

Transport Engineering

REF: #N166100

DATE: 1 May 2019

David Allen and The Casey Family Trust
c/o Platform Architects
503/ 39 East Esplanade
MANLY NSW 2095
Attention: Ms. Frida Blomqvist

Dear Frida,

RE: 52 LAUDERDALE AVENUE, FAIRLIGHT – TRANSPORT IMPACT ASSESSMENT

Background

It is understood that a development application is to be lodged with Northern Beaches Council (Council) for a residential development at 52 Lauderdale Avenue, Fairlight.

The proposal includes construction of two, three bedroom semi-detached residential dwellings over three levels. Basement level parking will be provided to accommodate two parking spaces for each dwelling, with access via Lauderdale Avenue along the southern boundary.

GTA Consultants (GTA) was engaged to complete a transport assessment for the proposed development.

Subject Site

The subject site is at 52 Lauderdale Avenue, Fairlight and covers approximately 540m² with an 18 metre frontage to Lauderdale Avenue. The location of the site and the surrounding environs is shown in Figure 1.

Figure 1: Subject site and its environs



Source: Sydney

The site has a land use classification as R1 General Residential and is currently occupied by a single detached dwelling, with no vehicle access provided to the property. The surrounding properties mostly include low density detached residential dwellings.

Existing Conditions

Road Network

Lauderdale Avenue is a local road aligned in an east-west direction and provides access to Manly Wharf and Town Centre. It generally provides one traffic lane and one parking lane in each direction set within a 13 metres carriageway and approximate 20 metres road reserve. Lauderdale Avenue has a posted speed limit of 50km/h.

Public Transport

The site is close to regular bus and ferry services, which are summarised in Table 1.

Table 1: Local public transport services

Service	Route #	Route Description	Location of Stop	Distance to Nearest Stop	Frequency On/Off peak
Bus	132	Warringah Mall - Manly			25-30 min. peak direction/ 60 min. off-peak
	E71	Manly - City			3 AM peak services to City 5 PM peak services from City
Ferry	F1	Manly - Circular Quay	Manly Wharf	1.2km	20-30 mins
	Capt. Cook Cruises	City – Manly via Garden Island and Watsons Bay	Manly Wharf	1.2km	3-4 midday-afternoon services

Cycling and Pedestrian Infrastructure

Pedestrian paths are generally provided along both sides of Lauderdale Avenue. These paths combine to provide adequate facilities to/ from key transport nodes including Manly Wharf and other local area facilities and destinations.

The site is also located along part of the Manly Bike Network with cycling facilities, including a shared path on the southern side of Lauderdale Avenue.

Car Parking Requirements

The car parking requirements for different development types are set out in Manly Development Control Plan (DCP) 2013. DCP 2013 requires two parking spaces for each dwelling house, semi-detached dwellings and secondary dwellings. Based on this, the development is required to provide four parking spaces; two for each dwelling. The proposal includes provision for such parking arrangements and therefore complies with DCP 2013.

Garbage collection will occur on-street on Lauderdale Avenue, consistent with similar residential dwellings in the area.

Bicycle Parking

DCP 2013 requires a minimum provision of one bicycle parking space for each dwelling. This is met with adequate space within each basement able to accommodate at least one bicycle space and in accordance with the spatial requirements of Australian Standard for bicycle parking (AS2890.3:2015).

Car Parking Layout Review

The car park layout has been reviewed against the requirements of Australian Standard for Off-Street Car Parking (AS/NZS2890.1:2004). This assessment included a review of the following:

- car space dimensions and manoeuvring width
- adjacent structures
- driveway gradients and ramps
- height clearances.

This review indicates that the proposed basement car parks have been designed appropriately. Turntables are included, one for each dwelling, with all vehicles able to enter and exit the respective properties in a forward direction. The area occupied by the turntable could also accommodate an additional vehicle (such as a visitor) without impacting on-street parking demand.

A combined driveway will provide access to both basement car parks. The gradients include a section of maximum 1:20 from the driveway layback, in accordance with AS2890.1:2004 with necessary splays in the rock wall and 'clear zones' ensuring appropriate sight distances for exiting vehicles. This is consistent with neighbouring properties (including 54 Lauderdale Avenue). The sight distances on Lauderdale Avenue also allow for the safe movement of vehicles to/ from the site and with no formal pedestrian footpaths along the frontage of the site, pedestrian amenity is not compromised.

While the driveway crossover is wider than typically accepted it has been purposely designed to positively respond to the unique local area constraints. It ensures efficient site access arrangements are provided for each dwelling and minimises the extent of impact to on-street parking supply. It has been designed to be 7.96 metres wide and is as narrow as possible to allow for 99th percentile car access. Separate driveways for each dwelling are not possible and would not represent practical use of the available space. The proposal would also realise a reduction in on-street parking demand given that the existing dwelling does not provide on-site parking.

A compliance review and vehicle swept paths using 99th percentile cars has been completed and shows that each basement car park is appropriately designed with the turntables and available space ensuring all vehicles are able to enter and exit each basement in a forward direction. The driveway crossover design ensures efficient access arrangements are practically achieved. Overall, the proposed on-site parking layout and access arrangements comply with the intent of AS2890.1:2004. The compliance review and vehicle swept paths are included as Attachment 1.

Traffic Impact Assessment

Traffic generation estimates for the proposed development have been sourced from Roads and Maritime Services *Technical Direction (TDT 2013/04) Updated Traffic Surveys*.

Application of the low density residential dwelling rate indicates that the proposed development could potentially generate up to two vehicle trips in any peak hour. The existing residential dwelling likely generates one vehicle trip in any peak hour. This is a nominal change in the traffic generation and presents no discernible change to the safety or function of the surrounding road network.

Conclusion

A residential development comprising of two, three bedroom semi-detached residential dwellings is proposed on land at 52 Lauderdale Avenue, Fairlight.

The proposed provision of two basement car parking spaces for each of the two dwellings satisfies DCP 2013 parking requirements. Access is proposed via a 7.96 metre wide combined driveway crossover on Lauderdale Avenue along the southern frontage of the site. The proposed parking layout and access arrangements for each dwelling is consistent with the Australian Standard for Off Street Car Parking (AS2890.1:2004). Kerbside garbage collection will occur on Lauderdale Avenue. Bicycle parking will be accommodated within the respective basements.

The proposed development represents a nominal change to overall site generated traffic and would not compromise the safety or function of the surrounding road network. This includes the location of the driveway and consideration of the available sightlines for exiting vehicles.

I trust this provides the information you require. Should you have any questions or require any further information, please do not hesitate to contact me in our Sydney office on (02) 8448 1800.

Yours sincerely

GTA CONSULTANTS



Rhys Hazell

Associate Director

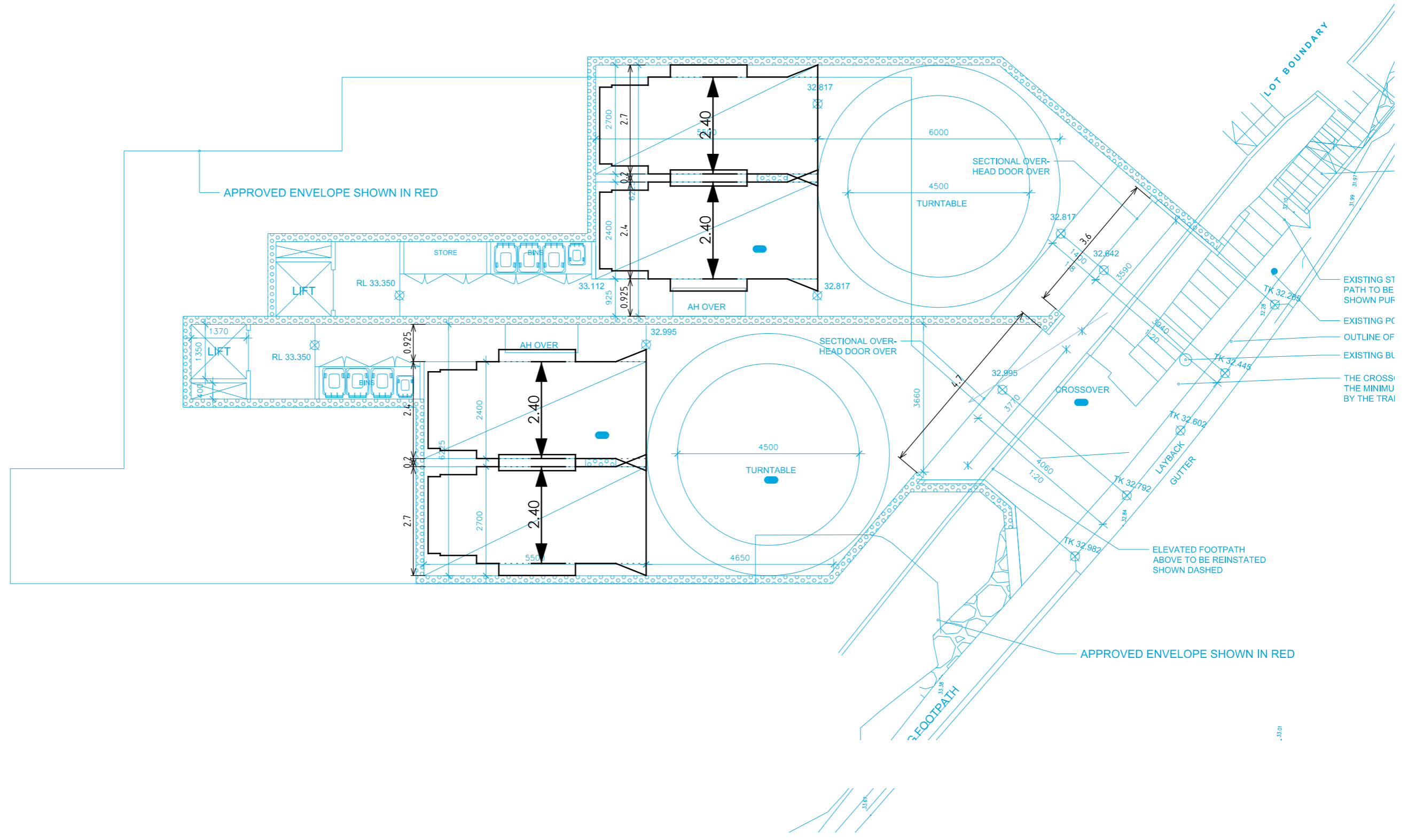
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Compliance Review and Vehicle Swept Paths

ATTACHMENT 1

Compliance Review and Vehicle Swept Paths

NOTES:
 - A MINIMUM HEIGHT CLEARANCE OF 2.2m (TO SERVICES AND STRUCTURE) SHOULD BE PROVIDED ABOVE CIRCULATION AISLES AND PARKING SPACES.



PLOTTED BY : Heiko Obermaier ON 29/04/2019 AT 12:26:02 PM



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 Sydney 02 8448 1800
 Brisbane 07 3113 5000
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 Perth 08 6169 1000

PRELIMINARY PLAN
 FOR DISCUSSION PURPOSES
 ONLY SUBJECT TO CHANGE
 WITHOUT NOTIFICATION

WARNING
 BEWARE OF UNDERGROUND SERVICES
 THE LOCATIONS OF UNDERGROUND SERVICES ARE
 APPROXIMATE ONLY AND THEIR EXACT POSITION
 SHOULD BE PROVEN ON SITE. NO GUARANTEE IS
 GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DESIGNED
 E.YE
 APPROVED BY
 R.HAZELL

DESIGN CHECK
 H.OBERMAIER
 DATE ISSUED
 18 APRIL 2019

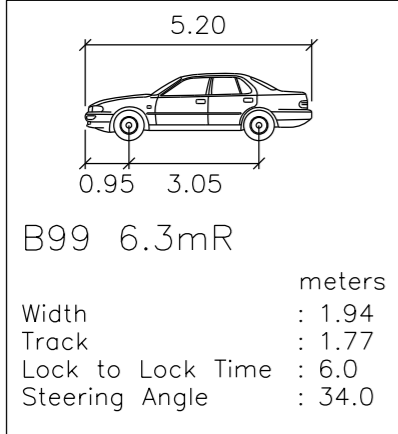
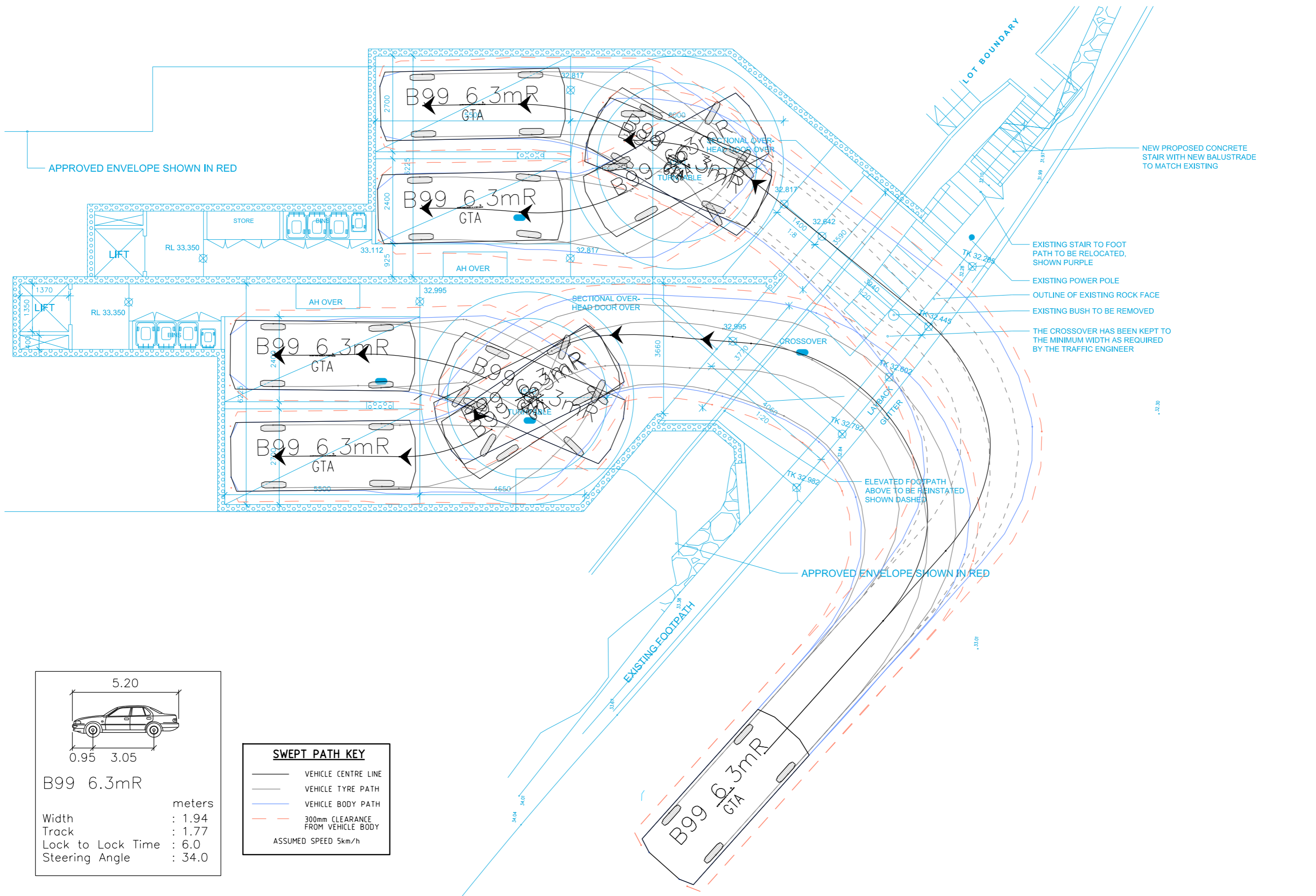
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52 LAUDERDALE AVENUE, FAIRLIGHT NSW

COMPLIANCE REVIEW
 DRAWING NO. N166100-01-01

SHEET 01 OF 04
 ISSUE P6



SWEPT PATH KEY	
	VEHICLE CENTRE LINE
	VEHICLE TYRE PATH
	VEHICLE BODY PATH
	300mm CLEARANCE FROM VEHICLE BODY
ASSUMED SPEED 5km/h	

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www.gta.com.au

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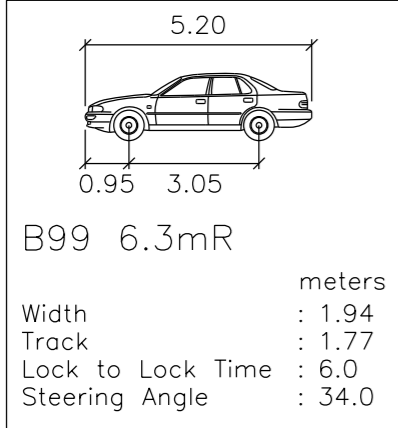
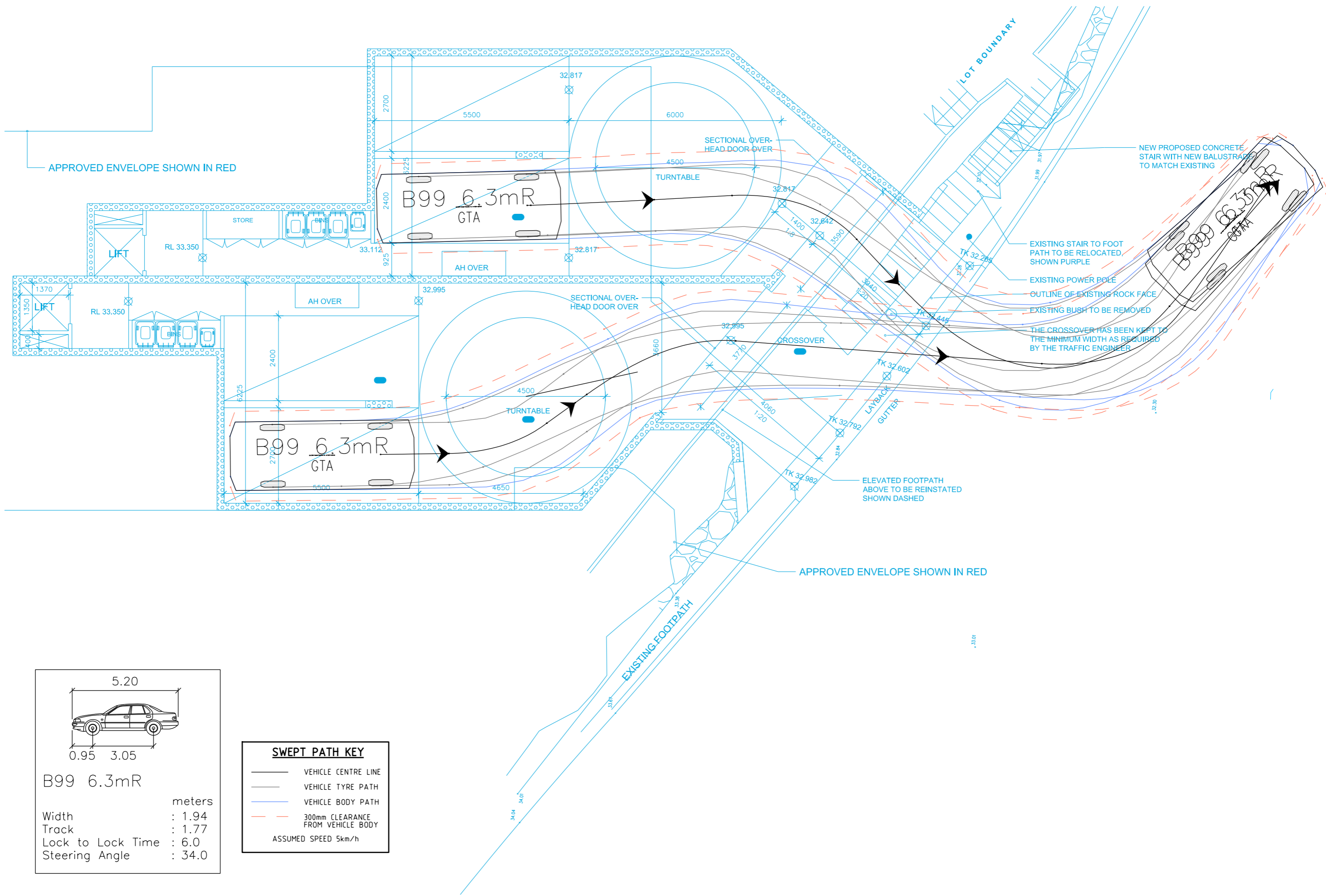
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SWEEP PATH KEY	
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	VEHICLE TYRE PATH
	VEHICLE BODY PATH
	300mm CLEARANCE FROM VEHICLE BODY
ASSUMED SPEED 5km/h	

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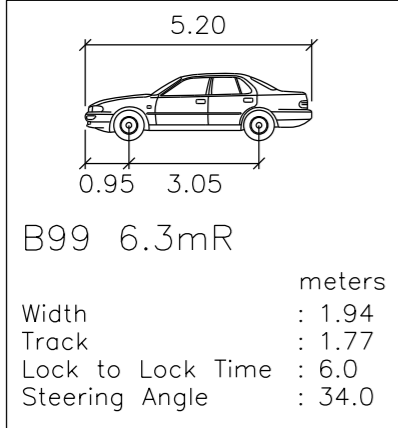
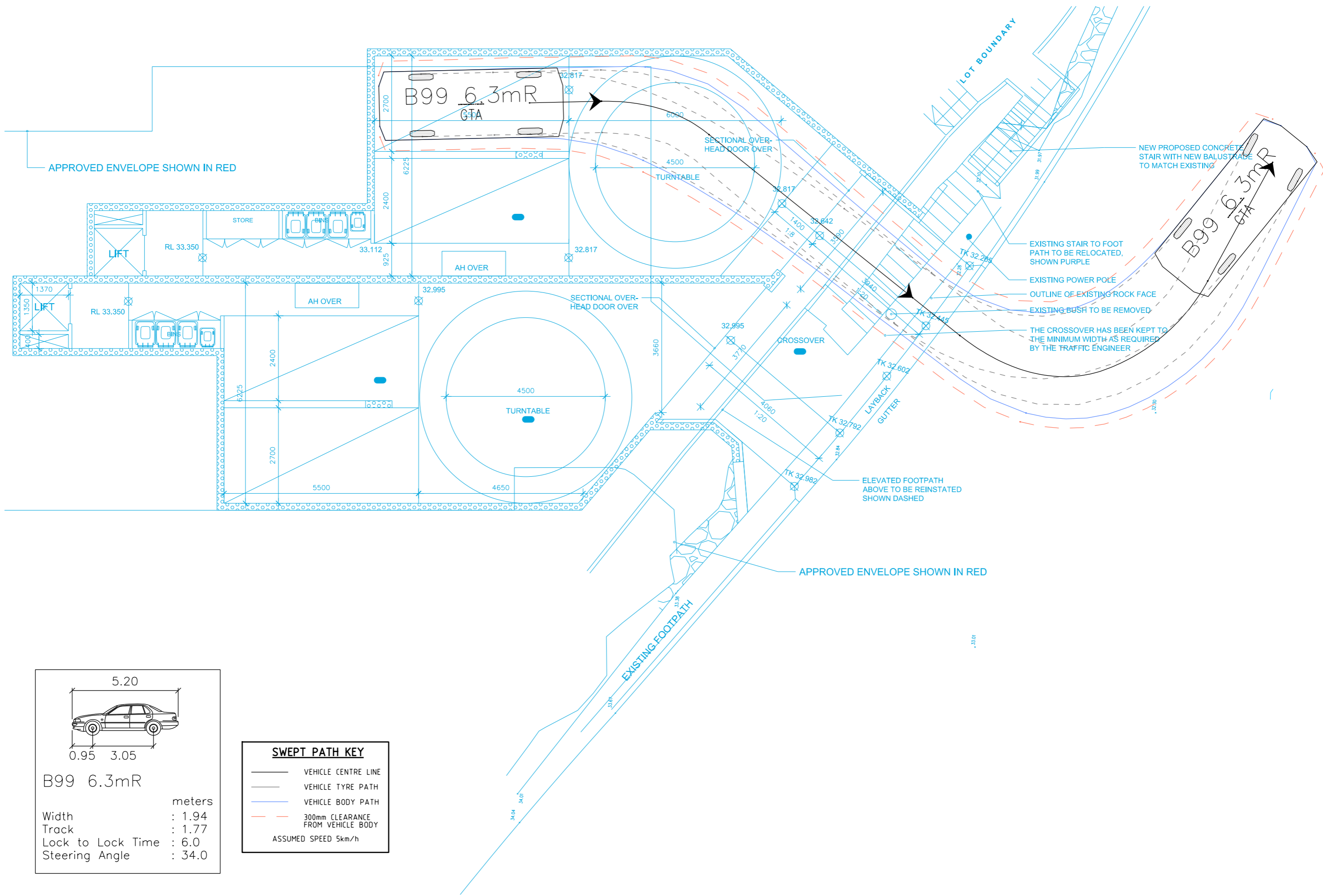
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