Appendix B Traffic Impact Assessment (GHD 2026)

Lei Deposit

Traffic Impact Assessment

Lithium Plus Minerals Ltd

28 September 2026

→ The Power of Commitment



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1. Introduction

1.1 Project background

Lithium Plus Minerals Ltd has engaged GHD to undertake a Traffic Impact Assessment for the proposed Lei Deposit Project (the Project). Lithium Plus Minerals proposes to mine spodumene, a mineral which can be processed to produce lithium from the Lei Deposit located approximately 90 km south of Darwin. This beneficiated product would then be transported via quad road train to the East Arm Wharf (Darwin Port) facility for export.

1.2 Purpose of this report

The purpose of this report is to undertake a Traffic Impact Assessment to identify potential traffic impacts of the proposed Lei Deposit Project mining activities on the existing road network in accordance with the requirements outlined in Northern Territory Government Department of Transport's Development Guidelines for Northern Territory Government Controlled Roads

1.3 Scope and limitations

This report: has been prepared by GHD for Lithium Plus Minerals Ltd and may only be used and relied on by Lithium Plus Minerals Ltd for the purpose agreed between GHD and Lithium Plus Minerals Ltd as set out in section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than Lithium Plus Minerals Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section(s) 1.4 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

1.4 Assumptions

Any assumptions that have been made during the course of this assessment have been mentioned within the relevant sections of the report including key assumptions shown below:

- Background traffic volume assumptions outlined in Section 3.2 along with the latest traffic volumes obtained from Northern Territory Government's *Annual Traffic Report 2024* were used to estimate future volumes.
- Data relating to but not limited to the site location, construction details and operational details of the site have been provided by Lithium Plus.
- Generated traffic volume during construction, operation and decommissioning is provided by Lithium Plus and is assumed to be accurate for the purposes of this assessment.

1.5 References

- Austroads, 2020, *Guide to Traffic Management Part 3: Transport Study and Analysis Methods*
- Austroads, 2020, *Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management*
- Austroads, 2020, *Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments*
- Austroads, 2021, *Guide to Road Design Part 3: Geometric Design*

- Austroads, 2023, *Guide to Road Design Part 4A: Unsignalised and Signalised Intersection*
- Core Lithium, 2026, *ASX:CXO Announcement - Core Awards BP33 Underground Mining Contract at Finniss*
- GHD, 2021, *BP33 Underground Mine Traffic Impact Statement*
- GHD, 2024, *Lei Deposit Haulage Route Assessment Report*
- Northen Territory Government, 2024, *Annual Traffic Report 2024*
- Northen Territory Government, 2015, *Development Guidelines for Northern Territory Government Controlled Roads*

2. Project overview

2.1 Site location

The proposed underground mine is located in Charlotte, Northern Territory (NT), with access to the mine to be directly off Fog Bay Road, near its intersection with Cox Peninsula Road as seen in Figure 1. Further details of the proposed mine layout and site access location on Fog Bay Road can be seen in Figure 2.

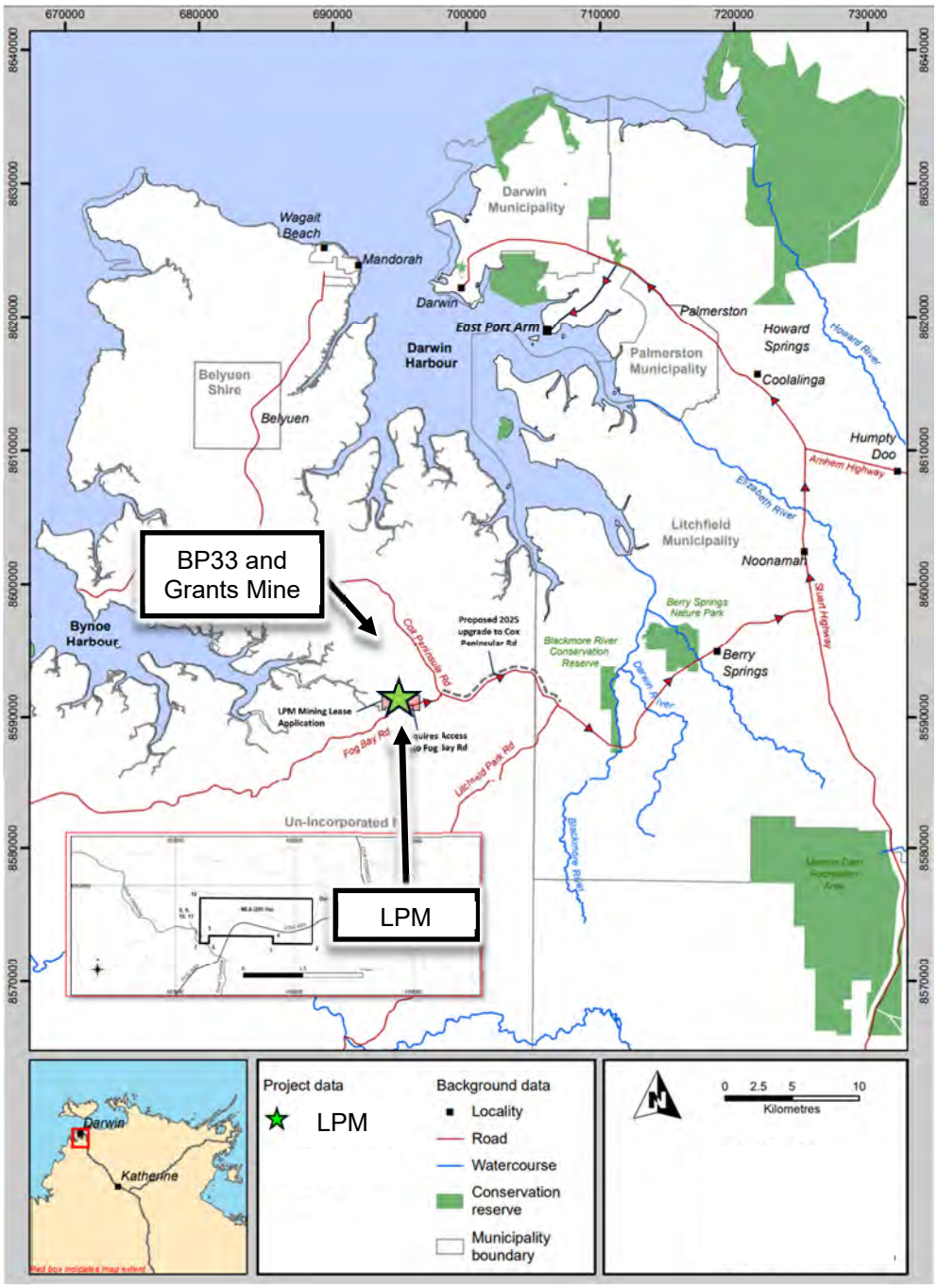


Figure 1 Site locality plan

Image source: Lithium Plus Minerals

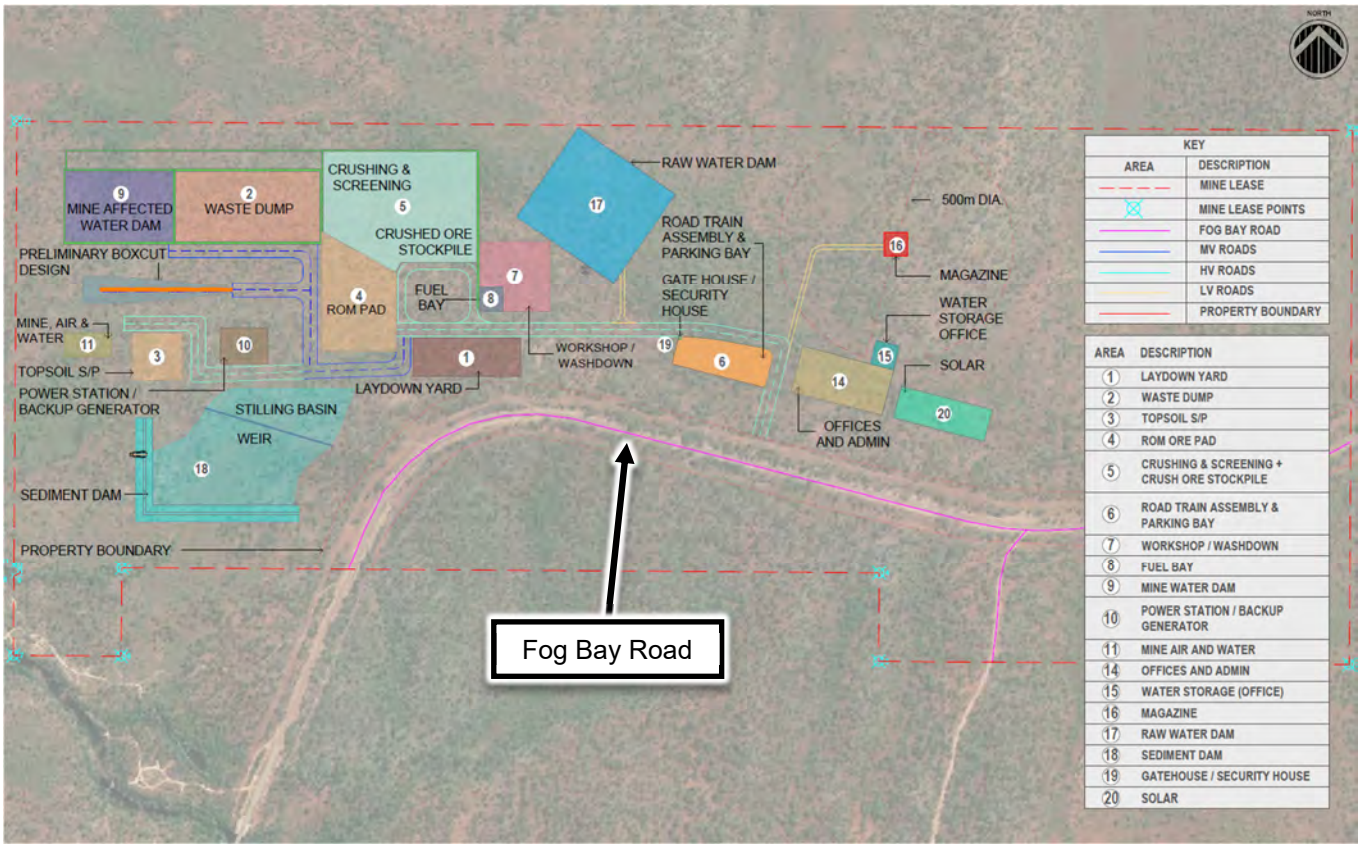


Figure 2 *Proposed mine layout*

Image source: Lithium Plus Minerals

2.2 Spodumene transport task

Lithium Plus Minerals proposes to ship spodumene as a Direct Shipping Ore (DSO) product from Darwin Port to customers in China. The Lei Deposit contains an estimated 3.10 million tonnes of high grade spodumene. The transfer of the DSO to East Arm is planned to commence in the first quarter 2028, peaking at a haulage rate of 600,000 tonnes in 2030 to 2032 and concluding in the last quarter of 2033. Table 1 outlines the proposed DSO haulage schedule.

As the peak haulage rate occurs between 2030 and 2032, the peak traffic generation assessment presented in this report is based on the end of peak operational scenario in 2032, as further outlined in Section 3.4. This year represents the final year of peak DSO haulage activity.

Table 1 *Proposed DSO haulage schedule*

Operational Phase							
Year	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**Total**
Ore hauled (t)	475,913	510,000	600,000	600,000	600,000	300,000	3.10M

2.3 East Arm Wharf facility

The East Arm Wharf facility will be utilised to export the DSO. The East Arm Wharf is operated by Darwin Port Operations Pty Ltd (part of the Landbridge Group). It is located on the Darwin harbour approximately 6 km south-east of Darwin CBD and 31 km north-east of the proposed Lithium Plus Minerals mine. Key features of the East Arm Wharf facility include the following:

– The wharf is accessible for quad road trains.
– The wharf operates 24 hours a day.

2.4 Selected Haul Route

The selected haul route will travel along Fog Bay Road, Cox Peninsula Road, Stuart Highway, Tiger Brennan Drive, Berrimah Road and East Arm Wharf. Details of the selected haul route are shown in Figure 3 below.

The total travel distance to the East Arm Wharf for the selected haul route is calculated to be approximately 79.2 km. Key features of this route include:

– There are three (3) turning movements located outside of the port at the following intersections:
  - Fog Bay Road and Cox Peninsula Road
  - Stuart Highway and Cox Peninsula Road
  - Berrimah Road and Tiger Brennan Drive interchange
– The route is an established road train route.
– The route crosses one at grade rail crossing on Cox Peninsula Road.
– Major intersections along the route (including Jenkins Road, Arnhem Highway, Berrimah Road, Tiger Brennan Drive, Lagoon Road, Glyde Point Road, Howard Springs Road and Girraween Road) are signalised or grade separated.
– Stuart Highway and Tiger Brennan Drive are four-lane divided carriageways, allowing for safe overtaking and passing of road trains. This configuration ensures smoother traffic flow and enhances safety for other road users.

Further details of the selected haul route are documented in the *Lei Deposit Haulage Route Assessment Report* (GHD, 2024).

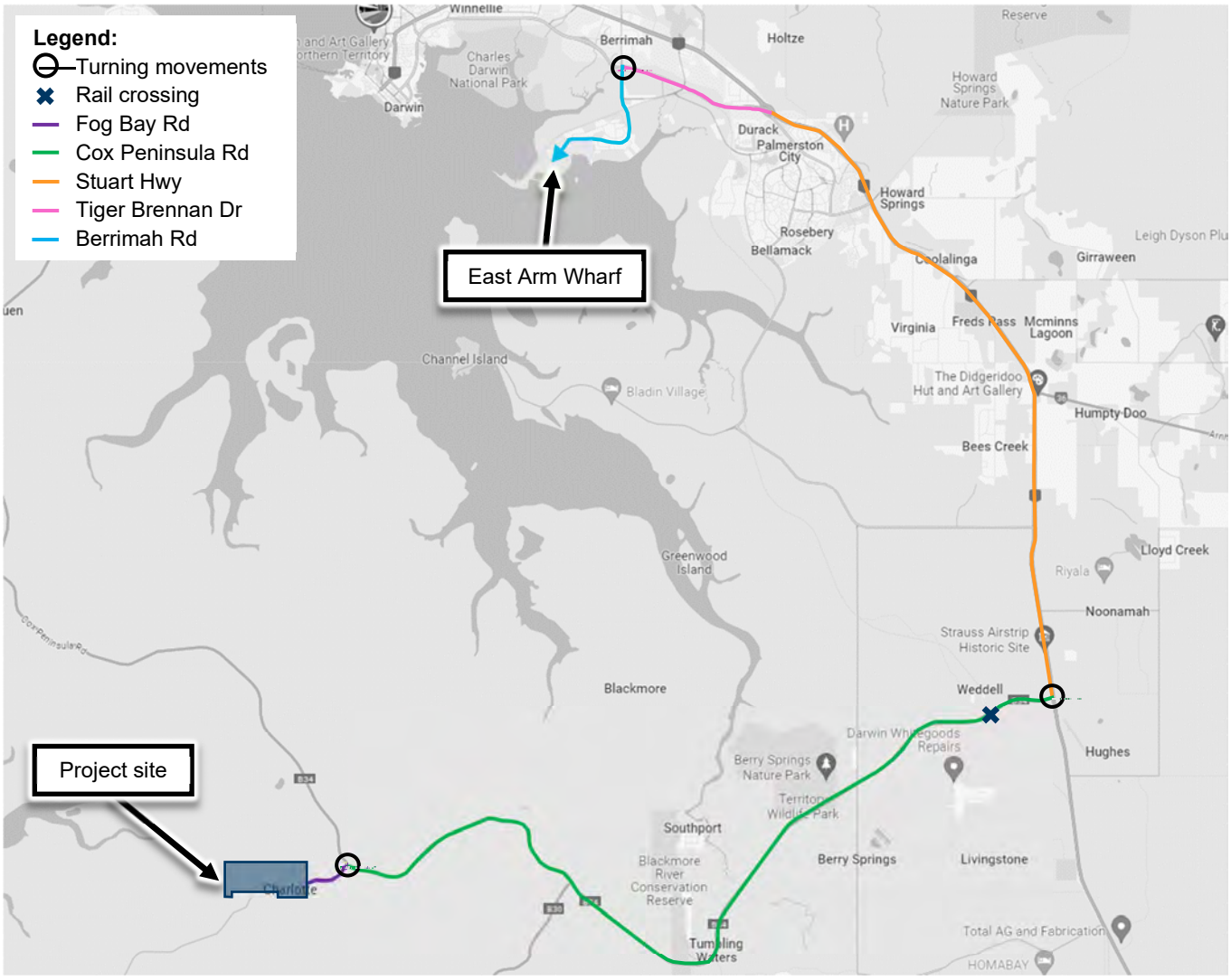


Figure 3 *Select Haulage Route*

3. Existing conditions

3.1 Road network

3.1.1 Stuart Highway

Stuart Highway is a DLI controlled national highway that connects Darwin to Katherine, Tennant Creek and Alice Springs and provides the main link between the Northern Territory and South Australia. Stuart Highway is a four lane dual carriageway divided by a central median (between Darwin to Cox Peninsula Road) with sealed shoulders and edge line markings. It is predominantly un-kerbed with open drainage on both sides of the road through the median. A posted speed limit of 100 km/h applies in both directions.

3.1.2 Tiger Brennan Drive

Tiger Brennan Drive is a DLI controlled arterial road that provides the main link between Darwin and Palmerston and connects to Stuart Highway to the east. Tiger Brennan Drive is a two-way divided road with two lanes in each direction. The carriageway is sealed with wide shoulders provided along both sides. It is predominantly un-kerbed with open drainage on both sides of the road and through the median. A posted speed limit of 90 km/h to 100 km/h applies in both directions.

3.1.3 Berrimah Road

Berrimah Road is a DLI controlled arterial road and provides the main access to the Darwin Port. Berrimah Road is a two-way road that transitions from a divided dual carriageway to a single undivided carriageway approximately 350 m south-west of the Cochrane Road intersection. It is predominantly kerbed with a combination of open channel and underground drainage. A posted speed limit of 80 km/h applies in both directions.

3.1.4 Cox Peninsula Road

Cox Peninsula Road is a Department of Logistics and Infrastructure (DLI) controlled rural arterial road and provides the main road link between Cox Peninsula and the Stuart Highway (as the primary southern access to Darwin). Cox Peninsular Road is a two-way undivided road with a carriageway. It is predominantly un-kerbed with open drainage on both sides of the road. It provides access to a number of tourist destinations including Litchfield National Park, Dundee Beach, Crab Claw Island and Wagait Beach. A posted speed limit of 100 km/h applies in both directions.

3.1.5 Fog Bay Road

Fog Bay Road is a rural arterial road managed by DLI, it connects to Cox Peninsula Road to the east and Namarada Drive to the west. Fog Bay Road is a two-way, undivided carriageway comprising a single traffic lane in each direction. An assumed posted speed limit of 100 km/h applies in both directions. The carriageway is sealed with wide shoulders provided along both sides.

3.1.6 Channel Island Road

Channel Island Road is a rural arterial road managed by DLI and provides a connection between Channel Island and Palmerston. Channel Island Road is a two-way, undivided carriageway comprising a single traffic lane in each direction. A posted speed limit of 100 km/h applies in both directions. The carriageway is sealed with narrow sealed shoulders which transition to unsealed shoulders beyond the pavement edge.

3.1.7 Jenkins Road

Jenkins Road is a rural arterial road managed by DLI, it connects to Stuart Highway to the east and Channel Island Road to the west. Jenkins Road is a two-way, undivided carriageway comprising a single traffic lane in each

direction. A posted speed limit of 100 km/h applies in both directions. The carriageway is sealed with wide shoulders provided along both sides.

3.1.8 Finn Road

Finn Road is a local road managed by Litchfield Council, it connects to Jenkins Road to the north and Cox Peninsula Road to the south. Finn Road is a two-way, undivided carriageway comprising a single traffic lane in each direction. A posted speed limit of 100 km/h applies in both directions. The carriageway is sealed with narrow sealed shoulders which transition to unsealed shoulders beyond the pavement edge. Finn Road has weight restrictions for heavy vehicles and would not be used as part of the haulage route to transport DSO to Darwin Port.

3.2 Traffic volumes

In order to understand the existing traffic volumes, the latest traffic volumes were obtained from Northern Territory Government's *Annual Traffic Report 2024*. This report provides the average annual daily traffic (AADT) for a ten-year period from 2015 to 2024.

Traffic growth projections were derived from a review of historical Average Annual Daily Traffic (AADT) data reported in the Northern Territory Government's Annual Traffic Report 2024. Historical traffic volumes from 2015 to 2024 at count stations located along the assessed haul route were reviewed to determine representative long-term traffic growth trends. Based on this review, a growth rate of 3% per annum was adopted for forecasting purposes. This growth rate is considered representative of observed long-term growth patterns across the road network and provides a reasonable basis for estimating future background traffic volumes. The adopted growth rate was applied to the 2024 traffic counts to estimate 2026 baseline traffic conditions. In addition, forecast traffic associated with Core Lithium's BP33 Underground Mine project has been incorporated into the 2026 estimates, given that construction is anticipated to commence in July 2026, as outlined *in ASX: CXO Announcement – Core Awards BP33 Underground Mining Contract at Finniss (Core Lithium, 2026).* Forecast traffic generation for the BP33 Underground Mine project has been adopted from the *BP33 Underground Mine Traffic Impact Statement (GHD, 2021)*. The project is estimated to generate a peak two-way daily traffic volume of approximately 55 vehicles, comprising 30 light vehicles and 25 heavy vehicles. This additional traffic is expected to utilise the same haulage route as the proposed Lei Deposit Project.

Peak hour volumes were estimated as 15% of the daily traffic in recognition of the generally rural nature of the proposed route. This is consistent with typical peak period generation on arterial classified road networks. It was also assumed that heavy vehicles comprise approximately 20% of total daily traffic volumes as per the *Annual Traffic Report 2024*. A summary of the estimated traffic volumes is shown in Table 2 below. Full calculations for the estimated existing (2026) traffic volume are provided in Appendix A.

Table 2 Calculated existing (2026) traffic volumes

Road and count station	2026 daily traffic volume	2026 peak hour traffic volume (15% of estimated 2026)
Berrimah Road (350m west of Casey Street) UDVDP029	1,778	267
Berrimah Road (400m south of Tiger Brennan Drive) UDVDP028	8,397	1,260
Stuart Highway (midway Yarrawonga & Tulagi Road) UDVDC079	27,834	4,175
Stuart Highway (500m west of Howard Springs Road) UDVDP017	29,987	4,498
Stuart Highway (100m north of Henning Road) UDVDC021	19,474	2,921
Stuart Highway (500m south of Bees Creek Road) UDVDP034	14,807	2,221

Road and count station	2026 daily traffic volume	2026 peak hour traffic volume (15% of estimated 2026)
Stuart Highway (500m north of Arnhem Highway) UDVDP020	13,602	2,040
Stuart Highway (500m north of Gulnare Road) RDVDC051	7,375	1,106
Stuart Highway (500m north of Cox Peninsula Road) RDVDP049	6,379	957
Stuart Highway (500m south of Cox Peninsula Road) RDVDC091	4,434	665
Cox Peninsula Road (2.8km west of Stuart Hwy) RDVDP009	2,509	376
Cox Peninsula Road (at Blackmore River Bridge) RDVDC030	1,637	246
Cox Peninsula Road (300m west of Pioneer Creek Bridge) RDVDP010	957	144
Cox Peninsula Road (500m west of Fog Bay Road) RDVDC033	389	58
Fog Bay Road (2km west of Cox Peninsula Road) RDVDP032	567	85
Channel Island Road (south of Elizabeth River Bridge) UDVDC072	2,109	316

3.3 Public Transport

Several public bus services operate along the section of the Stuart Highway that coincides with the proposed haulage route, including bus routes 5, 8, 9, 16, 17, 28, 77, 440, 445, 446, 447, 450, OL1 and OL2. In addition, one bus service (bus route 445) operates along Cox Peninsula Road. These bus routes are shown in Figure 4.

Bus timetable data obtained from the Northern Territory Government shows that there are three school buses that operate on Cox Peninsula Road to transport students to and from Berry Springs Primary School. These include bus routes 429, 433 and 435, which operate between 7:15am – 8:20am, and 2:55pm – 4:05pm.

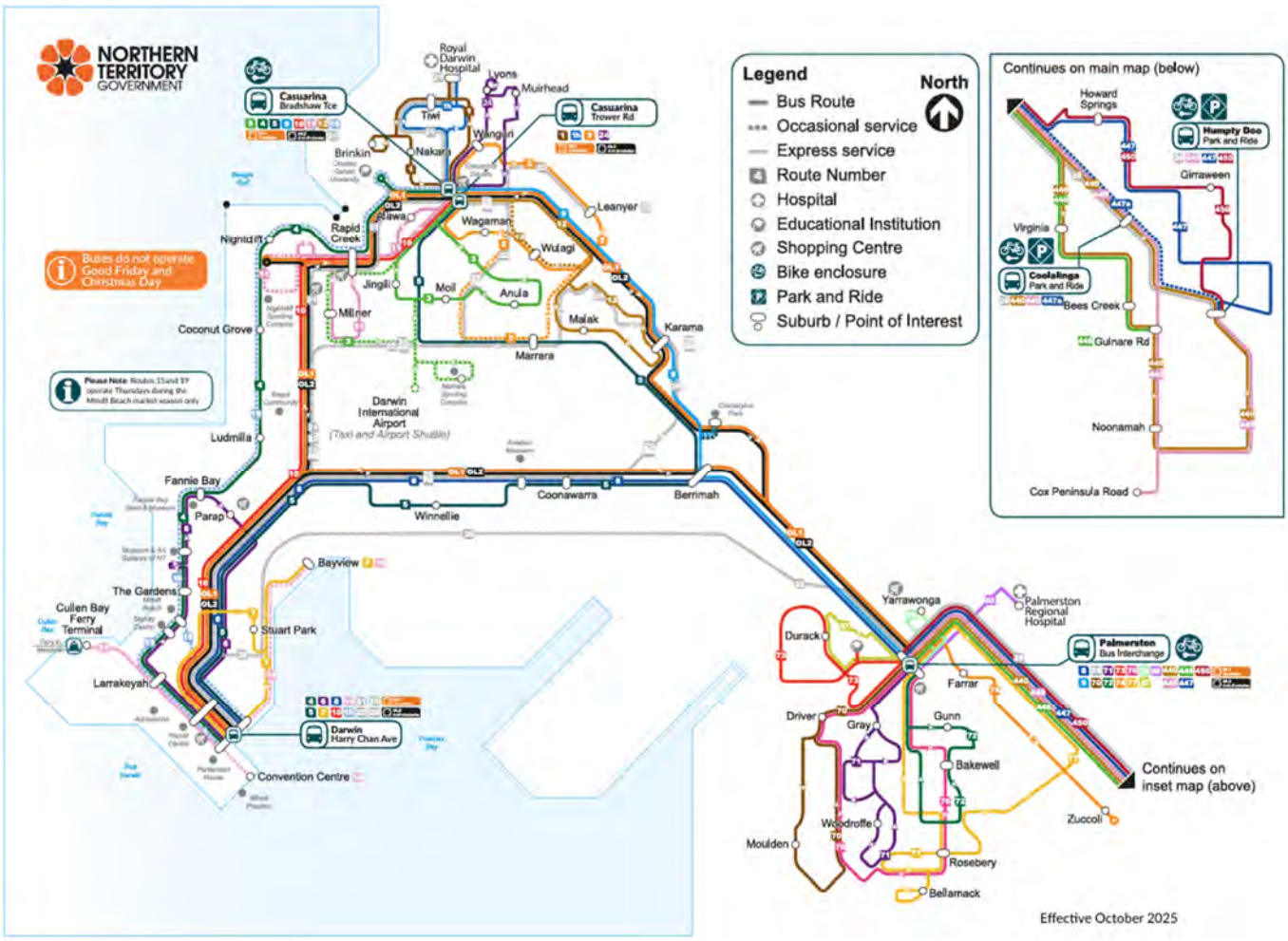


Figure 4 *Northern Territory public bus network*

Image source: Northern Territory Government

3.4 Crash history

Road crash history for the five-year period from 2021 to 2025 was supplied by DLI. The crash analysis area includes the following:

- Berrimah Road (south of Tiger Brennan Drive)
- Tiger Brennan Drive (east of Berrimah Road)
- Stuart Highway (between Tiger Brennan Drive and Cox Peninsula Road)
- Cox Peninsula Road (between Stuart Highway and Fog Bay Road)
- Fog Bay Road
- Finn Road
- Jenkins Road
- Channel Island Road (north of Jenkins Road)

A summary of the extracted crash data is provided below in Table 3.

Within the analysis period, key findings from the road crash history include:

- Berrimah Road:
  - Majority of the crashes occurred at intersections, predominantly during daylight conditions and on dry road surfaces.
- Tiger Brennan Drive:

- Majority of the crashes occurred at intersections due to rear-end collisions, with most involving road users who were not injured. These majority of crashes occurred during daylight conditions and on dry road surfaces.

– Stuart Highway:
  - Majority of the crashes occurred at intersections, predominantly during daylight conditions and on dry road surfaces.
  - 10 fatalities were reported, with the majority of the associated crashes occurring during dark conditions and on dry road surfaces.
– Cox Peninsula Road:
  - Majority of the crashes occurred at intersections, predominantly during daylight conditions and on dry road surfaces.
– Fog Bay Road:
  - No crashes were reported during the analysis period.
– Finn Road:
  - Majority the of crashes occurred at intersections, predominantly during daylight conditions and on dry road surfaces.
  - Two fatalities were reported and were associated with a head-on collision involving three vehicles. The fatal crash occurred under dark conditions with no street lighting and on dry road surfaces.
– Jenkins Road:
  - Majority the of crashes occurred midblock, predominantly during daylight conditions and on dry road surfaces.
– Channel Island Road:
  - Majority the of crashes occurred midblock, predominantly during daylight conditions and on dry road surfaces.

Based on the data provided, there does not appear to be any discernible pattern of crashes that may indicate any particular safety issues within the analysis area.

Table 3 Five year crash history

Road	Number of crashes			Injury description (number of road users)					
	Midblock	Intersection	Total	Fatal	Treated admitted	Treated not admitted	Injured not seeking treatment	Not injured	Not known
Berrimah Road	4	6	10	0	1	0	0	9	6
Tiger Brennan Drive	18	32	50	0	10	4	1	47	30
Stuart Highway	87	123	210	10	41	21	15	190	102
Cox Peninsula Road	13	14	27	0	12	2	0	9	16
Fog Bay Road	0	0	0	0	0	0	0	0	0
Finn Road	2	3	5	2	2	1	0	1	1
Jenkins Road	5	4	9	0	3	0	0	4	4
Channel Island Road	3	1	4	0	2	1	1	2	2
Total	**132**	**183**	**315**	**12**	**71**	**29**	**17**	**262**	**161**

4. Traffic generation and distribution

4.1 Background Traffic

The 2032 background traffic forecast was calculated by applying an annual growth factor of 3% to the existing 2026 traffic volumes, plus BP33 traffic, detailed in Section 3.2. Table 4 summarises the estimated daily and peak-hour background traffic volumes for 2032, when peak haulage operations are expected to conclude. Full calculations are provided in Appendix A.

Table 4 Estimated 2032 background traffic volumes

Road and count station	2032 daily traffic volume	2032 peak hour traffic volume (15% of estimated 2026)
Berrimah Road (350m west of Casey Street) UDVDP029	2,123	318
Berrimah Road (400m south of Tiger Brennan Drive) UDVDP028	10,026	1,504
Stuart Highway (midway Yarrawonga & Tulagi Road) UDVDC079	33,235	4,985
Stuart Highway (500m west of Howard Springs Road) UDVDP017	35,806	5,371
Stuart Highway (100m north of Henning Road) UDVDC021	23,253	3,488
Stuart Highway (500m south of Bees Creek Road) UDVDP034	17,680	2,652
Stuart Highway (500m north of Arnhem Highway) UDVDP020	16,241	2,436
Stuart Highway (500m north of Gulnare Road) RDVDC051	8,806	1,321
Stuart Highway (500m north of Cox Peninsula Road) RDVDP049	7,617	1,143
Stuart Highway (500m south of Cox Peninsula Road) RDVDC091	5,295	794
Cox Peninsula Road (2.8km west of Stuart Hwy) RDVDP009	2,996	449
Cox Peninsula Road (at Blackmore River Bridge) RDVDC030	1,954	293
Cox Peninsula Road (300m west of Pioneer Creek Bridge) RDVDP010	1,142	171
Cox Peninsula Road (500m west of Fog Bay Road) RDVDC033	465	70
Fog Bay Road (2km west of Cox Peninsula Road) RDVDP032	676	101
Channel Island Road (south of Elizabeth River Bridge) UDVDC072	2,518	378

4.2 Traffic Generation

Traffic generated volumes throughout the construction, operation, closure/rehabilitation phase have been provided by Lithium Plus and are summarised below in Table 5. The construction phase is proposed to occur in 2027, followed by the operation phase from 2028 to 2033, and the closure and rehabilitation phase in 2034.

Peak traffic generation occurs during the operational phase between 2030 and 2032, with a total of 23,739 vehicle movements per year. While operational traffic volumes remain constant across this peak period, for the purposes of this traffic impact assessment, 2032 has been adopted as the peak assessment year, as it represents the final year of peak operations.

For 2032, traffic movements comprise a mix of light vehicles (LV) and heavy vehicles (HV) associated with mine operations. Lithium Plus plans to reduce traffic volumes and the risk of fatigued workers driving private light vehicles by providing a worker bus service from Palmerston, with pick-up and drop-off points along the route. Bus and light vehicle movements are associated with trips generated by the mine workforce and visitors. These trips are expected to occur between the mine site and Palmerston, which is located to the north. Quad road train movements are associated with the haulage of DSO from the mine site. Semi-truck movements are associated with the delivery of mining materials and supplies, such as fuel and lubricants required for site operations. No triple road train movements are associated with the operation phase. HV movements, comprising quad road trains and semi-trucks, are expected to occur between the mine site and East Arm Wharf.

Table 5 Traffic generation (two-way) during construction, operation and closure/rehabilitation

Vehicle type		Construction	Operation						Closure and rehabilitation	Total
		2027	2028	2029	2030	2031	2032	2033	2034	
Light vehicles (LV)	Bus	1460	2190	2190	2190	2190	2190	1703	122	**14235**
	Light vehicle	9275	14400	14400	14400	14400	14400	10973	519	**92766**
Heavy vehicles (HV)	Quad	0	5288	5667	6667	6667	6667	3333	0	**34288**
	Semi	840	482	482	482	482	482	363	84	**3697**
	Triple	300	0	0	0	0	0	0	0	**300**
Total		**11875**	**22360**	**22739**	**23739**	**23739**	**23739**	**16372**	**725**	**145287**

4.2.1 Peak traffic generation (2032)

A breakdown of the peak annual traffic volumes generated in 2032, as outlined in Table 5, is presented in Table 6. Table 6 summarises the estimated daily, AM peak, and PM peak traffic volumes. These volumes have been derived based on the following assumptions advised by Lithium Plus and assumptions developed by GHD:

- Mine operational hours occur between 6:00 am and 6:00 pm (12-hour operating period).
- The AM peak hour occurs between 6:00 am and 7:00 am, and the PM peak hour occurs between 5:00 pm and 6:00 pm.
- There are 30 operational working days per month.
- During the AM peak, 90% of LV movements are inbound to the site and 10% are outbound.
- During the PM peak, 10% of LV movements are inbound to the site and 90% are outbound.
- HV movements are evenly distributed across the 12-hour operating period.
- LV movements associated with visitors are evenly distributed across the 12-hour operating period.
- LV movements associated with the mine workforce predominantly occur during the AM peak (start of shift) and PM peak (end of shift).

During both the AM and PM peak periods, a total of 27 two-way vehicle movements is generated, consisting of 25 LV movements and 2 HV movements. For the purposes of peak hour traffic volume calculations, all volumes have been conservatively rounded up. As a result, the combined AM and PM peak hour volumes may appear greater

than the corresponding daily traffic volumes. Total daily traffic generation is 68 two-way vehicle movements, consisting of 48 LV movements and 20 HV movements.

Table 6 Peak traffic generation volumes (2032)

Vehicle Type	AM peak (6am to 7am)			PM peak (5pm to 6pm)			Daily (6am to 6pm)		
	In	Out	Total (two-way)	In	Out	Total (two-way)	In	Out	Total (two-way)
LV	21	4	25	4	21	25	24	24	48
HV	1	1	2	1	1	2	10	10	20
Total (LV and HV)	22	5	27	5	22	27	34	34	68

4.3 Traffic distribution

The peak traffic volumes generated in 2032, as outlined above in Section 4.2.1, have been distributed across the surrounding road network illustrated in Figure 5.

LV movements associated with the mine workforce and visitors are expected to utilise Fog Bay Road, Cox Peninsula Road, Finn Road, Jenkins Road, and Channel Island Road to travel between the mine site and Palmerston as advised by Lithium Plus. The roads (Finn Road, Jenkins Road, and Channel Island Road) are used exclusively by LV associated with this development and are shown in light blue in Figure 5.

HV movements are expected to utilise Fog Bay Road, Cox Peninsula Road, the Stuart Highway, Tiger Brennan Drive, and Berrimah Road to travel between the mine site and East Arm Wharf. They would not travel along Channel Island Road, Jenkins Road and Finn Road.

There are seven key unsignalised intersections located along the assessed road network, which include:

– Unsignalised intersections used by both LV and HV:
  - Cox Peninsula Road / Finn Road
  - Cox Peninsula Road / Fog Bay Road
  - Fog Bay Road / Site Access Road
– Unsignalised intersections used exclusively by LV only:
  - Channel Island Road / Jenkins Road
  - Jenkins Road / Finn Road
– Unsignalised intersections used exclusively by HV:
  - Stuart Highway / Jenkins Road
  - Stuart Highway / Cox Peninsula Road

Traffic volume distribution diagrams for daily, AM peak and PM peak are provided in Appendix B. These diagrams present a detailed breakdown of traffic movements across the assessed road network, including both through movements along the various road segments and turning movements at intersections.

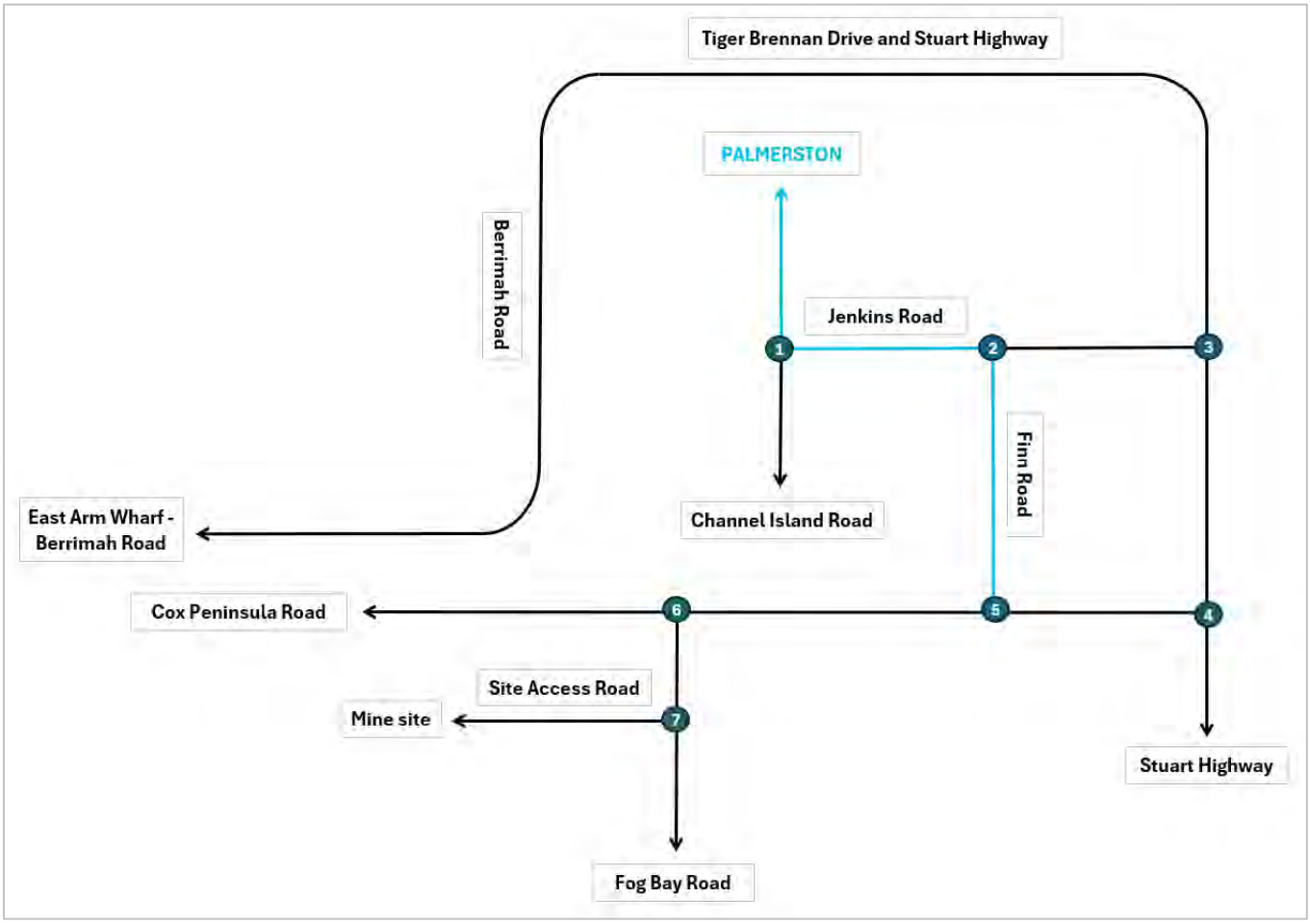


Figure 5 Traffic distribution diagram

4.4 Traffic volumes

The existing traffic volume and development (existing and peak generation) traffic volume for the AM peak, PM peak and daily along the various road segments are shown in Appendix C. It also shows the change in volume between the development traffic volume and existing traffic volume.

The increase in traffic volumes generated by the mine site is considered to be relatively low, and the existing road network is expected to have sufficient capacity to accommodate the additional traffic as further outlined below in Section 5.1. Existing background traffic volumes are also relatively low, which is typical of rural road environments.

The primary consideration associated with this increase in traffic volume relates to road safety, particularly at intersections and site access points where heavy vehicle movements would occur.

5. Development impacts on existing road network

5.1 Increase in traffic volumes

Road agencies typically nominate a traffic generation threshold relative to baseline conditions as an initial screening criterion to determine whether further assessment is required. This threshold is commonly adopted as an increase of approximately 5% of existing baseline traffic volumes as outlined in *Development Guidelines for Northern Territory Government Controlled Roads* (Northern Territory Government, 2015) and *Austroads Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments* (AGTM12-20). Road segments that exceed the 5% threshold are shown in Appendix C.

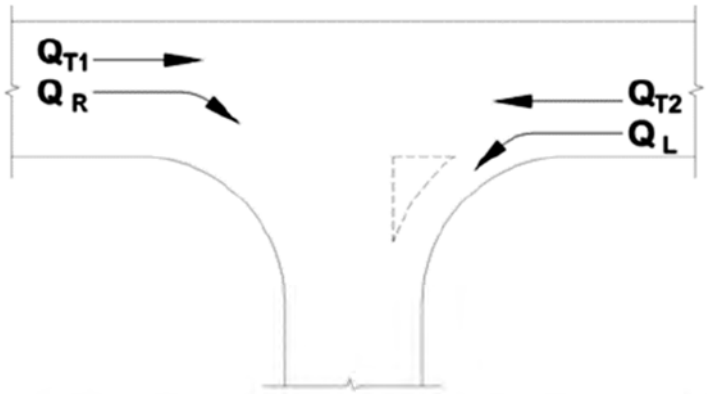
Cox Peninsula Road, Fog Bay Road, Jenkins Road, Channel Island Road and Finn Road are identified as exceeding the 5% threshold and therefore warrant further consideration of potential traffic impacts. However, Section 5.2 of the *Austroads Guide to Traffic Management Part 3: Transport Study and Analysis Methods* indicate that the theoretical capacity of a two-lane, two-way rural road is approximately 3,200 vehicles per hour for both directions combined. The peak hourly traffic volumes on the identified roads, which includes the additional traffic generated by the proposed Lei Project, are substantially lower than this theoretical capacity. As such, the forecast traffic demand represents a relatively small proportion of the available capacity of the road network. On this basis, the existing road network is expected to be capable of accommodating the additional traffic generated without any material impact on network capacity.

5.2 Turn lane warrant assessment

Section 3.3.6 of *Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management (AGTM06-20)*, provides warrants for the provision of turn lanes at unsignalised intersections. Turn lane warrants assess whether the addition of a turn lane is required at an unsignalised intersection. The purpose is to improve safety and traffic flow by reducing conflicts between turning vehicles and through traffic. Turn lane warrants are determined based on:

– design speed
– traffic volumes
– the number of lanes in each direction
– the presence of a right-turn splitter island

With consideration of the above criteria, turn lane warrants determine whether basic, auxiliary or channelised turn treatments are required. The warrants are determined as a function of the Major Road Traffic Volume 'Q_M' (veh/h) and the Turn Volume 'Q_R' or 'Q_L' (veh/h) as per Figure 3.26 of the AGTM06-20 which is shown in Figure 6.



Road type	Turn type	Splitter island	Q_M (veh/h)
Two-lane two-way	Right	No	= Q_{T1} + Q_{T2} + Q_L
		Yes	= Q_{T1} + Q_{T2}
	Left	Yes or no	= Q_{T2}

Figure 6 Calculation of the major road traffic volume parameter Q_M

Image source: Figure 3.26 of Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management, 2020

The seven key unsignalised intersections identified above in Section 4.3 have been assessed for turn lane warrants. The design speed along the major roads at these intersections is 110 km/h based on the posted speed limit of 100 km/h, therefore turn lane requirements have been assessed using the appropriate graph from Figure 3.24 of the AGTM06-20 which is shown in Figure 7.

The traffic volume parameters 'Q_{T1}', 'Q_R', 'Q_{T2}', 'Q_L' used to calculate 'Q_M' are based on the AM peak and PM peak traffic volumes at each intersection, as presented in Appendix C. Turn lane warrant assessments have been undertaken for both the AM peak and PM peak to determine the worst case scenario.

For the Fog Bay Road / Site Access Road intersection, the traffic volume parameters have been plotted on Figure 7 to determine the appropriate turn lane treatment required at each intersection. It shows that a BAR / BAL treatment is appropriate for the intersection.

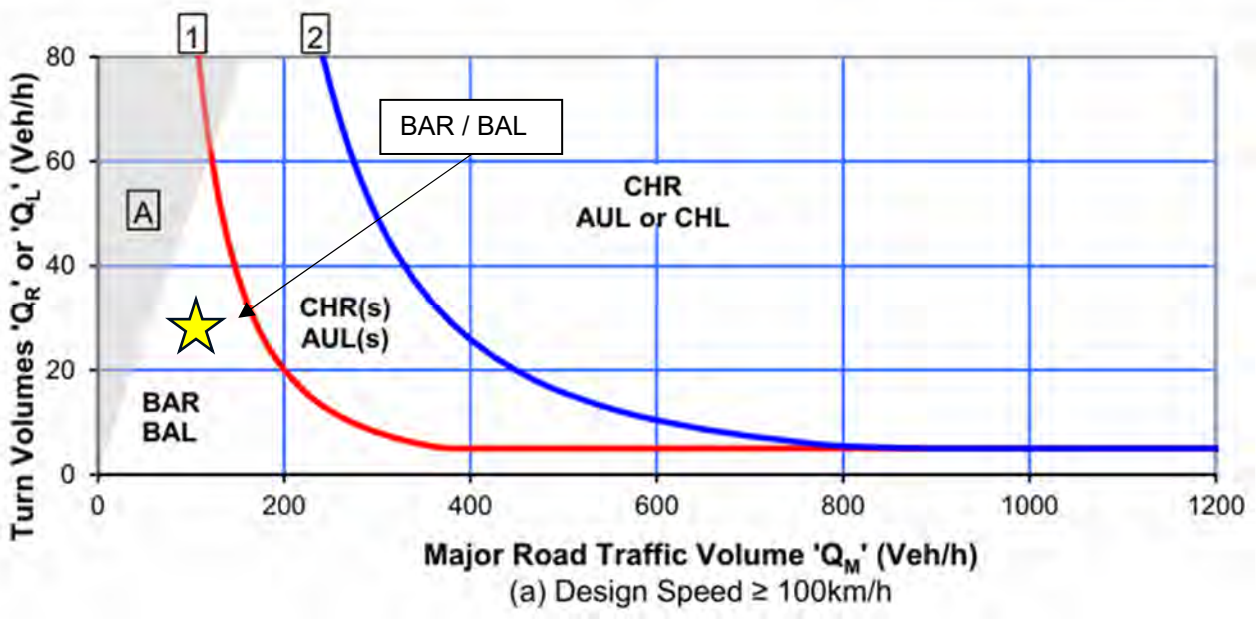


Figure 7 Assessment for turn treatments for Fog Bay Road / Site Access Road

Image source: Figure 3.25 of Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management, 2020

Table 7 summarises the key findings of the turn lane warrant assessment, including outlining existing intersection treatments, recommended treatments, and whether upgrades are required. Based on the assessment, a basic left-turn (BAL) and basic right-turn (BAR) treatment is recommended at the Fog Bay Road / Site Access Road intersection. Given that the Site Access Road is proposed and no access currently exists, no turn lane treatments are presently provided at this location. For all other assessed intersections, the existing turn lane treatments are considered sufficient, and no further upgrades would be required.

Example layouts for a BAL and a BAR turn treatment for rural roads are shown in Figure 8 and Figure 9. The BAL treatment for rural roads features a widened shoulder on the major road, which assists left turn vehicles to move further off the through carriageway, thus making it easier for through vehicles to pass. The BAR treatment for rural roads features a widened shoulder on the major road that allows through vehicles, having slowed, to pass to the left of turning vehicles that intend to turn right into the minor road.

Table 7 Turn lane warrant assessment

Intersection	Existing treatment		Recommended treatment		Upgrade required (YES/NO)
	Right turn	Left turn	Right turn	Left turn	
Channel Island Road / Jenkins Road	CHR	AUL	BAR	BAL	NO
Jenkins Road / Finn Road	CHR	AUL	CHR(s)	BAL	NO
Stuart Highway / Jenkins Road	CHR	AUL	CHR	AUL(s)	NO
Stuart Highway / Cox Peninsula Road	CHR	AUL	CHR	AUL(s)	NO
Cox Peninsula Road / Finn Road	CHR	AUL	CHR	AUL(s)	NO
Cox Peninsula Road / Fog Bay Road	BAR	AUL	BAR	BAL	NO
Fog Bay Road / Site Access Road	No existing treatment, Site Access Road to be constructed		BAR	BAL	YES

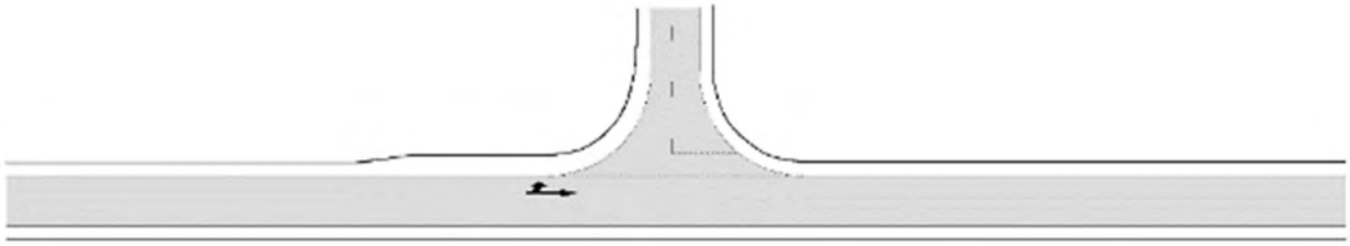


Figure 8 Basic Left (BAL) turn treatment for rural roads

Image source: Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management, 2020

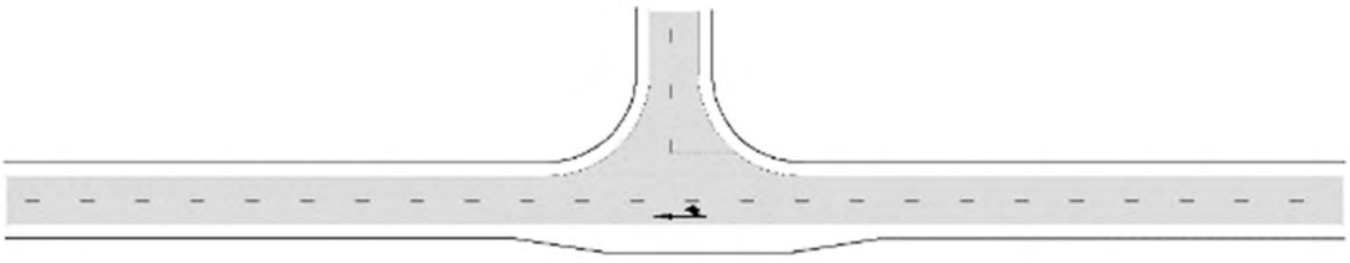


Figure 9 Basic Right (BAR) turn treatment for rural roads

Image source: Austroads Guide to Traffic Management Part 6: Intersections, Interchanges and Crossings Management, 2020

5.3 Road safety impacts

Analysis of the five year crash data outlined in Section 3.4 indicates that there are no discernible crash patterns to suggest any specific safety issues within the analysis area. However, to minimise any potential crash risk associated with project-related traffic, a range of workforce-specific mitigation measures could be implemented by Lithium Plus as part of mine operations. This includes the development and implementation of a Driver Fatigue Management Plan for the mine workforce, which would be actively managed by Lithium Plus. The plan would outline policies and procedures to minimise driver fatigue, such as limits on driving hours, mandatory rest breaks, and fit-for-work requirements. In addition, Lithium Plus could implement an Alcohol Management System Plan, which would require drivers to undergo alcohol breath testing prior to commencing work. Both management plans would be developed and managed by Lithium Plus in consultation with the Northern Territory Government.

In addition to the above workforce-specific controls, fatigue management signage could be installed along Cox Peninsula Road to address broader road user risk. These signs would serve to remind drivers of the dangers associated with driving while fatigued and increase awareness among unfamiliar or inexperienced drivers travelling along the corridor.

5.4 Berry Springs Primary School

Traffic impacts to Berry Springs Primary School have been considered due to the sensitive nature of this land use with respect to noise, dust and presence of children, parents/carers and school staff during school hours. Berry Springs Primary School is adjacent to Cox Peninsula Road which forms part of the haulage route. Access locations within the vicinity of Berry Springs Primary School are shown in Figure 10.

There are three access points within the vicinity of Berry Springs Primary School. Access 1 services Berry Springs Pre-school, whilst access 2 and access 3 services Berry Springs Primary School. Access 2 is assumed to cater for student pick-up and drop-off whilst access 3 caters for car parking and access to the Berry Springs recreational area to the east of the school.

There are three school buses that service the Berry Springs Primary School during the school drop-off and pick-up periods, travelling along Cox Peninsula Road. School buses are assumed to enter via access 1 and exit via access 3. At each access location, a basic left turn treatment with a channelised right turn treatment have been provided, therefore the right turn movements into the school are separated from the through traffic, whereas the left turn movements are not. The configuration of these three intersections is assumed to be appropriate given the frequency of turning movements and relatively low volumes of through movements.

Road trains currently utilise Cox Peninsula Road, which is an approved road for heavy vehicle operations. As such, the potential for interactions between general traffic and road trains is an existing and managed risk on this corridor. The proposed development would result in an increase of approximately 20 heavy vehicle movements per day (two-way) along Cox Peninsula Road. This increase is relatively modest when considered in the context of existing heavy vehicle activity on this route. Heavy vehicle movements associated with the operation phase are expected to occur evenly throughout the day and are therefore not anticipated to be concentrated during school drop-off (8:00am – 9:00am) or pick-up (2:30pm – 3:30pm) periods. As a result, additional heavy vehicle exposure during these sensitive time periods is expected to be limited.

To manage any potential traffic impacts due to construction and haulage operation movements, it is recommended that the school is advised of when the construction and haulage operation phase is to commence, as this will allow opportunity for the school to notify the parents and create a greater awareness of the marginal increase in triple road train movements during the construction phase and quad road train movements during the operation phase. It is also recommended that these road trains would avoid the Berry Springs Primary School vicinity during school drop-off and pick-up times.

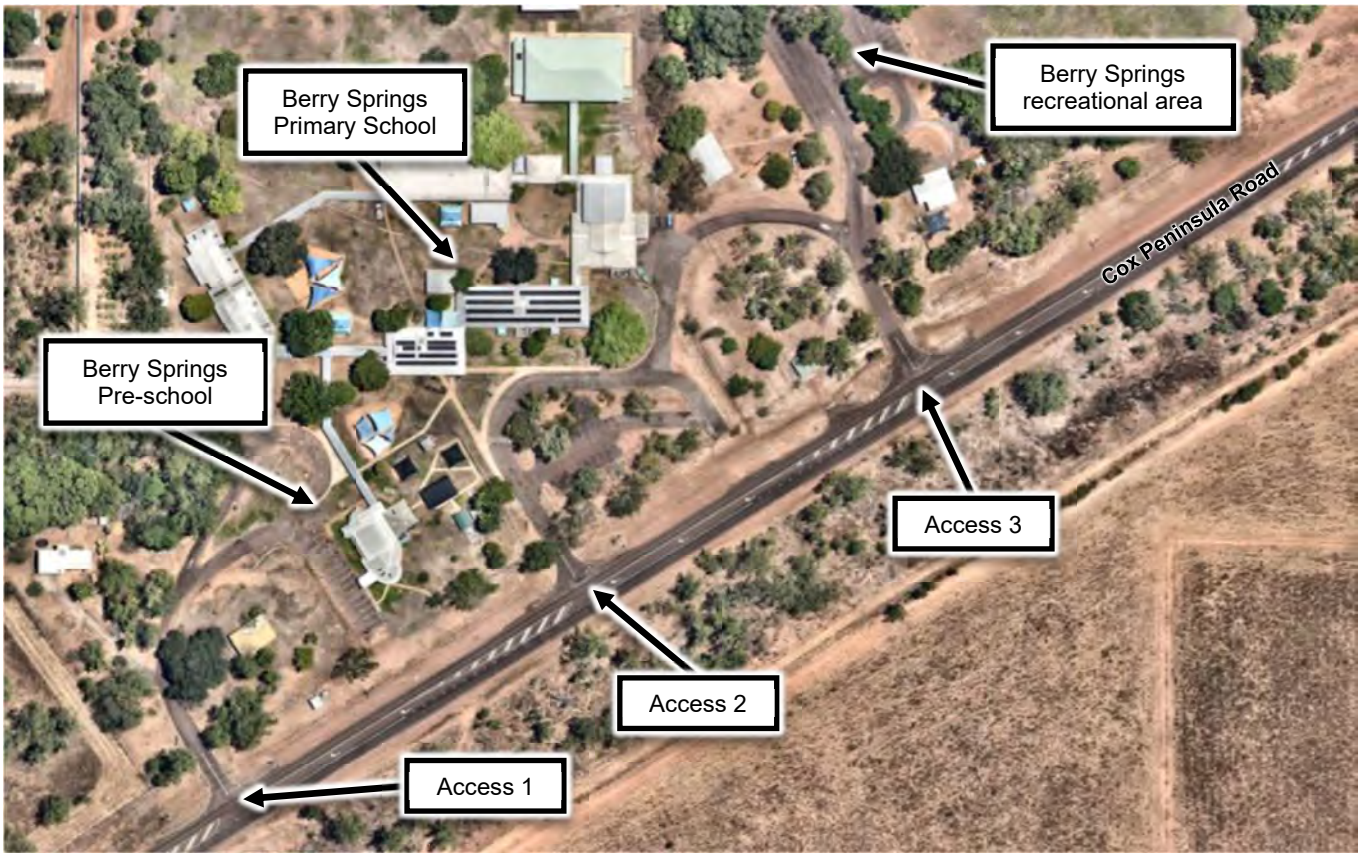


Figure 10 ***Access arrangements within the vicinity of Berry Springs Primary School***

Image source: NearMap (date captured: 23/092025, date extracted: 30/04/2026)

5.5 Community disruptions

Activities during all project phases may result in community disruptions associated with increased traffic volumes. Potential disruptions may include changes to traffic conditions and increased vehicle movements, particularly heavy vehicles and road trains which may also result in altered traffic patterns, increased travel times, and periodic delays or congestion. These disruptions could temporarily affect the daily operations of residents and nearby businesses.

To manage these impacts, measures would be implemented through the traffic management plans which would outline key strategies to minimise disruption to the road network and surrounding community, including traffic control measures, speed management, and scheduling of vehicle movements to avoid peak periods where practicable.

In addition, proactive stakeholder engagement should be undertaken, including advance notification of works associated with the projects, clear communication of expected disruptions, and ongoing liaison with affected residents and businesses.

5.6 Road condition

Activities during all project phases involve the movement of heavy vehicles along the road network, which can contribute to the deterioration of existing road surfaces over time. To manage this impact, a road condition audit should be undertaken prior to the commencement of construction works to establish the baseline condition of all roads expected to carry project-related traffic. The audit would include associated infrastructure such as culverts, bridges and other critical assets. The findings would be used to identify any sections of the road network that are not fit for the anticipated traffic, with upgrades undertaken prior to construction where required to ensure the network can safely accommodate increased vehicle movements across all project phases.

An inspection regime should also be implemented throughout the project phases to monitor road conditions and to identify any defects. Regular inspections would enable timely maintenance interventions, reduce safety hazards and minimise disruption.

5.7 Cumulative impacts

To evaluate potential cumulative impacts, other developments located in close proximity to the Project that may interact with its timelines, disturbance footprint, and project activities have been considered.

Existing mining operations are included in the baseline traffic volumes. In addition, the forecasted traffic volumes associated with Core Lithium's BP33 Underground Mine project has also been included in the baseline traffic volumes as outlined in Section 3.2. The BP33 project is expected to commence construction in July 2026 and has a mine life of more than 10 years. As such, this project is expected to overlap with the Project's construction, operation and closure/rehabilitation phases. As a result, there is potential for cumulative impacts associated with concurrent project activities, particularly given the proximity of the projects and their reliance of the same haul route.

Both projects are expected to generate HV movements, including road trains, predominantly during daytime periods. While it is understood that haulage activities would avoid school peak times, there remains potential for increased interaction between HVs and LVs outside these times.

The overlap in project activities between BP33 and the Project may result in a temporary increase in traffic volumes on shared freight corridors, which could contribute to increased congestion, extended travel times, and increased deterioration of road infrastructure. In addition, depending on the staging and scheduling of works, there is potential for compounded impacts, including temporary road disruptions and altered traffic conditions.

Notwithstanding the potential for cumulative impacts associated with concurrent operation of the Project and the BP33 Underground Mine, the forecast cumulative traffic volumes remain well within the theoretical capacity of the affected road network. As discussed in Section 5.1, the projected traffic volumes on the relevant road segments represent only a small proportion of the available capacity of a two-lane rural road and are not expected to result in any material impact on overall network performance or capacity.

To manage potential cumulative traffic impacts, consultation should be undertaken with the relevant road authorities to assess cumulative traffic impacts. Where required, additional traffic mitigation measures should be identified and implemented. Such measures may include coordination of haulage timing, implementation of consistent traffic control strategies, and proactive communication with affected stakeholders and communities. Any additional requirements should be documented in the Project's TMP prior to construction.

5.8 Other considerations

Other potential impacts on the existing road network and transport infrastructure may include:

– An increase in dust, noise and vibration due to heavy vehicle movements
– Parking issues at the worker bus pick-up and drop-off points

It is recommended that these issues be addressed in Traffic Management Plans prepared in consultation with relevant stakeholders, e.g. City of Palmerston in relation to parking issues

6. Site access assessment

At this stage, the detailed design of the site access has not been developed. The design would be developed in accordance with advice from DLI and relevant NT Government Department prior to construction, and approval of road upgrades would be undertaken in accordance with NT Government road approvals.

Safe intersection sight distance (SISD), stopping sight distance (SSD) and approach site distance (ASD) have been assessed in the following section to determine if the proposed site access location along Fog Bay Road is suitable. The assessment has been undertaken for both cars and trucks.

6.1 Safe intersection sight distance (SISD)

SISD is the minimum required sight distance on the major road at any intersection. At Fog Bay Road / Site Access Road intersection, Fog Bay Road operates as the major road, while the Site Access Road is the minor road. *Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersection (AGRD04A-23)* provides details on determining the required SISD.

6.1.1 Cars

As per Table 3.2 of AGRD04A-23 and shown in Figure 11, the required SISD for cars is 285 metres based on an operating speed of 110 km/h on Fog Bay Road, a reaction time of 2 seconds, and no grade change along the road.

Design speed (km/h)	Based on safe intersection sight distance for cars(1) h_1 = 1.1; h_2 = 1.25, d = 0.36(2); Observation time = 3 sec					
	R_T = 1.5 sec(3)		R_T = 2.0 sec		R_T = 2.5 sec	
	SISD (m)	K	SISD (m)	K	SISD (m)	K
40	67	4.9	73	6	–	–
50	90	8.6	97	10	–	–
60	114	14	123	16	–	–
70	141	22	151	25	–	–
80	170	31	181	35	–	–
90	201	43	214	49	226	55
100	234	59	248	66	262	74
110	–	–	285	87	300	97
120	–	–	324	112	341	124
130	–	–	365	143	383	157

Figure 11 Safe intersection sight distance (SISD) for cars

Image source: Table 3.2 of Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections, 2023

6.1.2 Trucks

As per AGRD04A-23, the formula used to calculate the required SISD along Fog Bay Road for trucks is as follows:

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

Where:

– D_T = observation time (sec) + reaction time (sec)
– V = operating speed (km/h)
– d = coefficient of deceleration
– a = longitudinal grade in %

Table 3.3 of AGRD04A-23 specifies the observation time and deceleration coefficient applicable to trucks. Based on an observation time of 3.0 seconds, a reaction time of 2.0 seconds, an operating speed of 110 km/h, a deceleration coefficient of 0.24 and assuming no grade change along the road, the required SISD for trucks is 352 metres.

6.2 Stopping sight distance (SSD)

Stopping sight distance (SSD) is the distance required for a normally alert driver, travelling at the design speed on a wet pavement, to perceive a hazard, react and brake to a stop before reaching a hazard on the road ahead. *Austroads Guide to Road Design Part 3: Geometric Design (AGRD03-21)*, provides details on determining the required SSD.

As per AGRD03-21, the SSD requirements for cars and trucks are shown in Figure 12 and Figure 13, respectively.

Design speed (km/h)	Absolute minimum values Only for specific road types and situations[1] based on $d = 0.46$[2],[3]			Desirable minimum values for all road types based on $d = 0.36$			Values for major highways and freeways in flat terrain[7] based on $d = 0.26$	
	R_T = 1.5 s[4]	R_T = 2.0 s[4]	R_T = 2.5 s	R_T = 1.5 s[4]	R_T = 2.0 s[4]	R_T = 2.5 s	R_T = 2.0 s	R_T = 2.5 s
40	30	36	–	34	40	45	–	–
50	42	49	–	48	55	62	–	–
60	56	64	–	64	73	81	–	–
70	71	81	–	83	92	102	113	123
80	88	99	–	103	114	126	141	152
90	107	119	132	126	139	151	173	185
100	–	141	155	–	165	179	207	221
110	–	165	180	–	193	209	244	260
120	–	190	207	–	224	241	285	301
130	–	217	235	–	257	275	328	346

Figure 12 SSD for cars

Image source: Table 5.5 of Austroads Guide to Road Design Part 3: Geometric Design, 2021

Operating speed (km/h)	Single unit trucks, semi-trailers and B-doubles Based on $d = 0.29$[1]		
	R_T = 1.5 s[2]	R_T = 2.0 s	R_T = 2.5 s
40	38	44	49
50	55	62	69
60	74	82	91
70	96	105	115
80	120	131	142
90	147	160	172
100	–	191	205
110	–	225	241

Figure 13 SSD for trucks

Image source: Table 5.6 of Austroads Guide to Road Design Part 3: Geometric Design, 2021

6.2.1 SSD for Site Access Road

6.2.1.1 Cars

Based on an operating speed of 60 km/h on the Site Access Road, a reaction time of 2.0 seconds, and generally flat road conditions, the required SSD is 73 metres for cars as provided in Figure 12.

6.2.1.2 Trucks

Based on an operating speed of 60 km/h on Fog Bay Road, a reaction time of 2.0 seconds, and generally flat road conditions, the required SSD is 82 metres for trucks as provided in Figure 13.

6.2.2 SSD for Fog Bay Road

6.2.2.1 Cars

Based on an operating speed of 110 km/h on Fog Bay Road, a reaction time of 2.0 seconds, and generally flat road conditions, the required SSD is 193 metres for cars as provided in Figure 12.

6.2.2.2 Trucks

Based on an operating speed of 110 km/h on Fog Bay Road, a reaction time of 2.0 seconds, and generally flat road conditions, the required SSD is 225 metres for trucks as provided in Figure 13.

6.3 Approach sight distance (ASD)

ASD is the minimum sight distance required on the minor road approaches to all intersections to ensure that drivers are aware of the presence of an intersection. The minor road for Fog Bay Road / Site Access Road intersection is the Site Access Road.

As per *Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersection (AGRD04A-23)*, the ASD requirements for cars are shown in Figure 14. For trucks, the required ASD is numerically the same as the SSD for trucks specified in AGRD03-21.

Design speed (km/h)	Based on approach sight distance for a car[1] h_1 = 1.1, h_2 = 0, d = 0.36[2]					
	R_T = 1.5 sec[3]		R_T = 2.0 sec		R_T = 2.5 sec	
	ASD (m)	K	ASD (m)	K	ASD (m)	K
40	34	5.3	40	7.2	–	–
50	48	10.5	55	13.8	–	–
60	64	18.8	73	24.0	–	–
70	83	31.1	92	38.9	–	–
80	103	48.5	114	59.5	–	–
90	126	72.3	139	87.3	151	104
100	151	104	165	124	179	146
110	–	–	193	171	209	198
120	–	–	224	229	241	264
130	–	–	257	301	275	344
Truck stopping capability provided by the minimum crest curve size[4]	h_1 = 2.4 m, h_2 = 0 m, d = 0.22					

Figure 14 ASD for cars

Image source: Table 3.1 of Austroads Guide to Road Design Part 4A: Unsignalised and Signalised Intersections, 2023

6.3.1 Cars

Based on an operating speed of 60 km/h on the Site Access Road, a reaction time of 2.0 seconds, and generally flat road conditions, the required ASD is 73 metres for cars as provided in Figure 14.

6.3.2 Trucks

The ASD for trucks along the Site Access Road is numerically the same as the SSD outlined in Section 6.2.1.2. Therefore, the required ASD for trucks is 82 metres.

6.4 Sight distance summary

The sight distance requirements along Fog Bay Road and the Site Access Road for both cars and trucks are summarised below in Table 8. For all sight distance assessments, trucks require greater sight distances than cars. Therefore, the minimum sight distance required along Fog Bay Road and the Site Access Road is 352 metres and 82 metres, respectively. These sight distances are illustrated below in Figure 15.

As shown in Figure 15, the minimum sight distance of 352 metres along Fog Bay Road is not located on a horizontal curve, and the road alignment is straight over the relevant length. Figure 16 shows views of Fog Bay Road to both the east and west of the proposed Site Access Road, which indicate that the road is generally flat with no apparent obstructions to sight lines. Vegetation along Fog Bay Road is minimal, low in height, and well maintained, providing clear visibility to and from the proposed Site Access Road.

The minimum sight distance of 82 metres along the proposed Site Access Road should be sufficient given that the road alignment over this distance is straight. Adequate sight lines are expected to be available, provided the Site Access Road is constructed on relatively flat terrain with no apparent vertical or horizontal constraints and the road corridor is kept clear of obstructions.

Overall, the location of the proposed Site Access Road off Fog Bay Road is considered suitable based on the sight distance requirements.

Table 8 Sight distance summary

Sight distance	Vehicle type	Requirement
SISD (Fog Bay Road)	Cars	285 m
	Trucks	352 m
SSD (Site Access Road)	Cars	73 m
	Trucks	82 m
SSD (Fog Bay Road)	Cars	193 m
	Trucks	225 m
ASD (Site Access Road)	Cars	73 m
	Trucks	82 m

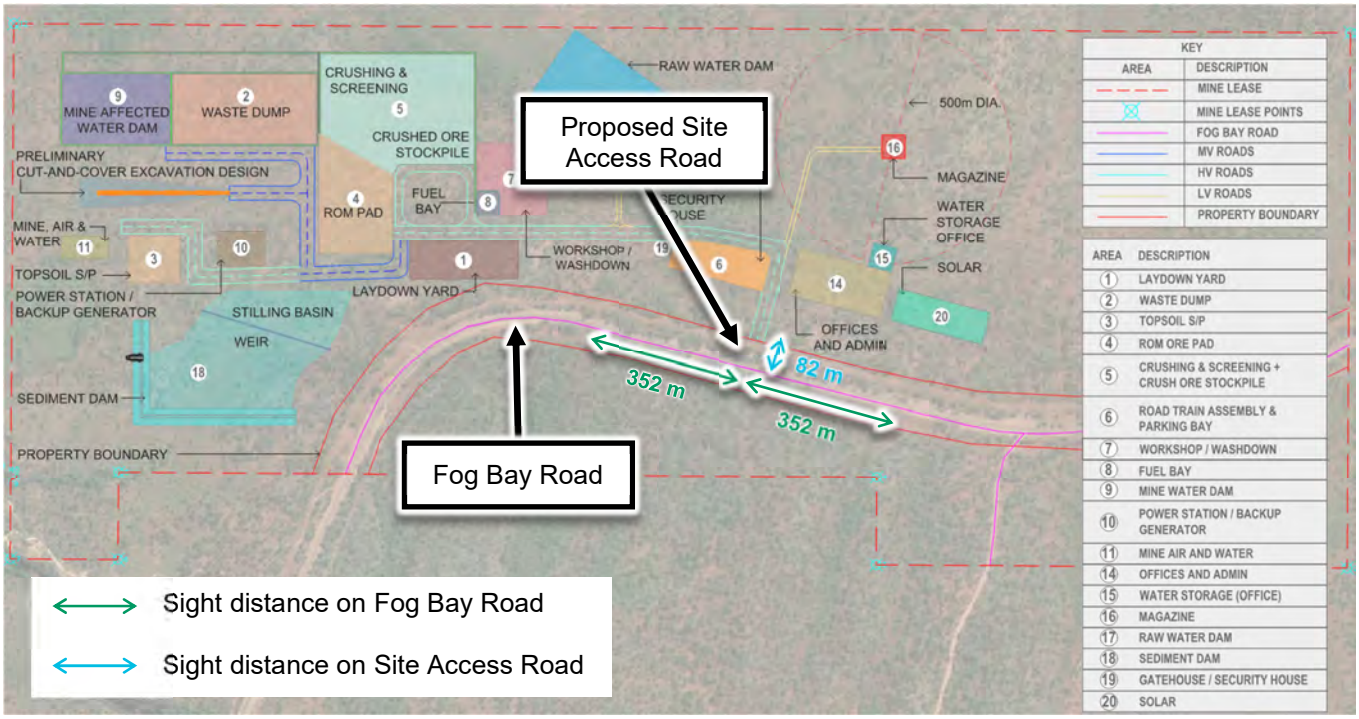


Figure 15 Sight distance requirement on Fog Bay Road and Site Access Road



Figure 16 Fog Bay Road facing east and west from the proposed Site Access Road location

Image source: Lithium Plus Minerals, 2026

6.5 Intersection treatment

Based on the turn lane warrant assessment outlined above in Section 5.2, a BAL/BAR turn treatment is recommended at the Fog Bay Road / Site Access Road intersection. Notwithstanding that most site-generated traffic would approach the site along Fog Bay Road and turn right into the site, the predicted traffic volumes support the provision of a BAL.

7. Traffic management strategy

A Traffic Management Strategy (TMS) would be developed for the construction, operation and closure/rehabilitation phases of the Project. The TMS would establish the overarching principles and commitments to be implemented through phase-specific Traffic Management Plans (TMPs), prepared before each project phase commences. For example, an Operational Traffic Management Plan (OTMP) would be developed prior to commencing operations. All TMPs would be prepared in consultation with relevant NT Government departments.

The underlying principles of the TMS are recommended to be as follows:

- The operation of vehicular traffic associated with the construction, operation and closure/rehabilitation phases would be undertaken such that it does not materially compromise the safety, efficiency or capacity of the NT Government road network.
- Haulage operations shall be managed to avoid the potential for convoying of road trains, to ensure that opportunity for safe passing and overtaking opportunities is maximised.
- Lithium Plus would implement appropriate fatigue management strategies with vehicle operators to ensure vehicle operations are safe on the NT Government road network.
- Appropriate traffic management signage would be implemented throughout the impacted road network.
- Lithium Plus would maintain ongoing consultation and engagement with stakeholders as a means of proactively informing, seeking and acting upon issues or concerns arising from the operations of vehicles associated with the function of the mine.
- Key stakeholders situated on the haulage route would be engaged to ensure issues identified with respect to amenity and safety are proactively managed.
- Material changes to the nature or frequency of haulage operations would be communicated well in advance of any changes to the NT Government.
- Road trains would avoid the Berry Springs Primary school during drop-off (8:00am – 9:00am) and pick-up (2:30pm – 3:30pm) times.
- Monitoring and inspection processes would be implemented such as periodic traffic counts, compliance monitoring with operational controls, incident and complaint recording, and regular reporting to DLI. Where issues are identified, appropriate corrective actions would be implemented.
- Measures to manage dust, noise and vibration impacts would be implemented where necessary.
- Engagement of a Road Quality Auditor to undertake a road condition audit prior to the commencement of construction works to establish the baseline condition of all roads expected to carry project-related traffic.
- The worker bus service should not materially impact existing parking availability at pick-up and drop-off points.

8. Summary and recommendations

Lithium Plus Minerals proposes to export 3.10 million tonnes of high grade spodumene from the proposed Lei Deposit mine site to the East Arm Wharf at the Port of Darwin. Access to the mine site would be off Fog Bay Road to the west of Cox Peninsula Road / Fog Bay Road intersection. Construction of the mine site is proposed to be undertaken in 2027, operation between 2028 to 2033, and closure/rehabilitation in 2034. During operation, the haulage route for HV would traverse along Fog Bay Road, Cox Peninsula Road, Stuart Highway, Tiger Brennan Drive and Berrimah Road. LV movements associated with the mine workforce and visitors are expected to utilise Fog Bay Road, Cox Peninsula Road, Finn Road, Jenkins Road, and Channel Island Road to travel between the mine site and Palmerston.

Traffic generation and distribution

Peak traffic generation and distribution are assessed for the 2032 operational scenario. During both the AM (6:00am – 7:00am) and PM (5:00pm – 6:00pm) periods, approximately 27 two-way vehicle movements are expected, comprising 25 light vehicle (LV) movements and 2 heavy vehicle (HV) movements. For the purposes of peak hour traffic volume calculations, all volumes have been conservatively rounded up. As a result, the combined AM and PM peak hour volumes may appear greater than the daily traffic volumes. The estimated total daily traffic generation is approximately 68 two-way vehicle movements, consisting of 48 LV movements and 20 HV movements.

Development impacts on existing road network

The increase in traffic volume along Cox Peninsula Road, Fog Bay Road, Jenkins Road, Channel Island Road and Finn Road have been identified as exceeding the 5% threshold relative to baseline conditions and therefore would warrant further consideration of potential traffic impacts. However, the total forecast traffic volumes on these roads remain well below the theoretical capacity of a two-lane, two-way rural road. On this basis, the existing road network is expected to be capable of accommodating the additional traffic generated without any material impact on network capacity.

While current crash data does not indicate any underlying safety issues, the increase in HV traffic may elevate the potential for interactions with other road users. The Project may also contribute to minor increases in congestion, travel times, and road wear, as well as temporary disruptions associated with changes in traffic conditions. These impacts may be compounded by overlapping developments, including the Core Lithium BP33 Underground Mine project, which is anticipated to utilise the same haul route and operate concurrently, resulting in cumulative increases in traffic volumes.

Overall, impacts to the road network are expected to be manageable with the implementation of appropriate mitigation measures, including Traffic Management Plans, road condition monitoring, and targeted safety and community management measures.

Mitigation measures

The proposed mitigation strategy is centred on preparation and implementation of a Traffic Management Strategy (TMS) supported by phase-specific Traffic Management Plans (TMPs). Key measures include:

– Minimising road train convoying to improve opportunities for safe overtaking by other road users.
– Implementing driver fatigue management measures for haulage operators.
– Installing and maintaining appropriate traffic management signage along affected roads.
– Undertaking ongoing stakeholder consultation and engagement to identify and address traffic-related concerns.
– Engaging directly with landholders and other stakeholders along the haulage route to proactively manage amenity and safety issues.
– Providing advance notification to the NT Government and affected stakeholders of any material changes to haulage operations.
– Restricting road train movements past Berry Springs Primary School during student drop-off and pick-up periods.

– Implementing traffic monitoring and compliance measures, including traffic counts, incident and complaint recording, compliance checks and reporting to DLI.
– Applying corrective actions where monitoring identifies issues.
– Implementing management measures for dust, noise and vibration impacts, such as covering loads, avoiding compression braking and reducing speeds in sensitive areas during haulage times.
– Completing a baseline road condition audit before construction to establish the condition of roads used by project traffic.

Site access assessment

At this stage, the detailed design of the site access has not been developed. The design would be developed in accordance with advice from DLI and relevant NT Government Department prior to construction, and approval of road upgrades would be undertaken in accordance with NT Government road approvals. The proposed location of the Site Access Road at the mine site off Fog Bay Road is considered appropriate based on the assessment of the safe intersection sight distance (SISD), approach site distance (ASD), stopping sight distance (SSD).

Appendix A

Background traffic volumes

LEGEND
Volumes Obtained from NT Annual Traffic Report 2024
Volumes Calculated Based on Assumed Parameters
Heavy Vehicle Volumes Based on Assumed Parameters

CALCULATION PARAMETERS	
Assumed Annual Growth Rate	3%
Assumed Peak Hour Proportion	15%
Assumed Proportion of Heavy Vehicles	20%

BP33 generated two-way daily volumes	
Light Vehicle	25
Heavy Vehicle	30
Total	55

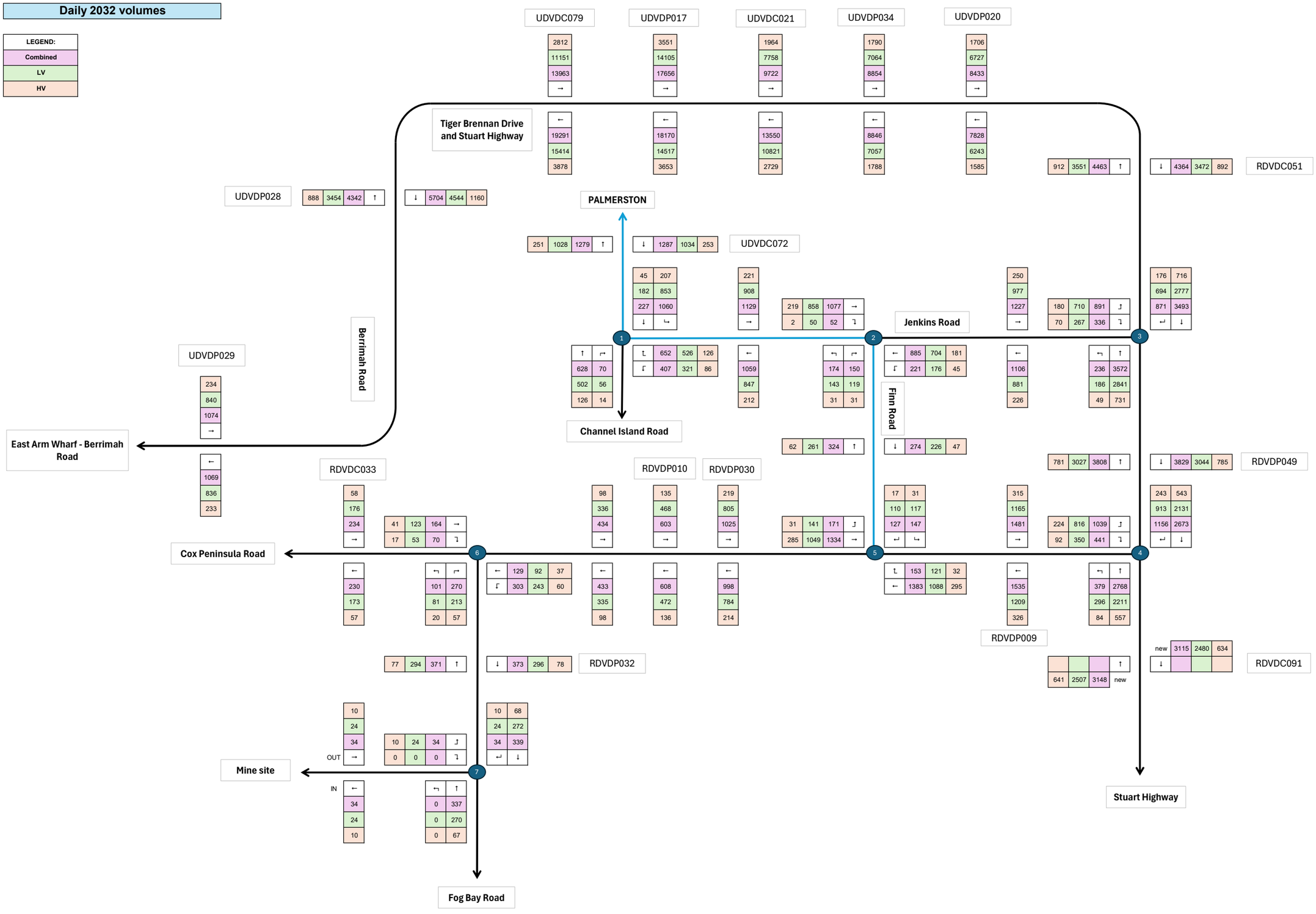
		VOLUMES																				Peak Hour Volumes	Peak Hour Volumes
		EXISTING										ESTIMATED		FORECASTED									
Road Counter	Direction	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2026	2032
Berrimah Road 350m west of Casey Street (UDVDP029)	Inbound	497	489	609	677	606	514	576	683	754	810	834	887	913	941	969	998	1,028	1,059	1,091	1,123	133	159
	Outbound	509	494	630	696	623	533	602	700	773	814	838	891	918	945	974	1,003	1,033	1,064	1,096	1,129	134	160
	Both	1,006	983	1,239	1,373	1,229	1,047	1,178	1,383	1,527	1,624	1,673	1,778	1,831	1,886	1,943	2,001	2,061	2,123	2,187	2,252	267	318
	HV Inbound	99	98	122	135	121	103	115	137	151	162	167	187	192	198	204	210	217	223	230	237	28	33
	HV Outbound	102	99	126	139	125	107	120	140	155	163	168	188	193	199	205	211	218	224	231	238	28	34
	HV Both	201	197	248	275	246	209	236	277	305	325	335	375	386	397	409	422	434	447	461	475	56	67
Berrimah Road 400m south of Tiger Brennan Drive (UDVDP028)	Inbound	5,033	4,919	4,784	4,663	4,291	4,139	4,201	4,443	3,776	4,469	4,603	4,769	4,912	5,059	5,211	5,367	5,528	5,694	5,865	6,041	715	854
	Outbound	4,140	3,840	3,670	3,729	3,460	3,117	3,124	3,337	2,992	3,394	3,496	3,628	3,737	3,849	3,965	4,084	4,206	4,332	4,462	4,596	544	650
	Both	9,173	8,759	8,454	8,392	7,751	7,256	7,325	7,780	6,768	7,863	8,099	8,397	8,649	8,908	9,175	9,451	9,734	10,026	10,327	10,637	1,260	1,504
	HV Inbound	1,007	984	957	933	858	828	840	889	755	894	921	963	992	1,022	1,053	1,084	1,117	1,150	1,185	1,220	144	173
	HV Outbound	828	768	734	746	692	623	625	667	598	679	699	735	757	780	803	827	852	878	904	931	110	132
	HV Both	1,835	1,752	1,691	1,678	1,550	1,451	1,465	1,556	1,354	1,573	1,620	1,698	1,749	1,802	1,856	1,912	1,969	2,028	2,089	2,151	255	304
Stuart Highway Midway Yarrawonga & Tulagi Road (UDVDC079)	Inbound	11,647	13,035	13,274	13,089	13,615	12,413	15,000	14,934	14,854	15,195	15,651	16,148	16,632	17,131	17,645	18,175	18,720	19,281	19,860	20,456	2,422	2,892
	Outbound	10,500	12,845	11,615	11,372	10,763	10,310	12,005	11,887	11,685	10,989	11,319	11,686	12,036	12,397	12,769	13,152	13,547	13,953	14,372	14,803	1,753	2,093
	Both	22,147	25,880	24,889	24,461	24,378	22,723	27,005	26,821	26,539	26,184	26,970	27,834	28,669	29,529	30,415	31,327	32,267	33,235	34,232	35,259	4,175	4,985
	HV Inbound	2,329	2,607	2,655	2,618	2,723	2,483	3,000	2,987	2,971	3,039	3,130	3,239	3,336	3,436	3,539	3,646	3,755	3,868	3,984	4,103	486	580
	HV Outbound	2,100	2,569	2,323	2,274	2,153	2,062	2,401	2,377	2,337	2,198	2,264	2,347	2,417	2,490	2,564	2,641	2,720	2,802	2,886	2,973	352	420
	HV Both	4,429	5,176	4,978	4,892	4,876	4,545	5,401	5,364	5,308	5,237	5,394	5,586	5,753	5,926	6,104	6,287	6,475	6,670	6,870	7,076	838	1,000
Stuart Highway 500m west of Howard Springs Road (UDVDP017)	Inbound	12,760	13,148	13,666	13,523	12,765	12,265	14,101	13,927	14,029	14,310	14,739	15,209	15,665	16,135	16,619	17,118	17,631	18,160	18,705	19,266	2,281	2,724
	Outbound	12,623	12,873	13,350	13,158	12,331	12,209	13,688	13,452	13,542	13,904	14,321	14,778	15,222	15,678	16,149	16,633	17,132	17,646	18,175	18,721	2,217	2,647
	Both	25,383	26,021	27,016	26,681	25,096	24,474	27,789	27,379	27,571	28,214	29,060	29,987	30,887	31,813	32,768	33,751	34,763	35,806	36,881	37,987	4,498	5,371
	HV Inbound	2,552	2,630	2,733	2,705	2,553	2,453	2,820	2,785	2,806	2,862	2,948	3,051	3,143	3,237	3,334	3,434	3,537	3,643	3,753	3,865	458	547
	HV Outbound	2,525	2,575	2,670	2,632	2,466	2,442	2,738	2,690	2,708	2,781	2,864	2,965	3,054	3,146	3,240	3,337	3,437	3,541	3,647	3,756	445	531
	HV Both	5,077	5,204	5,403	5,336	5,019	4,895	5,558	5,476	5,514	5,643	5,812	6,016	6,197	6,383	6,574	6,772	6,975	7,184	7,399	7,621	902	1,078
Stuart Highway 100m north of Henning Road (UDVDC021)	Inbound	8,701	8,657	9,117	10,715	9,747	9,746	6,548	10,025	11,138	10,663	10,983	11,340	11,680	12,030	12,391	12,763	13,146	13,540	13,947	14,365	1,701	2,031
	Outbound	8,124	8,765	8,032	7,668	7,139	6,879	7,843	6,621	7,747	7,641	7,870	8,134	8,378	8,629	8,888	9,155	9,429	9,712	10,004	10,304	1,220	1,457
	Both	16,825	17,422	17,149	18,383	16,886	16,625	14,391	16,646	18,885	18,304	18,853	19,474	20,058	20,660	21,279	21,918	22,575	23,253	23,950	24,669	2,921	3,488
	HV Inbound	1,740	1,731	1,823	2,143	1,949	1,949	1,310	2,005	2,228	2,133	2,197	2,277	2,346	2,416	2,489	2,563	2,640	2,719	2,801	2,885	342	408
	HV Outbound	1,625	1,753	1,606	1,534	1,428	1,376	1,569	1,324	1,549	1,528	1,574	1,636	1,685	1,736	1,788	1,842	1,897	1,954	2,012	2,073	245	293
	HV Both	3,365	3,484	3,430	3,677	3,377	3,325	2,878	3,329	3,777	3,661	3,771	3,914	4,031	4,152	4,277	4,405	4,537	4,673	4,813	4,958	587	701
Stuart Highway 500m south of Bees Creek Road (UDVDP034)	Inbound				6,666	6,460	6,023	6,916	6,958	6,070	6,949	7,157	7,400	7,622	7,850	8,086	8,328	8,578	8,836	9,101	9,374	1,110	1,325
	Outbound				6,850	6,431	6,229	6,881	6,873	6,556	6,956	7,165	7,407	7,629	7,858	8,094	8,337	8,587	8,844	9,110	9,383	1,111	1,327
	Both	-	-	-	13,516	12,891	12,252	13,797	13,831	12,626	13,905	14,322	14,807	15,251	15,709	16,180	16,665	17,165	17,680	18,211	18,757	2,221	2,652
	HV Inbound	-	-	-	1,333	1,292	1,205	1,383	1,392	1,214	1,390	1,431	1,489	1,534	1,580	1,628	1,676	1,727	1,778	1,832	1,887	223	267
	HV Outbound	-	-	-	1,370	1,286	1,246	1,376	1,375	1,311	1,391	1,433	1,491	1,536	1,582	1,629	1,678	1,728	1,780	1,834	1,889	224	267
	HV Both	-	-	-	2,703	2,578	2,450	2,759	2,766	2,525	2,781	2,864	2,980	3,070	3,162	3,257	3,354	3,455	3,559	3,665	3,775	447	534
Stuart Highway 500m north of Arnhem Highway (UDVDP020)	Inbound	5,784	5,795	5,875	5,853	5,595	5,431	7,051	6,107	6,065	6,146	6,330	6,548	6,744	6,947	7,155	7,370	7,591	7,818	8,053	8,295	982	1,173
	Outbound	6,486	6,517	6,525	6,431	6,119	5,940	7,630	6,630	6,561	6,623	6,822	7,054	7,265	7,483	7,708	7,939	8,177	8,423	8,675	8,936	1,058	1,263
	Both	12,270	12,312	12,400	12,284	11,714	11,371	14,681	12,737	12,626	12,769	13,152	13,602	14,010	14,430	14,863	15,309	15,768	16,241	16,728	17,230	2,040	2,436
	HV Inbound	1,157	1,159	1,175	1,171	1,119	1,086	1,410	1,221	1,213	1,229	1,266	1,319	1,359	1,399	1,441	1,485	1,529	1,575	1,622	1,671	198	236
	HV Outbound	1,297	1,303	1,305	1,286	1,224	1,188	1,526	1,326	1,312	1,325	1,364	1,420	1,463	1,507	1,552	1,599	1,646	1,696	1,747	1,799	213	254
	HV Both	2,454	2,462	2,480	2,457	2,343	2,274	2,936	2,547	2,525	2,554	2,630	2,739	2,822	2,906	2,993	3,083	3,176	3,271	3,369	3,470	411	491
Stuart Highway 500m north of Gulnare Road (RDVDC051)	Inbound	4,023	3,221	3,966	3,608	3,294	3,202	3,230	3,442	3,589	3,489	3,594	3,729	3,841	3,956	4,075	4,197	4,323	4,453	4,586	4,724	559	668
	Outbound	3,827	3,025	3,870	3,708	3,233	3,228	2,424	3,386	3,533	3,411	3,513	3,646	3,756	3,868	3,984	4,104	4,227	4,354	4,484	4,619	547	653
	Both	7,850	6,246	7,836	7,316	6,527	6,430	5,654	6,828	7,122	6,900	7,107	7,375	7,596	7,824	8,059	8,301	8,550	8,806	9,071	9,343	1,106	1,321
	HV Inbound	805	644	793	722	659	640	646	688	718	698	719	755	778	801	825	850	876	902	929	957	113	135
	HV Outbound	765	605	774	742	647	646	485	677	707	682	703	739	761	784	807	831	856	882	909	936	111	132
	HV Both	1,570	1,249	1,567	1,463	1,305	1,286	1,131	1,366	1,424	1,380	1,421	1,494	1,539	1,585	1,633	1,682	1,732	1,784	1,837	1,893	224	268
Stuart Highway 500m north of Cox Peninsula Road (RDVDP049)	Inbound				3,065	2,836	2,702	3,028	3,035	2,947	2,972	3,061	3,180	3,276	3,374	3,475	3,580	3,687	3,798	3,912	4,029	477	570
	Outbound				3,103	2,831	2,766	3,056	3,035	3,013	2,989	3,079	3,199	3,294	3,393	3,495	3,600	3,708	3,819	3,934	4,052	480	573
	Both	-	-	-	6,168	5,667	5,468	6,084	6,070	5,960	5,961	6,140	6,379	6,570	6,768	6,971	7,180	7,395	7,617	7,845	8,081	957	1,143
	HV Inbound	-	-	-	613	567	540	606	607	589	594	612	646	665	685	705	727	748	771	794	818	97	116
	HV Outbound	-	-	-	621	566	553	611	607	603	598	616	649	669	689	709	731	753	775	798	822	97	116
	HV Both	-	-	-	1,234	1,133	1,094	1,217	1,214	1,192	1,192	1,228	1,295	1,334	1,374	1,415	1,457	1,501	1,546	1,592	1,640	194	232
Stuart Highway 500m south of Cox Peninsula Road (RDVDC091)	Inbound	2,410	2,259	1,884	2,150	1,982	1,844	2,104	2,141	1,853	2,025	2,086	2,176	2,241	2,308	2,378	2,449	2,522	2,598	2,676	2,756	326	390
	Outbound	2,204	2,252	1,912	2,164	1,958	1,855	2,109	2,127	1,878	2,103	2,166	2,259	2,326	2,396	2,468	2,542	2,618	2,697	2,778	2,861	339	405
	Both	4,614	4,511	3,796	4,314	3,940	3,699	4,213	4,268	3,731	4,128	4,252	4,434	4,567	4,704	4,846	4,991	5,141	5,295	5,454	5,617	665	794
	HV Inbound	482	452	377	430	396	369	421	428	371	405	417	445	458	472	486	500	515	531	547	563	67	80
	HV Outbound	441	450	382	433	392	371	422	425	376	421	433	461	475	489	504	519	535	551	567	584	69	83
	HV Both	923	902	759	863	788	740	843	854	746	826	850	906	933	961	990	1,020	1,050	1,082	1,114	1,148	136	162
Cox Peninsula Road 2.8km west of Stuart Hwy (RDVDP009)	Inbound	1,051	1,089	1,056	1,076	1,040	997	1,170	2,424	1,291	1,135	1,169	1,232	1,269	1,307	1,346	1,386	1,428	1,471	1,515	1,560	185	221
	Outbound	1,114	1,136	1,088	1,118	1,070	1,053	1,213	2,502	1,335	1,178	1,213	1,277	1,316	1,355	1,396	1,438	1,481	1,525	1,571	1,618	192	229
	Both	2,165	2,225	2,144	2,194	2,110	2,050	2,383	4,926	2,626	2,313	2,382	2,509	2,584	2,662	2,742	2,824	2,908	2,996	3,086	3,178	376	449
	HV Inbound	210	218	211	215	208	199	234	485	258	227	234	256	263	271	280	288	297	305	315	324	38	46
	HV Outbound	223	227	218	224	214	211	243	500	267	236	243	265	273	281	290	298	307	316	326	336	40	47
	HV Both	433	445	429	439	422	410	477	985	525	463	476	521	536	552	569	586	604	622	640	660	78	93
Cox Peninsula Road At Blackmore River Bridge (RDVDC030)	Inbound		370		420		494		673		756	779	830	854	880	906	934	962	991	1,020	1,051	124	149
	Outbound		341		399		484		659		735	757	807	831	856	882	909	936	964	993	1,023	121	145
	Both		711		819		978		1,332		1,491	1,536	1,637	1,686	1,736	1,789	1,842	1,898	1,954	2,013	2,073	246	293
	HV Inbound		74		84		99		135		151	156	175	181	186	192	197	203	209	216	222	26	31
	HV Outbound		68		80		97		132		147	151	171	176	181	187	192	198	204	210	217	26	31
	HV Both		142		164		196		266		298	307	346	357	367	378	390	402	414	426	439	52	62
Cox Peninsula Road 300m west of Pioneer Creek Bridge (RDVDP010)	Inbound	284	318	311	302	302	346	376	441	505	423	436	476	491	505	520	536	552	569	586	603	71	85
	Outbound	288	322	315	306	305	350	380	445	521	427	440	481	495	510	525	541	557	574	591	609	72	86
	Both	572	640	626	608	607	696	756	886	1,026	850	876	957	985	1,015	1,045	1,077	1,109	1,142	1,177	1,212	144	171
	HV Inbound	57	64	62	60	60	69	75	88	101	85	87	105	108	111	114	118	121	125	129	133	16	19
	HV Outbound	58	64	63	61	61	70	76	89	104	85	88	106	109	112	115	119	122	126	130	134	16	19
	HV Both	114	128	125	122	121	139	151	177	205	170	175	210	217	223	230	237	244	251	259	266	32	38
Cox Peninsula Road 500m west of Fog Bay Road (RDVDC033)	Inbound		112		106		120		225		159	164	196	202	208	214	221	227	234	241	249	29	35
	Outbound		113		104		120		222		156	161	193	199	205	211	217	224	230	237	244	29	35
	Both		225		210		240		447		315	324	389	401	413	425	438	451	465	479	493	58	70
	HV Inbound		22		21		24		45		32	33	49	50	52	53	55	56	58	60	62	7	9
	HV Outbound		23		21		24		44		31	32	48	50	51	53	54	56	57	59	61	7	9
	HV Both		45		42		48		89		63	65	97	100	103	106	109	112	116	119	123	15	17
Fog Bay Road 2km west of Cox Peninsula Road (RDVDP032)	Inbound	183	213	211	209	211	2,237	254	257	255	266	274	282	291	299	308	318	327	337	347	357	42	51
	Outbound	190	212	212	209	211	238	256	258	265	268	276	284	293	302	311	320	330	339	350	360	43	51
	Both	373	425	423	418	422	2,475	510	515	520	534	550	567	584	601	619	638	657	676	697	718	85	101
	HV Inbound	37	43	42	42	42	447	51	51	51	53	55	56	58	60	62	64	65	67	69	71	8	10
	HV Outbound	38	42	42	42	42	48	51	52	53	54	55	57	59	60	62	64	66	68	70	72	9	10
	HV Both	75	85	85	84	84	495	102	103	104	107	110	113	117	120	124	128	131	135	139	144	17	20
Channel Island Road South of Elizabeth River Bridge (UDVDC072)	Inbound	1,548	1,358	1,520	1,821	950	741	829	702	853	991	1,021	1,051	1,083	1,115	1,149	1,183	1,219	1,255	1,293	1,332	158	188
	Outbound	1,812	1,566	1,535	1,810	944	737	842	730	863	997	1,027	1,058	1,089	1,122	1,156	1,190	1,226	1,263	1,301	1,340	159	189
	Both	3,360	2,924	3,055	3,631	1,894	1,478	1,671	1,432	1,716	1,988	2,048	2,109	2,172	2,238	2,305	2,374	2,445	2,518	2,594	2,672	316	378
	HV Inbound	310	272	304	364	190	148	166	140	171	198	204	210	217	223	230	237	244	251	259	266	32	38
	HV Outbound	362	313	307	362	189	147	168	146	173	199	205	212	218	224	231	238	245	253	260	268	32	38
	HV Both	672	585	611	726	379	296	334	286	343	398	410	422	434	448	461	475	489	504	519	534	63	76

Appendix B

Traffic distribution and volumes (2032)

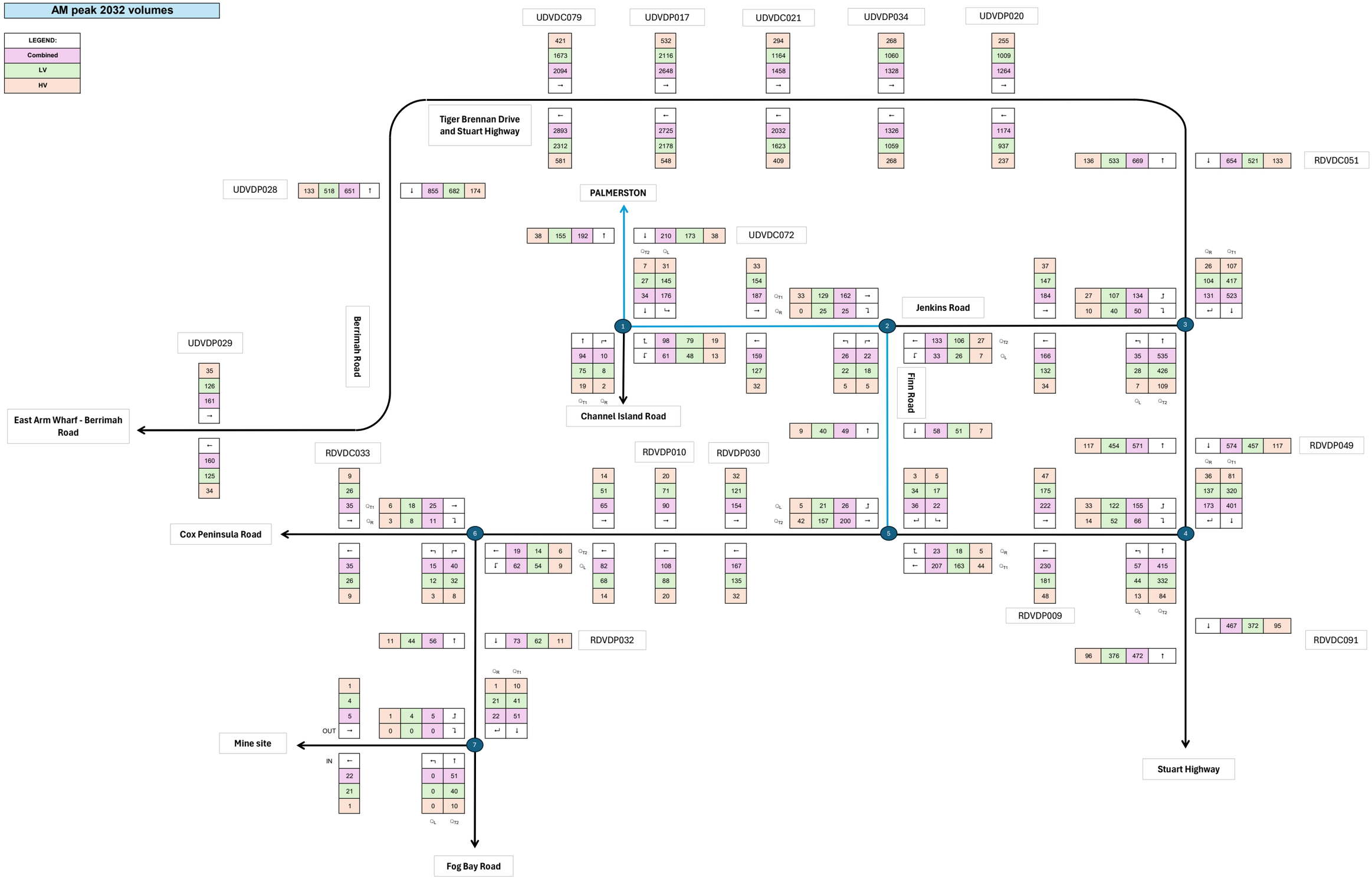
Daily 2032 volumes

LEGEND:
Combined
LV
HV



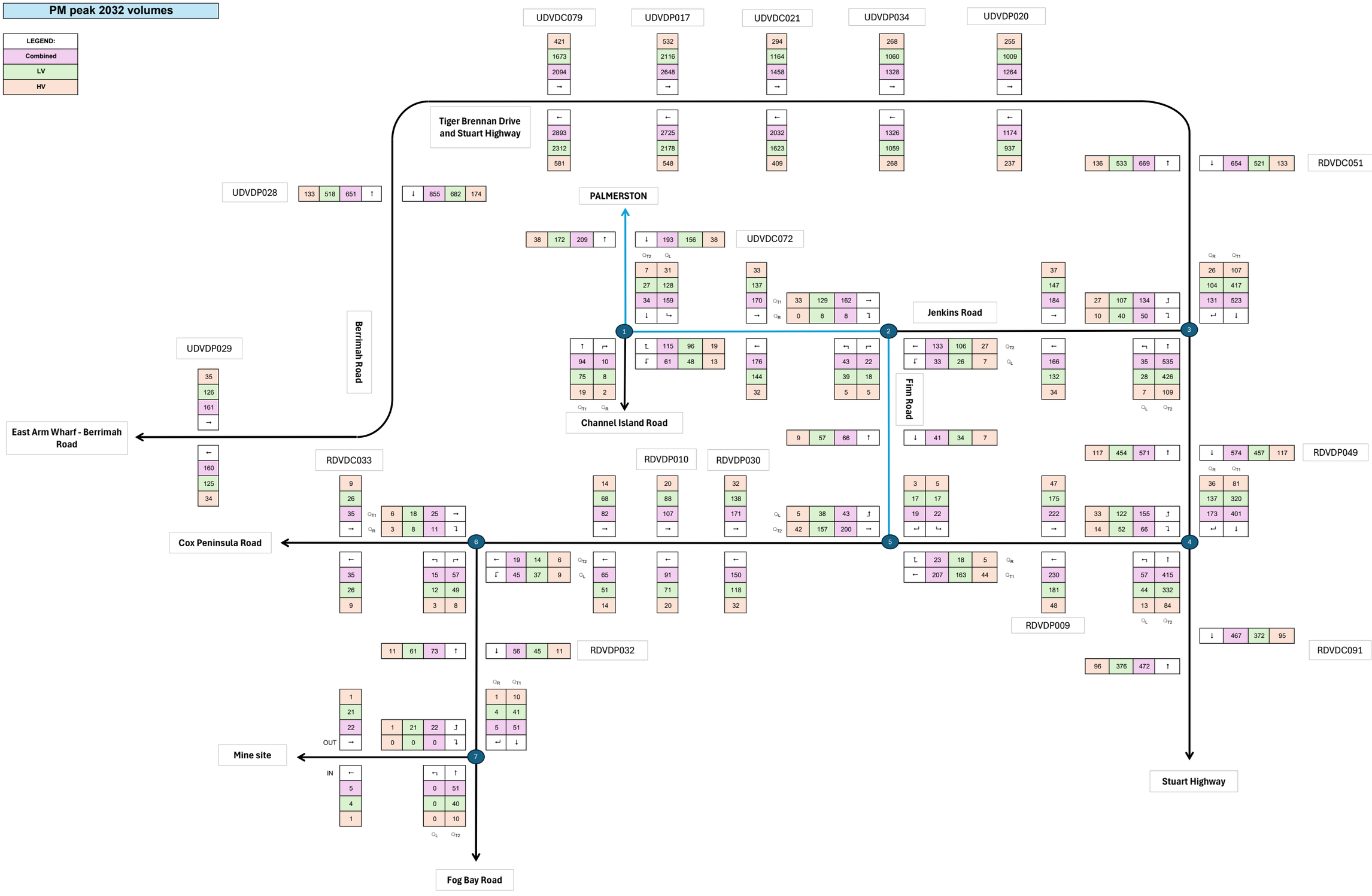
AM peak 2032 volumes

LEGEND:
Combined
LV
HV



PM peak 2032 volumes

LEGEND:
Combined
LV
HV



Appendix C

Change in traffic volumes

Table 9 Change in traffic volume between existing and development traffic (2032)

Road segment		Vehicle type	2032 existing volume (two-way)			2032 development volume (two-way)			Change in volume			% increase of development volume to existing volume		
			AM	PM	Daily	AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
Berrimah Road	UDVDP029	LV	251	251	1,676	251	251	1,676	0	0	0	0.0%	0.0%	0.0%
		HV	67	67	447	69	69	467	+2	+2	+20	3.0%	3.0%	4.5%
		Total	318	318	2,123	320	320	2,143	+2	+2	+20	0.6%	0.6%	0.9%
	UDVDP028	LV	1,200	1,200	7,998	1,200	1,200	7,998	0	0	0	0.0%	0.0%	0.0%
		HV	304	304	2,028	306	306	2,048	+2	+2	+20	0.7%	0.7%	1.0%
		Total	1,504	1,504	10,026	1,506	1,506	10,046	+2	+2	+20	0.1%	0.1%	0.2%
Stuart Highway	UDVDC079	LV	3,985	3,985	26,565	3,985	3,985	26,565	0	0	0	0.0%	0.0%	0.0%
		HV	1,000	1,000	6,670	1,002	1,002	6,690	+2	+2	+20	0.2%	0.2%	0.3%
		Total	4,985	4,985	33,235	4,987	4,987	33,255	+2	+2	+20	0.0%	0.0%	0.1%
	UDVDP017	LV	4,293	4,293	28,622	4,293	4,293	28,622	0	0	0	0.0%	0.0%	0.0%
		HV	1,078	1,078	7,184	1,080	1,080	7,204	+2	+2	+20	0.2%	0.2%	0.3%
		Total	5,371	5,371	35,806	5,373	5,373	35,826	+2	+2	+20	0.0%	0.0%	0.1%
	UDVDC021	LV	2,787	2,787	18,579	2,787	2,787	18,579	0	0	0	0.0%	0.0%	0.0%
		HV	701	701	4,673	703	703	4,693	+2	+2	+20	0.3%	0.3%	0.4%
		Total	3,488	3,488	23,253	3,490	3,490	23,273	+2	+2	+20	0.1%	0.1%	0.1%
	UDVDP034	LV	2,118	2,118	14,121	2,118	2,118	14,121	0	0	0	0.0%	0.0%	0.0%
		HV	534	534	3,559	536	536	3,579	+2	+2	+20	0.4%	0.4%	0.6%
		Total	2,652	2,652	17,680	2,654	2,654	17,700	+2	+2	+20	0.1%	0.1%	0.1%
	UDVDP020	LV	1,946	1,946	12,970	1,946	1,946	12,970	0	0	0	0.0%	0.0%	0.0%
		HV	491	491	3,271	493	493	3,291	+2	+2	+20	0.4%	0.4%	0.6%
		Total	2,436	2,436	16,241	2,438	2,438	16,261	+2	+2	+20	0.1%	0.1%	0.1%
	RDVDC051	LV	1,053	1,053	7,022	1,053	1,053	7,022	0	0	0	0.0%	0.0%	0.0%
		HV	268	268	1,784	270	270	1,804	+2	+2	+20	0.7%	0.7%	1.1%
		Total	1,321	1,321	8,806	1,323	1,323	8,826	+2	+2	+20	0.2%	0.2%	0.2%
	RDVDP049	LV	911	911	6,071	911	911	6,071	0	0	0	0.0%	0.0%	0.0%
		HV	232	232	1,546	234	234	1,566	+2	+2	+20	0.9%	0.9%	1.3%
		Total	1,143	1,143	7,617	1,145	1,145	7,637	+2	+2	+20	0.2%	0.2%	0.3%

Road segment		Vehicle type	2032 existing volume (two-way)			2032 development volume (two-way)			Change in volume			% increase of development volume to existing volume		
			AM	PM	Daily	AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
Jenkins Road	East of Jenkins Road/Finn Road intersection	LV	279	279	1,857	279	279	1,857	0	0	0	0.0%	0.0%	0.0%
		HV	71	71	476	71	71	476	0	0	0	0.0%	0.0%	0.0%
		Total	350	350	2,333	350	350	2,333	0	0	0	0.0%	0.0%	0.0%
	West of Jenkins Road/Finn Road intersection	LV	256	256	1,707	281	281	1,755	+25	+25	+48	9.8%	9.8%	2.8%
		HV	65	65	433	65	65	433	0	0	0	0.0%	0.0%	0.0%
		Total	321	321	2,140	346	346	2,188	+25	+25	+48	7.8%	7.8%	2.2%
Channel Island Road	North of Jenkins Road/Channel Island Road intersection	LV	302	302	2,015	327	327	2,063	+25	+25	+48	8.3%	8.3%	2.4%
		HV	76	76	504	76	76	504	0	0	0	0.0%	0.0%	0.0%
		Total	378	378	2,518	403	403	2,566	+25	+25	+48	6.6%	6.6%	1.9%
Finn Road	South of Jenkins Road/Finn Road intersection	LV	66	66	440	91	91	488	+25	+25	+48	37.9%	37.9%	10.9%
		HV	16	16	110	16	16	110	0	0	0	0.0%	0.0%	0.0%
		Total	82	82	549	107	107	597	+25	+25	+48	30.3%	30.3%	8.7%
Cox Peninsula Road	RDVDP009	LV	356	356	2,374	356	356	2,374	0	0	0	0.0%	0.0%	0.0%
		HV	93	93	622	95	95	642	+2	+2	+20	2.1%	2.1%	3.2%
		Total	449	449	2,996	451	451	3,016	+2	+2	+20	0.4%	0.4%	0.7%
	RDVDP030	LV	231	231	1,541	256	256	1,589	+25	+25	+48	10.8%	10.8%	3.1%
		HV	62	62	414	64	64	434	+2	+2	+20	3.2%	3.2%	4.8%
		Total	293	293	1,954	320	320	2,022	+27	+27	+68	9.2%	9.2%	3.5%
	RDVDP010	LV	134	134	891	159	159	939	+25	+25	+48	18.7%	18.7%	5.4%
		HV	38	38	251	40	40	271	+2	+2	+20	5.3%	5.3%	8.0%
		Total	171	171	1,142	198	198	1,210	+27	+27	+68	15.8%	15.8%	6.0%
	RDVDC033	LV	52	52	349	52	52	349	0	0	0	0.0%	0.0%	0.0%
		HV	17	17	116	17	17	116	0	0	0	0.0%	0.0%	0.0%
		Total	70	70	465	70	70	465	0	0	0	0.0%	0.0%	0.0%
Fog Bay Road	RDVDP032	LV	81	81	541	106	106	589	+25	+25	+48	30.8%	30.8%	8.9%
		HV	20	20	135	22	22	155	+2	+2	+20	9.9%	9.9%	14.8%
		Total	101	101	676	128	128	744	+27	+27	+68	26.6%	26.6%	10.1%
Mine site		LV	0	0	0	25	25	48	+25	+25	+48	N/A	N/A	N/A

Road segment		Vehicle type	2032 existing volume (two-way)			2032 development volume (two-way)			Change in volume			% increase of development volume to existing volume		
			AM	PM	Daily	AM	PM	Daily	AM	PM	Daily	AM	PM	Daily
	Site Access Road	HV	0	0	0	2	2	20	+2	+2	+20	N/A	N/A	N/A
		Total	0	0	0	27	27	68	+27	+27	+68	N/A	N/A	N/A

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