Technical Memorandum

The Village Oonoonba

Date	11 June 2025	**Project Number**	P0051836
Client	EDQ	**Prepared By**	Alice Shi / Denise Wang
Project	The Village Oonoonba Traffic Assessment	**Reviewed By**	Andy Johnston / Jadyn Benzie

1. Introduction

1.1 Background

Urbis has been engaged by Economic Development Queensland – Urban Developments team (EDQ UD) to provide traffic engineering advice for The Village development at Oonoonba, within the Oonoonba Priority Development Area (PDA).

This technical memorandum has been prepared to assist with pre-lodgement discussions for the delivery of infrastructure works to allow for further development at the site to occur. Intersection upgrades at the following sites are proposed as part of these works:

1. Abbott Street / Lakeside Drive
2. Lakeside Drive / Riveredge Boulevard

The locations of these intersections in context of the PDA are indicated on Figure 1. It is noted that the masterplan shown on Figure 1 is indicative only, indicating a denser outcome than what is being sought for approval.

The Lakeside Drive / Riveredge Boulevard intersection is within the PDA boundary, however the Abbott Street / Lakeside Drive intersection is outside of the PDA. The assessment of both intersections has been requested by the Department of Transport and Main Roads (TMR) through advice received from an associated Material Change of Use (MCU) application.

This assessment has determined the proposed upgrade layouts for both intersections. The proposal plan is enclosed at **Appendix A** and the concept sketches for the intersection layouts are enclosed at **Appendix B**.

Figure 1 Study Intersection Locations

Source: Nearmap, EDQ

1.2 References

In preparation of this assessment, previous traffic studies have been provided for review, including:

- South Townsville Road Strategic Assessment of Service Requirements (SASR) Future Situation and Causal Factors, prepared by Bitzios Consulting, dated 29 August 2024
- The Village, Oonoonba, Townsville Traffic Impact Assessment, prepared by Calibre Consulting, dated 4 May 2018.
- 286 Lakeside Drive, Oonoonba Proposed Mixed Use Development Traffic Engineering report, prepared by TTM, dated 25 June 2021.

The first report has been provided by TMR for input to this assessment.

This third report refers to the traffic impacts of the proposed development at Lot 6,000.

2. Transport Assessment

2.1 Background Traffic Volumes

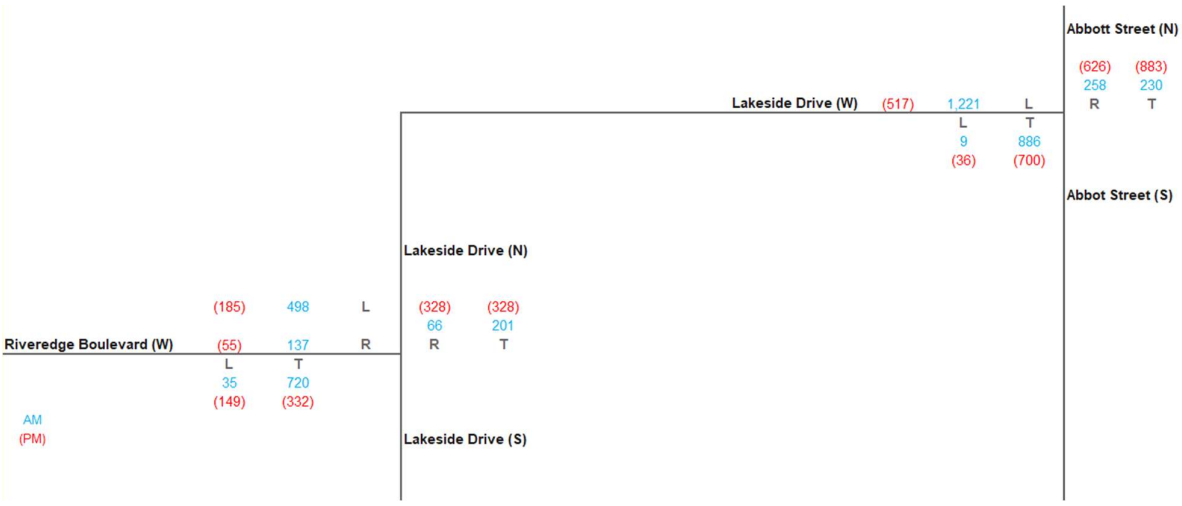
Previous traffic assessments adopted 2024 background traffic surveys as the base for the analysis. However, with the provision of TMR's future network planning and modelling (the South Townsville Road SASR report prepared by Bitzios Consulting), the traffic volumes for the external network have been informed from TMR's assessed model. This model was based on a subnetwork of the Townsville Aimsun Mesoscopic Model (TAMM), which was developed in 2022 and incorporates traffic demand from the Townsville Strategic Transport Model (TSTM).

Urbis was provided with the Stage 2 Future Year Base Modelling Report, which included Appendix A containing TAMM traffic volumes for the 2036 and 2046 forecast years. These datasets were reviewed to identify volumes for key road links within the study area.

The review found that on several road sections, projected 2046 volumes were lower than 2036 volumes due to capacity constraints in the base network, which limited the release of full demand. A significant number of vehicles remained unreleased at the end of the modelled period, affecting the ability of the model to reflect future conditions within the study corridor.

Given this limitation, Urbis adopted the 2036 volumes as the base and applied background traffic growth to derive volumes for the 2039 assessment year. The 2036 model volumes are shown on Figure 2.

Figure 2 2036 Traffic Volumes (Future Scenario Modelling)



Source: TMR adapted by Urbis

A copy of the extracted traffic modelling outputs is enclosed at **Appendix C**.

2.2 Background Traffic Growth

Annual growth rates were calculated by comparing the cordon matrices from the 2036 and 2046 TAMM scenarios for the AM peak (0700 to 0900) and PM peak (1500 to 1800). As shown in Table 1, growth rates of 1.35% for the AM peak and 1.24% for the PM peak were derived.

Table 1 Future year demand and annual growth rate

Peak Period	2036 Demand	2046 Demand	Annual Growth Rate
AM (0700–0900)	6,075	6,895	1.35%
PM (1500–1800)	9,021	10,141	1.24%

2.3 Assessment Scenarios

It has been assumed that the full development can be completed at 2029. Therefore the 10 year design horizon has been adopted as 2039.

The assessed scenarios include the AM and PM weekday peaks for the design horizon year (2039).

2.4 Development Traffic Volumes

The Village Masterplan Traffic

The Calibre Consulting traffic report (2018) was prepared to assess the masterplan traffic impacts for The Village. As this encompasses all the proposed uses over the site, the traffic volumes outlined in the report have informed this assessment. Figure 3 outlines the proposed use and yields associated with the assessment.

Figure 3 The Village Development Yield

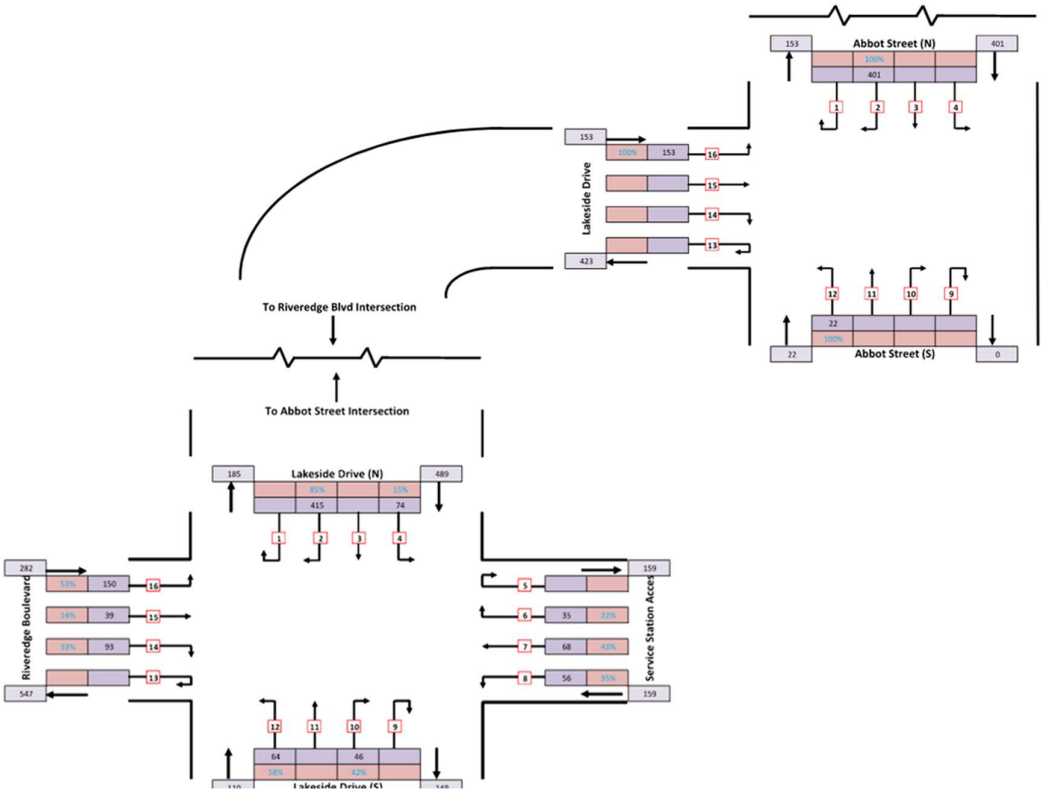
Table 2-1: Proposed Development Yield

Land Use	Quantum and Unit
Low Density Residential (Stages 1 to 20 inclusive)	626 Dwellings
Medium Density Residential (Lots that are less than 250 m^2)	330 Dwellings
Single Occupant Home Office (100 m^2)	31 Dwellings
Community Site (Church)	1,600 m^2 Total GFA
Child Care	75 children
Commercial (Retail)	1,500 m^2 Total GFA
Service Station	8 bowsers 180 m^2 service centre shop 2 drive-thru food outlets totaling 226 m^2 GFA 400 m^2 of service workshop with 6 service bays 790 m^2 of supermarket shop 308 m^2 of retail shop 180 m^2 of café with 42 m^2 of outdoor dining space

Source: Calibre Consulting

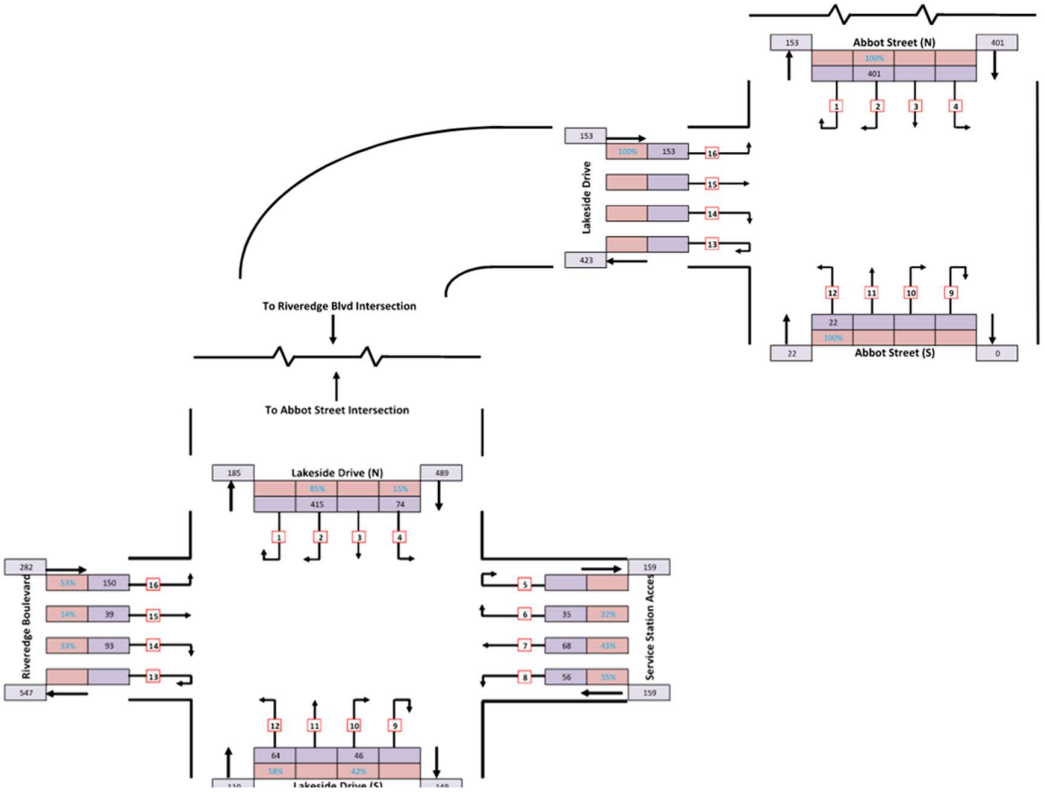
The corresponding traffic volumes for the full development are outlined in Figure 4 and Figure 5 for the AM and PM peaks, respectively.

Figure 4 The Village Traffic Generation – AM Peak



Source: Calibre Consulting

Figure 5 The Village Traffic Generation – PM Peak



Source: Calibre Consulting

Adjustments for Updated Trip Rates

The trip assumptions adopted for the Calibre assessment referred to 2002 guidelines from the NSW Roads and Traffic Authority (RTA), and Institute of Transportation Engineers (ITE) traffic engineering handbook for trip rates. More recent data is now available for many of the uses proposed which indicate many of the older trip rates overestimate the traffic generation.

This assessment has made adjustments for the following uses:

- **Low density residential** – instead of a standard rate from NSW data, this assessment adopts the AM and PM trip rates informed from the 2024 survey data for the Riveredge Boulevard catchment.
- **Medium density residential** – the Transport for NSW (TfNSW) 2024 publication Guide to Transport Impact Assessments has more recent survey data. This assessment adopts the regional average rates for AM and PM peaks.
- **Single occupant home office** – as per the Calibre assessment, this use adopts the same rate as the Medium density residential use and has been updated accordingly.
- **Retail** – typically, the AM peak rate for retail uses is much lower than the peak which occurs during the PM. This assessment adopts a 30% factor of the PM trip rate for the AM trip rate.

The Calibre assumptions and proposed amended trip rates are outlined in Table 2.

Table 2 Comparison of Trip Rates

Land Use	Calibre Assumption – AM Peak Rate	Calibre Assumption – PM Peak Rate	Amended Assumption – AM Peak Rate	Amended Assumption – PM Peak Rate
Low density residential	0.85 vph/house	0.85 vph/house	0.55 vph/house	0.68 vph/house
Medium density residential	0.55 vph/unit	0.55 vph/unit	0.41 vph/unit	0.60 vph/unit
Single occupant home office	0.55 vph/unit	0.55 vph/unit	0.41 vph/unit	0.60 vph/unit
Retail	12.5 vph/100sq.m GFA	12.5 vph/100sq.m GFA	3.75 vph/100sq.m GFA	12.5 vph/100sq.m GFA

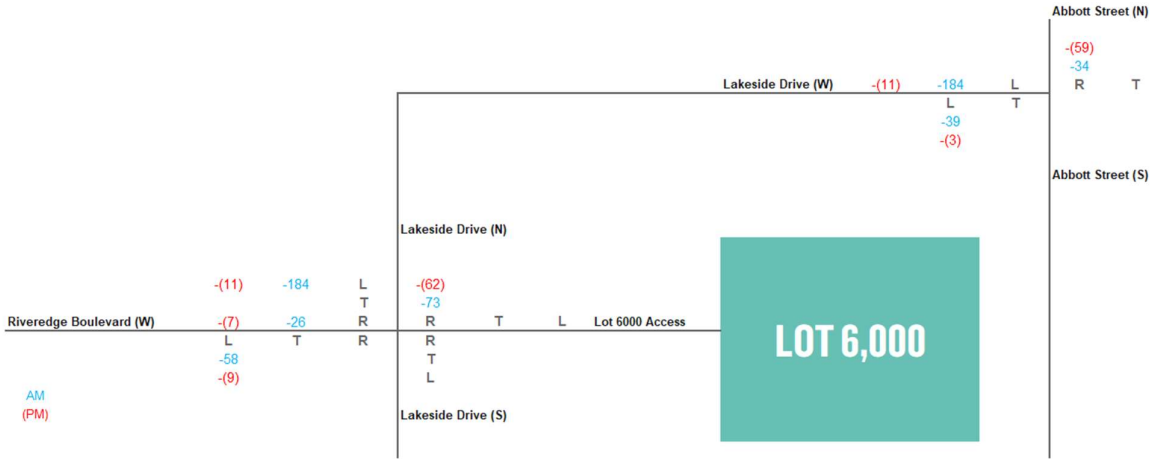
The adoption of these amended trip rates has been applied as a reduction from the Calibre assessed trips based on the difference in trip generation. The difference in trips is outlined in Table 3.

Table 3 Difference in Assessed Trip Generation

Land Use	Calibre Assumption – AM Peak Trips	Calibre Assumption – PM Peak Trips	Amended Assumption – AM Peak Trips	Amended Assumption – PM Peak Trips	Difference – AM Peak Trips	Difference – PM Peak Trips
Low density residential	532	532	347	425	*-185*	*-107*
Medium density residential	182	182	135	198	*-46*	*17*
Single occupant home office	17	17	13	19	*-4*	*2*
Retail	150	150	45	150	*-105*	*0*
Total Difference					**-341**	**-89**

The change in trips has been distributed across the network following the Calibre traffic distribution assumptions.

Figure 6 Adjusted Trip Generation



Lot 6000 Traffic

The proposed development uses and traffic generation for Lot 6000 has been outlined in the TTM traffic report dated 25 June 2021, prepared for the development application over the lot. The report outlines the following land uses and yields as shown in Figure 7. It is noted the future stages are indicative at this stage as the actual uses and yields are not known.

Figure 7 Lot 6000 Development Yield

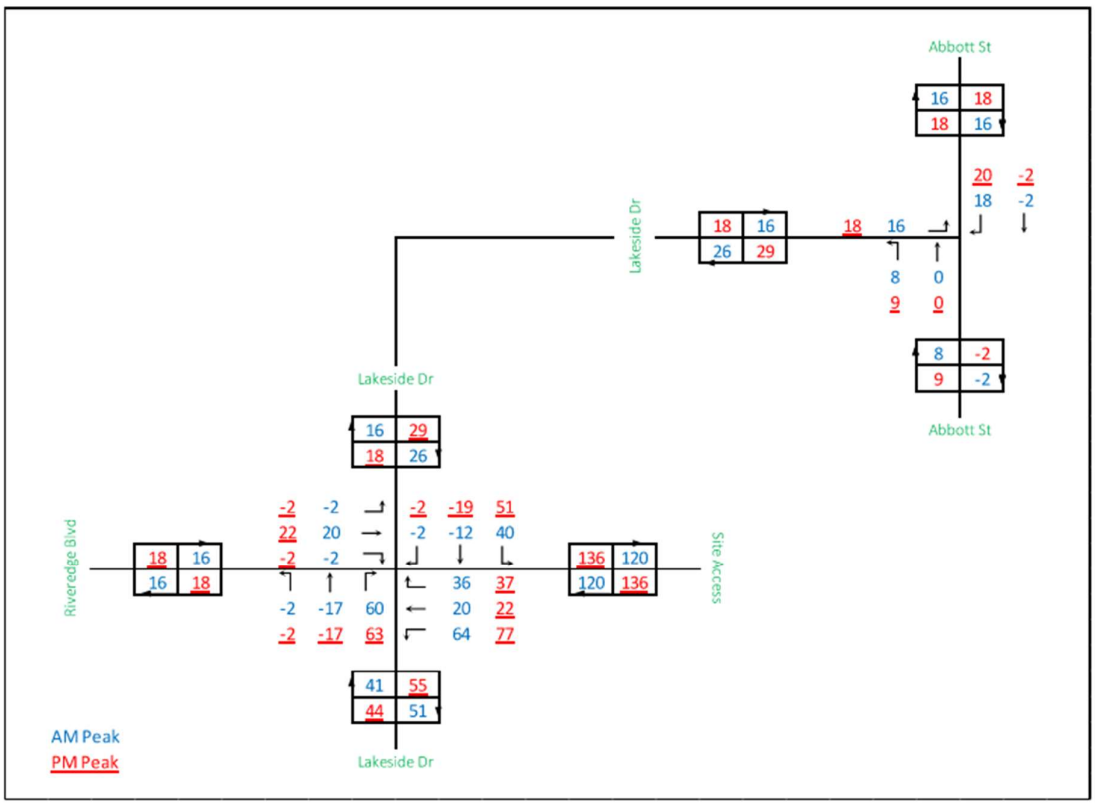
Table 2.1: Proposed Land Uses

Use	Use	Area/Qty
Stage 1	Service Station	240m² GFA 8 Fuel Bowsers
	Fast Food Outlet	223m² GFA
Future Stages	Indoor Sport & Rec (Gym)	700m² GFA
	Health Care	680m² GFA

Source: TTM

Figure 8 illustrates the assessed traffic generation associated with Lot 6000 as estimated by TTM. The negative values relate to the drop in trips associated with the convenience uses on the lot.

Figure 8 Lot 6000 Assessed Traffic Generation



Traffic Network Diagram 8: Development Traffic Volumes (vph) – Ultimate

Source: TTM

These values have been adopted in place of the Lot 6000 turning movements outlined in the Calibre report.

Assessed Volumes

Lakeside Drive and Abbott Street through volumes have been informed from the TMR model volumes (2036 scenario) and growthed at 1.35% p.a. (AM) and 1.24% p.a. (PM).

$$= 2036\ Model\ Volumes\ \times\ growth\ factor\text{^}(2039 - 2036)$$

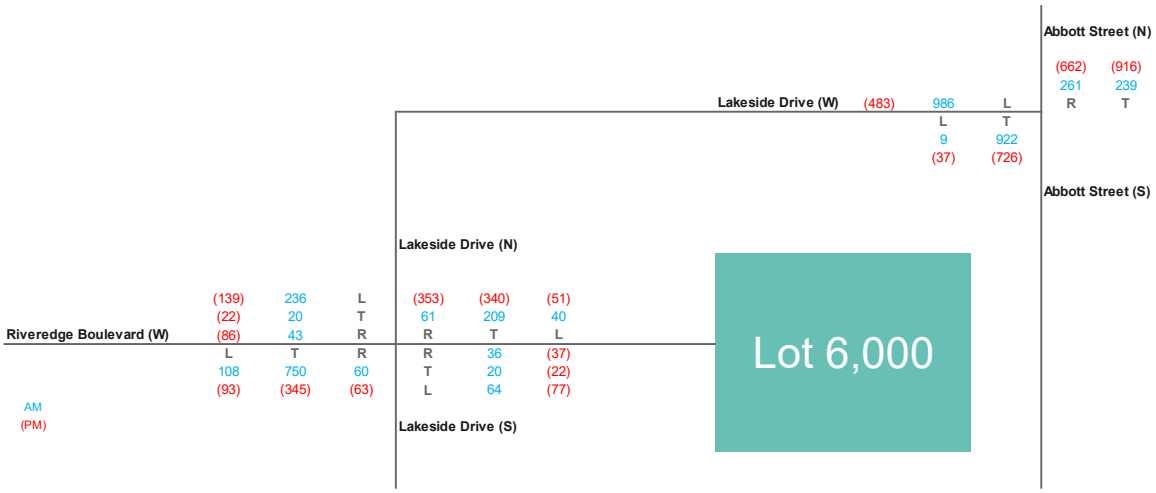
Riveredge Boulevard volumes represent the development traffic. This has been informed from the masterplan traffic assessment, with adjustments to account for updated trip generation data.

$$= Full\ Development\ Volumes\ (Calibre\ Traffic\ Report)\ adjusted\ for\ updated\ residential\ trip\ rates$$

Lot 6000 turning movements have been adopted from the TTM report which was prepared for the application over the site.

The assessed traffic volumes are shown on Figure 9.

Figure 9 Assessed Traffic Volumes (2039 AM and PM)



Source: Urbis

2.5 Assessment Results

The SIDRA assessment outcomes from the analysis is outlined in the following sections for each of the study intersections. The ultimate intersection layout has been reported.

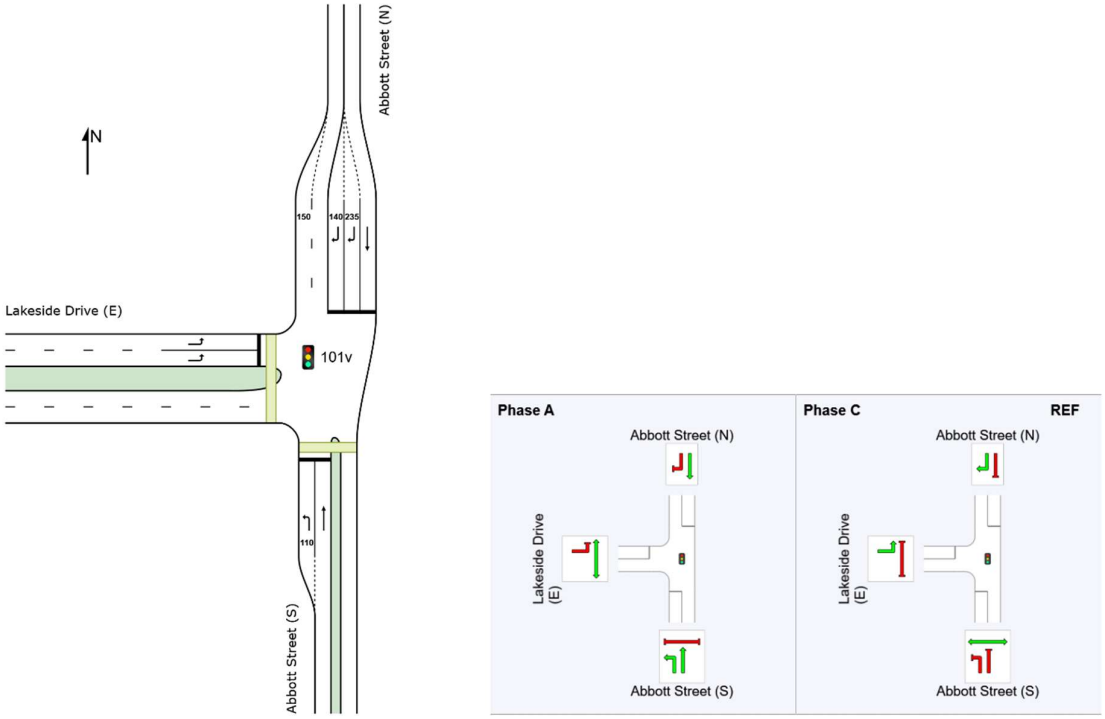
In line with discussions with TMR, the two intersections have been networked in SIDRA. The results reported are the network results. A copy of the SIDRA outputs is included at **Appendix D**.

Abbott Street / Lakeside Drive

The proposed layout of the Abbott Street / Lakeside Drive intersection is shown on Figure 10. The associated phasing is also included. As illustrated, the intersection will include the following changes:

- Signalised with pedestrian crossings on the western and southern approaches to match the existing connections.
- Two right turn lanes and one through lane on the north from Abbott Street into Lakeside Drive.
- Two left turn lanes on the west from Lakeside Drive into Abbott Street.
- One through lane on the south (Abbott Street) with a dedicated left lane turning into Lakeside Drive.

Figure 10 Abbott Street / Lakeside Drive - SIDRA Layout and Phasing Summary



Source: SIDRA

Table 4 reports the network intersection results from the SIDRA analysis.

Table 4 Abbott Street / Lakeside Drive – SIDRA Results

Scenario	DOS	Average Delay (sec)	95th Percentile Queue (m)	Critical Movement
2039BG+Dev AM Peak	0.89	120.6	454.5	S-T
2039BG+Dev PM Peak	0.88	40.5	392.5	N-R

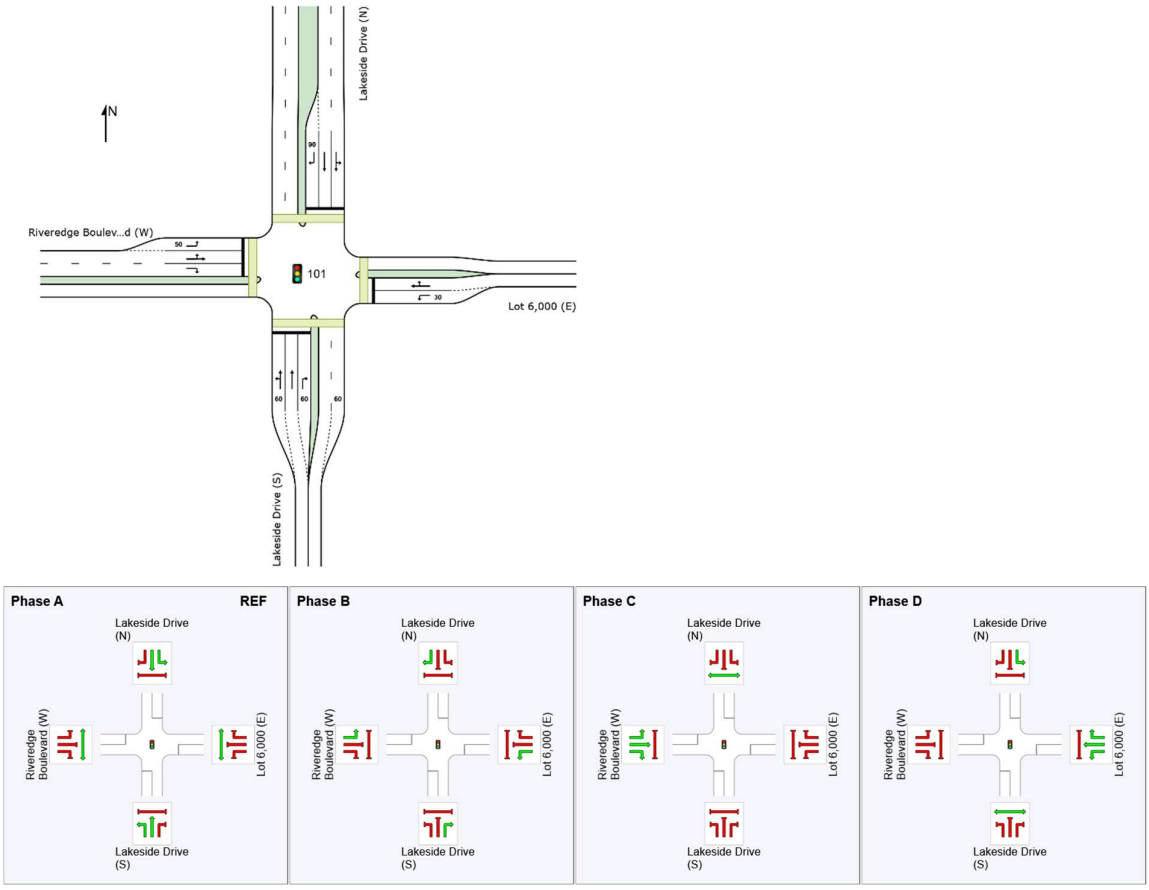
As shown, the degree of saturation (DOS) is expected to remain within the capacity threshold (0.90). Being a signalised intersection, delays are not a critical factor as the controlled nature of the intersection reduces the risk of unsafe driver behaviour that would be exhibited at priority controlled intersections.

Lakeside Drive / Riveredge Boulevard

The proposed layout of the Lakeside Drive / Riveredge Boulevard intersection is shown on Figure 11 (note that the civil drawing has not yet been updated to include the separate left turn lane on the southern Lakeside Drive approach). The associated phasing is also included. As illustrated, the intersection will include the following changes:

- Short right turn lane on the northern Lakeside Drive approach.
- Two full length through lanes on Lakeside Drive north approach with a shared left movement on the kerbside lane entering Lot 6000.
- Turning lanes for the Lot 6000 access.
- Dual left turns on the western Riveredge Boulevard approach, with the middle lane shared as a through movement, and a single right turn lane.
- Double through lanes on Lakeside Drive south with a shared left turn.
- Signalised pedestrian crossings on all four approaches.

Figure 11 Lakeside Drive / Riveredge Boulevard - SIDRA Layout and Phasing Summary



Source: SIDRA

Table 5 reports the network intersection results from the SIDRA analysis.

Table 5 Lakeside Drive / Riveredge Boulevard – SIDRA Results

Scenario	DOS	Average Delay (sec)	95th Percentile Queue (m)	Critical Movement
2039BG+Dev AM Peak	0.74	46.0	217.9	N-R
2039BG+Dev PM Peak	0.57	60.4	177.5	N-R

As shown, the degree of saturation (DOS) is expected to remain within the capacity threshold (0.90). Being a signalised intersection, delays are not a critical factor as the controlled nature of the intersection reduces the risk of unsafe driver behaviour that would be exhibited at priority controlled intersections.

The results indicate that theoretically, queues on Lakeside Drive north approach would extend back to Abbott Street during the PM peak. However, due to the fact that both intersections will be signal controlled and there are boom gates at the level crossing, the risk of vehicles queuing through the rail corridor will be minimal. Through discussions with QR, it is understood that the interaction with the rail corridor will require their input. Through consultation with the rail engineers, the signal controls between all three points (Abbott Street / Lakeside Drive, Lakeside Drive / Rail crossing, and Lakeside Drive / Riveredge Boulevard) will be designed such that queues will be safely managed. This will likely involve queue detectors which will trigger a flushing of downstream queues and stop upstream traffic to minimise the queuing across the rail corridor.

Furthermore, as road rules stipulate that vehicles cannot queue through a signalised intersection, drivers will be aware of queueing through a level crossing as a high risk decision. In congested urban environments, queues through signalised corridors with level crossings is a regular occurrence with drivers familiar with the traffic control measures. Therefore, the safety risks associated with the queues would be managed by the intersection controls.

3. Safety Assessment

A safety assessment has been prepared for the proposed intersection designs. This follows the risk assessment framework outlined in the Guide to Traffic Impact Assessments (GTIA) Section 9.

3.1 Existing Issues

Currently, the road corridor encompassing the two intersections involve the following safety related issues:

1. Uncontrolled pedestrian crossing on Lakeside Drive, next to rail corridor – crosses free left turn lane with vehicle priority, vehicle speeds higher with continuous lane and large corner radius
2. No designated pedestrian crossing over the rail line – no safe or formal connection for pedestrians or cyclists to travel between Lakeside Drive and Abbott Street
3. No pedestrian paths provided on Lakeside Drive
4. Local access on Lakeside Drive is line marked for left in / left out but not physically restricting right turns
5. Left slip lane on Lakeside Drive turning into Riveredge Boulevard – not preferred treatment for pedestrian and cyclist safety

Figure 12 Existing Safety Issues

Source: Nearmap

3.2 Crash History

Crash data has been sourced from the QLD Department of Transport and Main Roads for the study area for the most recent 5-year period (2019-2023) of available crash data. The locations of recorded crashes are shown in Figure 13.

Figure 13 Crash Locations (2019-2023)

Source: Google Earth

As shown, three crashes were recorded at the Lakeside Drive / Riveredge Boulevard intersection, of which two were hospitalisations. One crash occurred near the Abbott Street / Lakeside Drive intersection, approximately 160m north of the intersection. This also resulted in a hospitalisation. With no crashes recorded at the Abbott Street / Lakeside Drive intersection, there is no indicated crash trend at this location.

Table 6 details the crash descriptions. The crashes were all of different natures, indicating that there is no trend related to a deficiency of the road design. For the crashes located at the Lakeside Drive / Riveredge Boulevard intersection, the two hospitalisations involved two vehicles colliding. Crash ID 373885 is recorded as a DCA code 101 through-through collision, however this intersection is a T-junction therefore this crash type is not possible. It is reasoned that this crash may instead be a DCA code 102, which relates to through-right crash from adjacent approaches.

Table 6 Crash History (2019-2023)

Crash Reference	Crash Severity	Crash Year	Location	DCA Code	DCA Description
334068	Hospitalisation	2021	Lakeside Dr / Riveredge Blvd	202	Vehs Opposite Approach: Thru-Right
334103	Minor injury	2022	Lakeside Dr / Riveredge Blvd	808	Off Path-Curve: Mounts Traffic Island
373885	Hospitalisation	2020	Lakeside Dr / Riveredge Blvd	101	Vehs Adjacent Approach: Thru-Thru
334145	Hospitalisation	2022	Abbott St (~160m north of Lakeside Dr)	704	Off Path-Straight: Right Off Cway Hit Obj

The crash history does not indicate that the study area has a crash trend, however the incidences of three hospitalisations should be sought to be reduced.

3.3 Proposed Design

The proposed design will signalise both intersections and provide formal pedestrian facilities throughout the study area. Table 7 summarises how the proposed design will address the key issues identified. As shown, the proposed design will address all existing issues, by providing safe infrastructure for pedestrians, cyclists and drivers.

Table 7 Addressing Key Existing Issues

Issue ID	Existing Issue	Proposed Design Change	How Design Addresses Issue
1	Uncontrolled pedestrian crossing on Lakeside Drive, next to rail corridor	Signalised crossing as part of Abbott Street / Lakeside Drive intersection upgrade	Providing a controlled (signalised) crossing facility will ensure that pedestrians and vehicle conflicts are separated
2	No designated pedestrian crossing over the rail line	Crossing facility proposed as part of the rail crossing	Providing a formal crossing facility integrated with the rail corridor will ensure pedestrian, vehicle and train conflicts are separated
3	No pedestrian paths provided on Lakeside Drive	Pedestrian path included on the northern side of Lakeside Drive with signalised crossing to access Lot 6000	Providing pedestrians with a formal off-road facility will enable safe and accessible movement
4	Local access on Lakeside Drive is line marked for left in / left out but not physically restricting right turns	The access will be closed via a kerb extension across the access and extension of the median to ban turning movements	Eliminating vehicle movements at the removed access will reduce the potential conflicts between vehicles and pedestrians
5	Left slip lane on Lakeside Drive turning into Riveredge Boulevard	Stand up left turn / through lane instead of slip lane	Removing the slip lane will eliminate the risks associated with pedestrians and cyclists crossing slip lanes

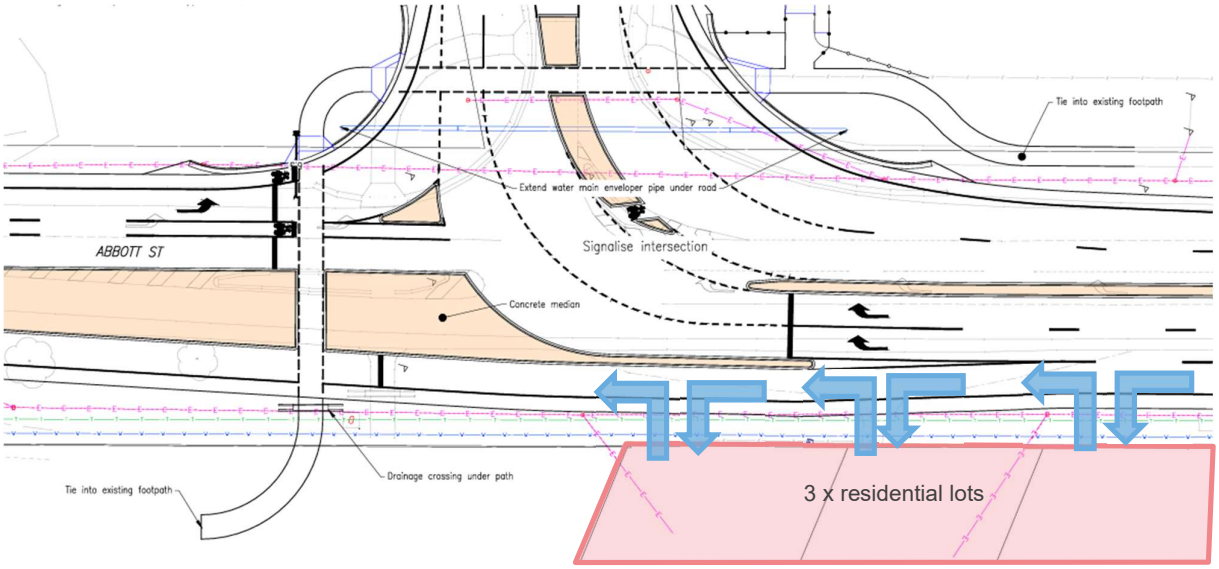
Existing Property Access

It is noted that the three low density residential lots accessed from Abbott Street will have access maintained with the design. By implementing a median that restricts access to left-in, left-out movements, the design effectively reduces the risk associated with right-turn movements in a multi-lane environment. The arrangement is indicated on Figure 14.

The extension of the central median across the frontage of the southernmost lot, located in the middle of the intersection, has been introduced to manage access safely. Although only the middle lot is currently occupied, the design accommodates the potential for future development of the other lots, ensuring they are safely accessible when needed. Opportunities to u-turn are located approximately 1km north and south of the lots, to enable travel northbound and southbound with the right turn restrictions. While the design may create some inconvenience for the three lots on Abbott Street, the operational and safety benefits of the intersection upgrade offer significant advantages for the broader community.

Further refinement of the interface with the Abbott Street pavement will be addressed as the design develops.

Figure 14 Residential Lot Access Design



Source: Stantec

3.4 Risk Assessment

As outlined in the GTIA Section 9, a safety risk assessment has been prepared. The rating descriptors are defined in Table 8 and Table 9.

Table 8 Potential Consequence

Rating	Descriptor
1	Property Only
2	Minor Injury
3	Medical Treatment
4	Hospitalisation
5	Fatality

Table 9 Potential Likelihood Descriptor

Rating	Descriptor	Occurrence
5	Very likely. The event is expected to occur in most circumstances	Once per quarter
4	There is a strong possibility the event will occur	Once per quarter to once per year
3	The event might occur at some time	Once per year to once every three years
2	Not expected, but there's a slight possibility it may occur at some time.	Once every three years to once every seven years
1	Highly unlikely, but it may occur in exceptional circumstances. It could happen, but probably never will.	Less than once every seven years

The issues identified have been assigned a risk rating using the risk score matrix shown on Figure 15.

Figure 15 Risk Score Matrix

Figure 9.3.2(a) – Safety risk score matrix

Potential likelihood	Potential consequence: Property only (1)	Minor injury (2)	Medical treatment (3)	Hospitalisation (4)	Fatality (5)
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

L: Low risk
M: Medium risk
H: High risk

Risk scores are calculated as likelihood multiplied by consequence level. Table 10 outlines the potential risks, and risk scores associated with the current design and the proposed design.

Table 10 Risk Safety Assessment

Risk Item	Existing Situation			Proposed Design			Comment
	Likelihood	Consequence	Risk Score	Likelihood	Consequence	Risk Score	
Abbott Street / Lakeside Drive							
Through-right crash on Abbott Street	2	4	8 **Med**	1	4	4 **Med**	No crashes recorded in the 5 year period, signalising the intersection will control the movements reducing the likelihood
Through-left crash on Abbott Street	1	3	3 **Low**	1	3	3 **Low**	Existing design has continuous left lane with merge, proposed design will control the movements
Pedestrians crossing Lakeside Drive being hit by a car	2	4	8 **Med**	1	4	4 **Med**	Existing design has an uncontrolled crossing facility, proposed design will provide signalised crossings reducing the likelihood
Pedestrians crossing Abbott Street being hit by a car	2	4	8 **Med**	1	4	4 **Med**	Existing design has an uncontrolled crossing facility, proposed design will provide signalised crossings reducing the likelihood
Pedestrians crossing the level crossing being hit by train	1	5	5 **Med**	1	5	5 **Med**	While the likelihood is very low in both scenarios, the proposed design will provide a controlled pedestrian crossing facility which will control pedestrian movements and essentially reduce the likelihood to nil resulting in a lower risk. However, if the crossing is circumvented, a fatality could still occur

Risk Item	Existing Situation			Proposed Design			Comment
	Likelihood	Consequence	Risk Score	Likelihood	Consequence	Risk Score	
Queueing spills back to the level crossing being hit by train	2	5	10 **Med**	1	5	5 **Med**	Existing design has boom gates to control vehicles crossing the rail corridor, proposed design will have networked signal controls with queue detection to actively manage potential queues over the rail corridor (through consultation with QR)
Lakeside Drive / Riveredge Boulevard							
Through-right crash on Lakeside Drive	3	4	12 **Med**	1	4	4 **Med**	One crash occurred during the 5 year period, signalising the intersection will control the movements reducing the likelihood
Through-right crash on Riveredge Blvd	3	4	12 **Med**	1	4	4 **Med**	One crash occurred during the 5 year period, signalising the intersection will control the movements reducing the likelihood
Through-left crash on Riveredge Blvd	2	3	6 **Med**	1	3	3 **Low**	No crashes recorded in the 5 year period, signalising the intersection will control the movements reducing the likelihood
Pedestrians crossing Lakeside Drive being hit by a car	2	4	8 **Med**	1	4	4 **Med**	Existing design has no formal crossing facility, proposed design will provide signalised crossings reducing the likelihood
Pedestrians crossing Riveredge Blvd being hit by a car	2	4	8 **Med**	1	4	4 **Med**	Existing design has no formal crossing facility and uncontrolled left slip lane crossing, proposed design will provide signalised crossings and remove slip lanes reducing the likelihood
Lakeside Drive midblock							
Vehicles turning into / out of access point hitting another car	2	3	6 **Med**	1	3	3 **Low**	The access will be closed therefore the risk will be eliminated

The risk assessment indicates that the proposed design will reduce the risk score for all identified risks through the controlled nature of signalising the intersections and removal of slip lanes. While many of the risk levels (Low, Medium) do not change between the scenarios, it is noted that no High risks were identified.

Therefore, the proposed design is considered to provide a safer overall outcome for the study intersections.

4. Summary

Urbis has undertaken the traffic engineering assessment for The Village development at Oonoonba, within the Oonoonba PDA, to identify the intersection upgrade layouts for the two study intersections:

1. Abbott Street / Lakeside Drive
2. Lakeside Drive / Riveredge Boulevard

The traffic analysis has identified that both intersections will be signalised with additional traffic lanes to accommodate the anticipated traffic growth and development traffic associated with The Village and Lot 6000.

The assessment results indicate that both proposed intersection layouts will operate within acceptable capacity limits at the 2039 design horizon.

A safety assessment identifies that the proposed design will provide a safer outcome overall for the study intersections, through the nature of signal controlling the vehicle and pedestrian movements, providing formal pedestrian crossing facilities and removing slip lanes.

APPENDIX A PROPOSAL PLAN (RPS)

DRAFT

For Discussion Only

Legend

- The Village Site Boundary
- Existing Development
- Existing Lots to be dedicated as new road - 3670m²

Note:
All Lot Numbers, Dimensions and Areas are approximate only, and are subject to survey and Council approval.

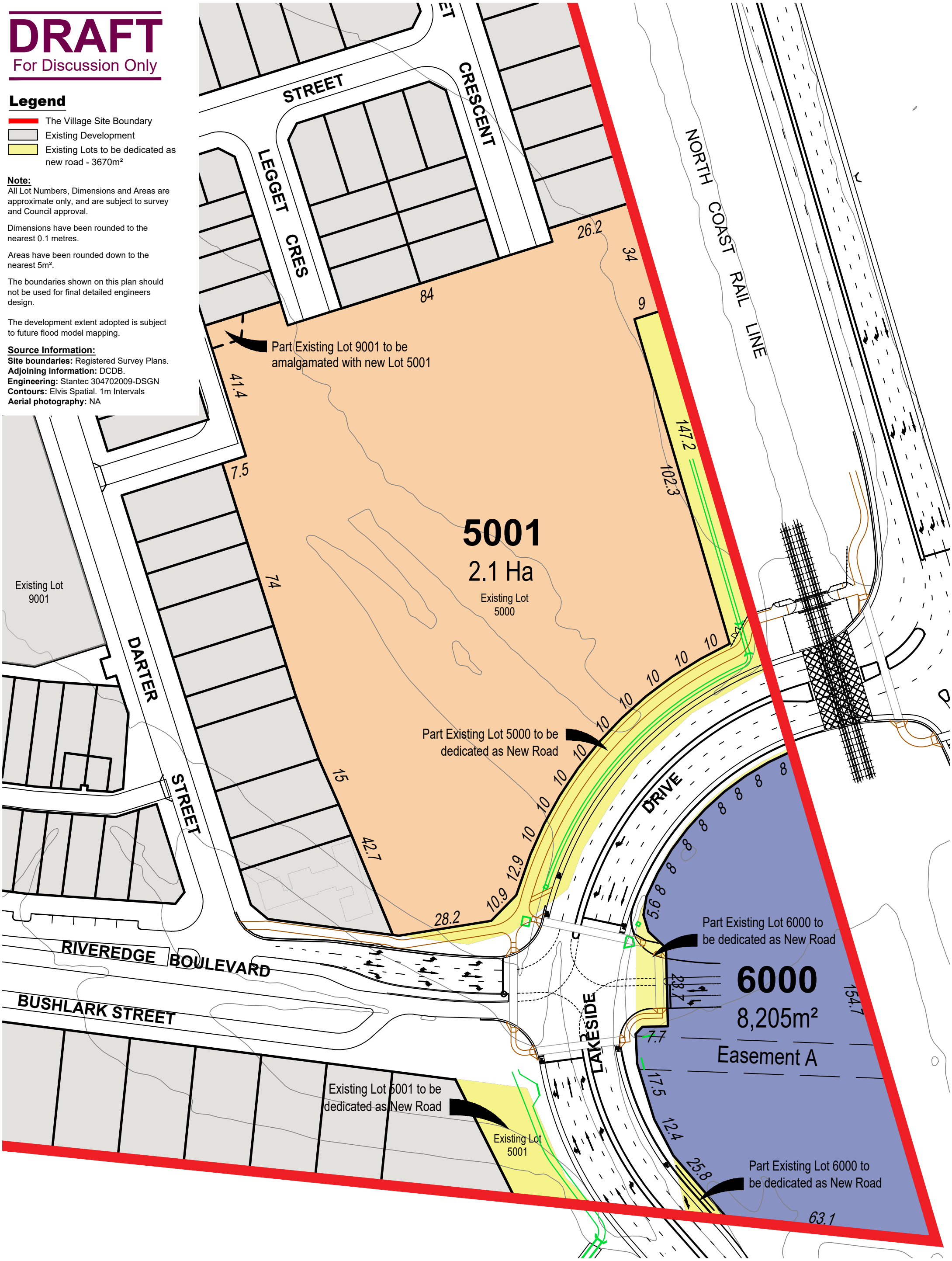
Dimensions have been rounded to the nearest 0.1 metres.

Areas have been rounded down to the nearest 5m².

The boundaries shown on this plan should not be used for final detailed engineers design.

The development extent adopted is subject to future flood model mapping.

Source Information:
Site boundaries: Registered Survey Plans.
Adjoining information: DCDB.
Engineering: Stantec 304702009-DSGN
Contours: Elvis Spatial. 1m Intervals
Aerial photography: NA



PLAN REF: AU13015703 – 12
Rev No: A
DATE: 28th MAY 2025
CLIENT: ECONOMIC DEVELOPMENT QUEENSLAND
DRAWN BY: MJB
CHECKED BY: MJB

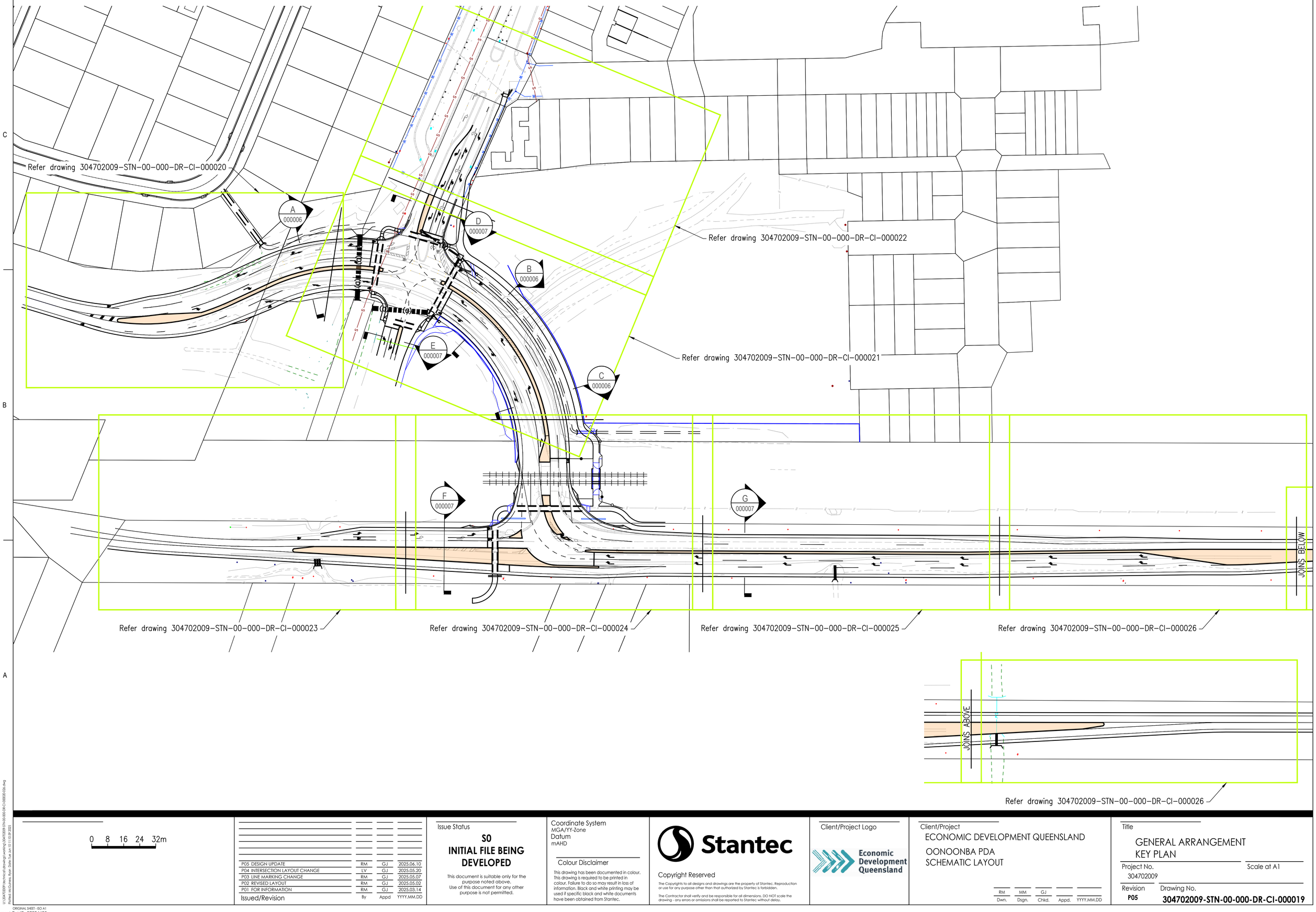
0 10 20 30 40 50 1 : 1,000 @ A3

THE VILLAGE, OONOONBA

RAL PROPOSAL PLAN - 3 into 1 Lots, Boundary Realignment & New Road - Cancelling Lots 5000 & 5001 SP302846

URBAN DESIGN
Unit 1
5-7 Barlow Street
South Townsville QLD 4810
T +61 7 4724 4244
W rpsgroup.com

APPENDIX B INTERSECTION SKETCH (STANTEC)



0 8 16 24 32m

Issued/Revision	By	Appd	YYYY.MM.DD
P05 DESIGN UPDATE	RM	GJ	2025.06.10
P04 INTERSECTION LAYOUT CHANGE	LV	GJ	2025.05.20
P03 LINE MARKING CHANGE	RM	GJ	2025.05.07
P02 REVISED LAYOUT	RM	GJ	2025.05.02
P01 FOR INFORMATION	RM	GJ	2025.03.14

Issue Status

S0
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Coordinate System
MGA/YY-Zone
Datum
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Colour Disclaimer

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Stantec

Client/Project Logo

Economic Development Queensland

Client/Project

ECONOMIC DEVELOPMENT QUEENSLAND

OONOONBA PDA
SCHEMATIC LAYOUT

RM	MM	GJ		
Dwn.	Dsgn.	Chkd.	Appd.	YYYY.MM.DD

Title

GENERAL ARRANGEMENT
KEY PLAN

Project No.
304702009

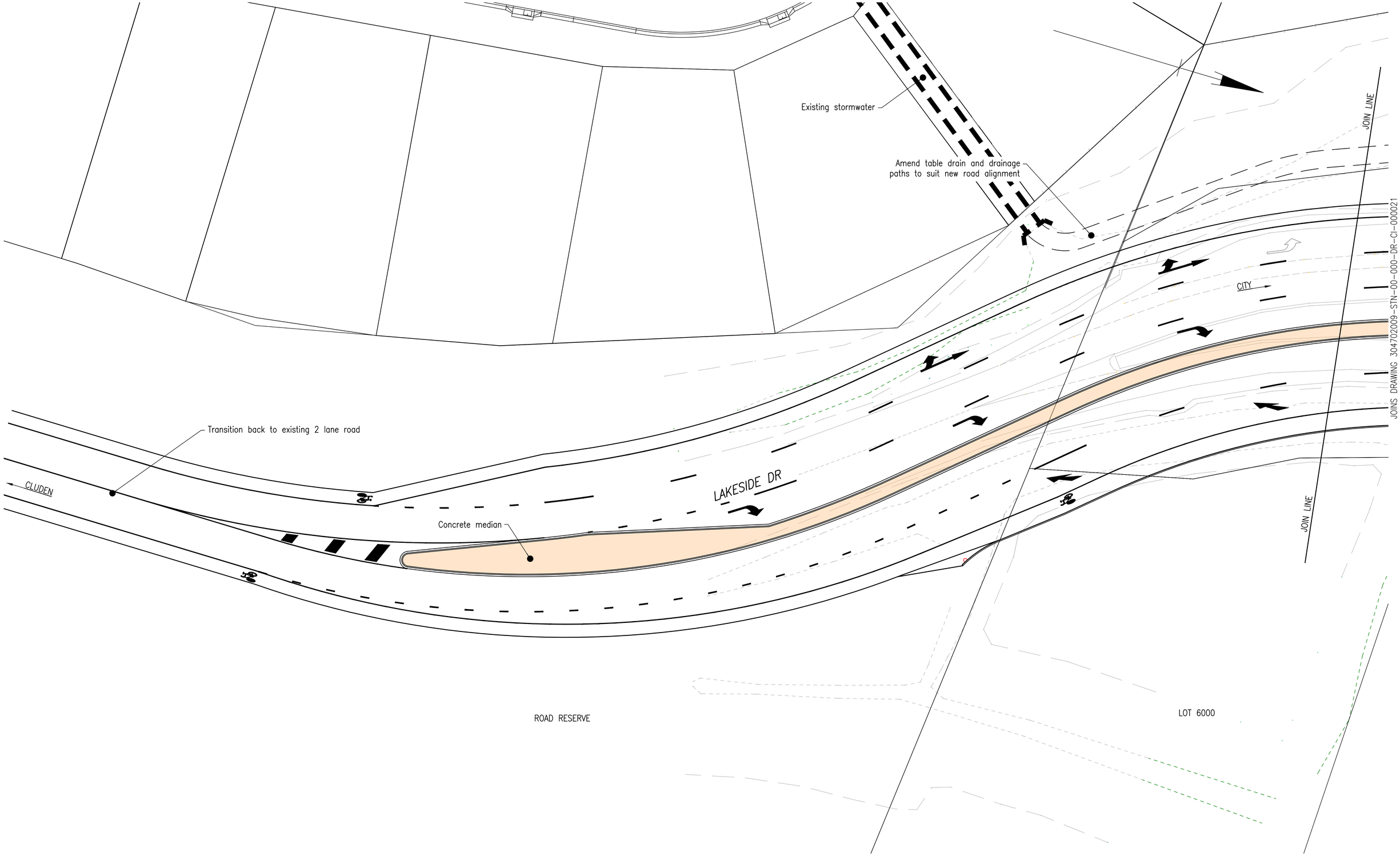
Scale at A1

Revision
P05

Drawing No.
304702009-STN-00-000-DR-CI-000019

ORIGINAL SHEET - ISO A1

U:\304702009\Technical\Drawing\working\304702009-STN-00-000-DR-CI-000020-026.dwg
Plotted: McGuiness, Ryan Date: Tue Jun 10 11:32:38 2025



0 2 4 6 8m

Issued/Revision	By	Appd	YYYY.MM.DD
P05 DESIGN UPDATE	RM	GJ	2025.06.10
P04 INTERSECTION LAYOUT CHANGE	LV	GJ	2025.05.20
P03 LOT 6000 WALL CHANGES	RM	GJ	2025.05.07
P02 REVISED LAYOUT	RM	GJ	2025.05.02
P01 FOR INFORMATION	RM	GJ	2025.03.14

Issue Status

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Client/Project Logo

Economic Development Queensland

Client/Project
ECONOMIC DEVELOPMENT QUEENSLAND
OONOONBA PDA
SCHEMATIC LAYOUT

RM	MM	GJ		
Dwn.	Dsgn.	Chkd.	Appd.	YYYY.MM.DD

Title
GENERAL ARRANGEMENT
SHEET 1 OF 7

Project No.
304702009

Scale at A1

Revision
P05

Drawing No.
304702009-STN-00-000-DR-CI-000020

ORIGINAL SHEET - ISO A1

\\.\304702009\technical\drawings\working\304702009-STN-00-000-DR-CI-000020-D26.dwg
Plotted: Mac Guiness, Ryan, Date: Tue Jun 10 11:51:11 2025

JOINS DRAWING 304702009-STN-00-000-DR-CI-000022

JOIN LINE

JOIN LINE

OONOOMBA

RIVEREDGE BLVD

New stormwater pits and new culverts

Acoustic wall

Future 3m shared path

SERVICE ROAD

Table drain

Removed access to old service road

JOIN LINE

Signalise intersection

Concrete median

CLUDEN

LAKESIDE DR

Concrete median

Concrete spillway

JOINS DRAWING 304702009-STN-00-000-DR-CI-000020

JOIN LINE

OPEN DRAIN

LIMIT OF CONSTRUCTION

Develop entrance into proposed service station

Remove table drain and replace with concrete invert

Change road alignment

LOT 6000

CITY

JOIN LINE

JOIN LINE

JOINS DRAWING 304702009-STN-00-000-DR-CI-000024

0 2 4 6 8m

Issued/Revision	By	Appd	YYYY.MM.DD
P05 DESIGN UPDATE	RM	GJ	2025.06.10
P04 LINE MARKING CHANGE	RM	GJ	2025.05.07
P03 LOT 6000 WALL CHANGES	RM	GJ	2025.05.07
P02 REVISED LAYOUT	RM	GJ	2025.05.02
P01 FOR INFORMATION	RM	GJ	2025.03.14

Issue Status

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Datum
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Economic Development Queensland

Client/Project
ECONOMIC DEVELOPMENT QUEENSLAND

OONOONBA PDA
SCHEMATIC LAYOUT

Dwn.	Dsgn.	Chkd.	Appd.	YYYY.MM.DD
RM	MM	GJ		

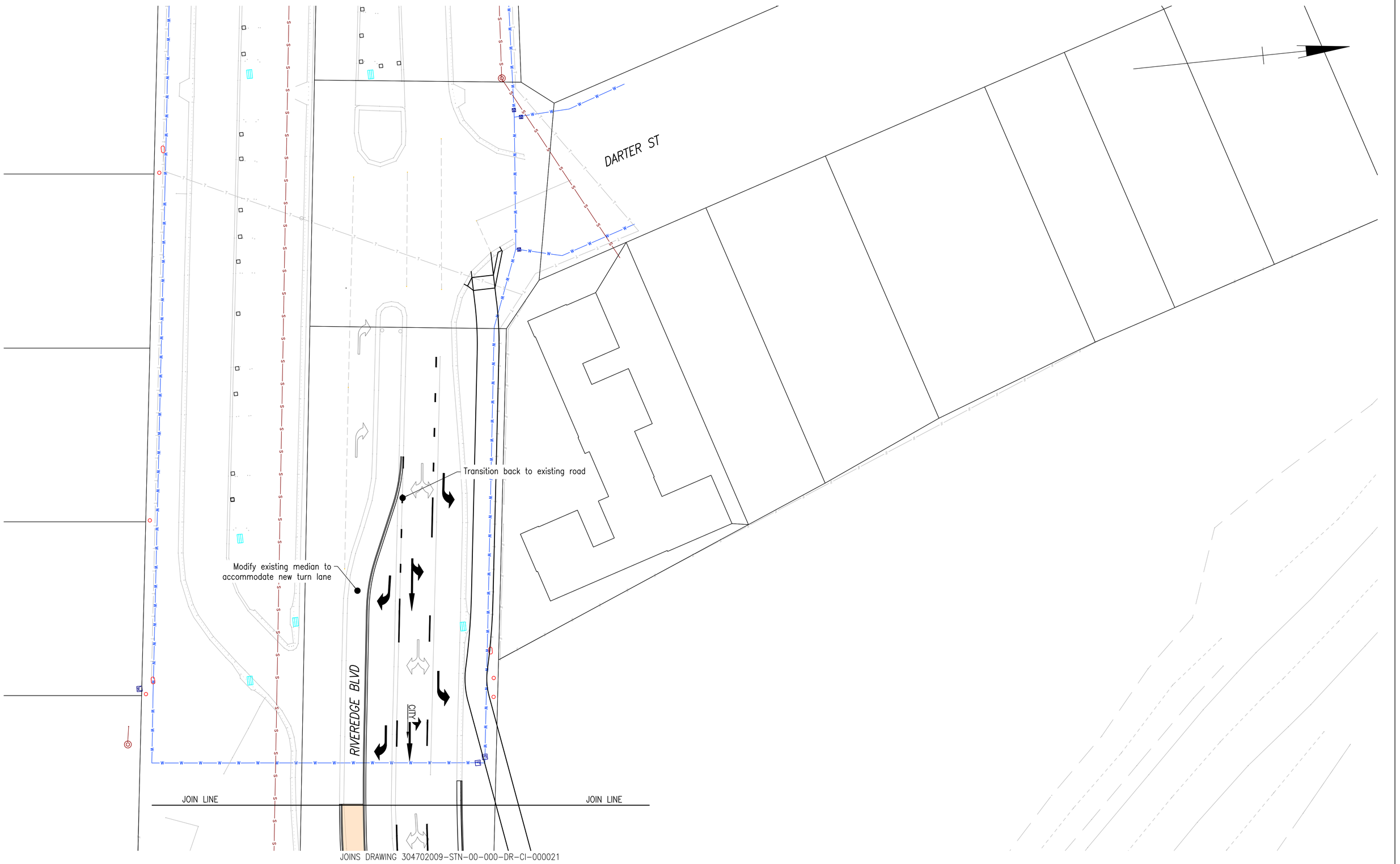
Title
GENERAL ARRANGEMENT
SHEET 2 OF 7

Project No.
304702009

Scale at A1

Revision
P05

Drawing No.
304702009-STN-00-000-DR-CI-000021



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Issued/Revision	By	Appd	YYYY.MM.DD
P04 DESIGN UPDATE	RM	GJ	2025.06.10
P03 INTERSECTION LAYOUT CHANGE	LV	GJ	2025.05.20
P02 REVISED LAYOUT	RM	GJ	2025.05.02
P01 FOR INFORMATION	RM	GJ	2025.03.14

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Economic Development Queensland

Client/Project

ECONOMIC DEVELOPMENT QUEENSLAND

OONOONBA PDA
SCHEMATIC LAYOUT

RM	MM	GJ		
Dwn.	Dsgn.	Chkd.	Appd.	YYYY.MM.DD

Title

GENERAL ARRANGEMENT
SHEET 3 OF 7

Project No.
304702009

Scale at A1

Revision
P04

Drawing No.
304702009-STN-00-000-DR-CI-000022

ORIGINAL SHEET - ISO A1

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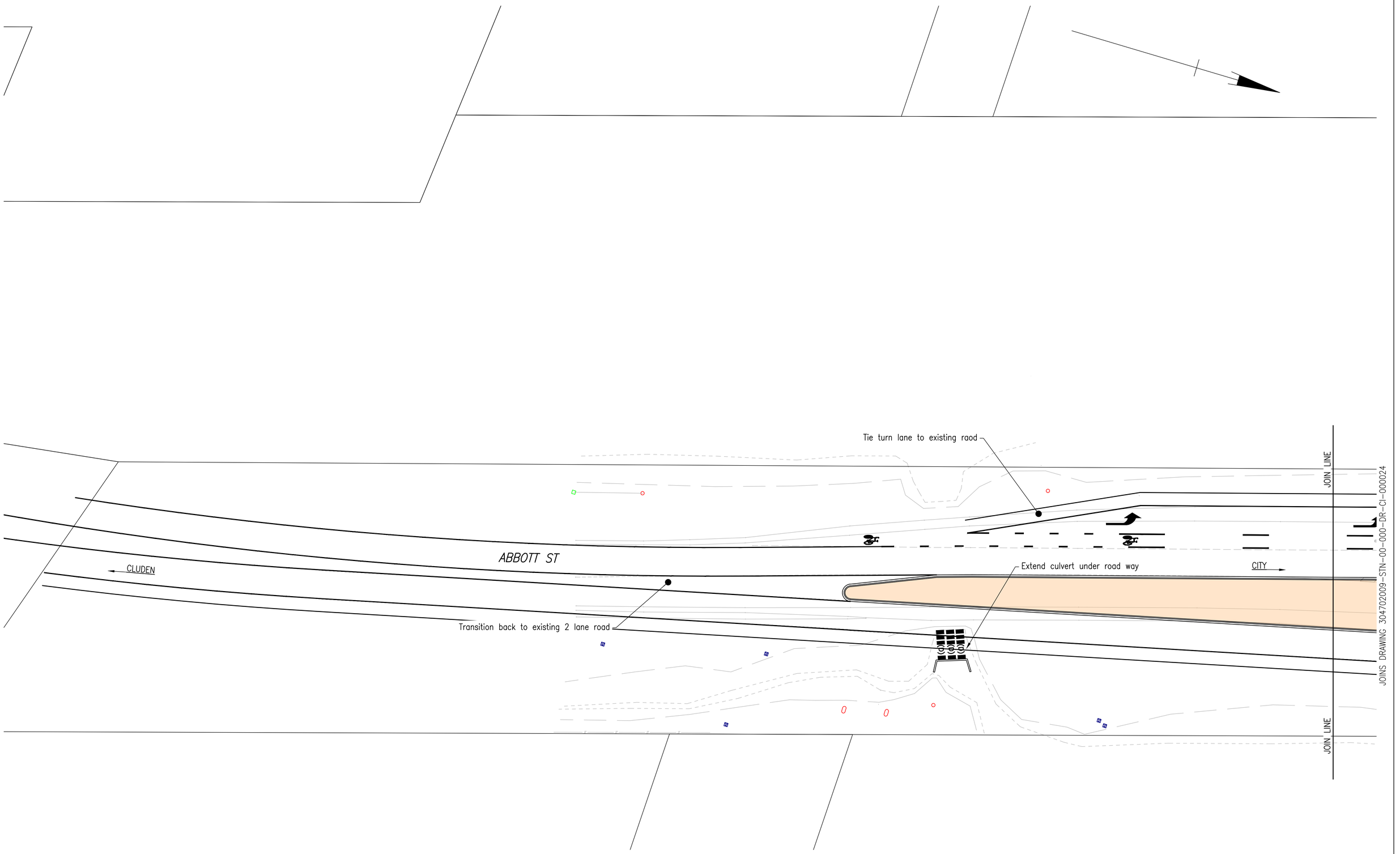
Plotted: MC-Gomes, Ryan, Date: Tue Jun 10 11:11:39 2025



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Issued/Revision	By	Appd	YYYY.MM.DD
P04 DESIGN UPDATE	RM	GJ	2025.06.10
P03 INTERSECTION LAYOUT CHANGE	LV	GJ	2025.05.20
P02 REVISED LAYOUT	RM	GJ	2025.05.02
P01 FOR INFORMATION	RM	GJ	2025.03.14

Issue Status

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Economic Development Queensland

Client/Project

ECONOMIC DEVELOPMENT QUEENSLAND

OONOONBA PDA
SCHEMATIC LAYOUT

RM	MM	GJ		
Dwn.	Dsgn.	Chkd.	Appd.	YYYY.MM.DD

Title

GENERAL ARRANGEMENT
SHEET 4 OF 7

Project No.
304702009

Scale at A1

Revision
P04

Drawing No.
304702009-STN-00-000-DR-CI-000023

ORIGINAL SHEET - ISO A1

JOINS DRAWING 304702009-STN-00-000-DR-CI-000021

JOIN LINE

JOIN LINE

OONOONBA

LAKESIDE DR

All works to tie into existing railroad. All works to the railroad crossing to be completed with the approval of Queensland Rail

Pedestrian crossing to be installed to Queensland Rail standards

Tie into existing footpath

Extend water main enveloper pipe under road

Signalise intersection

CITY

ABBOTT ST

Concrete median

CLUDEN

JOIN LINE

JOINS DRAWING 304702009-STN-00-000-DR-CI-000023

JOIN LINE

JOIN LINE

JOINS DRAWING 304702009-STN-00-000-DR-CI-000025

JOIN LINE

Drainage crossing under path

Tie into existing footpath

0 2 4 6 8m

Issued/Revision	By	Appd	YYYY.MM.DD
P05 DESIGN UPDATE	RM	GJ	2025.06.10
P04 INTERSECTION LAYOUT CHANGE	LV	GJ	2025.05.20
P03 LOT 6000 WALL CHANGES	RM	GJ	2025.05.07
P02 REVISED LAYOUT	RM	GJ	2025.05.02
P01 FOR INFORMATION	RM	GJ	2025.03.14

Issue Status

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Economic Development Queensland

Client/Project
ECONOMIC DEVELOPMENT QUEENSLAND

OONOONBA PDA
SCHEMATIC LAYOUT

RM	MM	GJ		
Dwn.	Dsgn.	Chkd.	Appd.	YYYY.MM.DD

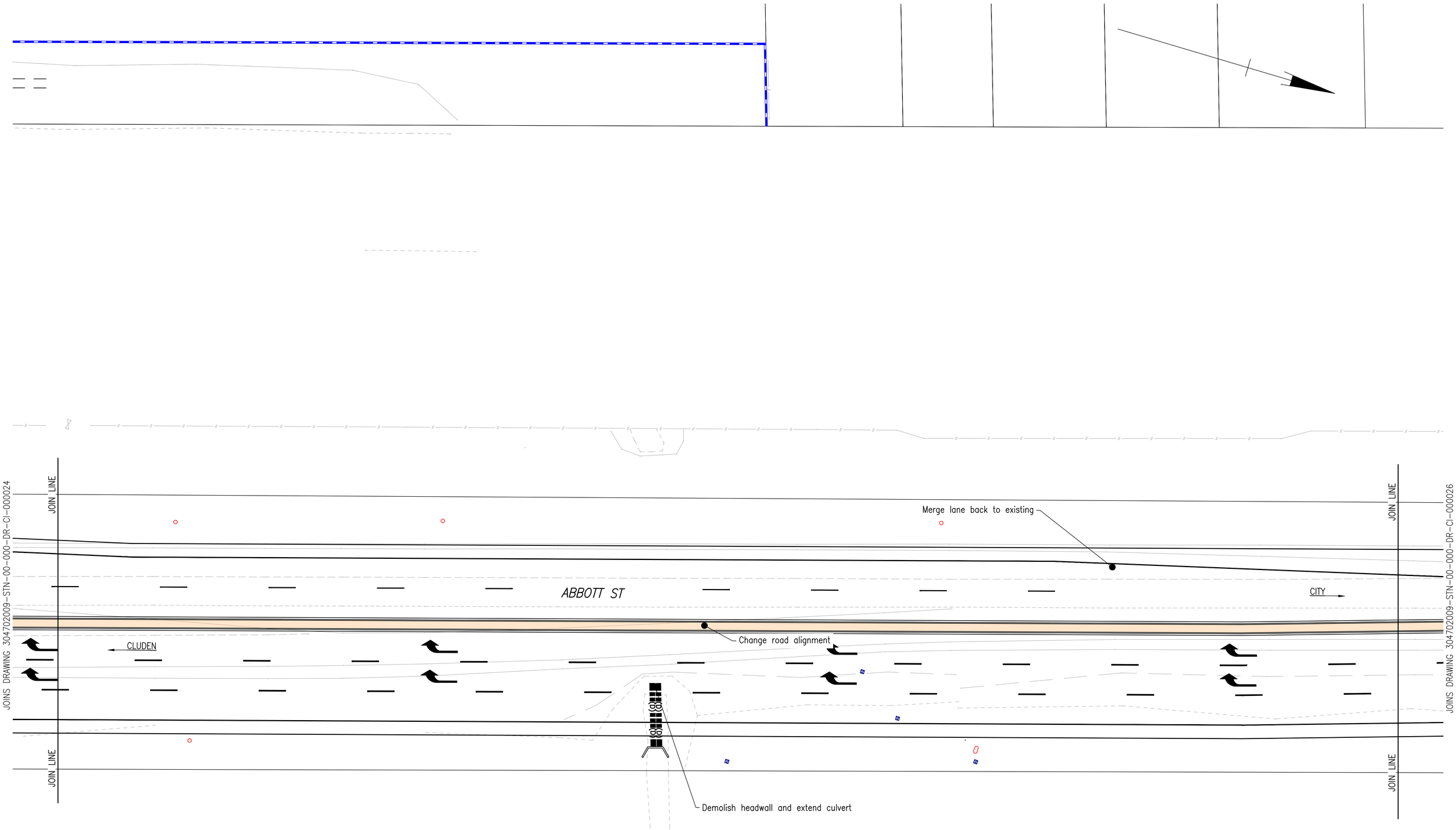
Title
GENERAL ARRANGEMENT
SHEET 5 OF 7

Project No.
304702009

Scale at A1

Revision
P05

Drawing No.
304702009-STN-00-000-DR-CI-000024



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P04 DESIGN UPDATE	RM	GJ	2025.06.10
P03 INTERSECTION LAYOUT CHANGE	LV	GJ	2025.05.20
P02 REVISED LAYOUT	RM	GJ	2025.05.02
P01 FOR INFORMATION	RM	GJ	2025.03.14
Issued/Revision	By	Appd	YYYY.MM.DD

Issue Status

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Datum
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Economic Development Queensland

Client/Project

ECONOMIC DEVELOPMENT QUEENSLAND

OONOONBA PDA
SCHEMATIC LAYOUT

RM	MM	GJ		
Dwn.	Dsgn.	Chkd.	Appd.	YYYY.MM.DD

Title

GENERAL ARRANGEMENT
SHEET 6 OF 7

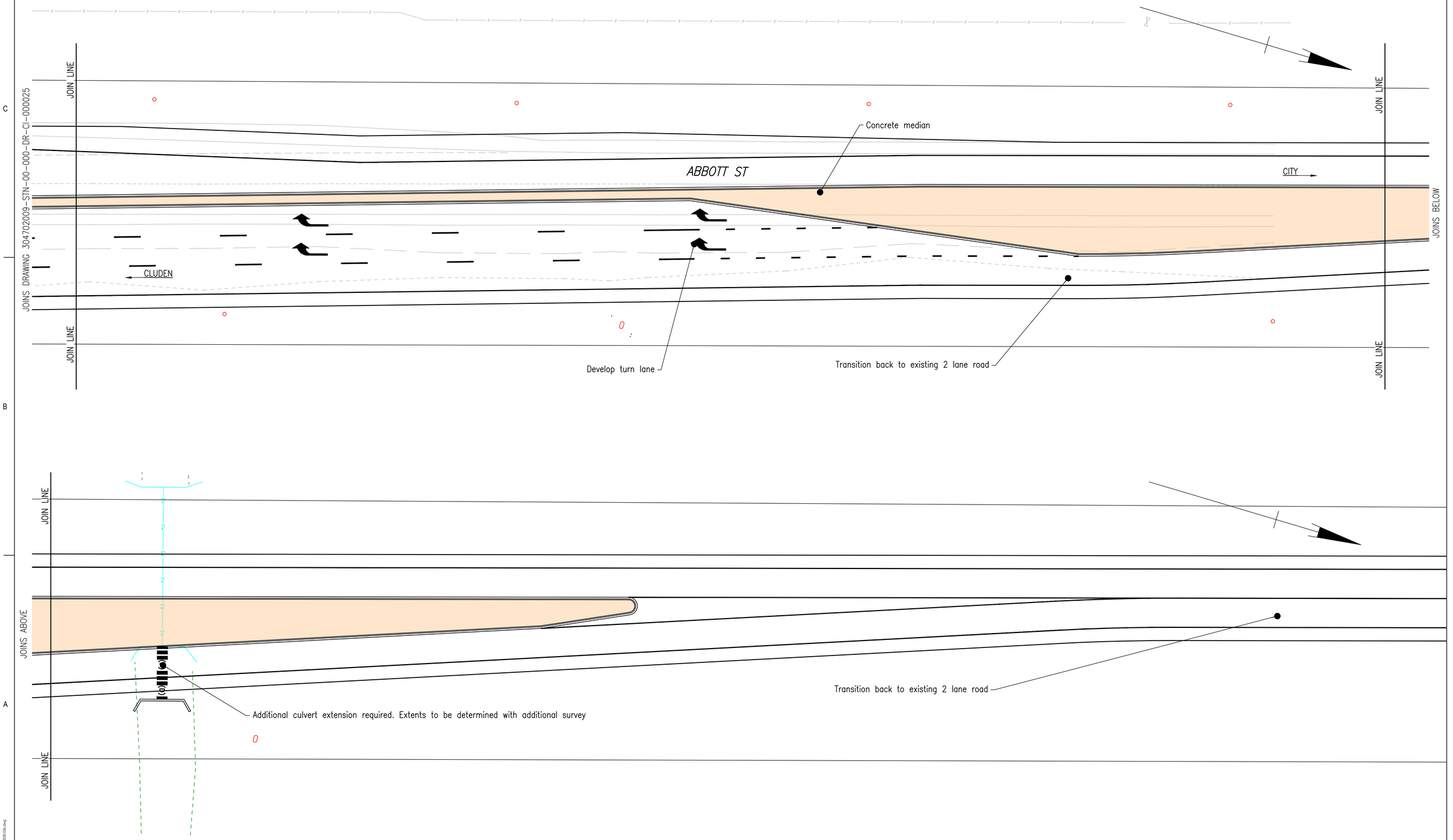
Project No.
304702009

Scale at A1

Revision
P04

Drawing No.
304702009-STN-00-000-DR-CI-000025

ORIGINAL SHEET - ISO A1



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Issued/Revision	By	Appd	YYYY.MM.DD
P04 DESIGN UPDATE	RM	GJ	2025.06.10
P03 INTERSECTION LAYOUT CHANGE	LV	GJ	2025.05.20
P02 REVISED LAYOUT	RM	GJ	2025.05.02
P01 FOR INFORMATION	RM	GJ	2025.03.14

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Client/Project

ECONOMIC DEVELOPMENT QUEENSLAND

OONOONBA PDA
SCHEMATIC LAYOUT

RM	MM	GJ		
Dwn.	Dsgn.	Chkd.	Appd.	YYYY.MM.DD

Title

GENERAL ARRANGEMENT
SHEET 7 OF 7

Project No.
304702009

Scale at A1

Revision
P04

Drawing No.
304702009-STN-00-000-DR-CI-000026

ORIGINAL SHEET - ISO A1

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Plotted: Mc Guiness, Ryan, Date: Tue Jun 10 11:12:18 2025

APPENDIX C TMR TRAFFIC MODELLING OUTPUTS

TAMM Volumes
2036 0800-0900

TAMM Volumes
2036 1700-1800

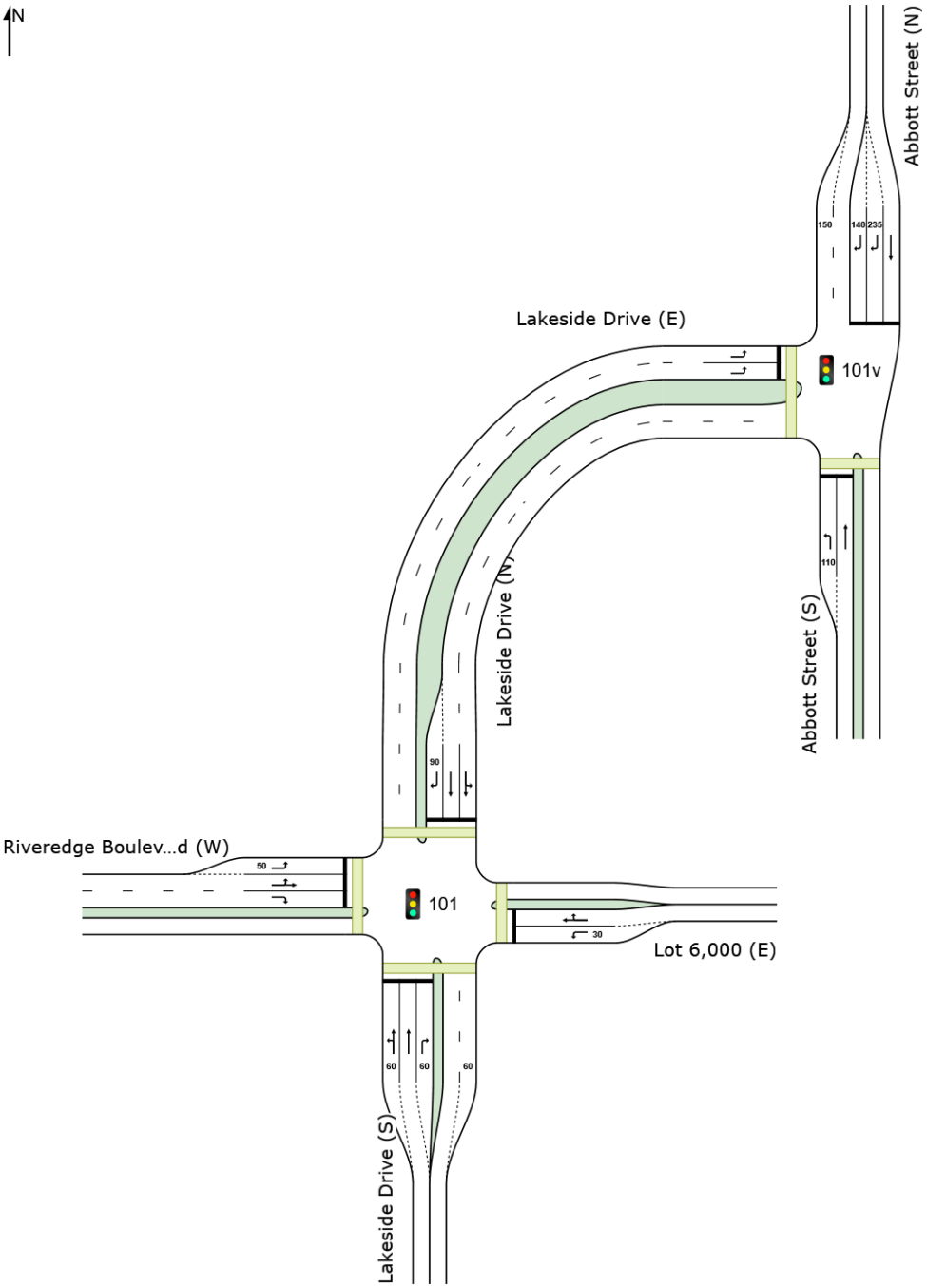
APPENDIX D SIDRA OUTPUTS

NETWORK LAYOUT

Network: N101 [2039 PM Ultimate - TAMM Adjust Volumes- Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Network
Network Category: (None)

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



SITES IN NETWORK		
Site ID	**CCG ID**	**Site Name**
101v	NA	Lakeside Dr - Abbott St - 2039BG+DEV - PM Peak - TAMM Adjust Volumes - Modified Layout - Abbott St L
101	NA	Lakeside Dr - Riveredge Blvd - 2039BG+Dev PM -TAMM Adjust Volumes - Modified Layout - Abbott St Lane

LANE SUMMARY

Site: 101v [Lakeside Dr - Abbott St - 2039BG+DEV - AM Peak - TAMM Adjust Volumes - Modified Layout - Abbott St L (Site Folder: 2039 with Full Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2039 AM Ultimate - TAMM Adjust Volumes-Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Abbott Street (S)															
Lane 1	9	0.0	9	0.0	1040	0.009	100	36.7	LOS D	0.3	2.0	Short	110	0.0	NA
Lane 2	922	7.0	922	7.0	1039[1]	0.888	100	193.4	LOS F	61.2	454.5	Full	500	0.0	0.0
Approach	931	6.9	931	6.9		0.888		191.9	LOS F	61.2	454.5				
North: Abbott Street (N)															
Lane 1	239	19.0	239	19.0	972	0.246	100	17.7	LOS B	8.7	71.0	Full	500	0.0	0.0
Lane 2	131	3.0	131	3.0	655	0.199	100	40.7	LOS D	6.5	46.5	Short	235	0.0	NA
Lane 3	131	3.0	131	3.0	655	0.199	100	40.7	LOS D	6.5	46.5	Short	140	0.0	NA
Approach	500	10.6	500	10.6		0.246		29.7	LOS C	8.7	71.0				
West: Lakeside Drive (E)															
Lane 1	441	1.0	441	1.0	664	0.665	81[6]	175.7	LOS F	22.2	156.5	Full	115	0.0	33.1
Lane 2	545	1.0	545	1.0	664	0.820	100	37.6	LOS D	26.6[N4]	187.7[N4]	Full	115	0.0	50.0
Approach	986	1.0	986	1.0		0.820		99.4	LOS F	26.6	187.7				
All Vehicles	2417	5.3	2417	5.3		0.888		120.6	LOS F	61.2	454.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
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 Green.
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.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
6 Lane under-utilisation due to downstream effects
N4 Average back of queue has been restricted to the available queue storage space.

Approach Lane Flows (veh/h)

South: Abbott Street (S)

Mov. From S To Exit:	L2 W	T1 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	9	-	9	0.0	1040	0.009	100	0.0	2
Lane 2	-	922	922	7.0	1039[1]	0.888	100	NA	NA
Approach	9	922	931	6.9		0.888			

North: Abbott Street (N)									
Mov. From N To Exit:	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	239	-	239	19.0	972	0.246	100	NA	NA
Lane 2	-	131	131	3.0	655	0.199	100	0.0	1
Lane 3	-	131	131	3.0	655	0.199	100	0.0	2
Approach	239	261	500	10.6		0.246			
West: Lakeside Drive (E)									
Mov. From W To Exit:	L2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	441	441	1.0		664	0.665	81[6]	NA	NA
Lane 2	545	545	1.0		664	0.820	100	NA	NA
Approach	986	986	1.0			0.820			
	Total	%HV	Deg.Satn (v/c)						
All Vehicles	2417	5.3	0.888						

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
6 Lane under-utilisation due to downstream effects

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
North Exit: Abbott Street (N) Merge Type: **Priority**												
Exit Short Lane	1	150	0.0	545	547	3.08	2.05	1363	1185	1.150	1.0	142.4
Merge Lane	2	-	100.0	Merge Lane is not Opposed				545	1800	0.303	0.0	0.0

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Abbott Street (S)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: Abbott Street (N)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
West: Lakeside Drive (E)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

PHASING SUMMARY

Site: 101v [Lakeside Dr - Abbott St - 2039BG+DEV - AM Peak - TAMM Adjust Volumes - Modified Layout - Abbott St L (Site Folder: 2039 with Full Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2039 AM Ultimate - TAMM Adjust Volumes-Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

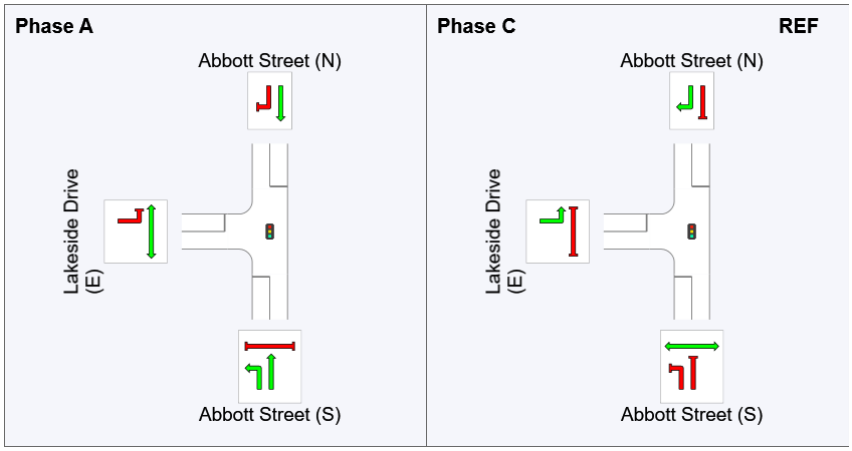
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Convert Function Default
Input Phase Sequence: A, C
Output Phase Sequence: A, C
Reference Phase: Phase C
Offset: 0 seconds (User)

Phase Timing Summary

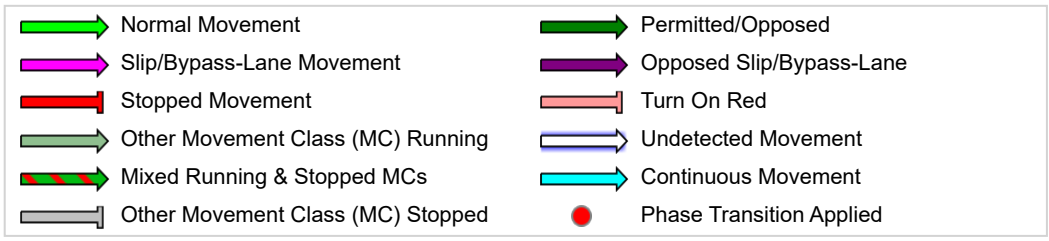
Phase	A	C
Phase Change Time (sec)	60	0
Green Time (sec)	84	54
Phase Time (sec)	90	60
Phase Split	60%	40%
Phase Frequency (%)	100.0	100.0

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Organisation: URBIS | Licence: NETWORK / 1PC | Processed: Monday, 28 April 2025 4:34:14 PM
Project: C:\Users\ashi\Urbis Ltd\P0051836 SUB Oonoonba Village Traffic Assessment - General\02_Workspace\08_Transport\01_Analysis\P0051836 - SIDRA - 250327_V6.sip9

LANE SUMMARY

Site: 101 [Lakeside Dr - Riveredge Blvd - 2039BG+Dev AM - TAMM Adjust Volumes - Modified Layout - Abbott St Lane (Site Folder: 2039 with Full Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2039 AM Ultimate - TAMM Adjust Volumes-Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Lakeside Drive (S)															
Lane 1	546	1.6	546	1.6	735[1]	0.742	100	43.9	LOS D	30.7	217.9	Short	60	-28.4[N3]	NA
Lane 2	312	2.0	312	2.0	421[1]	0.742	100	45.2	LOS D	18.4	131.2	Full	400	-50.0[N3]	0.0
Lane 3	60	0.0	60	0.0	87	0.692	100	87.6	LOS F	4.7	32.7	Short	60	0.0	NA
Approach	918	1.6	918	1.6		0.742		47.2	LOS D	30.7	217.9				
East: Lot 6,000 (E)															
Lane 1	64	0.0	64	0.0	334	0.191	100	41.4	LOS D	3.1	22.0	Short	30	0.0	NA
Lane 2	56	0.0	56	0.0	153	0.365	100	69.0	LOS E	3.9	27.1	Full	60	-39.1[N3]	0.0
Approach	120	0.0	120	0.0		0.365		54.2	LOS D	3.9	27.1				
North: Lakeside Drive (N)															
Lane 1	124	1.4	124	1.4	1002	0.124	100	5.4	LOS A	0.9	6.4	Full	115	0.0	0.0
Lane 2	125	2.0	125	2.0	1014	0.124	100	2.7	LOS A	0.7	5.2	Full	115	0.0	0.0
Lane 3	61	0.0	61	0.0	87	0.704	100	89.5	LOS F	4.8	33.4	Short	90	0.0	NA
Approach	310	1.3	310	1.3		0.704		20.9	LOS C	4.8	33.4				
West: Riveredge Boulevard (W)															
Lane 1	154	0.0	154	0.0	273	0.564	100	62.6	LOS E	10.2	71.7	Short	50	-33.1[N3]	NA
Lane 2	102	0.0	102	0.0	180	0.564	100	67.1	LOS E	7.1	49.4	Full	250	-44.6[N3]	0.0
Lane 3	43	0.0	43	0.0	248	0.174	100	68.2	LOS E	2.8	19.7	Full	250	0.0	0.0
Approach	299	0.0	299	0.0		0.564		65.0	LOS E	10.2	71.7				
All Vehicles	1647	1.2	1647	1.2		0.742		46.0	LOS D	30.7	217.9				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
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 Green.
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.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Approach Lane Flows (veh/h)

South: Lakeside Drive (S)

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	108	438	-	546	1.6	735[1]	0.742	100	100.0	2
Lane 2	-	312	-	312	2.0	421[1]	0.742	100	NA	NA
Lane 3	-	-	60	60	0.0	87	0.692	100	0.0	2
Approach	108	750	60	918	1.6		0.742			

East: Lot 6,000 (E)

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	64	-	-	64	0.0	334	0.191	100	0.0	2
Lane 2	-	20	36	56	0.0	153	0.365	100	NA	NA
Approach	64	20	36	120	0.0		0.365			

North: Lakeside Drive (N)

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	40	84	-	124	1.4	1002	0.124	100	NA	NA
Lane 2	-	125	-	125	2.0	1014	0.124	100	NA	NA
Lane 3	-	-	61	61	0.0	87	0.704	100	0.0	2
Approach	40	209	61	310	1.3		0.704			

West: Riveredge Boulevard (W)

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	154	-	-	154	0.0	273	0.564	100	37.9	2
Lane 2	82	20	-	102	0.0	180	0.564	100	NA	NA
Lane 3	-	-	43	43	0.0	248	0.174	100	NA	NA
Approach	236	20	43	299	0.0		0.564			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1647	1.2	0.742

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Lakeside Drive (S) Merge Type: **Priority**												
Exit Short Lane	1	60	0.0	168	169	3.02	2.01	148	1618	0.091	0.2	0.3
Merge Lane	2	-	100.0	Merge Lane is not Opposed				168	1800	0.093	0.0	0.0

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Lakeside Drive (S)				
Lane 1	0.0	0.0	0.0	0.0

Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
East: Lot 6,000 (E)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: Lakeside Drive (N)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
West: Riveredge Boulevard (W)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0

PHASING SUMMARY

Site: 101 [Lakeside Dr - Riveredge Blvd - 2039BG+Dev AM - TAMM Adjust Volumes - Modified Layout - Abbott St Lane (Site Folder: 2039 with Full Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2039 AM Ultimate - TAMM Adjust Volumes-Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Convert Function Default - Import
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase A
Offset: 0 seconds (User)

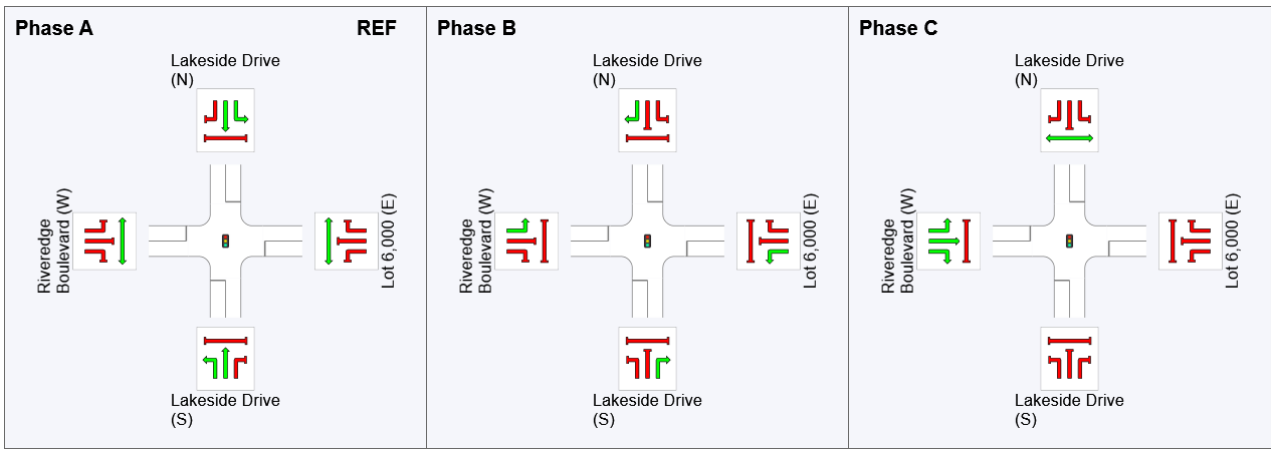
Phase Timing Summary

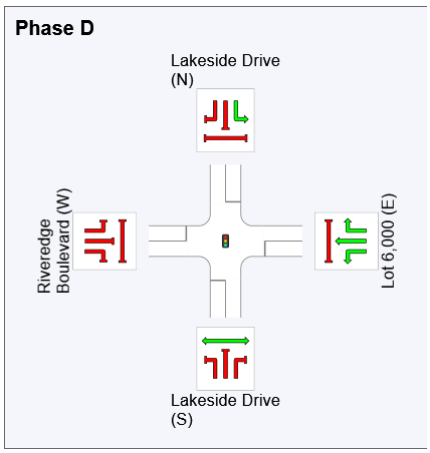
Phase	A	B	C	D
Phase Change Time (sec)	0	85	98	124
Green Time (sec)	79	7	20	20
Phase Time (sec)	85	13	26	26
Phase Split	57%	9%	17%	17%
Phase Frequency (%)	100.0	100.0	96.3[2]	96.3[2]

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

2 Phase Frequency is implied by a Phase Time specified by the user that is less than the Required Movement Time.

Output Phase Sequence





REF: Reference Phase
VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

Organisation: URBIS | Licence: NETWORK / 1PC | Processed: Monday, 28 April 2025 4:34:14 PM
Project: C:\Users\ashi\Urbis Ltd\P0051836 SUB Oonoonba Village Traffic Assessment - General\02_Workspace\08_Transport\01_Analysis\P0051836 - SIDRA - 250327_V6.sip9

LANE SUMMARY

Site: 101v [Lakeside Dr - Abbott St - 2039BG+DEV - PM Peak - TAMM Adjust Volumes - Modified Layout - Abbott St L (Site Folder: 2039 with Full Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2039 PM Ultimate - TAMM Adjust Volumes-Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Abbott Street (S)															
Lane 1	37	0.0	37	0.0	1213	0.030	100	17.1	LOS B	0.9	6.5	Short	110	0.0	NA
Lane 2	726	7.0	726	7.0	1210[1]	0.600	100	19.4	LOS B	29.6	219.5	Full	500	0.0	0.0
Approach	763	6.7	763	6.7		0.600		19.3	LOS B	29.6	219.5				
North: Abbott Street (N)															
Lane 1	916	19.0	916	19.0	1134	0.808	100	20.1	LOS C	48.2	392.5	Full	500	0.0	0.0
Lane 2	427	3.0	427	3.0	485	0.880	100	72.1	LOS E	33.0	237.2	Short	235	0.0	NA
Lane 3	235	3.0	235	3.0	268	0.880	100	80.1	LOS F	19.6	140.6	Short	140	-44.8[N3]	NA
Approach	1578	12.3	1578	12.3		0.880		43.1	LOS D	48.2	392.5				
West: Lakeside Drive (E)															
Lane 1	216	1.0	216	1.0	492	0.440	81[6]	69.0	LOS E	15.0	106.2	Full	115	0.0	0.0
Lane 2	267	1.0	267	1.0	492	0.543	100	62.8	LOS E	17.8	125.6	Full	115	0.0	13.0
Approach	483	1.0	483	1.0		0.543		65.6	LOS E	17.8	125.6				
All Vehicles	2824	8.8	2824	8.8		0.880		40.5	LOS D	48.2	392.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
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 Green.
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.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
6 Lane under-utilisation due to downstream effects
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Approach Lane Flows (veh/h)

South: Abbott Street (S)

Mov. From S To Exit:	L2 W	T1 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	37	-	37	0.0	1213	0.030	100	0.0	2
Lane 2	-	726	726	7.0	1210[1]	0.600	100	NA	NA
Approach	37	726	763	6.7		0.600			

North: Abbott Street (N)									
Mov. From N To Exit:	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	916	-	916	19.0	1134	0.808	100	NA	NA
Lane 2	-	427	427	3.0	485	0.880	100	5.8	1
Lane 3	-	235	235	3.0	268	0.880	100	5.4	2
Approach	916	662	1578	12.3		0.880			
West: Lakeside Drive (E)									
Mov. From W To Exit:	L2 N	Total	%HV		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	216	216	1.0		492	0.440	81[6]	NA	NA
Lane 2	267	267	1.0		492	0.543	100	NA	NA
Approach	483	483	1.0			0.543			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	2824	8.8	0.880

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
6 Lane under-utilisation due to downstream effects

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
North Exit: Abbott Street (N) Merge Type: **Priority**												
Exit Short Lane	1	150	0.0	267	268	3.08	2.06	942	1475	0.639	0.4	1.8
Merge Lane	2	-	100.0	Merge Lane is not Opposed				267	1800	0.148	0.0	0.0

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Abbott Street (S)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: Abbott Street (N)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
West: Lakeside Drive (E)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0

PHASING SUMMARY

Site: 101v [Lakeside Dr - Abbott St - 2039BG+DEV - PM Peak - TAMM Adjust Volumes - Modified Layout - Abbott St L (Site Folder: 2039 with Full Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2039 PM Ultimate - TAMM Adjust Volumes-Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

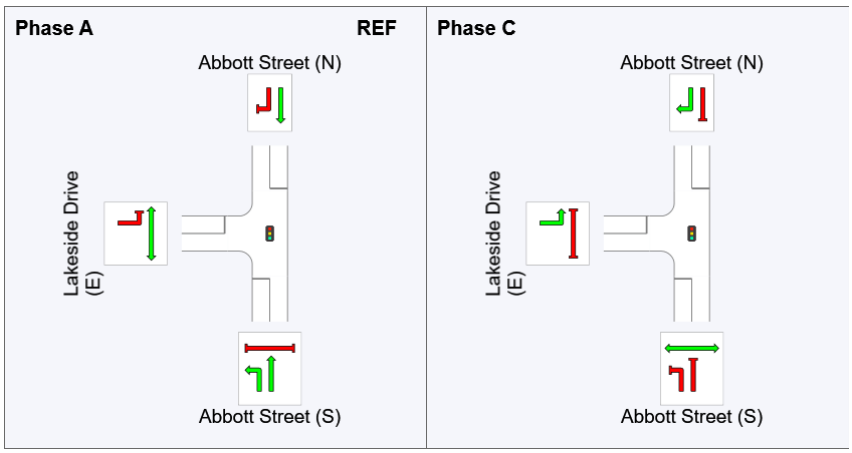
Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Convert Function Default
Input Phase Sequence: A, C
Output Phase Sequence: A, C
Reference Phase: Phase A
Offset: 0 seconds (User)

Phase Timing Summary

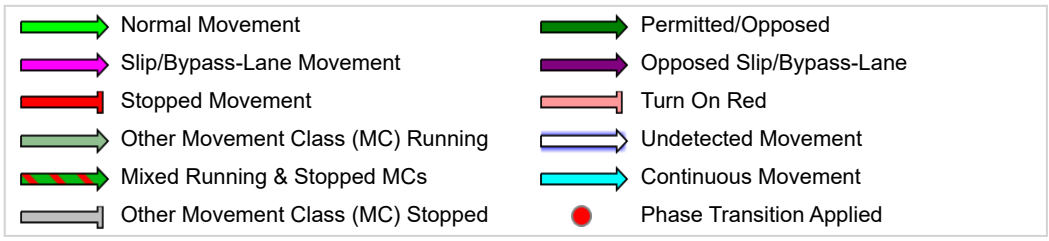
Phase	A	C
Phase Change Time (sec)	0	104
Green Time (sec)	98	40
Phase Time (sec)	104	46
Phase Split	69%	31%
Phase Frequency (%)	100.0	100.0

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

Output Phase Sequence



REF: Reference Phase
VAR: Variable Phase



Organisation: URBIS | Licence: NETWORK / 1PC | Processed: Monday, 28 April 2025 4:34:10 PM
Project: C:\Users\ashi\Urbis Ltd\P0051836 SUB Oonoonba Village Traffic Assessment - General\02_Workspace\08_Transport\01_Analysis\P0051836 - SIDRA - 250327_V6.sip9

LANE SUMMARY

Site: 101 [Lakeside Dr - Riveredge Blvd - 2039BG+Dev PM - TAMM Adjust Volumes - Modified Layout - Abbott St Lane (Site Folder: 2039 with Full Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2039 PM Ultimate - TAMM Adjust Volumes-Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Lane Use and Performance

	Demand Flows [Total veh/h	HV] %	Arrival Flows [Total veh/h	HV] %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh	Dist] m	Lane Config	Lane Length m	Cap. Adj. %	Prob. Block. %
South: Lakeside Drive (S)															
Lane 1	236	1.2	236	1.2	416[1]	0.566	100	60.9	LOS E	15.5	109.3	Short	60	0.0	NA
Lane 2	202	2.0	202	2.0	357	0.566	100	59.0	LOS E	13.3	95.0	Full	400	-13.0[N3]	0.0
Lane 3	63	0.0	63	0.0	669	0.094	100	39.1	LOS D	3.0	20.9	Short	60	0.0	NA
Approach	501	1.4	501	1.4		0.566		57.4	LOS E	15.5	109.3				
East: Lot 6,000 (E)															
Lane 1	77	0.0	77	0.0	916	0.084	100	15.9	LOS B	1.7	11.8	Short	30	0.0	NA
Lane 2	59	0.0	59	0.0	230	0.256	100	66.4	LOS E	3.9	27.5	Full	60	-8.6[N3]	0.0
Approach	136	0.0	136	0.0		0.256		37.8	LOS D	3.9	27.5				
North: Lakeside Drive (N)															
Lane 1	195	1.5	195	1.5	407	0.478	100	66.7	LOS E	13.6	96.6	Full	115	0.0	0.0
Lane 2	196	2.0	196	2.0	411	0.478	100	72.8	LOS E	13.9	98.8	Full	115	0.0	44.8[8]
Lane 3	353	0.0	353	0.0	631[1]	0.560	100	73.4	LOS E	25.4	177.5	Short	90	0.0	NA
Approach	744	0.9	744	0.9		0.560		71.5	LOS E	25.4	177.5				
West: Riveredge Boulevard (W)															
Lane 1	128	0.0	128	0.0	990	0.129	100	23.9	LOS C	4.6	32.0	Short	50	0.0	NA
Lane 2	33	0.0	33	0.0	255	0.129	100	63.0	LOS E	2.1	14.9	Full	250	-4.7[N3]	0.0
Lane 3	86	0.0	86	0.0	248	0.347	100	70.1	LOS E	5.8	40.6	Full	250	0.0	0.0
Approach	247	0.0	247	0.0		0.347		45.2	LOS D	5.8	40.6				
All Vehicles	1628	0.8	1628	0.8		0.566		60.4	LOS E	25.4	177.5				

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).
Lane LOS values are based on average delay per lane.
Intersection and Approach LOS values are based on average delay for all lanes.
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 Green.
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.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.
8 Probability of Blockage has been set on the basis of a queue that overflows from a short lane.
N3 Capacity Adjustment due to downstream lane blockage determined by the program.

Approach Lane Flows (veh/h)

South: Lakeside Drive (S)

Mov. From S To Exit:	L2 W	T1 N	R2 E	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	93	143	-	236	1.2	416[1]	0.566	100	60.4	2
Lane 2	-	202	-	202	2.0	357	0.566	100	NA	NA
Lane 3	-	-	63	63	0.0	669	0.094	100	0.0	2
Approach	93	345	63	501	1.4		0.566			

East: Lot 6,000 (E)

Mov. From E To Exit:	L2 S	T1 W	R2 N	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	77	-	-	77	0.0	916	0.084	100	0.0	2
Lane 2	-	22	37	59	0.0	230	0.256	100	NA	NA
Approach	77	22	37	136	0.0		0.256			

North: Lakeside Drive (N)

Mov. From N To Exit:	L2 E	T1 S	R2 W	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	51	144	-	195	1.5	407	0.478	100	NA	NA
Lane 2	-	196	-	196	2.0	411	0.478	100	NA	NA
Lane 3	-	-	353	353	0.0	631[1]	0.560	100	68.0	2
Approach	51	340	353	744	0.9		0.560			

West: Riveredge Boulevard (W)

Mov. From W To Exit:	L2 N	T1 E	R2 S	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.
Lane 1	128	-	-	128	0.0	990	0.129	100	0.0	2
Lane 2	11	22	-	33	0.0	255	0.129	100	NA	NA
Lane 3	-	-	86	86	0.0	248	0.347	100	NA	NA
Approach	139	22	86	247	0.0		0.347			

	Total	%HV	Deg.Satn (v/c)
All Vehicles	1628	0.8	0.566

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

1 Reduced capacity due to a short lane effect. Short lane queues may extend into the full-length lanes. Delay and stops experienced by drivers upstream of short lane entry have been accounted for.

Merge Analysis

	Exit Lane Number	Short Lane Length m	Percent Opng in Lane %	Opposing Flow Rate veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Lakeside Drive (S) Merge Type: **Priority**												
Exit Short Lane	1	60	0.0	282	284	3.02	2.01	221	1498	0.147	0.4	0.6
Merge Lane	2	-	100.0	Merge Lane is not Opposed				282	1800	0.157	0.0	0.0

Variable Demand Analysis

	Initial Queued Demand veh	Residual Queued Demand veh	Time for Residual Demand to Clear sec	Duration of Oversatn sec
South: Lakeside Drive (S)				
Lane 1	0.0	0.0	0.0	0.0

Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
East: Lot 6,000 (E)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
North: Lakeside Drive (N)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0
West: Riveredge Boulevard (W)				
Lane 1	0.0	0.0	0.0	0.0
Lane 2	0.0	0.0	0.0	0.0
Lane 3	0.0	0.0	0.0	0.0

PHASING SUMMARY

Site: 101 [Lakeside Dr - Riveredge Blvd - 2039BG+Dev PM - TAMM Adjust Volumes - Modified Layout - Abbott St Lane (Site Folder: 2039 with Full Dev)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2039 PM Ultimate - TAMM Adjust Volumes-Modified Layout TMR Comments Abbott St Lanes (Network Folder: TAMM Volumes - Abbott St Lanes)]

New Site
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Coordinated Cycle Time = 150 seconds (Network Site User-Given Phase Times)

Timings based on settings in the Network Timing dialog
Phase Times specified by the user
Phase Sequence: Convert Function Default - Import
Input Phase Sequence: A, B, C, D
Output Phase Sequence: A, B, C, D
Reference Phase: Phase A
Offset: 0 seconds (User)

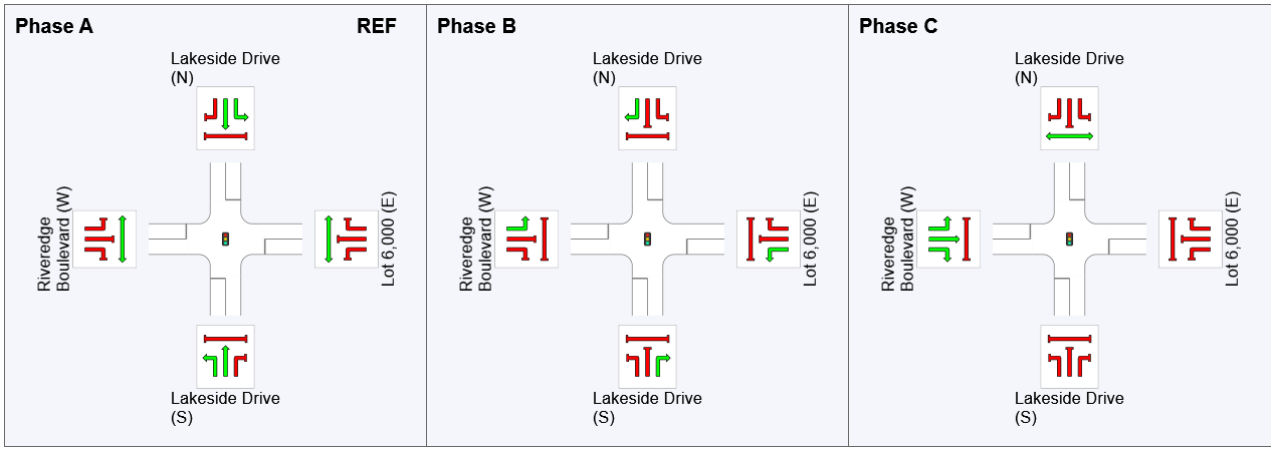
Phase Timing Summary

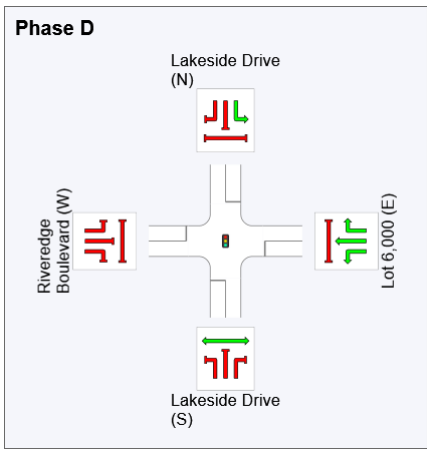
Phase	A	B	C	D
Phase Change Time (sec)	0	38	98	124
Green Time (sec)	32	54	20	20
Phase Time (sec)	38	60	26	26
Phase Split	25%	40%	17%	17%
Phase Frequency (%)	100.0	100.0	96.3[2]	96.3[2]

See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified or implied) less than 100%.

2 Phase Frequency is implied by a Phase Time specified by the user that is less than the Required Movement Time.

Output Phase Sequence





REF: Reference Phase
VAR: Variable Phase

Normal Movement	Permitted/Opposed
Slip/Bypass-Lane Movement	Opposed Slip/Bypass-Lane
Stopped Movement	Turn On Red
Other Movement Class (MC) Running	Undetected Movement
Mixed Running & Stopped MCs	Continuous Movement
Other Movement Class (MC) Stopped	Phase Transition Applied

Organisation: URBIS | Licence: NETWORK / 1PC | Processed: Monday, 28 April 2025 4:34:10 PM
Project: C:\Users\ashi\Urbis Ltd\P0051836 SUB Oonoonba Village Traffic Assessment - General\02_Workspace\08_Transport\01_Analysis\P0051836 - SIDRA - 250327_V6.sip9