

**TWO FRIARGATE**  
COVENTRY

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TENANT HANDBOOK  
**OFFICE FIT-OUT**

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# 1 INTRODUCTION

# 1.1 **PROFESSIONAL TEAM**

Client

Friargate

Project Manager

Cumming

Architect

Allies and Morrison

Civil and Structural Engineer

Curtins

Building Services Engineer

Ernest Griffiths

## 1.2 GENERAL TENANT CONSTRAINTS

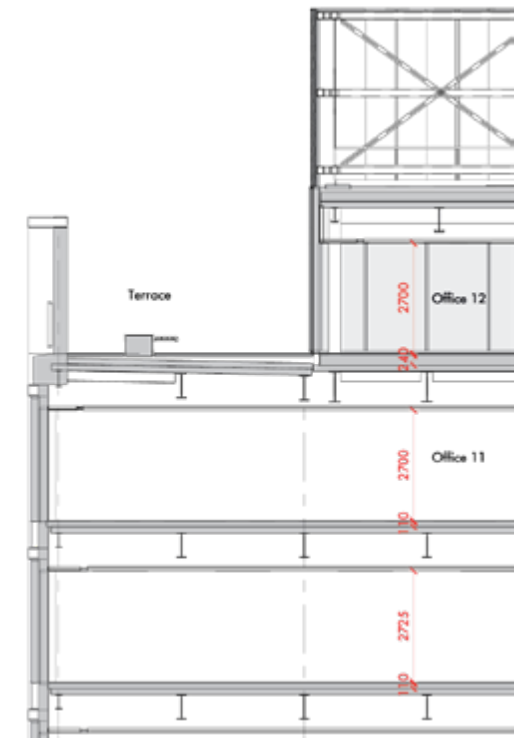
This document sets out criteria which tenants are to adhere to when designing and installing their fitout works. All systems supplied and installed by the tenant are to comply with all relevant regulations and applicable standards. All plant, equipment and services installed by the tenant are to be of an acceptable standard and quality and are to be installed within the demise. Careful consideration should be given to the Landlords services within the demise. Tenant fit-out designs are subject to the Landlords approval. No works are to proceed unless approval has been provided; any alterations by the Tenant to Landlord Works are not to be progressed until approval has been provided and a Licence to Alter issued. In particular the tenant should be aware of the following:

- An Energy Performance Certificate is required from each tenant prior to occupation.
- Each tenant is responsible for obtaining Building Control Approval for their fit-out, certification to be given to the Landlord before occupation.
- This document should be read in conjunction with the fire strategy for the building authored by Design Fire Consultants.
- Fixings through the perimeter wall build up are to

be avoided in order to safeguard the fire resistivity, airtightness and acoustic performance of the building envelope.

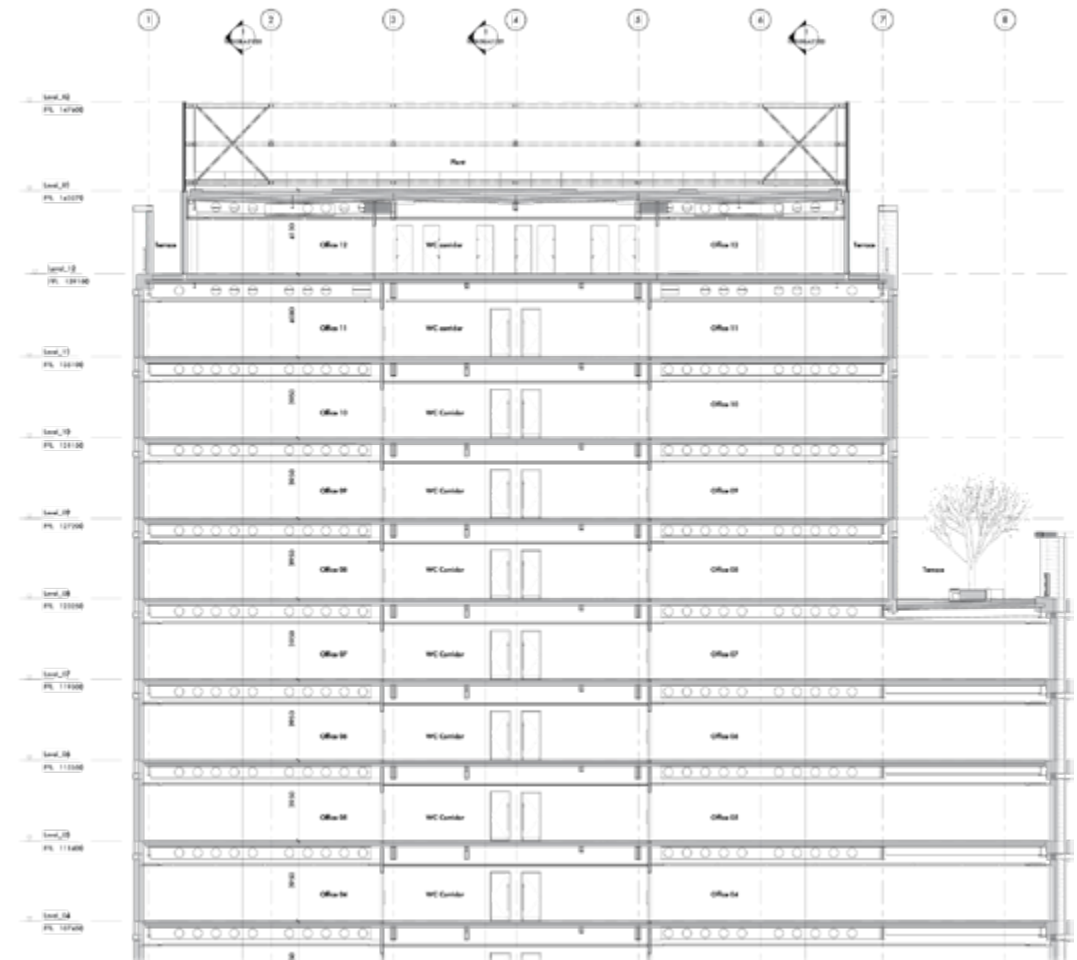
- Guidance to fixings into the primary structure are set out in section 2.
- All fire encasement including vermiculite, gypsum board fire protection to beams and intumescent paint to the columns is to be retained without alteration.
- If partition walls are required to be fixed to metal columns or beams then the beam and the column must also be fire encased as the intumescent paint will be prevented from expanding. Similarly a clear zone of at least 50mm should be maintained around all painted beams and 25mm to painted columns to allow the intumescent paint to expand in the event of a fire.
- All fire stopping around services, to the slab edge and to core walls is to remain undisturbed.
- The typical floor void is 100mm with the exception of level 12 where this increases to a void of 230mm.

- The floor to ceiling height is typically 2725mm with a slight reduction on floors 11 and 12 to 2700mm due to the sloping beams of the roof and deeper transfer beams.



FLOOR AND CEILING ZONES

- The rainwater pipe to the balconies is located at the intersection of gridline F & gridline 6 on all typical floor plates relocating slightly at first floor.
- Floors directly below the roof and terraces will have rainwater pipes within the ceiling void and in some locations dropping down beside a column. This will need to be considered in the tenants fit out. The floors this applies to are 6, 7, 9, 10, 11, 12.
- The ceiling voids on levels 7, 11, 12 vary due to the sloped roof structure above.
- The office floor plate has been designed to accommodate a central tenancy split along gridline 4. The two halves of the floor plate can be serviced independently. The partition forming the demise line between tenancies will need to meet both fire and acoustic requirements.
- The floor plate has been designed to a 1.5m planning grid which aligns with the central mullion to the windows. Partitions should be aligned with the mullion if required within the window bay.



ROOF SECTION

# 1.3 TENANT CONSTRAINTS TO CAT A FLOORS

In addition to the general constraints noted above tenants fitting out a Cat A floor should be aware of the following:

- Apart from minor adjustments required to accommodate the tenants layout and additional partitions installed finishes must be maintained. This is to minimise waste and is required for the building to achieve a BREEAM Excellent rating.
- Fire barriers have been installed to the voids in the suspended ceiling & raised access floor. Care should be taken when fit out work is carried out in the proximity of these barriers and they should be assessed after work is complete to confirm they are still fit for purpose. If not it will be the tenants responsibility to replace with a suitable solution.

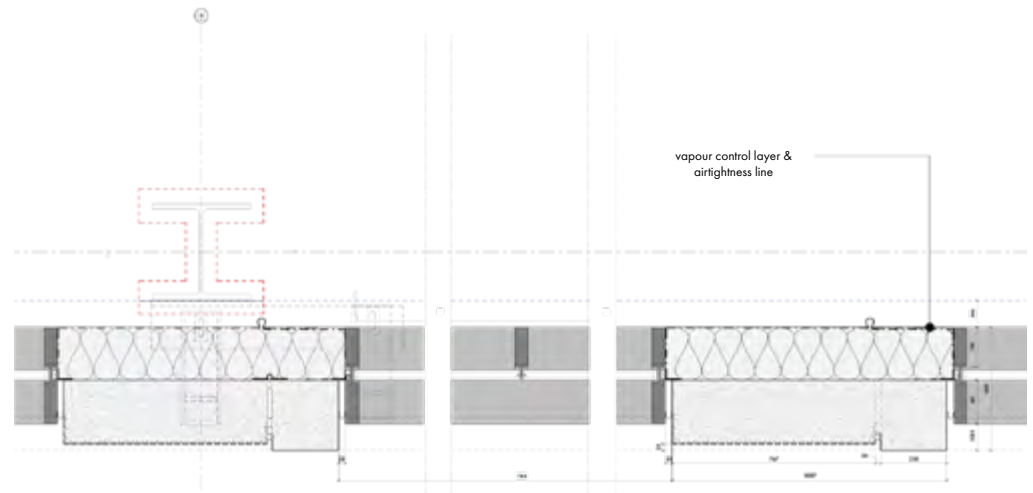


CAT A CEILING LAYOUT

# 1.4 TENANT CONSTRAINTS TO SHELL & CORE FLOORS

On the shell and core floors the following should be considered:

- The vapour control layer and air tightness membrane is exposed on the back of the facade. The tenant will be responsible for installing perimeter linings to close off the back of the facade and provide protection to the vapour control layer.
- The ceiling system and light fittings should match those used on the Cat A floors.
- Fire exit signs have been installed with temporary support and should be remounted when the ceiling system has been installed.
- Temporary door stops have been provided to the terrace doors on level 8. It is the tenants responsibility to ensure adequate door stops are installed as part of the fit-out to protect the doors from damage.

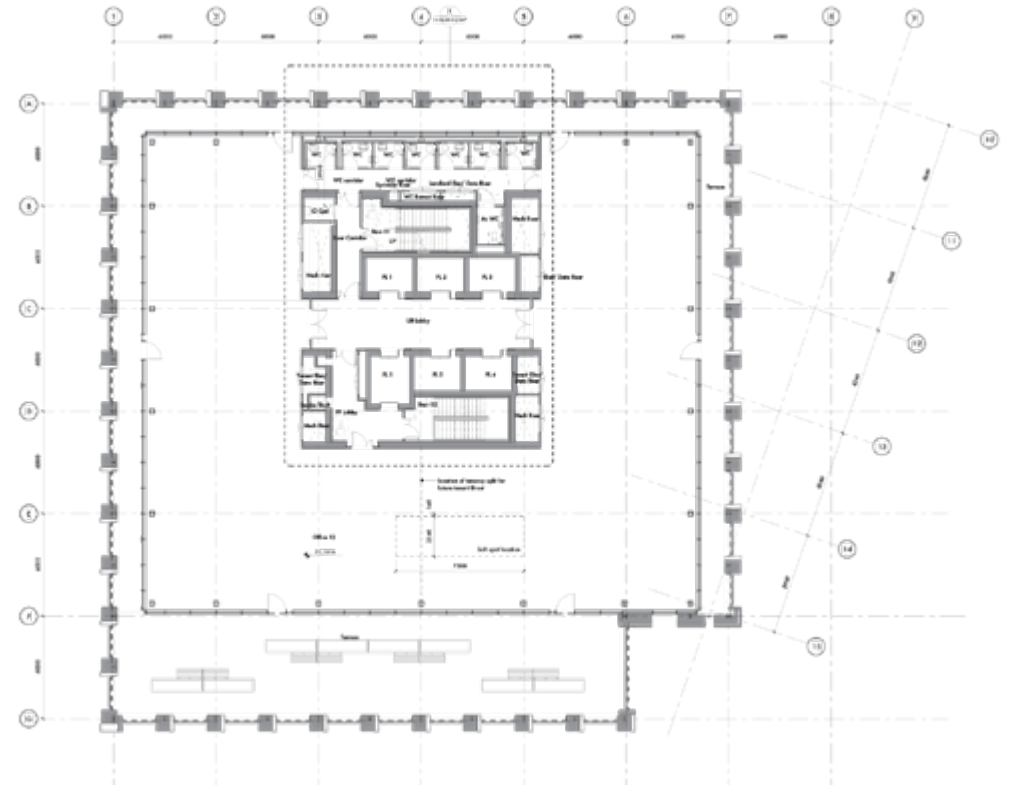


FACADE PLAN DETAIL; SHELL & CORE FLOORS



# 1.5 FUTURE FLEXIBILITY

Soft spots have been formed in the floor slab on levels 8 & 12. This is to allow for an accommodation stair to be installed should a tenant occupy one of these floors and the floor below. Consideration of how the stair flight will be lifted to the relevant floor will be required as well as the impact on the fire strategy.



SOFT SPOT LOCATION LEVEL 12

## 1.6 **ACCESS & SECURITY**

Various security systems have been installed throughout the building which is elaborated on in section 5 (Mechanical & Electrical Systems) of this handbook. Below is a brief description of the internal and external security points.

### **MAIN ENTRANCE**

During office hours the revolving doors and pass door will allow free access into the reception. Security to the rest of the building is maintained via the speed gates which will require a security card to operate.

Out of hours access to the building is via the pass door which will be controlled by the access control system.

### **CAR PARK ENTRANCE**

The car park has an automated roller shutter which will remain closed when no vehicles are entering or exiting the car park. The roller shutter will be activated via a fob provided to the tenants. Visitors will need to use the intercom provided on the right-hand side of the car park entrance to gain entry to the car park and then use a second intercom to gain entry to the core. Guests will need to be collected from the basement lift lobby.

### **CYCLE ENTRANCE**

A separate door is provided for cyclists to enter the basement ramp operated via the access control system.

### **FLOOR PLATE**

Tenant spaces are secured by the access control system and magnetic locks. The levels of the core are connected via the escape stairs allowing free movement between floors to use the WC facilities.

Guest who enter the building via reception will be taken to the correct floor level by the lift destination control but will need to be greeted at the lift lobby of the relevant floor by the tenant they are visiting.

# 2 **SUBSTRUCTURE & SUPERSTRUCTURE**

## 2.1 DESCRIPTION OF BASE BUILD

### SUBSTRUCTURE

A piled solution has been adopted with 750mm diameter CFA piles provided at 900mm centres to form the perimeter basement wall. 750mm diameter piles are also provided to pile caps at column and core locations, with individual piles provided to reduce the span of the 350mm thick RC basement slab.

The substructure has been developed on the basis of a piled solution. Piles are primarily required at column and core locations in the form of pile caps to spread the superstructure loads over the required number of piles. Lone piles with thickenings are also added to reduce the span of the slab. Due to the water table, the foundations also need to be designed for uplift from hydrostatic pressure.

### PILES

All piles are assumed to be 750mm diameter, the pile loads drawing specifies the loads the piles must be designed to take (see FCDL-CUR-C10-FN-DR-S-16001). All piles are assumed to settle 10mm under serviceability loads.

For the contiguous piled wall, 750mm diameter piles are provided at 900mm centres. The perimeter wall may

need propping during construction until the basement slab has been constructed and the pile drawings show the assumed extent of propping required, to be confirmed by the Piling Contractor.

In the permanent condition the contiguous pile wall is propped by the basement slab at basement level and the ground floor slab at ground level. Where a ramp is present, the ground floor propping level reduces and the pile design should allow for this because the piles will cantilever past the ramp.

Further requirements for the design are outlined on the pile loads drawing and the piling specification (FCDLCUR-C10-ZZ-SP-S-00005).

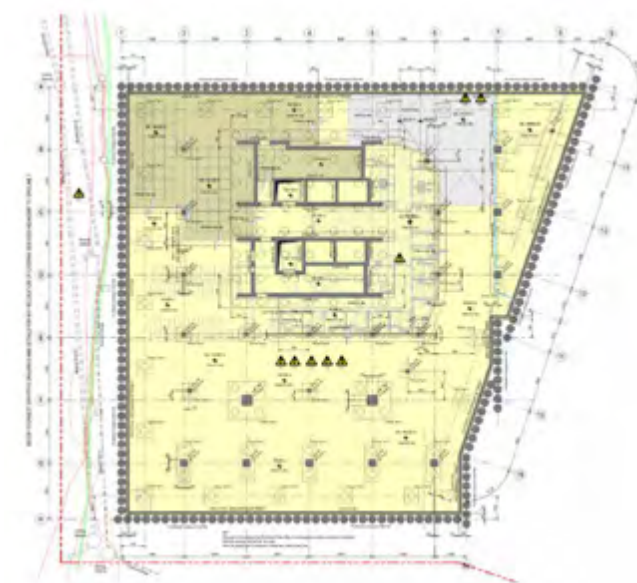


FIGURE 2.1 – PLAN OF BASEMENT

## SUPERSTRUCTURE

A long span steel framed solution has been developed, with a central reinforced concrete core providing stability against lateral loads. The long span steel frame allows open office spaces to be provided without the need for intermediate columns.

## FLOOR PLATES

The ground floor and below is constructed with in-situ concrete. A 350mm thick RC slab is used to form the ground floor slab and the basement slab is formed as part of the raft foundation.

A typical floor plate generally consists of cellular beams with a composite deck above forming long span composite beams. The floor plates are supported by steel columns at regular spacings to the façade of the building, with some columns present internally at lower levels due to the building stepping in. Internally, the steel beams are supported by the internal RC core, with wing walls provided to pick up riser trimming steelwork. At ground floor and below, an in-situ RC podium is proposed with contiguous piles forming the perimeter basement wall line. The perimeter columns are supported directly off the contiguous pile wall, with a capping beam provided to distribute the column load over multiple piles.

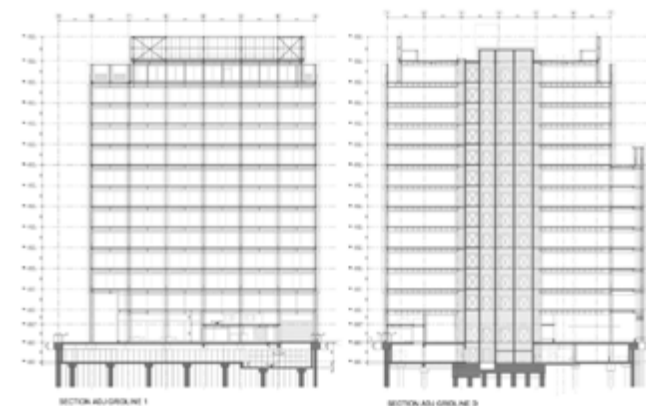


FIGURE 2.2 — TYPICAL SECTIONS THROUGH BUILDING

The ground floor slab is a 350mm thick RC flat slab, which has been achieved by the introduction of additional RC columns on a 6m x 6m grid. Where steel columns are present internally, a larger column is provided below to allow sufficient connectivity between the steel and concrete elements and also to transfer the axial forces from the floors above to the foundation.

At basement level, pile caps are provided for the primary structural columns and a piled base is provided to the central core. The basement slab is 350mm thick spanning between pile caps and additional lone piles are provided internally to reduce the span. A large step is present in the basement slab between two levels which are approximately 1m different. The water table has been measured above both levels of the slab so the slab has been designed to span between piles due to uplift, and many piles are required to resist uplift.

The in-situ reinforced concrete core provides stability to the building, with the walls varying between 250mm to 350mm thick. The core houses six lifts and two staircases, with risers provided to the exterior of the core. 350mm thick walls are provided where steel beams are incoming as this allows cast-in plates to be inserted into the core during construction for connectivity between the two.

Effective horizontal ties are required at each floor and vertical ties are required between storeys to meet the requirements for 2B disproportionate collapse.

## TYPICAL FLOORS

The concrete slab is typically 150mm thick on metal decking acting compositely with steel beams. SMDTR60+ is used for the decking, with a 0.9mm gauge deck suitable for the 3m span required. This slab also acts as a diaphragm to transfer lateral forces to the core.

The secondary beams are generally 610.UB's (rolled sections) which have a maximum span of 12m. These span between primary beams which are plated sections internally. The primary beams are plated because custom flange and web thicknesses can be specified, this allows for shallower (but heavier) sections to reduce the overall structural zone, along with increasing the stiffness of the web for cellular beam design.

Both primary and secondary beams are typically cellular beams, with 450mm diameter cells provided at 900mm centres to allow services to pass through. At riser locations elongated openings are required in some areas which require stiffening and where this is the case plate girders are provided.

The floor plates have been developed to accommodate typical office-imposed floor loadings in accordance with defined codes of practice. The maximum beam-span for a typical office floor plate is approximately 12m which means they may be sensitive to dynamic effects, which is controlled by limiting the response factor to a maximum of 8.

Each floor plate is limited to a maximum total deflection of 50mm beyond the structural zone, which in combination with the depth of the primary beam results in an overall structural zone of 1000mm excluding tolerances. Where secondary beams are supported off primary beams, cumulative deflections are present. This is covered further in section 8.5.

## STABILITY CORE

The central stability core resists lateral and longitudinal loadings arising from wind together with notional horizontal loadings generated from construction imperfections. These forces are transferred to the core via the composite floor slabs at each level acting as diaphragms. Reinforcement is provided to the core walls to resist compressive and tensile loads arising within the core, which is reduced up the building as the forces reduce.

The wall thicknesses vary between 250mm – 350mm. The larger thickness of 350mm is used where cast-in plates will be placed to allow steelwork to connect later. The narrower thickness of 250mm is used between lifts where there are no incoming cast-in plates and the walls are less heavily stressed.

Pull-out bars and couplers were required to connect incoming RC elements to the core.

The steel beams will be connected to the RC core using cast-in plates, whereby a steel plate with reinforcement and shear studs to the rear is fixed and cast as part of the core construction. The steelwork fabricator will then weld a fin plate onto the cast-in plate after the core has been constructed.

## PODIUM

In-situ concrete construction is used at ground floor level and below. This is partially to accommodate level changes at ground floor which can be accomplished by forming steps in the in-situ slab. This slab is also required to transfer shear and compressive forces from the earth from one side of the basement to the other, which is more efficient in RC flat slab construction as opposed to composite steel & concrete.

Concrete columns have been introduced between basement and ground to reduce the span of the suspended slab. The primary steel frame will be built off of the podium which will need to be sufficiently cured prior to the erection of the steel frame.

## STEEL COLUMNS

Rolled steel column sections have been utilised on a regular grid located to the perimeter of the building, this results in columns at 6m centres. On the lower floors there are 5 internal columns, 3 of which are required due to the step in the building and 2 are required to reduce the span of the primary beams.

The two internal columns on gridline F carry more load than the rest of the columns as they support a much

larger floor area. As they are also not positioned on the capping beam, they require an RC stub column below which needs to be large enough to tie the two together for disproportionate collapse. The stub is also larger than the steel column as RC has a lower allowable compressive stress in comparison to steelwork.

In general, it is assumed that the first splice occurs above level 1 and then splices occur every 2 storeys after, which is where the steel section sizes reduce.

## EXTERNAL CLADDING

The cladding will consist of a primarily of panels which combined precast concrete and glazing. A loading on elevation of 5.0 kN/m<sup>2</sup> has been allowed for this. This cladding system is assumed to be supported at column locations and does not directly load the slab. Elsewhere a primarily glazed system is used and a loading allowance of 1.5 kN/m<sup>2</sup> on elevation has been allowed for this, e.g. the inset level 12 office space. The glazing is assumed to be bottom-supported at every stack.

## ROOF AND TERRACES

At level 12 the building is inset to provide an external terrace to the perimeter of the building and a reduced office space at the same level. The inset columns are supported on transfer beams at level 12 which supports plant loading from level 13 above. A plant screen is provided at level 13.

At all locations of external terraces, the parapet is formed by extending the perimeter columns past the floor level to create a full-height external wall. Any parapets should span between external columns to avoid cantilevered parapets fixed to the composite decking.

## SERVICES DISTRIBUTION

Services have been coordinated through a series of key risers principally around the core. Early discussions with the M&E consultant have determined that large risers could be located near the perimeter of the central core, primarily to the perimeter of the WC's located just outside the core. The position of the risers impacts the internal column locations and setting out of any adjacent steelwork.

To the perimeter of the risers, cells (elongated where possible) are provided to allow services to pass through. These openings can be uniform up the building and can be pre-fabricated. As the riser positions and WC's are just outside the core, this will reduce the number of service penetrations through the core.



## 2.2 **LOADING CRITERIA**

This section of the report outlines the key design criteria for loadings that have been adopted in developing the permanent proposals.

The design loads and material densities in this document have been specified in accordance with BS EN 1991 1 1:2002, General Actions- Densities, Self-weight, Imposed Loads for Buildings. In addition to the design loads specified, the structural design and loadings are to meet current Building Regulations and legislative requirements.

The associated structures have been developed in accordance with the Eurocodes and the most onerous combination of dead, imposed and wind loadings has been considered in the permanent ultimate condition.

### **STRUCTURAL LOADS**

Permanent/Dead loads (DL) take into consideration the self-weight of floor slabs, structural walls and columns; in effect the self-weight of the building shell before finishes are applied. Dead loads are calculated in accordance with BS EN 1991-1-1:2002, relevant trade literature and the client brief.

Superimposed dead loads (SDL) account for the finishes that are applied to the building shell, usually as part of the fit-out. Assumed superimposed dead (uniformly distributed) plan loads in the permanent case are summarised in the following table 7.1.

Variable/Imposed loads (IL) are those loads generally associated with the occupation and use of the building after fit-out. They include an allowance for people, furniture, machines and appliances, fixtures and fittings, partition walls and plant and essentially cover loads which could vary during the building life. Snow loads on the roof are considered as a variable load.

Loading plans have been produced showing the loads used for design, these are provided below

### **FILE STORAGE (ENHANCED OFFICE)**

In accordance with the BCO requirements for offices, an increased imposed load of 7.5kN/m<sup>2</sup> should be taken over 5% of the office floor areas to account for file storage.

The following locations have been proposed:

- Adjacent to the straight core wall parallel to and between gridlines D & E (52m<sup>2</sup>) chosen for its proximity to the core and to only load the end of a primary beam.
- To the rear of the core adjacent to the WC's (2 x 10m<sup>2</sup>) chosen as a result of the smaller primary beam spans.

The location of file storage loads are shown on the loading plans.

### **CLADDING LOADS**

The cladding loads are provided on the loading plans.

## WIND LOADS

Wind loads have been calculated in accordance with BS EN 1991-1-4:2005 (Actions on Structures-General Actions-Wind Actions) and are considered in conjunction with permanent, superimposed dead and variable loads on the structure in accordance with the requirements of Eurocode 2 (Design of Concrete Structures) or Eurocode 3 (Design of Steel Structures) as relevant.

LOCATION	MANCHESTER
Wind Speed Velocity	$V_{b,map} = 21.7$ m/s
Distance to shore	$L_{shore} = 150$ km
Altitude above sea	$A_{alt} = 100.00$ m (AOD)
Fundamental Wind Speed Velocity	$V_{b,0} = 23.9$ m/s

TABLE 2.1 — WIND LOADING PARAMETERS

## HORIZONTAL LOADS

Any structure anticipated to be adjacent to vehicular movements is not intended to be specifically checked for vehicular impact loading. Sacrificial barriers are assumed to be provided. Any elements not protected will need to be designed as critical elements.

Pedestrian balustrades will be designed in accordance with public assembly requirements where required in accordance with the National Annex to BS EN 1991-1:2002 Table NA.8. The design lateral loads for handrails and impact barriers are given below:

REF	CAT	SUB-CAT	DESCRIPTION	UDL (kN/m)
B1	C33	vi	Stair and communal areas (no overcrowding)	0.74
B2	C13	vii	Balconies/Roof edges (no overcrowding)	0.74
B3	C5	ix	Footways adjacent to sunken areas (overcrowding)	1.5

TABLE 2.2 — PARAPET LOADING

## SNOW LOADS

The design snow loads at roof level have been calculated in accordance with BS EN 1991-1-3:2003 and are shown in table 7.4.

LOCATION	COVENTRY
Basic snow load	$s_k = 0.50 \text{ kN/m}^2$
Site altitude	$A_{alt} = 100 \text{ m (AOD)}$
Site snow load	$s_k = 0.50 \text{ kN/m}^2$
Shape coefficient	$\mu_1 = 0.80$

TABLE 2.3 – SNOW LOADING PARAMETERS

Where snow drift loads are considered significant to the design of the superstructure and associated cladding, these should be calculated in accordance with BS EN 1991-1-3:2003

## NOTIONAL HORIZONTAL LOADS

Notional horizontal loads are to be calculated in accordance with the following:

- BS EN 1996-1-2:2005 – Code of Practice for Use of Masonry;
- BS EN 1993-1-1:2005 – Structural Use of Steelwork in Buildings;
- BS EN 1992-1-1:2004 – Structural Use of Concrete.

## LOADS ARISING DURING EXECUTION

The Contractor was to develop the construction methodology and make due-allowance for temporary construction loads that may exceed the loading allowances.

## 2.3 **FIXINGS INTO PRIMARY STRUCTURE**

All fixings to the structure should be approved for the fixing substrate.

All fixings are to be installed in line with the manufacturers guidance.

When making fixings to structural elements, the fixed element should not exceed the design load of the installed structure, illustrated within the loading plans.

If questionable, a structural engineer and or building control must be consulted prior to installation of any elements.

# 3 **ACOUSTIC NOISE & VIBRATION**

# 3.1 ACOUSTIC NOISE & VIBRATION

## FLOORS

The floor construction is considered commensurate with achieving the airborne sound insulation performance requirements for between office floors. The floors will achieve  $D_{nT,w} 48$  if fitted to Cat A standard (in conjunction with the ceiling). The reference reverberation time  $T_0$  is 0.8s.

Impact sound would be expected to be controlled in general by finishes installed as part of the Cat A and/or Cat B fit-out. Therefore the tenant should specify soft floor finishes or resilient layers beneath hard floor finishes in the office floors to mitigate impact noise transfer. Impact sound insulation between office floors shall be  $\leq 60 \text{dB}_{LnT,w}$ .

## WALLS

Separating walls between tenancies will be a dry lined partition specified to achieve an acoustic performance of  $D_{nT,w} 48$ . The performance of these walls must not be compromised by the tenant via fixings or penetrations.

## NOISE EMISSION TO ADJACENT AREAS

The tenant shall be responsible for limiting noise within their demise to avoid disturbance to adjacent occupants. The tenant shall design and install any measures in their fit-out to ensure they achieve this. Any amplified music systems shall be fitted with a noise limiting device which shall be set on the completion of the fit-out to ensure that there is no disturbance to any adjacent tenancy. The noise limiter settings shall be maintained thereafter, unless alterations are approved by the Landlord. Any loudspeakers shall be resiliently connected to the structure.

Tenant noise intrusion on adjacent tenants spaces must be limited to  $55 \text{dB}_{LA1}$ .

The tenant is required to discuss and agree with the Landlord any noisy construction or fit-out activity so that this can be timed to avoid disruption to any other neighbouring Landlord and/or tenant areas

## VIBRATION

The design shall ensure that the maximum peak acceleration in the building structure of  $0.01 \text{m/s}^2$  based on the  $W_b$  weighting curve as defined in clause 3.3 of

BS 6472-1:20082 when the building services operate simultaneously at design duty load conditions.

## EXTERNAL NOISE

Noise from plant equipment needs to be limited to minimise disturbance to existing (and new) noise sensitive premises in the vicinity of the development, and new noise sensitive premises within the development.

The cumulative free field building services noise emission limits for all plant associated with the development are  $54 \text{dB}_{LA,rTr3}$  day time,  $42 \text{dB}_{LA,rTr3}$  night time.

The following cumulative plant noise emissions limits shall apply:

- Noise from rooftop plant shall be limited to  $60 \text{dB}_{LA,rTr3}$  at 1m from the perimeter of the building at roof level.
- Noise from rooftop plant shall be limited to  $48 \text{dB}_{LA,rTr3}$  on balconies and rooftop terraces.
- Noise emissions from louvres shall be limited to  $48 \text{dB}_{LA,rTr3}$  at the nearest public circulation point.

## INTERNAL NOISE

Internal noise within office areas including services and noise ingress from outside has been designed to achieve NR 38. Any new plant shall not increase the noise level in adjacent tenancies.

The demise walls separating the lift lobby and office area have been constructed to achieve a minimum Rw 45 DB with a double door of Rw 30 dB. Tenants may wish to consider having a further lobby within the office demise if greater acoustic separation is required.

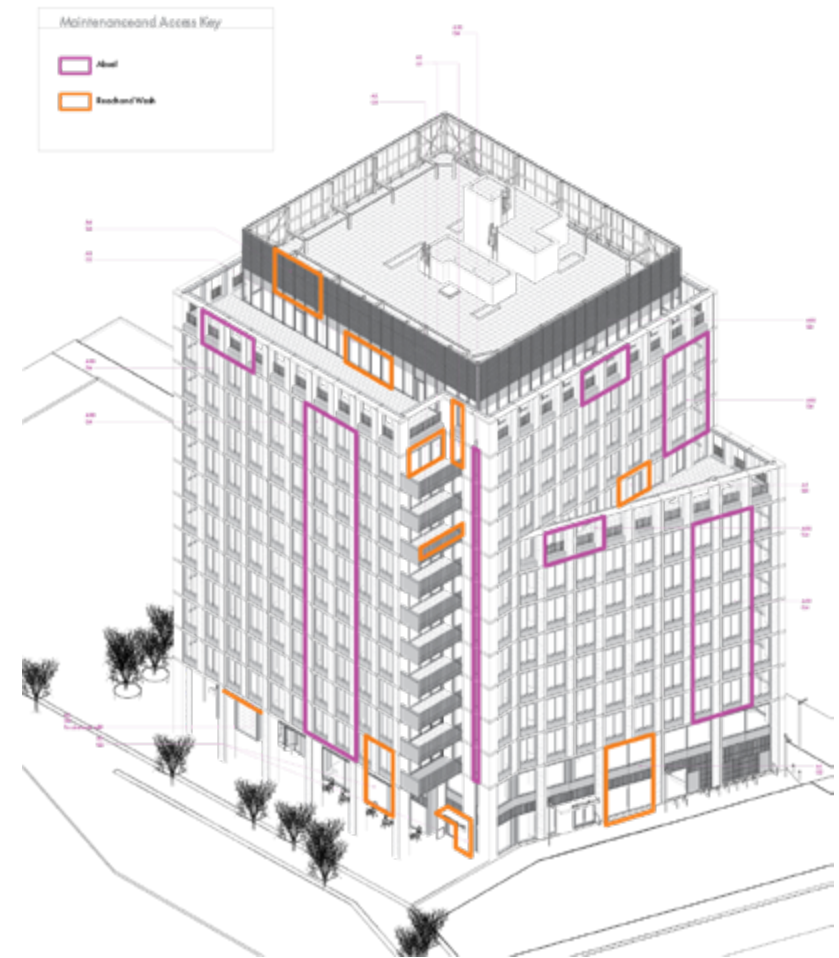
For further information refer to the **Acoustics Employer's Requirements** produced by Arup.

# 4 ACCESS FOR MAINTENANCE & WASTE MANAGEMENT



# 4.1 ACCESS REQUIREMENTS

Access for window cleaning is required on levels 8 & 12 where rope access will be utilised from the terraces to reach the floors below. For this reason the terrace perimeter needs to be kept clear to allow safe access to the abseiling eyebolt fixings. Periodic testing of the eyebolts will also be required, for further information refer to the O&M manual.



MAINTENANCE ACCESS DRAWING

## 4.2 **WASTE MANAGEMENT**

The Landlord will be responsible for providing a cleaner's service to the common parts within the building, including the reception, WCs and showers, and the core areas on each floor. The Landlord will also manage the external cleaning regime for the car park and building frontage. Tenants will be responsible for providing a cleaning service to their demised areas.

Refuse bins will be provided by the Landlord in the secure, dedicated bin store located at ground floor, to the rear of the building. Tenants will be responsible for emptying their own refuse into the bins, and the Landlord will provide a regular waste and recycling collection service, as part of the overall building service charge. Tenants will be required to ensure that their refuse is properly emptied into the bins, and that any spillage is cleaned up immediately, to keep the area clean and tidy. No waste is to be stored outside the building or on the external footpath, under any circumstances.

# 5

# MECHANICAL & ELECTRICAL SYSTEMS

# 5.1 INTRODUCTION & OVERVIEW

## GENERAL

This section of the handbook provides a brief description of the various Building Services systems within the office building.

## AIR-CONDITIONING AND VENTILATION

The office floors are air-conditioned by way of a 4-pipe fan-coil system. The system provides heating and cooling throughout the seasons. It also provides filtered ventilation air to all office areas from roof-mounted airhandling plant.

## ELECTRICAL DISTRIBUTION

Electrical power is distributed to all floors with distribution boards for tenants' power supplies located in two locations per floor.

## LIGHTING

Tenant areas are artificially lit by arrays of recessed ceiling-mounted luminaires fitted with LED light sources. Emergency lighting is also provided to illuminate escape routes in the event of a power failure.

## FIRE SAFETY

The building is equipped with an automatic fire alarm system and an automatic sprinkler system. There is a fire-fighting lift in the central core together with a smoke ventilated Fireman's lobby and staircase.

## ACCESS CONTROL

Entrance doors to the office suites and the main entrance into the building from outside are fitted with access control equipment. Access into the building, and then into the office suites, by authorised staff, is via cardcontrolled devices at each entry point.

Similarly, access into the Basement car park is via card controlled devices.

## DATA CONNECTIVITY

Data connectivity to each floor is provided by a tubular containment system accepting blown optical fibre media. There are two dedicated containment tubes per floor. These are terminated close to the electrical distribution boards on each floor. Data connectivity to Wired Score Platinum Standard is provided.

## CCTV

The Landlord operates a local CCTV system to monitor some of the common internal areas of the building. The CCTV also monitors the pedestrian walkways that are external to the building. The CCTV system does not extend into the tenanted areas.

## VERTICAL TRANSPORTATION

Access to all floors above the Ground Floor is provided by six passenger lifts. One of the lifts is also configured as a fire-fighting lift. One of the other passenger lifts may be fitted with protective drapes and used to transport goods to the upper floors. The lifts are controlled by a destination control system whereby travellers key in their chosen destination upon arrival in the main Ground Floor Reception.

## BUILDING MANAGEMENT SYSTEM

The mechanical services within the building are controlled by a Building Management system (BMS). This system, amongst other things, controls the temperature of the various zones in the office suites. User adjustable features are included.

## ENERGY METERING

Tenants' electricity consumption for both lighting and small power is metered at each distribution board; there being two such boards serving each office floor.

In addition to electricity metering, there are heat meters connected to the Low Pressure Hot Water and Chilled Water branch connections on each tenanted floor. The meters allow the Landlord to measure and charge for the energy used by each tenant.

## ELECTRIC VEHICLE CHARGING

The Basement car park has been fitted with two electric vehicle charging points. The electrical energy consumed will be charged to the recipient by way of the Landlord's metering agreement.

## 5.2 PARAMETERS

### GENERAL

This section of the handbook describes the parameters used when designing the building services systems.

The parameters are based on the guidance offered by the 2019 Edition of the British Council of Office Guide to Specifications. All parameters described under the subsequent headings are based on the office floor plates being occupied on an open plan basis unless stated otherwise.

### VENTILATION RATES

The ventilation rate to all office floors is based on a Workplace Density of one person per 8 m<sup>2</sup> of nett internal area. The ventilation rate to satisfy this density becomes 1.65 litres/second per m<sup>2</sup> of nett floor area when applying BCO guidelines. Ventilation air is distributed evenly throughout floors fitted out to Category A standards.

### VENTILATION CONTROL ZONES

The ventilation system on each floor has been subdivided into four zones. Each zone is equipped with an air control valve which regulates the rate of

ventilation to that zone. The control valves are often referred to as Variable Air Volume control boxes or VAV boxes. Regulation is controlled by a carbon dioxide sensor in each zone. In this way, the ventilation system, as a whole, adapts to the levels of occupancy in the building at any point of time. The tenant may alter, adapt, or introduce more air control valves to suit a particular space planning arrangement. The concentration of carbon dioxide is (at the design stage) anticipated to range from 400 part per million (unoccupied) to 1,100 part per million (densely occupied).

Floor plans indicating the ventilation zones are based on the Category A floors. It is anticipated that zones on shell and core floors will be similar unless a future tenant introduces a greater number of VAV boxes.



FIGURE 5.1 – VENTILATION CONTROL ZONES & VAV ARRANGMENT

## COOLING LOAD ALLOWANCES

### TEMPERATURE CONTROL ZONES

Office floors fitted out to Category A standards have been sub-divided into temperature control zones. Zoning is based on BCO guidance where perimeter zones extend to a depth of approximately 4.5 metres. The width of a perimeter zone is no more than 6.0 metres. Internal zones are larger in area but no more than 70 square metres in floor area.

The temperature control zones are indicated on the following floor plans where a fitting out has taken place to a Category A standards;

- Levels 02, 03 and 04
- Levels 10, 11 and 12

There is a fan-coil unit to control air temperature in each zone.

Temperature control zones for shell and core floors are not defined as these are to be determined by the tenant. The Landlord would encourage a tenant to follow the BCO Guidance, as a minimum requirement, when defining the temperature control zones.

The shell and core floors are;

- Level 01
- Levels 05, 06, 07, 08 and 09



FIGURE 5.2 – TEMPERATURE CONTROL ZONES (CATEGORY A)

## COOLING LOAD ANALYSIS

Cooling loads for each zone have been evaluated by computer software using standard CIBSE data to determine solar and transmission heat gains. Zoning for the shell and core floors follows the same zoning patterns as the Category A floors in order to establish central plant cooling loads.

## CASUAL GAINS

Casual gains, meaning the heat gains generated within each zone from occupancy, lighting and small power, are based on the following criteria:

(a) Occupancy

1 person per 8 m<sup>2</sup> of nett internal area using standard CIBSE data for metabolic gains.

(b) Lighting

An allowance of 6 Watts per m<sup>2</sup> of nett internal area is included for the heat gains from electric lighting.

(c) Small Power

An allowance of 20 Watts per m<sup>2</sup> of nett internal area is included for small power heat gains.



FIGURE 5.3 – SHELL & CORE FLOORS WITH SERVICES CONNECTIONS



A tenant wishing to occupy their tenancy with Workplace Densities greater than 1 person per 8 m<sup>2</sup> and/or consume small power with a dissipation rate greater than 20 W/m<sup>2</sup> should seek further guidance. The Landlord's Consulting Engineer will be happy to oblige.

## LOAD DIVERSITY

It is not anticipated that the whole of an office floor plate will be occupied to a Workplace Density of 1 per 8 m<sup>2</sup>. A diversity factor (or a utilisation factor) of 80% has been assumed at the design stage.

Over the area of a whole floorplate, the Effective Density becomes 1 person per 10 m<sup>2</sup>. Similarly, the casual gains from small power heat dissipation reduces to 16 W/m<sup>2</sup> over a whole floor. However, this reduction has only been factored into the sizing and selection of the building's water chillers.

## CENTRAL PLANT START AND STOP TIMES

The Landlord's heating, ventilating and air-conditioning plant will run on weekdays from 7.0 am to 7.0 pm. This time schedule is subject to amendment by the Landlord.

## INTERNAL TEMPERATURES

The air-conditioning system serving the office floors has been designed to control the air temperature at the temperature sensor within a band between 20°C and 24°C (i.e. 22°C ± 2°C).

The internal temperature for each control zone may be adjusted, either upwards or downwards, by amending the setpoint settings on the Building Management System (BMS). The BMS is under the control of the Landlord and such adjustments are to be made in consultation with the Landlord.

The building envelope is thermally-insulated to a high standard. It has also been constructed to achieve a high degree of airtightness. This will mean that internally generated heat will not readily escape through the walls and windows of a tenanted office area.

In view of this, it may be advisable to choose a higher than normal winter room air temperature to reduce the energy consumption attributable to cooling. This would be especially so where the density of occupation and the level of small power consumption for business machinery, (such as computers, printers, copiers, etc.) is very high. For example, choosing a temperature of 24°C will be more energy efficient than a temperature of 22°C in areas where internally generated heat gains exceed the heat loss through the structure and fabric of the building.

The choice of temperature is of course a matter for each tenant and how the office space is used. The foregoing example is given for information and guidance.

## LIGHTING LEVELS

Office lighting has been designed to achieve an average level of 500 lux on the working plane under open plan conditions.

The lighting system has been sub-divided into control zones that allow the users to dim the lighting levels to suit their particular preferences.

The perimeter zones also include dimming features to account for daylight entering through the external glazing.

For modern offices with computer screens, it is suggested that the lighting levels are dimmed to an average level of between 300 and 400 lux.

As stated previously, the lighting system has been arranged for open plan conditions. It may be necessary to alter and/or enhance the lighting to account for partitions.



FIGURE 5.4 – LIGHTING CONTROL ZONES

# 5.3 LANDLORD MECHANICAL SERVICES

## GENERAL

This section is intended to provide a general overview of the Landlord’s mechanical services that are installed within the building. These systems are owned and operated by the Landlord but are described here to provide a tenant with some background knowledge as to how their tenancy is serviced.

## HEATING

### HEAT SOURCE

The building is heated by way of a connection to the Coventry District Energy Company’s district heating scheme. There is a district heating sub-station in the Basement which provides a source of heat to the entirety of the building.

The heat supplied by CDEC is a low carbon energy source.

### HEAT DISTRIBUTION

The heat arriving into each tenancy is in the form of piped hot water (known as Low Pressure Hot Water). This is circulated to the perimeter fan-coil units in those tenancies fitted out to Category A standards.

On shell and core floors, the tenant is to install piped hot water to the heat emitters of their choice.

Heat emitters are most likely to be 4-pipe fan-coil units of a similar specification to those installed on the Category A floors. The heating pipework, whether on a Category A floor or a shell and core, is to be arranged with a reverse return configuration.

### HEAT METERING

There are heat meters on each floor to allow the Landlord to charge for the heat consumed by the tenant.

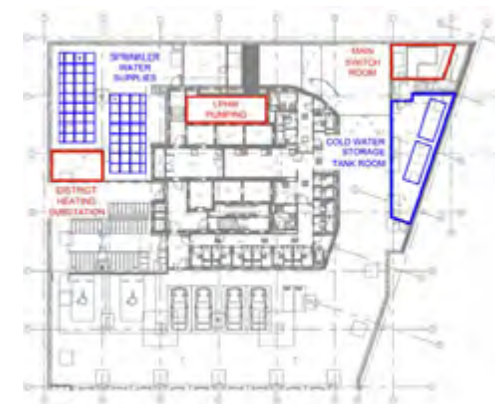


FIGURE 5.5 – BASEMENT SERVICES



FIGURE 5.6 – GROUND FLOOR SERVICES

## COOLING

### WATER CHILLERS

The building is cooled by a pair of roof-mounted air-cooled water chillers.

### CHILLED WATER

Chilled water is distributed to all tenanted areas by way of pumping plant at roof level.

On the Category A floors, the chilled water is piped to all of the fan-coil units. On shell and core floors, the chilled water terminates with isolating valves in the ceiling void close to the main risers.

Chilled water pipework, whether on a Category A floor or a shell and core floor, is to be arranged with a reverse return configuration.

Tenants are to note that the chilled water is designed to arrive at each tenant floor at a temperature of 7° Celsius. This will mean that all pipework to be installed on the shell and core floors is to be thermally-insulated and vapour-sealed. Fan-coil units will need to be fitted with condensate drains.

### CHILLED WATER METERING

There are “heat” meters on each floor to allow the Landlord to charge for the cooling energy consumed by the tenant.



FIGURE 5.7 – AIR HANDLING UNITS AND CHILLERS AT ROOF LEVEL

## VENTILATION

### AIR-HANDLING PLANT

There are two air-handling units installed on the roof of the building. These units provide filtered and heated ventilation air to the tenanted areas of the building.

### DISTRIBUTION

The ventilation air is ducted to each floor by way of two rising ducts; one on the Eastern Wing of the central core and one on the Western Wing of the core. There are ducted connections from the two riser positions supplying air to a total of four Variable Air Volume (VAV) controllers. The VAV controllers regulate the ventilation airflow in response to the concentration of carbon dioxide gas in the air within that zone of the office floor plate.

There is a range of ductwork on the downstream side of the VAV controllers that connects to each fan-coil unit on each of the Category A floors.

On shell and core floors, the incoming tenant will be obliged to install the ductwork distribution on the downstream side of the VAV controllers to suit the preferred space planning arrangements.

Tenants are at liberty to install a greater number of VAV controllers to suit their particular fitting-out plans. For example, a large Conference Room with a high, but infrequent, occupancy may benefit from having a VAV controller dedicated to that room.

### EXHAUST AIR

Exhaust air is removed from the office floor plates through open grilles in the ceiling. Thereafter, air is drawn from the ceiling void into an air shaft that rises to roof level.

## SPRINKLERS

### GENERAL

The building is sprinkler-protected to an Ordinary Hazard III classification.

### WATER SUPPLIERS

The water supplies for the sprinkler installation are located in a dedicated room in the Basement. This room contains two water storage tanks, two fire pumps, and the main valves that distribute fire-fighting water to the office floor plates.

### SPRINKLER HEADS

Tenanted areas fitted out to Category A standards are equipped with both ceiling-mounted sprinkler heads and sprinkler heads protecting the ceiling void above.

Shell and core floors are fitted with basic arrays of high level sprinklers to satisfy BS EN 12845:2015. These may need to be amended as necessary to suit a tenant's space planning requirements.

## HOT AND COLD WATER

### GENERAL

Hot and cold water is supplied to the common areas of the building under the Landlord's control. Common areas in this context refer to the toilet accommodation on each floor and the Basement shower accommodation amongst others.

## WATER SUPPLIES

There is a pair of cold water storage tanks in the Basement. Water is pumped to all draw-off points by way of a pressure booster located in the Tank Room.

Hot water is generated by a pair of fast recovery storage calorifiers in the Basement.

Primary heat for the calorifiers is sourced from the district heating sub-station.

## TENANTS' WATER SUPPLIES

Tenants wishing to install kitchenettes and other similar facilities requiring a water supply are to connect to the building's boosted cold water service. Connections to the building's hot water service are not admissible.

Valved and demountable sections of cold water pipework are installed above the ceilings in the core areas of each floor. The tenant is to install a tee into the demountable sections when connecting into the Landlord's cold water system.

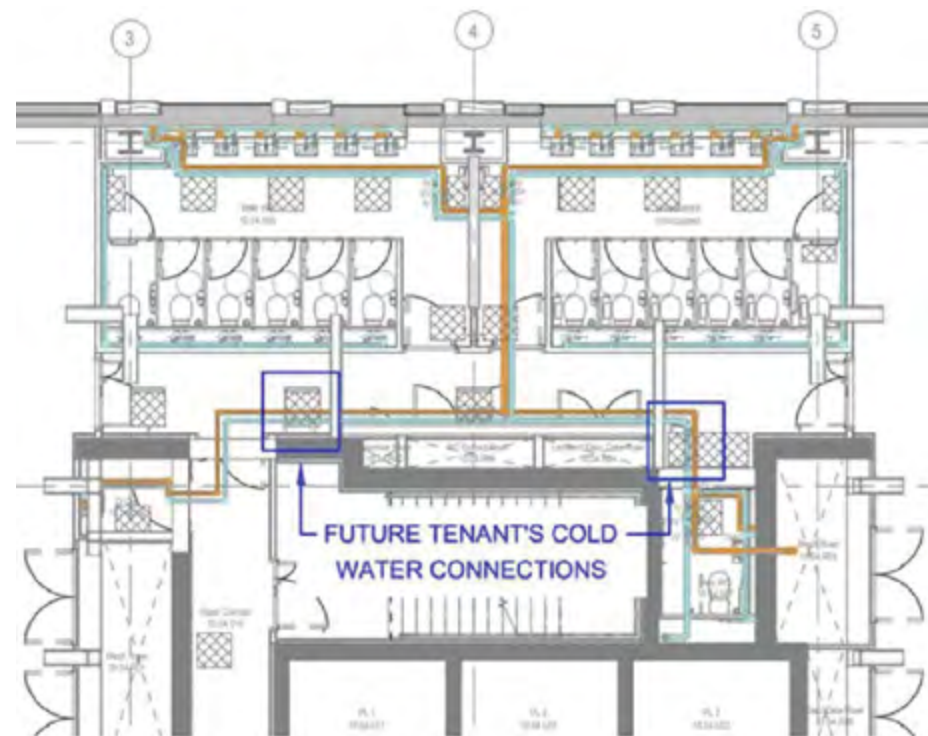


FIGURE 5.8 – LOCATION OF DEMOUNTABLE SECTIONS IN COLD WATER PIPEWORK FOR TENANT SERVICES CONNECTIONS

## MISCELLANEOUS VENTILATION SYSTEMS

### GENERAL

The following systems are dedicated to the common areas of the building. Their descriptions are given for information; they are unlikely to feature in any tenants' fitting-out work associated with the office accommodation.

### TOILET VENTILATION

The Male, Female, and Disabled WC toilet accommodation on each office floor is equipped with extract ventilation. The extract fans are located at roof level.

Replacement air is drawn from the office ceiling voids by way of attenuated duct connections. These are fire-dampened where the duct penetrates the dividing wall between office and toilet.

### BASEMENT SHOWER FACILITIES

This area is ventilated by way of a balanced system of supply and extract ventilation.

The air-handling plant associated with this system is located at Mezzanine level and is inclusive of a heat recovery device.

### BASEMENT CAR PARK

The Basement car park is equipped with a fan-assisted extract system. The system has two principal functions:

- To control the level of pollution arising from vehicle exhausts.
- To evacuate heat and smoke in the event of an outbreak of fire.

Replacement air arrives into the Basement from the entrance at Ground Floor level and flows along the ramp leading to the Basement parking area.

The extract fans, of which there are two, are located in a dedicated plantroom at Mezzanine level.

### BASEMENT GENERAL VENTILATION

There is a separate extract ventilation system serving the ancillary areas of the Basement, such as the switch room, the heating pump room, district heating sub-station, and the sprinkler water supply/pump room.

Normally, this system provides general ventilation to these rooms.

In the event of a fire in any particular room, a series of automatically-controlled fire dampers open to the "fire" room and close to all other rooms, and extract heat and

smoke to outside from the "fire" room. The fans associated with this system are located in the Mezzanine Fan Room which also houses the car park extract fans.

### FIRE-FIGHTING LOBBY VENTILATION

The fire-fighting lobbies on each floor associated with the fire-fighting staircase and lift are equipped with an extract ventilation system. This system is designed to provide visibility to the fire service in their efforts to extinguish a fire on an office floor.

Replacement air for the extract system is introduced through an Automatic Opening Vent located at the head (i.e. at roof level) of the fire-fighting staircase.

There is an automatic damper at each lobby landing level. These dampers are connected to a rising builder's duct equipped with a pair of axial fans at roof level. The dampers are normally closed. In the event of a fire, the lobby damper on the "fire" floor opens and the extract fans located at the head of the ventilation shaft start.

### SPRINKLER ROOM FRESH AIR VENTILATION

The Sprinkler Room in the Basement is equipped with a diesel engine-driven fire pump.



Aspiration and general ventilation air for the diesel engine is provided by a dedicated supply air system.

#### **RECEPTION AND ENTRANCE FOYER**

The Reception and Entrance Foyer are ventilated and air-conditioned by a dedicated constant volume air-handling system. The plant is located in a plantroom at Mezzanine level.

#### **BIN STORE**

This is equipped with an extract ventilation system.

#### **RECEPTION OFFICE**

This is ventilated and air-conditioned by way of a 4-pipe fan coil unit mounted in the ceiling void.

# 5.4 LANDLORD ELECTRICAL SERVICES

## GENERAL

This section is intended to provide a general overview of the Landlord’s electrical services that are installed within the building. These systems are owned and operated by the Landlord but are described here to provide a tenant with some background knowledge as to how their tenancy is serviced.

Two Distribution Boards have been provided per half floor, one for power and one for lighting. These are solely for use by the individual tenancies.

## POWER DISTRIBUTION

### INCOMING ELECTRICAL SUPPLY AND LOW VOLTAGE DISTRIBUTION

A dedicated substation is located on the Ground Floor of the building to provide power throughout the building. The substation in turn feeds the main switchboard located within the basement. Power is then distributed throughout the building via submain cables, installed on containment, and rising busbars.

Distribution Boards have been provided throughout the building in order to provide power to the landlord services (lighting, door access, mechanical equipment etc.).



BUSBAR TAP-OFF



LIGHTING & POWER DISTRIBUTION BOARDS

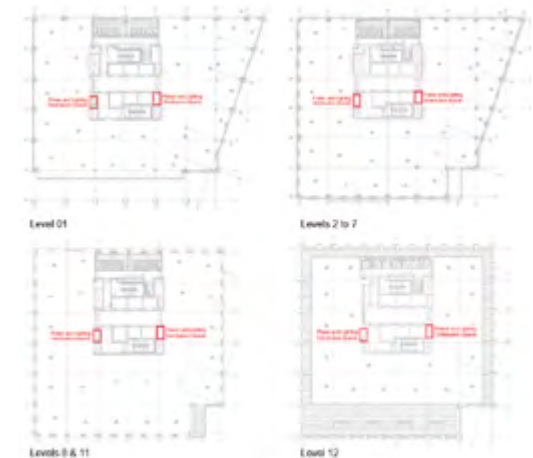


FIGURE 5.9 – LOCATION OF POWER & LIGHTING DISTRIBUTION BOARDS

## GENERATOR

A diesel generator package is installed on the roof to provide power to essential services in the event of a power failure. The generator feeds a dedicated MCCB board also located on the roof. Essential power is then distributed to automatic transfer switches located adjacent to each piece of essential equipment. An 8-hour capacity service fuel tank has been installed.

- The following are the loads the generator supports:
- The firefighting lift.
- The two basement car park extract fans.
- The car park impulse fan.
- The smoke ventilation fans serving the fire fighting lobbies.
- The basement smoke clearance ventilation fans.
- The sprinkler diesel engine pump ventilation and aspiration air fans.
- The Firefighting stairs lighting.
- The three uninterruptable power supply units.

## UNINTERRUPTABLE POWER SUPPLIES

To ensure that continuous power is supplied to the Landlord data infrastructure, UPSs have been installed in each of the three landlord data cabinets (two on the mezzanine and one on Level 8). The UPSs have a duration of 25 minutes.

## POWER QUALITY

To provide the correct voltage and to correct any power factor issues on site, a harmonic mitigation and correction of displacement power factor units have been installed on the wall in the main LV Switchboard room.

The unit is able to operate to provide harmonic compensation and reactive power compensation to improve the displacement power factor (either leading or lagging) and load balancing to improve the mains current as seen by the utility supply. The unit is to correct the line-line or line-neutral connected loads.

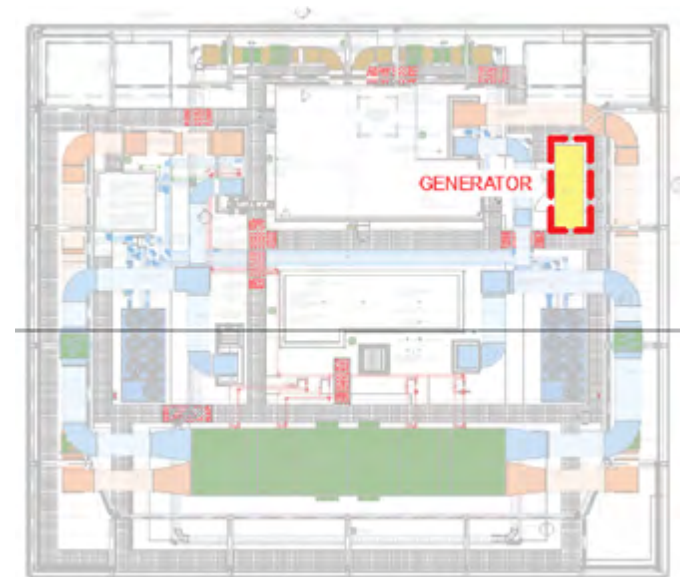


FIGURE 5.10 – LOCATION OF GENERATOR AT ROOF LEVEL

## SURGE PROTECTION

In addition to the Units described above, Surge Protection Devices (SPDs) have been installed to provide protection from overvoltage (such as lightning strikes)

The SPDs as provided are located in/adjacent to the following:

- Type 1+2 connected to the Main LV panel.
- Type 1+2+3 on all MCCB boards and DBs serving external equipment.
- Type 1+2+3 on all DBs serving telecommunication rooms.
- Type 2+3 on all circuits supplying the landlord's comms room.
- All incoming utility supplies, including all telecommunications cabling.

## EARTHING

The electrical installation has been installed complete with all required earthing arrangements. In addition provision has been made, in the form of a dedicated earth bar within each tenant's riser, for a clean earth.

This is intended to be used solely for any IT equipment installed within the tenancy.

## LIGHTING

### GENERAL

Lighting has been provided throughout the landlord areas including:

- Main entrance
- Lift lobbies
- Corridors and stairs
- Toilet/shower facilities
- Plantroom and risers
- Carpark
- External

All light fittings have an LED source to provide an energy efficient scheme.

## LIGHTING CONTROL

To further enhance the efficiency of the system lighting control has been installed throughout. The user interface is a cloud-based software package which can be accessed via PC. Any future modifications to the layouts, or changes to the lighting requirements, can be achieved by using this interface. The DALI based system operates in the following way:

### (a) Main entrance

Lighting is to be controlled via a DALI based control system with a scene setting plate located at the reception desk.

### (b) Lift lobbies

The Ground Floor lift lobby is to be controlled from the main entrance scene setting plate.

Lift lobbies on other levels are to be controlled by local PIRs with simple ON/OFF, presence, and daylight functions. The PIRs are to be equipped with a run-on timer, the timers are to be set initially to 10 minutes.

### (c) Corridors and stairs

Corridors are generally to be controlled by local PIRs with simple ON/OFF, presence, and daylight functions. The PIRs are to be equipped with a run-on timer, the timers are to be set initially to 10 minutes.

Fittings located within these areas which are equipped with smart controls are to be activated as groups by their internal sensors.

Stair fittings are to be programmed to operate in such a way that upon entry into the stairwell, the fittings on that level, one level above, and one level below are turned on.

### (d) Toilet/shower facilities

Toilet and shower areas are to be controlled by local PIRs with simple ON/OFF, presence, and daylight functions. The PIRs are to be equipped with a run-on timer, the timers are to be set initially to 10 minutes.

### (e) Plantroom and risers

Plantrooms and risers are controlled by local PIRs with simple ON/OFF, presence, and daylight functions. The PIRs are to be equipped with a run-on timer, the timers are to be set initially to 10 minutes.

### (f) Carpark

Carpark fittings are controlled by local PIRs with simple ON/OFF, presence, and daylight functions. The PIRs are to be equipped with a run-on timer, the timers are to be set initially to 10 minutes.

### (g) External Lighting

The external lighting is to be controlled with a DALI based system with a photocell and timer. The external lighting is also to be capable of scene setting and timed programmed scenes.

### (h) Category A Fitout

A fully addressable DALI lighting has been installed. The office lighting system is equipped with user operated dimmable controls in zones with a floor area as indicated opposite to allow an illuminance range of between 300 and 500lux.

Lighting within each zone is controlled by suitable sensors which enable zones to be individually, and automatically, dimmed whenever external daylight can contribute to the interior lighting levels.

(i) Shell and core floors

A lighting control enclosure and data outlet has been installed within the rider for future installation and connection of control modules. 4.3.3

### EMERGENCY LIGHTING

The general lighting is supplemented with emergency fittings and illuminated exit signs to illuminate the exit routes during any local or general power outage. The emergency lighting system is monitored and tested by the central DALI control.



TYPICAL LIGHTING CONTROL MODULE

## FIRE SAFETY

### FIRE ALARM SYSTEM

A Fire Detection and Alarm System has been installed throughout the building. The system comprises a number of panels, repeater panels, employs both conventional and aspiration detection, manual call points, interfaced devices, beacons, and voice evacuation alarms.

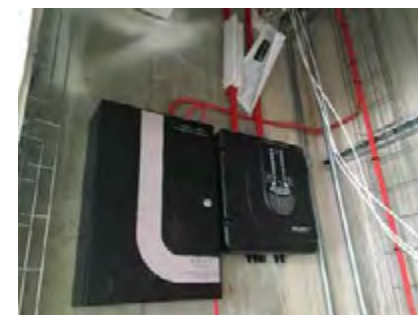
The entire system, including within the tenanted areas, is linked together to enable phased evacuation of the building.

The core areas, including interfaces to door access etc., are connected onto one of the two landlord's Fire Alarm Panels.

Each tenanted floor is equipped with one dedicated loop from one of the two tenant Fire Alarm Panels.

Detection within the shell and core floors is achieved by using an aspirating smoke detection system. Several loop devices have been installed onto these levels which will enable any future devices to be installed without interrupting other loops on the system.

Within the Category A levels the void detection is in the form of an aspirating system and detection below ceiling level is by conventional optical detectors. These areas have also been equipped with beacons and voice evacuation alarms.



ASPIRATING SMOKE DETECTION SYSTEM

### REFUGE ALARM

A refuge alarm system has been installed to enable less able-bodied persons to communicate with fire officers when the building is being evacuated.

Main panels are located at the reception desk and within the dedicated Fire response room, outstations are located within each escape stair on each level.

## ACCESS CONTROL

### FOB/CARD ACCESS

A number of fob/card readers have been provided throughout the building to allow authorised persons entry. The access system has been installed to the main entrances into the building, on all doors leading from the core area into the office space (5 per floor), and for the security barriers in the reception area.

### AUDIO/VIDEO INTERCOMS

In addition to the fob/card entry there is an Audio/Video intercom system which provides two-way audio and one way video between the three entry points and the two base stations (receivers) in the following locations:

Wall mounted vandal resistant external audio/video intercoms:

- Basement
- Ground floor external pass door (adjacent to main entrance)
- Ground floor cyclist door to car park

Desk mounted Internal Intercom Handset / Monitors:

- Reception desk
- Post Room / Management Office

### DATA CONNECTIVITY

The building data infrastructure has been installed to achieve Wired Score Platinum status. It has two dedicated 'meet-me' chambers located externally which are linked to the dedicated intake rooms via several ducts. The potential to have two incoming lines provides resilience to the telecommunications system.

### TELECOMMUNICATION INTAKE ROOMS

The building has two telecommunication intake rooms; one located within the basement and one on the Ground Floor. These are equipped with dedicated Distribution Boards and cooling.



FIGURE 5.11 – LOCATION OF TELECOMMUNICATION INTAKE ROOMS

## DATA CONNECTIVITY

The building data infrastructure has been installed to achieve Wired Score Platinum status. It has two dedicated 'meet-me' chambers located externally which are linked to the dedicated intake rooms via several ducts. The potential to have two incoming lines provides resilience to the telecommunications system.

## TELECOMMUNICATION INTAKE ROOMS

The building has two telecommunication intake rooms; one located within the basement and one on the Ground Floor. These are equipped with dedicated Distribution Boards and cooling.

## FIBRE TUBE/DUCT

A fibre ducting system has been installed to connect the landlord comms rooms and tenant risers to the intake rooms as follows:

- 12-way duct from Basement intake to Mezzanine comms room
- 12-way duct from Ground floor intake to Mezzanine comms room
- 12-way duct from Basement intake to ground floor intake

- 12-way duct from Mezzanine comms room to landlord satellite cabinet
- Basement intake to each and every tenant floor via the LHS riser utilising 2 x 12-way ducts
- Ground floor intake position to each and every tenant floor via the RHS riser utilising 2 x -way duct

The tenant ducting installed within the riser will be equipped with the following on each level:

- An internal tube distribution box
- Break out of two tubes from the duct
- The remaining tubes will be connected with clear straight connectors

Please note that the installation of the fibres within the tubes will be future IS/BT works.

## LANDLORD COMMS ROOM

The landlord comms equipment is located on the Mezzanine level with an additional satellite cabinet located on the 8th Floor. The data installation serves systems such as CCTV, Door Access, Data outlets (within landlord areas), and Wi-Fi provision.



FIBRE OPTIC BREAKOUT BOX  
INSTALLED WITHIN TENANT'S  
RISER

## WI-FI

Wi-Fi access points have been installed to provide coverage within the Ground Floor reception area and within the lift lobbies from level 1-12.



## CCTV

The CCTV system has been installed to provide general surveillance and monitoring of the building at Ground Floor and within landlord areas.

Command and control of all the cameras is via the PC workstation located in the management office. The rack mounted NVR is set to record at a rate of 16 images per camera per second archiving for thirty days at 2Mp 1080p resolution.

The system design consists of the following cameras:

- 153 x HIK 4 MP IR Fixed Turret Network Camera
- 12 x HIK 8MP IR varifocal Bullet Cameras

## ENERGY METERING

A sitewide metering system has been installed to facilitate the recording and viewing of all electric, water & heat meters.

The system comprises a Universal Gateway installed within the Basement Electrical Switchroom and Modbus wiring to meters throughout the building.

The gateway is fitted with a GPRS telephone module to enable connection to the Autometers remote servers

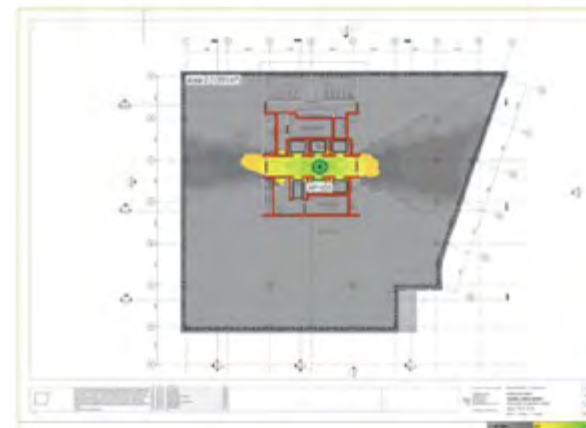
where information is recorded & can be viewed on-line. A data connection to the clients IT network will also be provided as back-up.

The electric meters record the Voltage, Current, kWh, kVA<sub>r</sub>, frequency, maximum demand and harmonics for all meters.

Two electrical meters are installed within each tenancy; one for power and one for lighting. These are located in the bottom enclosure of the Distribution Boards and can be read manually if required.



Ground Floor Wi-Fi Coverage



Typical Floor Wi-Fi Coverage

FIGURE 5.12 – PLANS ILLUSTRATING WI-FI COVERAGE

## ELECTRIC VEHICLE CHARGING

The EV charging system in the basement consists of two 7kW wall mounted charging units with automatic load management. A dedicated distribution board has been provided with 12 TP&N ways and a 100A supply within a separate room in the basement.

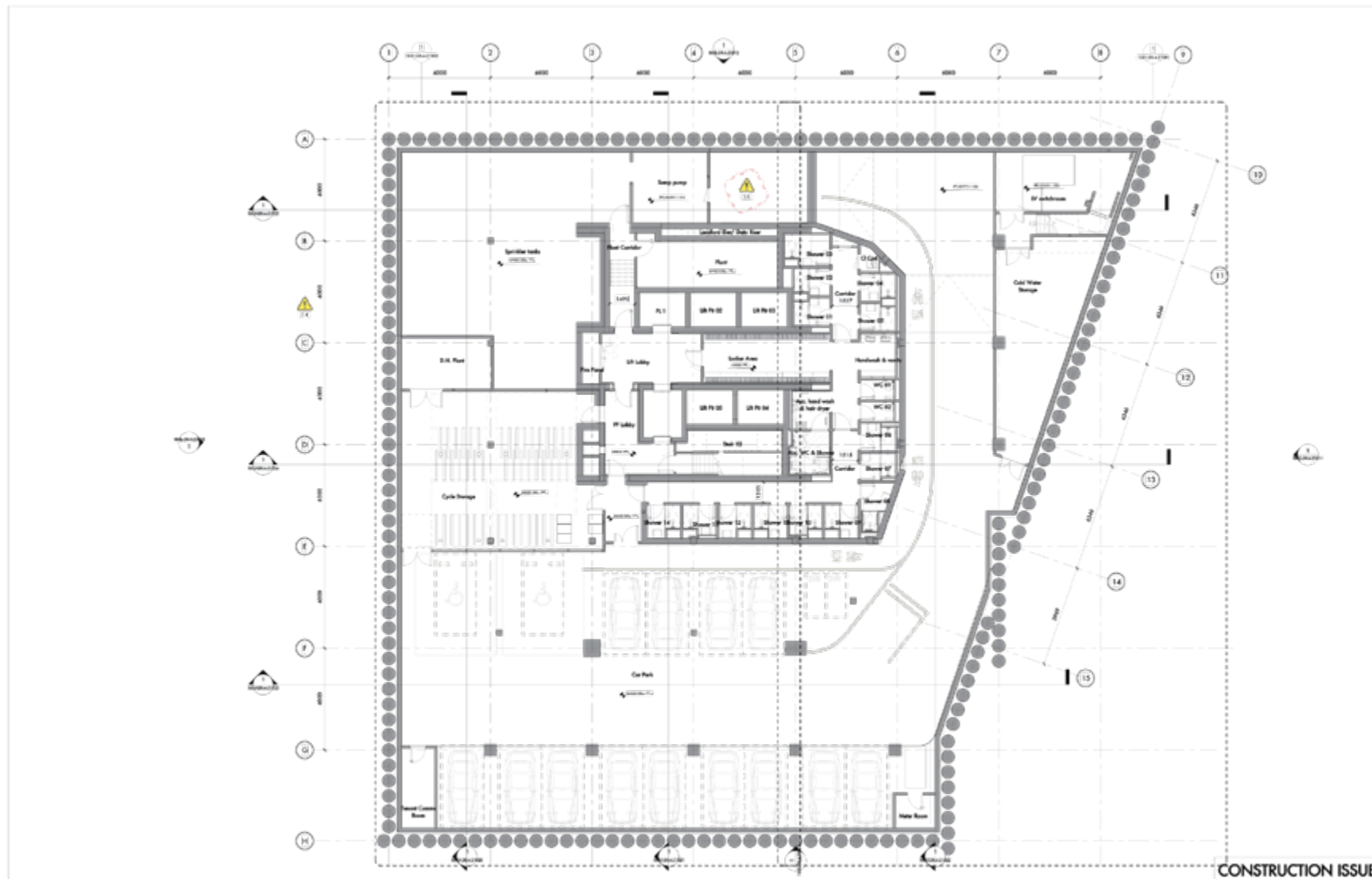
The load management system allows for future expansion using the existing 100A supply. In addition, containment routes have already been installed to serve 7 additional spaces.



FIGURE 5.13 – EV CHARGING LOCATIONS & FUTURE PROVISION

# 6 APPENDICES

# ARCHITECTURAL **DRAWINGS**



CONSTRUCTION ISSUE



NO.	DATE	DESCRIPTION
01	20/01/20	Issue for information
02	20/01/20	Issue for Stage 1
03	20/01/20	Issue for Stage 2
04	20/01/20	Issue for Stage 3
05	20/01/20	Issue for Stage 4
06	20/01/20	Issue for Stage 5
07	20/01/20	Issue for Stage 6
08	20/01/20	Issue for Stage 7
09	20/01/20	Issue for Stage 8
10	20/01/20	Issue for Stage 9
11	20/01/20	Issue for Stage 10
12	20/01/20	Issue for Stage 11
13	20/01/20	Issue for Stage 12
14	20/01/20	Issue for Stage 13
15	20/01/20	Issue for Stage 14
16	20/01/20	Issue for Stage 15
17	20/01/20	Issue for Stage 16
18	20/01/20	Issue for Stage 17
19	20/01/20	Issue for Stage 18
20	20/01/20	Issue for Stage 19
21	20/01/20	Issue for Stage 20

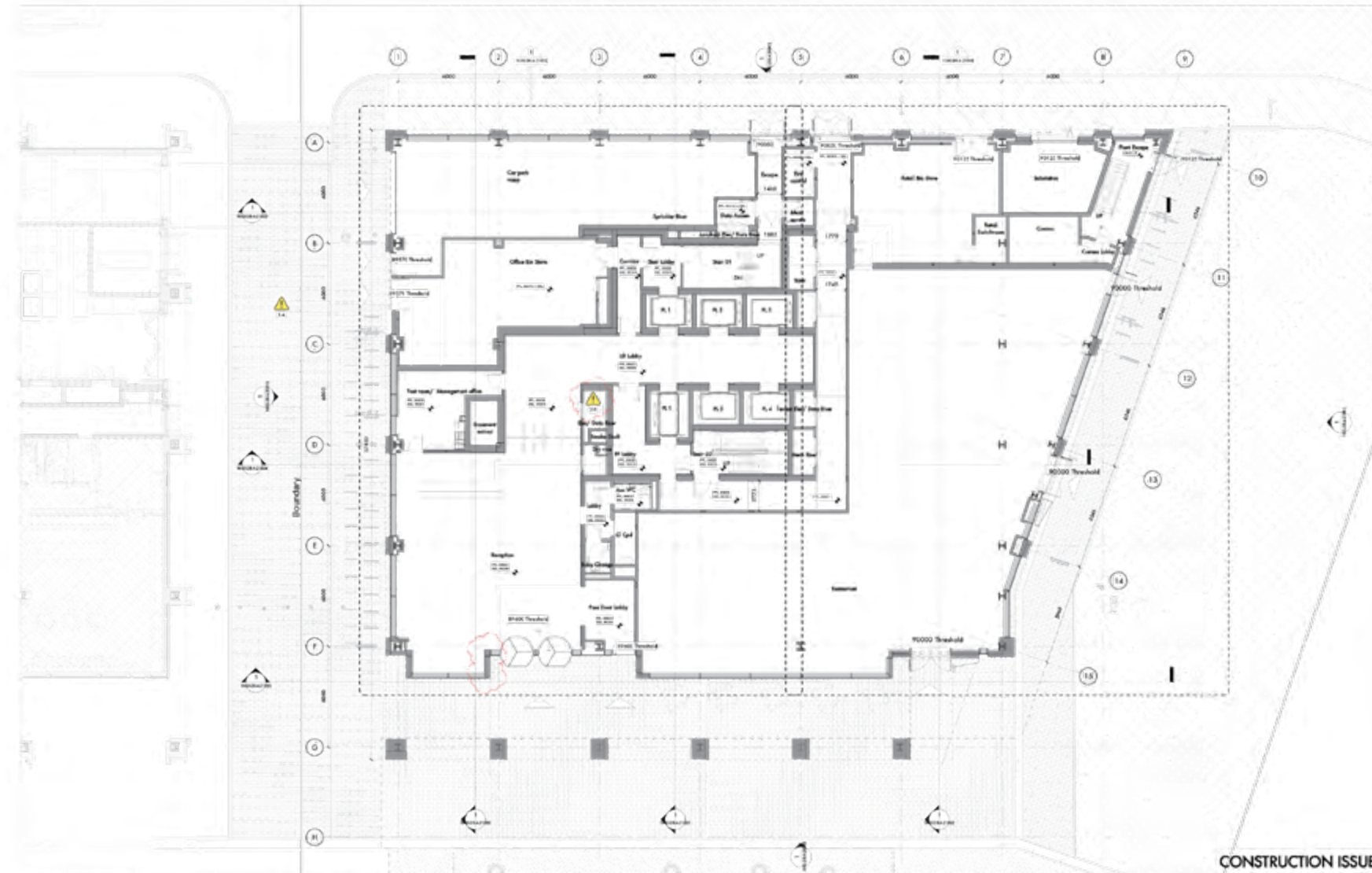
NO.	DATE	DESCRIPTION
01	20/01/20	Issue for information
02	20/01/20	Issue for Stage 1
03	20/01/20	Issue for Stage 2
04	20/01/20	Issue for Stage 3
05	20/01/20	Issue for Stage 4
06	20/01/20	Issue for Stage 5
07	20/01/20	Issue for Stage 6
08	20/01/20	Issue for Stage 7
09	20/01/20	Issue for Stage 8
10	20/01/20	Issue for Stage 9
11	20/01/20	Issue for Stage 10
12	20/01/20	Issue for Stage 11
13	20/01/20	Issue for Stage 12
14	20/01/20	Issue for Stage 13
15	20/01/20	Issue for Stage 14
16	20/01/20	Issue for Stage 15
17	20/01/20	Issue for Stage 16
18	20/01/20	Issue for Stage 17
19	20/01/20	Issue for Stage 18
20	20/01/20	Issue for Stage 19
21	20/01/20	Issue for Stage 20

Construction Design and Management Regulations 2015  
 See to 2015 CDMP Management Plan

**Allen and Morrison GP**  
 81 Southbank Street  
 London SE1 8JH  
 Telephone: 020 7461 4000  
 Facsimile: 020 7461 4001  
 Email: [enquiries@allenandmorrison.com](mailto:enquiries@allenandmorrison.com)  
 AML 008 Rev 758\_01

**PROJECT DIFFER 2 FRINGATE**  
 BASEMENT PLAN  
 GENERAL ARRANGEMENT  
 FCD5 AAM 10-B1-DB-A-20000  
 Issues No: 753\_06\_001  
 SCALE: 1:100 (A4) (1:200 (A3))

**A**  
 Dates  
**C2**  
 Revisions



CONSTRUCTION ISSUE

REV	DATE	DESCRIPTION
01	2023-08-01	Issue for construction
02	2023-08-01	Issue for construction
03	2023-08-01	Issue for construction
04	2023-08-01	Issue for construction
05	2023-08-01	Issue for construction
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16	2023-08-01	Issue for construction
17	2023-08-01	Issue for construction
18	2023-08-01	Issue for construction
19	2023-08-01	Issue for construction
20	2023-08-01	Issue for construction

NO.	DESCRIPTION
1	Change room
2	Change room
3	Change room
4	Change room
5	Change room
6	Change room
7	Change room
8	Change room
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11	Change room
12	Change room
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15	Change room
16	Change room
17	Change room
18	Change room
19	Change room
20	Change room

Construction Issue and Management Log Sheet 2023  
 Safety is a top priority. Please report any safety issues immediately.

Allen and Morrison LP  
 80 Southport Street  
 Sydney NSW 2000  
 Australia  
 Telephone +61 (0)2 9212 2000  
 www.allenandmorrison.com.au  
 Allen AM No 791.51

PROJECT OFFICE - 2 FRINGATE  
 GROUND FLOOR PLAN  
 GENERAL ARRANGEMENT  
 FCD: AAM 10-90 DB A-20000  
 Sydney NSW, Australia  
 Scale: 1:100 (A4) (1:100 A3)

A  
 Issue  
 C3  
 Revision



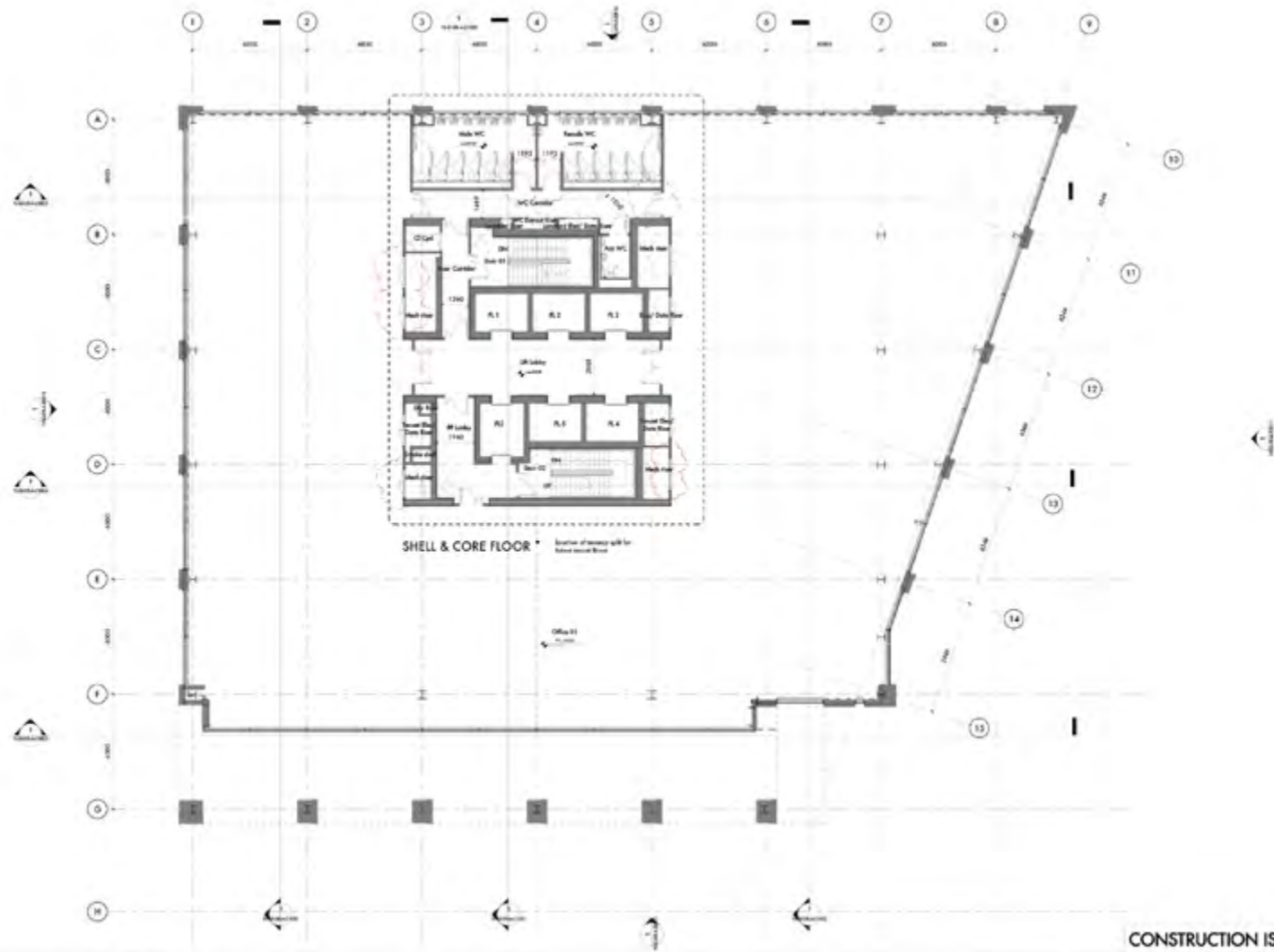
CONSTRUCTION ISSUE

NO.	DATE	DESCRIPTION	BY
01	17/10/20	For circulation	01
02	17/10/20	For construction	02
03	17/10/20	Issued for Building Control Review	03
04	23/10/20	Page 1 Draft Information	04
05	23/10/20	Page 2 Draft Information	05
06	23/10/20	Page 3 Addition	06
07	23/10/20	For circulation	07
08	23/10/20	For circulation	08
09	23/10/20	Construction Issue	09
10	23/10/20	Construction Issue	10

Construction Design and Management Regulations 2015  
 Refer to CDM 2015 Hazard Management Sheet

AKM and Marlowe UP  
 87 Dock Road Street  
 London, E1 3DU  
 Telephone: 020 7947 6968  
 Fax: 020 7947 6969  
 Email: info@akm-marlowe.com  
 A&M Job No: FM\_01

PROJECT DIVER 2 - FRIGATE  
 GROUND FLOOR MEZZANINE PLAN  
 GENERAL ARRANGEMENT  
 FCD: AAM-10-MO-DR-A-20000  
 Issues: 10 - FM\_010  
 Scale: 1:100 (A4) (1:200 (A3))  
 A  
 Dates  
 C2  
 Details



CONSTRUCTION ISSUE

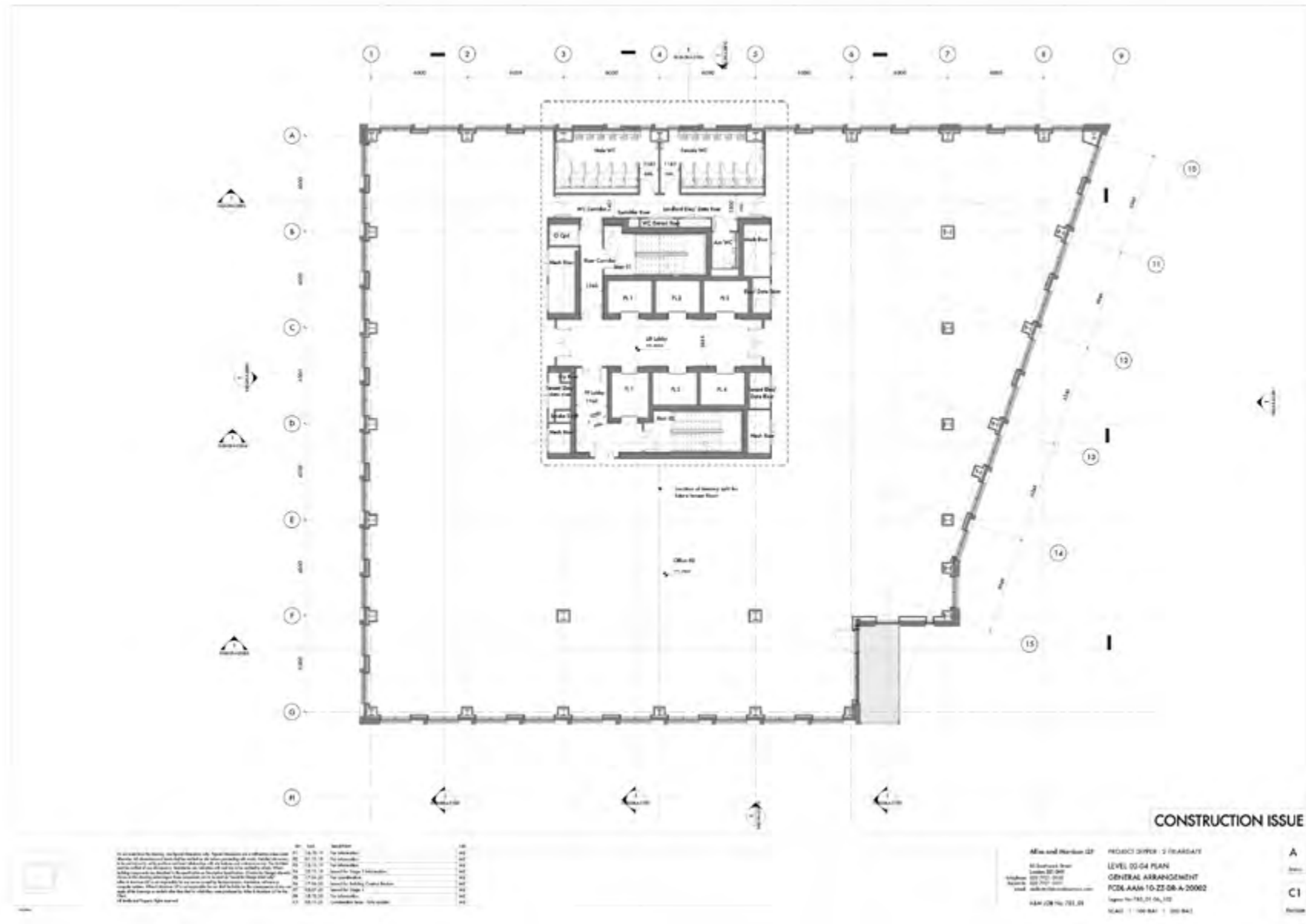
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50	15.11.18	Issue for information

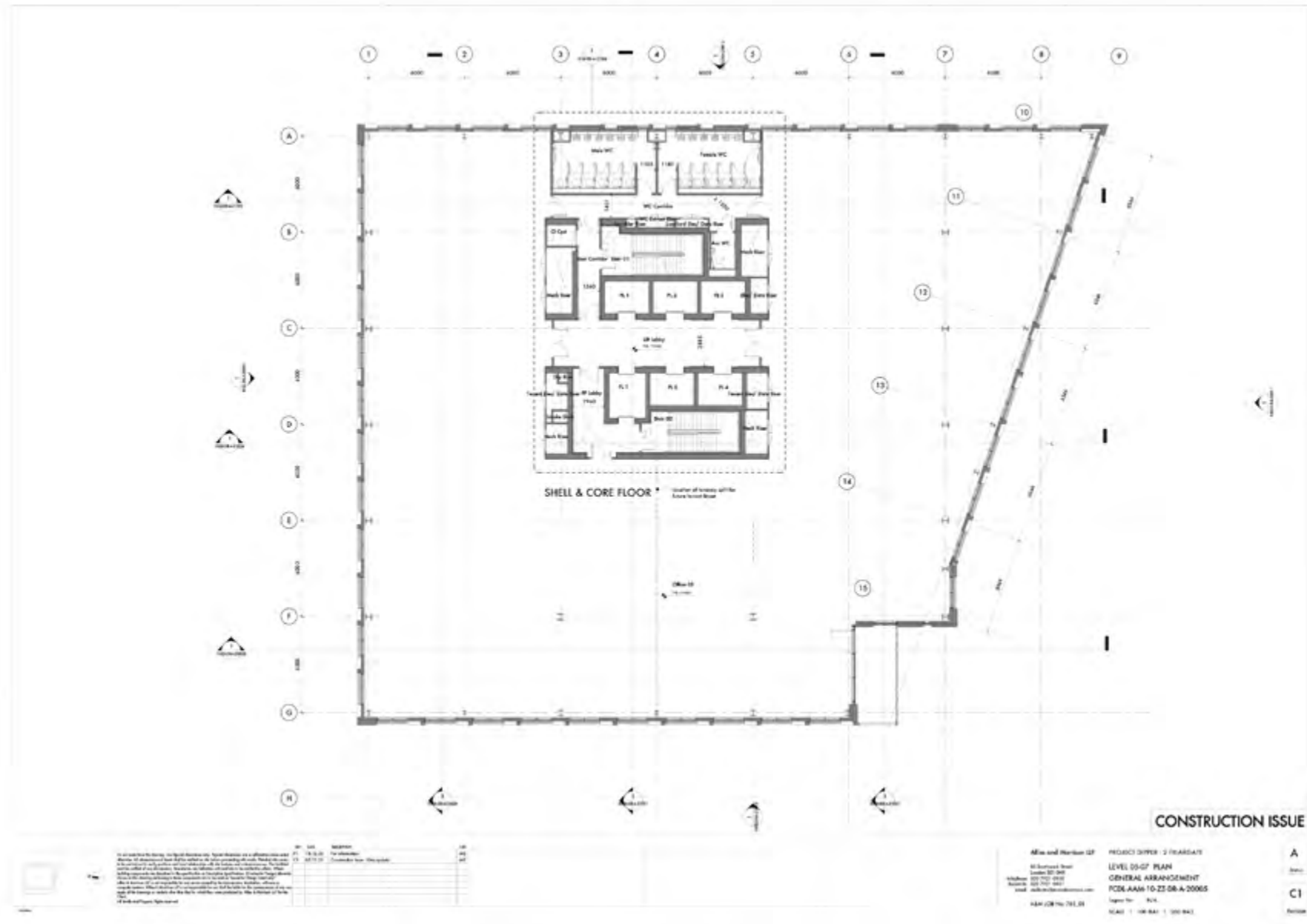
**Allen and Morrison GP**  
 81 Southbank Street  
 Sydney, NSW 2002  
 Australia  
 Phone: +61 2 9232 4000  
 Fax: +61 2 9232 4001  
 AMM JOB No: 752\_01

**PROJECT DRIVE - 2 FRASGATE**  
 FIRST FLOOR PLAN  
 GENERAL ARRANGEMENT  
 FCD5 AAM 10-01-DB-A-20001  
 Issues No: 752\_01\_04\_101  
 SCALE: 1:100 (A1) 1:200 (A3)

**A**  
 Issue  
**C1**  
 Section



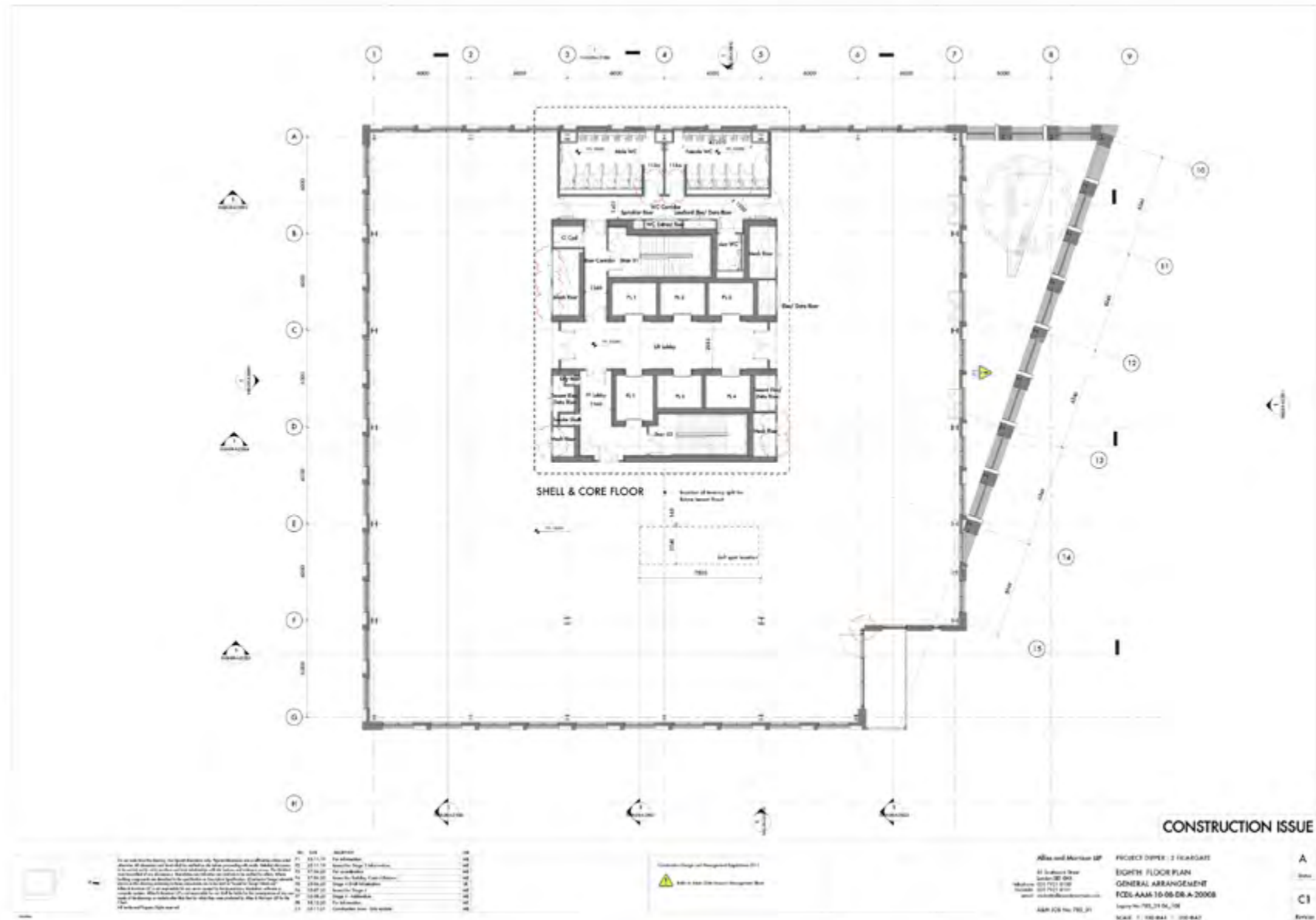


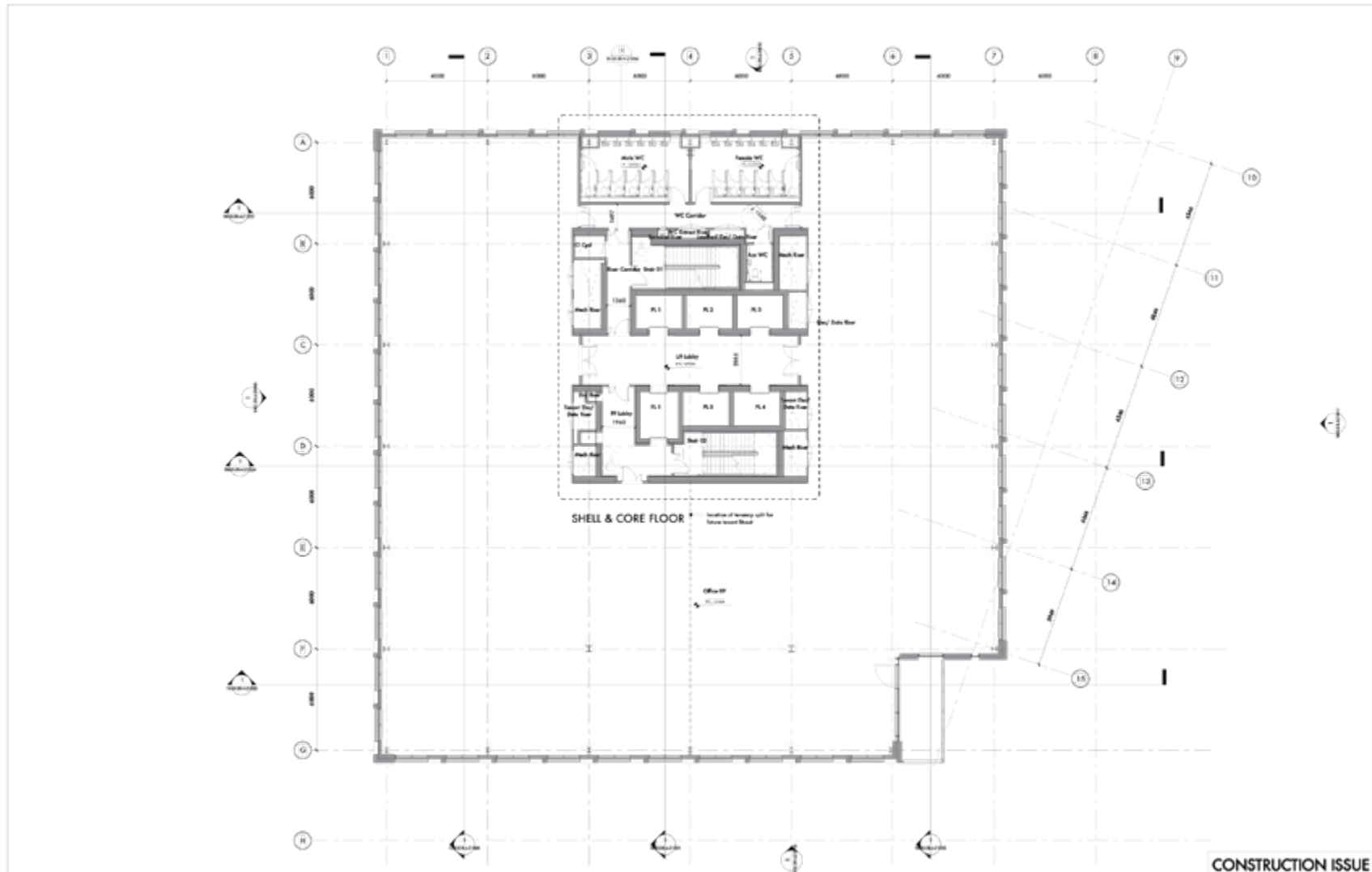


**CONSTRUCTION ISSUE**

NO.	DATE	DESCRIPTION	BY	CHECKED
01	15.10.20	For submission		
02	24.10.20	Consideration from Client/Architect		

<p><b>Miles and Harrison LLP</b>                  40 Bankwest Street                  London EC2A 4PU                  Tel: 020 7553 2200                  Fax: 020 7553 2201                  Email: info@mh.co.uk                  www.milesandharrison.co.uk</p>	<p>PROJECT DIVER: 2 YEARS/DAYS                  LEVEL 05-07 PLAN                  GENERAL ARRANGEMENT                  FCIB AAM-10-ZZ-DB-A-20065                  Register No: 624                  SCALE: 1:100 (A4) 1:200 (A3)</p>	<p><b>A</b>                  Date:  <b>C1</b>                  Revision:</p>
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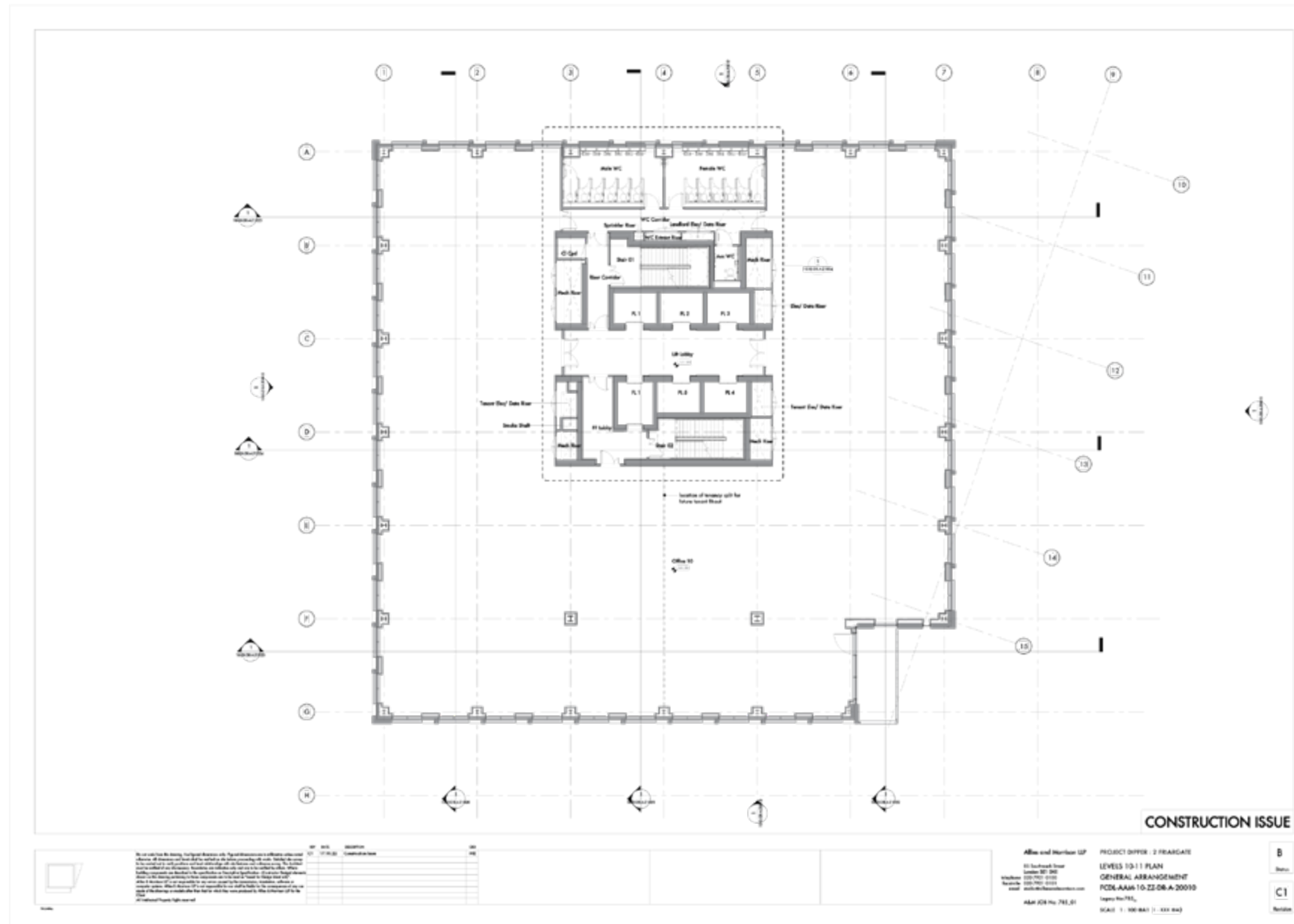




CONSTRUCTION ISSUE

	The user shall be responsible for ensuring that the information contained in this document is accurate and complete. The user shall be responsible for ensuring that the information contained in this document is accurate and complete. The user shall be responsible for ensuring that the information contained in this document is accurate and complete.	Date: 17/05/2024	Version: 1.0
	The user shall be responsible for ensuring that the information contained in this document is accurate and complete. The user shall be responsible for ensuring that the information contained in this document is accurate and complete. The user shall be responsible for ensuring that the information contained in this document is accurate and complete.	Date: 17/05/2024	Version: 1.0

<b>Alia and Waltham LLP</b> 11 Southbank Drive London SE10 2JG 020 7592 0100 020 7592 0101 info@aliamwaltham.com www.aliamwaltham.com	PROJECT OFFICE: 2 FERRISGATE NINTH FLOOR PLAN GENERAL ARRANGEMENT FCIL-AAA6-10-09-DE-A-2000P Leggett No.752, SCALE: 1:500 (A1) (1:XXX-843)	A Date: C1 Revision:
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CONSTRUCTION ISSUE

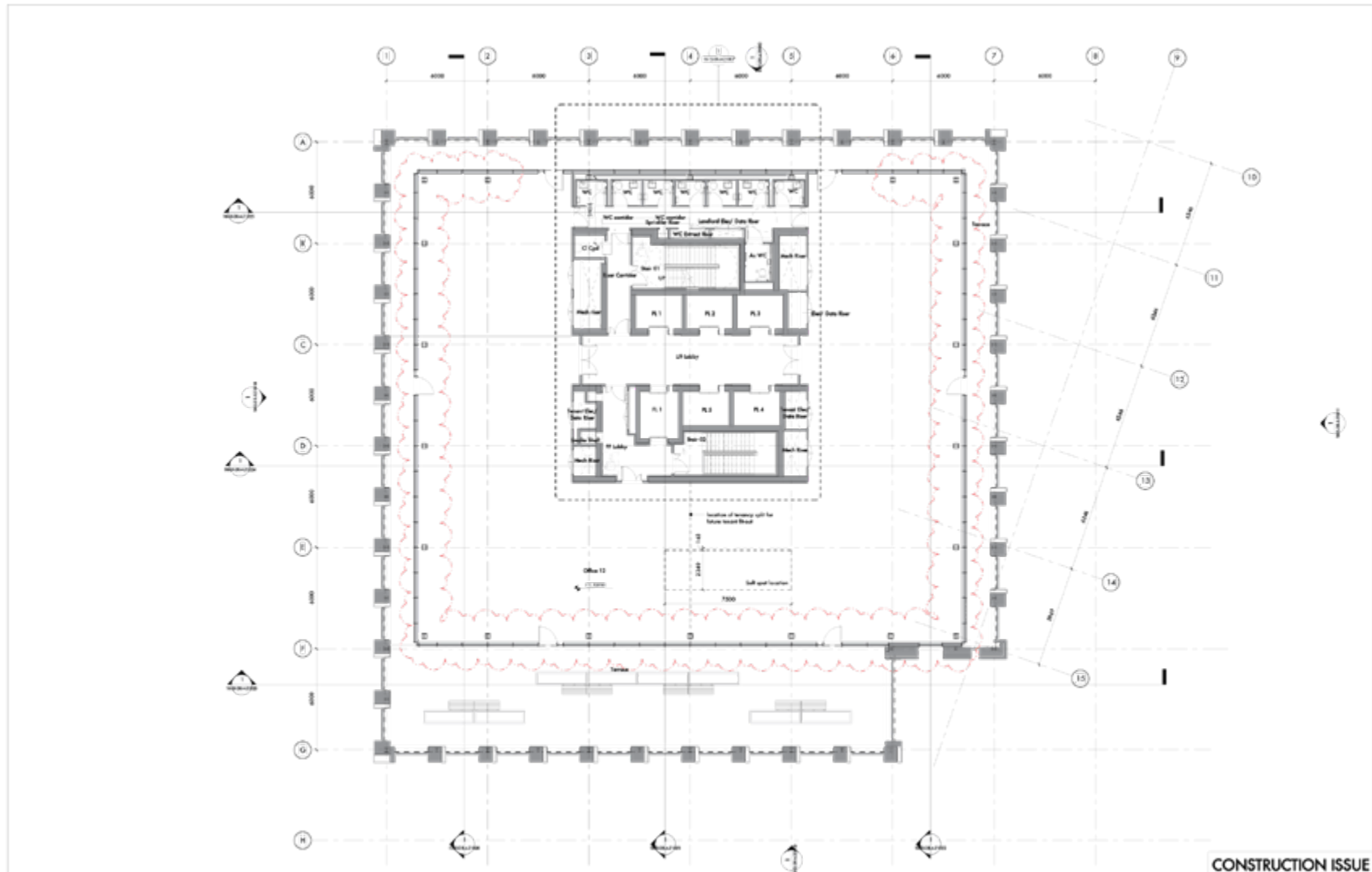
NO	REV	DATE	DESCRIPTION
01	01	17/10/20	Construction

We warrant that the design, construction and fitment of the building is in accordance with the Building Regulations and all other applicable laws and regulations. We warrant that the design, construction and fitment of the building is in accordance with the Building Regulations and all other applicable laws and regulations. We warrant that the design, construction and fitment of the building is in accordance with the Building Regulations and all other applicable laws and regulations.

**Atkins and Harbour LLP**  
 11 Southbank Street  
 London SE1 2NF  
 Telephone: 020 7493 2200  
 Fax: 020 7493 2222  
 Email: [enquiries@atkinsandharbour.com](mailto:enquiries@atkinsandharbour.com)  
 Atkin JCR No: 785, 01  
 Atkin JCR No: 785, 01

**PROJECT OFFICE: 2 FRINGATE**  
 LEVELS 10-11 PLAN  
 GENERAL ARRANGEMENT  
 FOLIO: AAM-10-ZZ-D&A-20010  
 Issues No: 785,  
 SCALE: 1:500 (A1) | 1:300 (A2)

**B**  
 Status  
**C1**  
 Revision



**CONSTRUCTION ISSUE**

NO	REV	DESCRIPTION	BY	CHK
01	01	Issue for Construction	AM	AM
02	01	Issue for Construction	AM	AM
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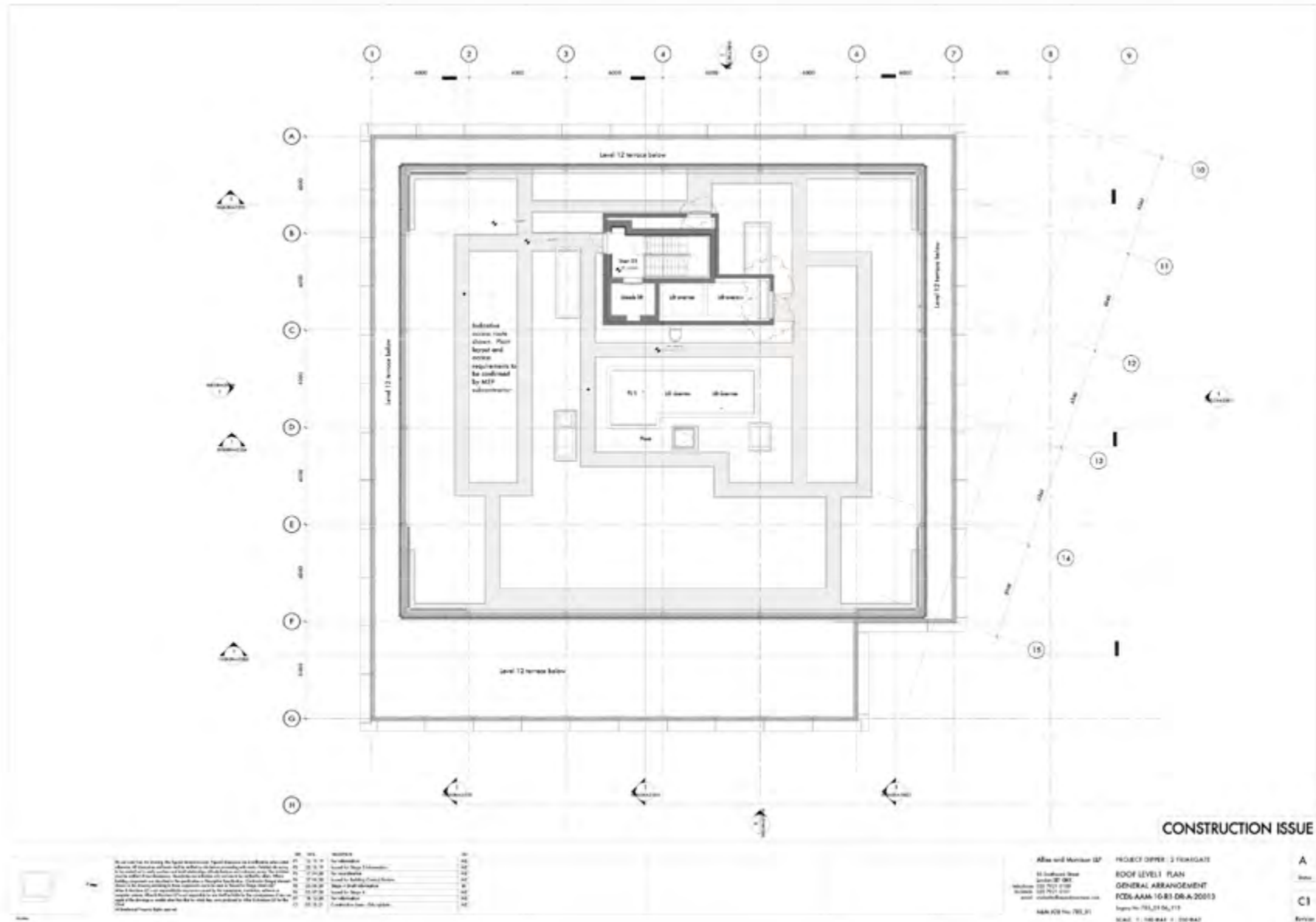
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**AMM and Warriner LLP**  
 11 Southpark Drive  
 Suite 200  
 Atlanta, GA 30328  
 Tel: 404.263.1000  
 Fax: 404.263.1001  
 www.ammwarriner.com  
 AIAA (2018) No. 793.01

**PROJECT OFFICE: 2 FERRISGATE**  
 TWELFTH FLOOR PLAN  
 GENERAL ARRANGEMENT  
 FCIL-AAA6 10-12-DB-A-20012  
 Issues No: 793\_01\_112  
 SCALE: 1 : 500 (A1) (1 : 200 (A4))

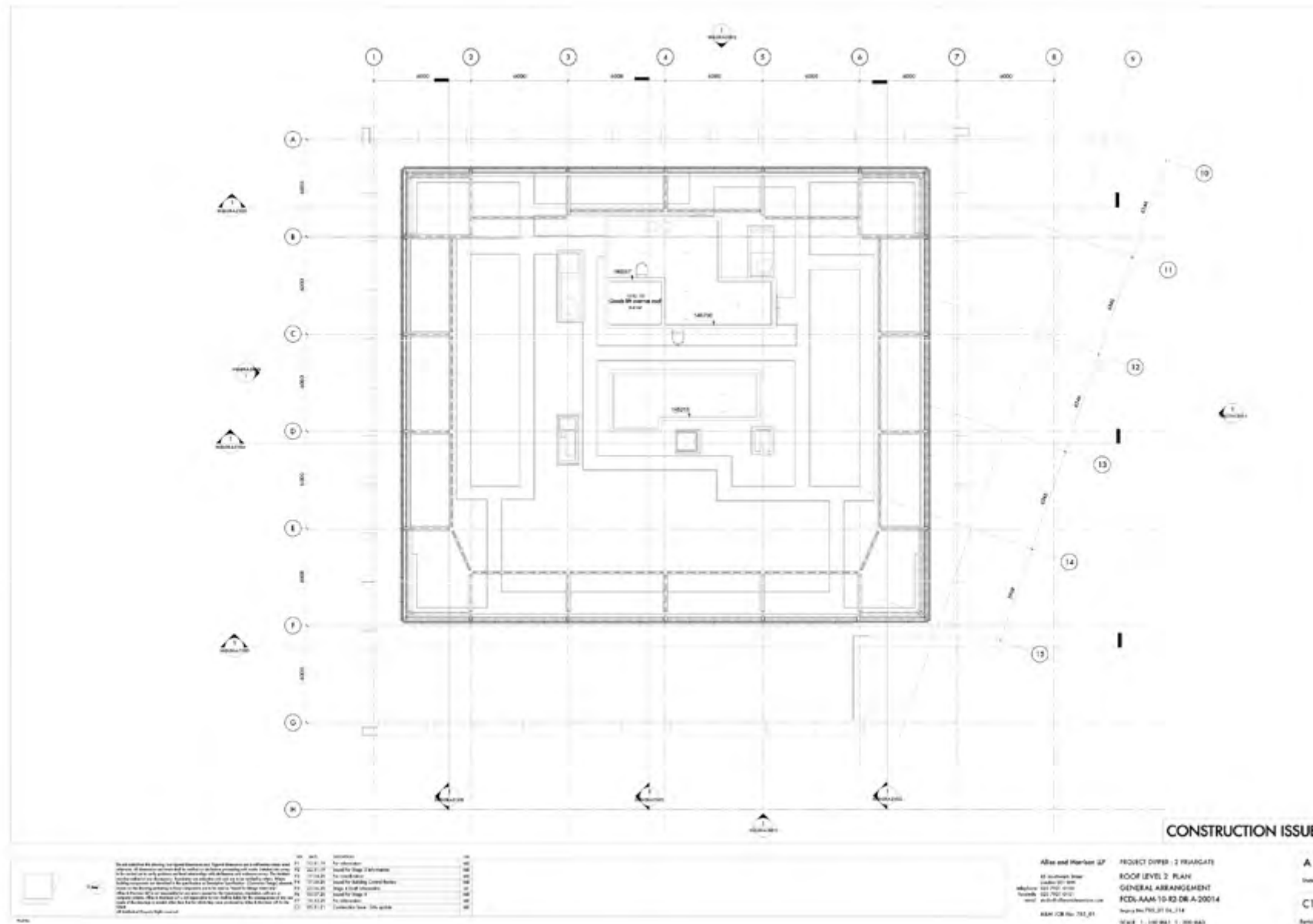
**A**  
 Date:  
**C2**  
 Number:



CONSTRUCTION ISSUE

NO.	REVISION	DATE	BY	CHECKED BY
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02	Issue for information	15/11/20	...	...
03	Issue for information	15/11/20	...	...
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18	Issue for information	15/11/20	...	...
19	Issue for information	15/11/20	...	...
20	Issue for information	15/11/20	...	...

<p>Alfa and Mott MacDonald</p> <p>11 Leake Street London SE1 1TA Tel: +44 (0)20 7493 4100 Fax: +44 (0)20 7493 4101 www.alfamott.com</p> <p>MARKER No: 701.01</p>	<p>PROJECT OFFICE: 2 FLEMINGATE</p> <p>ROOF LEVEL 1 PLAN GENERAL ARRANGEMENT FDS-AAA-10-81 DR-A-20013 Issue No: 701.01.04.113 SCALE: 1:100 (A4) 1:200 (A3)</p>	<p>A</p> <p>Issue</p> <p>C1</p> <p>Revision</p>
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**Notes**

1. The building shall comply with the relevant Building Regulations and all applicable codes of practice.
2. All dimensions are shown in millimetres unless otherwise stated.
3. The contractor shall verify all dimensions and levels before commencing work.
4. The contractor shall ensure that all work is completed in accordance with the relevant Building Regulations and all applicable codes of practice.
5. The contractor shall ensure that all work is completed in accordance with the relevant Building Regulations and all applicable codes of practice.
6. The contractor shall ensure that all work is completed in accordance with the relevant Building Regulations and all applicable codes of practice.
7. The contractor shall ensure that all work is completed in accordance with the relevant Building Regulations and all applicable codes of practice.
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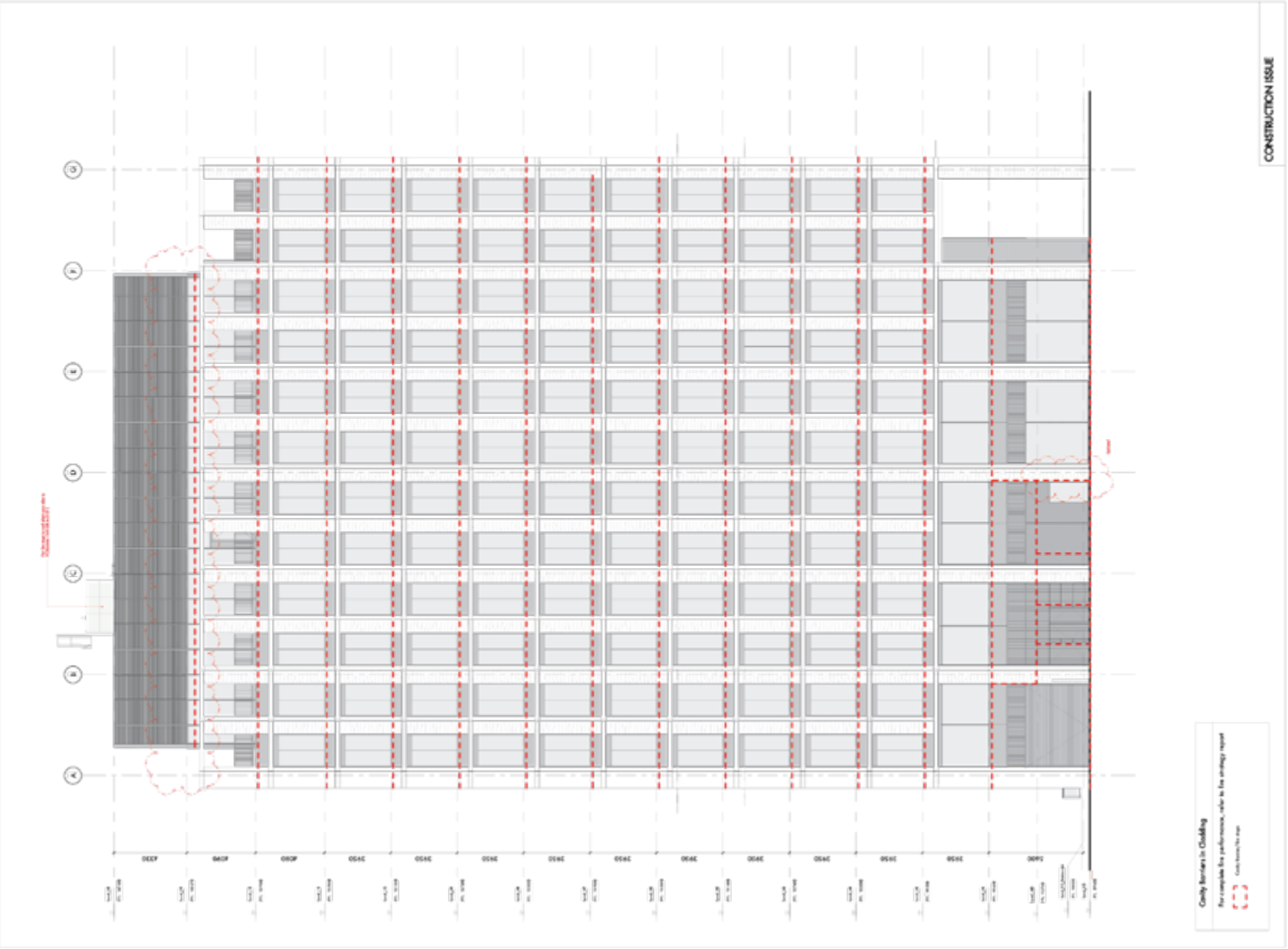
**CONSTRUCTION ISSUE**

**Allen and Partners GP**  
 45 Southgate Street  
 London EC1R 3HT  
 Telephone: 020 7552 4000  
 Email: info@allenpartners.com  
 BMAP CIB No. 781/01

**PROJECT DIVER - 2 FRIGATE**  
**ROOF LEVEL 2 PLAN**  
**GENERAL ARRANGEMENT**  
**FCDL-AAM-10-R2-DW-A-20014**  
 Issue No: 781/01 PL\_114  
 Scale: 1:100 (A1) 1:200 (A2)

**A**  
 Date:  
**C1**  
 Section:





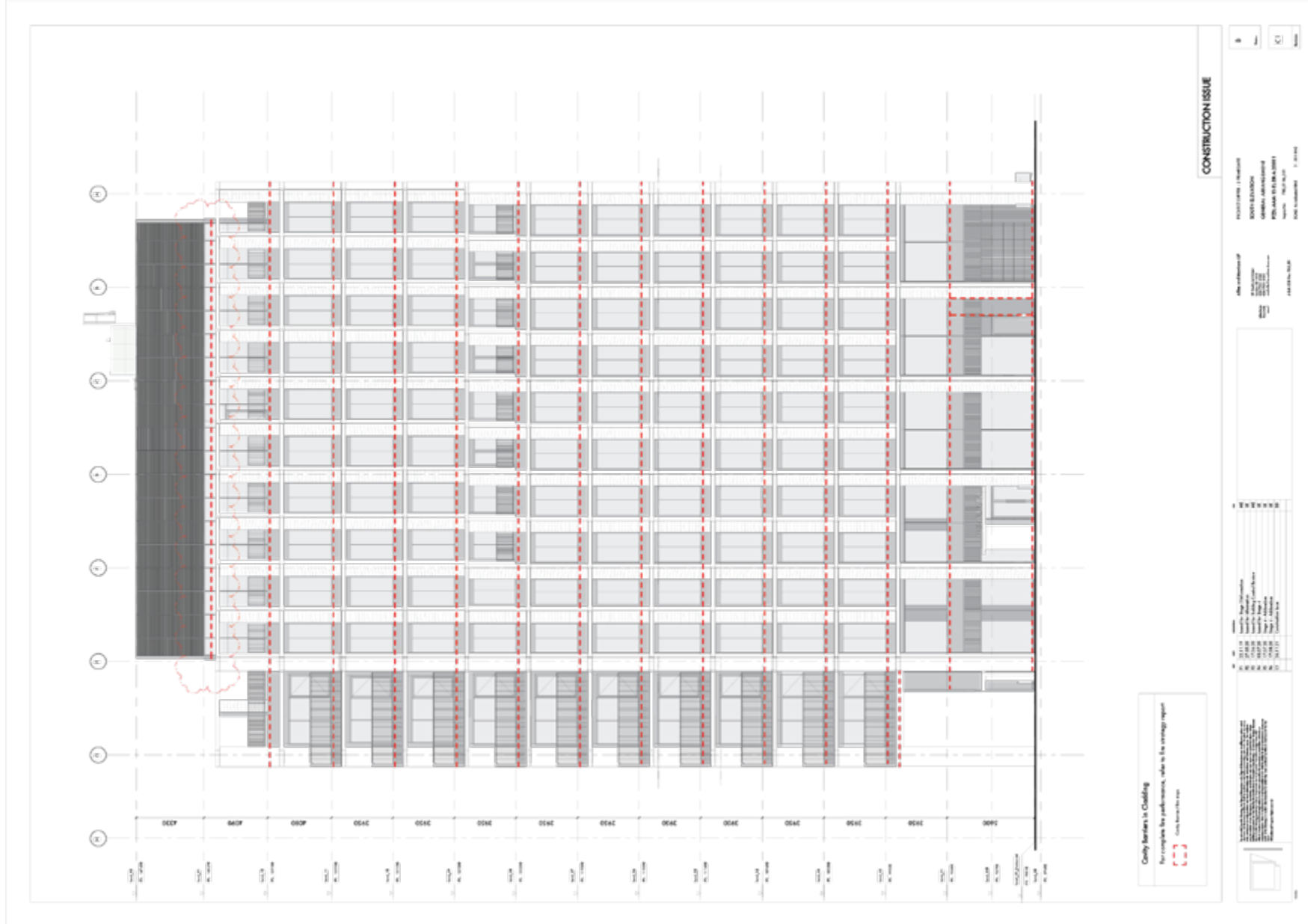
**Daily formwork in Cladding**  
 Perimeter for performance, refer to the strategy report

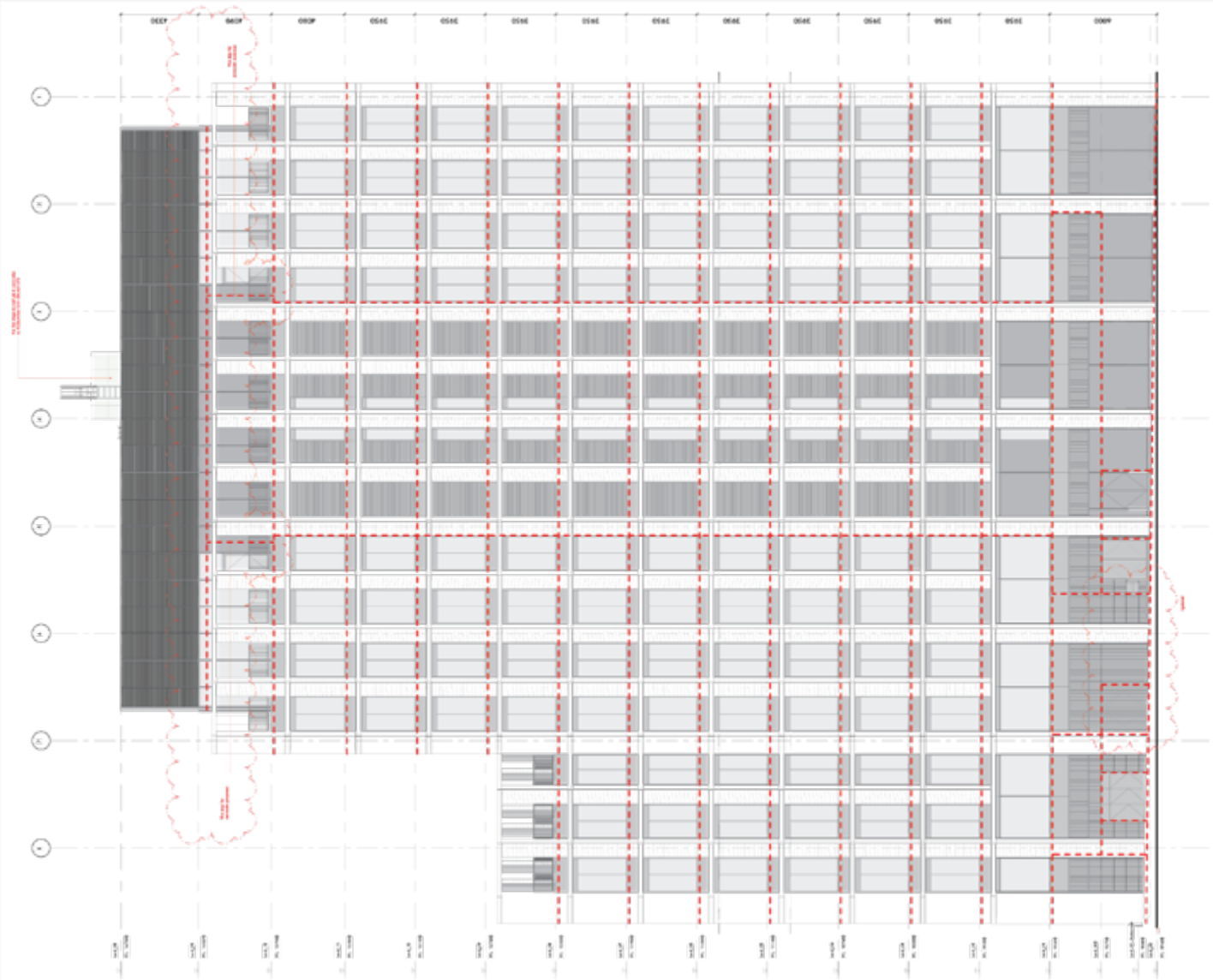


Refer to the report

**CONSTRUCTION ISSUE**

NO.	DESCRIPTION	STATUS	DATE
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**Daily Boundaries in Cladding**  
 For completion for performance, refer to the strategy report  
 - - - - -  
 - - - - -

**CONSTRUCTION ISSUE**

PROJECT NAME: [REDACTED]  
 BUILDING: [REDACTED]  
 GENERAL CONTRACTOR: [REDACTED]  
 ARCHITECT: [REDACTED]  
 DATE: [REDACTED]

ISSUE NO: [REDACTED]  
 ISSUE TITLE: [REDACTED]  
 ISSUE DESCRIPTION: [REDACTED]

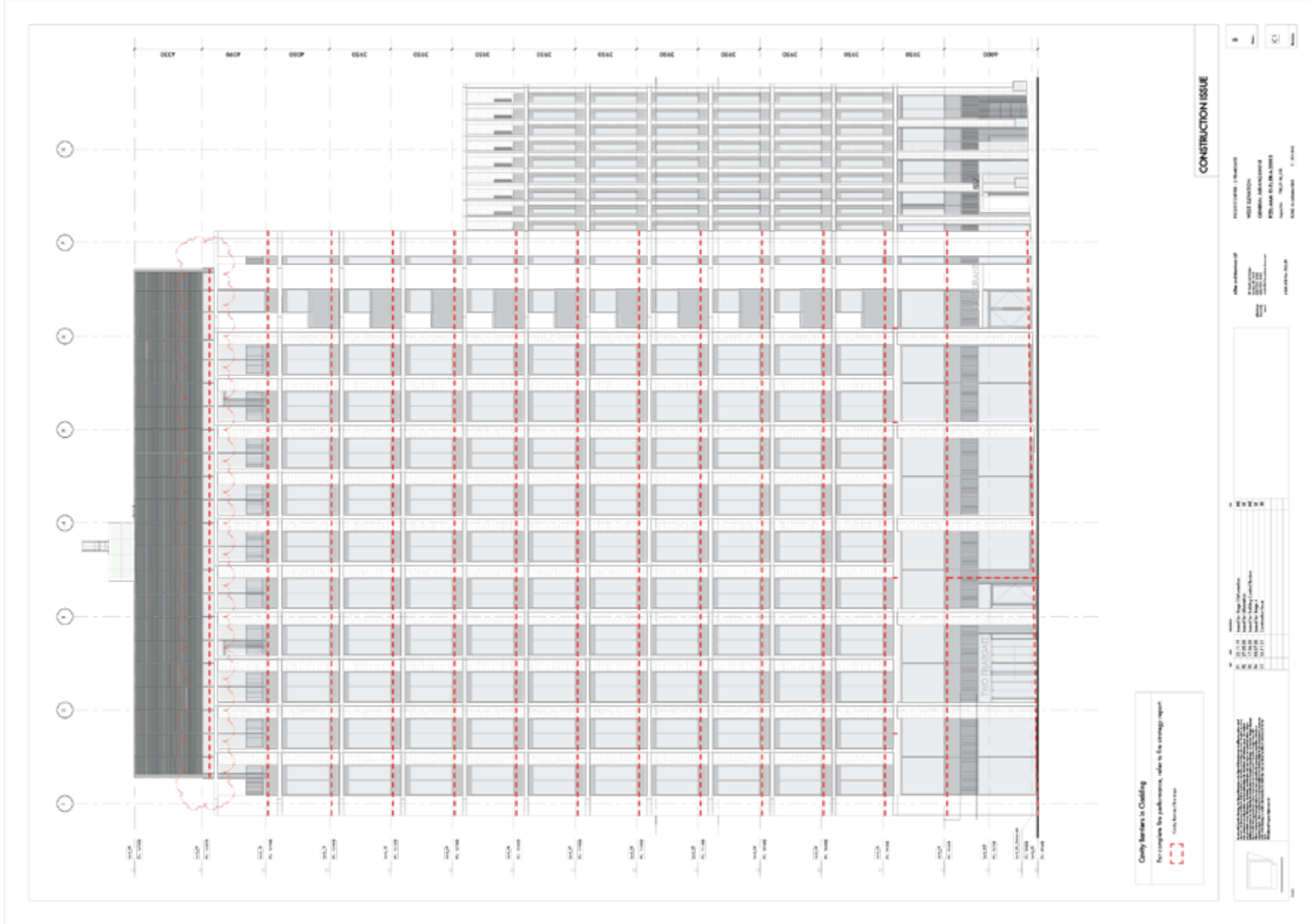
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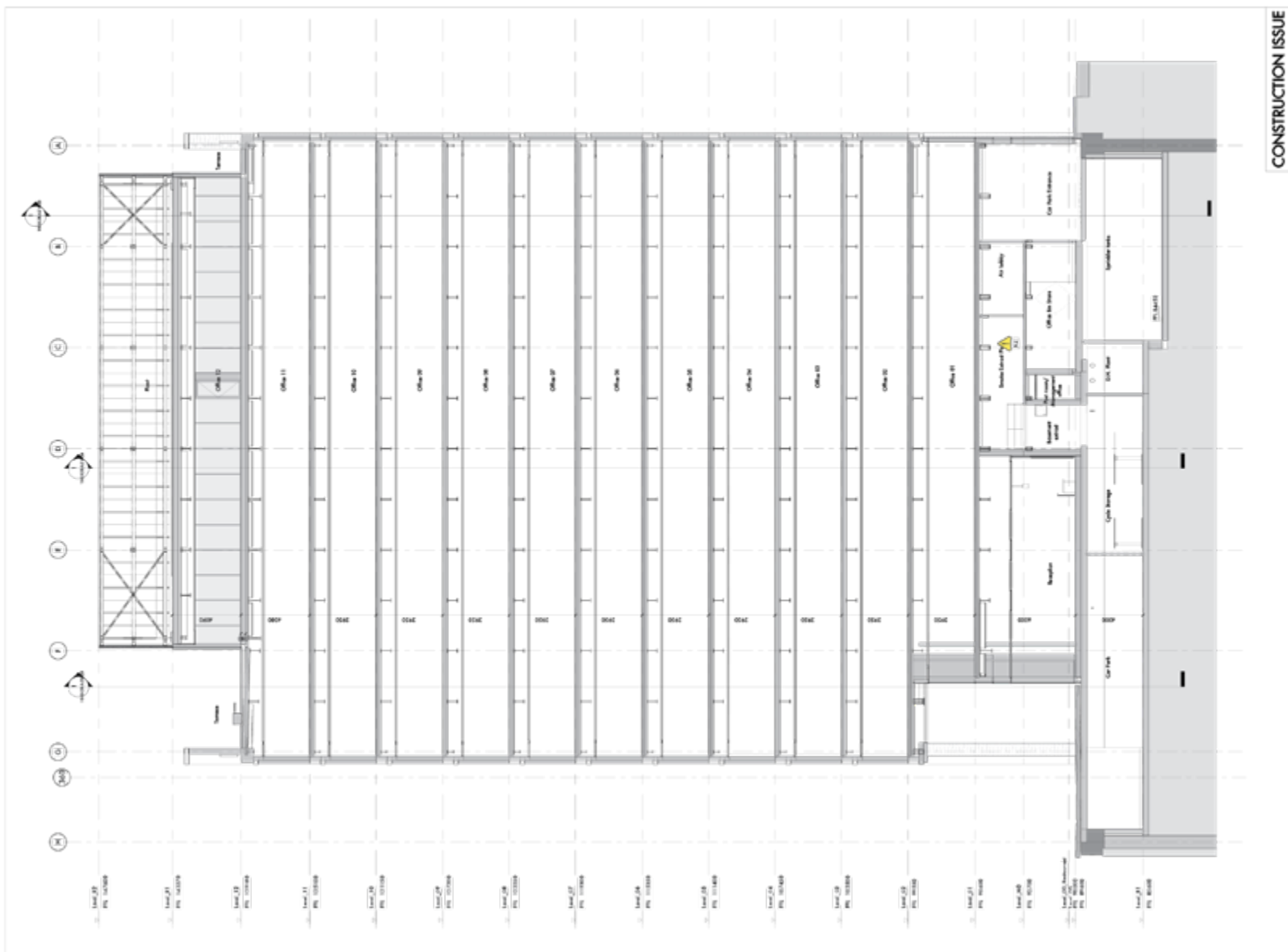
DATE: [REDACTED]

STATUS: [REDACTED]

APPROVED BY: [REDACTED]

DATE: [REDACTED]





**CONSTRUCTION ISSUE**

**6**  
Rev. 001  
C1  
Date

ADAM and ASSOCIATES LP  
1115 West 5th Street  
Portland, OR 97204  
Phone: 503.222.2200  
Fax: 503.222.2204  
www.adamandassociates.com  
AAEP JOB No. 730-41  
R021 / 1102 OKA / 11/25/2023

**REVISIONS**

NO.	DATE	DESCRIPTION
01	11/25/23	Issue for Review
02	11/25/23	Revise per comments
03	11/25/23	Revise per comments
04	11/25/23	Revise per comments
05	11/25/23	Revise per comments
06	11/25/23	Revise per comments
07	11/25/23	Revise per comments
08	11/25/23	Revise per comments
09	11/25/23	Revise per comments
10	11/25/23	Revise per comments

Approved: [Signature]  
Checked: [Signature]  
Prepared: [Signature]

ADAM and ASSOCIATES LP  
1115 West 5th Street  
Portland, OR 97204  
Phone: 503.222.2200  
Fax: 503.222.2204  
www.adamandassociates.com  
AAEP JOB No. 730-41  
R021 / 1102 OKA / 11/25/2023



**CONSTRUCTION ISSUE**

**Issue and Revision Log**

Issue No.	Description	Author	Checked	Approved	Date
1	Initial Issue	[Name]	[Name]	[Name]	2024-01-15
2	Minor Revisions	[Name]	[Name]	[Name]	2024-01-20
3	Final Approval	[Name]	[Name]	[Name]	2024-01-25

**PROJECT DATA - 3 FLOOR**

**SECTION B-B**

**GENERAL ARRANGEMENT**

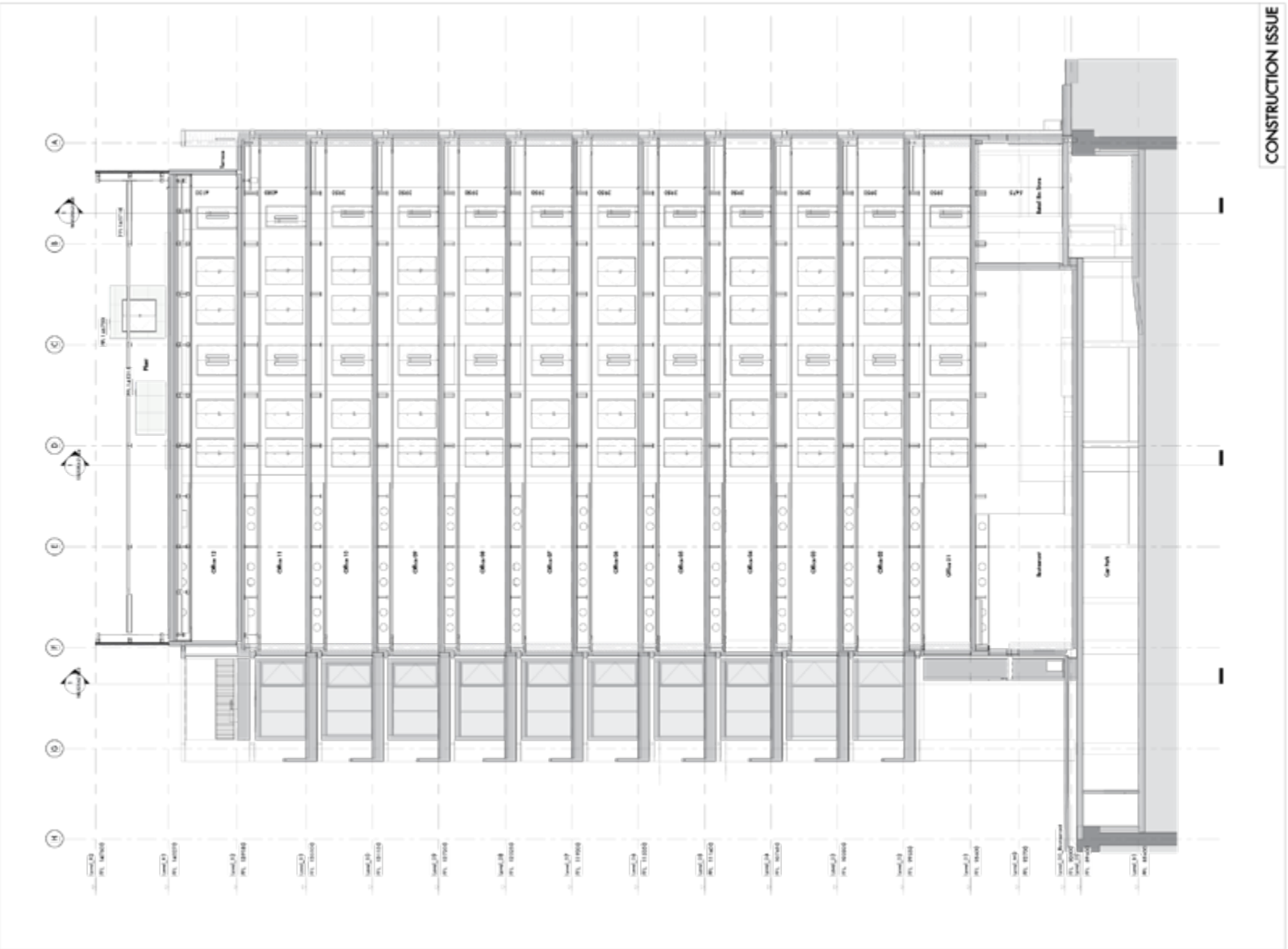
**KONLAMINASI RUMAH TINGGI**

Scale: 1:100

Issue No: 3

Revision: 3

Date: 2024-01-25



**CONSTRUCTION ISSUE**

**8** Rev: 1

**C1** (1/2024)

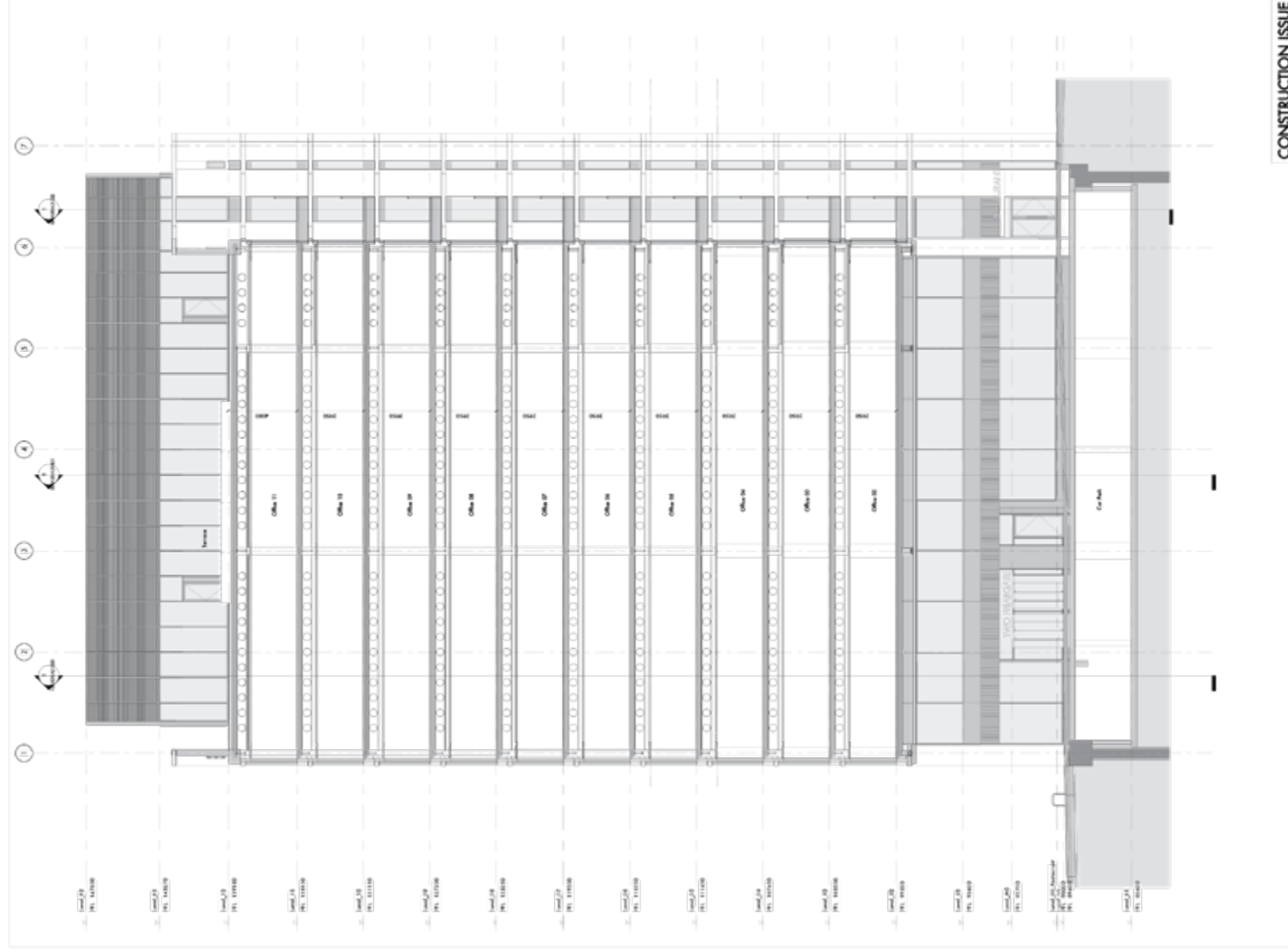
**PROJECT DATA - 3 FLOOR**  
**SECTION C-C**  
**GENERAL ARRANGEMENT**  
**KONLAMBISSKIDR-3-2102**  
 10/2024 - 11/2024  
 10/2024 - 11/2024  
 10/2024 - 11/2024

**Client and Address LP**  
 10/2024 - 11/2024  
 10/2024 - 11/2024  
 10/2024 - 11/2024  
 10/2024 - 11/2024

**Scale**  
 1:100  
 1:200  
 1:500  
 1:1000  
 1:2000  
 1:5000  
 1:10000

**Legend**  
 1. Structural Elements  
 2. Architectural Elements  
 3. Mechanical Elements  
 4. Electrical Elements  
 5. Plumbing Elements  
 6. Fire Protection Elements  
 7. Other Elements

**Notes**  
 1. All dimensions are in millimeters unless otherwise specified.  
 2. All materials shall be as specified in the Bill of Materials (BOM).  
 3. All work shall be in accordance with the relevant codes and standards.  
 4. All work shall be completed within the specified time frame.  
 5. All work shall be subject to inspection and approval by the relevant authorities.



CONSTRUCTION ISSUE

B  
Rev  
C1  
Date

Alfian and Associates S/P  
No. 10, Jalan  
Taman  
Seri 10/1, 43000  
Kajang, Negeri Sembilan  
MKN-05 No. 702/01

PROJECT SITE - 2 PERMATA  
SECTION DD  
GENERAL ARRANGEMENT  
FOR LAMA TO SERA-3023  
DATE: 11 FEB 2011 11:29:43

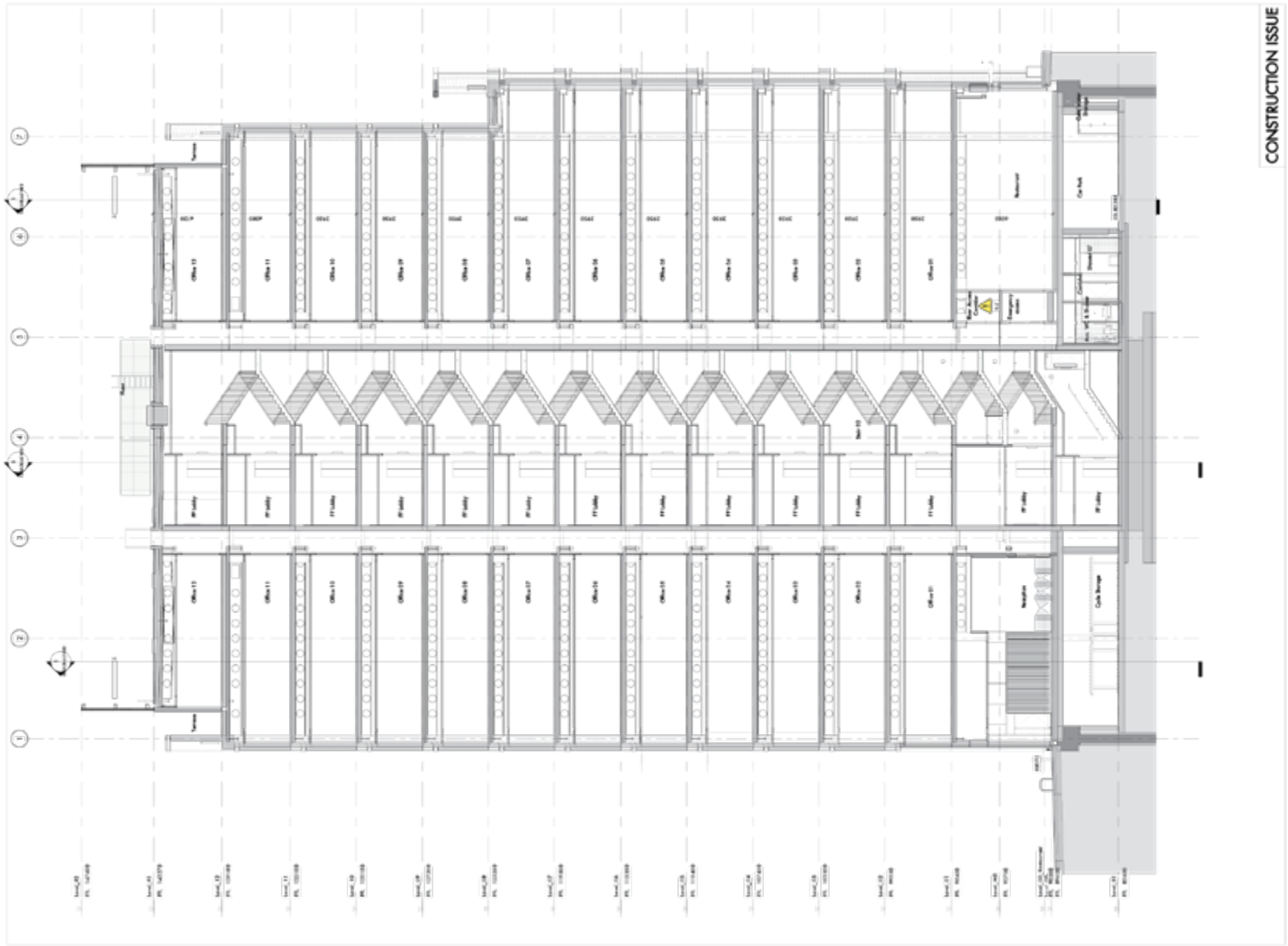
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NO.	REVISION	DATE	BY	CHECKED
1	ISSUE FOR PERMIT	11 FEB 2011	ALFIAN	ALFIAN
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100	ISSUE FOR PERMIT	11 FEB 2011	ALFIAN	ALFIAN





**CONSTRUCTION ISSUE**

**B**  
**8**  
**C1**  
8/2024

ALFA and NUMAN S.P.  
 Mimarlık Büro  
 No: 333  
 Kat: 3. Kat  
 Adres: Bahariye Caddesi No: 151/333 Kat: 3. Kat  
 Beşiktaş / İstanbul / Türkiye  
 Tel: +90 (212) 265 3000  
 E-posta: info@alfanuman.com.tr  
 Web: www.alfanuman.com.tr

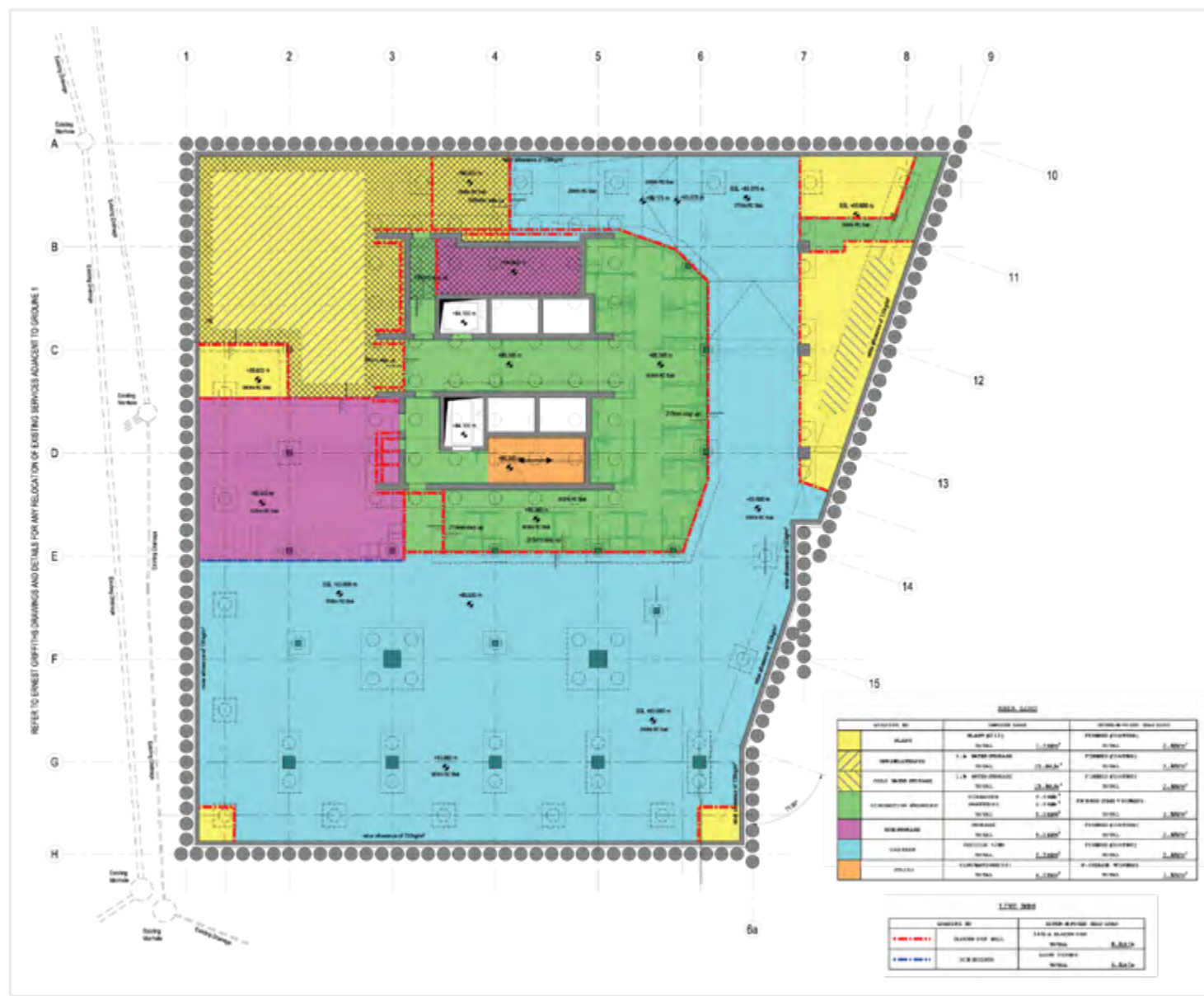
PROJE ADI: ALFA ve NUMAN S.P.  
 SEKTÖR: MİMARLIK  
 YERİ: BEŞİKTAŞ / İSTANBUL / TÜRKİYE  
 TARİH: 08/2024  
 ÇİZİM: M.ÖZDEMİR  
 ONAY: M.ÖZDEMİR

BİRİM: MİMARLIK  
 ÇİZİM: M.ÖZDEMİR  
 ONAY: M.ÖZDEMİR  
 ÇİZİM: M.ÖZDEMİR  
 ONAY: M.ÖZDEMİR  
 ÇİZİM: M.ÖZDEMİR  
 ONAY: M.ÖZDEMİR

Bu çizim, yapıyı oluşturan tüm yapısal elemanların ve diğer yapısal elemanların konumlarını ve boyutlarını göstermektedir. Çizim, yapıyı oluşturan tüm yapısal elemanların ve diğer yapısal elemanların konumlarını ve boyutlarını göstermektedir. Çizim, yapıyı oluşturan tüm yapısal elemanların ve diğer yapısal elemanların konumlarını ve boyutlarını göstermektedir. Çizim, yapıyı oluşturan tüm yapısal elemanların ve diğer yapısal elemanların konumlarını ve boyutlarını göstermektedir. Çizim, yapıyı oluşturan tüm yapısal elemanların ve diğer yapısal elemanların konumlarını ve boyutlarını göstermektedir.



# STRUCTURAL **DRAWINGS**



**GENERAL NOTES:**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY DIMENSIONS AND FINISHES ON DRAWINGS SHALL BE SUBJECT TO THE ENGINEER'S CHECK. IMMEDIATELY ALL DIMENSIONS MUST BE CHECKED ON SITE.
3. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-C10-B1-S-30001-101.

DATE: 20/07/2024  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]

**Curtins**

PROJECT: SUITABLE FOR TENDER **D2**

PROJECT: PROJECT DIPPER

LOADING PLAN LEVEL B1

GROUPING ID	DESCRIPTION	QUANTITY	UNIT	PRICE	TOTAL
1	CONCRETE	100.00	m <sup>3</sup>	100.00	10000.00
2	STEEL	50.00	kg	50.00	2500.00
3	PAINT	10.00	kg	10.00	100.00
4	FORMWORK	20.00	m <sup>2</sup>	20.00	400.00
5	LABOUR	100.00	hr	100.00	10000.00
6	CONCRETE	100.00	m <sup>3</sup>	100.00	10000.00
7	STEEL	50.00	kg	50.00	2500.00
8	PAINT	10.00	kg	10.00	100.00
9	FORMWORK	20.00	m <sup>2</sup>	20.00	400.00
10	LABOUR	100.00	hr	100.00	10000.00

FCDL - CUR - C10 - B1 - DR - S - 30001 - 101



**GENERAL NOTES:**

1. THE DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY DIMENSIONS AND DIMENSIONS OR DIMENSIONS SHALL BE SUBJECT TO THE DIMENSIONS OF TOLERANCE INDICATED. ALL DIMENSIONS MUST BE CHECKED + ADJUSTED ON-SITE.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-C10-00-001.

---

FOR STAFF AT TENDER ONLY

**Curtins**

100 St. James Street, Suite 100, Melbourne VIC 3000  
 03 9594 2000  
 www.curtins.com.au

DATE: 02/07/2024

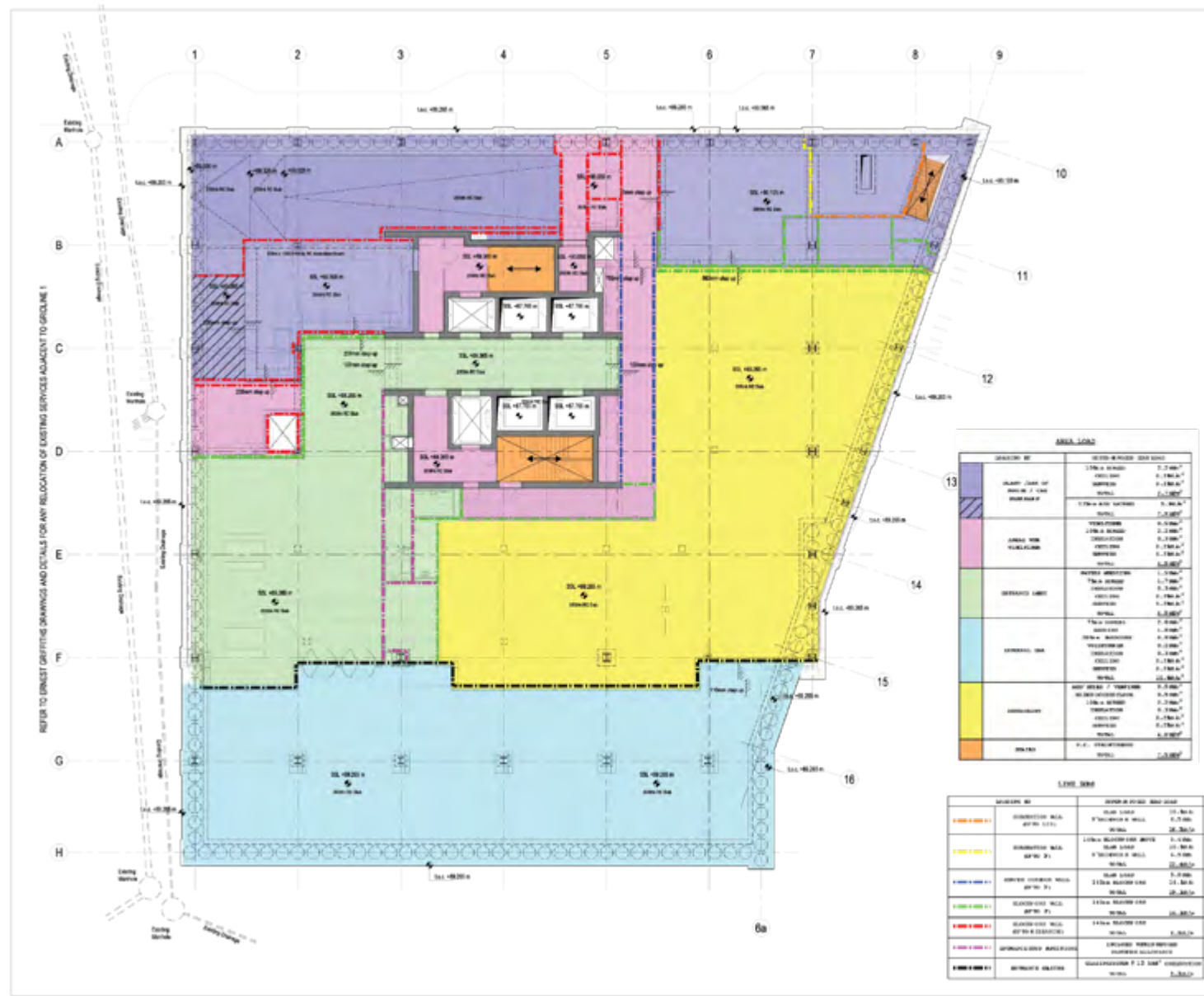
**SUITABLE FOR TENDER** 02

PROJECT: CURTINS

LOADING PLAN Level 00  
 Sheet 01 of 02

Project No.	Date	Drawn By	Checked By	Checked
073385	02 July 2024	PHM	WED	WED

FCDL - CUR - C10 - 00 - DR - S - 30002 - 101



**GENERAL NOTES:**

1. THE DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY DIMENSIONS, DIMENSIONS AND DIMENSIONS ON DRAWING SHALL BE SUBJECT TO THE DIMENSIONS SET OUT ON DRAWING. ALL DIMENSIONS MUST BE CHECKED & NOTED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING FCDL CURR C10 00 01.

AREA SCHED	
SECTION NO.	SECTION NAME
1	AREA 1
2	AREA 2
3	AREA 3
4	AREA 4
5	AREA 5
6	AREA 6
7	AREA 7
8	AREA 8
9	AREA 9
10	AREA 10
11	AREA 11
12	AREA 12
13	AREA 13
14	AREA 14
15	AREA 15
16	AREA 16

LINE SCHED	
SECTION NO.	SECTION NAME
1	LINE 1
2	LINE 2
3	LINE 3
4	LINE 4
5	LINE 5
6	LINE 6
7	LINE 7
8	LINE 8
9	LINE 9
10	LINE 10
11	LINE 11
12	LINE 12
13	LINE 13
14	LINE 14
15	LINE 15
16	LINE 16

**Curtins**

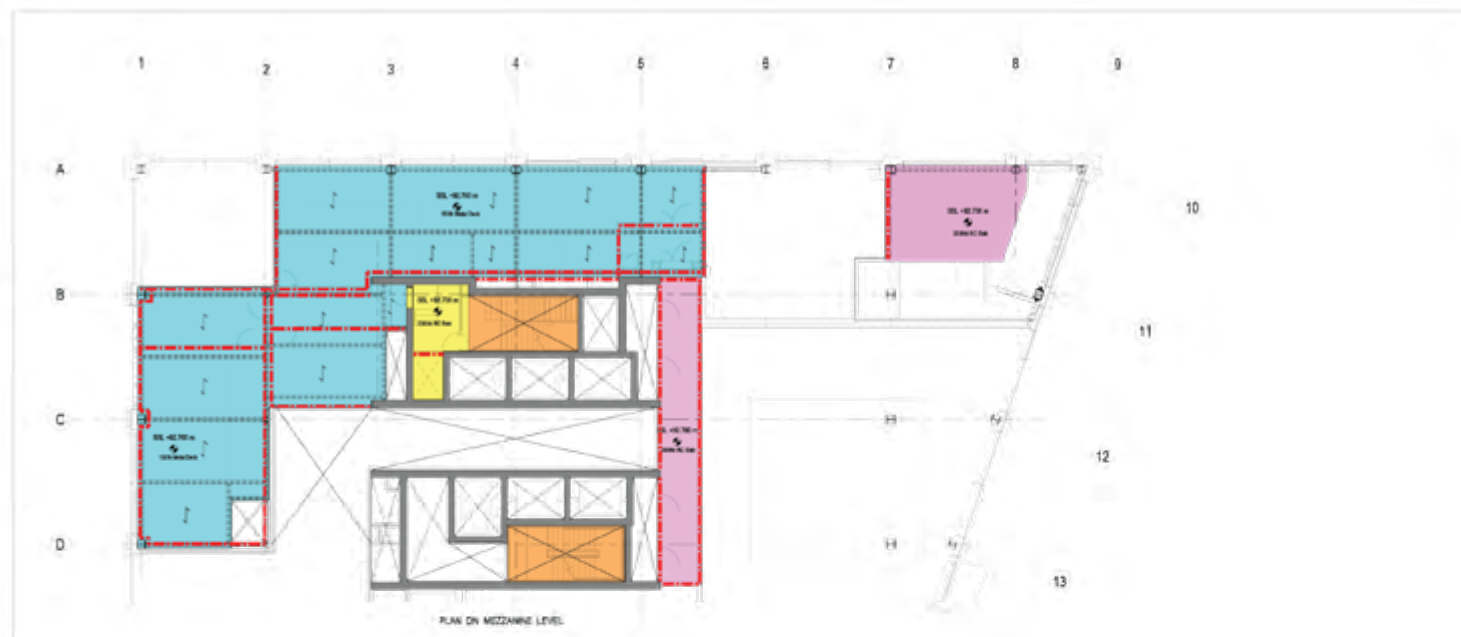
170 STANLEY STREET SUITE 1000 SYDNEY NSW 2008  
 TEL: (02) 9232 3000 FAX: (02) 9232 3001  
 WWW.CURTINS.COM.AU

**SUITABLE FOR TENDER** 02

**PROJECT DIGGER**

Loading Plan Level 00  
 Sheet 02 of 02

Project No: 073385 Date: 01 June 2022  
 Design No: 073385-01-001  
 Project Name: FCDL - CURR - C10 - 00 - DR - S - 30003 - 101



- GENERAL NOTES**
1. ENGINEERING TO BE DONE IN CONFORMANCE WITH ALL RELEVANT REGULATIONS AND STANDARDS. ENGINEERING TO BE PROVIDED BY THE CLIENT.
  2. DO NOT SCALE THIS DRAWING. ANY DIMENSIONS, FINISHES AND MARKINGS ON DRAWINGS SHALL BE PRECEDENT TO THE DIMENSIONS OF TYPICAL MATERIALS. ALL DIMENSIONS MUST BE CHECKED. (REFER TO SCHEDULES).
  3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS STATED OTHERWISE.
  4. FOR GENERAL NOTES REFER TO CURTINS PROJECTS ONLINE.

100% SUITABLE FOR TENDER (02/07/2022) 02/07/2022 100% 100%

**Curtins**  
 100% SUITABLE FOR TENDER (02/07/2022)  
 02/07/2022 100% 100%

**SUITABLE FOR TENDER** **02**

**PROJECT OWNER**

Loading Plan Mizzanine Level

Project No: 073385 Date: 02/07/2022 Status: 100% 100%

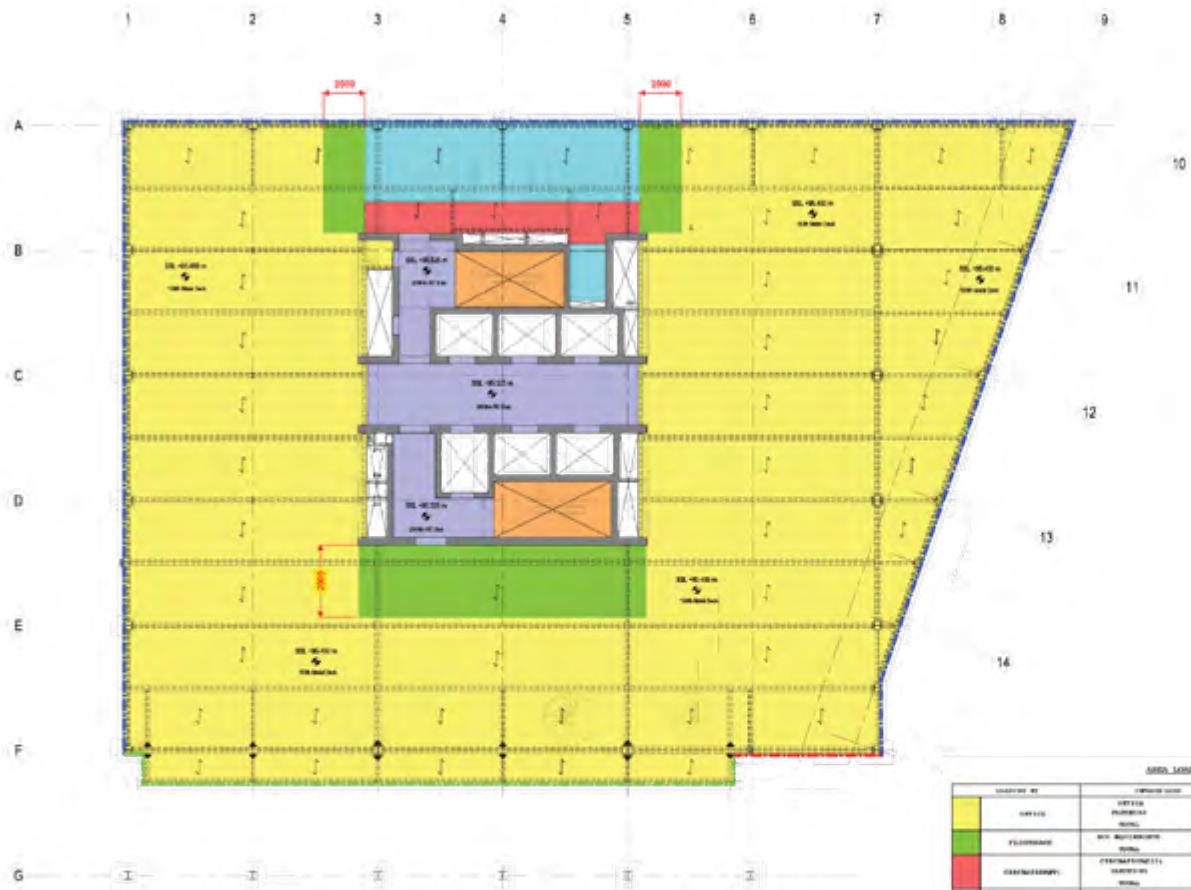
FCDL - CUR - C10 - M2 - DR - S - 30004 - 101

**AREA LOG**

Color	Room Name	Area (m <sup>2</sup> )	Volume (m <sup>3</sup> )
Blue	Office	1,200.00	1,200.00
Yellow	Conference Room	1,200.00	1,200.00
Orange	Meeting Room	1,200.00	1,200.00
Pink	Storage	1,200.00	1,200.00

**DATE LOG**

Date	By	Description
02/07/2022	02/07/2022	100% 100%



**AREA SCHEDULE**

SECTION NO.	SECTION NAME	SECTION AREA	SECTION PERIMETER	SECTION VOLUME
01	FLOOR	2,000.00	2,000.00	
	WALL	2,000.00	2,000.00	
02	CEILING	2,000.00	2,000.00	
	WALL	2,000.00	2,000.00	
03	CEILING	2,000.00	2,000.00	
	WALL	2,000.00	2,000.00	
04	CEILING	2,000.00	2,000.00	
	WALL	2,000.00	2,000.00	
05	CEILING	2,000.00	2,000.00	
	WALL	2,000.00	2,000.00	
06	CEILING	2,000.00	2,000.00	
	WALL	2,000.00	2,000.00	

**LOAD SCHEDULE**

SECTION NO.	SECTION NAME	SECTION AREA	SECTION PERIMETER	SECTION VOLUME
01	FLOOR	2,000.00	2,000.00	
02	CEILING	2,000.00	2,000.00	
03	CEILING	2,000.00	2,000.00	
04	CEILING	2,000.00	2,000.00	
05	CEILING	2,000.00	2,000.00	
06	CEILING	2,000.00	2,000.00	

NOTE: ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED. DIMENSIONS SHOWN ON THIS DRAWING ARE FOR INFORMATION ONLY. ALL DIMENSIONS MUST BE CHECKED ON SITE.

**GENERAL NOTES**

1. THE DRAWING IS TO BE USED IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY DIMENSIONS, FINISHES AND MARKINGS ON DRAWINGS SHALL BE SUBJECT TO THE DIMENSIONS OF TOLERANCE INDICATED. ALL DIMENSIONS MUST BE CHECKED ON SITE.
3. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
4. FOR GENERAL NOTES REFER TO RELEVANT SPECIFICATIONS AND DRAWINGS.

---

**SUITABLE FOR TENDER** 02

**PROJECT OWNER**

---

**Loading Plan Level 01**

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**07385**

DATE: July 2022

PROJECT: FCDL - CUR - C10 - 01 - DR - S - 30005 - 701





**AREA LOAD**

COLOUR KEY	CONSTRUCTION	AREA (m <sup>2</sup> )	LOAD (kN/m <sup>2</sup> )	TOTAL LOAD (kN)
Yellow	OFFICE	2,100.0	2.5	5,250.0
Green	PERIMETER	1,200.0	2.5	3,000.0
Blue	STAIRS	1,100.0	2.5	2,750.0
Purple	STAIRS	1,100.0	2.5	2,750.0
Green	PERIMETER	1,200.0	2.5	3,000.0
Yellow	OFFICE	2,100.0	2.5	5,250.0
Blue	STAIRS	1,100.0	2.5	2,750.0
Green	PERIMETER	1,200.0	2.5	3,000.0
Yellow	OFFICE	2,100.0	2.5	5,250.0
Blue	STAIRS	1,100.0	2.5	2,750.0
Green	PERIMETER	1,200.0	2.5	3,000.0

**LEVEL 001**

COLOUR KEY	CONSTRUCTION	AREA (m <sup>2</sup> )	LOAD (kN/m <sup>2</sup> )	TOTAL LOAD (kN)
Yellow	OFFICE	2,100.0	2.5	5,250.0
Green	PERIMETER	1,200.0	2.5	3,000.0
Blue	STAIRS	1,100.0	2.5	2,750.0
Purple	STAIRS	1,100.0	2.5	2,750.0
Green	PERIMETER	1,200.0	2.5	3,000.0
Yellow	OFFICE	2,100.0	2.5	5,250.0
Blue	STAIRS	1,100.0	2.5	2,750.0
Green	PERIMETER	1,200.0	2.5	3,000.0

- GENERAL NOTES**
1. THE DRAWING IS TO BE USED IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
  2. DO NOT SCALE THIS DRAWING. ANY DIMENSIONS, FINISHES AND MARKS ON DRAWING SHALL BE TAKEN FROM THE DIMENSIONS AND MARKS INDICATED. ALL DIMENSIONS MUST BE CHECKED (PARTS IN-ETS).
  3. ALL DIMENSIONS ARE IN METRES UNLESS STATED OTHERWISE.
  4. FOR GENERAL NOTES REFER TO DRAWING POLY-CURVES AND POLY-LINES.

100% SUITABLE FOR TENDER

**Curtins**

100% SUITABLE FOR TENDER **02**

PROJECT OWNER

Loading Plan Levels 02 - 07

073385

FCDL - CUR - C10 - Z2 - DR - S - 30006 - 701



**AREA SCHEDULE**

DESCRIPTION NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	OFFICE	SQ.M	1,150.00	1,150.00	1,312,500.00
2	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
3	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
4	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
5	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
6	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
7	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
8	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
9	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
10	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
11	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
12	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
13	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
14	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
15	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00

**LEVEL AREA**

DESCRIPTION NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL PRICE
1	OFFICE	SQ.M	1,150.00	1,150.00	1,312,500.00
2	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
3	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
4	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
5	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
6	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
7	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
8	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
9	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
10	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
11	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
12	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
13	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
14	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00
15	STAIRCASE	SQ.M	1,150.00	1,150.00	1,312,500.00

**GENERAL NOTES**

1. THE DRAWING IS TO BE USED IN CONNECTION WITH ALL RELEVANT ARCHITECTURAL DRAWINGS, CONTRACT AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY DIMENSIONS, FINISHES AND MARKS ON DRAWING SHALL BE TAKEN FROM THE DIMENSIONS OF THIS DRAWING. ALL DIMENSIONS MUST BE CHECKED (METERS IN METERS).
3. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
4. FOR GENERAL NOTES REFER TO DRAWING SPECIFICATIONS AND CONTRACT.

---

DATE: 15/05/2014  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 PROJECT NO: 100-100-1000

**Curtins**

111, STANLEY STREET, SUITE 201, MELBOURNE VIC 3000  
 PH: (03) 9600 4000  
 WWW.CURTINS.COM.AU

**SUITABLE FOR TENDER** 02

**PROJECT OWNER**

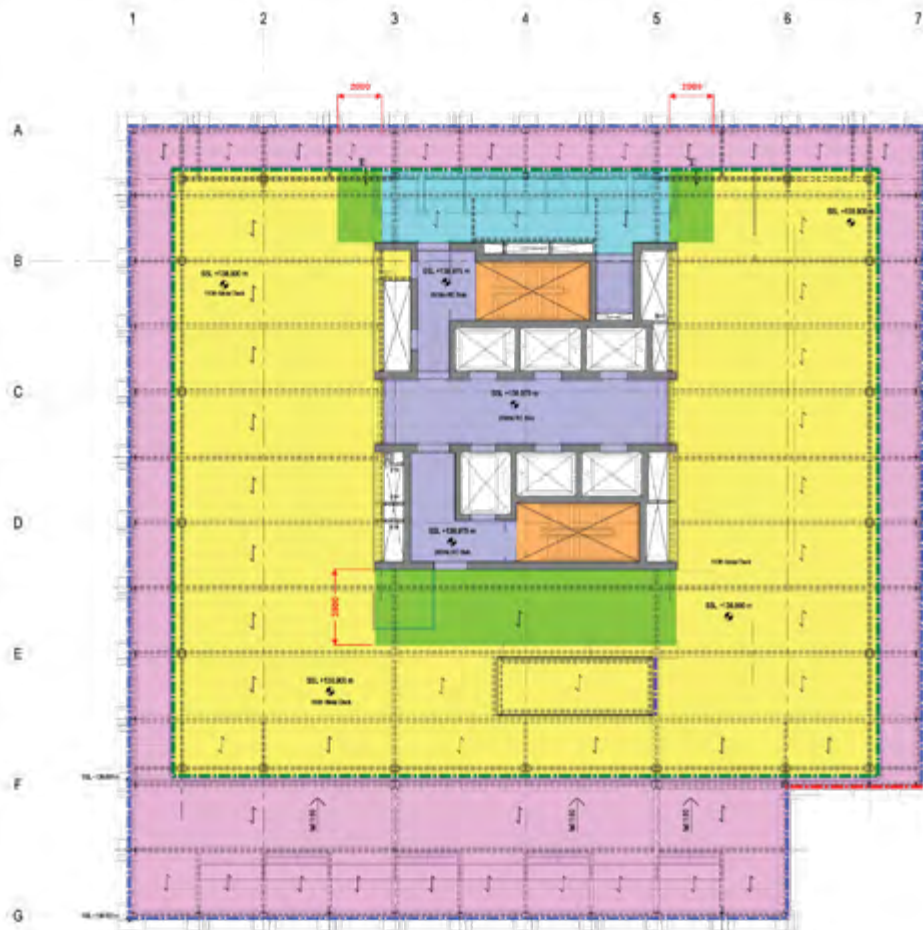
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Level 05

Project No: 100-100-1000  
 Date: 15/05/2014  
 Drawn By: [Name]  
 Checked By: [Name]  
 Project No: 100-100-1000  
 Title: Level 05  
 Scale: 1:1000  
 Project No: 100-100-1000  
 Title: Level 05  
 Scale: 1:1000

FCDL - CUR - C10 - DE - DR - S - 30007 - 101





**SPACE SCHEDULE**

LOCATION NO.	DESCRIPTION	AREA (SQM)	PERCENTAGE OF TOTAL
OFFICE	OFFICE	1,100.00	11.00%
	RECEPTION	1,100.00	11.00%
	TOTAL	2,200.00	22.00%
CIRCULATION	STAIRS	1,100.00	11.00%
	LIFT	1,100.00	11.00%
	TOTAL	2,200.00	22.00%
SERVICES	MECHANICAL	1,100.00	11.00%
	ELECTRICAL	1,100.00	11.00%
	TOTAL	2,200.00	22.00%
PERIMETER	PERIMETER	1,100.00	11.00%
	PERIMETER	1,100.00	11.00%
	TOTAL	2,200.00	22.00%
TOTAL	TOTAL	10,000.00	100.00%
	TOTAL	10,000.00	100.00%
	TOTAL	10,000.00	100.00%

**LINE SCHEDULE**

LOCATION NO.	DESCRIPTION	AREA (SQM)	PERCENTAGE OF TOTAL
12001-12010	OFFICE	1,100.00	11.00%
12011-12020	OFFICE	1,100.00	11.00%
12021-12030	OFFICE	1,100.00	11.00%
12031-12040	OFFICE	1,100.00	11.00%
12041-12050	OFFICE	1,100.00	11.00%
12051-12060	OFFICE	1,100.00	11.00%
12061-12070	OFFICE	1,100.00	11.00%
12071-12080	OFFICE	1,100.00	11.00%
12081-12090	OFFICE	1,100.00	11.00%
12091-12100	OFFICE	1,100.00	11.00%
TOTAL	TOTAL	10,000.00	100.00%

- GENERAL NOTES:**
1. THE DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES TO BE FOUND IN THE DRAWING AND SPECIFICATION.
  2. REFER TO THE DRAWING FOR DIMENSIONS, DIMENSIONS AND DIMENSIONS (OR DIMENSIONS) AS NOTED TO THE DIMENSIONS ATTENTION (DIMENSIONS) ALL DIMENSIONS ARE TO BE DIMENSIONS UNLESS NOTED OTHERWISE.
  3. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
  4. FOR DIMENSIONAL NOTES REFER TO DRAWING FOR DIMENSIONS AND DIMENSIONS.

DATE: 2017.01.14.14.00

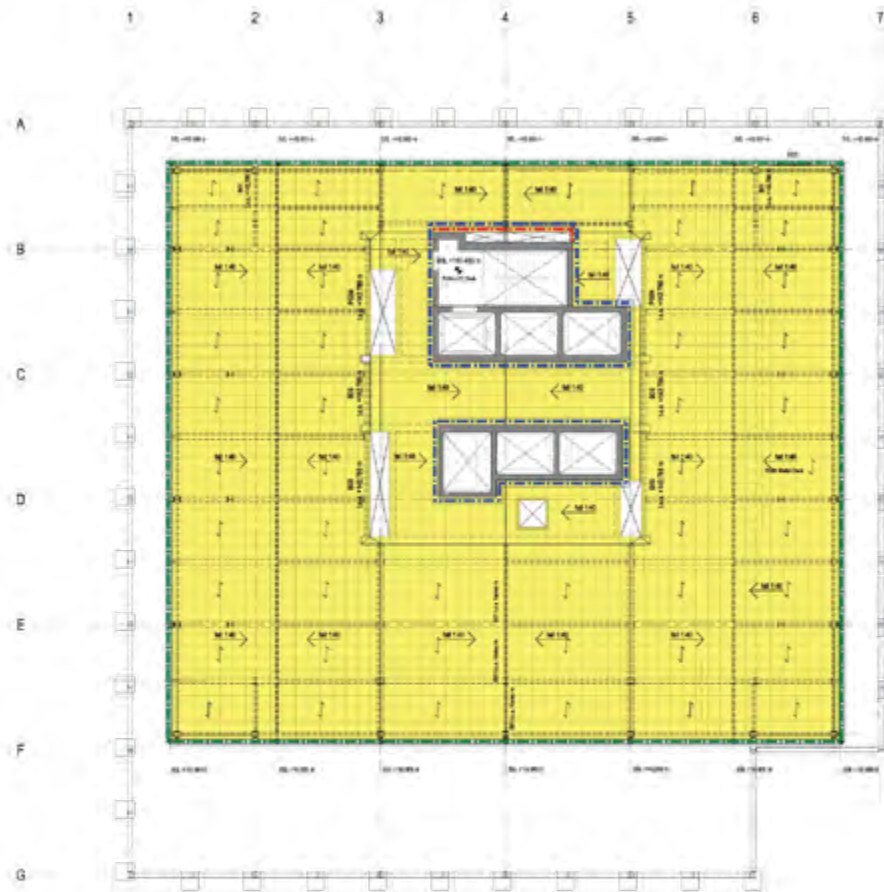
SCALE: 1:100

**SUITABLE FOR TENDER** D2

**PROJECT OFFER**

Loading Plat Level 12

Project No. 073385  
Date: 2017.01.14.14.00  
Scale: 1:100  
Drawing No. 073385-012-00000-101



- GENERAL NOTES**
1. THE DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS AND ENGINEER'S DRAWINGS AND SPECIFICATIONS.
  2. DO NOT SCALE THE DRAWING. ANY DIMENSIONS, DIMENSIONS AND FINISHES INDICATED SHALL BE DEEMED TO BE DIMENSIONS AND FINISHES UNLESS OTHERWISE SPECIFIED. ALL DIMENSIONS MUST BE CHECKED ON SITE.
  3. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
  4. FOR DIMENSION NOTES REFER TO DIMENSIONS FOLLOWING DIMENSION LINE.

**REVISIONS**

NO.	DESCRIPTION	DATE
1	ISSUED FOR TENDER	11/06/2022

**ALPHABETIC INDEX**

ALPHABETIC INDEX	DESCRIPTION	DATE
A	ALPHABETIC INDEX	11/06/2022
B	ALPHABETIC INDEX	11/06/2022
C	ALPHABETIC INDEX	11/06/2022

Project: 073385 - 13 - ER - S - 00010 - 101

Client: CURTINS

Project Name: PROJECT DIPPER

Phase: SUITABLE FOR TENDER

Level: Loading Plan Level 13

Date: 11/06/2022

Scale: 1:1000

Author: [Name]

Check: [Name]

Drawn: [Name]

Project No: 073385

Sheet No: 101

Project Name: PROJECT DIPPER

Level: Loading Plan Level 13

Date: 11/06/2022

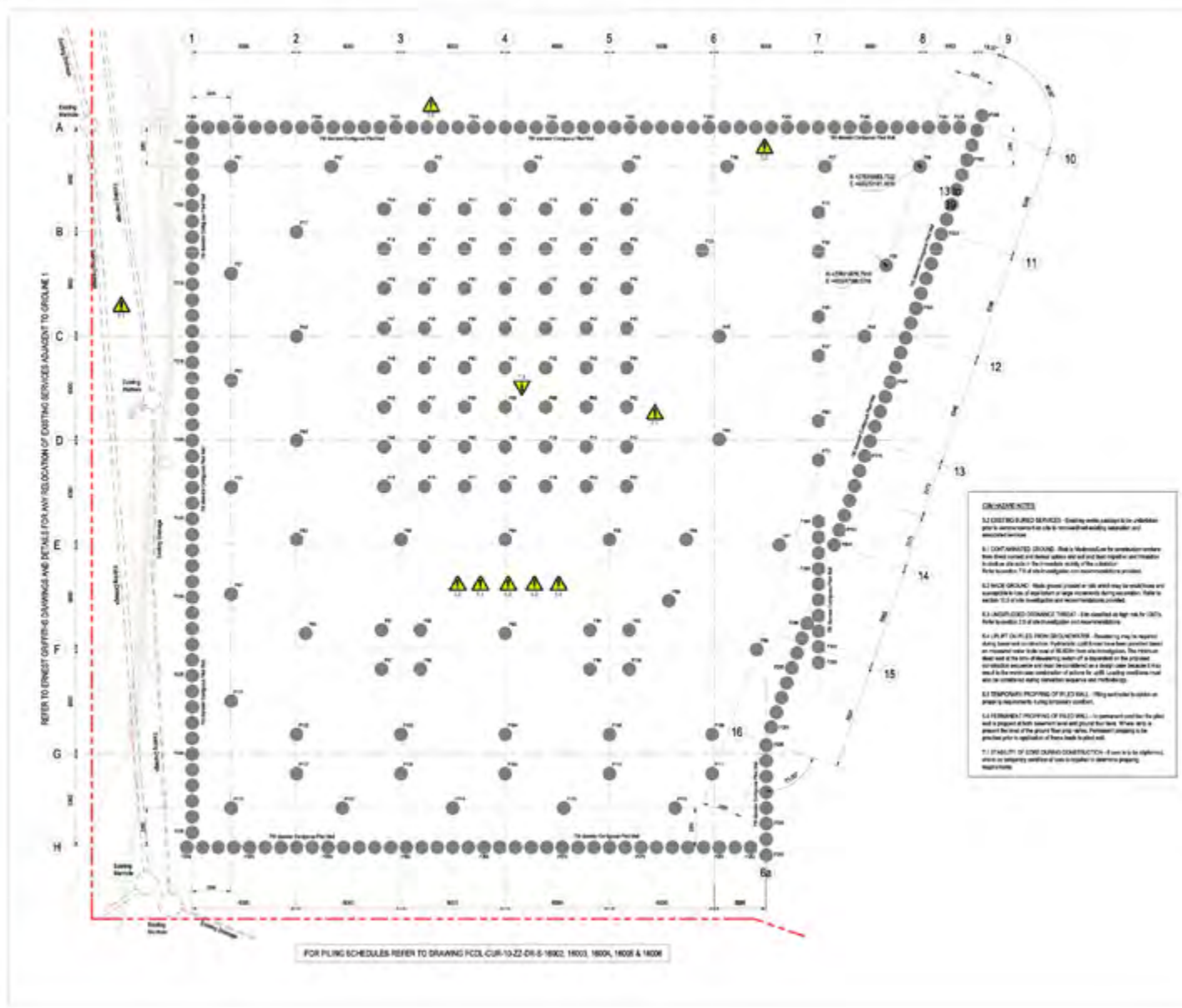
Scale: 1:1000

Author: [Name]

Check: [Name]

Drawn: [Name]





**GENERAL NOTES**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT SPECIFICATIONS AND CONDITIONS.
- DO NOT SCALE THIS DRAWING. ANY DIMENSIONS, DIMENSIONS AND FINISHES INDICATED SHALL BE REFUSED TO THE DIMENSIONS SPECIFIED IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED BEFORE CONSTRUCTION.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- FOR DIMENSIONAL NOTES REFER TO DRAWING FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808.
- FOR CURTAIN WALLS REFER TO THE DIMENSIONS SPECIFIED IN THE DRAWING.
- ALL PILES TO BE PROVIDED IN ACCORDANCE WITH CURTAIN WALLS. EXPLICIT VERIFICATION REFER TO FOLLOWING CURTAIN WALL SPECIFICATIONS:
  - FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808
  - FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808
  - FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808
- FOR FLOORING DETAILS REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FLOORING AND FINISHES.
- FOR FINISHES AND MATERIALS REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR FINISHES AND MATERIALS.

Refer to drawing for Piling Schedule design

**TYPICAL PILE CUT OFF DETAIL**

**GRADIENTS**

1.2 EXISTING BORED SERVICES - Existing bored services to be relocated prior to construction. Refer to drawing FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808 for details.

1.3 CONTAMINATED GROUND - Risk to be assessed for construction workers. Refer to drawing FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808 for details.

1.4 ROCK OBSTACLES - Risk to be assessed for construction workers. Refer to drawing FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808 for details.

1.5 UNDESIRABLE GROUND - Risk to be assessed for construction workers. Refer to drawing FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808 for details.

1.6 UNDESIRABLE GROUND - Risk to be assessed for construction workers. Refer to drawing FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808 for details.

1.7 TEMPORARY PROTECTIVE PILING WALL - Refer to drawing FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808 for details.

1.8 PERMANENT PROTECTIVE PILING WALL - Refer to drawing FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808 for details.

1.9 STABILITY OF EXISTING CONSTRUCTION - Refer to drawing FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808 for details.

FOR PILING SCHEDULES REFER TO DRAWING FCDL CUR-10-ZZ-DR-S-1800, 1801, 1806, 1808 & 1808

NO.	DESCRIPTION	DATE	BY
001	ISSUED FOR CONSTRUCTION	18/02/20	AM
002	FOR REVIEW OUTSIDE OUT OF SCOPE UPDATES	21/01/20	AM
003	FOR REVIEW OUTSIDE OUT OF SCOPE UPDATES	28/01/20	AM

**curtins**

100 Market Street, Level 10, Sydney NSW 2000  
 Phone: +61 2 9250 9000  
 Email: info@curtins.com.au

Site: **FINAL CONSTRUCTION**

Project: **PROJECT DIPPER**

File No: **Pile Layout**

Plan No.	Size	Date	Revised	Checked	Drawn
073365	A1	18/02/20	1	AM	AM

FCDL - CUR - 15 - FN - DR - S - 18001 - 003





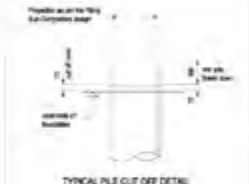
PILE REF	SIZE	CUT OFF LEVEL	COORDINATES (m)		VERTICAL ACTIONS (kN)					HORIZONTAL ACTIONS (kN)					Dist	Rev
			EASTING	NORTHING	Max Dead	Min Dead	Imposed	Wind 95%	Hydrostatic Uplift (kPa)	Max Dead	Min Dead	Imposed	Wind 95%			
P101	750	8.45026	58.010051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P102	750	8.45026	58.010051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P103	750	8.45026	61.330051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P104	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P105	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P106	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P107	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P108	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P109	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P110	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P111	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P112	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P113	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P114	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P115	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		
P116	750	8.45026	62.360051	80.871322	2300	1200	800	+ 600	-200	25	15	10	100	002		

**GENERAL NOTES**

- THE DRAWING IS TO BE USED IN CONJUNCTION WITH THE RELEVANT SPECIFICATIONS AND CONDITIONS.
- FOR ALL PILES TO BE CONSIDERED FOR DESIGN, THE DESIGNER SHALL BE RESPONSIBLE FOR THE DETERMINATION OF THE REQUIRED PILE CAPACITY AND THE REQUIRED PILE LENGTH.
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- FOR ALL PILES TO BE CONSIDERED FOR DESIGN, THE DESIGNER SHALL BE RESPONSIBLE FOR THE DETERMINATION OF THE REQUIRED PILE CAPACITY AND THE REQUIRED PILE LENGTH.



Rev	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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**curtins**

FINAL CONSTRUCTION

PROJECT DIVER

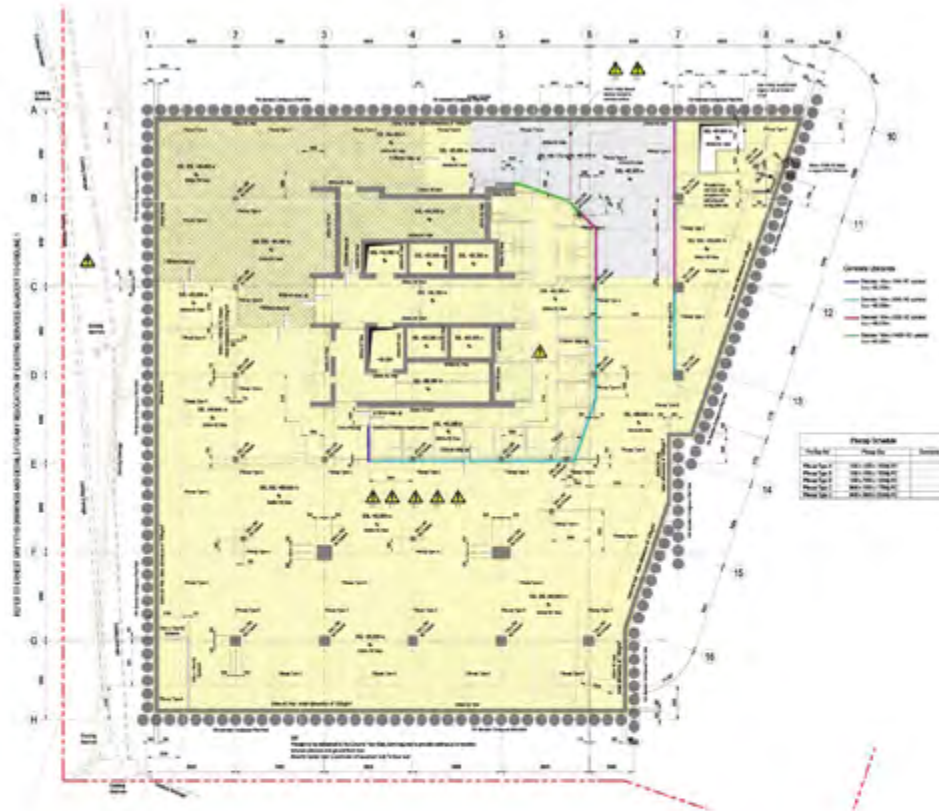
Pile Schedule sheet 2

FCDL - CUR - 10 - PV - DR - S - 10003 - 003









**GENERAL NOTES**

- SEE GENERAL NOTES TO THE ARCHITECTURAL DRAWINGS FOR THE PROJECT.
- SEE GENERAL NOTES TO THE STRUCTURAL DRAWINGS FOR THE PROJECT.
- SEE GENERAL NOTES TO THE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR THE PROJECT.
- SEE GENERAL NOTES TO THE CIVIL DRAWINGS FOR THE PROJECT.
- SEE GENERAL NOTES TO THE INTERIOR DESIGN DRAWINGS FOR THE PROJECT.
- SEE GENERAL NOTES TO THE LANDSCAPE ARCHITECTURE DRAWINGS FOR THE PROJECT.
- SEE GENERAL NOTES TO THE SPECIALTY TRADES DRAWINGS FOR THE PROJECT.
- SEE GENERAL NOTES TO THE CONSTRUCTION ADMINISTRATION MANUAL FOR THE PROJECT.
- SEE GENERAL NOTES TO THE SCHEDULE FOR THE PROJECT.
- SEE GENERAL NOTES TO THE SPECIFICATIONS FOR THE PROJECT.

**General Notes & Specifications**

Section	Quantity	Unit
...	...	...

**Panel Schedule**

Panel No.	Description	Notes
Panel 1	...	...
Panel 2	...	...
Panel 3	...	...
Panel 4	...	...
Panel 5	...	...
Panel 6	...	...
Panel 7	...	...
Panel 8	...	...

NO.	REVISION	DESCRIPTION	DATE
01	...	...	...
02	...	...	...
03	...	...	...
04	...	...	...
05	...	...	...
06	...	...	...
07	...	...	...
08	...	...	...
09	...	...	...
10	...	...	...

NO.	DESCRIPTION	DATE
...	...	...



**FINAL CONSTRUCTION**

**PROJECT OWNER**

General Management & Services Ltd.

PROJECT NO. ...

DATE ...

FOR - CUR - 10 - 01 - 01 - 01 - 01 - 01



REFER TO FINISH SCHEDULE DRAWINGS FOR ANY ALLOCATIONS OF FINISH SCHEDULES AS APPLICABLE TO FINISHES

GENERAL NOTES

1. ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE FINISH SCHEDULE.
2. ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE FINISH SCHEDULE.
3. ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE FINISH SCHEDULE.
4. ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE FINISH SCHEDULE.

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	...	...	...	...	...
2	...	...	...	...	...
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4	...	...	...	...	...
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11	...	...	...	...	...
12	...	...	...	...	...
13	...	...	...	...	...
14	...	...	...	...	...
15	...	...	...	...	...

GENERAL NOTES

1. ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE FINISH SCHEDULE.
2. ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE FINISH SCHEDULE.
3. ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE FINISH SCHEDULE.
4. ALL FINISHES TO BE INSTALLED IN ACCORDANCE WITH THE FINISH SCHEDULE.

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	...	...	...	...	...
2	...	...	...	...	...
3	...	...	...	...	...
4	...	...	...	...	...
5	...	...	...	...	...
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12	...	...	...	...	...
13	...	...	...	...	...
14	...	...	...	...	...
15	...	...	...	...	...

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	...	...	...	...	...
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3	...	...	...	...	...
4	...	...	...	...	...
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14	...	...	...	...	...
15	...	...	...	...	...

**Curtins**

FINAL CONSTRUCTION

PROJECT DWG#

General Arrangement to Level 01

DATE: 2024-08-20

PROJECT: ...

SCALE: ...

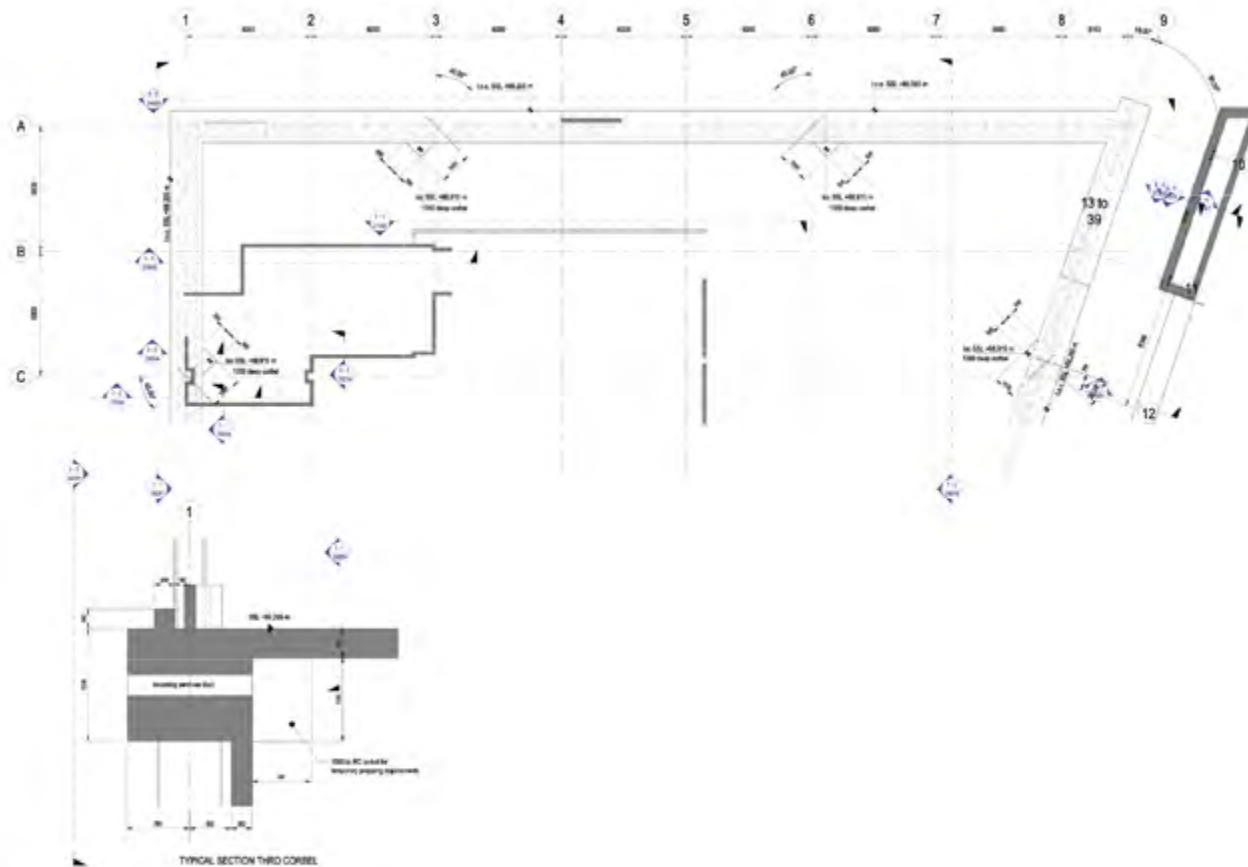
DESIGNER: ...

CHECKER: ...

APPROVER: ...

FILE: CUR - 01 - 00 - 20 - 0 - 1000 - 01





GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING AND DIMENSIONS. DIMENSIONS AND FINISHES INDICATED SHALL BE FOLLOWED TO THE DIMENSIONS SPECIFIED. IMMEDIATELY ALL DIMENSIONS MUST BE CHECKED TO BE CORRECT ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING FCD-CUR-10-000-01-0000. FOR PARTICULAR ITEM REQUIREMENTS REFER TO SPEC FCD-CUR-10-000-01-0000.

REV	FINAL CONSTRUCTION DRAWING	14.06.20	PT	JP
REV	CONSTRUCTION DRAWING	14.06.20	PT	ADD
REV				



INCORPORATED IN AUSTRALIA. 110 Market Street, Melbourne VIC 3000  
 1300 300 300  
 www.curtins.com.au

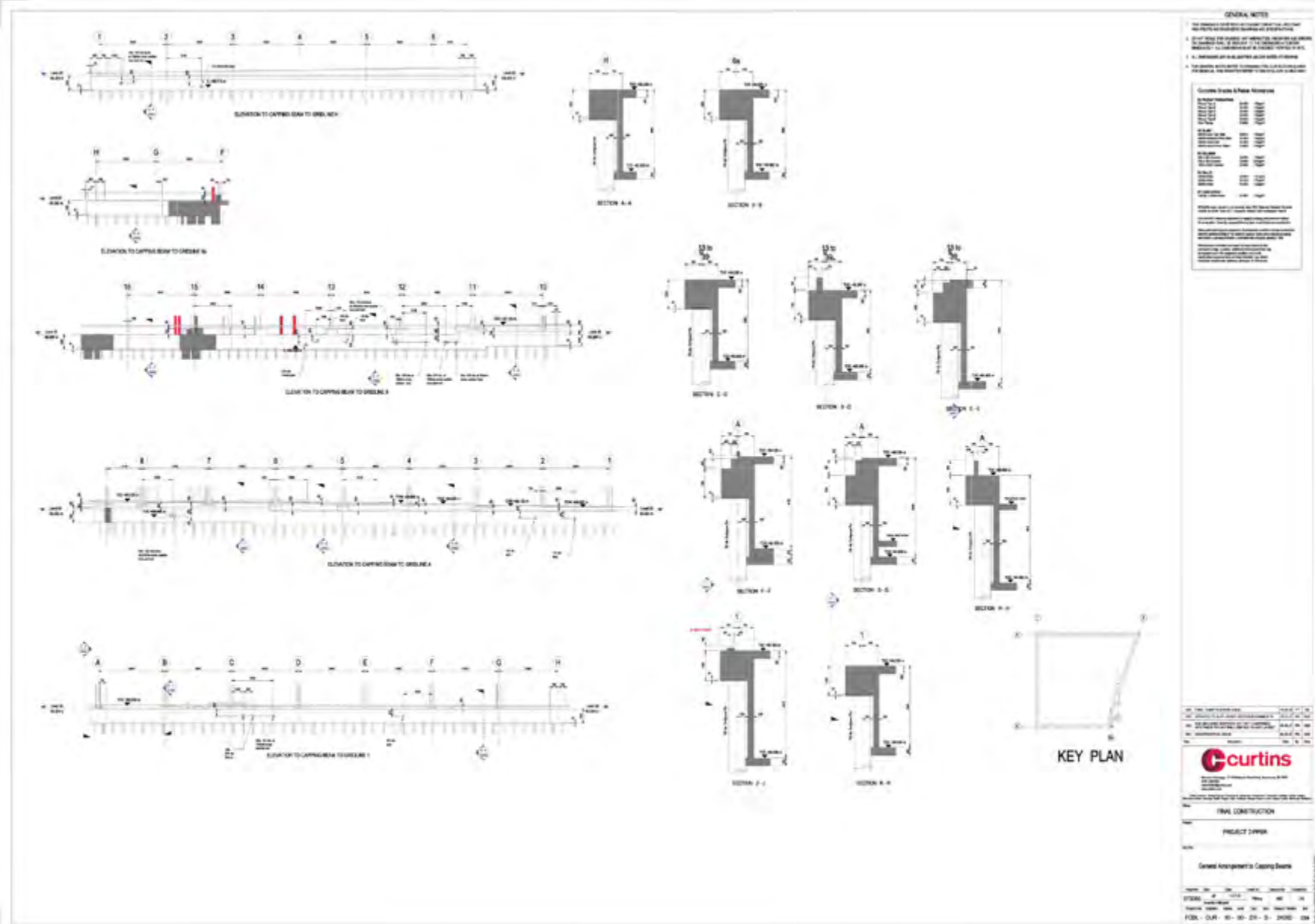
Rev: FINAL CONSTRUCTION

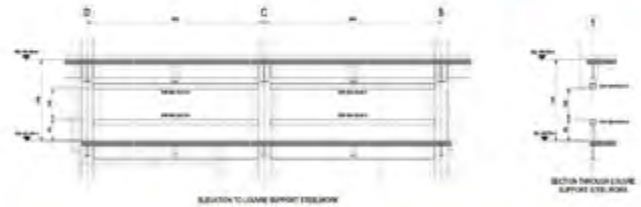
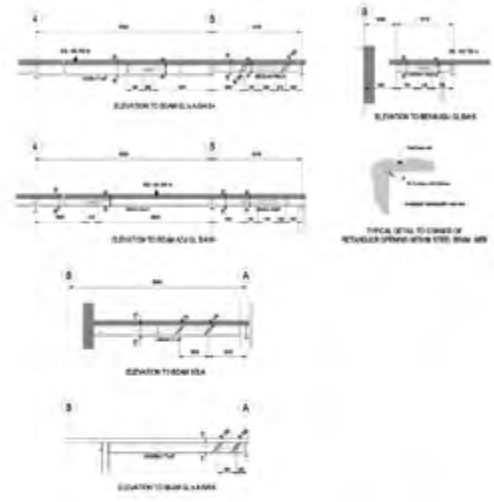
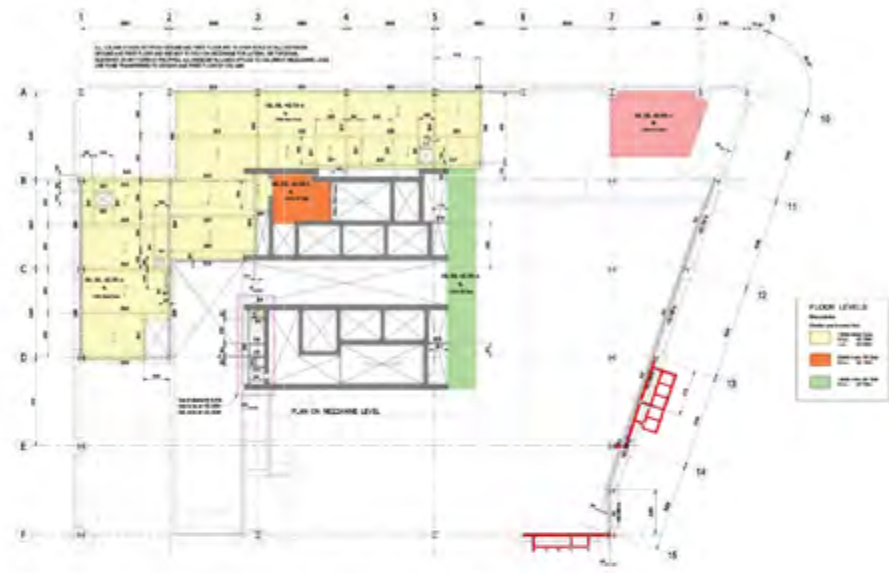
Page: PROJECT DIPPER

Rev: Details to Temporary Propping Corbels

Project No.	Rev	Date	Drawn By	Checked By	Issued By
073385	01	March 2020	PT	ADD	JP
Project No.	Revision	Date	Drawn By	Checked By	Issued By
FCD - CUR - 10 - 00 - DR - 8 -	17504 -	000			







**GENERAL NOTES**

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

**GENERAL NOTES**

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3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

**PRODUCTION FINISH SCHEDULE**

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	...	...	...	...	...
2	...	...	...	...	...
3	...	...	...	...	...
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30	...	...	...	...	...

**INSTALLATION SCHEDULE**

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	...	...	...	...	...
2	...	...	...	...	...
3	...	...	...	...	...
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28	...	...	...	...	...
29	...	...	...	...	...
30	...	...	...	...	...

**GENERAL NOTES**

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

**FINAL CONSTRUCTION**

**PROJECT OWNER**

**General Architecture & Interiors Ltd.**

**98**



**GENERAL NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS OF THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
4. ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS OF THE CONTRACT DOCUMENTS.

Code	Description	Material	Quantity	Unit
01	Concrete	Concrete	1000	m³
02	Reinforcement	Reinforcement	1000	m³
03	Formwork	Formwork	1000	m²
04	Steel	Steel	1000	m³
05	Brick	Brick	1000	m³
06	Block	Block	1000	m³
07	Plaster	Plaster	1000	m²
08	Paint	Paint	1000	m²
09	Roofing	Roofing	1000	m²
10	Cladding	Cladding	1000	m²
11	Glazing	Glazing	1000	m²
12	Partitions	Partitions	1000	m²
13	Furniture	Furniture	1000	m³
14	Electrical	Electrical	1000	m
15	Mechanical	Mechanical	1000	m
16	Plumbing	Plumbing	1000	m
17	Sanitaryware	Sanitaryware	1000	m
18	Lighting	Lighting	1000	m
19	Acoustic	Acoustic	1000	m
20	Security	Security	1000	m
21	Fire	Fire	1000	m
22	Other	Other	1000	m

**STRUCTURAL FINISHING SCHEDULE**

Code	Description	Material	Quantity	Unit
01	Concrete	Concrete	1000	m³
02	Reinforcement	Reinforcement	1000	m³
03	Formwork	Formwork	1000	m²
04	Steel	Steel	1000	m³
05	Brick	Brick	1000	m³
06	Block	Block	1000	m³
07	Plaster	Plaster	1000	m²
08	Paint	Paint	1000	m²
09	Roofing	Roofing	1000	m²
10	Cladding	Cladding	1000	m²
11	Glazing	Glazing	1000	m²
12	Partitions	Partitions	1000	m²
13	Furniture	Furniture	1000	m³
14	Electrical	Electrical	1000	m
15	Mechanical	Mechanical	1000	m
16	Plumbing	Plumbing	1000	m
17	Sanitaryware	Sanitaryware	1000	m
18	Lighting	Lighting	1000	m
19	Acoustic	Acoustic	1000	m
20	Security	Security	1000	m
21	Fire	Fire	1000	m
22	Other	Other	1000	m

**GENERAL NOTES**

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3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.
4. ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS OF THE CONTRACT DOCUMENTS.

**FINAL CONSTRUCTION**

**PROJECT DRAWING**

**General Arrangement to Level 01**

**Curtins**

1998 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100



NO.	DESCRIPTION	REMARKS
1	...	...
2	...	...
3	...	...
4	...	...
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NO.	DESCRIPTION	REMARKS
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NO.	DESCRIPTION	REMARKS
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**GENERAL NOTES**

1. ALL DIMENSIONS ARE GIVEN UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
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4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

**Concrete Grades & Reinforcement**

Concrete Grade	Reinforcement
M20	Fe 415
M25	Fe 415
M30	Fe 415
M35	Fe 415
M40	Fe 415
M45	Fe 415
M50	Fe 415
M55	Fe 415
M60	Fe 415
M65	Fe 415
M70	Fe 415
M75	Fe 415
M80	Fe 415
M85	Fe 415
M90	Fe 415
M95	Fe 415
M100	Fe 415

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3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

**FINAL CONSTRUCTION**

**PROJECT DRAWING**

**General Arrangement to Level 0**

**Curtins**

100



**GENERAL NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.

**GENERAL NOTES**

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.

**STEEL PLATE UNDER SCHEDULE**

NO.	REF.	DESCRIPTION	QUANTITY	UNIT	REMARKS
001	1	STEEL PLATE 10mm	100	SQ.M	
002	2	STEEL PLATE 12mm	150	SQ.M	
003	3	STEEL PLATE 15mm	200	SQ.M	
004	4	STEEL PLATE 20mm	300	SQ.M	
005	5	STEEL PLATE 25mm	400	SQ.M	
006	6	STEEL PLATE 30mm	500	SQ.M	
007	7	STEEL PLATE 35mm	600	SQ.M	
008	8	STEEL PLATE 40mm	700	SQ.M	
009	9	STEEL PLATE 45mm	800	SQ.M	
010	10	STEEL PLATE 50mm	900	SQ.M	

**GENERAL NOTES**

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2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AUTHORITY.

**General Arrangement to Level 01**

**FINAL CONSTRUCTION**

**PROJECT DRAWING**

**General Arrangement to Level 01**

**Curtins**

101



**FLOOR LEVELS**

Level	Finish	Level	Finish	Level	Finish
Level 11	11.150	Level 12	12.150	Level 13	13.150
Level 10	10.150	Level 11	11.150	Level 12	12.150
Level 9	9.150	Level 10	10.150	Level 11	11.150
Level 8	8.150	Level 9	9.150	Level 10	10.150
Level 7	7.150	Level 8	8.150	Level 9	9.150
Level 6	6.150	Level 7	7.150	Level 8	8.150
Level 5	5.150	Level 6	6.150	Level 7	7.150
Level 4	4.150	Level 5	5.150	Level 6	6.150
Level 3	3.150	Level 4	4.150	Level 5	5.150
Level 2	2.150	Level 3	3.150	Level 4	4.150
Level 1	1.150	Level 2	2.150	Level 3	3.150
Level 0	0.150	Level 1	1.150	Level 2	2.150
Level -1	-0.150	Level 0	0.150	Level 1	1.150
Level -2	-1.150	Level -1	-0.150	Level 0	0.150

**GENERAL NOTES**

1. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE NATIONAL BUILDING REGULATIONS AND ALL APPLICABLE STANDARDS.
2. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE NATIONAL BUILDING REGULATIONS AND ALL APPLICABLE STANDARDS.
3. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE NATIONAL BUILDING REGULATIONS AND ALL APPLICABLE STANDARDS.
4. ALL WORK IS TO BE DONE IN ACCORDANCE WITH THE NATIONAL BUILDING REGULATIONS AND ALL APPLICABLE STANDARDS.

**Concrete Slabs & Beams Schedule**

Item	Description	Quantity	Unit
1	Concrete Slabs	1000	m <sup>2</sup>
2	Concrete Beams	500	m
3	Concrete Columns	100	m
4	Concrete Walls	200	m

All work is to be done in accordance with the National Building Regulations and all applicable standards.

**STEELWORK SCHEDULE**

Item	Description	Quantity	Unit
1	Steel Beams	1000	m
2	Steel Columns	100	m
3	Steel Decking	1000	m <sup>2</sup>
4	Steel Bracing	500	m

**PILE PILE WORK SCHEDULE**

Item	Description	Quantity	Unit
1	Pile Drilling	1000	m
2	Pile Casting	1000	m
3	Pile Testing	100	m

Item	Description	Quantity	Unit
1	Formwork	1000	m <sup>2</sup>
2	Reinforcement	1000	m <sup>3</sup>
3	Concrete	1000	m <sup>3</sup>
4	Steel	1000	m <sup>3</sup>



**FINAL CONSTRUCTION**

PROJECT OWNER

General Arrangement to Level 0 to 11



**FLOOR LEVELS**

LEVEL	DESCRIPTION
01	FLOOR LEVEL
02	FLOOR LEVEL
03	FLOOR LEVEL
04	FLOOR LEVEL
05	FLOOR LEVEL
06	FLOOR LEVEL
07	FLOOR LEVEL
08	FLOOR LEVEL
09	FLOOR LEVEL

GENERAL NOTES

NO.	DESCRIPTION
1	FOR THE PURPOSE OF THIS CONTRACT DOCUMENTS, ALL REFERENCES TO 'THE CONTRACTOR' SHALL MEAN THE CONTRACTOR AS DEFINED IN THE CONTRACT DOCUMENTS.
2	THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, APPROVALS, AND LICENSES FROM THE APPLICABLE GOVERNMENT AGENCIES AND AUTHORITIES.
3	ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE APPLICABLE GOVERNMENT AGENCIES.
4	THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL UTILITIES AT ALL TIMES.
5	ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE APPLICABLE GOVERNMENT AGENCIES.

**STRUCTURAL FRAME SCHEDULE**

NO.	DESCRIPTION	UNIT	QUANTITY
1	CONCRETE WALL	m <sup>2</sup>	1000
2	CONCRETE SLAB	m <sup>2</sup>	1000
3	CONCRETE COLUMN	m <sup>3</sup>	100
4	CONCRETE BEAM	m <sup>3</sup>	100
5	STEEL COLUMN	m	100
6	STEEL BEAM	m	100
7	STEEL PLATE GIRDER	m	100
8	STEEL BRACE	m	100
9	STEEL JOIST	m	100
10	STEEL FLOOR DECK	m <sup>2</sup>	1000

**STEEL PLATE GIRDER SCHEDULE**

NO.	DESCRIPTION	UNIT	QUANTITY
1	STEEL PLATE GIRDER	m	100
2	STEEL PLATE GIRDER	m	100
3	STEEL PLATE GIRDER	m	100
4	STEEL PLATE GIRDER	m	100
5	STEEL PLATE GIRDER	m	100

**GENERAL NOTES**

1. FOR THE PURPOSE OF THIS CONTRACT DOCUMENTS, ALL REFERENCES TO 'THE CONTRACTOR' SHALL MEAN THE CONTRACTOR AS DEFINED IN THE CONTRACT DOCUMENTS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, APPROVALS, AND LICENSES FROM THE APPLICABLE GOVERNMENT AGENCIES AND AUTHORITIES.

3. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE APPLICABLE GOVERNMENT AGENCIES.

4. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL UTILITIES AT ALL TIMES.

5. ALL MATERIALS AND WORKMANSHIP SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE APPLICABLE GOVERNMENT AGENCIES.

**Quantity Schedule Table**

NO.	DESCRIPTION	UNIT	QUANTITY
1	CONCRETE WALL	m <sup>2</sup>	1000
2	CONCRETE SLAB	m <sup>2</sup>	1000
3	CONCRETE COLUMN	m <sup>3</sup>	100
4	CONCRETE BEAM	m <sup>3</sup>	100
5	STEEL COLUMN	m	100
6	STEEL BEAM	m	100
7	STEEL PLATE GIRDER	m	100
8	STEEL BRACE	m	100
9	STEEL JOIST	m	100
10	STEEL FLOOR DECK	m <sup>2</sup>	1000

**Final Construction**

**PROJECT DATA**

**General Arrangement to Level 01**



**FINAL CONSTRUCTION**

**PROJECT DATA**

**General Arrangement to Level 01**

DATE: 2024-01-01  
SCALE: 1:500  
DRAWN BY: [Name]  
CHECKED BY: [Name]



**GENERAL NOTES**

1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
4. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.
5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE SPECIFIED.

**Concrete Slabs & Reinforcement**

Slab	Thickness	Reinforcement
Level 02	150mm	10mm @ 150mm
Level 01	150mm	10mm @ 150mm
Level 03	150mm	10mm @ 150mm

NO.	DESCRIPTION	REMARKS
1	...	...
2	...	...
3	...	...
4	...	...
5	...	...
6	...	...
7	...	...
8	...	...
9	...	...
10	...	...
11	...	...
12	...	...

STEEL PLATE GIRDERS		STRUCTURAL FRAMEWORKS	
NO.	DESCRIPTION	NO.	DESCRIPTION
1	...	1	...
2	...	2	...
3	...	3	...
4	...	4	...
5	...	5	...
6	...	6	...
7	...	7	...
8	...	8	...
9	...	9	...
10	...	10	...
11	...	11	...
12	...	12	...

NO.	DESCRIPTION	REMARKS
1	...	...
2	...	...
3	...	...
4	...	...
5	...	...
6	...	...
7	...	...
8	...	...
9	...	...
10	...	...
11	...	...
12	...	...

**Curtins**

FINAL CONSTRUCTION

PROJECT DRAWING

General Arrangement to Levels 02

DATE: 01/10/2018

SCALE: 1:100

PROJECT: ...

DESIGNER: ...

CHECKER: ...

APPROVER: ...

FOR: CUR - 01 - 08 - 01 - 01 - 01 - 01





**GENERAL NOTES**

1. All dimensions are in millimeters unless otherwise stated.
2. All dimensions are to the centerline of walls and columns unless otherwise stated.
3. All dimensions are to the face of walls and columns unless otherwise stated.
4. All dimensions are to the face of walls and columns unless otherwise stated.

**GENERAL NOTES**

1. All dimensions are in millimeters unless otherwise stated.
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**GENERAL NOTES**

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3. All dimensions are to the face of walls and columns unless otherwise stated.
4. All dimensions are to the face of walls and columns unless otherwise stated.

**STRUCTURAL PROGRAM SCHEDULE**

NO.	DESCRIPTION	START DATE	END DATE	STATUS
1	FOUNDATION	01/01/2024	03/31/2024	Completed
2	GROUND FLOOR	04/01/2024	06/30/2024	Completed
3	FIRST FLOOR	07/01/2024	09/30/2024	Completed
4	SECOND FLOOR	10/01/2024	12/31/2024	Completed
5	THIRD FLOOR	01/01/2025	03/31/2025	Completed
6	FOURTH FLOOR	04/01/2025	06/30/2025	Completed
7	FIFTH FLOOR	07/01/2025	09/30/2025	Completed
8	SIXTH FLOOR	10/01/2025	12/31/2025	Completed
9	SEVENTH FLOOR	01/01/2026	03/31/2026	Completed
10	EIGHTH FLOOR	04/01/2026	06/30/2026	Completed
11	NINTH FLOOR	07/01/2026	09/30/2026	Completed
12	TENTH FLOOR	10/01/2026	12/31/2026	Completed
13	ROOF	01/01/2027	03/31/2027	Completed
14	MECHANICAL ROOMS	04/01/2027	06/30/2027	Completed
15	ELECTRICAL ROOMS	07/01/2027	09/30/2027	Completed
16	PLUMBING ROOMS	10/01/2027	12/31/2027	Completed
17	PAINTING	01/01/2028	03/31/2028	Completed
18	FINAL INSPECTION	04/01/2028	06/30/2028	Completed
19	HANDOVER	07/01/2028	09/30/2028	Completed
20	PROJECT TOTAL	01/01/2024	09/30/2028	Completed

**FINAL PLAT SCHEDULE**

NO.	DESCRIPTION	START DATE	END DATE	STATUS
1	FOUNDATION	01/01/2024	03/31/2024	Completed
2	GROUND FLOOR	04/01/2024	06/30/2024	Completed
3	FIRST FLOOR	07/01/2024	09/30/2024	Completed
4	SECOND FLOOR	10/01/2024	12/31/2024	Completed
5	THIRD FLOOR	01/01/2025	03/31/2025	Completed
6	FOURTH FLOOR	04/01/2025	06/30/2025	Completed
7	FIFTH FLOOR	07/01/2025	09/30/2025	Completed
8	SIXTH FLOOR	10/01/2025	12/31/2025	Completed
9	SEVENTH FLOOR	01/01/2026	03/31/2026	Completed
10	EIGHTH FLOOR	04/01/2026	06/30/2026	Completed
11	NINTH FLOOR	07/01/2026	09/30/2026	Completed
12	TENTH FLOOR	10/01/2026	12/31/2026	Completed
13	ROOF	01/01/2027	03/31/2027	Completed
14	MECHANICAL ROOMS	04/01/2027	06/30/2027	Completed
15	ELECTRICAL ROOMS	07/01/2027	09/30/2027	Completed
16	PLUMBING ROOMS	10/01/2027	12/31/2027	Completed
17	PAINTING	01/01/2028	03/31/2028	Completed
18	FINAL INSPECTION	04/01/2028	06/30/2028	Completed
19	HANDOVER	07/01/2028	09/30/2028	Completed
20	PROJECT TOTAL	01/01/2024	09/30/2028	Completed

**GENERAL NOTES**

1. All dimensions are in millimeters unless otherwise stated.
2. All dimensions are to the centerline of walls and columns unless otherwise stated.
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**FINAL CONSTRUCTION**

**PROJECT OFFICE**

**General Arrangement to Level 01**

**Curtins**

**PROJECT OFFICE**

**General Arrangement to Level 01**

**PROJECT OFFICE**

**General Arrangement to Level 01**



10b



FLOOR LEVELS	
Level 10	Yellow
Level 11	Orange
Level 12	Red

SPECIFICATIONS - GENERAL NOTES	
1.1	General Notes
1.2	Construction Notes
1.3	Material Notes
1.4	Installation Notes
1.5	Finishing Notes
1.6	Structural Notes
1.7	Mechanical Notes
1.8	Electrical Notes
1.9	Plumbing Notes
1.10	Other Notes

STRUCTURAL FRAME SCHEDULE			
NO.	SECTION	DESCRIPTION	MARKING
1	10	Column	C10
2	10	Beam	B10
3	10	Slab	S10
4	10	Wall	W10
5	10	Stair	ST10
6	10	Roof	R10
7	10	Foundation	F10
8	10	Other	O10

**GENERAL NOTES**

1. All dimensions are given in millimeters unless otherwise stated.
2. All work shall be in accordance with the Australian Standard AS/NZS 1170:2002.
3. All materials shall be of a quality and standard as specified in the contract documents.
4. All materials shall be of a quality and standard as specified in the contract documents.
5. All materials shall be of a quality and standard as specified in the contract documents.

**Concrete Grades & Reinforcement**

Grade	Reinforcement
Concrete	Reinforcement
Concrete	Reinforcement
Concrete	Reinforcement
Concrete	Reinforcement
Concrete	Reinforcement
Concrete	Reinforcement

**Other Notes:**

- 1. All materials shall be of a quality and standard as specified in the contract documents.
- 2. All materials shall be of a quality and standard as specified in the contract documents.
- 3. All materials shall be of a quality and standard as specified in the contract documents.

**FINAL CONSTRUCTION**

PROJECT NAME: **Generic Arrangement to Level 10**

DATE: 10/10/2020

VERSION: 1.0

PROJECT NO: 1010

DESIGN NO: 1010

CONSTRUCTION NO: 1010

CONTRACT NO: 1010

PROJECT NO: 1010

DESIGN NO: 1010

CONSTRUCTION NO: 1010

CONTRACT NO: 1010

PROJECT NO: 1010

DESIGN NO: 1010

CONSTRUCTION NO: 1010

CONTRACT NO: 1010

PROJECT NO: 1010

DESIGN NO: 1010

CONSTRUCTION NO: 1010

CONTRACT NO: 1010

PROJECT NO: 1010

DESIGN NO: 1010

CONSTRUCTION NO: 1010

CONTRACT NO: 1010



11  
20



**FLOOR LEVELS**

Level 11	Yellow
Level 10	Orange
Level 9	Red

NO.	DESCRIPTION	REMARKS
1	General Notes	Refer to General Notes for all items not specified here.
2	Structural Steel	Structural steel shall be as specified in the Structural Steel Schedule.
3	Concrete	Concrete shall be as specified in the Concrete Schedule.
4	Formwork	Formwork shall be as specified in the Formwork Schedule.
5	Insulation	Insulation shall be as specified in the Insulation Schedule.
6	Paint	Paint shall be as specified in the Paint Schedule.
7	Handrails	Handrails shall be as specified in the Handrails Schedule.
8	Staircases	Staircases shall be as specified in the Staircases Schedule.
9	Elevators	Elevators shall be as specified in the Elevators Schedule.
10	Other	Other items shall be as specified in the Other Schedule.

**STRUCTURAL STEEL SCHEDULE**

NO.	DESCRIPTION	QUANTITY	UNIT
1	Structural Steel	1000	kg
2	Structural Steel	2000	kg
3	Structural Steel	3000	kg
4	Structural Steel	4000	kg
5	Structural Steel	5000	kg
6	Structural Steel	6000	kg
7	Structural Steel	7000	kg
8	Structural Steel	8000	kg
9	Structural Steel	9000	kg
10	Structural Steel	10000	kg

**GENERAL NOTES**

1. All dimensions are in millimeters unless otherwise stated.
2. All work shall be in accordance with the relevant Australian Standards and Codes of Practice.
3. All materials shall be as specified in the relevant schedules.
4. All work shall be completed in accordance with the relevant schedules.
5. All work shall be completed in accordance with the relevant schedules.

**General Notes & Refer to Schedule**

Refer to Schedule 1 for all items not specified here.

Refer to Schedule 2 for all items not specified here.

Refer to Schedule 3 for all items not specified here.

Refer to Schedule 4 for all items not specified here.

Refer to Schedule 5 for all items not specified here.

Refer to Schedule 6 for all items not specified here.

Refer to Schedule 7 for all items not specified here.

Refer to Schedule 8 for all items not specified here.

Refer to Schedule 9 for all items not specified here.

Refer to Schedule 10 for all items not specified here.

**FINAL CONSTRUCTION**

**PROJECT DATA**

Client: Curtin University

Project: Curtin University Building

Location: Perth, Western Australia

Contract No: 11-20-5

Issue No: 1

Issue Date: 11-20-5

Scale: As Shown

Author: [Name]

Check: [Name]

Drawn: [Name]

Project Manager: [Name]

Structural Engineer: [Name]

Architect: [Name]

Client Representative: [Name]

Contract Administrator: [Name]

Quantity Surveyor: [Name]

Cost Consultant: [Name]

Environmental Consultant: [Name]

Energy Consultant: [Name]

Acoustic Consultant: [Name]

Lighting Consultant: [Name]

MEP Consultant: [Name]

Fire Consultant: [Name]

Transport Consultant: [Name]

Other Consultant: [Name]

Prepared by: [Name]

Checked by: [Name]

Drawn by: [Name]

Project Manager: [Name]

Structural Engineer: [Name]

Architect: [Name]

Client Representative: [Name]

Contract Administrator: [Name]

Quantity Surveyor: [Name]

Cost Consultant: [Name]

Environmental Consultant: [Name]

Energy Consultant: [Name]

Acoustic Consultant: [Name]

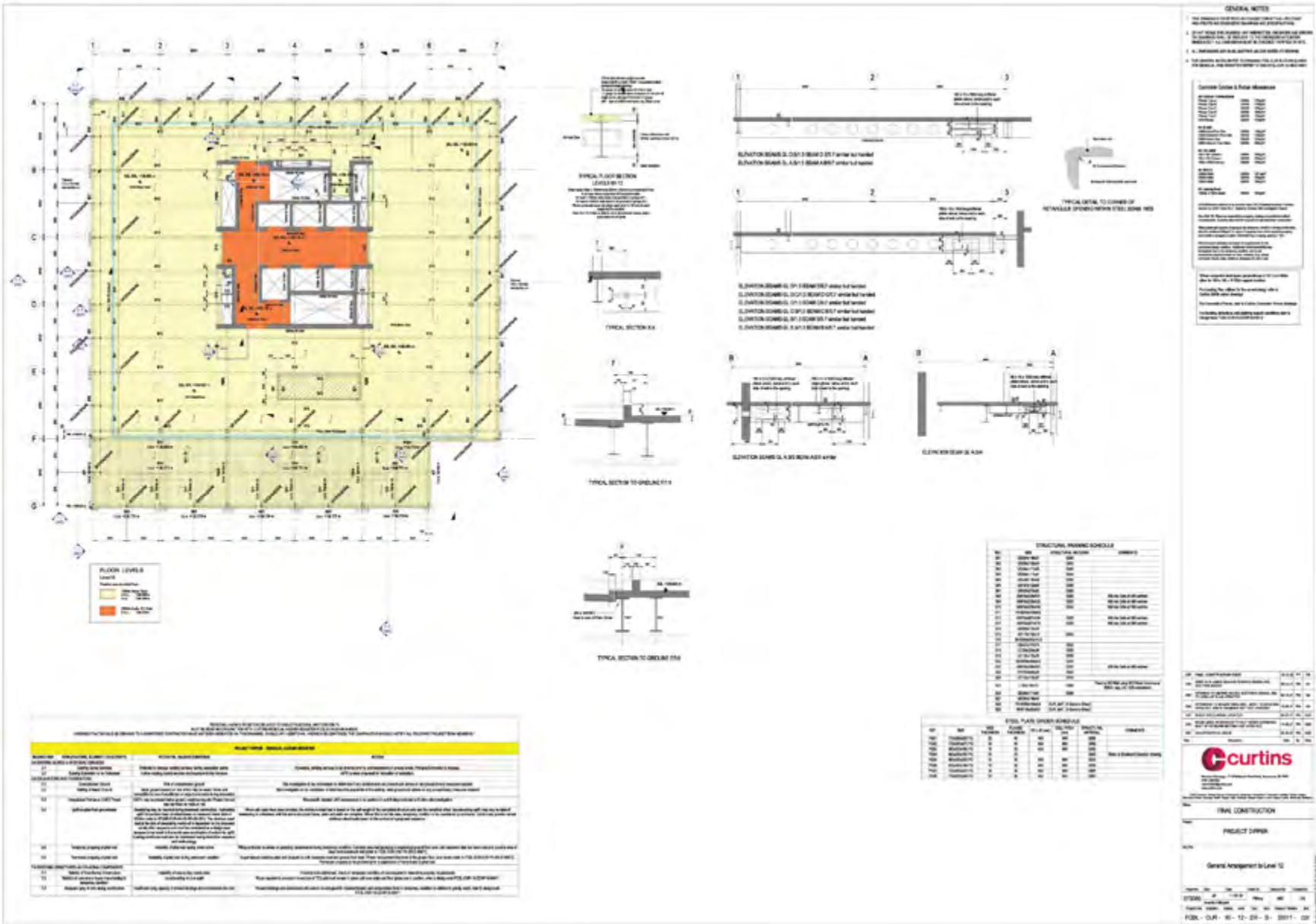
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MEP Consultant: [Name]

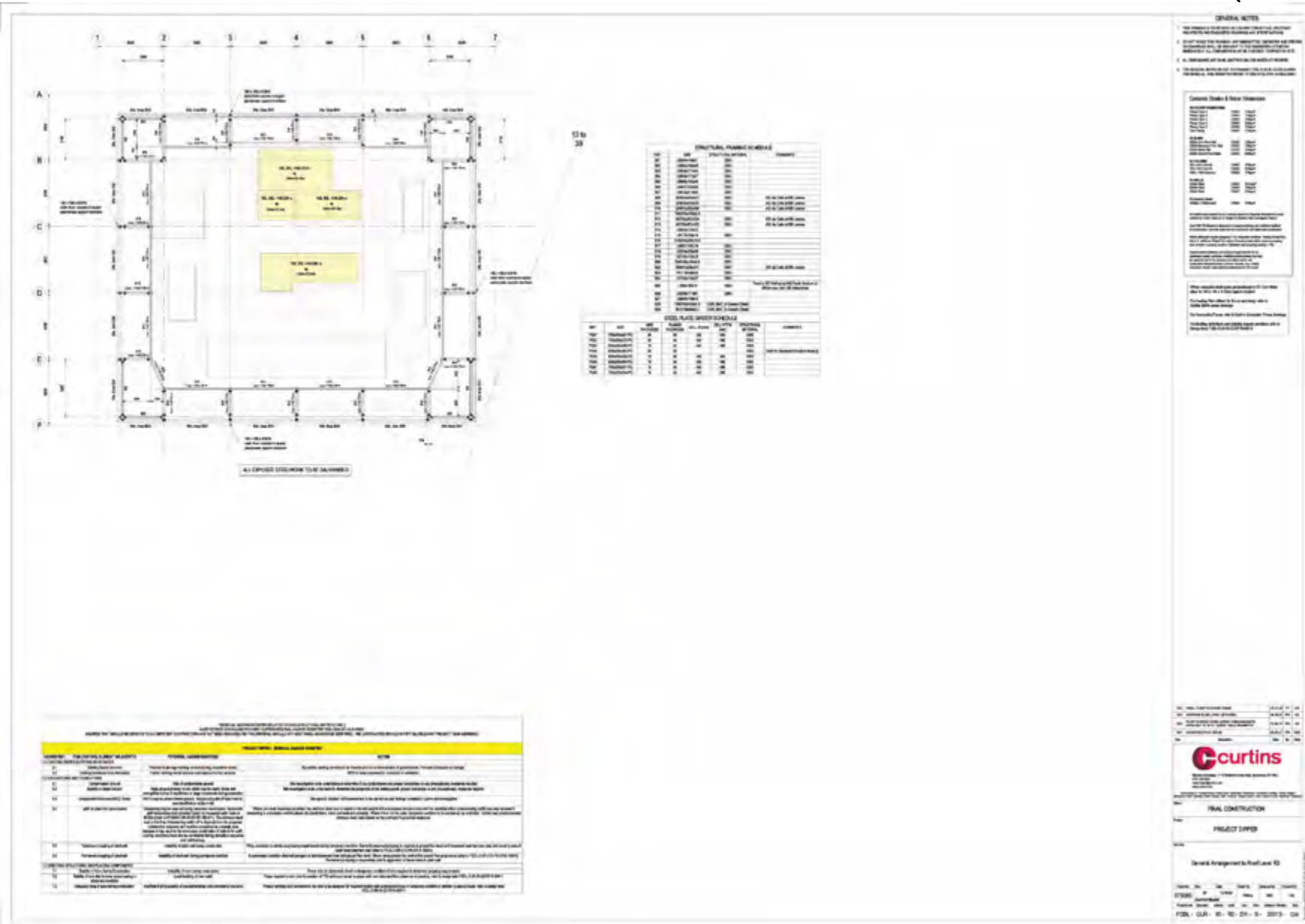
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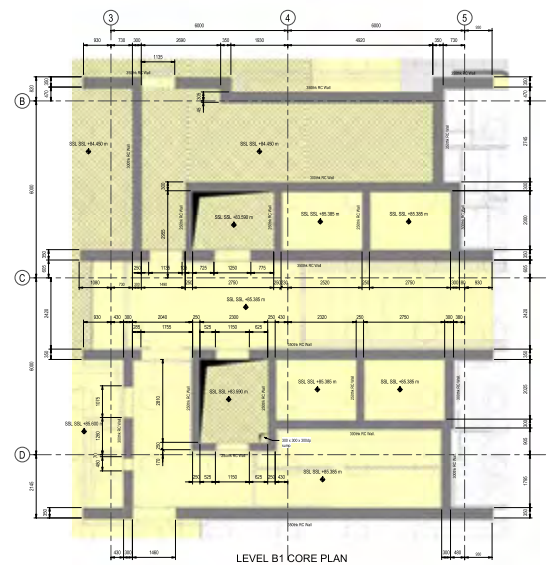
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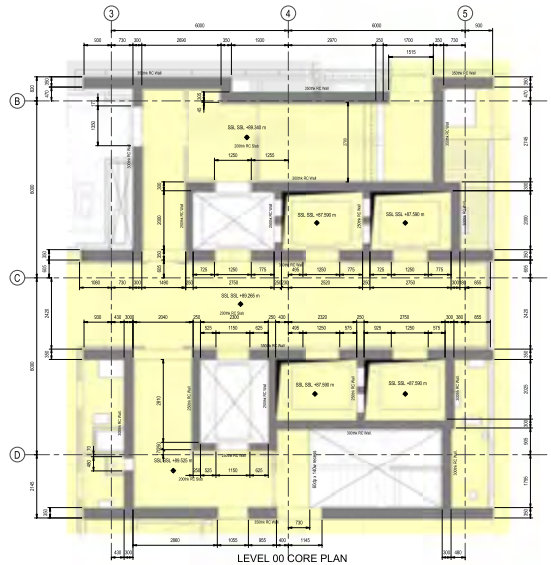




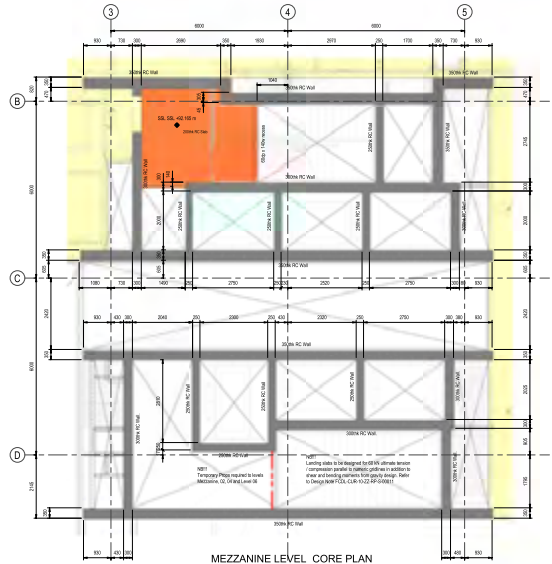




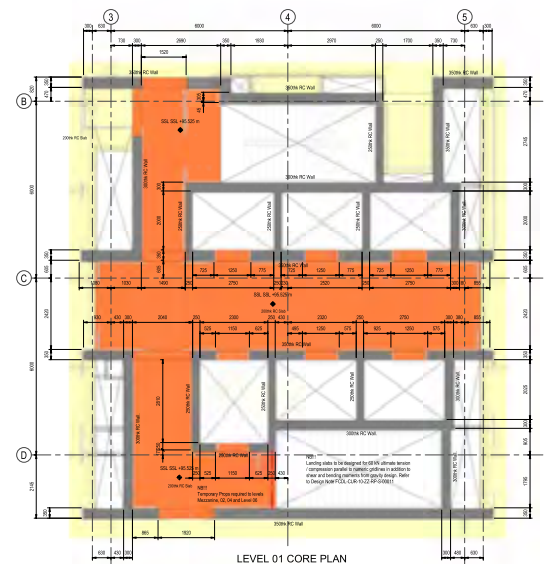
LEVEL B1 CORE PLAN



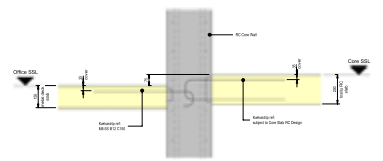
LEVEL 00 CORE PLAN



MEZZANINE LEVEL CORE PLAN



LEVEL 01 CORE PLAN



TYPICAL KWIKASTRIP DETAIL RC WALL / METAL DECK / INSITU SLAB INTERFERENCE WHERE DECKING SPANS PERPENDICULAR OR PARALLEL TO RC WALL

Table with 3 columns: HAZARD REF, ITEM FEATURE, ELEMENT OR ACTIVITY, POTENTIAL HAZARD IDENTIFIED, and ACTION. It lists various safety hazards like falling objects, stability of walls, and fire safety measures.

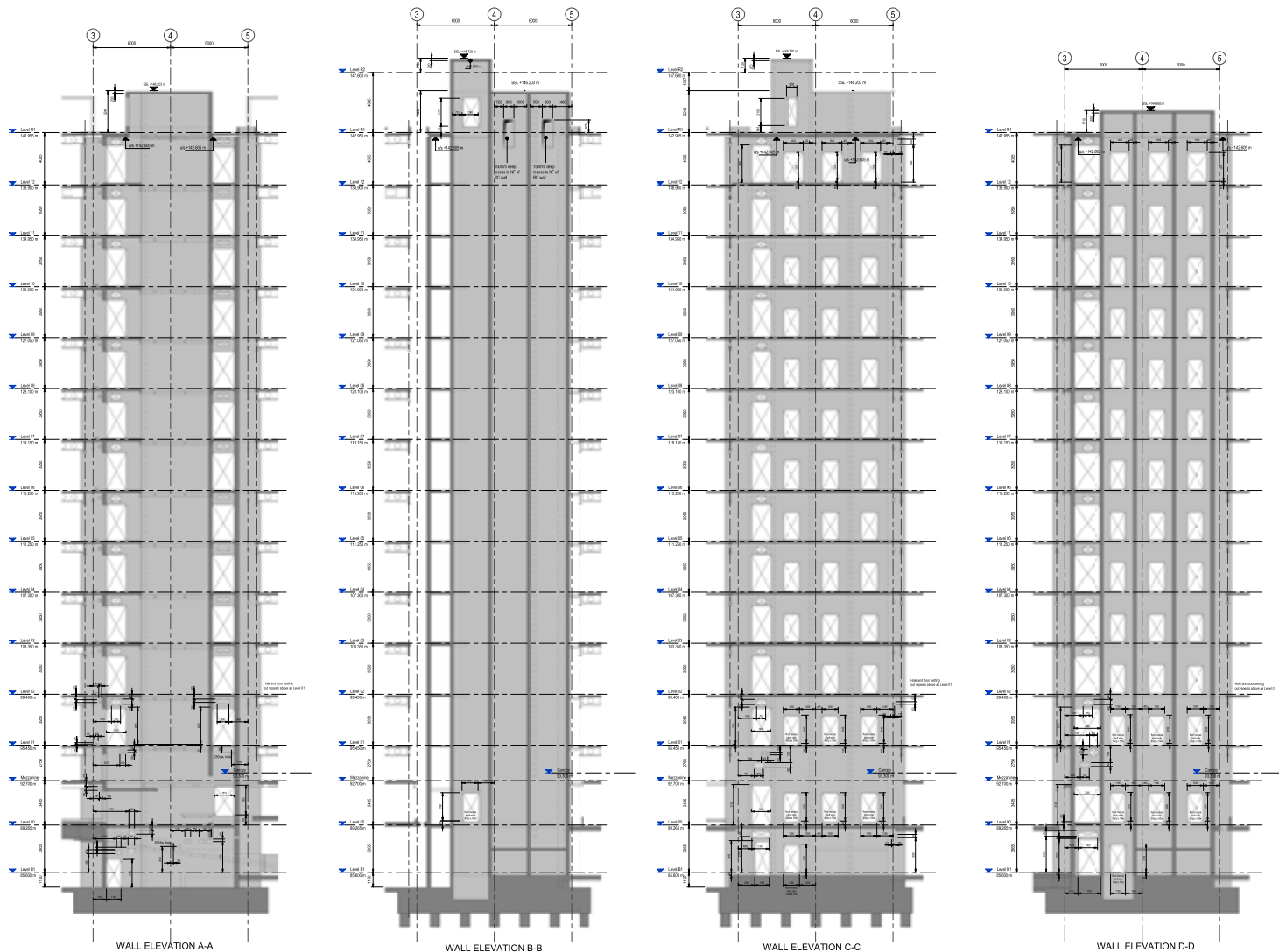
GENERAL NOTES
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ALL DIMENSIONS AND FINISHES SHOWN ON DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY IN THE EVENT OF ANY DISCREPANCY OR INCONSISTENCY.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-ZZ-DR-2005 FOR RELEVANT INFORMATION REFER TO DRAWING FCDL-CUR-10-ZZ-DR-2005.

Table with 3 columns: CONCRETE GRADES & REBAR ALLOWANCES, REBAR ALLOWANCES, and REBAR ALLOWANCES. It lists various concrete and rebar specifications for different parts of the building.

Project information block including Curtins logo, project name 'PROJECT DIPPER', sheet number 'General Arrangement to Core sheet 1', and drawing ID 'FCDL - CUR - 10 - ZZ - DR - S - 24005 - 04'.







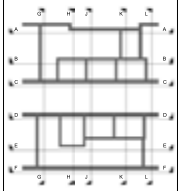
**GENERAL NOTES**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL AND ENGINEERING DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE UP OR DOWN. ALL DIMENSIONS SHALL BE INDICATED BY DIMENSION LINES AND DIMENSIONS SHALL BE BROUGHT TO THE DIMENSIONED ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CORRECTLY IDENTIFIED.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING FC01-CLM-12-24-02-0001 FOR GENERAL NOTES REFER TO DRAWING FC01-CLM-12-24-02-0001.

**Concrete Grades & Rebar Allowances**

Member / Allowance	Grade	Rebar
Slab	C30/37	H40
Beam	C30/37	H40
Column	C30/37	H40
Wall	C30/37	H40
Foundation	C30/37	H40
Other	C30/37	H40

Refer to drawing FC01-CLM-12-24-02-0001 for details of concrete grades and rebar allowances. All dimensions are in millimeters unless noted otherwise. For general notes refer to drawing FC01-CLM-12-24-02-0001.



CORE WALL KEY PLAN

Code	Description	Start Date	End Date
001	FINAL CONSTRUCTION DRAW	10/02/2024	10/02/2024
002	CONSTRUCTION PERMITS	10/02/2024	10/02/2024
003	CONSTRUCTION START	10/02/2024	10/02/2024
004	CONSTRUCTION COMPLETE	10/02/2024	10/02/2024
005	CONSTRUCTION END	10/02/2024	10/02/2024

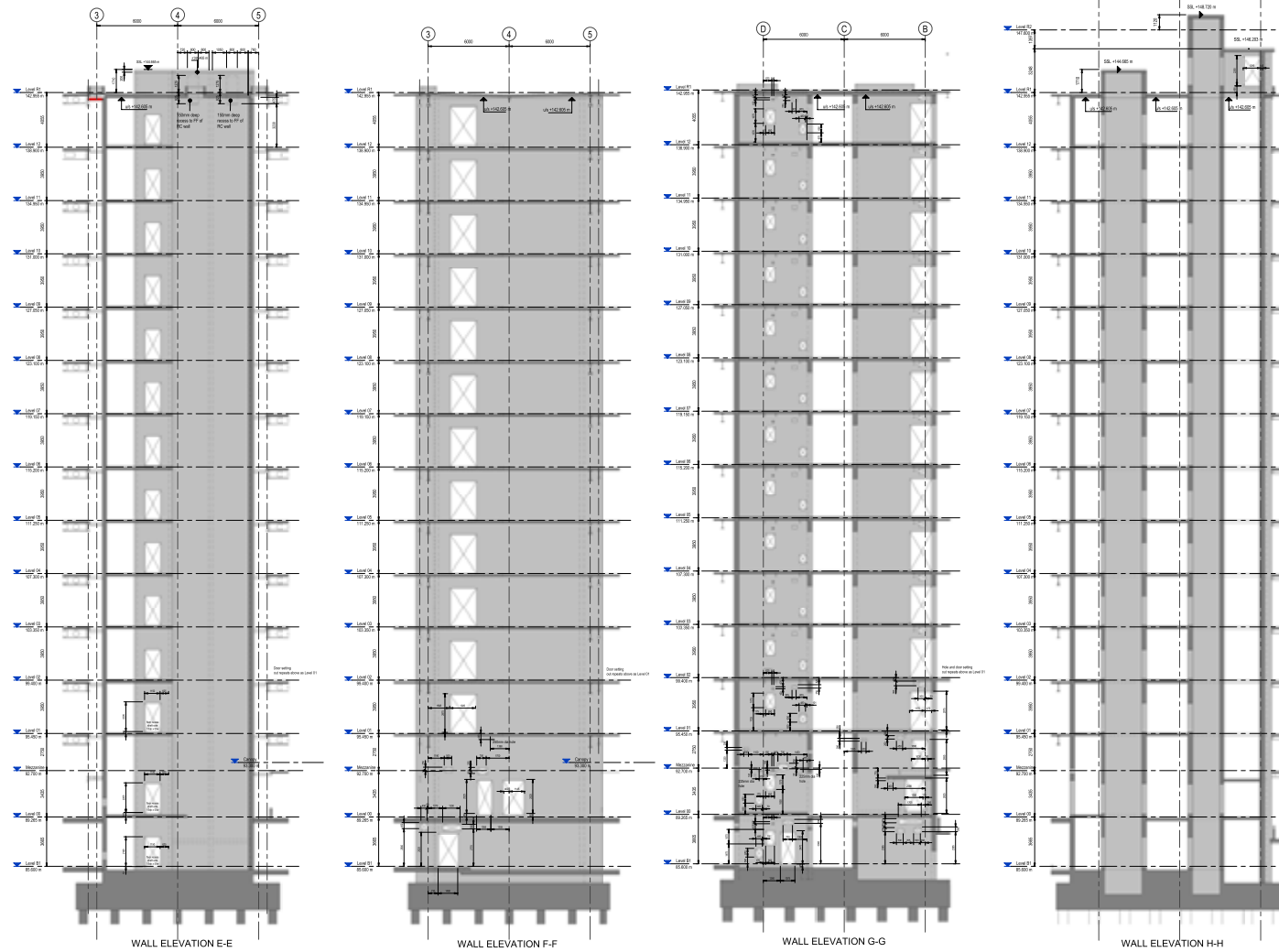
**Curtins**  
 115 St. James Street, Dublin 8, Ireland  
 Tel: +353 1 454 4444  
 Email: info@curtins.com  
 www.curtins.com

FINAL CONSTRUCTION  
 PROJECT DIPPER

Core Wall Elevations sheet 1

Project	Client	Phase	Rev	Date
073885	Project Manager	Final	450	24

FC01 - CLM - 10 - ZZ - DR - S - 24011 - 03

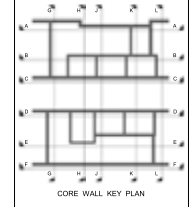


GENERAL NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. DIMENSIONS GIVEN IN ARCHITECTS AND ENGINEERS DRAWINGS SHALL BE BROUGHT TO THE FOREMOST ATTENTION IMMEDIATELY IN THE EVENT OF ANY DISCREPANCY.
3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING FCDL-10-ZZ-DR-0-2001 FOR RELEVANT INFORMATION.

**Concrete Grades & Rebar Allowances**

Concrete Grade	Rebar	Allowance
C35/45	B500C	10mm
C30/37	B500C	10mm
C25/30	B500C	10mm
C20/25	B500C	10mm
C15/20	B500C	10mm
C10/13	B500C	10mm
C5/8	B500C	10mm
C35/45	B500C	10mm
C30/37	B500C	10mm
C25/30	B500C	10mm
C20/25	B500C	10mm
C15/20	B500C	10mm
C10/13	B500C	10mm
C5/8	B500C	10mm



NO.	DESCRIPTION	DATE	BY
001	FINAL CONSTRUCTION	11.10.24	DR
002	ISSUED FOR PERMIT	01.07.24	DR
003	ISSUED FOR PERMIT	11.07.24	DR
004	ISSUED FOR PERMIT	11.07.24	DR
005	ISSUED FOR PERMIT	11.07.24	DR
006	ISSUED FOR PERMIT	11.07.24	DR
007	ISSUED FOR PERMIT	11.07.24	DR
008	ISSUED FOR PERMIT	11.07.24	DR
009	ISSUED FOR PERMIT	11.07.24	DR
010	ISSUED FOR PERMIT	11.07.24	DR

**Curtins**  
 Building & Construction Division  
 111 St. Johns Street, Suite 1000, Melbourne, VIC 3000  
 Australia  
 Phone: +61 (0)3 9594 1000  
 Email: info@curtins.com.au  
 www.curtins.com.au

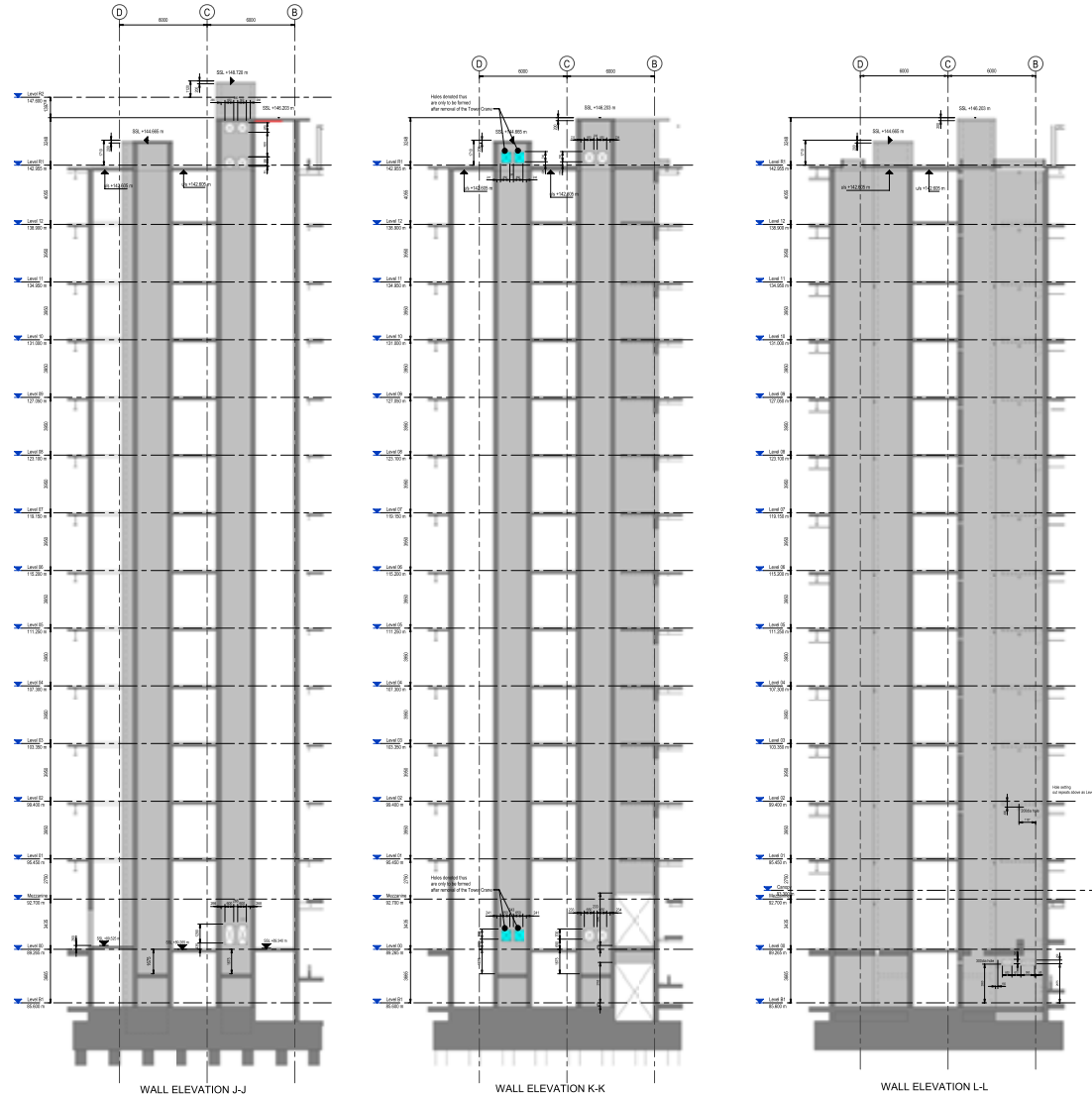
NO.	DESCRIPTION	DATE	BY
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004	ISSUED FOR PERMIT	11.07.24	DR
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007	ISSUED FOR PERMIT	11.07.24	DR
008	ISSUED FOR PERMIT	11.07.24	DR
009	ISSUED FOR PERMIT	11.07.24	DR
010	ISSUED FOR PERMIT	11.07.24	DR

PROJECT DIPPER

Core Wall Elevations sheet 2

NO.	DESCRIPTION	DATE	BY
001	FINAL CONSTRUCTION	11.10.24	DR
002	ISSUED FOR PERMIT	01.07.24	DR
003	ISSUED FOR PERMIT	11.07.24	DR
004	ISSUED FOR PERMIT	11.07.24	DR
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008	ISSUED FOR PERMIT	11.07.24	DR
009	ISSUED FOR PERMIT	11.07.24	DR
010	ISSUED FOR PERMIT	11.07.24	DR

FCDL - CUR - 10 - ZZ - DR - S - 24012 - 03



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3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING FCUL-CLM-22-CR-6-0003 FOR GENERAL WORK REQUIREMENTS TO THE CORE WALLS (SEE DRAWING).

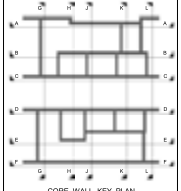
**Concrete Grades & Reinforcement**

Concrete Grade	Reinforcement
Structural Deck	Class 300mpa
Structural Wall	Class 300mpa
Structural Slab	Class 300mpa
Structural Column	Class 300mpa
Structural Beam	Class 300mpa
Structural Floor	Class 300mpa
Structural Core	Class 300mpa
Structural Foundation	Class 300mpa

**AS 4576-2012**  
 All cast-in-place concrete shall be tested for Compressive Strength in accordance with AS 4576-2012. Samples should be taken in accordance with AS 4576-2012. The test results shall be reported to the Engineer.

**AS 4576-2012**  
 Concrete shall be cast in accordance with AS 4576-2012. The test results shall be reported to the Engineer.

**AS 4576-2012**  
 Concrete shall be cast in accordance with AS 4576-2012. The test results shall be reported to the Engineer.



Code	Description	Start Date	End Date
001	FINAL CONSTRUCTION	15/02/2021	15/02/2021
002	CONSTRUCTION	15/02/2021	15/02/2021
003	CONSTRUCTION	15/02/2021	15/02/2021
004	CONSTRUCTION	15/02/2021	15/02/2021
005	CONSTRUCTION	15/02/2021	15/02/2021
006	CONSTRUCTION	15/02/2021	15/02/2021
007	CONSTRUCTION	15/02/2021	15/02/2021
008	CONSTRUCTION	15/02/2021	15/02/2021
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010	CONSTRUCTION	15/02/2021	15/02/2021

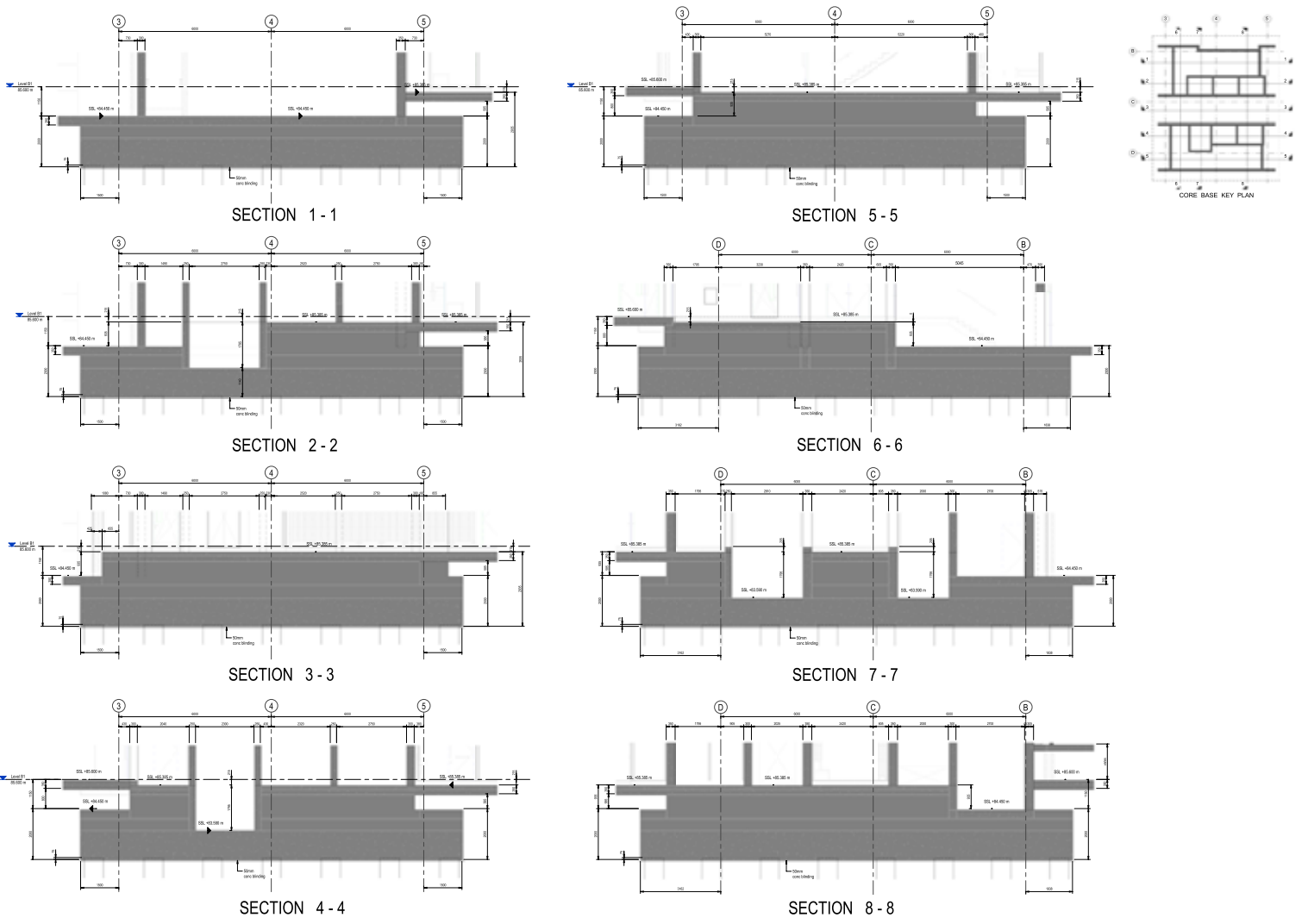
**Curtins**  
 Macquarie Tower, 245 Pitt Street West, Macquarie, NSW, 2108  
 P: 61 2 9550 6000  
 www.curtins.com.au

Project: FINAL CONSTRUCTION  
 Sheet: PROJECT DIPPER

Core Wall Elevations sheet 3

Drawn By	10	Check By	10
Drawn Date	10/02/2021	Check Date	10/02/2021
Drawn By	10	Check By	10
Drawn Date	10/02/2021	Check Date	10/02/2021

FCUL - CUR - 10 - ZZ - DR - S - 24013 - 09



**GENERAL NOTES**

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- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING FCDL-CLM-12-04-01-0001 FOR PERIODICAL WORK POSITION REFERENCE TO FCDL-CLM-12-04-01-0001

**Concrete Grades & Reinforcement Allowances**

NO	ITEM	GRADE	THICKNESS
RC RAFTER (CONCRETE)	Reinforcement	C30/37	180mm
	Formwork	C20/25	150mm
	Chamber Floor Slab	C30/37	180mm
	Chamber Floor Slab	C30/37	180mm
RC SLAB	Reinforcement	C30/37	180mm
	Formwork	C20/25	150mm
	Chamber Floor Slab	C30/37	180mm
	Chamber Floor Slab	C30/37	180mm
RC BEARING	Reinforcement	C30/37	180mm
	Formwork	C20/25	150mm
	Chamber Floor Slab	C30/37	180mm
	Chamber Floor Slab	C30/37	180mm
RC WALL	Reinforcement	C30/37	180mm
	Formwork	C20/25	150mm
	Chamber Floor Slab	C30/37	180mm
	Chamber Floor Slab	C30/37	180mm
RC COLUMN	Reinforcement	C30/37	180mm
	Formwork	C20/25	150mm
	Chamber Floor Slab	C30/37	180mm
	Chamber Floor Slab	C30/37	180mm

RC = Reinforced Concrete  
C30/37 = Concrete Grade  
C20/25 = Concrete Grade  
180mm = Thickness  
150mm = Thickness

NO	DESCRIPTION	DATE
001	FINAL CONSTRUCTION ISSUE	14/10/24
002	CONSTRUCTION ISSUE	01/11/24

Curtiss  
 Architects  
 10/11/24  
[www.curtisarchitects.com](http://www.curtisarchitects.com)

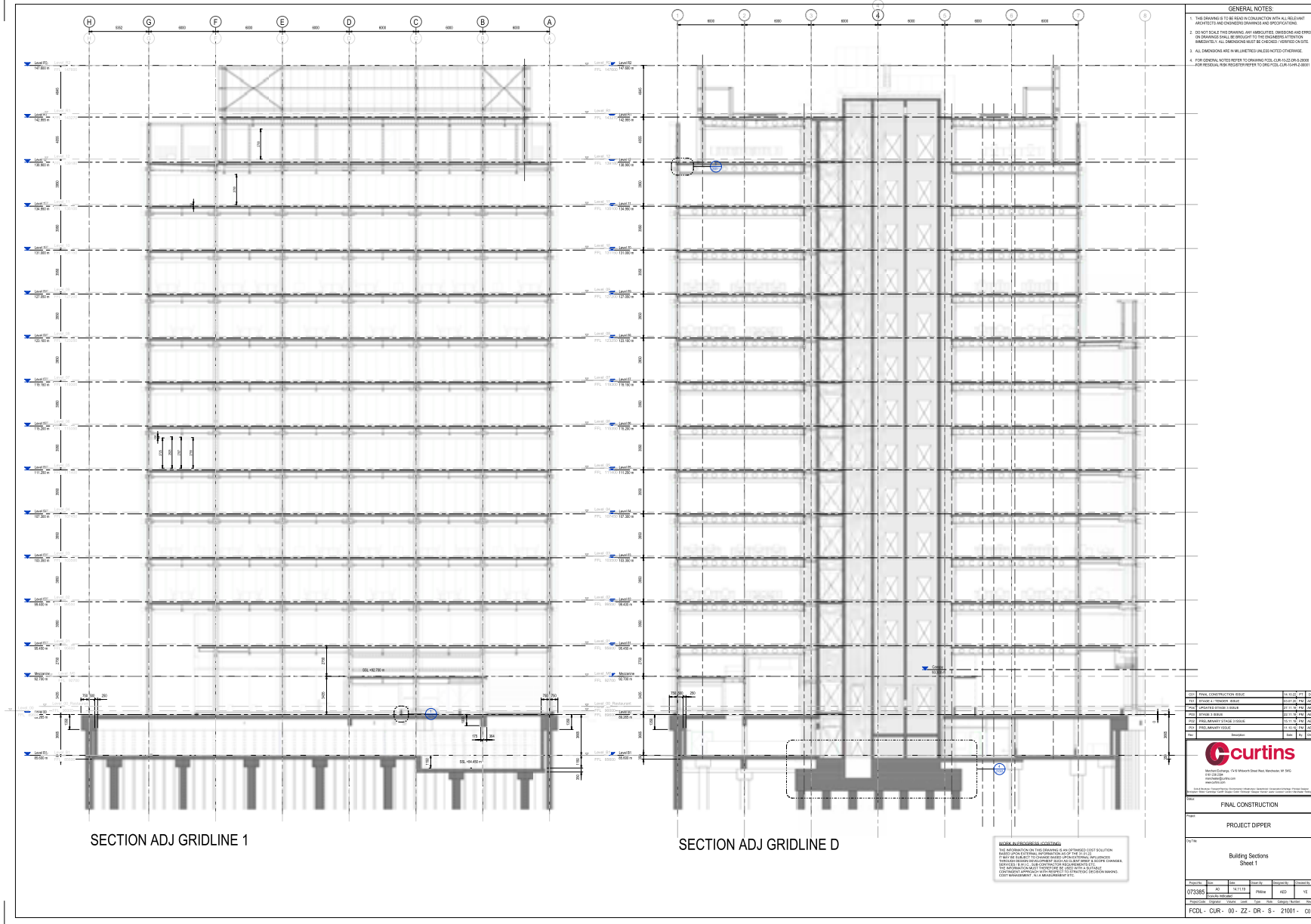
FINAL CONSTRUCTION

PROJECT: DIPPER

Core Base Sectional Details

NO	DESCRIPTION	DATE
073085	073017	14/10/24

FCDL - CUR - 10 - B1 - DR - S - 21005 - 002



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- FOR GENERAL NOTES REFER TO DRAWING FCDL-QUR-00-ZZ-DR-S-21001-0101.

NO.	DESCRIPTION	DATE	BY
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002	ISSUE FOR TENDER	07/11/2020	DR
003	ISSUE FOR TENDER	07/11/2020	DR
004	ISSUE FOR TENDER	07/11/2020	DR
005	ISSUE FOR TENDER	07/11/2020	DR
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007	ISSUE FOR TENDER	07/11/2020	DR
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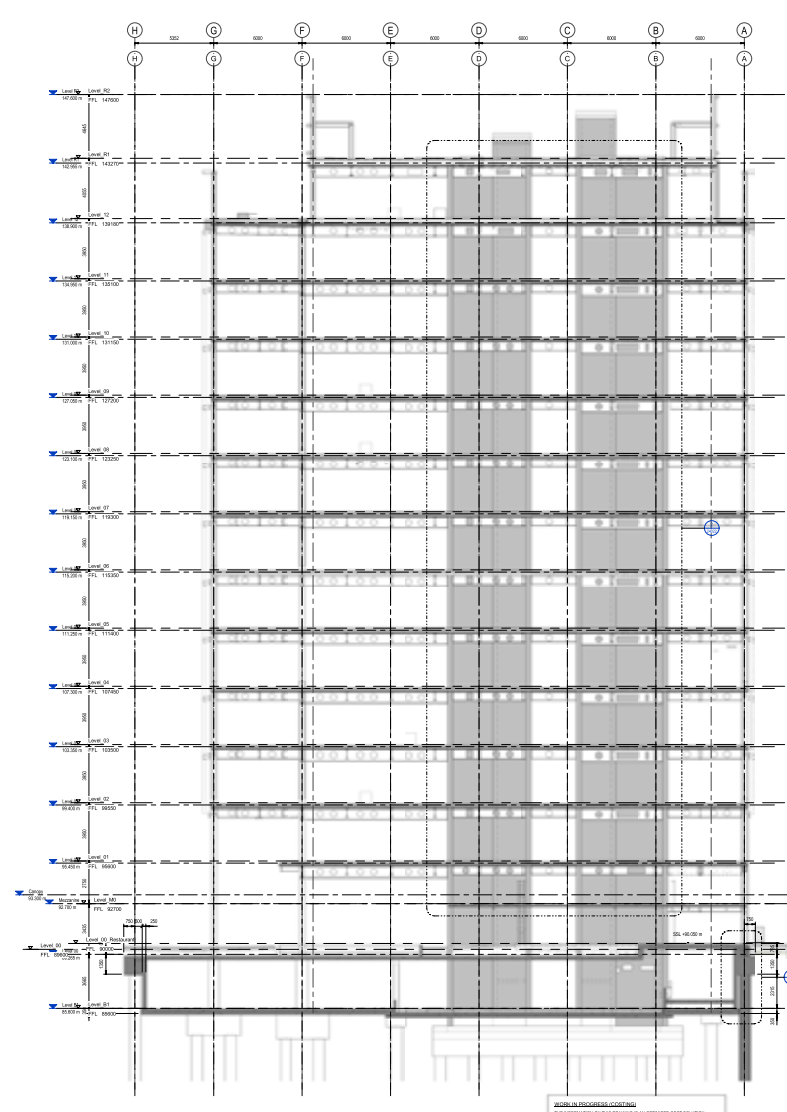
DATE: FINAL CONSTRUCTION

PROJECT: PROJECT DIPPER

TYPE: Building Sections  
 Sheet 1

NO.	DESCRIPTION	DATE	BY
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07386	ISSUE FOR TENDER	10/02/2021	DR
07387	ISSUE FOR TENDER	10/02/2021	DR
07388	ISSUE FOR TENDER	10/02/2021	DR
07389	ISSUE FOR TENDER	10/02/2021	DR
07390	ISSUE FOR TENDER	10/02/2021	DR
07391	ISSUE FOR TENDER	10/02/2021	DR
07392	ISSUE FOR TENDER	10/02/2021	DR
07393	ISSUE FOR TENDER	10/02/2021	DR
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07396	ISSUE FOR TENDER	10/02/2021	DR
07397	ISSUE FOR TENDER	10/02/2021	DR
07398	ISSUE FOR TENDER	10/02/2021	DR
07399	ISSUE FOR TENDER	10/02/2021	DR
07400	ISSUE FOR TENDER	10/02/2021	DR

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SECTION ADJ GRIDLINE 5

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  - 3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  - 4. FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-00-ZZ-DR-S-21002-CB1 FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-00-ZZ-DR-S-21002-CB1.

FINAL CONSTRUCTION DATE	14/02/21
PROJECT NUMBER	07385
PROJECT OWNER / USER	27/11/20
PROJECT NAME	27/11/20
PROJECT NUMBER / DATE / ISSUE	27/11/20
PROJECT NUMBER / DATE / ISSUE	27/11/20
PROJECT NUMBER / DATE / ISSUE	27/11/20
PROJECT NUMBER / DATE / ISSUE	27/11/20

**curtins**  
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 100/100 St Georges Road, Melbourne, VIC 3000  
 Australia  
 Phone: +61 (0)3 9593 9000  
 Email: [info@curtins.com.au](mailto:info@curtins.com.au)  
 Website: [www.curtins.com.au](http://www.curtins.com.au)

**FINAL CONSTRUCTION**

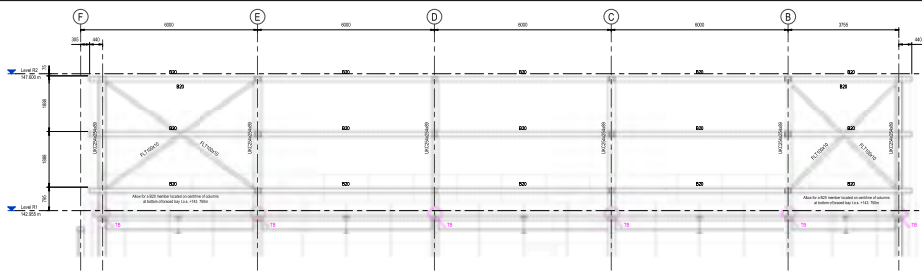
Project: PROJECT DIPPER

By: Building Sections  
 Sheet 2

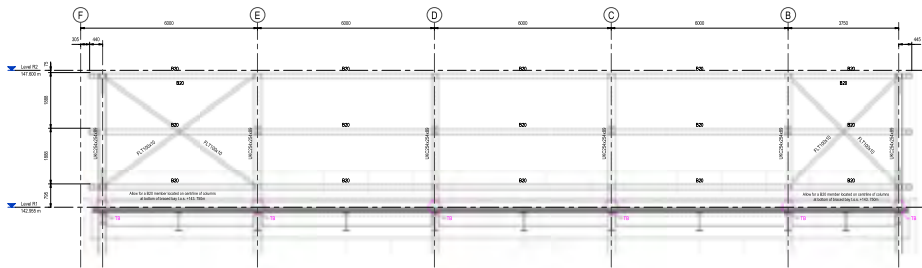
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Project Name:	Project Dipper	Date:	27/11/20	Client:	27/11/20	Project No:	07385

FCDL - CUR - 00 - ZZ - DR - S - 21002 - CB1

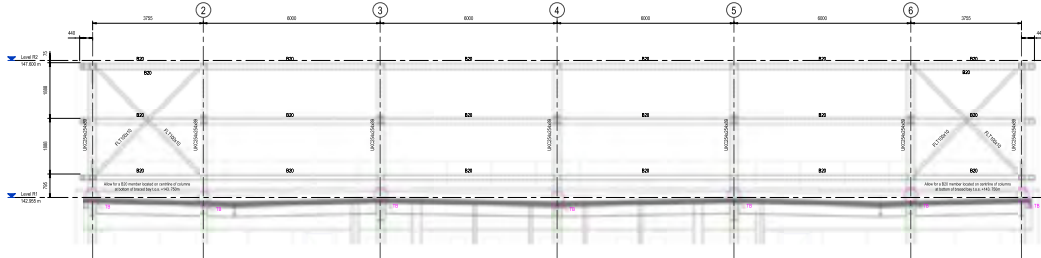




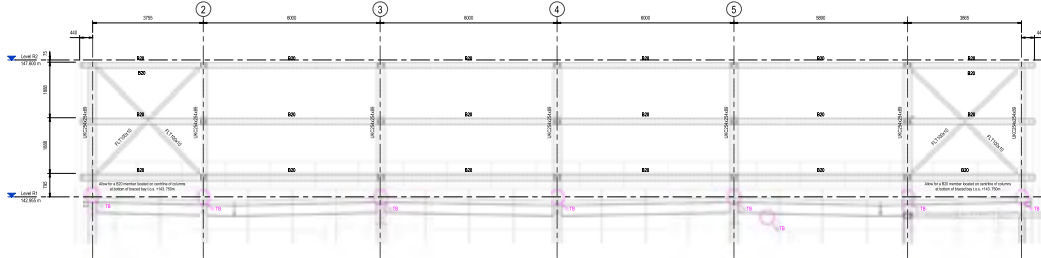
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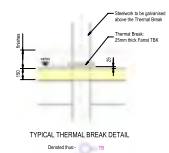
PLANTSREEN ADJ GRIDLINE 1:2



PLANTSREEN ADJ GRIDLINE A:B



PLANTSREEN ADJ GRIDLINE F



STRUCTURAL FRAMING SCHEDULE		COMMENTS
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102	CONCRETE	
103	CONCRETE	
104	CONCRETE	
105	CONCRETE	
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128	CONCRETE	
129	CONCRETE	
130	CONCRETE	

PROJECT DIFFERENTIAL HAZARD REGISTER			
HAZARD REF	RISK FACTOR ELEMENT OR ACTIVITY	POTENTIAL HAZARD IDENTIFIED	ACTION
01	Structural Frame Stability	Failure of structural frame due to overloading or uneven settlement.	Verify design loads and ensure proper construction of foundations.
02	Foundation Settlement	Excessive settlement of foundations leading to structural damage.	Monitor settlement during construction and ensure proper soil compaction.
03	Concrete Quality	Defects in concrete such as honeycombing, cracks, or strength loss.	Implement strict quality control measures and ensure proper curing.
04	Steel Fabrication	Errors in steel fabrication leading to misalignment or welding defects.	Verify steel dimensions and ensure proper welding procedures.
05	Construction Safety	Accidents or safety incidents on the construction site.	Implement strict safety protocols and provide safety training for all workers.
06	Weather-Related Risks	Adverse weather conditions affecting construction progress or quality.	Monitor weather forecasts and adjust construction schedule accordingly.
07	Material Availability	Delays or shortages in the availability of construction materials.	Establish alternative suppliers and maintain inventory of critical materials.
08	Construction Schedule	Delays in construction progress affecting project completion.	Review and optimize construction schedule to minimize delays.
09	Construction Cost	Overruns in construction costs due to inefficiencies or price fluctuations.	Implement cost control measures and negotiate favorable contracts.
10	Construction Quality	Overall poor quality of construction work.	Implement a comprehensive quality management system.
11	Construction Safety	Accidents or safety incidents on the construction site.	Implement strict safety protocols and provide safety training for all workers.
12	Construction Schedule	Delays in construction progress affecting project completion.	Review and optimize construction schedule to minimize delays.
13	Construction Cost	Overruns in construction costs due to inefficiencies or price fluctuations.	Implement cost control measures and negotiate favorable contracts.
14	Construction Quality	Overall poor quality of construction work.	Implement a comprehensive quality management system.
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28	Construction Schedule	Delays in construction progress affecting project completion.	Review and optimize construction schedule to minimize delays.
29	Construction Cost	Overruns in construction costs due to inefficiencies or price fluctuations.	Implement cost control measures and negotiate favorable contracts.
30	Construction Quality	Overall poor quality of construction work.	Implement a comprehensive quality management system.

**GENERAL NOTES**

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- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING FCOL-DR-02-04-0-0001 FOR PERFORMAL AND PROJECT INFORMATION TO THE CLIENT (GOLDEN RIVER).

Where complete work items are indicated by 'FC' Code Mark, refer to FC 101 - FC 104 for specific details.

For additional information, refer to the relevant drawings in the Curtin 3000 series drawings.

For Construction Details, refer to Curtin Construction Details drawings.

For Building Information and Planning, refer to the relevant drawings in the Design New FCOL-DR-02-04-0-0001.

**FINAL CONSTRUCTION**

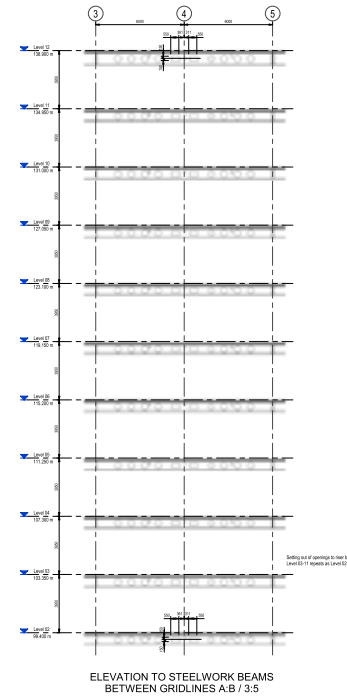
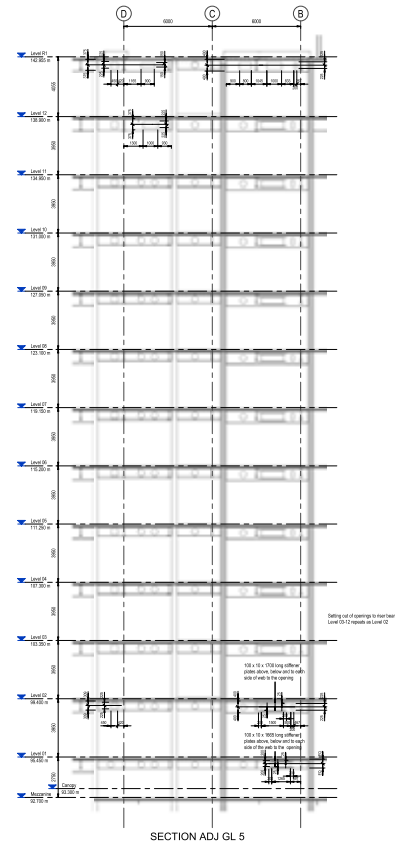
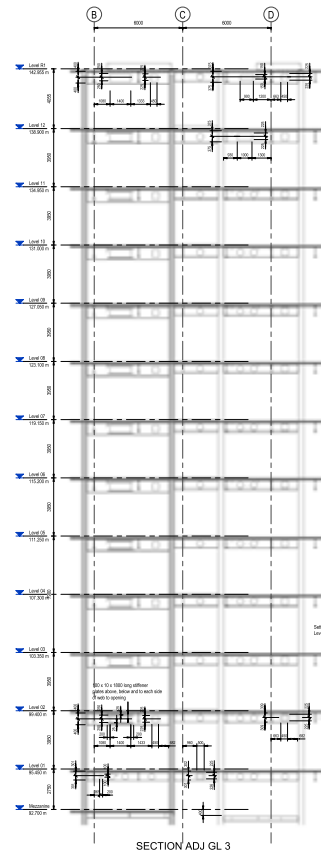
**PROJECT DIFFERENTIAL**

Elevations to Plantscreens

Level	Height	Reference
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07325	10.00	FCOL-DR-02-04-0-0001
07330	10.00	FCOL-DR-02-04-0-0001
07335	10.00	FCOL-DR-02-04-0-0001
07340	10.00	FCOL-DR-02-04-0-0001
07345	10.00	FCOL-DR-02-04-0-0001
07350	10.00	FCOL-DR-02-04-0-0001
07355	10.00	FCOL-DR-02-04-0-0001
07360	10.00	FCOL-DR-02-04-0-0001
07365	10.00	FCOL-DR-02-04-0-0001
07370	10.00	FCOL-DR-02-04-0-0001
07375	10.00	FCOL-DR-02-04-0-0001
07380	10.00	FCOL-DR-02-04-0-0001
07385	10.00	FCOL-DR-02-04-0-0001
07390	10.00	FCOL-DR-02-04-0-0001
07395	10.00	FCOL-DR-02-04-0-0001
07400	10.00	FCOL-DR-02-04-0-0001
07405	10.00	FCOL-DR-02-04-0-0001
07410	10.00	FCOL-DR-02-04-0-0001
07415	10.00	FCOL-DR-02-04-0-0001
07420	10.00	FCOL-DR-02-04-0-0001
07425	10.00	FCOL-DR-02-04-0-0001
07430	10.00	FCOL-DR-02-04-0-0001
07435	10.00	FCOL-DR-02-04-0-0001
07440	10.00	FCOL-DR-02-04-0-0001
07445	10.00	FCOL-DR-02-04-0-0001
07450	10.00	FCOL-DR-02-04-0-0001
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07465	10.00	FCOL-DR-02-04-0-0001
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07495	10.00	FCOL-DR-02-04-0-0001
07500	10.00	FCOL-DR-02-04-0-0001

FCOL - CUR - 10 - ZZ - DR - S - 24021 - 04





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- FOR GENERAL NOTES REFER TO DRAWING FCDL-QUR-10-ZZ-DR-02-0001 FOR PERIODICAL WORKS REFER TO DRAWING FCDL-QUR-10-ZZ-DR-03-0001

When complete this page represents an in-situ concrete wall  
depth is 100 x 1000 support frame  
For Loading Refer to the current design note to  
Curbs 3055 series drawings  
For General Notes refer to Curbs Connection Formwork  
For Building Information and Quality Assurance refer to  
Design Note FCDL-QUR-10-ZZ-DR-03-0001

000	FINAL CONSTRUCTION DRAWING	11/10/24	01	01
001	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
002	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
003	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
004	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
005	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
006	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
007	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
008	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
009	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01
010	REVISIONS TO BE MADE TO DRAWING TO MATCH TO	01/01/24	01	01

**curtins**

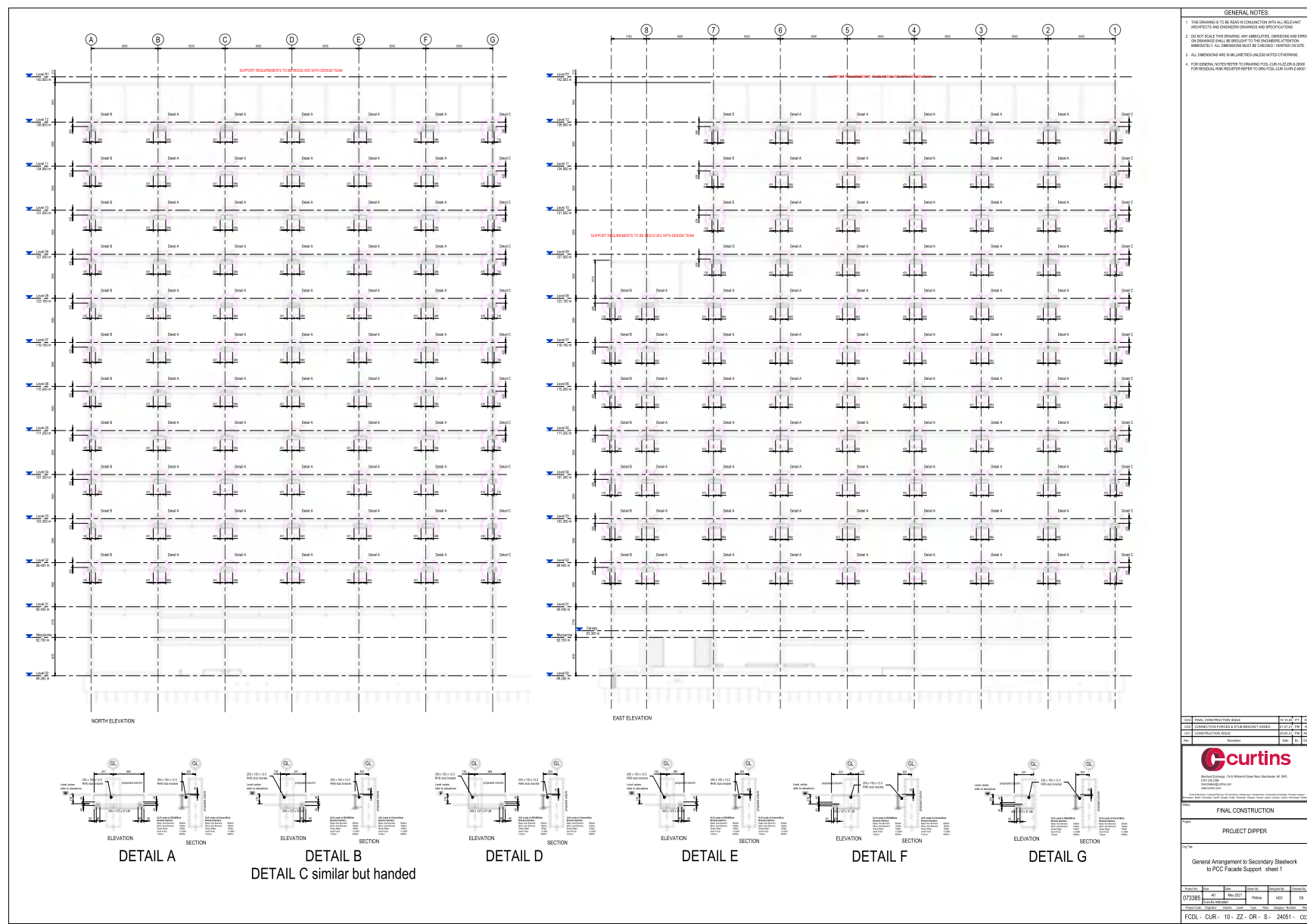
McLaren Centre, 148 Wilson Street, Melbourne, VIC 3000  
 P: 61 3 9594 2000  
 www.curtins.com.au

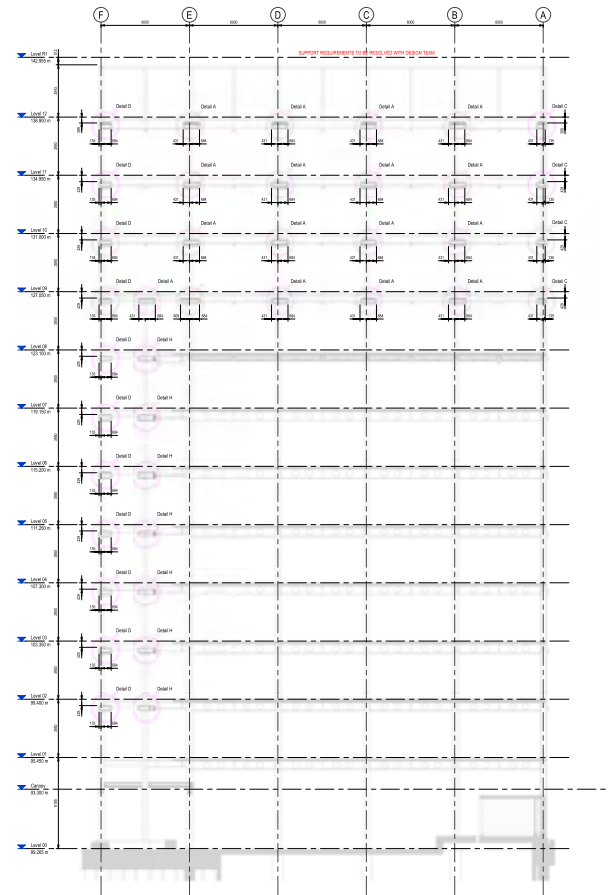
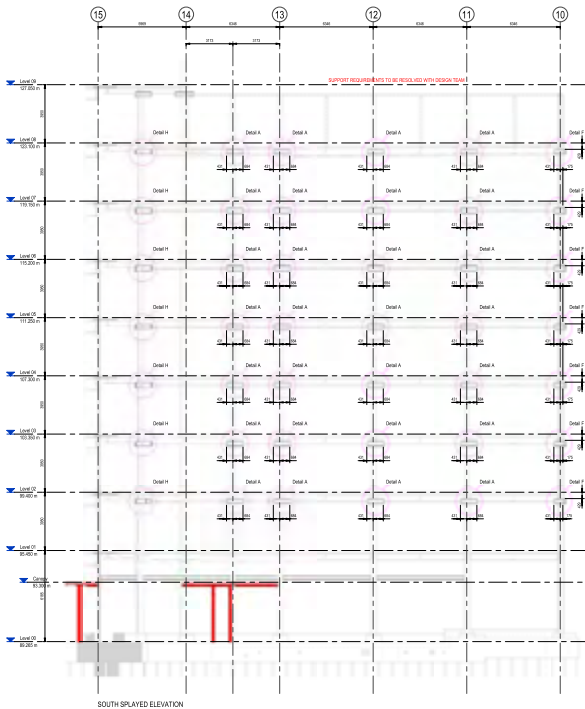
DATE: 11/10/24  
 PROJECT: PROJECT DIPPER

Scale: 1:100  
 Title: Elevations to Riser and Floor Steelwork

072385	10	2024	Final	A50	24
072385	10	2024	Final	A50	24

FCDL - QUR - 10 - ZZ - DR - S - 24022 - 09





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- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING FCCL-DL-22-04-0001 FOR GENERAL NOTES REFER TO DRAWING FCCL-DL-22-04-0001.

DATE	FINAL CONSTRUCTION DRAW	11.10.24	14
DATE	CONSTRUCTION PHASE A (15% BRANCHED) ISSUED	03.07.24	08
DATE	CONSTRUCTION PHASE A (15% BRANCHED) ISSUED	01.07.24	01
DATE	CONSTRUCTION DRAW	03.07.24	04
DATE	REVISION	1.10.24	01



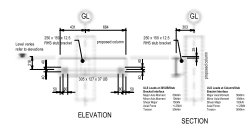
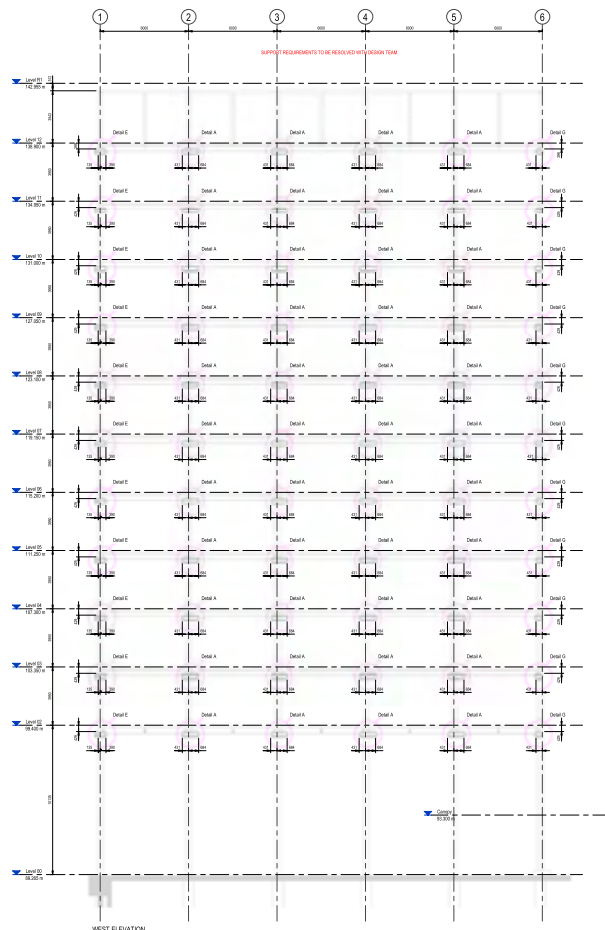
Project: FINAL CONSTRUCTION

Project: PROJECT DIGGER

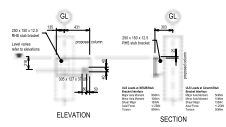
General Arrangement to Secondary Steelwork to support PCC Facade Sheet 2

NO.	DATE	BY	CHKD	APP'D
073385	10	05/2024		14/03/24

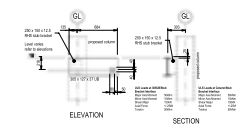
FCCL - CUR - 10 - ZZ - DR - S - 24062 - 04



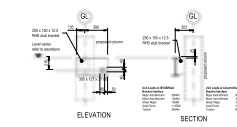
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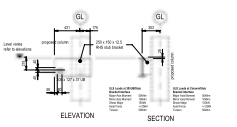
DETAIL B  
DETAIL C similar but handed



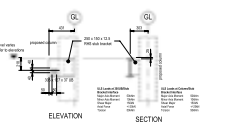
DETAIL D



DETAIL E



DETAIL F



DETAIL G

- GENERAL NOTES:**
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
  2. DO NOT SCALE THIS DRAWING. ANY DIMENSIONS SHOWN ON THESE DRAWINGS SHALL BE BROUGHT TO THE ARCHITECT'S ATTENTION IMMEDIATELY. ALL DIMENSIONS ARE TO FACE UNLESS NOTED OTHERWISE.
  3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  4. FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-ZZ-DR-0-24063-C03 FOR RELEVANT INFORMATION REFER TO PROJECT CUR-LIVE-00001.

REV	DESCRIPTION	DATE	BY
01	FINAL CONSTRUCTION FOR MARK	11/11/24	ML
02	CONSTRUCTION FOR FACE & SLIVER BRACKET ASSESS	01/07/24	ML
03	CONSTRUCTION FOR MARK	01/04/24	ML
04	Mark	11/06/24	ML

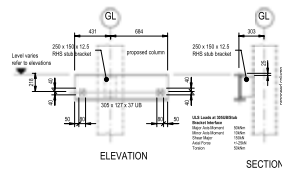
**curtins**  
 Markham Offices: 1245 Highway 7 East, Markham, ON L3R 9V7  
 905-477-2200  
 markham@curtins.com  
 www.curtins.com

DATE: 11/11/24  
 TIME: 10:00 AM  
 PROJECT: PROJECT DIPPER

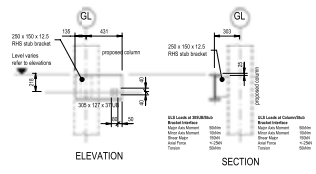
General Arrangement to Secondary Steelwork to PCC Facade support sheet 3

NO	DATE	BY	CHK
072385	01/07/24	ML	ML

FCDL - CUR - 10 - ZZ - DR - S - 24063 - 03

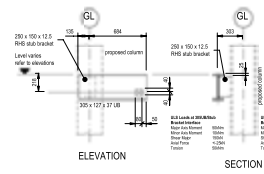


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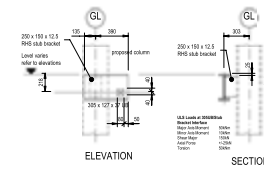


DETAIL B

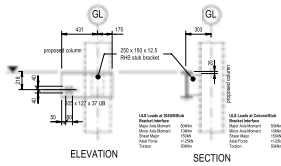
DETAIL C similar but handed



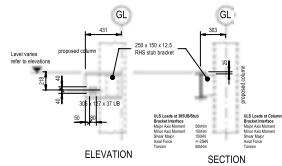
DETAIL D



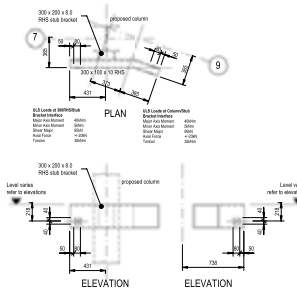
DETAIL E



DETAIL F



DETAIL G



DETAIL H

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3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-ZZ-DR-6-2000. FOR RESIDUAL RISK REGISTER REFER TO DRG FCDL-CUR-10-ZZ-DR-6-2010.

Level values refer to elevations

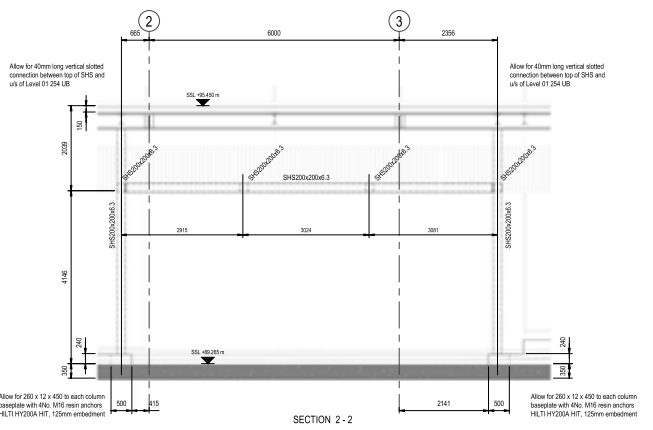
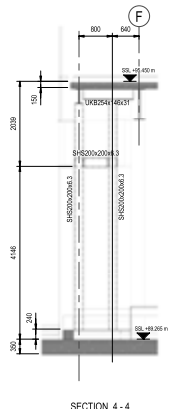
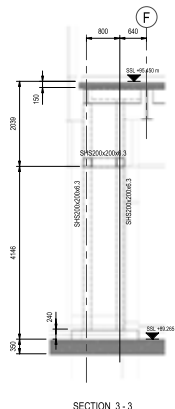
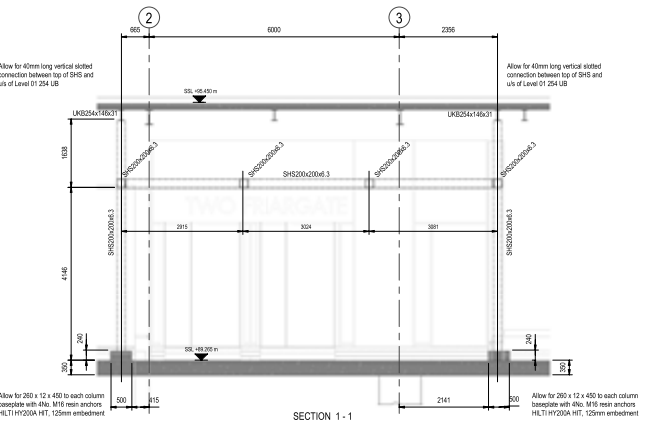
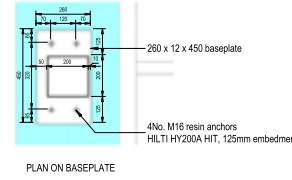
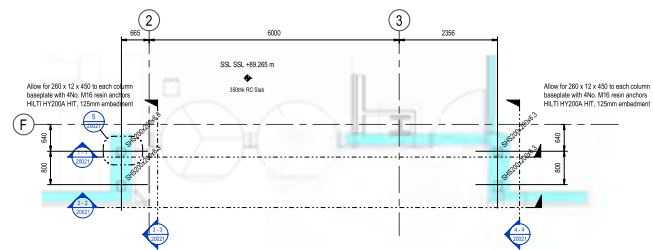
CO2	FINAL CONSTRUCTION ISSUE	14.10.22	PT	DS
CO1	CONSTRUCTION ISSUE	16.06.21	PM	NJ
Rev	Description	Date	By	Checked

Final Construction

Project: PROJECT DIPPER

Doc File: General Arrangement to Secondary Steelwork to PCC Facade support sheet 4

Project No	073385	Issue	A1	Date	14.10.22	Drawn By	PM/NO	Designed By	NJ	Checked By	DS
Project Code	FCDL - CUR - 10 - ZZ - DR - S - 24054 - C02	Volume	1 - 23	Level		Type		Rev		Category / Number	



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4. FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-ZZ-DR-S-2002. FOR RESIDUAL RISK REGISTER REFER TO DRG FCDL-CUR-10-ZZ-DR-S-2002.

Rev	Description	Date	By	Check
C01	FINAL CONSTRUCTION ISSUE	14.10.23	PT	DS
C04	BASEPLATE DETAIL ADDED, STEEL LEVEL AMENDED	22.09.23	SW	NJ
C02	STEELWORK SETTING OUT UPDATED TO SUIT LATEST COMMENTS	04.01.22	PM	NJ
C03	STEELWORK SETTING OUT UPDATED TO SUIT LATEST COMMENTS	03.12.21	PM	NJ
C05	CONSTRUCTION ISSUE	07.11.21	PM	NJ

**Curtins**  
 Merchant Exchange, 15-19 Whitworth Street West, Manchester, M1 5WG  
 0161 230 2266  
 info@curtins.com  
 www.curtins.com

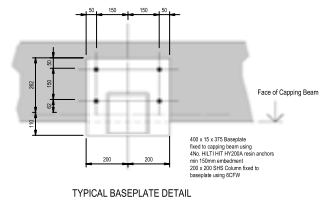
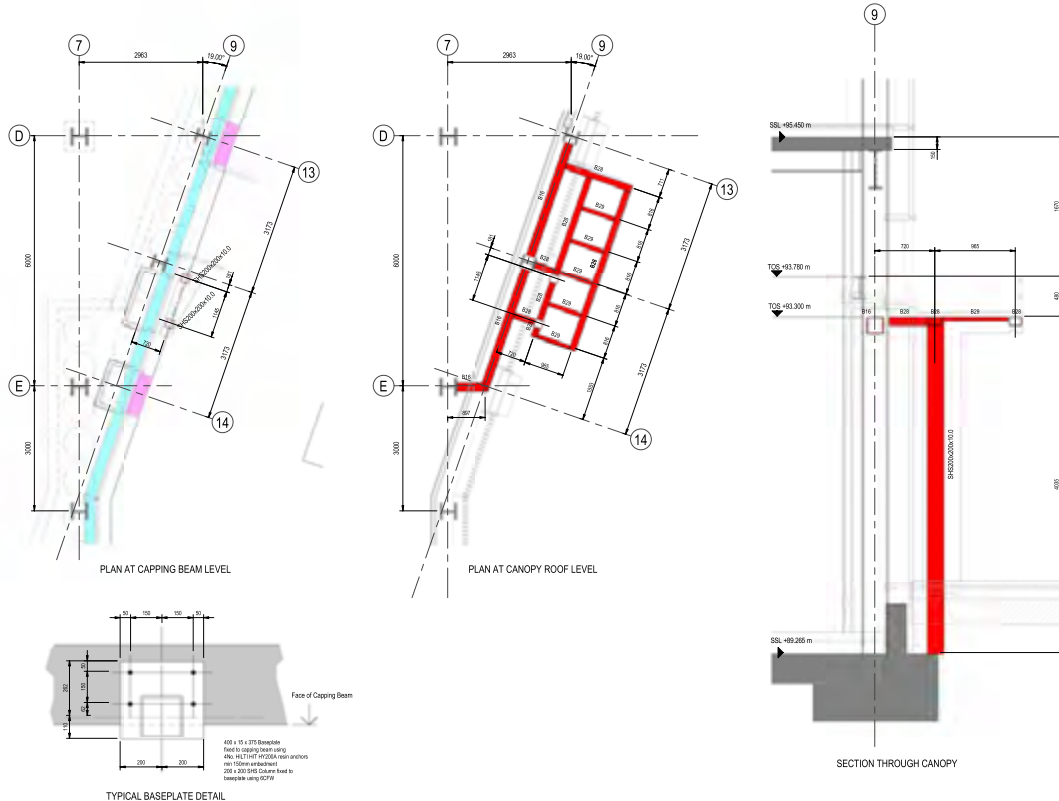
Curtns is a Division of Project Planning & Engineering (PPE) - a Division of Construction & Building - a Division of Strategic Business Operations - Curtin Construction Group. Curtin Construction Group is a Division of Curtin Construction Group.

Phase: FINAL CONSTRUCTION

Project: PROJECT DIPPER

Doc File: General Arrangement to Main Entrance Steelwork

Project No.	Size	Date	Drawn By:	Designed By:	Checked By:
073385	A1	OCT 2021	PM/No	NJ	DS
Project Code:	Original	Volume	Level	Type	Revision Number
FCDL - CUR - 10 - ZZ - DR - S -	20021 -	C05			



REF	SIZE	STRUCTURAL MATERIAL	COMMENTS
B01	UB304x146x31	S355	
B02	UB310x154x40	S355	
B03	UB360x171x45	S355	
B04	UB360x171x45	S355	
B05	UB360x171x45	S355	
B06	UB45x152x40	S355	
B07	UB304x146x31	S355	
B08	UB10x220x107	S355	450 dia Cells at 900 centres
B09	UB10x220x125	S355	450 dia Cells at 900 centres
B10	UB10x220x141	S355	450 dia Cells at 900 centres
B11	RH200x150x8.0	S355	
B12	UB10x200x134	S355	450 dia Cells at 900 centres
B13	UB10x200x173	S355	450 dia Cells at 900 centres
B14	UB304x134x29	S355	
B15	UB10x100x19	S355	
B16	SHS100x100x10	S355	
B17	UB45x152x40	S355	
B18	UC150x50x6.9	S355	
B19	UC150x50x23	S355	
B20	SHS160x160x8.0	S355	
B21	UB10x220x107	S355	450 dia Cells at 900 centres
B22	PPC100x60x24	S355	
B24	UC150x50x27	S355	
B25	L100x100x10	S355	Fixed to RC Wall using M12 Rein Anchors at 450% max, min 125 embedment
B26	UB304x146x31	S355	
B27	UB304x146x31	S355	
B28	RHS100x100x8.0	CUR WAF S-Genarc(S355)	
B29	RHS100x100x8.0	CUR WAF S-Genarc(S355)	

"RESIDUAL HAZARD REGISTER (RELATES TO CIVIL/STRUCTURAL MATTERS ONLY)"  
 MUST BE READ IN CONJUNCTION WITH CURTINS RESIDUAL HAZARD REGISTER FCDL-CUR-10-XX-DR-S-0001  
 HAZARDS THAT SHOULD BE OBVIOUS TO A COMPETENT CONTRACTOR HAVE NOT BEEN INDICATED ON THIS DRAWING. SHOULD ANY ADDITIONAL HAZARDS BE IDENTIFIED, THE CONTRACTOR SHOULD NOTIFY ALL RELEVANT PROJECT TEAM MEMBERS"

PROJECT DIPPER - RESIDUAL HAZARD REGISTER			
HAZARD REF.	ITEM FEATURE, ELEMENT OR ACTIVITY	POTENTIAL HAZARD IDENTIFIED	ACTION
<b>EXISTING SERVICES AND UTILITIES</b>			
3.1	Existing Buried Services	Potential to damage existing services during excavation works.	If possible, existing services to be diverted prior to commencement of ground works. Principle Contractor to manage.
3.2	Existing Substation to be Relocated	Further existing buried services and exposure to live services.	WPD to issue proposal for relocation of substation.
<b>SO EXCAVATIONS AND FOUNDATIONS</b>			
5.1	Contaminated Ground	Risk of contaminated ground.	Site investigation to be undertaken to determine if any contaminants are present and advise on any precautionary measures required.
5.2	Stability of Made Ground	Make ground present on site which may be weak, loose and susceptible to loss of equilibrium or large movements during excavation.	Site investigation to be undertaken to determine the properties of the existing made ground and advise on any precautionary measures required.
5.3	Unexploded Ordnance (UXO) Threat	UXO's may be present below ground, neighbouring site (Project Heron) was identified as medium risk.	Site-specific detailed UXO assessment to be carried out and findings included in Curtins site investigation.
5.4	Uplift on piles from groundwater	Deswelling may be required during basement construction. Hydraulic uplift forces have been provided based on measured water table of 85.5m (refer to 073385-CUR-00-XX-DR-S-001). The minimum dead load at the line of deswelling water will be dependent on the proposed construction sequence and must be considered as a design case because if any result in the worst case combination of actions for uplift. Loading conditions must also be considered during demolition sequence and methodology.	Where pile loads have been provided, the minimum dead load is based on the self-weight of the completed structure only and the beneficial effect (counteracting uplift) may only be taken if deswelling is undertaken until the above structural frame, slabs and walls are complete. Where this is not the case, temporary conditions to be considered by contractor. Curtins may provide revised minimum dead loads based on the contractor's proposed sequence.
5.5	Temporary propping of piled wall	Inability of piled wall during construction.	Piling contractor to advise on propping requirements during temporary condition. Currently assumed propping is required at ground floor level until basement slab has been cast and cured to area of lower level basement slab (refer to FCDL-CUR-10-XX-DR-S-1001).
5.6	Permanent propping of piled wall	Inability of piled wall during permanent condition.	If permanent condition piled wall proposed at both basement level and ground floor levels. Where props present the level of the ground floor props varies (refer to FCDL-CUR-10-XX-DR-S-1001). Permanent propping to be provided prior to application of frame loads to piled wall.
<b>TO ERECTING STRUCTURES AND PLACING COMPONENTS</b>			
7.1	Stability of Core during Construction	Inability of core during construction.	If core is to be abutment, check on temporary condition of core required to determine propping requirements.
7.2	Stability of core due to lower crane loading in temporary condition	Local buckling of core walls.	Props required to core prior to erection of TCC and must remain in place until core slabs and floor slabs are in position, refer to design note FCDL-CUR-10-ZZ-RP-S-0001.
7.3	Adequate tying of core during construction	Inefficient tying capacity of precast landings and connections into core.	Precast landings and connections into core to be designed for required tension and compression force in temporary condition in addition to gravity loads, refer to design note FCDL-CUR-10-ZZ-RP-S-0001.

- GENERAL NOTES:**
- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
  - DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
  - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  - FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-XX-DR-S-2000. FOR RESIDUAL RISK REGISTER REFER TO DRG FCDL-CUR-10-ZZ-RP-S-2010.

CO2	FINAL CONSTRUCTION ISSUE	14.10.22	PT	DS
CO1	CONSTRUCTION ISSUE	31.01.22	PM	BA
Rev	Description	Date	By	Check

**FINAL CONSTRUCTION**

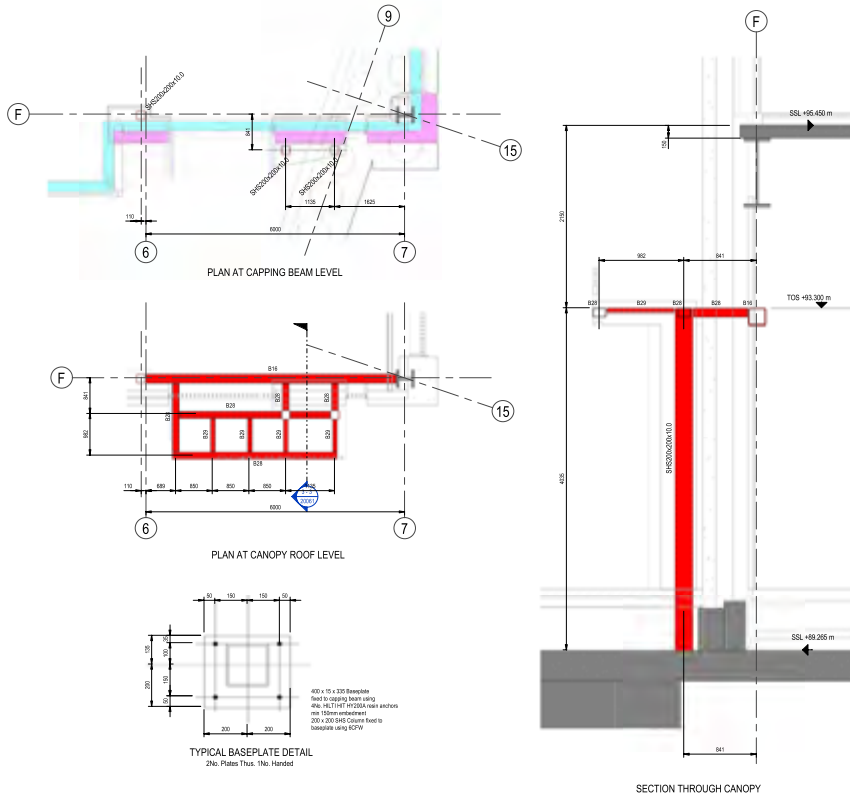
Project: **PROJECT DIPPER**

Draw File: **Canopy Structure to Gridline 9**

Project No	Size	Date	Drawn By	Designed By	Checked By
073385	A1	Jan 2022	PM/BA	BA	DS

Project Code: Original Volume Limit Type Risk Category Number Rev

FCDL - CUR - 10 - ZZ - DR - S - 20060 - CO2



STRUCTURAL FRAMING SCHEDULE			
REF	SIZE	STRUCTURAL MATERIAL	COMMENTS
B01	UB254x166x31	S355	
B02	UB304x166x40	S355	
B03	UB304x177x45	S355	
B04	UB254x177x57	S355	
B05	UB406x142x46	S355	
B06	UB457x152x49	S355	
B07	UB354x106x32	S355	
B08	UB810x229x101	S355	450 dia Cols at 900 centres
B09	UB610x229x125	S355	450 dia Cols at 900 centres
B10	UB610x229x140	S355	450 dia Cols at 900 centres
B11	RH250x192x8.0	S355	450 dia Cols at 900 centres
B12	UB750x267x134	S355	450 dia Cols at 900 centres
B13	UB750x267x173	S355	450 dia Cols at 900 centres
B14	UB608x132x25	S355	
B15	UB370x120x19	S355	
B16	SHS200x200x10.0	S355	
B17	UB474x194x74	S355	
B18	UC254x254x89	S355	
B19	UC152x152x23	S355	
B20	SHS180x180x8.0	S355	
B21	UB810x229x101	S355	450 dia Cols at 900 centres
B22	PHC100x40x24	S355	
B24	UC152x152x37	S355	
B25	L100x100x10	S355	Fixed to RC Wall using M12 Resin Anchors at 4500z max, min 12z embedment
B26	UB354x177x57	S355	
B27	UB254x166x43	S355	
B28	RHS100x100x5.0	CUR M13 S-Garvic-S360	
B29	RHS100x100x5.0	CUR M13 S-Garvic-S360	

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  - ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
  - FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-XX-DR-S-2000. FOR RESIDUAL RISK REGISTER REFER TO DRG FCDL-CUR-10-ZZ-DR-S-2010

RESIDUAL HAZARD REGISTER (RELATES TO CIVIL/STRUCTURAL MATTERS ONLY)  
MUST BE READ IN CONJUNCTION WITH CLINICAL RESIDUAL HAZARD REGISTER FCDL-CUR-10-XX-DR-S-2000

HAZARDS THAT SHOULD BE OBVIOUS TO A COMPETENT CONTRACTOR HAVE NOT BEEN INDICATED ON THIS DRAWING. SHOULD ANY ADDITIONAL HAZARDS BE IDENTIFIED, THE CONTRACTOR SHOULD NOTIFY ALL RELEVANT PROJECT TEAM MEMBERS\*

PROJECT DIPPER - RESIDUAL HAZARD REGISTER			
HAZARD REF.	ITEM (FEATURE, ELEMENT OR ACTIVITY)	POTENTIAL HAZARD IDENTIFIED	ACTION
<b>EXISTING BURIED &amp; OVERHEAD SERVICES</b>			
3.1	Existing Buried Services	Potential to damage existing services during excavation works.	If possible, existing services to be diverted prior to commencement of ground works. Principle Contractor to manage.
3.2	Existing Substation to be Relocated	Further existing buried services and exposure to live services.	WFO to issue proposals for relocation of substation.
<b>EXCAVATIONS AND FOUNDATIONS</b>			
5.1	Contaminated Ground	Risk of contaminated ground	Site investigation to be undertaken to determine if any contaminants are present and advise on any precautionary measures required
5.2	Stability of Made Ground	Made ground present on site which may be weak / loose and susceptible to loss of equilibrium or large movements during excavation	Site investigation to be undertaken to determine the properties of the existing made ground and advise on any precautionary measures required
5.3	Unexploded Ordnance (UXO) Threat	UXO's may be present below ground, neighbouring site (Project Heron) site identified as medium risk	Site-specific detailed UXO assessment to be carried out and findings included in Curtins site investigation
5.4	Lift/lift on piles from groundwater	Dewatering may be required during basement construction. Hydraulic uplift forces have been provided based on measured water table of 85.5m (refer to OFS&S-CUR-03-XX-RP-S-001). The minimum dead load at the time of dewatering shall be as dependent on the proposed construction sequence and must be considered as a design case because it may result in the worst-case combination of actions for uplift. Loading conditions must also be considered during demolition sequence and methodology.	Where pile loads have been provided, the minimum dead load is based on the self-weight of the completed structure only and the beneficial effect (counteracting uplift) may only be taken if dewatering is undertaken until the above structure frame, slabs and walls are complete. Where this is not the case, temporary condition to be considered by contractor. Curtins may provide revised minimum dead loads based on the contractor's proposed sequence.
5.5	Temporary propping of piled wall	Instability of piled wall during construction	Piling contractor to advise on propping requirements during temporary condition. Currently assumed propping is required at ground floor level until basement slab has been cast and cured to area of 'live' level basement slab, refer to FCDL-CUR-10-FN-DR-S-18001.
5.8	Permanent propping of piled wall	Instability of piled wall during permanent condition	In permanent condition piled wall propped at both basement level and ground floor level. Where ramp present the level of the ground floor prop varies (refer to FCDL-CUR-10-FN-DR-S-18001). Permanent propping to be considered prior to application of form loads to piled wall.
<b>ERECTING STRUCTURES AND PLACING COMPONENTS</b>			
7.1	Stability of Core during Construction	Instability of core during construction	If core is to be spigotted, check on temporary condition of core required to determine propping requirements
7.2	Stability of core due to 'live' crane loading in temporary condition	Local loading of core walls	Prices required to core prior to erection of T&C and must remain in place until core slabs and floor slabs are in position, refer to design note FCDL-CUR-10-ZZ-RPS-0011
7.3	Adequate tying of core during construction	Insufficient tying capacity of precast windings and connections into core	Precast windings and connections into core to be designed for required tension and compression forces in temporary condition in addition to gravity loads, refer to design note FCDL-CUR-10-ZZ-RP-S-0011

**WORK IN PROGRESS (CONTINUED)**

THE INFORMATION ON THIS DRAWING IS AN OPTIMISED COST SOLUTION BASED UPON EXTERNAL INFORMATION AS OF THE F10.22. IT MAY BE SUBJECT TO CHANGE BASED UPON EXTERNAL INFLUENCES THROUGH DESIGN DEVELOPMENT SUCH AS CLIENT BRIEF & SCOPE CHANGES, SERVICES BY P.A.C., SUB-CONTRACTOR REQUIREMENTS ETC. THE INFORMATION MUST THEREFORE BE USED WITH A SUSTAINABLE CONTRACTOR APPROACH WITH REFERENCE TO SUSTAINABLE DESIGN DECISION MAKING, COST MANAGEMENT, \*1-A MEASUREMENT ETC.

C01	FINAL CONSTRUCTION ISSUE	14.10.22	P1	ES
B01	PRELIMINARY ISSUE	31.03.22	PM	BA

Member Exchange, 14/19 Whitworth Street West, Manchester, M1 5WG  
0161 275 2284  
manchester@curtins.com  
www.curtins.com

**FINAL CONSTRUCTION**

Project: **PROJECT DIPPER**

Dg Title: **Canopy Structure to Gridline F**

Project No:	Rev:	Date:	Drawn By:	Designed By:	Checked By:
073385	A1				
Project Code:	Organization:	Version:	Level:	Type:	Origin:
FCDL - CUR - 10 - ZZ - DR - S -					

20061 - C01



"RESIDUAL HAZARD REGISTER (RELATES TO CIVIL/STRUCTURAL MATTERS ONLY)"  
MUST BE READ IN CONJUNCTION WITH CURTIS'S RESIDUAL HAZARD REGISTER (FCDL-CUR-10-XX-DR-S-2000)  
HAZARDS THAT SHOULD BE OBVIOUS TO A COMPETENT CONTRACTOR HAVE NOT BEEN INDICATED ON THIS DRAWING. SHOULD ANY ADDITIONAL HAZARDS BE IDENTIFIED, THE CONTRACTOR SHOULD NOTIFY ALL RELEVANT PROJECT TEAM MEMBERS."

PROJECT DIPPER - RESIDUAL HAZARD REGISTER			
HAZARD REF.	ITEM (FEATURE, ELEMENT OR ACTIVITY)	POTENTIAL HAZARD IDENTIFIED	ACTION
<b>EXISTING SERVICES &amp; OVERHEAD SERVICES</b>			
01	Existing Buried Services	Potential to damage existing services during excavation works.	If possible, existing services to be diverted prior to commencement of ground works. Provide Contractor to manage.
02	Existing Substation to be Relocated	Further existing buried services and exposure to live services.	WFO to issue proposal for relocation of substation.
<b>EXCAVATIONS AND FOUNDATIONS</b>			
01	Contaminated Ground	Risk of contaminated ground	Site investigation to be undertaken to determine if any contaminants are present and advise on any precautionary measures required
02	Stability of Made Ground	Made ground present on site which may be weak, loose and susceptible to loss of equilibrium or large movements during excavation	Site investigation to be undertaken to determine the properties of the existing made ground and advise on any precautionary measures required
03	Unevaluated Ordnance (UXO) Threat	UXOs may be present below ground, neighbouring site (Project Heron)	Site-specific detailed UXO assessment to be carried out and findings included in Curtiss site investigation
04	Uplift on piles from groundwater	Deswelling may be required during basement construction. Hydrostatic uplift forces have been provided based on measured water table of 85.50m (refer to 07386-CUR-C10-XX-RP-SE-001). The minimum dead load at the time of deswelling switch-off is dependent on the proposed construction sequence and must be considered as a design case because it may result in the worst case combination of factors for uplift. Uplift conditions must also be considered during demolition sequence and methodology.	Where pile loads have been provided, the minimum dead load is based on the self weight of the completed structure only and the beneficial effect (counteracting uplift) may only be taken if deswelling is undertaken until the above structural frame, slabs and walls are complete. Where this is not the case, temporary condition to be considered by contractor. Curtiss may provide revised minimum dead loads based on the contractor's proposed sequence.
05	Temporary propping of pile wall	Inability of pile wall during construction	Propp contractor to advise on propping requirements during temporary condition. Currently assumed propping is required at ground floor level until basement slab has been cast and cured to area of cover level basement slab (refer to FCDL-CUR-C10-FN-DR-S-16001)
06	Permanent propping of pile wall	Inability of pile wall during permanent condition	In permanent condition pile wall propped at both basement level and ground floor level. Where props present the need of the ground floor props varies (refer to FCDL-CUR-C10-FN-DR-S-16001). Permanent propping to be provided prior to application of frame loads to pile wall.
<b>7.0 ERECTING STRUCTURES AND PLACING COMPONENTS</b>			
7.1	Stability of core during construction	Inability of core during construction	If core is to be subformed, check on temporary condition of core required to determine propping requirements
7.2	Stability of core due to tower crane loading in temporary condition	Local buckling of core walls	Props required to core prior to erection of TC2 and must remain in place until core slabs and floor plates are in position, refer to design note FCDL-CUR-10-ZZ-RP-S-00011
7.3	Adequate tying of core during construction	Inadequate tying capacity of precast landings and connectors into core	Precast landings and connectors into core to be designed for required tension and compression force in temporary condition in addition to gravity loads, refer to design note FCDL-CUR-10-ZZ-RP-S-00011

**WORK IN PROGRESS (COSTING)**  
THE INFORMATION ON THIS DRAWING IS AN OFFERED COST SOLUTION BASED ON PRELIMINARY INFORMATION AS OF THE 31/10/2020. IT MAY BE SUBJECT TO CHANGE SUBJECT TO VARIATIONS THROUGH DESIGN DEVELOPMENT SUCH AS CLIENT BRIEF & SCOPE CHANGES, SERVICES PROVIDED, SUB-CONTRACTOR REQUIREMENTS, ETC. THE INFORMATION MUST THEREFORE BE USED WITH A SUITABLE CONTINGENT APPROACH WITH RESPECT TO STRATEGIC DECISION MAKING, COST MANAGEMENT, N/A MEASUREMENT ETC.

- GENERAL NOTES:**
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C01	FINAL CONSTRUCTION ISSUE	14.10.20	PT	DS
T01	STAGE 4 TENDER ISSUE	03.07.20	PM	AED
Rev	Description	Date	By	Check

Phase: **FINAL CONSTRUCTION**

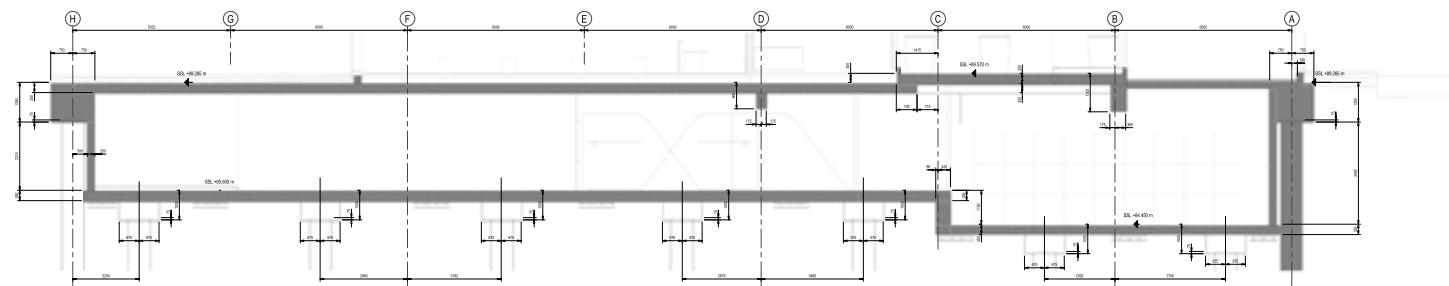
Project: **PROJECT DIPPER**

Dwg Title: **Residual Hazard Register**

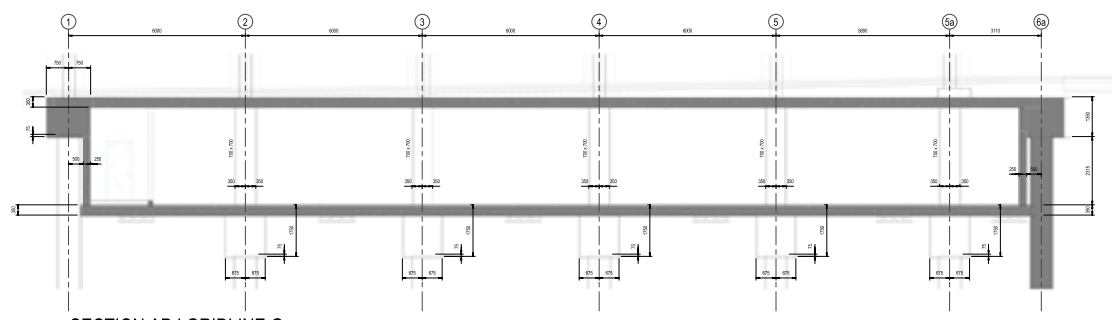
Project No.	07386	Rev	A1	Date	JULY 2020	Drawn By	PM/vo	Described By	AED	Checked By	DS
Scale	1:1										

Project Code	FCDL - CUR - C10 - ZZ - DR - S - 20100 - C01
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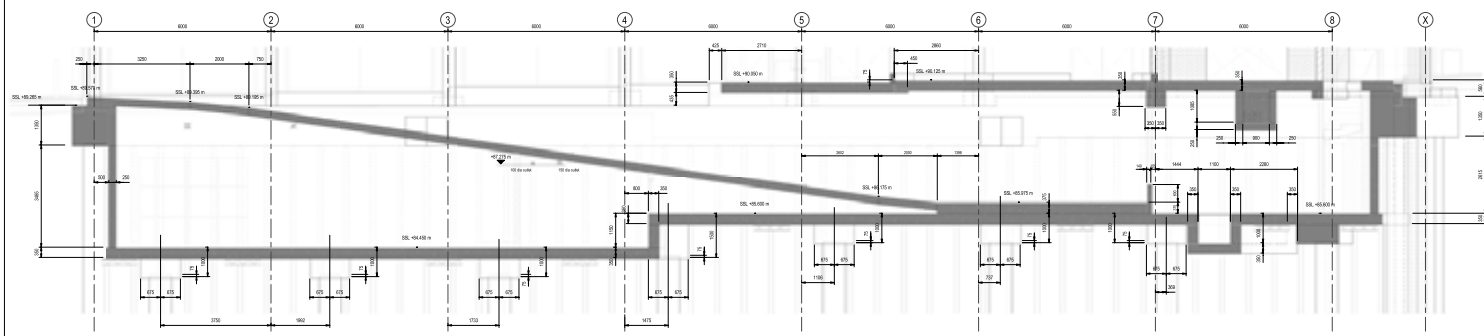
Master Number: 10000-CUR-C10-ZZ-DR-S-2000



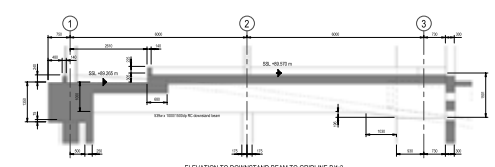
SECTION ADJ GRIDLINE 1



SECTION ADJ GRIDLINE G



SECTION ADJ GRIDLINE A



ELEVATION TO DOWNSTAND BEAM TO GRIDLINE B+1.3

**GENERAL NOTES**

- 1. THIS DRAWING IS TO BE USED IN CONSTRUCTION WITH ALL RELATED ARCHITECT AND ENGINEER DRAWINGS AND SPECIFICATIONS.
- 2. DO NOT SCALE THE DRAWING. ALL DIMENSIONS SHALL BE SHOWN ON THE DRAWING AND DIMENSIONS ON DRAWINGS SHALL BE BROUGHT TO THE EXACTED ATTENTION IMMEDIATELY. THE DIMENSIONS ARE TO BE EXACTED UNLESS NOTED OTHERWISE.
- 3. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.

**Concrete Grades & Rebar Allowances**

CONCRETE GRADE	UNIT WEIGHT (kg/m³)	COMPRESSIVE STRENGTH (MPa)	MIN. CURING PERCENTAGE
20M Concrete	2400	20	90
25M Concrete	2400	25	90
30M Concrete	2400	30	90
35M Concrete	2400	35	90
40M Concrete	2400	40	90
45M Concrete	2400	45	90
50M Concrete	2400	50	90
55M Concrete	2400	55	90
60M Concrete	2400	60	90
65M Concrete	2400	65	90
70M Concrete	2400	70	90
75M Concrete	2400	75	90
80M Concrete	2400	80	90
85M Concrete	2400	85	90
90M Concrete	2400	90	90
95M Concrete	2400	95	90
100M Concrete	2400	100	90

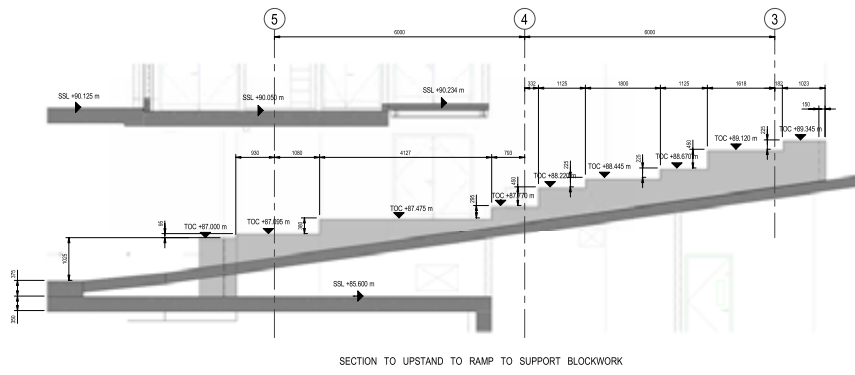
REBAR ALLOWANCES (kg/m³) FOR CONCRETE GRADES 20M TO 100M:  
 20M: 0.25%  
 25M: 0.25%  
 30M: 0.25%  
 35M: 0.25%  
 40M: 0.25%  
 45M: 0.25%  
 50M: 0.25%  
 55M: 0.25%  
 60M: 0.25%  
 65M: 0.25%  
 70M: 0.25%  
 75M: 0.25%  
 80M: 0.25%  
 85M: 0.25%  
 90M: 0.25%  
 95M: 0.25%  
 100M: 0.25%

DATE	DESCRIPTION	BY	CHECKED
2024-10-22	FINAL CONSTRUCTION	JL	JK
2024-10-22	BLANK ELEVATION REVISED	JL	JK
2024-10-22	CONSTRUCTION SET	JL	JK
2024-10-22	ISSUED FOR CONSTRUCTION	JL	JK

**Curtis**  
 Mechanical & Electrical Engineering  
 1011 10th Street, Suite 100, Minneapolis, MN 55403  
 Phone: 612.338.3333  
 Fax: 612.338.3334  
 Email: info@curtis-engineering.com  
 Website: www.curtis-engineering.com

DATE	DESCRIPTION
2024-10-22	FINAL CONSTRUCTION
2024-10-22	PROJECT DIPPER
2024-10-22	Basement Sections sheet 1

072385  
 Project: 24101017  
 Title: 450 - 24  
 Discipline: Mechanical & Electrical  
 Date: 2024-10-22  
 Scale: 1/8" = 1' - 0" (1:24)  
 FCDL - CUR - 10 - ZZ - DR - S - 21006 - 03



GENERAL NOTES:

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4. FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-XX-DR-S-2000. FOR RESIDUAL RISK REGISTER REFER TO DRG FCDL-CUR-10-ZZ-DR-S-2010.

**Concrete Grades & Rebar Allowances**

Item	Grade	Allowance
<b>RC PILECAP FOUNDATIONS</b>		
Pilecap Type A	C40/50	175kg/m <sup>3</sup>
Pilecap Type B	C40/50	175kg/m <sup>3</sup>
Pilecap Type C	C40/50	175kg/m <sup>3</sup>
Pilecap Type D	C40/50	175kg/m <sup>3</sup>
Pilecap Type E	C40/50	175kg/m <sup>3</sup>
Core Pilecap	C40/50	175kg/m <sup>3</sup>
<b>RC SLABS</b>		
200mm Concrete Floor Slab	C35/45	150kg/m <sup>3</sup>
200mm Reinforced Floor Slab	C40/50	160kg/m <sup>3</sup>
200mm Dimple Slab	C40/50	160kg/m <sup>3</sup>
200mm Reinforced Floor Slab	C40/50	160kg/m <sup>3</sup>
<b>RC COLUMN</b>		
300 x 300 Columns	C40/50	160kg/m <sup>3</sup>
175 x 175 Columns	C40/50	200kg/m <sup>3</sup>
1000 x 1000 Columns	C40/50	175kg/m <sup>3</sup>
<b>RC WALLS</b>		
200mm Walls	C40/50	125 kg/m <sup>3</sup>
150mm Walls	C40/50	100kg/m <sup>3</sup>
300mm Walls	C40/50	160kg/m <sup>3</sup>
<b>RC Casting Beam</b>		
150mm x 150mm Beam	C40/50	150kg/m <sup>3</sup>

All Structural elements to be concrete class DCP (Supreme Resistant Concrete) unless the A/C/C/ Class is specified. Subject to relevant Site Investigation Report.

Concrete Allowance dependent on casting strategy and preferred method of construction. Concrete measured for long term to be determined construction.

When used with rebar complying with the necessary standard. Existing construction, allow for additional 5kg/m<sup>3</sup> for extent of casting beam which requires crushing and testing to existing structure. Considerations regarding leaving 10mm.

Reinforcement estimates are based on requirements for the component design condition. Additional reinforcement that may be required prior to the temporary construction shall be noted.

Construction sequence from top to bottom indicated. (N/A if none)

Construction should refer to drawings for details.

CC1	FINAL CONSTRUCTION ISSUE	14.10.22	BT	DS
CC2	UPDATED TO SUIT LATEST INFORMATION	01.09.23	PM	NJ
CC3	CONSTRUCTION ISSUE	11.05.23	PM	ASD

Rev	Description	Date	By	Check

Market Exchange, 15-16 Whitworth Street West, Manchester, M1 3WG  
0161 276 2266  
info@curtins.com  
www.curtins.com

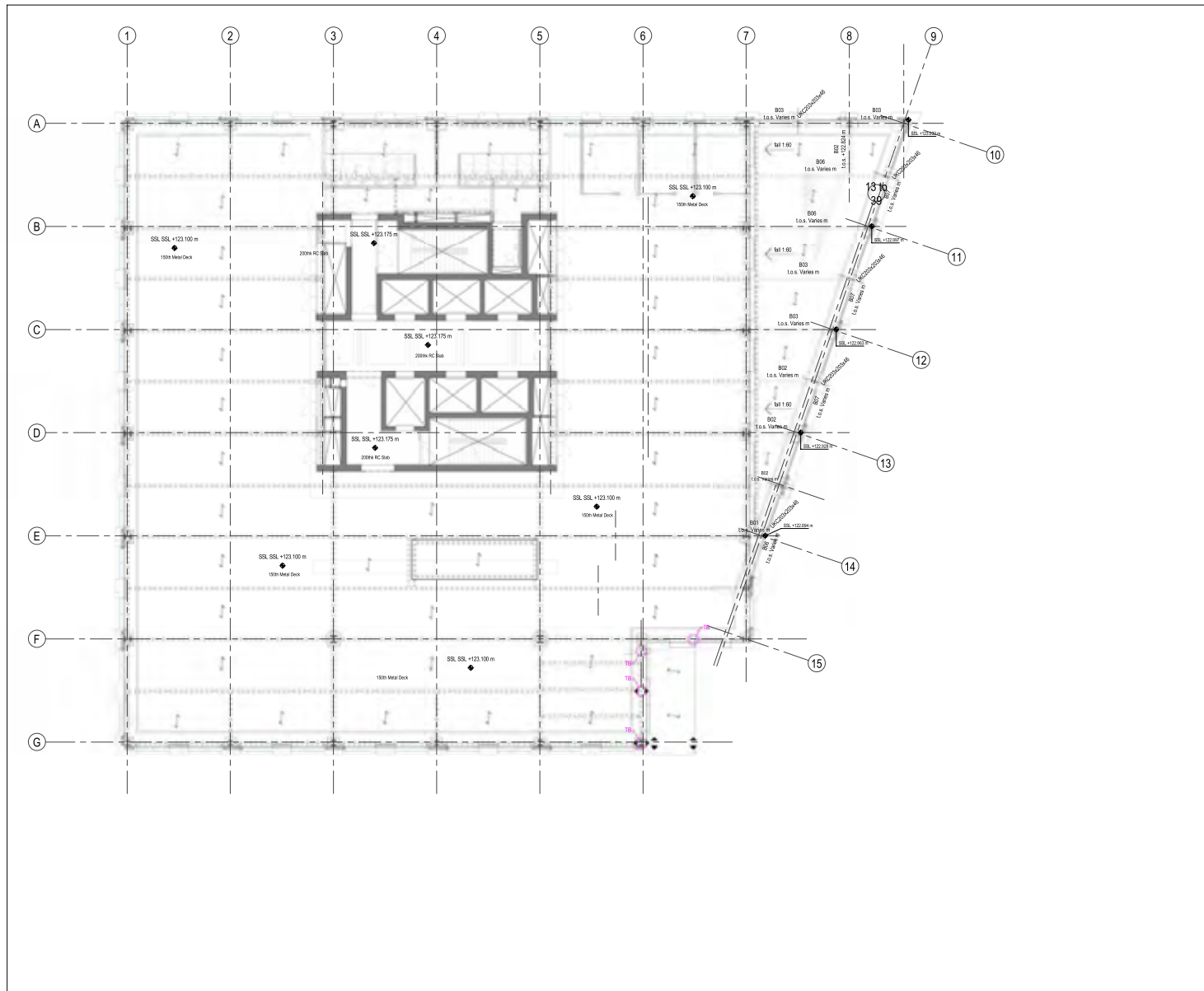
Curtns is a member of the Curtins Group. Curtins Group is a member of the Curtins Group. Curtins Group is a member of the Curtins Group. Curtins Group is a member of the Curtins Group.

Project: PROJECT DIPPER

Drawn By: Basem Sections sheet 2

Project No.	Size	Date	Drawn By	Designed By	Checked By
073385	A1	May 2021	PM/No	AED	DS

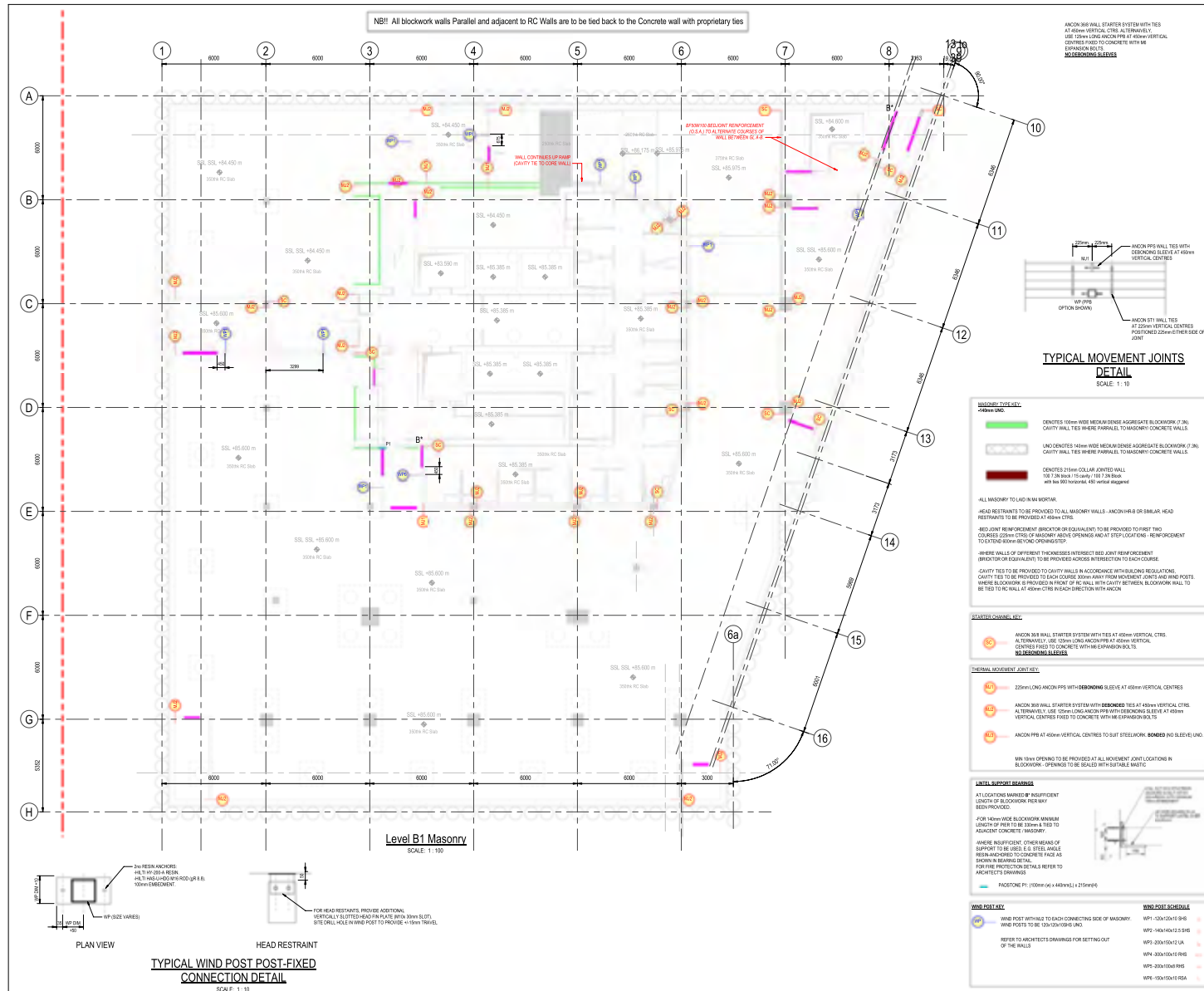
Project Code	Original	Volume	Level	Type	Rev.	Category / Number
FCDL - CUR - 10 - ZZ - DR - S -						21007 - C03



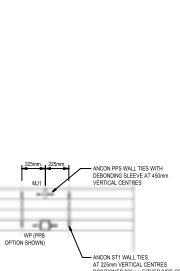
**GENERAL NOTES:**

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C02	FINAL CONSTRUCTION ISSUE	14.10.22	PT	DS							
C01	CONSTRUCTION ISSUE	18.06.21	PM	AED							
Rev	Description	Date	By	Check							
<p><b>Curtins</b></p> <p>Merchant Exchange, 15-18 Whitworth Street West, Manchester, M1 5WG          0161 276 2266  <a href="mailto:info@curtins.com">info@curtins.com</a>  <a href="http://www.curtins.com">www.curtins.com</a></p> <p><small>Curtins is a registered trademark of Curtins Group. Curtins Group is a registered trademark of Curtins Group. Curtins Group is a registered trademark of Curtins Group. Curtins Group is a registered trademark of Curtins Group. Curtins Group is a registered trademark of Curtins Group.</small></p>											
<p>Status: <b>FINAL CONSTRUCTION</b></p>											
<p>Project: <b>PROJECT DIPPER</b></p>											
<p>Dwg Title: <b>Loading Plan Level 08</b></p>											
Project No:	073385	Rev:	A1	Date:	14 JUN 2020	Drawn By:	PLW/m	Designed By:	AED	Checked By:	AED
Project Code:	100	Volume:	1	Level:	100	Type:	DR	Category:	DR	Number:	30007
<p>FCDL - CUR - 10 - 08 - DR - S - 30007 - C02</p>											



ANCON B2 WALL STARTER SYSTEM WITH TIES AT 450mm VERTICAL CENTRE ALTERNATELY USE 120mm LONG ANCON B1 AT 450mm VERTICAL CENTRES TO CONCRETE WITH EXPANSION BOLTS TO DISMOUNT BULBES



TYPICAL MOVEMENT JOINTS DETAIL SCALE: 1:10

**MASONRY TYPE KEY**  
 - DENOTES 100mm wide MEDIUM DENSITY AGGREGATE BLOCKWORK (7.5%) CAVITY WALL TIES WHERE PARALLEL TO MASONRY CONCRETE WALLS.  
 - DENOTES 140mm wide MEDIUM DENSITY AGGREGATE BLOCKWORK (7.5%) CAVITY WALL TIES WHERE PARALLEL TO MASONRY CONCRETE WALLS.  
 - DENOTES 210mm COLLAR JOINTED WALL 100/120/140/160/180/210 Blocks with max 300 horizontal, 450 vertical stagger.

**ALL MASONRY TO LAG IN M MORTAR**  
 - HEAD RESTRAINTS TO BE PROVIDED TO ALL MASONRY WALLS - ANCON HRB OR SIMILAR - HEAD RESTRAINTS TO BE PROVIDED AT 450mm CTR-CTR.  
 - 90° JOINT REINFORCEMENT BUCKING OR EQUIVALENTS TO BE PROVIDED TO BE TIED TO TWO COURSES (25mm CTR-CTR) OF MASONRY ABOVE OPENINGS AND AT STEP LOCATIONS - REINFORCEMENT TO EXTEND MINIMUM 200mm OVER.  
 - WHERE WALLS OF DIFFERENT THICKNESSES INTERSECT BED JOINT REINFORCEMENT (BRIQUETTES OR EQUIVALENT) TO BE PROVIDED ACROSS INTERSECTION TO EACH COURSE.  
 - CAVITY TIES TO BE PROVIDED TO CAVITY WALLS IN ACCORDANCE WITH THE LINE RECORD. CAVITY TIES TO BE PROVIDED TO EACH COURSE 300mm AWAY FROM MOVEMENT JOINTS AND WIND POSTS WHERE BLOCKWORK IS PROVIDED IN FRONT OF RC WALL WITH CAVITY BETWEEN. BLOCKWORK WALL TO BE TIED TO RC WALL AT 450mm CTR-CTR IN EACH DIRECTION WITH ANCON.

**STARTER CHANNEL KEY**  
 - ANCON B2 WALL STARTER SYSTEM WITH TIES AT 450mm VERTICAL CENTRE ALTERNATELY USE 120mm LONG ANCON B1 AT 450mm VERTICAL CENTRES FIXED TO CONCRETE WITH EXPANSION BOLTS TO DISMOUNT BULBES

**THERMAL MOVEMENT JOINT KEY**  
 - 220mm LONG ANCON PRS WITH DEBRIDED SLEEVE AT 450mm VERTICAL CENTRES  
 - ANCON B2 WALL STARTER SYSTEM WITH DEBRIDED TIES AT 450mm VERTICAL CENTRE ALTERNATELY USE 120mm LONG ANCON B1 WITH DEBRIDED TIES AT 450mm VERTICAL CENTRES FIXED TO CONCRETE WITH EXPANSION BOLTS TO DISMOUNT BULBES  
 - ANCON PRS AT 450mm VERTICAL CENTRES TO SUIT STEELWORK BONDERS (NO BULBES) UNDO

**WIND SUPPORT RESTRAINT**  
 - AT LOCATIONS WHERE REINFORCEMENT LENGTH OF BLOCKWORK REINFORCEMENT IS INSUFFICIENT  
 - FOR 100mm WIDE BLOCKWORK MINIMUM LENGTH OF REIN TO BE 120mm & TIED TO ADJACENT CONCRETE MASONRY  
 - WHERE INSUFFICIENT OTHER MEANS OF SUPPORT TO BE USED. E.G. STEEL ANGLE REINFORCEMENT TO CONCRETE FACE AS SHOWN IN SUPPORT DETAIL.  
 - FOR FIRE PROTECTION DETAILS REFER TO ARCHITECT'S DRAWINGS.  
 - FINSTONE P1 (100mm x 40mm x 125mm)



WIND SUPPORT RESTRAINT DETAIL SCALE: 1:10

**WIND POST SCHEDULE**

W/P	Size	Use	Date	Drawn By	Designed By	Checked By
W/P1	125x125x10	9-6	19/01/2021	RL	AED	KG
W/P2	140x140x12	5-6				
W/P3	200x100x12	UN				
W/P4	200x100x10	UN				
W/P5	200x100x10	UN				
W/P6	100x100x10	UN				

**GENERAL NOTES:**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING FCD-CUR-10-XX-DR-6-2000. FOR RISK REGISTER REFER TO DRG FCD-CUR-10-ZZ-DR-6-2000.

**MASONRY NOTES**

- THIS DRAWING IS FOR INFORMATION ONLY AND NOT TO BE USED FOR CONSTRUCTION. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTS & ENGINEERS INFORMATION.
- CONCRETE TO BE PROVIDED TO ALL MASONRY WALLS MAY INCREASE NUMBER OF MOVEMENT JOINTS AND/OR WIND POSTS OR HAVE AN ADVERSE EFFECT ON THE DRAWING LOOK-LIKE. ADDITIONAL INFORMATION ON FLOOR SLAB MAY ALSO REQUIRE MOVEMENT JOINTS AT STEP LOCATIONS.
- MASONRY WALLS ARE DESIGNED TO WITHSTAND PRESSURE AND MANUALLY LOADING ONLY. TEMPORARY WORKS MAY BE REQUIRED TO PROTECT FROM MASONRY UNTIL PERMANENT LOADING IS CONSTRUCTED.
- IN GENERAL MASONRY WALLS ARE DETAILABLE UNTIL TOP OF WALL HAS BEEN ESTABLISHED WITH SUITABLE HEAD RESTRAINT DETAIL.
- AT CAVITY WALL LOCATIONS PARALLEL CONCRETE WALL CAVITY WALL TIES ARE TO BE PROVIDED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS (IF LATELITES ARE TO BE EXPOSED IN THESE LOCATIONS, FURNISHED FIRE) LATELITES SHOULD BE USED.
- WHERE PROPRIETARY 'Tough' Lintel are to be utilised these are to be designed and detailed by specialist. Refer to specialist drawings and details for locations.

**DETAILED IN MASONRY WALL**

WALL CONSTRUCTION	MAX CLEAR SPAN (mm)	LINTEL	MIN END BEARING
Single Leaf 100mm Blockwork	700 - 2750	EB-7	150mm
Single Leaf 200mm Blockwork	700 - 3000	FIRE RB	150mm

**FINAL CONSTRUCTION**

Code	Description	Date	By	Checked
CC1	FINAL CONSTRUCTION ISSUE	14.10.22	PT	DB
CC2	DRAWING UPDATED	26.10.21	PM	NEC
CC3	BLOCKWORK B STRENGTH UPDATED	05.10.21	PM	NEC
CC4	CONSTRUCTION ISSUE	30.04.21	PM	NEC

**FINAL CONSTRUCTION**

Project: PROJECT DIPPER

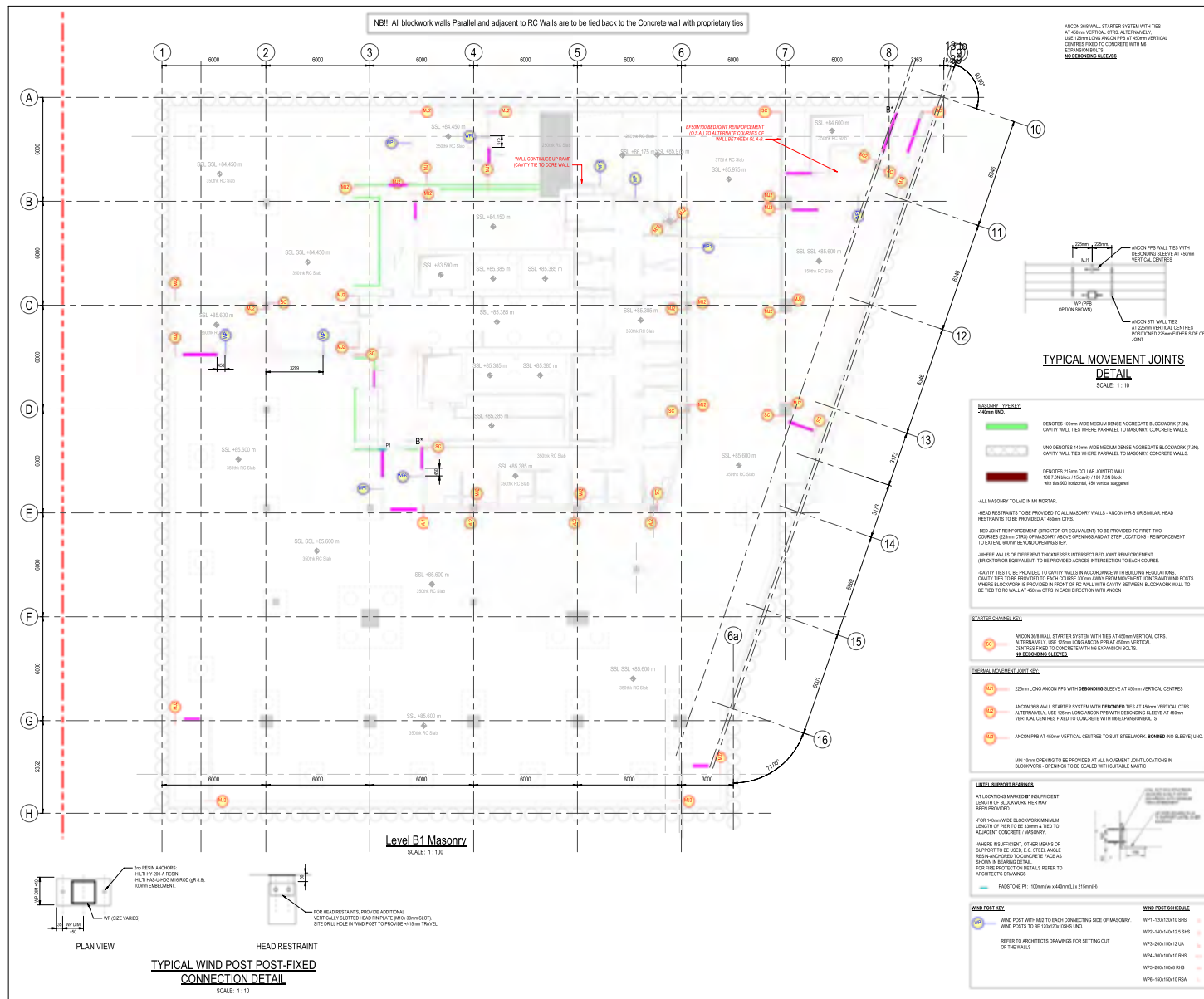
Basement Level Masonry Restraint Details

**Project Summary**

Project No.	Site	Date	Drawn By	Designed By	Checked By
073385		April 2021	RL	AED	KG

**Revision History**

Project Code	Quantity	Level	Type	Roll	Category / Number	Rev
FCDL - CUR - 10 - B1 - DR - S - 20051 - C04						



ANCON PRS WALL STARTER SYSTEM WITH TIES AT 400mm VERTICAL CTRS ALTERNATELY USE 120mm LONG ANCON PRS AT 400mm VERTICAL CENTRES FIXED TO CONCRETE WITH EXPANSION BOLTS  
**NO DIMENSIONS IN LEVEL**



**TYPICAL MOVEMENT JOINTS DETAIL**  
SCALE: 1:10

**MASONRY TYPE KEY**  
-Hollow UNO  
-Solid UNO  
-Solid UNO  
-Solid UNO

**ALL MASONRY TO LAG IN M MORTAR**  
-HEAD RESTRAINTS TO BE PROVIDED TO ALL MASONRY WALLS - ANCON HRB OR SIMILAR - HEAD RESTRAINTS TO BE PROVIDED AT 400mm CTR  
-WIND JOINT REINFORCEMENT (BOLTS OR EQUIVALENTS) TO BE PROVIDED TO BE FIXED TO TWO COURSES (20mm CTR) OF MASONRY ABOVE OPENINGS AND AT STEP LOCATIONS - REINFORCEMENT TO EXTEND REVERSE SIDE OF MASONRY  
-WHERE WALLS OF DIFFERENT THICKNESSES INTERSECT BED JOINT REINFORCEMENT (BROUCTION OR EQUIVALENT) TO BE PROVIDED ACROSS INTERSECTION TO EACH COURSE  
-CAVITY TIES TO BE PROVIDED TO CAVITY WALLS IN ACCORDANCE WITH THE UNO RECOMMENDATIONS  
-CAVITY TIES TO BE PROVIDED TO EACH COURSE 300mm AWAY FROM MOVEMENT JOINTS AND WIND POSTS WHERE BLOWING IS PROVIDED FROM ONE WALL WITH CAVITY BETWEEN JOINTS AND WIND POSTS TO BE TIED TO RC WALL AT 400mm CTR IN EACH DIRECTION WITH ANCON

**STARTER CHANNEL KEY**  
ANCON PRS WALL STARTER SYSTEM WITH TIES AT 400mm VERTICAL CTRS ALTERNATELY USE 120mm LONG ANCON PRS AT 400mm VERTICAL CENTRES FIXED TO CONCRETE WITH EXPANSION BOLTS  
**NO DIMENSIONS IN LEVEL**

**THERMAL MOVEMENT JOINT KEY**  
20mm LONG ANCON PRS WITH DEBRIDED SLEEVE AT 400mm VERTICAL CENTRES  
ANCON PRS WALL STARTER SYSTEM WITH DEBRIDED TIES AT 400mm VERTICAL CTRS ALTERNATELY USE 120mm LONG ANCON PRS WITH DEBRIDED TIES AT 400mm VERTICAL CENTRES FIXED TO CONCRETE WITH EXPANSION BOLTS  
ANCON PRS AT 400mm VERTICAL CENTRES TO SUIT STEELWORK BONDING (NO BLEEDING UNO)  
MIN 10mm OPENING TO BE PROVIDED AT ALL MOVEMENT JOINT LOCATIONS IN BLOWWORK - OPENINGS TO BE SEALED WITH SUITABLE MORTAR

**UNIT SUPPORT REINFORCEMENT**  
AT LOCATIONS WHERE REINFORCEMENT LENGTH OF BLOWWORK REINFORCEMENT IS REQUIRED  
FOR Hollow WIRE BLOWWORK MINIMUM LENGTH OF REIN TO BE 100mm & TIED TO ADJACENT CONCRETE MASONRY  
WHERE INSUFFICIENT OTHER MEANS OF SUPPORT TO BE USED, E.G. STEEL ANGLE REINFORCEMENT TO CONCRETE FACE AS SHOWN IN SUPPORT DETAIL  
FOR FIRE PROTECTION DETAILS REFER TO ARCHITECT'S DRAWINGS  
PISTONE P1: 100mm (w) x 40mm (h) x 125mm (t)

**WIND POST KEY**  
WIND POST WITH NAIL TO EACH CONNECTING SIDE OF MASONRY WIND POSTS TO BE 100mm (MIN) AND REFER TO ARCHITECT'S DRAWINGS FOR SETTING OUT OF THE WALLS  
**WIND POST SCHEDULE**  
W/P1 - 20x125x15 S/S  
W/P2 - 16x125x12 S/S  
W/P3 - 20x150x12 S/S  
W/P4 - 20x150x15 S/S  
W/P5 - 20x150x15 S/S  
W/P6 - 120x150x15 S/S

**GENERAL NOTES:**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
- DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-XX-DR-8-2000. FOR RISK REGISTER REFER TO DRG FCDL-CUR-10-ZZ-DR-8-2010.

**MASONRY NOTES**

- THIS DRAWING IS FOR INFORMATION ONLY AND NOT TO BE USED FOR CONSTRUCTION. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTS & ENGINEERS INFORMATION.
- CONCRETE TO BE PROVIDED TO ALL MASONRY WALLS MAY INCREASE NUMBER OF MOVEMENT JOINTS AND/OR WIND POSTS OR HAVE AN ADVERSE EFFECT ON THE DRAWING. LOOK FOR ADDITIONAL NOTES ON FOUND FLOOR PLAN AND RELEVANT MOVEMENT JOINTS AT STEP LOCATIONS.
- MASONRY WALLS ARE DESIGNED TO WITHSTAND PRESSURE AND MANUALLY LOADING ONLY. TEMPORARY WORKS MAY BE REQUIRED TO PROTECT FROM MASONRY UNTIL PERMANENT LOADING IS CONSTRUCTED.
- IN GENERAL MASONRY WALLS ARE DETAILABLE UNTIL TOP OF WALL HAS BEEN ESTABLISHED WITH SUITABLE HEAD RESTRAINT DETAIL.
- AT CAVITY WALL LOCATIONS PARALLEL CONCRETE WALL CAVITY WALL TIES ARE TO BE PROVIDED IN ACCORDANCE WITH UNO BUILDING SPECIFICATION DOCUMENT A. AT ALL LOCATIONS OF WINDPOSTS AND MOVEMENT JOINTS TO BE AGREED WITH ARCHITECT.

DETAILS UNITS IN MASONRY WALL

-FIRE RATING OF BLOWWORK WALLS SHOULD BE SPECIFIED WHEN ORDERING FIRE UNITS (SEE DRG)

-LINTELS TO BE RETALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS IF LINTELS ARE TO EXPOSE UNTERIOR SURFACES. FIRE RATED LINTELS SHOULD BE USED

WALL CONSTRUCTION	MAX CLEAR SPAN (mm)	LINTEL	MIN END BEARING
Single Leaf 100mm Blockwork	700 - 2750	EN-F	150mm
Single Leaf 100mm Blockwork	700 - 3000	FIRE RIB	150mm

Where proprietary 'Tough' Lintels are to be utilised these are to be designed and detailed by specialist. Refer to architect drawings and details for locations.

CD	DESCRIPTION	DATE	BY	CHKD
CD1	FINAL CONSTRUCTION ISSUE	14.10.22	PT	DB
CD2	DRAWING UPDATED	26.10.21	PM	KEG
CD3	BLOCKWORK STRENGTH UPDATED	05.10.21	PM	KEG
CD4	CONSTRUCTION ISSUE	30.04.21	PM	KEG

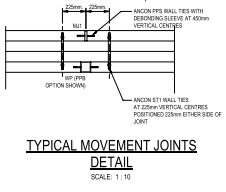
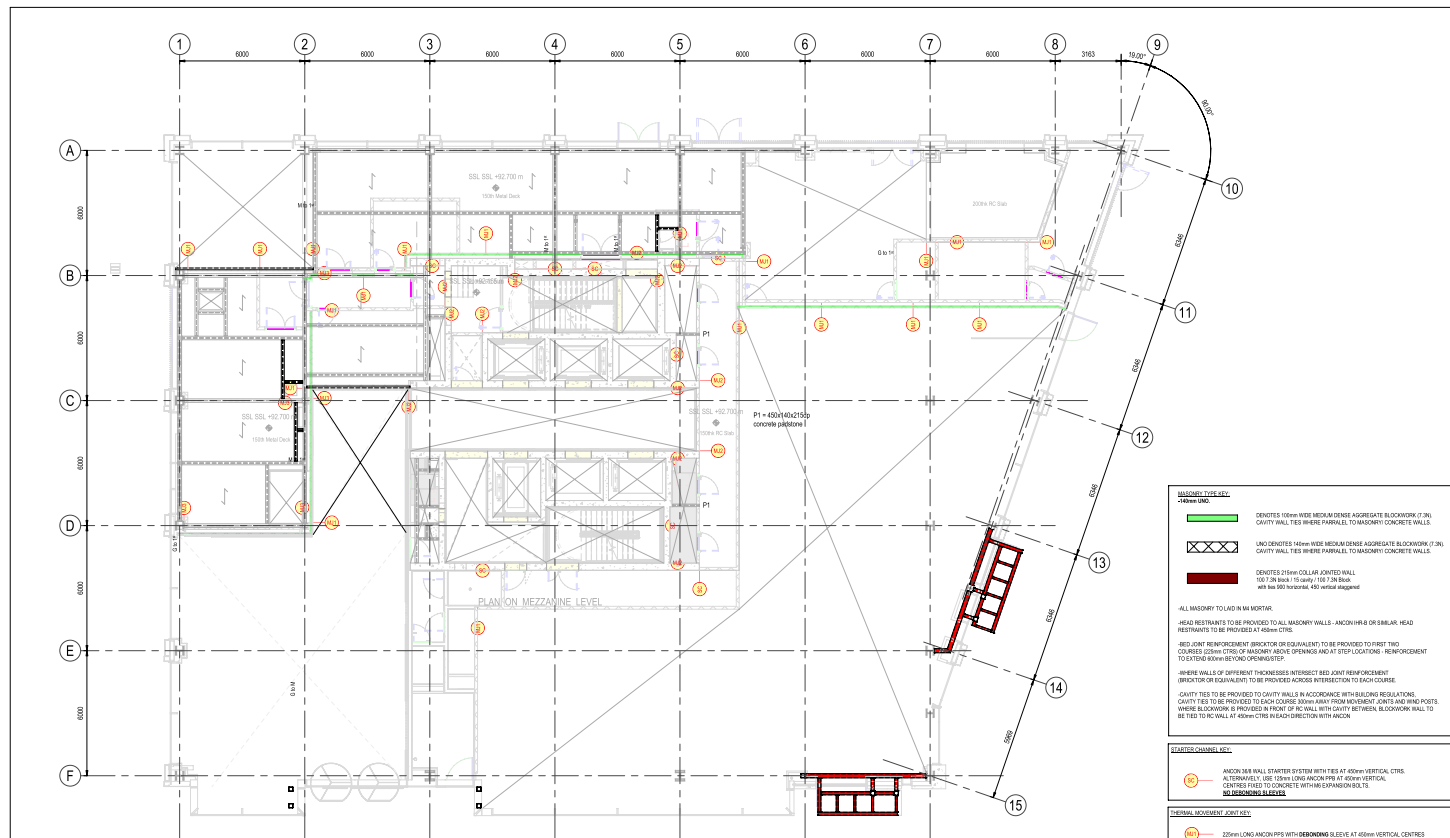
**FINAL CONSTRUCTION**

Project: **PROJECT DIPPER**

Doc File: **Basement Level Masonry Restraint Details**

Project No.	Size	Date	Drawn By	Designed By	Checked By
073385	A1	April 2021	RL	AED	KG

Project Code: **FCDL - CUR - 10 - B1 - DR - S - 20051 - C04**



FOR WINDPOST SETTING OUT AND DETAILS MEZZANINE LEVEL REFER TO DRAWING FCDL-HEX-10-00-DR-Y-2151

**MASONRY TYPE KEY**

140mm WIDE MEDIUM DENSITY AGGREGATE BLOCKWORK (7.5% CAVITY WALL TIES WHERE PARALLEL TO MASONRY CONCRETE WALLS)

140mm DEVICES 140mm WIDE MEDIUM DENSITY AGGREGATE BLOCKWORK (7.5% CAVITY WALL TIES WHERE PARALLEL TO MASONRY CONCRETE WALLS)

215mm COLLAR JOINTED WALL 100 x 200mm 150 cavity + 100 x 200mm block with 20mm horizontal 40mm vertical engagement

ALL MASONRY TO LIE IN AN MORTAR HEAD RESTRAINTS TO BE PROVIDED TO ALL MASONRY WALLS - ANCON HP8 OR SIMILAR HEAD RESTRAINTS TO BE PROVIDED AT 600mm CTRTS

REINFORCING BARS (OR EQUIVALENT) TO BE PROVIDED TO REST TWO COURSES (DOWN CTRTS) OF MASONRY ABOVE OPENINGS AND AT STEEL LOCATIONS REINFORCEMENT TO EXTEND 800mm BEYOND OPENING

WHERE WALLS OF DIFFERENT THICKNESSES INTERSECT REINFORCEMENT (BRICTOR OR EQUIVALENT) TO BE PROVIDED ACROSS INTERSECTION TO EACH COURSE

CAVITY TIES TO BE PROVIDED TO CAVITY WALLS IN ACCORDANCE WITH BUILDING REGULATIONS CAVITY TIES TO BE PROVIDED TO EACH COURSE 300mm AWAY FROM MOVEMENT JOINTS AND WINDPOSTS WHERE BLOCKWORK IS PROVIDED IN FRONT OF RC WALL WITH CAVITY BETWEEN BLOCKWORK WALL TO BE TIED TO RC WALL AT 400mm CTRTS BEHIND DIRECTION WITH ANCON

**STARTER CHANNEL KEY**

ANCON 300 WALL STARTER SYSTEM WITH TIES AT 400mm VERTICAL CTRTS. ALTERNATIVELY, USE 120mm LONG ANCON PINS AT 800mm VERTICAL CENTRES FIXED TO CONCRETE WITH M6 EXPANSION BOLTS

**THERMAL MOVEMENT JOINT KEY**

250mm LONG ANCON PINS WITH DEBORING SLEEVE AT 400mm VERTICAL CENTRES

ANCON 300 WALL STARTER SYSTEM WITH DEBORING TIES AT 400mm VERTICAL CTRTS. ALTERNATIVELY, USE 120mm LONG ANCON PINS WITH DEBORING SLEEVE AT 400mm VERTICAL CENTRES FIXED TO CONCRETE WITH M6 EXPANSION BOLTS

ANCON PINS AT 400mm VERTICAL CENTRES TO BLIND STEELWORK BENEATH SLEEVE END

MIN 15mm OPENING TO BE PROVIDED AT ALL MOVEMENT JOINT LOCATIONS IN BLOCKWORK - OPENINGS TO BE SEALED WITH SUITABLE MORTIC

**LINTEL SUPPORT BEAMS**

AT LOCATIONS MARKED BY RED DOTTED LINES OR BLOCKWORK REINFORCEMENT HAS BEEN PROVIDED

FOR 140mm WIDE BLOCKWORK ANCON WALLS UP TO 2000mm HEIGHT TO BE TIED TO ADJACENT CONCRETE MASONRY

WHERE REINFORCEMENT OVERHEADS OF SUPPORT TO BE USED E.G. STEEL ANGLE REINFORCEMENT TO CONCRETE IS TO BE SHOWN IN BEARING DETAIL FOR FIRE PROTECTION DETAILS REFER TO ARCHITECT'S DRAWINGS

PAVINGSTONE P1 (100mm (x) 440mm) x 250mm

**GENERAL NOTES:**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
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- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
- FOR GENERAL NOTES REFER TO DRAWING FCDL-CUR-10-XX-DR-S-2000. FOR RESIDUAL RISK REGISTER REFER TO DRG FCDL-CUR-10-ZZ-DR-S-2010

- MASONRY NOTES**
- THIS DRAWING IS FOR INFORMATION ONLY AND NOT TO BE USED FOR CONSTRUCTION. THE DRAWING SHOULD BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTS & ENGINEERS INFORMATION.
  - ALL TIES ARE TO BE THE SIZE OF THE TIE FOR MASONRY WALLS MAY INCREASE NUMBER OF MOVEMENT JOINTS AND/OR WINDPOSTS OR HAVE AN ADVERSE EFFECT ON THE STRUCTURE. SEE ADDITIONAL NOTES FOR FURTHER INFORMATION.
  - MASONRY WALLS ARE DESIGNED FOR NORMAL PRESSURE AND HARVEST / LADING ONLY. TEMPORARY WORKS MAY BE REQUIRED TO PROTECT MASONRY WALLS. RETENTION CLADDING IS CONSTRUCTED.
  - IN GENERAL MASONRY WALLS ARE INSTABLE UNTIL TOP OF WALL HAS BEEN ESTABLISHED WITH SUITABLE HEAD RESTRAINTS.
  - ALL CAVITY WALL LOCATIONS & PARALLEL CONCRETE WALLS CAVITY WALL TIES ARE TO BE PROVIDED IN ACCORDANCE WITH BUILDING REGULATIONS (APPROVED DOCUMENT A).
  - ALL LOCATIONS OF WINDPOSTS AND MOVEMENT JOINTS TO BE AGREED WITH ARCHITECT.

**DEBORING LINTEL IN MASONRY WALL**

- FIRE RATINGS OF BLOCKWORK WALLS SHOULD BE SPECIFIED WHEN ORDERING FIRE LINTELS TO BE ORDERED.

- LINTELS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS IF LINTELS ARE TO BE EXPOSED TO WEATHER (UNPAINTED FIRE) LINTELS SHOULD BE USED

WALL CONSTRUCTION	MAX CLEAR SPAN (mm)	LINTEL	MIN END BEARING
Single Leaf 100mm Blockwork	200 - 2700	ED-7	150mm
Single Leaf 140mm Blockwork	200 - 2200	FIRE RB	150mm

Where proprietary 'Thought' Liners are to be utilised these are to be designed and drawn by specialist fabricator to match drawings and made for Ancons

CO1	FINAL CONSTRUCTION ISSUE	22.11.20	PT	DB
CO2	FINAL CONSTRUCTION ISSUE	14.10.20	PT	DB
CO3	WIND POST ADDSD	15.11.21	PM	NJ
CO4	CONSTRUCTION ISSUE	28.10.21	PM	NJ

**Curtins**

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**FINAL CONSTRUCTION**

Project: PROJECT DIPPER

Dwg No: Mezzanine Level Masonry Restraint Details

Project No:	073385	Size:	A1	Date:	April 2021	Drawn By:	RL	Designed By:	AED	Checked By:	KG
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Project Code:	FCDL - CUR - 10 - M0 - DR - S - 20053 - C04
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