

Appendix I

Post development traffic volumes



Total
117

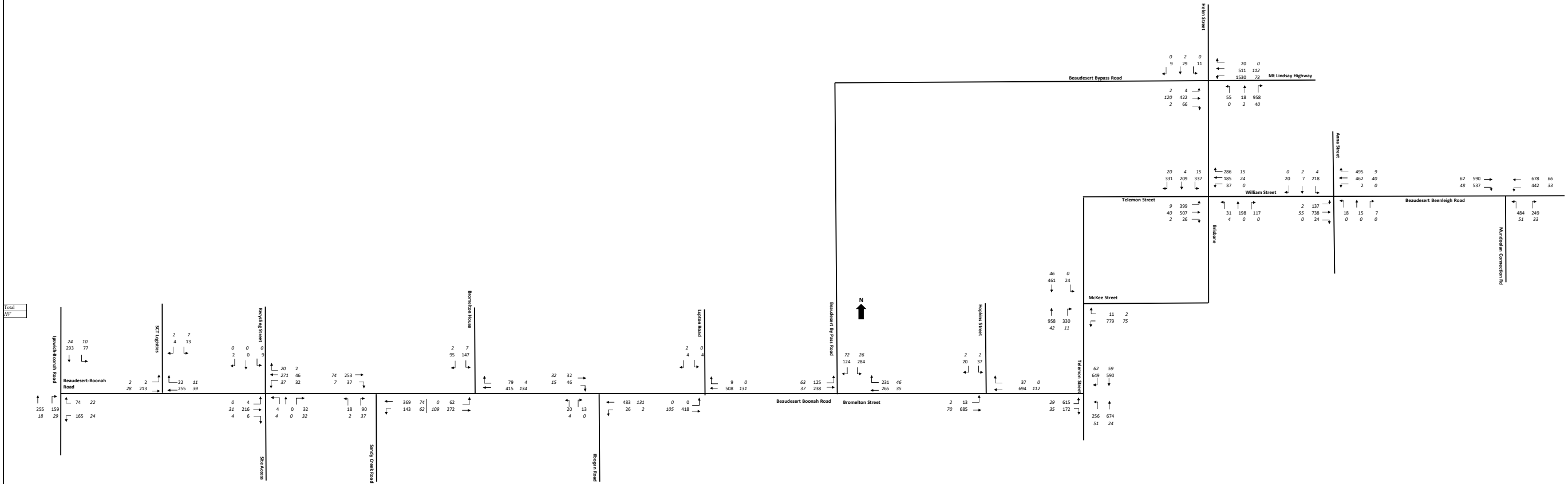


Figure A1: AM (7:45-8:45 AM) Post Development 2042 Maximum Traffic Volumes

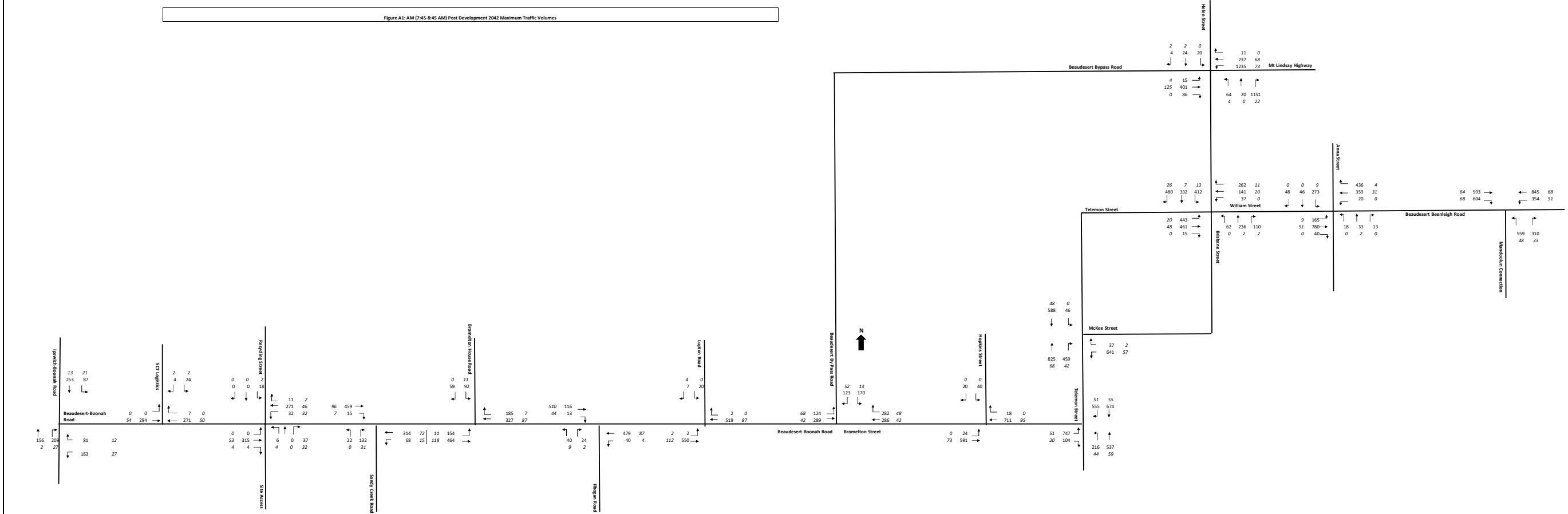


Figure A2: PM (2:45-3:45 PM) Post Development 2042 Maximum Traffic Volumes

Appendix J

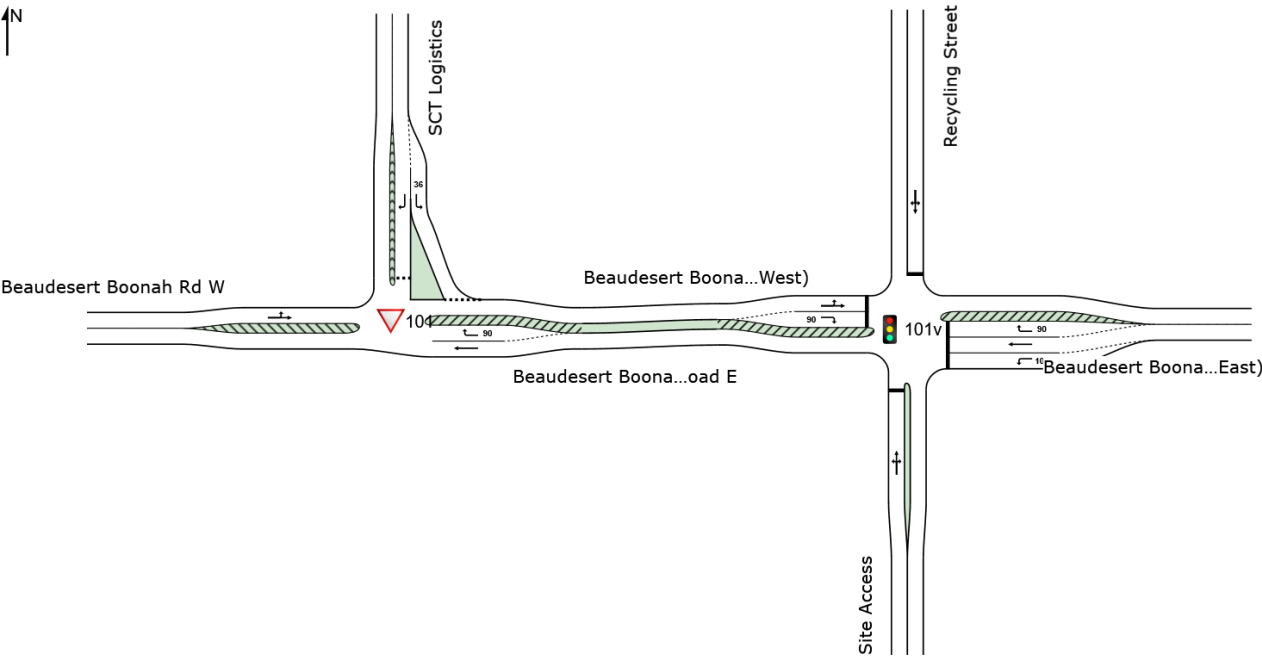
SIDRA summaries

NETWORK LAYOUT

■ Network: N101 [2032 Post Development AM (Network Folder: 2032 Post Development)]

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	Beaudesert Boonah Road / Recycling Street / Site Access
101	NA	Beaudesert Boonah Road / SCT Logistics

MOVEMENT SUMMARY

Site: 101v [Beaudesert Boonah Road / Recycling Street / Site Access (Site Folder: 2032 Post Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2032 Post Development AM (Network Folder: 2032 Post Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Recycling Street / Site Access
2032 AM Post Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Site Access															
1	L2	All MCs	4	100.0	4	100.0	0.299	37.6	LOS D	1.3	16.5	0.95	0.73	0.95	22.3
2	T1	All MCs	1	0.0	1	0.0	*0.299	33.6	LOS C	1.3	16.5	0.95	0.73	0.95	32.3
3	R2	All MCs	32	100.0	32	100.0	0.299	37.5	LOS D	1.3	16.5	0.95	0.73	0.95	29.6
Approach			37	97.3	37	97.3	0.299	37.4	LOS D	1.3	16.5	0.95	0.73	0.95	29.2
East: Beaudesert Boonah Road (East)															
4	L2	All MCs	37	86.5	37	86.5	0.088	25.8	LOS C	0.8	10.3	0.68	0.73	0.68	41.2
5	T1	All MCs	181	17.3	181	17.3	*0.278	16.8	LOS B	4.4	35.3	0.74	0.61	0.74	52.3
6	R2	All MCs	13	7.7	13	7.7	*0.087	39.3	LOS D	0.4	3.3	0.95	0.68	0.95	35.3
Approach			232	27.9	232	27.9	0.278	19.5	LOS B	4.4	35.3	0.74	0.64	0.74	46.8
North: Recycling Street															
7	L2	All MCs	6	0.0	6	0.0	0.051	38.8	LOS D	0.3	1.9	0.94	0.66	0.94	36.0
8	T1	All MCs	1	0.0	1	0.0	*0.051	33.3	LOS C	0.3	1.9	0.94	0.66	0.94	36.9
9	R2	All MCs	1	0.0	1	0.0	0.051	38.8	LOS D	0.3	1.9	0.94	0.66	0.94	26.9
Approach			8	0.0	8	0.0	0.051	38.1	LOS D	0.3	1.9	0.94	0.66	0.94	35.3
West: Beaudesert Boonah Road (West)															
10	L2	All MCs	3	0.0	3	0.0	0.221	21.9	LOS C	3.5	27.1	0.72	0.59	0.72	41.5
11	T1	All MCs	144	14.1	144	14.1	0.221	16.4	LOS B	3.5	27.1	0.72	0.59	0.72	57.2
12	R2	All MCs	6	66.7	6	66.7	0.056	38.9	LOS D	0.2	2.3	0.94	0.66	0.94	24.8
Approach			153	15.9	153	15.9	0.221	17.4	LOS B	3.5	27.1	0.73	0.60	0.73	54.0
All Vehicles			430	29.2	430	29.2	0.299	20.7	LOS C	4.4	35.3	0.76	0.63	0.76	44.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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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2:01:39 PM

Project: C:\Users\Madison.Taylor\OneDriveCloudTemp\ZFSBV6ZF\BERC V5.1.sip9

MOVEMENT SUMMARY

Site: 101v [Beaudesert Boonah Road / Recycling Street / Site Access (Site Folder: 2032 Post Development PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2032 Post Development PM (Network Folder: 2032 Post Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Recycling Street / Site Access
2032 PM Post Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Site Access															
1	L2	All MCs	7	66.7	7	66.7	0.360	37.6	LOS D	1.7	19.9	0.96	0.74	0.96	22.9
2	T1	All MCs	1	0.0	1	0.0	* 0.360	33.8	LOS C	1.7	19.9	0.96	0.74	0.96	32.9
3	R2	All MCs	41	86.5	41	86.5	0.360	37.6	LOS D	1.7	19.9	0.96	0.74	0.96	29.2
Approach			48	81.8	48	81.8	0.360	37.5	LOS D	1.7	19.9	0.96	0.74	0.96	28.7
East: Beaudesert Boonah Road (East)															
4	L2	All MCs	35	100.0	35	100.0	0.087	26.2	LOS C	0.8	10.4	0.68	0.73	0.68	39.9
5	T1	All MCs	196	17.3	196	17.3	0.301	17.0	LOS B	4.8	38.6	0.75	0.62	0.75	52.0
6	R2	All MCs	8	14.3	8	14.3	* 0.053	39.1	LOS D	0.3	2.0	0.94	0.66	0.94	35.2
Approach			239	29.4	239	29.4	0.301	19.0	LOS B	4.8	38.6	0.74	0.64	0.74	47.2
North: Recycling Street															
7	L2	All MCs	13	8.3	13	8.3	0.101	39.4	LOS D	0.5	3.8	0.95	0.68	0.95	35.5
8	T1	All MCs	1	0.0	1	0.0	* 0.101	33.8	LOS C	0.5	3.8	0.95	0.68	0.95	36.6
9	R2	All MCs	1	0.0	1	0.0	0.101	39.3	LOS D	0.5	3.8	0.95	0.68	0.95	26.6
Approach			15	7.1	15	7.1	0.101	39.0	LOS D	0.5	3.8	0.95	0.68	0.95	35.2
West: Beaudesert Boonah Road (West)															
10	L2	All MCs	1	0.0	1	0.0	0.351	22.9	LOS C	5.7	45.9	0.77	0.64	0.77	40.9
11	T1	All MCs	228	16.8	228	16.8	* 0.351	17.4	LOS B	5.7	45.9	0.77	0.64	0.77	56.0
12	R2	All MCs	4	100.0	4	100.0	0.047	39.3	LOS D	0.1	1.9	0.94	0.65	0.94	24.5
Approach			234	18.3	234	18.3	0.351	17.8	LOS B	5.7	45.9	0.77	0.64	0.77	54.6
All Vehicles			536	28.6	536	28.6	0.360	20.7	LOS C	5.7	45.9	0.78	0.65	0.78	45.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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: 101v [Beaudesert Boonah Road / Recycling Street / Site Access (Site Folder: 2042 Post Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2042 Post Development AM (Network Folder: 2042 Post Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Recycling Street / Site Access
2042 AM Post Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Site Access															
1	L2	All MCs	4	75.0	4	75.0	0.394	40.5	LOS D	1.4	17.2	0.98	0.74	0.98	21.6
2	T1	All MCs	1	0.0	1	0.0	* 0.394	36.6	LOS D	1.4	17.2	0.98	0.74	0.98	31.5
3	R2	All MCs	32	100.0	32	100.0	0.394	40.5	LOS D	1.4	17.2	0.98	0.74	0.98	29.0
Approach			37	94.6	37	94.6	0.394	40.4	LOS D	1.4	17.2	0.98	0.74	0.98	28.5
East: Beaudesert Boonah Road (East)															
4	L2	All MCs	37	86.5	37	86.5	0.081	24.3	LOS C	0.8	9.8	0.65	0.73	0.65	41.8
5	T1	All MCs	274	17.0	274	17.0	* 0.390	16.3	LOS B	6.7	54.1	0.76	0.64	0.76	53.1
6	R2	All MCs	20	10.0	20	10.0	* 0.136	39.7	LOS D	0.7	5.2	0.95	0.70	0.95	35.1
Approach			332	24.4	332	24.4	0.390	18.6	LOS B	6.7	54.1	0.76	0.65	0.76	48.1
North: Recycling Street															
7	L2	All MCs	9	0.0	9	0.0	0.076	39.0	LOS D	0.4	2.8	0.95	0.67	0.95	35.8
8	T1	All MCs	1	0.0	1	0.0	* 0.076	33.5	LOS C	0.4	2.8	0.95	0.67	0.95	36.7
9	R2	All MCs	2	0.0	2	0.0	0.076	39.0	LOS D	0.4	2.8	0.95	0.67	0.95	26.7
Approach			12	0.0	12	0.0	0.076	38.6	LOS D	0.4	2.8	0.95	0.67	0.95	34.8
West: Beaudesert Boonah Road (West)															
10	L2	All MCs	4	0.0	4	0.0	0.312	21.2	LOS C	5.3	41.3	0.73	0.61	0.73	42.1
11	T1	All MCs	219	14.4	219	14.4	0.312	15.7	LOS B	5.3	41.3	0.73	0.61	0.73	58.4
12	R2	All MCs	6	66.7	6	66.7	0.056	38.9	LOS D	0.2	2.3	0.94	0.66	0.94	24.8
Approach			229	15.5	229	15.5	0.312	16.4	LOS B	5.3	41.3	0.73	0.61	0.73	56.0
All Vehicles			610	24.9	610	24.9	0.394	19.5	LOS B	6.7	54.1	0.76	0.64	0.76	46.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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: 101v [Beaudesert Boonah Road / Recycling Street / Site Access (Site Folder: 2042 Post Development PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [2042 Post Development PM (Network Folder: 2042 Post Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Recycling Street / Site Access
2042 PM Post Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 70 seconds (Site User-Given Cycle Time)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Site Access															
1	L2	All MCs	7	66.7	7	66.7	0.480	40.7	LOS D	1.8	21.0	0.99	0.76	1.01	22.1
2	T1	All MCs	1	0.0	1	0.0	* 0.480	36.9	LOS D	1.8	21.0	0.99	0.76	1.01	32.0
3	R2	All MCs	41	86.5	41	86.5	0.480	40.7	LOS D	1.8	21.0	0.99	0.76	1.01	28.5
Approach			48	81.8	48	81.8	0.480	40.6	LOS D	1.8	21.0	0.99	0.76	1.01	27.9
East: Beaudesert Boonah Road (East)															
4	L2	All MCs	35	100.0	35	100.0	0.081	24.7	LOS C	0.8	9.9	0.65	0.73	0.65	40.6
5	T1	All MCs	297	17.0	297	17.0	0.423	16.5	LOS B	7.4	59.6	0.77	0.65	0.77	52.7
6	R2	All MCs	12	18.2	12	18.2	* 0.086	39.5	LOS D	0.4	3.3	0.95	0.68	0.95	35.0
Approach			344	25.5	344	25.5	0.423	18.2	LOS B	7.4	59.6	0.76	0.66	0.76	48.6
North: Recycling Street															
7	L2	All MCs	20	11.1	20	11.1	0.147	39.8	LOS D	0.7	5.6	0.96	0.70	0.96	35.3
8	T1	All MCs	1	0.0	1	0.0	* 0.147	34.1	LOS C	0.7	5.6	0.96	0.70	0.96	36.5
9	R2	All MCs	1	0.0	1	0.0	0.147	39.7	LOS D	0.7	5.6	0.96	0.70	0.96	26.4
Approach			22	10.0	22	10.0	0.147	39.5	LOS D	0.7	5.6	0.96	0.70	0.96	35.1
West: Beaudesert Boonah Road (West)															
10	L2	All MCs	1	0.0	1	0.0	0.493	22.7	LOS C	9.0	71.8	0.80	0.69	0.80	41.1
11	T1	All MCs	345	16.8	345	16.8	* 0.493	17.1	LOS B	9.0	71.8	0.80	0.69	0.80	56.4
12	R2	All MCs	4	100.0	4	100.0	0.047	39.3	LOS D	0.1	1.9	0.94	0.65	0.94	24.5
Approach			351	17.8	351	17.8	0.493	17.4	LOS B	9.0	71.8	0.80	0.69	0.80	55.4
All Vehicles			765	25.1	765	25.1	0.493	19.9	LOS B	9.0	71.8	0.80	0.68	0.80	47.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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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2:03:35 PM

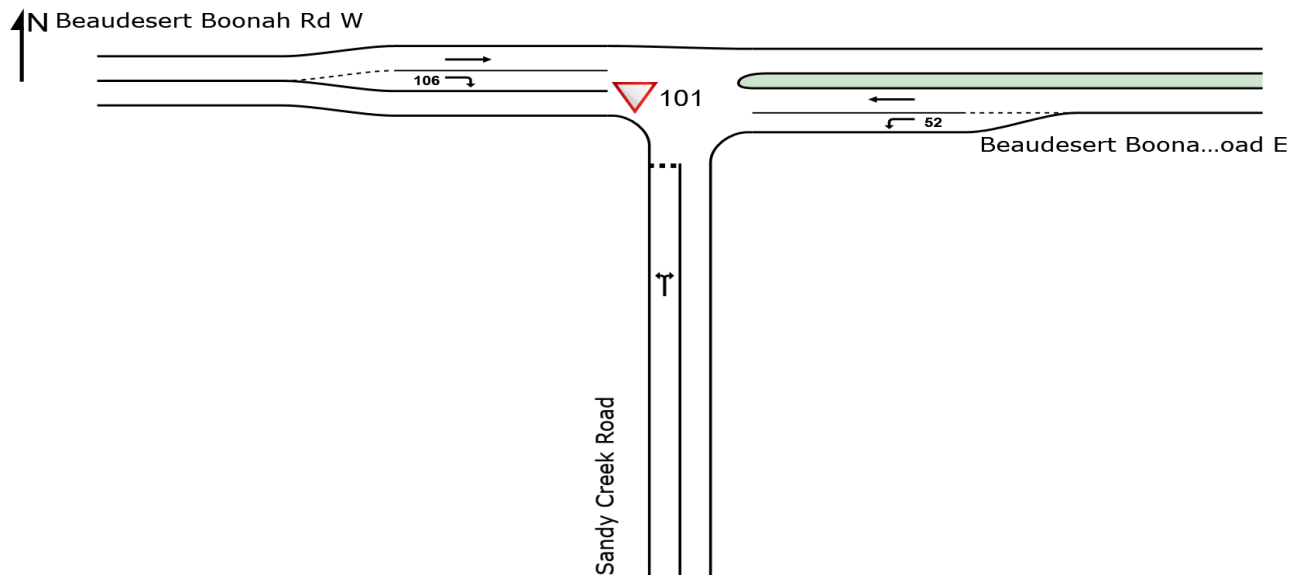
Project: C:\Users\Madison.Taylor\OneDriveCloudTemp\ZFSBV6ZF\BERC V5.1.sip9

SITE LAYOUT

▽ Site: 101 [Beaudesert Boonah Road / Sandy Creek Road (Site
Folder: 2032 Pre Development AM)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Sandy Creek Road
2032 AM Pre Development Conditions
Site Category: (None)
Give-Way (Two-Way)

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



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Organisation: ARUP AUSTRALIA SERVICES PTY LTD | Licence: NETWORK / Enterprise Level 4 | Created: Monday, 2 February 2026 10:07:40 AM

Project: C:\Users\Madison.Taylor\OneDriveCloudTemp\ZFSBV6ZF\BERC V5.1.sip9

MOVEMENT SUMMARY

▼ Site: 101 [Beaudesert Boonah Road / Sandy Creek Road (Site Folder: 2032 Pre Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Sandy Creek Road
2032 AM Pre Development Conditions
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				
			veh/h		veh/h		v/c	sec							km/h
South: Sandy Creek Road															
1	L2	All MCs	12	8.3	12	8.3	0.168	6.8	LOS A	0.6	5.6	0.58	0.77	0.58	48.2
3	R2	All MCs	62	41.7	62	41.7	0.168	13.4	LOS B	0.6	5.6	0.58	0.77	0.58	41.5
Approach			74	36.1	74	36.1	0.168	12.3	LOS B	0.6	5.6	0.58	0.77	0.58	43.0
East: Beaudesert Boonah Road E															
4	L2	All MCs	97	43.6	97	43.6	0.071	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	46.7
5	T1	All MCs	225	12.8	225	12.8	0.125	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			321	22.0	321	22.0	0.125	1.7	NA	0.0	0.0	0.00	0.17	0.00	55.2
West: Beaudesert Boonah Rd W															
11	T1	All MCs	149	19.3	149	19.3	0.086	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	60.0
12	R2	All MCs	26	16.0	26	16.0	0.029	7.5	LOS A	0.1	0.9	0.42	0.63	0.42	50.6
Approach			175	18.8	175	18.8	0.086	1.1	NA	0.1	0.9	0.06	0.09	0.06	57.6
All Vehicles			570	22.9	570	22.9	0.168	2.9	NA	0.6	5.6	0.09	0.22	0.09	53.8

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

MOVEMENT SUMMARY

Site: 101 [Beaudesert Boonah Road / Sandy Creek Road (Site Folder: 2032 Post Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Sandy Creek Road
2032 AM Post Development Conditions
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				
			veh/h		veh/h		v/c	sec							km/h
South: Sandy Creek Road															
1	L2	All MCs	12	8.3	12	8.3	0.205	7.2	LOS A	0.7	6.7	0.63	0.84	0.64	46.6
3	R2	All MCs	62	41.7	62	41.7	0.205	16.3	LOS C	0.7	6.7	0.63	0.84	0.64	39.7
Approach			74	36.1	74	36.1	0.205	14.8	LOS B	0.7	6.7	0.63	0.84	0.64	41.2
East: Beaudesert Boonah Road E															
4	L2	All MCs	97	43.6	97	43.6	0.071	5.7	LOS A	0.0	0.0	0.00	0.57	0.00	46.7
5	T1	All MCs	263	23.4	263	23.4	0.155	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			359	28.9	359	28.9	0.155	1.6	NA	0.0	0.0	0.00	0.15	0.00	55.7
West: Beaudesert Boonah Rd W															
11	T1	All MCs	183	33.7	183	33.7	0.114	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	26	16.0	26	16.0	0.031	7.9	LOS A	0.1	0.9	0.46	0.65	0.46	50.3
Approach			208	31.5	208	31.5	0.114	1.0	NA	0.1	0.9	0.06	0.08	0.06	57.9
All Vehicles			642	30.6	642	30.6	0.205	2.9	NA	0.7	6.7	0.09	0.21	0.09	54.0

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

MOVEMENT SUMMARY

▼ Site: 101 [Beaudesert Boonah Road / Sandy Creek Road (Site Folder: 2032 Pre Development PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Sandy Creek Road
2032 PM Pre Development Conditions
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: RoadName															
1	L2	All MCs	16	0.0	16	0.0	0.238	6.6	LOS A	0.9	7.6	0.61	0.80	0.64	48.0
3	R2	All MCs	90	23.0	90	23.0	0.238	13.8	LOS B	0.9	7.6	0.61	0.80	0.64	41.7
Approach			106	19.6	106	19.6	0.238	12.7	LOS B	0.9	7.6	0.61	0.80	0.64	43.0
East: Beaudesert Boonah Road E															
4	L2	All MCs	47	22.2	47	22.2	0.030	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	47.9
5	T1	All MCs	193	14.0	193	14.0	0.108	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			240	15.6	240	15.6	0.108	1.1	NA	0.0	0.0	0.00	0.11	0.00	57.1
West: Beaudesert Boonah Rd W															
11	T1	All MCs	290	15.1	290	15.1	0.163	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	10	40.0	10	40.0	0.012	7.5	LOS A	0.0	0.4	0.37	0.59	0.37	49.9
Approach			300	15.9	300	15.9	0.163	0.3	NA	0.0	0.4	0.01	0.02	0.01	59.2
All Vehicles			647	16.4	647	16.4	0.238	2.6	NA	0.9	7.6	0.11	0.18	0.11	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.

MOVEMENT SUMMARY

▼ Site: 101 [Beaudesert Boonah Road / Sandy Creek Road (Site Folder: 2032 Post Development PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Sandy Creek Road
2032 PM Post Development Conditions
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				
			veh/h		veh/h		v/c	sec							km/h
South: Sandy Creek Road															
1	L2	All MCs	16	0.0	16	0.0	0.290	7.6	LOS A	1.2	9.6	0.67	0.89	0.79	46.1
3	R2	All MCs	90	23.0	90	23.0	0.290	17.3	LOS C	1.2	9.6	0.67	0.89	0.79	39.4
Approach			106	19.6	106	19.6	0.290	15.9	LOS C	1.2	9.6	0.67	0.89	0.79	40.7
East: Beaudesert Boonah Road E															
4	L2	All MCs	47	22.2	47	22.2	0.030	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	47.9
5	T1	All MCs	227	27.1	227	27.1	0.137	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			273	26.2	273	26.2	0.137	1.0	NA	0.0	0.0	0.00	0.10	0.00	57.4
West: Beaudesert Boonah Rd W															
11	T1	All MCs	328	23.7	328	23.7	0.194	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
12	R2	All MCs	10	40.0	10	40.0	0.013	7.9	LOS A	0.0	0.4	0.41	0.61	0.41	49.6
Approach			339	24.2	339	24.2	0.194	0.3	NA	0.0	0.4	0.01	0.02	0.01	59.3
All Vehicles			718	24.3	718	24.3	0.290	2.9	NA	1.2	9.6	0.10	0.18	0.12	54.7

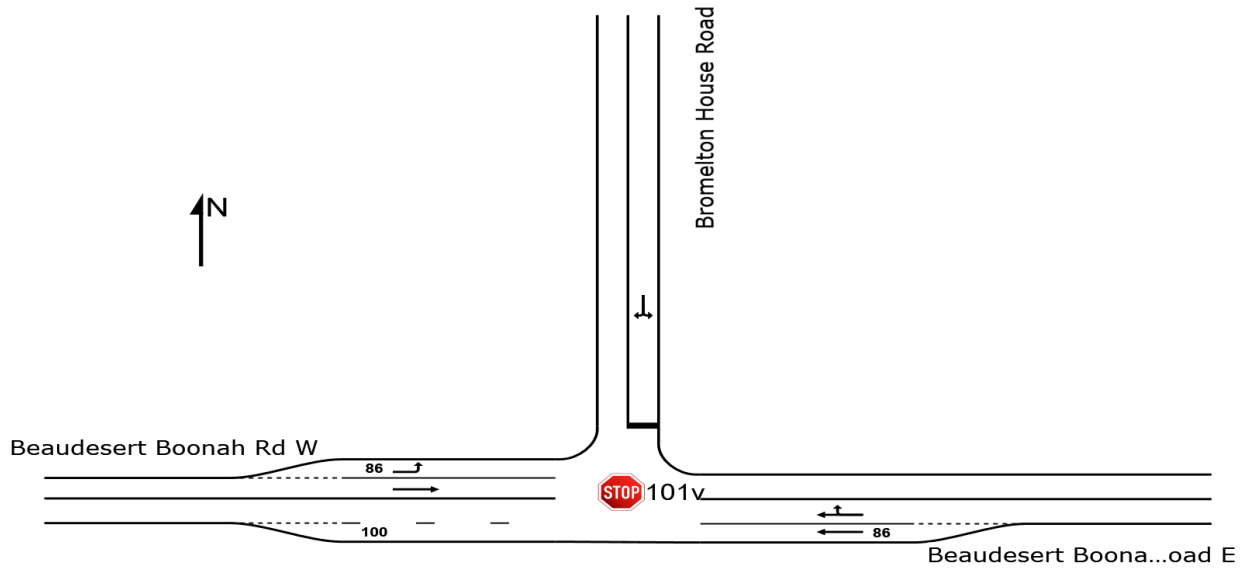
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of 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.

SITE LAYOUT

 **Site: 101v [Beaudesert Boonah Road / Bromelton House Road (Site Folder: 2032 Pre Development AM)]**

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Bromelton House Road
2032 AM Pre Development Conditions
Site Category: (None)
Stop (Two-Way)

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



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MOVEMENT SUMMARY

 **Site: 101v [Beaudesert Boonah Road / Bromelton House Road (Site Folder: 2032 Pre Development AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Bromelton House Road
2032 AM Pre Development Conditions
Site Category: (None)
Stop (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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Beaudesert Boonah Road E															
5	T1	All MCs	264	26.8	264	26.8	0.138	0.5	LOS A	0.4	3.7	0.12	0.15	0.12	57.6
6	R2	All MCs	55	5.8	55	5.8	0.138	6.6	LOS A	0.4	3.7	0.22	0.26	0.22	51.6
Approach			319	23.2	319	23.2	0.138	1.6	NA	0.4	3.7	0.14	0.17	0.14	56.5
North: Bromelton House Road															
7	L2	All MCs	102	4.1	102	4.1	0.258	9.4	LOS A	1.1	7.7	0.50	0.88	0.50	44.1
9	R2	All MCs	65	1.6	65	1.6	0.258	15.2	LOS C	1.1	7.7	0.50	0.88	0.50	49.1
Approach			168	3.1	168	3.1	0.258	11.7	LOS B	1.1	7.7	0.50	0.88	0.50	46.5
West: Beaudesert Boonah Rd W															
10	L2	All MCs	43	0.0	43	0.0	0.024	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
11	T1	All MCs	167	32.3	167	32.3	0.106	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			210	25.6	210	25.6	0.106	1.2	NA	0.0	0.0	0.00	0.12	0.00	57.6
All Vehicles			696	19.1	696	19.1	0.258	3.9	NA	1.1	7.7	0.18	0.32	0.18	53.7

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

MOVEMENT SUMMARY

 **Site: 101v [Beadesert Boonah Road / Bromelton House Road (Site Folder: 2032 Post Development AM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beadesert Boonah Road / Bromelton House Road
2032 AM Post Development Conditions
Site Category: (None)
Stop (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				
			veh/h	%	veh/h	%	v/c	sec							km/h
East: Beaudesert Boonah Road E															
5	T1	All MCs	303	34.5	303	34.5	0.160	0.6	LOS A	0.5	4.2	0.13	0.15	0.13	57.6
6	R2	All MCs	55	5.8	55	5.8	0.160	6.9	LOS A	0.5	4.2	0.22	0.27	0.22	51.7
Approach			358	30.1	358	30.1	0.160	1.6	NA	0.5	4.2	0.14	0.17	0.14	56.6
North: Bromelton House Road															
7	L2	All MCs	102	4.1	102	4.1	0.295	10.1	LOS B	1.3	9.4	0.57	0.92	0.62	42.9
9	R2	All MCs	65	1.6	65	1.6	0.295	18.0	LOS C	1.3	9.4	0.57	0.92	0.62	48.2
Approach			168	3.1	168	3.1	0.295	13.2	LOS B	1.3	9.4	0.57	0.92	0.62	45.5
West: Beaudesert Boonah Rd W															
10	L2	All MCs	43	0.0	43	0.0	0.024	5.5	LOS A	0.0	0.0	0.00	0.58	0.00	52.9
11	T1	All MCs	201	43.5	201	43.5	0.136	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			245	35.8	245	35.8	0.136	1.0	NA	0.0	0.0	0.00	0.10	0.00	57.9
All Vehicles			770	26.0	770	26.0	0.295	3.9	NA	1.3	9.4	0.19	0.31	0.20	53.7

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

MOVEMENT SUMMARY

 **Site: 101v [Beaudesert Boonah Road / Bromelton House Road (Site Folder: 2032 Pre Development PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Bromelton House Road
2032 PM Pre Development Conditions
Site Category: (None)
Stop (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				
			veh/h		veh/h		v/c	sec							km/h
East: Beaudesert Boonah Road E															
5	T1	All MCs	206	18.5	206	18.5	0.173	0.8	LOS A	0.8	6.2	0.13	0.17	0.13	57.3
6	R2	All MCs	129	3.3	129	3.3	0.173	7.9	LOS A	0.8	6.2	0.50	0.62	0.50	47.7
Approach			334	12.6	334	12.6	0.173	3.5	NA	0.8	6.2	0.27	0.34	0.27	53.2
North: Bromelton House Road															
7	L2	All MCs	64	11.5	64	11.5	0.209	10.9	LOS B	0.8	5.8	0.58	0.95	0.58	42.4
9	R2	All MCs	41	0.0	41	0.0	0.209	18.1	LOS C	0.8	5.8	0.58	0.95	0.58	48.1
Approach			105	7.0	105	7.0	0.209	13.7	LOS B	0.8	5.8	0.58	0.95	0.58	45.1
West: Beaudesert Boonah Rd W															
10	L2	All MCs	108	6.9	108	6.9	0.063	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.6
11	T1	All MCs	297	20.2	297	20.2	0.178	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			405	16.7	405	16.7	0.178	1.5	NA	0.0	0.0	0.00	0.15	0.00	56.9
All Vehicles			845	13.9	845	13.9	0.209	3.8	NA	0.8	6.2	0.18	0.33	0.18	53.6

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

MOVEMENT SUMMARY

 **Site: 101v [Beaudesert Boonah Road / Bromelton House Road (Site Folder: 2032 Post Development PM)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Bromelton House Road
2032 PM Post Development Conditions
Site Category: (None)
Stop (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				
			veh/h	%	veh/h	%	v/c	sec							km/h
East: Beaudesert Boonah Road E															
5	T1	All MCs	239	30.4	239	30.4	0.197	1.1	LOS A	1.0	7.6	0.17	0.21	0.17	56.7
6	R2	All MCs	129	3.3	129	3.3	0.197	8.3	LOS A	1.0	7.6	0.53	0.63	0.53	47.5
Approach			368	20.9	368	20.9	0.197	3.6	NA	1.0	7.6	0.30	0.35	0.30	53.1
North: Bromelton House Road															
7	L2	All MCs	64	11.5	64	11.5	0.243	11.7	LOS B	0.9	7.0	0.63	0.99	0.68	41.1
9	R2	All MCs	41	0.0	41	0.0	0.243	21.4	LOS C	0.9	7.0	0.63	0.99	0.68	47.0
Approach			105	7.0	105	7.0	0.243	15.5	LOS C	0.9	7.0	0.63	0.99	0.68	43.9
West: Beaudesert Boonah Rd W															
10	L2	All MCs	108	6.9	108	6.9	0.063	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	52.6
11	T1	All MCs	336	27.9	336	27.9	0.210	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			444	22.8	444	22.8	0.210	1.4	NA	0.0	0.0	0.00	0.14	0.00	57.1
All Vehicles			918	20.2	918	20.2	0.243	3.9	NA	1.0	7.6	0.19	0.32	0.20	53.5

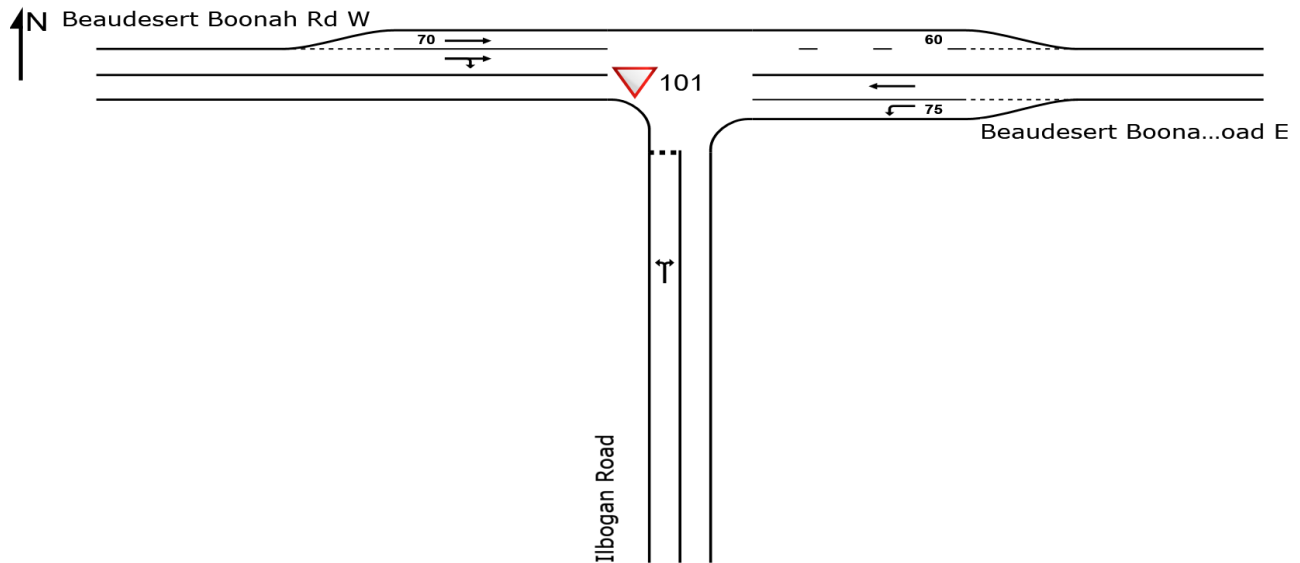
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of 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.

SITE LAYOUT

▽ Site: 101 [Beaudesert Boonah Road / Ilbogan Road (Site
Folder: 2032 Pre Development AM)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Ilbogan Road
2032 AM Pre Development Conditions
Site Category: (None)
Give-Way (Two-Way)

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



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MOVEMENT SUMMARY

Site: 101 [Beaudesert Boonah Road / Ilbogan Road (Site Folder: 2032 Pre Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Ilbogan Road
2032 AM Pre Development Conditions
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				
			veh/h		veh/h		v/c	sec							km/h
South: Ilbogan Road															
1	L2	All MCs	14	23.1	14	23.1	0.040	7.8	LOS A	0.1	1.1	0.51	0.69	0.51	49.2
3	R2	All MCs	10	0.0	10	0.0	0.040	12.0	LOS B	0.1	1.1	0.51	0.69	0.51	45.1
Approach			23	13.6	23	13.6	0.040	9.6	LOS A	0.1	1.1	0.51	0.69	0.51	47.9
East: Beaudesert Boonah Road E															
4	L2	All MCs	18	5.9	18	5.9	0.011	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	48.8
5	T1	All MCs	314	22.0	314	22.0	0.184	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			332	21.2	332	21.2	0.184	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.2
West: Beaudesert Boonah Rd W															
11	T1	All MCs	263	19.0	263	19.0	0.147	0.7	LOS A	0.4	3.6	0.15	0.16	0.15	58.1
12	R2	All MCs	33	32.3	33	32.3	0.147	8.5	LOS A	0.4	3.6	0.21	0.23	0.21	54.0
Approach			296	20.5	296	20.5	0.147	1.6	NA	0.4	3.6	0.15	0.17	0.15	57.3
All Vehicles			651	20.6	651	20.6	0.184	1.2	NA	0.4	3.6	0.09	0.12	0.09	57.7

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

MOVEMENT SUMMARY

Site: 101 [Beaudesert Boonah Road / Ilbogan Road (Site Folder: 2032 Post Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Ilbogan Road
2032 AM Post Development Conditions
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: Ilbogan Road															
1	L2	All MCs	14	23.1	14	23.1	0.046	8.3	LOS A	0.2	1.2	0.56	0.73	0.56	48.5
3	R2	All MCs	10	0.0	10	0.0	0.046	14.0	LOS B	0.2	1.2	0.56	0.73	0.56	44.1
Approach			23	13.6	23	13.6	0.046	10.6	LOS B	0.2	1.2	0.56	0.73	0.56	47.1
East: Beaudesert Boonah Road E															
4	L2	All MCs	18	5.9	18	5.9	0.011	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	48.8
5	T1	All MCs	353	29.5	353	29.5	0.216	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			371	28.4	371	28.4	0.216	0.3	NA	0.0	0.0	0.00	0.03	0.00	59.2
West: Beaudesert Boonah Rd W															
11	T1	All MCs	298	28.2	298	28.2	0.171	0.8	LOS A	0.5	4.1	0.14	0.16	0.14	57.9
12	R2	All MCs	33	32.3	33	32.3	0.171	9.2	LOS A	0.5	4.1	0.21	0.23	0.21	53.9
Approach			331	28.6	331	28.6	0.171	1.6	NA	0.5	4.1	0.15	0.17	0.15	57.2
All Vehicles			726	28.0	726	28.0	0.216	1.2	NA	0.5	4.1	0.09	0.11	0.09	57.7

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

MOVEMENT SUMMARY

Site: 101 [Beaudesert Boonah Road / Ilbogan Road (Site Folder: 2032 Pre Development PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Ilbogan Road
2032 PM Pre Development Conditions
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				
			veh/h		veh/h		v/c	sec							km/h
South: Ilbogan Road															
1	L2	All MCs	26	23.1	26	23.1	0.074	7.6	LOS A	0.3	2.1	0.52	0.70	0.52	49.0
3	R2	All MCs	16	6.3	16	6.3	0.074	13.5	LOS B	0.3	2.1	0.52	0.70	0.52	44.6
Approach			42	16.7	42	16.7	0.074	9.9	LOS A	0.3	2.1	0.52	0.70	0.52	47.7
East: Beaudesert Boonah Road E															
4	L2	All MCs	26	11.5	26	11.5	0.016	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	48.5
5	T1	All MCs	297	12.2	297	12.2	0.164	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			323	12.1	323	12.1	0.164	0.5	NA	0.0	0.0	0.00	0.05	0.00	58.8
West: Beaudesert Boonah Rd W															
11	T1	All MCs	317	16.5	317	16.5	0.163	0.5	LOS A	0.4	3.1	0.11	0.12	0.11	58.6
12	R2	All MCs	29	31.0	29	31.0	0.163	8.3	LOS A	0.4	3.1	0.16	0.17	0.16	54.5
Approach			346	17.7	346	17.7	0.163	1.2	NA	0.4	3.1	0.12	0.13	0.12	58.0
All Vehicles			711	15.1	711	15.1	0.164	1.4	NA	0.4	3.1	0.09	0.12	0.09	57.3

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

MOVEMENT SUMMARY

Site: 101 [Beaudesert Boonah Road / Ilbogan Road (Site Folder: 2032 Post Development PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Ilbogan Road
2032 PM Post Development Conditions
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: Ilbogan Road															
1	L2	All MCs	26	23.1	26	23.1	0.084	8.0	LOS A	0.3	2.3	0.56	0.75	0.56	48.3
3	R2	All MCs	16	6.3	16	6.3	0.084	15.8	LOS C	0.3	2.3	0.56	0.75	0.56	43.6
Approach			42	16.7	42	16.7	0.084	11.0	LOS B	0.3	2.3	0.56	0.75	0.56	46.9
East: Beaudesert Boonah Road E															
4	L2	All MCs	26	11.5	26	11.5	0.016	5.6	LOS A	0.0	0.0	0.00	0.57	0.00	48.5
5	T1	All MCs	329	21.1	329	21.1	0.192	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			355	20.4	355	20.4	0.192	0.4	NA	0.0	0.0	0.00	0.04	0.00	58.9
West: Beaudesert Boonah Rd W															
11	T1	All MCs	354	24.1	354	24.1	0.187	0.6	LOS A	0.4	3.5	0.11	0.12	0.11	58.5
12	R2	All MCs	29	31.0	29	31.0	0.187	8.8	LOS A	0.4	3.5	0.15	0.17	0.15	54.4
Approach			383	24.7	383	24.7	0.187	1.3	NA	0.4	3.5	0.11	0.13	0.11	58.0
All Vehicles			781	22.3	781	22.3	0.192	1.4	NA	0.4	3.5	0.09	0.12	0.09	57.4

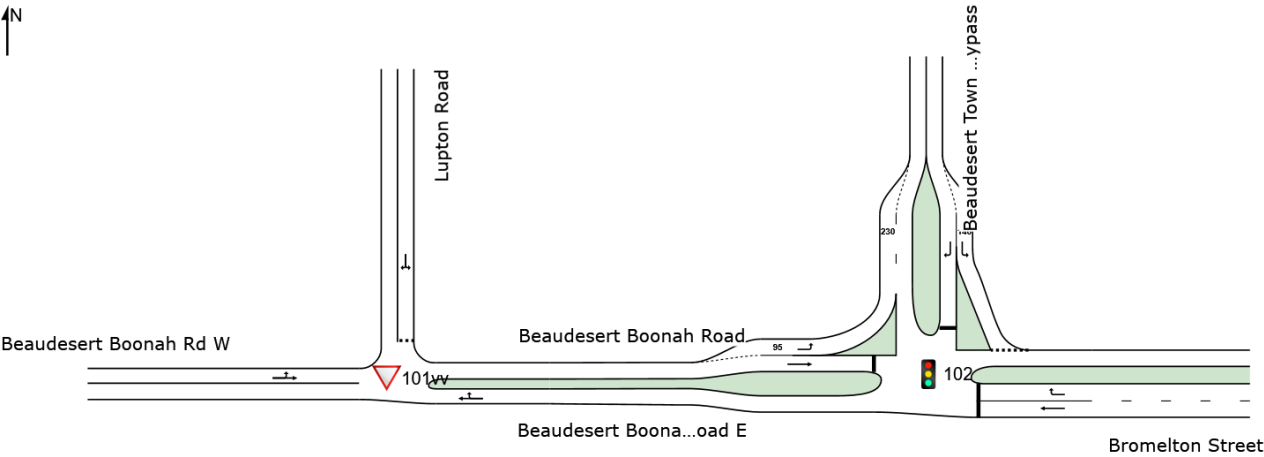
Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of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

NETWORK LAYOUT

Network: N101 [Bromelton Street 2032 Pre Development AM
(Network Folder: 2032 Pre Development)]

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
102	NA	Beaudesert Boonah Road / Beaudesert Bypass Road
101vv	NA	Beaudesert Boonah Road / Lupton Road

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Project: C:\Users\Madison.Taylor\OneDriveCloudTemp\ZF5BV6ZF\BERC V5.1.sip9

MOVEMENT SUMMARY

▼ Site: 101vv [Beaudesert Boonah Road / Lupton Road (Site Folder: 2032 Pre Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Bromelton Street 2032 Pre Development AM (Network Folder: 2032 Pre Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Lupton Road
2032 AM Pre Development Conditions
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Beaudesert Boonah Road E															
5	T1	All MCs	329	20.9	329	20.9	0.199	0.0	LOS A	0.0	0.4	0.02	0.02	0.02	59.7
6	R2	All MCs	6	0.0	6	0.0	0.199	6.1	LOS A	0.0	0.4	0.02	0.02	0.02	55.4
Approach			335	20.5	335	20.5	0.199	0.1	NA	0.0	0.4	0.02	0.02	0.02	59.6
North: Lupton Road															
7	L2	All MCs	3	0.0	3	0.0	0.009	6.4	LOS A	0.0	0.2	0.45	0.61	0.45	47.5
9	R2	All MCs	3	33.3	3	33.3	0.009	10.2	LOS B	0.0	0.2	0.45	0.61	0.45	49.4
Approach			6	16.7	6	16.7	0.009	8.3	LOS A	0.0	0.2	0.45	0.61	0.45	48.7
West: Beaudesert Boonah Rd W															
10	L2	All MCs	1	0.0	1	0.0	0.158	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	57.4
11	T1	All MCs	269	18.9	269	18.9	0.158	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	59.9
Approach			270	18.8	270	18.8	0.158	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles			612	19.7	612	19.7	0.199	0.2	NA	0.0	0.4	0.01	0.02	0.01	59.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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

MOVEMENT SUMMARY

Site: 101vv [Beaudesert Boonah Road / Lupton Road (Site Folder: 2032 Post Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Bromelton Street 2032 Post Development AM (Network Folder: 2032 Post Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Lupton Road
2032 AM Post Development Conditions
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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Beaudesert Boonah Road E															
5	T1	All MCs	368	28.2	368	28.2	0.231	0.0	LOS A	0.0	0.4	0.01	0.02	0.01	59.7
6	R2	All MCs	6	0.0	6	0.0	0.231	6.3	LOS A	0.0	0.4	0.01	0.02	0.01	55.4
Approach			375	27.7	375	27.7	0.231	0.1	NA	0.0	0.4	0.01	0.02	0.01	59.6
North: Lupton Road															
7	L2	All MCs	3	0.0	3	0.0	0.010	6.6	LOS A	0.0	0.2	0.49	0.63	0.49	46.6
9	R2	All MCs	3	33.3	3	33.3	0.010	11.4	LOS B	0.0	0.2	0.49	0.63	0.49	48.9
Approach			6	16.7	6	16.7	0.010	9.0	LOS A	0.0	0.2	0.49	0.63	0.49	48.1
West: Beaudesert Boonah Rd W															
10	L2	All MCs	1	0.0	1	0.0	0.187	5.6	LOS A	0.0	0.0	0.00	0.00	0.00	57.4
11	T1	All MCs	304	27.9	304	27.9	0.187	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			305	27.8	305	27.8	0.187	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles			686	27.6	686	27.6	0.231	0.2	NA	0.0	0.4	0.01	0.02	0.01	59.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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

MOVEMENT SUMMARY

▼ Site: 101vv [Beaudesert Boonah Road / Lupton Road (Site Folder: 2032 Pre Development PM)]
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Bromelton Street 2032 Pre Development PM (Network Folder: 2032 Pre Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Lupton Road
2032 AM Pre Development Conditions
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
			veh/h	%	veh/h	%	v/c	sec							
East: Beaudesert Boonah Road E															
5	T1	All MCs	331	11.2	331	11.2	0.186	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.9
6	R2	All MCs	1	0.0	1	0.0	0.186	5.7	LOS A	0.0	0.1	0.00	0.00	0.00	55.6
Approach			332	11.2	332	11.2	0.186	0.0	NA	0.0	0.1	0.00	0.00	0.00	59.9
North: Lupton Road															
7	L2	All MCs	13	0.0	13	0.0	0.023	6.8	LOS A	0.1	0.6	0.47	0.64	0.47	47.4
9	R2	All MCs	4	75.0	4	75.0	0.023	13.8	LOS B	0.1	0.6	0.47	0.64	0.47	47.7
Approach			18	17.6	18	17.6	0.023	8.5	LOS A	0.1	0.6	0.47	0.64	0.47	47.5
West: Beaudesert Boonah Rd W															
10	L2	All MCs	1	100.0	1	100.0	0.201	6.7	LOS A	0.0	0.0	0.00	0.00	0.00	52.8
11	T1	All MCs	349	15.3	349	15.3	0.201	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			350	15.6	350	15.6	0.201	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles			699	13.5	699	13.5	0.201	0.3	NA	0.1	0.6	0.01	0.02	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data tab).

Vehicle movement LOS values are based on average delay per movement.

Minor Road Approach LOS values are based on average delay for all vehicle movements.

NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).

Two-Way Sign Control Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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

MOVEMENT SUMMARY

▼ Site: 101vv [Beaudesert Boonah Road / Lupton Road (Site Folder: 2032 Post Development PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

■ Network: N101 [Bromelton Street 2032 Post Development PM (Network Folder: 2032 Post Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Lupton Road
2032 PM Post Development Conditions
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
East: Beaudesert Boonah Road E															
5	T1	All MCs	365	19.5	365	19.5	0.215	0.0	LOS A	0.0	0.1	0.00	0.00	0.00	59.9
6	R2	All MCs	1	0.0	1	0.0	0.215	5.7	LOS A	0.0	0.1	0.00	0.00	0.00	55.7
Approach			366	19.4	366	19.4	0.215	0.0	NA	0.0	0.1	0.00	0.00	0.00	59.9
North: Lupton Road															
7	L2	All MCs	13	0.0	13	0.0	0.026	7.0	LOS A	0.1	0.7	0.51	0.67	0.51	46.6
9	R2	All MCs	4	75.0	4	75.0	0.026	15.9	LOS C	0.1	0.7	0.51	0.67	0.51	47.3
Approach			18	17.6	18	17.6	0.026	9.1	LOS A	0.1	0.7	0.51	0.67	0.51	46.8
West: Beaudesert Boonah Rd W															
10	L2	All MCs	1	100.0	1	100.0	0.232	6.7	LOS A	0.0	0.0	0.00	0.00	0.00	52.8
11	T1	All MCs	386	22.7	386	22.7	0.232	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	59.8
Approach			387	22.9	387	22.9	0.232	0.1	NA	0.0	0.0	0.00	0.00	0.00	59.8
All Vehicles			770	21.1	770	21.1	0.232	0.3	NA	0.1	0.7	0.01	0.02	0.01	59.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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: 102 [Beaudesert Boonah Road / Beaudesert Bypass Road (Site Folder: 2032 Pre Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Bromelton Street 2032 Pre Development AM (Network Folder: 2032 Pre Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Beaudesert Bypass Road
2032 AM Pre Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 43 seconds (Site User-Given 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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Bromelton Street															
5	T1	All MCs	188	13.3	188	13.3	0.181	4.6	LOS A	1.9	14.6	0.49	0.41	0.49	35.7
6	R2	All MCs	167	20.3	167	20.3	* 0.437	21.7	LOS C	3.2	26.2	0.90	0.78	0.90	36.3
Approach			355	16.6	355	16.6	0.437	12.6	LOS B	3.2	26.2	0.68	0.58	0.68	36.2
North: Beaudesert Town Centre Bypass															
7	L2	All MCs	204	9.1	204	9.1	0.175	7.5	LOS A	1.1	8.3	0.41	0.66	0.41	38.7
9	R2	All MCs	65	43.3	65	43.3	* 0.330	26.0	LOS C	1.4	13.1	0.94	0.75	0.94	20.2
Approach			269	17.4	269	17.4	0.330	12.0	LOS B	1.4	13.1	0.54	0.68	0.54	33.1
West: Beaudesert Boonah Road															
10	L2	All MCs	66	32.8	66	32.8	0.044	6.2	LOS A	0.0	0.0	0.00	0.51	0.00	48.6
11	T1	All MCs	171	15.9	171	15.9	* 0.462	17.1	LOS B	3.4	26.7	0.92	0.74	0.92	26.3
Approach			237	20.6	237	20.6	0.462	14.1	LOS B	3.4	26.7	0.66	0.68	0.66	34.7
All Vehicles			862	18.0	862	18.0	0.462	12.8	LOS B	3.4	26.7	0.63	0.64	0.63	34.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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: 102 [Beaudesert Boonah Road / Beaudesert Bypass Road (Site Folder: 2032 Post Development AM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Bromelton Street 2032 Post Development AM (Network Folder: 2032 Post Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Beaudesert Bypass Road
2032 AM Post Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 43 seconds (Site User-Given 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]				km/h
			veh/h	%	veh/h	%	v/c	sec			m				
East: Bromelton Street															
5	T1	All MCs	192	13.1	192	13.1	0.191	5.1	LOS A	2.0	15.7	0.52	0.43	0.52	34.0
6	R2	All MCs	167	20.3	167	20.3	* 0.486	22.9	LOS C	3.3	27.2	0.93	0.79	0.93	35.7
Approach			358	16.4	358	16.4	0.486	13.4	LOS B	3.3	27.2	0.71	0.60	0.71	35.4
North: Beaudesert Town Centre Bypass															
7	L2	All MCs	204	9.1	204	9.1	0.175	7.5	LOS A	1.1	8.3	0.41	0.66	0.41	38.7
9	R2	All MCs	101	63.4	101	63.4	* 0.487	25.9	LOS C	2.2	23.2	0.95	0.78	0.96	20.4
Approach			305	27.1	305	27.1	0.487	13.6	LOS B	2.2	23.2	0.59	0.70	0.59	31.3
West: Beaudesert Boonah Road															
10	L2	All MCs	102	56.4	102	56.4	0.077	6.5	LOS A	0.0	0.0	0.00	0.49	0.00	47.5
11	T1	All MCs	171	15.9	171	15.9	* 0.462	17.1	LOS B	3.4	26.7	0.92	0.74	0.92	26.3
Approach			273	31.1	273	31.1	0.462	13.1	LOS B	3.4	26.7	0.58	0.65	0.58	36.7
All Vehicles			937	24.2	937	24.2	0.487	13.4	LOS B	3.4	27.2	0.63	0.64	0.63	34.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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: 102 [Beaudesert Boonah Road / Beaudesert Bypass Road (Site Folder: 2032 Pre Development PM)]**
Output produced by SIDRA INTERSECTION Version: 9.1.6.228

 **Network: N101 [Bromelton Street 2032 Pre Development PM (Network Folder: 2032 Pre Development)]**

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Beaudesert Bypass Road
2032 PM Pre Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 41 seconds (Site User-Given 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]	%	v/c	sec		[Veh. veh	Dist] m				km/h
East: Bromelton Street															
5	T1	All MCs	206	14.8	206	14.8	0.206	4.9	LOS A	2.1	16.4	0.53	0.44	0.53	34.7
6	R2	All MCs	203	17.2	203	17.2	* 0.552	22.1	LOS C	3.9	31.3	0.94	0.81	0.95	36.6
Approach			408	16.0	408	16.0	0.552	13.4	LOS B	3.9	31.3	0.73	0.62	0.74	36.3
North: Beaudesert Town Centre Bypass															
7	L2	All MCs	122	8.0	122	8.0	0.108	7.7	LOS A	0.7	5.2	0.43	0.65	0.43	38.4
9	R2	All MCs	65	21.7	65	21.7	* 0.278	24.2	LOS C	1.3	10.6	0.93	0.74	0.93	21.1
Approach			187	12.8	187	12.8	0.278	13.5	LOS B	1.3	10.6	0.61	0.68	0.61	31.3
West: Beaudesert Boonah Road															
10	L2	All MCs	65	38.3	65	38.3	0.045	6.4	LOS A	0.0	0.0	0.00	0.51	0.00	48.3
11	T1	All MCs	206	14.8	206	14.8	* 0.593	17.8	LOS B	4.1	32.4	0.96	0.80	1.02	25.7
Approach			271	20.5	271	20.5	0.593	15.0	LOS B	4.1	32.4	0.73	0.73	0.77	33.1
All Vehicles			867	16.7	867	16.7	0.593	13.9	LOS B	4.1	32.4	0.70	0.67	0.72	34.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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 (Akcelik 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: 102 [Beaudesert Boonah Road / Beaudesert Bypass Road (Site Folder: 2032 Post Development PM)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

Network: N101 [Bromelton Street 2032 Post Development PM (Network Folder: 2032 Post Development)]

293683 Bromelton Energy and Resource Centre
Beaudesert Boonah Road / Beaudesert Bypass Road
2032 PM Post Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 41 seconds (Site User-Given 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]	%	v/c	sec		[Veh. veh	Dist]				km/h
East: Bromelton Street															
5	T1	All MCs	206	14.8	206	14.8	0.206	4.9	LOS A	2.1	16.4	0.53	0.44	0.53	34.7
6	R2	All MCs	203	17.2	203	17.2	* 0.552	22.1	LOS C	3.9	31.3	0.94	0.81	0.95	36.6
Approach			408	16.0	408	16.0	0.552	13.4	LOS B	3.9	31.3	0.73	0.62	0.74	36.3
North: Beaudesert Town Centre Bypass															
7	L2	All MCs	122	8.0	122	8.0	0.108	7.7	LOS A	0.7	5.2	0.43	0.65	0.43	38.3
9	R2	All MCs	100	48.9	100	48.9	* 0.497	25.6	LOS C	2.1	20.6	0.96	0.78	0.99	20.4
Approach			222	26.5	222	26.5	0.497	15.8	LOS B	2.1	20.6	0.67	0.71	0.68	29.0
West: Beaudesert Boonah Road															
10	L2	All MCs	101	60.2	101	60.2	0.078	6.6	LOS A	0.0	0.0	0.00	0.49	0.00	47.4
11	T1	All MCs	209	14.6	209	14.6	* 0.602	17.8	LOS B	4.2	33.0	0.96	0.81	1.03	25.7
Approach			310	29.5	310	29.5	0.602	14.2	LOS B	4.2	33.0	0.65	0.71	0.69	35.0
All Vehicles			941	22.9	941	22.9	0.602	14.2	LOS B	4.2	33.0	0.69	0.67	0.71	34.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Network Data dialog (Override Site Data 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.

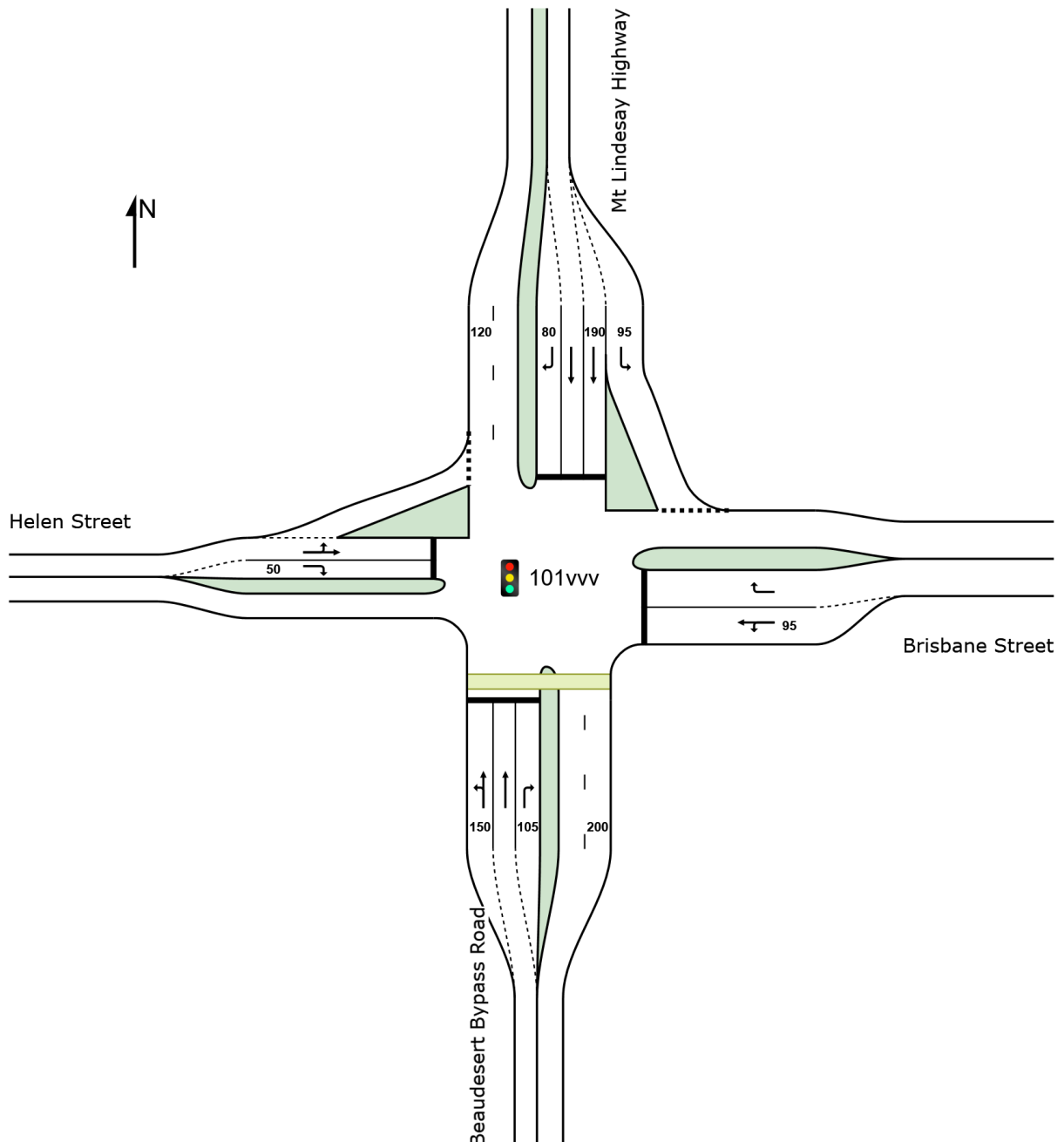
* Critical Movement (Signal Timing)

SITE LAYOUT

 Site: 101vvv [Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street (Site Folder: 2032 Pre Development AM)]

293683 Bromelton Energy and Resource Centre
Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street
2032 AM Pre Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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



Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped	Dist]			sec	m	m/sec
South: Beaudesert Bypass Road												

P1 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	0	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped	Dist]			sec	m	m/sec
South: Beaudesert Bypass Road												

P1 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	0	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

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

**Site: 101vvv [Beaudesert Bypass Road / Helen Street / Mt
Lindesay Highway / Brisbane Street (Site Folder: 2032 Pre
Development PM)]**

293683 Bromelton Energy and Resource Centre
Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street
2032 PM Pre Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site Practical Cycle Time)

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.

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped	Dist]			sec	m	m/sec
South: Beaudesert Bypass Road												

P1 Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	0	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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**Site: 101vvv [Beaudesert Bypass Road / Helen Street / Mt
Lindesay Highway / Brisbane Street (Site Folder: 2032 Post
Development PM)]**

293683 Bromelton Energy and Resource Centre
Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street
2032 PM Post Development Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

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.

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped	Dist]			sec	m	m/sec
South: Beaudesert Bypass Road												

P1 Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	0	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

Level of Service (LOS) Method: SIDRA Pedestrian LOS Method (Based on Average Delay)

Pedestrian movement LOS values are based on average delay per pedestrian movement.

Intersection LOS value for Pedestrians is based on average delay for all pedestrian movements.

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Appendix K

Network delay calculation

Total Intersection Aggregate Delay Impact

Sum WD	210653.5	3510.9
Sum BC	198066.2	3301.1
ID	12587.3	209.788
% Impact	6.36%	

Beaudesert Boonah Road / Beaudesert Bypass Road / Bromelton Street Aggregate Delay (per intersection) 1.8% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	188	4.6	864.8
6	R2	167	21.7	3623.9
Approach		355	12.6	
7	L2	204	7.5	1530.0
9	R2	65	26.0	1690.0
Approach		269	12.0	
10	L2	66	6.2	409.2
11	T1	171	17.1	2924.1
Approach		237	14.1	
All Vehicles		862	12.8	11042.0

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	206	4.9	1009.4
6	R2	203	22.1	4486.3
Approach		408	13.4	
7	L2	122	7.7	939.4
9	R2	65	24.2	1573.0
Approach		187	13.5	
10	L2	65	6.4	416.0
11	T1	206	17.8	3666.8
Approach		271	15.0	
All Vehicles		867	13.9	12090.9

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	188	5.1	958.8
6	R2	167	22.9	3824.3
Approach		355	13.4	
7	L2	204	7.5	1530.0
9	R2	65	25.9	1683.5
Approach		269	13.6	
10	L2	66	6.5	429
11	T1	171	17.1	2924.1
Approach		237	13.1	
All Vehicles		862	13.4	11349.7

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	206	4.9	1009.4
6	R2	203	22.1	4486.3
Approach		408	13.4	
7	L2	122	7.7	939.4
9	R2	65	25.6	1664.0
Approach		187	15.8	
10	L2	65	6.6	429
11	T1	206	17.8	3666.8
Approach		271	14.2	
All Vehicles		867	14.2	12194.9

Beaudesert Boonah Road / Sandy Creek Road Aggregate Delay (per intersection) 16.7% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	12	6.8	81.6
3	R2	62	13.4	830.8
Approach		74	12.3	
4	L2	97	5.7	552.9
5	T1	225	0.0	0.0
Approach		321	1.7	
11	T1	149	0.0	0.0
12	R2	26	7.5	195.0
Approach		175	1.1	
All Vehicles		570	2.9	1660.3

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	16	6.6	105.6
3	R2	90	13.8	1242.0
Approach		106	12.7	
4	L2	47	5.6	263.2
5	T1	193	0.0	0.0
Approach		240	1.1	
11	T1	290	0.0	0.0
12	R2	10	7.5	75.0
Approach		300	0.3	
All Vehicles		647	2.6	1685.8

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	12	7.2	86.4
3	R2	62	16.3	1010.6
Approach		74	14.8	
4	L2	97	5.7	552.9
5	T1	225	0.0	0.0
Approach		321	1.6	
11	T1	149	0.0	0.0
12	R2	26	7.9	205.4
Approach		175	1.0	
All Vehicles		570	2.9	1855.3

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	16	7.6	121.6
3	R2	90	17.3	1557.0
Approach		106	15.9	
4	L2	47	5.6	263.2
5	T1	193	0.0	0.0
Approach		240	1.0	
11	T1	290	0.1	29.0
12	R2	10	7.9	79.0
Approach		300	0.3	
All Vehicles		647	2.9	2049.8

Beaudesert Boonah Road / Bromelton House Road Aggregate Delay (per intersection) 10.0% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	264	0.5	132.0
6	R2	55	6.6	363
Approach		319	1.6	
7	L2	102	9.4	958.8
9	R2	65	15.2	988
Approach		168	11.7	
10	L2	43	5.5	236.5
11	T1	167	0.0	0.0
Approach		210	1.2	
All Vehicles		696	3.9	2678.3

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	206	0.8	164.8
6	R2	129	7.9	1019.1
Approach		334	3.5	
7	L2	64	10.9	697.6
9	R2	41	18.1	742.1
Approach		105	13.7	
10	L2	108	5.6	604.8
11	T1	297	0.1	29.7
Approach		405	1.5	
All Vehicles		845	3.8	3258.1

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	264	0.6	158.4
6	R2	55	6.9	379.5
Approach		319	1.6	
7	L2	102	10.1	1030.2
9	R2	65	18	1170
Approach		168	13.2	
10	L2	43	5.5	236.5
11	T1	167	0.0	0.0
Approach		210	1.0	
All Vehicles		696	3.9	2974.6

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	206	1.1	226.6
6	R2	129	8.3	1070.7
Approach		334	3.6	
7	L2	64	11.7	748.8
9	R2	41	21.4	877.4
Approach		105	15.5	
10	L2	108	5.6	604.8
11	T1	297	0.1	29.7
Approach		405	1.4	
All Vehicles		845	3.9	3558.0

Beaudesert Boonah Road / Ilbogan Road Aggregate Delay (per intersection) 9.7% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	14	7.8	109.2
3	R2	10	12.0	120.0
Approach		23	9.6	
4	L2	18	5.6	100.8
5	T1	314	0.0	0.0
Approach		332	0.3	
11	T1	263	0.7	184.1
12	R2	33	8.5	280.5
Approach		296	1.6	
All Vehicles		651	1.2	794.6

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	26	7.6	197.6
3	R2	16	13.5	216.0
Approach		42	9.9	
4	L2	26	5.6	145.6
5	T1	297	0.0	0.0
Approach		323	0.5	
11	T1	317	0.5	158.5
12	R2	29	8.3	240.7
Approach		346	1.2	
All Vehicles		711	1.4	958.4

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	14	8.3	116.2
3	R2	10	14.0	140.0
Approach		23	10.6	
4	L2	18	5.6	100.8
5	T1	314	0.0	0.0
Approach		332	0.3	
11	T1	263	0.8	210.4
12	R2	33	9.2	303.6
Approach		296	1.6	
All Vehicles		651	1.2	871.0

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	26	8.0	208.0
3	R2	16	15.8	252.8
Approach		42	11.0	
4	L2	26	5.6	145.6
5	T1	297	0.0	0.0
Approach		323	0.4	
11	T1	317	0.6	190.2
12	R2	29	8.8	255.2
Approach		346	1.3	
All Vehicles		711	1.4	1051.8

Beaudesert Boonah Road / Lupton Road Aggregate Delay (per intersection) 15.3% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	329	0.0	0.0
6	R2	6	6.1	36.6
Approach		335	0.1	
7	L2	3	6.4	19.2
9	R2	3	10.2	30.6
Approach		6	8.3	
10	L2	1	5.6	5.6
11	T1	269	0.0	0.0
Approach		270	0.1	
All Vehicles		612	0.2	92.0

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	331	0.0	0.0
6	R2	1	5.7	5.7
Approach		332	0.0	
7	L2	13	6.8	88.4
9	R2	4	13.8	55.2
Approach		18	8.5	
10	L2	1	6.7	6.7
11	T1	349	0.1	34.9
Approach		350	0.1	
All Vehicles		699	0.3	190.9

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	329	0.0	0.0
6	R2	6	6.3	37.8
Approach		335	0.1	
7	L2	3	6.6	19.8
9	R2	3	11.4	34.2
Approach		6	9.0	
10	L2	1	5.6	5.6
11	T1	269	0.1	26.9
Approach		270	0.1	
All Vehicles		612	0.2	124.3

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	331	0.0	0.0
6	R2	1	5.7	5.7
Approach		332	0.0	
7	L2	13	7.0	91.0
9	R2	4	15.9	63.6
Approach		18	9.1	
10	L2	1	6.7	6.7
11	T1	349	0.1	34.9
Approach		350	0.1	
All Vehicles		699	0.3	201.9

Brisbane Street / Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway Aggregate Delay (per intersection) 6.6% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	3	43.4	130.2
2	T1	283	41.3	11687.9
3	R2	48	46.4	2227.2
Approach		335	42.1	
4	L2	40	22.0	880.0
5	T1	13	15.2	197.6
6	R2	696	34.1	23733.6
Approach		749	33.1	
7	L2	1112	7.3	8117.6
8	T1	347	42.6	14782.2
9	R2	14	44.9	628.6
Approach		1474	16.0	
10	L2	8	12.9	103.2
11	T1	21	21.2	445.2
12	R2	7	44.6	312.2
Approach		35	23.8	
All Vehicles		2593	24.4	63245.5

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	10	62.1	621.0
2	T1	268	62.6	16776.8
3	R2	268	67.3	18036.4
Approach		545	64.9	
4	L2	44	38.6	1698.4
5	T1	14	31.2	436.8
6	R2	803	58.8	47216.4
Approach		861	57.4	
7	L2	861	7.4	6371.4
8	T1	143	54.3	7764.9
9	R2	7	50.4	352.8
Approach		1011	14.4	
10	L2	14	18.7	261.8
11	T1	17	37.0	629
12	R2	3	67.9	203.7
Approach		34	32.5	
All Vehicles		2450	41.0	100369.4

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	3	43.0	129.0
2	T1	283	43.4	12282.2
3	R2	48	46.4	2227.2
Approach		335	43.8	
4	L2	40	23.2	928.0
5	T1	13	16.3	211.9
6	R2	696	38.0	26448.0
Approach		749	36.9	
7	L2	1112	8.6	9563.2
8	T1	347	44.5	15441.5
9	R2	14	44.9	628.6
Approach		1474	18.0	
10	L2	8	14.1	112.8
11	T1	21	21.5	451.5
12	R2	7	44.6	312.2
Approach		35	24.2	
All Vehicles		2593	27.0	68736.1

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	10	60.6	606.0
2	T1	268	63.5	17018
3	R2	268	74.0	19832
Approach		545	68.3	
4	L2	44	39.9	1755.6
5	T1	14	32.5	455.0
6	R2	803	63.6	51070.8
Approach		861	61.9	
7	L2	861	6.8	5854.8
8	T1	143	53.2	7607.6
9	R2	7	51.4	359.8
Approach		1011	15.0	
10	L2	14	20.5	287
11	T1	17	37.4	635.8
12	R2	3	67.9	203.7
Approach		34	33.4	
All Vehicles		2450	43.5	105686.1

Appendix L

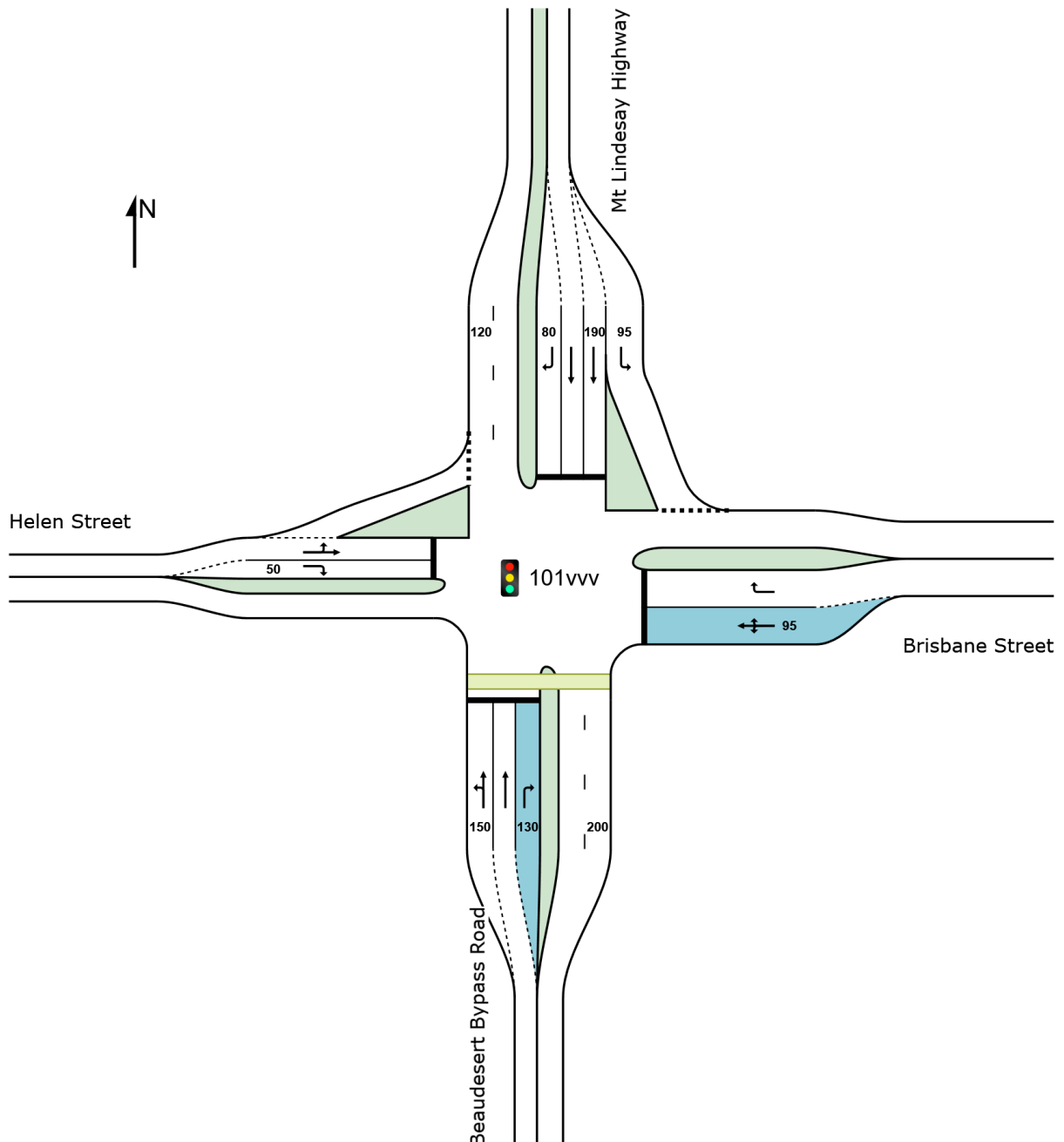
Upgraded intersection outputs

SITE LAYOUT

 Site: 101vvv [Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street - Upgraded (Site Folder: 2032 Post Development AM)]

293683 Bromelton Energy and Resource Centre
Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street
2032 AM Post Development Upgraded Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated

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



Site: 101vvv [Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street - Upgraded (Site Folder: 2032 Post Development AM)]

293683 Bromelton Energy and Resource Centre
Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street
2032 AM Post Development Upgraded Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 80 seconds (Site User-Given Cycle Time)

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.

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE [Ped Dist] ped m		Prop. Que	Eff. Stop Rate	Travel Time sec	Travel Dist. m	Aver. Speed m/sec
South: Beaudesert Bypass Road												

P1 Full	50	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06
All Pedestrians	0	53	34.3	LOS D	0.1	0.1	0.93	0.93	188.1	200.0	1.06

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

Site: 101vvv [Beauesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street - Upgraded (Site Folder: 2032 Post Development PM)]

293683 Bromelton Energy and Resource Centre
Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway / Brisbane Street
2032 PM Post Development Upgraded Conditions
Site Category: (None)
Signals - EQUISAT (Fixed-Time/SCATS) Isolated Cycle Time = 120 seconds (Site User-Given Cycle Time)

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.

Pedestrian Movement Performance												
Mov ID	Crossing	Input Vol.	Dem. Flow	Aver. Delay	Level of Service	AVERAGE BACK OF QUEUE		Prop. Que	Eff. Stop Rate	Travel Time	Travel Dist.	Aver. Speed
		ped/h	ped/h	sec		[Ped	Dist]			sec	m	m/sec
South: Beaudesert Bypass Road												

P1 Full	50	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96
All Pedestrians	0	53	54.3	LOS E	0.2	0.2	0.95	0.95	208.1	200.0	0.96

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

Total Intersection Aggregate Delay Impact - Upgraded		
Sum WD	169691.8	2828.2
Sum BC	198066.2	3301.1
ID	-28374.4	-472.907
% Impact	-14.33%	

Beaudesert Boonah Road / Beaudesert Bypass Road / Bromelton Street

Aggregate Delay (per intersection)

1.8% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	188	4.6	864.8
6	R2	167	21.7	3623.9
Approach		355	12.6	
7	L2	204	7.5	1530.0
9	R2	65	26.0	1690.0
Approach		269	12.0	
10	L2	66	6.2	409.2
11	T1	171	17.1	2924.1
Approach		237	14.1	
All Vehicles		862	12.8	11042.0

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	206	4.9	1009.4
6	R2	203	22.1	4486.3
Approach		408	13.4	
7	L2	122	7.7	939.4
9	R2	65	24.2	1573.0
Approach		187	13.5	
10	L2	65	6.4	416.0
11	T1	206	17.8	3666.8
Approach		271	15.0	
All Vehicles		867	13.9	12090.9

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	188	5.1	958.8
6	R2	167	22.9	3824.3
Approach		355	13.4	
7	L2	204	7.5	1530.0
9	R2	65	25.9	1683.5
Approach		269	13.6	
10	L2	66	6.5	429
11	T1	171	17.1	2924.1
Approach		237	13.1	
All Vehicles		862	13.4	11349.7

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	206	4.9	1009.4
6	R2	203	22.1	4486.3
Approach		408	13.4	
7	L2	122	7.7	939.4
9	R2	65	25.6	1664.0
Approach		187	15.8	
10	L2	65	6.6	429
11	T1	206	17.8	3666.8
Approach		271	14.2	
All Vehicles		867	14.2	12194.9

Beaudesert Boonah Road / Sandy Creek Road

Aggregate Delay (per intersection)

16.7% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	12	6.8	81.6
3	R2	62	13.4	830.8
Approach		74	12.3	
4	L2	97	5.7	552.9
5	T1	225	0.0	0.0
Approach		321	1.7	
11	T1	149	0.0	0.0
12	R2	26	7.5	195.0
Approach		175	1.1	
All Vehicles		570	2.9	1660.3

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	16	6.6	105.6
3	R2	90	13.8	1242.0
Approach		106	12.7	
4	L2	47	5.6	263.2
5	T1	193	0.0	0.0
Approach		240	1.1	
11	T1	290	0.0	0.0
12	R2	10	7.5	75.0
Approach		300	0.3	
All Vehicles		647	2.6	1685.8

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	12	7.2	86.4
3	R2	62	16.3	1010.6
Approach		74	14.8	
4	L2	97	5.7	552.9
5	T1	225	0.0	0.0
Approach		321	1.6	
11	T1	149	0.0	0.0
12	R2	26	7.9	205.4
Approach		175	1.0	
All Vehicles		570	2.9	1855.3

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	16	7.6	121.6
3	R2	90	17.3	1557.0
Approach		106	15.9	
4	L2	47	5.6	263.2
5	T1	193	0.0	0.0
Approach		240	1.0	
11	T1	290	0.1	29.0
12	R2	10	7.9	79.0
Approach		300	0.3	
All Vehicles		647	2.9	2049.8

Beaudesert Boonah Road / Bromelton House Road

Aggregate Delay (per intersection)

10.0% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	264	0.5	132.0
6	R2	55	6.6	363
Approach		319	1.6	
7	L2	102	9.4	958.8
9	R2	65	15.2	988
Approach		168	11.7	
10	L2	43	5.5	236.5
11	T1	167	0.0	0.0
Approach		210	1.2	
All Vehicles		696	3.9	2678.3

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	206	0.8	164.8
6	R2	129	7.9	1019.1
Approach		334	3.5	
7	L2	64	10.9	697.6
9	R2	41	18.1	742.1
Approach		105	13.7	
10	L2	108	5.6	604.8
11	T1	297	0.1	29.7
Approach		405	1.5	
All Vehicles		845	3.8	3258.1

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	264	0.6	158.4
6	R2	55	6.9	379.5
Approach		319	1.6	
7	L2	102	10.1	1030.2
9	R2	65	18	1170
Approach		168	13.2	
10	L2	43	5.5	236.5
11	T1	167	0.0	0.0
Approach		210	1.0	
All Vehicles		696	3.9	2974.6

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	206	1.1	226.6
6	R2	129	8.3	1070.7
Approach		334	3.6	
7	L2	64	11.7	748.8
9	R2	41	21.4	877.4
Approach		105	15.5	
10	L2	108	5.6	604.8
11	T1	297	0.1	29.7
Approach		405	1.4	
All Vehicles		845	3.9	3558.0

Beaudesert Boonah Road / Ilbogan Road

Aggregate Delay (per intersection)

9.7% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	14	7.8	109.2
3	R2	10	12.0	120.0
Approach		23	9.6	
4	L2	18	5.6	100.8
5	T1	314	0.0	0.0
Approach		332	0.3	
11	T1	263	0.7	184.1
12	R2	33	8.5	280.5
Approach		296	1.6	
All Vehicles		651	1.2	794.6

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	26	7.6	197.6
3	R2	16	13.5	216.0
Approach		42	9.9	
4	L2	26	5.6	145.6
5	T1	297	0.0	0.0
Approach		323	0.5	
11	T1	317	0.5	158.5
12	R2	29	8.3	240.7
Approach		346	1.2	
All Vehicles		711	1.4	958.4

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	14	8.3	116.2
3	R2	10	14.0	140.0
Approach		23	10.6	
4	L2	18	5.6	100.8
5	T1	314	0.0	0.0
Approach		332	0.3	
11	T1	263	0.8	210.4
12	R2	33	9.2	303.6
Approach		296	1.6	
All Vehicles		651	1.2	871.0

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	26	8.0	208.0
3	R2	16	15.8	252.8
Approach		42	11.0	
4	L2	26	5.6	145.6
5	T1	297	0.0	0.0
Approach		323	0.4	
11	T1	317	0.6	190.2
12	R2	29	8.8	255.2
Approach		346	1.3	
All Vehicles		711	1.4	1051.8

Beaudesert Boonah Road / Lupton Road

Aggregate Delay (per intersection)

15.3% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	329	0.0	0.0
6	R2	6	6.1	36.6
Approach		335	0.1	
7	L2	3	6.4	19.2
9	R2	3	10.2	30.6
Approach		6	8.3	
10	L2	1	5.6	5.6
11	T1	269	0.0	0.0
Approach		270	0.1	
All Vehicles		612	0.2	92.0

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
5	T1	331	0.0	0.0
6	R2	1	5.7	5.7
Approach		332	0.0	
7	L2	13	6.8	88.4
9	R2	4	13.8	55.2
Approach		18	8.5	
10	L2	1	6.7	6.7
11	T1	349	0.1	34.9
Approach		350	0.1	
All Vehicles		699	0.3	190.9

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	329	0.0	0.0
6	R2	6	6.3	37.8
Approach		335	0.1	
7	L2	3	6.6	19.8
9	R2	3	11.4	34.2
Approach		6	9.0	
10	L2	1	5.6	5.6
11	T1	269	0.1	26.9
Approach		270	0.1	
All Vehicles		612	0.2	124.3

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
5	T1	331	0.0	0.0
6	R2	1	5.7	5.7
Approach		332	0.0	
7	L2	13	7.0	91.0
9	R2	4	15.9	63.6
Approach		18	9.1	
10	L2	1	6.7	6.7
11	T1	349	0.1	34.9
Approach		350	0.1	
All Vehicles		699	0.3	201.9

Brisbane Street / Beaudesert Bypass Road / Helen Street / Mt Lindesay Highway

Aggregate Delay (per intersection)

-18.4% increase

2032 AM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	3	43.4	130.2
2	T1	283	41.3	11687.9
3	R2	48	46.4	2227.2
Approach		335	42.1	
4	L2	40	22.0	880.0
5	T1	13	15.2	197.6
6	R2	696	34.1	23733.6
Approach		749	33.1	
7	L2	1112	7.3	8117.6
8	T1	347	42.6	14782.2
9	R2	14	44.9	628.6
Approach		1474	16.0	
10	L2	8	12.9	103.2
11	T1	21	21.2	445.2
12	R2	7	44.6	312.2
Approach		35	23.8	
All Vehicles		2593	24.4	63245.5

2032 PM Peak Base Case				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	BC (veh-sec)
1	L2	10	62.1	621.0
2	T1	268	62.6	16776.8
3	R2	268	67.3	18036.4
Approach		545	64.9	
4	L2	44	38.6	1698.4
5	T1	14	31.2	436.8
6	R2	803	58.8	47216.4
Approach		861	57.4	
7	L2	861	7.4	6371.4
8	T1	143	54.3	7764.9
9	R2	7	50.4	352.8
Approach		1011	14.4	
10	L2	14	18.7	261.8
11	T1	17	37.0	629
12	R2	3	67.9	203.7
Approach		34	32.5	
All Vehicles		2450	41.0	100369.4

2032 AM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	3	38.1	114.3
2	T1	283	33.7	9537.1
3	R2	48	46.4	2227.2
Approach		335	35.4	
4	L2	40	28.0	1120.0
5	T1	13	20.7	269.1
6	R2	696	28.0	19488.0
Approach		749	27.9	
7	L2	1112	7.3	8117.6
8	T1	347	33.9	11763.3
9	R2	14	44.9	628.6
Approach		1474	14.4	
10	L2	8	9.6	76.8
11	T1	21	21.1	443.1
12	R2	7	44.6	312.2
Approach		35	23.0	
All Vehicles		2593	21.3	54097.3

2032 PM Peak With Development				
Mov ID	OD Mov	Total (veh/h)	Average Delay (sec)	WD (veh-sec)
1	L2	10	55.9	559.0
2	T1	268	52.7	14123.6
3	R2	268	54.0	14472
Approach		545	53.3	
4	L2	44	39.7	1746.8
5	T1	14	31.5	441.0
6	R2	803	39.8	31959.4
Approach		861	39.6	
7	L2	861	9	7749
8	T1	143	48.7	6964.1
9	R2	7	45.7	319.9
Approach		1011	16.0	
10	L2	14	12.4	173.6
11	T1	17	38.3	651.1
12	R2	3	67.9	203.7
Approach		34	30.6	
All Vehicles		2450	32.8	79363.2

Appendix M

Road Safety Audit

Cleanaway Operations Pty Ltd

Bromelton Energy and Resource Centre

Concept Design Road Safety Audit Report

Reference: 293683-ARU-00-RSA-RPT-0001

Draft | 4 November 2025



This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 293683-00

Arup Australia Pty Ltd | ABN 76 625 912 665

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		Name	Paul Poulsen / Thomas Herrmann	Paul Poulsen	Paul Poulsen
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1. Introduction

Arup has been engaged by Cleanaway Operations Pty Ltd (Cleanaway), an Australian waste management, recycling and industrial services company to examine the traffic implications of a new planned Energy from Waste (EfW) facility at Lot 1 Beaudesert-Boonah Road, Bromelton.

The proposed works include the signalisation and general intersection upgrade at the intersection of Recycling Street (Quickcell Technology Products Pty Ltd access), Beaudesert-Boonah Road and the proposed site access road. The intersection upgrade also includes the following:

- Reduction of posted speed from 100km/h to 70km/h through the site (occurring approximately 300m upstream and downstream of the site)
- Accommodations for vehicles of maximum size 36.2m A-double (planned for future use)
- Designed to accommodate regular use of 26m B-double

Arup has further been commissioned to undertake a Road Safety Audit (RSA) on the Concept Design of the intersection signalisation/ upgrade to identify potential safety issues. This report documents the RSA for the extents illustrated in Figure 1 for Beaudesert-Boonah Road, Quickcell Technology Products Pty Ltd access and SCT Logistics access.

1.1 Study area

Beaudesert-Boonah Road (refer Figure 1) operates as the major link between Beaudesert and Boonah. The current posted speed of Beaudesert-Boonah Road is 100km/h, and is a rural type environment with an existing AADT of less than 4,000.

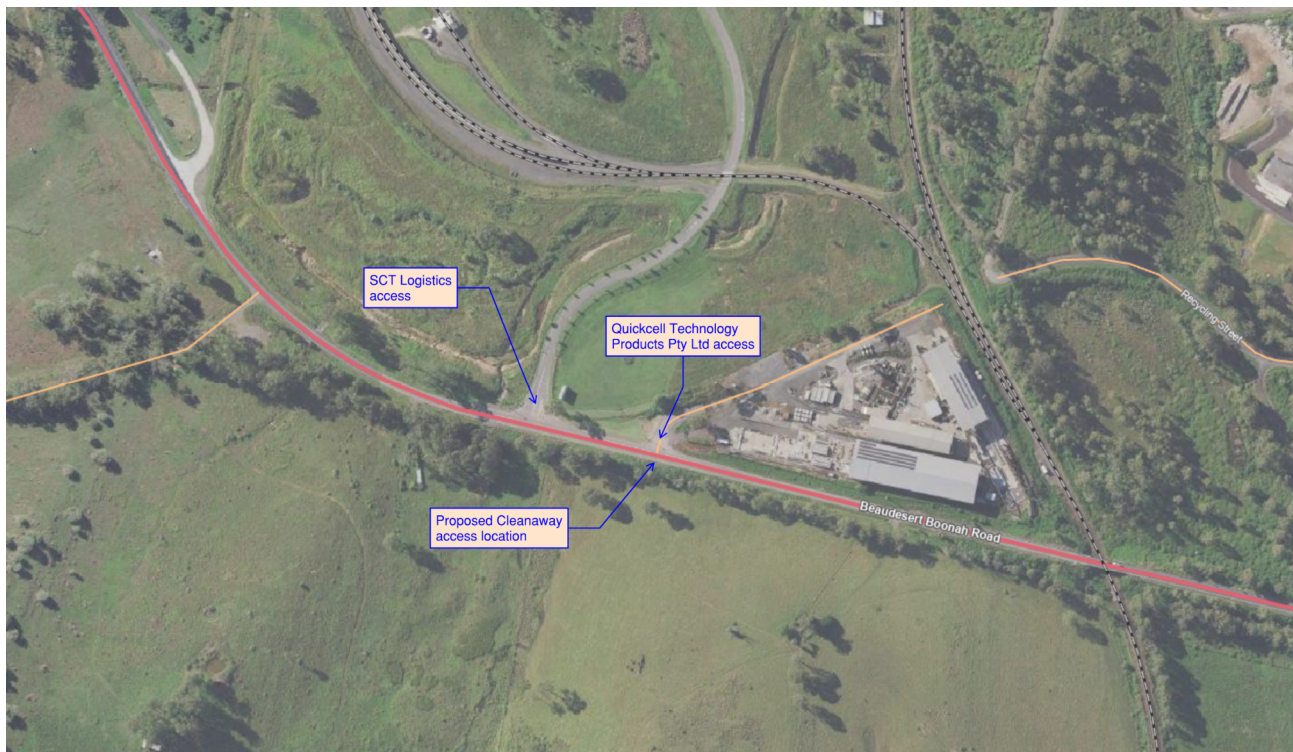


Figure 1 Overview of RSA study area

2. Audit process

2.1 The road safety audit

The *Austroads Guide to Road Safety Part 6: Road Safety Audit (2022)* defines an RSA as:

“a formal examination of a future road or traffic project or an existing road or road related area, in which an independent, qualified team reports on the project’s crash potential and actual safety performance respectively.”

An audit is not a check against the design standards and does not imply compliance with the standards, which may represent the minimum requirements. The essential elements of this definition are that the audit:

- is completed by an independent and qualified audit team
- considers the safety of all road users (unless specified within the audit brief), crash types and severities
- is aligned with the Safe System principles which focuses on eliminating fatal and serious injury crash potential
- can be conducted on proposed or existing roads.

The objective of an RSA is to identify foreseeable hazards for all users. It does not guarantee safety. The RSA process provides a reasonable, but not absolute, hazard identification method for all road users with a particular focus on the reduction in fatal and serious injuries.

The benefits of conducting RSAs include:

- the exposure of road users to safety risks can be reduced
- the likelihood of crashes on the road network can be reduced
- the severity of crashes that occur can be reduced.

2.2 Limitations of road safety audit

Whilst RSAs are detailed in some respects, they represent a relatively brief assessment of a road network or of an associated feature and are not intended to extend to or investigate every aspect which may potentially have some level of influence on road function or safety.

It should not be expected that a review has been carried out in relation to issues requiring specific verification testing in order to confirm conformity with all of the relevant (and possibly exacting) standards, or where a level of detailed investigation is required that is inconsistent with the general audit process.

In an audit it may be appropriate to ensure the existence of aspects such as roadway lighting, but the actual levels or quality would not be verified in absolute terms.

In general, auditors are unfamiliar with the roads under review and may be unaware of all of the circumstances of use of a road or all of the conditions that exist from time to time (e.g. specific traffic manoeuvres, sun glare from a building during a short period of the day).

2.3 Audit team

This RSA was undertaken by:

- Audit team lead – Paul Poulsen (Senior Technician)
- Thomas Herrmann (Engineer)

Paul Poulsen is registered as a Senior Road Safety Auditor on the TMR Road Safety Auditor Register. Thomas Herrmann is registered as a Road Safety Auditor on the TMR Road Safety Auditor Register.

2.4 Information sources

References used for the RSA include:

- Austroads Guide to Road Safety
- Austroads Guide to Road Design
- Austroads Guide to Traffic Management
- TMR Road Planning and Design Manual
- TMR Manual of Uniform Traffic Control Devices (MUTCD)

2.5 Inception meeting

An inception meeting was held on 21st October 2025 between Madi Taylor (senior traffic engineer for the project), Paul Poulsen (Arup audit team) and Thomas Herrmann (Arup audit team). As part of the inception correspondence, key issues and focus areas were discussed.

2.6 Site visit

Day and night site visits were undertaken on 27th October 2024. The weather conditions for both the day and night site visits were both sunny with minimal cloud cover, but hazy.

The site visit inspections included a vehicular drive through the trafficable lanes and a general pedestrian walk through within the site extents. All drive throughs were recorded, allowing the audit team to analyse the footage post site visit to review initial findings and/or assess additional safety concerns. Photos were also captured during the pedestrian walk through for the same purpose.

2.7 Methodology

This RSA was carried out to review the existing conditions in the vicinity of the site and identify potential road user safety issues, including specific risks to vulnerable road users. It was undertaken in accordance with the practices outlined in the *Austroads Guide to Road Safety Part 6: Road Safety Audit* (2022). The audit covers physical features of the existing network which may affect road user safety and it has sought to identify potential safety deficiencies.

However, the auditors point out that no guarantee is made that every deficiency has been identified. Further, if all recommendations in the report were to be followed, this would not guarantee that the existing roads are 'safe' rather the adoption of the recommendations should improve the level of safety of the roads.

Safety deficiencies identified in this report have been rated based on the likelihood and severity of a traffic accident resulting from the identified issue as described in the tables below. These tables have been reproduced from *Austroads Guide to Road Safety Part 6: Road Safety Audit* (2022).

Table 1: Likelihood

Frequency	Description
Almost Certain	Occurrence once per quarter
Likely	Occurrence once per quarter to once per year
Possible	Occurrence once per year to once every three years
Unlikely	Occurrence once every three years to once every seven years
Rare	Occurrence less than once every seven years

Table 2: Severity Guidance

		CRASH SPEED (km/h)										
		<10	10	20	30	40	50	60	70	80	90	100
Crash type	Pedestrian (vs HV)											
	Cyclist (vs HV)											
	Motorcyclist (vs car)											
	Pedestrian (vs car)											
	Cyclist (vs car)											
	Pole/Tree Impact (car)											
	Motorcyclist (vs car)											
	Side Impact (HV vs car)											
	Side Impact (car vs car)											
	Head On (HV vs car)											
	Head on (car vs car)											

The information contained within the severity guidance sheet is a general indication only.

Table 3: Resulting level of risk

			Severity				
			Insignificant	Minor	Moderate	Serious	Fatal
			Property damage	Minor first aid	Major first aid and/or presents to hospital (not admitted)	Admitted to hospital	Death within 30 days of crash
Likelihood	Almost Certain	One per quarter	Medium	High	High	Extreme (FSI)	Extreme (FSI)
	Likely	Quarter to 1-year	Medium	Medium	High	Extreme (FSI)	Extreme (FSI)
	Possible	1 to 3 years	Low	Medium	High	High (FSI)	Extreme (FSI)
	Unlikely	3 to 7 years	Negligible	Low	Medium	High (FSI)	Extreme (FSI)
	Rare	>7 years	Negligible	Negligible	Low	Medium (FSI)	High (FSI)

Table 4: Corresponding priorities for mitigation

Risk	Description
Negligible	No action required
Low	Should be corrected or the risk reduced if the treatment is low cost
Medium	Should be corrected or the risk significantly reduced, if the treatment cost is moderate, but not high
High	Should be corrected or the risk significantly reduced, even if the treatment cost is high
Extreme	Must be corrected regardless of cost

Possible actions have been suggested for the identified deficiencies. These should be considered as a guide to assist with the investigation of remedial measures.

2.8 Interpretation of audit results

As set out in the RSA guidelines, responsibility for the RSA always rests with the road controlling authority and not with the auditor. An asset owner is under no obligation to accept all the of audit recommendations. Also, it is not the role of the auditor to agree to or approve of the asset owner's response to the audit. Rather, the audit provides the opportunity to highlight potential safety issues and have them formally considered by the asset owner, in conjunction with all other asset considerations.

3. Audit findings

3.1 Summary of findings and recommendations

A summary of the findings and their subsequent risk rating is listed below in Table 5 with a detailed description of each finding presented in Appendix A. The findings are not presented in order of relative safety, importance, priority for treatment or chainage.

Table 5: Summary of audit findings

Item	Finding	Risk Rating
1	SCT Logistics Intersection Sight distance for egress of lot	High
2	Quickcell Technology Products Pty Ltd Intersection Second driveway consideration	Negligible
3	Project Area Large number of roadkill	Medium
4	Project Area Vehicle storage requirements	High
5	Project Area Wide centre line treatment (WCLT)	Medium (FSI)
6	Project Area Audio tactile line marking (ATLM) and sealed shoulders	Medium
7	Project Area Light poles, power poles and large trees close to edge line	Medium
8	Project Area Steep batters and drains	Medium
9	Project Area Culverts	Medium
10	Project Area Speed reduction compliance	Medium
11	Project Area Cyclist consideration	Medium (FSI)
12	Project Area General pavement marking design	Negligible
13	Project Area General signage design	Negligible
14	Project Area Signal design (including phasing)	High (FSI)
15	Project Area Existing and proposed lighting.	High
16	Project Area Requirement for large kerbing	Negligible
17	Quickcell Technology Products Pty Ltd Intersection No left turn into facility for eastbound traffic.	Medium
18	Project Area Deceleration lengths	Medium
19	Project Area Design and check vehicles	Low
20	Subject site Gate positioning	High
21	SCT Logistics Intersection Staggered stop/ give way locations	Low
22	Project Area Lane widths	Low
23	Project Area Median type	Negligible
24	Quickcell Technology Products Pty Ltd Intersection Median width	Low
25	Project Area Clearance envelope encroaching kerb line	Medium

Item	Finding	Risk Rating
26	SCT Logistics Intersection Left out egress swept path	Negligible
27	Quickcell Technology Products Pty Ltd Intersection Access and egress swept paths	Negligible
28	Project Area Access and egress swept paths	Low
29	Quickcell Technology Products Pty Ltd Intersection Lack of raised central median	Negligible
30	SCT Logistics Intersection Speed of egressing vehicles	High
31	Project Area Wide swept paths	Medium

4. Audit team statement

This RSA was carried out by the audit team based on the existing conditions of the site and inception meeting conducted.

Suggested actions have been indicated, where applicable. Such actions are not likely to be the only possible measures available, therefore it is recommended that any suggested actions provided be used only as a guide, and that other treatments should be considered.

The audit findings and suggested actions included in this report have been compiled by the following persons:



.....
Paul Poulsen (Senior Technician)

Senior Road Safety Auditor

Date: 3/11/2025



.....
Thomas Herrmann (Engineer)

Road Safety Auditor

Date: 29/10/2025

Appendix A

Road Safety Audit findings

1	SCT Logistics Intersection	Sight distance for egress of lot	Vehicles egressing the SCT Logistics site have limited sight distance when attempting to site west around the horizontal curve of the road. Sight distance is impeded by light/ power poles, business signage and trees, for both the right out and left out movements from the lot. Impeded sight distance increases risk of intersection type crashes.		Possible	Moderate	High	Consider improving sight distance by removing conflicts. Consider improving sight distance by reconfiguring intersection.	Yes	Acknowledged. These sight distances issues exist with the current intersection layout. Sight distance will be reviewed at the next design stage.
2	Quickcell Technology Products Pty Ltd Intersection	Second driveway consideration	Current concept design does not include second driveway into lot. Consideration of second driveway may influence intersection type and layout.		Unlikely	Insignificant	Negligible	Consider second driveway into lot when developing intersection layout.	No	Acknowledged. The concept design includes a single driveway. The second access needs to be clarified through discussions with the landholder. The final design will develop a layout that provides safe and efficient access for both Cleanaway and Quickcell Technology Products.
3	Project Area	Large number of roadkill	A large number of roadkill was observed on site, which may influence further design development (such as barrier design and more).	N/A	Likely	Insignificant	Medium	Consider number of animals that may be present on the roadway throughout design development. Consider limited use and/ or gaps for animal safe passage when designing roadside safety barriers.	Yes	Acknowledged. The potential presence of animals on the roadway will be considered throughout design development. Any roadside safety barrier design will incorporate limited use or gaps where appropriate to allow safe animal passage.

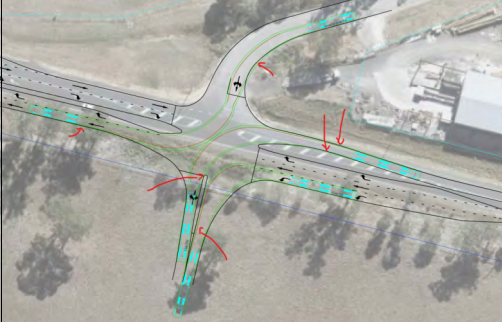
4 November 2025

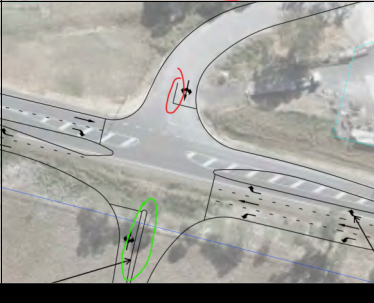
8	Project Area	Steep batters and drains	Steep batters and drains were observed to be close to the existing edge line. With potential widening required, the closer these hazards get to the edge line, the more hazardous they are to the road user, increasing risk of vehicle rollover and vehicles hitting non-recoverable slopes.			Unlikely	Moderate	Medium	Consider conducting Risk Score assessment on steep batters and drains that vehicles can potentially hit. If warranted, consider increasing lateral offset between edge line and roadside hazards. If warranted, consider protecting roadside hazards with roadside safety barrier.		Acknowledged. At the next design stage, a risk assessment of existing roadside hazards will be conducted, and measures such as installing safety barriers will be considered to reduce the risk of vehicle-object crashes.
9	Project Area	Culverts	Culverts (including culvert headwalls, vertical drops and potential for water to be present) were observed to be close to the existing edge line. With potential widening required, the closer these hazards get to the edge line, the more hazardous they are to the road user, increasing risk of vehicles hitting object and vertical drop into water type crashes.			Unlikely	Moderate	Medium	Consider conducting Risk Score assessment on culverts (including vehicle hitting object, vertical drops and potential for water to be present). If warranted, consider increasing lateral offset between edge line and roadside hazards. If warranted, consider protecting roadside hazards with roadside safety barrier.		Acknowledged. At the next design stage, a risk assessment of existing roadside hazards will be conducted, and measures such as installing safety barriers will be considered to reduce the risk of vehicle-object crashes.
10	Project Area	Speed reduction compliance	Drivers are not likely to comply with the proposed posted speed reduction from 100km/h to 70km/h due to the rural visual amenity of the site. This, coupled with the proposed signalized intersection, increases the risk of potential rear ending and intersection movement type crashes. Note, east of project area, a large crest within the existing vertical alignment was observed. To be considered when determining optimal location of speed reduction. Note, west of project area, a horizontal curve with steep longitudinal grade was observed. To be considered when determining optimal location of speed reduction.			Unlikely	Moderate	Medium	Consider alternative intersection arrangements that may be more fit for purpose. Consider conducting a Safe Systems Assessment (SSA) for proposed solution. Consider alternative arrangements with speed reduction to increase driver compliance. Consider incremental speed reductions. Consider both horizontal and vertical road geometry upstream and downstream of proposed intersection when selecting optimal speed reduction placement.	No	Acknowledged. Multiple intersection options have been considered, and the selected signalized intersection with Recycling Street layout has been agreed with TMR as the preferred solution. At the next design stage, consideration will be given to incremental speed reductions to enhance driver compliance and safety.

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18	Project Area	Deceleration lengths	Current design allows for 70m deceleration length within each turn lane. Based on a design speed of 80km/h, this is considered a "maximum" stopping type condition, with a more "comfortable" stopping condition being 100m. Consideration of grade correction is also not evident. With the consideration of heavy vehicles utilising the proposed turn lanes and their reduced stopping capabilities, using the maximum allowed stopping condition increases risk of rear ending and intersection type crashes.		Unlikely	Moderate	Medium	Consider increasing deceleration lengths within turn lanes.	Yes	Acknowledged. Deceleration length has been increased to 100 m. Refer to updated intersection drawings.
19	Project Area	Design and check vehicles	Current documentation is unclear as to what should be considered as the design vehicle and the check vehicle. Various lanes accessing the facility have been designed to cater for differing vehicle lengths, however swept paths indicate A-double sized vehicles will require straddling type movements through intersections. Clarity is required for what vehicles are required as design vehicles and check vehicles. If the intersection is designed with the design vehicle as a 26m B-double, and a check vehicle as a 36.2m A-double, and in future, the A-double sized vehicle is to be the most common vehicle to use the facility, the risk of geometry non-compliances increases, resulting in increased risk of intersection type crashes.		Rare	Moderate	Low	Clarify what vehicles are to be design and check vehicles throughout design development and ensure all intersection movements & swept paths accommodate design and check vehicle movements correctly.		BERC: Design + Check Vehicle: A double Quickcell Technology Product: Design: 19m articulated vehicle. Check: D double STC: Design + Check: B double
20	Subject site	Gate positioning	Gate does not appear to be positioned to allow the required vehicle to be stored at the gate and be clear of the intersection. Turning right into the facility, the largest required vehicle should be able to perform the movement and store at the gate, clear of the intersection to wait for the gate to open. Turning left into the facility, straddling movements are required, which also creates need for vehicles to be stored at the gate, clear of the intersection. If the vehicles store at the gate and encroach the intersection, risk of intersection and rear ending type crashes increases.		Possible	Moderate	High	Consider relocating gate to appropriate position to allow for vehicle storage at gate, clear of intersection.	No	The gate shown in purple represents the boundary fence. This gate would remain open during operation. The security gate, which can be opened and closed, is shown in orange. The security gate is aligned with the weighbridges, which are located more than 250 m inside the site boundary, providing sufficient space to ensure that vehicles are not queuing on the external road network.
21	SCT Logistics Intersection	Staggered stop/ give way locations	Documentation provided potentially shows misaligned/ staggered stop bar (right turn) and give way line (left turn) egressing the facility. This misalignment increases risk of impeded sight distances, increasing risk of intersection type crashes. Noted, both give way line marking and stop bars are not shown on plan. This assumption is due to the location of left out island and central median on the facility egress.		Unlikely	Minor	Low	Consider more cohesive alignment of stop bar, give way line marking and medians for egressing movements from facility throughout design development.	No	Stop and give way location shown are as per the existing intersection.

22	Project Area	Lane widths	General lane widths are not shown within documentation provided. This is considered critical for an intersection requiring large vehicle movements such as this. Incorrect lane widths may increase risk of intersection, opposing direction and one/ same direction type crashes.	N/A	Unlikely	Minor	Low	Consider appropriate lane widths throughout design development that cater for heavy vehicle use.	No	Lane widths are 3.5m.
23	Project Area	Median type	It is unclear what types of medians are to be provided within the documentation provided (i.e., physical/ raised medians or painted medians). It is assumed that the signalised intersection will have raised medians to house signal infrastructure, and the give way/ stop controlled intersection will have painted medians to allow for large vehicle swept paths. Distinguishing where raised and painted medians are positioned is critical to an intersection with high percentages of heavy vehicles to allow for large swept paths. If swept paths are not catered for, median islands and signal infrastructure can be impacted by vehicles.	N/A	Unlikely	Insignificant	Negligible	Consider showing raised and painted/ chevroned medians throughout design development.	Yes	Acknowledged. Raised medians have been defined in the updated drawings with two lines. Chevrons have also been shown. Refer to updated intersection drawings.
24	Quickcell Technology Products Pty Ltd Intersection	Median width	Medians nominated seem to meet minimum width criteria when housing signal infrastructure. However, with large vehicle movements required, increasing median width decreases risk of vehicles striking signal infrastructure. The minimum requirements met within AGRD P3 also list these requirements as appropriate to an urban setting, as opposed to the subject rural setting.	N/A	Possible	Insignificant	Low	Consider increasing median widths above minimums required to cater for rural environment and large vehicle types.	No	Median width has been reviewed and updated where required to allow for the 2.5 m width required to house signal infrastructure. Refer to updated intersection drawings.
25	Project Area	Clearance envelope encroaching kerb line	It is currently unclear what design strings represent within the documentation provided. Swept paths of design vehicles are to maintain required clearances from physical obstructions. If design strings are assumed to be kerb lines, various vehicle envelopes encroach over kerb lines. If appropriate geometry isn't provided to allow for the required swept path, risk of intersection type crashes increases.		Possible	Minor	Medium	Consider positioning of lane lines, edge lines, kerb lines and edge of pavement throughout design development in relation to vehicle swept paths.	Yes	Swept paths have been updated to ensure sufficient space is provided. Refer to updated intersection drawings.

26	SCT Logistics Intersection	Left out egress swept path	The left out swept path from the facility (B-double) swept path starts in an unrealistic position. Unclear if movement is possible from realistic starting position, increasing risk of conflict with kerb.		Rare	Minor	Negligible	Consider adjusting swept path to ensure realistic starting position.	Yes	Swept paths have been updated to ensure sufficient space is provided. Refer to updated intersection drawings.
27	Quickcell Technology Products Pty Ltd Intersection	Access and egress swept paths	Access and egress design vehicle swept paths show conflicting clearance envelopes when through the intersection and closest to facility gate. Geometry may be too constrained around access horizontal bend to allow for two design vehicles to pass each other, increasing risk of head on and side swipe type collisions.		Unlikely	Insignificant	Negligible	Consider widening access geometry to facility to accommodate two design vehicles to pass each other, ensuring clearance envelopes do not conflict.	No	This is an existing access arrangement.
28	Project Area	Access and egress swept paths	Various swept paths are shown to cross the center of the lane, increasing risk of head on and side swipe type crashes.		Rare	Moderate	Low	Consider review of geometry to allow all swept paths to be clear of center line/ opposing traffic stream.	Yes	Acknowledged. Updated swept paths have been undertaken. Refer revised intersection drawings.
29	Quickcell Technology Products Pty Ltd Intersection	Lack of raised central median	There is no median shown to house signal infrastructure on the Quickcell Technology Products leg of the intersection. If the central median was required for the subject site as shown, it is assumed similar warrants would apply to the opposing leg.		Rare	Insignificant	Negligible	Consider warrants for central raised median at Quickcell Technology Products leg of the intersection throughout design development.	No	A raised median has not been provided to allow for flexibility in terms of larger vehicles accessing Quickcell Technology Products. It is suggested that the traffic light is provided by an outreach signal.

30	SCT Logistics Intersection	Speed of egressing vehicles	Due to lack of sight distance available for egressing vehicles, vehicles were often observed evaluating their minimum gap a substantial distance back from the stop/ give way lines, where appropriate sight distance was available. Drivers would then make the decision to perform the required movement and speed up prior to the stop/ give way line, often to a speed where the vehicle would not be able to stop if needing to prior to entering the intersection. If an opposing vehicle is positioned where the egressing vehicle cannot sight, and the egressing vehicle has gained considerable speed, the risk of intersection and T-bone type crashes increases.			Possible	Moderate	High	Consider improving sight distance by removing conflicts. Consider improving sight distance by reconfiguring intersection.	No	This is the same issue flagged in item 1. Refer item 1 for response.
31	Project Area	Wide swept paths	The tire marks on site indicate vehicles needing to cross chevrons, center lines and make wide turns to complete the required movements. If the intersections are not generous enough to cater for heavy vehicle movements, this increases risk of intersection and side swipe type crashes.			Unlikely	Moderate	Medium	Consider intersection design with larger geometric factors to cater for large vehicles.	Yes	The revised intersection layout has provided a hatched area in addition to a raised median to accommodate heavy vehicles turning whilst still delineating the through movement.

Appendix B

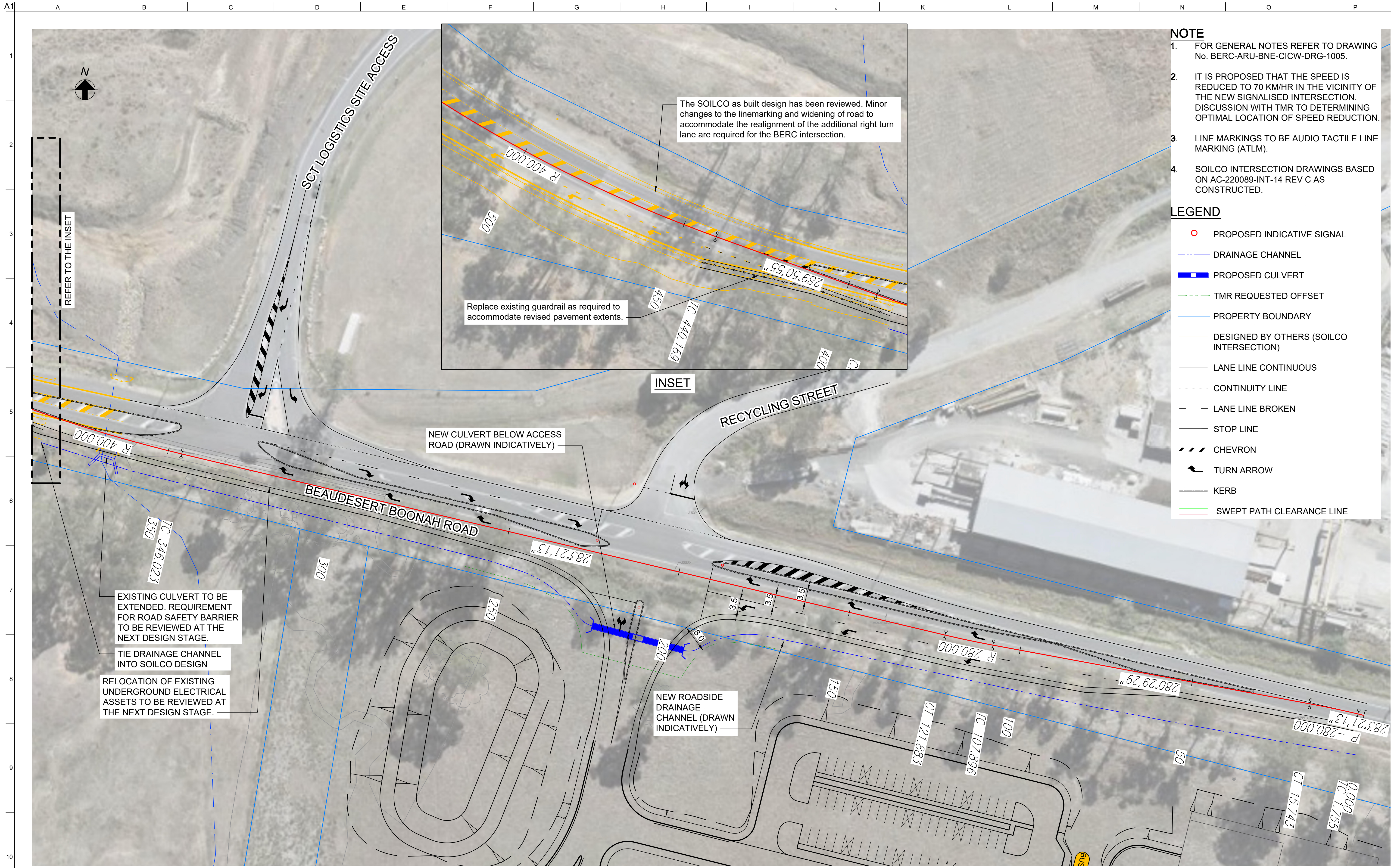
Summary of Documentation Provided for Audit

See a summary of documents provided for the purpose of the audit listed below. Note, all documents provided were provided in PDF form on the date of the inception meeting. All documents were provided via SharePoint electronic link.

- BERC DESIGN SIGNAL OPT B 80 Combined turn paths.pdf (6 pages)
 - o Documented dated 06/11/2023
- BERC DESIGN SIGNAL OPT B 80.pdf (1 page)
 - o Documented dated 06/11/2023
- BERC-ARUP-BNE-ARAR-DGR-001202 (1 page)
 - o Documented dated 19/09/2025

Appendix N

Updated Intersection Drawings



NOTE

- FOR GENERAL NOTES REFER TO DRAWING No. BERC-ARU-BNE-CICW-DRG-1005.
- IT IS PROPOSED THAT THE SPEED IS REDUCED TO 70 KM/HR IN THE VICINITY OF THE NEW SIGNALISED INTERSECTION. DISCUSSION WITH TMR TO DETERMINING OPTIMAL LOCATION OF SPEED REDUCTION.
- LINE MARKINGS TO BE AUDIO TACTILE LINE MARKING (ATLM).
- SOILCO INTERSECTION DRAWINGS BASED ON AC-220089-INT-14 REV C AS CONSTRUCTED.

LEGEND

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- PROPOSED CULVERT
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- PROPERTY BOUNDARY
- DESIGNED BY OTHERS (SOILCO INTERSECTION)
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- SWEPT PATH CLEARANCE LINE

EXISTING CULVERT TO BE EXTENDED. REQUIREMENT FOR ROAD SAFETY BARRIER TO BE REVIEWED AT THE NEXT DESIGN STAGE.

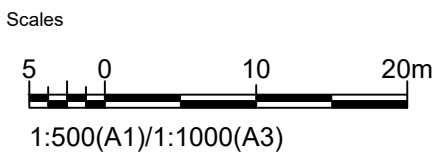
TIE DRAINAGE CHANNEL INTO SOILCO DESIGN

RELOCATION OF EXISTING UNDERGROUND ELECTRICAL ASSETS TO BE REVIEWED AT THE NEXT DESIGN STAGE.

The SOILCO as built design has been reviewed. Minor changes to the linemarking and widening of road to accommodate the realignment of the additional right turn lane are required for the BERC intersection.

Replace existing guardrail as required to accommodate revised pavement extents.

NOT FOR CONSTRUCTION



Issue	Date	By	Chkd	Appd

Issue	Date	By	Chkd	Appd

C	30.06.26	JH	AS	EM
ISSUED FOR INFORMATION				
B	22.01.26	PDA	ERA	EGM
ISSUED FOR INFORMATION				
A	21.11.25	PDA	ERA	EGM
ISSUED FOR INFORMATION				
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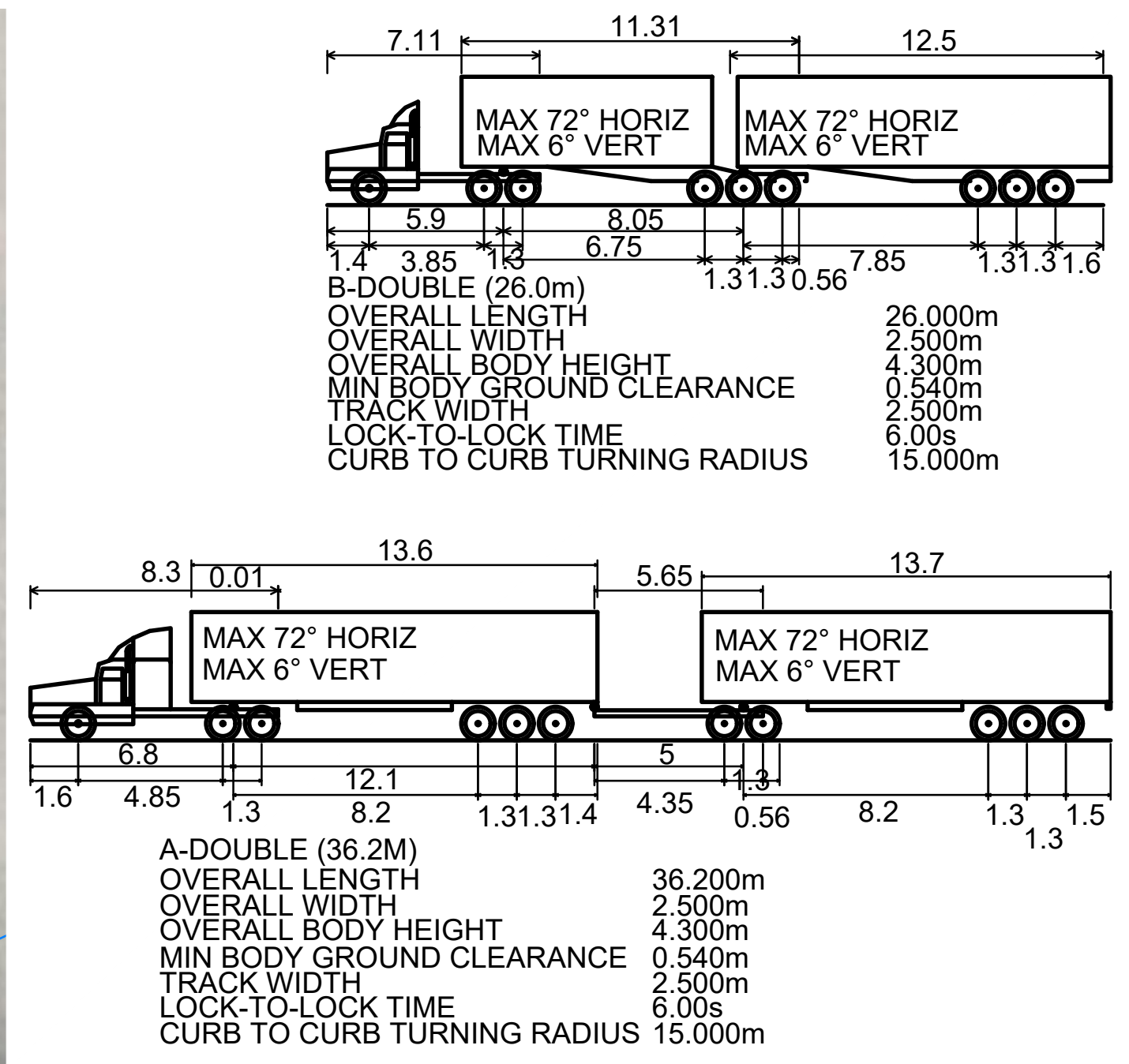
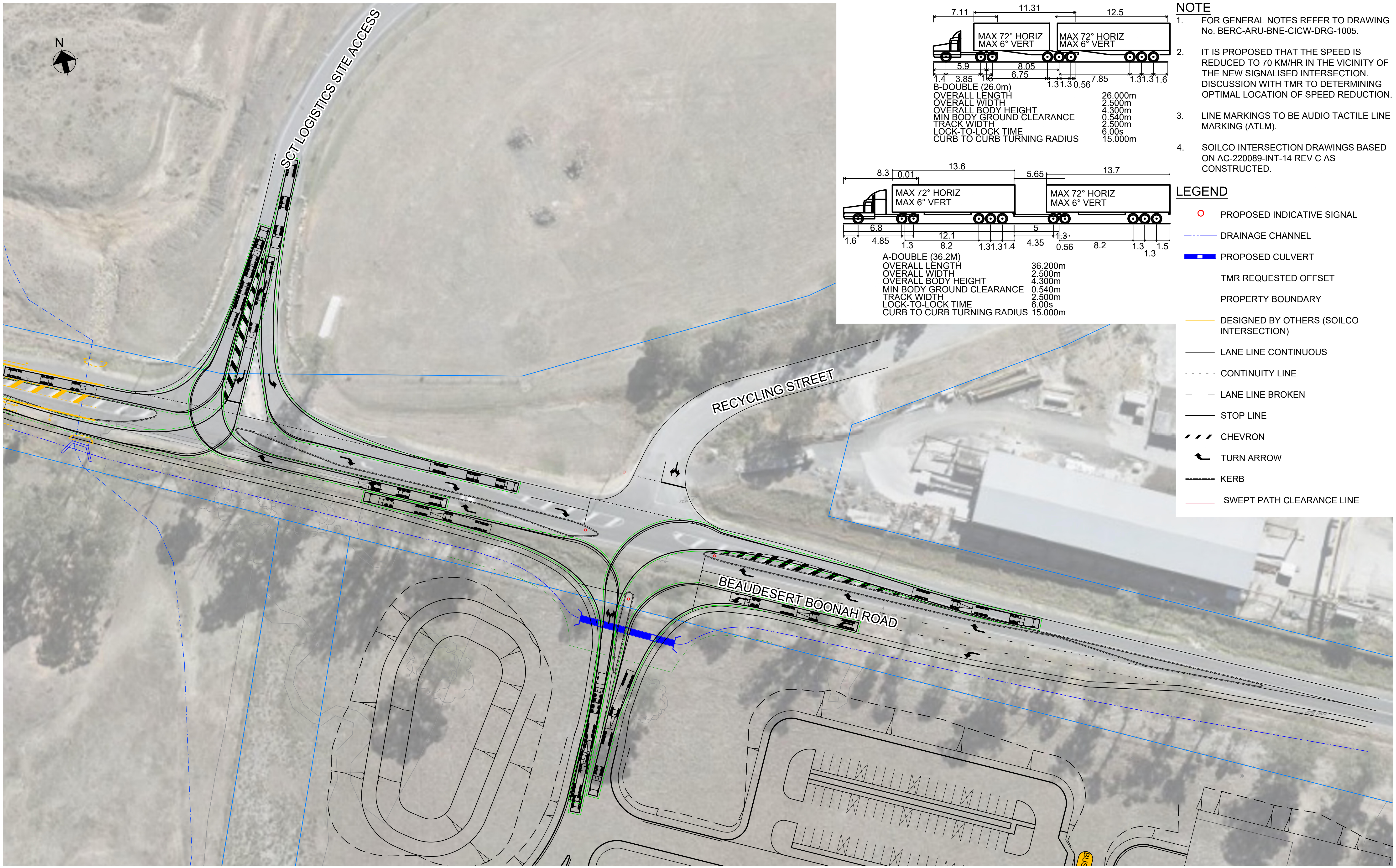
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GENERAL ARRANGEMENT PLAN

Drawing Status

ISSUED FOR INFORMATION

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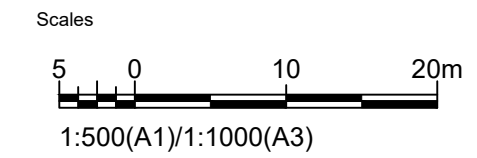
B-DOUBLE (26.0m)	
OVERALL LENGTH	26.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.540m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
CURB TO CURB TURNING RADIUS	15.000m

A-DOUBLE (36.2M)	
OVERALL LENGTH	36.200m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.300m
MIN BODY GROUND CLEARANCE	0.540m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
CURB TO CURB TURNING RADIUS	15.000m

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ISSUED FOR INFORMATION				
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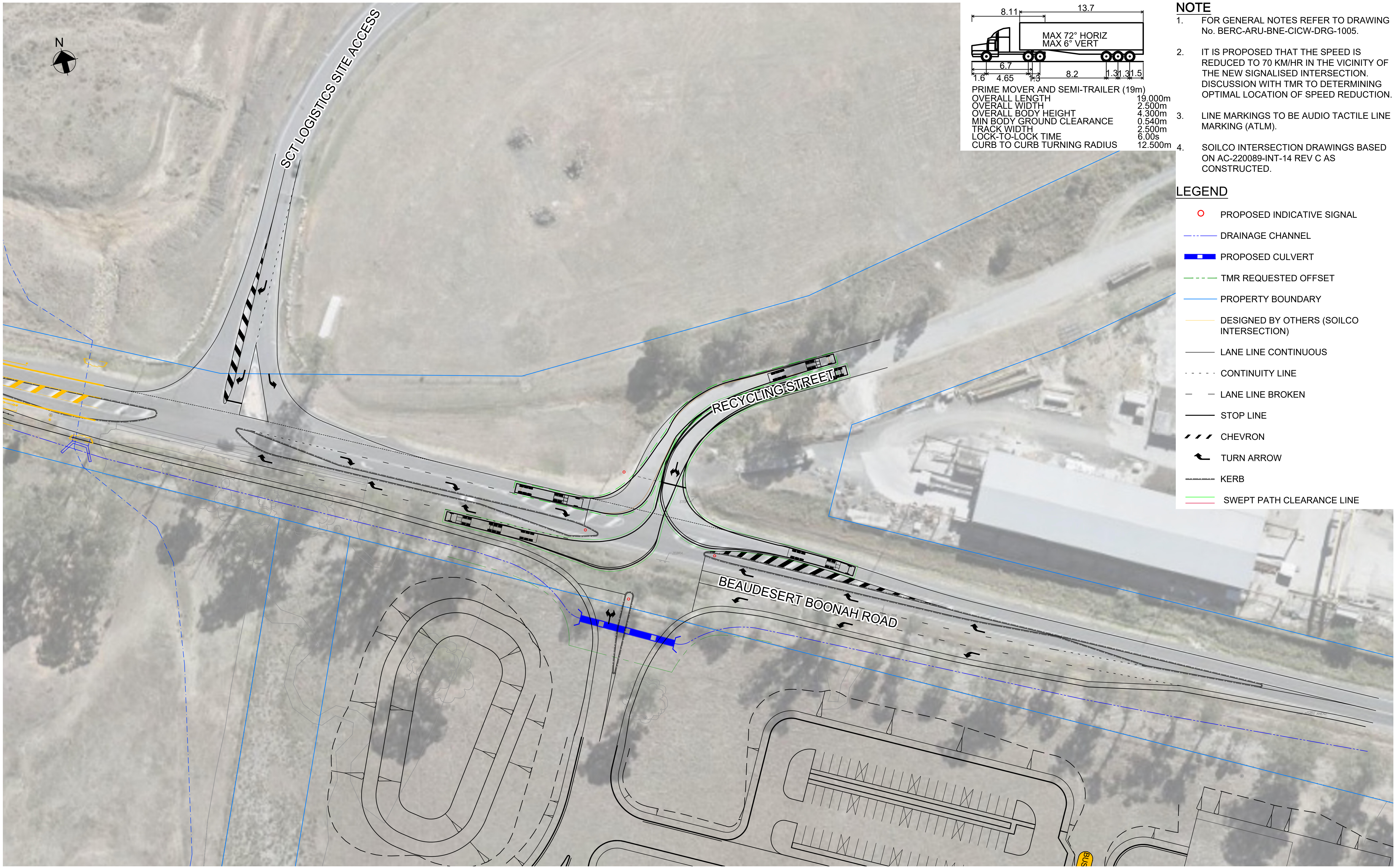
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VEHICLE TRACKING SHEET 1 PLAN

Drawing Status

ISSUED FOR INFORMATION

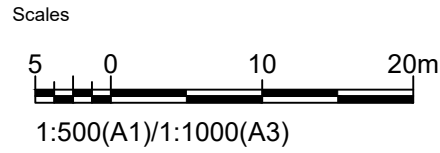
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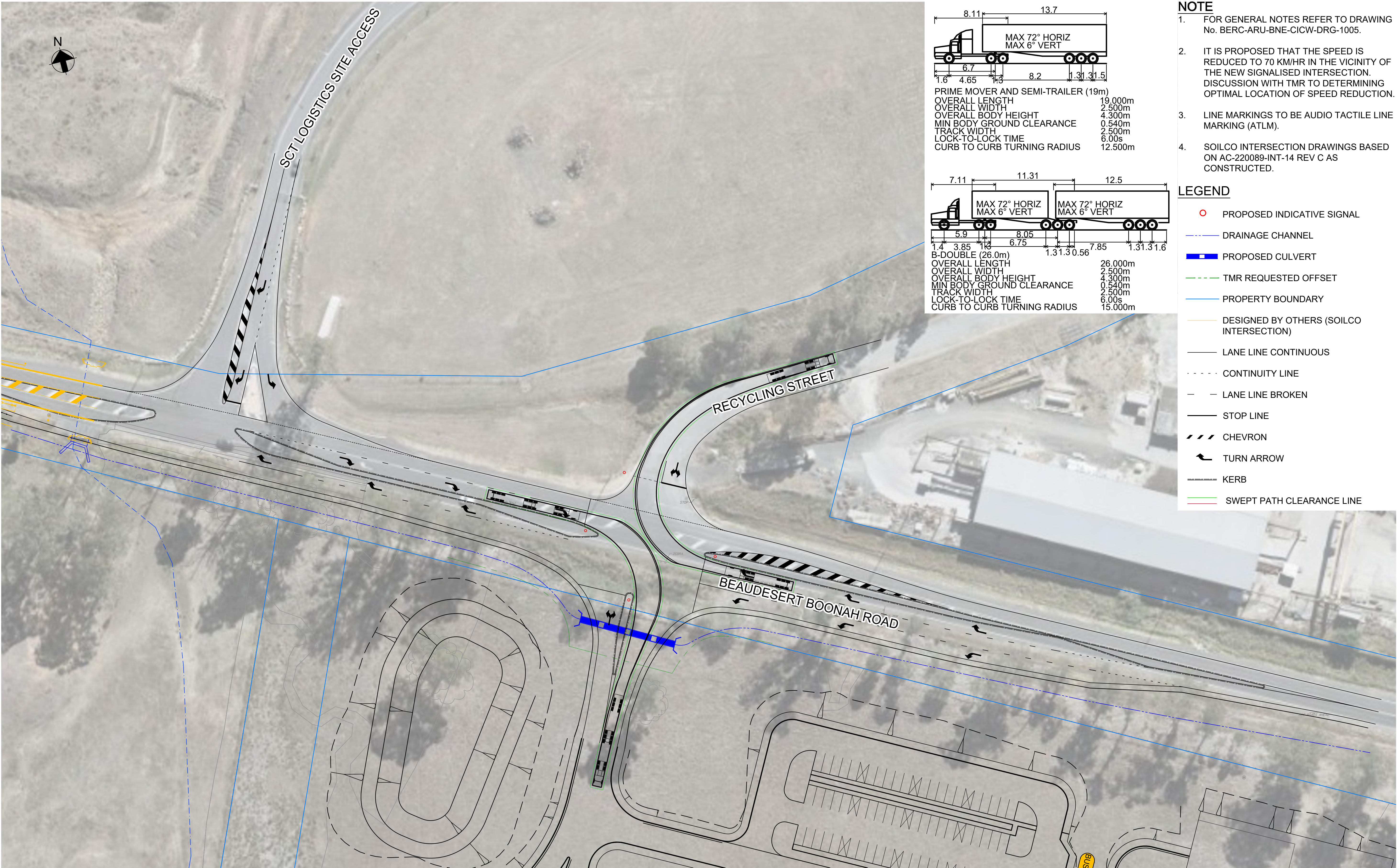
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Drawing Status

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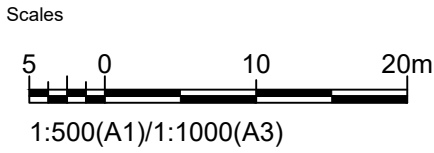
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VEHICLE TRACKING SHEET 3 PLAN

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