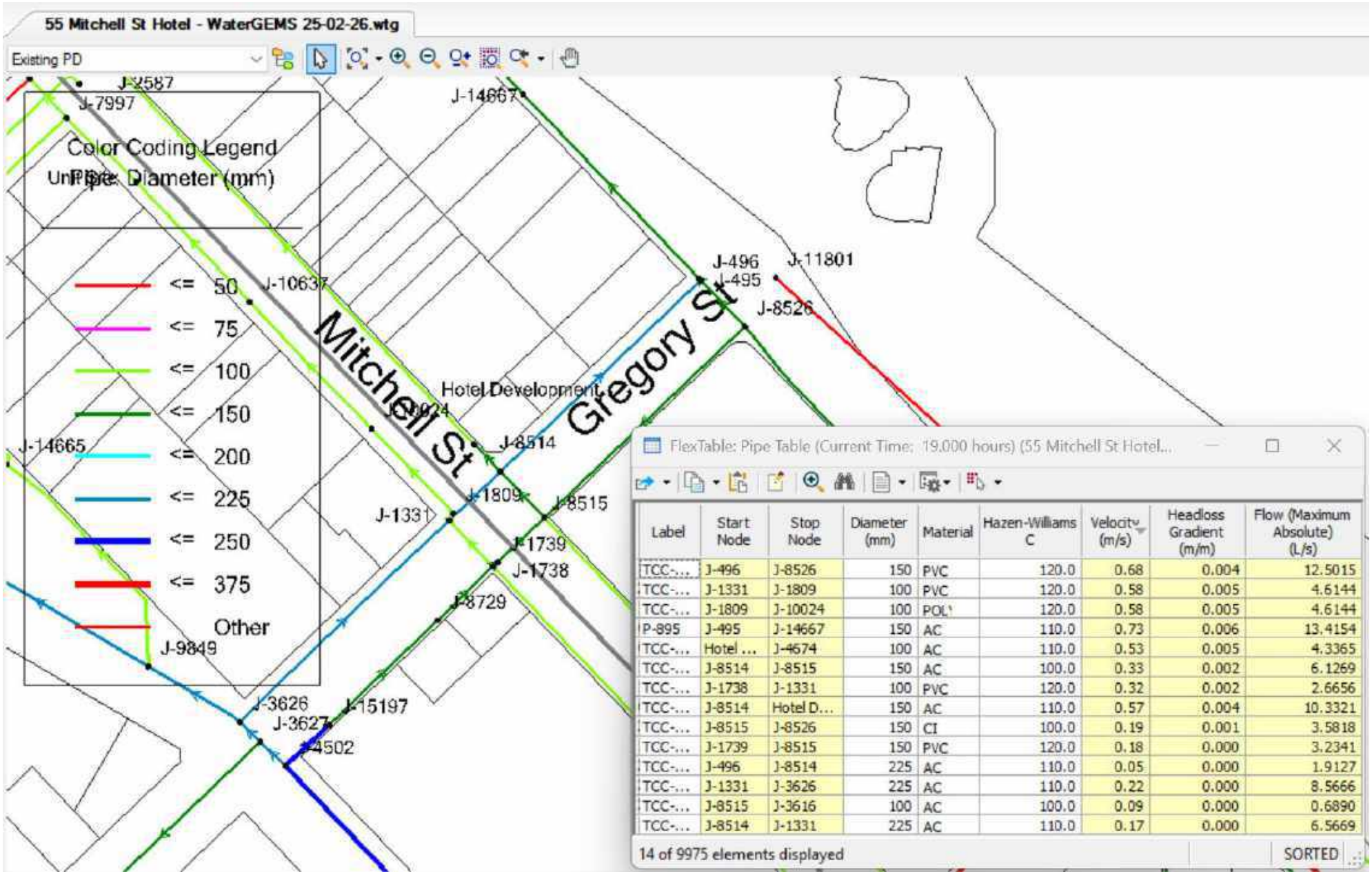

Label	Start Node	Stop Node	Diameter (mm)	Material	Hazen-Williams C	Velocity (m/s)	Headloss Gradient (m/m)	Flow (Maximum Absolute) (L/s)
TCC-...	J-496	J-8526	150	PVC	120.0	0.68	0.004	12.5015
TCC-...	J-1331	J-1809	100	PVC	120.0	0.58	0.005	4.6144
TCC-...	J-1809	J-10024	100	POL'	120.0	0.58	0.005	4.6144
P-895	J-495	J-14667	150	AC	110.0	0.73	0.006	13.4154
TCC-...	Hotel ...	J-4674	100	AC	110.0	0.53	0.005	4.3365
TCC-...	J-8514	J-8515	150	AC	100.0	0.33	0.002	6.1269
TCC-...	J-1738	J-1331	100	PVC	120.0	0.32	0.002	2.6656
TCC-...	J-8514	Hotel D...	150	AC	110.0	0.57	0.004	10.3321
TCC-...	J-8515	J-8526	150	CI	100.0	0.19	0.001	3.5818
TCC-...	J-1739	J-8515	150	PVC	120.0	0.18	0.000	3.2341
TCC-...	J-496	J-8514	225	AC	110.0	0.05	0.000	1.9127
TCC-...	J-1331	J-3626	225	AC	110.0	0.22	0.000	8.5666
TCC-...	J-8515	J-3616	100	AC	100.0	0.09	0.000	0.6890
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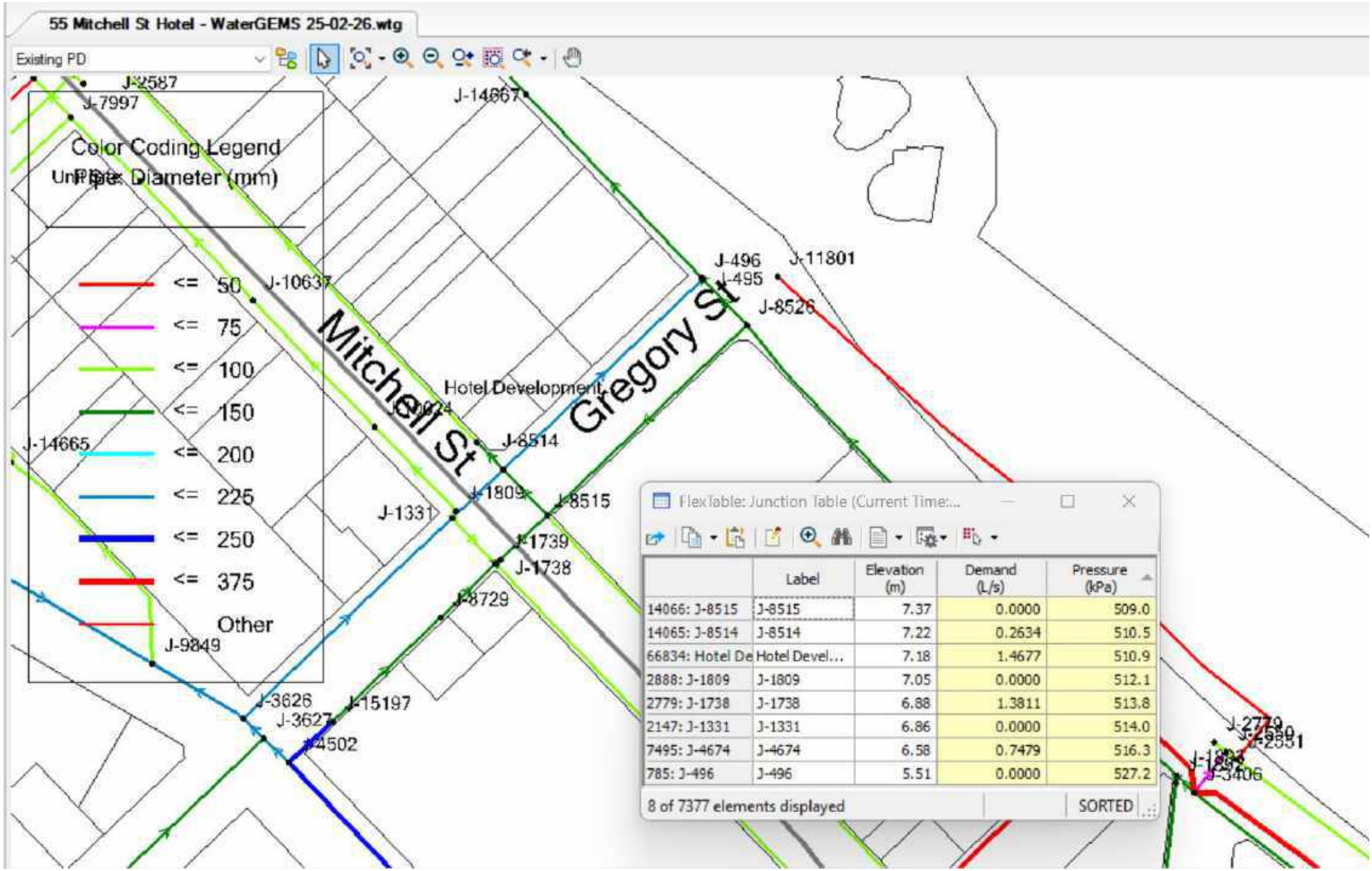
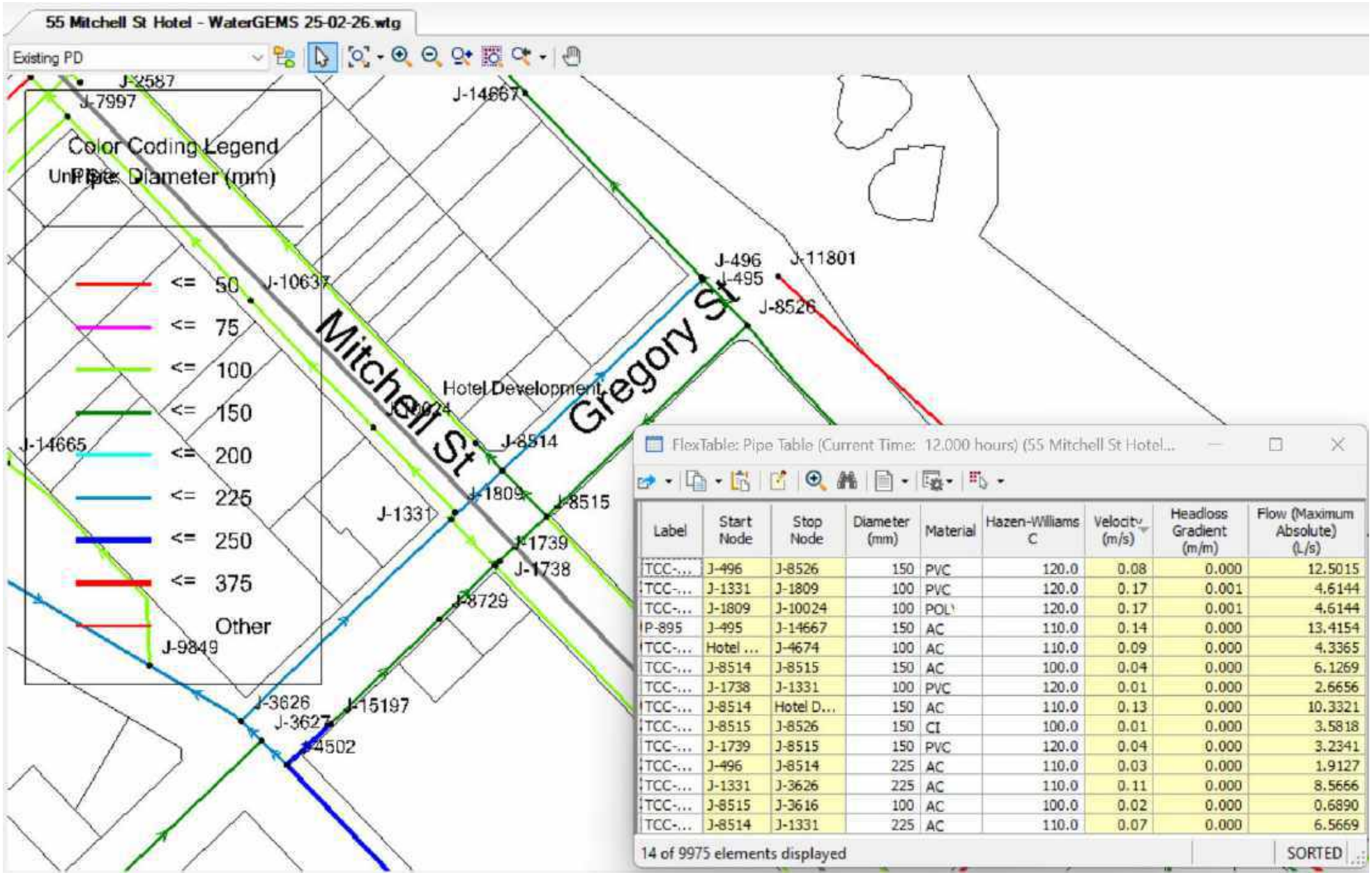
Peak Hour Pipes Modelling Results – 7 pm



Peak Hour Node Modelling Results – 12 noon



Label	Start Node	Stop Node	Diameter (mm)	Material	Hazen-Williams C	Velocity (m/s)	Headloss Gradient (m/m)	Flow (Maximum Absolute) (L/s)
TCC-...	J-496	J-8526	150	PVC	120.0	0.08	0.000	12.5015
TCC-...	J-1331	J-1809	100	PVC	120.0	0.17	0.001	4.6144
TCC-...	J-1809	J-10024	100	POL	120.0	0.17	0.001	4.6144
P-895	J-495	J-14667	150	AC	110.0	0.14	0.000	13.4154
TCC-...	Hotel ...	J-4674	100	AC	110.0	0.09	0.000	4.3365
TCC-...	J-8514	J-8515	150	AC	100.0	0.04	0.000	6.1269
TCC-...	J-1738	J-1331	100	PVC	120.0	0.01	0.000	2.6656
TCC-...	J-8514	Hotel D...	150	AC	110.0	0.13	0.000	10.3321
TCC-...	J-8515	J-8526	150	CI	100.0	0.01	0.000	3.5818
TCC-...	J-1739	J-8515	150	PVC	120.0	0.04	0.000	3.2341
TCC-...	J-496	J-8514	225	AC	110.0	0.03	0.000	1.9127
TCC-...	J-1331	J-3626	225	AC	110.0	0.11	0.000	8.5666
TCC-...	J-8515	J-3616	100	AC	100.0	0.02	0.000	0.6890
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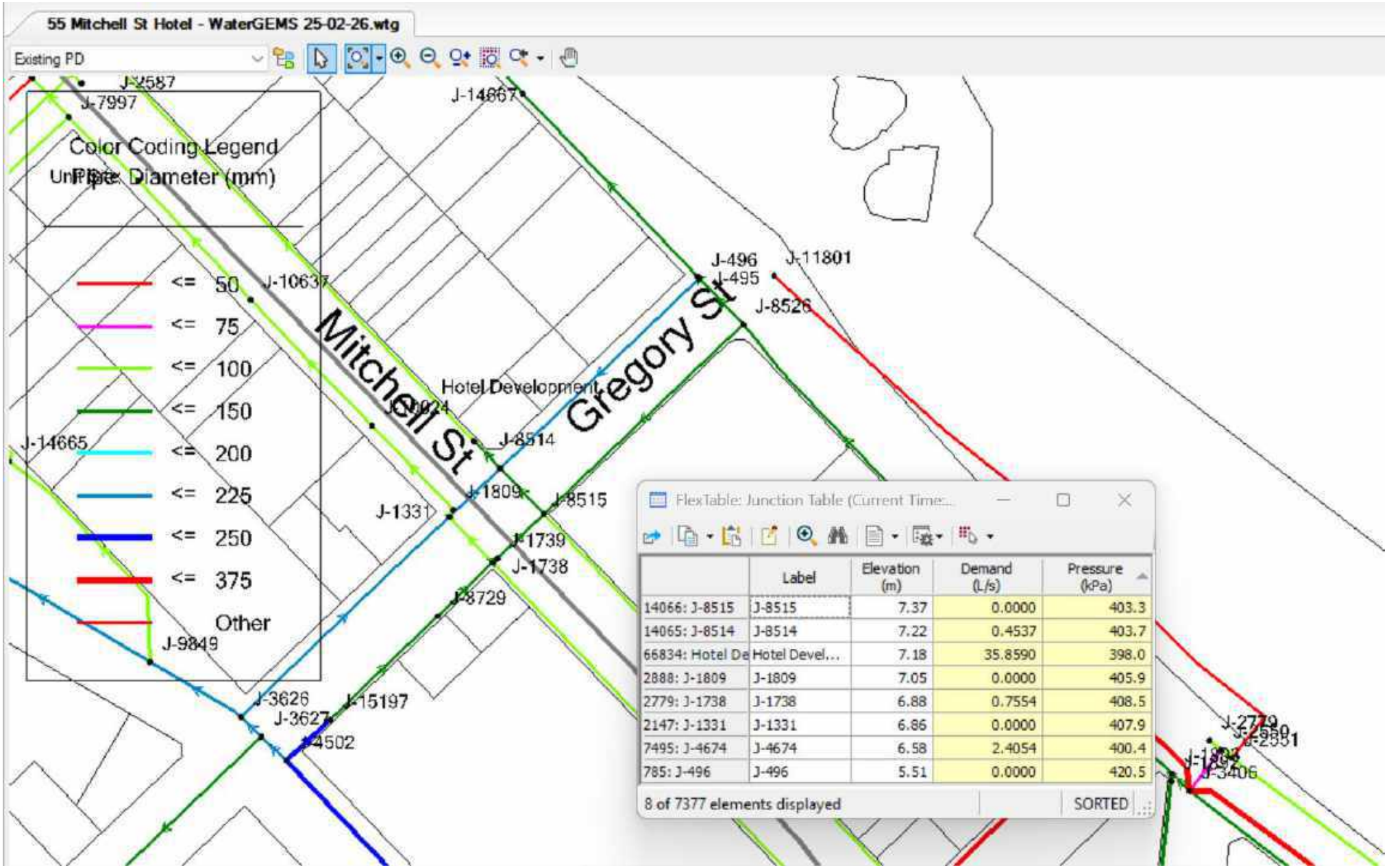
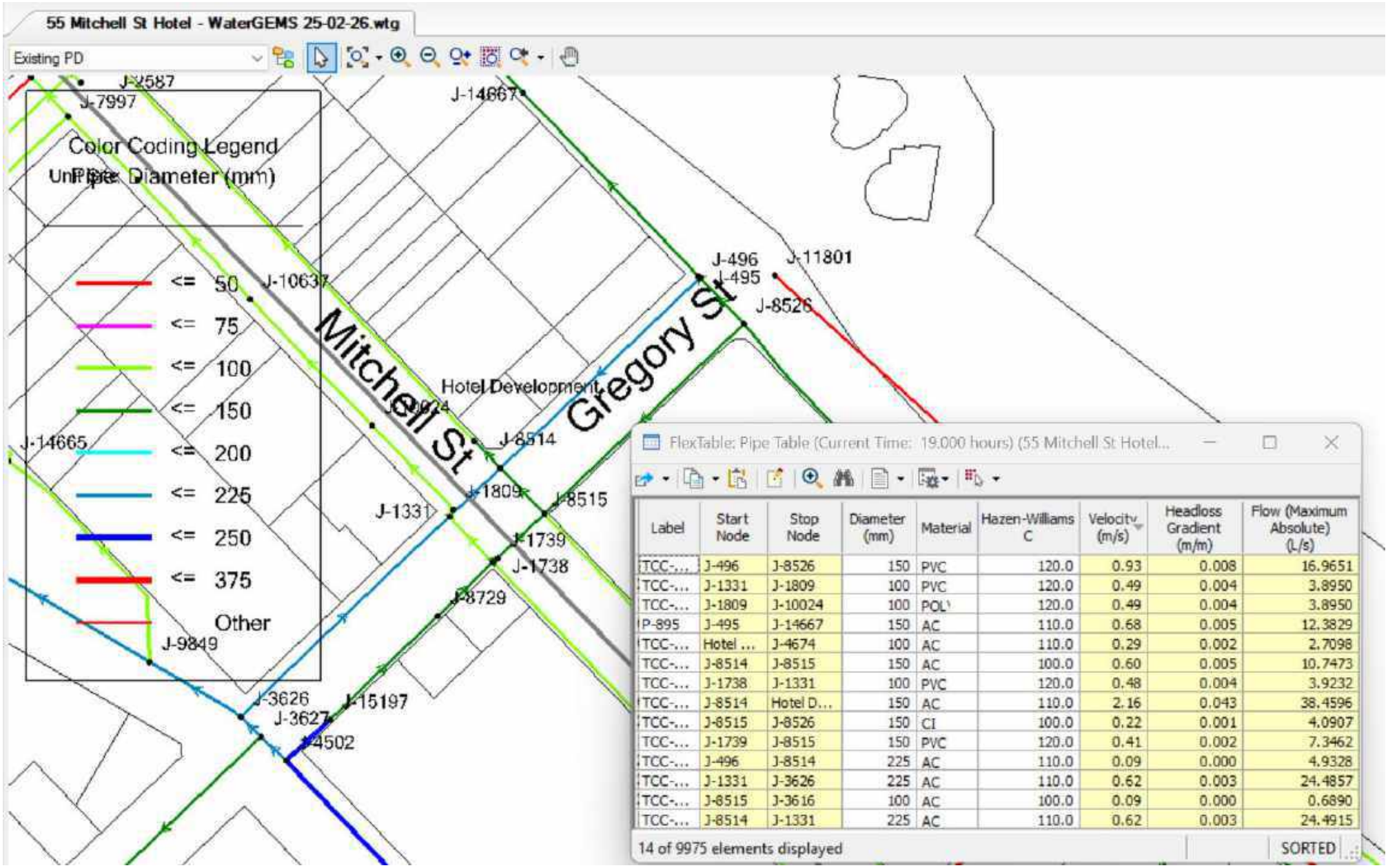
Peak Hour Pipe Modelling Results – 12 noon



	Label	Elevation (m)	Demand (L/s)	Pressure (kPa)
14066: J-8515	J-8515	7.37	0.0000	403.3
14065: J-8514	J-8514	7.22	0.4537	403.7
66834: Hotel De	Hotel Devel...	7.18	35.8590	398.0
2888: J-1809	J-1809	7.05	0.0000	405.9
2779: J-1738	J-1738	6.88	0.7554	408.5
2147: J-1331	J-1331	6.86	0.0000	407.9
7495: J-4674	J-4674	6.58	2.4054	400.4
785: J-496	J-496	5.51	0.0000	420.5

30 l/s Commercial Fire Flow Node Results – 7 pm



Label	Start Node	Stop Node	Diameter (mm)	Material	Hazen-Williams C	Velocity (m/s)	Headloss Gradient (m/m)	Flow (Maximum Absolute) (L/s)
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TCC-...	J-1809	J-10024	100	POL'	120.0	0.49	0.004	3.8950
P-895	J-495	J-14667	150	AC	110.0	0.68	0.005	12.3829
TCC-...	Hotel ...	J-4674	100	AC	110.0	0.29	0.002	2.7098
TCC-...	J-8514	J-8515	150	AC	100.0	0.60	0.005	10.7473
TCC-...	J-1738	J-1331	100	PVC	120.0	0.48	0.004	3.9232
TCC-...	J-8514	Hotel D...	150	AC	110.0	2.16	0.043	38.4596
TCC-...	J-8515	J-8526	150	CI	100.0	0.22	0.001	4.0907
TCC-...	J-1739	J-8515	150	PVC	120.0	0.41	0.002	7.3462
TCC-...	J-496	J-8514	225	AC	110.0	0.09	0.000	4.9328
TCC-...	J-1331	J-3626	225	AC	110.0	0.62	0.003	24.4857
TCC-...	J-8515	J-3616	100	AC	100.0	0.09	0.000	0.6890
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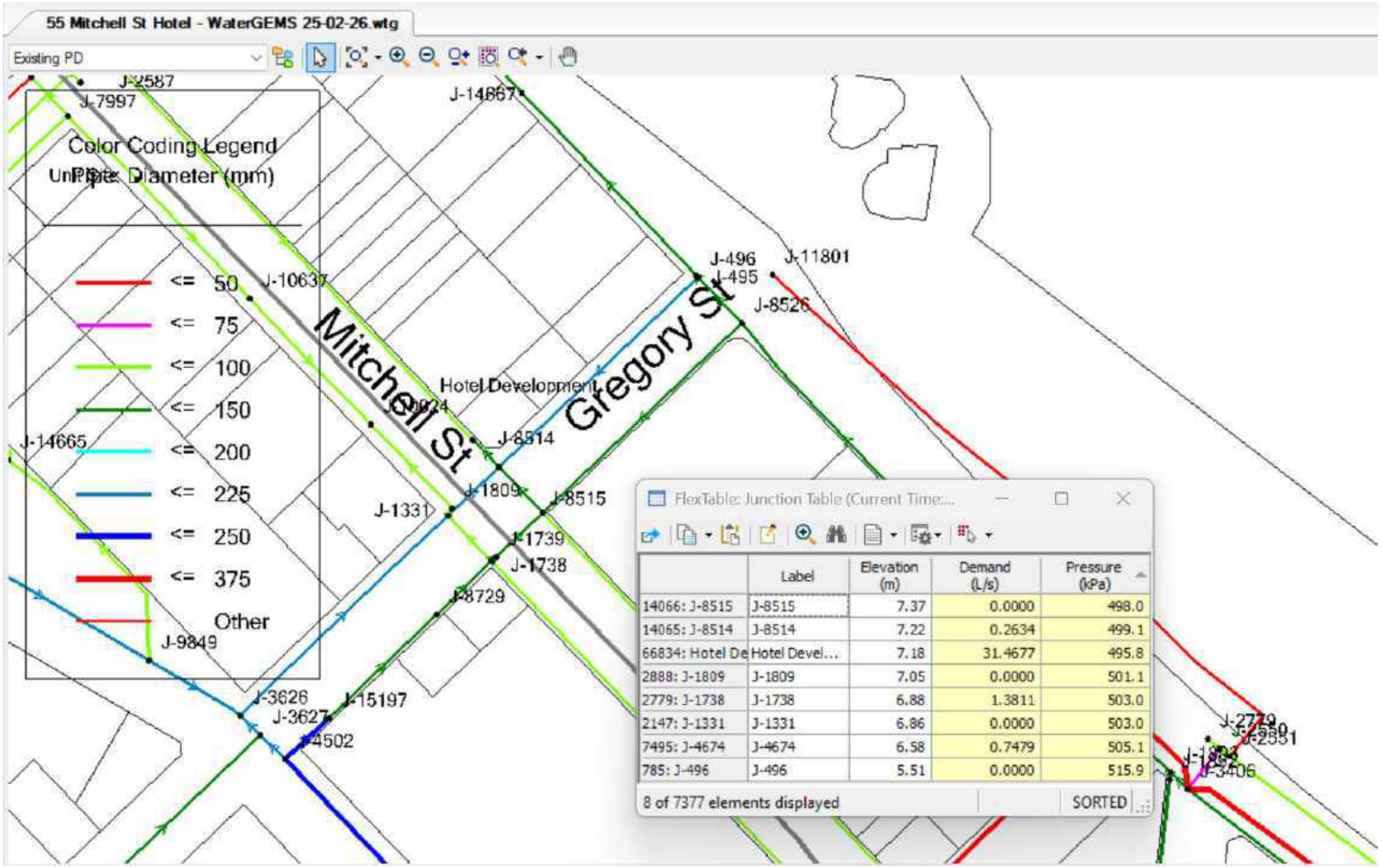
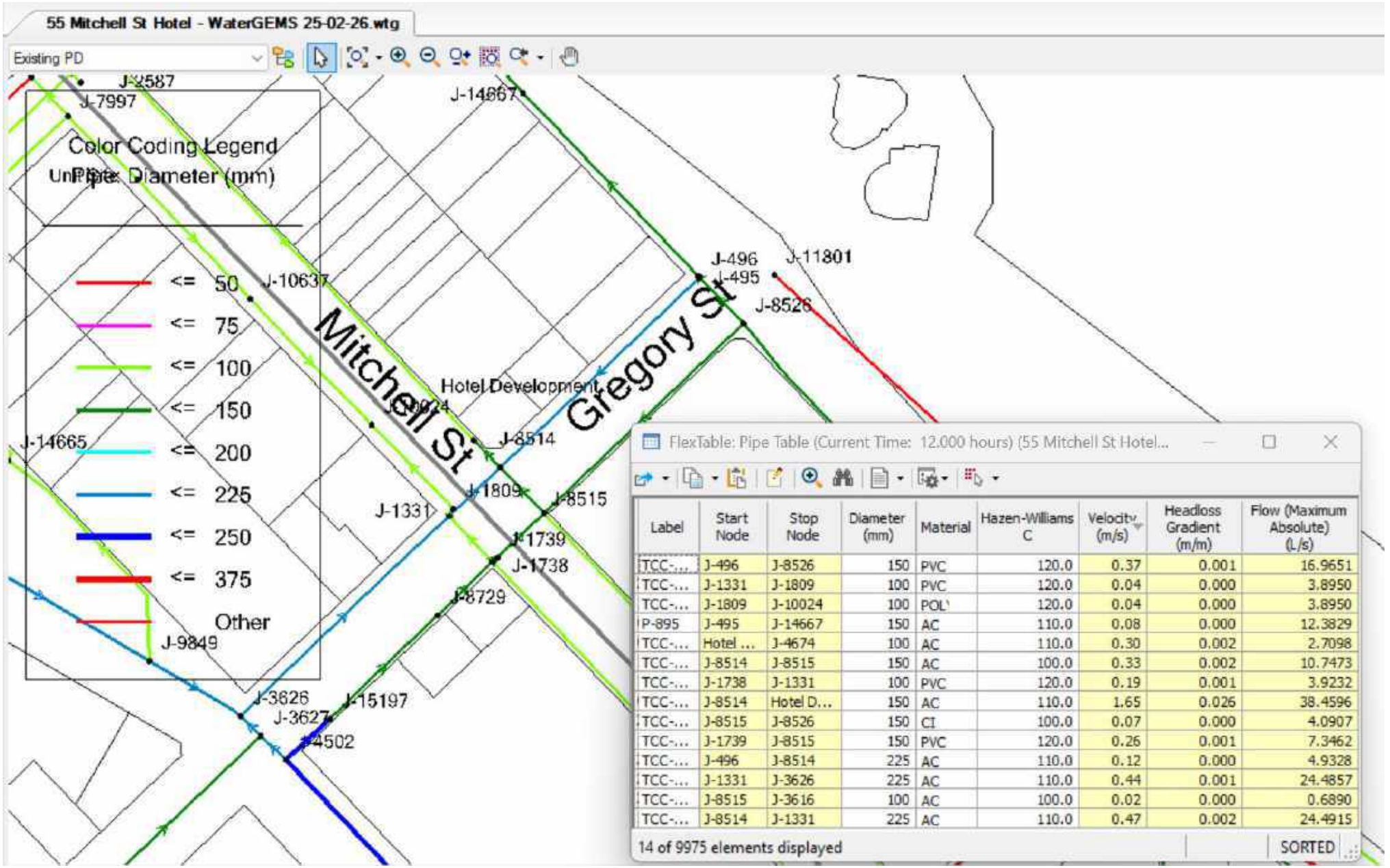
30 l/s Commercial Fire Flow Pipe Results – 7 pm



	Label	Elevation (m)	Demand (L/s)	Pressure (kPa)
14066: J-8515	J-8515	7.37	0.0000	498.0
14065: J-8514	J-8514	7.22	0.2634	499.1
66834: Hotel De	Hotel Devel...	7.18	31.4677	495.8
2888: J-1809	J-1809	7.05	0.0000	501.1
2779: J-1738	J-1738	6.88	1.3811	503.0
2147: J-1331	J-1331	6.86	0.0000	503.0
7495: J-4674	J-4674	6.58	0.7479	505.1
785: J-496	J-496	5.51	0.0000	515.9

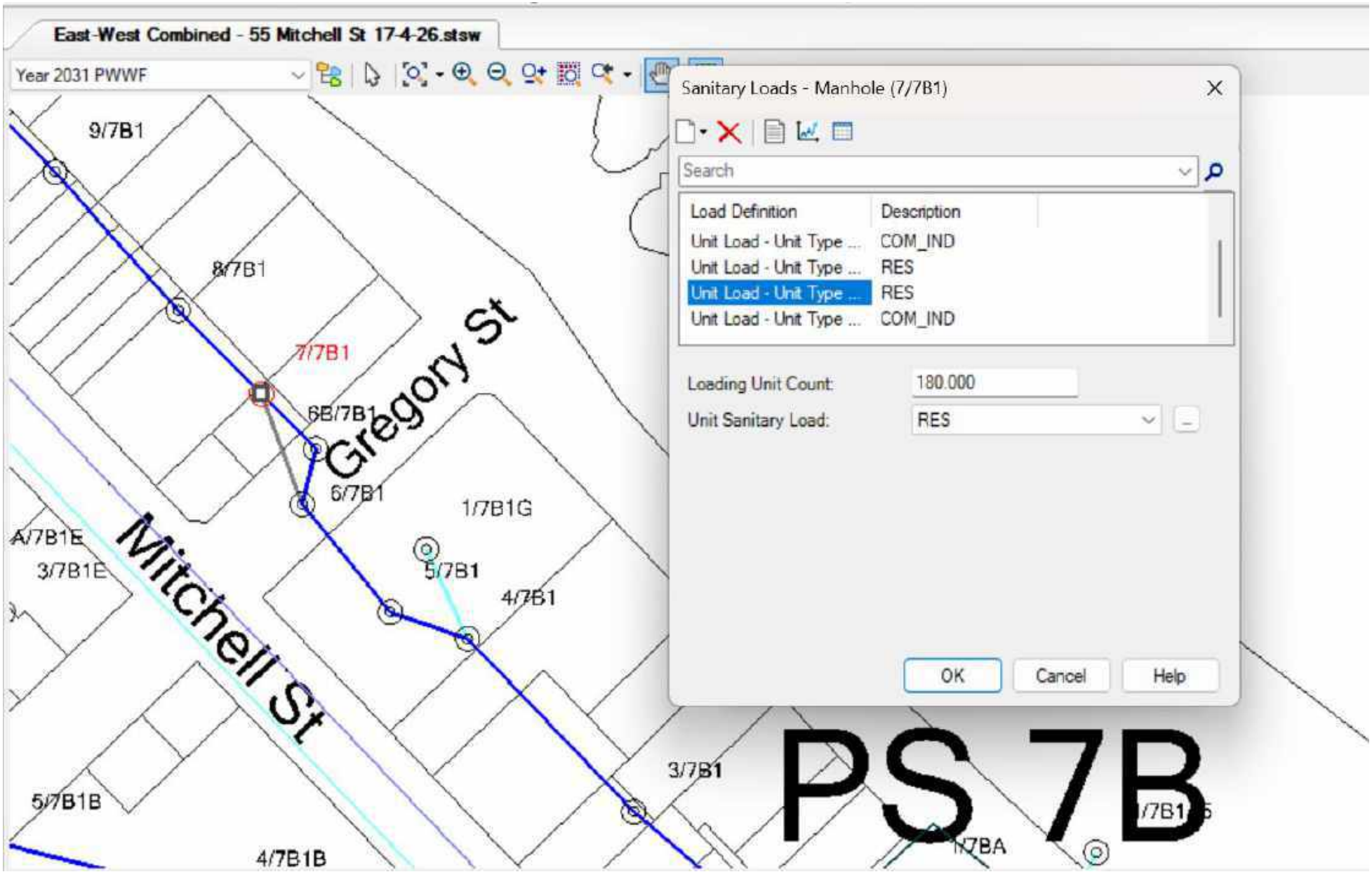
30 l/s Commercial Fire Flow Node Results – 12 noon



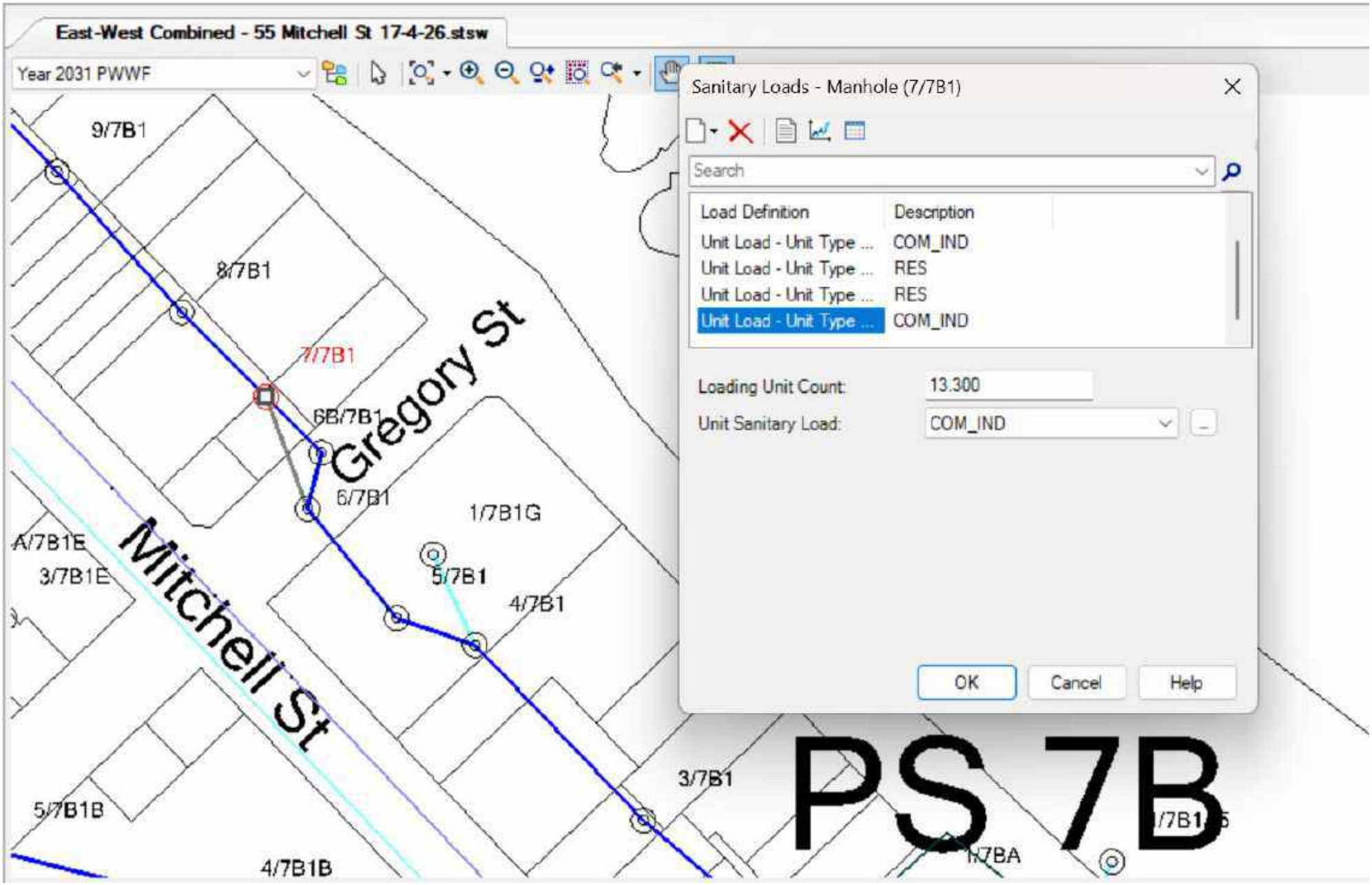
Label	Start Node	Stop Node	Diameter (mm)	Material	Hazen-Williams C	Velocity (m/s)	Headloss Gradient (m/m)	Flow (Maximum Absolute) (L/s)
TCC-...	J-496	J-8526	150	PVC	120.0	0.37	0.001	16.9651
TCC-...	J-1331	J-1809	100	PVC	120.0	0.04	0.000	3.8950
TCC-...	J-1809	J-10024	100	POL'	120.0	0.04	0.000	3.8950
P-895	J-495	J-14667	150	AC	110.0	0.08	0.000	12.3829
TCC-...	Hotel ...	J-4674	100	AC	110.0	0.30	0.002	2.7098
TCC-...	J-8514	J-8515	150	AC	100.0	0.33	0.002	10.7473
TCC-...	J-1738	J-1331	100	PVC	120.0	0.19	0.001	3.9232
TCC-...	J-8514	Hotel D...	150	AC	110.0	1.65	0.026	38.4596
TCC-...	J-8515	J-8526	150	CI	100.0	0.07	0.000	4.0907
TCC-...	J-1739	J-8515	150	PVC	120.0	0.26	0.001	7.3462
TCC-...	J-496	J-8514	225	AC	110.0	0.12	0.000	4.9328
TCC-...	J-1331	J-3626	225	AC	110.0	0.44	0.001	24.4857
TCC-...	J-8515	J-3616	100	AC	100.0	0.02	0.000	0.6890
TCC-...	J-8514	J-1331	225	AC	110.0	0.47	0.002	24.4915

30 l/s Commercial Fire Flow Pipe Results – 12 noon

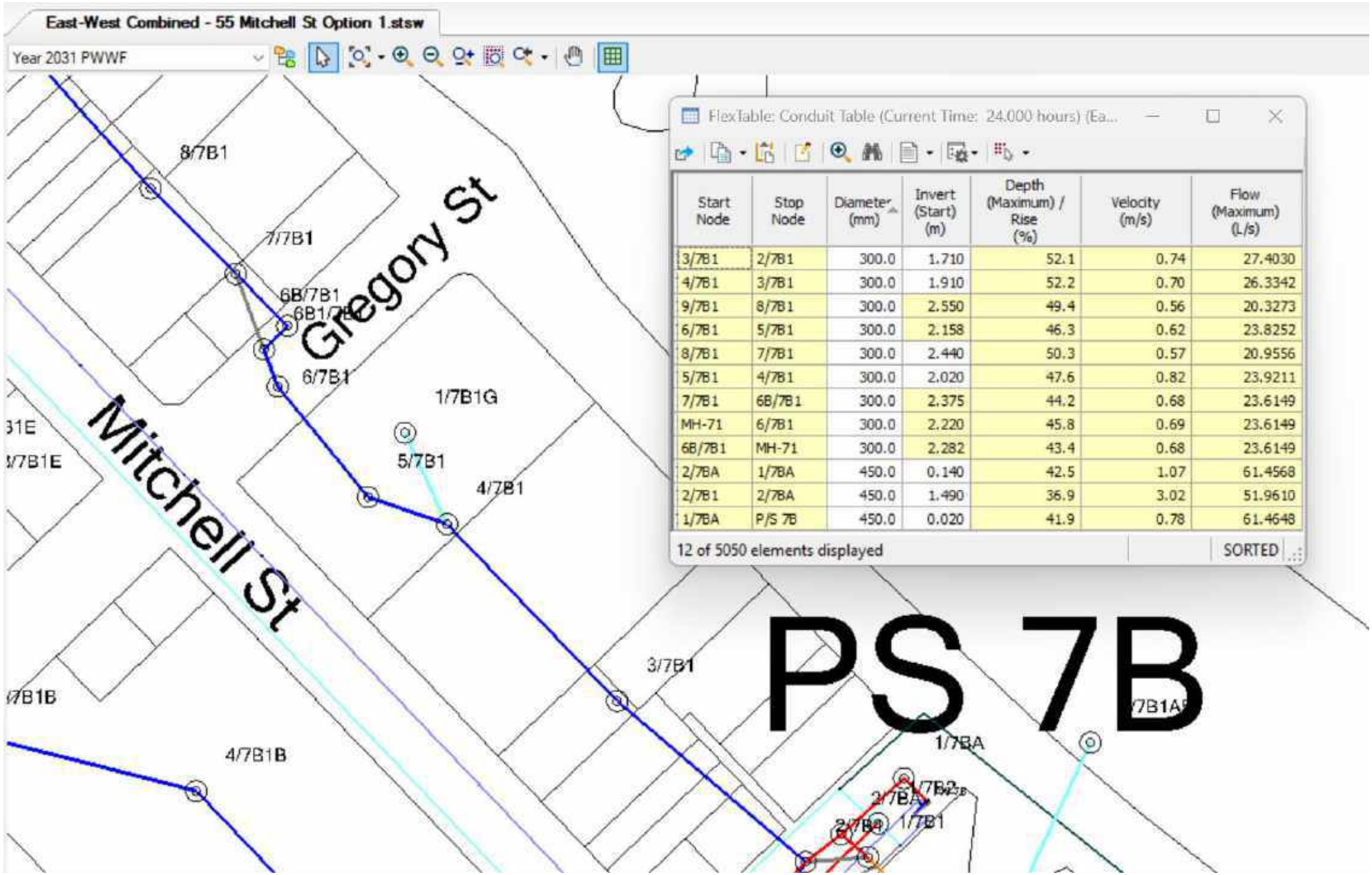
APPENDIX C
SEWERGEMS MODEL FIGURE & RESULTS TABLE



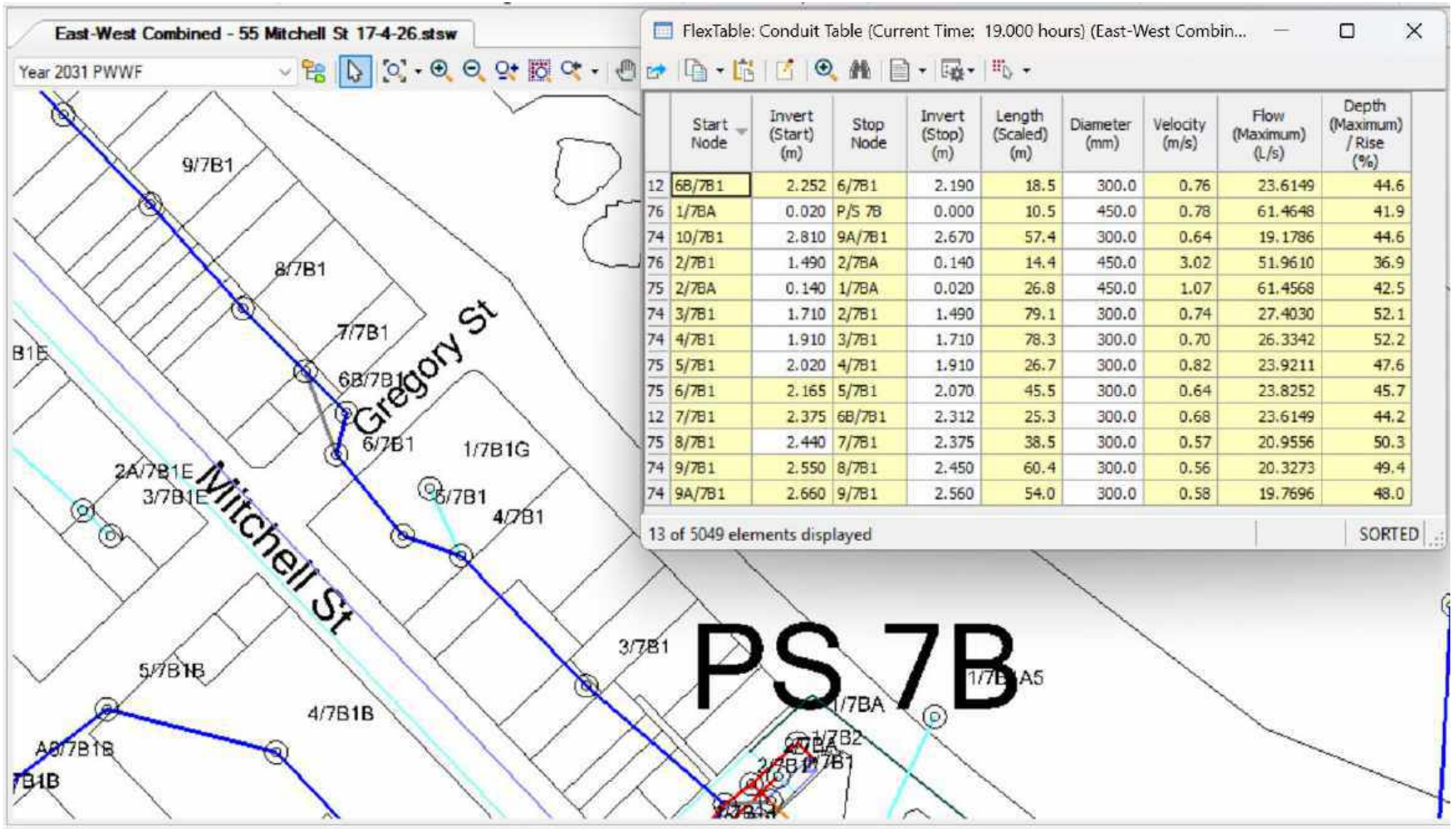
Residential Sewer Loading from 55 Mitchell St Development



Commercial Sewer Loading from 55 Mitchell St Development



Option 1 Diversion - PWWF Sewer Capacity Assessment Results



Option 2 Diversion - PWWF Sewer Capacity Assessment Results

Appendix 9

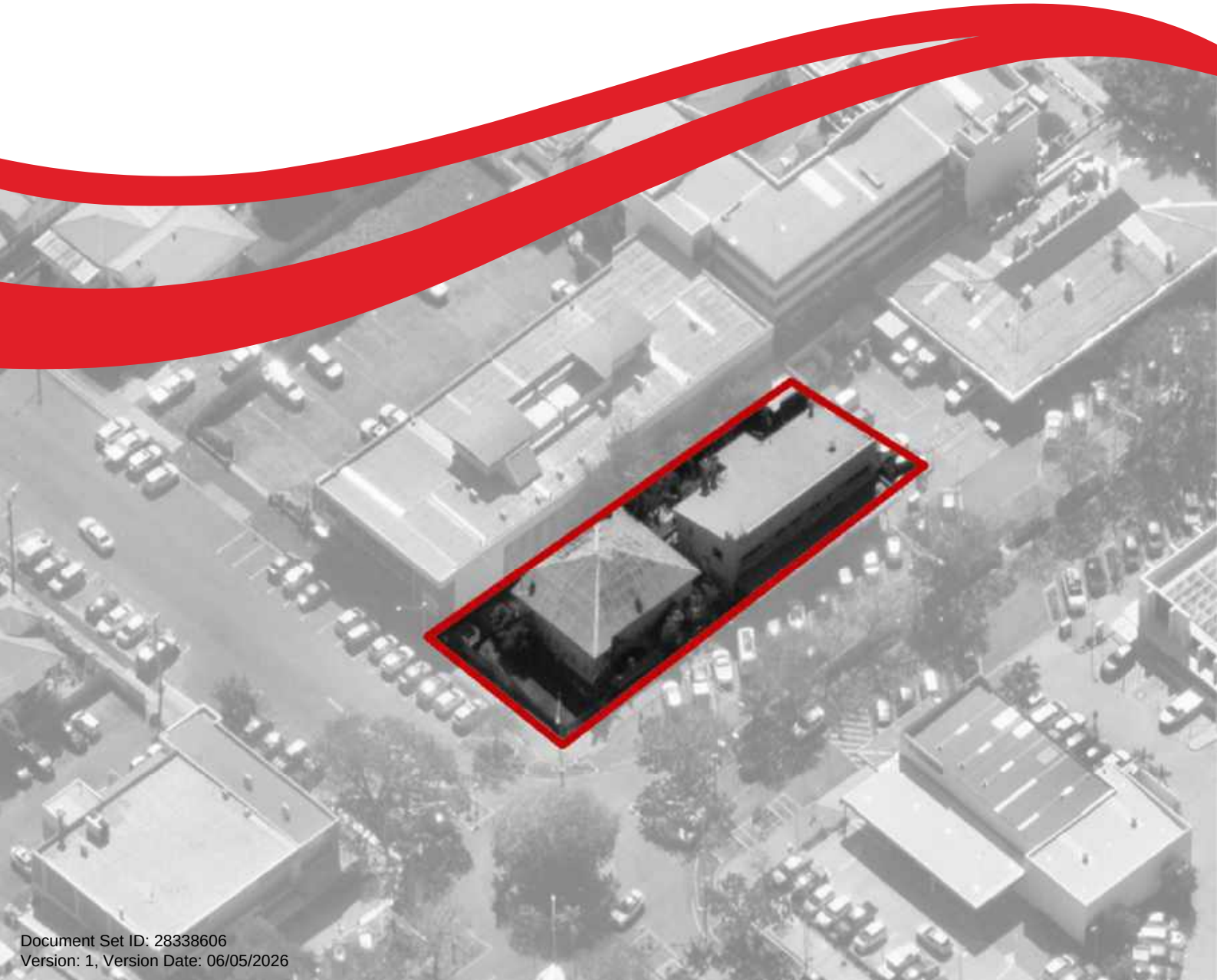
55 Mitchell Street, Townsville

Traffic Impact Assessment

BITZIOS consulting
traffic engineering transport planning

Jankovic Property Group

24 April 2026



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Document Issue History

Report File Name	Version	Document Control		Date	Issued to
P7428.001R 55 Mitchell Street Townsville TIA	001	Prepared: Reviewed: Issued	A. Soltan B. Campbell B. Campbell	23/04/2026	Juergen Weigl *via jweigl@marchespartners.com*
P7428.002R 55 Mitchell Street Townsville TIA	002	Prepared: Reviewed: Issued	A. Soltan B. Campbell B. Campbell	24/04/2026	Juergen Weigl via jweigl@marchespartners.com

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1. INTRODUCTION

1.1 Overview

Bitzios Consulting (Bitzios) has been engaged by Jankovic Property Group (applicant) to prepare a Traffic Impact Assessment (TIA) to assess the relevant traffic and transport implications of a proposed mixed-use development on 55 Mitchell Street and 52 Gregory Street, North Ward (subject site). The subject site is formally described as Lots 1 and 2 on RP718777 and is presented in Figure 1.1.

Aerial imagery adapted from Nearmap.

Figure 1.1: Subject Site Location

Importantly, it is noted that the subject site is within Council's Medium Density Residential zone, and is situated within the North Ward local centre precinct.

1.2 Scope

The scope for this assessment included:

- A review of existing site conditions, including an assessment of public transport, pedestrian and cycle networks and connectivity surrounding the development site
- An estimation of the development's traffic generation and distribution onto the external road network
- An assessment of the development's car and bicycle parking provision against Townsville City Council's (Council's) Transport Impact, Access and Parking (TCIAP) Code.
- An assessment of the development's on-site car parking geometric layout against Council's TCIAP Code and Australian Standard AS2890
- An assessment of the site's access location and form
- A review of the site's servicing and refuse collection requirements.

1.3 Proposed Development

The development application seeks approval for a mixed-use development comprising short-term accommodation and a ground-floor food and drink outlet. Further development details are as follows:

- 100 short-term accommodation units across seven (7) storeys
- 327.9m^2 GFA food and drink outlet on the ground floor
- Two (2) podium car parking levels, providing 34 car parking spaces
- Vehicular access via an all-movements crossover on Mitchell Street
- Pedestrian access via Mitchell Street and Gregory Street
- Provision for an on-street loading zone on Mitchell Street to accommodate a Medium Rigid Vehicle (MRV) and waste vehicles.

Development plans are provided in **Appendix A**.

2. EXISTING CONDITIONS

2.1 Existing Site

The subject site presently contains two (2) lots that operate independently of each other and maintain different uses. 55 Mitchell Street currently comprises one (1) existing detached residential dwelling, while 52 Gregory Street contains an existing mixed-use building consisting of four (4) food and drink outlets.

2.2 Surrounding Road Network

Details of the road network surrounding the subject site are shown in Table 2.1.

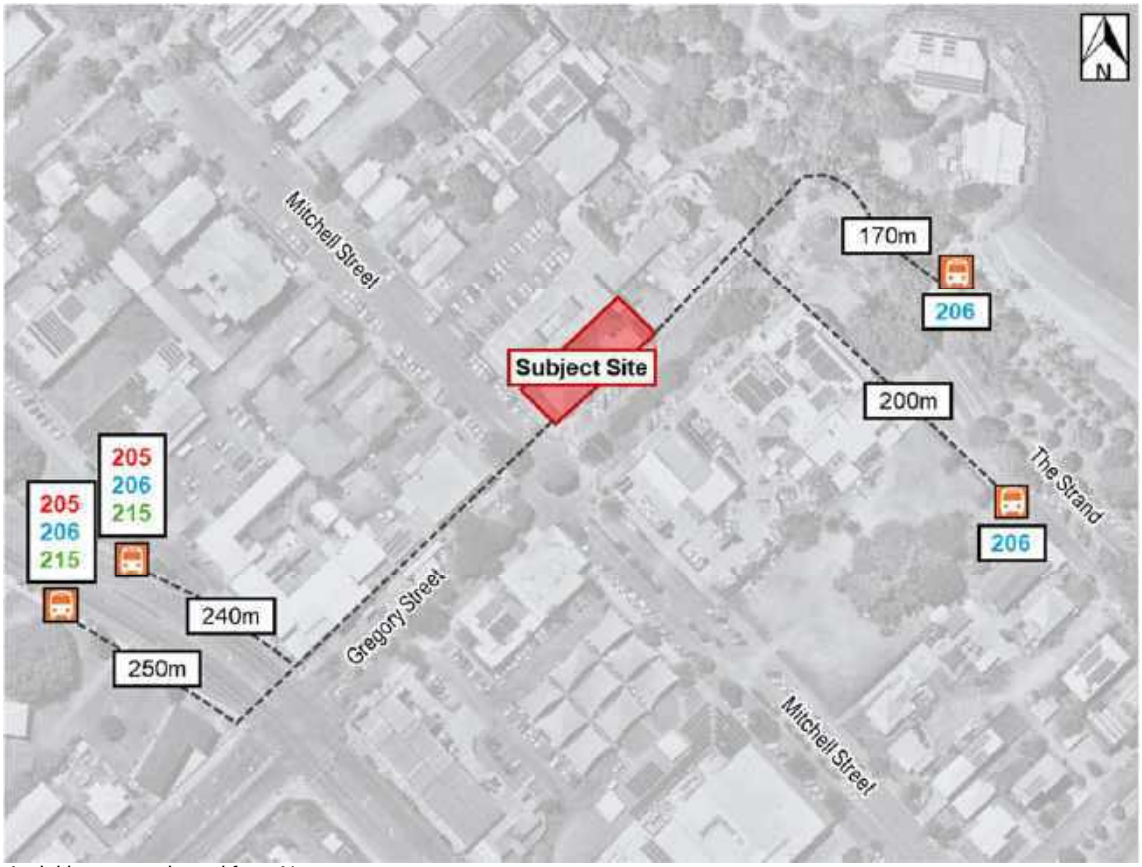
Table 2.1: Surrounding Road Network

Road Name	Jurisdiction	No. of Lanes	Hierarchy	Divided	Posted Speed	Details
Mitchell Street	Council	2	Local access	No	40km/h	Signposted high pedestrian zone
Gregory Street	Council	2	Local access	Yes	40km/h	Signposted high pedestrian zone
Warburton Street	State	4	Distributor	Yes	60km/h	N/A

The subject site fronts Mitchell Street and Gregory Street. It is understood that the surrounding area is undergoing urban renewal and activation, with several medium to high-density developments under construction. It is anticipated that these new developments will act as local trip generators within the vicinity of the subject site.

2.3 Public Transport

Figure 2.1 shows the location of the two local bus stops within proximity to the subject site.



Aerial imagery adapted from Nearmap

Figure 2.1: Bus Stop Locations

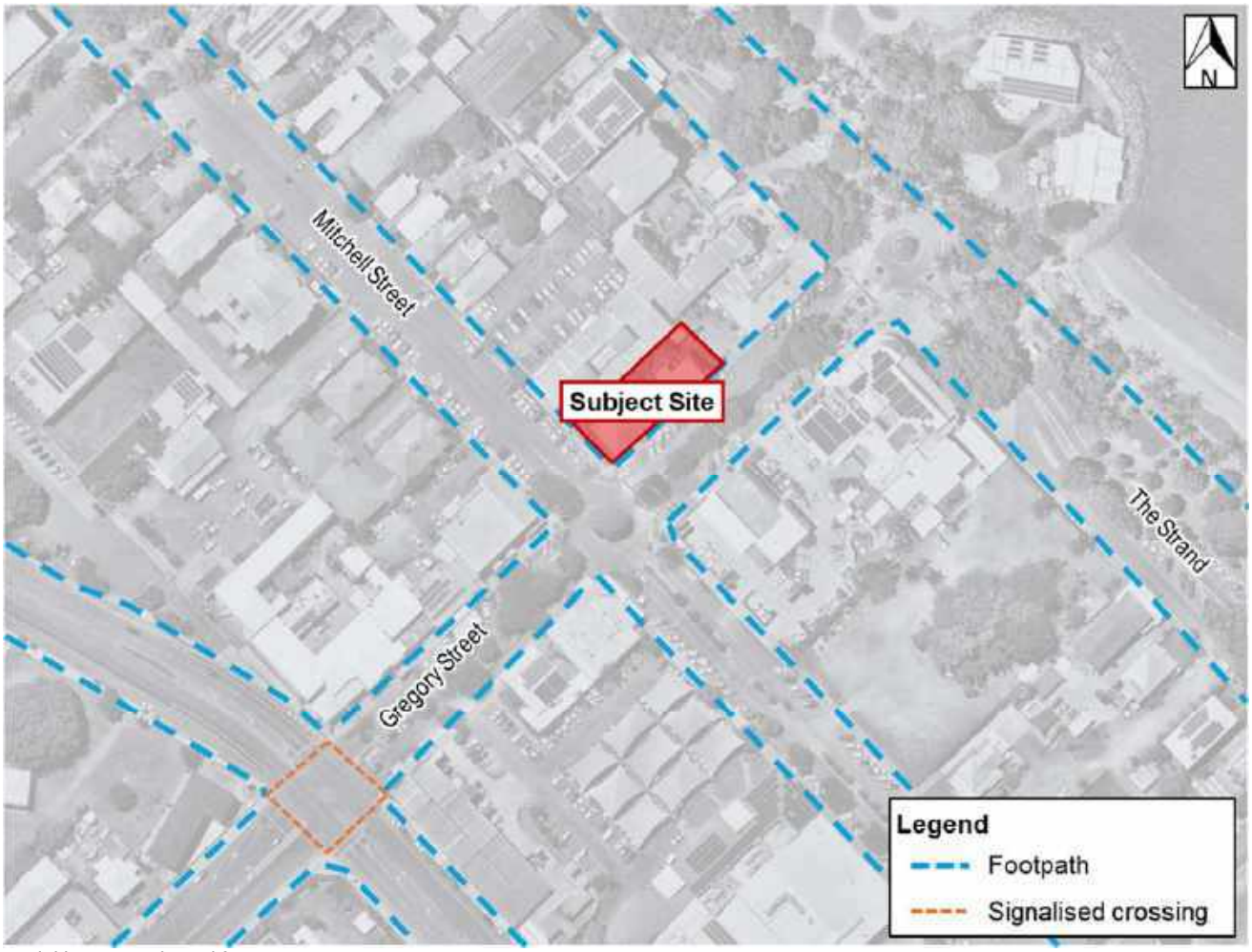
The proposed development has four (4) bus stops within an approximately 3-minute (250m) walking distance. Several bus routes service these stops as detailed in Table 2.2.

Table 2.2: Proximal Bus Routes

Route No.	Description	Frequency	
		AM Peak	PM Peak
205	Townsville City bus hub to Townsville Shopping Centre via Garbutt	Hourly	Hourly
206	Townsville City bus hub to Kirwan	Hourly	Hourly
215	Townsville City bus hub to Townsville Shopping Centre via Garbutt	Hourly	Hourly

2.4 Active Transport

The active transport network in proximity to the subject site is shown in Figure 2.2.



Aerial imagery adapted from Nearmap

Figure 2.2: Active Transport Network

As shown in Figure 2.2, the subject site benefits from an existing comprehensive active transport network.

3. TRAFFIC ASSESSMENT

3.1 Development Traffic

The RMS Guide to Traffic Generating Developments (2002) was used to source the trip generation rate for the existing and proposed developments. The trip rates for *Dwelling House* and *Restaurant* were adopted for the existing development and *Motel* and *Restaurant* were adopted for the proposed development.

Table 3.1 summarises the trip generation rates and net increase of the proposed development.

Table 3.1: Trip Generation

Land Use	Quantity	Traffic Generation Rates		Trips (v/h)	
		AM	PM	AM	PM
Existing Development					
Detached Dwelling	1 unit	0.85 trips / dwelling		1	1
Food and Drink	503m^2	5 trips / 100m^2 GFA		26	26
			Total	**27**	**27**
Proposed Development					
Short-term Accommodation	100 units	0.4 trips / unit		40	40
Food and Drink	328m^2	5 trips / 100m^2 GFA		17	17
			Total	**57**	**57**
			Net Difference	**(+) 30**	**(+) 30**

The proposed development is expected to generate a net increase of 30 trips during either the AM and PM peak periods. This quantity of traffic is considered low and consistent with the nature and capacity of the surrounding road network and is not expected to result in any operational impacts.

Moreover, it is noted that the proposed development is situated near high-quality active and public transportation provisions. Considering the proposed development's intended use of predominantly short-term accommodation, it is unlikely to generate a quantum of trips that may limit the operation and safety of the surrounding road network.

4. PARKING ASSESSMENT

4.1 Car Parking

The car parking requirements for the proposed development assessed against Council's TCIAP Code. The relevant car parking rates and requirements are outlined in Table 4.1.

Table 4.1: Car Parking Requirement and Provision

Land Use	Quantity	Parking Rate	Parking Required	Parking Provided
Short-term Accommodation	100 units, 297m^2 GFA available to the public; 75m^2 of GFA kitchen and preparation area	1 space for each guest suite + 1 space for a restaurant manager or caretaker + 1 space for each 10m^2 of GFA available to the public + 1 space per 50 m^2 of GFA kitchen and preparation areas.	132 spaces	34 spaces
Food and Drink	328m^2	No car parking required.	0	
		Total Parking	**132 spaces**	**34 spaces**

The proposed car parking provision results in a shortfall against Council's TCIAP Code. However, the Council's car parking rates are considered onerous for the proposed development based on the following:

- The availability of a comprehensive network of pedestrian footpaths, providing ample access to surrounding public transport facilities, ride share and e-scooter providers and the ferry terminal.
- The site's target market will generally not require access to private vehicles.
- Council's long-standing position that non-residential developments proximal to The Strand are not required to provide off-street parking, as doing so will limit the activation of developments' ground floor components, limiting the locale's amenity.
- Council's strategic intent envisions The Strand incorporating tourist accommodation with activated ground floor interfaces.
- Council's City Plan only provides reduced car parking rates for development's located in the CBD, which is considered unreasonable for tourist accommodation developments along The Strand, noting that the locale is more accessible and connected than the CBD.
- Subsequent provision of off-street car parking that complies with AO17 of Council's TCIAP Code results in a development of the Application's nature to be unfeasible, resulting in Council's strategic vision not being realised.
- The site's proximal area is well serviced by several formalised on-street car parking facilities.

The above is consistent with recent nearby development approvals for similar developments. Particularly, a development was recently approved at 68 & 69 The Strand for an 80-room hotel, with a food and drink tenancy of 490m^2 GFA, and a function facility 631m^2 GFA (Council ref: MCU22/0046). The development plans approved with The Strand development show a parking provision of 34 spaces, resulting in a shortfall of 143 spaces against Council's TCIAP Code.

The Traffic and Transport Assessment prepared by Geleon for The Strand development determined a parking demand rate of **1 space per 4 units** using parking demand data collected from an existing short-term accommodation use similar in operation and considering alternative transport accessibility. Given the shared similarity to the proposed development, this rate has been adopted to determine the anticipated parking demand.

Table 4.2 details the anticipated parking demand for the proposed development.

Table 4.2: Car Parking Demand and Provision

Land Use	Quantity	Assumed Parking Rate	Parking Required	Parking Provided
Short-term Accommodation	100 units	1 space per 4 units	25 spaces	34 spaces
Food and Drink	328m^2	No car parking required.	0	
		Total Parking	**25 spaces**	**34 spaces**

Considering the above, the proposed development provides sufficient parking to meet the demand of the development in accordance with PO17 of Council's TCIAP Code.

4.2 Bicycle Parking

No bicycle parking rates are specified throughout Council's City Plan. As such, no bicycle parking is required to be provided to achieve compliance with PO3 and PO15 of Council's TCIAP Code.

4.3 Parking Layout

The parking geometry was assessed against Australian Standards AS2890.1 and Council's TCIAP Code. The parking geometric assessment is shown in Table 4.3.

Table 4.3: Parking Geometric Layout Assessment

Design Element	AS2890.1 / TCIAP Code Requirement	Provided	Compliant
Car Parking Bay (User Class 2)	2.5m x 5.4m (min.)	2.6m x 5.4m	Yes
Car Parking Bays (Parallel; 3.6m Aisle)	2.1m x 6.2m (min.)	2.1m x 6.5m	Yes
Car Parking Bays (Tandem)	2.4m x 10.4m (min.)	2.4m x 10.4m (min.)	Yes
Car Parking Bays (Small Car)	2.3m x 5.0m (min.)	2.4m x 5.0m	Yes
Parking Aisle Width	5.8m (+0.3m for single sided aisle)	6.0m (min)	Yes
Circulation Aisle Width (Two-way)	5.5m + 0.3m where bounded by vertical obstructions	6.0m (min.)	Yes
Circulation Aisle Width (One-way)	3.0m + 0.3m where bounded by vertical obstructions	3.8m (min.)	Yes
Grades (car parking modules)	Max. 1:16 perpendicular to direction bay	Grades not annotated	**Shall Comply**
Height clearance	2.2m	2.3m (min.)	Yes

As demonstrated, the on-site parking geometric layout generally complies with the relevant requirements of Australian Standards AS2890 and Council's TCIAP Code.

4.3.1 Single-Lane Signalised Ramp System

The development proposes a one-way signalised ramp system from ground floor to the podium levels. Hold points and signals are provided on both ground floor and podium levels favouring ingress movements. The hold line locations have been provided at a location to allow for two-way passing.

Typical operations of the signalised ramp system are recommended as follows:

- The ground floor signal will always default to “green” to provide priority for entering vehicles and to avoid unnecessary stopping on entry
- When an exiting vehicle approaches the hold-line on Podium Level 1, a “red” signal will be given to entering vehicles from ground floor. Allowing for an exiting vehicle to safely traverse the one-way ramp and pass the waiting vehicle at the ground floor hold line
- Once the exiting vehicle has cleared the ramp to ground floor, a ‘red’ signal will be given at the Podium Level 1 hold line and the default ‘green’ will be given back to the ground floor hold line.

The details of the signalised ramp system will be provided at the time of installation (by a nominated provider). To ensure the system does not impact external traffic, it is recommended that the system is reviewed by an RPEQ-certified engineer.

Swept path diagrams provided in **Appendix B** demonstrate the function of the ramps system with respect to hold line locations and manoeuvrability.

4.3.2 Queueing Assessment

A queueing assessment was undertaken in accordance with AS2890.1 and Austroads Guides. AS2890.1 requires sufficient on-site queuing to ensure vehicles do not extend beyond the property boundary and can accommodate for the 98th percentile vehicle queues. On-site queue storage was determined by applying queuing theory from the Austroads *Guide to Traffic Management: Part 2 – Traffic Theory* (2008). This is based on the mean arrival and departure rates during peak traffic periods.

The following parameters were adopted for the queuing analysis:

- PM peak hour ingress trips: 29vph (total number of ingress trips during the PM peak hour)
- Servicing time: 16.6s (Servicing time has been based on the time taken for a vehicle to egress the site from the Podium Level 1 hold line at a vehicle speed of 2.78m/s, using a length of 35m)

The results of the queueing assessment are provided in Table 4.4.

Table 4.4: Queueing Assessment

Queue Length		Probability	
Vehicles	**Meters**	**Exactly ‘x’ Vehicles**	**Less or Equal to ‘x’ Vehicles**
0	0	86.6%	86.6%
1	6	11.6%	98.2%
2	12	1.5%	99.8%

As shown in Table 4.4, the 98th percentile queue length is one (1) vehicle (i.e. 6m). The proposed development plans provided at **Appendix A** shows 6m of queueing space from the ground floor hold line to the property boundary which is sufficient space to cater for one (1) vehicle to store. Therefore, no queuing impacts to the road frontage are expected to occur.

5. SITE ACCESS ASSESSMENT

5.1 Access Location and Form

Details of the proposed access are summarised in Table 5.1.

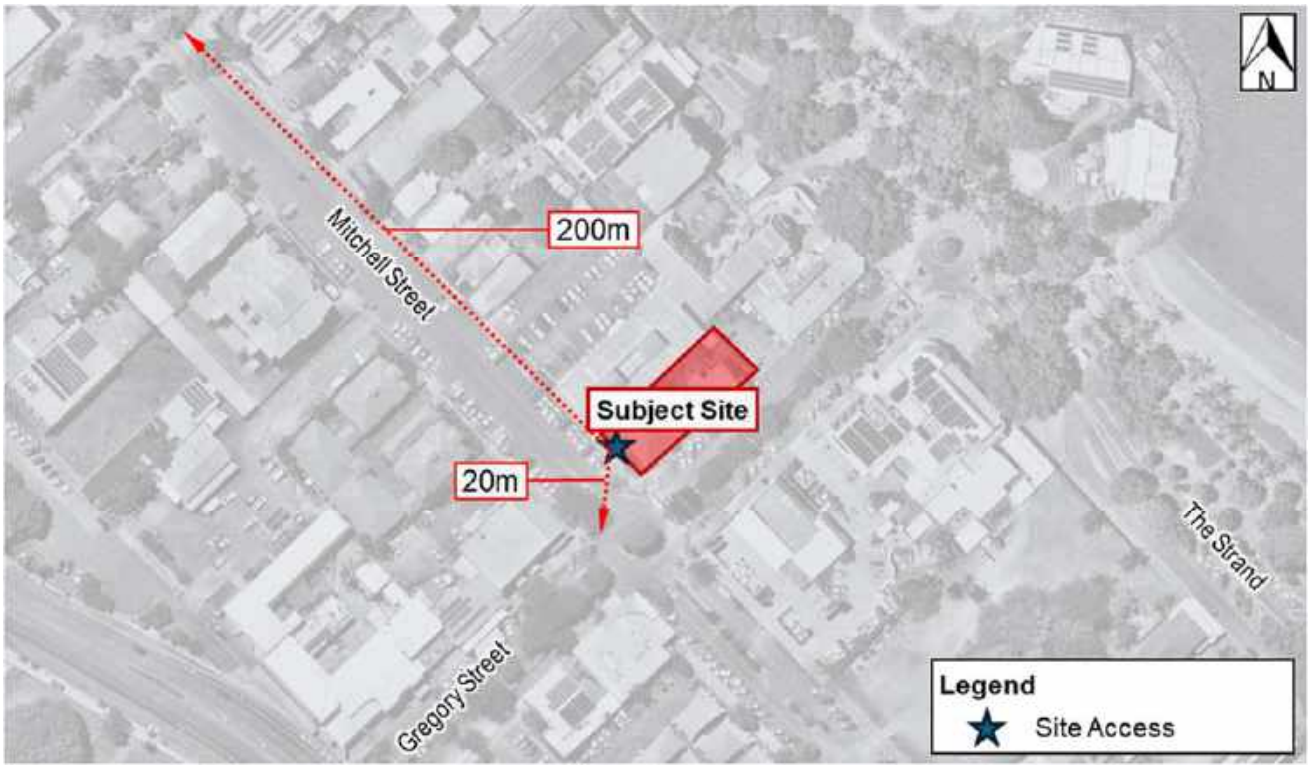
Table 5.1: Vehicular Access

Design Element	Details
Access Facility Category	Category 2 as per AS2890.1 (i.e. User Class 2, 25-100 car parking spaces and local road frontage).
Crossover Form	Crossover Form is not detailed on the development plans. It is recommended the crossover form is provided in accordance with Council's Standard Drawing SD-030I
Pedestrian Sight Line Triangle	Pedestrian sight line triangles are provided on the egress side of the driveway at 2.0m along the property boundary 2.5m into the site as per Figure 3.3 in AS2890.1 The area within the triangle is clear of all obstructions to visibility. Sufficient sight distance is also provided on the entry side of the access for on-site service vehicles

Subject to the recommendation provided above, the proposed vehicular access is generally in accordance with the relevant requirements of AS2890.1 and Council's TCIAP Code.

5.2 Sight Distance

A sight distance assessment of the vehicular crossover was undertaken in accordance with AS2890.1. The posted speed limit of Mitchell Street is 40km/h, resulting in a requirement of 55m to accommodate a five (5) second safe stopping distance. The available sight distance for the proposed development is approximately 200m to the northeast and 20m to the southwest as shown in Figure 5.1.



Aerial imagery adapted from Nearmap

Figure 5.1: Sight Distance Assessment

While the southwestern sight distance does not comply with AS2890.1, the development is limited by the roundabout, which requires motorists to slow significantly to manoeuvre. Considering the speeds at which vehicles will traverse the roundabout, the sight distance is deemed safe.

6. SERVICING ASSESSMENT

6.1 Servicing

No minimum servicing vehicle requirements are specified in Council's City Plan. It is understood the proposed development may be serviced by an Medium Rigid Vehicle (MRV) or Small Rigid Vehicle (SRV). An on-street servicing bay is proposed on Mitchell Street adjacent to the proposed crossover which is design to accommodate a Medium Rigid Vehicle (MRV). Additionally, an SRV loading bay is proposed on-site. Swept path diagrams in **Appendix B** demonstrate an SRV is able to reverse on-site to access the loading bay and exit the site in a forward gear.

To mitigate potential conflict between vehicles using the ramp and servicing vehicles on-site, a Servicing Management Plan is recommended to detail management of vehicle movements during servicing.

6.2 Refuse Collection

Refuse collection is proposed to occur on-street by Council's Refuse Collection Vehicle (RCV) via kerbside collection the proposed on-street servicing bay on Mitchell Street. On collection days, bins will be moved from the internal storage point to the kerb for collection. This arrangement is consistent with typical refuse collection for developments of this nature and hence, not expected to result in any adverse traffic conditions.

7. ALTERNATE TRANSPORT

7.1 Public Transport

The public transport network surrounding the subject site, shown in Figure 2.1, is comprised of multiple bus routes connecting the immediate area to nearby hubs. As such, the proposed development requires no additional public transport infrastructure.

7.2 Active Transport

The active transport network surrounding the subject site, shown in Figure 2.2, is considered adequate for the needs of the proposed development. As such, no additional pedestrian or cycling infrastructure is required.

8. CONCLUSION

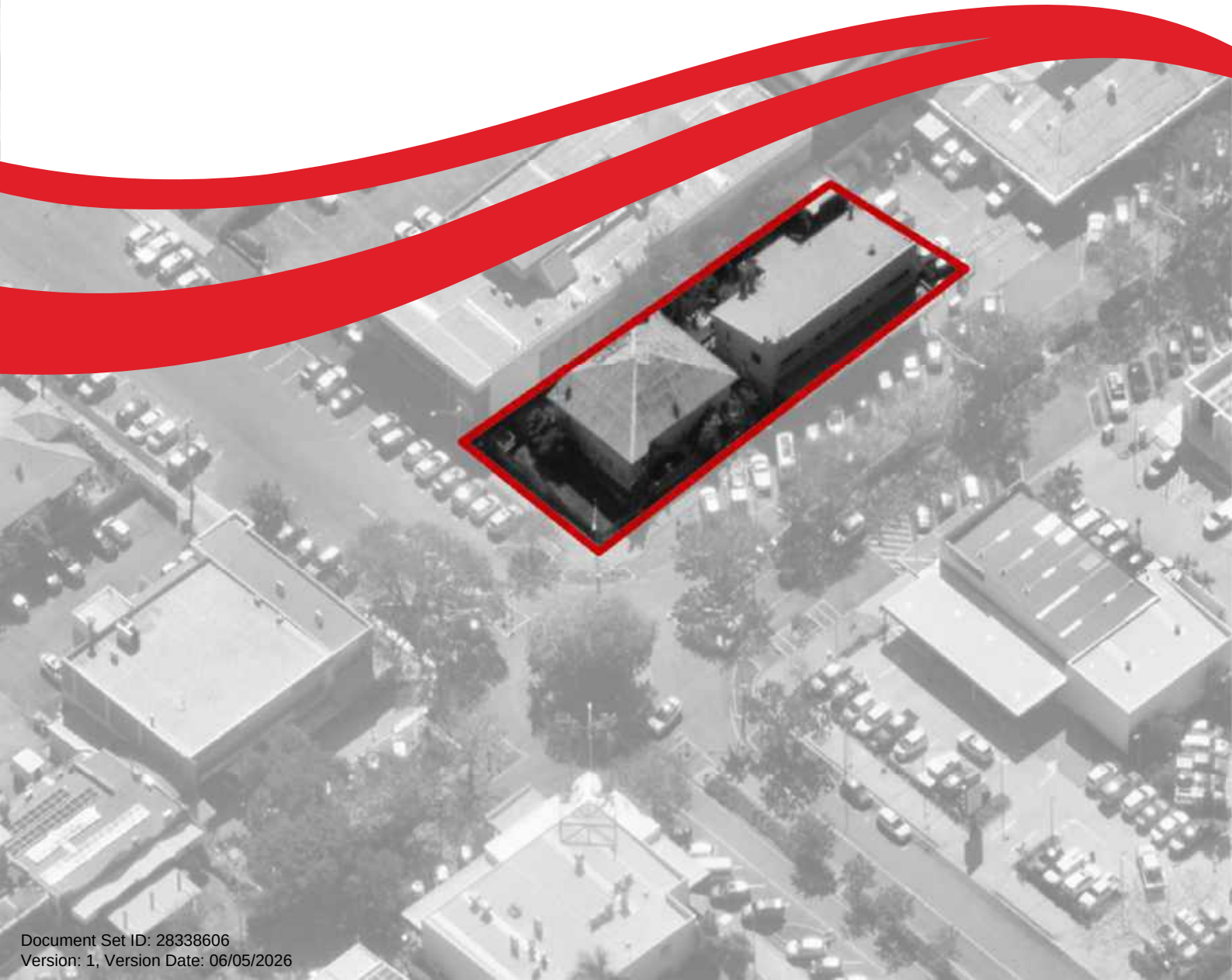
The key findings of the traffic impact assessment for the proposed development located at 55 Mitchell Street and 52 Gregory Street, North Ward are as follows:

- The proposed development is a mixed-use development comprising 100 short-term accommodation units and 327.9m^2 GFA food and drink outlet
- The proposed development is estimated to result in a net increase of 30 trips in the AM peak hour and PM peak hour. This quantity of traffic is considered low and consistent with the nature and capacity of the surrounding road network and is not expected to result in any operational impacts
- The proposed development will provide 34 car parking spaces, which is anticipated to meet the demands of the development and is consistent with recent nearby approvals (e.g. MCU22/0046)
- The parking layout generally complies with the relevant requirements of AS2890 and Council's TCIAP Code
- The proposed driveway crossover location and category complies with the relevant requirements of Council's requirements, AS2890. It is recommended the crossover form is provided in accordance with Council's Standard Drawing SD-030I
- Sight distance at the proposed access location is generally in accordance with AS2890.1
- Servicing of the development is proposed to occur via an indented servicing bay on Mitchell Street suitable for an MRV and an on-site loading bay suitable for an SRV
- Refuse collection is proposed to occur on-street by Council's Refuse Collection Vehicle (RCV) via kerbside collection on Mitchell Street.

Subject to the recommendations included herein, there are no significant traffic or transport impacts associated with the proposed development that would preclude its approval or require relevant conditioning on transport planning grounds.

Appendix A:

Development Plans



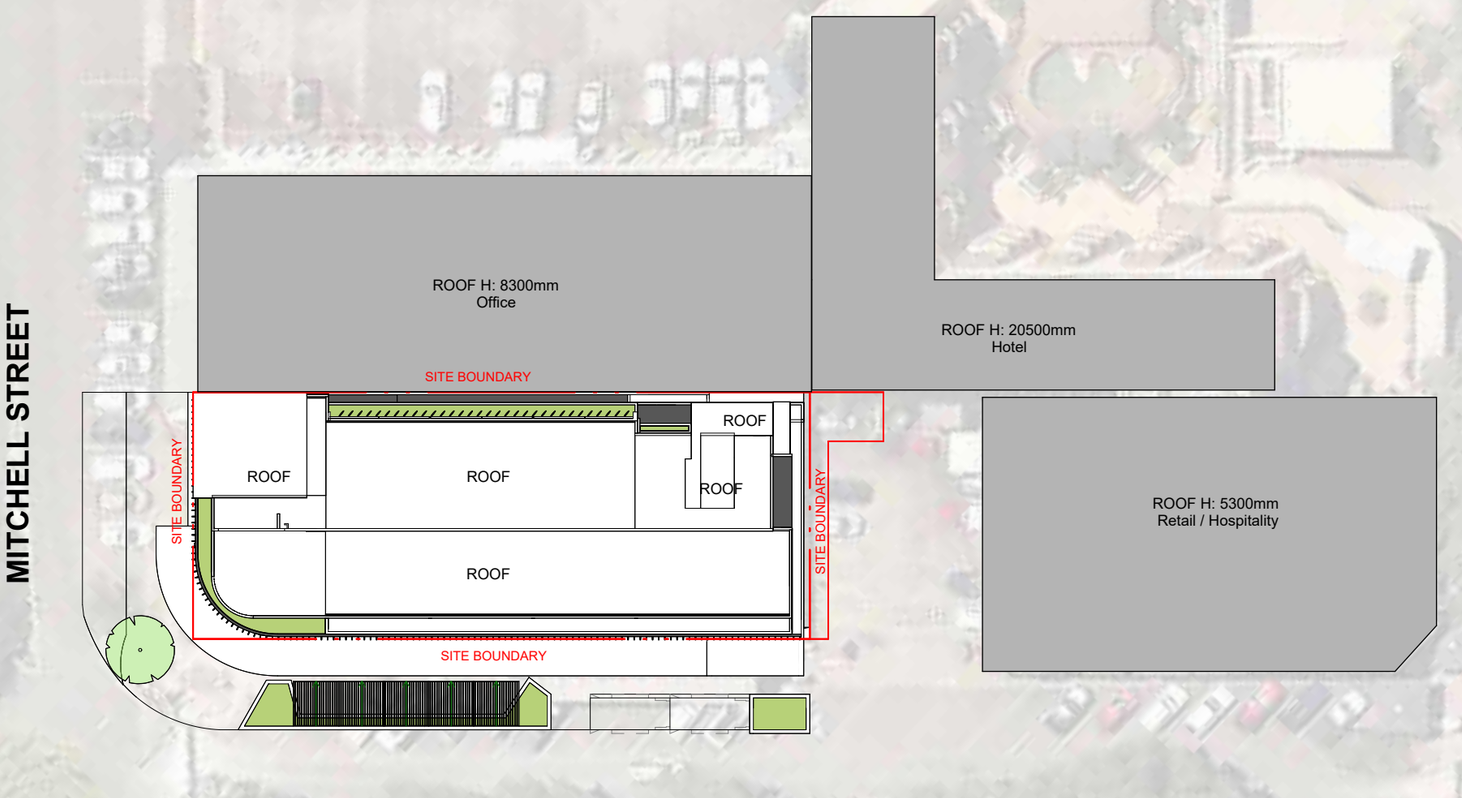
DA
TOWNSVILLE HOTEL
55 MITCHELL STREET + 52 GREGORY STREET

DA DRAWING LIST

DWG NO.	TITLE	REV
DA0.00	PRELIMINARIES	
DA0.00	COVER SHEET	
DA0.01	PERSPECTIVE	
DA0.02	PERSPECTIVE	
DA0.03	PERSPECTIVE	
DA0.04	PERSPECTIVE	
DA1.00	SITE	
DA1.01	SITE PLAN	A
DA2.00	FLOOR PLANS	
DA2.0B	BASEMENT LEVEL	A
DA2.0G	GROUND LEVEL	A
DA2.0M	MEZZANINE LEVEL	A
DA2.01	LEVEL 01	A
DA2.02	LEVEL 02	A
DA2.03	LEVEL 03	A
DA2.04	LEVEL 04-08	A
DA2.09	LEVEL 09	A

DA DRAWING LIST

DWG NO.	TITLE	REV
DA2.10	ROOF LEVEL	A
DA3.00	ELEVATIONS	
DA3.01	ELEVATIONS	A
DA3.02	ELEVATIONS	A
DA3.03	ELEVATIONS	A
DA3.04	ELEVATIONS	A
DA4.00	SECTIONS	
DA4.01	SECTION A-A	A
DA4.02	SECTION B-B	A
DA5.00	TYPICAL UNITS	
DA5.01	HOTEL TYPE 1	
DA5.05	HOTEL TYPE 2	A
DA5.08	HOTEL TYPE 3	A
DA5.10	GROUND FLOOR - LOBBY	A
DA8.00	COMPLIANCE DIAGRAMS	
DA8.01	SHADOW ANALYSIS - SHEET 01	A
DA8.14	DEVELOPMENT DATA - SHEET 01	



1 : 500@ A3

marchesepartners | Life3A

JANKOVIC PROPERTY GROUP

SITE PLAN
TOWNSVILLE HOTEL | 55 MITCHELL STREET +
52 GREGORY STREET

DA1.01

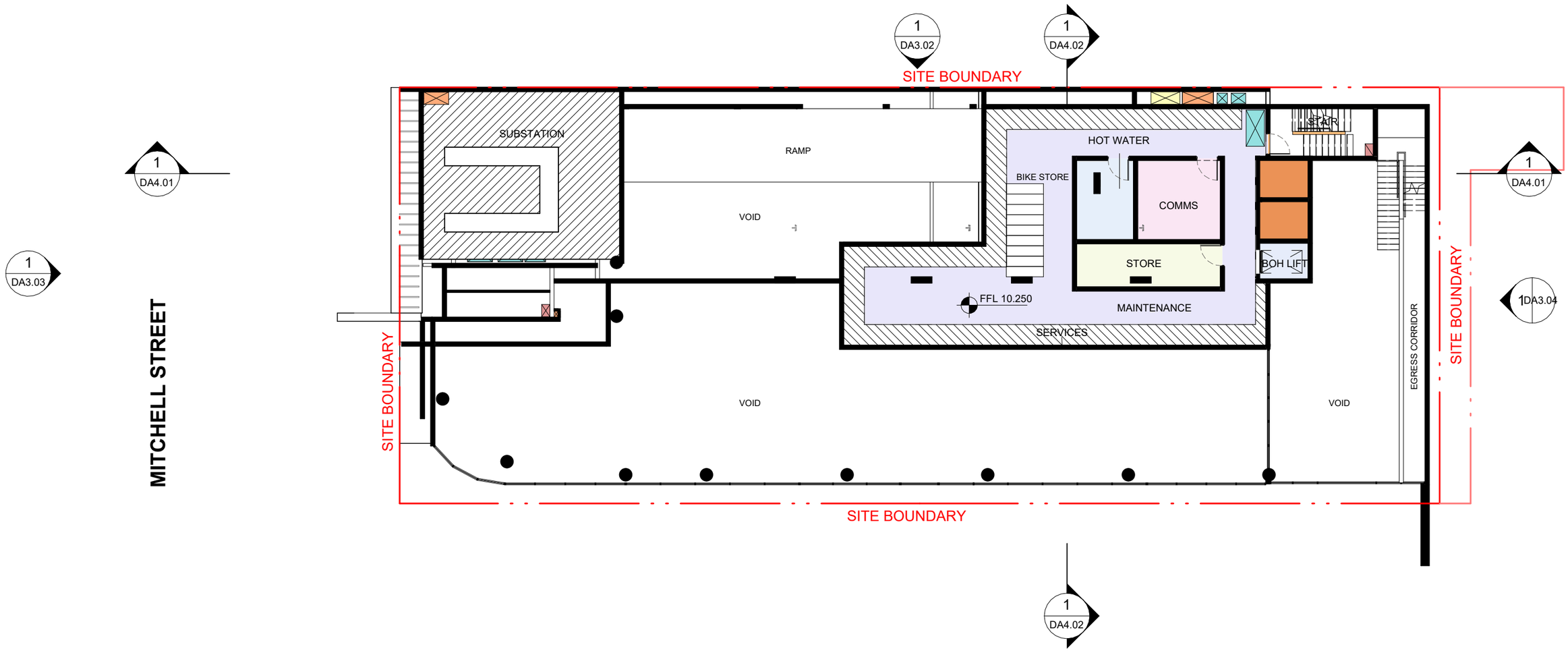
1 : 200@ A3

marchesepartners | Life3A

JANKOVIC PROPERTY GROUP

GROUND LEVEL
TOWNSVILLE HOTEL | 55 MITCHELL STREET + 52 GREGORY STREET

DA2.0G

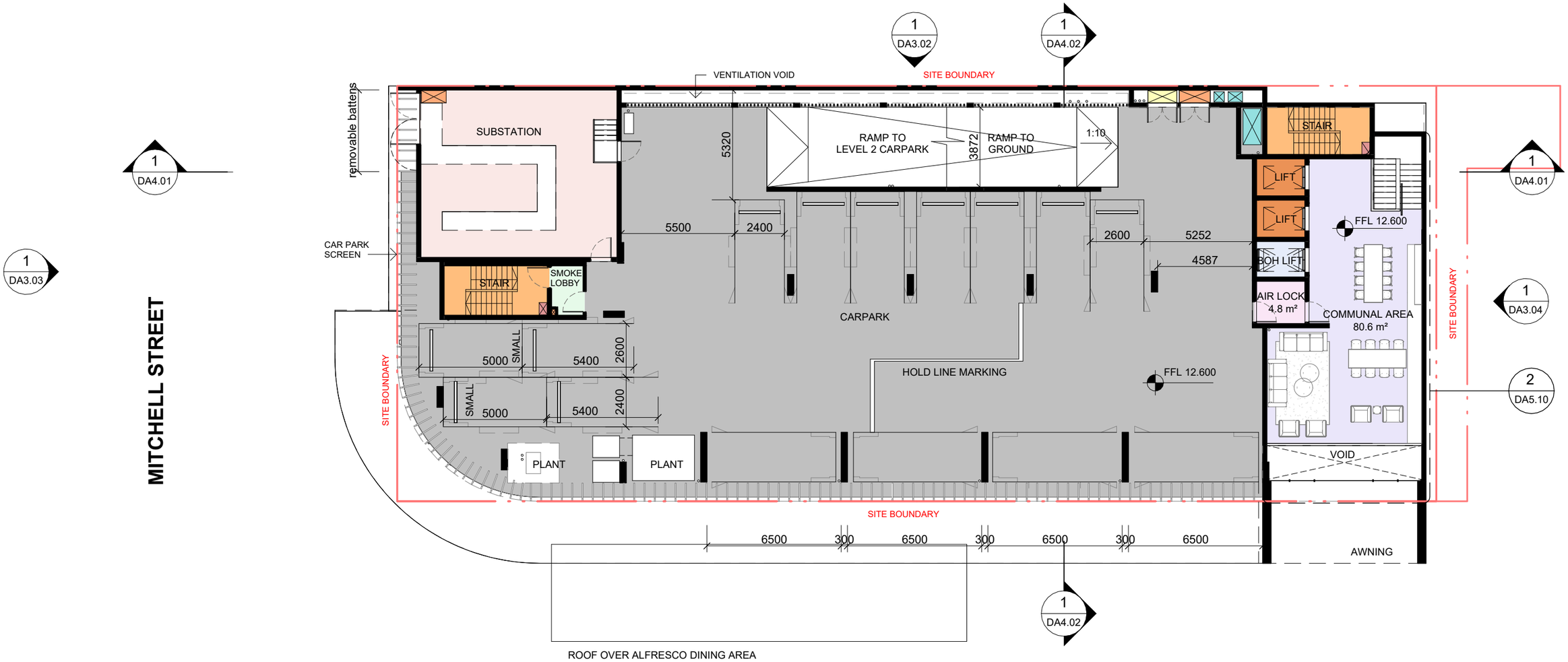


1 : 200@ A3

marchesepartners | Life 3A | JANKOVIC PROPERTY GROUP

MEZZANINE LEVEL
TOWNSVILLE HOTEL | 55 MITCHELL STREET + 52 GREGORY STREET

DA2.0M



LEVEL	CARPARKS
LEVEL 1	15
LEVEL 2	19
	34

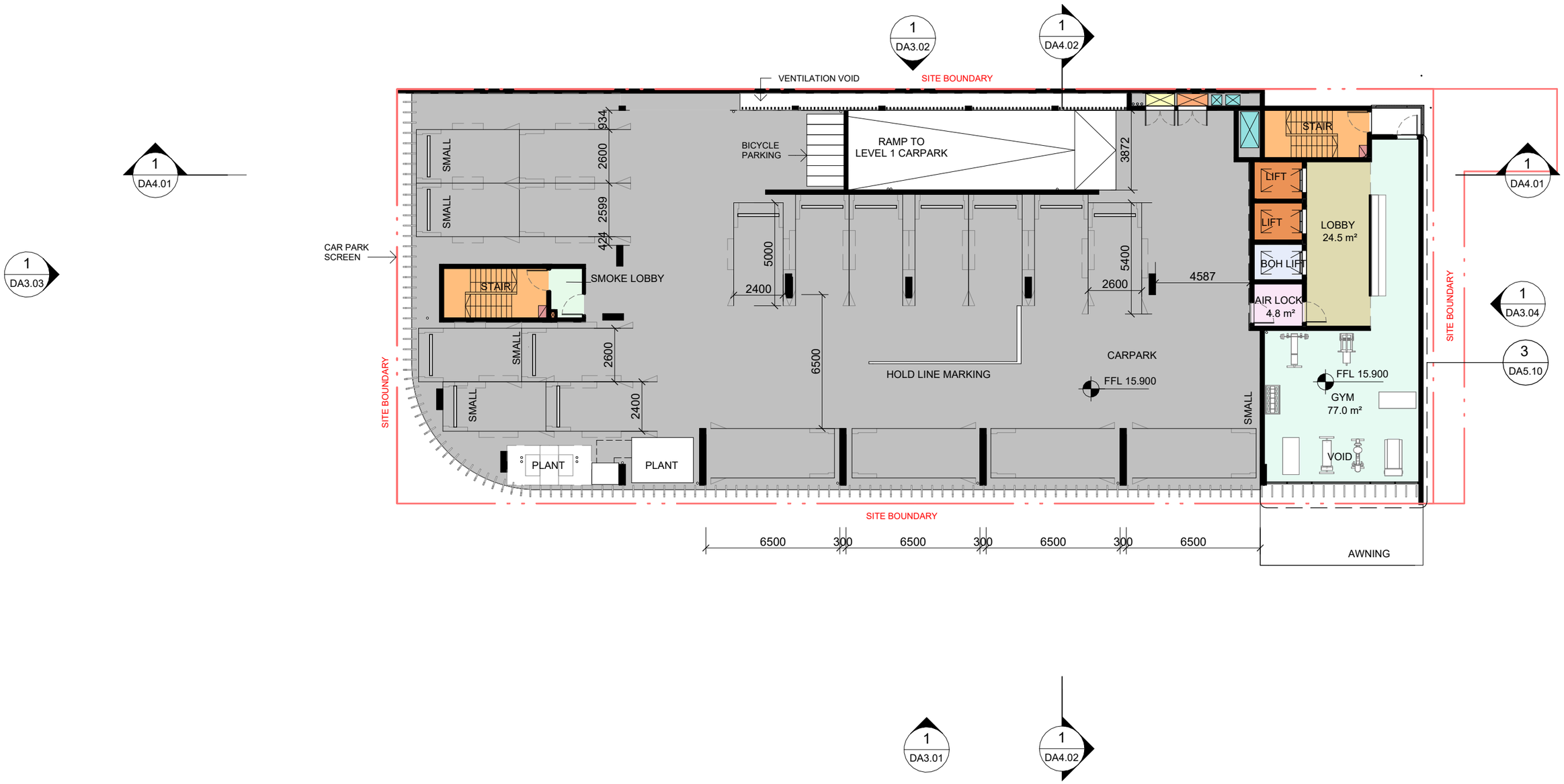
1 : 200@ A3

LEVEL 01
TOWNSVILLE HOTEL | 55 MITCHELL STREET +
52 GREGORY STREET

DA2.01

marchesepartners | Life 3A

JANKOVIC PROPERTY GROUP



1 : 200@ A3

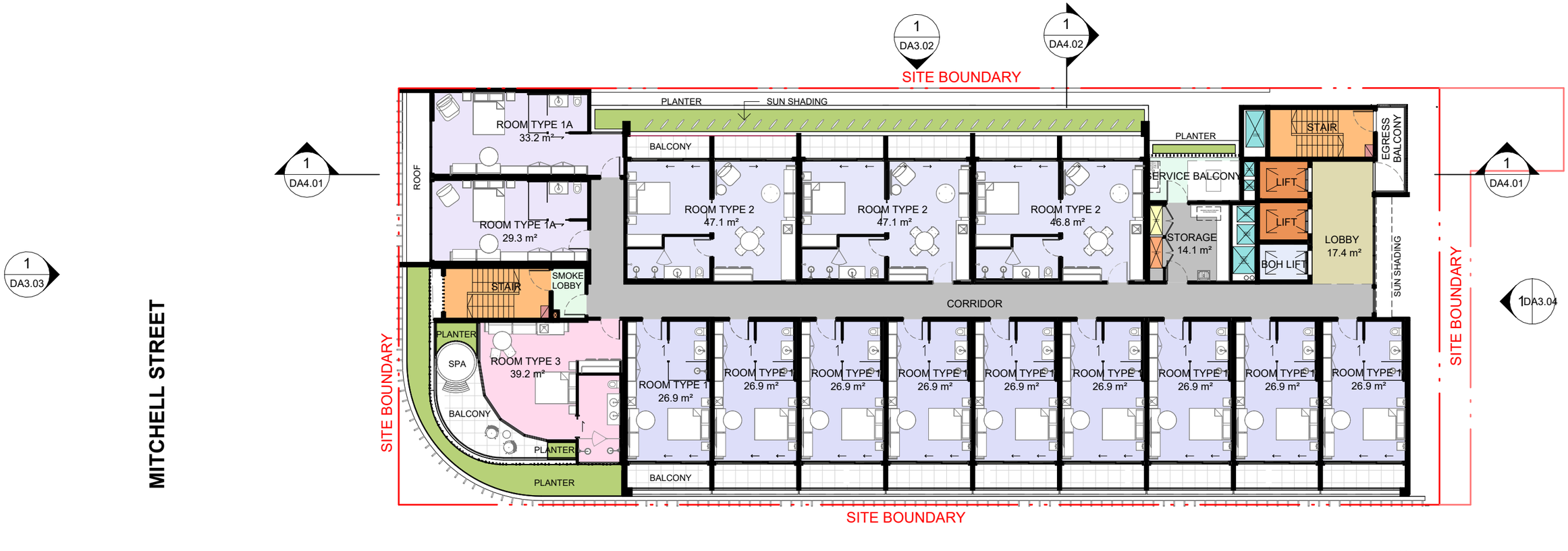
LEVEL	CARPARKS
LEVEL 1	15
LEVEL 2	19
	34

LEVEL 02
TOWNSVILLE HOTEL | 55 MITCHELL STREET +
52 GREGORY STREET

DA2.02

marchesepartners | Life 3A

JANKOVIC PROPERTY GROUP



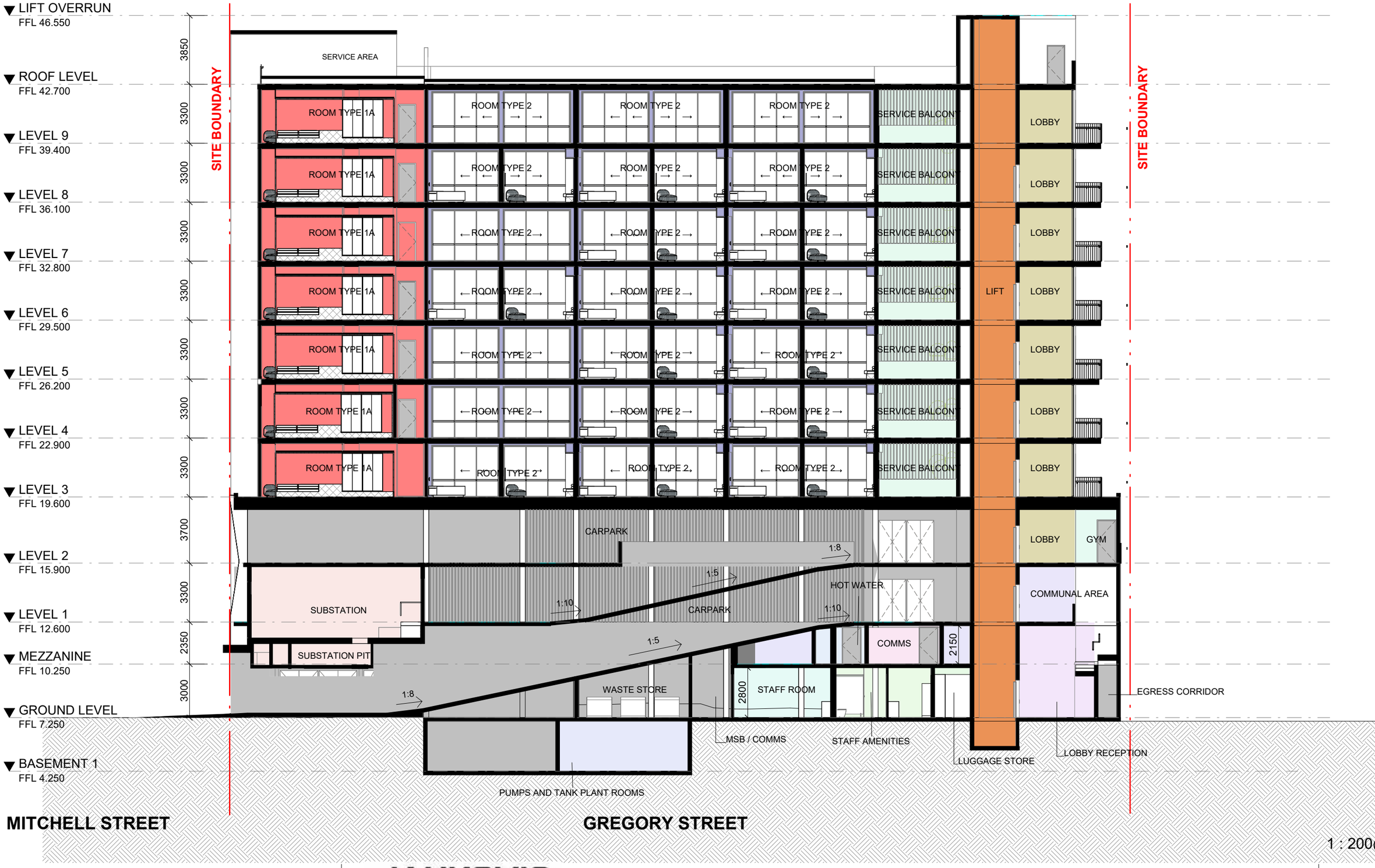
LEVEL 3
15 X HOTEL KEYS

1 : 200@ A3

marchesepartners | Life3A | JANKOVIC PROPERTY GROUP

LEVEL 03
TOWNSVILLE HOTEL | 55 MITCHELL STREET +
52 GREGORY STREET

DA2.03



1 : 200@ A3

marchesepartners | Life 3A

JANKOVIC PROPERTY GROUP

SECTION A-A
TOWNSVILLE HOTEL | 55 MITCHELL STREET + 52 GREGORY STREET

DA4.01

1 : 200@ A3

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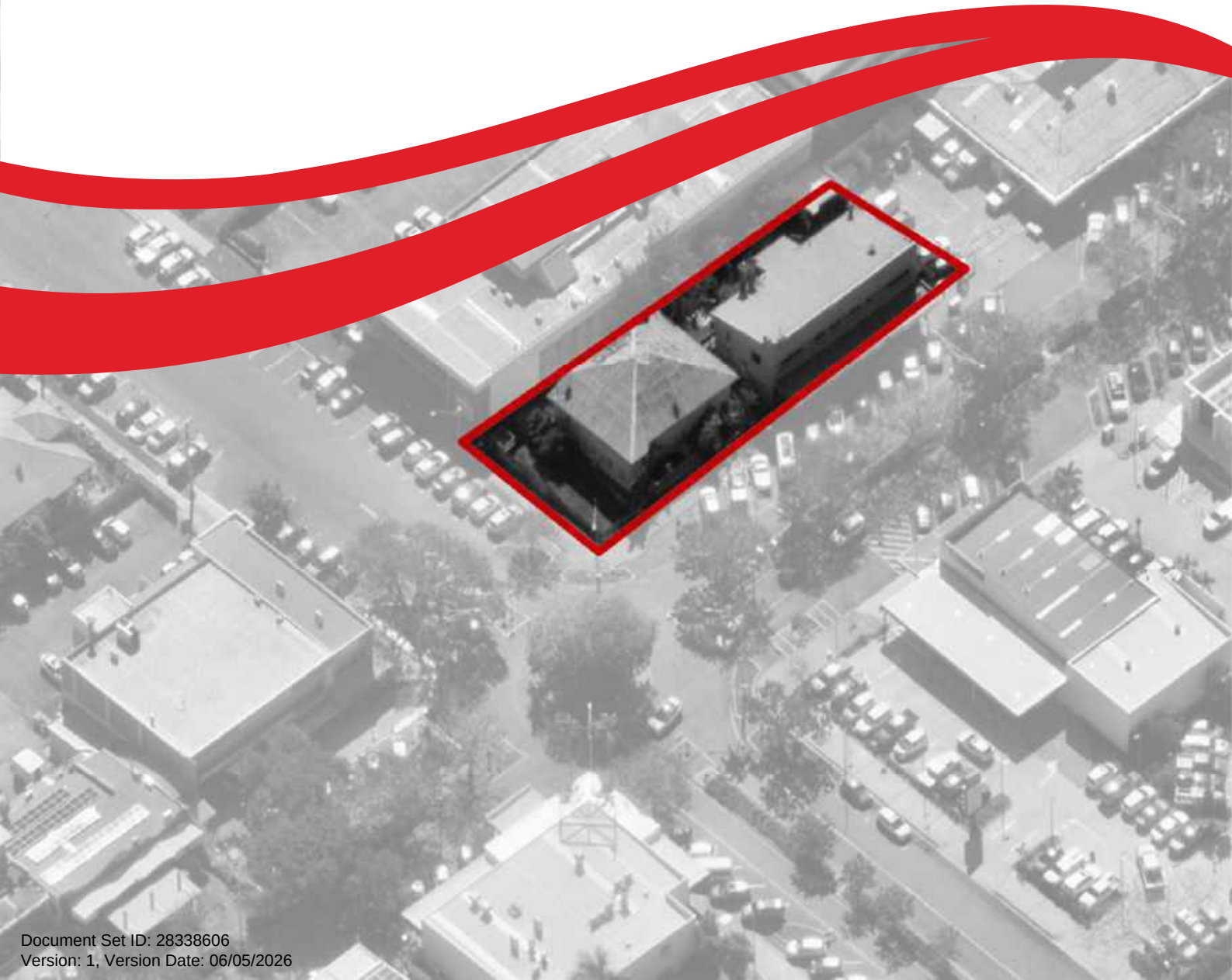
JANKOVIC PROPERTY GROUP

SECTION B-B
TOWNSVILLE HOTEL | 55 MITCHELL STREET + 52 GREGORY STREET

DA4.02

Appendix B:

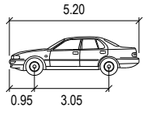
Swept Path Assessment



Notes:

Vehicle Clearance (300mm)

Vehicle Clearance (600mm)



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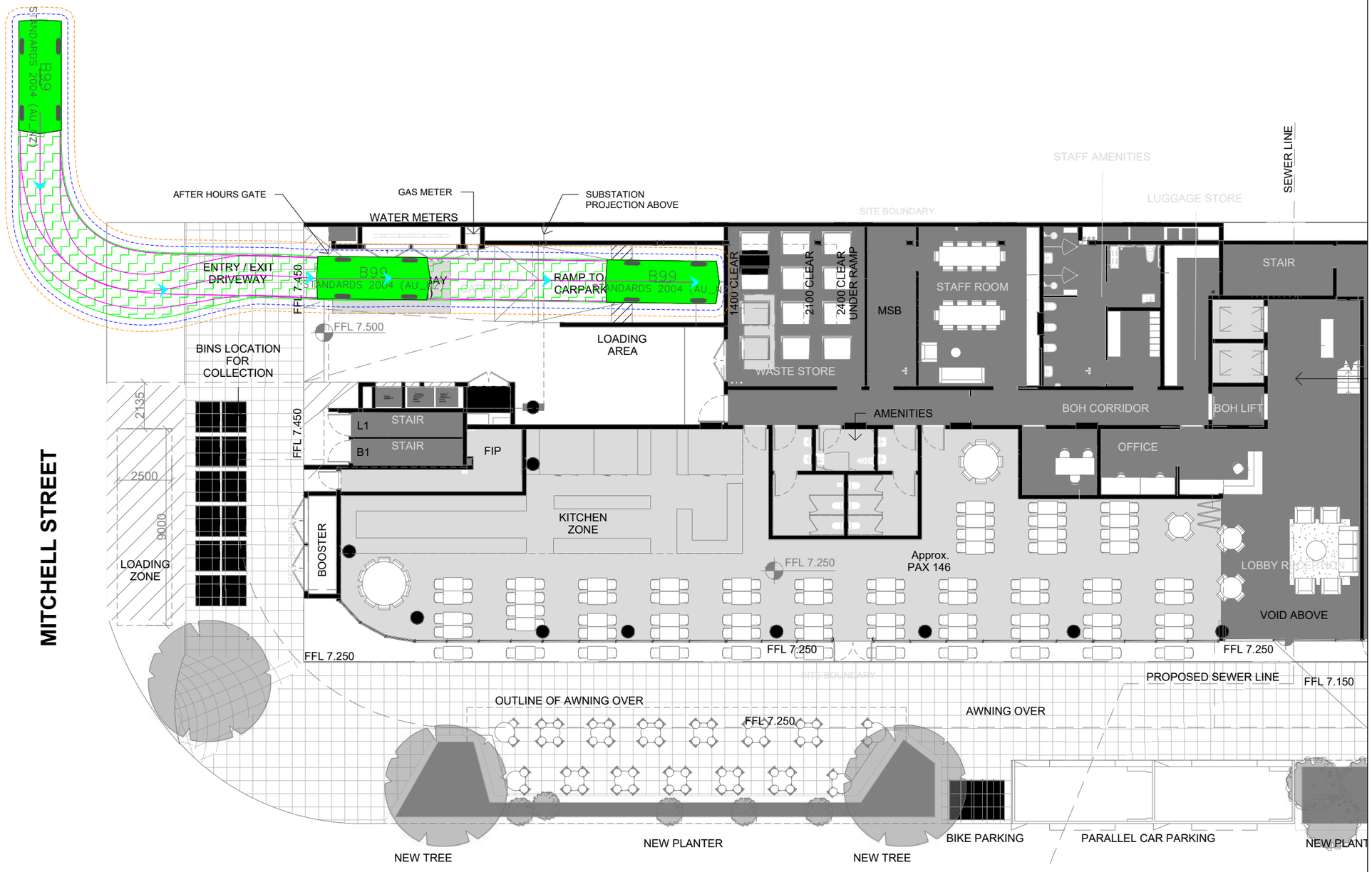
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

DESIGN VEHICLE



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REVISIONS			
Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23.04.2026

Scale @ A3 0 2 4 6 8 10 1:200

Project: 55 Mitchell Street Townsville TIA		
Title: Ground Level - B99 Ingressing Swept Path Assessment		
Design: A.S	Drawn: A.S	Checked: B.C
CONCEPT ONLY		Date: 23.04.2026
Project Number: P7428	Sheet Number: 1	Issue: 001

Notes:

Vehicle Clearance (300mm)

Vehicle Clearance (600mm)

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Track	: 1.84
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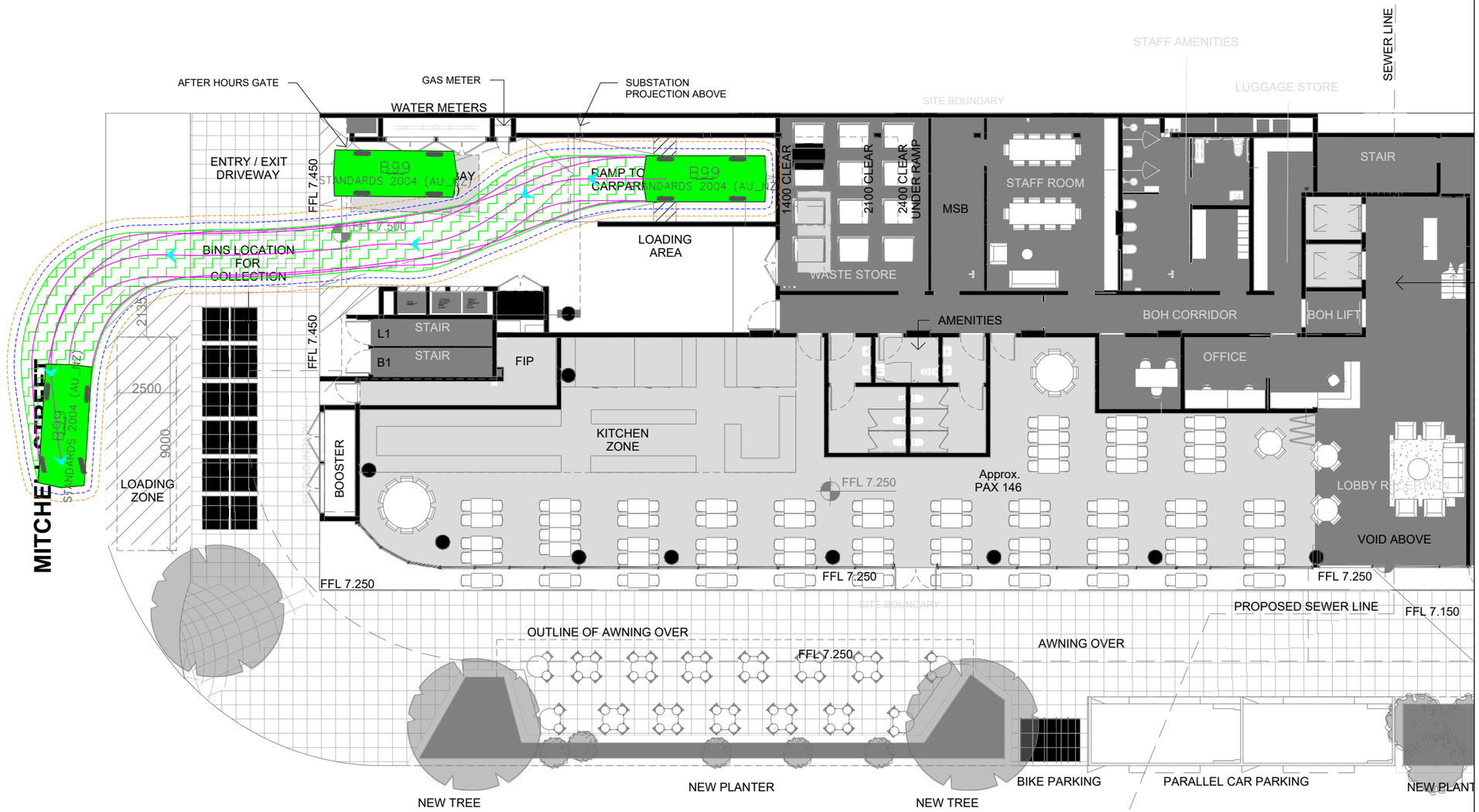
Steering Angle	: 38.0

DESIGN VEHICLE



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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23.04.2026

Scale @ A3 0 2 4 6 8 10 1:200

Project: 55 Mitchell Street Townsville TIA	Design: A.S	Drawn: A.S	Checked: B.C
Title: Ground Level - B99 Egressing Swept Path Assessment	CONCEPT ONLY		Date: 23.04.2026
	Project Number: P7428	Sheet Number: 2	Issue: 001

Notes:

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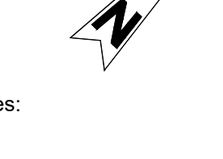

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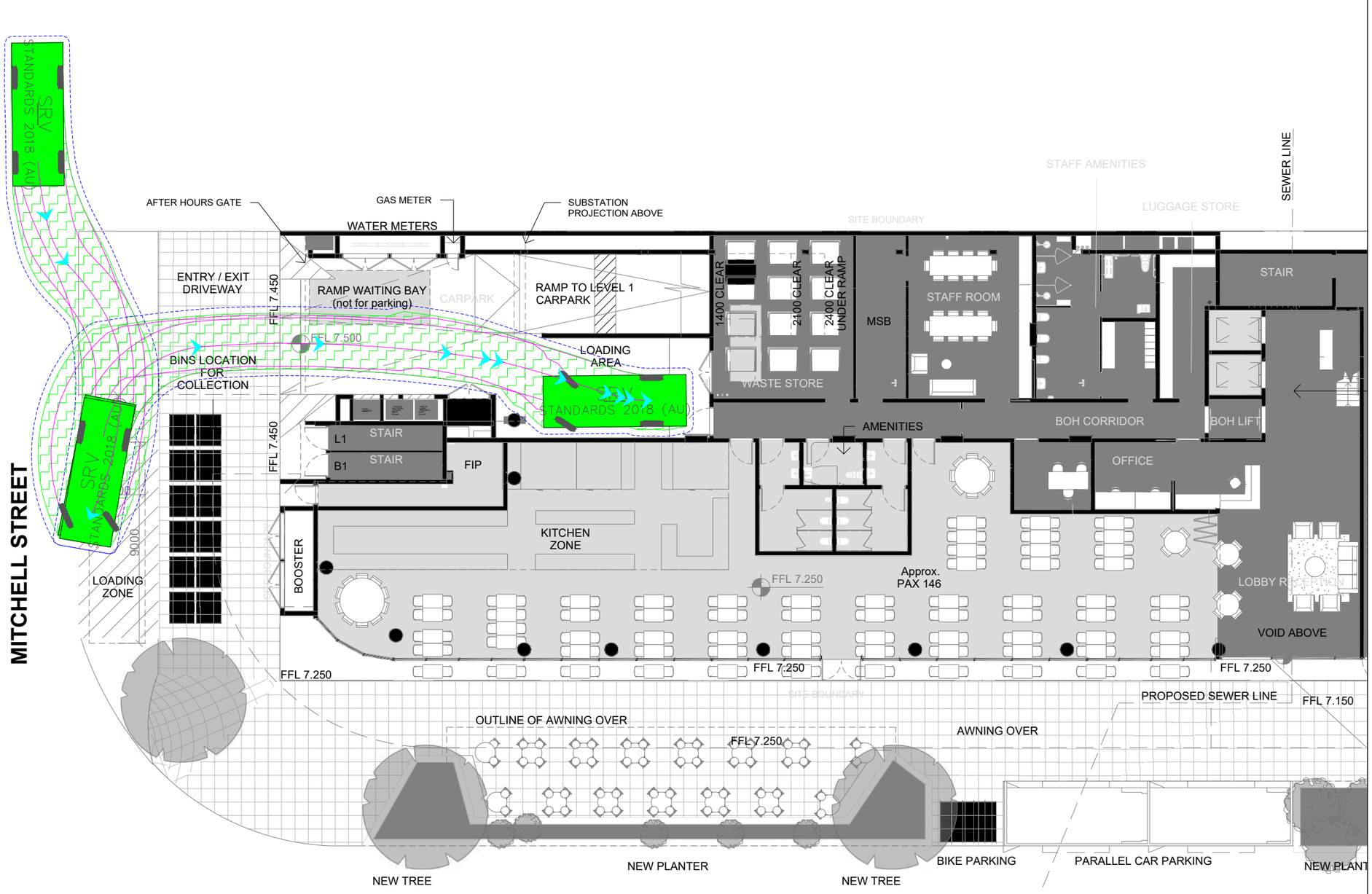
Track	: 2.3
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

DESIGN VEHICLE



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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23.04.2026

Scale @ A3 0 2 4 6 8 10 1:200

Project	Design	Drawn	Checked
55 Mitchell Street Townsville TIA	A.S	A.S	B.C
Title: Ground Level - SRV Ingressing Swept Path Assessment	CONCEPT ONLY	Date: 23.04.2026	
	Project Number: P7428	Sheet Number: 3	Issue: 001

Notes:

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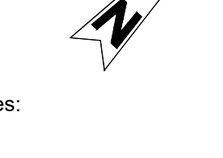

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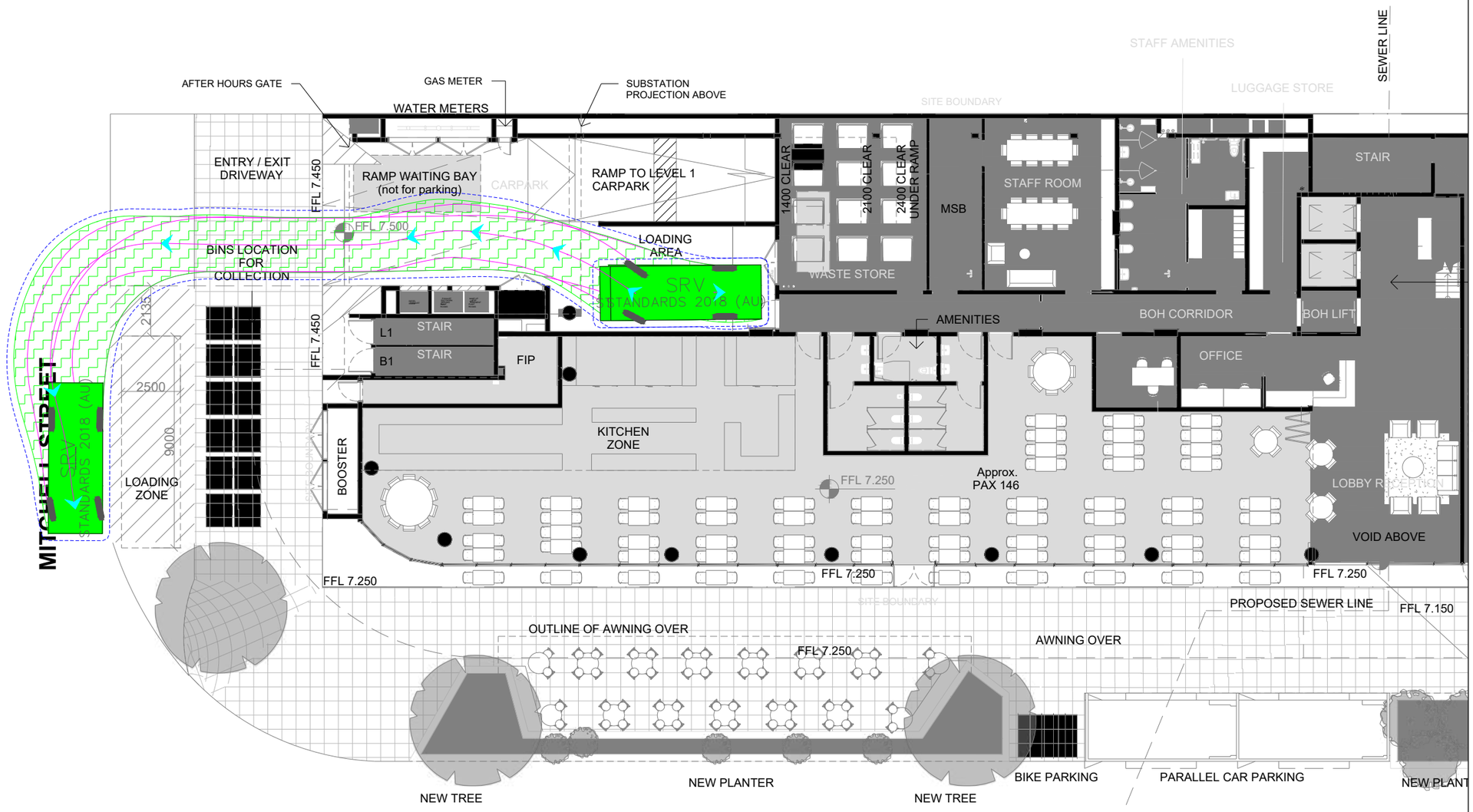
DESIGN VEHICLE



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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23.04.2026

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Project: 55 Mitchell Street Townsville TIA	Design: A.S	Drawn: A.S
Title: Ground Level - SRV Egressing Swept Path Assessment	CONCEPT ONLY	Checked: B.C
	Date: 23.04.2026	
	Project Number: P7428	Sheet Number: 4
		Issue: 001

Notes:

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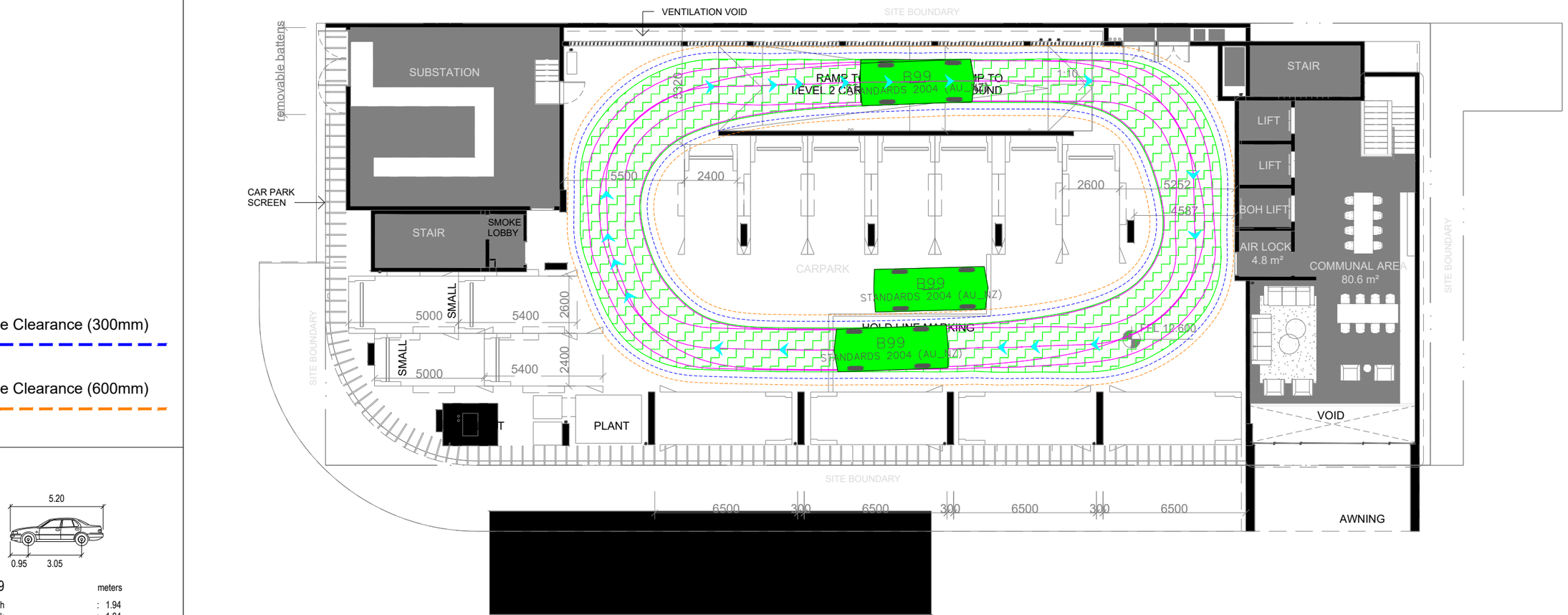
Vehicle Clearance (600mm)



B99	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

DESIGN VEHICLE

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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23.04.2026

Scale @ A3 0 2 4 6 8 10 1:200

Project: 55 Mitchell Street Townsville TIA

Title: Podium Level 1 - B99 Ingressing Swept Path Assessment

Design	Drawn	Checked
A.S	A.S	B.C

CONCEPT ONLY

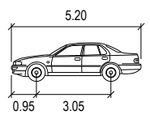
Date: 23.04.2026

Project Number	Sheet Number	Issue
P7428	5	001

Notes:

Vehicle Clearance (300mm)

Vehicle Clearance (600mm)



B99 meters

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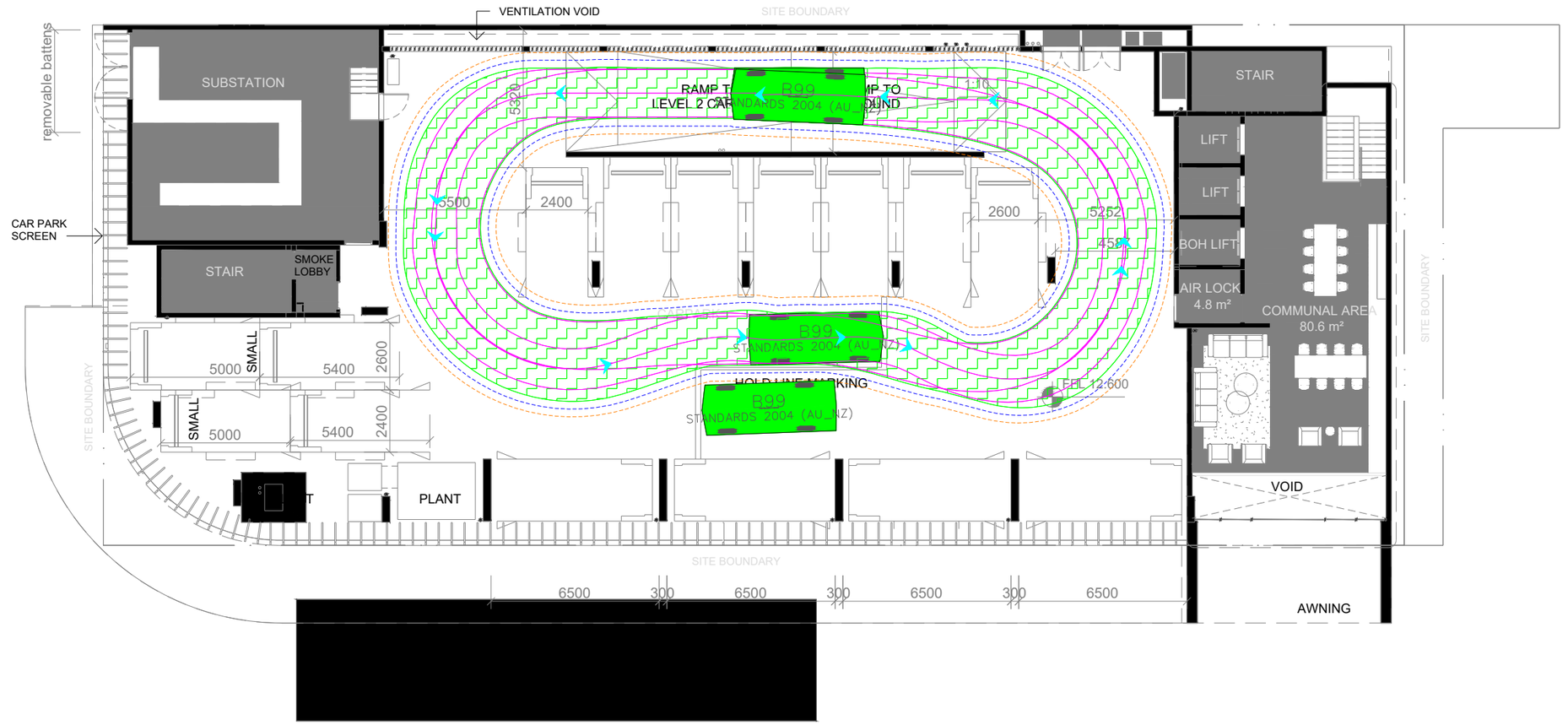
Track	:	1.84
Lock to Lock Time	:	6.0
Steering Angle	:	38.0

DESIGN VEHICLE



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REVISIONS

Issue	Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	12.01.2020

Scale @ A3 0 2 4 6 8 10 1:200

Project: 55 Mitchell Street Townsville TIA

Title: Podium Level 1 - B99 Egressing Swept Path Assessment

Design	Drawn	Checked
A.S	A.S	B.C

CONCEPT ONLY

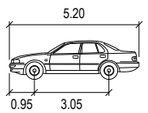
Date: 23.04.2026

Project Number	Sheet Number	Issue
P7428	6	001

Notes:

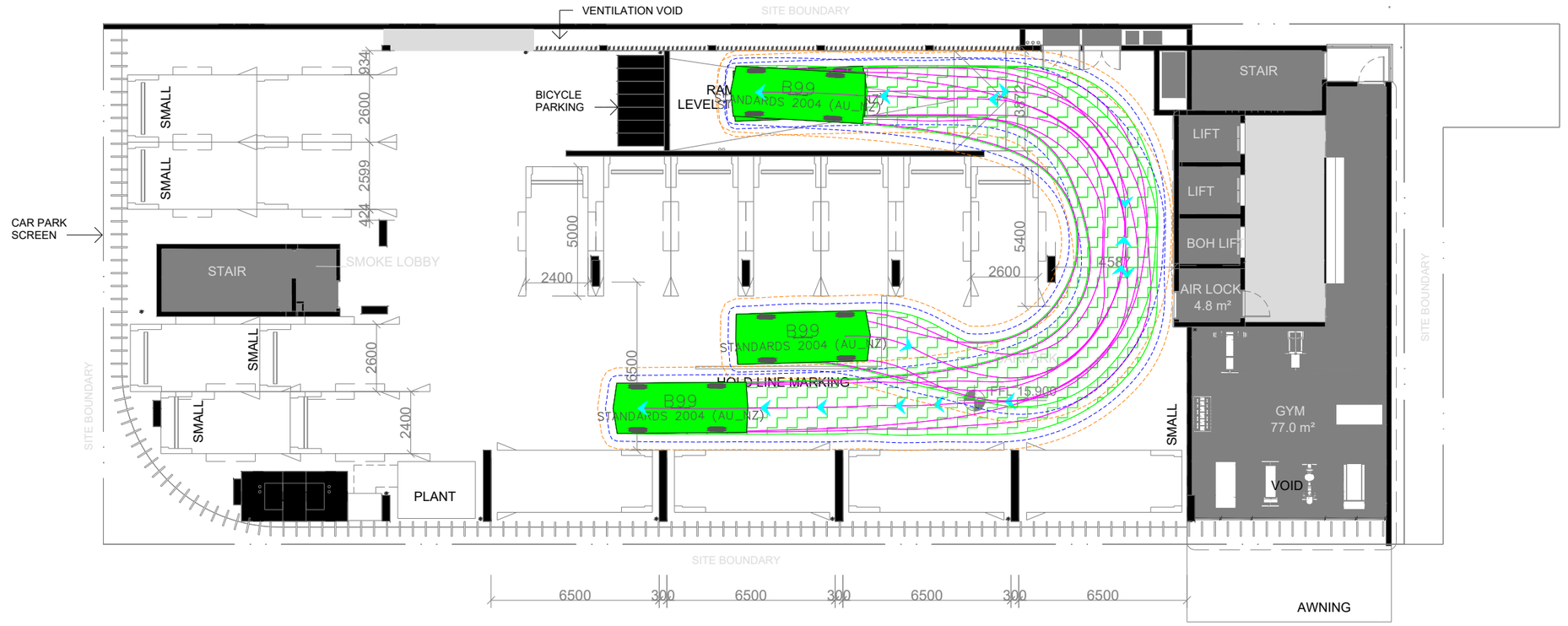
Vehicle Clearance (300mm)

Vehicle Clearance (600mm)



B99	meters
Width	: 1.94
Track	: 1.84
Lock to Lock Time	: 6.0
Steering Angle	: 38.0

DESIGN VEHICLE



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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23/04/2026

Scale @ A3 0 2 4 6 8 10 1:200

Project: 55 Mitchell Street Townsville TIA	Design: A.S	Drawn: A.S	Checked: B.C
Title: Podium Level 2 - B99 Circulation Swept Path Assessment	CONCEPT ONLY	Date: 23.04.2026	
	Project Number: P7428	Sheet Number: 7	Issue: 001

Notes:

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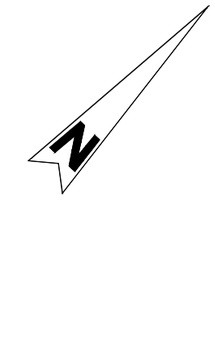

B85	meters
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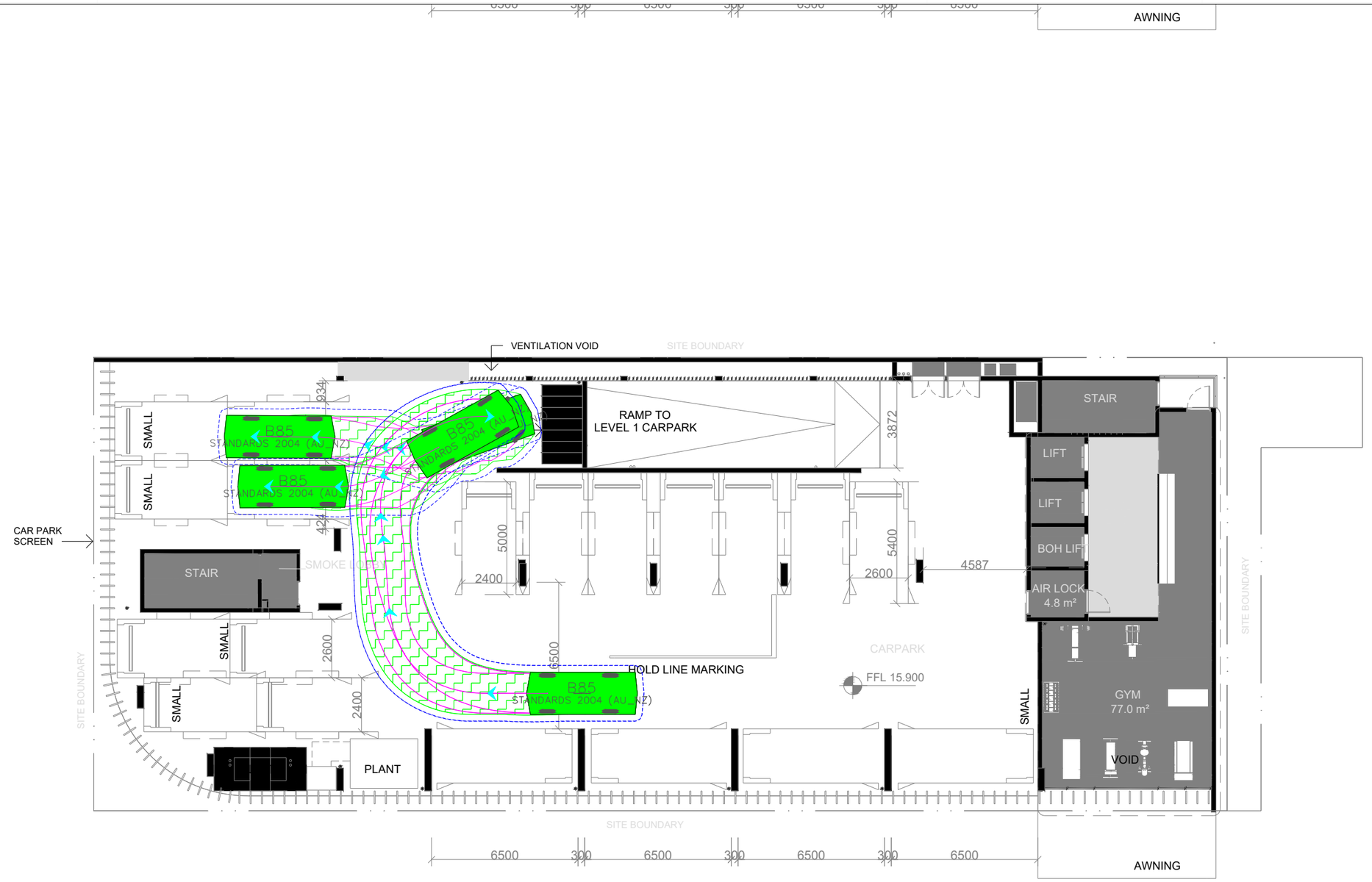
Steering Angle	: 38.5

DESIGN VEHICLE



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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23/04/2026

Scale @ A3 0 2 4 6 8 10 1:200

Project: 55 Mitchell Street Townsville TIA

Title: Podium Level 2 - B85 Parking Manoeuvre Swept Path Assessment

Design	Drawn	Checked
A.S	A.S	B.C

CONCEPT ONLY

Date: 23.04.2026

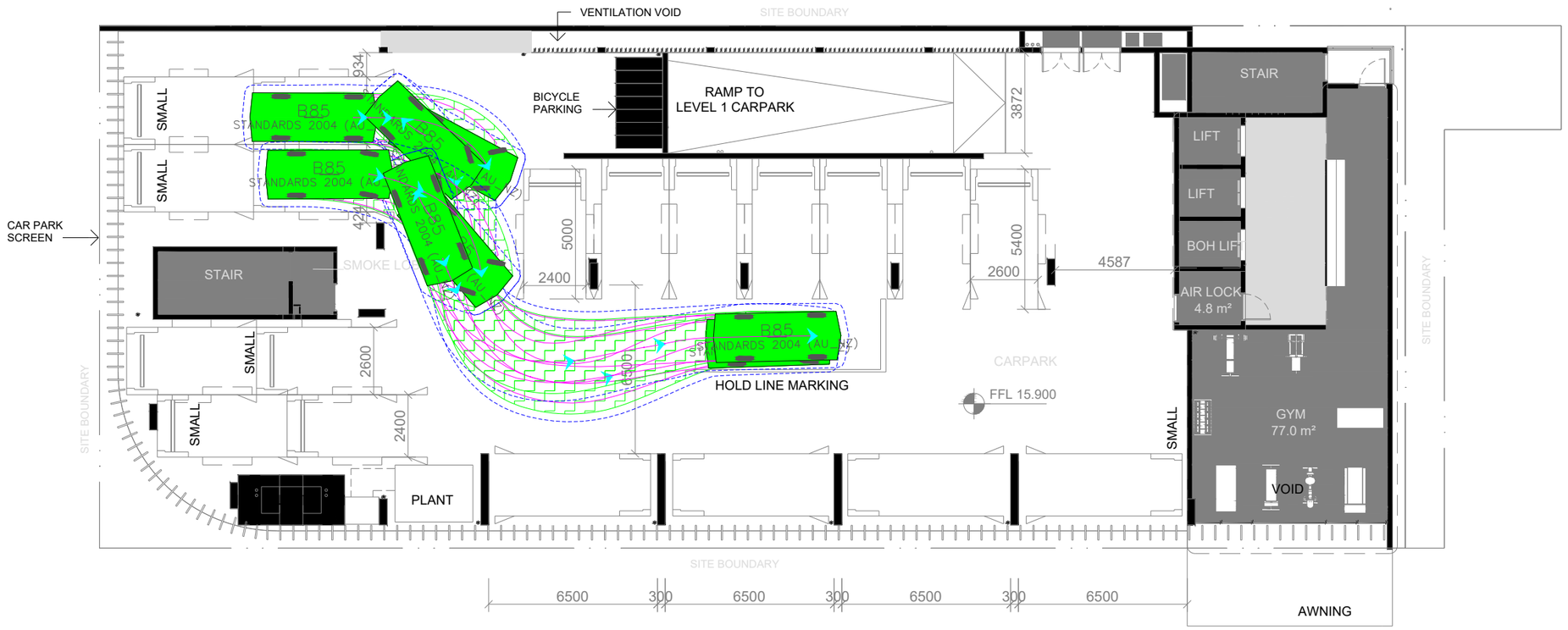
Project Number	Sheet Number	Issue
P7428	8	001

Notes:

Vehicle Clearance (300mm)

B85	meters
Width	: 1.87
Track	: 1.77
Lock to Lock Time	: 6.0
Steering Angle	: 38.5

DESIGN VEHICLE



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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23/04/2026

Scale @ A3 0 2 4 6 8 10 1:200

Project: 55 Mitchell Street Townsville TIA

Title: Podium Level 2 - B85 Parking Manoeuvre Swept Path Assessment

Design	Drawn	Checked
A.S	A.S	B.C

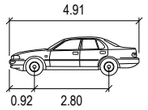
CONCEPT ONLY

Date: 23.04.2026

Project Number	Sheet Number	Issue
P7428	9	001

Vehicle Clearance (300mm)

Vehicle Clearance (600mm)



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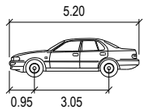

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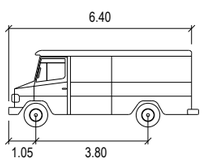

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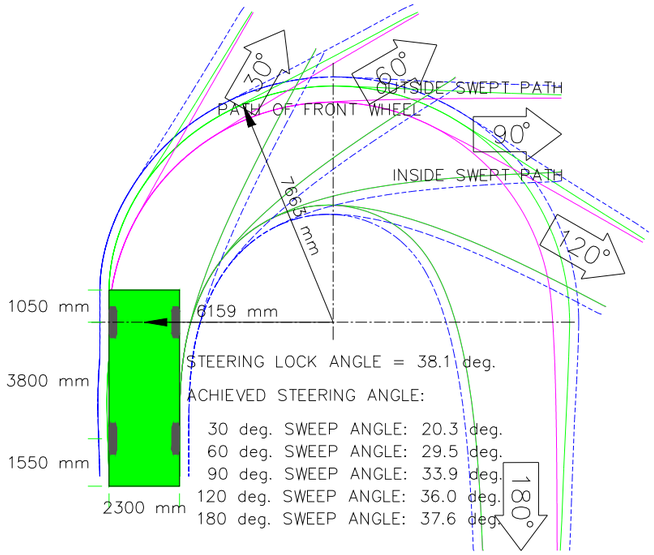

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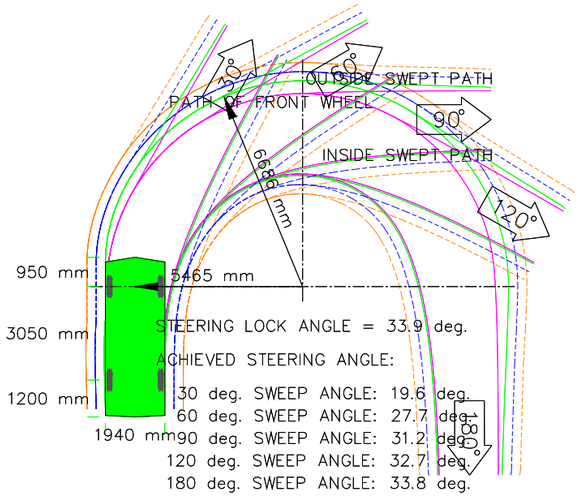

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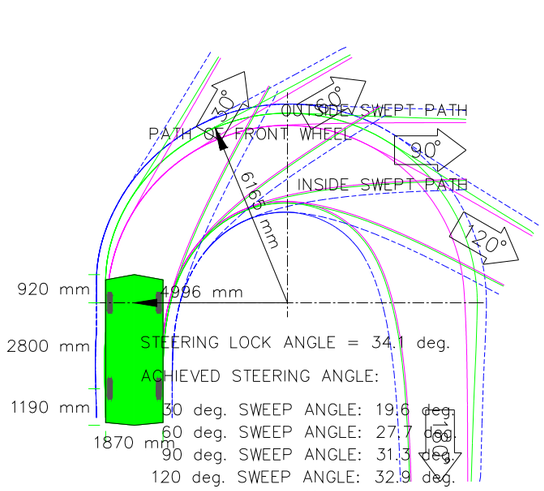

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STANDARDS 2004 (AU_NZ)
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0m 5m 10m

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Issue	REVISIONS Revisions/Descriptions	Drawn	Date
001	Swept Path Assessment	A.S	23/04/2026

Scale @ A3 0 2 4 6 8 10 1:200

Project	Design	Drawn	Checked
55 Mitchell Street Townsville TIA	A.S	A.S	B.C
Title: Vehicle Templates Swept Path Assessment	CONCEPT ONLY	Date: 23.04.2026	
	Project Number: P7428	Sheet Number: 10	Issue: 001

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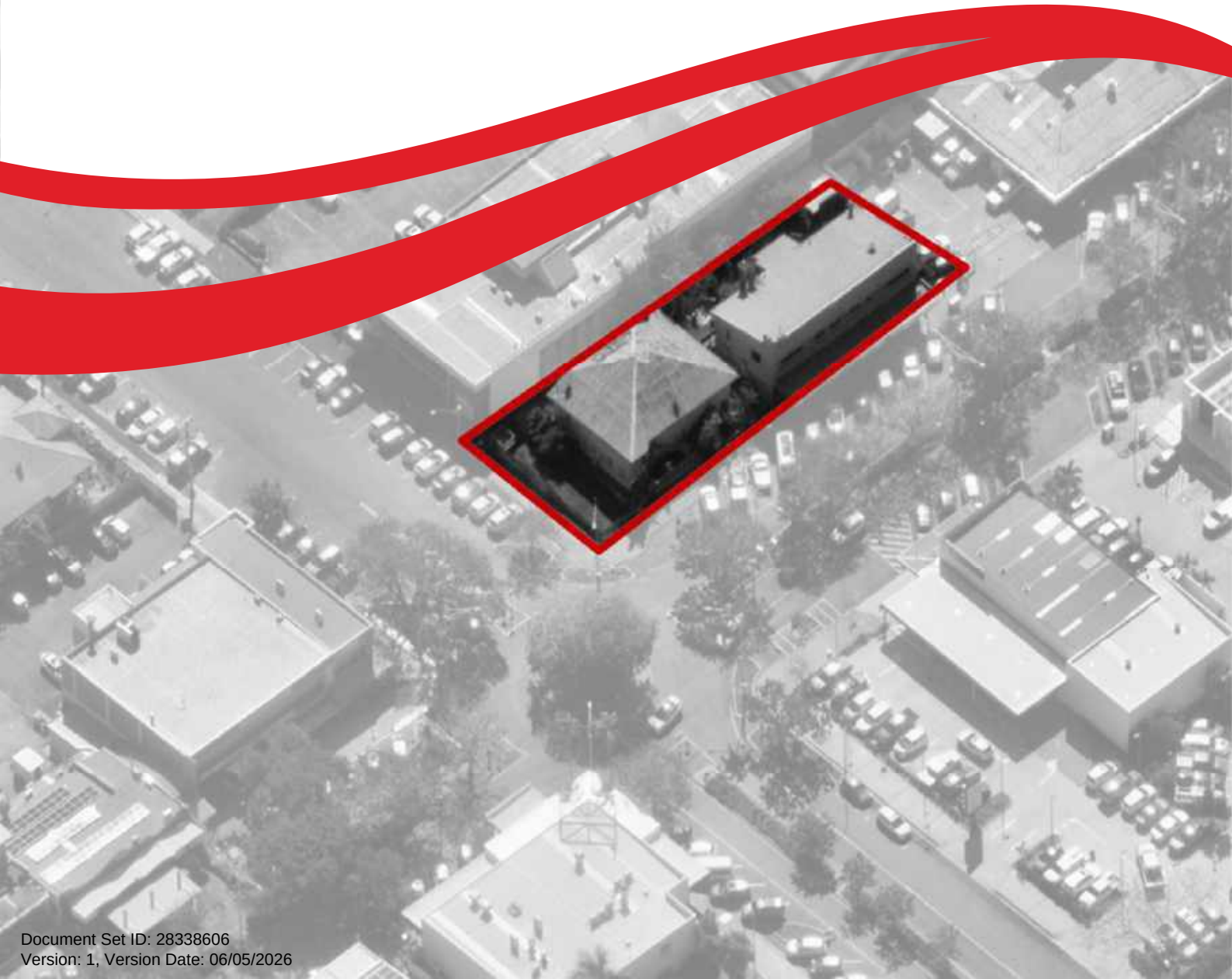

Appendix 10

MRA ENVIRONMENTAL

YOUR TRUSTED ENVIRONMENTAL PARTNER

NOW PART OF mlei CONSULTING ENGINEERS

WASTE MANAGEMENT PLAN

55 MITCHELL ST & 52 GREGORY ST TOWNSVILLE QLD 4810

CLIENT
Lexj Pty Ltd
April 2026

DOCUMENT INFORMATION

Contact Details:

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Client Details:

Client:	Lexj Pty Ltd c/ Marchese Partners
Client contact:	Jeurgen Weigl
Client Phone:	07 3211 2600

Document Details:

Title:	Waste Management Plan 55 Mitchell Street & 52 Gregory Street North Ward, Qld 4810
Project Number:	MRA26-035

Revision	Date	Author	Reviewed By	Issued By
V.1	27 April 2026	A Reiser	M Rigby	A Reiser

Destination	Draft	Final
Marchese Partners	V.1	V.1
MRA Environmental	V.1	V.1

LIMITATIONS

Mark Rigby & Associates Pty Ltd (MRA Environmental) has prepared this Waste Management Plan for the sole use of Lexj Pty Ltd c/- Marchese Partners to support a Development Application for a proposed development located at 55 Mitchell Street & 52 Gregory Street, North Ward QLD 4810.

Specifically, this report supports the Development Application and relates to the waste storage and collection activities for the operational phase of the planned development in accordance with the Townsville City Council *City Plan – SC6.4.22 Waste Management* requirements. This WMP will be submitted to Council as a component of the Development Application.

This report is for the sole use of Lexj Pty Ltd c/-Marchese Partners in relation to the Development Application to be submitted to the Townsville City Council. It may not contain sufficient information for the purposes of other parties, for other uses or at other locations.

We have performed our services for this project in accordance with our current professional standards. No other warranty, expressed or implied, is made as to the professional advice included in this submission.

Opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal opinions. The report also contains comments and information provided by others. MRA Environmental cannot take responsibility for advice provided by any third party.

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TABLES

FIGURES

1.0 INTRODUCTION

1.1 BACKGROUND

MRA Environmental (MRA) has been commissioned by the Lexj Pty Ltd c/- Marchese Partners to prepare a Waste Management Plan (WMP) for the proposed development located at 55 Mitchell Street & 52 Gregory Street, North Ward QLD 4810.

This WMP is to be submitted to City of Townsville (Council) as part of a Development Application prepared for the site and ensures that the waste storage and collection activities for the operational phase of the proposed development are generally in accordance with the *City Plan – SC6.4.22 Waste Management* requirements.

1.2 SITE DETAILS

The subject site is located on two (2) parcels of land formally described as Lots 1 and 2 on RP718777, with a total site area of 1,002m². The site is located at the intersection of Mitchell Street and Gregory Street, providing road frontages to the southeast and southwest boundaries, respectively.

Vehicular access is proposed via Mitchell Street, with pedestrian walkways along both street frontages. This site is in close proximity to The Strand beachfront promenade and adjoining parkland and is generally surrounded by a mix of residential & commercial properties (Refer to **Figure 1**). Waste servicing on Mitchell Street by a private waste contractor using a rear lift truck is proposed for the development.

The proposed development comprises a ten (10)-storey tower which will offer approximately 100 x one-bedroom hotel rooms located between Levels 3 and 9. Ground level is proposed to accommodate a range of retail and restaurant tenancies with outdoor seating. Parking and communal facilities for hotel guests are provided on Levels 1 and 2.

1.3 PURPOSE & SCOPE OF REPORT

This report represents a Waste Management Plan for the operational phase of the development, which includes:

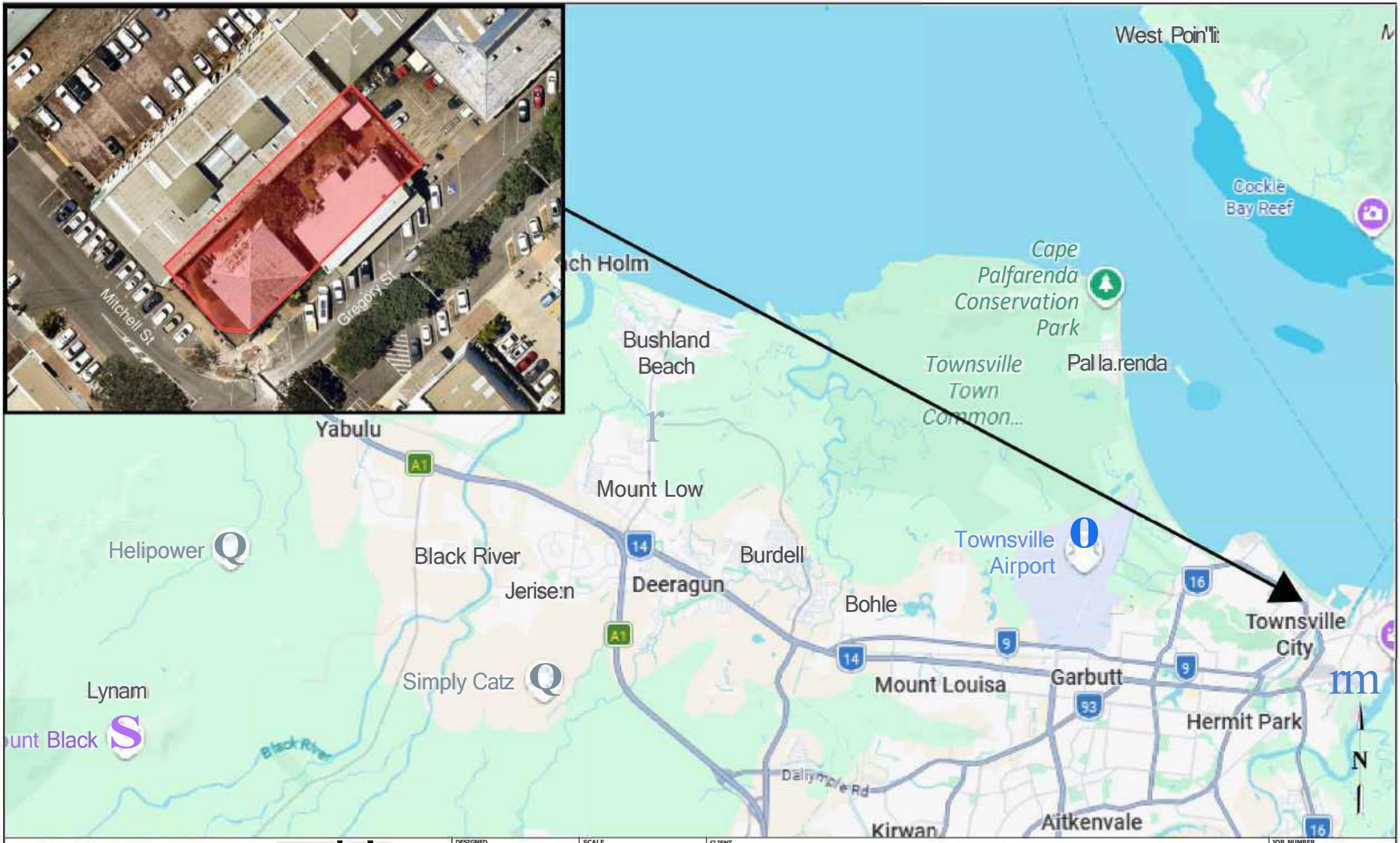
- Details on the anticipated type and quantity of waste (**Section 2.0**);
- Details of the waste storage room requirements and waste storage bins (**Section 3.0**); and
- Details of the proposed waste collection arrangements (**Section 4.0**).

1.4 WMP OBJECTIVES & STRUCTURE

The main objectives of this report are to provide details for optimal waste management in the operational phase of the development.

The structure of this report will be as follows:

- An introduction including the site details, summary, purpose and scope of the report along with the objectives and structure;
- Development figures including the site location and outlining the waste storage and servicing infrastructure and locations;
- Waste quantities including the type of waste, quantities of waste based on the proposed development tenancy;
- Proposed waste storage and servicing areas including waste storage infrastructure and locations within the development; and
- Details of the waste collection including servicing frequencies, the waste servicing area and collection vehicle access.



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DRAWN RP	LEVEL DATUM -	PROJECT WASTE MANAGEMENT PLAN 55 MITCHELL ST & 52 GREGORY ST, TOWNSVILLE	DRAWING Figure 1
CHECKED AR	SHEET SIZE A4		
APPROVED AR	CAD FILE	TITLE SITE LOCATION	
DATE APRIL 2026	ISSUE FINAL		REV A

mma ENVIRONMENTAL I YOUR TRUSTED ENVIRONMENTAL PARTNER
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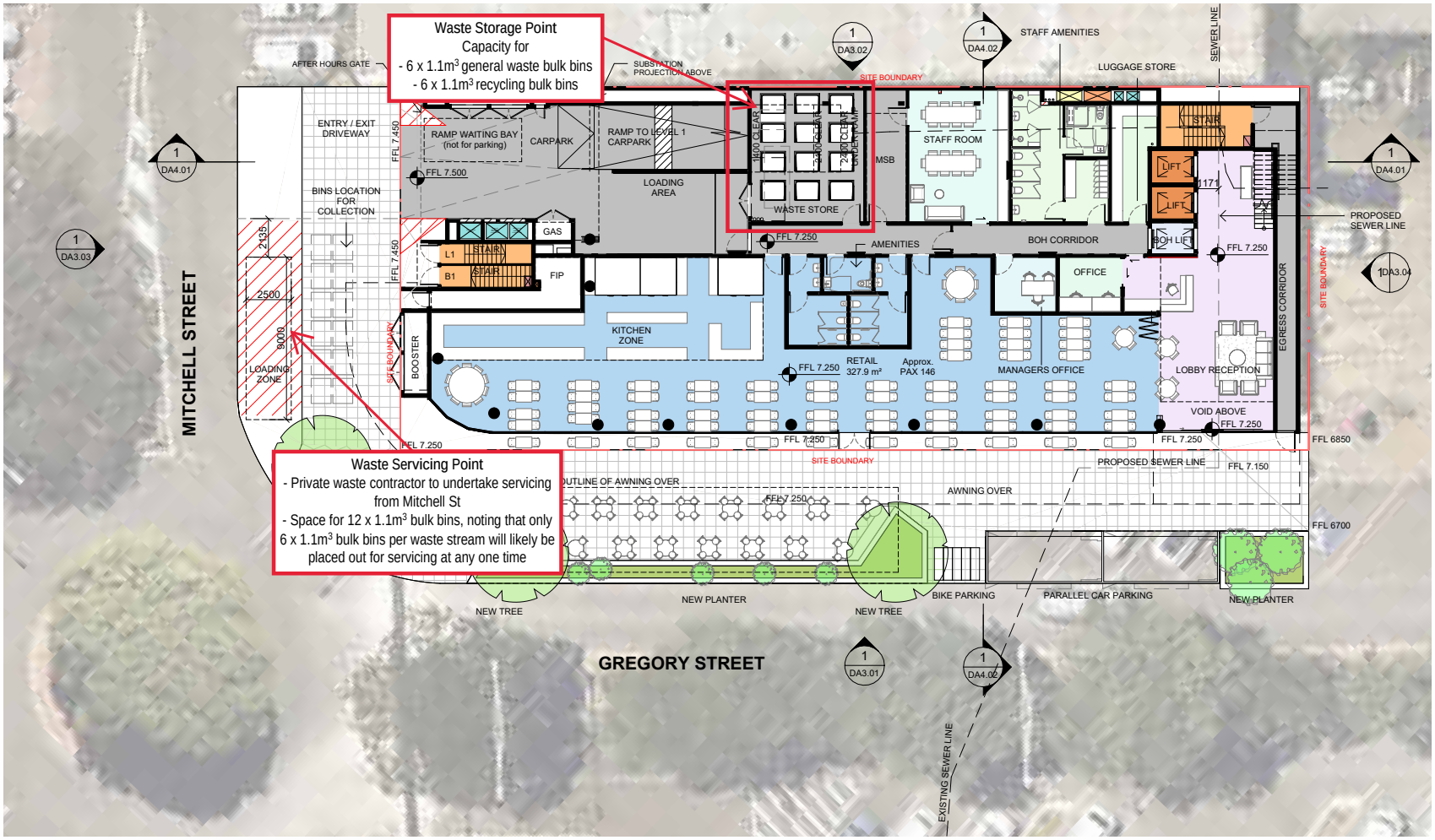

1 : 200@ A3

marchesepartners | Life3A | JANKOVIC PROPERTY GROUP

GROUND LEVEL
TOWNSVILLE HOTEL | 55 MITCHELL STREET + 52 GREGORY STREET

DA2.0G

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DESIGNED RP	SCALE NTS	CLIENT LEXJ PTYLTD	JOB NUMBER MRA26-035
DRAWN RP	LEVEL DATUM -	PROJECT WASTE MANAGEMENT PLAN 55 MITCHELL ST & 52 GREGORYST, TOWNSVILLE	DRAWING Figure 2
CHECKED AR	SHEET SIZE A4		
APPROVED AR	CAD FILE	TITLE WASTE STORAGE & SERVICING POINTS	REV A
DATE APRIL 2026	ISSUE FINAL		

2.0 WASTE QUANTITIES

2.1 TYPE OF WASTE

Based on the proposed land uses identified in **Section 1.2, Table 1** below outlines the predicted types of waste that are expected to be generated from the proposed development.

Table 1: Predicted waste types to be generated

Tenancy Type	Predicted Waste Types
Short-term Accommodation, Food & Drink Outlets and Retail tenancies	General waste, recycling & waste cooking oil

2.2 WASTE QUANTITIES

Calculations of the anticipated waste quantities have been separated into the general waste and recycling components. As there are no waste generation rates provided within Council's *SC6.4.22 Waste Management* requirements, it is typically acceptable to utilise waste generation rates provided in other local government planning schemes.

As such, the waste calculations for this report were performed using typical waste generation rates as provided in Appendix A of City of Gold Coast Council's *SC6.16 City Plan Policy v.13 – Solid Waste Management*.

2.3 HOTEL ROOMS & COMMERCIAL TENANCIES

Table 2 displays the general waste quantities and **Table 3** displays the recycling quantities that are anticipated for the 100 hotel rooms within the proposed development.

Table 2: Anticipated hotel room general waste quantities

Component	Apartment Type	No.	Estimated Waste Generation Rate (L/week)	Total Required Waste Capacity (L/week)	Estimated Waste Generation (m^3/week)	Estimated Daily Waste Generation (m^3/day)
Hotel Rooms	1 bedroom	100	35	3,500	3.50	0.50
Total		**100**		**3,500**	**3.50**	**0.50**

Table 3: Anticipated hotel room recycling quantities

Component	Apartment Type	No.	Estimated Waste Generation Rate (L/week)	Total Required Waste Capacity (L/week)	Estimated Waste Generation (m^3/week)	Estimated Daily Waste Generation (m^3/day)
Hotel Rooms	1 bedroom	100	35	3,500	3.50	0.50
Total		**100**		**3,500**	**3.50**	**0.50**

Table 4 displays the general waste quantities and **Table 5** displays the recycling quantities that are anticipated for the commercial tenancies within the proposed development.

Table 4: Anticipated commercial general waste quantities

Type	Approx. Floor Space (m^2)	Estimated Waste Generation Rate ($L/100m^2/day$)	Total Required Waste Capacity (L/day)	Estimated Waste Generation (m^3/week)	Estimated Waste Generation (m^3/day)
Ground Floor Restaurant	327.9	660	2,164.14	15.15	2.16
Ground Floor Reception	83.2	30	24.96	0.17	0.02
Ground Floor Staff Room/Administration	60	30	18	0.13	0.02
TOTAL	**471.1**		**2,207.1**	**15.45**	**2.21**

Table 5: Anticipated commercial recycling quantities

Type	Approx. Floor Space (m^2)	Estimated Waste Generation Rate ($L/100m^2/day$)	Total Required Waste Capacity (L/day)	Estimated Waste Generation (m^3/week)	Estimated Waste Generation (m^3/day)
Ground Floor Restaurant	327.9	200	655.80	4.59	0.66
Ground Floor Reception	83.2	40	33.28	0.23	0.03
Ground Floor Staff Room/Administration	60	40	24.00	0.17	0.02
TOTAL	**471.1**		**713.08**	**4.99**	**0.71**

It should be noted that waste cooking oil facilities will be provided for the development, however, the quantity of waste cooking oil generated can vary greatly, depending on type of food & beverage, seasonality etc. For that reason, no estimates for waste cooking oil have been provided. There is sufficient area for appropriate storage of waste cooking oil containers in the hotel waste storage points and bulk bin servicing point.

2.4 TOTAL WASTE CAPACITY

The hotel rooms are estimated to generate a total of approximately **0.50m³ per day** of general waste and **0.50m³ per day** of recyclable waste.

The commercial tenancies from the development are expected to generate approximately **2.21m³/day** of general waste and approximately **0.71m³/day** of recycling waste.

In summary, the proposed development is anticipated to generate approximately **2.71m³/day** of general waste and approximately **1.21m³/day** of recycling waste.

3.0 WASTE & RECYCLING STORAGE

This section outlines the general design criteria for the waste storage point, as required by Council's *SC6.4.22 - Waste Management* requirements, along with a description of the proposed bins to be used.

3.1 WASTE STORAGE POINT

The proposed development will provide a single waste storage point located at the ground level adjacent to the master switchboard (MSB) & internal loading area (Refer to **Figure 2**).

Waste generated by the hotel rooms and commercial tenancies will be transferred manually by tenancy staff / contracted cleaning staff to the waste storage point and placed directly into the relevant bulk bins.

The waste storage point will be designed and constructed to meet the requirements listed below:

1. Designed to allow the bins to be moved from these areas and transported to the servicing point (no steps or lips on bin carting route);
2. Screened/enclosed such that they are not visible from any street frontage;
3. Of sufficient size to accommodate the required number of bins allowing for adequate clearance surrounding each bin;
4. Constructed hardstand area with a solid concrete base or acceptable equivalent;
5. Roofed and designed to prevent entry to rainwater;
6. The storage of waste must not cause odour, dust or noise related nuisance to neighbouring properties;
7. Provided with adequate artificial lighting;
8. Doors must be wide enough to allow for the easy removal of the largest container to be stored;
9. The walls, floor and equipment of the waste storage point is to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning.

3.2 PROPOSED WASTE BINS

To ensure that the design of the waste storage point is sufficient, the details of the type of waste and number of bulk bins provided to accommodate the general waste and recycling generated from proposed development is outlined in **Table 6**.

Table 6: Details of proposed bins & servicing frequency

Waste Type	Waste Quantity (m^3/week)	Bins Proposed	Collection Frequency
General Waste	18.95	6 x 1.1m^3 bulk bins	Three times per week
Recycling	8.49	6 x 1.1m^3 bulk bins	Twice per week

3.3 DIMENSIONS OF WASTE CONTAINERS

Table 7 below provides dimensions of the bulk bins to be used on-site. The 1.1m^3 bulk bins will be composed of heavy-duty plastic with lightweight plastic lids.

Table 7: Dimensions of waste storage bins

Bin Type	Volume	Length (mm)	Width/ Diameter (mm)	Height (mm)	Collection Vehicle Type
Bulk bin	1.1m^3	1,280	1,080	1,340	Rear Lift Truck

3.4 DRAINAGE AND BIN WASH

Bin wash facilities (including hose-cock) will be provided in the waste storage point, which is also graded to a central drainage point that is connected to sewer, in accordance with trade waste requirements. It is the responsibility of site management to wash bins and to maintain the cleanliness of the waste storage point.

4.0 DETAILS OF COLLECTION

4.1 FREQUENCY

Waste servicing frequencies for general waste and recycling bulk bins for the development have been outlined in **Table 6.** The general waste is anticipated to be serviced three (3) times per week (typically between Monday to Friday), and the recycling is anticipated to be serviced twice per week (typically Tuesday & Friday).

4.2 BULK BIN SERVICING POINT

Servicing from Mitchell St is proposed for the development. The site is on a truncated corner of Mitchell St & Gregory St and there is only 15m frontage onto Mitchell St. As there is limited frontage on Mitchell St to provide the driveway & water infrastructure, on-site turnaround for the waste collection vehicle is not achievable. As such, a loading zone is provided outside of the curtilage of the site adjacent to the driveway.

Therefore, an alternative solution for waste servicing is proposed whereby the bulk bins are placed in a dedicated location for collection adjacent to the loading zone for servicing (Refer to **Figure 2**). Given the site is in close proximity to The Strand, it is understood that this type of waste servicing arrangement is not uncommon, with waste servicing generally undertaken early in the morning to ensure minimal disruption to business & tourist activities during the day.

The proposed waste management strategy is considered the most efficient use of the development site whilst also providing an effective waste management system that is adequate for the type and volume of waste generated by the proposed development.

The bins will be transferred by site management from the waste storage point to the servicing point when scheduled. The bulk bins will be transferred by the engaged waste contractor to/from the bulk bin servicing point for servicing. Servicing of general waste and recycling bulk bins will be scheduled to occur on alternate days. There is sufficient capacity available within the bulk bin servicing point for temporary storage of at twelve (12) x 1.1m^3 bulk bins which is more than the six (6) x 1.1m^3 bulk bins per waste stream anticipated to be serviced at any one time.

The bulk bin servicing point will be designed to meet the following requirements:

1. Sufficient access and clearance for the waste and recycling collection vehicles to service the bins;
2. Installation of “No standing any time” signs to ensure designated refuse truck turning areas are provided to waste collection vehicles for safe access;
3. Constructed so that waste collection vehicles can enter and exit the site in a forward manner;
4. Bin-carting route must allow bins to be easily manoeuvred and be devoid of steps or steep rises;
5. Bin-carting route must not extend through habitable parts of a building, or a food premises, and only occur through common property or publicly accessible locations;

6. Constructed hardstand with a solid concrete base or acceptable equivalent, positioned on a level pad within the site;
7. Allow for sufficient clearance between each side of the bin and any barrier around the location; and
8. Bin carting must be via hard stand pathways or internal roads and can be easily moved to the temporary storage point and is not stored on a section of the driveway that falls away (e.g. to the basement).

4.3 COLLECTION VEHICLE ACCESS

The bulk bin servicing point has been located to allow for easy access by collection vehicles adjacent to the loading zone provided on Mitchell Street. driveway. A rear lift truck will service the site and unroofed & unimpeded overhead clearance is provided along the path of travel and in the servicing point.

Table 8 below details the dimensions of typical rear-lift waste collection vehicles that will be used to service the development.

Table 8: Rear lift truck dimensions

Parameter	Rear Lift truck
Height (m)	3.39
Width (m)	2.48
Length (m)	9.0
Working Height (m)	3.5*-3.7
Total Tonnage (max)	23.5

*Note that the waste collection vehicle clearance height (working height) is to be calculated according to the following formula as a minimum:

SUITABLE CLEARANCE	=	VEHICLE OPERATING DIMENSION	+	100mm	+	CLEARANCE FOR SERVICES	+	CALCULATION FOR ROADWAY GRADIENT

5.0 SUMMARY

Details of this Waste Management Plan are summarised below:

- The subject site is located on two (2) parcels of land formally described as Lots 1 and 2 on RP718777, with a total site area of 1,002m². The site is located at the intersection of Mitchell Street and Gregory Street, providing road frontages to the southeast and southwest boundaries, respectively;
- Vehicular access is proposed via Mitchell Street, with pedestrian walkways along both street frontages. This site is in close proximity to The Strand beachfront promenade and adjoining parkland and is generally surrounded by a mix of residential & commercial properties (Refer to **Figure 1**). Waste servicing on Mitchell Street by a private waste contractor using a rear lift truck is proposed for the development;
- The proposed development comprises a ten (10)-storey tower which will offer approximately 100 x one-bedroom hotel rooms located between Levels 3 and 9. Ground level is proposed to accommodate a range of retail and restaurant tenancies with outdoor seating. Parking and communal facilities for hotel guests are provided on Levels 1 and 2;
- The proposed development is anticipated to generate approximately **2.71m^3/day** of general waste and approximately **1.21m^3/day** of recycling waste;
- The proposed development will provide a single waste storage point located at the ground level adjacent to the master switchboard (MSB) & internal loading area (Refer to **Figure 2**);
- Waste generated by the hotel rooms and commercial tenancies will be transferred manually by tenancy staff / contracted cleaning staff to the waste storage point and placed directly into the relevant bulk bins;
- Servicing from Mitchell St is proposed for the development. The site is on a truncated corner of Mitchell St & Gregory St and there is only 15m frontage onto Mitchell St. As there is limited frontage on Mitchell St to provide the driveway & water infrastructure, on-site turnaround for the waste collection vehicle is not achievable. As such, a loading zone is provided outside of the curtilage of the site adjacent to the driveway;
- Therefore, an alternative solution for waste servicing is proposed whereby the bulk bins are placed in a dedicated location for collection adjacent to the loading zone for servicing (Refer to **Figure 2**). Given the site is in close proximity to The Strand, it is understood that this type of waste servicing arrangement is not uncommon, with waste servicing generally undertaken early in the morning to ensure minimal disruption to business & tourist activities during the day;
- The proposed waste management strategy is considered the most efficient use of the development site whilst also providing an effective waste management system that is adequate for the type and volume of waste generated by the proposed development.