASPE	31 A2 394431	On MURRAY VALLEY HIGHWAY 2m SE from Int YOUNG ROAD	Serious injury 0/1/1 Pas/38/F/3 Dri/70/M/2 Oth/30/M/4	05/06/2021 13:40	Sat 152	No control B02	Day Dry	E^ E*	Panel Van Plant machinery	T20210012519 0/0

Number of crashes: 12

Note : * Indicates vehicle # 1 as per DCA chart; ^ Indicates vehicle #2 as per DCA chart

All users, please note details of abbreviation used to record heavy vehicle information:
SEMI TRLR PT is Semi-Trailer (Pre-TIS); TRK EXCL SEMI PT is Truck (excluding semi)(Pre-TIS); PM ONLY is Prime Mover Only; PM SING TRLR is Prime Mover - Single Trailer; PM B-DOUBLE is Prime Mover - B-Double; PM B-TRIPLE is Prime Mover - B-TRIPLE; LCVR <=4.5T is Light Commercial Vehicle (Rigid) <=4.5 Tonnes GVM; HV-RIGID >4.5T is Heavy Vehicle (Rigid)>4.5 Tonnes GVM;

NB: Any complex intersections included in this report may not have had all accidents included.

UDA=User Defined Severity=All Casualty Date=01/01/2004 to 09/09/2025 ABS=ABS to receive accident

ACCIDENTS BY YEAR AND SEVERITY and PERSONS INVOLVED BY YEAR AND INJURY LEVEL

	ACCIDENTS				PERSONS				
Year	Fatal	Serious Injury	Other Injury	Total Accidents	Killed	Seriously Injured	Other Injury	Not Injured	Total Persons
2004			1	1			1		1
2005	1		1	2	1		1	2	4
2010		1		1		1	1	2	4
2012	1			1	1	1			2
2013			1	1			1		1
2015			1	1			1		1
2016		1		1		1		3	4
2017		2		2		5	4		9
2021		1		1		1	1	1	3
2023			1	1			1	1	2

All users, please note details of abbreviation used to record heavy vehicle information:
SEMI TRLR PT is Semi-Trailer (Pre-TIS); TRK EXCL SEMI PT is Truck (excluding semi)(Pre-TIS); PM ONLY is Prime Mover Only; PM SING TRLR is Prime Mover - Single Trailer; PM B-DOUBLE is Prime Mover - B-Double; PM B-TRIPLE is Prime Mover - B-TRIPLE; LCVR <=4.5T is Light Commercial Vehicle (Rigid) <=4.5 Tonnes GVM; HV-RIGID >4.5T is Heavy Vehicle (Rigid)>4.5 Tonnes GVM;

ROAD CRASH INFORMATION SYSTEM

Location Formatted Report

UDA=User Defined Severity=All Casualty Date=01/01/2004 to 09/09/2025 ABS=ABS to receive accident

DCA BY ACCIDENT SEVERITY

DCA	Fatal Accident	Serious Injury Accident	Other Injury Accident	Total Accidents	Total Persons
111			1	1	2
120	1	1		2	6
129		1		1	4
132		1		1	6
152		1		1	3
171			2	2	2
172		1		1	4
173			1	1	1
179	1			1	2
182			1	1	1

All users, please note details of abbreviation used to record heavy vehicle information:
SEMI TRLR PT is Semi-Trailer (Pre-TIS); TRK EXCL SEMI PT is Truck (excluding semi)(Pre-TIS); PM ONLY is Prime Mover Only; PM SING TRLR is Prime Mover - Single Trailer; PM B-DOUBLE is Prime Mover - B-Double; PM B-TRIPLE is Prime Mover - B-TRIPLE; LCVR <=4.5T is Light Commercial Vehicle (Rigid) <=4.5 Tonnes GVM; HV-RIGID >4.5T is Heavy Vehicle (Rigid)>4.5 Tonnes GVM;