

Statement of Advice

Yarrabilba Masterplan Community – Precinct 4 District Sports Park Access Intersection *Traffic Engineering Statement*

CLIENT: Graeme Knox

SLR PROJECT No: 620.11743

AUTHOR: Naristi Neale

DATE: 23 October 2024

REVISION: v1.1

REVIEWER: Brett McClurg,
Brendyn Rheinberger

1.0 Introduction

SLR Consulting Australia Pty Ltd (**SLR**) has been commissioned by Lendlease Communities (Lendlease) to provide traffic engineering and transport planning advice for the Yarrabilba master planned development area. The Yarrabilba master planned development is located within the extents of the Yarrabilba Priority Development Area (**PDA**), which is situated approximately 20km south of Logan Central and Springwood. When fully developed, it is anticipated that the ultimate Yarrabilba development will yield approximately 17,000 residential dwellings, and approximately 45,000 residents.

The traffic and transport aspects of the overall Yarrabilba master plan have been extensively documented within several reports which are referenced in **Section 1.1**. This statement of advice specifically addresses the traffic and transport aspects of Precinct 4 District Sports Park (DSP) (which is a sub-precinct of Precinct 4). The proposed layout plan for the Precinct 4 DSP application is included at **Appendix A**.

1.1 Previous Reporting

The traffic and transport aspects of the entire Yarrabilba master plan development (and other relevant precincts) have been previously addressed within a number of documents including the following:

- *Yarrabilba Master Plan Micro-simulation Modelling - Revised Land Use and Road Network* (Cardno, May 2015).
- *Yarrabilba Movement Infrastructure Master Plan* (Cardno, October 2015) – endorsed by EDQ on 11 November 2015, and on 3 July 2019. Referred to herein as the 'Endorsed MIMP (2019)'.
- *Yarrabilba Master Plan Development – Movement Infrastructure Master Plan* (SLR, April 2017).
- *Traffic Impact Assessment – Yarrabilba Master Plan Development Precinct 5* (SLR, September 2017).

- *Yarrabilba Master Plan Development Traffic Model and Intersection Analysis Data Compendium (SLR, November 2019) – submitted to and under review by EDQ.*
- *Yarrabilba Master Plan Development Movement Infrastructure Master Plan (Version 8) (SLR, October 2022) – submitted to and under review by EDQ. Referred to herein as the 'Current MIMP (2022)'.*

For clarity, it is acknowledged that:

- The October 2015 Movement IMP (Cardno) has been endorsed by EDQ but uses traffic modelling information that is superseded.
- Updated traffic modelling was undertaken in 2018 and the volumes from this are most representative of current Yarrabilba planning and have been used for all traffic design and assessment since 2018.
- The updated traffic modelling (2018) is included in the Current MIMP (2022) and represents the most recent traffic forecasts and assessment for Yarrabilba.
- The Precinct 4 DSP assessment herein uses volumes from the traffic model update in 2018.

Where relevant, some elements of these reports have been used to inform the traffic assessment herein. In particular, it is intended that the traffic and transport aspects of Precinct 4 DSP are generally consistent with the Movement Infrastructure Master Plan (endorsed in 2019).

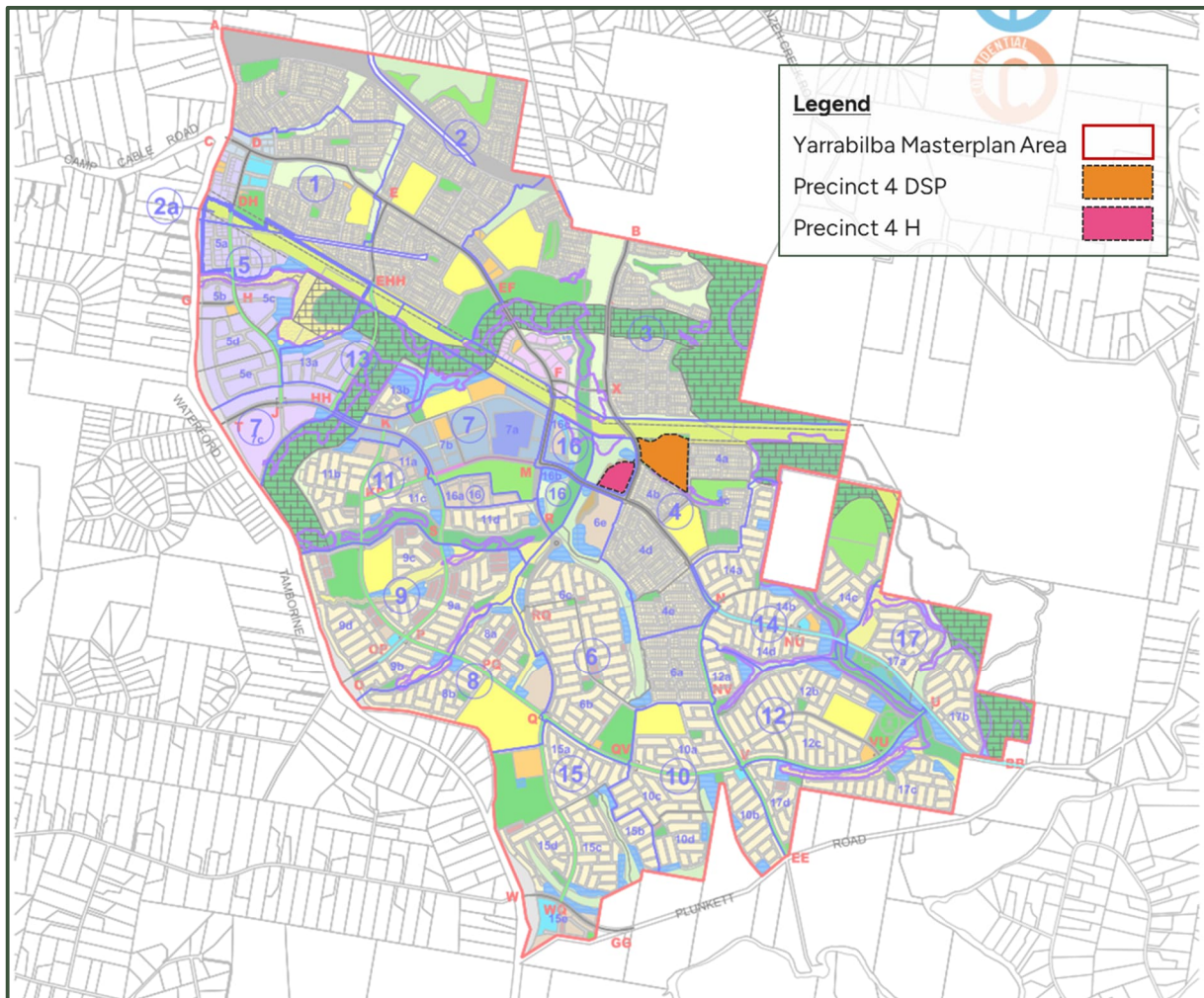


2.0 Proposed Development

The proposed Precinct 4 DSP development is located to the west of the broader Precinct 4 area and immediately north of Precinct 4B. Vehicular access to the P4 DSP precinct will be via McKenny Boulevard which provides connectivity to/from Wentland Avenue and to/from Yarrabilba Drive (via Fauna Way). McKenny Boulevard travels along the western boundary of Precinct 4 DSP.

The proposed sports park location is illustrated on **Figure 1** in the context of precinct staging and the overall Yarrabilba Development Area.

Figure 1: Precinct 4 DSP Site Context



The layout of the development is provided at **Appendix A**. The proposed development plan for Precinct 4 DSP has been prepared by Lendlease and is proposed to include the following sports fields and recreational areas:

- 1 Basketball/ multi-court.
- 4 Netball grassed courts.
- 8 Netball hardcourt.
- 2 Pickle ball courts.
- Grassed athletics field.
- Trail head.
- Bushland/ picnic areas.

It is recognised that in the interim McKenny Boulevard has no external road connection to/from the north at the Southern Infrastructure Corridor (SIC) and only links with Yarrabilba Drive (via Fauna Way) and provides access to Precinct 3. McKenny Boulevard has been planned and designed so that in the ultimate it can connect to/from the north at the Southern Infrastructure Corridor (SIC). The latter connection would be the responsibility of DTMR. There is significant uncertainty about if/when the connection may occur.



3.0 Traffic Analysis

3.1 Assessment Scope

The access intersection to Precinct 4 DSP, McKenny Boulevard / DSP Access has been evaluated herein. The analysis uses through traffic volumes on McKenny Boulevard from the 2018 traffic model update that was completed using the most recent demographic (land use, yield, and location) and geographic (road alignment) information provided by Lendlease at the time. These volumes are considered appropriate for the assessment herein.

3.2 Development Scenarios

In accordance with the traffic model undertaken in 2018 the following two scenarios have been considered:

- Scenario 1: Interim (2031) – assumes partial (approximately 75%) development of the Yarrabilba Masterplan excluding some precincts to the south and east predominantly. This scenario also assumes no external road connections to/from the north at the Southern Infrastructure Corridor (SIC).
- Scenario 2: Ultimate – which assumes the full development of the wider Yarrabilba Masterplan, with a completed external road network in line with the Movement IMP (including a future connection to/from the north at the SIC).

Precinct 4 DSP will be fully constructed before 2031 and therefore operational during both scenarios.

3.3 Development Peak Periods

The sports park main activities will occur on Saturdays. It is however, anticipated that it would still be utilised during a normal weekday, but to a lesser extent. Given that the background traffic volumes are higher during weekday peak periods, the development has been assessed for the weekday and Saturday peak periods. The following peak periods have been considered:

- Weekday AM peak period.
- Weekday PM peak period.
- Saturday AM peak period – when the majority are arriving at the sports park; and
- Saturday PM peak period – when the majority are departing from the sports park.

3.4 Background Traffic Volumes

3.4.1 Overview

For the purposes of the following analysis, the traffic volumes on McKenny Boulevard for both scenarios were obtained from the 2018 modelling volumes (as reported in the *Yarrabilba Master Plan Development Traffic Model and Intersection Analysis Data Compendium* (SLR, November 2019)). A summary of the traffic volumes on McKenny Boulevard based on information from the traffic model has been provided in **Table 1**.



Table 1 Traffic Volumes on McKenny Boulevard from the 2018 Traffic Model

Direction	Interim (2031)		Ultimate	
	AM Peak	PM Peak	AM Peak	PM Peak
Northbound	174	189	486	199
Southbound	325	152	353	1056

Precinct 4H is located to the southwest of Precinct 4DSP, see **Figure 1**. The development traffic for precinct 4H as identified in the 2018 model has changed and has therefore been removed from the background traffic (see **Table 2**) and the revised precinct 4H traffic volumes have been manually derived and then added. The Precinct 4H development traffic assumptions are addressed in the following sections.

Table 2 Updated Traffic Volumes on McKenny Boulevard from the 2018 Traffic Model (removing previously planned Precinct 4H)

Direction	Interim (2031)		Ultimate	
	AM Peak	PM Peak	AM Peak	PM Peak
Northbound	160	147	472	157
Southbound	270	124	298	1028

3.4.2 Precinct 4H Development

3.4.2.1 Overview

The proposed Precinct 4H development is located to the west of the broader Precinct 4 area and immediately west of Precinct 4B. Its location is illustrated on **Figure 1** in context of the precinct staging and overall Yarrabilba Development Area.

It is understood that the planned yield for Precinct 4H is 120 residential lots. Precinct 4H will be fully constructed before 2031 and therefore operational during both the interim and ultimate scenarios.

3.4.2.2 Precinct 4H Development Traffic Assumptions

In line with previous assessments and the traffic model of 2018, a traffic generation rate of 0.7vph/lot has been applied to the development yield, see **Table 3**. To quantify the traffic movements the trip distribution adopted for the development is 50% / 50% to and from the north/south.

Table 3 Precinct 4H Trip Generation – Residential

Sub-Precinct	Number of Lots	AM and PM Trip Rate	AM and PM Trips
4H	120	0.7 per lot	84

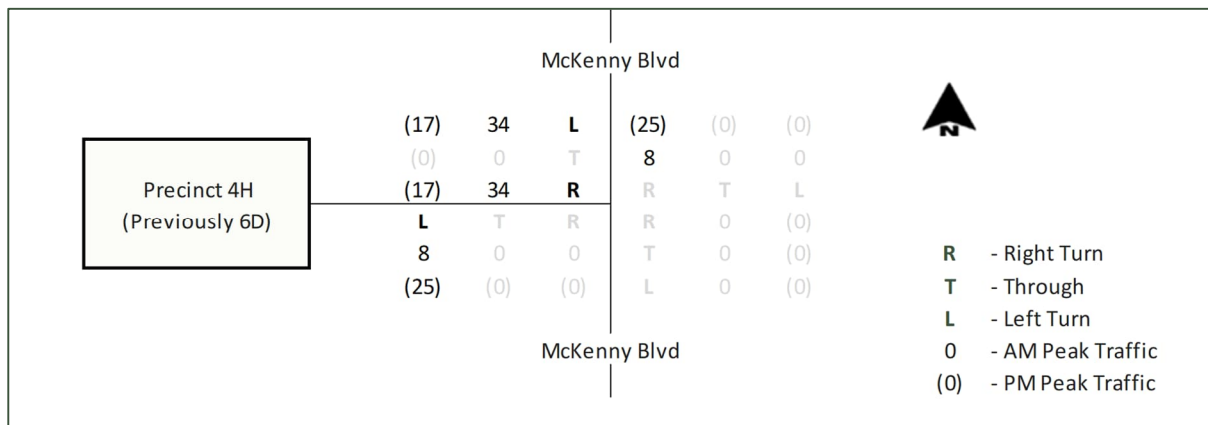
Typical industry adopted in / out splits have been adopted for the residential development, in accordance with the traffic model (2028) and is summarised as follows:

- AM Peak (in / out splits): 20% / 80%
- PM Peak (in / out splits): 60% / 40%

The resultant traffic volumes are provided in the diagram below, see **Figure 2**.



Figure 2 Development Traffic



3.4.3 Updated Background Traffic Volumes

The development traffic for Precinct 4H has been removed from the background traffic and the revised Precinct 4H traffic volumes as identified above in **Section 3.4.2.2** have been added to the background traffic volumes and can be seen in **Figure B1** and **Figure B2** in **Appendix B**.

The 2018 traffic model only provides traffic volumes for the AM and PM weekday peak period. However, sports parks are predominantly utilised on Saturdays. To ascertain the Saturday background traffic volumes, the traffic surveys conducted over a 7-day period (Sunday 14 May 2023 to Saturday 20 May 2023) at Yarrabilba Drive (Waterford-Tamborine Road - Wongawallan Drive) were queried. The surveys indicated that both Saturday AM and PM Peak hours are approximately 75% of the corresponding weekday peak periods. The background traffic volumes were adjusted according for the Saturday peak periods and can be seen in **Figure B1** and **Figure B2** in **Appendix B**.

3.5 Precinct 4 DSP Development Traffic Assumptions

3.5.1 Yield Change

The traffic assumptions and assessments were conducted based on a previous planned layout of the sports park. The superseded layout included the following additional yields that are no longer part of 4DSP:

- 1 Additional basketball/ multi-courts.
- Pump track (BMX).
- Dog off-leash area.

Considering that the revised yield is less than the assessed yield, the assessment is still relevant albeit a conservative approach and was therefore not updated to reflect the current yields.



3.5.2 Traffic Generation

No standard trip rates are available for sports parks, therefore the trips generated by the DSP were determined through applying basic principals. The number of people expected to utilise the different areas of the sports park can be seen in **Table 4**, **Table 5** and **Table 6** below. The following assumptions were made to derive the number of users:

- The number of players includes reserve players and are for 2 teams.
- Officials will be involved in multiple games or events. Therefore, if more than one game is played at the same field in an hour, the same officials will be involved in both games.
- 1.25 spectators per player.
- No overlap will occur between recreational and competitive sports.

Table 4 Precinct 4 DSP Users – Courts

Court	Yield	Per Match			Per Hour			
		Players	Officials	Spectators	Matches per court	Players	Officials	Spectators
Basketball	2	20	3	25	1	40	6	50
Netball	12	40	8	50	2	240	48	300
Pickle Ball	2	4	2	5	2	16	4	20
Total						296	58	370

Table 5 Precinct 4 DSP Users – Athletics Field

Field Sport	Athletes	Officials	Spectators
Track and Water jump	16	4	20
Long jump facility	10	4	13
Javelin throw facility	10	4	13
Discus and hammer throw facility	10	4	13
Discus throw facility	10	4	13
Pole Vault Facility	10	4	13
Shot put facility	10	4	13
High jump facility	10	4	13
Total	86	32	108

Table 6 Precinct 4 DSP Users – Recreational Facilities

Recreational Facility	Users Per hour
Pump Track	20
Dog Off-Leash Area	15
Trail Head	10
Bushland/ Picnic Areas	20
Total	86



The following assumptions were made regarding the number of trips that will be required for the users to travel to and from the sports park:

- All people drive to site.
- Parents make up all spectators and arrive in the same vehicles as the players.
- At the athletics field, everyone arrives before the event starts and athletes rotate between the various field sports.
- The expected vehicle occupancy for the various users is:
 - Players: 1.2 persons / vehicle.
 - Officials: 1 person / vehicle.
 - Users: 1.25 persons / vehicle.

Applying the assumptions above, the number of trips per hour was calculated for the full utilisation of the sports park and can be seen in **Table 7**.

Table 7 Precinct 4 DSP Trip Generation when Fully Utilised

Areas within the DSP	Players/ Athletes	Officials	Users	Veh. Trips / hour
Courts	296	58		305
Athletics	86	32		104
Recreational Facilities			52	52
Total	382	90	52	460

3.5.3 Facility Utilisation

The sports park main activities will occur on Saturdays. It is anticipated that it would still be utilised during a normal weekday, but to a lesser extent. The utilisation of the sports park at the various times during the week is assumed to be as follows:

- Weekday AM Peak – 10% of capacity.
- Weekday PM Peak – 60% of capacity.
- Saturdays – 100% of capacity.

3.5.4 Trip Distribution

It is envisaged that the generated traffic will originate from the residential areas surrounding the sports park. The distribution for the generated traffic was therefore assumed to be split equally between north and south.



3.5.5 In / Out Split

The adopted in / out splits for the sports park development are summarised in **Table 8**.

Table 8 In / Out Split

Peak Period	IN	OUT
Weekday AM Peak	50%	50%
Weekday PM Peak	50%	50%
Saturday AM Peak	80%	20%
Saturday PM Peak	20%	80%

3.5.6 Traffic Volumes

The resultant traffic volumes are summarised in **Table 9** and the traffic flow diagrams are provided in **Figure B3** in **Appendix B**.

Table 9 Development Traffic Volumes

Peak Period	IN	OUT	Total
Weekday AM Peak	23	23	46
Weekday PM Peak	138	138	276
Saturday AM Peak	368	92	460
Saturday PM Peak	92	368	460

3.6 Intersection Assessment

The performance of the access intersection to the Precinct 4 DSP has been analysed for each of the aforementioned scenarios using SIDRA Intersection 9.1 to establish the operational performance of the proposed layout.

3.6.1 Scenario 1 – Interim

Detailed outputs for the various peak periods of the interim scenario, including intersection layout plans and movement summaries, have been provided in **Appendix C**. The proposed intersection forms, as extracted from SIDRA can be seen in **Figure 3**. A summary of the results is provided in **Table 10**.

The results presented indicate that the proposed intersection performs well within typically adopted performance thresholds (DOS of 0.80 for a priority-controlled intersection) and delays are low under all traffic scenarios.



Figure 3 Proposed Intersection Form – Interim

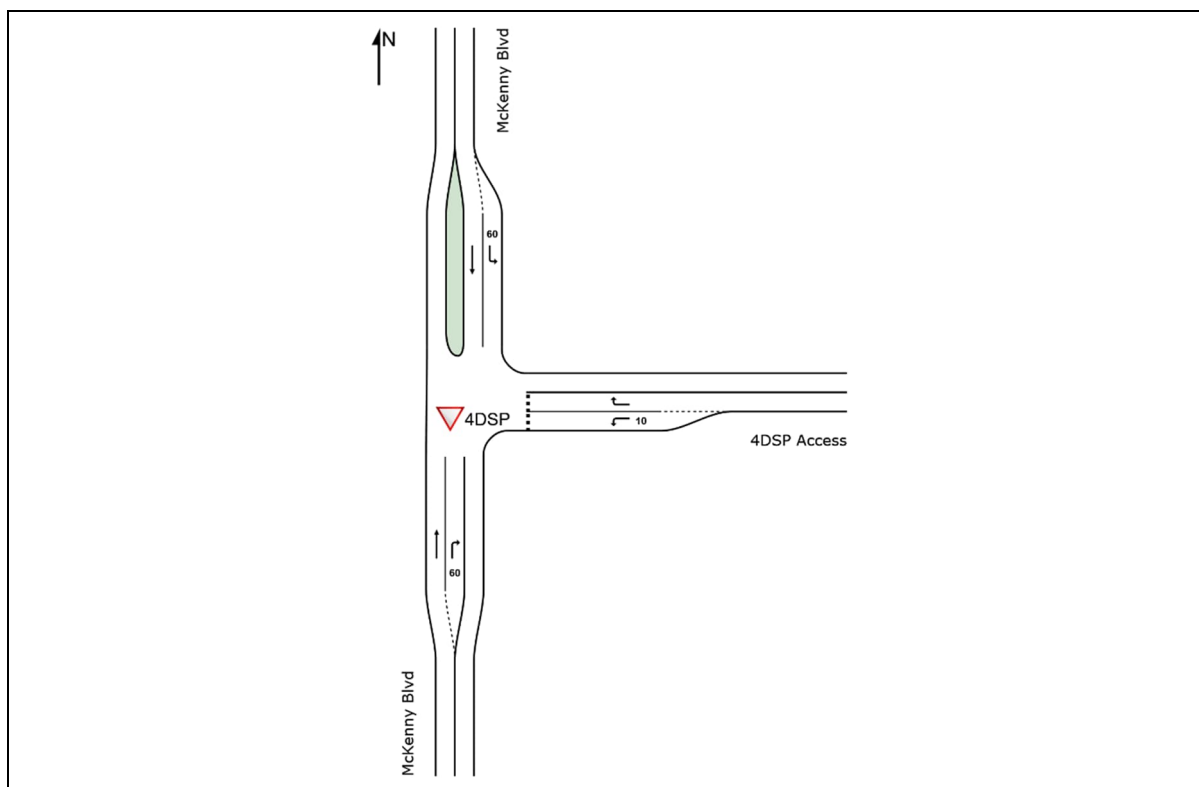


Table 10 Summary of SIDRA Results – Interim

Day	AM Peak			PM Peak		
	DoS	Average Delay (s)	95 th ile queue (m)	DoS	Average Delay (s)	95 th ile queue (m)
Weekday	0.15	10	1 (e)	0.12	9	3 (e)
Saturday	0.21	12	6 (s)	0.27	8	8 (e)

3.6.2 Scenario 2 – Ultimate

The access intersection form was evaluated for four options: priority controlled and signalised, each for 2 through lanes (1 each way) and 4 through lanes (2 each way). The proposed intersection forms, as extracted from SIDRA can be seen in **Figure 4**. Detailed outputs for the various peak periods of the ultimate scenario, including intersection layout plans and movement summaries, have been provided in **Appendix C**. A summary of the results is provided in **Table 11**.



Figure 4 Proposed Intersection Form – Ultimate

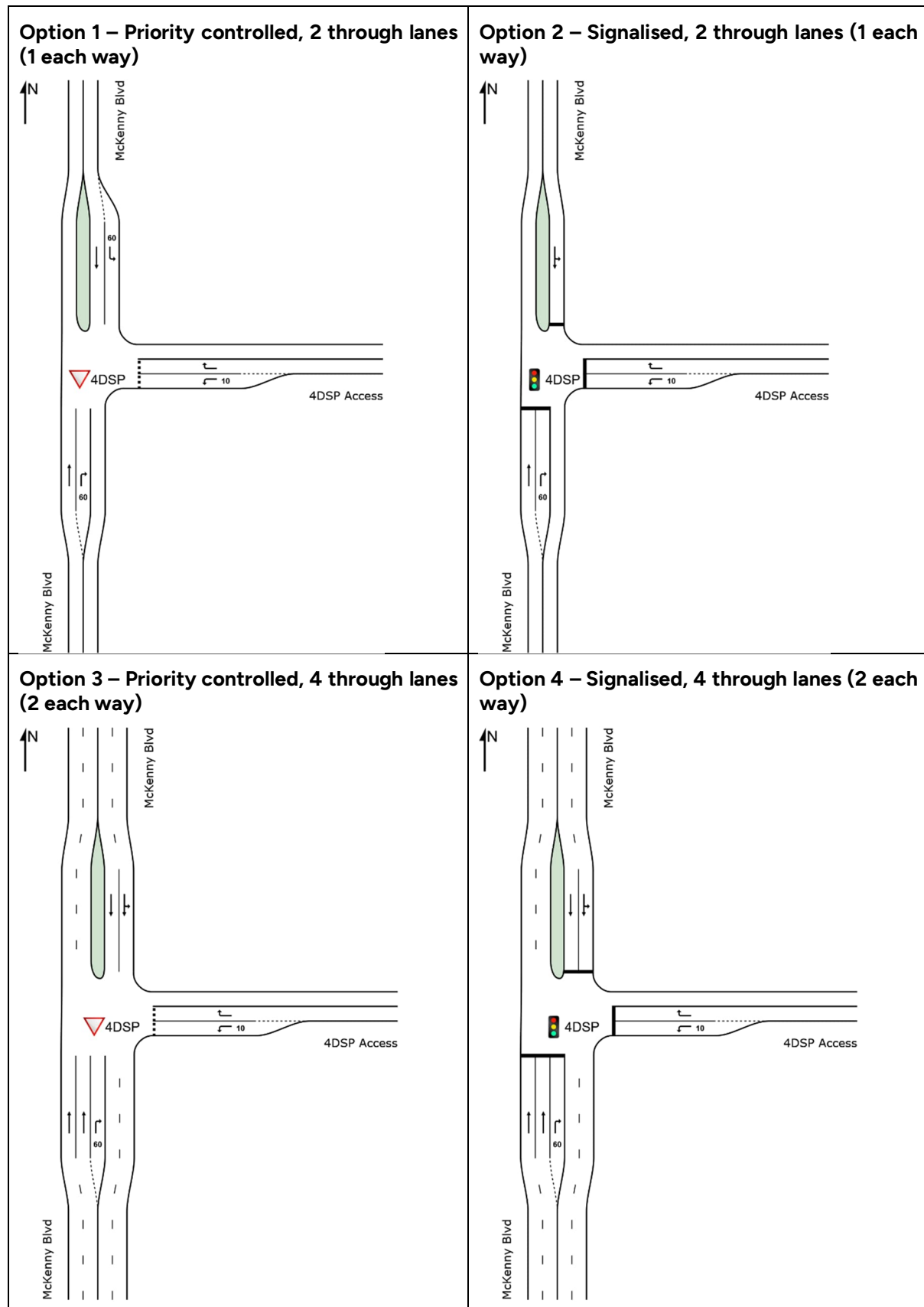


Table 11 Summary of SIDRA Results – Ultimate

Day	AM Peak			PM Peak		
	DoS	Average Delay (s)	95 th ile queue (m)	DoS	Average Delay (s)	95 th ile queue (m)
Option 1 – Priority-controlled, 2 through lanes (1 each way)						
Weekday	0.28	16	1 (e)	1.02	192	48 (e)
Saturday	0.21	18	6.3 (s)	1.03	113	93 (e)
Option 2 – Signalised, 2 through lanes (1 each way)						
Weekday	0.70	11	48	0.88	23	362
Saturday	0.59	13	62	0.88	39	285
Option 3 – Priority-controlled, 4 through lanes (2 each way)						
Weekday	0.14	18	1 (e)	0.96	150	39 (e)
Saturday	0.21	21	6 (s)	1.12	175	142 (e)
Option 4 – Signalised, 4 through lanes (2 each way)						
Weekday	0.35	9	20	0.77	17	102
Saturday	0.47	13	29	0.75	22	74

The results presented in **Table 11** indicate that the access intersection will not have sufficient capacity in the ultimate year for Options 1 and 3, noting that this assumes DTMR ultimately deliver the SIC. Although Option 2 achieves a DoS under 0.90, extensive queuing from the northern approach is expected, particularly during the PM peak. Option 4 (signalised with 4 through lanes, 2 each way) performs well within typically adopted performance thresholds (DOS of 0.90) with much lower delays and smaller queues anticipated.

In the event that the SIC is not proceeded with by DTMR, Option 2 would provide sufficient capacity to accommodate Yarrabilba development traffic in its ultimate form. Due to this uncertainty, it is therefore recommended that the road reserve around the subject intersection be designed to accommodate a potential future upgrading to the intersection form Option 4 as a future-proof measure.

3.7 Turn Warrant Assessment

A turn warrant assessment has been conducted to confirm the appropriate turn treatment type at the proposed priority-controlled (unsignalised) intersection. The access intersection is only recommended to operate as a priority-controlled intersection in the interim scenario.

The development of the warrants is described in Austroads AGTM06-20 and is further detailed in the *Queensland Department for Transport and Main Roads' Road Planning and Design Manual Edition 2 Volume 3: Supplement to Austroads Guide to Road Design Part 4a: Unsignalised and Signalised Intersections (2021)*. To assist with reader interpretation of the assessment a pictorial description of the various turn treatments that may be considered is provided in **Table 12**. Detailed output from the assessments is included in **Appendix D**. The results indicate that:

- an auxiliary left turn lane (short) is required (AUL).
- a channelised right turn treatment is required (CHR).



Table 12 Turn Treatment Type

Acronym	Right Turn Treatment	Left Turn Treatment
BAL or BAR	 BAR (Basic Right Turn)	 BAL (Basic Left Turn)
AUL(S) or CHR(S)	 CHR(S) (Channelised Right Turn (Short))	 AUL(S) (Auxiliary Left Turn (Short))
(AUL or CHL) or CHR	 CHR (Channelised Right Turn)	 CHL (Channelised Left Turn)
		 AUL (Auxiliary Left Turn)

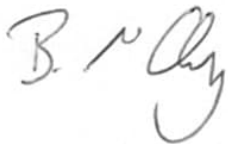


4.0 Summary

The following summarises the key conclusions in respect of the intersection for the Precinct 4 DSP on McKenny Boulevard:

- The design and configuration of the key road network have been informed by the anticipated traffic demands using the outputs of the most recent traffic modelling performed in 2018.
- The proposed development trip generation was determined from first principles based on the yield of the sports park.
- The proposed access intersection form was evaluated for the interim and ultimate scenarios, and the following is recommended:
 - Proposed interim form: priority-controlled intersection with a single lane per direction on McKenny Boulevard (Option 1). The turn warrant assessment indicated that an auxiliary left turn (short) and a channelised right turn treatment would be required.
 - Proposed road reserve: sufficient to accommodate a signalised intersection with two lanes per direction on McKenny Boulevard. A channelised right turn treatment would be required.
 - Proposed ultimate form: to be decided upon at a later date when additional clarity is provided by DTMR regarding the Southern Infrastructure Corridor. This will determine whether Option 2 (no SIC) or Option 4 (SIC delivered) is required.

Regards,



Brett McClurg
Technical Director – Transport Advisory
RPEQ #7628

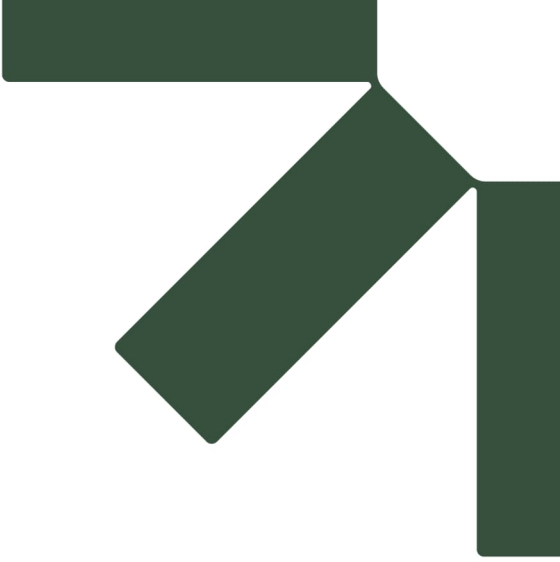


Brendyn Rheinberger
Principal – Transport Advisory
RPEQ #17962

Basis of Statement of Advice

This report has been prepared with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with the Client. Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid. This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR. SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.





Appendix A District Sports Park

DISTRICT SPORTS PARK - MASTERPLAN



LEGEND

-  Existing trees to be retained where possible
-  Indicative new trees
-  Existing Vegetation to be retained where possible
-  WSUD devices
-  Shared Pedestrian / Cycle pathway
-  General Pedestrian pathway
-  Trail network
-  Proposed ROL
-  Useable Area 6.8 Ha
-  Powerline vegetation buffer
-  Protected Vegetation
-  Overland flow path



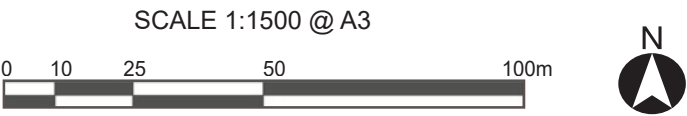
DISTRICT SPORTS PARK - CONCEPT PLAN

EMBELLISHMENTS TO BE DELIVERED BY LENDLEASE



LEGEND

- 1 Internal access road (indicative layout) with lighting
- 2 224 Sealed carparks including (8 PWD bays and 2 Electric Vehicle) with lighting delivered to LCC DSS requirement + busbay
- 3 210 Unsealed carparks with no lighting (conduits only)
- 4 Toilet Block: 1 x Unisex Accessible (NO SHOWER), 1 x Female Ambulant, 1 x Male Ambulant, 1x unisex standard, and bike parking
- 5a Netball Shed 9x6m
- 5b Athletics Shed 12x6m
- 6a Running Track Linework on grass with lighting
- 6b Pole Vault, Discus, Shot Put Linework on grass
- 6c Javelin, High Jump, Discus, Hammer Linework on grass
- 6d Long Jump and Triple Jump Pit with rubber track
- 7 Concrete seating terraces
- 8 Turfed viewing batter
- 9 8 no. sealed netball courts with lighting
- 10 Grassed level pad suitable for a future 4 no. grassed netball courts. Conduits provided for future lighting.
- 11 1 no. sealed multiuse court no lighting
- 12 2 no. Pickleball courts with lighting
- 13 Flat area adjacent to finish line for marquee and grandstand by others
- 14 Flat area for clubhouse by others
- 15 Barrired access to unsealed carparks with gates / lock rails to manage use



Note: Seating bins, water bubbler, lighting and signage located throughout the park to EDQ requirements.

DISTRICT SPORTS PARK

FUTURE CLUBHOUSE (BY OTHERS) SITING PLAN

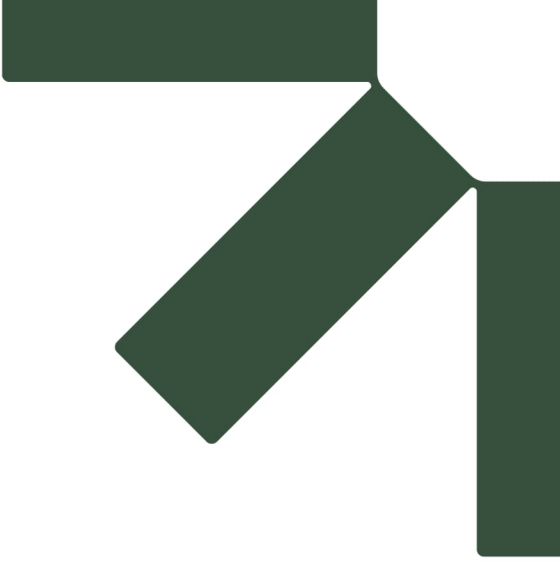


LEGEND

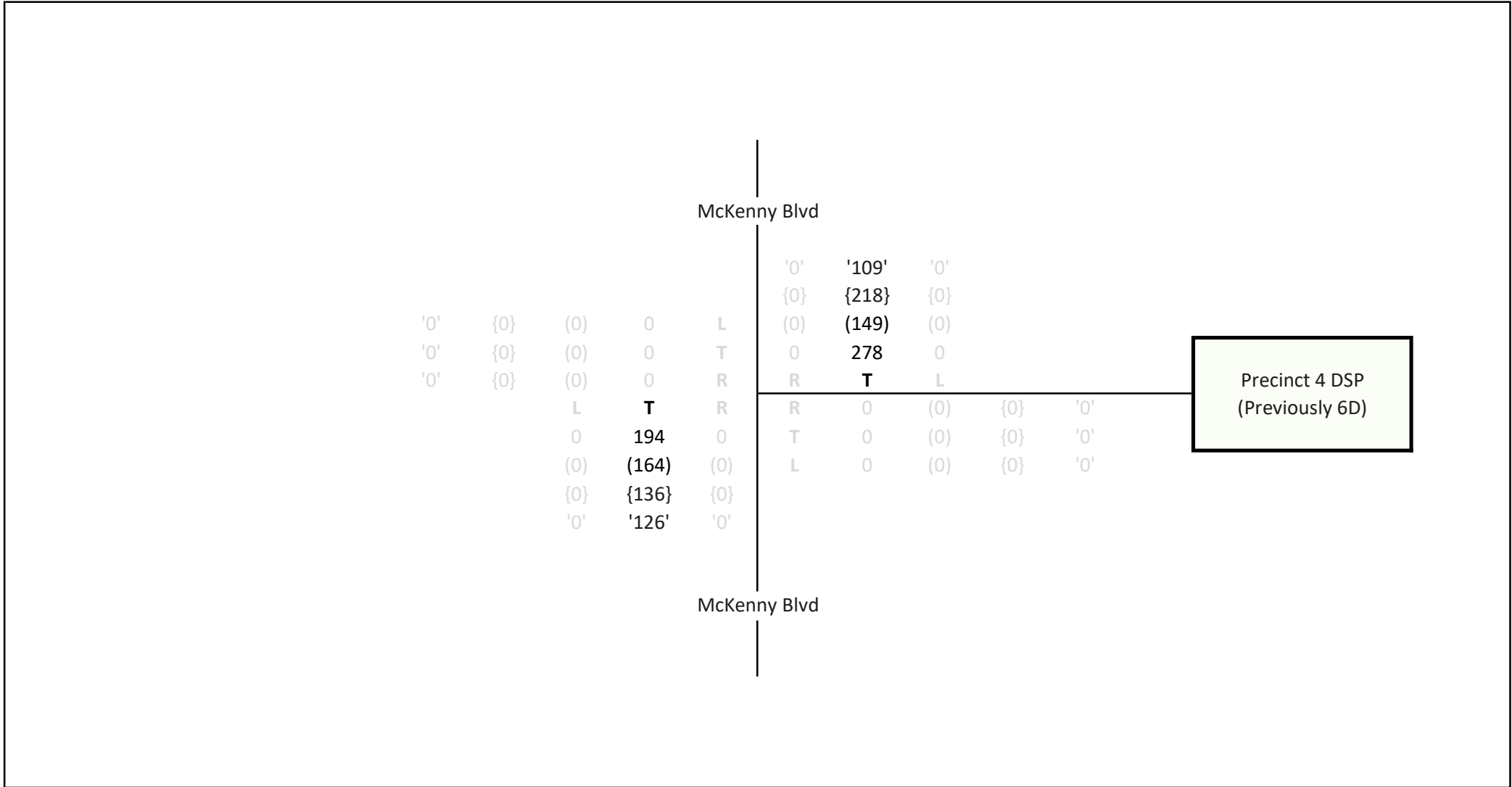
- 1 145m² Internal Clubhouse Area

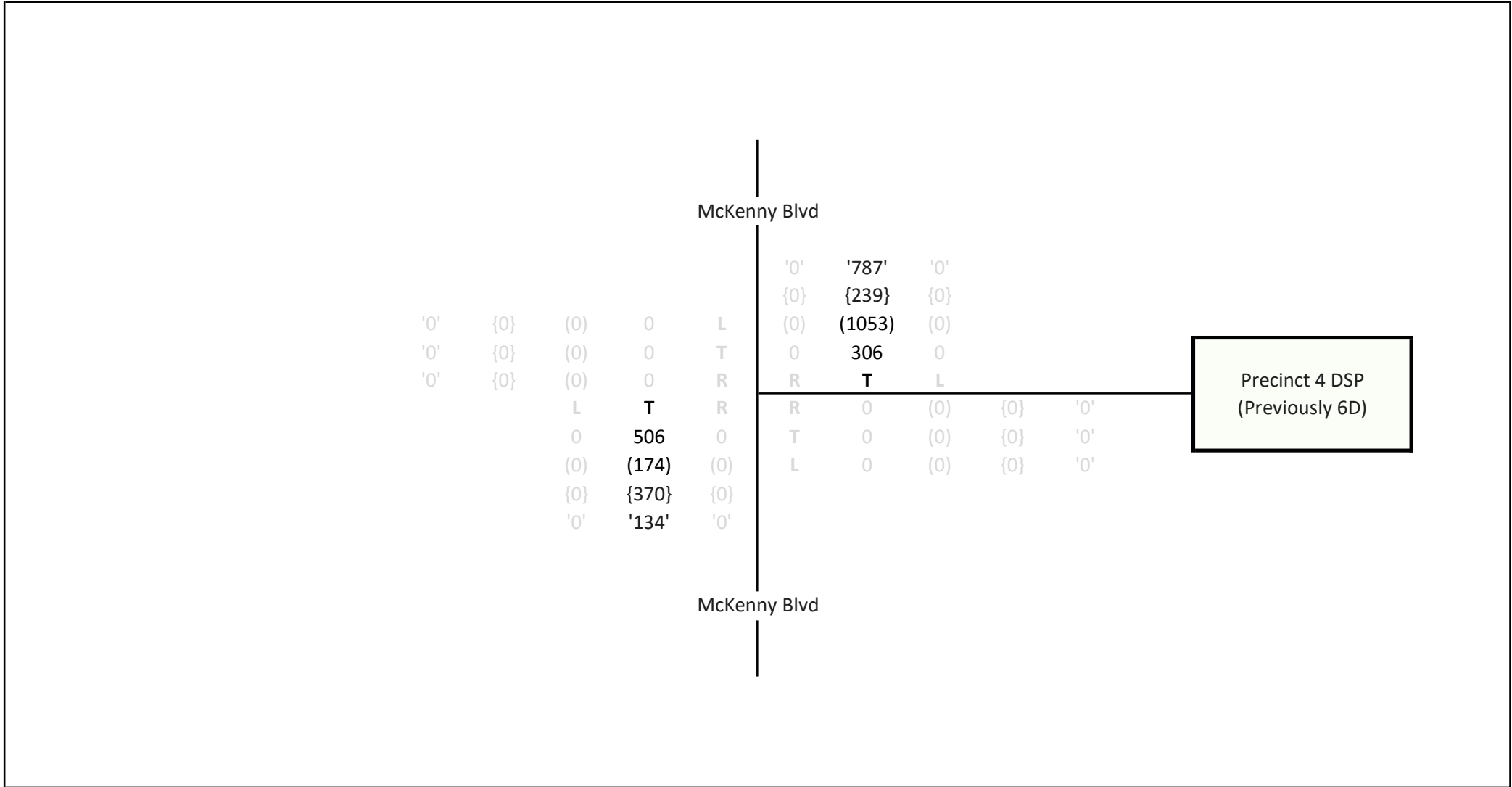
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Appendix B Traffic Flow Diagrams





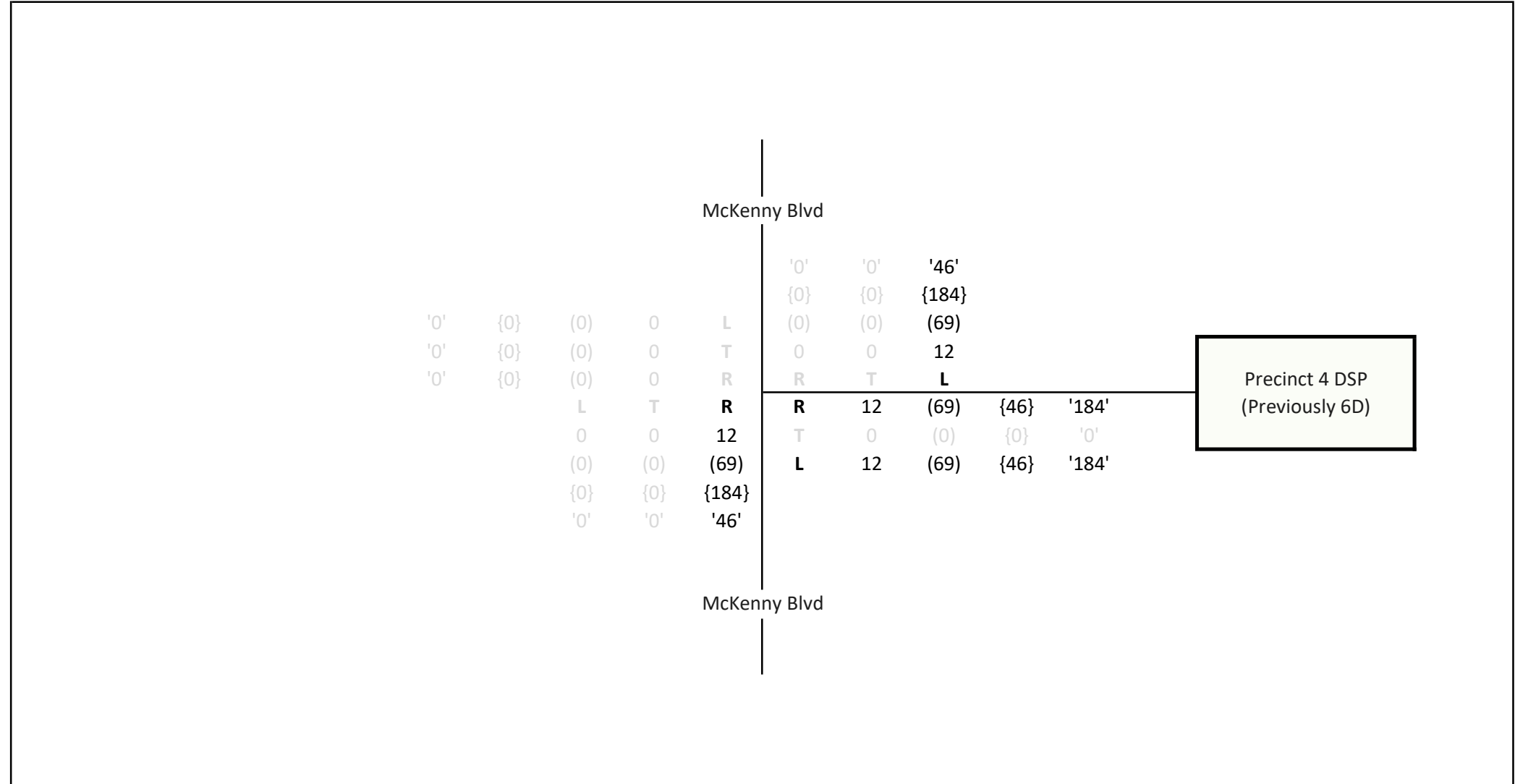


Figure B3
4 DSP Development
 620.11743
 Yarrabilba Precinct 4 DSP

- | | | | |
|----------|--------------|------------|-------------------------------|
| R | - Right Turn | 0 | - AM Peak Traffic |
| T | - Through | (0) | - PM Peak Traffic |
| L | - Left Turn | {0} | - Sat Scenario 1 Peak Traffic |
| | | '0' | - Sat Scenario 2 Peak Traffic |



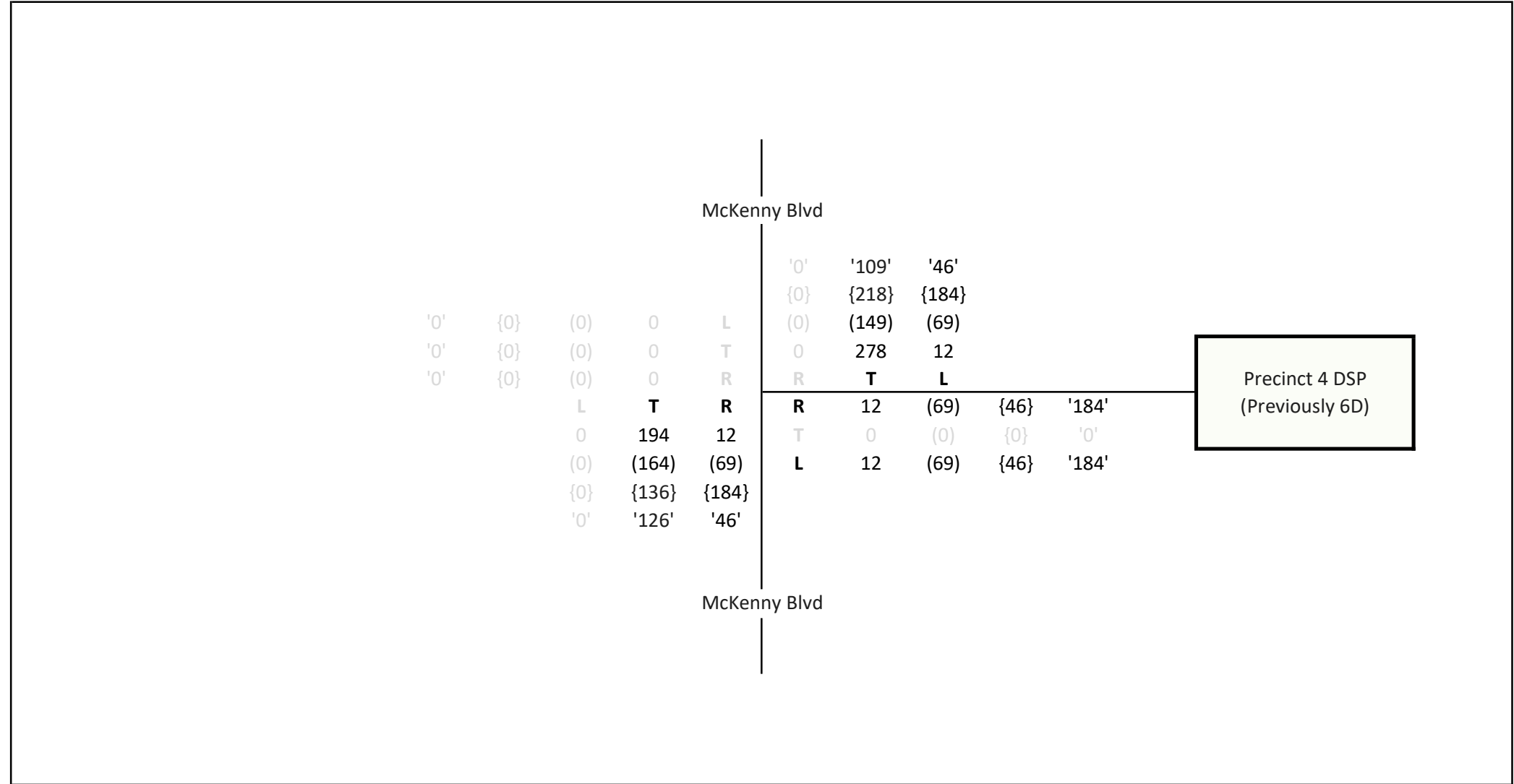


Figure B4
2031 BG + 4 DSP Development
 620.11743
 Yarrabilba Precinct 4 DSP

- R** - Right Turn
- T** - Through
- L** - Left Turn
- 0** - AM Peak Traffic
- (0)** - PM Peak Traffic
- {0}** - Sat Scenario 1 Peak Traffic
- '0'** - Sat Scenario 2 Peak Traffic



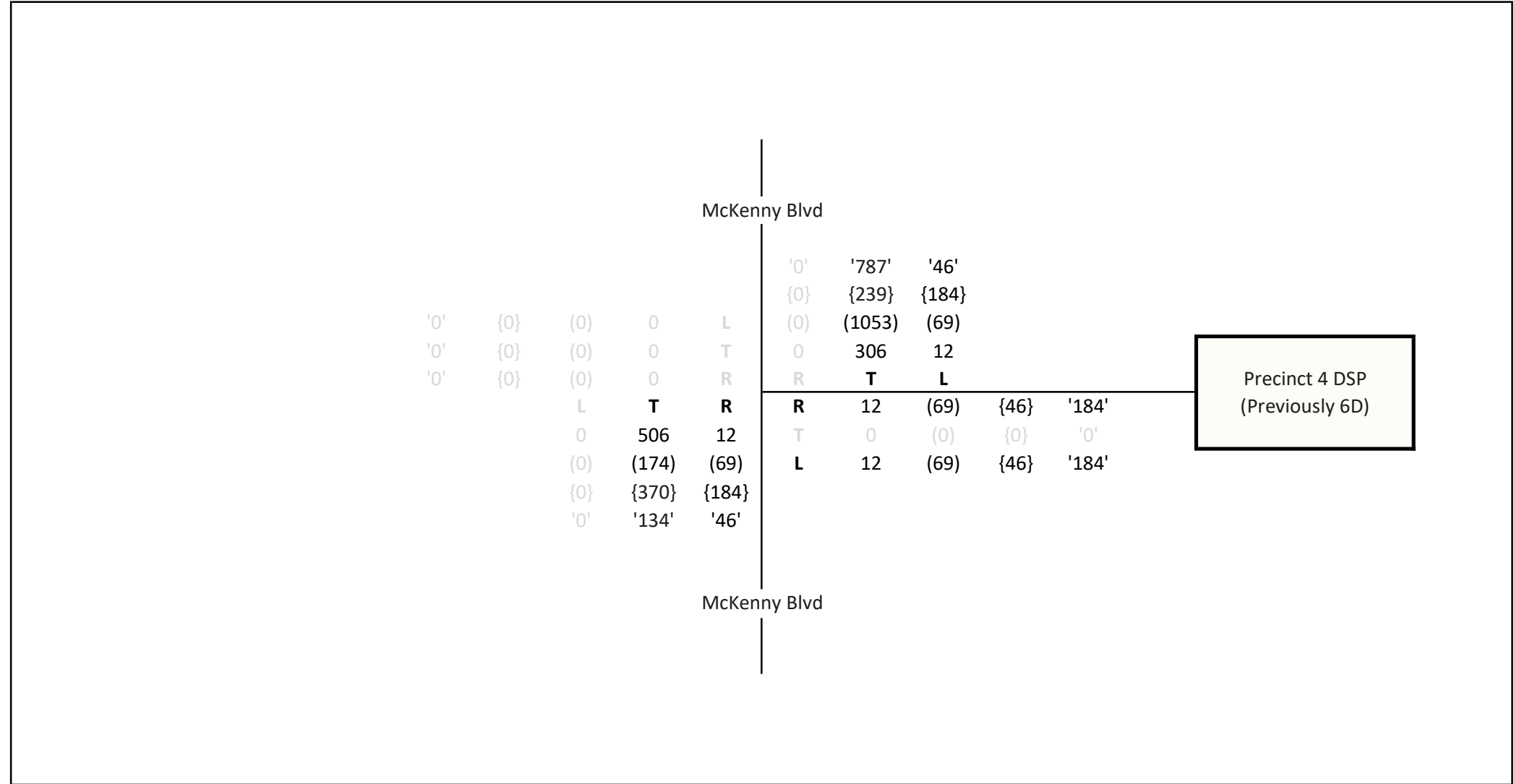
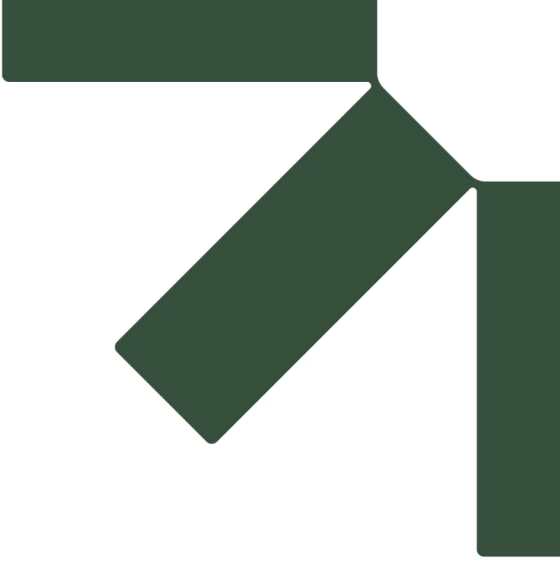


Figure B5
Ultimate BG + 4 DSP Development
 620.11743
 Yarrabilba Precinct 4 DSP

R - Right Turn
T - Through
L - Left Turn
0 - AM Peak Traffic
(0) - PM Peak Traffic
{0} - Sat Scenario 1 Peak Traffic
'0' - Sat Scenario 2 Peak Traffic





Appendix C SIDRA Results

SITE LAYOUT

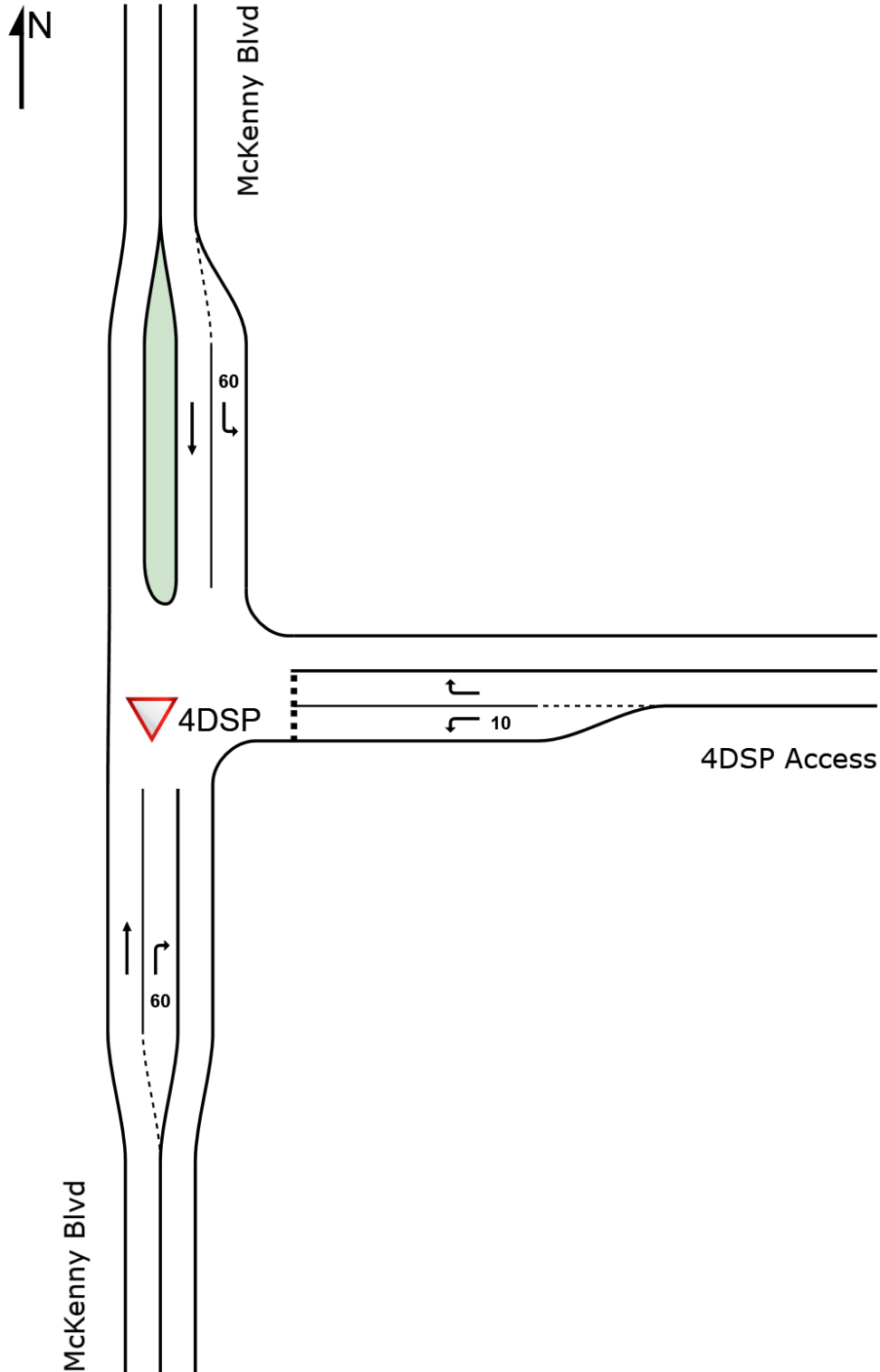
▽ Site: 4DSP [4DSP DS1 2031 AM (Site Folder: General)]

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

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



MOVEMENT SUMMARY

Site: 4DSP [4DSP DS1 2031 AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	204	3.0	204	3.0	0.107	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	12	0.0	12	0.0	0.012	6.7	LOS A	0.0	0.3	0.38	0.58	0.38	51.7
Approach			216	2.8	216	2.8	0.107	0.4	NA	0.0	0.3	0.02	0.03	0.02	59.4
East: 4DSP Access															
4	L2	All MCs	12	0.0	12	0.0	0.012	6.7	LOS A	0.0	0.3	0.35	0.58	0.35	51.8
6	R2	All MCs	12	0.0	12	0.0	0.022	9.8	LOS A	0.1	0.6	0.54	0.69	0.54	49.8
Approach			24	0.0	24	0.0	0.022	8.3	LOS A	0.1	0.6	0.44	0.64	0.44	50.8
North: McKenny Blvd															
7	L2	All MCs	12	0.0	12	0.0	0.007	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
8	T1	All MCs	293	3.0	293	3.0	0.153	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			305	2.9	305	2.9	0.153	0.3	NA	0.0	0.0	0.00	0.02	0.00	59.6
All Vehicles			545	2.7	545	2.7	0.153	0.7	NA	0.1	0.6	0.03	0.05	0.03	59.1

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.

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Project: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 4 (previous P5)\2023 07 21 - SLR - P4H and P4DSP SIDRA\SIDRA\Mckenny Blvd & 4H & 4DSP - 20230821.sip9

MOVEMENT SUMMARY

Site: 4DSP [4DSP DS1 2031 PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	173	3.0	173	3.0	0.090	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	73	0.0	73	0.0	0.063	6.4	LOS A	0.3	1.8	0.33	0.59	0.33	51.8
Approach			246	2.1	246	2.1	0.090	1.9	NA	0.3	1.8	0.10	0.17	0.10	57.3
East: 4DSP Access															
4	L2	All MCs	73	0.0	73	0.0	0.063	6.2	LOS A	0.2	1.6	0.25	0.57	0.25	52.1
6	R2	All MCs	73	0.0	73	0.0	0.117	9.2	LOS A	0.5	3.2	0.52	0.73	0.52	50.3
Approach			145	0.0	145	0.0	0.117	7.7	LOS A	0.5	3.2	0.39	0.65	0.39	51.2
North: McKenny Blvd															
7	L2	All MCs	73	0.0	73	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
8	T1	All MCs	157	3.0	157	3.0	0.082	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			230	2.1	230	2.1	0.082	1.8	NA	0.0	0.0	0.00	0.18	0.00	57.5
All Vehicles			621	1.6	621	1.6	0.117	3.2	NA	0.5	3.2	0.13	0.29	0.13	55.8

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.

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Project: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 4 (previous P5)\2023 07 21 - SLR - P4H and P4DSP SIDRA\SIDRA\Mckenny Blvd & 4H & 4DSP - 20230821.sip9

MOVEMENT SUMMARY

Site: 4DSP [4DSP DS1 2031 Sat AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: McKenny Blvd															
2	T1	All MCs	143	3.0	143	3.0	0.075	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	194	0.0	194	0.0	0.207	7.7	LOS A	0.9	6.1	0.49	0.70	0.49	51.2
Approach			337	1.3	337	1.3	0.207	4.4	NA	0.9	6.1	0.28	0.40	0.28	54.6
East: 4DSP Access															
4	L2	All MCs	48	0.0	48	0.0	0.045	6.5	LOS A	0.2	1.1	0.31	0.58	0.31	51.9
6	R2	All MCs	48	0.0	48	0.0	0.108	12.0	LOS B	0.4	2.8	0.62	0.84	0.62	48.4
Approach			97	0.0	97	0.0	0.108	9.2	LOS A	0.4	2.8	0.46	0.71	0.46	50.1
North: McKenny Blvd															
7	L2	All MCs	194	0.0	194	0.0	0.104	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
8	T1	All MCs	229	3.0	229	3.0	0.120	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			423	1.6	423	1.6	0.120	2.6	NA	0.0	0.0	0.00	0.26	0.00	56.5
All Vehicles			857	1.3	857	1.3	0.207	4.1	NA	0.9	6.1	0.16	0.37	0.16	54.9

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.

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MOVEMENT SUMMARY

Site: 4DSP [4DSP DS1 2031 Sat PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	133	3.0	133	3.0	0.070	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	48	0.0	48	0.0	0.039	6.1	LOS A	0.2	1.1	0.27	0.56	0.27	52.0
Approach			181	2.2	181	2.2	0.070	1.6	NA	0.2	1.1	0.07	0.15	0.07	57.6
East: 4DSP Access															
4	L2	All MCs	194	0.0	194	0.0	0.162	6.0	LOS A	0.6	4.5	0.23	0.56	0.23	52.2
6	R2	All MCs	194	0.0	194	0.0	0.266	8.4	LOS A	1.2	8.1	0.50	0.69	0.50	50.8
Approach			388	0.0	388	0.0	0.266	7.2	LOS A	1.2	8.1	0.37	0.63	0.37	51.5
North: McKenny Blvd															
7	L2	All MCs	48	0.0	48	0.0	0.026	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
8	T1	All MCs	115	3.0	115	3.0	0.060	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
Approach			163	2.1	163	2.1	0.060	1.7	NA	0.0	0.0	0.00	0.17	0.00	57.7
All Vehicles			732	1.0	732	1.0	0.266	4.6	NA	1.2	8.1	0.21	0.41	0.21	54.2

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.

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SITE LAYOUT

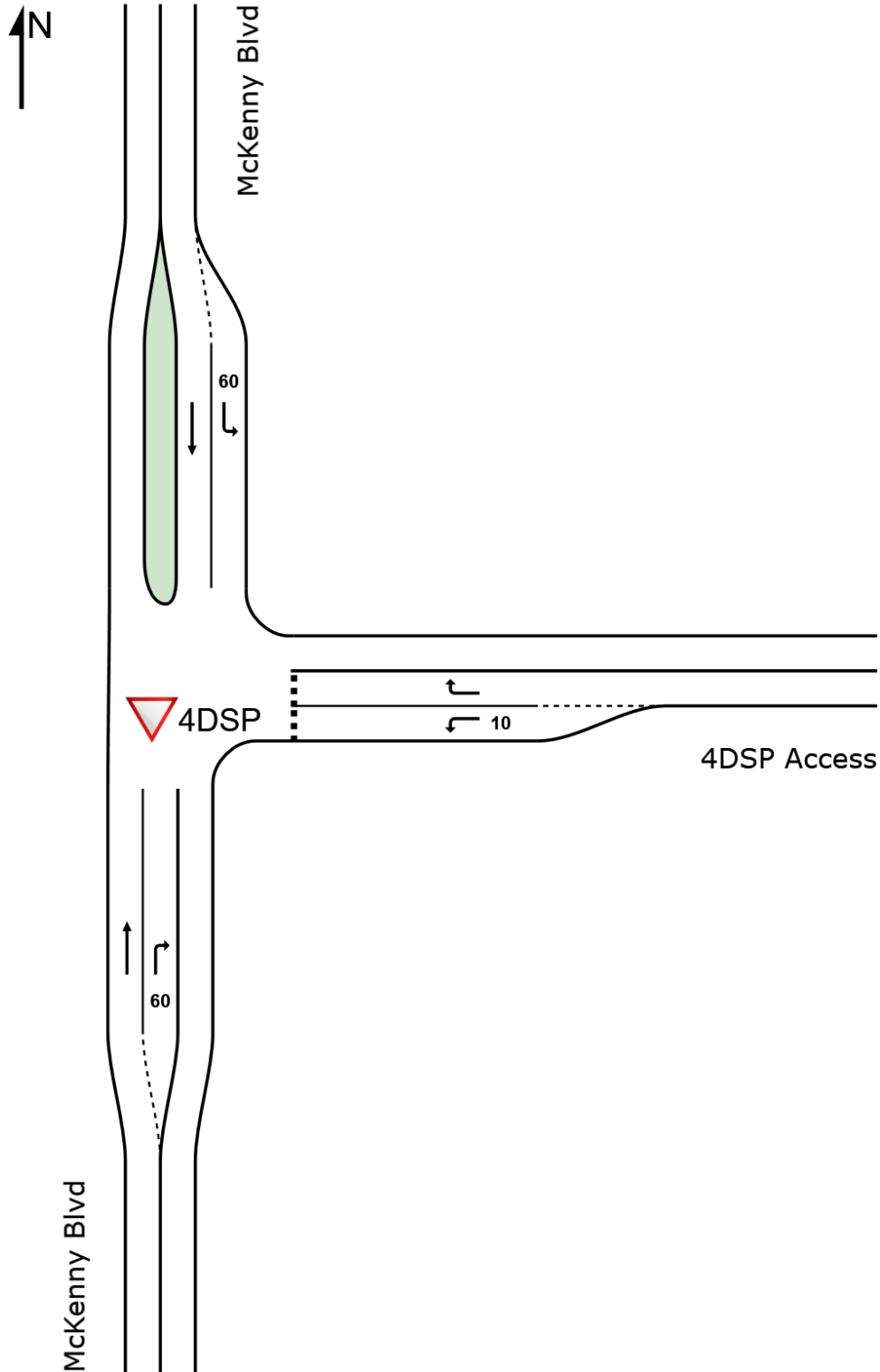
▽ Site: 4DSP [4DSP DS1 Ultimate AM (Site Folder: General)]

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

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



MOVEMENT SUMMARY

Site: 4DSP [4DSP DS1 Ultimate AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	532	3.0	532	3.0	0.278	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
3	R2	All MCs	12	0.0	12	0.0	0.012	6.9	LOS A	0.0	0.3	0.40	0.59	0.40	51.6
Approach			544	2.9	544	2.9	0.278	0.2	NA	0.0	0.3	0.01	0.01	0.01	59.6
East: 4DSP Access															
4	L2	All MCs	12	0.0	12	0.0	0.013	6.9	LOS A	0.0	0.3	0.37	0.59	0.37	51.8
6	R2	All MCs	12	0.0	12	0.0	0.041	16.4	LOS C	0.1	1.0	0.74	0.89	0.74	45.7
Approach			24	0.0	24	0.0	0.041	11.6	LOS B	0.1	1.0	0.56	0.74	0.56	48.6
North: McKenny Blvd															
7	L2	All MCs	12	0.0	12	0.0	0.007	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
8	T1	All MCs	322	3.0	322	3.0	0.168	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			334	2.9	334	2.9	0.168	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.6
All Vehicles			903	2.8	903	2.8	0.278	0.5	NA	0.1	1.0	0.02	0.04	0.02	59.3

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.

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MOVEMENT SUMMARY

Site: 4DSP [4DSP DS1 Ultimate PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	183	3.0	183	3.0	0.096	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	73	0.0	73	0.0	0.314	23.5	LOS C	1.1	7.7	0.88	0.99	1.03	41.9
Approach			256	2.1	256	2.1	0.314	6.7	NA	1.1	7.7	0.25	0.28	0.29	53.4
East: 4DSP Access															
4	L2	All MCs	73	0.0	73	0.0	0.328	23.4	LOS C	1.1	7.5	0.88	0.99	1.04	42.0
6	R2	All MCs	73	0.0	73	0.0	1.024	191.5	LOS F	6.9	48.3	1.00	1.45	2.99	14.3
Approach			145	0.0	145	0.0	1.024	107.5	LOS F	6.9	48.3	0.94	1.22	2.02	21.4
North: McKenny Blvd															
7	L2	All MCs	73	0.0	73	0.0	0.039	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
8	T1	All MCs	1109	3.0	1109	3.0	0.580	0.3	LOS A	0.0	0.0	0.00	0.00	0.00	59.4
Approach			1182	2.8	1182	2.8	0.580	0.6	NA	0.0	0.0	0.00	0.04	0.00	59.0
All Vehicles			1583	2.4	1583	2.4	1.024	11.4	NA	6.9	48.3	0.13	0.18	0.23	50.0

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.

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MOVEMENT SUMMARY

Site: 4DSP [4DSP DS1 Ultimate Sat AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: McKenny Blvd															
2	T1	All MCs	389	3.0	389	3.0	0.204	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	194	0.0	194	0.0	0.213	7.9	LOS A	0.9	6.3	0.51	0.71	0.51	51.0
Approach			583	2.0	583	2.0	0.213	2.7	NA	0.9	6.3	0.17	0.24	0.17	56.6
East: 4DSP Access															
4	L2	All MCs	48	0.0	48	0.0	0.047	6.6	LOS A	0.2	1.1	0.33	0.59	0.33	51.9
6	R2	All MCs	48	0.0	48	0.0	0.171	17.7	LOS C	0.6	4.1	0.78	0.90	0.78	45.0
Approach			97	0.0	97	0.0	0.171	12.1	LOS B	0.6	4.1	0.55	0.75	0.55	48.2
North: McKenny Blvd															
7	L2	All MCs	194	0.0	194	0.0	0.104	5.6	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
8	T1	All MCs	251	3.0	251	3.0	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			445	1.7	445	1.7	0.131	2.4	NA	0.0	0.0	0.00	0.25	0.00	56.6
All Vehicles			1125	1.7	1125	1.7	0.213	3.4	NA	0.9	6.3	0.14	0.29	0.14	55.8

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.

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MOVEMENT SUMMARY

Site: 4DSP [4DSP DS1 Ultimate Sat PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	141	3.0	141	3.0	0.074	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	48	0.0	48	0.0	0.107	12.4	LOS B	0.4	2.6	0.71	0.88	0.71	48.0
Approach			189	2.2	189	2.2	0.107	3.2	NA	0.4	2.6	0.18	0.23	0.18	56.4
East: 4DSP Access															
4	L2	All MCs	194	0.0	194	0.0	0.440	15.1	LOS C	1.9	13.3	0.78	0.99	1.09	46.5
6	R2	All MCs	194	0.0	194	0.0	1.026	113.2	LOS F	13.3	93.4	1.00	1.94	4.75	20.7
Approach			388	0.0	388	0.0	1.026	64.2	LOS F	13.3	93.4	0.89	1.47	2.92	28.6
North: McKenny Blvd															
7	L2	All MCs	48	0.0	48	0.0	0.026	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
8	T1	All MCs	828	3.0	828	3.0	0.433	0.2	LOS A	0.0	0.0	0.00	0.00	0.00	59.7
Approach			877	2.8	877	2.8	0.433	0.5	NA	0.0	0.0	0.00	0.03	0.00	59.3
All Vehicles			1454	2.0	1454	2.0	1.026	17.8	NA	13.3	93.4	0.26	0.44	0.80	45.9

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.

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Project: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 4 (previous P5)\2023 07 21 - SLR - P4H and P4DSP SIDRA\SIDRA\Mckenny Blvd & 4H & 4DSP - 20230821.sip9

SITE LAYOUT

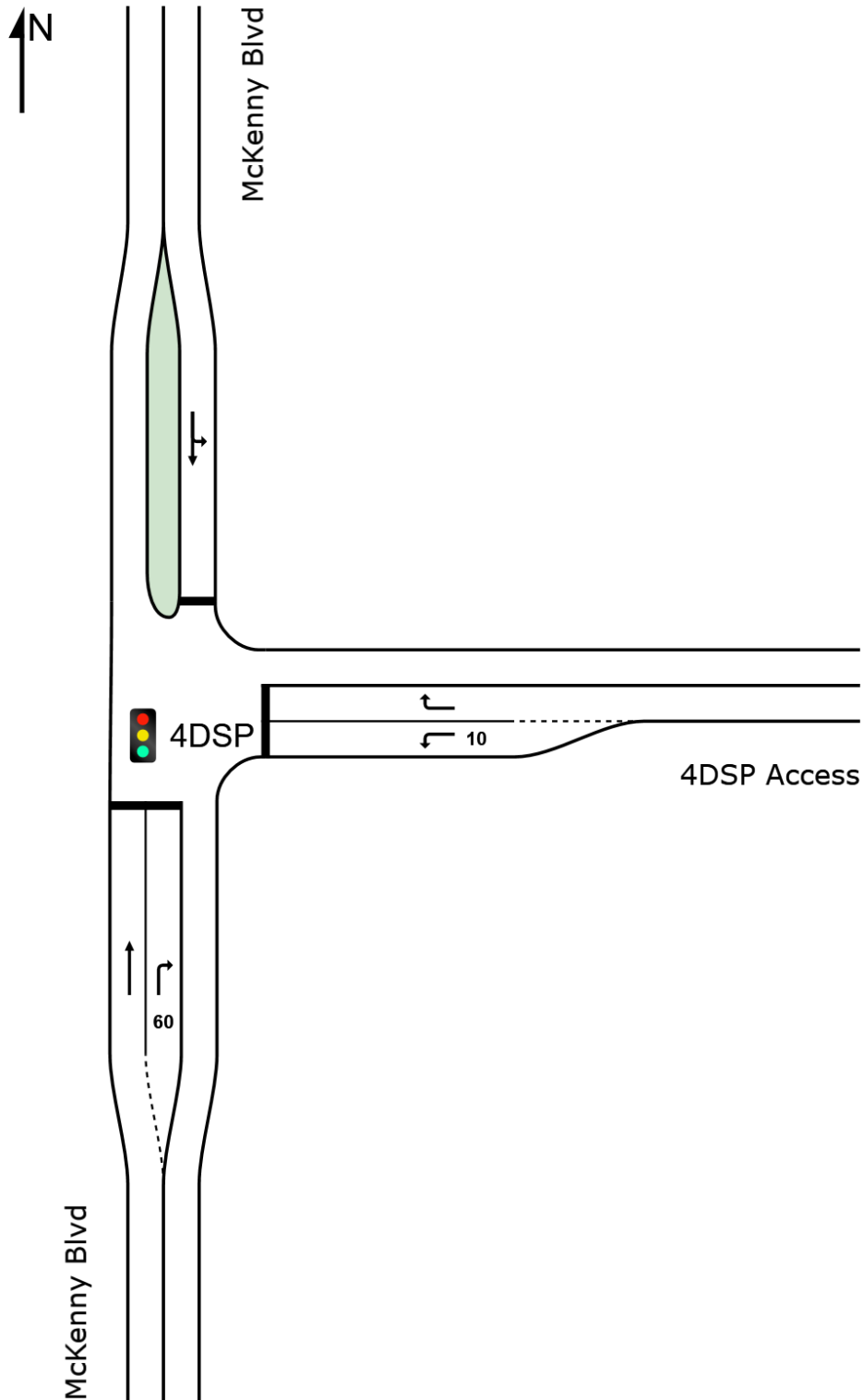
 **Site: 4DSP [4DSP DS2 Ultimate AM (Site Folder: General)]**

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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



MOVEMENT SUMMARY

 Site: 4DSP [4DSP DS2 Ultimate AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	532	3.0	532	3.0	0.506	6.2	LOS A	6.6	47.7	0.67	0.58	0.67	54.5
3	R2	All MCs	12	0.0	12	0.0	* 0.025	14.4	LOS B	0.2	1.1	0.78	0.65	0.78	46.7
Approach			544	2.9	544	2.9	0.506	6.4	LOS A	6.6	47.7	0.67	0.59	0.67	54.3
East: 4DSP Access															
4	L2	All MCs	12	0.0	12	0.0	0.043	22.1	LOS C	0.2	1.5	0.88	0.67	0.88	42.7
6	R2	All MCs	12	0.0	12	0.0	* 0.043	22.0	LOS C	0.2	1.5	0.88	0.67	0.88	42.6
Approach			24	0.0	24	0.0	0.043	22.1	LOS C	0.2	1.5	0.88	0.67	0.88	42.6
North: McKenny Blvd															
7	L2	All MCs	12	0.0	12	0.0	0.700	22.3	LOS C	6.6	47.6	0.96	0.87	1.10	45.3
8	T1	All MCs	322	3.0	322	3.0	* 0.700	16.8	LOS B	6.6	47.6	0.96	0.87	1.10	46.9
Approach			334	2.9	334	2.9	0.700	17.0	LOS B	6.6	47.6	0.96	0.87	1.10	46.8
All Vehicles			903	2.8	903	2.8	0.700	10.7	LOS B	6.6	47.7	0.78	0.69	0.83	50.9

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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.

* Critical Movement (Signal Timing)

MOVEMENT SUMMARY

 Site: 4DSP [4DSP DS2 Ultimate PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV] veh/h	%	[Total HV] veh/h	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	183	3.0	183	3.0	0.117	1.9	LOS A	1.7	12.5	0.21	0.18	0.21	58.2
3	R2	All MCs	73	0.0	73	0.0	* 0.325	35.9	LOS D	3.0	21.1	0.88	0.79	0.88	36.7
Approach			256	2.1	256	2.1	0.325	11.5	LOS B	3.0	21.1	0.40	0.35	0.40	49.9
East: 4DSP Access															
4	L2	All MCs	73	0.0	73	0.0	0.838	77.3	LOS E	4.0	28.1	1.00	0.93	1.44	28.6
6	R2	All MCs	73	0.0	73	0.0	* 0.838	77.3	LOS E	4.0	28.1	1.00	0.93	1.44	28.5
Approach			145	0.0	145	0.0	0.838	77.3	LOS E	4.0	28.1	1.00	0.93	1.44	28.5
North: McKenny Blvd															
7	L2	All MCs	73	0.0	73	0.0	0.884	24.1	LOS C	50.5	361.7	0.86	0.84	0.92	44.3
8	T1	All MCs	1109	3.0	1109	3.0	* 0.884	18.6	LOS B	50.5	361.7	0.86	0.84	0.92	45.8
Approach			1182	2.8	1182	2.8	0.884	18.9	LOS B	50.5	361.7	0.86	0.84	0.92	45.7
All Vehicles			1583	2.4	1583	2.4	0.884	23.1	LOS C	50.5	361.7	0.80	0.77	0.89	43.9

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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.

* Critical Movement (Signal Timing)

MOVEMENT SUMMARY

 Site: 4DSP [4DSP DS2 Ultimate Sat AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: McKenny Blvd															
2	T1	All MCs	389	3.0	389	3.0	0.318	4.4	LOS A	4.3	31.0	0.48	0.42	0.48	55.9
3	R2	All MCs	194	0.0	194	0.0	* 0.378	15.9	LOS B	3.2	22.7	0.81	0.78	0.81	45.8
Approach			583	2.0	583	2.0	0.378	8.2	LOS A	4.3	31.0	0.59	0.54	0.59	52.1
East: 4DSP Access															
4	L2	All MCs	48	0.0	48	0.0	0.217	28.6	LOS C	1.1	8.0	0.94	0.73	0.94	39.7
6	R2	All MCs	48	0.0	48	0.0	* 0.217	28.5	LOS C	1.1	8.0	0.94	0.73	0.94	39.6
Approach			97	0.0	97	0.0	0.217	28.5	LOS C	1.1	8.0	0.94	0.73	0.94	39.6
North: McKenny Blvd															
7	L2	All MCs	194	0.0	194	0.0	0.590	18.6	LOS B	8.8	62.3	0.84	0.77	0.84	46.2
8	T1	All MCs	251	3.0	251	3.0	* 0.590	13.0	LOS B	8.8	62.3	0.84	0.77	0.84	47.8
Approach			445	1.7	445	1.7	0.590	15.4	LOS B	8.8	62.3	0.84	0.77	0.84	47.1
All Vehicles			1125	1.7	1125	1.7	0.590	12.8	LOS B	8.8	62.3	0.72	0.64	0.72	48.7

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.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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.

* Critical Movement (Signal Timing)

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Project: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 4 (previous P5)\2023 07 21 - SLR - P4H and P4DSP SIDRA\SIDRA\Mckenny Blvd & 4H & 4DSP - 20230821.sip9

MOVEMENT SUMMARY

 Site: 4DSP [4DSP DS2 Ultimate Sat PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: McKenny Blvd															
2	T1	All MCs	141	3.0	141	3.0	0.112	6.1	LOS A	2.3	16.2	0.39	0.32	0.39	54.5
3	R2	All MCs	48	0.0	48	0.0	* 0.197	36.4	LOS D	1.8	12.7	0.89	0.75	0.89	36.5
Approach			189	2.2	189	2.2	0.197	13.8	LOS B	2.3	16.2	0.52	0.43	0.52	48.4
East: 4DSP Access															
4	L2	All MCs	194	0.0	194	0.0	0.837	74.1	LOS E	9.5	66.3	1.00	0.96	1.32	31.8
6	R2	All MCs	194	0.0	194	0.0	* 0.837	74.1	LOS E	9.5	66.3	1.00	0.95	1.32	31.7
Approach			388	0.0	388	0.0	0.837	74.1	LOS E	9.5	66.3	1.00	0.96	1.32	31.7
North: McKenny Blvd															
7	L2	All MCs	48	0.0	48	0.0	0.879	34.4	LOS C	39.7	284.6	0.96	0.98	1.09	39.4
8	T1	All MCs	828	3.0	828	3.0	* 0.879	28.9	LOS C	39.7	284.6	0.96	0.98	1.09	40.5
Approach			877	2.8	877	2.8	0.879	29.2	LOS C	39.7	284.6	0.96	0.98	1.09	40.5
All Vehicles			1454	2.0	1454	2.0	0.879	39.2	LOS D	39.7	284.6	0.91	0.90	1.07	38.5

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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.

* Critical Movement (Signal Timing)

PHASING SUMMARY

 **Site: 4DSP [4DSP DS2 Ultimate AM (Site Folder: General)]**

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Convert Function Default

Input Phase Sequence: A, B, C

Output Phase Sequence: A, B, C

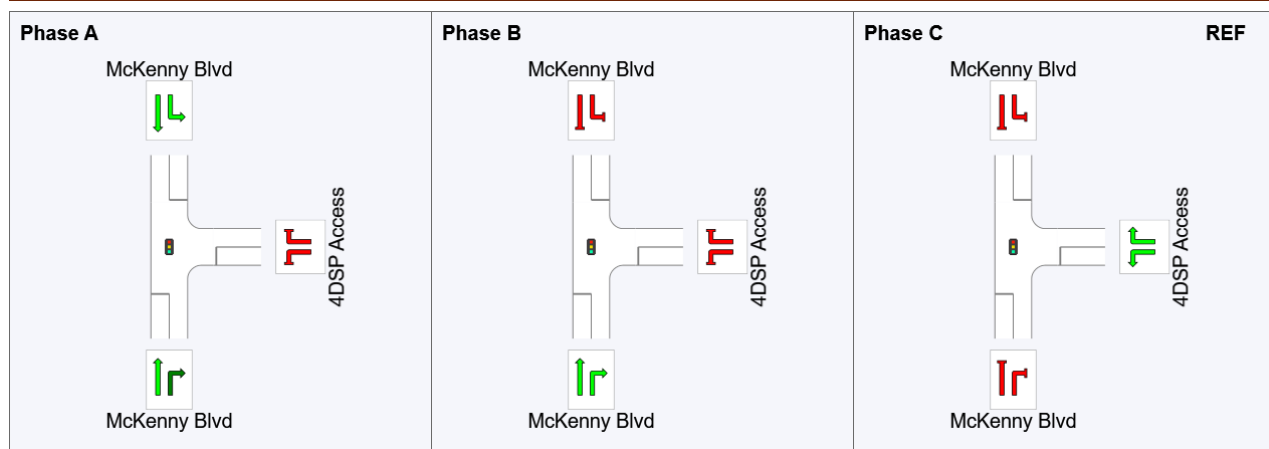
Reference Phase: Phase C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	12	28	0
Green Time (sec)	10	6	6
Phase Time (sec)	16	12	12
Phase Split	40%	30%	30%
Phase Frequency (%)	100.0	100.0	100.0

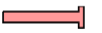
See the Timing Analysis report for more detailed information including input values of Yellow Time and All-Red Time, and information on any adjustments to Intergreen Time, Phase Time and Green Time values in cases of Pedestrian Actuation, Minor Phase Actuation and Phase Frequency values (user-specified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

Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

 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

PHASING SUMMARY

 Site: 4DSP [4DSP DS4 Ultimate AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Convert Function Default

Input Phase Sequence: A, B, C

Output Phase Sequence: A, B, C

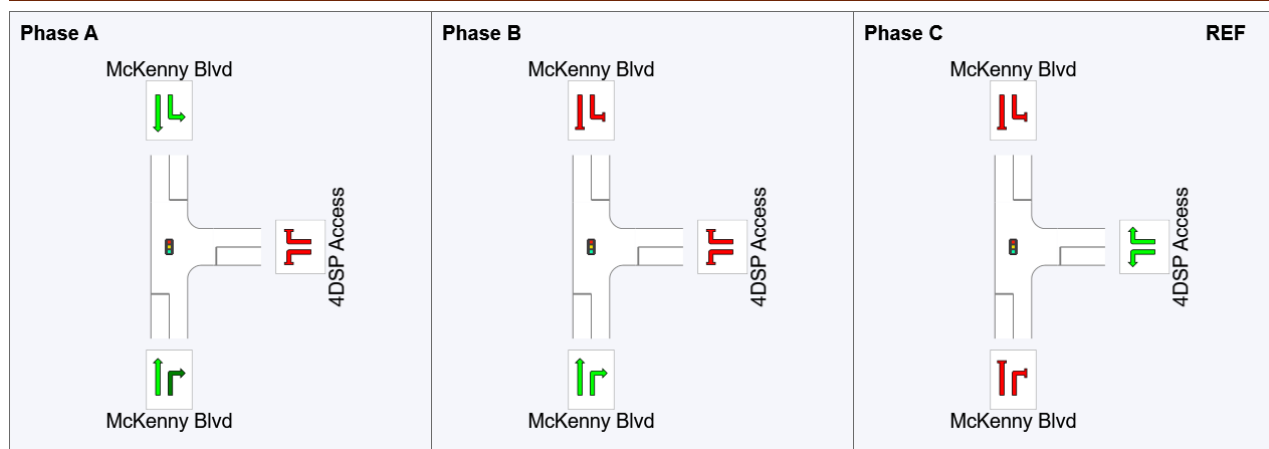
Reference Phase: Phase C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	12	28	0
Green Time (sec)	10	6	6
Phase Time (sec)	16	12	12
Phase Split	40%	30%	30%
Phase Frequency (%)	100.0	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

 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

PHASING SUMMARY

 Site: 4DSP [4DSP DS2 Ultimate PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 100 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Convert Function Default

Input Phase Sequence: A, B, C

Output Phase Sequence: A, B, C

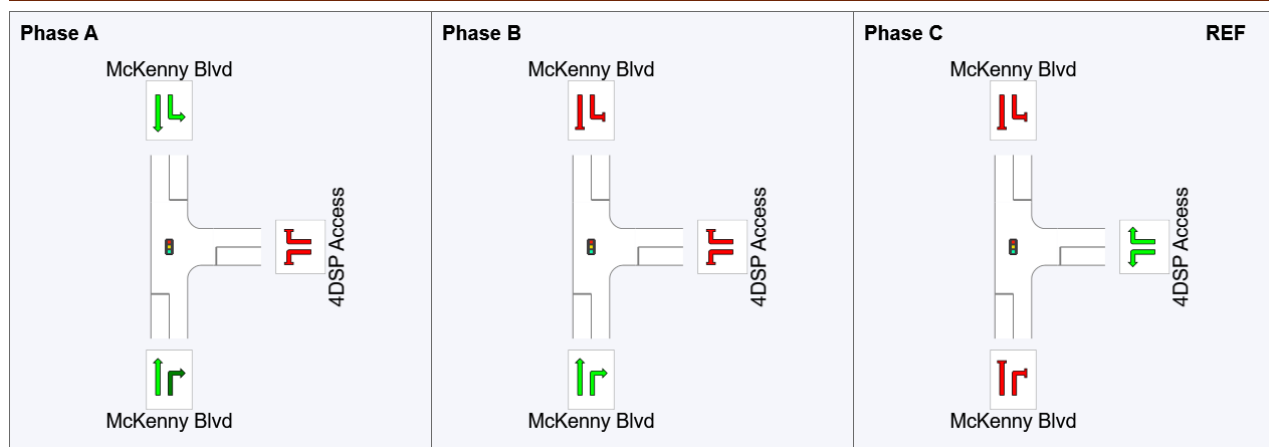
Reference Phase: Phase C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	12	88	0
Green Time (sec)	70	6	6
Phase Time (sec)	76	12	12
Phase Split	76%	12%	12%
Phase Frequency (%)	100.0	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

	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

PHASING SUMMARY

 Site: 4DSP [4DSP DS2 Ultimate Sat AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Convert Function Default

Input Phase Sequence: A, B, C

Output Phase Sequence: A, B, C

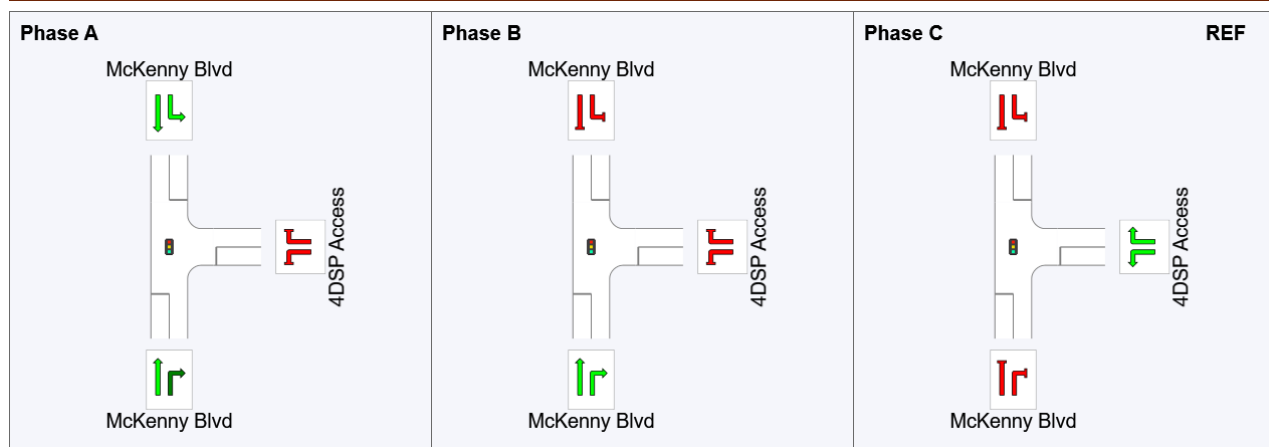
Reference Phase: Phase C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	12	38	0
Green Time (sec)	20	6	6
Phase Time (sec)	26	12	12
Phase Split	52%	24%	24%
Phase Frequency (%)	100.0	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

 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

SITE LAYOUT

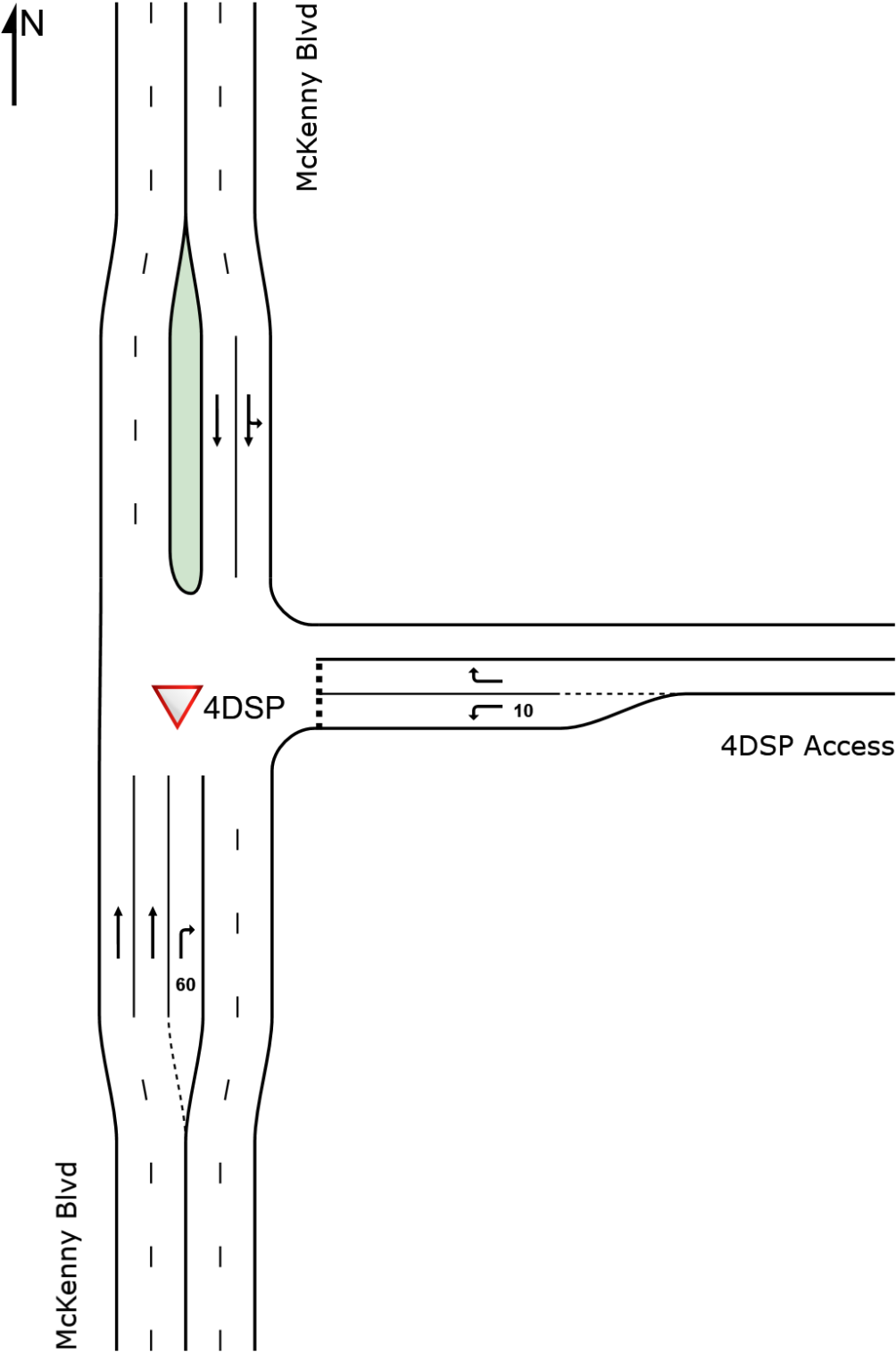
▼ Site: 4DSP [4DSP DS3 Ultimate AM (Site Folder: General)]

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

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



MOVEMENT SUMMARY

Site: 4DSP [4DSP DS3 Ultimate AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	532	3.0	532	3.0	0.139	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
3	R2	All MCs	12	0.0	12	0.0	0.012	6.9	LOS A	0.0	0.3	0.39	0.58	0.39	51.7
Approach			544	2.9	544	2.9	0.139	0.2	NA	0.0	0.3	0.01	0.01	0.01	59.7
East: 4DSP Access															
4	L2	All MCs	12	0.0	12	0.0	0.011	6.1	LOS A	0.0	0.3	0.24	0.54	0.24	52.2
6	R2	All MCs	12	0.0	12	0.0	0.048	17.8	LOS C	0.2	1.1	0.74	0.89	0.74	44.9
Approach			24	0.0	24	0.0	0.048	12.0	LOS B	0.2	1.1	0.49	0.72	0.49	48.3
North: McKenny Blvd															
7	L2	All MCs	12	0.0	12	0.0	0.087	5.6	LOS A	0.0	0.0	0.00	0.04	0.00	57.1
8	T1	All MCs	322	3.0	322	3.0	0.087	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	59.8
Approach			334	2.9	334	2.9	0.087	0.2	NA	0.0	0.0	0.00	0.02	0.00	59.7
All Vehicles			903	2.8	903	2.8	0.139	0.5	NA	0.2	1.1	0.02	0.04	0.02	59.3

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.

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Project: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 4 (previous P5)\2023 07 21 - SLR - P4H and P4DSP SIDRA\SIDRA\Mckenny Blvd & 4H & 4DSP - 20230821.sip9

MOVEMENT SUMMARY

Site: 4DSP [4DSP DS3 Ultimate PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	183	3.0	183	3.0	0.048	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	73	0.0	73	0.0	0.225	17.3	LOS C	0.8	5.7	0.82	0.94	0.88	45.2
Approach			256	2.1	256	2.1	0.225	4.9	NA	0.8	5.7	0.23	0.27	0.25	54.9
East: 4DSP Access															
4	L2	All MCs	73	0.0	73	0.0	0.096	8.4	LOS A	0.3	2.4	0.50	0.74	0.50	50.8
6	R2	All MCs	73	0.0	73	0.0	0.957	149.6	LOS F	5.5	38.5	1.00	1.36	2.58	17.2
Approach			145	0.0	145	0.0	0.957	79.0	LOS F	5.5	38.5	0.75	1.05	1.54	25.7
North: McKenny Blvd															
7	L2	All MCs	73	0.0	73	0.0	0.309	5.6	LOS A	0.0	0.0	0.00	0.07	0.00	56.7
8	T1	All MCs	1109	3.0	1109	3.0	0.309	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.5
Approach			1182	2.8	1182	2.8	0.309	0.4	NA	0.0	0.0	0.00	0.04	0.00	59.3
All Vehicles			1583	2.4	1583	2.4	0.957	8.4	NA	5.5	38.5	0.11	0.17	0.18	52.3

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.

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MOVEMENT SUMMARY

Site: 4DSP [4DSP DS3 Ultimate Sat AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	389	3.0	389	3.0	0.102	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	194	0.0	194	0.0	0.212	7.9	LOS A	0.9	6.3	0.51	0.71	0.51	51.1
Approach			583	2.0	583	2.0	0.212	2.6	NA	0.9	6.3	0.17	0.23	0.17	56.7
East: 4DSP Access															
4	L2	All MCs	48	0.0	48	0.0	0.037	5.6	LOS A	0.1	0.9	0.09	0.55	0.09	52.6
6	R2	All MCs	48	0.0	48	0.0	0.210	20.8	LOS C	0.7	5.0	0.80	0.93	0.85	43.3
Approach			97	0.0	97	0.0	0.210	13.2	LOS B	0.7	5.0	0.44	0.74	0.47	47.5
North: McKenny Blvd															
7	L2	All MCs	194	0.0	194	0.0	0.118	5.6	LOS A	0.0	0.0	0.00	0.51	0.00	53.3
8	T1	All MCs	251	3.0	251	3.0	0.118	0.0	LOS A	0.0	0.0	0.00	0.05	0.00	59.5
Approach			445	1.7	445	1.7	0.118	2.4	NA	0.0	0.0	0.00	0.25	0.00	56.6
All Vehicles			1125	1.7	1125	1.7	0.212	3.5	NA	0.9	6.3	0.13	0.29	0.13	55.7

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.

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MOVEMENT SUMMARY

Site: 4DSP [4DSP DS3 Ultimate Sat PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
South: McKenny Blvd															
2	T1	All MCs	141	3.0	141	3.0	0.037	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
3	R2	All MCs	48	0.0	48	0.0	0.093	11.3	LOS B	0.3	2.3	0.66	0.86	0.66	48.8
Approach			189	2.2	189	2.2	0.093	2.9	NA	0.3	2.3	0.17	0.22	0.17	56.7
East: 4DSP Access															
4	L2	All MCs	194	0.0	194	0.0	0.218	7.7	LOS A	0.8	5.9	0.47	0.70	0.47	51.3
6	R2	All MCs	194	0.0	194	0.0	1.121	175.4	LOS F	20.2	141.6	1.00	2.35	6.39	15.3
Approach			388	0.0	388	0.0	1.121	91.5	LOS F	20.2	141.6	0.73	1.52	3.43	23.6
North: McKenny Blvd															
7	L2	All MCs	48	0.0	48	0.0	0.230	5.6	LOS A	0.0	0.0	0.00	0.07	0.00	56.8
8	T1	All MCs	828	3.0	828	3.0	0.230	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	59.6
Approach			877	2.8	877	2.8	0.230	0.4	NA	0.0	0.0	0.00	0.03	0.00	59.4
All Vehicles			1454	2.0	1454	2.0	1.121	25.0	NA	20.2	141.6	0.22	0.45	0.94	42.1

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.

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SITE LAYOUT

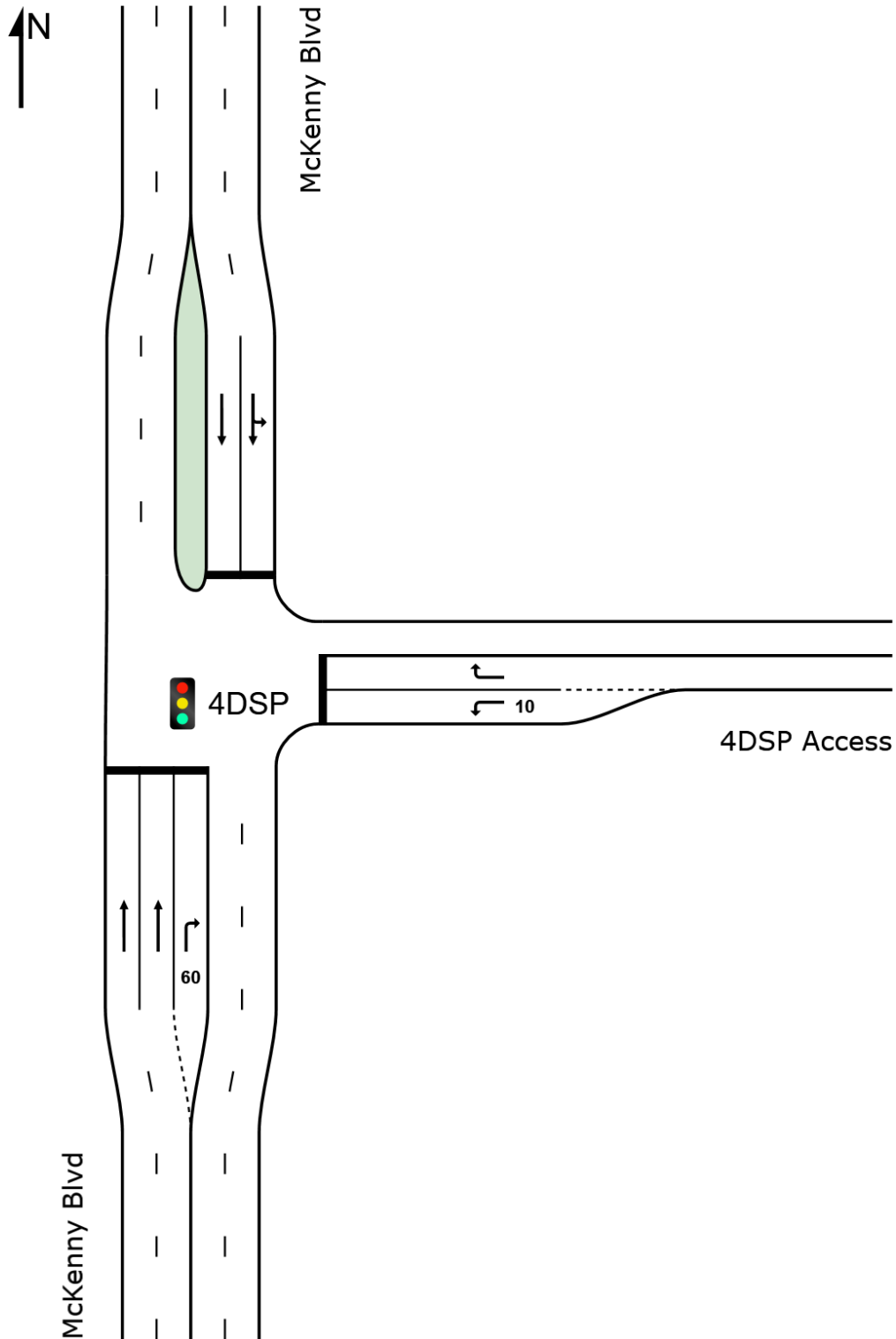
 **Site: 4DSP [4DSP DS4 Ultimate AM (Site Folder: General)]**

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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



MOVEMENT SUMMARY

 Site: 4DSP [4DSP DS4 Ultimate AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				
			veh/h		veh/h		v/c	sec							km/h
South: McKenny Blvd															
2	T1	All MCs	532	3.0	532	3.0	0.253	5.2	LOS A	2.8	19.9	0.55	0.47	0.55	55.3
3	R2	All MCs	12	0.0	12	0.0	* 0.021	11.8	LOS B	0.1	0.9	0.67	0.65	0.67	48.4
Approach			544	2.9	544	2.9	0.253	5.3	LOS A	2.8	19.9	0.56	0.47	0.56	55.1
East: 4DSP Access															
4	L2	All MCs	12	0.0	12	0.0	0.043	22.1	LOS C	0.2	1.5	0.88	0.67	0.88	42.7
6	R2	All MCs	12	0.0	12	0.0	* 0.043	22.1	LOS C	0.2	1.5	0.88	0.67	0.88	42.7
Approach			24	0.0	24	0.0	0.043	22.1	LOS C	0.2	1.5	0.88	0.67	0.88	42.7
North: McKenny Blvd															
7	L2	All MCs	12	0.0	12	0.0	0.350	19.5	LOS B	2.8	20.3	0.86	0.70	0.86	46.9
8	T1	All MCs	322	3.0	322	3.0	* 0.350	14.0	LOS B	2.8	20.3	0.86	0.70	0.86	48.6
Approach			334	2.9	334	2.9	0.350	14.2	LOS B	2.8	20.3	0.86	0.70	0.86	48.6
All Vehicles			903	2.8	903	2.8	0.350	9.0	LOS A	2.8	20.3	0.68	0.56	0.68	52.1

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.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
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.

* Critical Movement (Signal Timing)

MOVEMENT SUMMARY

 Site: 4DSP [4DSP DS4 Ultimate PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh.]	[Dist]				
			veh/h	%	veh/h	%	v/c	sec		veh	m				km/h
South: McKenny Blvd															
2	T1	All MCs	183	3.0	183	3.0	0.075	3.6	LOS A	0.8	6.0	0.40	0.32	0.40	56.6
3	R2	All MCs	73	0.0	73	0.0	* 0.180	18.1	LOS B	1.3	9.0	0.82	0.73	0.82	44.7
Approach			256	2.1	256	2.1	0.180	7.7	LOS A	1.3	9.0	0.52	0.43	0.52	52.6
East: 4DSP Access															
4	L2	All MCs	73	0.0	73	0.0	0.326	29.0	LOS C	1.8	12.3	0.95	0.75	0.95	39.5
6	R2	All MCs	73	0.0	73	0.0	* 0.326	29.0	LOS C	1.8	12.3	0.95	0.75	0.95	39.5
Approach			145	0.0	145	0.0	0.326	29.0	LOS C	1.8	12.3	0.95	0.75	0.95	39.5
North: McKenny Blvd															
7	L2	All MCs	73	0.0	73	0.0	0.774	22.7	LOS C	14.2	101.5	0.93	0.90	1.06	44.9
8	T1	All MCs	1109	3.0	1109	3.0	* 0.774	17.1	LOS B	14.2	102.1	0.93	0.90	1.06	46.6
Approach			1182	2.8	1182	2.8	0.774	17.5	LOS B	14.2	102.1	0.93	0.90	1.06	46.5
All Vehicles			1583	2.4	1583	2.4	0.774	16.9	LOS B	14.2	102.1	0.87	0.81	0.96	46.6

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.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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.

* Critical Movement (Signal Timing)

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MOVEMENT SUMMARY

 Site: 4DSP [4DSP DS4 Ultimate Sat AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh.	Dist]				
			veh/h		veh/h		v/c	sec		veh	m				km/h
South: McKenny Blvd															
2	T1	All MCs	389	3.0	389	3.0	0.185	4.9	LOS A	1.9	13.9	0.53	0.44	0.53	55.5
3	R2	All MCs	194	0.0	194	0.0	* 0.357	14.2	LOS B	2.6	18.1	0.82	0.77	0.82	46.9
Approach			583	2.0	583	2.0	0.357	8.0	LOS A	2.6	18.1	0.63	0.55	0.63	52.3
East: 4DSP Access															
4	L2	All MCs	48	0.0	48	0.0	0.174	22.7	LOS C	0.9	6.2	0.91	0.72	0.91	42.4
6	R2	All MCs	48	0.0	48	0.0	* 0.174	22.7	LOS C	0.9	6.2	0.91	0.72	0.91	42.4
Approach			97	0.0	97	0.0	0.174	22.7	LOS C	0.9	6.2	0.91	0.72	0.91	42.4
North: McKenny Blvd															
7	L2	All MCs	194	0.0	194	0.0	0.472	20.1	LOS C	3.9	27.2	0.90	0.79	0.90	44.0
8	T1	All MCs	251	3.0	251	3.0	* 0.472	14.5	LOS B	4.0	28.5	0.90	0.74	0.90	48.1
Approach			445	1.7	445	1.7	0.472	17.0	LOS B	4.0	28.5	0.90	0.76	0.90	46.2
All Vehicles			1125	1.7	1125	1.7	0.472	12.8	LOS B	4.0	28.5	0.76	0.65	0.76	48.8

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.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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.

* Critical Movement (Signal Timing)

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MOVEMENT SUMMARY

 Site: 4DSP [4DSP DS4 Ultimate Sat PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%				[Veh. veh	Dist] m				km/h
South: McKenny Blvd															
2	T1	All MCs	141	3.0	141	3.0	0.066	5.4	LOS A	0.8	5.6	0.48	0.37	0.48	55.1
3	R2	All MCs	48	0.0	48	0.0	* 0.118	18.4	LOS B	0.9	6.0	0.81	0.71	0.81	44.6
Approach			189	2.2	189	2.2	0.118	8.7	LOS A	0.9	6.0	0.56	0.46	0.56	51.9
East: 4DSP Access															
4	L2	All MCs	194	0.0	194	0.0	0.749	37.4	LOS D	5.1	35.7	0.99	0.92	1.27	39.2
6	R2	All MCs	194	0.0	194	0.0	* 0.749	37.4	LOS D	5.1	35.7	0.99	0.92	1.27	39.2
Approach			388	0.0	388	0.0	0.749	37.4	LOS D	5.1	35.7	0.99	0.92	1.27	39.2
North: McKenny Blvd															
7	L2	All MCs	48	0.0	48	0.0	0.717	23.7	LOS C	10.3	73.8	0.94	0.87	1.03	44.4
8	T1	All MCs	828	3.0	828	3.0	* 0.717	18.1	LOS B	10.3	74.2	0.94	0.86	1.03	46.1
Approach			877	2.8	877	2.8	0.717	18.4	LOS B	10.3	74.2	0.94	0.86	1.03	46.0
All Vehicles			1454	2.0	1454	2.0	0.749	22.2	LOS C	10.3	74.2	0.90	0.83	1.03	44.6

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.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

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.

* Critical Movement (Signal Timing)

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Organisation: SLR CONSULTING AUSTRALIA | Licence: NETWORK / 1PC | Processed: Thursday, 24 August 2023 10:32:02 AM

Project: \\au.slr.local\Corporate\Projects-SLR\620-BNE\620-BNE\620.11743 Yarrabilba Master Plan Development\00 Data\Precinct 4 (previous P5)\2023 07 21 - SLR - P4H and P4DSP SIDRA\SIDRA\Mckenny Blvd & 4H & 4DSP - 20230821.sip9

PHASING SUMMARY

 Site: 4DSP [4DSP DS2 Ultimate Sat PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 90 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Convert Function Default

Input Phase Sequence: A, B, C

Output Phase Sequence: A, B, C

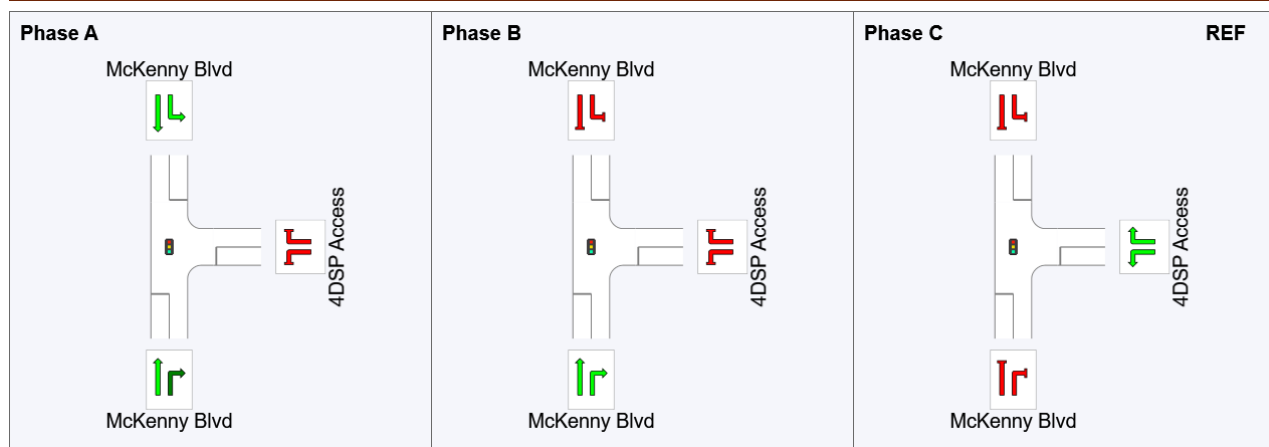
Reference Phase: Phase C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	25	78	0
Green Time (sec)	47	6	19
Phase Time (sec)	53	12	25
Phase Split	59%	13%	28%
Phase Frequency (%)	100.0	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

	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

PHASING SUMMARY

 Site: 4DSP [4DSP DS4 Ultimate PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Convert Function Default

Input Phase Sequence: A, B, C

Output Phase Sequence: A, B, C

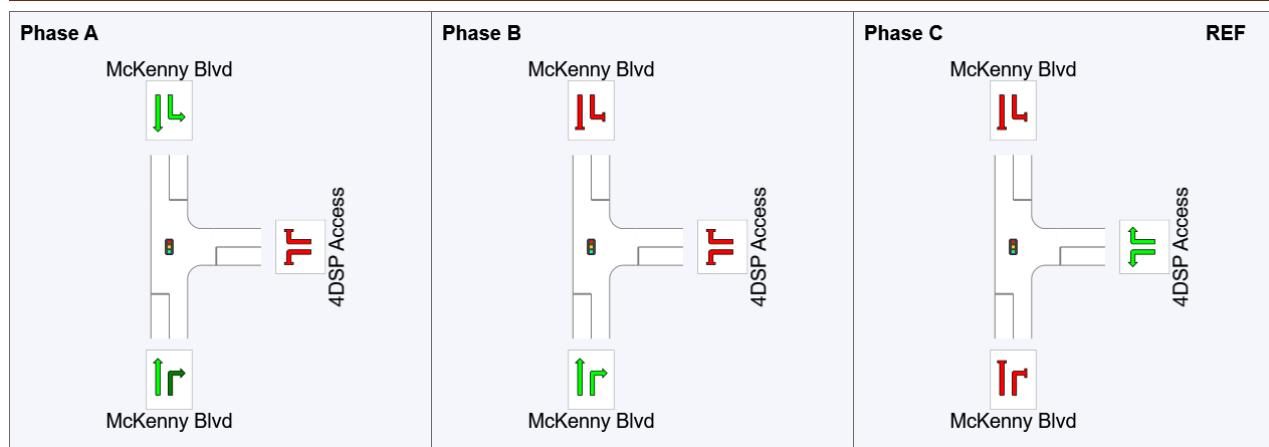
Reference Phase: Phase C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	12	38	0
Green Time (sec)	20	6	6
Phase Time (sec)	26	12	12
Phase Split	52%	24%	24%
Phase Frequency (%)	100.0	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

	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

PHASING SUMMARY

 Site: 4DSP [4DSP DS4 Ultimate Sat AM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 40 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Convert Function Default

Input Phase Sequence: A, B, C

Output Phase Sequence: A, B, C

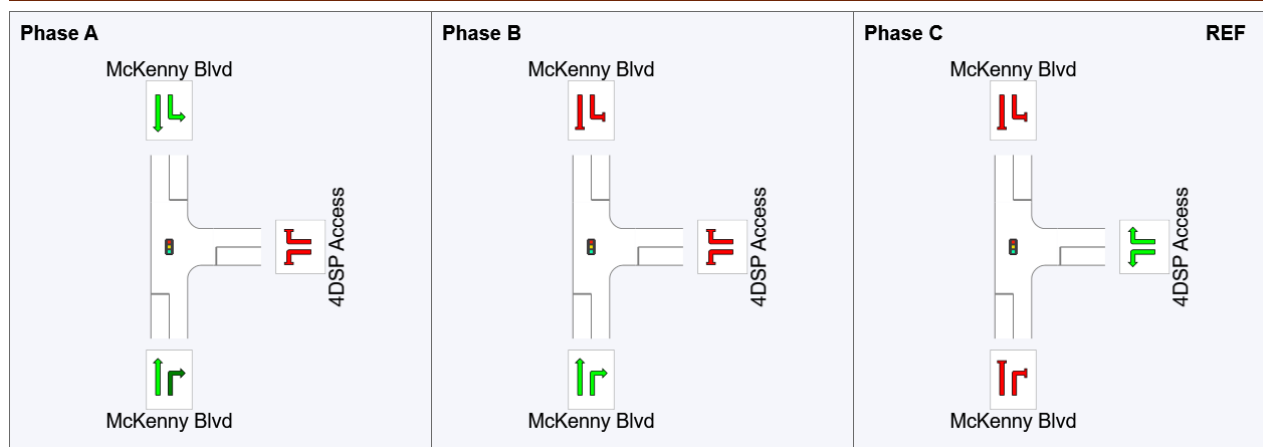
Reference Phase: Phase C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	12	28	0
Green Time (sec)	10	6	6
Phase Time (sec)	16	12	12
Phase Split	40%	30%	30%
Phase Frequency (%)	100.0	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

 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

PHASING SUMMARY

 Site: 4DSP [4DSP DS4 Ultimate Sat PM (Site Folder: General)]

Output produced by SIDRA INTERSECTION Version: 9.1.3.210

McKenny Blvd / 4DSP Access

Site Category: (None)

Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 50 seconds (Site Practical Cycle Time)

Timings based on settings in the Site Phasing & Timing dialog

Phase Times determined by the program

Phase Sequence: Convert Function Default

Input Phase Sequence: A, B, C

Output Phase Sequence: A, B, C

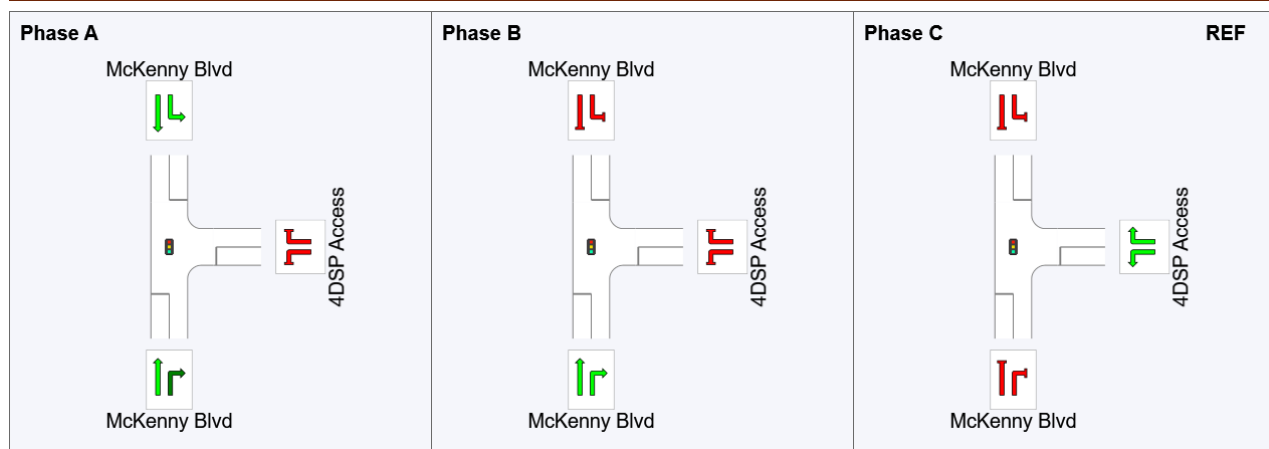
Reference Phase: Phase C

Phase Timing Summary

Phase	A	B	C
Phase Change Time (sec)	16	38	0
Green Time (sec)	16	6	10
Phase Time (sec)	22	12	16
Phase Split	44%	24%	32%
Phase Frequency (%)	100.0	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%.

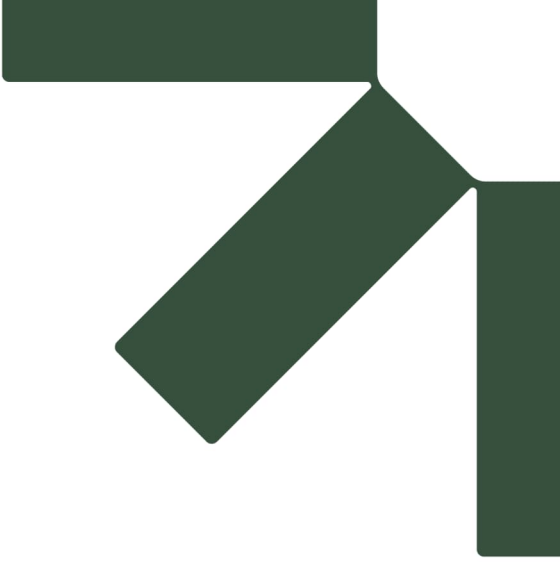
Output Phase Sequence



REF: Reference Phase

VAR: Variable Phase

 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

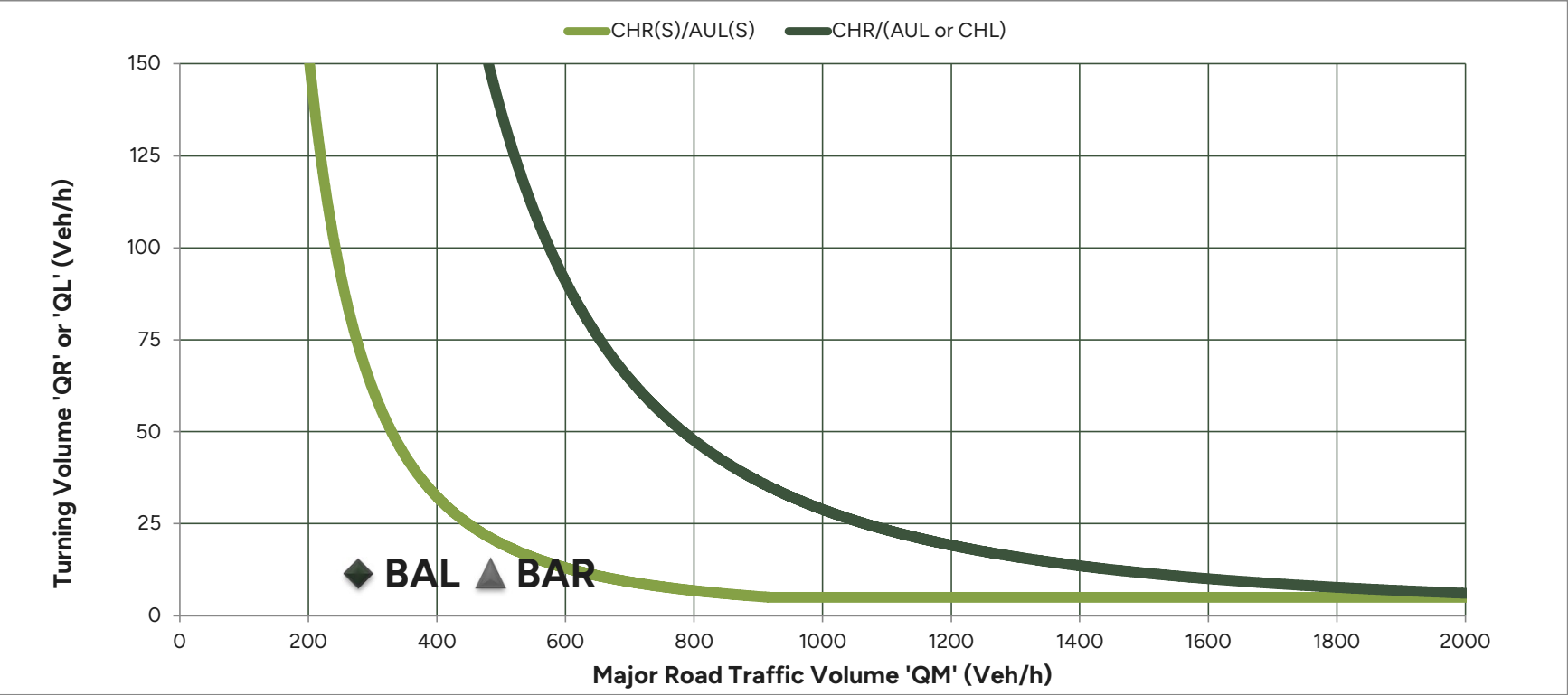
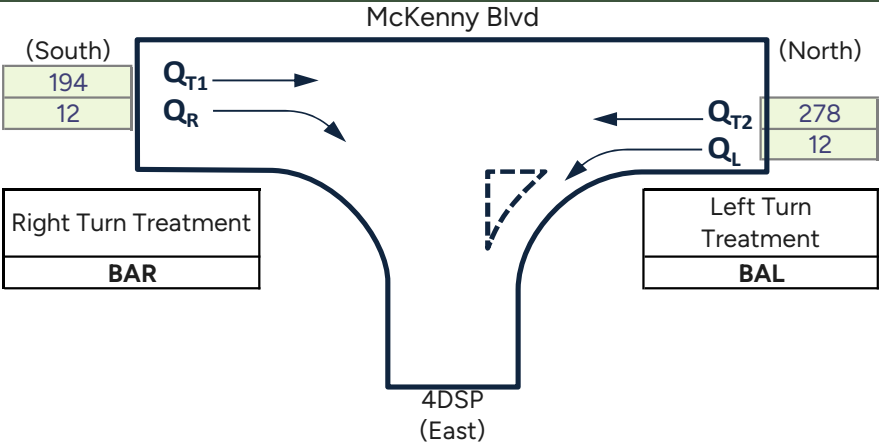


Appendix D Turn Warrant Assessment

Assessment Year	2031
Peak Period	AM
Scenario	BG+D

Design Domain	Normal Design Domain
Design Year	10
Lane Count	2L2W
Design Speed	<70km/h
Splitter Island?	No

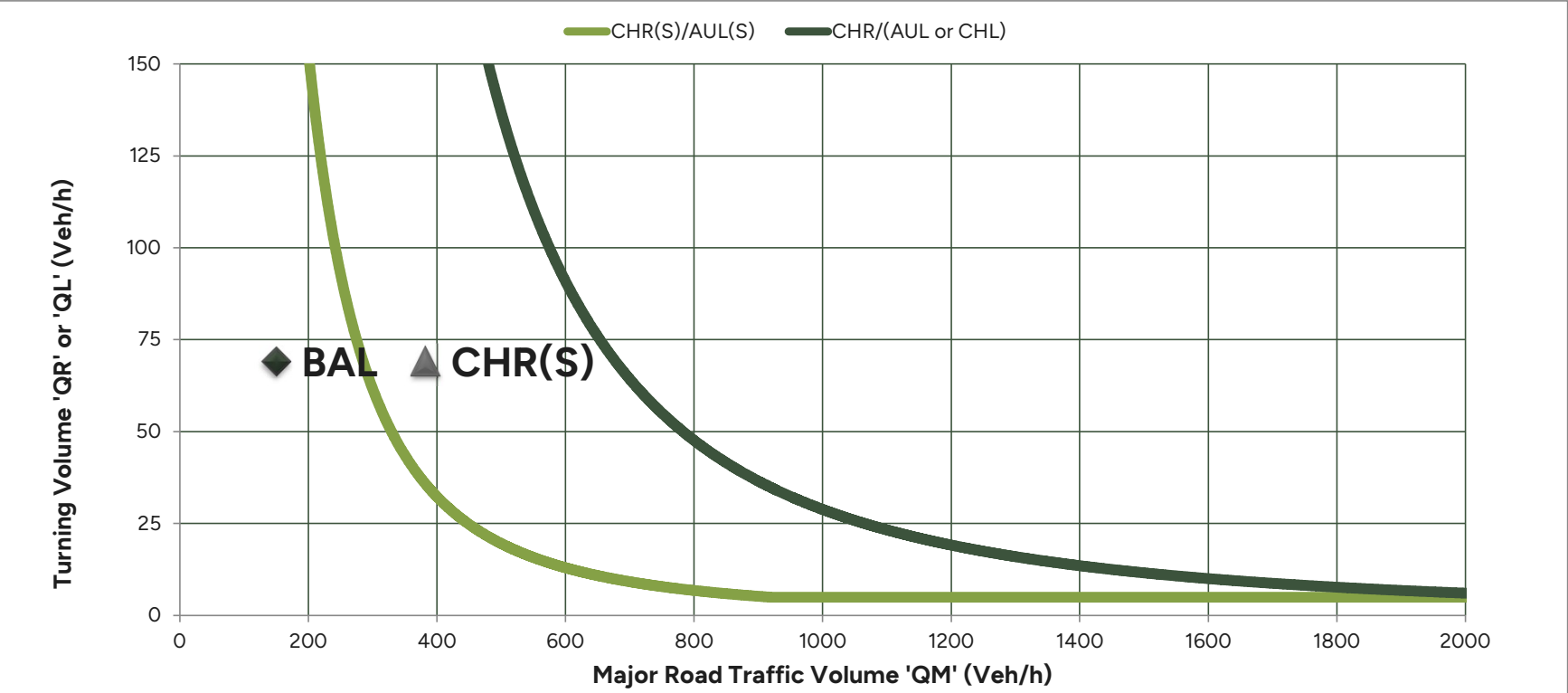
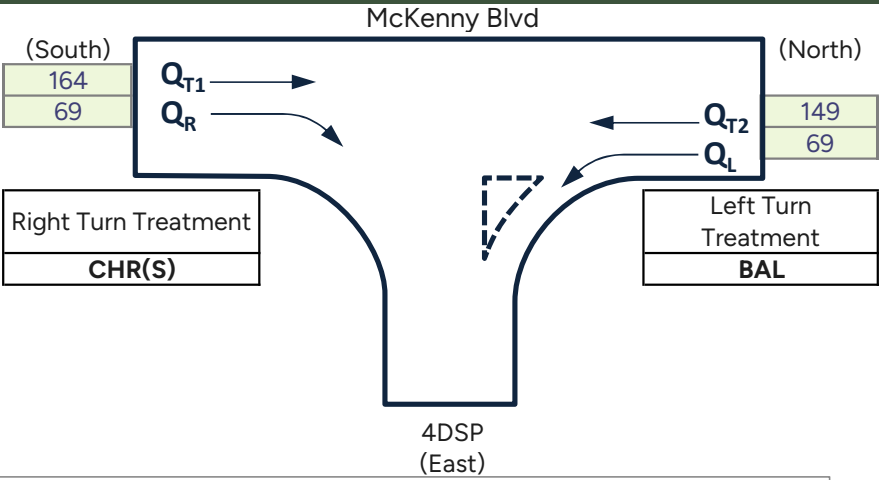
Q _M	Q _R /Q _L	
483	11.51	Right
278	11.51	Left



Assessment Year	2031
Peak Period	PM
Scenario	BG+D

Design Domain	Normal Design Domain
Design Year	10
Lane Count	2L2W
Design Speed	<70km/h
Splitter Island?	No

Q _M	Q _R /Q _L	
383	69.05	Right
149	69.05	Left



Reflects changes made in RPDM (Ed2: Vol3) Supplement to Austroads Part 4A (DTMR - August, 2014)

Turn Warrant Assessment

McKenny Blvd / 4DSP

620.11890.00300

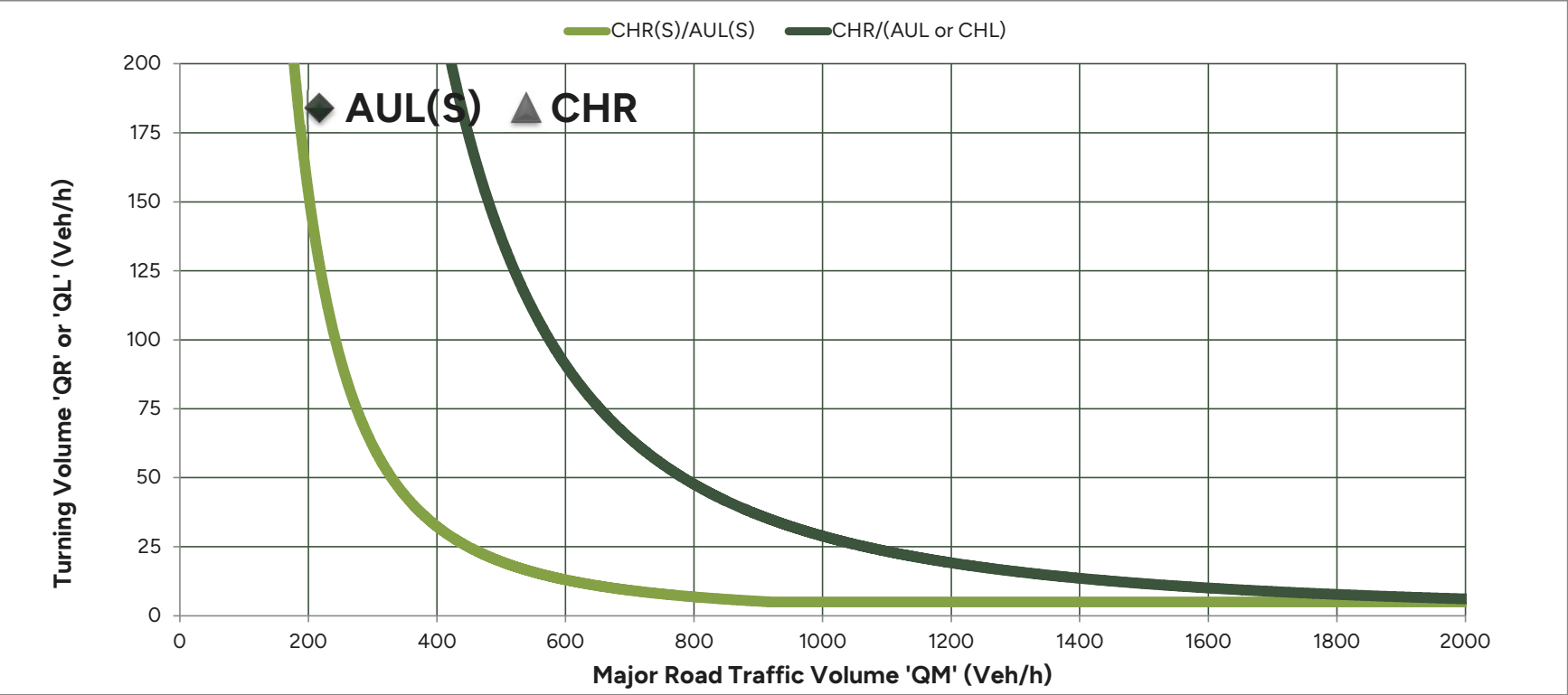
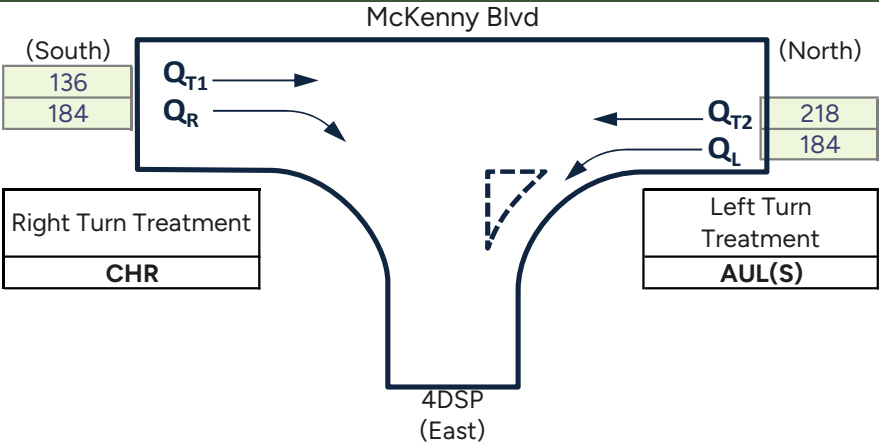
31 July 23



Assessment Year	2031
Peak Period	Sat S1
Scenario	BG+D

Design Domain	Normal Design Domain
Design Year	10
Lane Count	2L2W
Design Speed	<70km/h
Splitter Island?	No

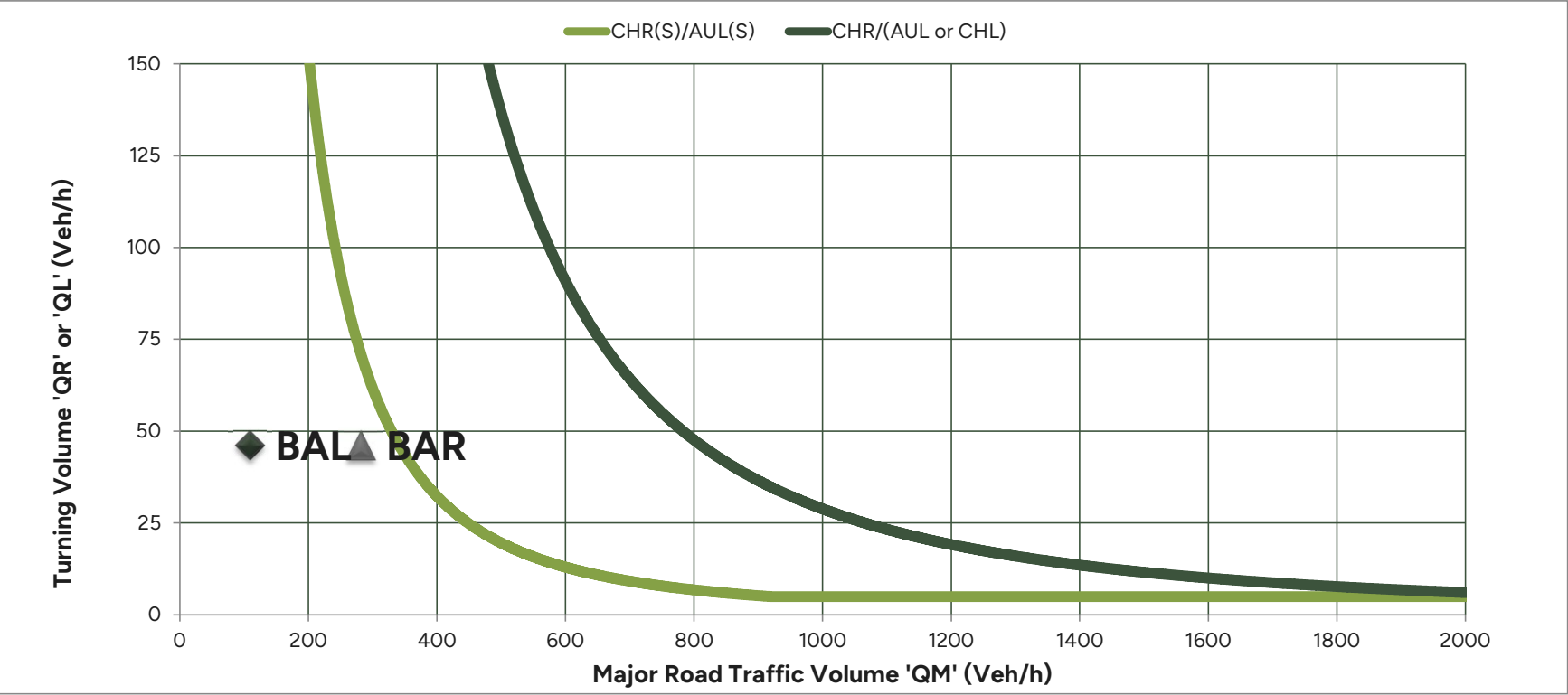
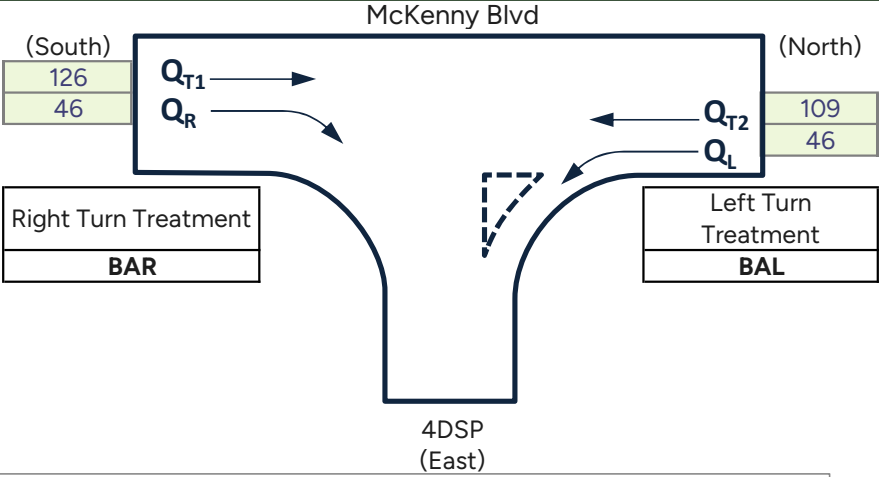
Q _M	Q _R /Q _L	
538	184.13	Right
218	184.13	Left



Assessment Year	2031
Peak Period	Sat S2
Scenario	BG+D

Design Domain	Normal Design Domain
Design Year	10
Lane Count	2L2W
Design Speed	<70km/h
Splitter Island?	No

Q _M	Q _R /Q _L	
281	46.0	Right
109	46.0	Left



Reflects changes made in RPDM (Ed2: Vol3) Supplement to Austroads Part 4A (DTMR - August, 2014)

Turn Warrant Assessment

McKenny Blvd / 4DSP

620.11890.00300

31 July 23

