



Thomas Street Car Park Site  
Thomas St and Albert Ave  
Chatswood  
Car Park Management Plan

transportation planning, design and delivery

Thomas Street Car Park Site  
Thomas St and Albert Ave, Chatswood  
Car Park Management Plan

Issue: B 16/07/12  
Client: Meriton Group  
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GTA Consultants Office: NSW

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Issue	Date	Description	Prepared By	Checked By	Approved By
A	05/07/12	Final	Penny Dalton	Brett Maynard	Brett Maynard
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# 1. Introduction

## 1.1 Background

A mixed residential and commercial development has been approved on the Thomas Street car park site in Chatswood. Condition B15 of the current development consent (MP09\_0066 dated 28 September 2010) requires that a whole of basement car parking management plan be prepared, showing the relationship and operation of all car parking and bicycle facilities on the site. GTA Consultants was commissioned by Meriton Group in June 2012 to prepare the Car Park Management Plan.

Willoughby City Council will own and operate the public car park component of the development on its completion. A Building Management Statement is to be prepared to define the operation costs where services and facilities in the basement are shared with Council. These aspects are noted throughout this report, and general principles regarding these are presented where appropriate.

## 1.2 Purpose of This Report

The objectives of the car parking management plan are to:

- i Define the management of parking.
- ii Define the management of access and car park operation, including but limited to:
  - a. allocation of parking
  - b. ticketing system operation and fee structures
  - c. operational hours
  - d. internal signage and linemarking.

## 1.3 Referenced Documents

In preparing this report, reference has been made to background documents, including:

- an inspection of the site and its surrounds
- Australian Standard, Parking Facilities, Part 1: Off-Street Car Parking AS 2890.1:2004
- Australian Standard, Parking Facilities, Part 2: Off-Street Commercial Vehicle Facilities AS 2890.2:2002
- Australian Standard, Parking Facilities, Part 6: Off-Street Parking for People with Disabilities AS 2890.6:2009
- plans for the development prepared by PTW A-0111-D to A-0115-D dated April 2012 (refer to Appendix A)
- Project Approval MP09\_0066 dated 28 September 2010
- Design Performance Brief Thomas Street/Albert Avenue – Public Carpark Chatswood, NSW 2067, prepared by Willoughby City Council
- other documents and data as referenced in this report.

## 2. Car Park Design Overview

### 2.1 Car Parking Quantum

As shown on the plans prepared by PTW, the development contains five (5) car parking levels, which are divided into two separate areas, one being solely for residential users and one being for public and commercial users. The number of car parking spaces on each level and in each portion of the car park is summarised in Table 2.1.

**Table 2.1: Car Parking Provision per Basement Level**

Plan	Level	Number of Car Spaces		
		Residential	Public	Commercial
A-0111/C	Basement 1	16	-	18
A-0112/C	Basement 2	42	74	-
A-0113/C	Basement 3	44	75	-
A-0114/C	Basement 4	45	76	-
A-0115/C	Basement 5	45	25	46
	<b>Total</b>	<b>192</b>	<b>250</b>	<b>64</b>

### 2.2 Vehicle Access

The development has one car park entry point, and two car park exit points as detailed below. Detection loops will be cast in the slab at the entry gates.

#### 2.2.1 Albert Avenue Entry and Exit

The main vehicular access into and egress from the development's Basement 1 level is provided via an unsignalised driveway on Albert Avenue, located near the north-eastern boundary of the site. Vehicle movements are restricted to left turns only into and out of the driveway.

Vehicles arriving from the east on Albert Avenue are required to use an alternative route to approach from the west, such as circulating via Oliver Road, Whitton Road, Centennial Avenue, Pacific Highway, Albert Avenue. Vehicles departing to the east may use the Thomas Street exit and circulate via local streets such as Thomas Street, Katherine Street, Victoria Avenue, or use the Albert Avenue exit to Orchard Road.

This access services entry to all parking and loading facilities for the development. The driveway on Albert Avenue is configured with a 4.0m wide entry and 4.0m wide exit, separated by a 750mm median. The driveway crossing flares across the footpath and on its approach to Albert Avenue.

The driveway grades between Albert Avenue and the basement meet the requirements of AS2890.1 and AS2890.2 for maximum grades and ground clearance for Medium Rigid Vehicle access.

#### 2.2.2 Thomas Street Exit

A secondary vehicular egress from the car park is provided to Thomas Street via a ramp from Basement 1. Drivers can exit onto Thomas Street via left or right turn movements. The exit driveway is 4.0m wide and lies adjacent to (but separated from) the right of way linking Fleet Lane West to Thomas Street.

## 2.3 Loading Facilities

Two loading areas are provided within the development on Basement 1 level, adjacent to the main vehicular access from Albert Avenue.

One loading area is located adjacent to the southern boundary of the site, and is designated as the commercial loading area. The commercial loading area is designed to accommodate one Medium Rigid Vehicle and one Small Rigid Vehicle (as defined by AS2890.2, 2002).

One loading area is centrally located within the site, and is designated as the residential loading area. The residential loading area is designed to accommodate one Medium Rigid Vehicle and one Small Rigid Vehicle (as defined by AS2890.2, 2002).

Vehicle entry to and exit from the loading areas is provided via the Albert Avenue entry. The loading dock entries will be appropriately identified with signage and linemarking to ensure the understanding of delivery drivers and other car park users alike. All manoeuvring of service vehicles in a reverse direction would take place within the loading area, clear of all other car park users, with the exception of the MRV accessing the residential loading dock. The front of the MRV would cross in front of the exit boom gate from the residential car park before the vehicle reverses into the dock. Drivers exiting the residential car park would be required to give way to the MRV, and signage to that effect will be provided. The boom gate would control vehicle movements during this time, and the drivers of each vehicle would have a clear view of each other.

Upon exiting the loading dock, service vehicles are required to give way to vehicles exiting the public and residential car parks. In addition, deliveries would generally occur outside of the morning and evening peak hours when traffic activity in the development would be at its highest.

The manoeuvring of vehicles into and out of the loading spaces is demonstrated in the swept paths presented in Appendix B.

## 2.4 Car Parking Layout

Parking bays are at 90 degrees to the circulation aisles and have a minimum size of 2.4m wide and 5.4m long, with additional clearances to columns and other obstructions, and aisles are minimum 5.8m wide in the residential car park, and minimum 6.125m wide in the public carpark. Ramps are at a grade of 1:8, and have minimum roadway width of 6.0m in the public car park and 5.75m wide in the residential car park, with additional clearances either side to structural and other elements.

The public car parking area is laid out with a two way ramp system at the western end of each parking levels, a low graded aisle along the southern side of the public car park on each level, linking via a cross aisle to a level and parallel aisle on each level on the northern side of the public car park. The layout of the aisles and ramps permits two large cars (B85 as defined by AS2890.1) to pass each other at any point along the travel paths. The manoeuvring of these vehicles is demonstrated in the swept paths presented in Appendix B.

The residential car parking area is laid out with east and west split levels connected via two way ramps near the northern and southern ends of each level.

## 2.5 Car Park Operating Hours

The residential car park levels will be open at all times. The operating hours of the public car park will be determined by Willoughby Council, which will own and operate the car park. Public car park operating hours are expected to coincide with the principal operating hours of the businesses within the development and its surrounds.

## 3. Car Park Management

### 3.1 Allocation of Parking

A summary of the allocation of car parking within all car park levels is shown in Table 3.1 for the residential car park and Table 3.2 for the commercial/ public car parking. The different allocations are discussed in the following sections.

**Table 3.1: Residential Car Park Space Allocation**

Level	Standard	Tandem Pairs	Disabled	Total
Basement 1	10	3	0	16
Basement 2	35	3	1	42
Basement 3	37	3	1	44
Basement 4	38	3	1	45
Basement 5	38	3	1	45
<b>Total</b>	<b>158</b>	<b>15</b>	<b>4</b>	<b>192</b>

**Table 3.2: Commercial and Public Car Park Space Allocation**

Level	Commercial		Public		Total	Notes
	Standard	Disabled	Standard	Disabled		
Basement 1	18	0	0	0	18	
Basement 2	0	0	72	2	74	
Basement 3	0	0	75	1	76	
Basement 4	0	0	75	0	75	
Basement 5	46	0	25	0	71	3 restricted headroom
<b>Total</b>	<b>64</b>	<b>0</b>	<b>247</b>	<b>3</b>	<b>314</b>	

#### 3.1.1 Residential Parking

All residential car parking will be fully contained within the residential car parking area, accessed via a boom gate on Basement 1.

Each tandem pair of spaces (15 pairs totalling 30 spaces) will be allocated to an individual apartment in the Strata Plan. Store rooms which are accessed solely through a car parking space will be allocated to the same apartment as the car parking space within the Strata Plan.

Each disabled car parking space will be allocated to an individual adaptable apartment in the Strata Plan.

#### 3.1.2 Disabled Car Parking

The disabled car parking spaces are located near the lifts to minimise the distance required for pedestrians to travel to and from the parking space. Disabled spaces and adjoining shared areas will be marked and signed appropriately in accordance with AS2890.6, 2009.

Headroom above the disabled spaces and along the path of travel from the car park entry to the disabled spaces will comply with AS2890.6, 2009.



As operator of the public parking, Willoughby Council will be responsible for monitoring use of disabled car parking spaces in the public parking area.

### 3.1.3 Commercial Parking

Commercial car parking is located in two areas, one being on Basement 1 containing 18 spaces, and the other on Basement 5 containing 46 cars. Meriton will be responsible for payment and reporting of the parking space levy on the commercial spaces.

Commercial spaces will be marked and signed appropriately.

### 3.1.4 Public Car Parking

Public car parking is located on Basements 2 to 5 inclusive.

Public parking spaces will be marked and signed appropriately. As operator of the car park, Willoughby Council will be responsible for monitoring any misuse of public spaces, such as multiple entries per day to maximise free parking periods, if any will exist.

### 3.1.5 Restrictions on Car Parking

Three spaces in the public car parking on Basement 5 are noted to have low headroom. These spaces will have headroom in excess of 2.0m for the majority of the length of the space, reducing to 1.997m at the closed end of the space. The height restriction on those spaces would restrict access for only a very small proportion of all vehicles using the car park, being only a small proportion of vans and 4WDs, and would not prevent pedestrian access around the parked cars in those spaces, noting that:

- The height of all passenger cars and station wagons is below 1.5 metres.
- The 99<sup>th</sup> percentile height of the Australian male is 1.88m.
- Most vans and four wheel drive vehicles that are commonly used as passenger vehicles have a height less than 2.0m; although some commonly used vehicles have a height approaching 2.2m.
- Headroom is permitted to be reduced to 1.8m for 500mm from the closed end of a space for people with a disability for forward-in parking, which recognises that the front of the vehicle is typically lower than the rest.

The height restriction on the spaces will be marked and signed appropriately.

## 3.2 Ticketing System Operation

Willoughby City Council will be responsible for the supply and installation of supplementary operational equipment such as access control, ticketing machines, dynamic signage, intercom/video services and security services. The car park allows for the installation of such systems, which will be installed to Council's specifications. General principles regarding ticketing are discussed below.

### 3.2.1 Hardware

Boom gates are located at the entry and exit point of both the residential and the commercial/ public car parking areas to control the movement of vehicles. Residents will use a swipe card or similar to enter and exit the residential car park. It is anticipated that public car park users will be issued with

tickets at the boom gate. Pass-card readers or similar will be provided at the boom gate entry and exit for commercial users, with swipe cards provided to commercial tenants. A second pass-card reader would be provided within the commercial lift lobby on Basement 5. Commercial tenants would be required to swipe their card at this reader prior to entering the lift, otherwise the public car parking charges would apply. This system would be managed by Meriton.

The location of the entry boom gates allows for in excess of three vehicles to queue off the street as required by the Design Brief.

A security office is located on Basement 1 adjacent to the exit from the public car parking.

### 3.2.2 Parking Control/Ticketing

The public car park will operate in a manner to be determined by Council, who would be responsible for the management of the public car park. Details of the ticketing and parking control will be resolved prior to opening of the car park. It is anticipated that Council will install ticket machines near the public lifts.

### 3.2.3 Pricing Structure

The pricing structure for the public car parking will be to Council's specification.

### 3.2.4 Validation of Disabled Car Park Users

To be in-line with on-street parking restrictions for disabled car parking spaces, it is anticipated that users of the public parking disabled spaces will be provided with free car parking. Monitoring of the disabled spaces will be the responsibility of Willoughby City Council.

## 3.3 Pedestrian Access

Three sets of lifts are provided within the development:

1. Residential
2. Commercial
3. Public car park.

The lifts for the residential car parking are centrally located within the residential car park, to minimise travel distances. Pedestrians on the north-eastern side of the residential car park on Basements 2 to 4 will have level access to the lift lobby. Pedestrians on the south-western side of the residential car park will have access via one of two sets of stairs to access the lift lobby.

Two groups of lifts are provided within the commercial and public car parking area. The commercial car lifts would operate only between the main building levels and Basements 1 and 5 where the commercial car parking is provided. The public lifts would operate on all Basements 1 to 5. All pedestrians would have level access (or up to 1:40 grade) to the public and commercial lift lobbies.

Pedestrian access will be available 24 hours per day, and the stairs between car parking levels will be available for use by pedestrians walking between floors of the public car park.

### 3.4 Bicycle Parking

Separate storage areas for bicycle parking are provided on Basement 1 for residential and public cyclists. Bicycle storage areas are also provided within the residential car park on Basements 2 to 5.

The public bicycle spaces on Basement 1 are located on the entry level to the car park, to minimise travel distance for cyclists. Change room facilities are provided adjacent to the bicycle parking.

## 4. Car Park Signage, Linemarking and Kerbing

### 4.1 Signage

All operations within the car park are directed by directional, informative, regulatory and warning signs for the following purposes:

- To control traffic movement and driver behaviour.
- To warn against hazards to personal safety or potential damage to vehicles.
- To identify sections or rows of parking spaces so pedestrians can easily find their parked vehicles.
- To direct and inform drivers entering and circulating within the car park about vehicle entry points, exits and parking locations.
- To direct pedestrians to lifts, stairs, amenities and other parts of the building.

General principles regarding the location and type of car park signage are described below, and a detailed signage plan will be provided to Willoughby Council prior to opening of the car park.

#### 4.1.1 Vehicular Guide Signs

Guide signs will be in accordance with AS2890.1. The vehicular guide sign principles with respect to the public and commercial car parking area are as follows:

- Entry and exit instructions in operating the boom gates will be located on the ticketing machines adjacent to the boom gates. This informs drivers to (for example) take a ticket on the way in and insert their validated ticket on the way out of the car park.
- Circulation signage in the form of overhead directional signage at decision points at the ends of ramps and on the circulating aisles will be installed to guide drivers to car parking spaces.
- Exit signage in the form of overhead direction signage to direct drivers to the route out of the car park.
- Exit signage on Basement 1 in the form of overhead directional signage to direct drivers to the Thomas Street exit or the Albert Avenue exit.
- Lifts and stairs will be signposted on each level.
- Bicycle parking and user facilities will be signposted on Basement 1.
- Location identification signage to help users locate their parked vehicles will be provided by colour coding (or similar) of each car parking level and, due to the relatively small floor area on each level, users are expected to be able to find their vehicle easily on each level.
- Installation of convex mirrors will be considered at the ends of ramps to assist the two way flow of traffic.

#### 4.1.2 Regulatory and Warning Signs

Regulatory signs will be in accordance with AS2890.1. The principles regarding regulatory and warning sign locations are given as follows:

- Height clearance bars and/or signs will be located overhead at the top of the ramp from Albert Avenue, at the entry to the public car parking, at the entry to the residential car parking, and at the bottom of the exit ramp to Thomas Street. These will indicate the

maximum permitted vehicle height for the loading area, for the public and residential car parking areas, and for the exit to Thomas Street.

- Give Way (R1-2) signs will be located at the exit from the commercial parking on Basement 1, to raise awareness of the conflict point and to assign priority to the dominant movement along the entry/exit to Basement 2.
- Give Way (R1-2) signs will be located at the exit from the residential parking on Basement 1, to raise awareness of the conflict point with service vehicles, and to allocate priority to the vehicles exiting the public car park.
- Speed limit signs are not considered to be warranted in the public car park, as the design does not encourage excessive speed, and signs alone are not generally effective in controlling excessive speed.

## 4.2 Linemarking

Linemarking within the car park will be installed to help guide users and indicate the types of allocated car parking spaces. Pavement markings will be in accordance with AS2890.1, and the general principles are as follows.

### 4.2.1 Marking of Parking Spaces

The car parking spaces are marked as follows:

- All car parking spaces other than those for people with disabilities will be marked with white or yellow lines 80 to 100mm wide.
- Disabled car parking spaces will be identified by means of a white symbol of access between 800mm and 1000mm high placed on a blue rectangle with no side more than 1200mm, placed as a pavement marking in the centre of the space between 500mm and 600mm away from its entry point.
- Residential disabled car parking spaces do not require the marking above.
- Disabled spaces will be outlined with unbroken yellow lines 80mm to 100mm wide on all sides and shared areas (not shown on the PTW plans) will be marked with  $45 \pm 10$  degrees diagonal stripes 150mm to 200mm wide with spaces 200mm to 300mm between stripes.
- All car parking spaces will be individually numbered.

### 4.2.2 Pavement Arrows

Pavement arrows to guide vehicles around the car park will be located at each decision point and at regular intervals to indicate to drivers the correct circulation direction within the car park. Pavement arrows will be in accordance with AS2890.1, marked in white. They will be either 3.0m in length for a straight ahead or turn arrow or 3.75m in length for a combined straight and turn arrow.

### 4.2.3 Kerb Configuration

All kerb lines shown on the referenced PTW drawings will be reinforced concrete kerbs. The kerb configuration allows for access to all car parking facilities within the car park for all expected vehicles.

No speed humps are proposed.

Concrete wheel stops will be provided for each public parking bay in accordance with AS2890.1 for front-in parking. Wheel stops will be between 90mm and 100mm in height and 1650mm  $\pm$  50mm in width.

## 5. Building Management Statement

A Building Management Statement (BMS) is to be prepared in consultation with Council. It will identify cost sharing responsibilities for future maintenance of the basement car park. Items to be addressed in the BMS include, but are not limited to, the following:

- Mechanical ventilation
- Electricity
- Maintenance
- Security
- Ticketing
- Cleaning
- Lighting
- Water
- Provision of conduits, and
- Other Information Technology requirements.

The BMS and associated items required to be provided are to be resolved prior to stratum subdivision approval of the public car park.

## 6. Conclusions

Based on the discussions presented within this report, the following conclusions are made:

- i The Thomas Street car park has 506 parking spaces over five basement levels, with all entry from Albert Avenue and exit to both Albert Avenue and Thomas Street.
- ii The car park is divided into two areas with separate internal accesses, one being for residential parking, the other being for commercial and public parking.
- iii Two loading dock areas each accommodate one MRV and one SRV, and all service vehicles enter and exit via Albert Avenue.
- iv Access to both car parks is controlled through boom gates.
- v The residential car park will be open at all times.
- vi The public car parking will be owned and operated by Willoughby City Council, who will be responsible for the management of the commercial and public car parking. Willoughby City Council will determine all management aspects of that car parking, including (but limited to) operating hours, ticketing systems and detailed signage planning.
- vii The 192 residential car parking spaces include four disabled spaces and 15 tandem pairs (30 spaces). In addition there is provision for bicycle parking.
- viii The 314 spaces in the commercial and public parking area include three public disabled spaces, and three spaces with a headroom restriction.
- ix Directional signage will assist drivers to find a parking space and exit the car park.
- x A combination of regulatory and warning signs, linemarking and concrete kerbs will be provided to manage vehicle movement within the car parks.
- xi Subject to Willoughby City Council's operational management, the car park will operate efficiently and effectively at all times.
- xii Periodic review of the Car Parking Management Plan should be undertaken. Consideration of further improvements and changes to the Plan should be considered in response to any operational issues that arise.

## Appendix A

### Car Park Plans



# LEGEND

E/A - EXHAUST AIR RISER  
S/A - SUPPLY AIR  
S/P - STAIR PRESSURISATION  
F/S - FIRE STAIR  
L1 - LIFT 1  
PL1 - COUNCIL LIFT  
PS - COUNCIL STAIR  
E - ELECTRICAL

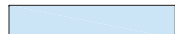
COUNCIL



RESIDENTIAL



COMMERCIAL



1 BASEMENT 1 PLAN  
1:200

Revisions

D CC Submission Council comments inundated 01.07.2012  
C Construction Certificate Submission 2.07.2012  
B EA Submission 18.12.09

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Landscape -  
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Traffic -

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Project No. 212007  
Scale: 1:200@A1; 1:400@A3  
Date: APRIL 2012  
Drawn: EA/RB  
Checked: DH  
Approved:



1 2 3 4 5 6m

BASEMENT 1 PLAN

A-0111 D  
CONSTRUCTION CERTIFICATE

MP 09\_0066  
APPROVED 28 SEPTEMBER 2010

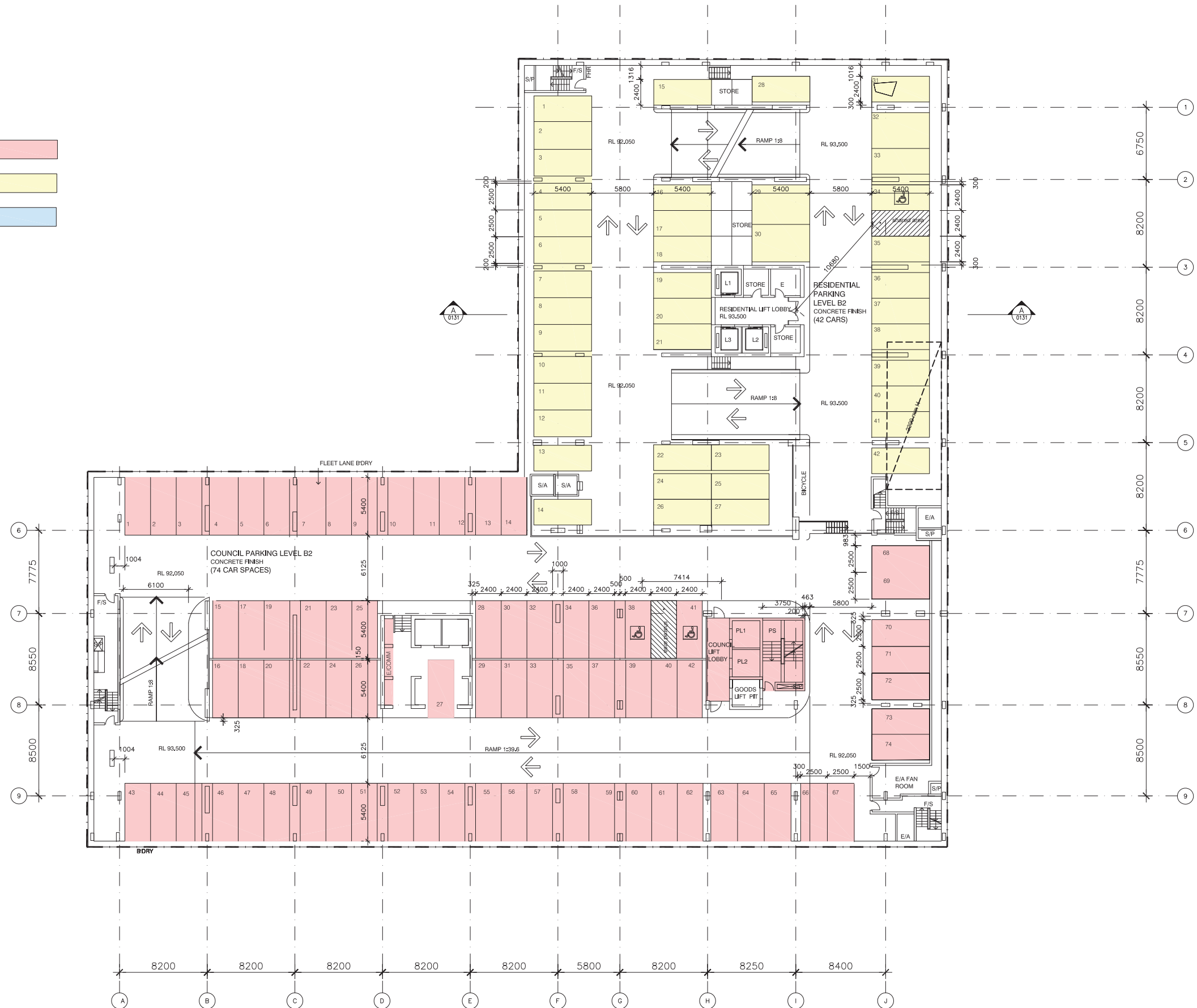
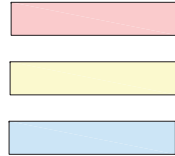
LEGEND

E/A - EXHAUST AIR RISER  
S/A - SUPPLY AIR  
S/P - STAIR PRESSURISATION  
F/S - FIRE STAIR  
L1 - LIFT 1  
PL1 - COUNCIL LIFT  
PS - COUNCIL STAIR  
E - ELECTRICAL

COUNCIL

RESIDENTAL

COMMERCIAL



1 BASEMENT 2 PLAN  
1:200

MP 09\_0066  
APPROVED 28 SEPTEMBER 2010

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MERITON THOMAS STREET

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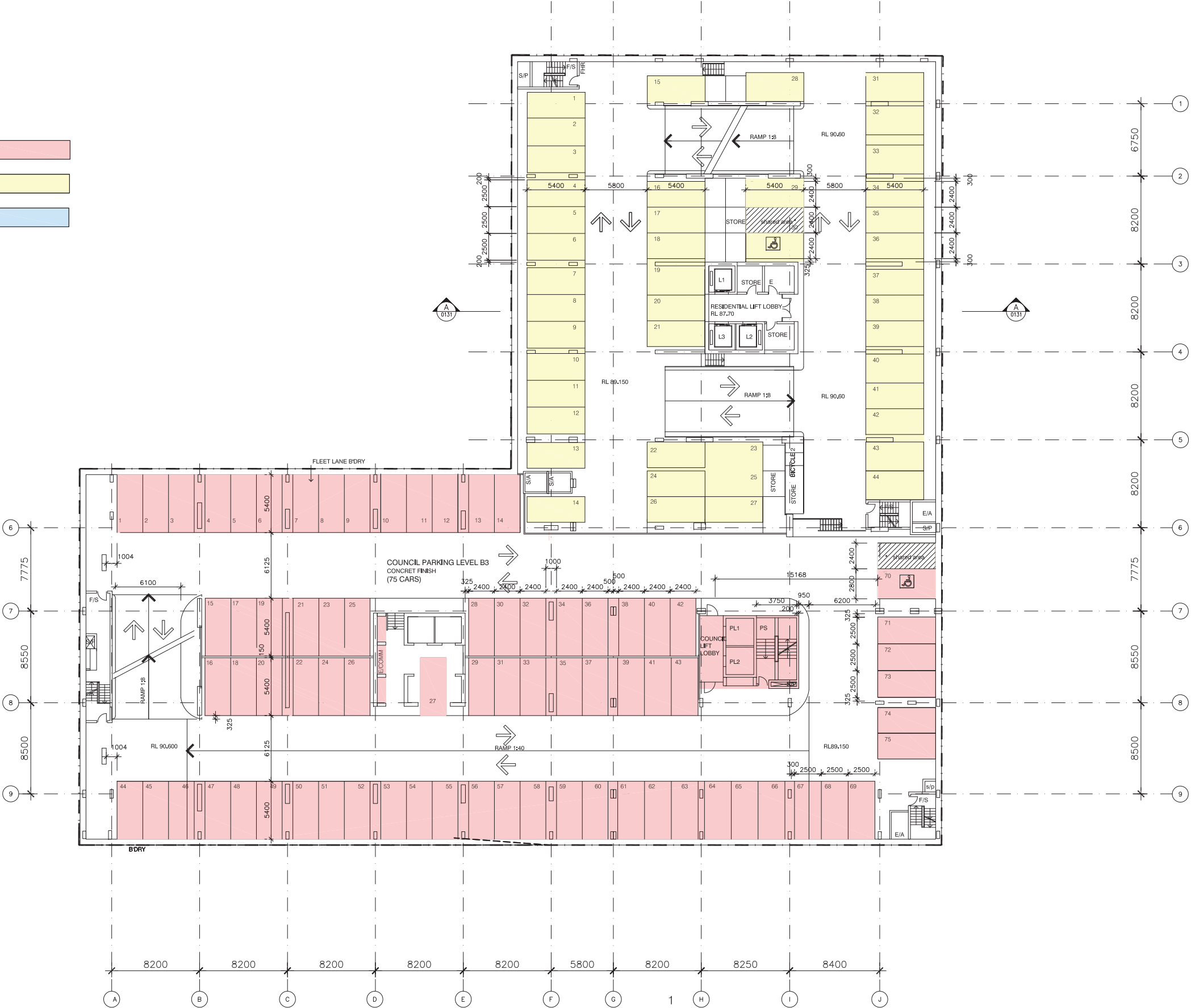


BASEMENT 2 PLAN

A-0112 D  
CONSTRUCTION CERTIFICATE

- LEGEND
- E/A - EXHAUST AIR RISER
  - S/A - SUPPLY AIR
  - S/P - STAIR PRESSURISATION
  - F/S - FIRE STAIR
  - L1 - LIFT 1
  - PL1 - PUBLIC LIFT
  - PS - PUBLIC STAIR
  - E - ELECTRICAL

- COUNCIL
- RESIDENTAL
- COMMERCIAL



1 BASEMENT 3 PLAN  
1:200

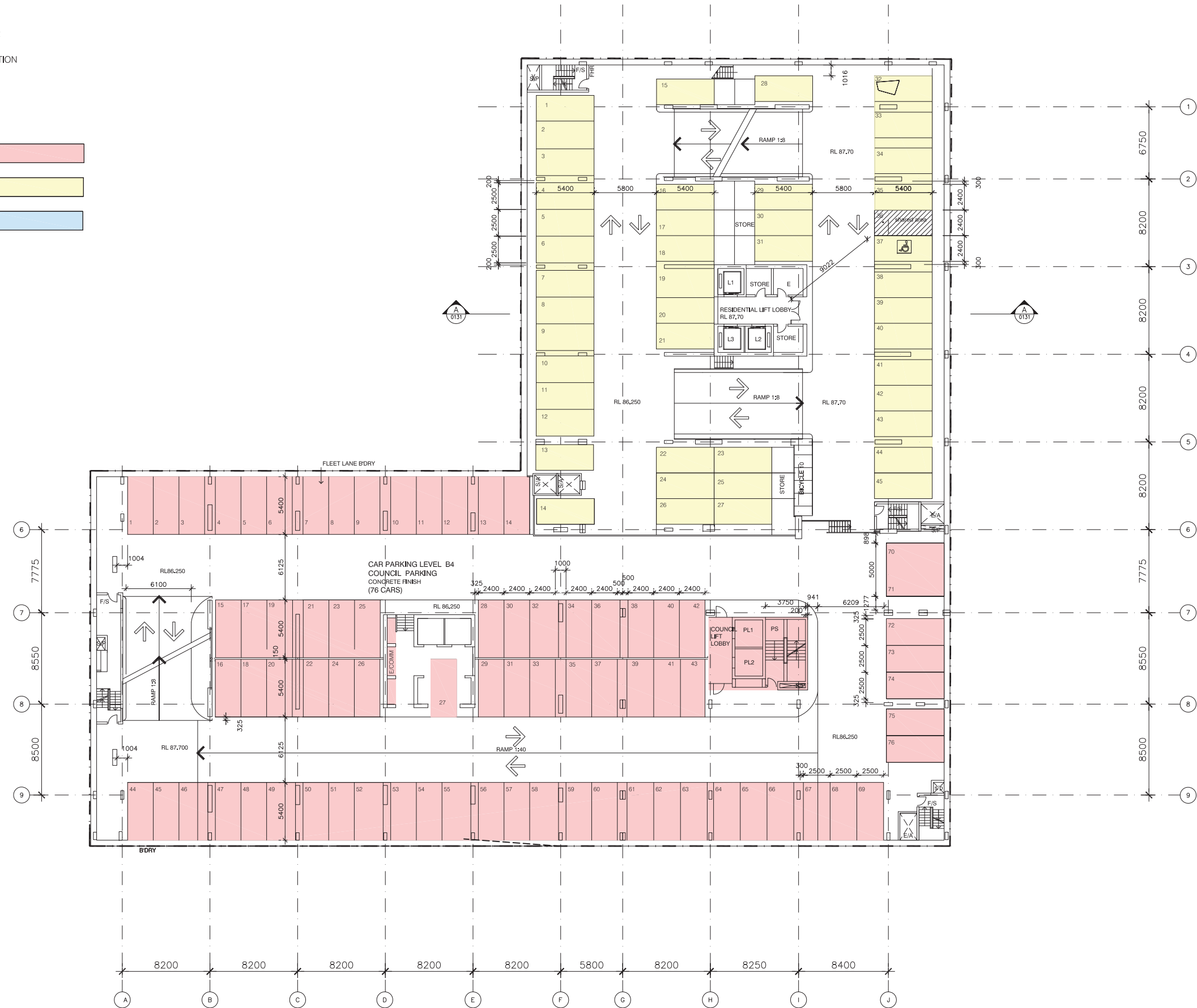
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MERITON THOMAS STREET Thomas Street/ Albert Avenue Chatswood NSW 2067
Project No. 212007 Scale: 1:200@A1;1:400@A3 Date: APRIL 2012 Drawn: EA/RB Checked: DH Approved:
BASEMENT 3 PLAN A-0113 D CONSTRUCTION CERTIFICATE

LEGEND

E/A - EXHAUST AIR RISER  
S/A - SUPPLY AIR  
S/P - STAIR PRESSURISATION  
F/S - FIRE STAIR  
L1 - LIFT 1  
PL1 - COUNCIL LIFT  
PS - COUNCIL STAIR  
E - ELECTRICAL

COUNCIL  
RESIDENTAL  
COMMERCIAL



1 BASEMENT 4 PLAN  
1:200

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Contractor

Consultants

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Structural -  
Services -  
Landscape -  
Acoustics -  
Traffic -

MERITON THOMAS STREET

Thomas Street/ Albert Avenue  
Chatswood NSW 2067

Project No. 212007  
Scale: 1:200@A1;1:400@A3  
Date: APRIL 2012  
Drawn: EA/RB  
Checked: DH  
Approved

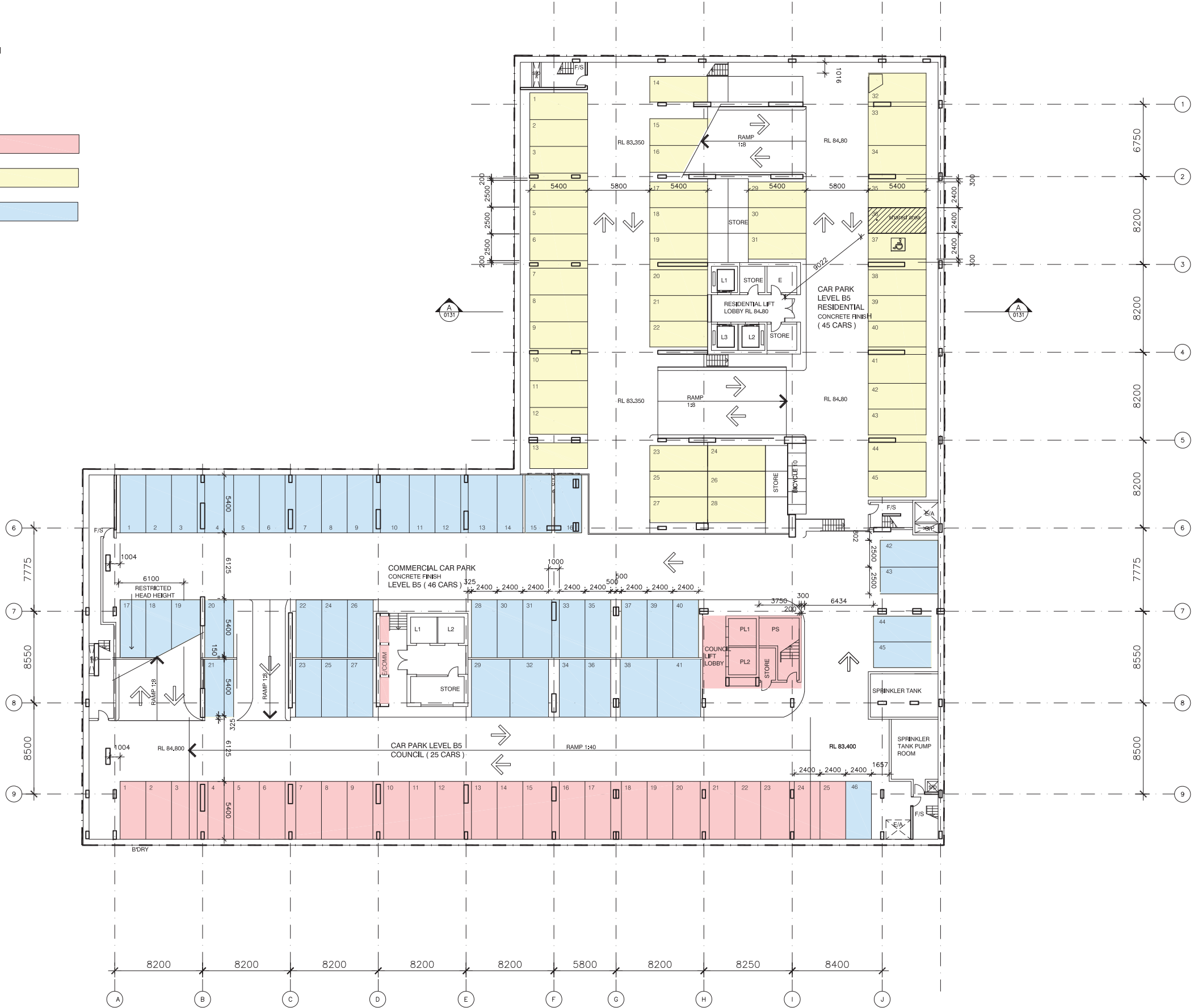


BASEMENT 4 PLAN

A-0114 D  
CONSTRUCTION CERTIFICATE

- LEGEND
- E/A - EXHAUST AIR RISER
  - S/A - SUPPLY AIR
  - S/P - STAIR PRESSURISATION
  - F/S - FIRE STAIR
  - L1 - LIFT 1
  - PL1 - COUNCIL LIFT
  - PS - COUNCIL STAIR
  - E - ELECTRICAL

- COUNCIL
- RESIDENTAL
- COMMERCIAL



1 BASEMENT 5 PLAN  
1:200

MP 09\_0066  
APPROVED 28 SEPTEMBER 2010

Revisions

D CC Submission, Council comments (undated 11.07.2012)

C Construction Certificate Submission 2.07.2012

B EA Submission 18.12.09

Do not scale from drawings. Verify all dimensions on site before commencing work. Copying or the reproduction of this drawing is strictly prohibited without the consent of PTW Architects P/L.

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Traffic -

**MERITON THOMAS STREET**  
Thomas Street/ Albert Avenue  
Chatswood NSW 2067

Project No. 212007  
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Date: DRAFT  
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Approved:

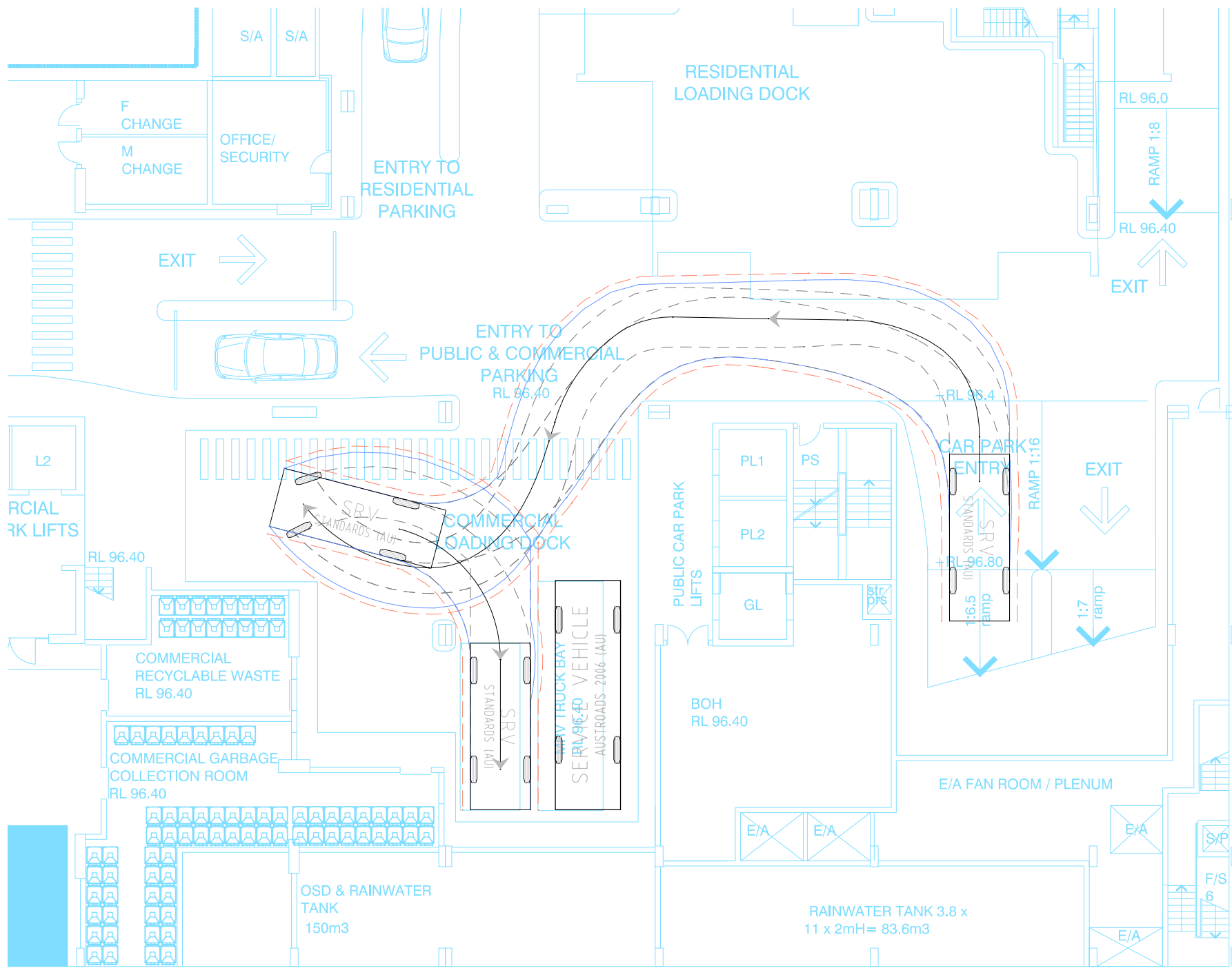
BASEMENT 5 PLAN

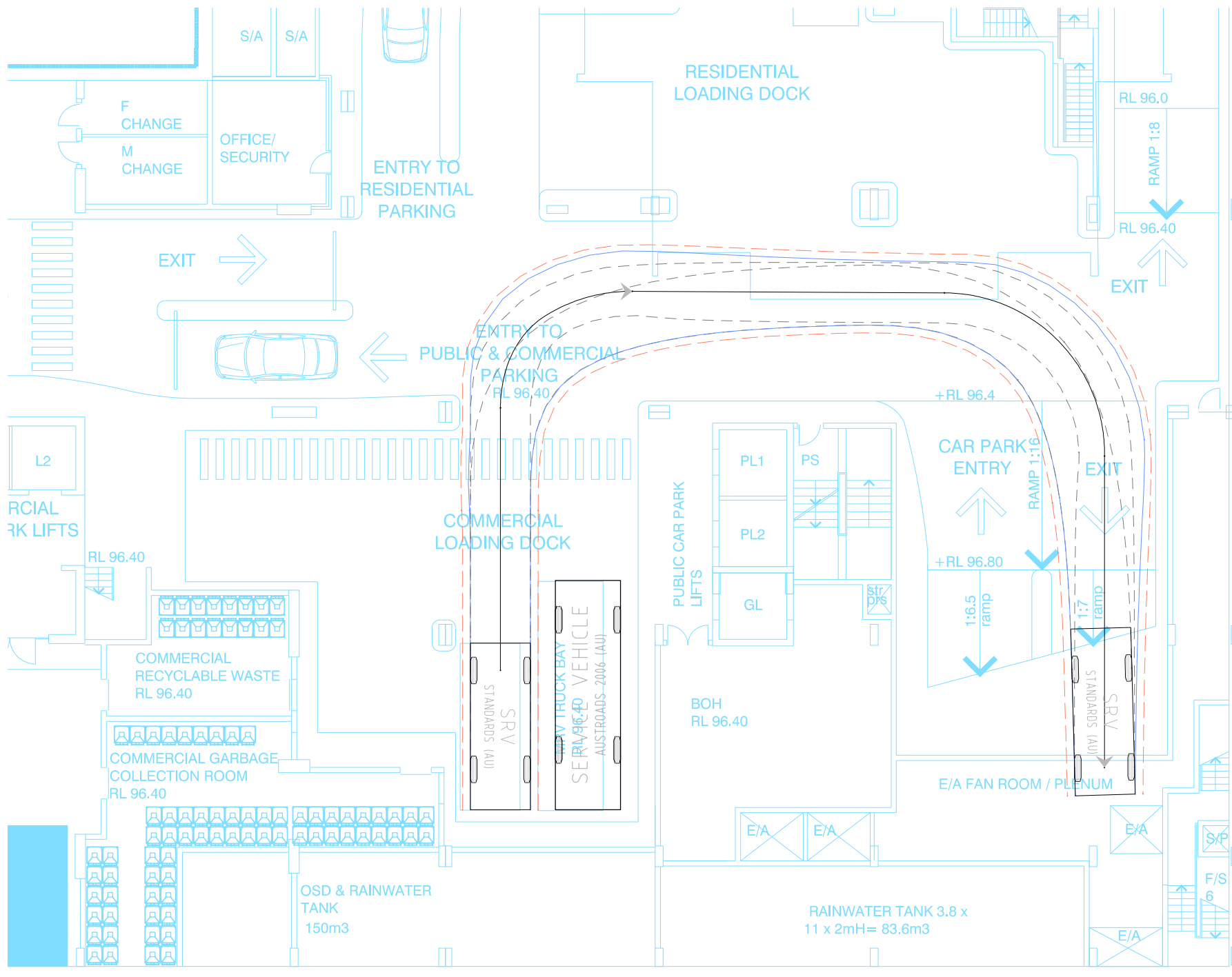
A-0115 D  
CONSTRUCTION CERTIFICATE

## Appendix B

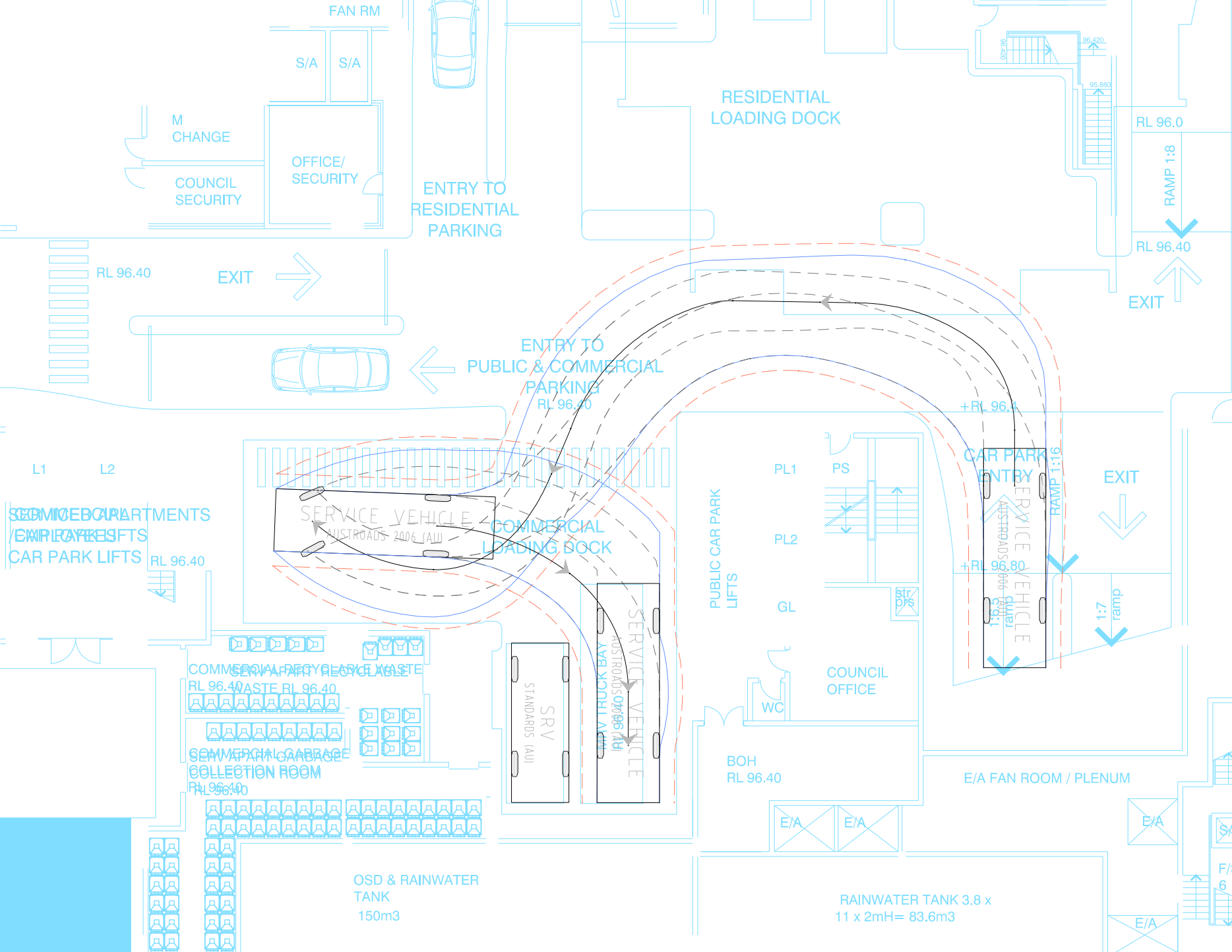
### Vehicle Swept Paths

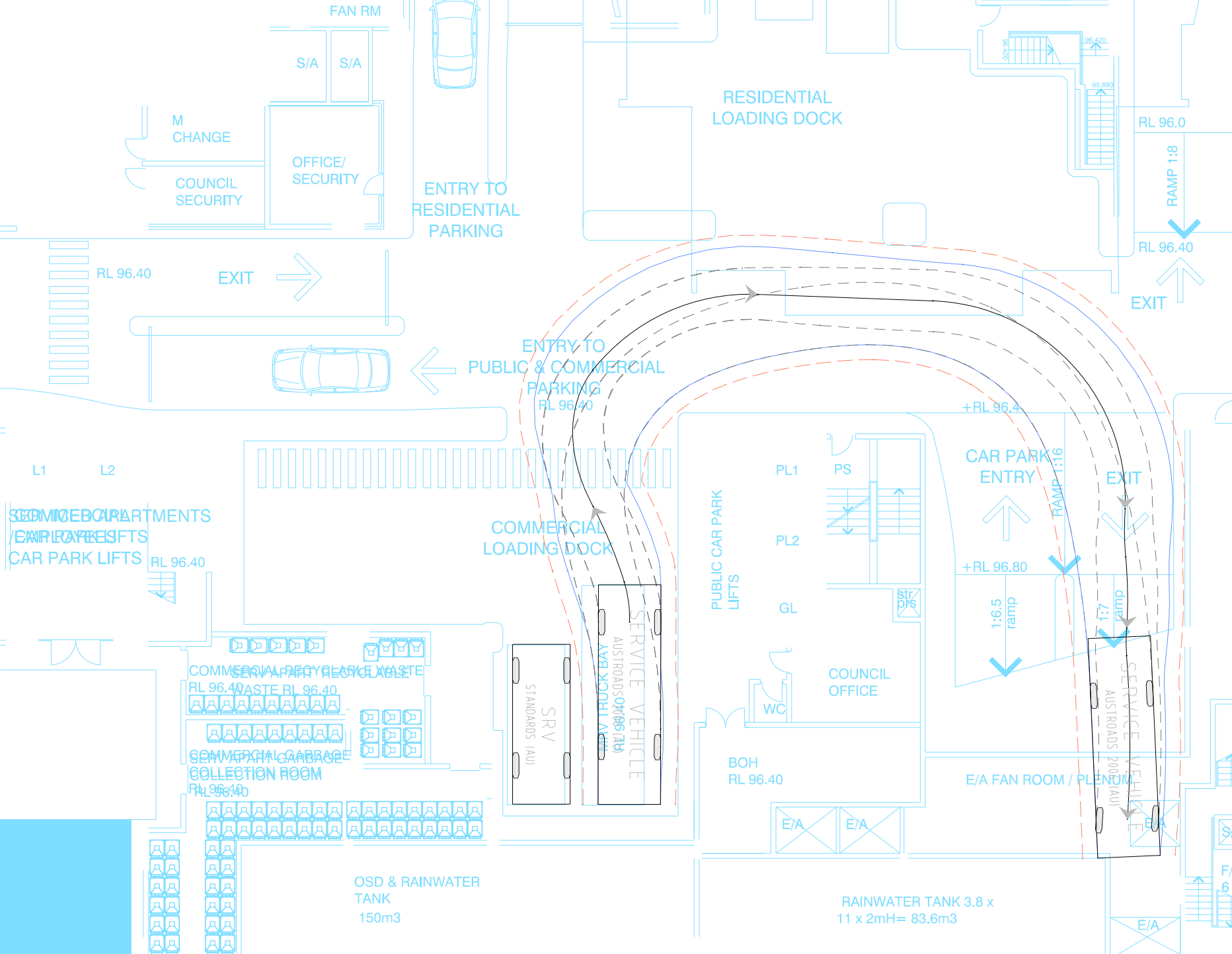
The following plans demonstrate the swept paths of vehicles at key locations in the car park. Vehicles used are B85 as defined by AS2890.2, and SRV and MRV as defined by AS2890.2. Paths show wheel paths, swept body paths and clearances.

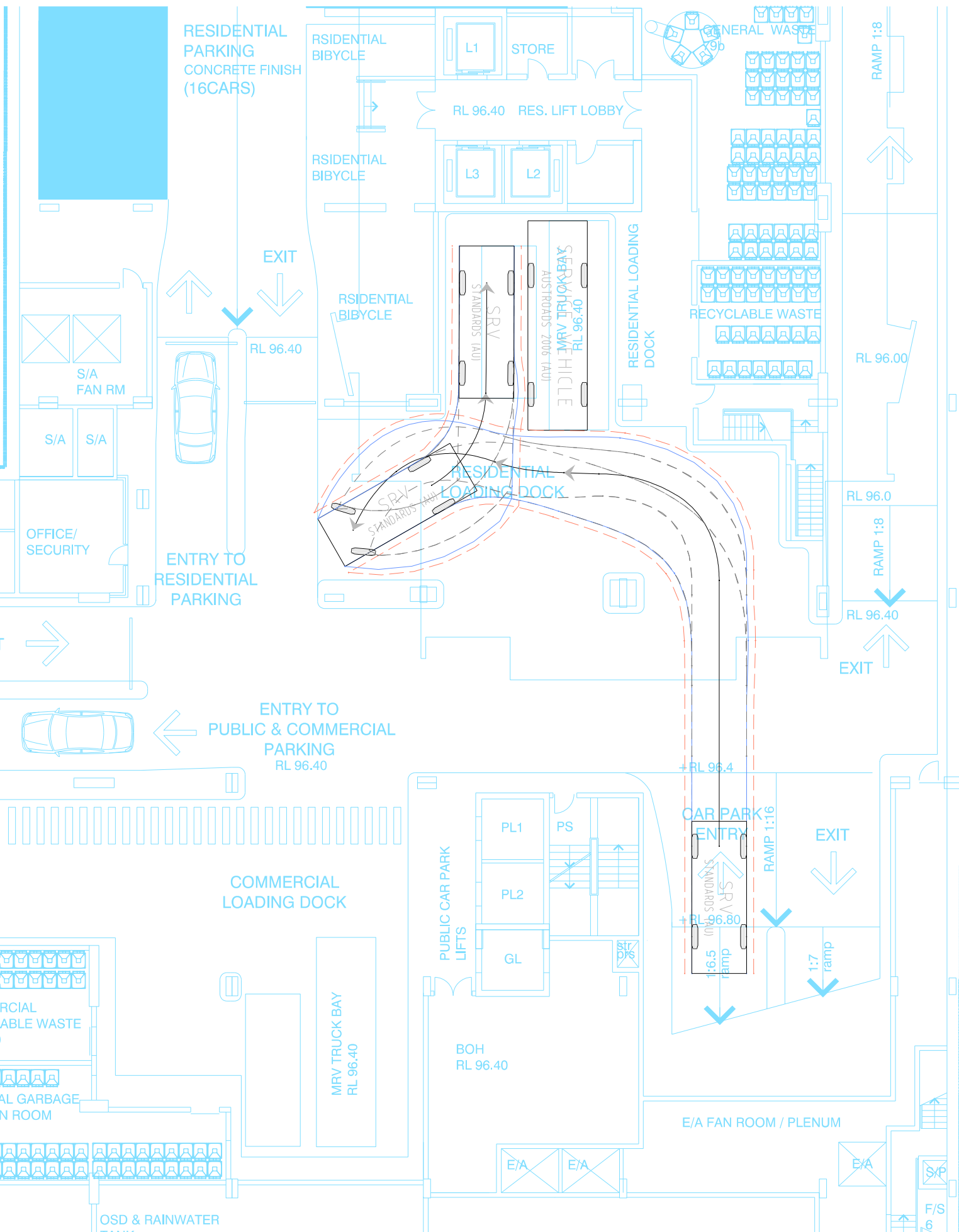


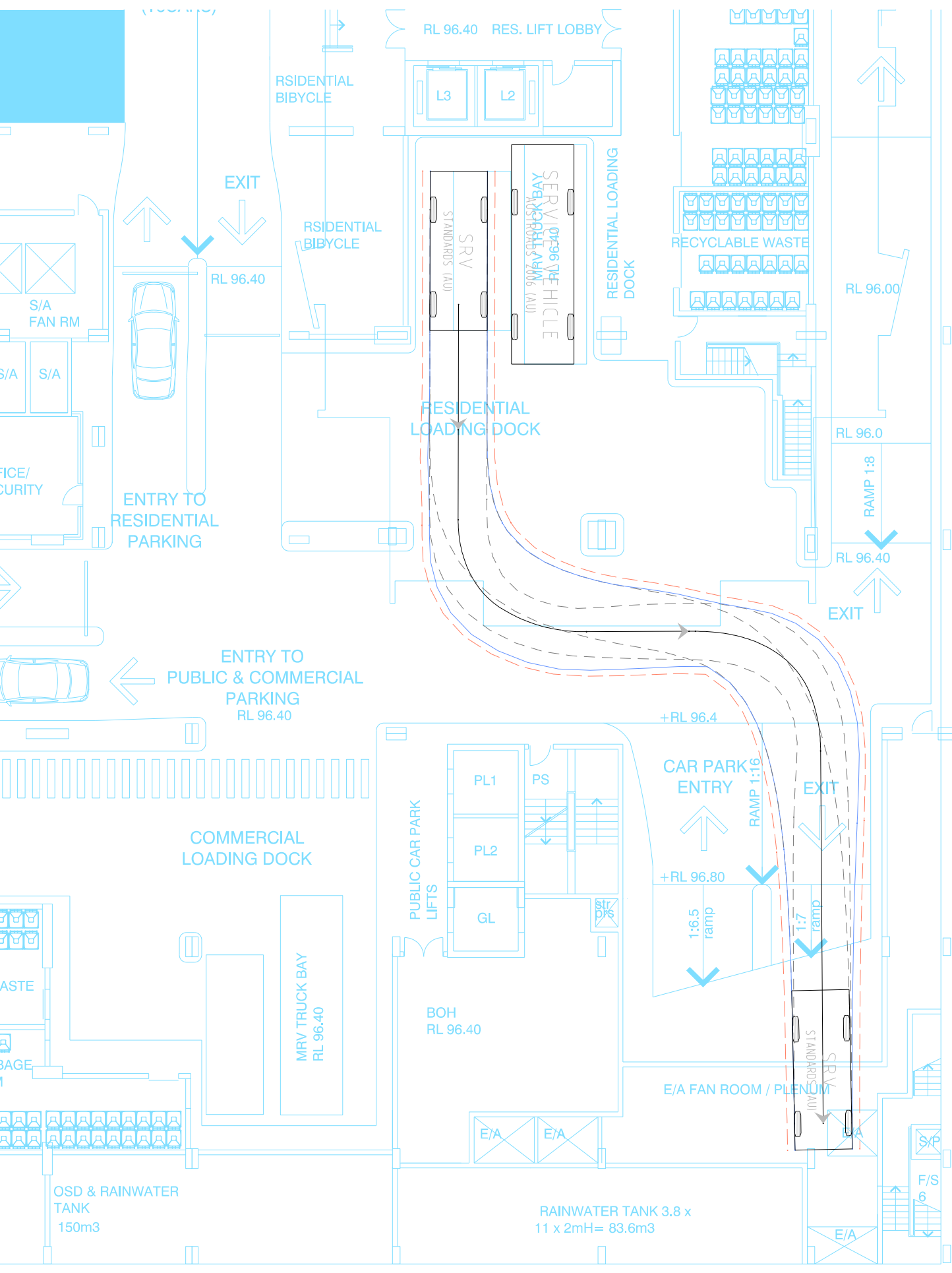


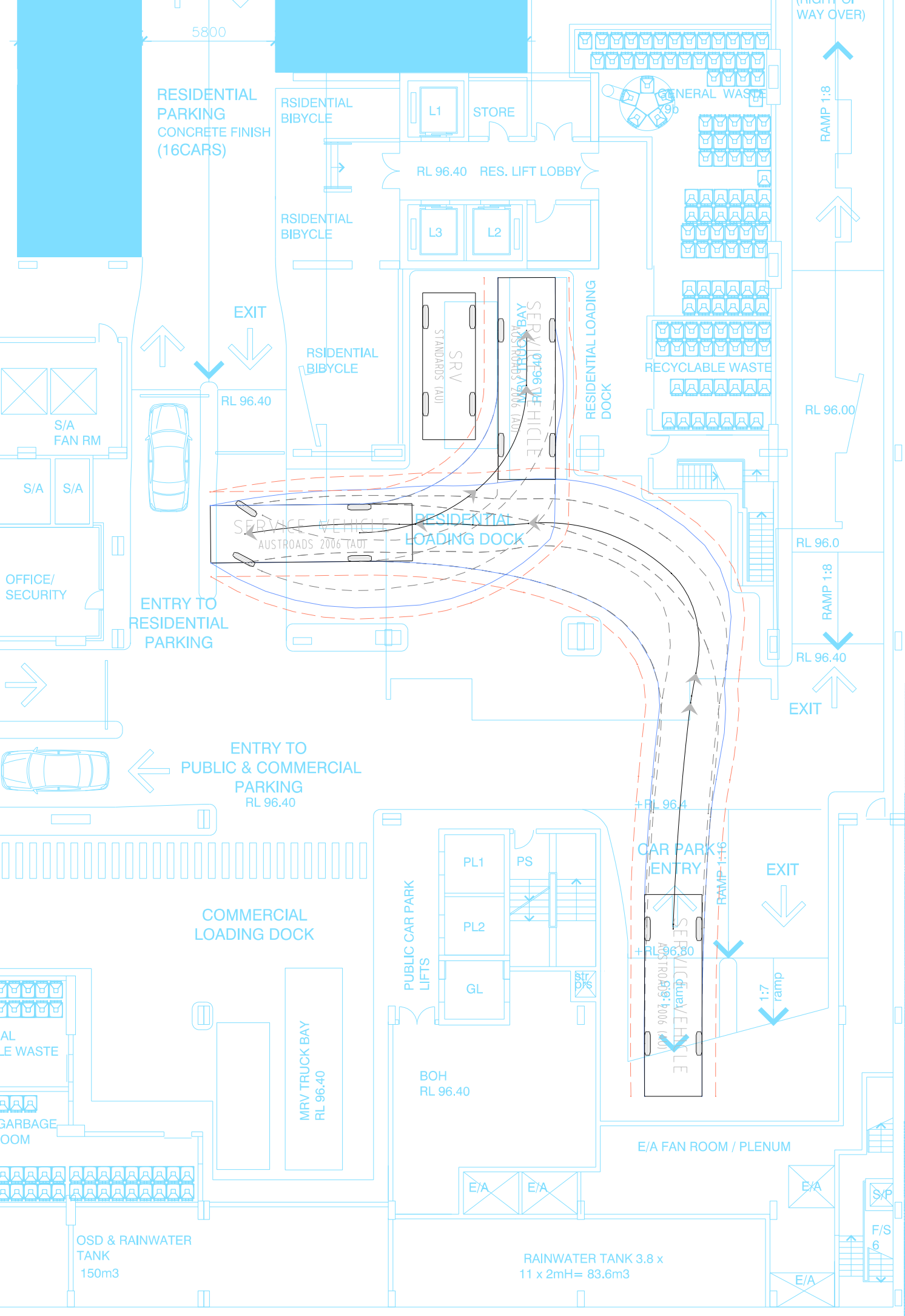




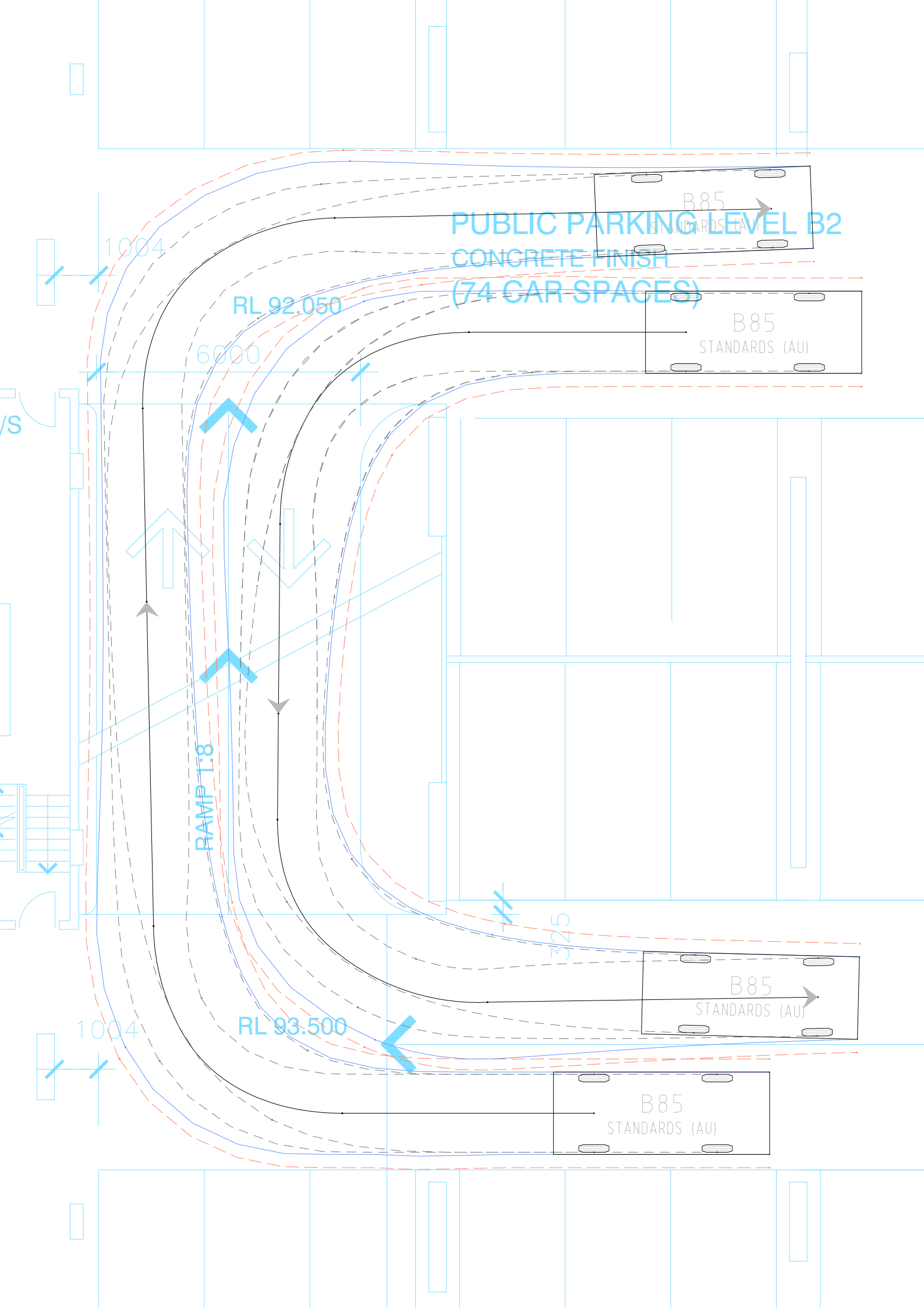












PUBLIC PARKING LEVEL B2  
CONCRETE FINISH  
(74 CAR SPACES)

RL 92.050

6000

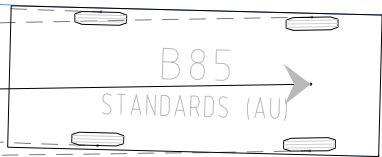
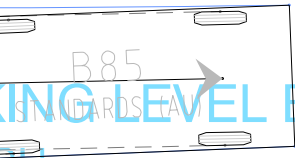
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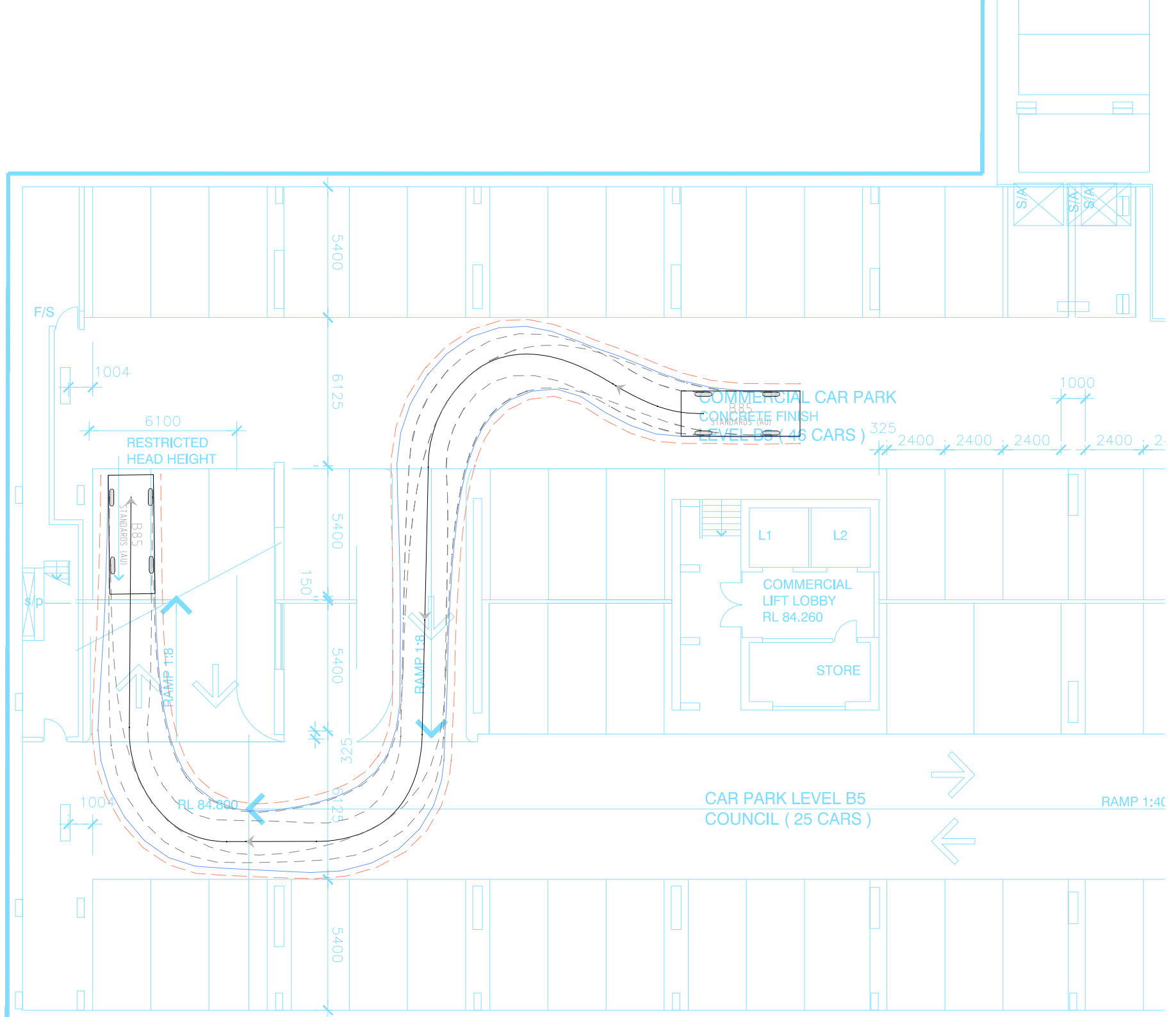
RL 93.500

325

1004

1004







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