

DUNN + HILLAM ARCHITECTS

TRAFFIC AND PARKING ASSESSMENT

FOR

PROPOSED GILGANDRA LIBRARY

AT 30-32 MILLER STREET

GILGANDRA, NSW

Prepared by:

LYLE MARSHALL & PARTNERS
Consulting Engineers,
Transportation and Environmental Planners
Suite 31 401 Pacific Highway
ARTARMON NSW 2064

Phone: (02) 9436 0086
Email: lyle@lylemarshall.com.au

Job No.: 1117-21
Report No.: 8/21

JUNE 2021

CONTENTS

1.0	INTRODUCTION	1
1.1	Background	1
1.2	Scope of Report	1
1.3	Acknowledgement	2
2.0	EXISTING SITE AND TRAFFIC CONDITIONS	3
2.1	Site Location.....	3
2.2	Previous Uses in Site Building	3
2.3	Street Inventory	3
2.4	Existing Traffic Volumes	4
2.5	Visitor Survey at Existing Library	5
2.6	Parking Surveys in Miller Street	6
3.0	THE PROPOSED LIBRARY	8
3.1	The Proposed Building and Facilities	8
3.2	Parking Demand and Parking Standard	8
3.3	Parking Provision.....	9
3.4	Traffic Generation	10
	Table 3.4 Busiest Hour Traffic Generation	10
3.5	SEPP (Infrastructure) 2007	11
4.0	SUMMARY	12

LIST OF FIGURES

Figure 1	Locality Map
Figure 2A	Warren Road/Miller Street/Castlereagh Street intersection PM Traffic Count.
Figure 2B	Warren Road/Miller Street/Castlereagh Street Intersection AM Traffic Count.
Figure 3	Extent of Parking Survey
Figure 4	Aerial view of the Newell Highway/Oxley Highway/Castlereagh Highway intersection.

APPENDICES

APPENDIX A

- **Automatic Tube Counts in Miller Street east of Warren Road. Average hourly weekday and weekend traffic volumes by direction by Gilgandra Shire Council.**
1/1/21 to 12/4/21 – 102 Days
6/12/20 to 31/12/20 – 26 Days

APPENDIX B

- **Architectural Plans prepared by Dunn and Hillam. DA01-03, DA01-05.**

APPENDIX C

- **GLC Library Visitor Numbers - email from Librarian 2/2/21.**
- **Visitor survey 23/4/21 to 29/4/21 – email from Librarian 29/4/21.**

1.0 INTRODUCTION

1.1 Background

The existing library is located at No 1 Warren Road (Oxley Highway) and is outside the town centre. The existing library building is shown in **Photograph P1**. Gilgandra Shire Council has had an application for a Regional Cultural Fund Grant approved for a library extension.

The new library is to be located at No 30-32 Miller Street (Castlereagh Highway) in an existing building formerly a Country Target store and before that by Fosseys. The building is currently vacant.

Dunn and Hillam Architects have been engaged as Head Design Consultant by Gilgandra Shire Council for design and refurbishment of the existing building for a new and larger Library and Community Hub.

This traffic and parking assessment has been prepared a development application to be lodged with Council for the new Library, and Plaza and associated car parking facility.

1.2 Scope of Report

Our firm has been engaged by Dunn and Hillam to prepare this Traffic Impact Study for the proposed new Library, Plaza and associated facilities.

The study tasks have been assessed as follows: -

Study Tasks

- Site visit for an overnight stay in Gilgandra to carry out surveys and attend meetings, site inspection and measurements.
- Traffic volume counts at the Warren Road/Miller Street/Castlereagh Street intersection in the am and pm periods.
- Parking accumulation counts in Miller Street within walking distance of the proposed library building.
- Analysis of traffic and parking survey data.
- Preparation of Street Inventory map in Precinct showing traffic circulation, traffic controls, traffic and parking signs, pavement widths, traffic islands and sight distance restrictions.
- Traffic and parking advice input to Head Consultant.
- Estimated traffic generation and parking demand and provision for proposed Library.
- Review of geometric layout of car parking area for compliance with relevant Australian Standards.
- Assess Traffic parking and pedestrian impacts.
- Prepare Traffic Impact Study report.

P1 – View of Library at No1 Warren Road from Morris Street.



1.3 Acknowledgement

We wish to thank the General Manager and Senior Executive Officers of Council for their attendance and advice at a meeting to discuss the traffic issues and other meetings with Council's Project Manager, Council Librarian, Council's Director of Infrastructure, Council's Director of Planning and Environment, Council's Director of Community Services, Council's Project Co-ordinator for provision of current traffic counts in Miller Street near the subject library, for a hard copy of the Gilgandra Shire DCP 2011, for patronage forecasts for the new library and for a survey of visitor attendance at the existing library.

2.0 EXISTING SITE AND TRAFFIC CONDITIONS

2.1 Site Location

The proposed new library is to be located in an existing single storey building located at No 30-32 Miller Street as shown in **Figure 1 Locality Map**. The land is zoned Zone B2 – Local Centre Zone. The building is shown in **Photographs P7** and **P8**.

2.2 Previous Uses in Site Building

The site building is currently vacant and was formerly a Country Target store and prior to that was a Fosseys clothing shop. The building has no off street car parking. The gross floor area is 555.7m². Based upon Table 14.1 in DCP 2011 Retail premises with a GFA of less than 3000m² has a parking requirement of 1 space per 40m² GFA. The off street parking requirement for the existing premises for a retail use in the B2 Zone was 13.9 spaces rounded to 14 spaces.

2.3 Street Inventory

Miller Street is part of the Castleway Highway (B55) in the Zone B2 where the proposed library is located. Miller Street is 15 metres wide kerb to kerb and has a kerbside parking lane and a through traffic lane in the north and south directions. The signposted speed limit is 50km/hour. The pavement is linemarked with a dividing (barrier) line (two way), edge lines and the limits of each kerbside parking space. The views north and south in Miller Street are shown in **Photographs P5** and **P11**. The footpath width is 3.2 metres.

An aerial view of the Newell Highway/Oxley Highway/Castlereagh Highway intersection show pavement arrows, line marking, and parked medians is shown in **Figure 4**.

Bridge Street at the intersection with Miller Street is controlled by “Give Way” signs. Bridge Street is 13.8 metres wide kerb to kerb and has a dividing (barrier) line (two way) extending some 20 metres east of the eastern kerb in Miller Street and has a kerb side parking lane and a through traffic lane in both directions. The kerbside parking signs limit parking to 2 hours.

The eastern end of Bridge Street forms a tee intersection roundabout with an unnamed road known locally as River Parking. River Parking extends south to the rear of No 30-32 Miller Street and ends in a roundabout with a central 4.1 metres diameter painted and raised central island and outer diameter of 24.4 metres. The central island at Bridge Street/River Parking is 4.1 metres diameter and the outer diameter is 16.7 metres.



SUBJECT SITE
30-32 MILLER STREET
GILGANDRA

FIGURE 1: LOCALITY MAP
SCALE 1:4000 APPROX

P7 – View of future Library building.



P8 – View of rear of future Library building. 2 or 3 cars normally park there.



P5 – View north along Miller Street. Marked pedestrian crossing and R3-1A pedestrian crossing signs.



P11 – View south of Miller Street from future Library.



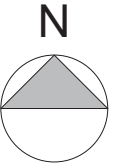


FIGURE 4: AERIAL VIEW NEWELL H'WAY/OXLEY HIGHWAY/CASTLEREAGH HIGHWAY INTERSECTION

(2.3 Continued.)

There are marked parking bays on the eastern side of River Parking for cars towing caravans and campervans. There is a 10km/hour speed limit sign posted in River Parking with Shared Zone signs marking the start and end of the Shared Zones. View of signposting and line marking in River Parking are shown in **Photographs P2, P3, P4 and P9**. The disabled parking bay at the eastern end of the proposed Gilgandra Plaza is shown in **Photograph 10**. A view of the existing paved frontage of the future Gilgandra Plaza, kiosk on the north side and public toilets on the southern side are shown in **Photograph 6**.

2.4 Existing Traffic Volumes

An intersection traffic count was made from 4:30pm to 5:45pm on Thursday 22/4/21 and from 7:30am to 9:15am at the intersection of Newell Highway/Oxley Highway/Castlereagh Highway. The turning movements by direction in 15 minute intervals are listed in **Figures 2A and 2B**, respectively. The busiest hours were 4:30 to 5:30pm and 8:15am to 9:15am.

Gilgandra Shire Council provided average two-way traffic volumes, traffic speeds from an automatic tube counter located in Miller Street at the tangent point to the bend as located in the data sheet provided by Council and included in Appendix A. The counts were provided for the 102 day period of 1/1/21 to 12/4/21 and the 26 day period 6/12/20 to 31/12/20. The average hourly weekday traffic volumes by direction from 8am to 5pm are listed in **Tables 2A and 2B**. The peak hour during both periods of record was 10am to 11am.

Table 2A Average Hourly Volumes

6/12/20 to 31/12/20 - 26 days			
Mon to Fri			
TIME	North	South	TOTAL
8-9am	147	117	265
9-10am	171	142	313
10-11am	172	148	320
11am-12pm	153	135	288
12-1pm	152	133	286
1-2pm	145	128	273
2-3pm	140	111	251
3-4pm	141	115	257
4-5pm	118	99	217

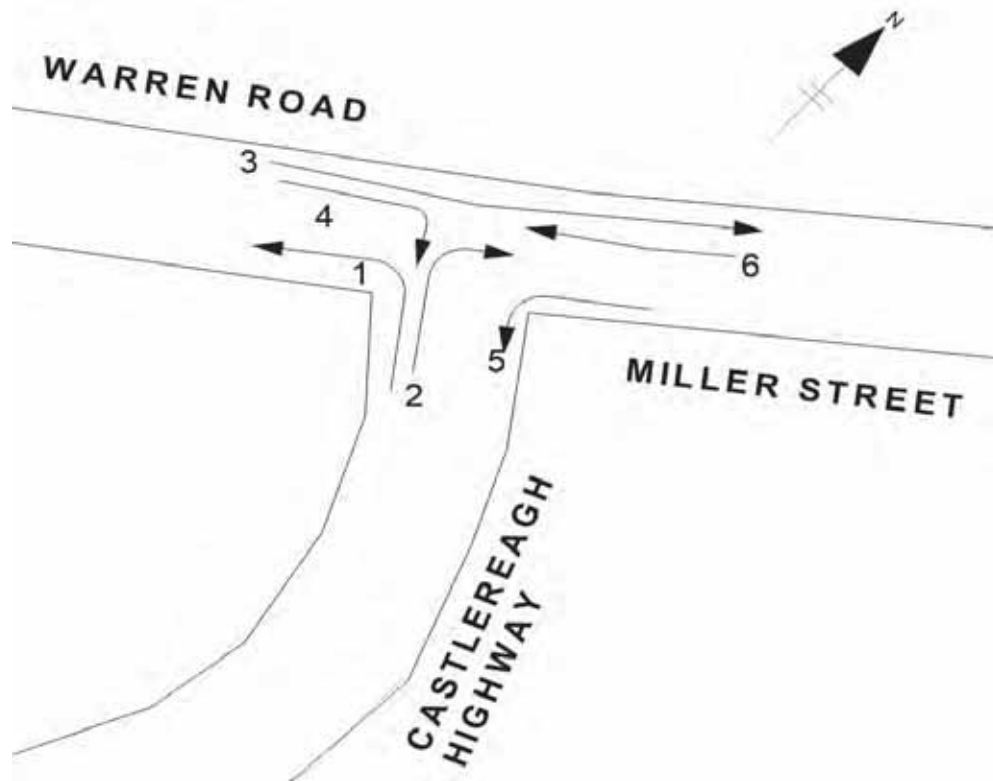
Peak Hour

FIGURE 2A

Intersection: Castlereagh Highway/Miller Street

TRAFFIC COUNT

Day: THURSDAY DATE: 22/04/2021 WEATHER: FINE OBSERVER: GLM



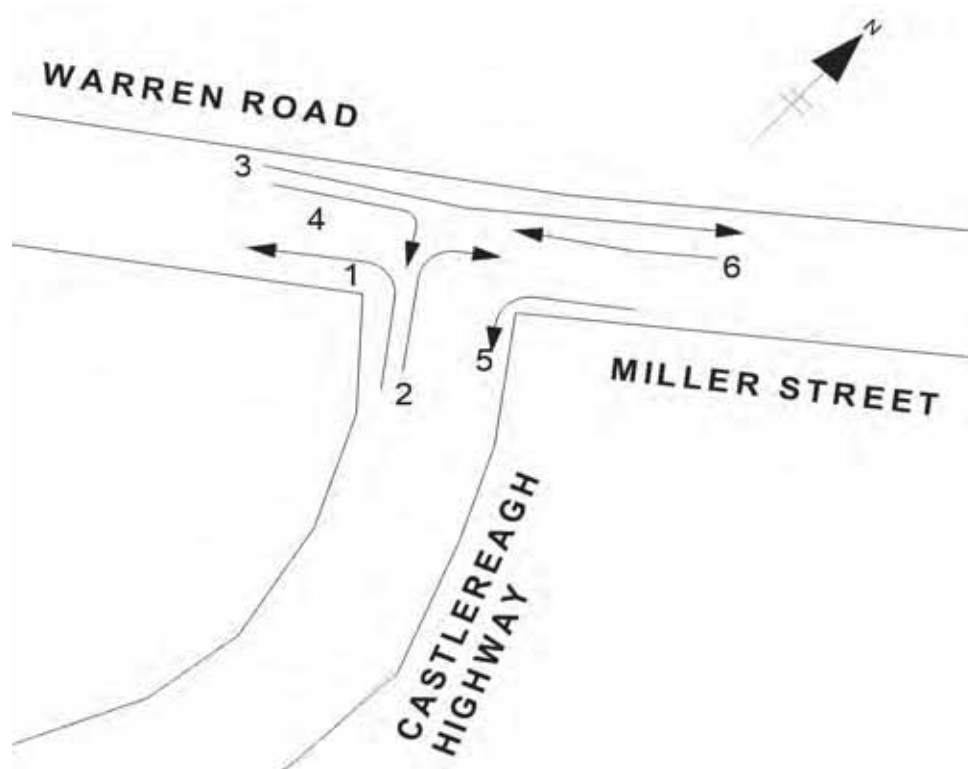
Time	MOVEMENT NUMBER						TOTAL
	1	2	3	4	5	6	
4:30 - 4:45pm	20	24	22	21	24	21	132
4:45 - 5:00	11	11	23	37	6	20	108
5:00 - 5:15	22	21	33	15	21	26	138
5:15 - 5:30	21	23	15	16	10	16	101
5:30 - 5:45	12	15	24	19	14	16	100
BUSIEST HOUR							
4:30 - 5:30pm	74	79	93	89	61	83	479
	MILLER STREET						
	NORTH	SOUTH	TOTAL				
4:30 - 5:30pm	172	144	316				

FIGURE 2B

Intersection: Castlereagh Highway/Miller Street

TRAFFIC VOLUME COUNT

Day: FRIDAY DATE: 23/04/2021 WEATHER: FINE OBSERVER: GLM



Time	MOVEMENT NUMBER						TOTAL
	1	2	3	4	5	6	
7:30 - 7:45am	11	15	5	17	9	9	66
7:45 - 8:00	27	33	6	16	16	18	116
8:00 - 8:15	25	20	12	24	7	24	112
8:15 - 8:30	26	19	19	25	7	16	112
8:30 - 8:45	29	26	11	21	15	14	116
8:45 - 9:00	28	19	25	32	15	20	139
9:00 - 9:15	28	23	10	22	10	23	116
BUSIEST HOUR							
8:15 - 9:15	111	87	65	100	47	73	483
	MILLER STREET						
	NORTH	SOUTH	TOTAL				
8:15 - 9:15am	152	120	272				

FIGURE 2 INTERSECTION TRAFFIC COUNT

P2 – View north of River Parking from southern roundabout 10km shared zone.



P3 – View towards river across centre of southern roundabout.



P4 – View towards river across end of southern roundabout.



P9 – View north towards Bridge Street of “River Parking” 23.4.21.



P10 – View of disabled parking space at rear of plaza from river parking.



P6 – View across Miller Street of future plaza. Kiosk on left, toilet block on right.



(2.4 Continued.)**Table 2B Average Weekday Traffic Volumes**

1/1/21 to 12/4/21 - 102 days				
Mon to Fri				
TIME	North	South	TOTAL	
8-9am	133	99	232	
9-10am	153	129	283	
10-11am	165	137	302	Peak Hour
11am-12pm	158	137	295	
12-1pm	157	137	294	
1-2pm	145	130	275	
2-3pm	144	117	261	
3-4pm	143	120	264	
4-5pm	140	115	255	

2.5 Visitor Survey at Existing Library

The Council librarian carried out a visitor survey at the library over 5 weekdays from Friday 23/4/21 to Thurs 29/4/21. The purpose of the survey was to determine the proportion of adults and number of adults present, number of staff on duty and traffic generation. The results are summarised in Table 2.5.1 and the full survey data is provided in **Appendix C**.

Table 2.5.1 Visitation Survey April 2021

DAY	DATE	No of Visitors		No of Staff
		Adults	Children	
Fri	23/04/21	21	2	2
Mon	26/04/21	16	4	2
Tues	27/04/21	30	4	2 + 2 part time
Wed	28/04/21	15	5	3
Thurs	29/04/21	20	7	2 + 1 part time
TOTAL		102	22	
Daily Average		20.4	4.4	
Proportion		82.30%	17.70%	

The average number of visitors 24.8 daily was less than 50% of the estimate of 60 persons daily made before the Covid crisis. There was “No Story Club” activity during the survey and the number of children present was less than normal. The Librarian has estimated that the future proportion of adults and children to be 75% and 25%. This statistic is relevant in estimating future parking demand by parents/carers as all adult visitors currently travel by car as car drivers.

(2.5 Continued.)

The existing library has a gross floor area of 248m². The maximum number of adult visitors present at any time period on all weekdays was 5. The numbers present during the busiest period on each day are tabulated in **Table 2.5.2**.

Table 2.5.2 Busiest Period

DAY	PERIOD	No. Present
Mon	10:12 to 10:22am	3
	3:05 to 3:41pm	3
Tue	10:30 to 10:40am	4
	10:41 to 10:55 am	3
	10:55 to 11:15 am	5
	2:25 to 2:30pm	5
Wed	10:34 to 10:46am	3
	1:33 to 2:15pm	2
Thurs	10:25 to 10:28am	3
	11:40 to 11:48am	3
	3:40 to 3:45pm	4
	3:50 to 4:10pm	4
	4:18 to 5:00pm	4
Fri	10:47am to 10:50am	3
	10:50 to 10:52am	5
	12:13 to 12:21pm	5

Average maximum over 5 days = 40

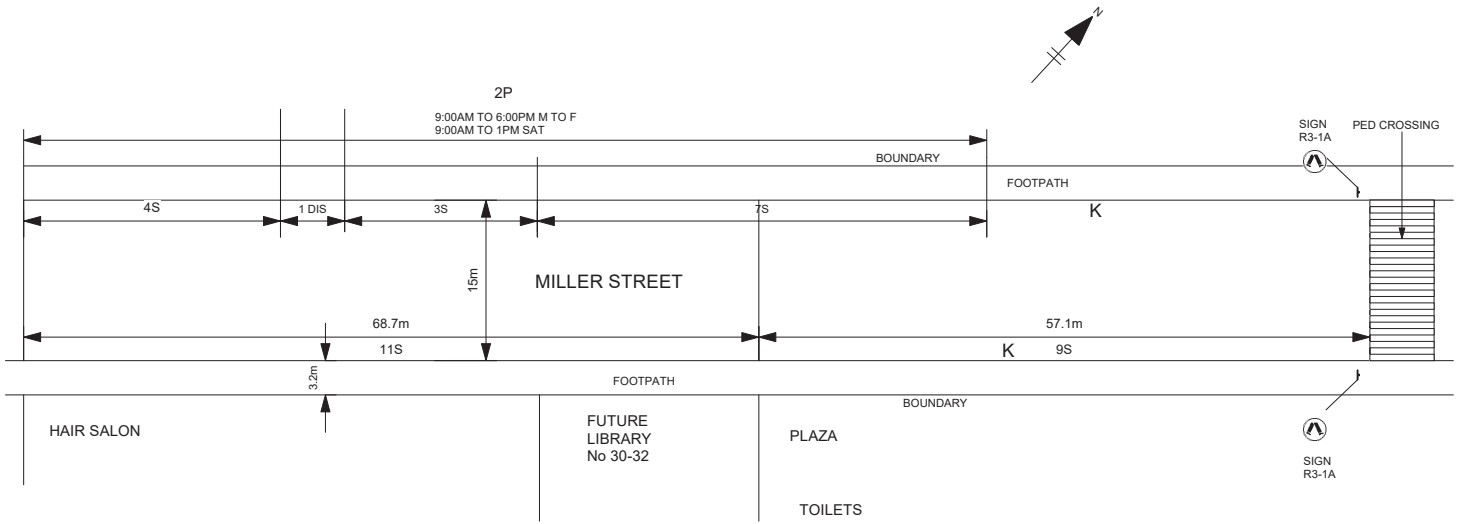
Ratio Maximum Daily Adult Visitation to average = 30/20.4 = 1.47 to 1*

Ratio Maximum No. of Adults at any time to average maximum over 5 days = 5/4 = 1.25 to 1*

It may be inferred from the survey data that there is less variation in the maximum number of visitors present at one time on the busiest day and the average maximum and the variation in the daily number of visitors between the busiest day and the average day.

2.6 Parking Surveys in Miller Street

Parking accumulation surveys were conducted in the kerbside parking spaces in Miller Street between the marked pedestrian crossing to the north of the proposed new library and south of the proposed library to the Hair salon adjacent to News Power. There are 14/2 hour time restricted spaces and 1 disabled space on the western side and 20/2 hour spaces on the eastern side. The extent of the survey and the number of parking spaces is illustrated in **Figure 3**. The number of parked cars at 3 time periods on Thursday 22/4/21 and Friday 23/4/21 are listed in **Table 3**. The peak accumulation was 28 vehicles at 1:10pm on Thursday.



NTS

FIGURE 3
EXTENT OF PARKING
SURVEY 35 SPACES

(2.6 Continued.)

Hence at times when the proposed library will be open between 10am and 12:30pm and 1:30pm and 5:00pm there were a number of vacant spaces.

Table 3 On Street Parking Surveys

DAY	TIME	LOCATION				TOTAL VEHS
		No of spaces	West side Miller St	No of spaces	East side of Miller St	
Thurs 22/4/21	1:10pm	15	15 vehs	20	13 vehs	28
	2:30pm	15	7	20	6	13
	4:00pm	15	6	20	5	11
Fri 23/4/21	9:25am	15	8	20	8	16
	12:00noon	15	11	20	8	19
	1:30pm	15	10	20	8	18

3.0 THE PROPOSED LIBRARY

3.1 The Proposed Building and Facilities

The proposal seeks to refurbish the existing building for the proposed use as a library, provide 6 car parking spaces at the rear of the building with access from River Parking, provide a loading area, provide an outdoor function deck at the rear of the building, upgrade the existing paved area adjacent to the north of the library building based upon the landscape architects' drawings to create the Gilgandra Plaza. The existing disabled parking space is relocated, the proposed library and facilities are shown on the drawing DA01-03 and DA01-05 prepared by Dunn and Hillam for the Development Application to Gilgandra Shire Council. The operating hours of the library will be 10am to 12:30pm and 1:30pm to 5:00pm Monday to Friday and 10am to 12pm on Saturday. The architect's drawings are included in **Appendix B**.

Based upon the dimensions shown on the architects' Drawing DA01-05 the gross floor area of the building is 543.88m², the library is 288m², the outdoor reading and function deck are 116m². Pedestrian access from the car park is via an accessible walkway within the Plaza to the entrance close to Miller Street.

3.2 Parking Demand and Parking Standard

There is no parking standard for a library in *Table 14.1 Gilgandra Shire DCP 2011*. In *Section 14.3 Car Parking Provisions* in *DCP 2011* clauses b), c) and d) are relevant. Where the land use is not stated car parking must be provided in accordance with the requirements of Council. Clause c) allows parking to be reduced at the discretion of Council in cases where the proponent can demonstrate that the lesser amount will satisfy the expected demand. Clause d) requires all parking to be fully provided on site. The parking demand is based up surveys at the existing library and estimates of future daily visitations at the new enlarged library prepared by Council's librarian. The surveys and projections are included in **Appendix C**.

The *RTA Guide to Traffic Generating Developments* does not have a parking standard for a library and states "ultimately it is the responsibility of the applicant to prove that either the proposed level of parking provision is adequate or that the overall planning benefits of the proposed development outweigh these needs."

The estimated average daily visitation is 78 persons and the average hourly is 13.06 persons. Persons includes adults and children. The estimated hourly adult visitor number based upon the surveys at the existing library and the librarian's estimate of 75% of adult visitors at the new library is 10 per hour. The average length of stay on all days was for 18.3 minutes and on the busiest day was 18.6 minutes.

(3.2 Continued.)

The existing library is isolated from the main shopping centre. The future library is much closer to the retail hub and it is likely that a percentage of trips to the new library will be multi or dual purpose trips. A percentage usually allowed in Sydney metropolitan centres is 20%.

Based upon Drawings No MD01 the existing building has a gross floor area of 555.7m² including storage and kitchenette of 103.7m². The previous use of the site was for a Target store and no off street parking as provided. The rate for retail premises in the Gilgandra DCP2011 is 1 space per 40m² where the GFA is less than 3000m². At 1 space per 40m² the parking requirement for retail use is 14 spaces rounded.

It is estimated that the mode of travel of all adult visitors to the existing library was car driver.

The visitor survey showed that the ratio of the busiest day to the average daily visitation was 30/20.4 = 1.47 to 1. However, the ration of the maximum number of adult visitors present at one time on the busiest day was 5 compared with a maximum of 4 on the average day. This ratio was 1.25 to 1. ON the busiest day there were more occasions when the number of adults present exceeded 3.

The estimated peak parking demand at the new library is based upon a car driver travel mode of 100%, a maximum attendance at 1 time of 1.25 times the average of 10 adult visitors (12.5) and 2 staff. This is rounded to 15 spaces.

3.3 Parking Provision

The proposal shown on Drawings DA01-05 provides 6 spaces including 1 space for disabled persons and 1 space for parents with a pram. The existing space for disabled persons at the eastern end of the future plaza has been deleted.

All 90 degree angle parking spaces are 2.6 metres wide by 5.4 metres long and the access aisle exceeds 7 metres. Hence the parking space and aisle dimensions exceed the minimum for User Class 3 in Figure 2.2 in *AS/NZS 2890.1*.

The parallel spaces are not obstructed and are 2.6m wide by 5.4m long and comply with Figure 2.5 in *AS/NZS 2890.1*.

There is an accessible path of travel from the disabled space through the proposed Gilgandra Plaza to the entrance to the library. A shared area with bollard is adjacent to the disabled space No 4 and the pram space No 3. All vehicles can enter and leave the parking spaces in a forward direction.

(3.3 Continued.)Loading Area

A loading area 3.5m wide by 6.4m long suitable for a small rigid truck (SRV), a B99 van or similar delivery vehicle, a courier vehicle and maintenance vehicle is provided adjacent to the southern edge of the building. The loading area is 3.5m wide by 6.4m long and complies with Table 4.1 Service bay dimensions in *AS2890.2-2018*. A SRV can enter and exit from the loading area in a forward direction. It is recommended that if a SRV is used that it reverse into the loading area.

On-Street Parking

The on-street parking surveys described in Section 2.6 show that there are at least 16 vacant spaces in Miller Street within walking distance of the library during the busiest shopping period 12:00 to 12:30 and 1:30 to 2pm when the library is open. The busiest period at the existing library is 10:00am to 11pm. Hence the provision of 5 additional parking spaces on site and 16 available spaces on street exceeds the peak demand of 15 spaces.

The proposed new library will provide for the future needs of the community and is in a more convenient location in the B2 zone. Hence a departure from the DCP is requested to permit the number of on site parking spaces to be reduced on the grounds that the proposal is in the public interest. The previous retail use of the site provided no on site parking and had a similar parking requirement of 14 spaces based upon DCP 2011.

3.4 Traffic Generation

The busiest traffic generation at the existing library occurred from 10am to 11am on Monday, Tuesday, Wednesday, Thursday and Friday as shown in Table 3.4.

Table 3.4 Busiest Hour Traffic Generation

DAY	Busiest Hour	TRAFFIC MOVEMENT		
		IN	OUT	TOTAL
MON	10-11am	4	4	8
TUES	10-11am	8	5	13
WED	10-11am	5	4	9
THUR	10-11am	8	5	13
FRI	10-11am	7	7	14

Hence the traffic generation during the busiest hour was marginally higher on Friday, the average daily visitation compared to Tuesday the maximum daily visitation.

(3.4 Continued.)

Future peak hour traffic generation is expected to occur between 10am to 11am and based upon the average of 10 adults per hour is expected to reach 10 movements in and 10 movements out.

The intersection of Bridge Street/Miller Street will provide the capacity for this increase without reducing the Level of Service.

3.5 SEPP (Infrastructure) 2007

The site fronts Miller Street (Castlereagh Highway) and the combined library and Plaza site has an area of 2342.5m². The site has dual pedestrian access to the Gilgandra Plaza and to Miller Street. Vehicular access is via River Parking and Bridge Street which are local roads.

SJP planning has advised that the proposed use is not a commercial premises but fall under the category of "any other purpose". Since the estimated peak hour traffic generation is less than 50uphv, the DA does not have to be referred the TFNSW.

4.0 SUMMARY

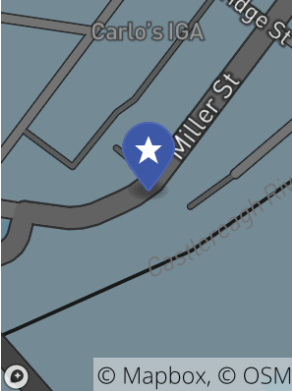
1. A development application is to be lodged with Gilgandra Shire Council for a new library and community hub in a existing building and adjoining site at No 30-32 Miller street, Gilgandra.
2. The combined area of the library site and Plaza site is 2342.5m². Miller street is part of Castlereagh Highway. The land is zoned B2 – local centre.
3. The existing library is located at No1 Warren road, has a gross floor area of 248m² and is too small for future needs.
4. The visitation in 2019/2020 was 16257 and averaged 10 persons per hour. The estimated future annual visitation is 20900 persons and the hourly visitation is 13.06 persons
5. The current 2 way traffic volume count carried out by Council in Miller street was 302 vphour in the 10-11 am peak hour. This is equivalent to the maximum environmental capacity of a local sheet as shown in Table 4.6 of the RTA guide to Traffic Generating Development. As shown in Table 4.4 the level of Service is A
6. Base upon the visitation survey in April 2021, the Council librarian has estimated future adult visitation to be 75%. The estimated car driver travel mode of adult visitors and staff is 100%.
7. A survey of 35 on street parking spaces in Miller street within walking distance of the new library showed a vacancy of 16 vacant spaces during the busiest shopping period 12.00 to 2.00pm. The proposed library will be closed from 12.30 to 1.30pm
8. The estimated peak parking demand at the new library is 15 spaces
9. The proposed off street car park provides for 6 parking spaces and includes 1 spaces for disabled persons and 1 space for person with a pram. The geometric layout complies with the relevant Australian Standards.
10. A loading area is provided for a small rigid vehicle (SRV). It is expected that the delivery and service vehicles will be utilities and station wagons no larger than a B99 to service the library.
11. Since the provision of 6 off street car spaces plus the available on street parking spaces within walking distance of the library exceed the maximum parking demand, Council is requested to give favourable consideration to the provision of 6 spaces on site which is Departure from DCD2011. There is an established precedent for this site as the previous retail use had no on site parking.
12. We support the proposed parking layout, parking provision on site and the proposed loading area on traffic grounds as the geometric design of the car park complies with all Australian Standards. The parking space for disabled is on an accessible path of travel to the library entrance.

APPENDICES

APPENDIX A

Miller St RU64201
RU642 S01 <50>

GPS Coordinates(-31.712032, 148.668483)



Data Summary
26 days data in total contribute to the report, which include:
2020: 26 days, From 2020-12-06 to 2020-12-31
[2020-12-06 : 2020-12-19]
[2020-12-20 : 2020-12-31]

Data Quality Check
Some traffic data files contribute to this report may have problems, the list is as below:
File: scheme_14_Miller_St_RU64201_0_2020-12-19_0652.ECO, Reason: Average RHO score too low, Possible installation issue;Volume Threshold, Maximum daily volume too

Summary Data (2020)

	ADT	AWDT	AWET	85th	Avg	85th Weekday	Avg Weekday	85th Weekend	Avg Weekend
South	1410	1545	1115	43.09km/h	36.58km/h	44.50km/h	37.76km/h	42.52km/h	36.18km/h
North	1689	1844	1339	42.08km/h	34.78km/h	43.88km/h	37.19km/h	41.18km/h	33.98km/h
Both directions	3106	3395	2459	42.59km/h	35.60km/h	44.10km/h	37.48km/h	41.80km/h	34.99km/h

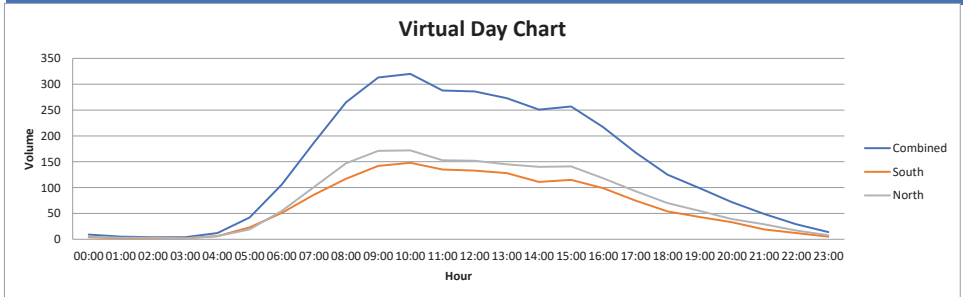
Virtual Day Summary Table(2020)

	Both directions		South		North			
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend		
All day (0-24)	3395	100.00%	2459	100.00%	1545	1115	1844	1339
Daytime (7-19)	2950	86.89%	2088	84.91%	1343	949	1603	1135
Evening (19-23)	249	7.33%	253	10.29%	107	109	140	144
Night (23-7)	196	5.77%	118	4.80%	95	57	101	60
2 Hours Morning Peak (7-9)	452	13.31%	289	11.75%	203	141	248	147
2 Hour Afternoon Peak (16-18)	385	11.34%	288	11.71%	174	123	211	165

Virtual Day Detail Table(2020)

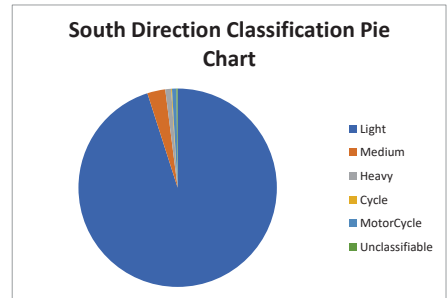
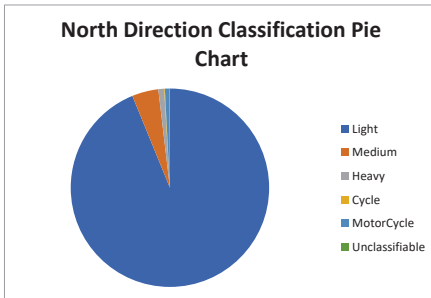
Time Range	Both directions		South		North			
	Weekday	Weekend	Weekday	Weekend	Weekday	Weekend		
00:00 - 01:00	9	0.27%	8	0.33%	4	3	5	5
01:00 - 02:00	5	0.15%	8	0.33%	2	2	3	5
02:00 - 03:00	4	0.12%	3	0.12%	2	1	3	2
03:00 - 04:00	4	0.12%	4	0.16%	2	3	2	2
04:00 - 05:00	12	0.35%	8	0.33%	6	4	6	4
05:00 - 06:00	42	1.24%	18	0.73%	23	9	19	9
06:00 - 07:00	106	3.12%	55	2.24%	51	30	55	24
07:00 - 08:00	187	5.51%	99	4.03%	86	49	101	49
08:00 - 09:00	265	7.81%	190	7.73%	117	92	147	98
09:00 - 10:00	313	9.22%	226	9.19%	142	104	171	122
10:00 - 11:00	320	9.43%	246	10.00%	148	116	172	129
11:00 - 12:00	288	8.48%	239	9.72%	135	109	153	129
12:00 - 13:00	286	8.42%	201	8.17%	133	93	152	108
13:00 - 14:00	273	8.04%	167	6.79%	128	79	145	88
14:00 - 15:00	251	7.39%	170	6.91%	111	72	140	98
15:00 - 16:00	257	7.57%	146	5.94%	115	63	141	83
16:00 - 17:00	217	6.39%	145	5.90%	99	65	118	80
17:00 - 18:00	168	4.95%	143	5.82%	75	58	93	85
18:00 - 19:00	125	3.68%	116	4.72%	54	49	70	66
19:00 - 20:00	99	2.92%	99	4.03%	43	44	55	55
20:00 - 21:00	72	2.12%	74	3.01%	33	32	39	42
21:00 - 22:00	49	1.44%	48	1.95%	19	18	29	30
22:00 - 23:00	29	0.85%	32	1.30%	12	15	17	17
23:00 - 00:00	14	0.41%	14	0.57%	5	5	8	9

Weekday Virtual Day Graph(2020)



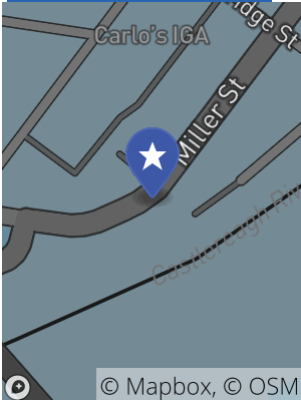
Classification (2020)

	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total
South	95.07%	2.93%	0.95%	0.14%	0.71%	0.20%	31814
North	93.82%	4.30%	0.95%	0.12%	0.73%	0.08%	37989



Miller St RU64201
RU642 501 <50>

GPS Coordinates(-31.712032, 148.668483)



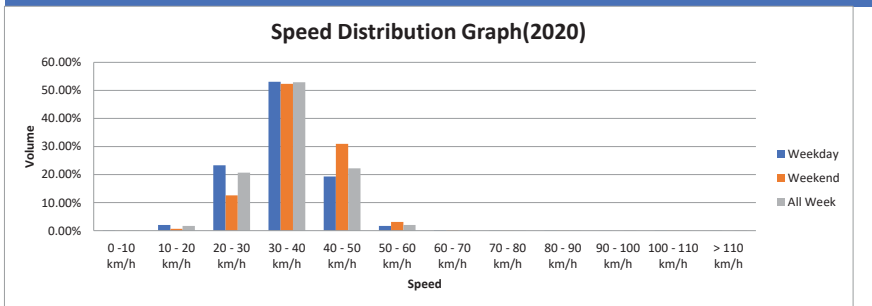
Speed Summary(2020)

	South			North			Both directions		
	Weekday	Weekend	All Week	Weekday	Weekend	All Week	Weekday	Weekend	All Week
85th Avg	44.50	42.52	43.09	43.88	41.18	42.08	44.10	41.80	42.59
	37.76	36.18	36.58	37.19	33.98	34.78	37.48	34.99	35.60

Speed Distribution(2020)

	South			North			Both directions		
	Weekday	Weekend	All Week	Weekday	Weekend	All Week	Weekday	Weekend	All Week
0 - 10 km/h	0.07%	0.05%	0.07%	0.12%	0.06%	0.10%	0.10%	0.06%	0.09%
10 - 20 km/h	1.40%	0.56%	1.20%	2.57%	0.74%	2.12%	2.04%	0.66%	1.70%
20 - 30 km/h	19.08%	12.62%	17.50%	26.84%	12.52%	23.31%	23.31%	12.57%	20.66%
30 - 40 km/h	55.02%	51.33%	54.11%	51.49%	53.20%	51.91%	53.10%	52.35%	52.91%
40 - 50 km/h	21.85%	31.33%	24.18%	17.24%	30.62%	20.54%	19.34%	30.94%	22.20%
50 - 60 km/h	1.94%	3.68%	2.37%	1.47%	2.69%	1.77%	1.68%	3.14%	2.04%
60 - 70 km/h	0.20%	0.22%	0.20%	0.14%	0.13%	0.14%	0.17%	0.17%	0.17%
70 - 80 km/h	0.08%	0.08%	0.08%	0.03%	0.03%	0.03%	0.05%	0.05%	0.05%
80 - 90 km/h	0.06%	0.03%	0.05%	0.01%	0	0.01%	0.03%	0.01%	0.03%
90 - 100 km/h	0.09%	0	0.07%	0.03%	0	0.03%	0.06%	0	0.04%
100 - 110 km/h	0.06%	0.04%	0.06%	0.01%	0.01%	0.01%	0.04%	0.02%	0.03%
> 110 km/h	0.04%	0	0.03%	0	0	0	0.02%	0	0.01%
	0.12%	0.06%	0.10%	0.03%	0.00%	0.02%	0.07%	0.03%	0.06%

Speed Distribution Graph(2020)



Virtual Day 85th Speed Distribution(2020)

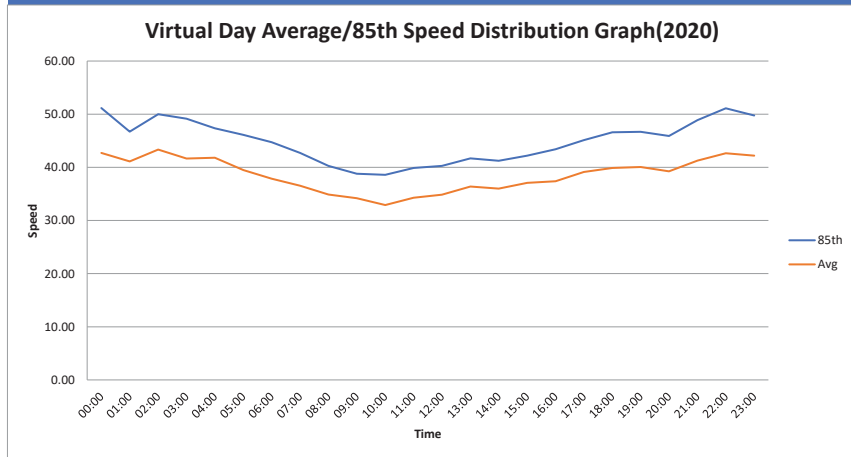
Time Range	South			North			Both directions		
	Weekday	Weekend	All Week	Weekday	Weekend	All Week	Weekday	Weekend	All Week
00:00 - 01:00	51.16	47.59	50.69	47.95	48.74	48.42	49.54	48.49	49.10
01:00 - 02:00	46.73	56.05	47.95	46.22	55.55	52.60	46.51	55.87	51.30
02:00 - 03:00	50.00	46.12	48.56	49.64	51.52	50.44	49.90	49.75	49.97
03:00 - 04:00	49.14	43.74	47.63	48.82	43.13	48.71	48.85	43.45	48.49
04:00 - 05:00	47.34	53.42	48.89	46.33	47.63	46.48	46.58	51.37	47.70
05:00 - 06:00	46.12	46.76	46.37	45.22	45.72	45.29	45.90	46.48	45.94
06:00 - 07:00	44.71	43.99	44.57	42.91	43.60	42.91	43.81	43.88	43.88
07:00 - 08:00	42.70	42.59	42.59	41.18	42.19	41.40	41.80	42.30	41.90
08:00 - 09:00	40.28	42.08	40.79	38.81	40.79	39.38	39.60	41.26	40.00
09:00 - 10:00	38.81	40.90	39.38	36.79	40.39	37.91	37.76	40.72	38.59
10:00 - 11:00	38.59	41.72	39.56	36.40	40.50	37.69	37.40	41.22	38.59
11:00 - 12:00	39.89	42.30	40.79	37.58	41.58	39.10	38.70	42.08	39.89
12:00 - 13:00	40.28	43.27	41.29	38.59	42.70	39.71	39.20	42.91	40.50
13:00 - 14:00	41.69	45.11	42.80	39.20	44.39	41.00	40.50	44.78	41.90
14:00 - 15:00	41.22	45.61	42.41	39.82	45.43	41.69	40.50	45.50	42.08
15:00 - 16:00	42.19	45.79	43.20	40.86	45.11	42.08	41.40	45.61	42.59
16:00 - 17:00	43.42	45.61	43.88	42.52	44.21	42.98	42.91	44.89	43.42
17:00 - 18:00	45.11	46.26	45.43	44.03	45.22	44.42	44.50	45.65	44.89
18:00 - 19:00	46.58	46.91	46.69	45.90	45.14	45.61	46.33	46.19	46.30
19:00 - 20:00	46.69	46.15	46.69	45.86	47.20	46.30	46.12	46.80	46.40
20:00 - 21:00	45.90	46.51	46.12	46.19	46.26	46.26	46.12	46.30	46.19
21:00 - 22:00	48.89	50.90	50.00	49.36	48.24	49.10	49.10	50.00	49.50
22:00 - 23:00	51.12	50.58	51.01	50.18	49.39	49.72	50.80	50.00	50.18
23:00 - 00:00	49.75	51.30	50.08	50.69	49.21	50.40	50.58	49.72	50.40

Virtual Day Average Speed Distribution(2020)

Time Range	South			North			Both directions		
	Weekday	Weekend	All Week	Weekday	Weekend	All Week	Weekday	Weekend	All Week
00:00 - 01:00	42.70	39.42	41.94	41.62	41.80	41.69	42.08	40.90	41.80
01:00 - 02:00	41.11	45.36	42.52	41.22	45.47	42.80	41.18	45.43	42.70
02:00 - 03:00	43.34	41.26	42.80	39.24	41.69	39.89	41.15	41.51	41.26
03:00 - 04:00	41.65	34.49	38.99	38.20	38.95	38.38	39.71	36.22	38.66
04:00 - 05:00	41.80	43.88	42.23	40.86	40.61	40.79	41.29	42.19	41.47
05:00 - 06:00	39.49	39.67	39.49	37.84	39.24	38.05	38.74	39.46	38.84
06:00 - 07:00	37.87	35.89	37.51	36.14	36.94	36.25	36.97	36.36	36.86
07:00 - 08:00	36.54	35.57	36.32	34.31	35.50	34.52	35.32	35.53	35.35
08:00 - 09:00	34.88	35.32	34.99	32.36	34.34	32.80	33.48	34.81	33.80
09:00 - 10:00	34.20	35.42	34.49	30.71	34.31	31.57	32.29	34.85	32.90
10:00 - 11:00	32.90	35.28	33.52	30.56	34.24	31.46	31.64	34.74	32.40
11:00 - 12:00	34.27	36.25	34.78	31.50	35.28	32.51	32.80	35.71	33.59
12:00 - 13:00	34.85	38.09	35.64	32.04	36.83	33.23	33.34	37.40	34.34
13:00 - 14:00	36.40	38.92	36.97	32.80	38.70	34.09	34.49	38.81	35.42
14:00 - 15:00	36.00	38.74	36.65	33.55	38.66	34.81	34.63	38.70	35.60
15:00 - 16:00	37.08	39.53	37.58	34.42	38.70	35.35	35.60	39.06	36.32
16:00 - 17:00	37.37	39.60	37.87	36.11	38.41	36.65	36.68	38.95	37.22
17:00 - 18:00	39.13	39.92	39.31	37.98	39.17	38.34	38.48	39.46	38.77

18:00	-	19:00	39.89	40.93	40.18	39.31	39.24	39.28	39.56	39.96	39.67
19:00	-	20:00	40.07	39.42	39.85	39.56	40.21	39.78	39.78	39.89	39.82
20:00	-	21:00	39.24	39.28	39.24	39.46	39.20	39.38	39.35	39.20	39.31
21:00	-	22:00	41.26	42.44	41.62	41.87	41.15	41.65	41.62	41.65	41.62
22:00	-	23:00	42.66	45.11	43.56	42.41	42.73	42.52	42.52	43.85	42.98
23:00	-	00:00	42.19	41.36	41.90	44.60	41.33	43.49	43.60	41.33	42.84

Virtual Day Average/85th Speed Distribution Graph(2020)

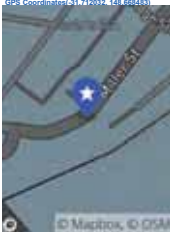


Virtual Week 85th/Average Speed Distribution(2020)

	South		North		Both directions	
	85th	Average	85th	Average	85th	Average
Monday	42.59	36.00	41.29	34.02	41.90	34.92
Tuesday	41.69	35.78	40.21	33.37	40.90	34.45
Wednesday	42.59	36.32	41.40	34.20	42.01	35.17
Thursday	42.52	36.29	41.11	33.84	41.80	34.96
Friday	43.99	37.12	43.13	35.42	43.60	36.22
Saturday	43.99	37.30	43.49	36.58	43.70	36.90
Sunday	44.71	38.12	44.10	37.69	44.39	37.91
All Week	42.52	36.18	41.18	33.98	41.80	34.99
Weekday	44.50	37.76	43.88	37.19	44.10	37.48

Miller St RU64201
 RU642 501 <5D>

GPS Coordinates: 51.717072, -118.858455



Virtual Day Class/Volume Matrix Weekday(2020)

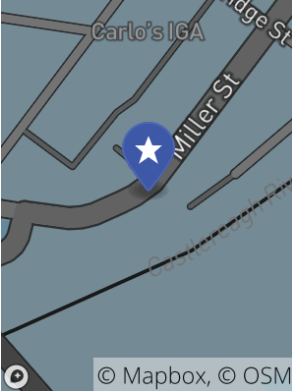
	South							North							Both directions						
	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total
00:00 - 01:00	4	1	2	0	0	0	7	5	1	3	0	0	0	9	9	2	5	0	0	0	16
01:00 - 02:00	2	1	1	0	0	0	4	3	1	1	0	0	0	5	5	2	2	0	0	0	9
02:00 - 03:00	2	0	1	0	0	1	4	3	1	1	0	0	0	5	5	1	2	0	0	1	9
03:00 - 04:00	2	1	0	0	0	0	3	2	1	0	0	0	0	3	4	2	0	0	0	0	6
04:00 - 05:00	5	2	1	0	1	0	9	6	1	1	0	0	0	8	11	3	2	0	1	0	17
05:00 - 06:00	21	2	1	1	1	1	27	17	2	2	0	0	0	21	38	4	3	1	1	1	48
06:00 - 07:00	47	4	2	1	1	1	56	50	5	1	1	2	1	60	97	9	3	2	3	2	116
07:00 - 08:00	80	5	1	1	1	1	89	99	7	2	1	2	1	106	178	12	3	2	3	2	195
08:00 - 09:00	112	5	2	1	2	1	123	137	9	2	2	1	0	151	249	14	4	3	3	1	274
09:00 - 10:00	135	5	2	1	2	1	146	160	9	2	1	2	2	176	295	14	4	2	4	3	322
10:00 - 11:00	140	6	2	1	2	1	152	159	11	2	1	2	0	175	299	17	4	2	4	1	327
11:00 - 12:00	129	5	2	1	1	1	139	143	7	2	1	2	1	156	272	12	4	2	3	2	295
12:00 - 13:00	127	5	3	1	1	1	138	142	7	3	1	2	1	156	269	12	6	2	3	2	294
13:00 - 14:00	121	4	2	1	2	1	131	137	6	2	1	2	1	149	258	10	4	2	4	2	280
14:00 - 15:00	106	3	2	1	2	2	116	122	6	2	1	1	2	144	238	9	4	2	3	4	260
15:00 - 16:00	111	3	2	1	1	1	119	124	6	2	1	1	1	145	245	9	4	2	2	2	254
16:00 - 17:00	95	3	2	0	2	1	103	111	6	2	1	2	0	122	206	9	4	1	4	1	225
17:00 - 18:00	72	2	2	0	1	1	78	88	4	2	0	2	1	97	160	6	4	0	3	2	175
18:00 - 19:00	52	2	2	0	1	1	58	67	3	2	0	1	1	74	115	5	4	0	2	2	132
19:00 - 20:00	43	1	1	1	1	0	47	52	2	2	1	1	1	59	95	3	3	2	2	1	106
20:00 - 21:00	31	1	2	1	1	0	36	38	2	2	0	1	0	43	69	3	4	1	2	0	79
21:00 - 22:00	19	2	1	0	0	0	22	29	2	1	0	0	0	32	48	4	2	0	0	0	54
22:00 - 23:00	12	1	0	0	0	0	13	16	2	1	0	0	0	19	28	3	1	0	0	0	32
23:00 - 00:00	6	0	1	1	0	0	8	8	2	0	0	0	0	10	14	2	1	1	0	0	18
All day (0-24)	1474	64	37	14	23	16	1628	1732	103	40	13	24	13	1925	3206	167	77	27	47	29	3553
Daytime (7-19)	1260	48	24	9	18	13	1392	1503	81	25	11	20	11	1651	2789	129	49	20	38	24	3043
Evening (19-23)	165	5	4	2	2	0	178	135	8	6	1	2	1	153	240	13	10	3	4	1	271
Night (23-7)	89	11	9	3	3	3	118	94	14	9	1	2	1	121	183	25	18	4	5	4	239
2 Hours Morning Peak (7-9)	192	10	3	2	3	2	212	230	16	4	3	1	2	257	422	26	7	5	6	3	469
2 Hour Afternoon Peak (16-18)	167	5	4	0	3	2	181	199	10	4	1	4	1	219	366	15	8	1	7	3	400

Classification Speed Matrix, Absolute Volume(2020)

	South							North							Both directions						
	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total
Under 10 km/h	3	1	0	5	0	12	21	22	6	0	7	1	3	39	25	7	0	12	1	15	60
10 - 20 km/h	323	21	1	14	3	18	380	671	87	10	19	4	13	804	994	108	11	33	7	31	1184
20 - 30 km/h	5223	214	86	10	8	11	5552	8056	581	160	11	35	7	8929	13279	795	246	21	43	18	14407
30 - 40 km/h	7403	145	19	3	95	7	7672	7516	184	16	1	82	0	7799	14919	329	35	4	177	7	15471
40 - 50 km/h	708	16	0	0	26	2	752	646	15	0	0	11	0	672	1854	31	0	0	37	2	1424
50 - 60 km/h	47	6	0	0	11	0	64	45	1	0	0	6	0	52	92	7	0	0	17	0	116
60 - 70 km/h	19	1	2	0	2	0	24	13	0	0	0	0	0	13	32	1	2	0	2	0	37
70 - 80 km/h	13	1	2	0	0	0	16	3	0	1	0	0	0	4	16	1	3	0	0	0	20
80 - 90 km/h	18	3	0	0	0	0	21	9	1	0	0	0	0	30	27	4	0	0	0	0	31
90 - 100 km/h	13	2	3	0	0	0	18	4	0	1	0	0	0	5	17	2	4	0	0	0	23
100 - 110 km/h																					
> 110 km/h	31	5	6	0	0	0	42	8	0	1	0	0	0	9	39	5	7	0	0	0	51

Miller St RU64201
RU642 S01 <50>

GPS Coordinates(-31.712032, 148.668483)

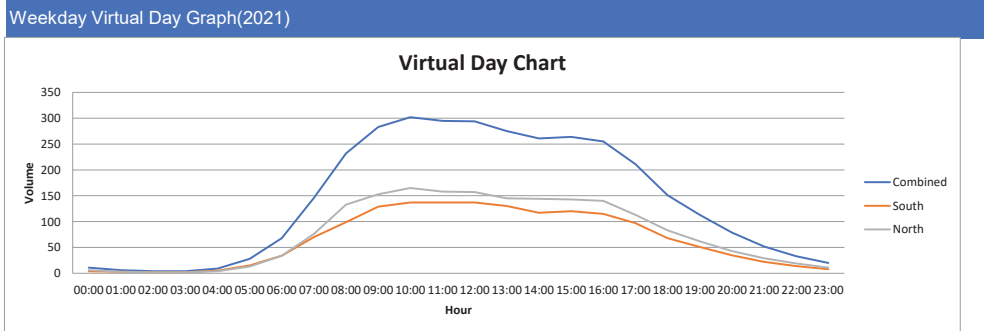


Data Summary
102 days data in total contribute to the report, which include:
2021: 102 days, From 2021-01-01 to 2021-04-12
[2021-01-01 : 2021-02-11]
[2021-02-12 : 2021-03-18]
[2021-03-19 : 2021-04-12]

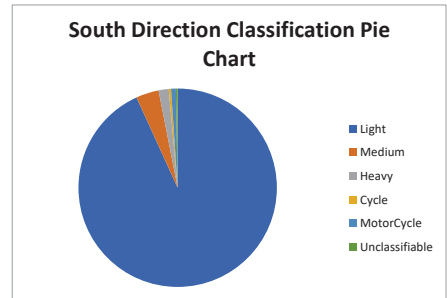
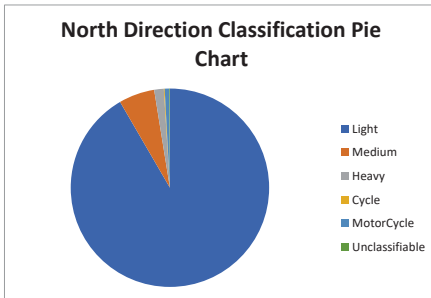
Summary Data (2021)									
	ADT	AWDT	AWET	85th	Avg	85th Weekday	Avg Weekday	85th Weekend	Avg Weekend
South	1425	1551	1128	42.98km/h	36.04km/h	44.32km/h	37.33km/h	42.52km/h	35.64km/h
North	1687	1838	1329	42.08km/h	34.78km/h	43.88km/h	36.86km/h	41.40km/h	34.16km/h
Both directions	3125	3396	2471	42.52km/h	35.35km/h	44.10km/h	37.08km/h	41.90km/h	34.85km/h

Virtual Day Summary Table(2021)								
	Both directions				South		North	
	Weekday		Weekend		Weekday	Weekend	Weekday	Weekend
All day (0-24)	3396	100.00%	2471	100.00%	1551	1128	1838	1329
Daytime (7-19)	2969	87.43%	2098	84.90%	1356	966	1610	1123
Evening (19-23)	277	8.16%	258	10.44%	122	111	153	144
Night (23-7)	150	4.42%	115	4.65%	73	51	75	62
2 Hours Morning Peak (7-9)	378	11.13%	233	9.43%	169	117	209	114
2 Hour Afternoon Peak (16-18)	466	13.72%	283	11.45%	212	122	253	160

Virtual Day Detail Table(2021)									
Time Range	Both directions				South		North		
	Weekday		Weekend		Weekday	Weekend	Weekday	Weekend	
00:00 - 01:00	11	0.32%	18	0.73%	4	6	6	11	
01:00 - 02:00	6	0.18%	12	0.49%	3	4	3	7	
02:00 - 03:00	4	0.12%	6	0.24%	2	3	2	3	
03:00 - 04:00	4	0.12%	5	0.20%	2	2	2	3	
04:00 - 05:00	9	0.27%	6	0.24%	5	3	4	3	
05:00 - 06:00	28	0.82%	12	0.49%	15	6	13	6	
06:00 - 07:00	68	2.00%	33	1.34%	34	17	34	16	
07:00 - 08:00	146	4.30%	82	3.32%	70	43	76	38	
08:00 - 09:00	232	6.83%	151	6.11%	99	74	133	76	
09:00 - 10:00	283	8.33%	214	8.66%	129	100	153	114	
10:00 - 11:00	302	8.89%	248	10.04%	137	115	165	133	
11:00 - 12:00	295	8.69%	261	10.56%	137	121	158	139	
12:00 - 13:00	294	8.66%	227	9.19%	137	106	157	120	
13:00 - 14:00	275	8.10%	192	7.77%	130	89	145	102	
14:00 - 15:00	261	7.69%	164	6.64%	117	74	144	89	
15:00 - 16:00	264	7.77%	149	6.03%	120	66	143	82	
16:00 - 17:00	255	7.51%	142	5.75%	115	62	140	79	
17:00 - 18:00	211	6.21%	141	5.71%	97	60	113	81	
18:00 - 19:00	151	4.45%	127	5.14%	68	56	83	70	
19:00 - 20:00	113	3.33%	101	4.09%	51	44	62	57	
20:00 - 21:00	79	2.33%	75	3.04%	35	32	43	42	
21:00 - 22:00	52	1.53%	49	1.98%	22	21	29	27	
22:00 - 23:00	33	0.97%	33	1.34%	14	14	19	18	
23:00 - 00:00	20	0.59%	23	0.93%	8	10	11	13	

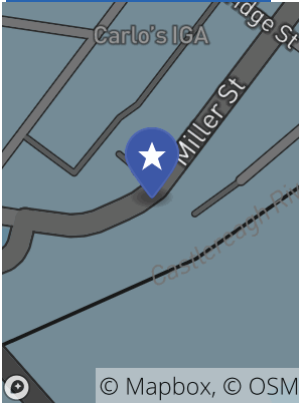


Classification (2021)							
	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total
South	93.20%	3.71%	1.65%	0.37%	0.78%	0.28%	146920
North	91.62%	5.83%	1.56%	0.14%	0.74%	0.11%	173514



Miller St RU64201
 RU642 S01 <50>

GPS Coordinates(-31.712032, 148.668483)



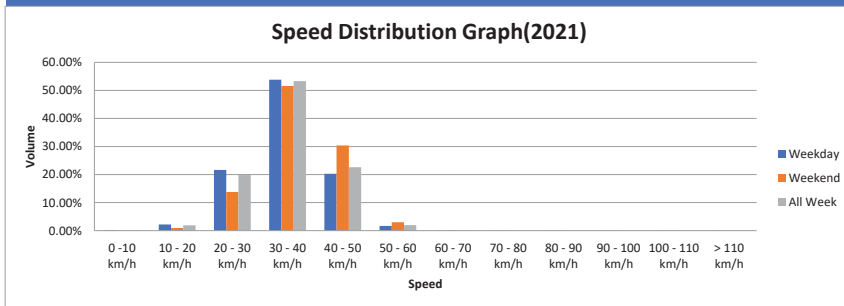
Speed Summary(2021)

	South			North			Both directions		
	Weekday	Weekend	All Week	Weekday	Weekend	All Week	Weekday	Weekend	All Week
85th	44.32	42.52	42.98	43.88	41.40	42.08	44.10	41.90	42.52
Avg	37.33	35.64	36.04	36.86	34.16	34.78	37.08	34.85	35.35

Speed Distribution(2021)

	South			North			Both directions		
	Weekday	Weekend	All Week	Weekday	Weekend	All Week	Weekday	Weekend	All Week
0 - 10 km/h	0.20%	0.08%	0.17%	0.16%	0.05%	0.13%	0.18%	0.06%	0.15%
10 - 20 km/h	1.69%	0.90%	1.50%	2.63%	1.01%	2.26%	2.20%	0.96%	1.91%
20 - 30 km/h	18.05%	12.83%	16.83%	24.69%	14.57%	22.34%	21.64%	13.77%	19.82%
30 - 40 km/h	55.38%	51.46%	54.47%	52.52%	51.67%	52.32%	53.83%	51.57%	53.31%
40 - 50 km/h	22.54%	31.31%	24.58%	18.33%	29.56%	20.93%	20.26%	30.36%	22.60%
50 - 60 km/h	1.86%	3.15%	2.16%	1.49%	2.89%	1.82%	1.66%	3.01%	1.97%
60 - 70 km/h	0.13%	0.21%	0.14%	0.10%	0.21%	0.13%	0.11%	0.21%	0.14%
70 - 80 km/h	0.04%	0.03%	0.04%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
80 - 90 km/h	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%	0.02%	0.01%	0.01%
90 - 100 km/h	0.02%	0.01%	0.02%	0.00%	0	0.00%	0.01%	0.00%	0.01%
100 - 110 km/h	0.02%	0.01%	0.01%	0.01%	0.00%	0.01%	0.01%	0.01%	0.01%
> 110 km/h	0.02%	0	0.02%	0.01%	0	0.01%	0.02%	0	0.01%
	0.05%	0.01%	0.04%	0.01%	0.00%	0.01%	0.03%	0.00%	0.02%

Speed Distribution Graph(2021)



Virtual Day 85th Speed Distribution(2021)

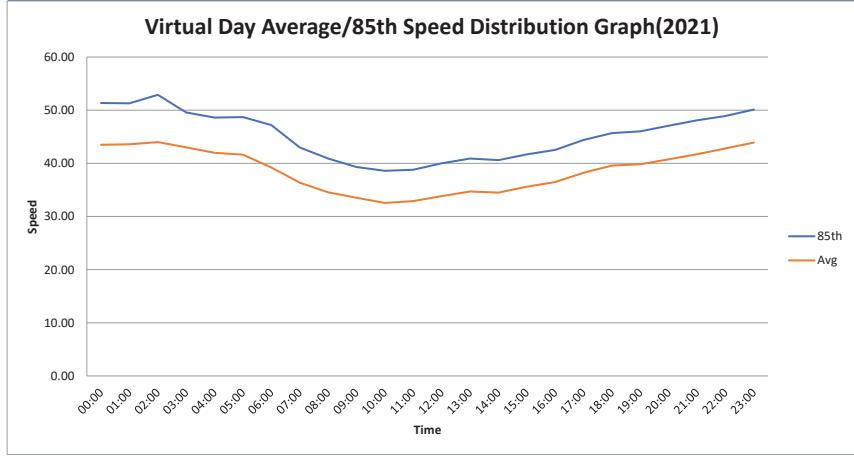
Time Range	South			North			Both directions		
	Weekday	Weekend	All Week	Weekday	Weekend	All Week	Weekday	Weekend	All Week
00:00 - 01:00	51.34	50.40	51.01	51.80	51.01	51.62	51.73	50.90	51.30
01:00 - 02:00	51.30	47.99	50.11	52.27	50.94	51.80	51.66	50.29	51.01
02:00 - 03:00	52.88	49.64	51.80	51.26	53.14	52.49	51.95	52.42	52.42
03:00 - 04:00	49.57	54.72	51.01	47.74	51.23	49.97	48.60	52.85	50.22
04:00 - 05:00	48.60	49.97	48.64	47.95	50.87	48.89	48.49	50.72	48.82
05:00 - 06:00	48.71	47.81	48.60	45.00	47.48	45.50	47.30	47.63	47.41
06:00 - 07:00	47.20	46.04	47.09	44.60	44.96	44.71	45.90	45.79	45.90
07:00 - 08:00	42.98	43.27	43.09	41.51	42.30	41.69	42.19	42.80	42.30
08:00 - 09:00	40.90	42.08	41.18	39.20	41.18	39.71	40.00	41.62	40.39
09:00 - 10:00	39.31	41.29	39.71	37.19	39.89	38.02	38.30	40.57	38.92
10:00 - 11:00	38.59	40.61	39.31	36.61	39.71	37.51	37.51	40.10	38.41
11:00 - 12:00	38.81	41.54	39.60	36.90	40.21	37.91	37.91	40.90	38.81
12:00 - 13:00	40.00	42.91	40.90	38.02	42.70	39.49	38.99	42.80	40.21
13:00 - 14:00	40.90	44.21	41.69	39.20	43.81	40.61	40.10	43.96	41.18
14:00 - 15:00	40.61	44.71	41.69	39.60	44.21	40.79	40.10	44.46	41.18
15:00 - 16:00	41.69	45.50	42.59	40.39	44.64	41.51	41.11	45.00	42.01
16:00 - 17:00	42.52	45.79	43.20	41.40	45.00	42.30	41.80	45.29	42.70
17:00 - 18:00	44.39	45.97	44.71	44.21	45.29	44.39	44.32	45.61	44.50
18:00 - 19:00	45.68	46.12	45.79	45.29	46.30	45.61	45.50	46.30	45.68
19:00 - 20:00	46.01	45.68	45.90	46.01	45.68	45.90	46.01	45.68	45.90
20:00 - 21:00	47.09	47.02	47.09	47.02	46.69	46.91	47.02	46.80	47.02
21:00 - 22:00	48.10	48.38	48.20	48.89	47.81	48.49	48.53	47.99	48.38
22:00 - 23:00	48.92	48.02	48.71	49.79	49.21	49.61	49.32	48.64	49.21
23:00 - 00:00	50.11	49.07	50.04	50.80	50.90	50.80	50.51	50.36	50.51

Virtual Day Average Speed Distribution(2021)

Time Range	South			North			Both directions		
	Weekday	Weekend	All Week	Weekday	Weekend	All Week	Weekday	Weekend	All Week
00:00 - 01:00	43.49	43.31	43.42	43.24	44.28	43.67	43.34	43.92	43.56
01:00 - 02:00	43.60	42.88	43.34	44.39	44.53	44.46	44.03	43.96	43.99
02:00 - 03:00	43.99	43.56	43.81	42.91	44.89	43.67	43.38	44.32	43.74
03:00 - 04:00	43.02	44.71	43.60	40.32	43.99	41.62	41.54	44.32	42.52
04:00 - 05:00	41.98	42.59	42.08	40.64	43.09	41.26	41.40	42.84	41.72
05:00 - 06:00	41.62	40.18	41.40	38.41	40.14	38.70	40.10	40.14	40.10
06:00 - 07:00	39.20	38.52	39.10	37.73	38.20	37.80	38.48	38.34	38.45
07:00 - 08:00	36.36	35.32	36.14	34.99	35.64	35.10	35.64	35.46	35.60
08:00 - 09:00	34.56	35.28	34.74	32.65	34.67	33.05	33.48	34.96	33.80
09:00 - 10:00	33.52	34.85	33.84	30.85	33.62	31.50	32.08	34.20	32.58
10:00 - 11:00	32.54	34.52	33.05	30.53	33.23	31.21	31.43	33.80	32.04
11:00 - 12:00	32.90	35.35	33.55	30.67	33.84	31.54	31.72	34.52	32.47
12:00 - 13:00	33.84	36.76	34.56	31.68	36.32	32.83	32.69	36.54	33.62
13:00 - 14:00	34.70	37.87	35.39	32.80	37.30	33.84	33.70	37.55	34.56
14:00 - 15:00	34.49	38.38	35.32	33.08	37.76	34.06	33.73	38.05	34.63
15:00 - 16:00	35.60	38.99	36.25	34.24	38.12	34.99	34.85	38.52	35.57
16:00 - 17:00	36.47	39.56	37.04	35.17	38.95	35.89	35.78	39.20	36.43
17:00 - 18:00	38.23	39.46	38.48	37.94	39.24	38.27	38.09	39.31	38.34

18:00	-	19:00	39.56	39.64	39.56	39.35	39.38	39.35	39.42	39.49	39.46
19:00	-	20:00	39.82	39.06	39.60	39.78	38.77	39.49	39.78	38.92	39.56
20:00	-	21:00	40.75	40.14	40.57	40.82	40.03	40.57	40.79	40.07	40.57
21:00	-	22:00	41.72	40.79	41.44	42.34	41.11	41.98	42.05	40.97	41.76
22:00	-	23:00	42.80	41.04	42.26	43.13	42.19	42.88	43.02	41.69	42.62
23:00	-	00:00	43.92	42.55	43.45	44.21	43.34	43.96	44.10	43.02	43.74

Virtual Day Average/85th Speed Distribution Graph(2021)



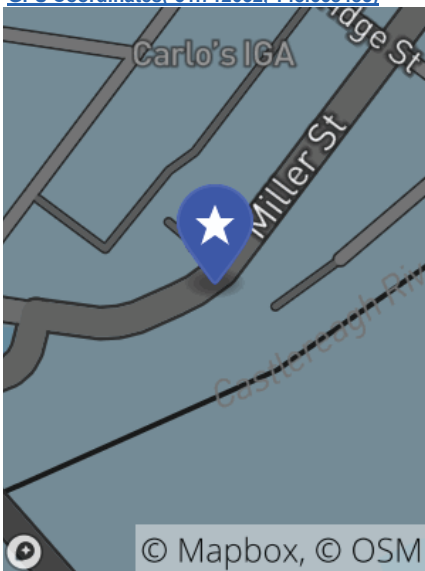
Virtual Week 85th/Average Speed Distribution(2021)

	South		North		Both directions	
	85th	Average	85th	Average	85th	Average
Monday	42.70	35.86	41.40	34.16	42.01	34.92
Tuesday	42.52	35.68	41.51	34.13	41.90	34.85
Wednesday	42.59	35.93	41.62	34.42	42.08	35.10
Thursday	42.01	35.14	40.79	33.70	41.40	34.34
Friday	42.70	35.68	41.80	34.38	42.19	34.99
Saturday	43.99	36.94	43.42	36.18	43.70	36.54
Sunday	44.71	37.80	44.60	37.76	44.60	37.80
All Week	42.52	35.64	41.40	34.16	41.90	34.85
Weekday	44.32	37.33	43.88	36.86	44.10	37.08

Miller St RU64201

RU642 S01 <50>

[GPS Coordinates\(-31.712032, 148.668483\)](#)



Virtual Day Class/Volume Matrix Weekday(2021)

			Light	Medium	Heavy	South Cycle
00:00	-	01:00	4	1	1	0
01:00	-	02:00	3	1	1	0
02:00	-	03:00	3	1	1	1
03:00	-	04:00	2	1	2	2
04:00	-	05:00	4	1	3	0
05:00	-	06:00	12	2	3	1
06:00	-	07:00	30	3	2	1
07:00	-	08:00	62	6	2	2
08:00	-	09:00	92	4	2	2
09:00	-	10:00	120	6	2	2
10:00	-	11:00	127	6	2	2
11:00	-	12:00	126	6	3	2
12:00	-	13:00	128	6	3	1
13:00	-	14:00	121	5	3	2
14:00	-	15:00	108	6	2	2
15:00	-	16:00	113	4	2	2
16:00	-	17:00	109	4	2	1
17:00	-	18:00	93	3	2	1
18:00	-	19:00	65	2	2	1
19:00	-	20:00	49	2	1	1
20:00	-	21:00	34	1	1	1
21:00	-	22:00	22	1	1	1
22:00	-	23:00	13	1	1	0
23:00	-	00:00	8	1	1	1
All day (0-24)			1448	74	45	29
Daytime [7-19]			1264	58	27	20

Evening [19-23)	118	5	4	3
Night [23-7)	66	11	14	6
2 Hours Morning Peak [7-9)	154	10	4	4
2 Hour Afternoon Peak [16-18)	202	7	4	2

Classification Speed Matrix, Absolute Volume(2021)

	Light	Medium	Heavy	South Cycle
Under 10 km/h	57	18	0	115
10 - 20 km/h	1559	196	10	253
20 - 30 km/h	22711	1214	483	104
30 - 40 km/h	74730	3141	1537	61
40 - 50 km/h	34515	788	327	11
50 - 60 km/h	2978	44	32	2
60 - 70 km/h	182	6	2	0
70 - 80 km/h	49	2	1	0
80 - 90 km/h	19	0	1	0
90 - 100 km/h	18	2	3	0
100 - 110 km/h	18	3	1	0
> 110 km/h	52	13	15	0



MotorCycle	Unclassifiable	Total	North						
			Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total
0	1	7	7	1	1	1	1	1	12
0	1	6	4	1	1	0	0	0	6
0	1	7	3	1	1	1	1	1	8
0	1	8	2	1	2	1	0	0	6
1	1	10	3	2	2	1	0	0	8
1	1	20	11	2	2	1	1	1	18
1	1	38	28	5	2	1	1	1	38
2	1	75	65	7	3	1	1	1	78
1	1	102	121	9	2	1	1	1	135
2	1	133	138	11	3	1	2	1	156
2	1	140	150	11	3	1	2	1	168
2	1	140	145	10	2	1	2	1	161
1	1	140	144	10	2	1	2	1	160
2	1	134	133	9	3	1	2	1	149
1	1	120	131	10	2	1	2	1	147
2	1	124	132	8	3	1	2	1	147
1	1	118	127	9	3	1	2	1	143
2	1	102	105	5	2	1	2	1	116
1	1	72	77	3	2	1	1	1	85
1	1	55	58	3	2	1	2	1	67
1	1	39	41	2	2	1	1	1	48
1	1	27	27	2	1	0	1	1	32
1	1	17	18	1	1	1	0	1	22
1	2	14	11	1	1	0	1	0	14
27	25	1648	1681	124	48	21	30	20	1924
19	12	1400	1468	102	30	12	21	12	1645

4	4	138	144	8	6	3	4	4	169
4	9	110	69	14	12	6	5	4	110
3	2	177	186	16	5	2	2	2	213
3	2	220	232	14	5	2	4	2	259



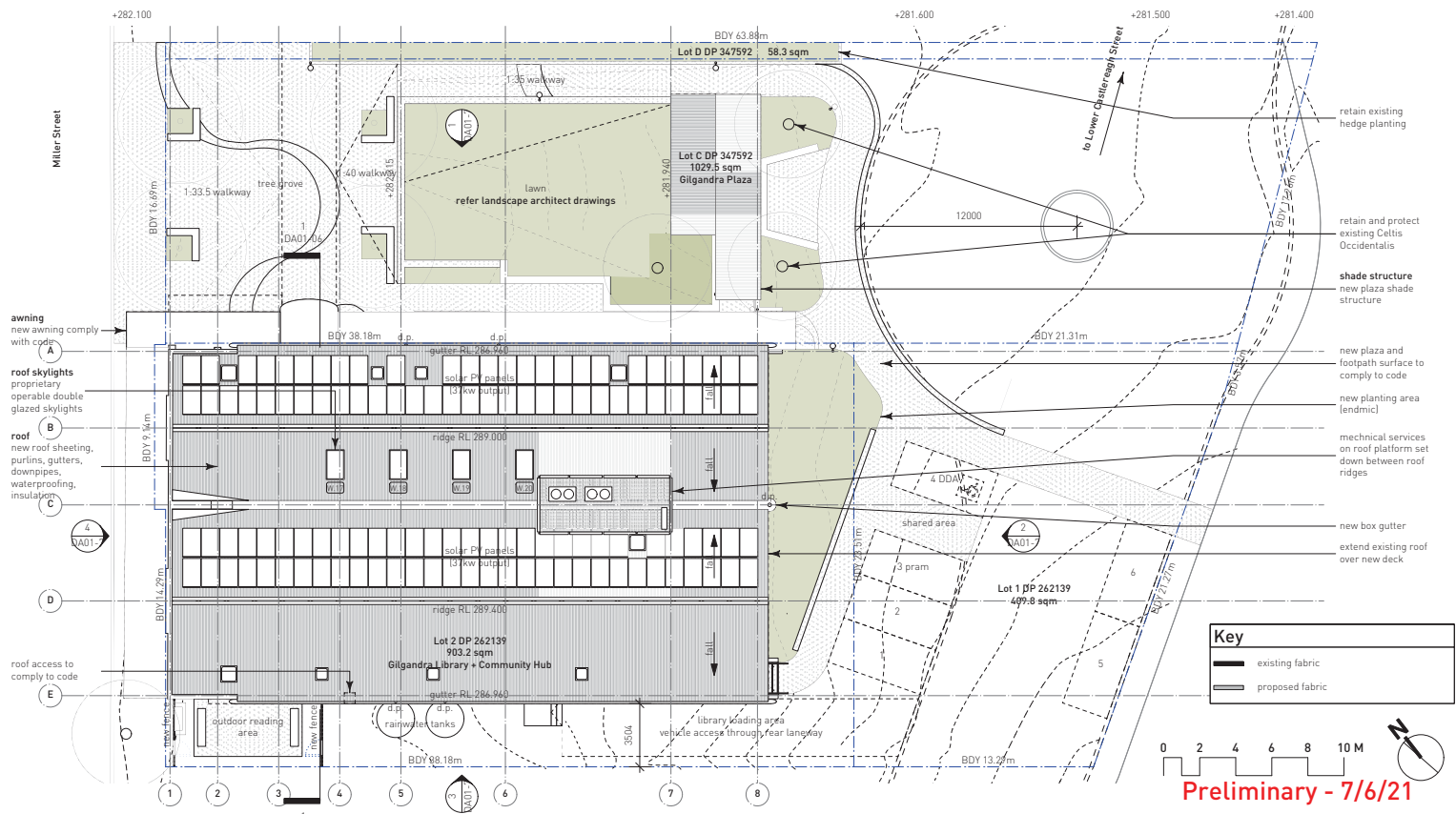
			North						
MotorCycle	Unclassifiable	Total	Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total
1	60	251	128	16	1	68	3	17	233
17	174	2209	3238	458	31	81	35	74	3917
99	105	24716	34285	3191	985	64	190	45	38760
449	67	79985	83683	5054	1452	31	508	49	90777
446	8	36095	34366	1292	228	2	426	1	36315
115	1	3172	2950	95	7	0	100	0	3152
22	0	212	201	5	0	0	17	0	223
0	0	52	44	1	0	0	2	0	47
0	0	20	19	3	0	0	0	0	22
0	0	23	5	0	1	0	0	0	6
0	0	22	9	3	1	0	0	0	13
0	0	80	22	2	2	0	0	0	26

Both directions						
Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total
11	2	2	1	1	2	19
7	2	2	0	0	1	12
6	2	2	2	1	2	15
4	2	4	3	0	1	14
7	3	5	1	1	1	18
23	4	5	2	2	2	38
58	8	4	2	2	2	76
127	13	5	3	3	2	153
213	13	4	3	2	2	237
258	17	5	3	4	2	289
277	17	5	3	4	2	308
271	16	5	3	4	2	301
272	16	5	2	3	2	300
254	14	6	3	4	2	283
239	16	4	3	3	2	267
245	12	5	3	4	2	271
236	13	5	2	3	2	261
198	8	4	2	4	2	218
142	5	4	2	2	2	157
107	5	3	2	3	2	122
75	3	3	2	2	2	87
49	3	2	1	2	2	59
31	2	2	1	1	2	39
19	2	2	1	2	2	28
3129	198	93	50	57	45	3572
2732	160	57	32	40	24	3045

262	13	10	6	8	8	307
135	25	26	12	9	13	220
340	26	9	6	5	4	390
434	21	9	4	7	4	479

Both directions						
Light	Medium	Heavy	Cycle	MotorCycle	Unclassifiable	Total
185	34	1	183	4	77	484
4797	654	41	334	52	248	6126
56996	4405	1468	168	289	150	63476
158413	8195	2989	92	957	116	170762
68881	2080	555	13	872	9	72410
5928	139	39	2	215	1	6324
383	11	2	0	39	0	435
93	3	1	0	2	0	99
38	3	1	0	0	0	42
23	2	4	0	0	0	29
27	6	2	0	0	0	35
74	15	17	0	0	0	106

APPENDIX B



Preliminary - 7/6/21

DUNN & HILLAM ARCHITECTS

Workshop 1 Pty Ltd
 U/a Dunn & Hillam Architects
 ACN 098 209 194 ABN 17 099 209 194
 Nominated architect Sydney Dunn NSW ARB No. 7547

Revision	Note
DA01-06	

Consultants

Surveyor - Western Survey Pty Ltd
 contact ph: +61 499 080 997

Structural Engineer - John Carrick Pty Ltd
 contact ph: (02) 9498 2961

Services Engineer - JHA
 contact ph: (02) 9437 1000

Quantity Surveyor - Altus Group
 contact ph: (02) 9283 7311

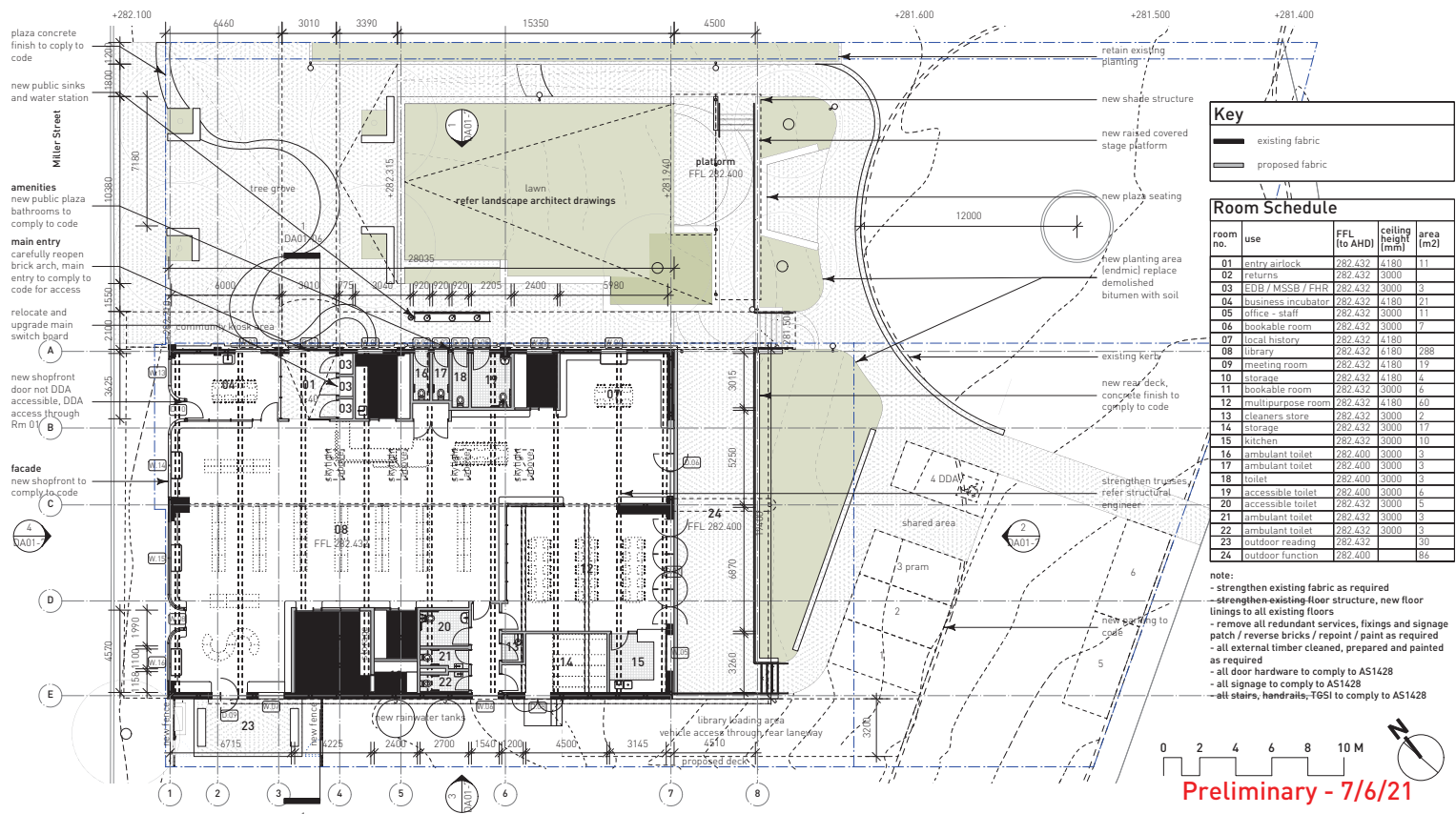
Builder - TBA contact ph:

Notes

1. all dimensions in mm.
2. do not scale from drawing.
3. this drawing has been prepared for Development Approval purposes only and is not to be used for tender or construction.
4. clarification to be sought from the architect in the event of any discrepancies in the documentation or if further information is required.

Client	Gilgandra Shire Council
Project	Library and Plaza 30-34 Miller Street, Gilgandra
Issue	Development Approval
Date	Mon, 7 Jun 2021
Scale	1:200 @A3
Drawing	Site Plan
Dwg No.	DA01-03
Job No.	20_304
Drawn	GY
Rev.	
Check	AD

33 Salisbury St, Botany NSW 2019
 T: +61 2 9316 7715 E: admin@dunnhillam.com.au W: dunnhillam.com.au



Key

— existing fabric
 — proposed fabric

Room Schedule

room no.	use	FFL (to AHD)	ceiling height (mm)	area (m2)
01	entry airlock	282.432	4180	11
02	returns	282.432	3000	6
03	EDB / MSSB / FHR	282.432	3000	3
04	business incubator	282.432	4180	21
05	office - staff	282.432	3000	11
06	bookable room	282.432	3000	7
07	local history	282.432	4180	7
08	library	282.432	6180	288
09	meeting room	282.432	4180	19
10	storage	282.432	4180	4
11	bookable room	282.432	3000	6
12	multipurpose room	282.432	4180	60
13	cleaners store	282.432	3000	2
14	storage	282.432	3000	17
15	kitchen	282.432	3000	10
16	ambulant toilet	282.400	3000	3
17	ambulant toilet	282.400	3000	3
18	toilet	282.400	3000	3
19	accessible toilet	282.400	3000	6
20	accessible toilet	282.432	3000	5
21	ambulant toilet	282.432	3000	3
22	ambulant toilet	282.432	3000	3
23	outdoor reading	282.432	3000	30
24	outdoor function	282.400	3000	86

note:

- strengthen existing fabric as required
- strengthen existing floor structure, new floor linings to all existing floors
- remove all redundant services, fixings and signage patch / reverse bricks / repaint / paint as required
- all external timber cleaned, prepared and painted as required
- all door hardware to comply to AS1428
- all signage to comply to AS1428
- all stairs, handrails, T&GSI to comply to AS1428

DUNN & HILLAM ARCHITECTS

Workshop 1 Pty Ltd
 U/a Dunn & Hillam Architects
 ACN 098 209 194 ABN 17 099 209 194
 Nominated architect Sydney Domain NSW ARB No. 7547

This drawing, the information and design in it are copyright to Workshop 1 Pty Ltd.

Revision DA01-06

Note

33 Salisbury St, Botany NSW 2019
 T: +61 2 9316 7715 E: admin@dunhillam.com.au W: dunhillam.com.au

Consultants

Surveyor - Western Survey Pty Ltd
 contact ph: +61 499 080 997

Structural Engineer - John Carrick Pty Ltd
 contact ph: (02) 9698 2961

Services Engineer - JHA
 contact ph: (02) 9437 1000

Quantity Surveyor - Altus Group
 contact ph: (02) 9283 7311

Builder - TBA contact ph:

Notes

1. all dimensions in mm.
2. do not scale from drawing.
3. this drawing has been prepared for Development Approval purposes only and is not to be used for tender or construction.
4. clarification to be sought from the architect in the event of any discrepancies in the documentation or if further information is required.

Client Gilgandra Shire Council

Project Library and Plaza
 30-34 Miller Street, Gilgandra

Issue Development Approval

Date Mon, 7 Jun 2021 **Job No.** 20_304

Scale 1:200 @A3 **Drawn** GY

Drawing Ground Floor Plan **Rev.**

Dwg No. DA01-05 **Check** AD

Preliminary - 7/6/21

APPENDIX C

From: [Liz McCutcheon](#)
To: lyle.lylemarshall.com.au
Subject: 5 days of visitor records Gilgandra Library, 1 Warren Road, Gilgandra
Date: Thursday, 29 April 2021 7:16:11 PM
Attachments: [image649482.PNG](#)
[VISITOR SURVEY 23 APRIL -29 APRIL 2021 FOR TRAFFIC ENGINEER.pdf](#)

Hi Lyle,

Here are the records from Friday last week until today, Thursday. It was a quiet week, as you will see.

Hope this helps.

Liz



Liz McCutcheon
Librarian

E: lmccutcheon@gilgandra.nsw.gov.au
A: P.O. Box 23, Gilgandra NSW, 2827
P: (02) 6817 8877 | **F:** (02) 6847 2521
W: www.gilgandra.nsw.gov.au

Get social on [Facebook](#) | Send your [Feedback](#)

Business Improvement Grant Program
Applications close 3 May 2021
www.gilgandra.nsw.gov.au

[Please think of the environment before printing this email.](#)

This message is intended for the addressee named and may contain confidential information.

If you are not the intended recipient, please delete it and notify the sender. Views expressed in this message are those of the individual sender, and are not necessarily the views of the [Gilgandra Shire Council](#) unless otherwise stated. For the purposes of the Copyright Act, the permission of the holder of copyright in this communication may be taken to have been granted, unless stated otherwise, for the copying or forwarding of this message, as long as both the content of this communication and the purposes for which it is copied or forwarded are work-related.

23/4/21

Visitor survey				
Name	Time of arrival	Departure time	Number of adults	Number of children
Maurice	10.21.	10.26	1	
Janette	10.39	10.58	1	
Margaret	10.44	10.51	1	
Peter	10.47	10.50	1	
Andrew (mail collector)	10.50	10.52	3	
Janette	10.53	10.55	1	
Maurice	10.53	10.55	1	
Pat.	11.19	11.30	1	
Sherman	11.41	12.04	1	
Jason.	12.04	12.14	1	
Janet	12.06	10.27	1	
Deanna	12.13	10.21	1	
Roz	12.21	10.12.25	1	
Roz	2.16	2.25	1	
Judy	2.17	2.33	1	
Grade	3.00	3.06	1	
Alicia	3.44.	3.50	1	
Russell	4.00		1	
Kyran	4.05	4.08		1
Liz	4.00	7.30	1	
Rhonda	4.30	5.30	1	
Russell	5.00	6.30	1	
			23	1

26/4/21

DATE

Visitor survey				
Name	Time of arrival	Departure time	Number of adults	Number of children
Rhonda	9.15	5.30	1	
Lauren	10.09	10.22	1	2.
Janelle	10.12	10.30	1	
Lauren Kern	10.23	10.35	1	
Theresa	10.44	10.55	1	2.
Liz	10.55	3.30 7.30	1	
Andrew	11.11	11.15	1	
Bob	11.50	11.57	1	
Rachel	11.57	12.00	1	
Terry	12.00	12.13	1	
Ken	12.19	12.22	1	
Gay Clarke	12.21	12.22	1	
Louisa	2.56	4.14	1	
Sonia	3.03	4.14	1	
Roshyn	3.40	3.41	1	
Kaitlyn	3.59	4.09	1	
Melinda	4.21	4.23	1	
Russell	4.53	5.10	1	
Liz	9.30			
			19.	4

27/4/20.

DATE

Visitor survey

Name	Time of arrival	Departure time	Number of adults	Number of children
Lorraine	9.30	5.30	1	
Liz	9.00	6.30	1	
Andrew	10.21	10.21	1	
Ed	10.29	11.15	1	
Leanne	10.41	10.41	1	
Margaret	10.30	10.55	1	
Lorraine	10.30	10.40	1	
Ian.	10.30	10.40	1	
Terry M	10.45	11.15	1	
Terry K.	10.55	11.20	1	
Heather	11.00	12.00	1	
Bev	11.00	11.25	1	
Edith.	11.25	11.27.	1	
Karen.	11.25	12.10	1	
Joan	11.51	12.18	1	
Darren	11.52	12.05	1	
Rhonda	1.26	5.30	1	
Trudy	1.31	1.44	1	
Anna	1.31	1.44	1	
Karen	1.34	1.50	1	
Joan.	1.42	1.45	1	
Milton	1.51	2.15	1	
Kristina	1.54	5.30	1	
			(23)	

Local history.

29/14

DATE

Visitor survey				
Name	Time of arrival	Departure time	Number of adults	Number of children
Emma	10.07	10.25	1	2
Sarah (mar)	10.20	10.20	1	
Pam	10.23	10.24	1	
Janelle	10.25	10.46	1	
Eleisha	10.35	10.44	1	
Lindy	10.25	10.35	1	
Er	10.48	11.20	1	
Joan	10.53	11.48	1	
Liz	11.33	7.30	1	
Corrairie	9.30	5.30	1	
Bernadette	11.40	11.45	1	
Jay	11.40	11.48	1	
Kristina	1.30	5.30	1	
Tina	2.21	2.28	2	1
Helen	2.30	2.40	1	
Daniel	2.45	2.50	1	
Rdom	3.30	3.45	1	
Rod	3.30	4.00	1	
Ashleigh	3.30	3.45	1	2
Joan	3.40	4.10	1	
Orlando	3.50	5.00		1
Mudson	3.50	5.00		1
Wendy	3.50	5.00	1	2
Kelly melissa	4.18	5.00	1	