rytenskild
Traffic Engineering

TRANSPORT ASSESSMENT

PROPOSED WAREHOUSE DEVELOPMENT

PROPOSED LOT 104 FLAGSTONE LOGISTICS ESTATE, NORTH MACLEAN

(RESPONSE TO INFORMATION REQUEST DATED 5 NOVEMBER 2024)

Prepared for

CH HYDRANGEA PTY LTD

18 DECEMBER 2024

PLANS AND DOCUMENTS
referred to in the PDA
DEVELOPMENT APPROVAL

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1.0 INTRODUCTION

This Transport Assessment report has been prepared on behalf of CH Hydrangea Pty Ltd (Applicant) in support of a development application over land at 4499-4651 Mount Lindesay Highway, North Maclean QLD 4280 and described as Lot 39 on SP258739 (site).

This report is an amended version of the one submitted with the PDA Development Application and responds to transport related items raised by Council in its Information Request letter dated 5 November 2024.

Responses to the Service Access and Parking code, and State Code 1 have been removed from this version of the report. A brief response to each is provided below with further information provided throughout the report.

Item:

6) Traffic & Parking

a) The submitted architectural plans indicate that vehicle movement will encroach within the Powerlink Easement. Further clarification is requested for the following:

- ***i) Demonstrate that heavy vehicles manoeuvring within the easement are able to maintain statutory clearances set out in the Electrical Safety Regulation 2013. Submit an RPEQ certified plan showing vertical clearances that consider aspects such as line sag and conductor shadow area as a minimum.***
- ***ii) If required, clarify how heavy vehicles will be prevented from entering the Powerlink easement. Provide details of any physical barrier required.***

b) Provide additional details for cycle infrastructure:

- ***i) Demonstrate compliance with Queensland Development Code MP4.1 regarding the end-of-trip (EOT) facilities (including shower locations) and cycle connectivity through the site. It is recommended that EOT facilities are located near bike parking so that employees do not have to traverse the building to reach EOT facilities from bike parks.***
- ***ii) Provide a safe cycle route through the site that considers heavy vehicle movement.***
- ***iii) Provide clarification whether the bicycle parking is located under cover.***

c) Provide further clarification on Electric Vehicle (EV) charging:

- ***i) Submit updated car parking plans demonstrating the location of all EV charging stations.***

d) The submitted documentation indicates that only 165 parking spaces are proposed, contrary to the required number of 440 parking spaces prescribed within the Servicing, access and parking code of the Logan Planning Scheme 2015. Although it is acknowledged that Section 4.1 of the planning report submitted provides justification for the reduced car parking, further detail is requested for the following:

- ***i) Provide further detail on the operations and type of tenancy envisioned for the proposed warehouse, and***
- ***ii) Provide confirmation of the maximum number of staff and visitors expected on-site during peak times.***

e) A review of the vehicle swept path for B-doubles within Figure 6.9 of the submitted Transport Assessment report (prepared by Rytenskild, Version 1, dated 12 September 2024) indicates that the left exit may impact upon the street parking on the opposing lane. Therefore, the following further information is required to address this concern:

- ***i) Submit amended swept path plans to indicate a yellow line marking on the street parking to prohibit vehicles from parking on that section of the street, or***
- ***ii) Submit amended swept path plans with variations to the B-double's left exit path to prevent it from impacting street parking.***

Response:

Item (a): As demonstrated in the civil drawings, the lowest clearance distance to the powerlines is 7.69m, exceeding the minimum clearance requirement of 4.5m for the heavy vehicles expected to traverse the easement.

Item (b):

i. The end of trip facilities are located within the office component of the building, and parking spaces are located adjacent to the façade of the office component (within 100m of the building entrance).

ii. A pedestrian pathway has been provided between the pathway along the northern frontage of the site and the building entrance. It is proposed that cyclists would dismount at the front gate and use the pedestrian route to access the bicycle parking facilities.

iii. Class C bicycle parking is provided, which is not located undercover. This is considered satisfactory as the Logan Planning Scheme 2015 does not mandate bicycle parking provision for the proposed use.

Item (c)i: EV charging bays will be provided for 6% of the car parking bays, with provisions (conduiting) installed to allow 20% of the car parking bays to be converted to EV charging bays in the future.

Item (d): Refer to Section 4.2.

Item (e):

i. As shown in Figure 6.9, a 'No Stopping' zone is proposed to be installed along the opposite side of the road to allow for satisfactory manoeuvring of B-Double vehicles.

ii. As shown in Figure 6.9, the swept path for the B-Double has been adjusted to minimise its impact on the car parking located on the opposite side of the road.

2.0 SUBJECT SITE

As shown in Figure 2.1, the subject site is located within the Flagstone Logistics Estate, on the south west corner of new estate road and new collector road. The site is identified as proposed Lot 104 and has a total site area of 78,698m^2.

The site is located within the Greater Flagstone Priority Development Area, and currently vacant.

FIGURE 2.1 – LOCATION OF SUBJECT SITE

3.0 DEVELOPMENT PROPOSAL

The proposed warehouse has been custom designed to suit the operational requirements of a particular user. The proposal has a Gross Floor Area (GFA) of 43,956m^2.

The intended user has advised that it will operate with up to 150 persons on-site, including a small number of visitors.

The proposal provides a total of 165 car parking spaces, including 4 spaces for people with a disability (PWD).

Heavy vehicles will access the site at the eastern end of the industrial collector road frontage. Primary access for the car parking area will be provided towards the western end of the collector road frontage.

The proposed site plan is shown in Figure 3.1.

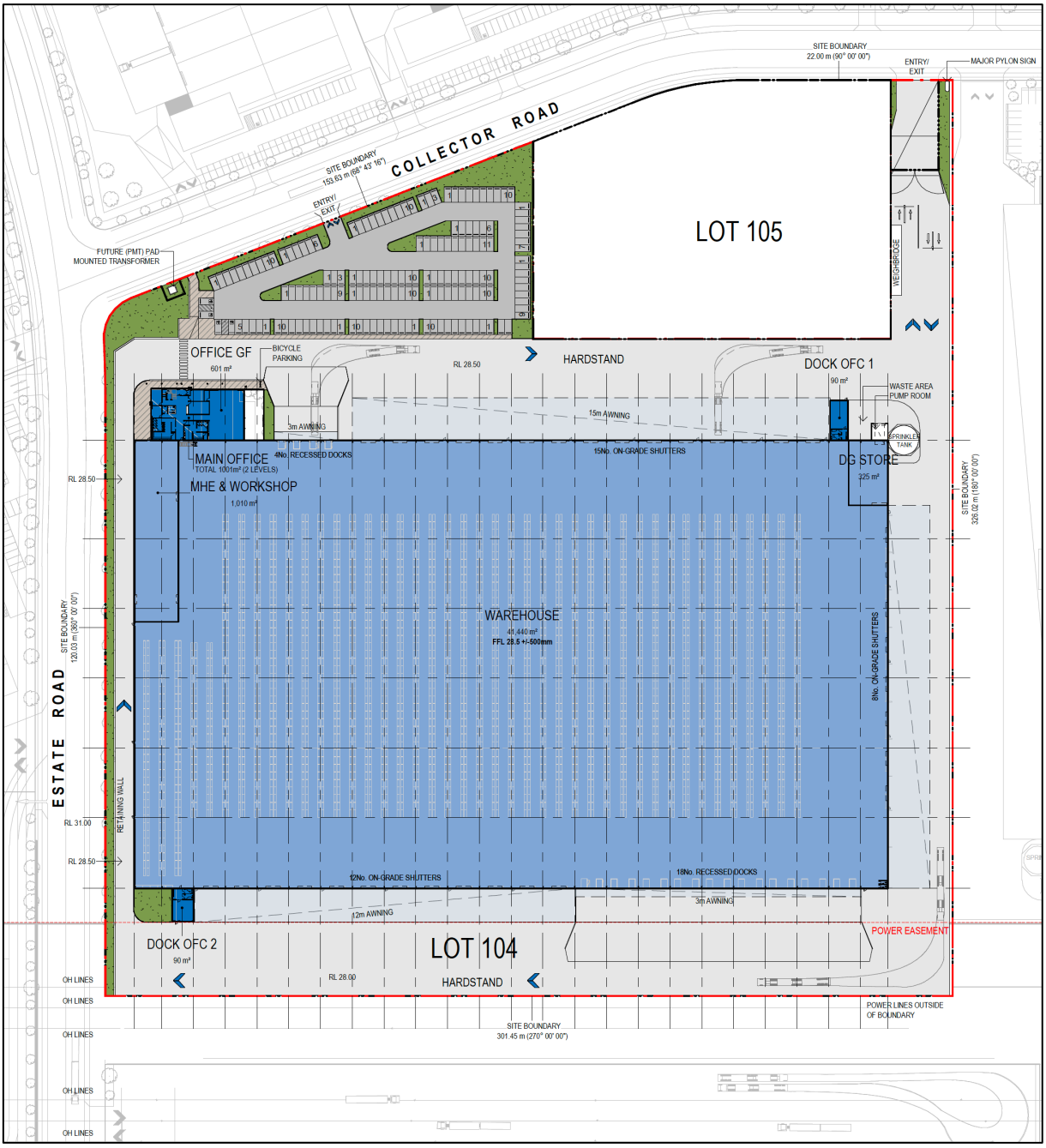

FIGURE 3.1 – PROPOSED SITE PLAN

4.0 CAR PARKING

4.1 Car Parking Supply

In accordance with the Logan Planning Scheme, the following car parking rate is applicable to the proposed development:

Warehouse:
1 space per 100m^2 GFA

Application of the above rate results in a requirement for 440 spaces, as follows:

Table 4.1: Acceptable Outcome for car parking

Component	Minimum Car Parking Spaces Required
Warehouse (43,956m^2)	440 (439.56) spaces

The proposal provides a total of 165 car parking spaces and is therefore short of the Acceptable Outcome.

4.2 Adequacy of Proposed Car Parking Provisions

The tenant is confidential at this stage; however, the building has been designed for warehouse use and can only be operated by a limited number of persons. It has not been designed for manufacturing or other industrial purposes that typically generate a relatively high density of workers. It is estimated that the overall building will have a maximum of 20 people within the office space, and 130 persons within the warehouse use, with a total maximum of 150 staff members onsite at any one time.

The proposed provision of 165 car parking spaces will comfortably accommodate the expected staffing levels, and results in a car parking rate of 0.38 spaces per 100m^2 GFA. This approach is consistent with recent approvals, such as DEV2023/1466, where a warehouse (distribution centre) with a GFA of 40,939m^2 was approved with a total of 140 car parking spaces. This equates to a rate of 0.34 spaces per 100m^2 GFA. Additionally, for application MCUI/24/2022/A, a warehouse with a GFA of 21,055m^2 was approved with 100 car parking spaces, resulting in a rate of 0.47 spaces per 100m^2 GFA. These examples demonstrate that EDQ and LCC have supported similar uses with comparable or lower parking provisions.

As depicted in Figures 4.1 – 4.3, a review of car parking utilisation has been carried out using Nearmap aerial imagery. The results of the review are summarised in Table 4.2, with the car parking relationships detailed in Table 4.3.

As shown in Table 4.3, the surveyed sites indicate low car parking utilisation, with car parking rates as low as 0.17 spaces per 100m^2 GFA. RTE has been involved in many large warehouse unit developments and find that the rates shown below are typical of user requirements.

Table 4.2 – Aerial Imagery Survey Results

Location	Number of Car Parking Spaces Occupied		
	Tuesday 11th April 23	Wednesday 2nd Nov 22	Tuesday 16th August 22
Bluestone Place, Yatala	20 spaces	28 spaces	31 spaces
Arthur Dixon Crt, Yatala	14 spaces	22 spaces	23 spaces
Thomas Hanlon Crt, Yatala	9 spaces	7 spaces	8 spaces

Table 4.3 – Average Car Parking Rates

Location	Approx. Area	Avg. Spaces Occupied	Car Parking Rate
Bluestone Place, Yatala	9,000m^2	15 spaces	0.17 spaces per 100m^2
Arthur Dixon Crt, Yatala	8,500m^2	19 spaces	0.23 spaces per 100m^2
Thomas Hanlon Crt, Yatala	2,500m^2	21 spaces	0.84 spaces per 100m^2

Given the above data, the provided car parking rate of 0.38 spaces per 100m^2 is considered to be satisfactory, and should adequately meet future car parking demands.

FIGURE 4.1 – CAR PARKING DEMANDS AT 1 BLUESTONE PLACE, YATALA (GFA APPROX: 9,000M^2)

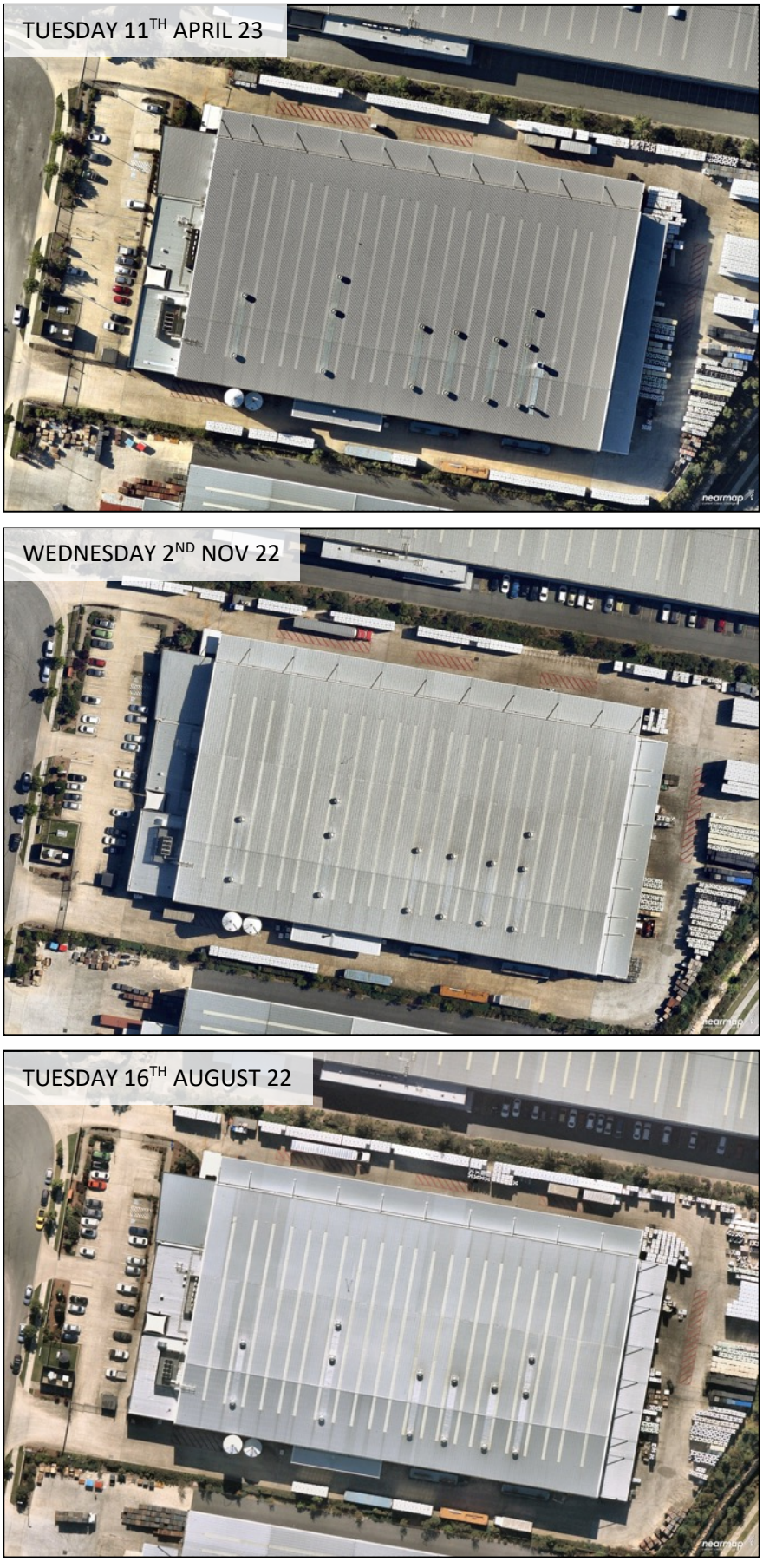

FIGURE 4.2 – CAR PARKING DEMANDS AT 23 ARTHUR DIXON COURT, YATALA (GFA APPROX: 8,000M^2)

FIGURE 4.3 – CAR PARKING DEMANDS AT 14 THOMAS HANLON COURT, YATALA (GFA APPROX: 2,500M^2)

4.3 Car Parking Design

The geometric layout of the proposed parking facilities has been designed to comply with the relevant requirements specified in the Planning Scheme and AS2890.1: 2004.

The proposed car parking layout has the following dimensions:

Car parking aisle - 6.5 metres (min)
Car parking spaces - 2.5m x 5.4m
PWD spaces - 2.4m x 5.4m, plus 2.4m wide shared zone

The layout and dimensions are shown in Figures 4.4 – 4.14. Swept path diagrams for B85 and B99 design vehicles are shown in Figures 4.12 – 4.17.

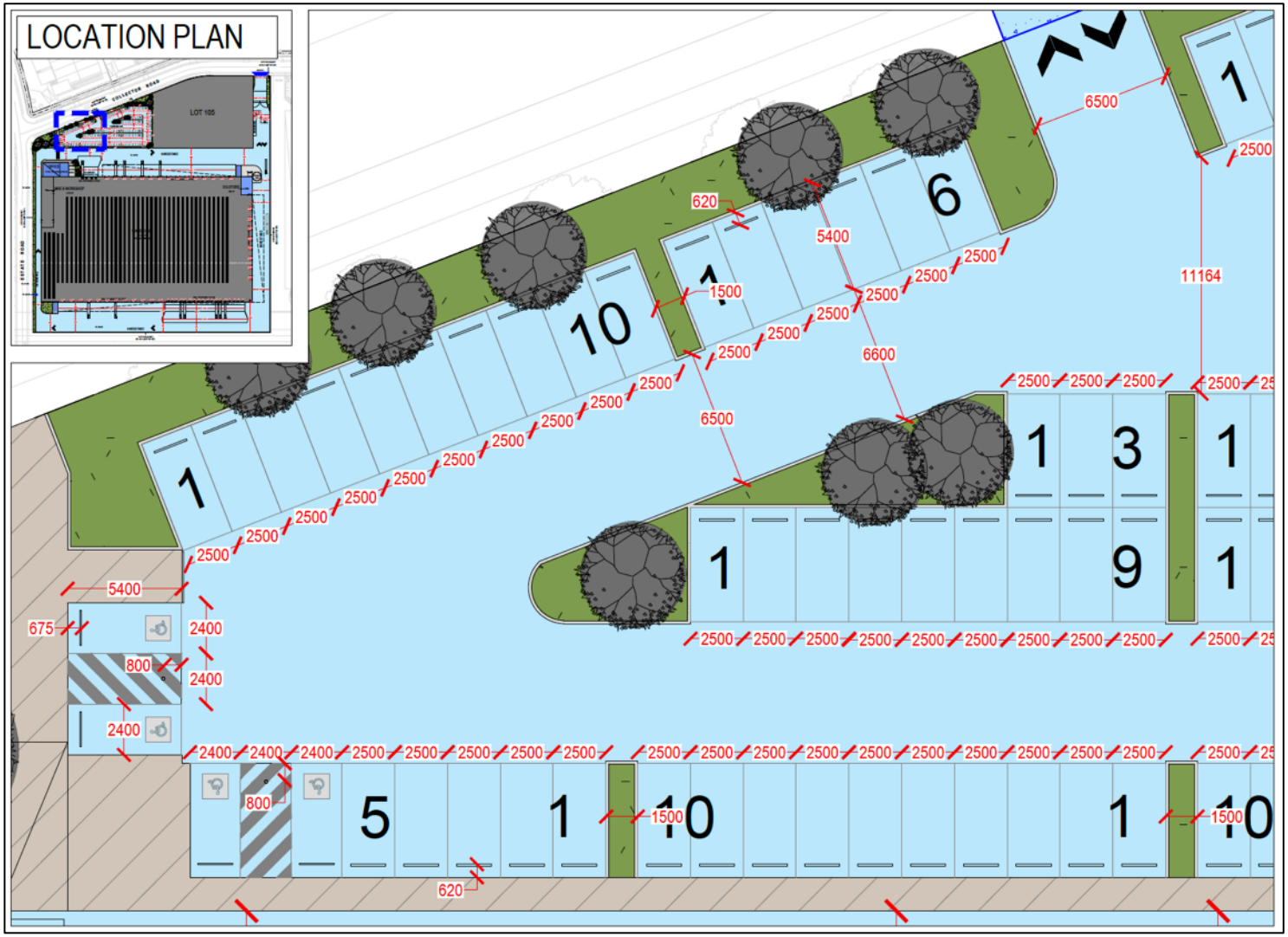

FIGURE 4.4– PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

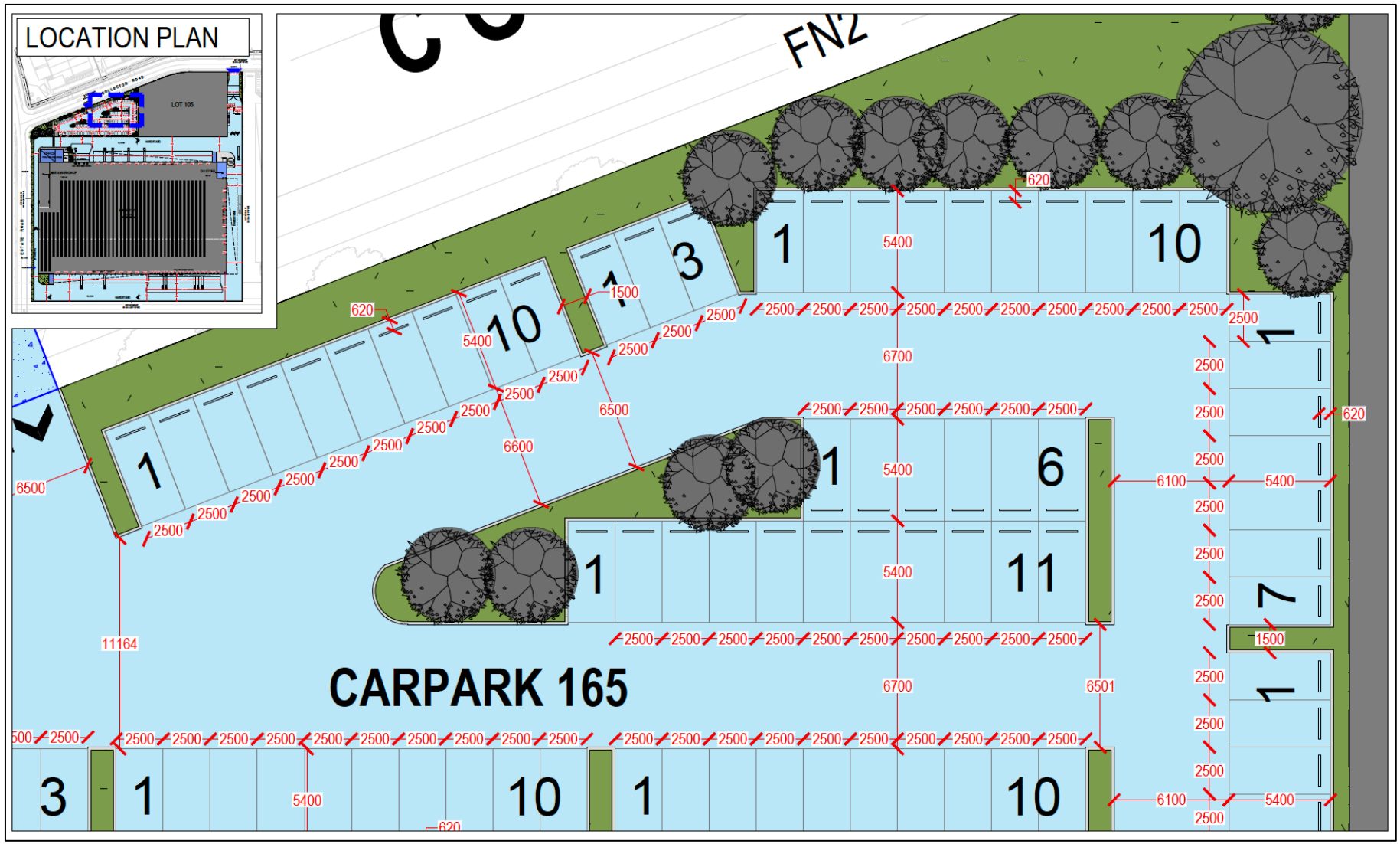

FIGURE 4.5 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

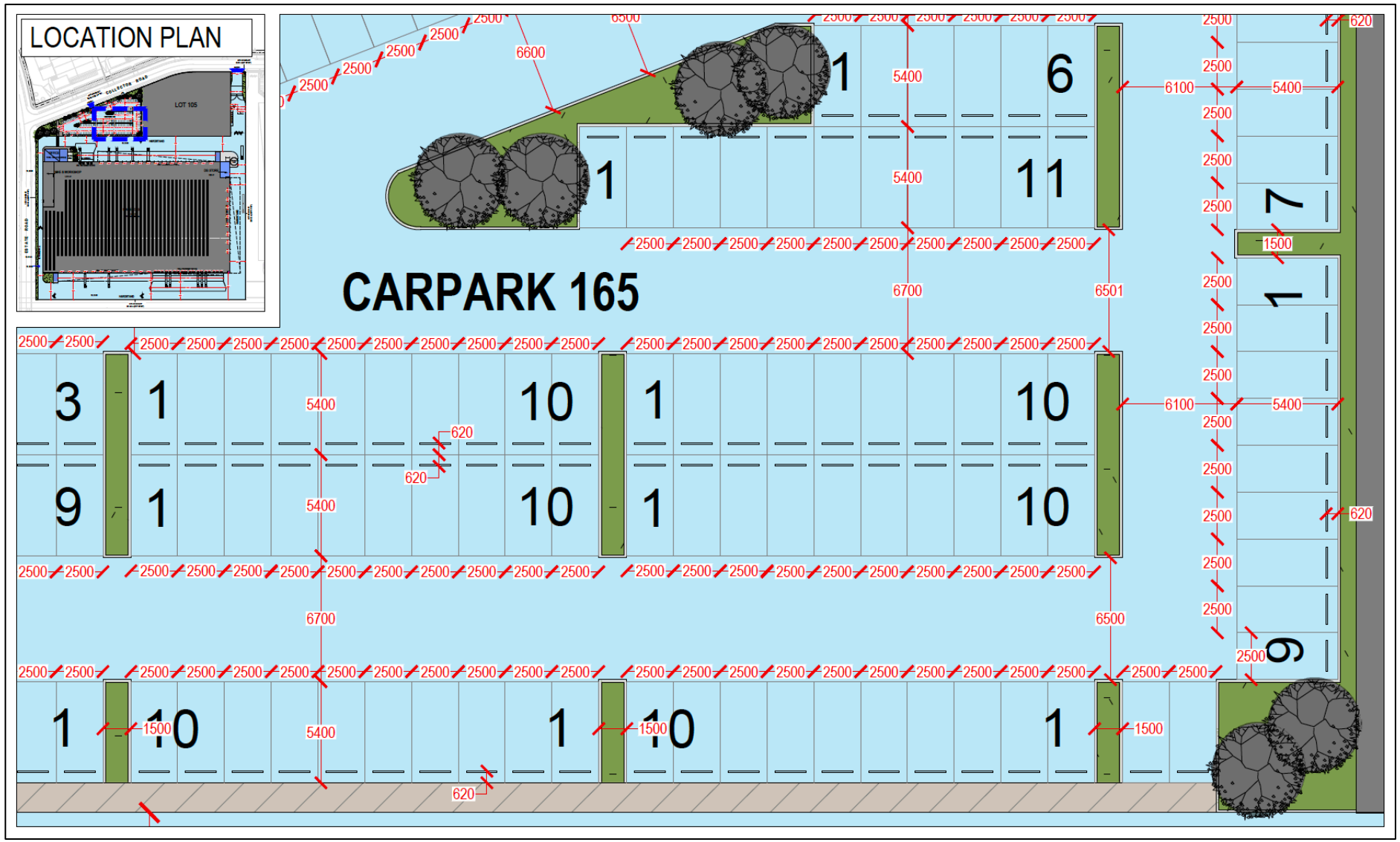

FIGURE 4.6 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

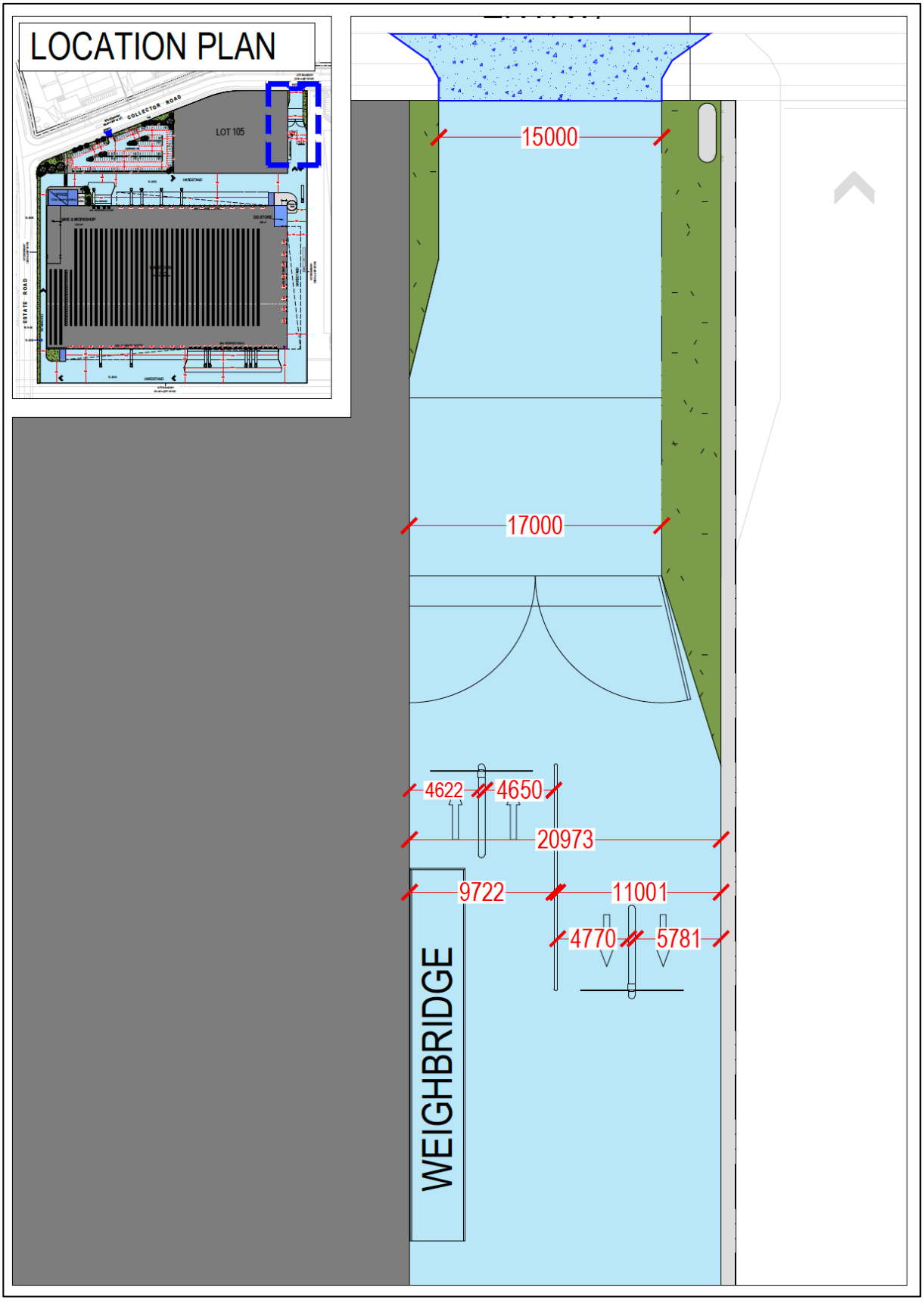

FIGURE 4.7 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

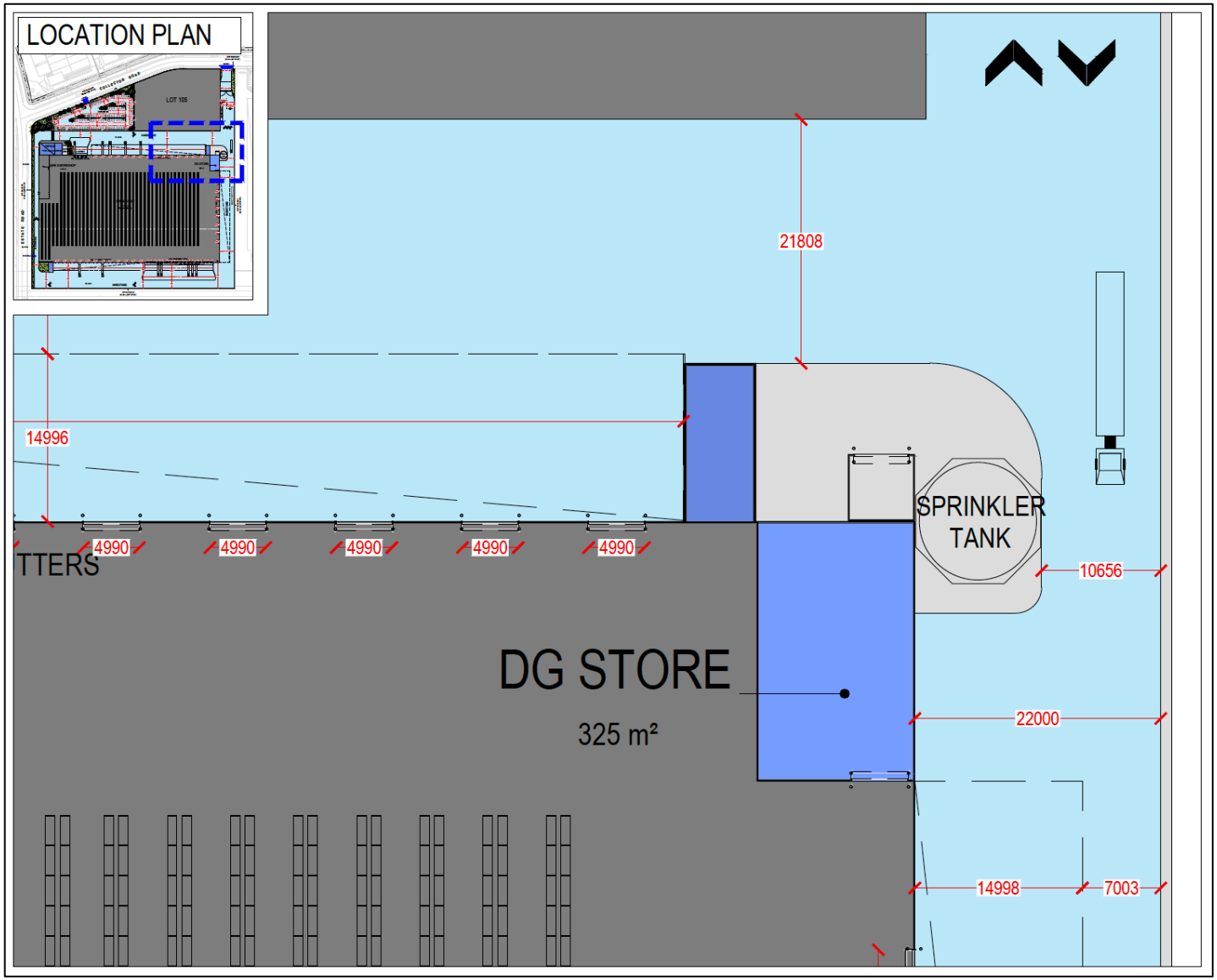

FIGURE 4.8 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

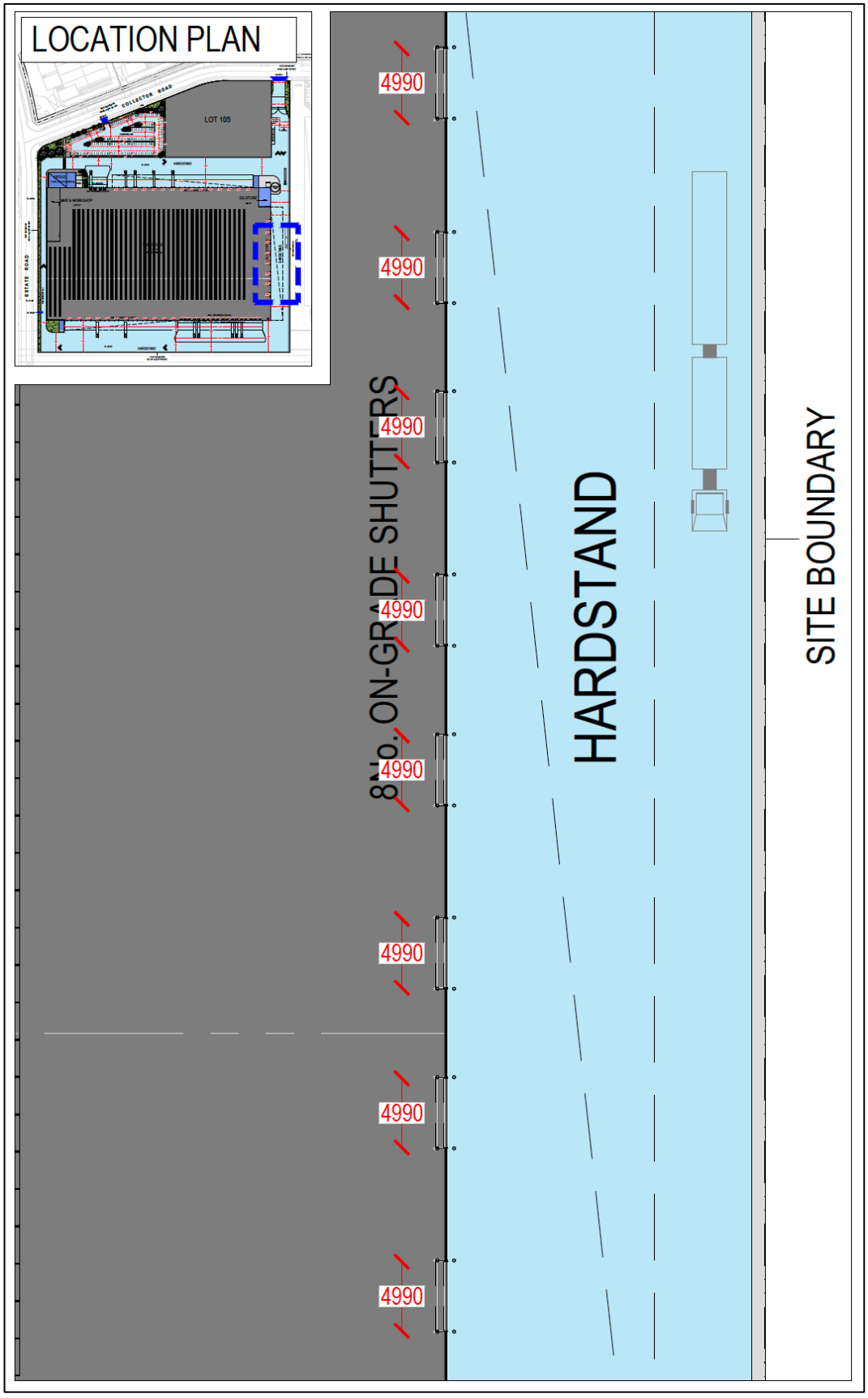

FIGURE 4.9 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

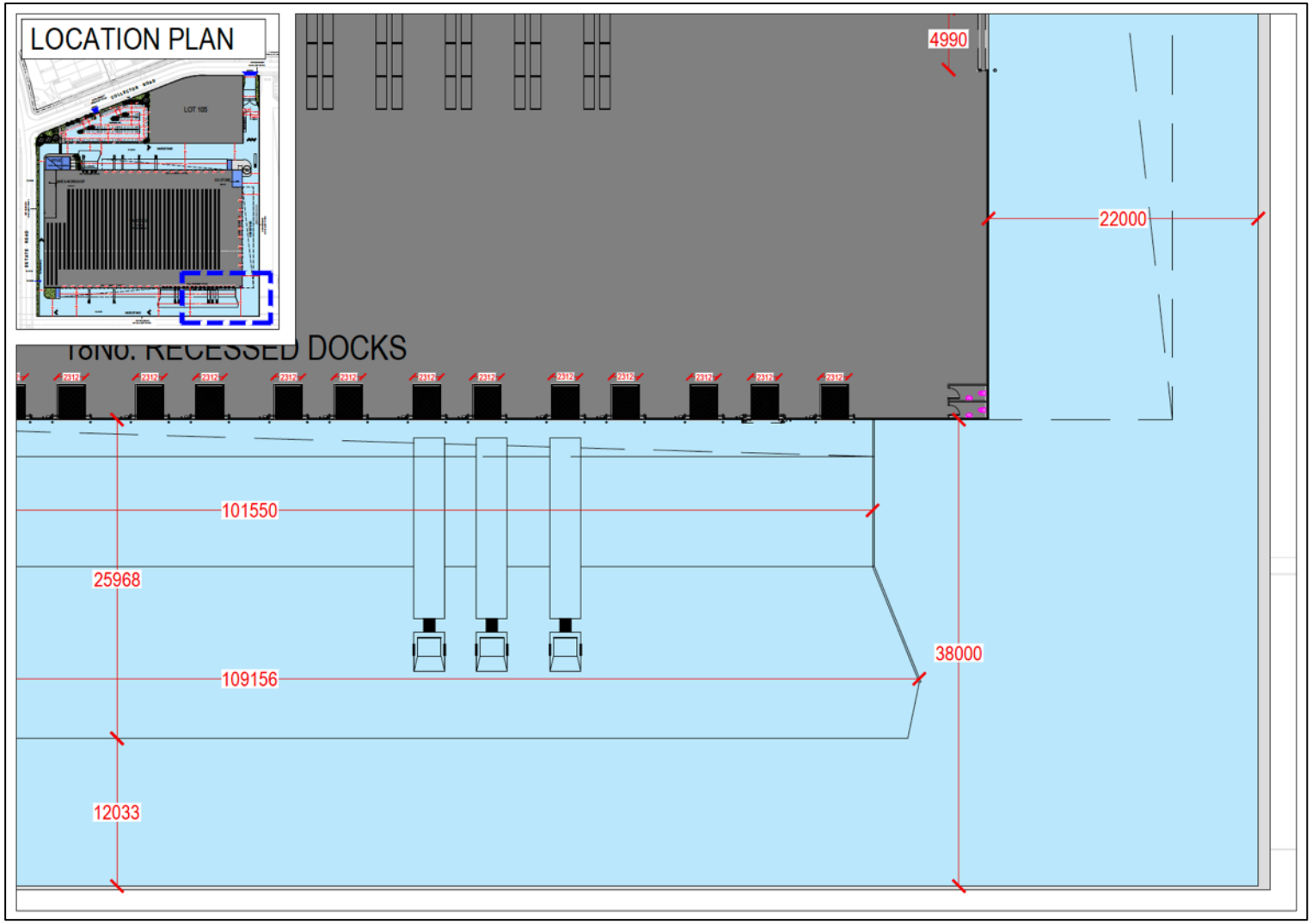

FIGURE 4.10 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

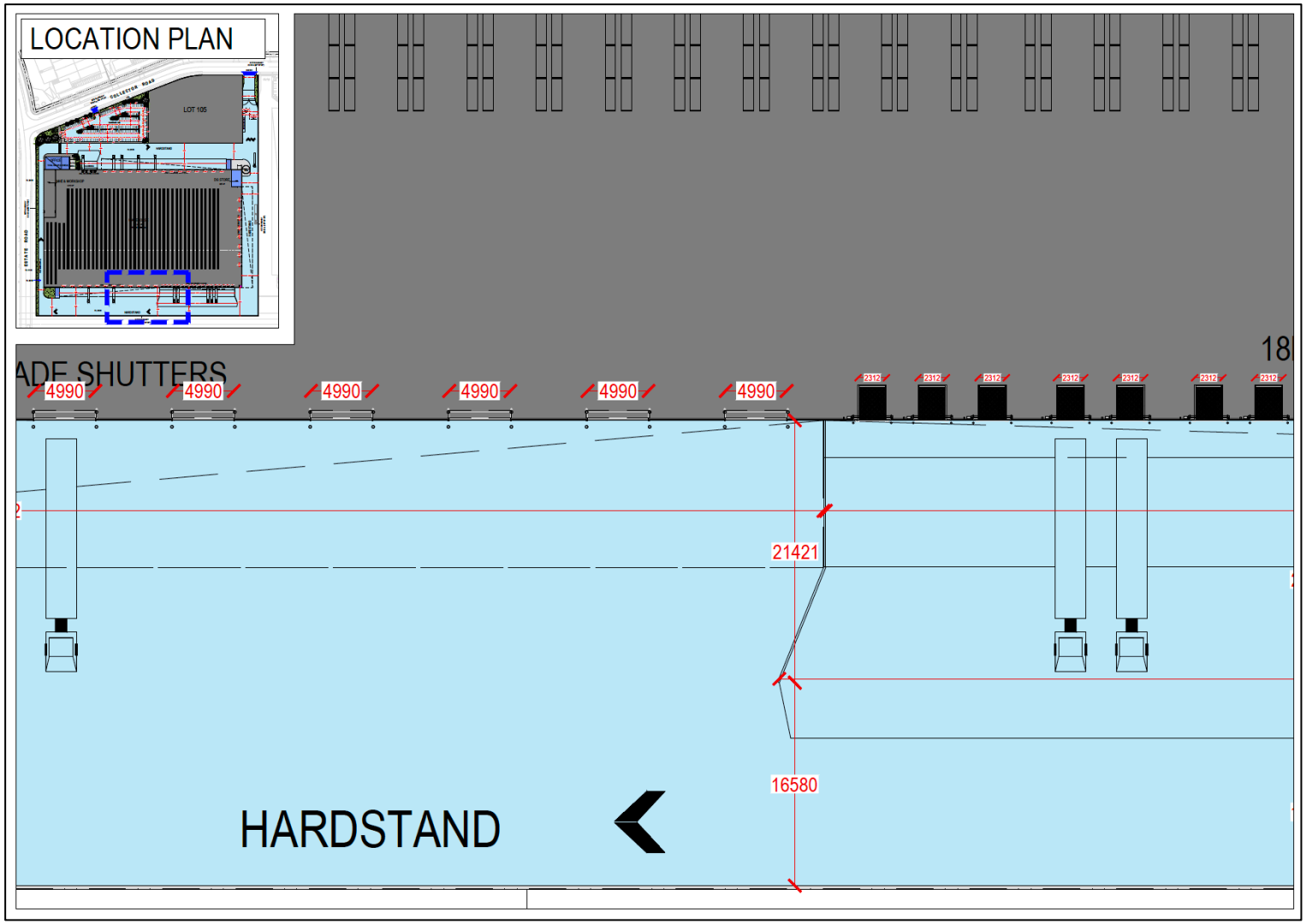

FIGURE 4.11 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

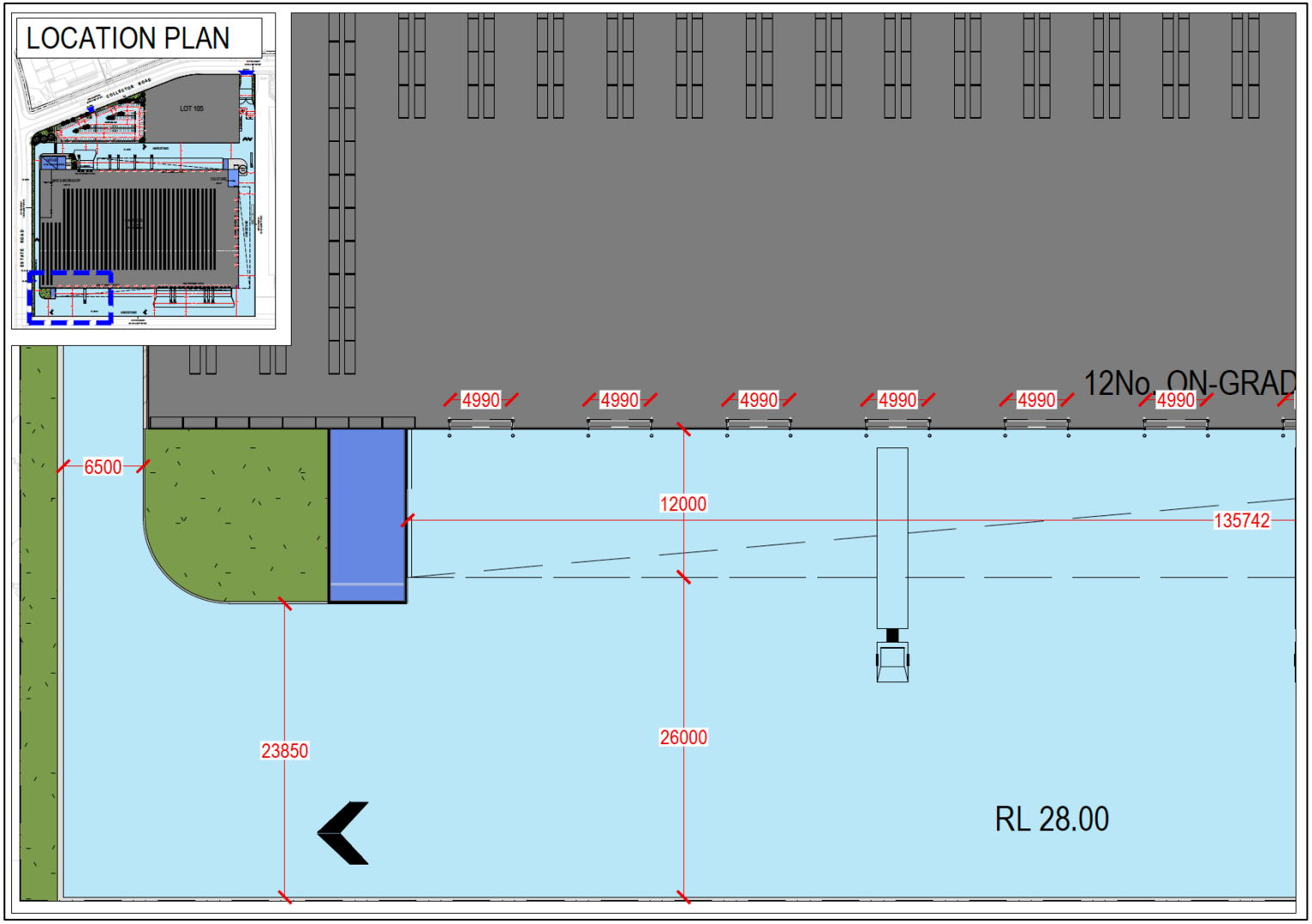

FIGURE 4.12 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

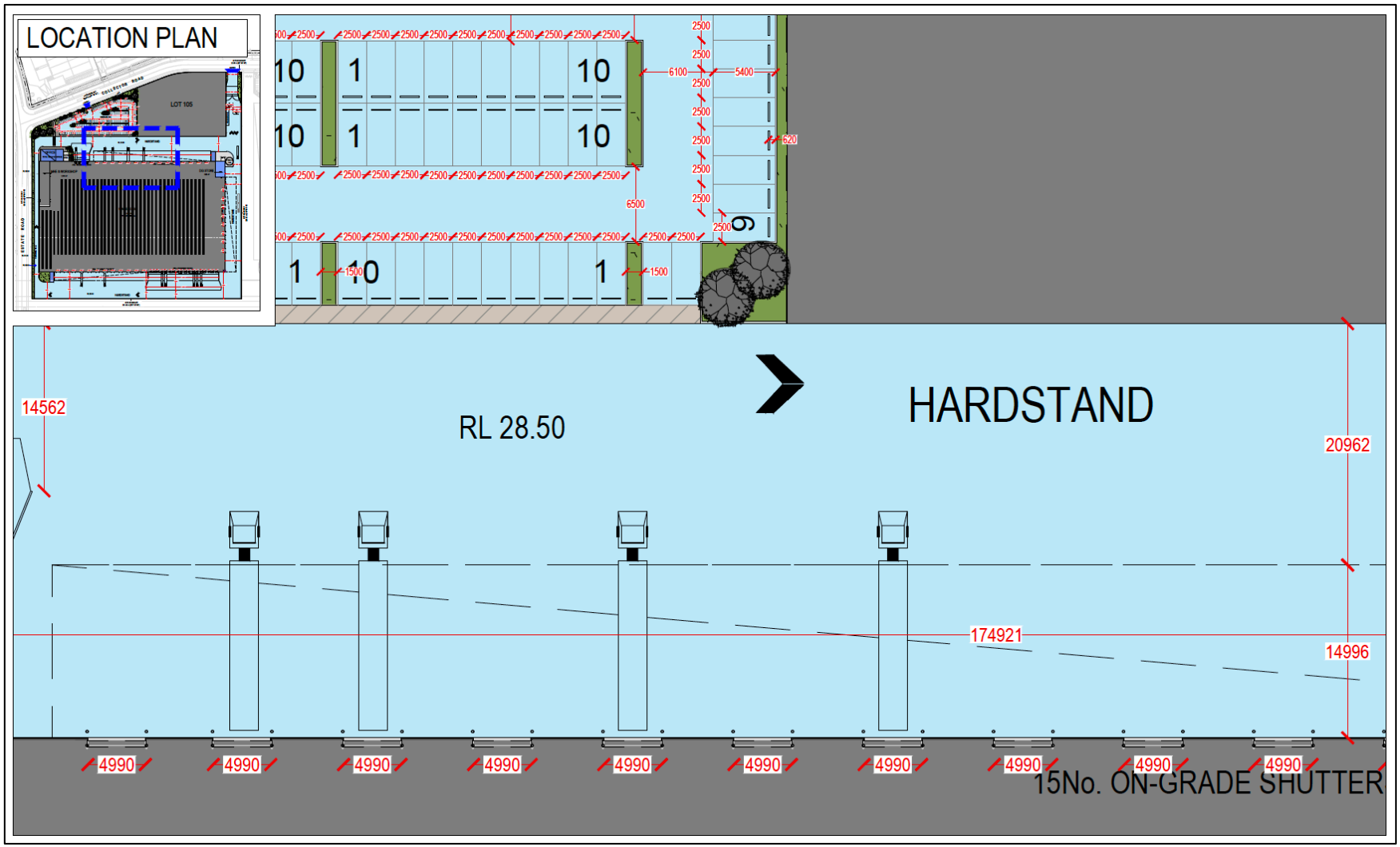

FIGURE 4.13 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

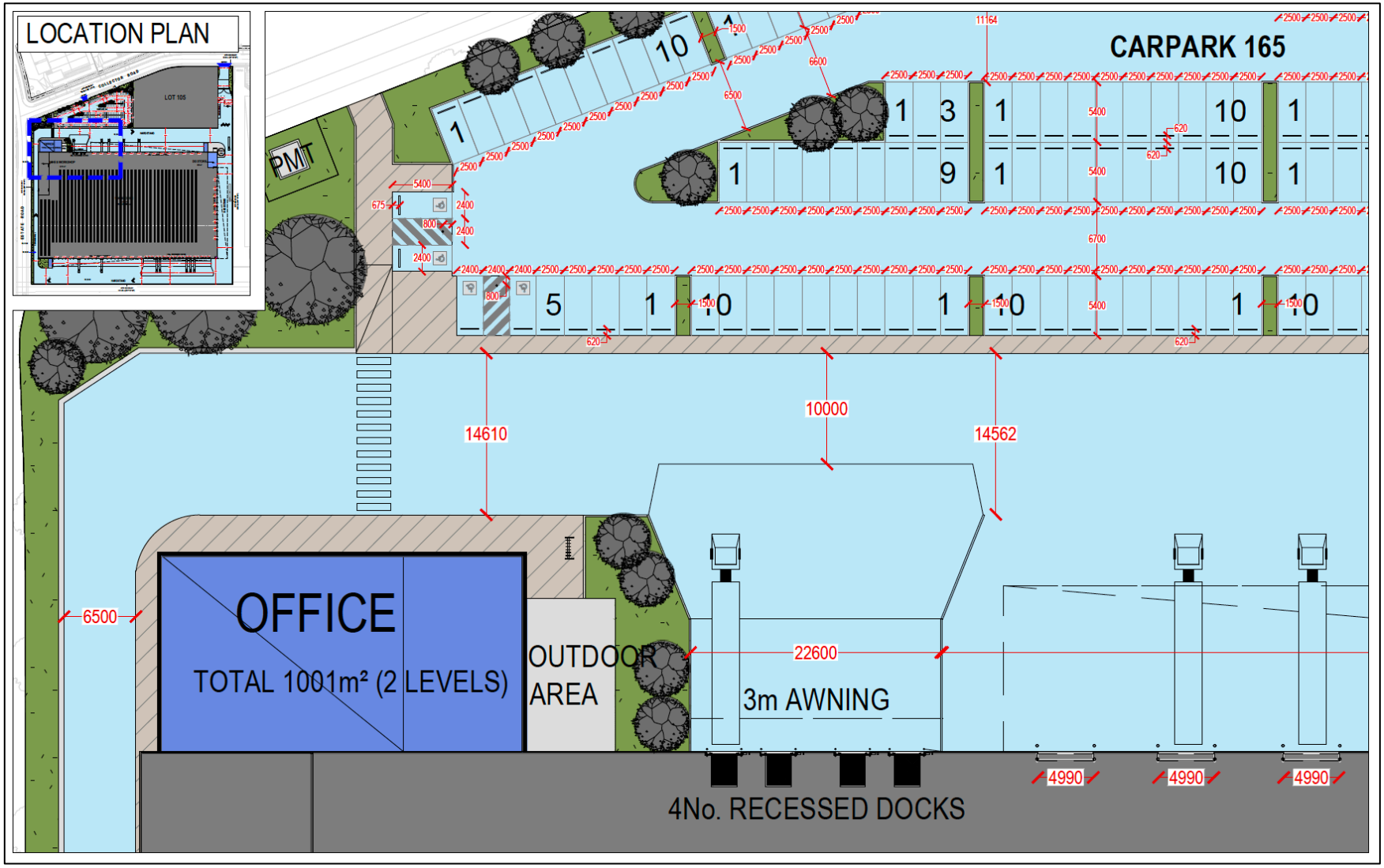

FIGURE 4.14 – PROPOSED CAR PARKING LAYOUT AND DIMENSIONS

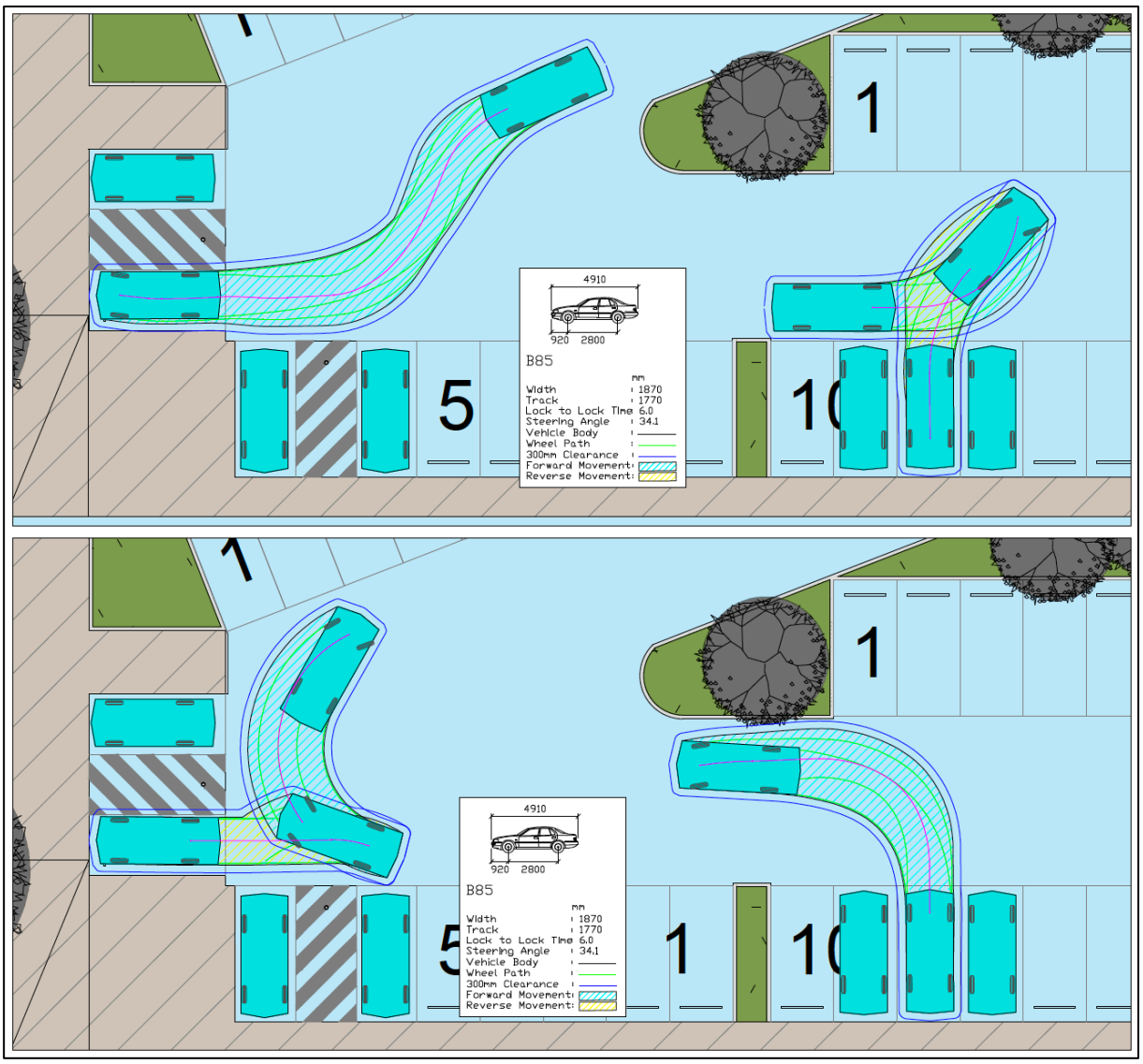

FIGURE 4.15 – SWEPT PATH OF B85 VEHICLES (MANOEUVRING)

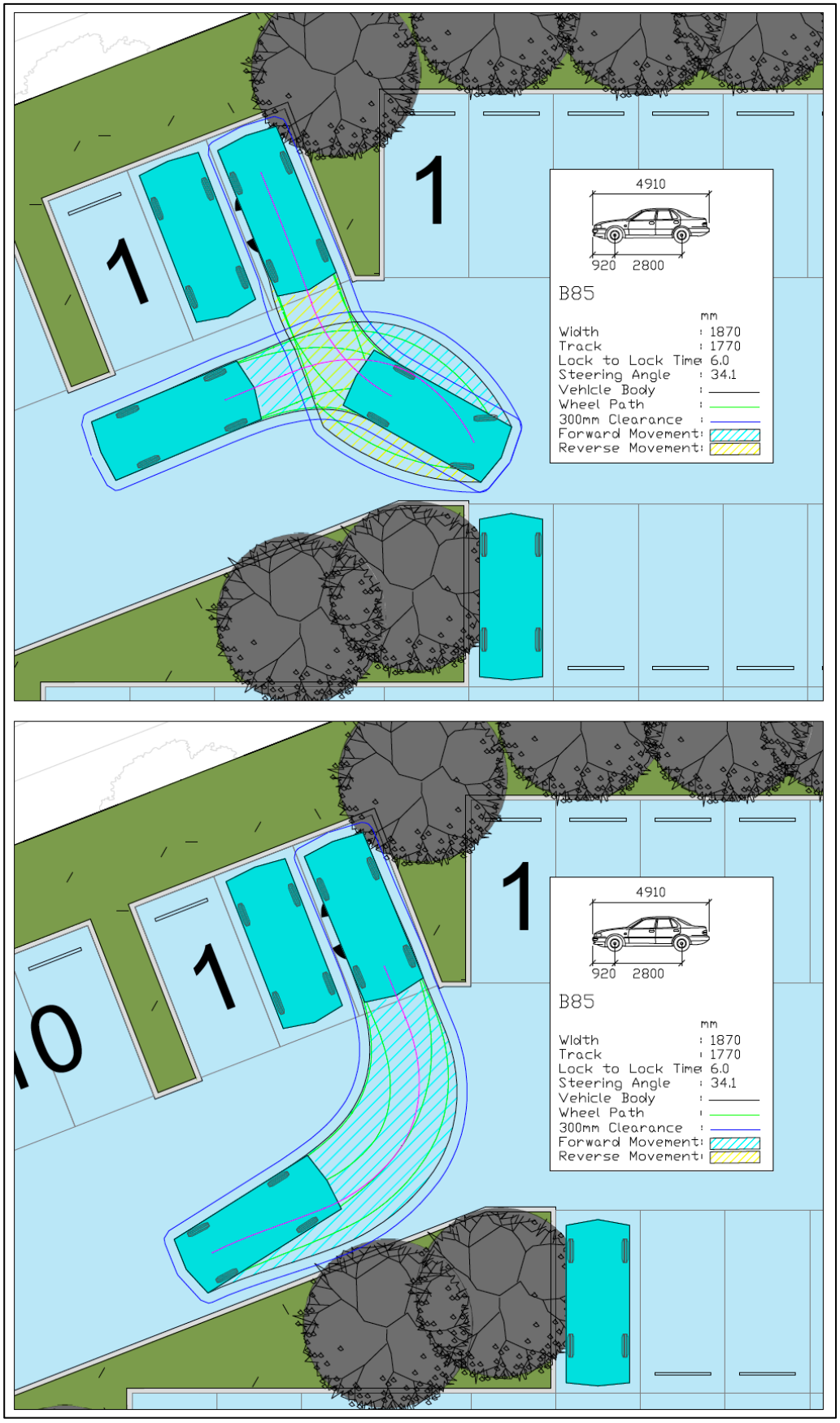

FIGURE 4.16 – SWEPT PATH OF B85 VEHICLES (MANOEUVRING)

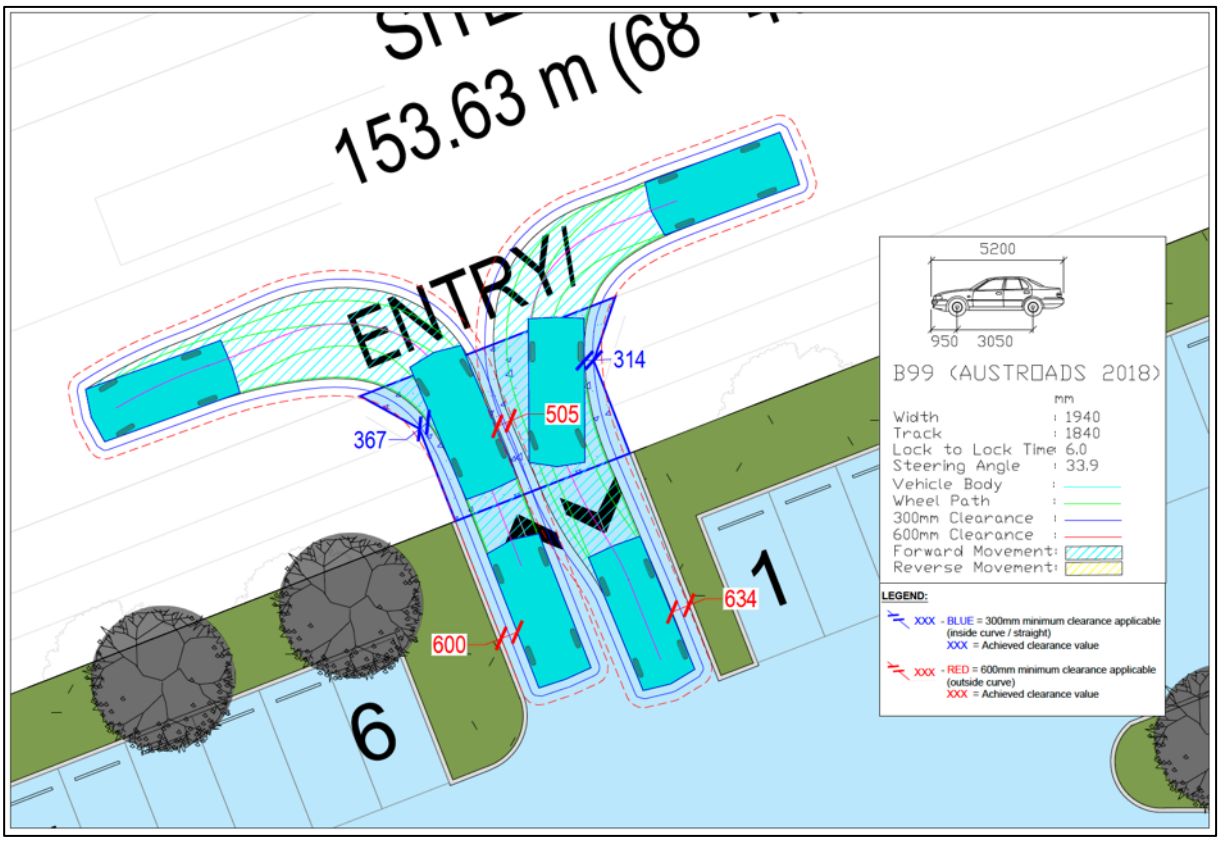

FIGURE 4.17 – SWEPT PATH OF B99 VEHICLES (TURNING)

5.0 ACCESS ARRANGEMENTS

The proposed access crossovers have been designed in accordance with IPWEA Standard Drawing RS-051.

The proposed layout and dimensions of each crossover are shown in Figures 5.1 – 5.2.

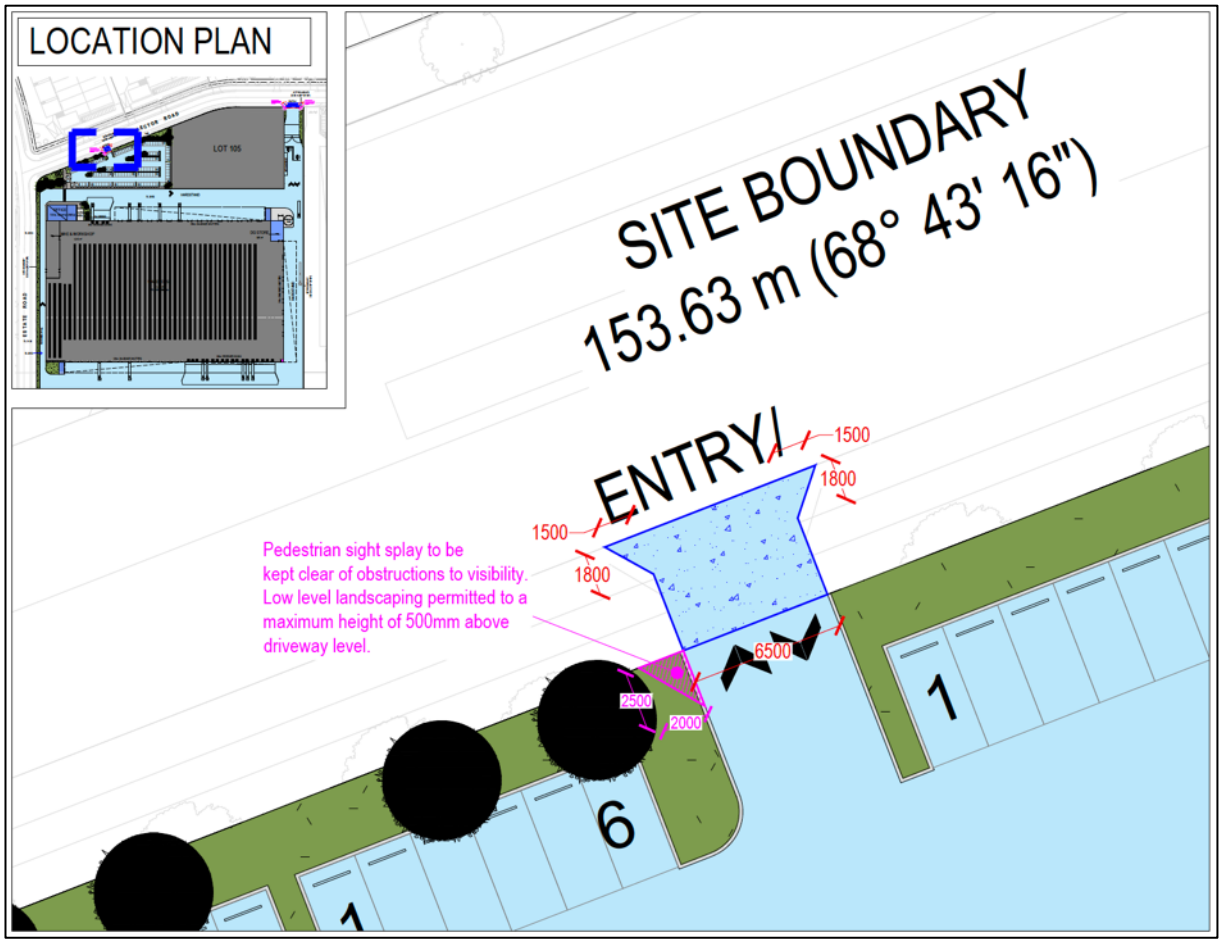

FIGURE 5.1 – PROPOSED LAYOUT AND DIMENSIONS OF PROPOSED VEHICLE CROSSOVER (CENTRAL CAR PARKING ACCESS)

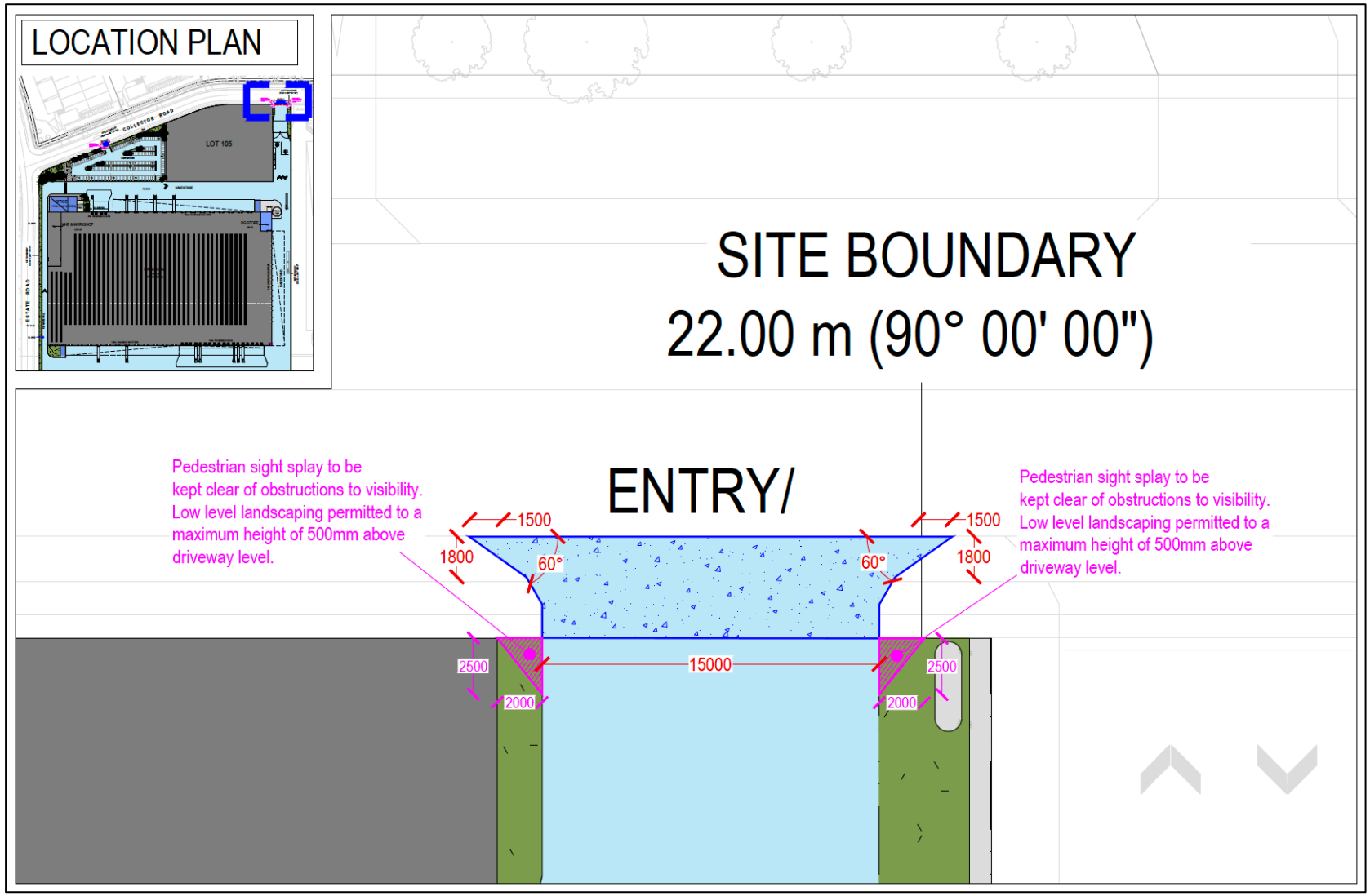

FIGURE 5.2 – PROPOSED LAYOUT AND DIMENSIONS OF VEHICLE CROSSOVER (EASTERN HEAVY VEHICLE ACCESS)

6.0 PROVISION FOR HEAVY VEHICLES

6.1 Acceptable Outcome

In accordance with Table 9.4.13-9 of the Logan Planning Scheme, the following service vehicle provisions is required to meet the Acceptable Outcome:

Warehouse: Articulated Vehicle

6.2 Proposed Outcome

The proposal allows for Heavy Rigid Vehicles, Articulated Vehicles and B-double vehicles to circulate and manoeuvre within the site satisfactorily.

As shown in Figure 6.9, a 'No Stopping' zone is proposed to be installed along the opposite side of the road to allow for satisfactory manoeuvring of B-Double vehicles.

Swept path diagrams are provided in Figures 6.1 – 6.13.

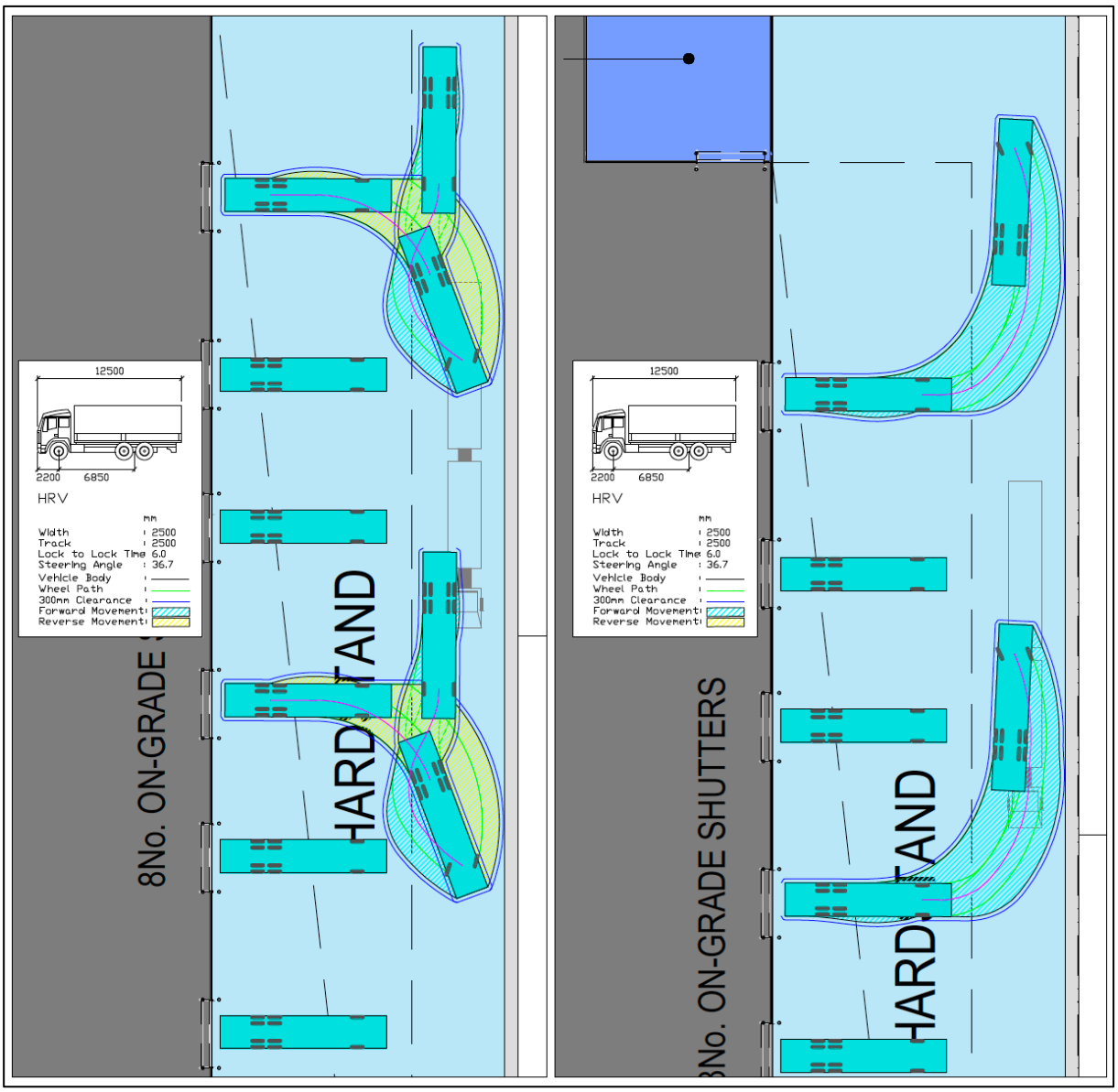

FIGURE 6.1 –SWEPT PATHS FOR HEAVY RIGID VEHICLE (HRV)

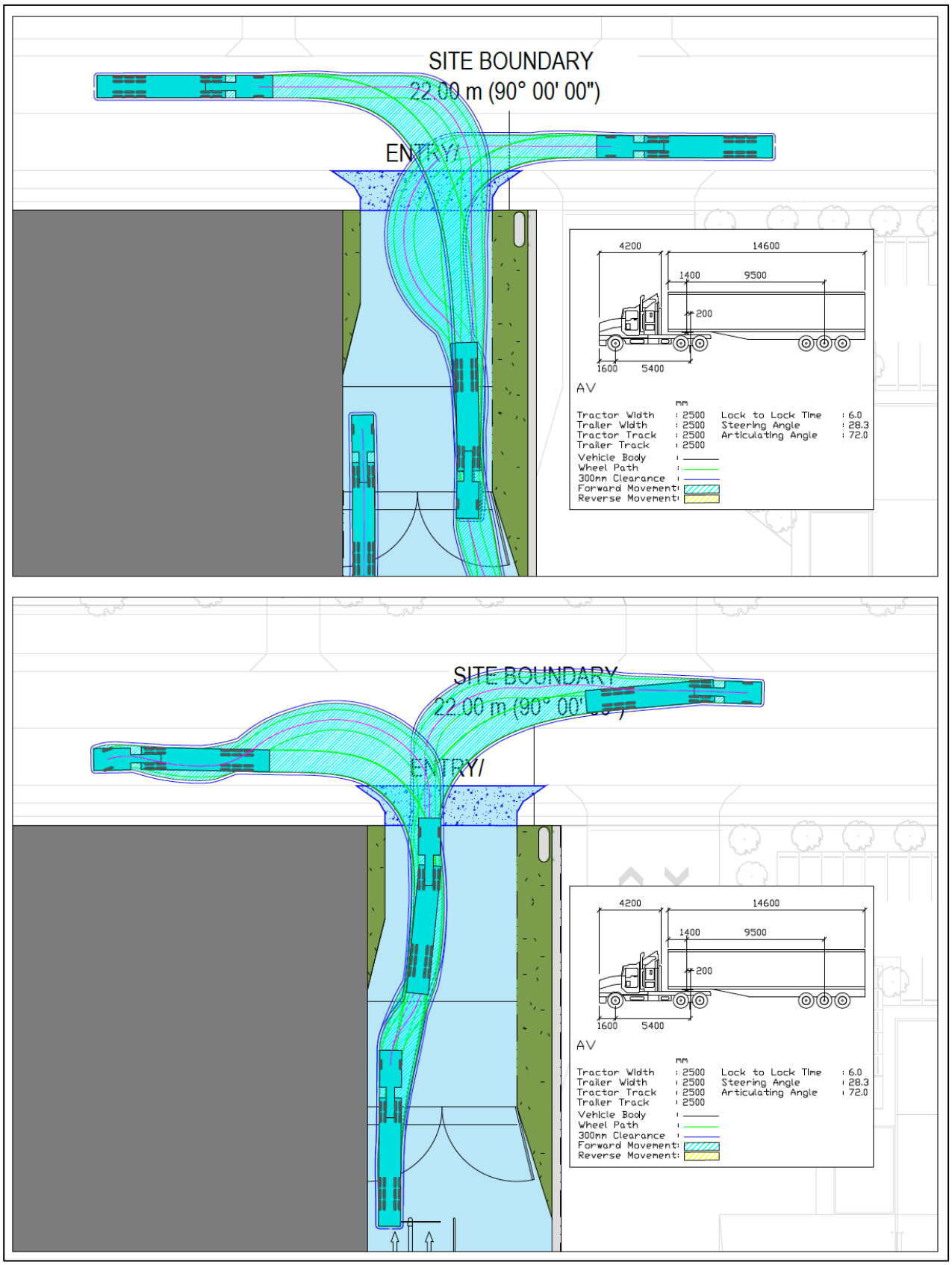

FIGURE 6.2 – VEHICLE SWEPT PATH (ARTICULATED VEHICLE)

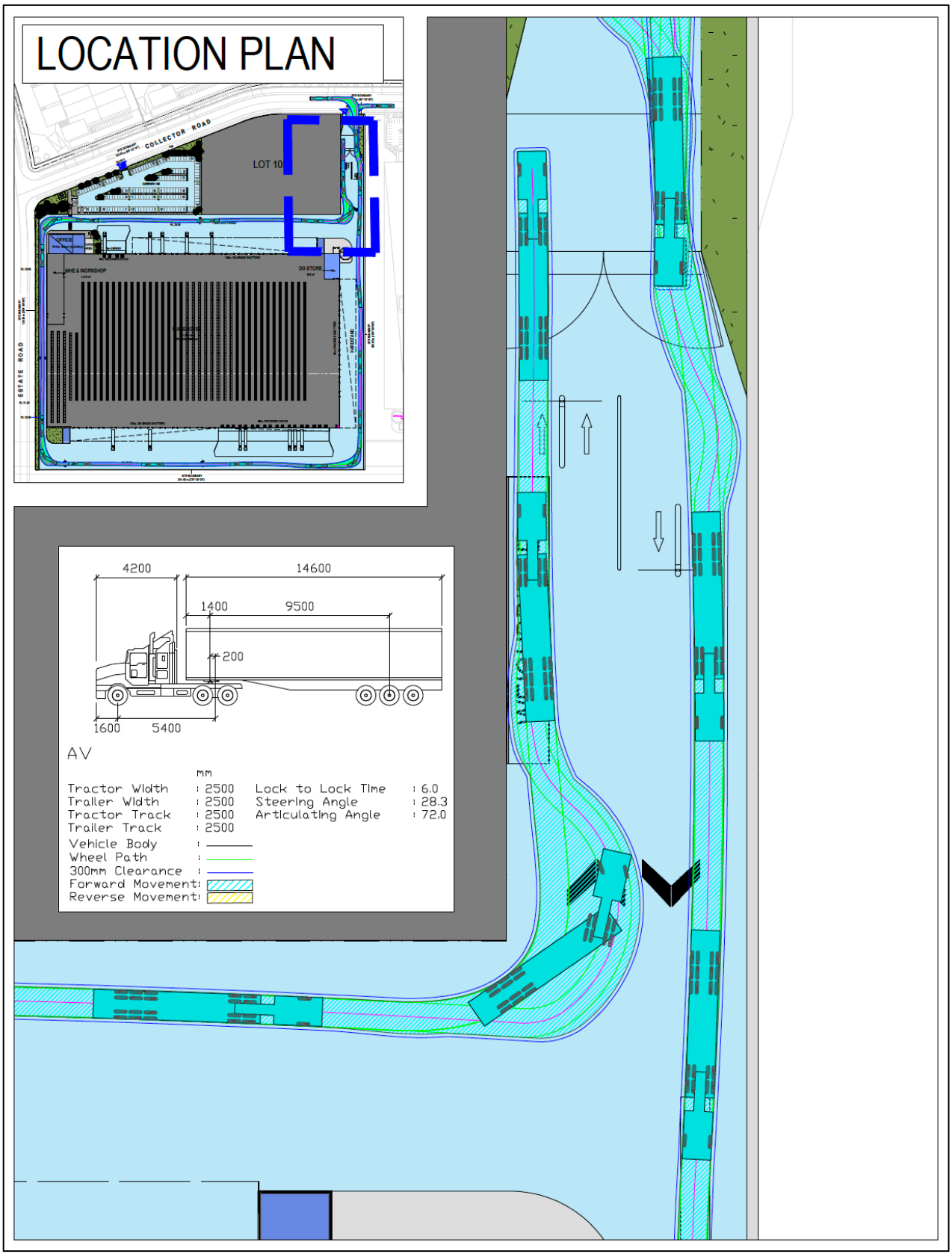

FIGURE 6.3 – VEHICLE SWEPT PATHS (ARTICULATED VEHICLE)

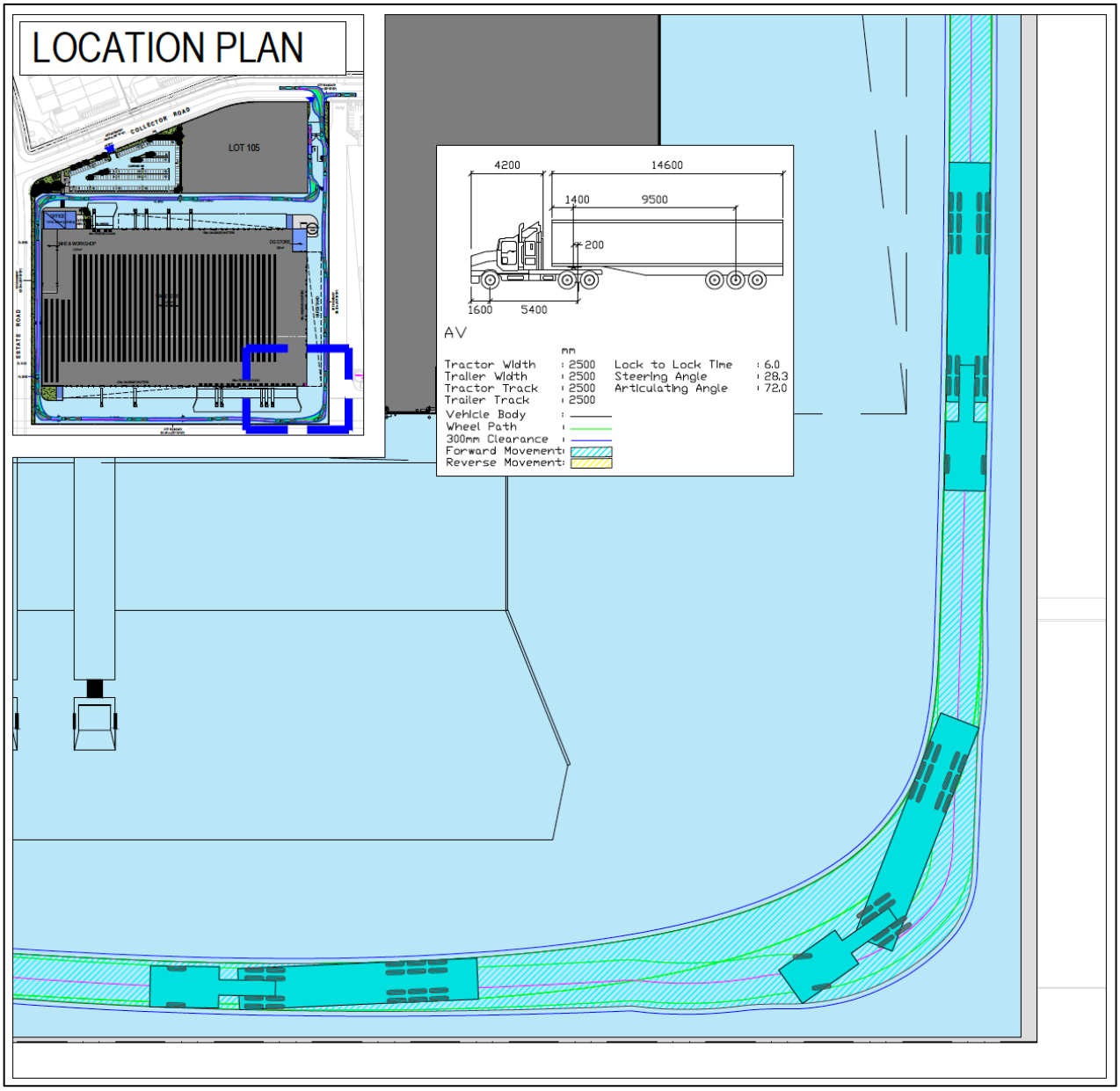

FIGURE 6.4 – VEHICLE SWEPT PATHS (ARTICULATED VEHICLE)

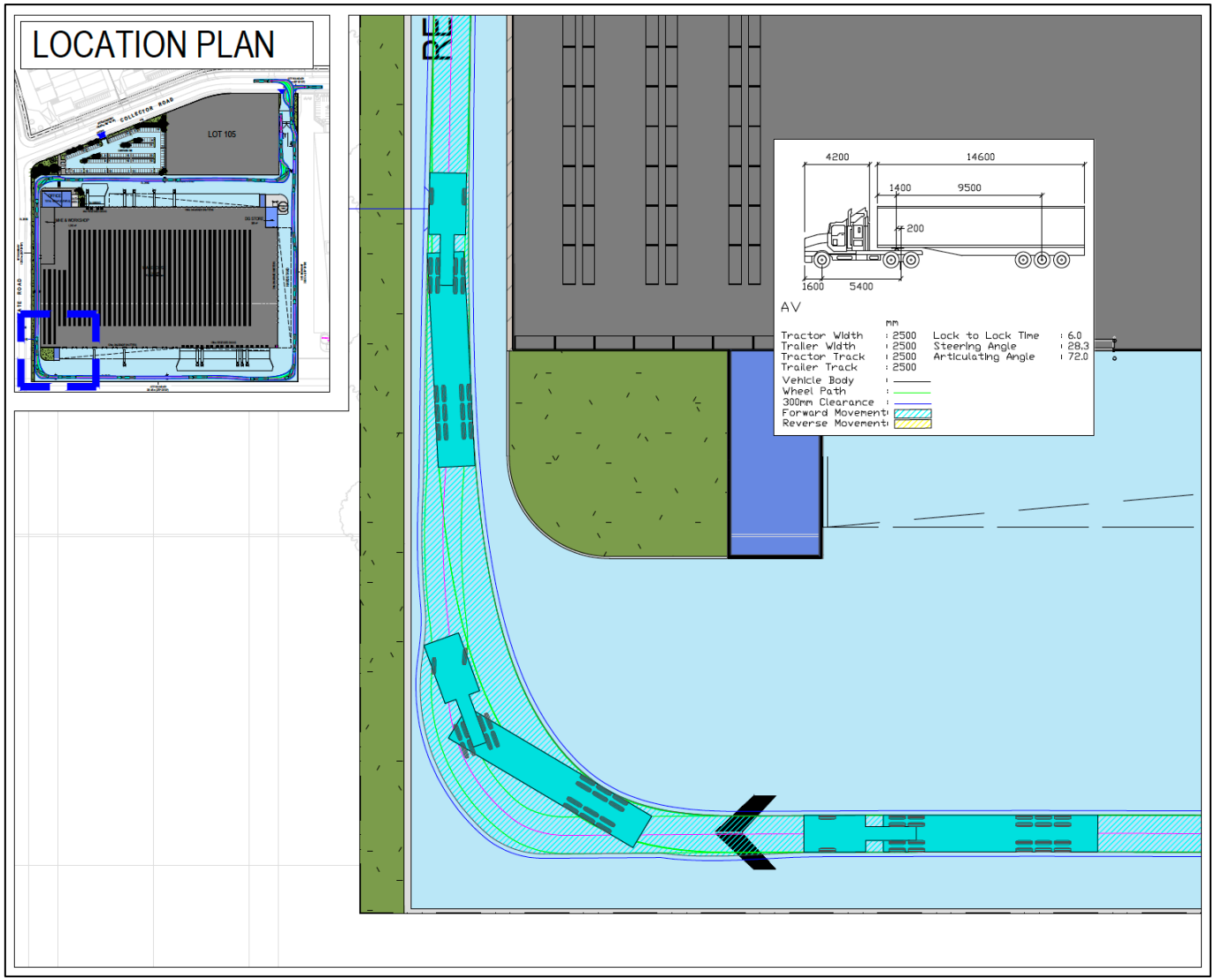

FIGURE 6.5 – VEHICLE SWEPT PATH (ARTICULATED VEHICLE)

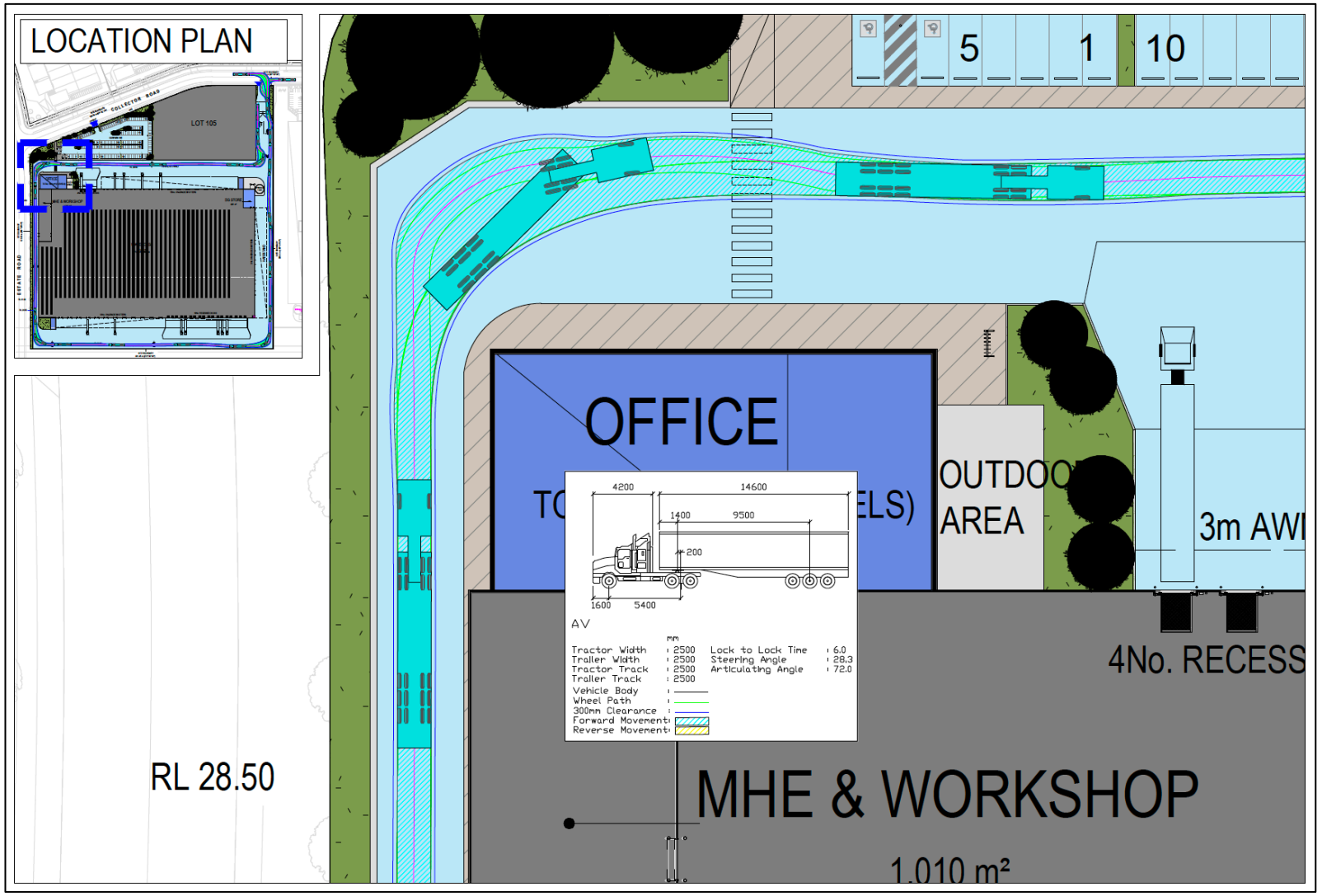

FIGURE 6.6 – VEHICLE SWEPT PATH (ARTICULATED VEHICLE)

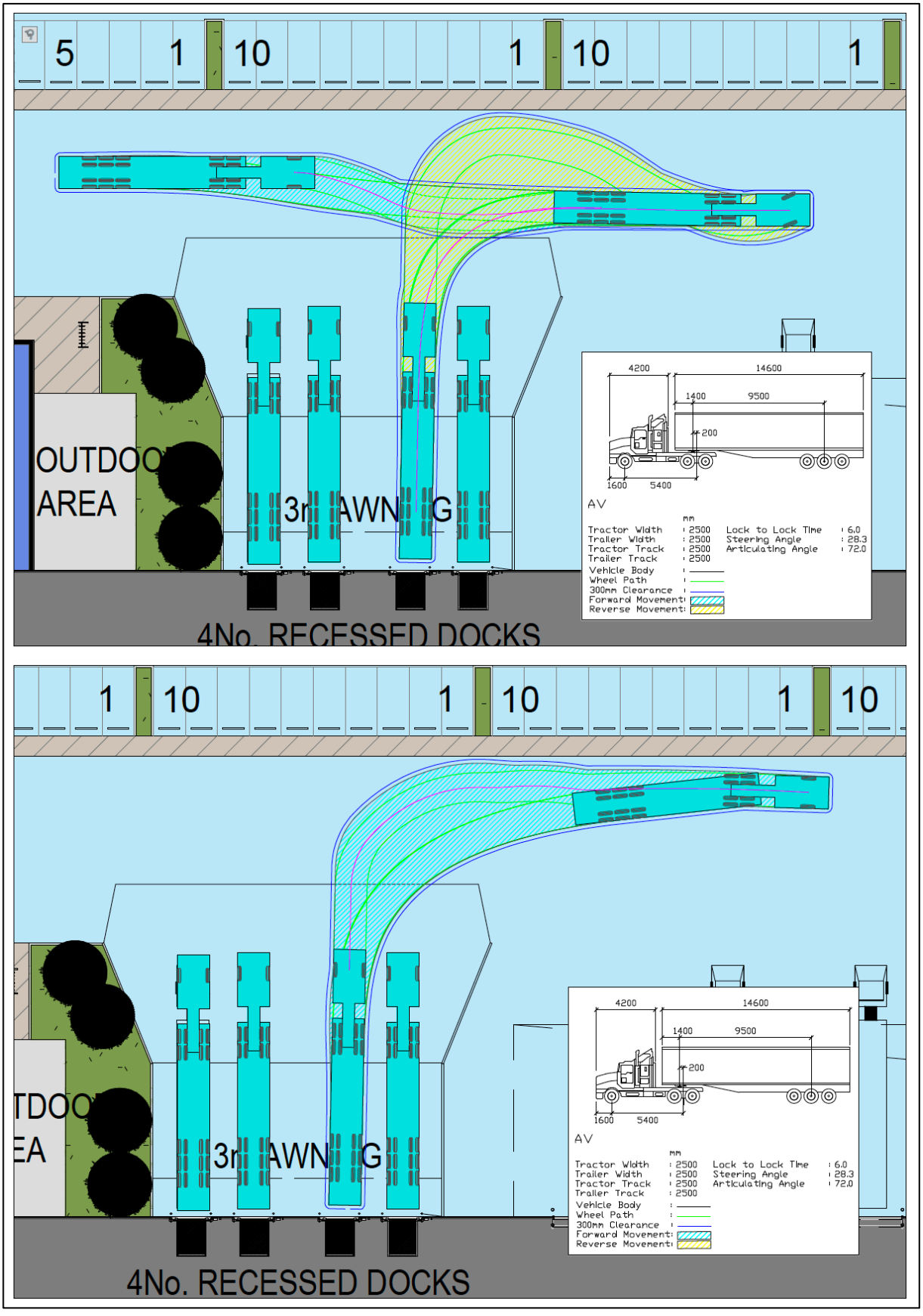

FIGURE 6.7 – VEHICLE SWEPT PATH (ARTICULATED VEHICLE)

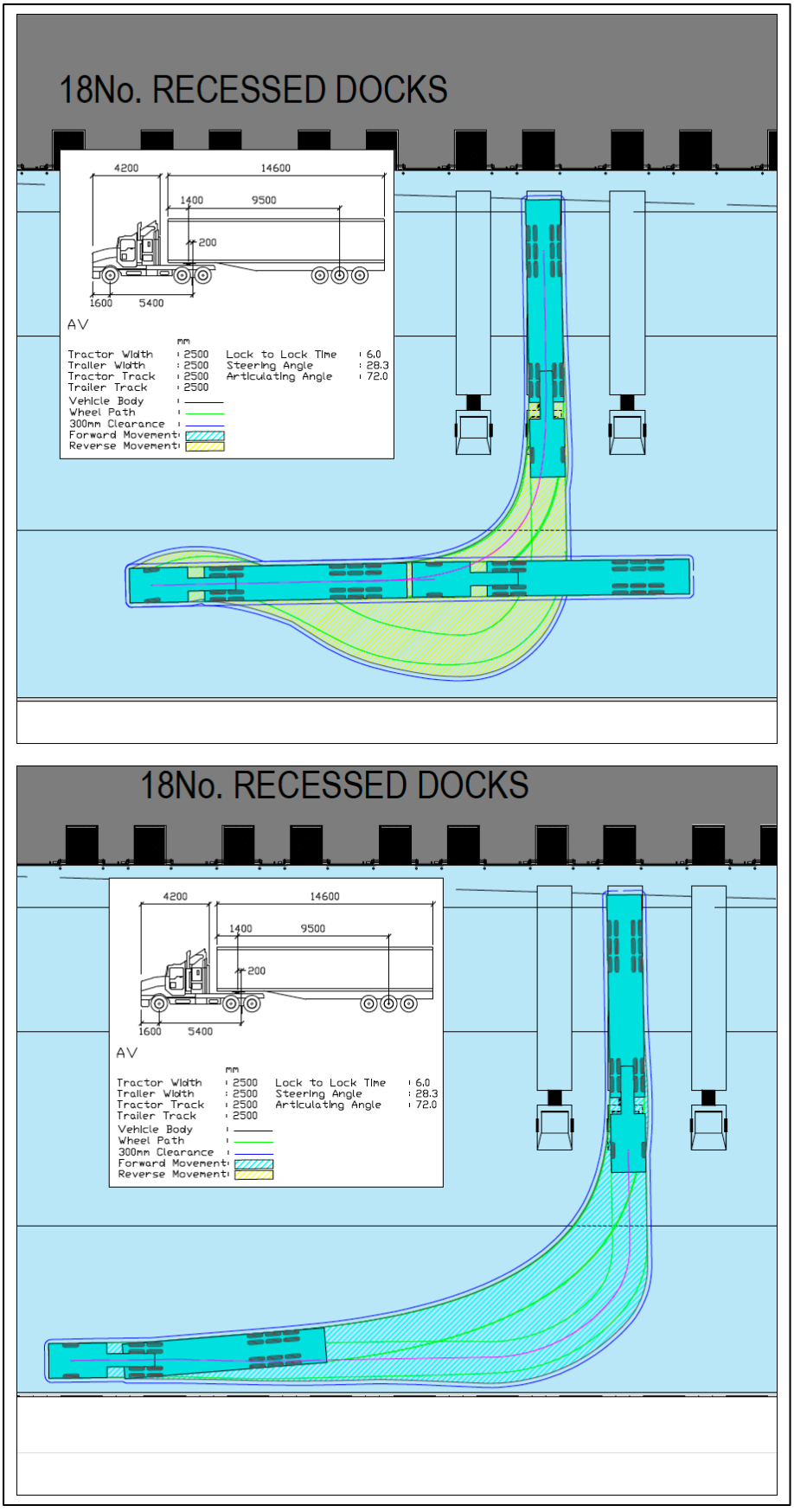

FIGURE 6.8– VEHICLE SWEPT PATH (ARTICULATED VEHICLE)

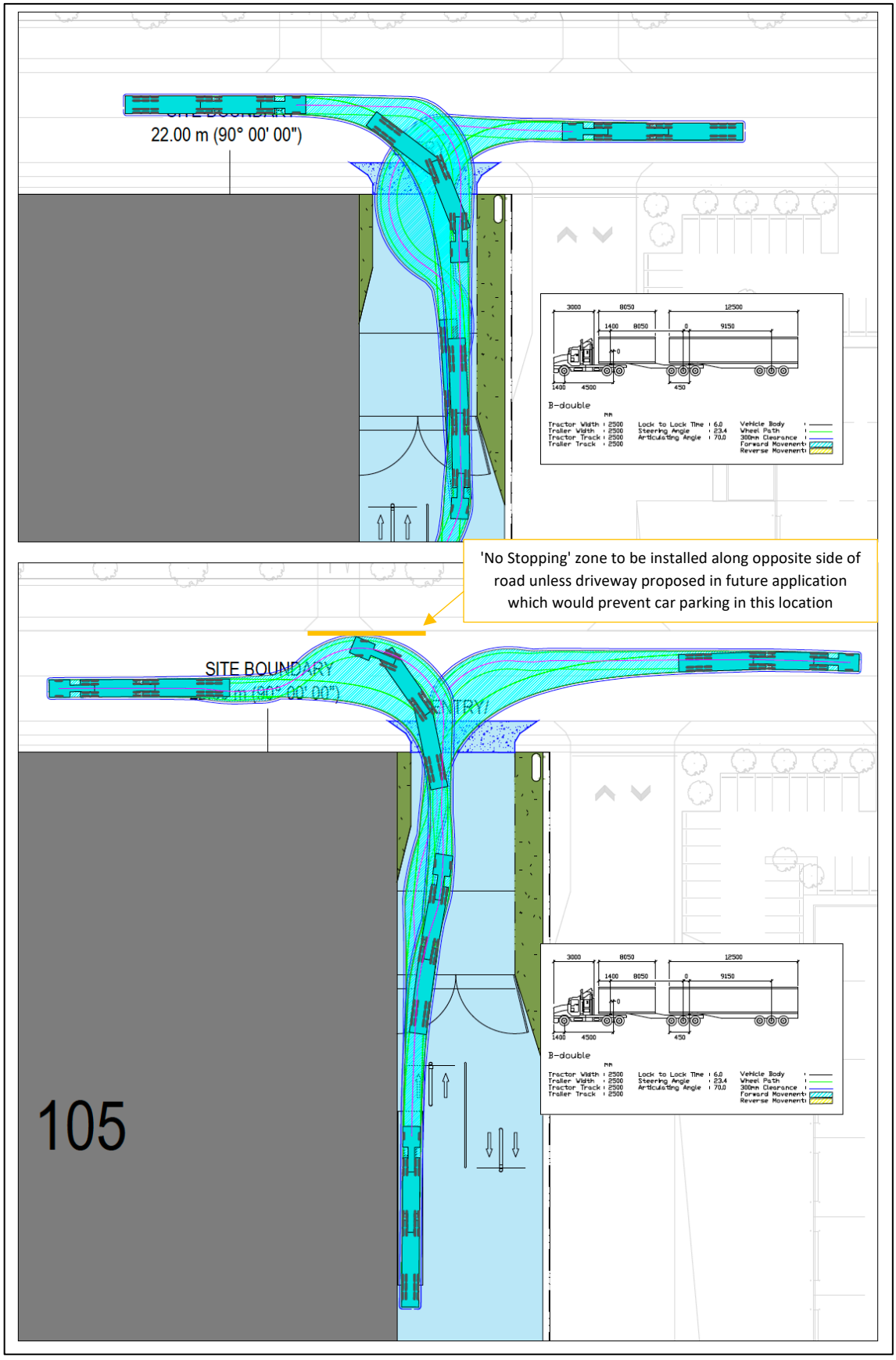

FIGURE 6.9– VEHICLE SWEPT PATH (B – DOUBLE)

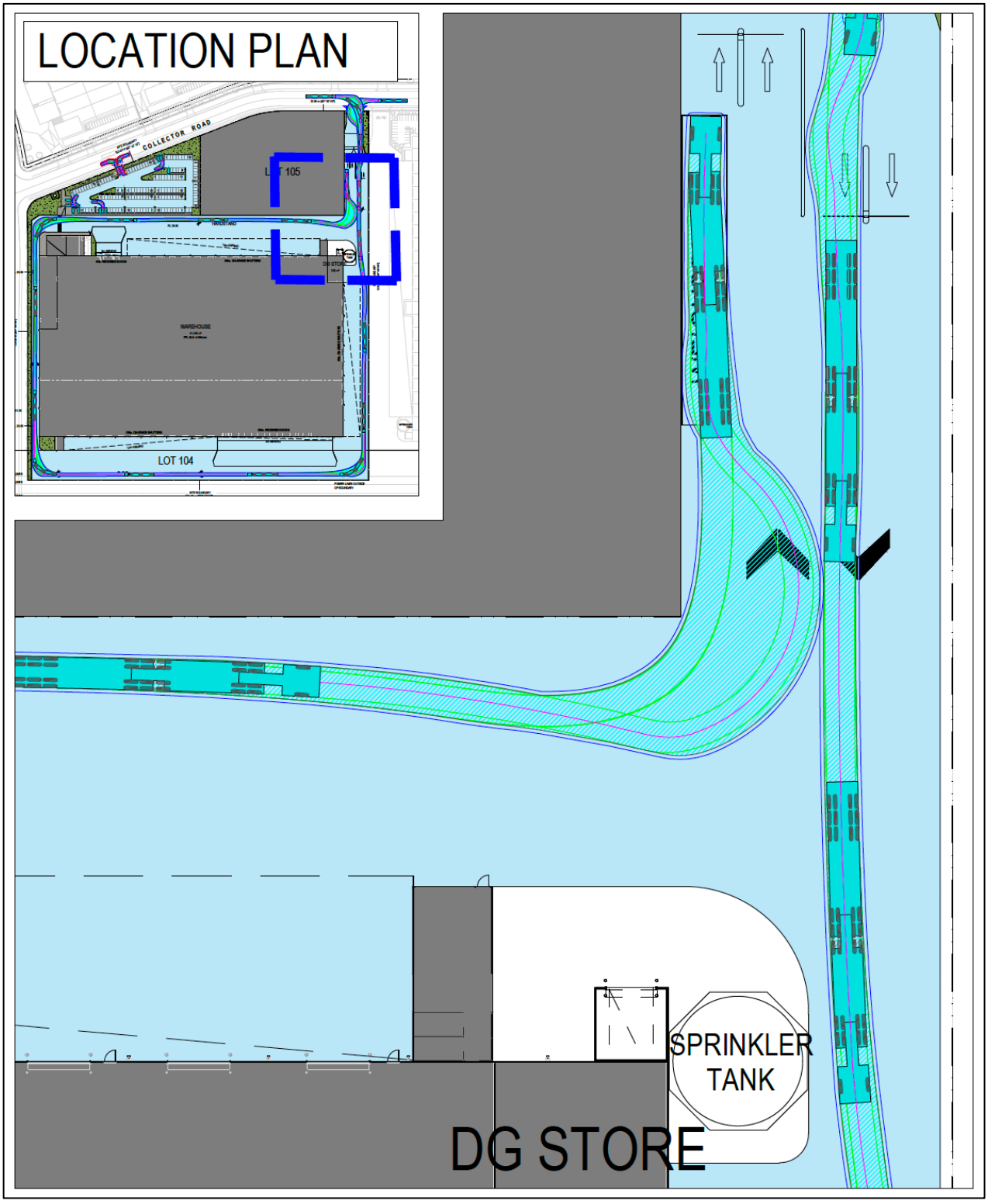

FIGURE 6.10– VEHICLE SWEPT PATH (B – DOUBLE)

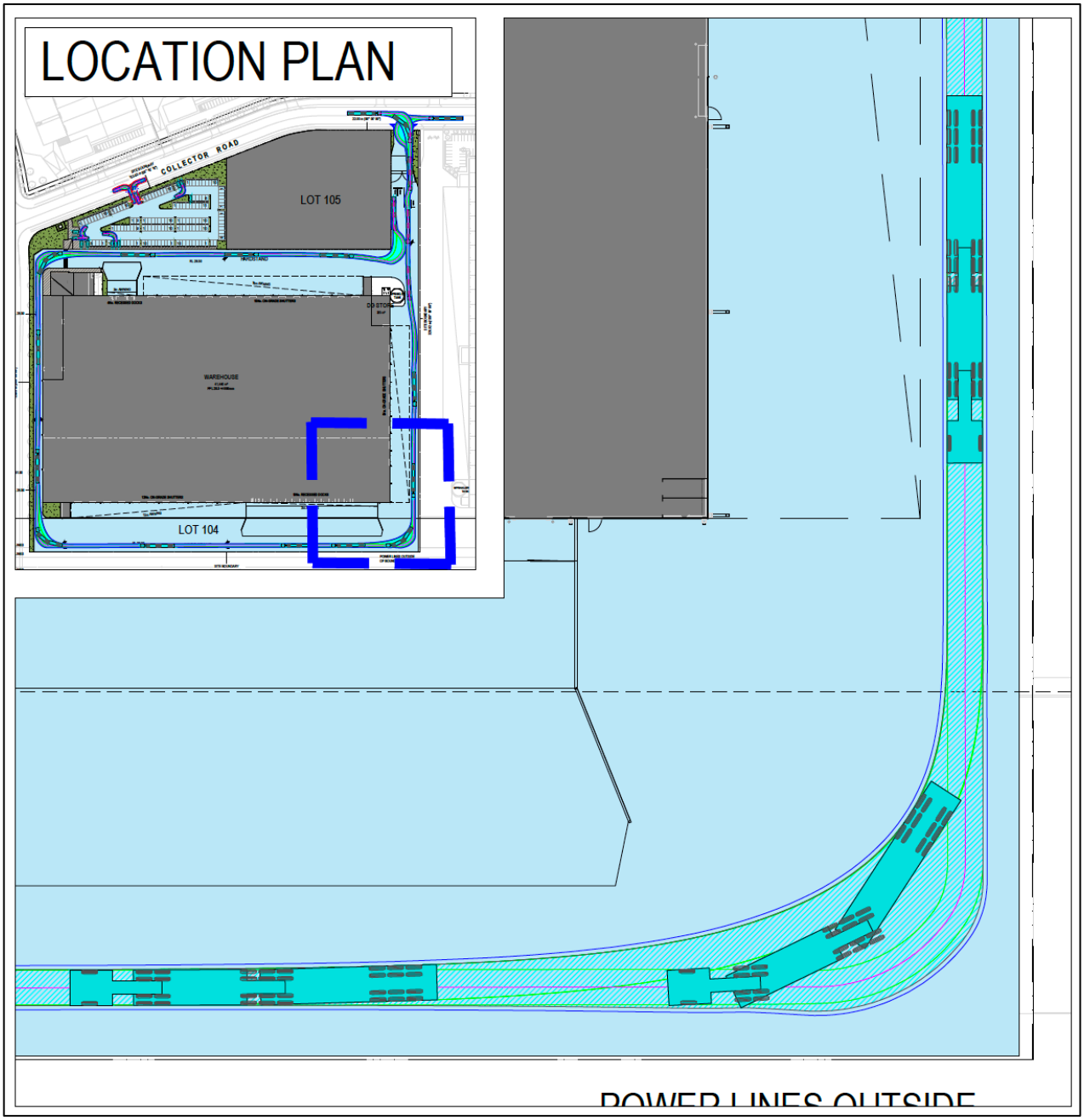

FIGURE 6.11– VEHICLE SWEPT PATH (B – DOUBLE)

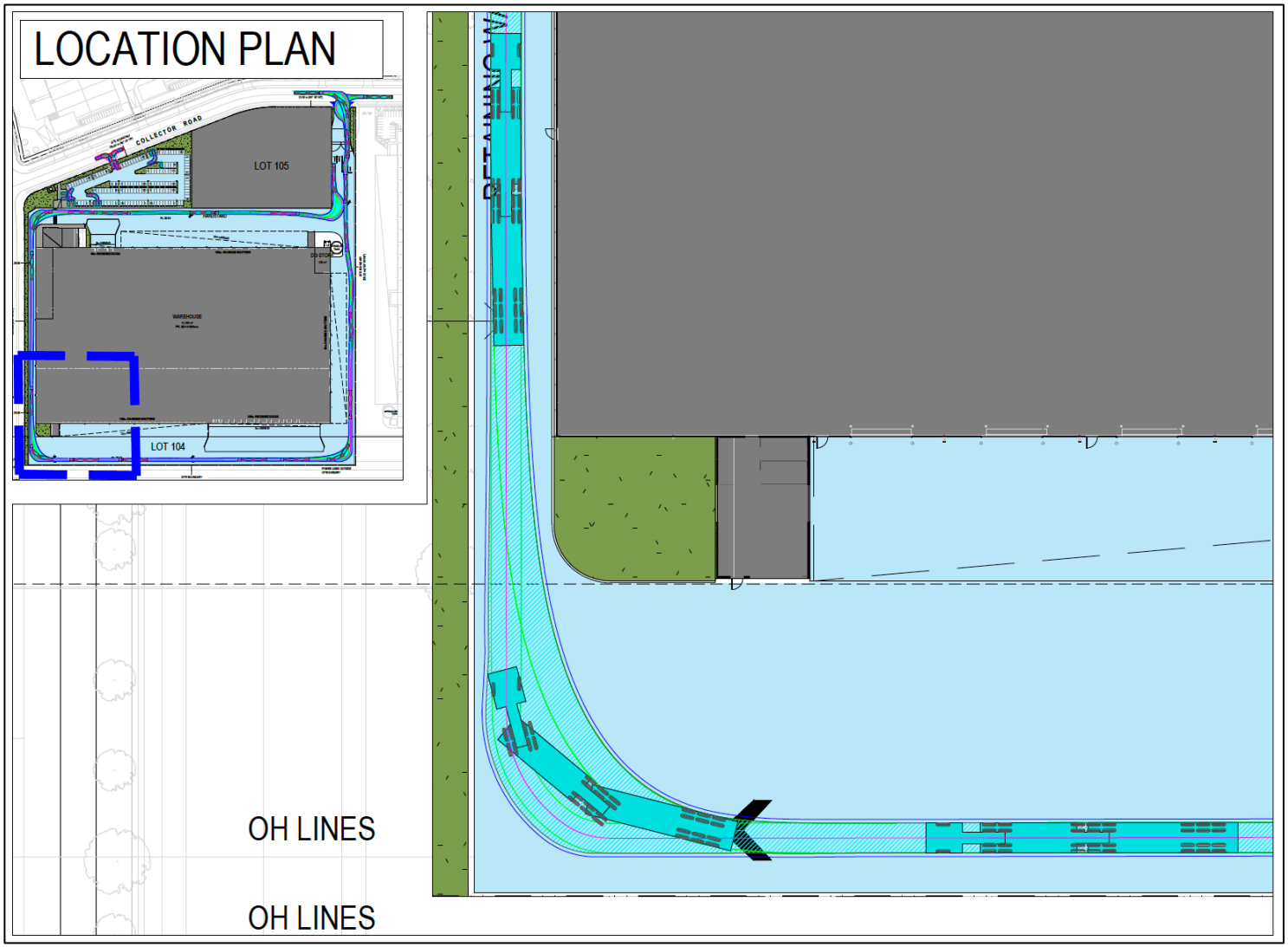

FIGURE 6.12– VEHICLE SWEPT PATH (B – DOUBLE)

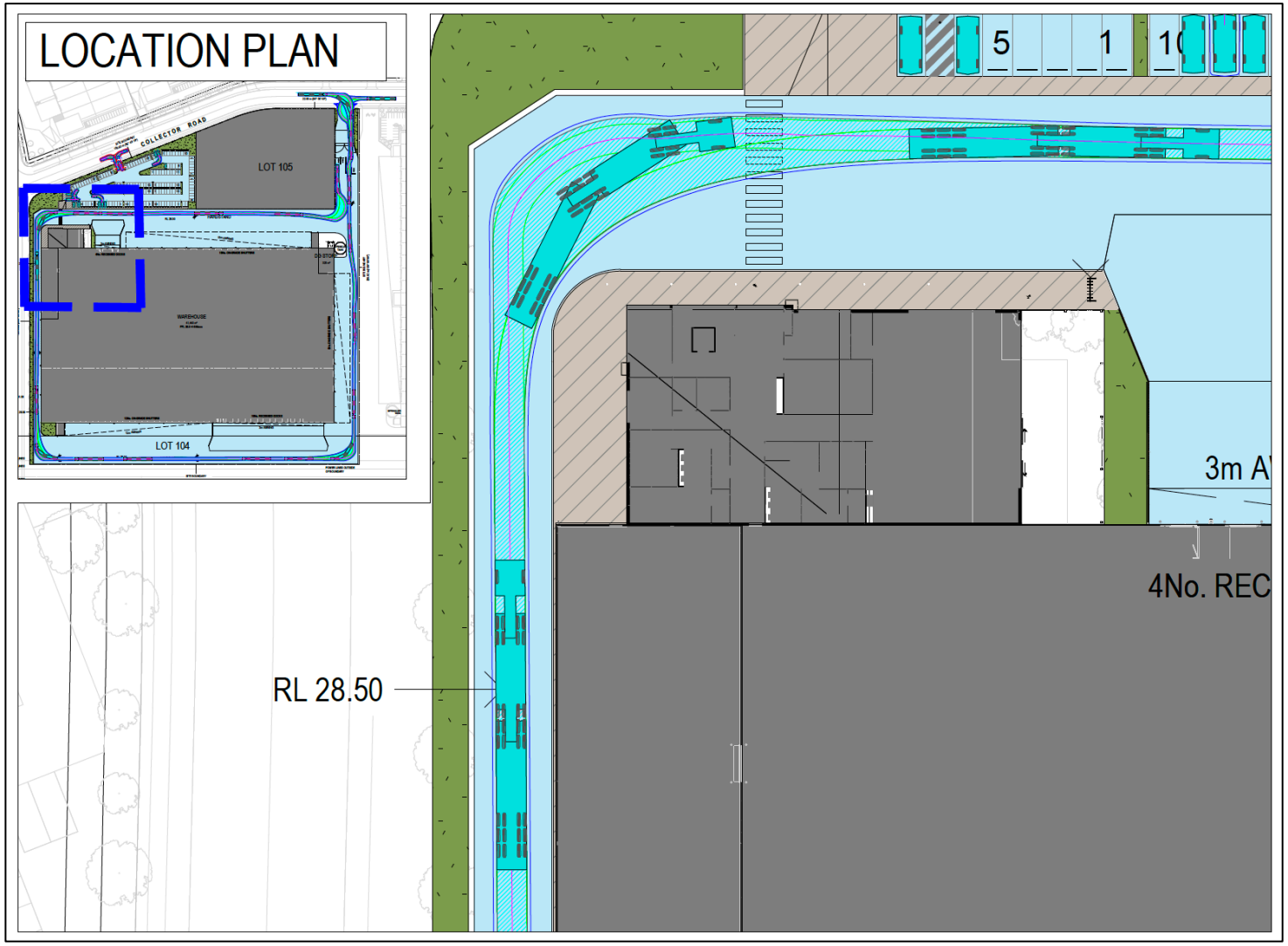

FIGURE 6.13– VEHICLE SWEPT PATH (B – DOUBLE)

7.0 PROVISION FOR PEDESTRIANS AND CYCLISTS

Bicycle parking is not required under the Servicing, Access, and Parking Code of the Logan Planning Scheme for the proposed uses; however, the proposal includes bicycle parking adjacent to the office entry. End of trip facilities (showers / change room) have been provided within the premises for workers who choose to cycle to work.

A pedestrian pathway has been provided between the pathway along the northern frontage of the site and the building entrance. It is proposed that cyclists would dismount at the front gate and use the pedestrian route to access the bicycle parking facilities.

8.0 ROAD NETWORK IMPACT

The proposed use and its potential traffic generation is consistent with that adopted in the Traffic Impact Assessment for the overall estate, prepared by Bitzios Consulting for the overall estate. As such, there is no need to consider the potential impact of development traffic upon the surrounding road network.

9.0 SUMMARY OF CONCLUSIONS & RECOMMENDATIONS

- The proposal is for a warehouse development with a Gross Floor Area (GFA) of 43,956m^2. The proposed car parking capacity of 165 spaces will comfortably accommodate peak demands generated by the intended user.

- The proposal has been designed for a specific user, who will have up to 150 persons on-site at any time, including a small number of visitors.

- The proposal provides a total of 165 car parking spaces and is therefore short of the Acceptable Outcome. As discussed in Section 3, the intended user will operate with up to 150 persons on-site, including a small number of visitors. The proposal provides a least 1 space per expected employee on site at any one time, plus 15 spaces that could accommodate visitors. On this basis, it is considered that the proposed car parking capacity will comfortably accommodate peak demands.

- It is noted the proposed car parking supply is typical of warehouse developments of this scale, as they generally have lower parking demand compared to other industrial uses where more intense activities are carried out (e.g. manufacturing).

- The geometric layout of the proposed parking facilities has generally been designed to comply with the relevant requirements specified in the Planning Scheme and AS2890.1: 2004.

- The proposed access crossovers have been designed in accordance with IPWEA Standard Drawing RS-051.

- The proposal has been designed to allow up to a 26 metre B-double vehicle to circulate throughout the site in a forward gear.

- The proposed use and its potential traffic generation is consistent with that adopted in the Traffic Impact Assessment for the overall estate, prepared by Bitzios Consulting for the overall estate. As such, there is no need to consider the potential impact of development traffic upon the surrounding road network.