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# TRAFFIC IMPACT ASSESSMENT

**PROPOSED MEDICAL CENTRE DEVELOPMENT**

31-33 HIGH STREET ROAD, ASHWOOD

6 NOVEMBER 2024

## 31-33 HIGH STREET ROAD, ASHWOOD

CLIENT: ZC Wood

OBT JOB NUMBER: 26362



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# 1 INTRODUCTION

O'Brien Traffic has been engaged by ZC Wood to undertake a traffic impact assessment in relation to a proposed medical centre development at 31-33 High Street Road, Ashwood.

In the course of preparing this report:

- Plans and relevant documentation have been examined;
- The subject site and surrounding area have been inspected;
- Traffic and parking surveys have been undertaken and the results analysed; and
- The traffic and parking implications of the proposal have been assessed.

## 2 EXISTING CONDITIONS

### 2.1 LOCATION AND LAND USE

The subject site is located on the northern side of High Street Road approximately 30 metres east of Warragul Road in Ashwood. The location of the subject site and the surrounding road network is shown in **Figure 1**.

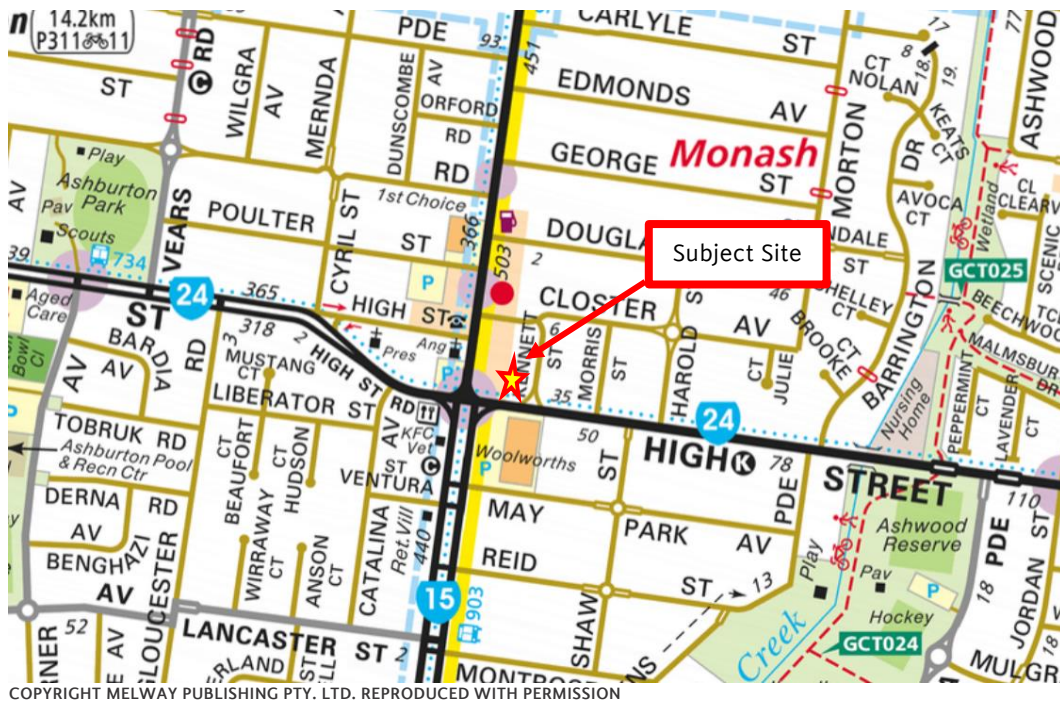


FIGURE 1: LOCATION OF SUBJECT SITE

A recent aerial photograph of the subject site and surrounds is shown in **Figure 2**.



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FIGURE 2: AERIAL PHOTO OF SUBJECT SITE AND SURROUNDS

The site, which is zoned *General Residential*, is rectangular in shape with a frontage of 37.42 metres to High Street Road Street and 36.58 metres to Kennett Street, comprising an area of approximately 1,491 square metres. The site is currently occupied by two single dwellings as shown in **Figure 2**.

## 2.2 SURROUNDING LAND USE

Residential properties are located to the north and east of the subject site, including immediately adjacent to the northern boundary of the subject site. Commercial properties are located to the west, fronting Warrigal Road. The unnamed right-of-way (ROW) provides access to the rear of properties with some providing car parking direct off the ROW.

The subject site is located within the Principle Public Transport Network area (PPTN).

A zoning map is provided in **Figure 3**.

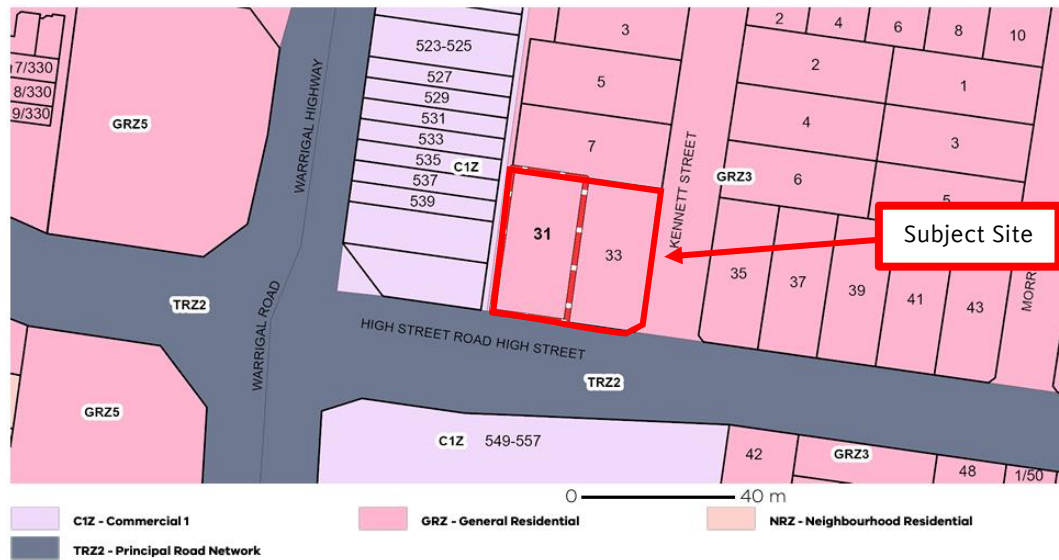


FIGURE 3: ZONING MAP

## 2.3 ROAD NETWORK

**High Street Road** is a State arterial road and *Transport Zone 2* under the control of the Department of Transport. High Street Road provides a pavement width of approximately 19.6m, with two traffic lanes in each direction and separate right and left turning lanes in the vicinity of the subject site.

On-street parking is prohibited on the northern side of High Street Road adjacent the subject site. East of Kennett Street, on-street parking is restricted by a Clearway 4pm-6:30pm Monday-Friday. On the southern side of High Street Road in the vicinity of the subject site parking is restricted by a Clearway 7am-9am Monday-Friday. The posted speed limit in the vicinity of the site is 60 km/h. Recent views of High Street Road are shown in **Figure 4** and **Figure 5**.



FIGURE 4: HIGH STREET ROAD FACING WEST



FIGURE 5: HIGH STREET ROAD FACING EAST

**Kennett Street** is a local access street under the control of Council. It runs in a north-south orientation between High Street Road and Closter Avenue. It provides a pavement width of approximately 6.7m, allowing for two-way traffic. Parking along the western kerb is restricted to No stopping 8am to 6pm Monday to Friday and 8am-1pm Saturday, while the eastern side of Kennett Street provides unrestricted on-street parking. The intersection of Kennett Street and High Street Road is restricted to left in and left out movements only. Recent views of Kennett Street are shown in **Figure 6** and **Figure 7**.



FIGURE 6: KENNETT STREET FACING NORTH FROM HIGH STREET ROAD



FIGURE 7: KENNETT STREET FACING SOUTH TO HIGH STREET ROAD

The unnamed Right-of Way (ROW) is under the control of Council. It runs in a north-south orientation between High Street Road and Closter Avenue. It provides a pavement width of approximately 3 metres. The intersection of the ROW with High Street Road is restricted to left out movements only, no access via High Street Road is allowed. Recent views of the ROW are shown in **Figure 8** and **Figure 9**.



FIGURE 8: UNNAMED RIGHT-OF WAY FACING NORTH TOWARDS CLOSTER AVENUE



FIGURE 9: UNNAMED RIGHT-OF WAY FACING SOUTH TOWARDS HIGH STREET ROAD

## 2.4 EXISTING TRAFFIC VOLUMES

**High Street Road:** A review of the Department of Transport's *Traffic Volume* database indicates that High Street Road west bound carries an estimated Annual Average Daily Traffic (AADT) volume of 8,900 vehicles per day and east bound carries an estimated Annual Average Daily Traffic (AADT) volume of 7,100 vehicles per day between Warrigal Road & Huntingdale Road.

**Kennett Street:** O'Brien Traffic obtained traffic data for the Kennett Street, north of High Street Road, from a 7-day survey between Wednesday August 23<sup>rd</sup> and Wednesday August 30<sup>th</sup>, 2023, which had the following results:

- A daily weekday average of 197 vehicles per day, with a northbound daily average of 94 vehicles and a southbound daily average of 104 vehicles. The weekday AM peak hour was between 9-10am with an average of 13 vehicles per hour, and the weekday PM peak hour was between 5-6pm with an average of 23 vehicles per hour; and
- A daily weekend average of 135 vehicles per day, with a northbound daily average of 74 vehicles and a southbound daily average of 64 vehicles.

**Unnamed ROW:** O'Brien Traffic commissioned vehicle movement surveys for the unnamed ROW south of Closter Avenue, for a nine-hour period from 8am to 5pm on Tuesday August 27<sup>th</sup>, 2024, which had the following results:

- A total of 68 vehicles per day, with a northbound total of 23 vehicles and a southbound total of 45 vehicles. The weekday AM peak hour was between 9-10am with a total of 12 vehicles per hour, with 10 northbound vehicles and 2 southbound vehicles in the peak hour, and the weekday PM peak hour was between 3:30-4:30pm with a total of 11 vehicles per hour, with a total of 6 northbound vehicles and 5 southbound vehicles.

O'Brien Traffic also commissioned vehicle movement surveys for the unnamed ROW north of High Street Road, from 8am-5pm on Tuesday August 27<sup>th</sup>, 2024, which had the following results:

- A total of 51 vehicles per day, with a northbound total of 24 vehicles and a southbound total of 27 vehicles. The weekday AM peak hour was between 11-12am with a total of 11 vehicles per hour with 3 northbound vehicles and 5 southbound vehicles in the peak hour, and the weekday PM peak hour was between 2-3pm with a total of 12 vehicles per hour, with a total of 4 northbound vehicles and 8 southbound vehicles.

It was observed that throughout the survey period from 8am-5pm, that six vehicles stopped within the laneway consisting of:

- A car stopped from 8:39:43 to 8:41:00 for 77 seconds to pick up rubbish bins blown over by wind;
- A car stopped from 9:37:07 to 9:37:38 for 31 seconds to pick up empty bins blown over by wind;
- A Van stopped from 13:22:06 to 13:22:49 for 43 seconds;
- A ute stopped from 13:58:18 to 13:59:05 for 47 seconds to pick up empty bins blown over by wind;

- A car stopped from 15:58:48 to 16:00:43 for 115 seconds to pick up empty bins blown over by wind; and
- A car stopped from 16:52:34 to 16:54:41 for 127 seconds to place rubbish in a bin.

The day surveyed was an unusually windy day and bins were blown from the rear of properties onto the laneway. None of these occasions resulted in another vehicle using the laneway being delayed.

Detailed results of the turning movement count on the unnamed ROW are provided in **Appendix A**.

## 2.5 CASUALTY CRASH HISTORY

There have been ten crashes reported within 50m of the subject site within the last 5 years, including nine at the Warrigal Road / High Street Road intersection:

- A serious-injury accident at the intersection of High Street Road and Warrigal Road involving rear end crash of two vehicles in the same lane travelling north, on Wednesday April 17, 2019, at 7:15am;
- An other-injury accident at the intersection of High Street Road and Warrigal Road involving vehicle collision of a vehicle travelling north and a vehicle travelling south, on Monday April 15, 2019, at 1:25pm;
- A serious-injury accident at the intersection of High Street Road and Warrigal Road involving vehicle collision of a vehicle travelling north and a vehicle travelling south, on Wednesday April 9, 2021, at 6:58pm;
- A serious-injury accident at the intersection of High Street Road and Warrigal Road involving vehicle collision involving 5 vehicles travelling north east and south west, on Wednesday September 21, 2019, at 8:33pm;
- An other-injury accident at the intersection of High Street Road and Warrigal Road involving rear end crash of four vehicles in the same lane travelling east, on Friday April 23, 2021, at 9:41am;
- A serious-injury accident at the intersection of High Street Road and Warrigal Road involving pedestrian being struck by a light rigid vehicle travelling south, on Thursday September 5, 2019, at 6:15am;
- An other-injury accident at the intersection of High Street Road and Warrigal Road involving vehicle collision of turning vehicles with one vehicle travelling north and a vehicle travelling south, on Tuesday November 30, 2021, at 4pm;
- An other-injury accident at the intersection of High Street Road and Warrigal Road involving rear end crash of two vehicles in the same lane travelling west, on Wednesday May 5, 2021, at 7:05am;
- A serious-injury accident at the intersection of High Street Road and Warrigal Road involving rear end crash of two vehicles in the same lane travelling south, on Friday April 29, 2022, at 3:45am; and
- A serious-injury accident on High Street Road involving a vehicle colliding with a cyclist on Friday September 13, 2019, at 8:07am.

It is noted that there were no crashes recorded along Kennett Street or the ROW or their intersections with High Street Road.

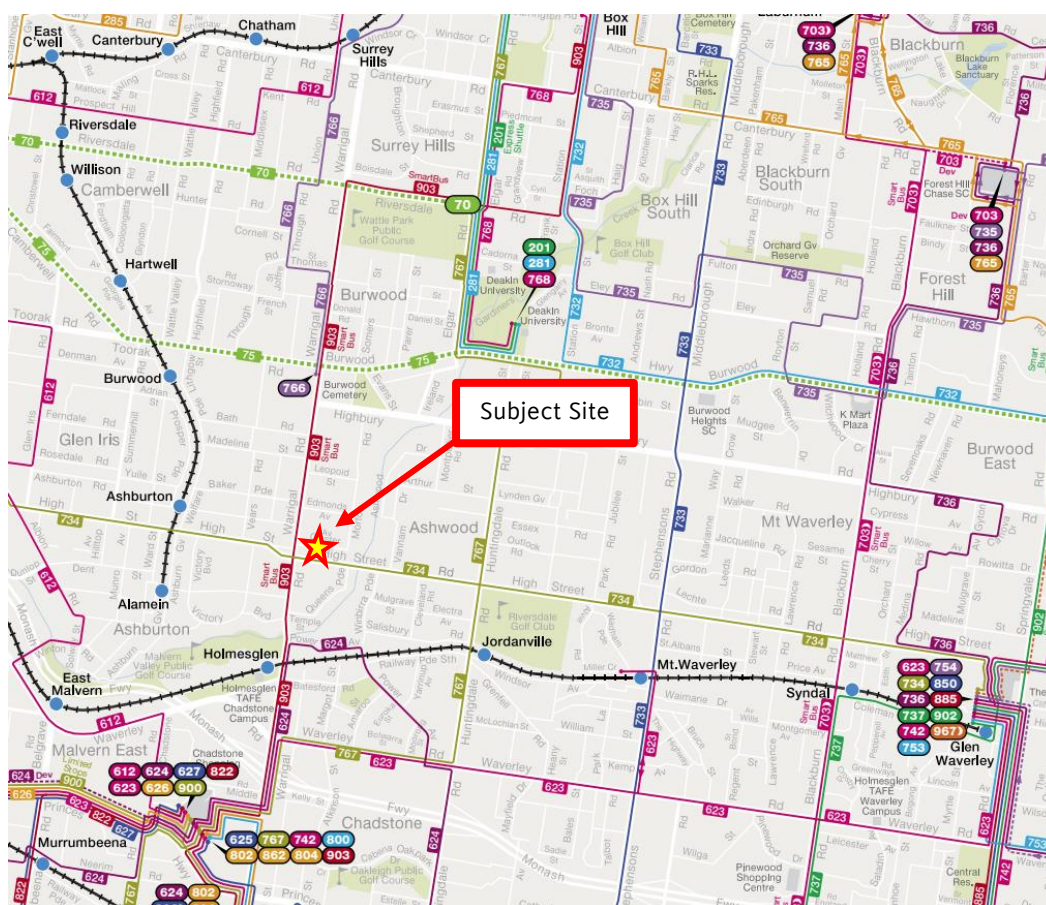
## 2.6 SUSTAINABLE TRANSPORT

### 2.6.1 Public Transport

The site is located within the Principal Public Transport Network (PPTN) area.

Bus Route 734 (Glen Iris – Glen Waverley) operates on High Street past the subject site, with the nearest stop adjacent the subject site. These services provide direct access to the Ashburton and Glen Iris Railway Stations west of the subject site. They provide regular services on the Alamein and Glen Waverley lines, respectively.

The public transport services in the vicinity of the subject site are shown in **Figure 10**.



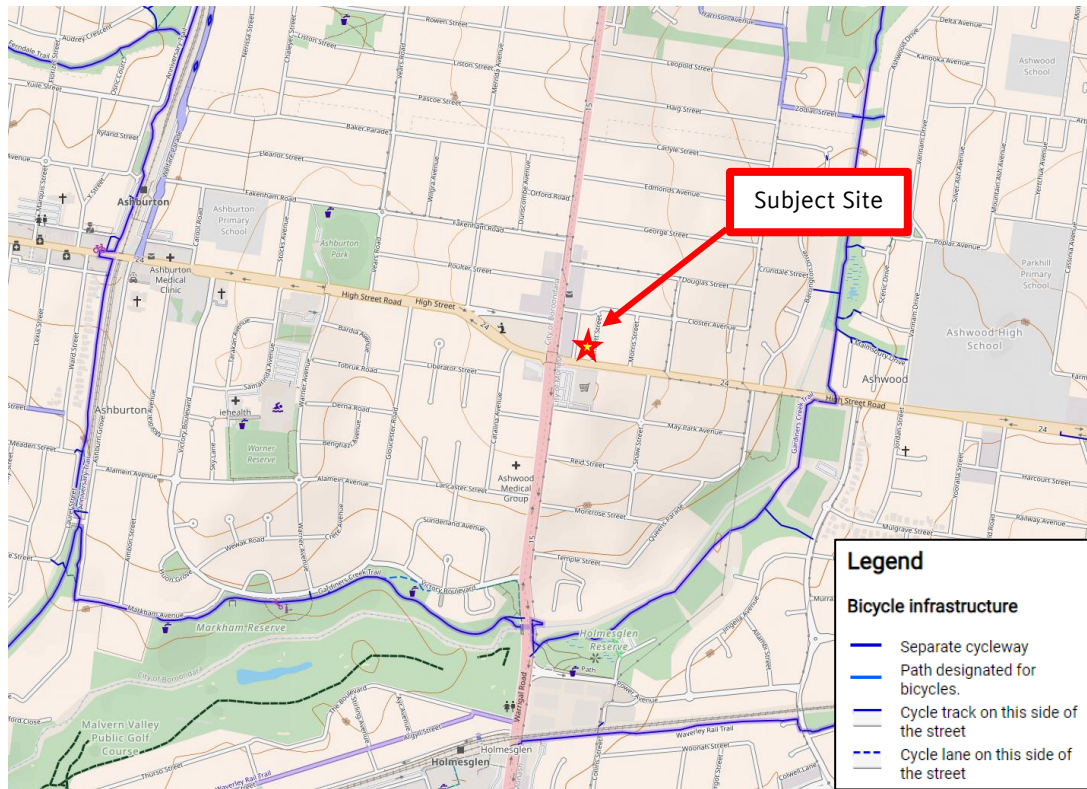
SOURCE: PUBLIC TRANSPORT VICTORIA (PTV) WEBSITE

FIGURE 10: PUBLIC TRANSPORT SERVICES

### 2.6.2 Bicycle Network

The site has convenient access to bicycle infrastructure. The Gardiners Creek Trail is located 600 m to the east of the subject site, providing connectivity to a number of additional off-road facilities to the north and west of the site.

The bicycle network in the vicinity of the subject site is illustrated in **Figure 11**.



SOURCE: TRAVELSMART MAP

FIGURE 11: BICYCLE NETWORK

### 3 THE PROPOSAL

It is proposed to demolish the existing dwellings on the subject site and construct a three-storey medical clinic with a basement car park. The proposed net floor area of the building will be 1,731m<sup>2</sup> and the leasable floor area will be 1,228.1m<sup>2</sup>.

It is proposed that up to 16 practitioners will be on site at any one time to provide specialist medical services from the facility.

It is proposed to provide a total of 44 car parking spaces on site, including 30 parking spaces in a basement level and 14 ground level parking spaces, 2 spaces in a tandem parking arrangement allocated for staff use. One accessible space is also provided within the basement level.

Vehicle access to basement is proposed via a 6.1m wide crossover to Kennett Street. Vehicle access to the ground level parking spaces is proposed via the unnamed Right-of-Way.

In addition, a total of six bicycle parking rails (12 bicycle parking spaces) are proposed within the High Street Road frontage, adjacent to the main entrance.

### 4 CAR PARKING

#### 4.1 PLANNING SCHEME CAR PARKING REQUIREMENT

Parking policy and requirements applicable to the proposed development are specified in Clause 52.06 of the Planning Scheme.

The purpose of Clause 52.06 is:

- To ensure that car parking is provided in accordance with the Municipal Planning Strategy and the Planning Policy Framework.
- To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.
- To support sustainable transport alternatives to the motor car.
- To promote the efficient use of car parking spaces through the consolidation of car parking facilities.
- To ensure that car parking does not adversely affect the amenity of the locality.
- To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.

The Planning Scheme parking requirement for the proposal is shown in **Table 1**.

USE	SIZE	PLANNING SCHEME PARKING RATE	CAR PARKING REQUIREMENT
Medical centre	1,228.1m <sup>2</sup>	3.5 spaces per 100m <sup>2</sup> leasable floor area	42 spaces
TOTAL			42 SPACES

TABLE 1: PLANNING SCHEME CAR PARKING REQUIREMENT

On this basis, the proposed development has a Planning Scheme car parking requirement of 42 spaces, as it is proposed to provide 44 on-site parking spaces, the Planning Scheme car parking requirement is met.

## 4.2 CAR PARKING ALLOCATION

It is proposed that the 14 car parking spaces located on the ground floor level and accessed via the unnamed ROW would be all allocated to staff. This will enable the parking within the two tandem sets of spaces to be readily managed. This allocation will also reduce the amount of additional traffic movements generated within the laneway to less than 14 in any hour.

The car parking spaces within the basement car park will be for patient parking, with some spaces utilised by staff from time to time. It is not proposed to allocate spaces within the basement to staff so that all spaces would be able to be utilised by patients, if they are vacant.

## 5 CAR PARK ACCESS & LAYOUT

- Access to the basement car park is proposed via a 6.1m wide ramp, in accordance with AS2890.1-2004 requirements;
- The proposed basement ramp gradients are in accordance with Design Standard 3 of Clause 52.06-9 of the Planning Scheme;
- All spaces in the basement are a minimum of 2.6m wide x 4.9m long accessed by aisles 6.4m wide meeting the requirements of Design Standard 2 of Clause 52.06-9 of the Planning Scheme;
- The accessible space is dimensioned 2.4m wide x 5.4m long with an adjacent shared area dimensioned 2.4m wide x 5.4m long, in accordance with the dimensional requirements of the Planning Scheme;
- For basement parking spaces adjacent to columns, the proposed columns are located within the clearance envelopes stipulated in Design Standard 2 of Clause 52.06-9 of the Planning Scheme.
- The proposed minimum headroom clearance within the basement of 2.4m exceeds the requirements of AS2890.6-2009 and Design Standard 1 of Clause 52.06-9 of the Planning Scheme;
- All 90 degrees spaces on the ground floor are 2.6m wide x 4.9m long accessed via the unnamed ROW providing an effective aisle at least 6.4m wide, meeting the requirements of Design Standard 2 of Clause 52.06-9 of the Planning Scheme;
- Swept path analysis provided in **Appendix B** indicates that an Australian Standard B85 vehicle can access all critical basement car parking spaces;
- All tandem parking spaces are provided with a 500mm separation between spaces, meeting the requirements of Design Standard 2 of Clause 52.06-9 of the Planning Scheme; and
- For ground floor parking spaces adjacent to columns, the proposed columns are located within the clearance envelopes stipulated in Design Standard 2 of Clause 52.06-9 of the Planning Scheme.

## 6 BICYCLE FACILITIES

Bicycle parking requirements applicable to the proposed development are specified in Clause 52.34 of the Planning Scheme.

Adopting a total of 16 practitioners to complete the Planning Scheme assessment, the bicycle parking requirement would be as shown in **Table 2**.

USE	SIZE	PLANNING SCHEME BICYCLE PARKING RATE		BICYCLE PARKING REQUIREMENT	
		EMPLOYEE / RESIDENT	CUSTOMER / VISITOR	EMPLOYEE / RESIDENT	CUSTOMER / VISITOR
Medical Centre	16 practitioners	1 to each 8 practitioners	1 to each 4 practitioners	2 spaces	4 spaces
TOTAL				2 SPACES	4 SPACES

TABLE 2: PLANNING SCHEME BICYCLE PARKING REQUIREMENT

As six (6) bicycle rails (providing 12 spaces) are proposed within the frontage of the site, the development exceeds the Planning Scheme bicycle parking requirement based on 16 practitioners.

## 7 LOADING

It is anticipated that for a development of this size and use, that most deliveries would be undertaken using a B99/van delivery vehicle. Deliveries are proposed to occur within the basement area outside of peak periods. Any deliveries from larger vehicles would be able to utilise available on-street parking in Kennett Street.

Waste collection would be undertaken by a private contractor via kerbside collection.

Bins will be collected on a weekly basis for general waste and fortnightly basis for recycling by the engaged private waste contractor.

A Local Contextual Analysis Plan for the waste collection is shown in **Figure 12**.

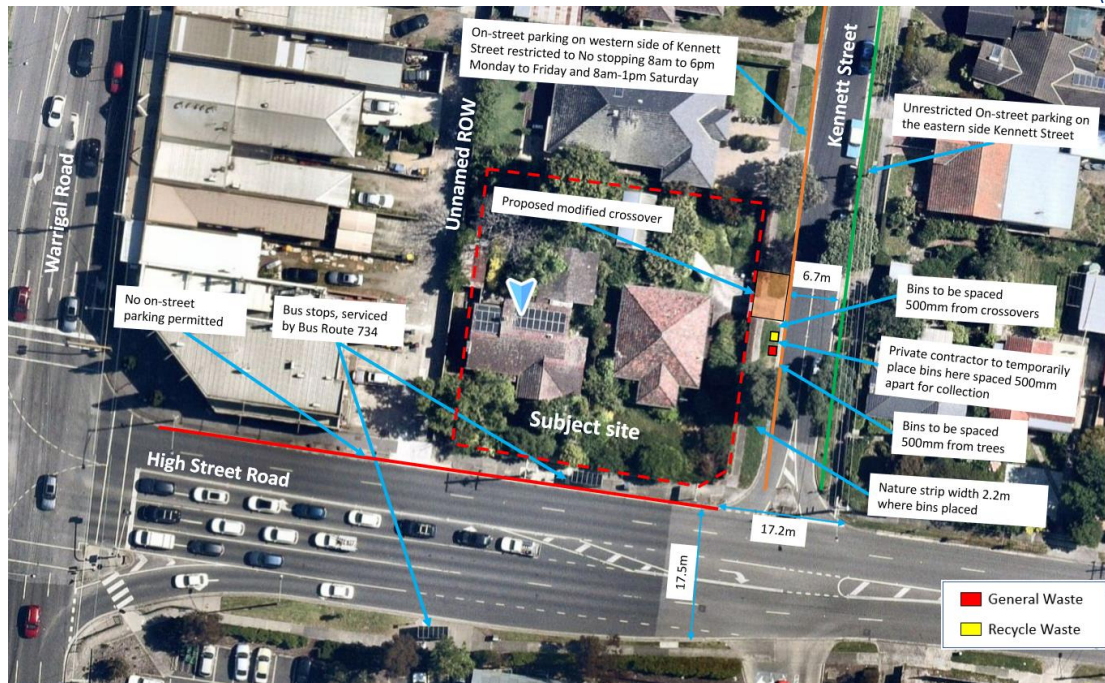


FIGURE 12: LOCAL CONTEXTUAL ANALYSIS PLAN

Private collection will occur on an alternate day to the Council kerbside collection on Kennett Street, which is on Mondays. Bins will be placed on the western kerb of Kennett Street.

On collection days, waste trucks should access Kennett Street via turning left from High Street Road, to travel north along Kennett Street. A 6.4m or 8.8m waste vehicle would collect bins from the kerb. The waste vehicle would travel north along Kennett Street to exit the location.

No Stopping restrictions apply to the western side of Kennett Street from 8am to 6pm on Monday-Friday. The private waste collection would be similar to the current Council collection i.e. a waste truck pulls up to the bins and they are loaded (although there is a No Stopping restriction). The collection would be very short in duration therefore the traffic impact would be no different to the existing Council waste collection service that takes place along the street.

It is noted that a separate Waste Management Plan has been prepared for the proposed development detailing the likely amount of waste generated, the bin requirements and the anticipated pick-up schedule by private contractor.

## 8 TRAFFIC GENERATION & IMPACT

Case study data has shown that medical centres generate a peak of 8 vehicle trips for general practitioners and 4 vehicle trips per hour for specialists. We have been advised that the proposed development is designed to be utilised by medical specialists and not by general practitioners.

Adopting a total of 13 practitioners, the traffic generation for the proposed development

is shown in **Table 3**.

USE	SIZE	TRAFFIC GENERATION RATE	TRIPS GENERATED
Medical Centre	16 specialist practitioners	4 trips per hour per practitioner	64 trips per hour (50% inbound, 50% outbound)
TOTAL			PEAK: 64 TRIPS

**TABLE 3: TRIP GENERATION ESTIMATE**

It is anticipated that up to 64 trips in any hour, 32 in and 32 out, will be generated by the proposed development when operating at full capacity. These vehicle trips are likely to be evenly distributed on Kennett Street so that 16 vehicles would enter and exit via Kennett Street north of the subject site and 16 vehicles would enter and exit via Kennett Street to the south of the site access.

The additional traffic distributed over the surrounding road network would be well within the capacity of Kennett Street and the surrounding streets. The traffic generated would have no foreseeable adverse impact on the current safety and operation of Kennett Street or the surrounding road network.

The 14 car parking spaces located on the ground floor level and accessed via the unnamed ROW would be all allocated to staff. The amount of additional traffic movements generated within the laneway will be less than 14 in the AM and PM commuter peak periods. Outside of the AM and PM peak periods the amount of traffic generated would likely be less than 2-3 movements in any hour. Given the low levels of existing traffic along the unnamed ROW, as mentioned in **Section 2.4**, this amount of traffic would have no foreseeable adverse impact on the current safety and operation of the ROW or the surrounding road network.

## 9 CONCLUSION

Based on the considerations outlined above, it is concluded that:

- The proposal has a Planning Scheme car parking requirement of 42 spaces based on the leasable floor area;
- The proposed provision of 44 car parking spaces on site exceeds the Planning Scheme car parking requirement;
- The proposed car parking access and layout meets relevant Planning Scheme and Australian Standard requirements;
- A total of 12 bicycle spaces are proposed within the site's frontage, exceeding the Planning Scheme requirement;
- Loading and waste collection arrangements are considered satisfactory for a development of this size and use; and,
- The anticipated additional vehicle movements generated by the proposed development would have no foreseeable adverse impact on the current safety and operation of Kennett Street, the ROW or the surrounding road network.

On this basis, there are no traffic or parking related grounds to prevent the proposed medical centre development from being approved.

# APPENDIX A

## TURNING MOVEMENT COUNT RESULTS



Client: O'Brien Traffic  
 Name: High Street Road Ashwood Traffic Count  
 Job No.: 6875  
 Location: 31-33 High Street Rd, Ashwood  
 Date: Tue 27/08/2024 Time: 8am to 5pm  
 Weather: Windy

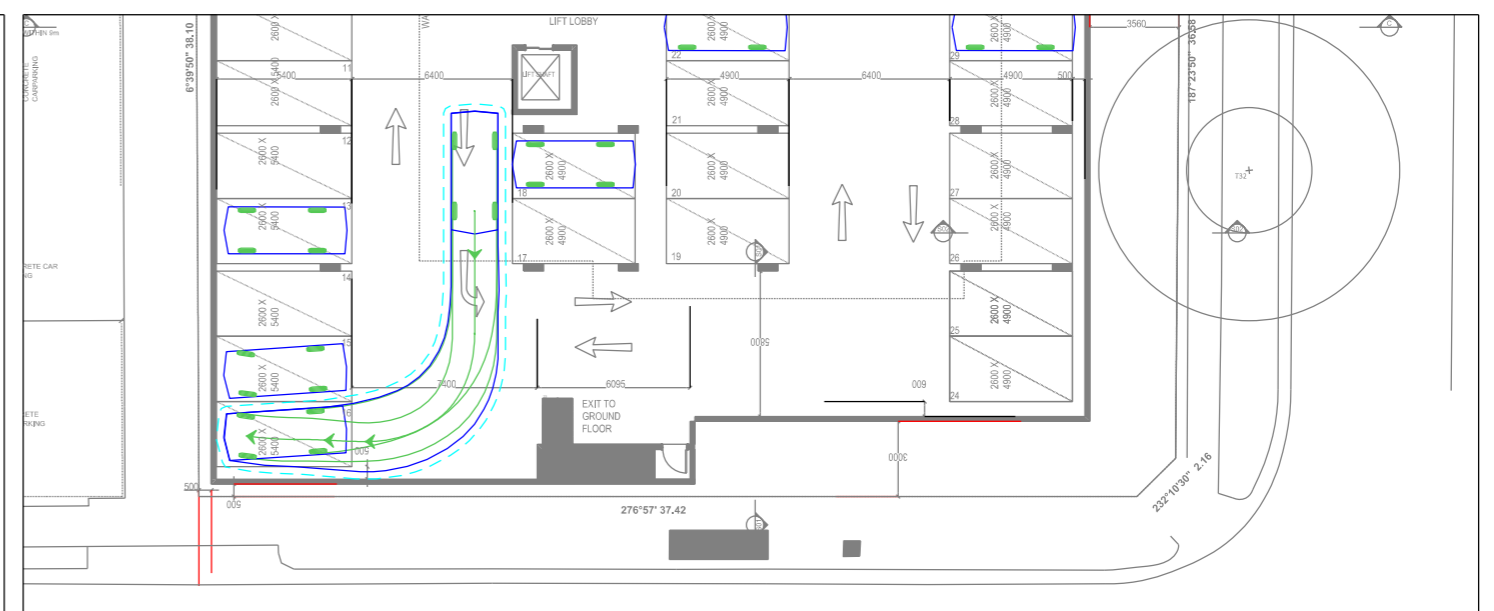
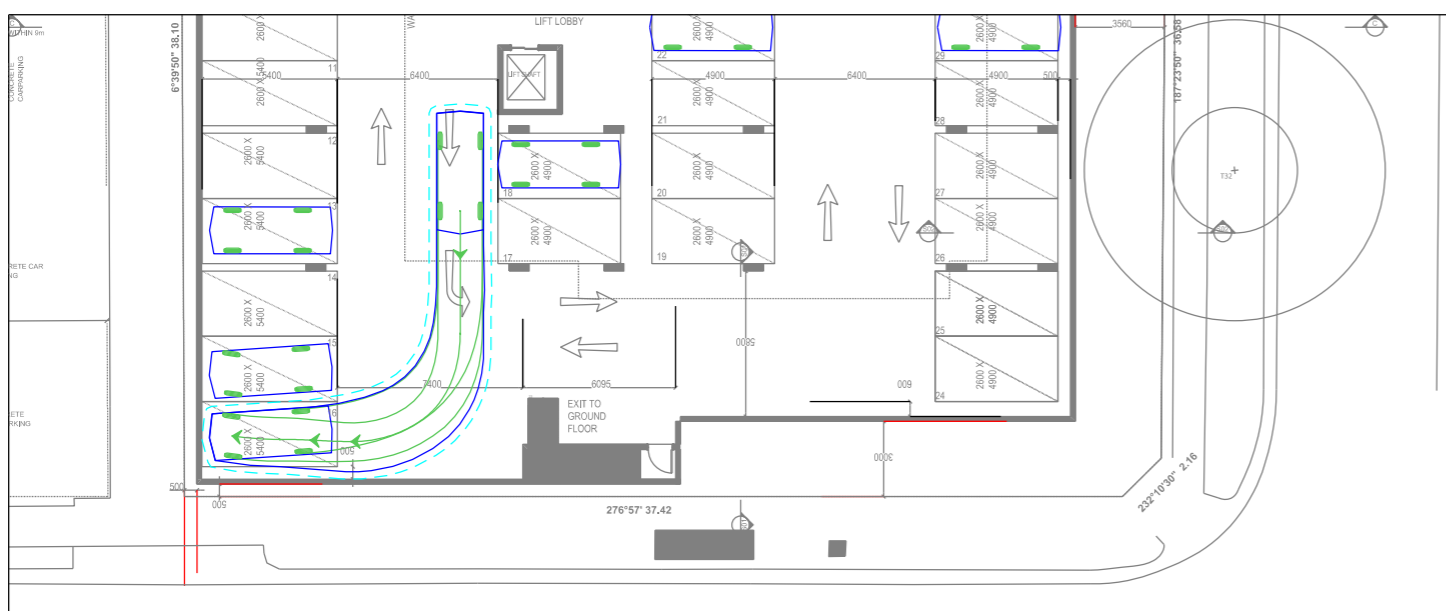
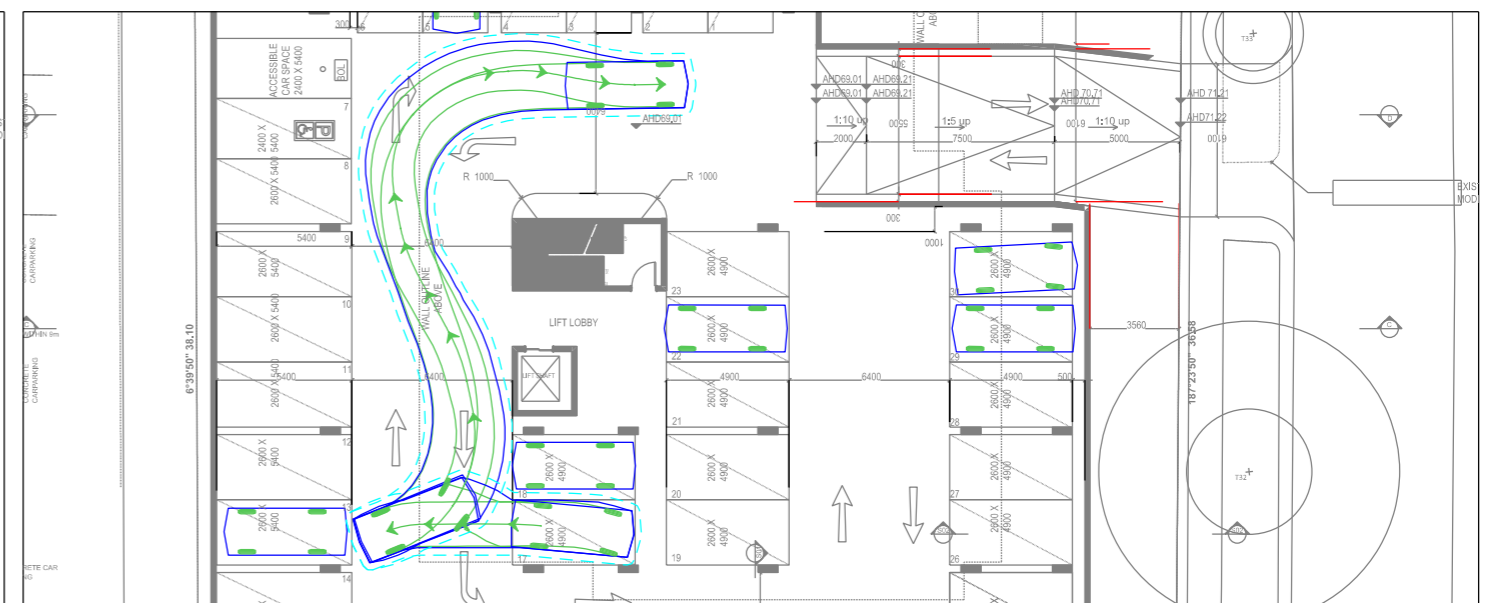
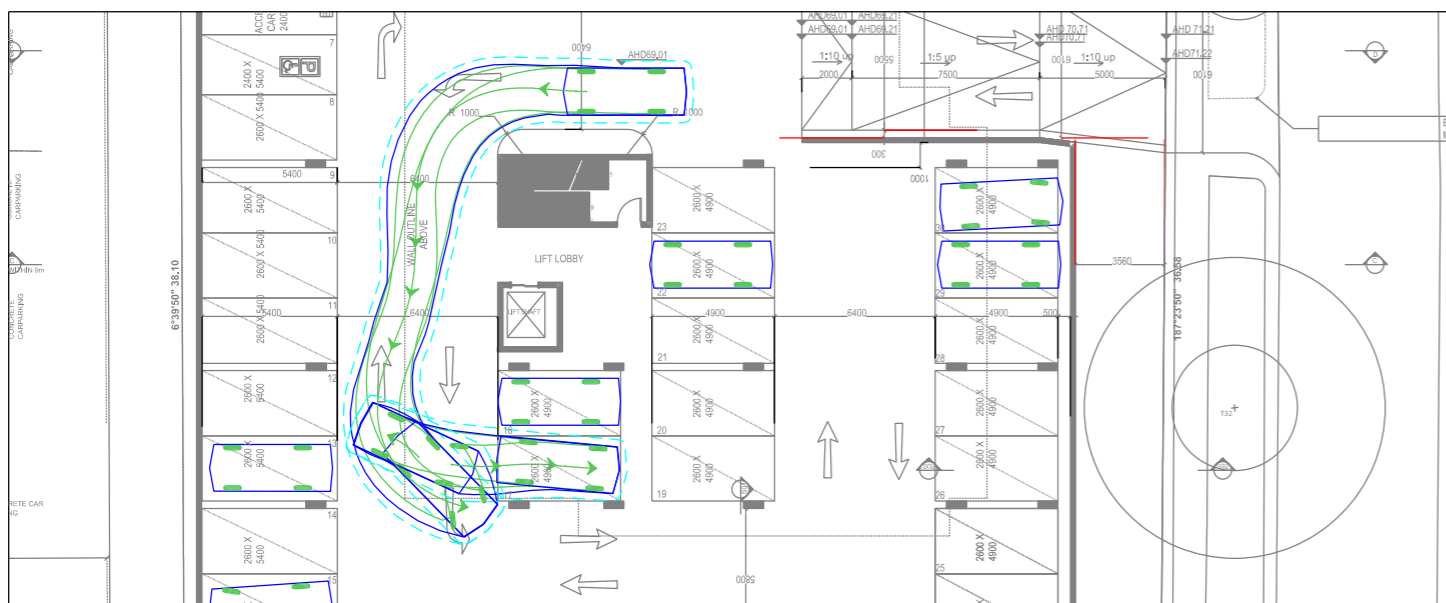
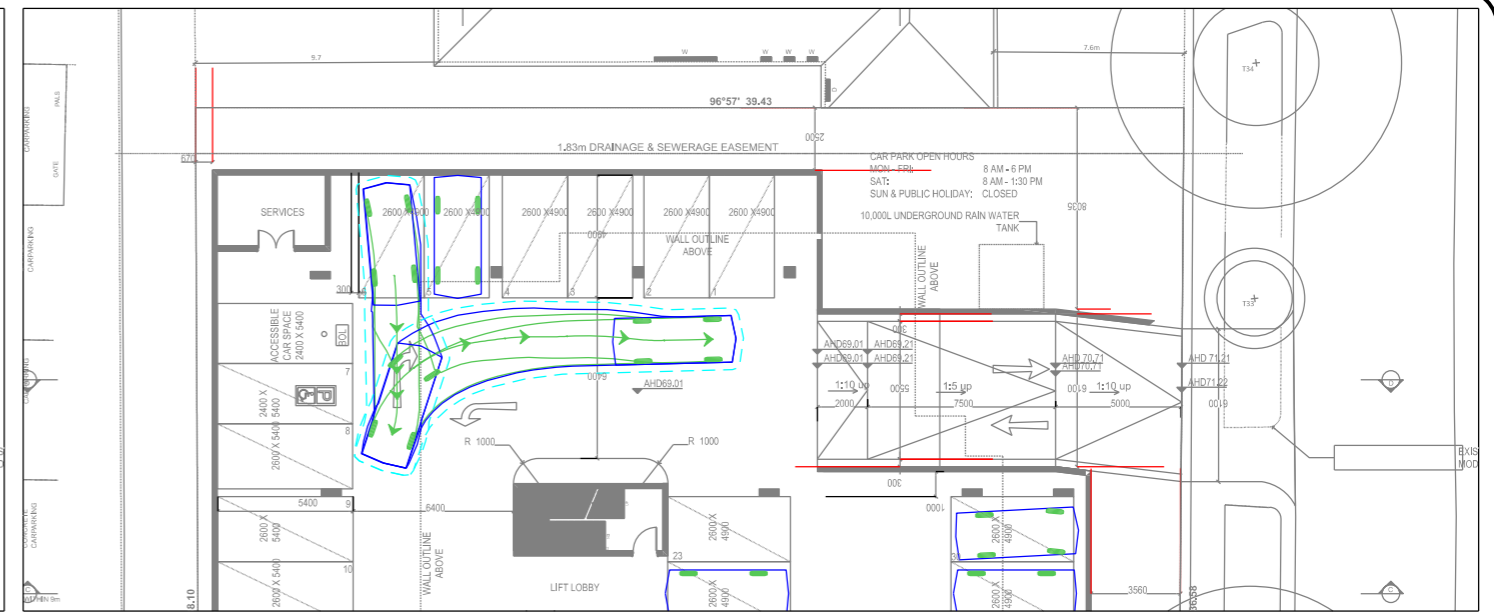
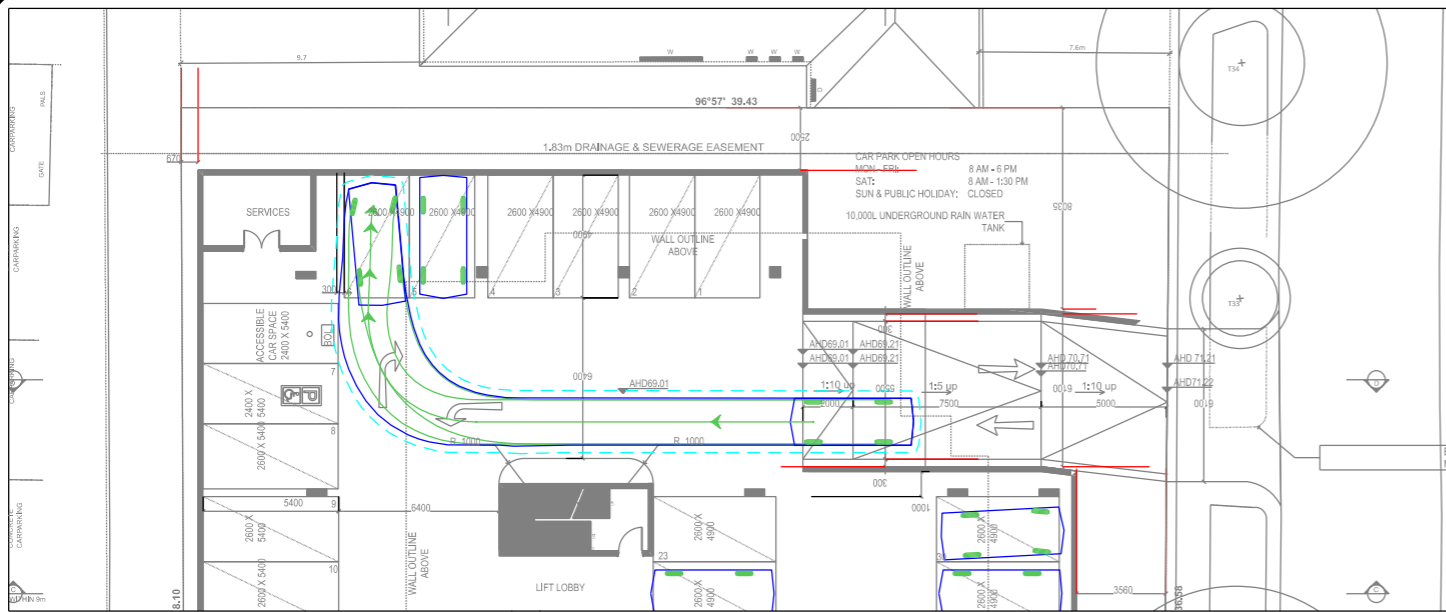
Absolute Value		At Closter Ave						At High Street Road					
		IN			OUT			IN			OUT		
		Car	LC	Truck	Car	LC	Truck	Car	LC	Truck	Car	LC	Truck
TIME	TIME												
8:00	8:15	1	0	0	0	0	0	0	0	0	0	0	0
8:15	8:30	0	0	0	1	0	0	1	0	0	0	0	0
8:30	8:45	1	0	0	0	0	0	0	0	0	0	0	0
8:45	9:00	2	0	0	0	0	0	1	0	0	1	0	0
9:00	9:15	3	0	0	0	0	0	0	0	0	0	0	0
9:15	9:30	4	0	0	1	0	0	2	0	0	0	0	0
9:30	9:45	1	0	0	1	0	0	0	0	0	0	0	0
9:45	10:00	2	0	0	0	0	0	0	0	0	0	0	0
10:00	10:15	0	0	0	1	0	0	1	0	0	1	0	0
10:15	10:30	1	0	0	0	0	0	0	0	0	1	0	0
10:30	10:45	2	0	0	0	0	0	0	0	0	0	0	0
10:45	11:00	0	1	0	0	1	0	0	0	0	0	0	0
11:00	11:15	2	1	0	1	0	0	1	0	0	2	0	0
11:15	11:30	3	0	0	0	0	0	1	0	0	2	1	0
11:30	11:45	0	0	1	1	0	0	1	0	0	0	0	0
11:45	12:00	1	0	0	0	0	1	0	0	0	0	0	0
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12:15	12:30	0	0	0	1	0	0	1	0	0	0	0	0
12:30	12:45	1	0	0	1	0	0	1	0	0	1	0	0
12:45	13:00	0	1	0	0	0	0	0	0	0	1	0	0
13:00	13:15	1	0	0	0	1	0	0	0	0	0	0	0
13:15	13:30	2	1	0	0	1	0	0	1	0	1	1	0
13:30	13:45	1	0	0	0	0	0	0	0	0	0	0	0
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14:00	14:15	0	0	0	0	0	0	1	0	0	2	1	0
14:15	14:30	0	0	0	2	0	0	1	0	0	1	0	0
14:30	14:45	1	0	0	0	0	0	0	0	0	2	0	0
14:45	15:00	1	0	0	0	0	0	1	0	0	1	0	0
15:00	15:15	0	0	0	1	0	0	0	0	0	1	0	0
15:15	15:30	1	0	0	0	0	0	1	0	0	1	0	0
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16:15	16:30	1	0	0	1	0	0	0	0	0	1	0	0
16:30	16:45	0	0	0	1	0	0	0	0	0	0	0	0
16:45	17:00	0	0	0	1	0	0	2	0	0	0	0	0

Accumulative Value		At Closter Ave						At High Street Road					
		IN			OUT			IN			OUT		
		Car	LC	Truck	Car	LC	Truck	Car	LC	Truck	Car	LC	Truck
TIME	TIME												
8:00	8:15	1	0	0	0	0	0	0	0	0	0	0	0
8:15	8:30	1	0	0	1	0	0	1	0	0	0	0	0
8:30	8:45	2	0	0	1	0	0	1	0	0	0	0	0
8:45	9:00	4	0	0	1	0	0	2	0	0	1	0	0
9:00	9:15	7	0	0	1	0	0	2	0	0	1	0	0
9:15	9:30	11	0	0	2	0	0	4	0	0	1	0	0
9:30	9:45	12	0	0	3	0	0	4	0	0	1	0	0
9:45	10:00	14	0	0	3	0	0	4	0	0	1	0	0
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10:15	10:30	15	0	0	4	0	0	5	0	0	3	0	0
10:30	10:45	17	0	0	4	0	0	5	0	0	3	0	0
10:45	11:00	17	1	0	4	1	0	5	0	0	3	0	0
11:00	11:15	19	2	0	5	1	0	6	0	0	5	0	0
11:15	11:30	22	2	0	5	1	0	7	0	0	7	1	0
11:30	11:45	22	2	1	6	1	0	8	0	0	7	1	0
11:45	12:00	23	2	1	6	1	1	8	0	0	7	1	0
12:00	12:15	24	2	1	7	1	1	9	0	0	8	1	0
12:15	12:30	24	2	1	8	1	1	10	0	0	8	1	0
12:30	12:45	25	2	1	9	1	1	11	0	0	9	1	0
12:45	13:00	25	3	1	9	1	1	11	0	0	10	1	0
13:00	13:15	26	3	1	9	2	1	11	0	0	10	1	0
13:15	13:30	28	4	1	9	3	1	11	1	0	11	2	0
13:30	13:45	29	4	1	9	3	1	11	1	0	11	2	0
13:45	14:00	30	5	1	9	3	1	13	1	0	13	2	0
14:00	14:15	30	5	1	9	3	1	14	1	0	15	3	0
14:15	14:30	30	5	1	11	3	1	15	1	0	16	3	0
14:30	14:45	31	5	1	11	3	1	15	1	0	18	3	0
14:45	15:00	32	5	1	11	3	1	16	1	0	19	3	0
15:00	15:15	32	5	1	12	3	1	16	1	0	20	3	0
15:15	15:30	33	5	1	12	3	1	17	1	0	21	3	0
15:30	15:45	34	5	1	14	3	1	18	1	0	22	3	0
15:45	16:00	36	5	1	14	3	1	19	1	0	23	3	0
16:00	16:15	38	5	1	16	3	1	21	1	0	23	3	0
16:15	16:30	39	5	1	17	3	1	21	1	0	24	3	0
16:30	16:45	39	5	1	18	3	1	21	1	0	24	3	0
16:45	17:00	39	5	1	19	3	1	23	1	0	24	3	0

FIGURE A1: TURNING MOVEMENT COUNT RESULTS TUESDAY AUGUST 27, 2024, 8AM-5PM

## APPENDIX B

### SWEPT PATH ANALYSIS



**NOT FOR CONSTRUCTION**

**B85**

Width : 1.97  
Track : 1.77  
Lock to Lock Time : 6.0  
Steering Angle : 34.1

**B85 ENTRY/EXIT**

31-33 High Street Road, Ashwood

1:300 @ A3 02/09/24

DWG NO: 26362001

**KEY**

→ → → CENTRE LINE OF FRONT WHEELS

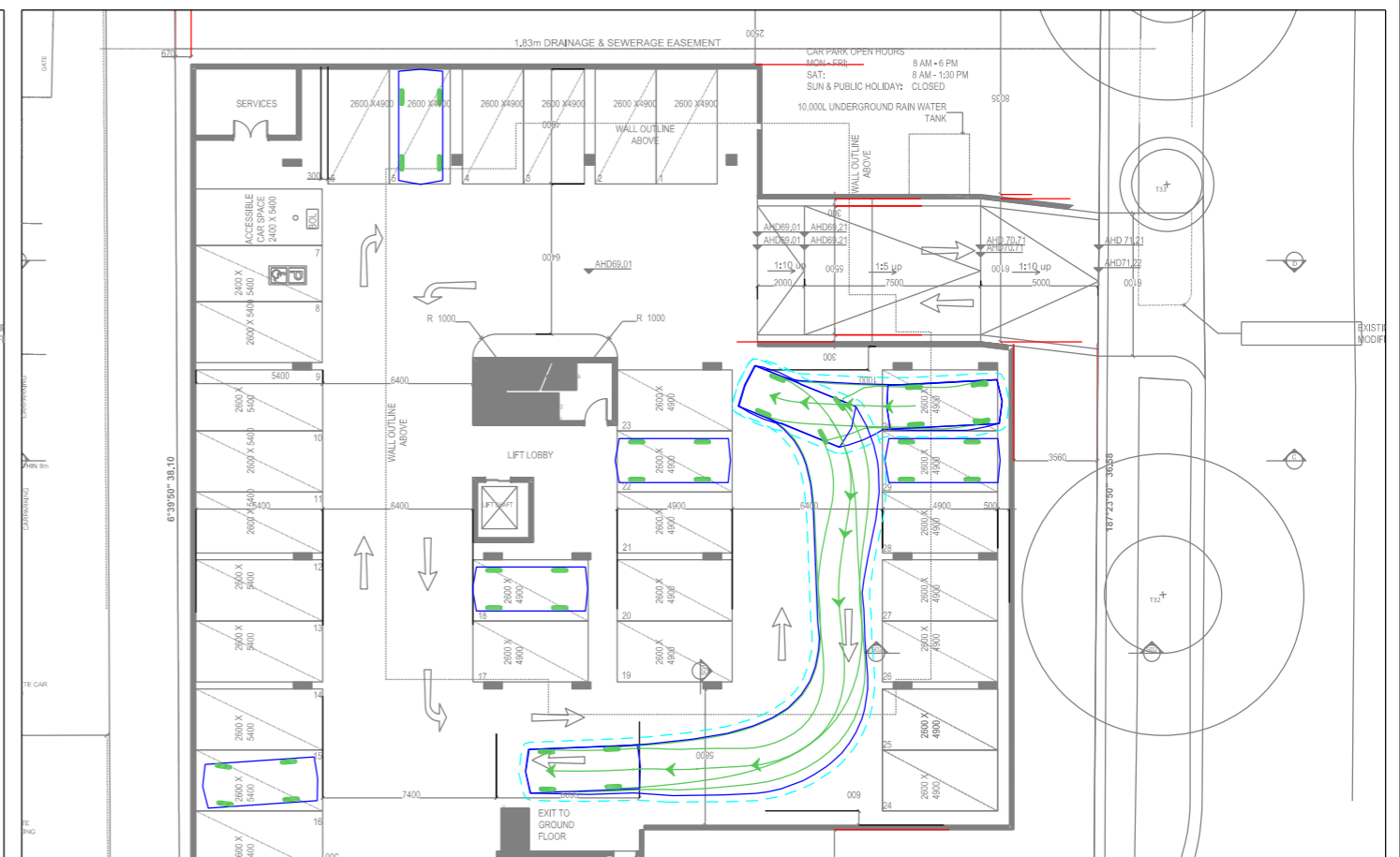
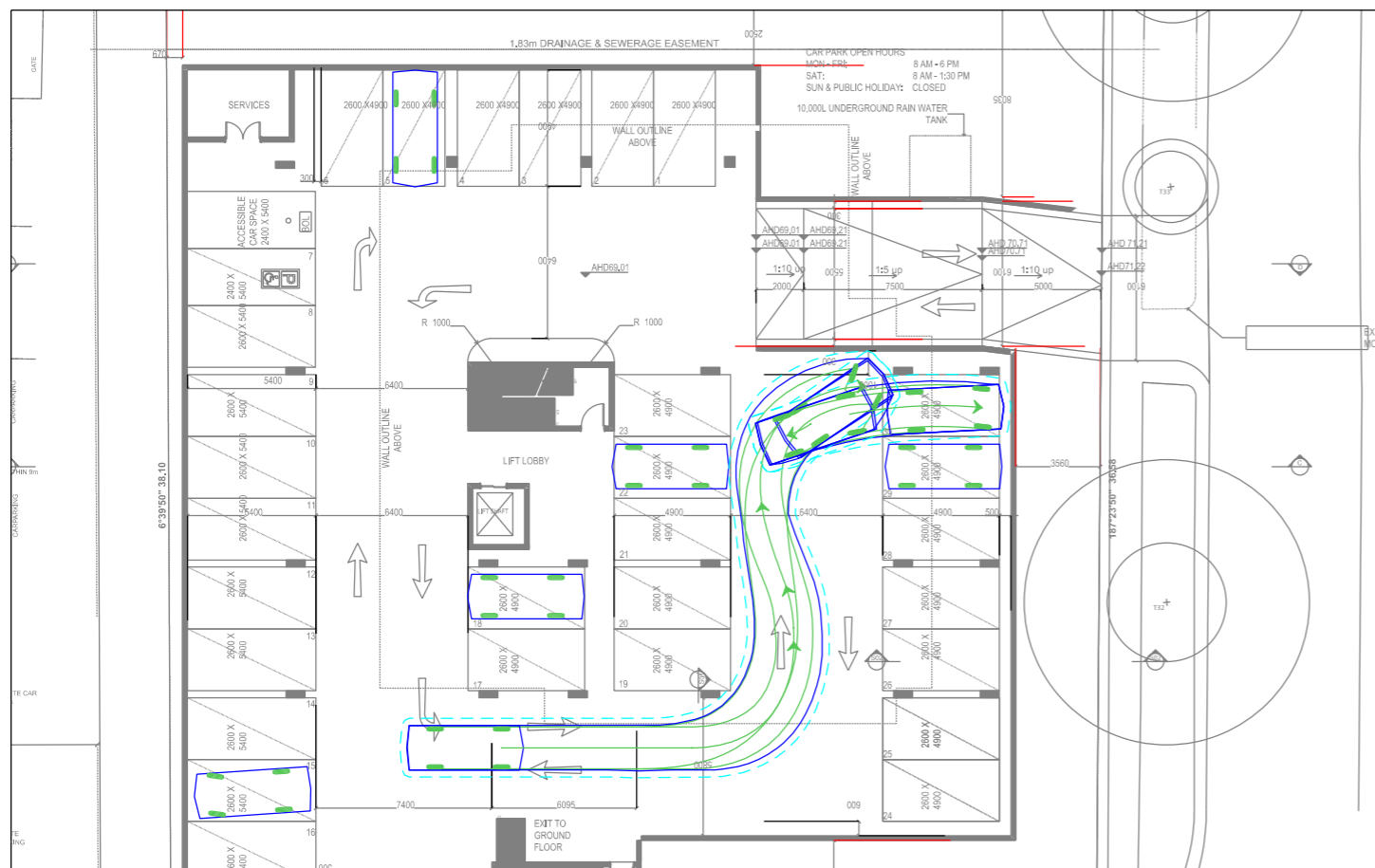
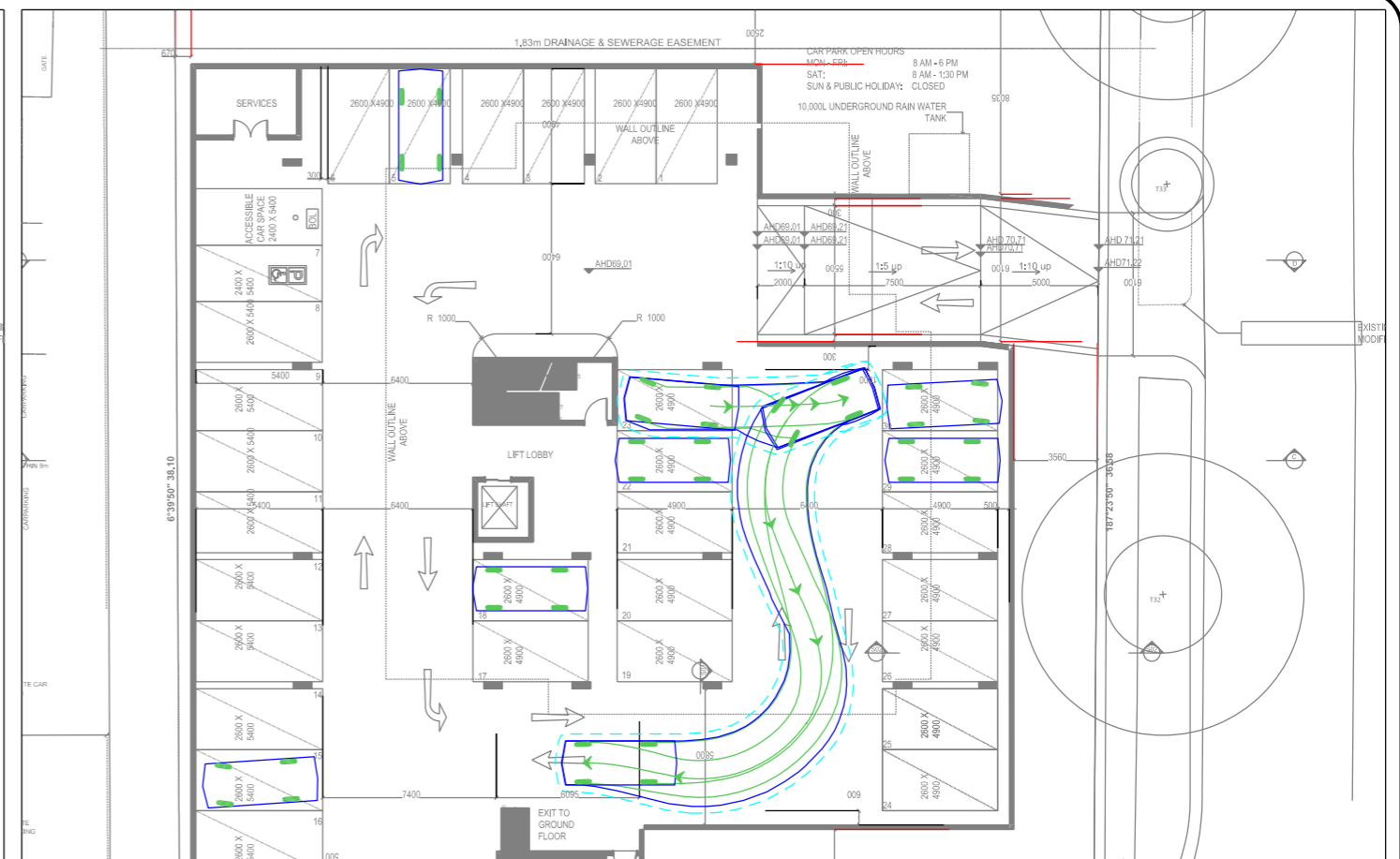
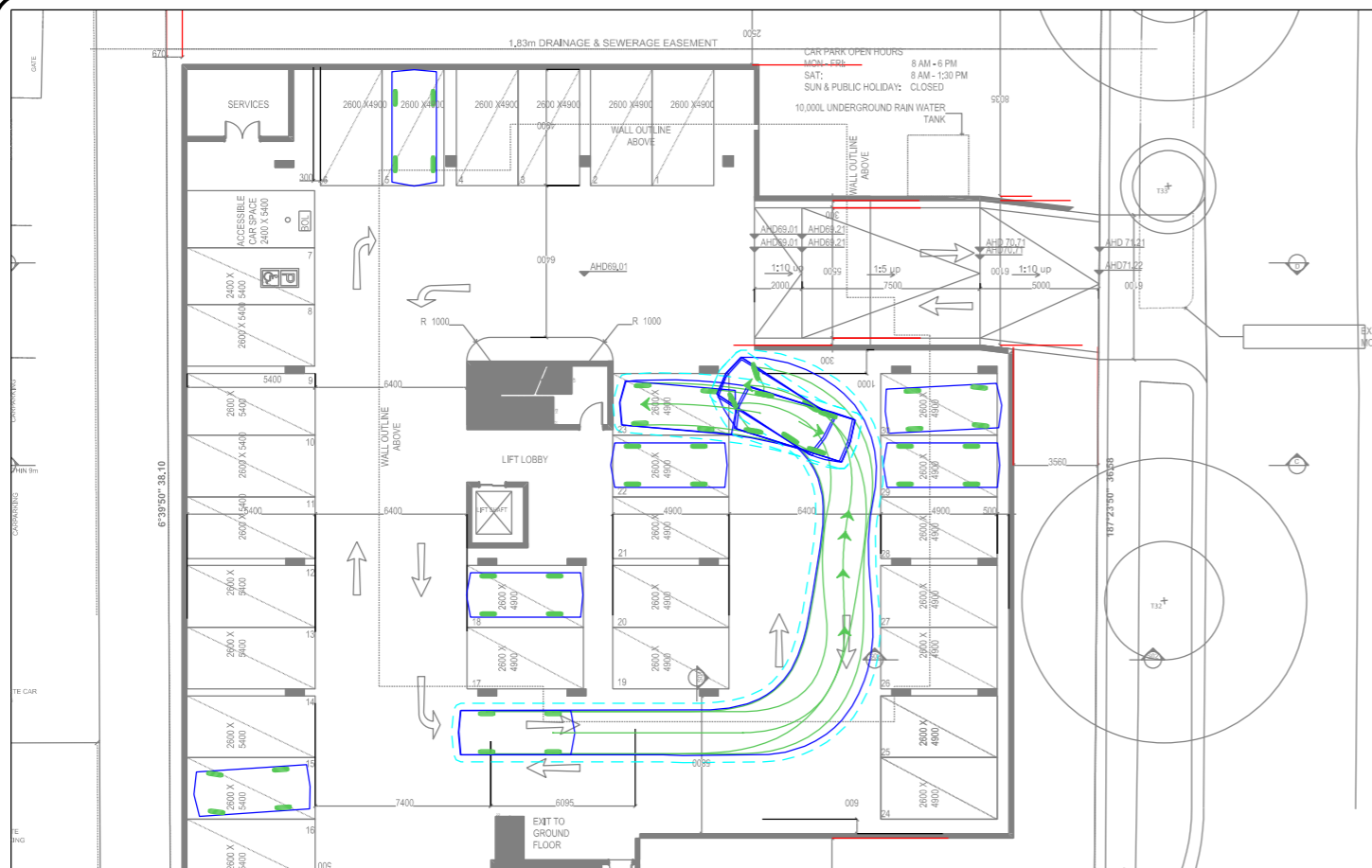
— — — WHEEL PATH

— — — VEHICLE BODY

- - - VEHICLE CLEARANCE LINE (300mm FROM VEHICLE BODY)

• Traffic Planning • Transport Planning  
• Traffic Engineering • Road Safety

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**NOT FOR CONSTRUCTION**

B85

Width : 1.87  
Track : 1.77  
Lock to Lock Time : 6.0  
Steering Angle : 34.1

## B85 ENTRY/EXIT

31-33 High Street Road, Ashwood

1:300 @ A3 02/09/24

DWG NO: 26362001

**KEY**

- CENTRE LINE OF FRONT WHEELS
- WHEEL PATH
- VEHICLE BODY
- VEHICLE CLEARANCE LINE (300mm FROM VEHICLE BODY)

• Traffic Planning • Transport Planning  
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