

# ADVERTISED PLAN

## Traffic & Transport Assessment

60 Collins Street, Melbourne

V190325

Prepared for  
Dexus

1 February 2021

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# 1 Introduction

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Cardno has been engaged by Dexus to prepare the ensuing Traffic & Transport Assessment for a proposed commercial development on land located at 52-60 Collins Street, Melbourne.

The proposal would permit the partial demolition of the buildings on the site to allow the construction of a 37-storey commercial building, comprising activated retail land uses on the ground level with office land use provided on the levels above.

In the course of preparing this assessment the subject site and its environs have been inspected, plans of the development examined, and all relevant traffic and parking data collected and analysed.

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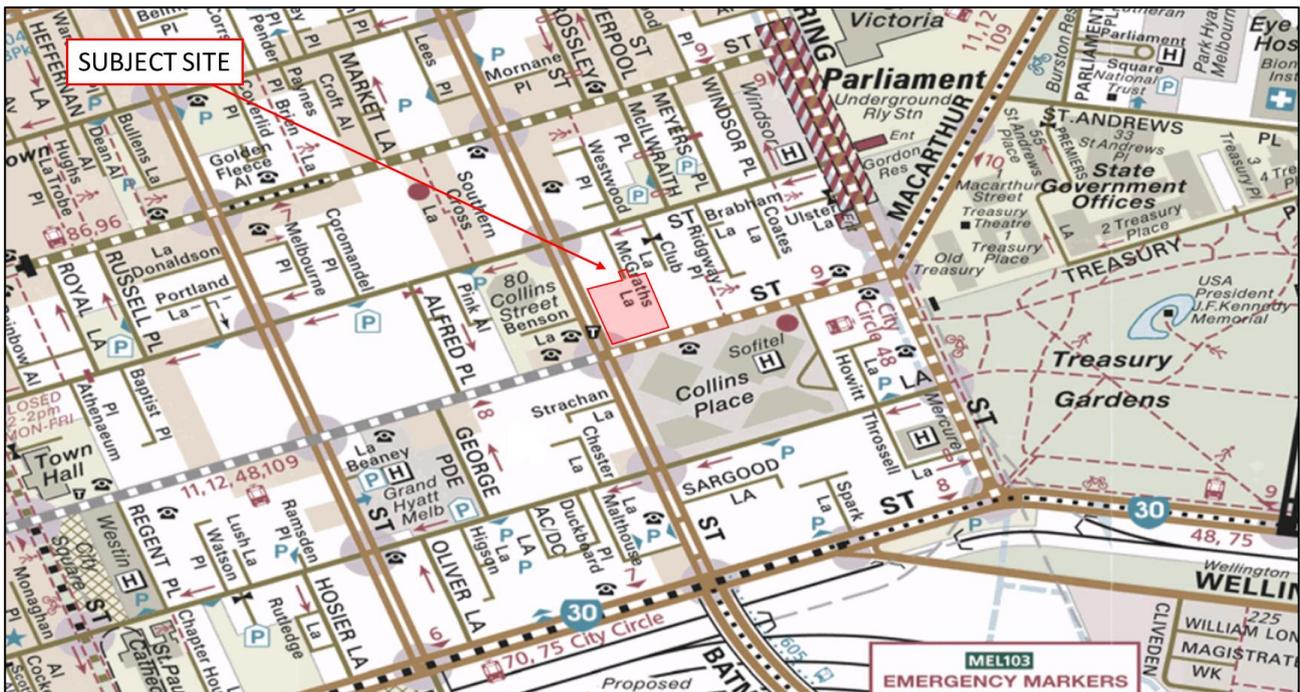
## 2 Background and Existing Conditions

### 2.1 Location and Land Use

The subject site comprises the land titles of 52 and 60 Collins Street which are located at the north-eastern corner of Collins Street and Exhibition Street in the Melbourne Central Activities District (CAD).

Figure 1 shows the location of the site and the surrounding street network.

Figure 2-1 Site Locality Plan



The subject site provides an overall area of 1,985 m<sup>2</sup> and has 40 metres of frontage to Collins Street along the southern site boundary and 48 metres of frontage to Exhibition Street along the western site boundary. McGraths Lane intersects the northern boundary of the site and continues the existing laneway formation into the site.

The site comprises two (2) currently distinct land titles:

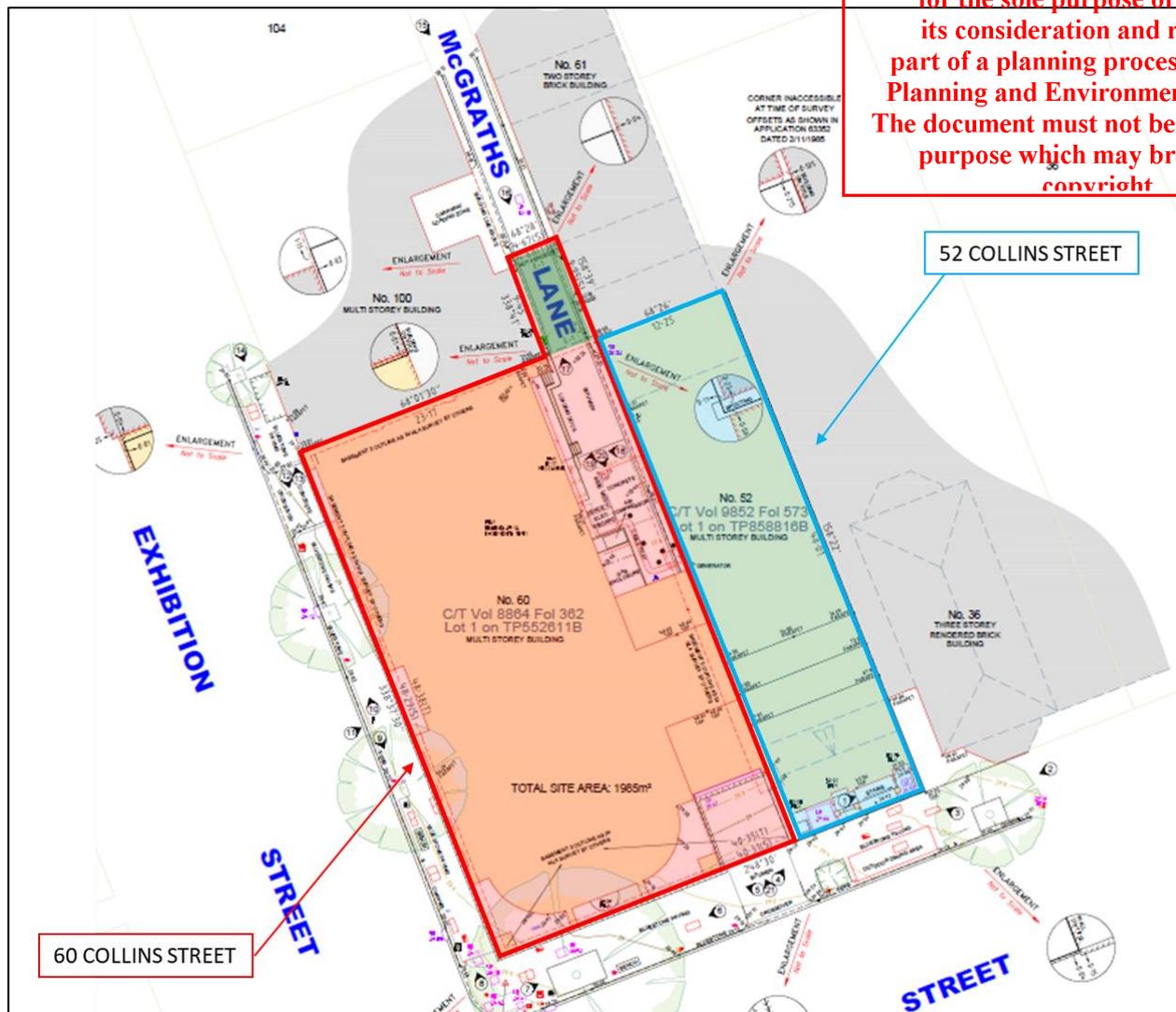
- > **No. 52 Collins Street** currently accommodates an 11-storey office building which includes a single basement level; and
- > **No. 60 Collins Street** currently accommodates a 15-storey building that includes a 3-level basement loading area. This title also includes an approximately 9.5-metre length of McGraths Lane at the northern site boundary, which is incorporated into the site and is currently used for loading operations.

Figure 2-2 illustrates the composition of the subject site.

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Figure 2-2 Composition of Subject Site



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The combined site is located within the Central Melbourne Activities District (CAD) and is located conveniently to all the facilities and services located with the Hoddle Grid.

Land use surrounding the site is generally mixed in nature, with several commercial, hotel and residential tower buildings located within the immediate vicinity of the site, many of which provide activated ground level retail uses.

## 2.2 Existing Car Parking and Vehicular Access

Vehicular access to the subject site is currently provided via:

- > A double width crossover to Collins Street that provides vehicular access to the basement levels of 60 Collins Street. The crossover is located at the eastern end of 60 Collins Street and the approximate midpoint of the combined site frontage;
- > A double width crossover to Exhibition Street at the northern site boundary of 60 Collins Street. A break in the central median on Exhibition Street (discussed at Section 2.4.2) allows fully directional access to the crossover. The crossover provides vehicular access to an internal on-site loading area; and
- > A roller door access to 52 Collins Street from the extension of McGraths Lane within the land title.

The location of these crossover arrangements are illustrated at Figure 2-3 and presented in the photographs at Figure 2-4 to Figure 2-7.

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Figure 2-3 Existing Site Access Arrangements

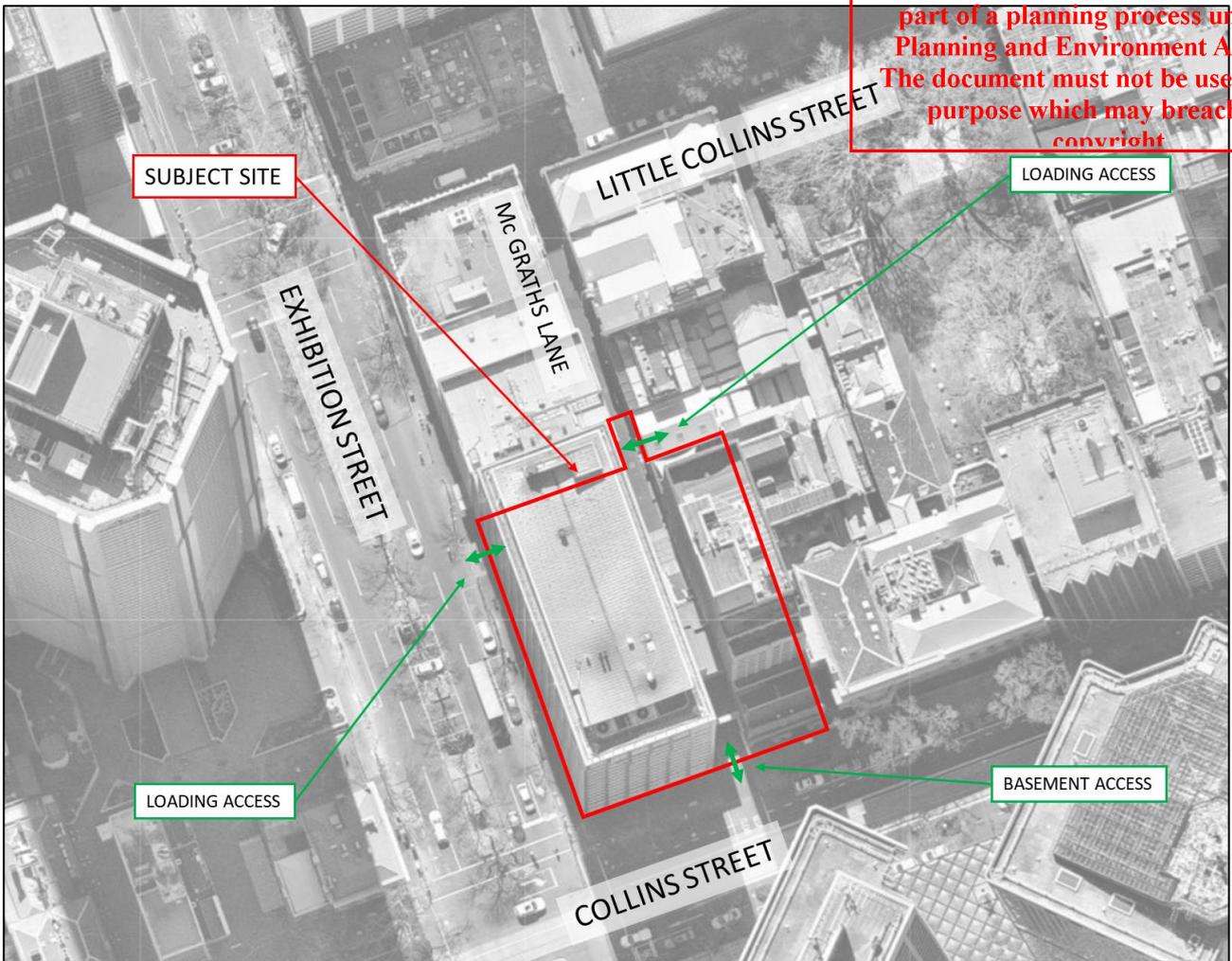


Figure 2-4 Collins Street Vehicular Access



**Figure 2-5 Exhibition Street Crossover**



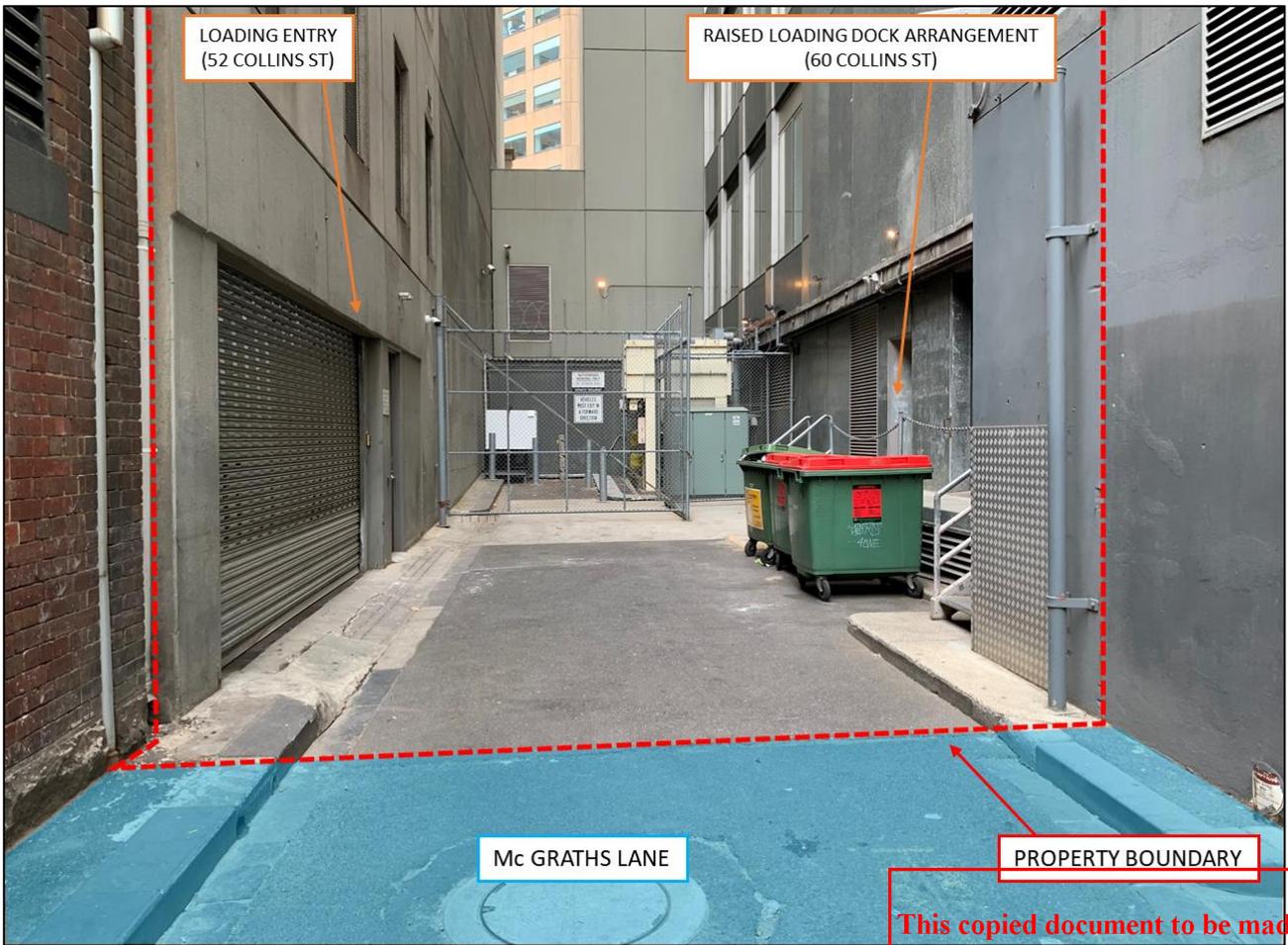
**Figure 2-6 Exhibition Street Median Break Opposite Site Access (Site Visit - Dec 2020)**



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**Figure 2-7 McGraths Lane Vehicular Access**



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**2.3 Planning Zones**

Figure 2-8 illustrates the location of the site as defined by the City of Melbourne land zoning maps.

**Figure 2-8 Planning Scheme Zones**

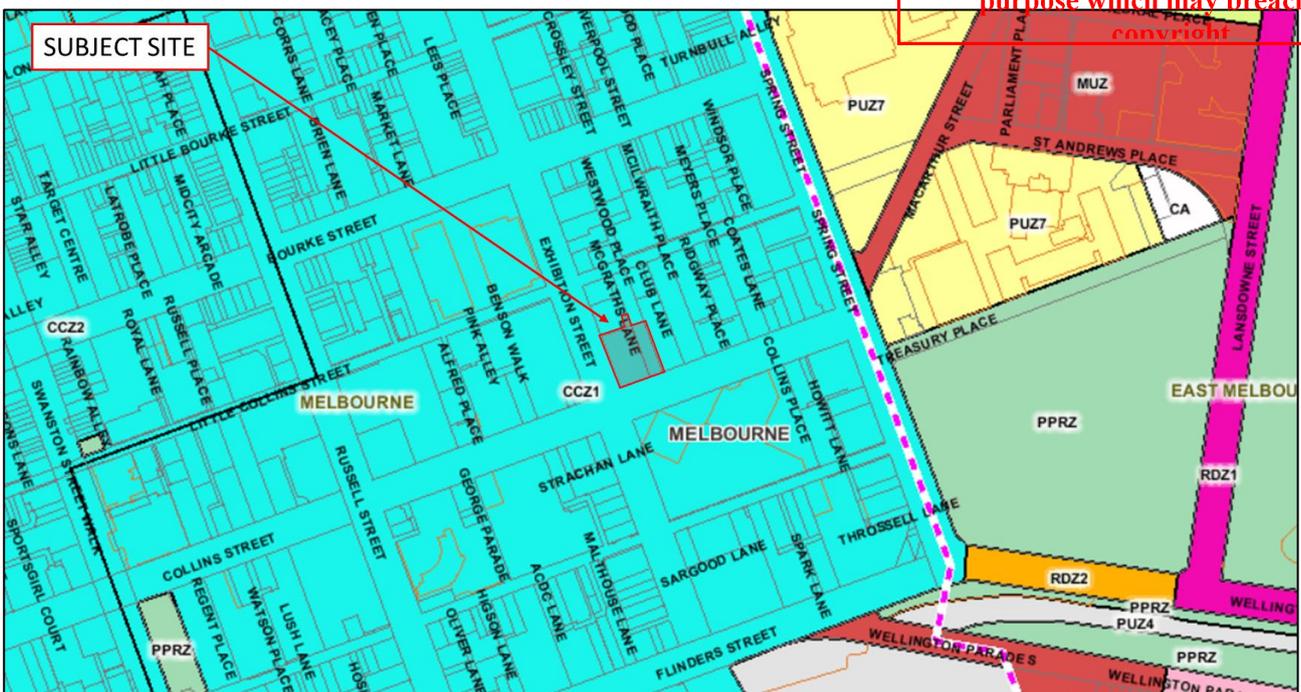


Figure 2-8 indicates the subject site is located within the Capital City Zone (Schedule 1 – Outside the Retail Core). The purpose and objectives of this zone are listed at Schedule 1 to Clause 37.04 of the Capital City Zone

The site is also located in an area to which several overlays apply, including:

- > Schedule 1 to the Parking Overlay (PO1) – A car parking limitation policy that outlines maximum permissible car parking rates for new land uses; and
- > Schedule 1-A2 to the Design and Development Overlay (DD01-A2) – An overlay that seeks to ensure that buildings fronting Collins Street provide activated ground level uses that are designed with consideration of the major pedestrian activity along the site frontage.

## 2.4 Road Network

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### 2.4.1 Collins Street

Collins Street is a local street under the jurisdiction of Melbourne City Council that generally extends in an east-west alignment through the Central Activities District (CAD). It is a 'destination street' that provides activated ground level land uses and also serves as a key pedestrian route and public transport corridor.

The subject site is located at the 'Paris (eastern) end' of Collins Street, where the street formation provides a single vehicular travel lane, bicycle lane and parallel kerbside parking lane on either side of central tram lanes.

On-street car parking along Collins Street in the vicinity of the site is generally subject to short-term (<2P) and user specific car parking controls. An on-street loading zone is located along the immediate site frontage. The posted speed limit along Collins Street is 40km/h.

The photograph at Figure 2-9 shows the existing configuration of Collins Street along the frontage of the subject site.

**Figure 2-9 Collins Street, looking east from existing site access**



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### 2.4.2 Exhibition Street

Exhibition Street is a local street under the jurisdiction of Melbourne City Council which generally extends in a north-south alignment through the CAD as the extension of Rathdowne Street Carlton to the north and Batman Avenue Melbourne to the south.

The City of Melbourne has recently installed 'Copenhagen' style protected bicycle lanes along both sides of Exhibition Street between Flinders Street and Bourke Street. At the site frontage, Exhibition Street currently accommodates two (2) shared through travel lanes and a protected bicycle lane in both directions.

To the north of the site, on-street parking is allowed during the off-peak periods in the outer travel lane with 1-hour time restrictions. The protected bicycle lane continues along the kerb line with a raised separator from

the parking / outer travel lane. During the AM and PM peak periods, Elizabeth Street provides two lanes of travel.

A central median comprised of landscaping bays and centre of road motorcycle parking spaces separates the opposing traffic streams.

The posted speed limit along Exhibition Street is 40km/h.

The photograph at Figure 2-10 shows the current configuration of Exhibition Street looking south along the site frontage.

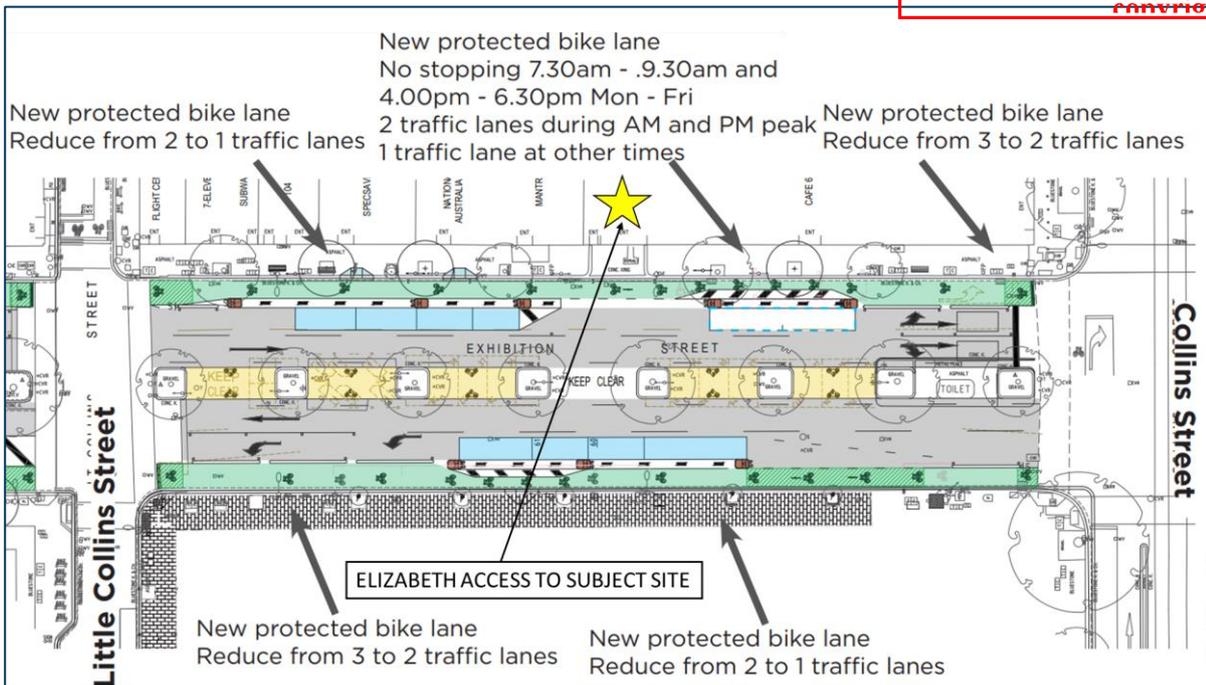
**Figure 2-10 Exhibition Street, looking south along the site frontage**



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The image at Figure 2-11 shows a general arrangement for the current cross section of Exhibition Street north of Collins Street.

**Figure 2-11 Current Exhibition Street Cross Section**



**2.4.3 McGraths Lane**

McGraths Lane is a Right of Way that extends southward from Little Collins Street towards and into the site. The laneway provides a trafficable width of approximately 3.5 metres between kerbs and accommodates two-way vehicular movement. Several businesses provide their primary frontage to the laneway.

Vehicular access from Little Collins Street into McGraths Lane is restricted to left-in and left-out movements only.

The photograph at Figure 2-12 shows the existing configuration of McGraths Lane.

**Figure 2-12 McGraths Lane, looking south towards the site from Little Collins Street**



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**2.5 Sustainable Transport**

**2.5.1 Public Transport**

The location of the site within the Melbourne CAD provides it with excellent access to public transport services. Tram services pass along the Collins Street frontage of the site and several railway stations are located within a convenient walking distance, providing connections to all metropolitan and regional train services.

Figure 2-13 illustrates the location of the subject site relative to public transport services, which are summarised at Table 2-1.

**Figure 2-13 Public Transport Services Proximate to the Site**



**Table 2-1 Summary of Public Transport Services**

| Service      | Route                     | Route Description                             | Nearest Stop*        | Distance<br>(Approx. Walking Time) |
|--------------|---------------------------|---|----------------------|------------------------------------|
| <b>Tram</b>  | 1                         | East Coburg - South Melbourne Beach           | Swanston Street      | 550 metres (8 mins)                |
|              | 3/3a                      | Melbourne University - East Malvern           | Swanston Street      | 550 metres (8 mins)                |
|              | 5                         | Melbourne University - Malvern                | Swanston Street      | 550 metres (8 mins)                |
|              | 6                         | Melbourne University - Glen Iris              | Swanston Street      | 550 metres (8 mins)                |
|              | 11                        | West Preston – Victoria Harbour Docklands     | Collins Street       | 90 metres (<1 min)                 |
|              | 12                        | Victoria Gardens – St Kilda                   | Collins Street       | 90 metres (<1 min)                 |
|              | 16                        | Melbourne University - Kew via St Kilda Beach | Swanston Street      | 550 metres (8 mins)                |
|              | 19                        | North Coburg – Flinders Street Station, City  | Elizabeth Street     | 800 metres (10 mins)               |
|              | 48                        | North Balwyn – Victoria Harbour Docklands     | Collins Street       | 90 metres (<1 min)                 |
|              | 57                        | West Maribyrnong – Flinders St Station, City  | Elizabeth Street     | 800 metres (10 mins)               |
|              | 58                        | West Coburg - Toorak                          | William Street       | 1,000 metres (16 mins)             |
|              | 59                        | Airport West – Flinders Street Station, City  | Elizabeth Street     | 800 metres (10 mins)               |
|              | 64                        | Melbourne University - East Brighton          | Swanston Street      | 550 metres (8 mins)                |
|              | 67                        | Melbourne University - Carnegie               | Swanston Street      | 550 metres (8 mins)                |
|              | 70                        | Waterfront City Docklands – Wattle Park       | Finders Street       | 300 metres (4 mins)                |
|              | 72                        | Melbourne University – Camberwell             | Swanston Street      | 550 metres (8 mins)                |
|              | 75                        | Etiihad Stadium – Vermont South               | Finders Street       | 300 metres (4 mins)                |
|              | 86                        | Bundoora – Waterfront City Docklands          | Bourke Street        | 400 metres (5 mins)                |
|              | 96                        | East Brunswick – St Kilda Beach               | Bourke Street        | 400 metres (5 mins)                |
| 109          | Box Hill – Port Melbourne | Collins Street                                | 90 metres (<1 min)   |                                    |
| <b>Bus</b>   | 200                       | City – Bulleen                                | Lonsdale Street      | 750 metres (10 mins)               |
|              | 207                       | City – Bulleen - Doncaster                    | Lonsdale Street      | 750 metres (10 mins)               |
|              | 250                       | City – LaTrobe University                     | Lonsdale Street      | 750 metres (10 mins)               |
|              | 251                       | City - Northland                              | Lonsdale Street      | 750 metres (10 mins)               |
|              | 220                       | Sunshine - City - Gardenvale                  | Franklin Street      | 1000 metres (15 mins)              |
|              | 232                       | Altona North – City (Queen Victoria Market)   | Queen Street         | 900 metres (13 mins)               |
|              | 234                       | Garden City – City (Queen Victoria Market)    | Queen Street         | 900 metres (13 mins)               |
|              | 235                       | City - Fishermans Bend via Williamstown Rd    | Queen Street         | 1100 metres (14 mins)              |
|              | 236                       | Garden City – Queen Victoria Market via City  | Franklin Street      | 1100 metres (14 mins)              |
| 303          | City – Ringwood           | Queen Street                                  | 900 metres (13 mins) |                                    |
| 309          | City - Donvale            | Queen Street                                  | 900 metres (13 mins) |                                    |
| <b>Train</b> | All lines                 |   | Parliament Station   | 240 metres (3 mins)                |

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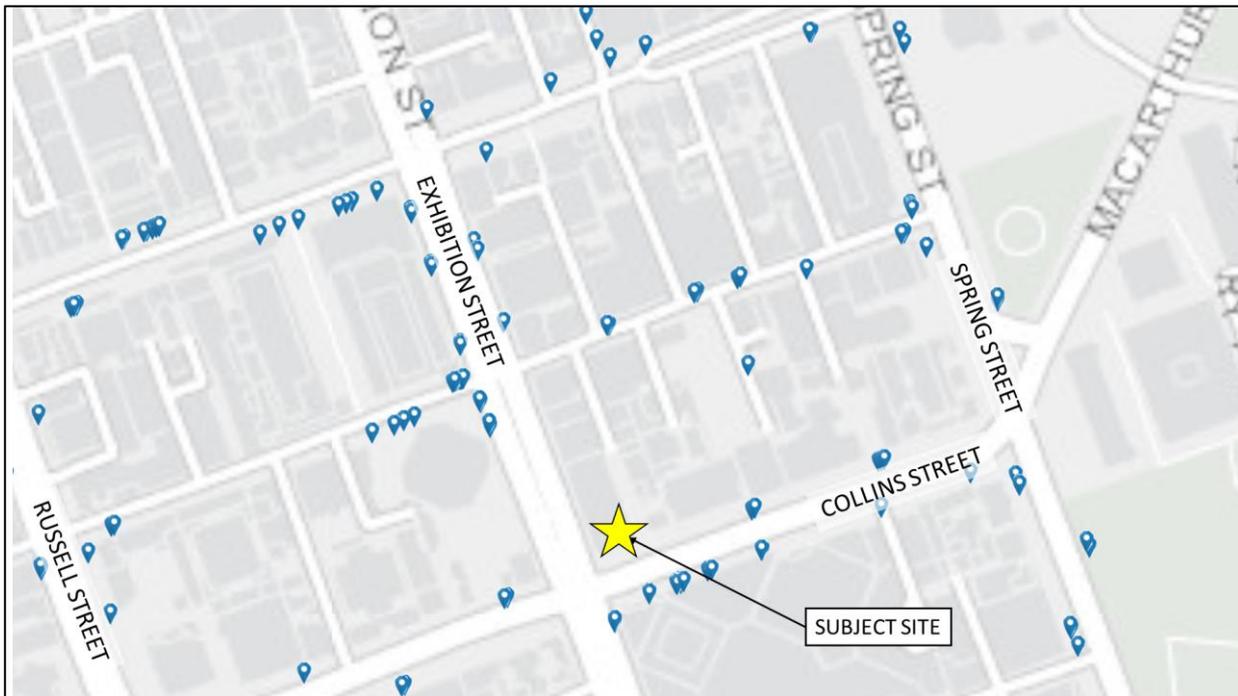
## 2.5.2 Bicycle Network

Dedicated on-street bicycle lanes are provided on Collins Street and Exhibition Street at the frontage of the site, on Spring Street approximately 160 metres east of the site, Swanston Street (~450 metres west of the site) and Bourke Street (~130 metres north of the site).

These routes all provide convenient access in and around the Melbourne Central Activities District (CAD) and radial links to inner suburbs.

The bicycle network is supported by various bike parking options within the Melbourne CAD, including numerous on-street bicycle hoops as shown in Figure 2-14.

**Figure 2-14 On-Street Bicycle Hoop Locations**



## 2.5.3 Car Share

Car sharing schemes allow users to hire a motor vehicle for private use when required.

Share cars are stored in public and private car parking spaces known as 'pods' throughout the city. The primary point of difference between car sharing schemes and car rental companies is that share car users join as members and can book the vehicle online for as little as one hour. Once the user is finished with the vehicle, they can return it to the car parking space from which it was collected.

There are several companies which operate car share schemes throughout Melbourne and the number of share car pods throughout the site is being increased as demand grows. The following companies currently provide car share pods within the City of Melbourne:

- > Flexicar
- > GoGet
- > Green Share Car
- > Pop Car
- > RACV Share Car

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The City of Melbourne Council Car Share webpage indicates that there were 160 car share pods (as of July 2019) within the Hoddle Grid area.

## 3 Proposed Development

### 3.1 General

Dexus propose to partially demolish the existing buildings on the site to allow for the construction of a 37-storey commercial tower with ground level retail uses and a four level basement carpark.

Architectural plans for the proposal have been prepared by Bates Smart, which indicate the Development Schedule outlined at Table 3-1 below.

**Table 3-1 Development Schedule**

| Land Use               | Inventory            |
|------------------------|----------------------|
| Commercial             | 41,541m <sup>2</sup> |
| Retail                 | 422 m <sup>2</sup>   |
| Car Parking Spaces     | 41 no.               |
| Bicycle Parking Spaces | 342 no.              |

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The architectural plans indicate that 41 car parking spaces are proposed on the site, which are to be located across the two lowest basement (B3 & B4) levels. All car parking spaces proposed on the site are intended to be for staff use.

The bicycle parking spaces are proposed on the upper basement (B1) level of the car park, with end of trip facilities proposed in the B2 level.

### 3.2 Access Arrangements

#### 3.2.1 Vehicular Access Arrangements

Vehicular access to the site is proposed via the existing double width crossover on Exhibition Street, which will be modified slightly to accommodate concurrent two-way vehicle movements.

The crossover will provide access to the basement levels via a two-way vehicle ramp, that extends eastward into the site and circulates in a clockwise direction to the car parking spaces on the B3 and B4 levels.

The existing vehicle crossover on Collins Street is proposed to be removed, the kerb and channel reinstated, and additional on-street car parking spaces provided where practicable.

#### 3.2.2 Pedestrian and Cyclist Access

The development is proposed to accommodate a 37-storey commercial tower with ground level retail uses.

A large lobby area is proposed at ground level with pedestrian access provided from both Exhibition Street to the west and Collins Street to the south. A third pedestrian access to the lobby is proposed from McGraths Lane to the north, which along with the Collins Street access will create a north-south pedestrian thoroughfare through the site.

The retail land uses at the south-western corner of the site will each be provided with dedicated pedestrian entrances from their respective street frontages.

Cyclist access to the site is proposed via a dedicated bicycle entry located on Exhibition Street to the immediate south of the basement access. The cyclist entry will provide access to the bicycle parking facilities on the B1 level via a dedicated ramp, with access to the end of trip facilities on the B2 level facilitated via internal lifts.

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## 4 Design Considerations

### 4.1 Car Parking Layouts

The car parking layout has been assessed against Clause 52.06 of the Melbourne Planning Scheme and the Australian Standard for Off-Street Car Parking (AS2890.1:2004) where applicable.

All parking spaces are a minimum 2.6 metres wide by 4.9 metres long. A number of parking spaces on the B3 level are accessed from a parking aisle of 6.4 metres width in accordance with the minimum design criteria outlined at Clause 52.06 – Design Standard 2 of the Melbourne Planning Scheme. However, a few parking spaces in the B3 level and all parking spaces in the B4 level are accessed from a parking aisle with a reduced width of 6.0 metres. These dimensions are closely in line with those outlined for domestic and employee parking in the Australian Standard, and swept path diagrams have been prepared and attached at Appendix A to demonstrate that they can function appropriately.

Columns have generally been located so that they do not encroach on the parking space design envelope outlined at Clause 52.06 of the Planning Scheme. Similarly, where car parking spaces are located against a wall or obstruction, the space has been offset by 300mm to allow door opening.

Blind parking aisles are provided in several locations throughout the car park, which is acceptable given the car park is for private use and all spaces will be allocated to a specific user. All blind aisles have been provided with a blind aisle extension of at least 1-metre to allow ease of access to and from the space in accordance with the Australian Standard.

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### 4.2 Site Access

#### 4.2.1 Existing Exhibition Street Cross Section

Vehicular access to the site is proposed via the existing double width crossover on Exhibition Street, which will be modified slightly to accommodate concurrent two-way vehicle movements. The break in the central median opposite the access is proposed to be retained, which will allow vehicles to approach and depart the site to/from both of the Exhibition Street carriageways.

The ramp has a typical width of 6.1 metres, comprising a 5.5-metre trafficable carriageway between 300mm kerbs in accordance with the Australian Standard for two-way traffic flow. The bicycle ramp on the southern side of the vehicular ramp has been set back by 2.5 metres, to provide a pedestrian sight triangle on the departure side of the access in accordance with Planning Scheme requirements.

Swept path diagrams have been prepared to demonstrate concurrent opposing vehicle movements at the site access. The diagrams are attached at Appendix A.

The architectural plans indicate that an access door is proposed approximately 8.7 metres within the property boundary, which will allow an inbound vehicle to prop within the site whilst waiting for the door to open without blocking the pedestrian footpath on Exhibition Street. A security door is proposed to be provided along the building façade which will be left open during operational times.

### 4.3 Internal Circulation

The architectural plans indicate car parking spaces (13 no.) and loading areas will be provided in the B3 level, and further car parking spaces (28 no.) will be provided in the B4 level.

Vehicular circulation from the Exhibition Street entrance to these parking/loading areas is proposed via a two-way vehicle ramp which provides a trafficable width of 5.5 metres between 300mm kerbs, in accordance with the Australian Standard for two-way vehicle movement.

Swept path diagrams are attached in Appendix A which indicate that concurrent opposing vehicle movements by B85 and B99 vehicles can occur along the length of the ramp from Exhibition Street to the B3 Level.

Vehicular movement between the B3 and B4 levels is proposed via another 5.5m wide ramp and two-way parking aisles no less than 6.0 metres in width. These accessway widths exceed the minimum requirement

for 4.2-metre wide accessways at intersections and changes in direction as outlined at Clause 52.06 of the Planning Scheme. At some intersecting parking aisles and bends in alignment, one vehicle is required to yield to allow an opposing vehicle to pass. This is a typical arrangement in private car parks that serves to slow vehicles and is generally self-regulating. It is recommended that convex mirrors be installed at bends in alignment where sight distance is restricted to assist circulation.

Grades no steeper than 1:6.5 (15.4%) and 1:5 (20%) are proposed along the G-B3 and B3-B4 ramps respectively. It is recommended that the 1:12 transition at the base of the G-B3 ramp be extended from 3.5m to 4.0m so that adequate grade transitions are provided at the top and base of each ramp to avoid the appropriate design vehicles scraping or bottoming out. A grade no steeper than 1:20 is provided within approximately 5 metres of the property boundary to assist driver-pedestrian sightlines.

The overhead height clearances above the ramps should be reviewed at the detailed design stage to ensure that a minimum 2.2 metres height clearance is maintained above all ramps and trafficable areas once structure has been determined in accordance with AS/NZS2890.1:2004.

#### 4.4 Waste & Loading Arrangements

Four (4) loading bays are located at the north-eastern corner of the B3 Level which will accommodate the loading and refuse collection arrangements from the subject site.

Swept path diagrams have been prepared using the 6.4-metre long Small Rigid Vehicle (SRV) from the Australian Standard for Off-Street Commercial Vehicle Facilities (AS2890.2:2002) to demonstrate vehicular access from Exhibition Street to the B3 level, and to the two bays in the loading area.

The diagrams are attached in Appendix A, and indicate that the design vehicle can traverse the ramp in both directions between the ground and B3 level, which has been designed with ramp grades and transitions that accord with those outlined for Small Rigid access in the Australian Standard. Passing opportunities for opposing vehicle movements are provided along the northern and eastern sections of the ramp but not along the small southern section of ramp. A Dock Manager is proposed at the site to manage the incoming and outgoing movements of commercial vehicles along the southern section of ramp (with a red/green light system or similar) so that passing movements are avoided, which will cause little inconvenience to motorists given the low traffic volumes forecast at the site (Section 7).

A waste management plan has been prepared for the subject proposal by Arup which details the proposed refuse collection arrangements at the site.

These collections will be scheduled so that they do not coincide with deliveries to the site by the Dock Manager, who has been provided with a dedicated office to the immediate south of the loading area.

A dedicated bay for the use of contractors or couriers, etc. has been provided to the immediate west of the loading area which has been designed appropriately for light commercial vans (i.e. Hi Ace, Transit, etc.) and utilities (Hilux, etc.)

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## 5 Bicycle Parking Requirements

The statutory bicycle parking requirements at Clause 52.34 of the Melbourne Planning Scheme are applicable to the site and are summarised for the subject proposal at Table 5-1 below.

**Table 5-1 Statutory Bicycle Parking Requirement – Stage 2**

| Use          | Area/No.              | Employee Bicycle Requirement Rate                   | Parking Req.   | Visitor Bicycle Requirement Rate                       | Parking Req.  |
|--------------|-----------------------|---|----------------|--|---------------|
| Office       | 41,541 m <sup>2</sup> | 1 space to each 300m <sup>2</sup> of net floor area | 138 no.        | 1 space to each 1,000 m <sup>2</sup> of net floor area | 42 no.        |
| Retail       | 422 m <sup>2</sup>    | 1 to each 300 m <sup>2</sup> of leasable floor area | 1 no.          | 1 to each 500 m <sup>2</sup> of leasable floor area    | 1 no.         |
| <b>Total</b> |                       |   | <b>139 no.</b> |  | <b>43 no.</b> |

Based on the above, there is a requirement to provide 182 bicycle spaces comprising 139 spaces for staff use and 43 spaces for visitor use.

The architectural plans indicate provision of 342 spaces in the upper basement (B1) level which exceeds this minimum requirement. This provision will be more than adequate to accommodate both employee and visitor bicycle parking demands, which are intended to be provided in segregated areas within the same bicycle compound. Visitor access to the bicycle parking facilities is proposed to be secured, with an intercom to a concierge provided at the Exhibition Street access to request entry.

The proposal comprises 272 vertical and 70 at-grade spaces. This equates to an at-grade bicycle parking provision of 20% which satisfies the requirement for at least 20% of bicycle parking spaces to be provided via horizontal at-grade rails in the Australian Standard for Off-Street Bicycle Parking (AS2890.3:2015).

A review of the plans indicates that:

- > Access to the bicycle parking spaces is proposed via a dedicated access ramp from Exhibition Street;
- > The horizontal bicycle spaces are provided with a length of 1.8 metres for bicycle storage and an aisle of at least 1.5 metres for bicycle access, in accordance with the Australian Standard; and
- > The vertical bicycle spaces provide 1.2 metres depth for bicycle storage and a 1.5 metre aisle for bicycle access. The rails have been spaced at 500mm centres which accords with the specifications for many vertical bicycle parking products. Spaces towards the centre of the bicycle compound have been staggered to provide an economical use of available space.

Based on the above, no permit is required to vary the bicycle parking requirement at the site.

In addition to bicycle parking spaces, Clause 52.34 of the Melbourne Planning Scheme outlines the following requirement for employee showers, which should be provided with access to a change room, or should incorporate a combined change room with the shower.

**Table 5-2 Shower Requirements – Clause 52.34**

| Employee Bicycle Parking Space Requirement | Requirement Rate   | Total  |
|--|--|--------|
| 139 spaces                                 | 1 shower for the first 5 spaces; plus<br>1 shower for each additional 10 employee spaces | 14 no. |

Based on the above, there is a requirement to provide 14 showers/change rooms.

The architectural plans indicate provision of 40 showers linked to the bicycle parking facilities, evenly split between male and female change rooms and with one additional DDA compliant shower, which far exceeds this minimum requirement.

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## 6 Car Parking Considerations

### 6.1 Statutory Car Parking Requirement

The subject land is located in an area to which ‘Schedule 1 to the Parking Overlay’ of the Melbourne Planning Scheme applies.

Rather than outline minimum car parking requirements for a particular use, Schedule 1 to the Parking Overlay is a car parking limitation policy that outlines maximum car parking provisions that can be provided on a site. The intent of such policy is to reduce the number of car parking spaces provided in the central Melbourne area and in turn, reduce the traffic generated by the site.

For non-residential land use, Schedule 1 to the Parking Overlay states that the number of spaces provided on the site must not exceed the number calculated using the following formula:

$$\frac{5 \times \text{net floor area of buildings on the site in sqm}}{1,000\text{sqm}}$$

Based on the above, the maximum number of car parking spaces that can be provided on the site is summarised at Table 6-1 below.

**Table 6-1 Maximum Car Parking Requirement – Stage 2**

| Land Use                  | Area (NFA)*           | Maximum Car Parking Rate                                   | No. of Spaces |
|---------------------------|-----------------------|--|---------------|
| Commercial and Retail NFA | 41,963 m <sup>2</sup> | 5 x Net Floor Area (m <sup>2</sup> ) / 1,000m <sup>2</sup> | 210 spaces    |

The maximum number of car parking spaces that can be provided under the car parking limitation policy is 210 spaces.

The architectural plans indicate provision of 41 spaces which is well within the maximum number of spaces permitted on the site.

### 6.2 Motorcycle Parking Requirement

Schedule 1 to the Parking Overlay (PO1) requires all buildings that provide on-site car parking provide motorcycle parking at a minimum rate of one motorcycle parking space for every 100 car parking spaces.

Although this requirement is not triggered by the proposed on site car parking provision (41 spaces) there are suitable locations within the B3 and B4 levels for a motorcycle space to be provided should it be desired.

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## 7 Traffic Impact

### 7.1 Traffic Generation

The subject proposal is largely an office development with some activated ground level uses. Accordingly, almost all car parking spaces will be allocated to the office land uses, with a few spaces provided for the retail uses at ground level.

Case study data held by Cardno for office land use suggests that in a constrained situation where parking is expected to be fully utilised, approximately 50% of the car park turns over during a peak 1-hour period, with around 2% of vehicle movements in the counter peak direction.

On this basis, the 41 spaces proposed within the development are anticipated to generate the traffic volumes presented at Table 7-1 below

**Table 7-1 Estimated Trip Generation**

| Stage   | AM Peak Hour |          |       | PM Peak Hour |          |       |
|---------|--------------|----------|-------|--------------|----------|-------|
|         | Inbound      | Outbound | Total | Inbound      | Outbound | Total |
| Stage 2 | 20           | 1        | 21    | 1            | 20       | 21    |

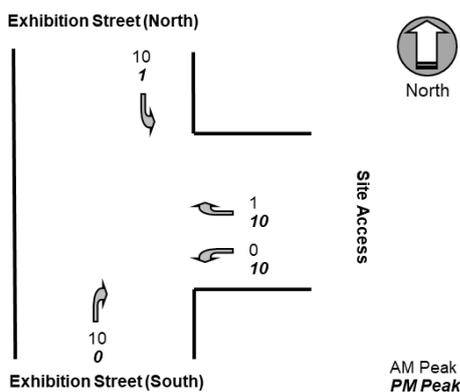
Based on the above, the subject proposal is anticipated to generate in the order of 21 vehicle movements during each of the AM and PM peak 1-hour periods.

Traffic generated by office developments prior to the morning peak period, throughout the daytime and after the evening peak period, is typically minimal.

### 7.2 Distribution of Peak Hour Vehicle Movements

The location of the subject site within the Melbourne CAD makes it easily accessible from all directions. For the purposes of assessment, it has been assumed that traffic will arrive and depart the site evenly in all directions, being 25% to each the north, south, east and west. Based on the above, the peak hour traffic generated by the site is estimated to be as illustrated at Figure 7-1, below.

**Figure 7-1 Estimated Site-Generated Peak Hour Traffic Volume**



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### 7.3 Impact of Site Generated Traffic

The peak hour traffic volume is equivalent to around 1 vehicle movements (in and out combined) every 3 minutes, which is considered low in a traffic engineering context and in respect of the surrounding traffic volumes.

Based on the distribution presented at Figure 7-1, the site is likely to generate in the order of 10 vehicle movements per hour through the adjacent Exhibition Street / Collins Street and nearby Exhibition Street / Little Collins Street intersections. Based on a typical average cycle length of around 120 seconds, this increase equates to around 1 additional vehicle every 3 cycles during the AM and PM peak periods.

Given the above, the additional traffic generated by the subject proposal is unlikely to have any significant impact on existing traffic conditions.

## 8 Conclusions

---

Dexus proposed to partially demolish the existing buildings at 52 and 60 Collins Street to allow for the construction of a 37-storey commercial tower with ground level retail uses and a four level basement carpark.

Based on the foregoing analysis it is concluded that;

- > The subject proposal provides an on-site parking provision of 41 spaces, which is within the maximum number of spaces permitted (210 no.) under the car parking limitation policy (PO1) that applies to the site;
- > The car parking layout and access arrangements have generally been designed in accordance with Clause 52.06 of the Melbourne Planning Scheme and the Australian Standard for Off-Street Car Parking (AS2890.1:2004);
- > The internal circulation arrangements have been designed appropriately for a private car park;
- > The proposed bicycle parking provision (342 spaces) far exceeds the minimum requirement (182 spaces) outlined by the Melbourne Planning Scheme and has been designed appropriately;
- > The subject proposal is estimated to generate in the order of 21 vehicle movements (in and out combined) during each of the AM and PM peak 1-hour periods. Traffic generation prior to the AM peak period, throughout the daytime and post PM peak period is anticipated to be minimal;
- > The peak hour traffic volume is equivalent to around 1 vehicle movements (in and out combined) every 2 to 3 minutes, which is considered low in a traffic engineering context and in respect of the surrounding traffic volumes;
- > Based on a typical average cycle length of around 120 seconds, the proposal is anticipated to generate around one additional vehicle through adjacent Exhibition Street / Collins Street and nearby Exhibition Street / Little Collins Street intersections every 3 cycles during the AM and PM peak periods, which will have no adverse impacts on exiting proximate traffic conditions.

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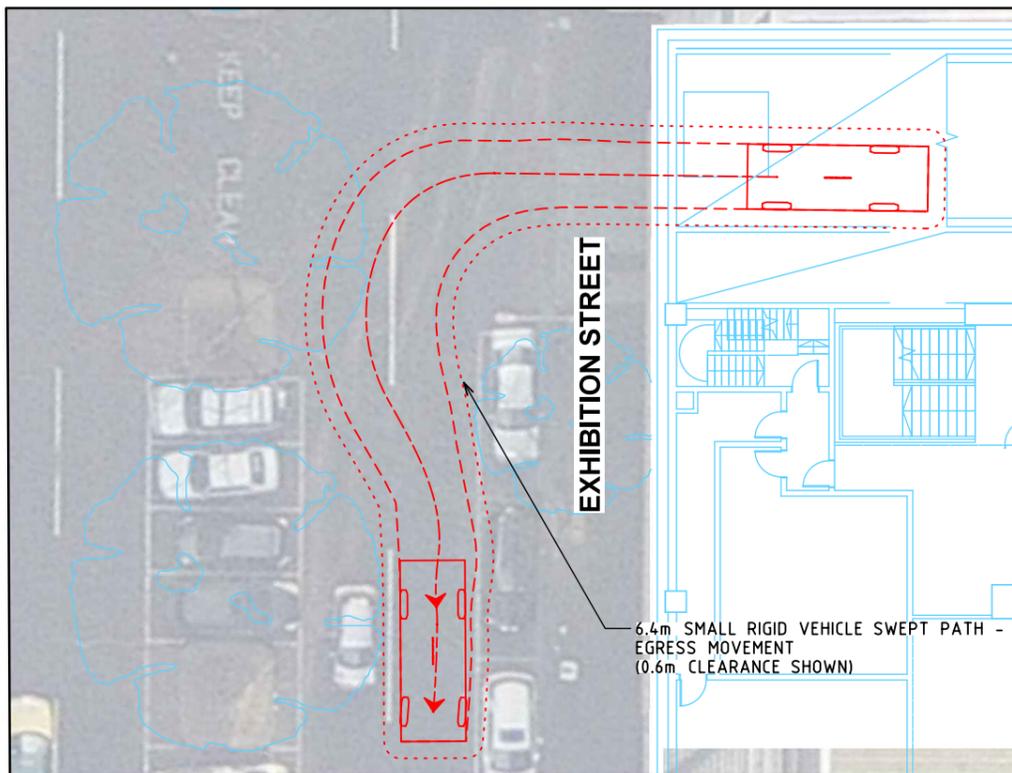
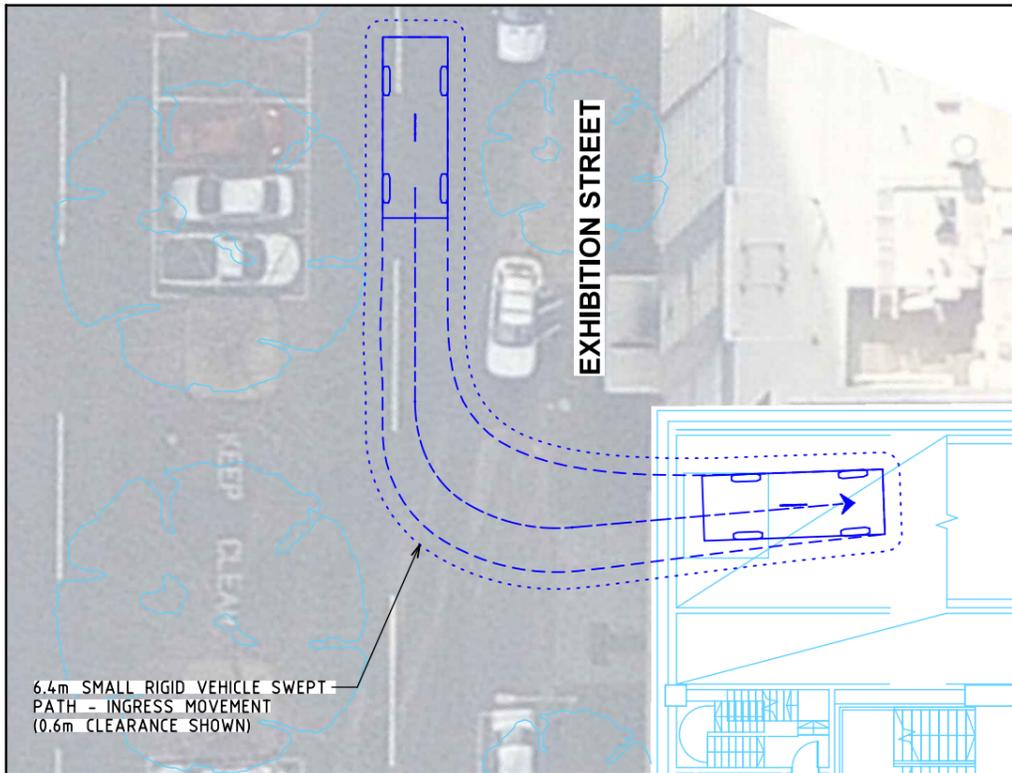
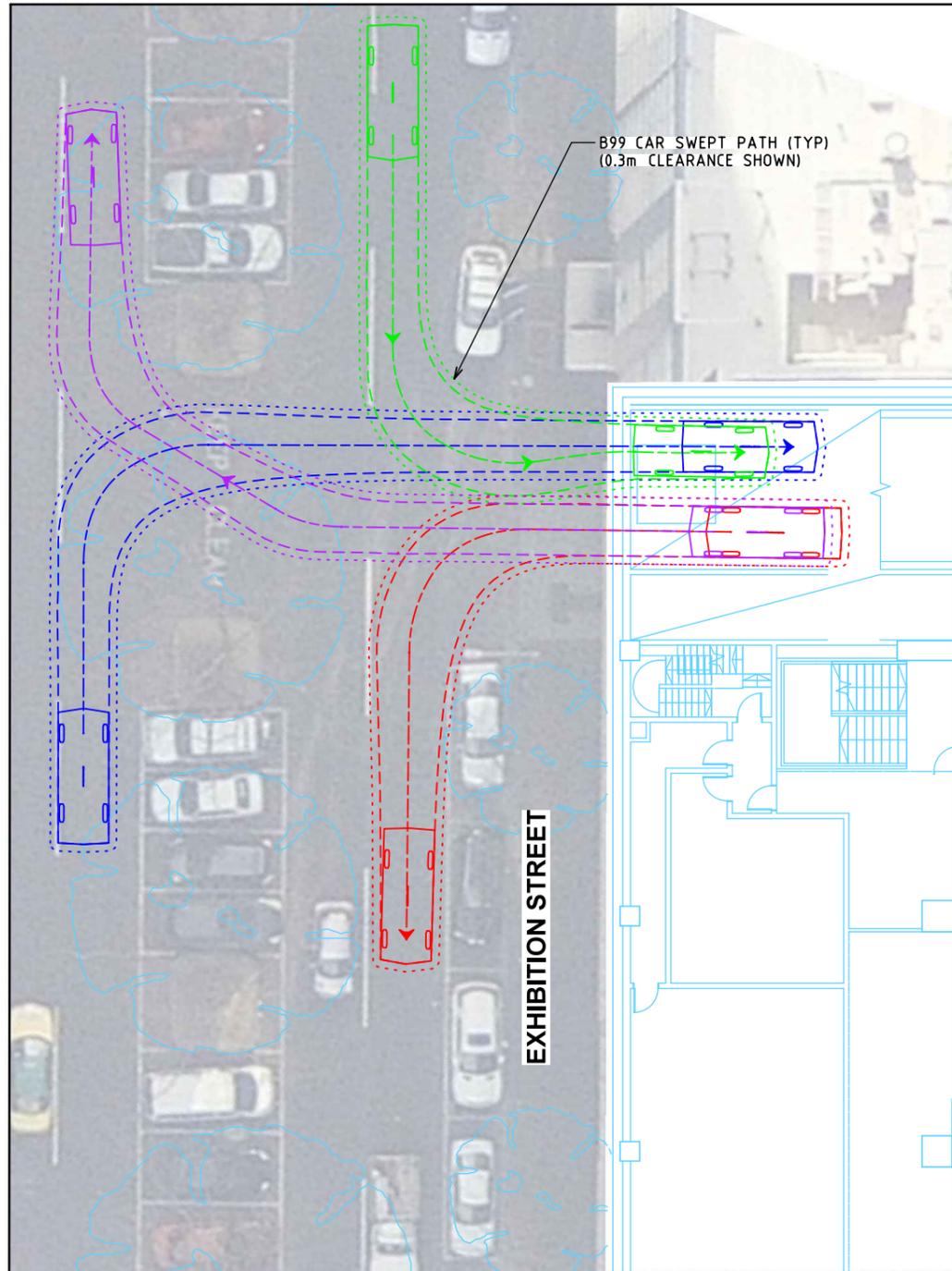
APPENDIX

A

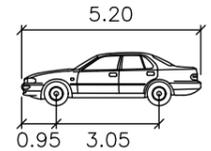
SWEPT PATH DIAGRAMS

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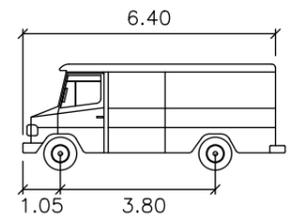


### DESIGN VEHICLES



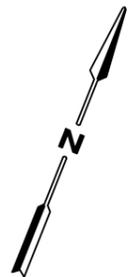
B99

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|-------------------|--------|
|                   | metres |
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| Track             | : 1.84 |
| Lock to Lock Time | : 6.0  |
| Steering Angle    | : 33.9 |



SRV

|                   |        |
|-------------------|--------|
|                   | metres |
| Width             | : 2.30 |
| Track             | : 2.30 |
| Lock to Lock Time | : 6.0  |
| Steering Angle    | : 38.0 |



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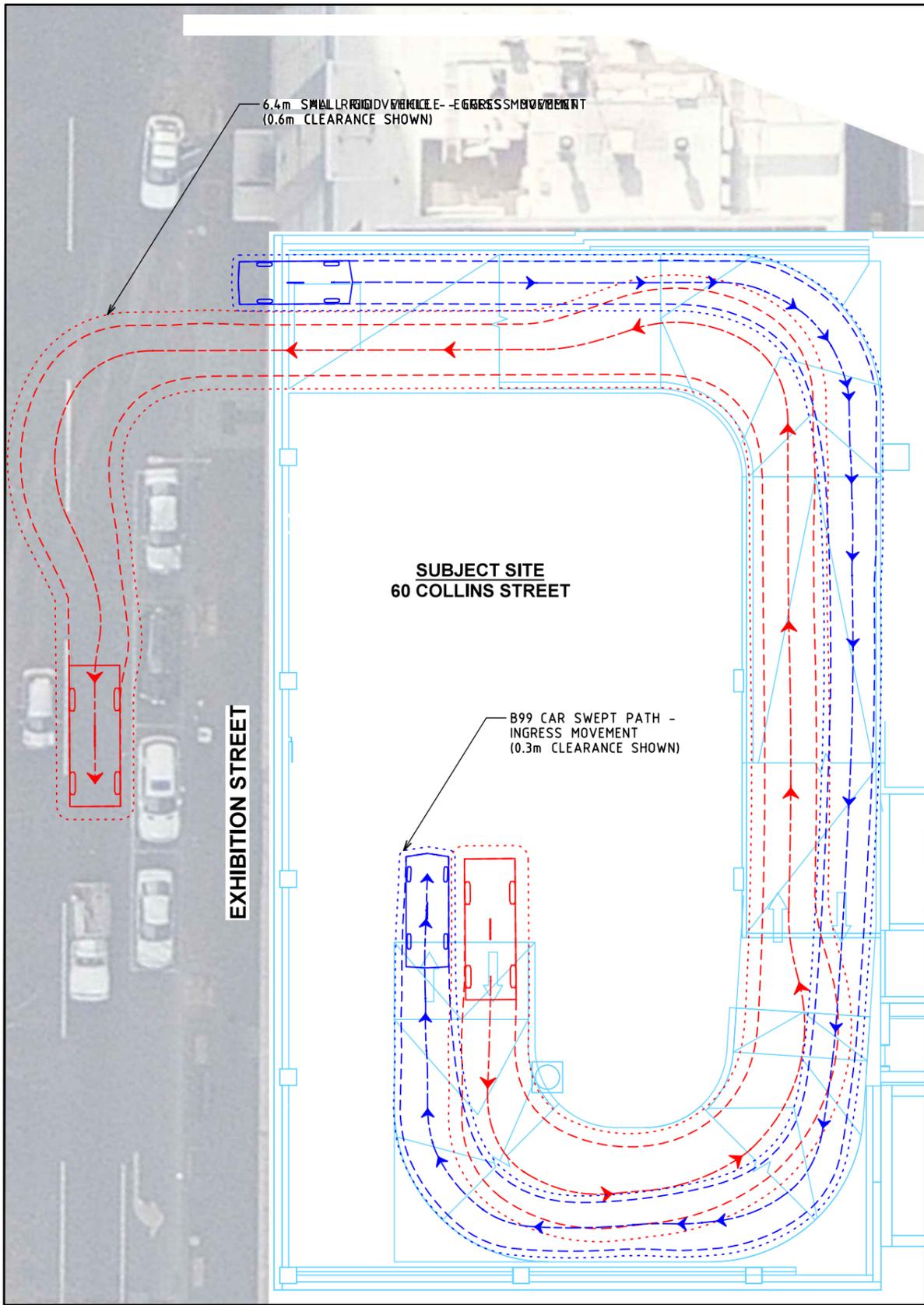
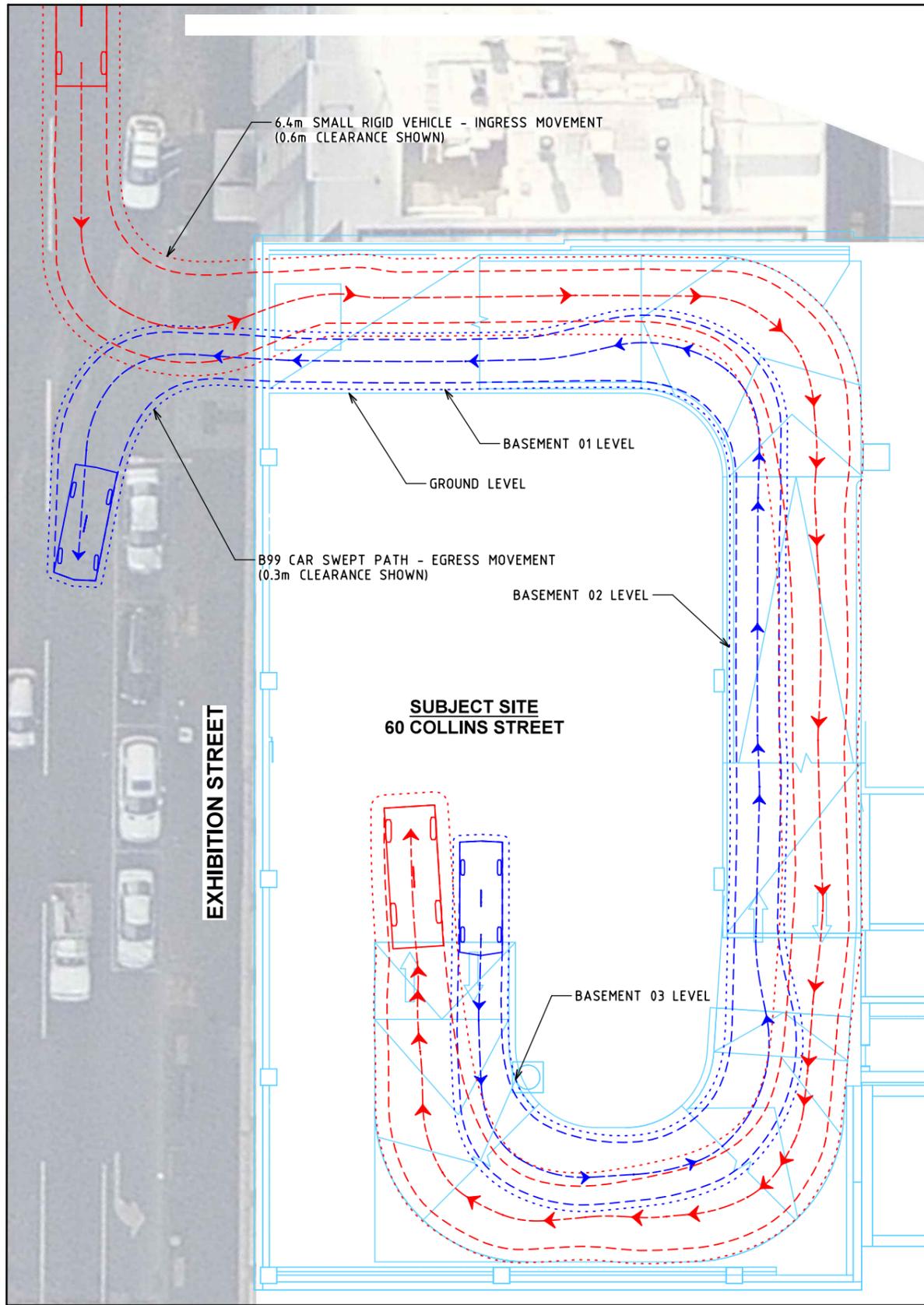
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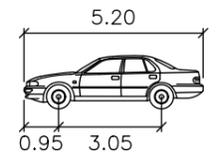


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|--|------------|-------|---------------|
| DEXUS<br>PROPOSED COMMERCIAL DEVELOPMENT<br>60 COLLINS STREET, MELBOURNE<br>LOADING AND CAR SWEEP PATH DIAGRAMS<br>SITE ACCESS |            |       |               |
| Drawn/Check  | Date       | Scale | Size          |
| AB / VO  | 18.11.2020 | 1:250 | A3            |
| Drawing Number<br>V190325-TR-SK-0002   |            |       | Revision<br>3 |

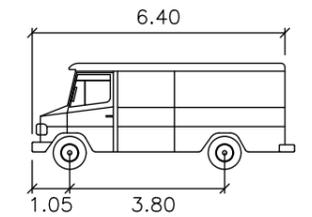


**DESIGN VEHICLES**



B99

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|  | Lock to Lock Time | : 6.0  |        |
|  | Steering Angle    | : 33.9 |        |



SRV

|  |                   |        |        |
|--|-------------------|--------|--------|
|  | Width             | : 2.30 | meters |
|  | Track             | : 2.30 |        |
|  | Lock to Lock Time | : 6.0  |        |
|  | Steering Angle    | : 38.0 |        |



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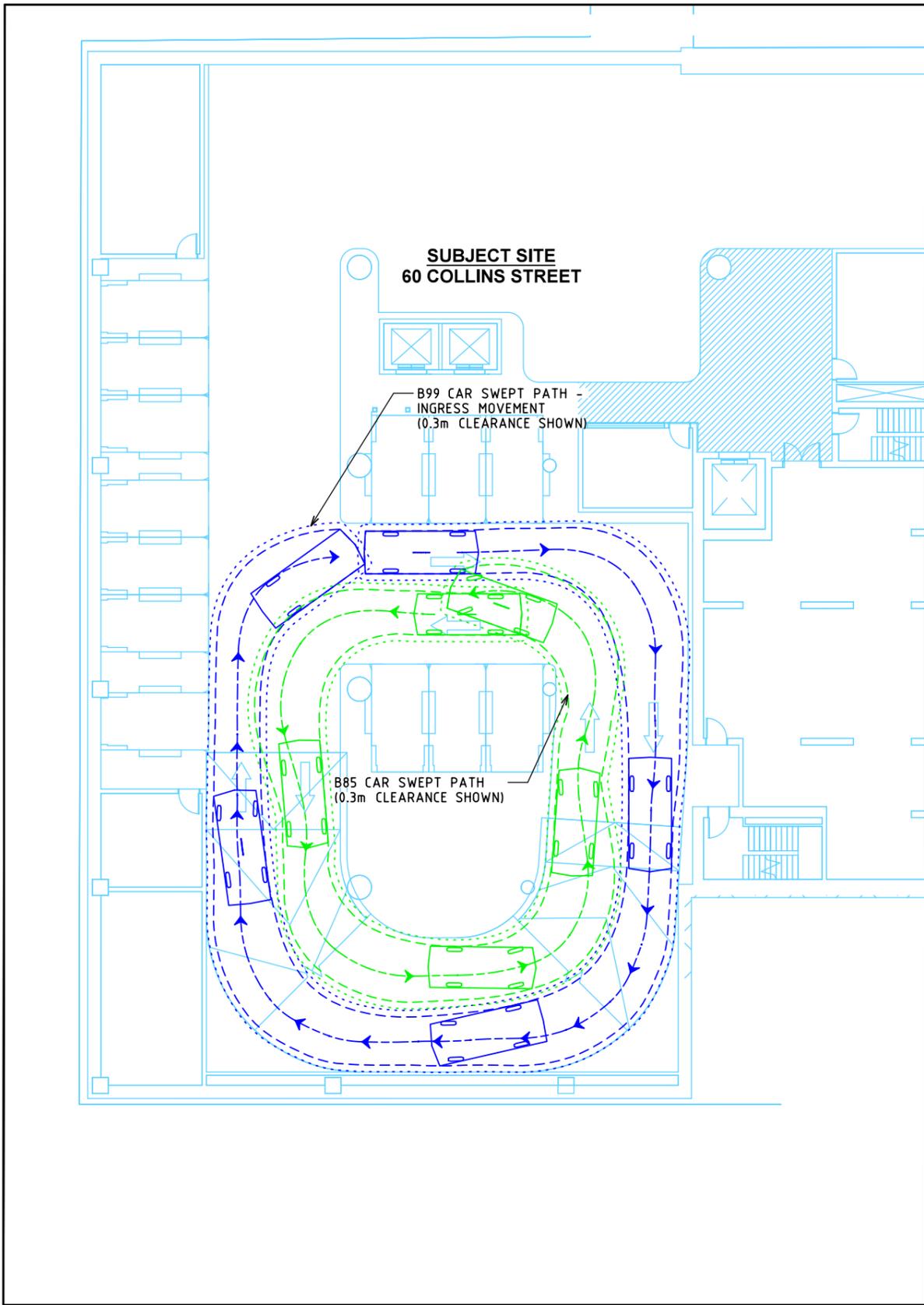
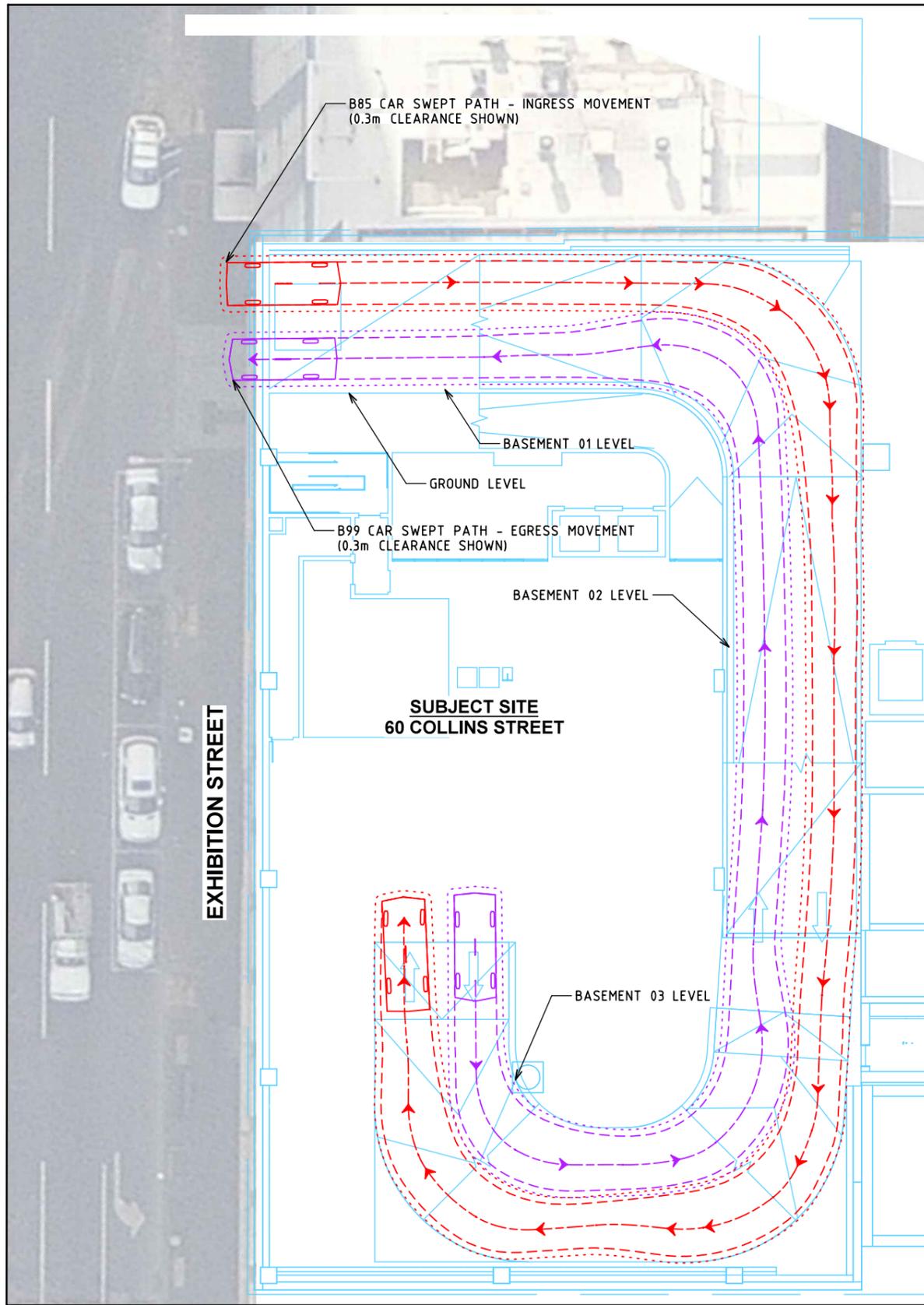
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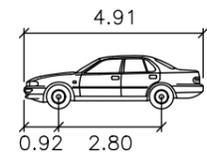


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| DEXUS                           |            |       |          |
| PROPOSED COMMERCIAL DEVELOPMENT |            |       |          |
| 60 COLLINS STREET, MELBOURNE    |            |       |          |
| LOADING VEHICLE AND CAR PASSING |            |       |          |
| RAMP LEVEL G-03                 |            |       |          |
| Drawn/Check                     | Date       | Scale | Size     |
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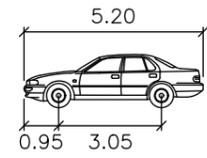


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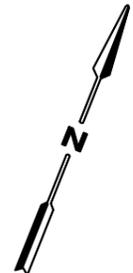
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**B99**

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|-------------------|--------|--------|
| Width             | : 1.94 | metres |
| Track             | : 1.84 |        |
| Lock to Lock Time | : 6.0  |        |
| Steering Angle    | : 33.9 |        |



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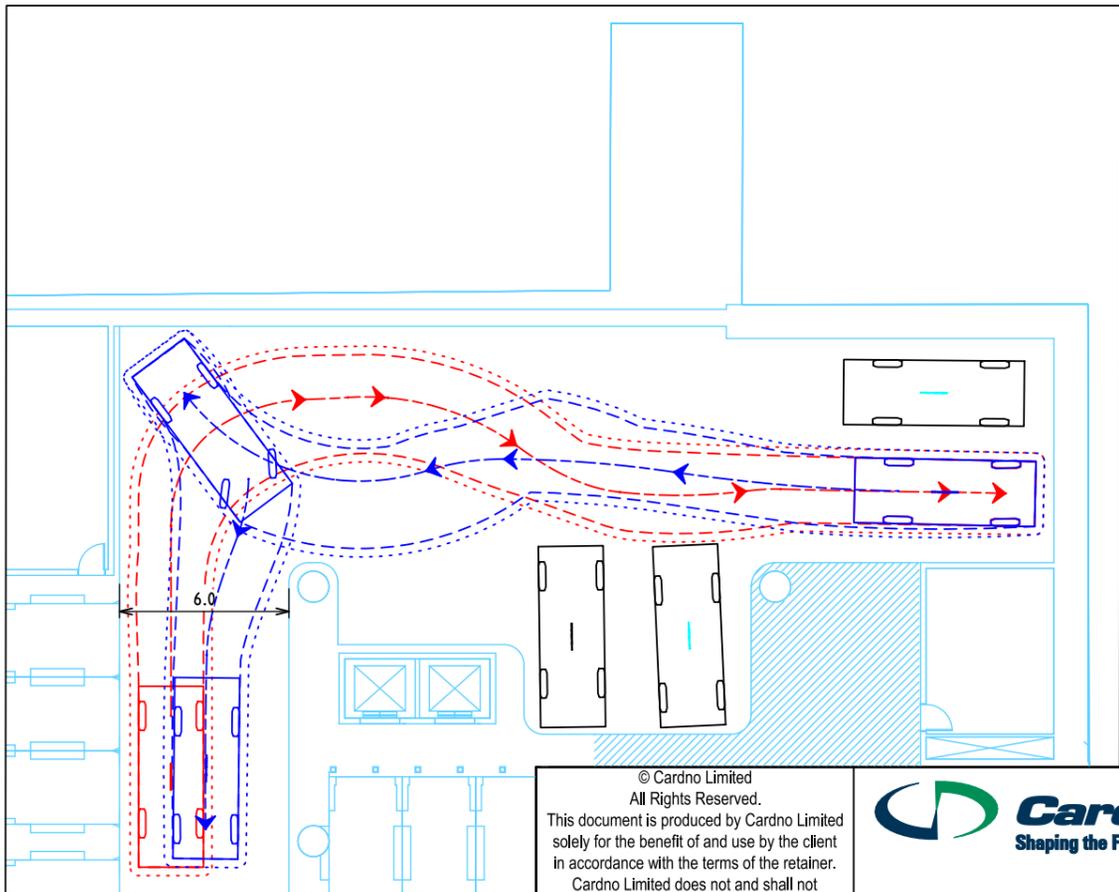
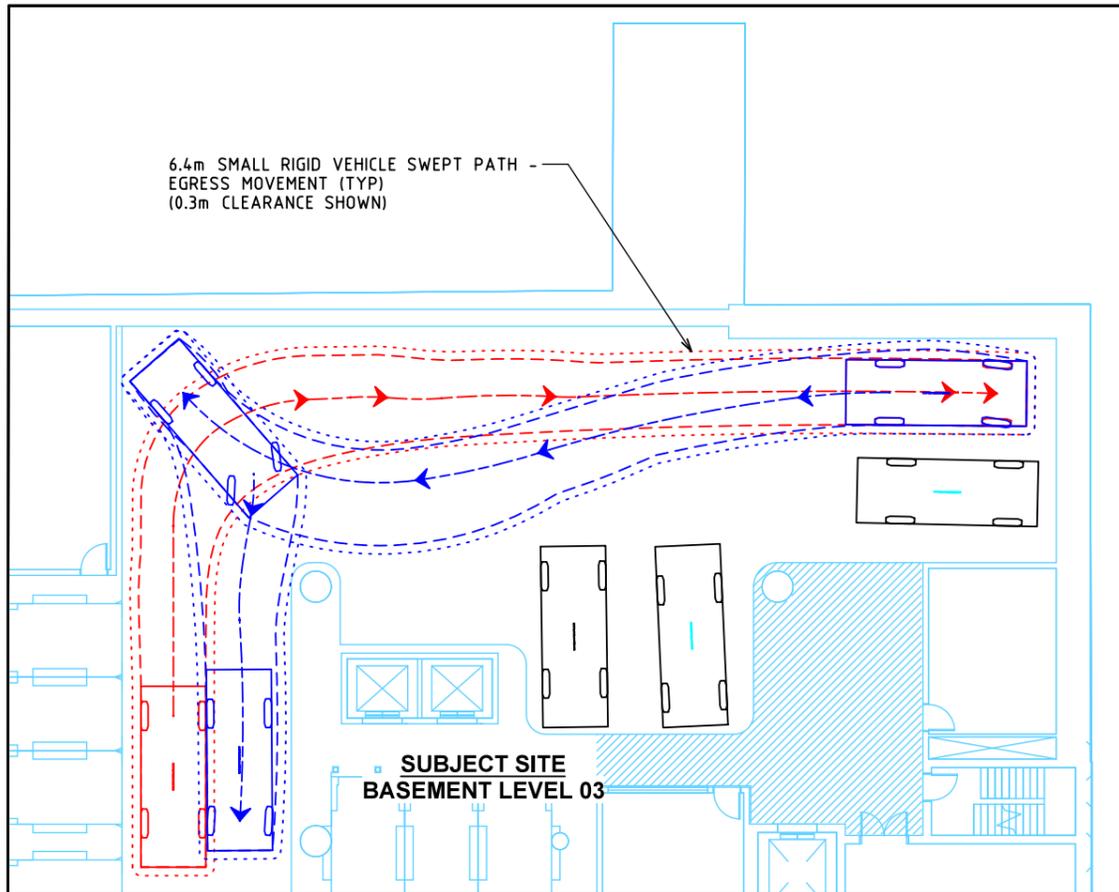
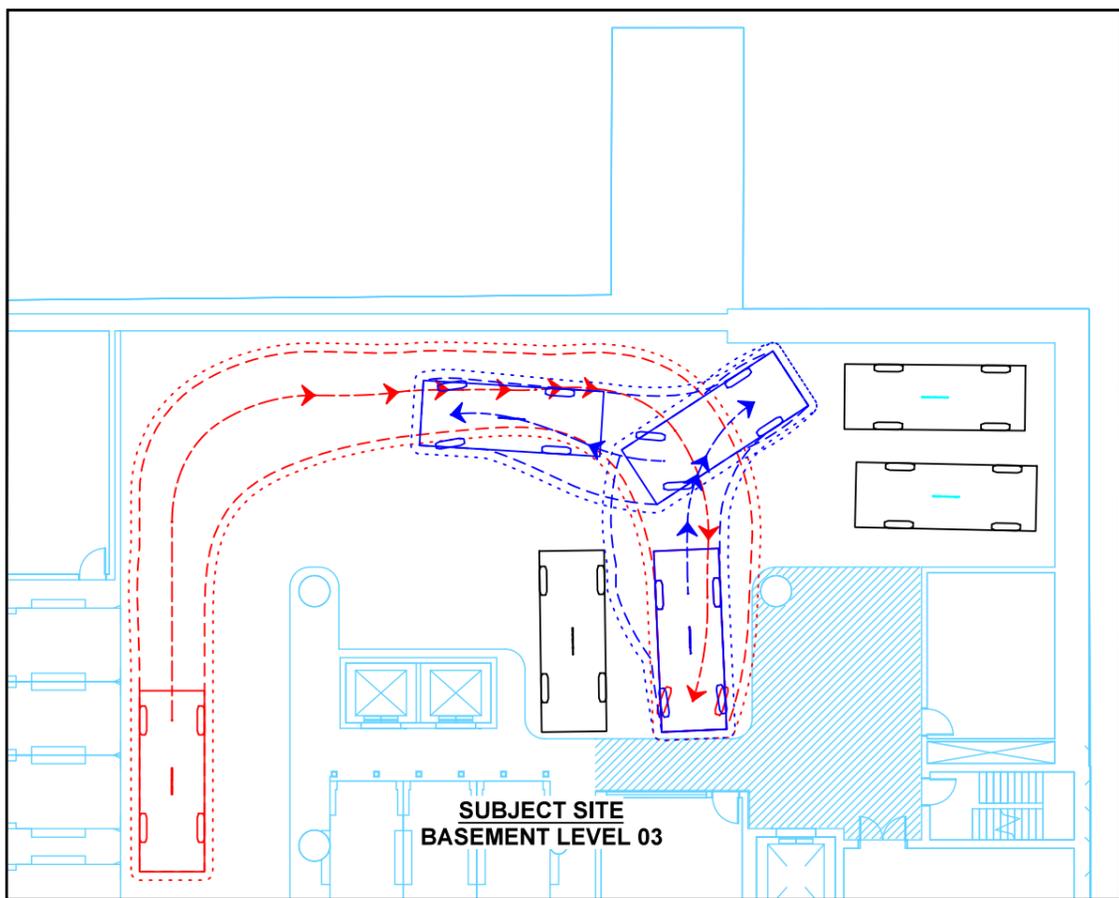
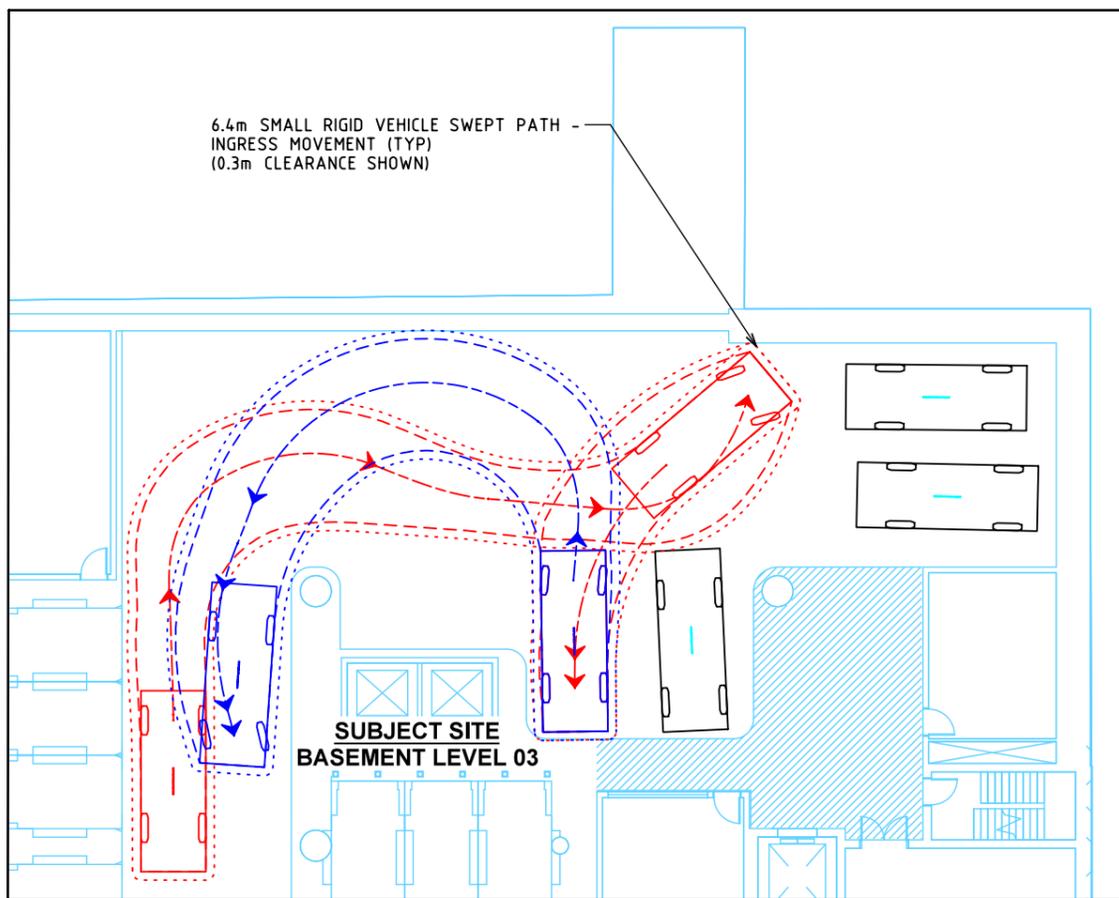
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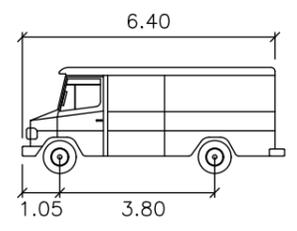
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|---------------------------------------|------------|-------|----------|
| <b>DEXUS</b>                          |            |       |          |
| PROPOSED COMMERCIAL DEVELOPMENT       |            |       |          |
| 60 COLLINS STREET, MELBOURNE          |            |       |          |
| CONCURRENT OPPOSING VEHICLE MOVEMENTS |            |       |          |
| LEVEL 03-04 RAMP SYSTEM               |            |       |          |
| Drawn/Check                           | Date       | Scale | Size     |
| AB / VO                               | 18.11.2020 | 1:250 | A3       |
| Drawing Number                        |            |       | Revision |
| V190325-TR-SK-0004                    |            |       | 3        |

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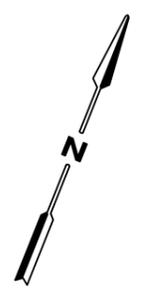
**DESIGN VEHICLE**



- SRV
- Width : 2.30 meters
  - Track : 2.30
  - Lock to Lock Time : 6.0
  - Steering Angle : 38.0

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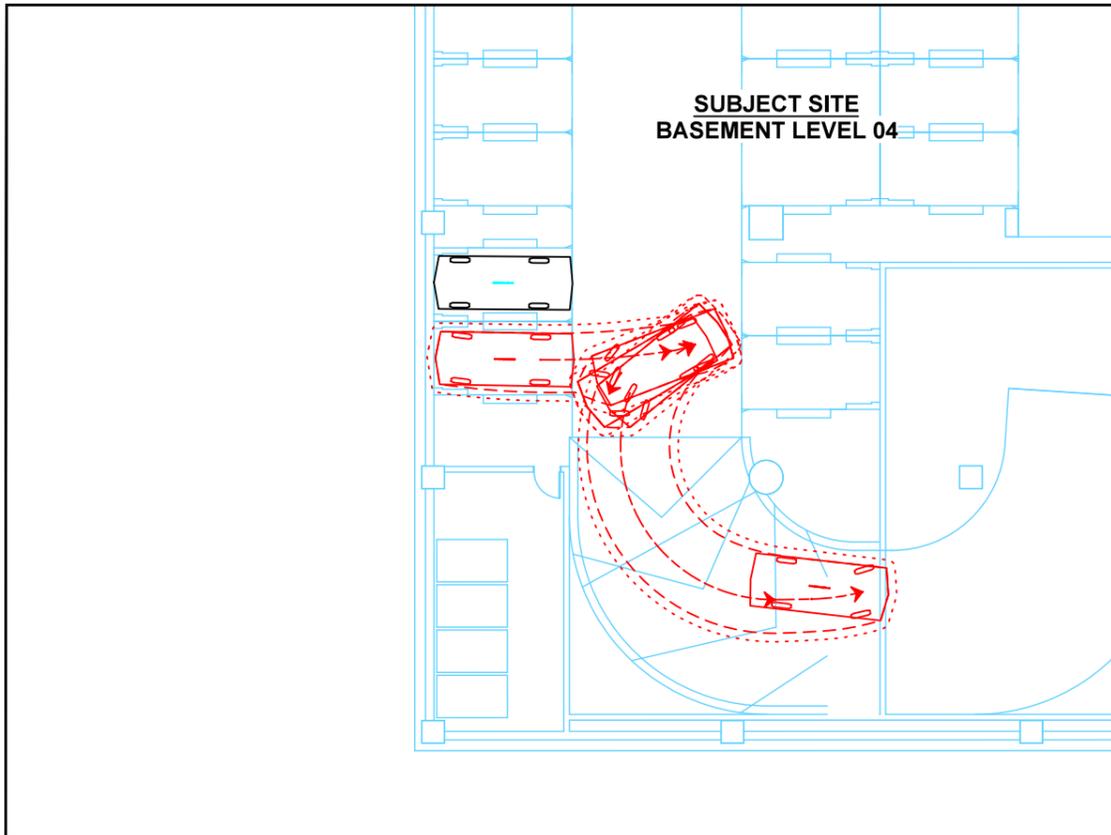
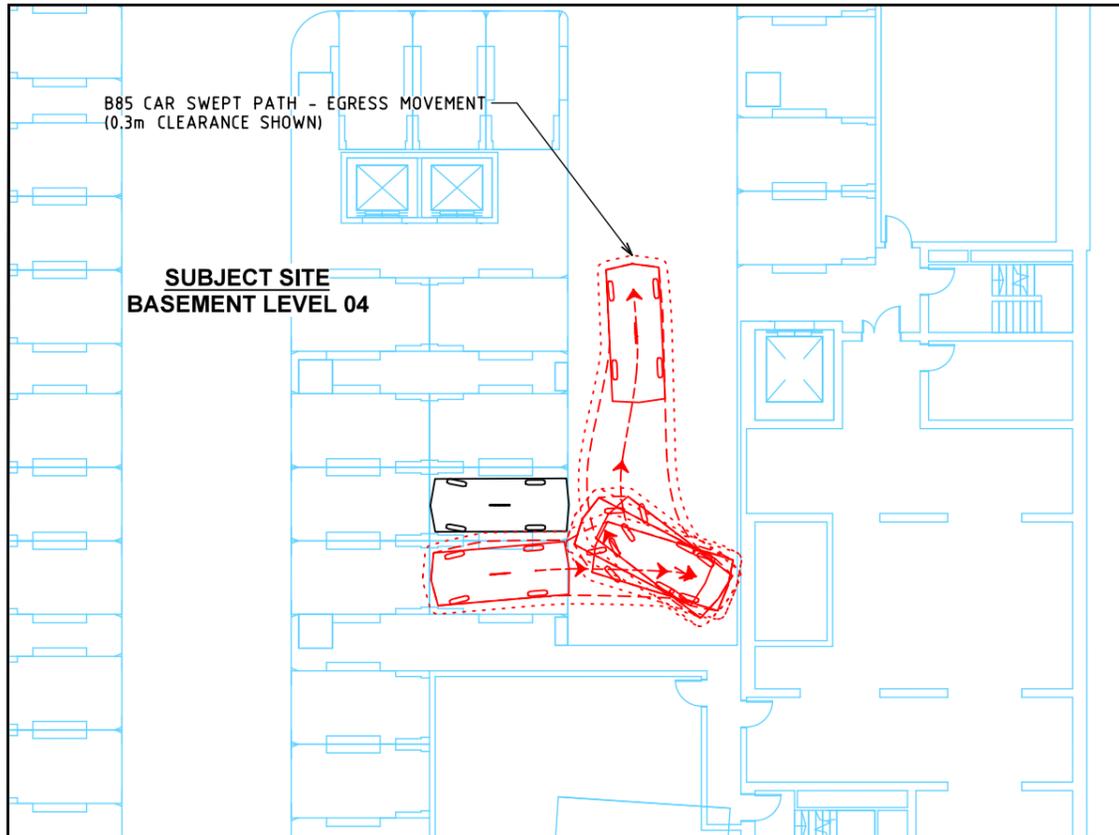
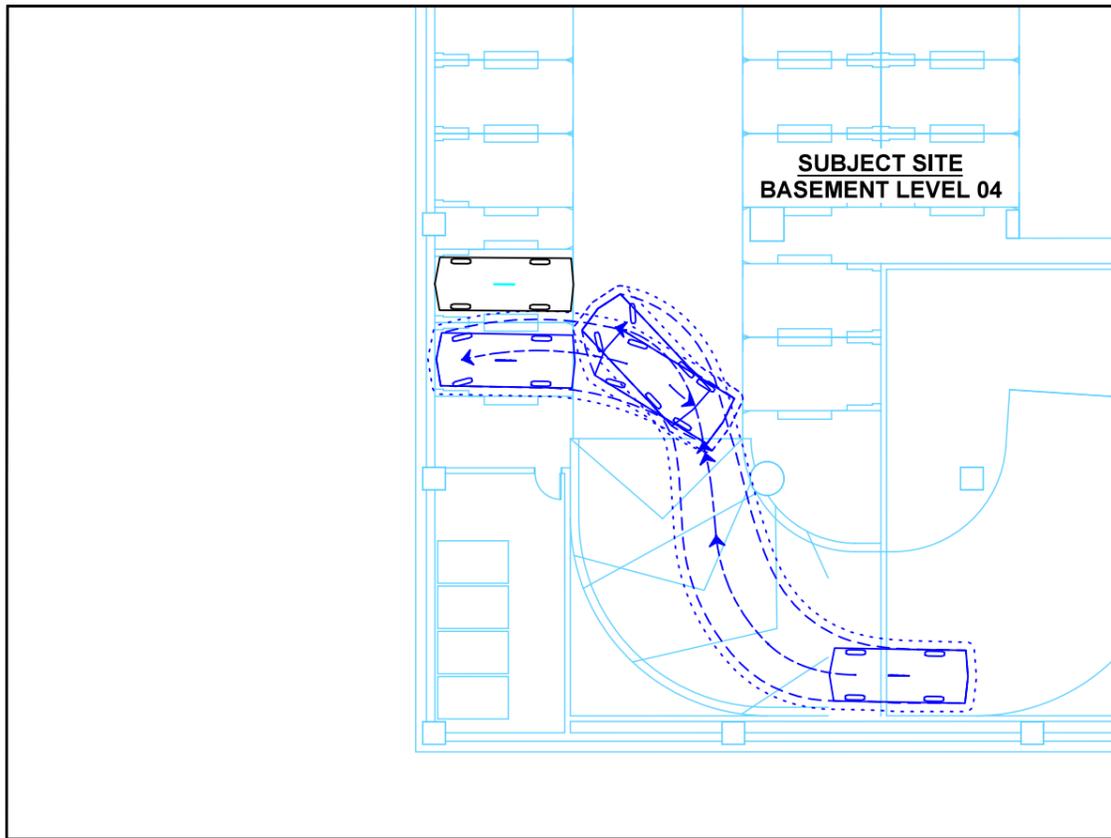
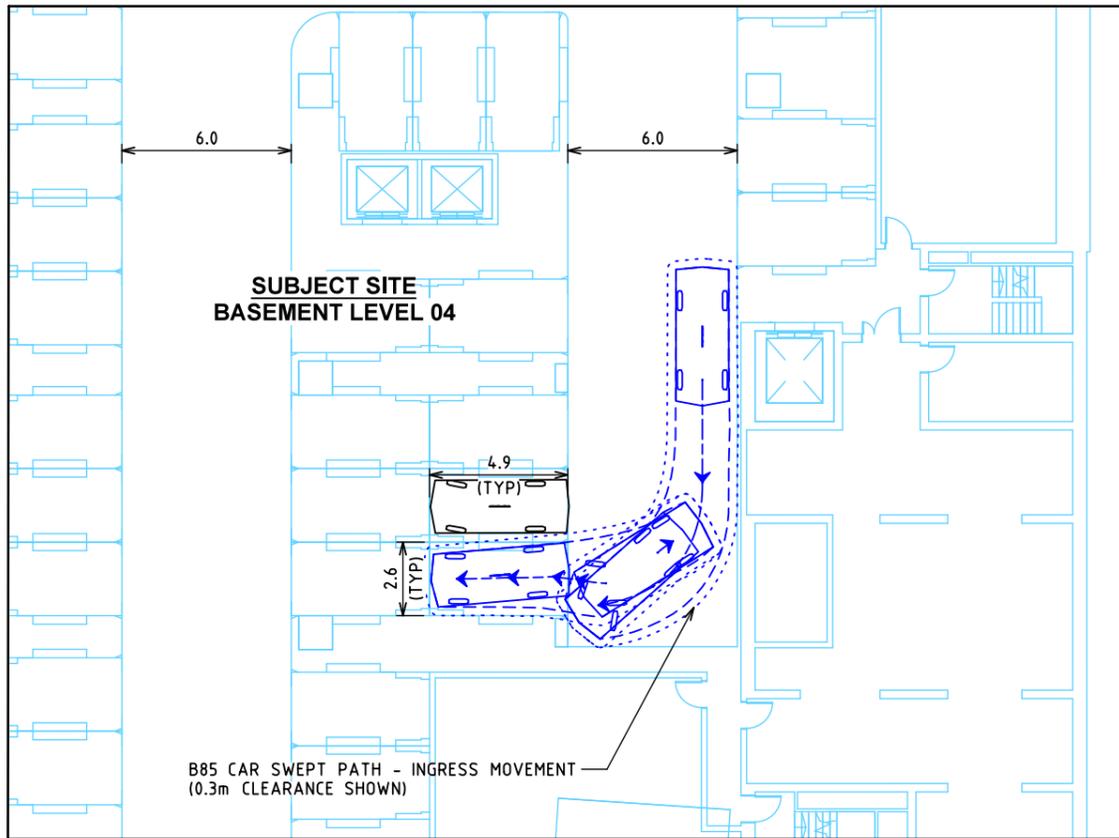


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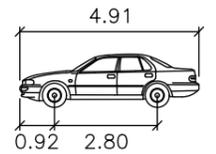
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| PROPOSED COMMERCIAL DEVELOPMENT |            |       |          |
| BASEMENT LEVEL 03               |            |       |          |
| LOADING MOVEMENTS               |            |       |          |
| BASEMENT LEVEL 03               |            |       |          |
| Drawn/Check                     | Date       | Scale | Size     |
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| V190325-TR-SK-0005              |            |       | 4        |



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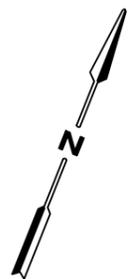
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### DESIGN VEHICLE



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|  | Track             | : 1.77 |        |
|  | Lock to Lock Time | : 6.0  |        |
|  | Steering Angle    | : 34.1 |        |



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|--|----------|------|--|
| DEXUS<br>PROPOSED COMMERCIAL DEVELOPMENT<br>BASEMENT LEVEL 03<br>PARKING SPACE ACCESS<br>BASEMENT LEVEL 04 |          |      |  |
| Drawn/Check/Date   | Scale    | Size |  |
| AB / VO 18.11.2020   | 1:250    | A3   |  |
| Drawing Number   | Revision |      |  |
| V190325-TR-SK-0006   | 3        |      |  |