



# BCA Capability Statement

390-422 Harris Street and 273 Pyrmont Street, Ultimo

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Prepared for: HDI SYD1 Property Holdings Pty Limited (DigiCo)

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## Contents

1	Executive Summary.....	4
2	Introduction.....	5
2.1	Methodology.....	5
2.2	Limitations.....	5
2.3	Conflict of Interest.....	6
3	Development Description.....	7
3.1	Site Location and Context.....	7
3.2	Site description.....	8
3.3	Overview of proposed development.....	8
3.4	BCA Classification (Part A6).....	9
3.5	Rise in Storeys (Clause C2D3).....	9
3.6	Effective Heights (Part A1).....	9
3.7	Type of Construction Required (Clause C2D2 / Table C2D2).....	9
3.8	Building Data Summary.....	10
4	Assessment.....	11
4.1	Relevant BCA Edition.....	11
4.2	Compliance with the BCA.....	11
4.2.1	A2GA Compliance with the Performance Requirements.....	11
5	Conclusion.....	15
6	Appendix A – Design Documentation.....	16

## Authorisation

Revision	Comment / Reason for Issue	Issue Date	Prepared by	Reviewed by
02	Issue for SSDA	28 February 2025		
			Ethan Davies	Heath McNab

## Revision History

Revision	Comment / Reason for Issue	Issue Date	Prepared by
01	First draft	31 January 2025	Ethan Davies
02	Issue for SSDA	28 February 2025	Ethan Davies

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## 1 Executive Summary

MBC Group have assessed architectural design documents prepared by dem (refer appendix A) for compliance with the National Construction Code - Building Code of Australia Volume One 2022 (referred to as BCA).

The purpose of the assessment is to provide surety to the Consent Authority, the Department of Planning, Housing and Infrastructure (DPHI), that the proposed development has been assessed and is capable of complying with the BCA and that subsequent compliance with the provisions of Parts C, D and E of the BCA will not give rise to significant design amendments.

This statement does not consider Section 62 of the Environmental Planning and Assessment Regulation 2021, this clause is a consent authority consideration.

The application for Construction Certificate shall be assessed under the relevant provisions of the Environmental Planning & Assessment Act 1979 (As Amended) and the Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021.

## 2 Introduction

### 1.1 Purpose of this Report

This BCA capability report has been prepared on behalf of HDI SYD1 Property Holdings Pty Limited (DigiCo) in support of a State Significant Development Application (SSDA) submitted to the Department of Planning, Housing and Infrastructure (DPHI) under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act 1979).

The SSDA seeks approval for intensification of the existing data centre development at the site. Specifically, the SSDA seeks consent for the vertical expansion of two existing data centres at the site known as SYD1W (western facility) and SYD1E (eastern facility). The vertical expansion would allow for the intensification of the data centre to provide for a 88MW facility.

This report provides an assessment of BCA compliance capability and responds to the Secretary's Environmental Assessment Requirements (SEARs) issued by DPHI on 8 May 2024 in relation to the project as applicable.

### 2.1 Methodology

The methodology applied in undertaking this assessment has included: -

- A desktop review of architectural plans, as listed in Appendix A
- Assessment of the architectural plans against the following relevant codes:-
  - Sections C, D & E (as applicable / relevant) of the National Construction Code Series (Volume 1) Building Code of Australia 2022 (BCA)
  - Environmental Planning and Assessment Act 1979 (EPAA)
  - Environmental Planning & Assessment (Development Certification and Fire Safety) Regulation 2021 (EPAR)
- Discussions with the design development team to gain an understanding of the development proposed.

### 2.2 Limitations

This statement **does not include** or imply any detailed assessment for design, compliance or upgrading for:

- the structural adequacy or design of the building;
- the inherent derived fire-resistance ratings of any proposed structural elements of the building (unless specifically referred to); and
- the design basis and/or operating capabilities (including pressure & flows) of any proposed
  - electrical
  - mechanical
  - hydraulic
  - fire protection services.
- Section 62 of the Environmental Planning and Assessment Regulation 2021

This statement does not include, or imply compliance with:

- the National Construction Code – Plumbing Code of Australia Volume 3

- the Disability Discrimination Act 1992 including the Disability ((Access to Premises – Buildings) Standards 2010 – unless specifically referred to)
- The deemed to satisfy provisions of Part D4 and F4D5 of BCA 2022
- The deemed to satisfy provisions of Sections B, F, G, H & J of BCA 2022
- Demolition Standards not referred to by the BCA;
- Work Health and Safety Act 2011;
- An out of cycle change to the Building Code of Australia.
- Requirements of other Regulatory Authorities including, but not limited to, Telstra, Telecommunications Supply Authority, Water Supply Authority, Electricity Supply Authority, Work Cover, Roads and Maritime Services (RMS), Roads and Transport Authority, Local Council, ARTC, Department of Planning and the like; and
- Conditions of Development Consent issued by the Local Consent Authority.

### 2.3 Conflict of Interest

This statement prepared by MBC Group was provided as part of MBC Group’s contracted scope for this project, which is “Certification Work”, as defined in the Building and Development Certifiers Regulation 2020.

Due to the strict requirements and limits in terms of conflicts of interest imposed under that regulation, MBC Group has not and cannot undertake any services other than Certification Work services on this project. Hence, the contents of this statement, and any associated correspondence, were provided in the context of a certification assessment, and should not be construed to constitute involvement in building design, the preparation of plans and specifications, the provision of advice on how to amend a plan or specification to ensure that the aspect will comply with legislative or code requirements, or to breach any other restriction or limitation imposed under the conflict of interest provisions of that or any other legislation.

### 3 Development Description

#### 3.1 Site Location and Context

The site is located within the suburb of Ultimo, within the City of Sydney Local Government Area (LGA).

The locality is characterised by a mix of uses, as shown in Figure 1. This includes lower density terrace housing with heritage value on the west side of Harris Street, mid-rise residential development to the south, the International Convention Centre to the east, and higher residential densities and tourist accommodation buildings to the north. The site is less than 1km from the Sydney CBD and Darling Harbour which contain high rise commercial and residential towers, waterfront areas, public reserves, and numerous shops and entertainment premises.

The subject site is within a highly accessible locality, less than 250m from the Exhibition Centre light rail stop which connects to Central Station, and approximately 800m from Pyrmont Bay ferries. The location will also be an approximate 10 minute walk from the future Pyrmont metro station along the Sydney Metro West route.

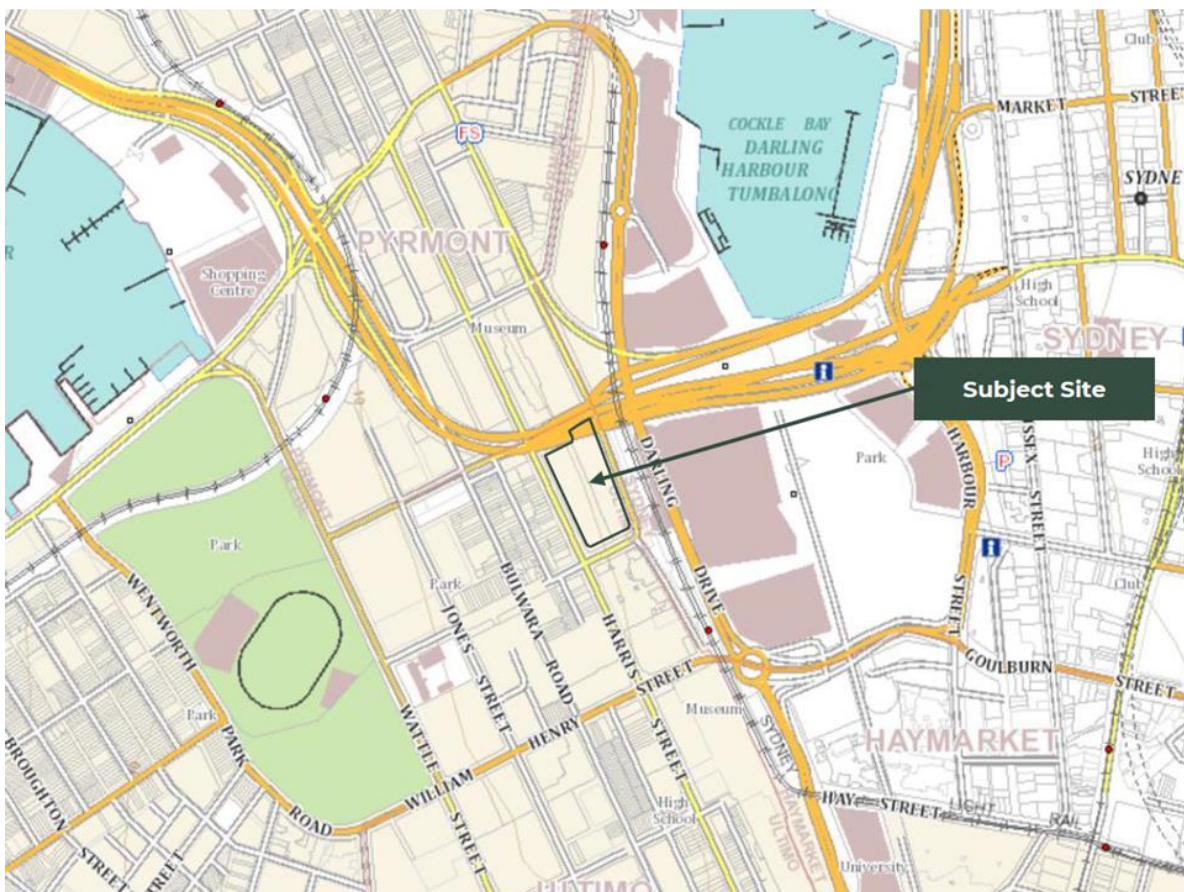


Figure 1 – Site Context Map

### 3.2 Site description

The subject site comprises an entire block and is made up of two parcels of land, known as 392-422 Harris Street (on the western side) and 273 Pyrmont Street (on the eastern side). The western side comprises the data centre referred to as SYDW, and the eastern side comprises the data centre referred to as SYDE.

As shown in Figure 2 below, the site is generally in a rectangular form, with frontages to Harris Street to the west, Quarry Street to the south, Pyrmont Street to the east, and both Fig Street and the Western Distributor to the north (with the Western Distributor constructed in a viaduct above Fig Street).



Figure 2 - Aerial Image of the subject site and surrounds

### 3.3 Overview of proposed development

The SSDA seeks approval for intensification of the existing data centre development at the site. Specifically, the SSDA will seek consent for the vertical expansion of two existing data centres at the site known as SYD1W (western facility) and SYD1E (eastern facility) and data hall densification works. The vertical expansion would allow for the intensification of the data centre to provide for a 88MW facility

In summary, approval for the following is sought for development comprising:

- Augmentation and vertical extension to the data centre facilitating the installation of electrical and mechanical equipment;
- Conversion of existing building floor space into additional electrical rooms or conversion of plant/mechanical space;
- Increase in the total megawattage of the data centre from 42.5MW to 88MW;
- Installation of an additional 24 generators, achieving a total of 66 generators across the site

### 3.4 BCA Classification (Part A6)

The proposed development being a Data Centre has been classified as:

- Class 5: being an office building or part
- Class 7b: being a Data Centre or part

### 3.5 Rise in Storeys (Clause C2D3)

The proposed development is within a building that has been assessed to have a rise in storeys of –

- Eight (8) West building
- Nine (9) East building

### 3.6 Effective Heights (Part A1)

The proposed development has been assessed to have an effective height of 36 metres to the east building and 32 metres to the west building. This is measured from ground floor level in the respective buildings to the second topmost storey as both roofs contain plant only and can be discounted.

The BCA now defines effective height as: -

*“Effective height means the vertical distance between the floor of the lowest storey included in a determination of rise in storeys and the floor of the topmost storey (excluding the topmost storey if it contains only heating, ventilating, lift or other equipment, water tanks or similar service units).”*

### 3.7 Type of Construction Required (Clause C2D2 / Table C2D2)

The proposed development is required to be Type A Construction. Specification 5 outlines the fire resistance required by certain building elements. Where the maximum floor area of 5 000m<sup>2</sup> or volume of 30 000 m<sup>3</sup> is exceeded, compartmentation or performance-based solution will be required to address the DtS departure.

As can be seen below, some floor exceed the maximum permitted area and will rely upon a compartmentation strategy or performance solution to address this. Compliance will be achievable.

### 3.8 Building Data Summary

#### East Building

Part of Development	Use	Class	Floor Area (approx.) m <sup>2</sup>
Basement	Ancillary	7b	1345m <sup>2</sup>
Ground floor (Level 0)	Ancillary, data hall, office	5,7b	3630m <sup>2</sup>
Level 1	Ancillary, data hall, office	5, 7b	3700m <sup>2</sup>
Level 2	Ancillary data hall, office	5, 7b	4000m <sup>2</sup>
Level 3	Ancillary, data hall, office	5, 7b	4300m <sup>2</sup>
Level 4	Ancillary, data hall, office	5, 7b	4300m <sup>2</sup>
Level 5	Ancillary	7b	4400m <sup>2</sup>
Level 6	Ancillary	7b	4000m <sup>2</sup>
*Level 8 (joint floor plate)	Ancillary	7b	6354m <sup>2</sup>
*Plant and equipment mezzanine	Ancillary	7b	4000m <sup>2</sup>

#### West Building

Part of Development	Use	Class	Floor Area (approx.) m <sup>2</sup>
Level 1	Ancillary, data hall, office	5, 7b	5700m <sup>2</sup>
Level 2	Ancillary, data hall, office	5, 7b	5700m <sup>2</sup>
Level 3	Ancillary, data hall, office	5, 7b	5300m <sup>2</sup>
Level 4	Ancillary, data hall, office	5, 7b	5300m <sup>2</sup>
Level 5	Ancillary, data hall, office	5, 7b	5300m <sup>2</sup>
Level 6	Ancillary, data hall, office	5, 7b	5300m <sup>2</sup>
Level 7	Ancillary, data hall, office	5, 7b	5300m <sup>2</sup>
*Level 8 (joint floorplate)	Ancillary	7b	6354m <sup>2</sup>
Level 9	Ancillary	7b	480m <sup>2</sup>
Lift motor room	Ancillary	7b	120m <sup>2</sup>

\*Level 8 Joint floor plate (including plant & equipment mezzanine) is dedicated to the west building as summarised within this report.

Summary of Construction and Building	
Use(s)	Data centre and office
Classifications(s)	5, 7b
Number of Storeys contained	10 (East building) and 10 (West building)
Rise in Storeys	9 (East building) and 8 (West building)
Type of Construction	A
Effective Height	36 metres (East building) 32 metres (West building)
Climate Zone	5
Importance Level	Structural Engineer is to determine importance level in accordance with BCA and AS1170 Part 0-2002, this must be specified in their design certificate

## 4 Assessment

### 4.1 Relevant BCA Edition

The proposed development will be subject to compliance with the relevant requirements of the BCA as in force at the time that the application for the Construction Certificate is made.

Should an out of cycle change occur to the BCA, then this statement is required to be updated to reflect any applicable changes made and now required by the BCA.

In this regard the current edition in force is 2022. NCC 2025 is due to come into force 1<sup>st</sup> May 2025, but only a Draft version is available, as such this statement is based upon the Deemed-to-Satisfy provisions of BCA 2022.

### 4.2 Compliance with the BCA

A desktop assessment was carried out against the technical provisions of the BCA and compliance matters will be addressed in the Construction Certificate documentation. It is noted that the proposed development must comply with the relevant requirements, and this can be achieved by complying with the Performance Requirements of the BCA:

#### 4.2.1 A2GA Compliance with the Performance Requirements

1. A Performance Solution
2. A Deemed-to-Satisfy Solution
3. A combination of (1) and (2)

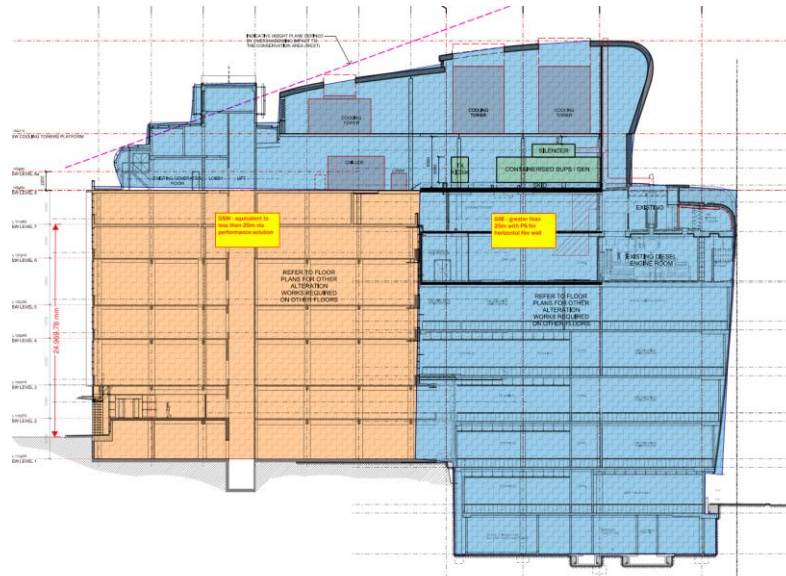
Upon assessment of architectural plans, MBC Group can verify that the proposed design can readily achieve compliance with the performance requirements of the BCA.

Departures from the Deemed to Satisfy Provisions of the BCA are identified below and will need to be addressed during design development, this includes a number of performance solutions proposed by the design team:

DTS Clause	Description of Non-Compliance	Performance Requirement
B1D2, B1D3	<p>Where new structural works do not comply with the deemed to satisfy provisions, a performance solution demonstrating compliance with B1P1 and B1P2 may be developed by the structural engineer.</p> <p>There is a potential strategy, as put forward by the design team to MBC, for the West Building (SYD W) focusing on localized strengthening without the need for additional wind or earthquake strengthening, this is predicated on there being no change in building use, building envelope, or significant additional gravity loadings proposed. For the East Building (SYD E), the addition of a new supplementary structure ensures the ability to carry new loadings for gravity and stability, it is proposed this would be adhering to both local and international standards to demonstrate compliance. This will then require a performance solution.</p>	B1P1, B1P2
C2D2 & S5C11	<p>The buildings presently are not united and require separation. Type A construction would require an FRL of 240/240/240 on account of being type A construction. There appear previous performance solutions rationalising reductions in FRLs. Confirmation on the current level and proposed level of FRLs is needed. This will also require consideration where the buildings are being joined, and detail regarding the horizontal separation and projection of the global switch east additions over global switch west if that proposed strategy is to be put forward.</p>	C1P1, C1P2
C2D2, C2D3	<p>Both buildings exceed 25m. It appears the east building has accounted for this in design whereas the west building has not and will be impacted upon throughout the assessment where 25m is a trigger for requirements. A performance solution being proposed by the proponent is to fire separate horizontally and</p>	C1P1, C1P2

DTS Clause	Description of Non-Compliance	Performance Requirement
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remove a required exit to the west building to reduce the effective height of the west building to below 25 metres or otherwise address non compliances through a combination of DtS and performance based solutions for things such as stair pressurisation, zone pressurisation, emergency lifts etc that the west building does not have.



C2D10	A building required to be Type A construction, has requirements in relation to non-combustible materials, including external walls. Aluminium Composite Panels (ACP) appear present on the building as external cladding and was subject to a previous performance solution. The proposed new works are not to impact this and the existing cladding addressed as an existing hazard.	C1P2
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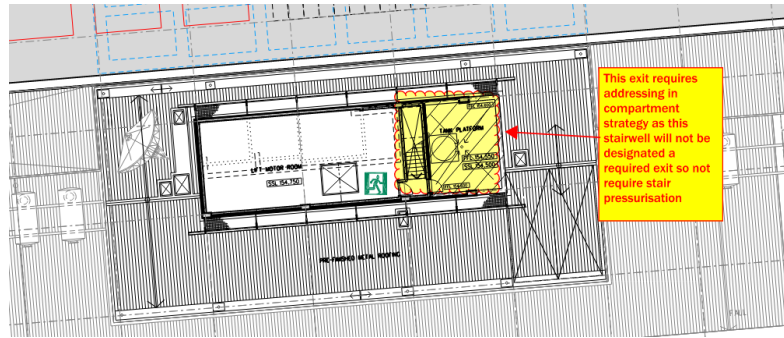
C4D4	Existing external walls (and floors) overlap the adjacent building and there are openings throughout. This has been subject to previous performance solutions, with review to be completed and further detail to be submitted.	C1P2
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D2D4	This will be a technical non compliance to the new works which project from one building over to another and is understood to be addressed via performance solution as outlined above.	D1P5
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D2D4	If the aforementioned compartmentation strategy is to proceed, existing fire isolated stairs each require a performance	D1P5
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DTS Clause	Description of Non-Compliance	Performance Requirement
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solution due to DtS departures created through no longer utilising them as required exits. The pump valve room and lift pump room currently rely upon these stairs for egress.



Throughout the buildings there are existing travel distances exceeded that are subject to existing performance solution. These are to be reviewed and updated according to proposed new layout and a performance solution prepared.

D2D5

The horizontal fire wall to permit global switch east projection over global switch west and the removal of required fire isolated stairs to global switch west and on account of the intermittent plant floor above, new extended travel distances not covered by existing FER will be created and require performance solutions.

D1P6

The most of extended of these being,

- Distance to a POC – 63 metres
- Distance to Exit – 30 metres
- Distance between exits – 77 metres

Where existing extended travel distances throughout the building are impacted upon through proposed works, increasing beyond those endorsed previously, will also require a performance solution.

E1D2

New hydrant works will be undertaken sharing services between buildings and locating booster assemblies that will lead to technical non-compliance with AS 2419.1 – 2021 that performance solutions will be required for.

E1P1

NSW E1D4

It is understood that shared services, pre action sprinkler, mist and other design requirements along with coverage omissions

E1P4

DTS Clause	Description of Non-Compliance	Performance Requirement
	for building operational requirements will trigger performance solutions and are to be incorporated in developing fire strategy.	
E2D4	It's understood the east building currently has stair pressurisation. The west building however does not and exceeds 25m in effective height. This will be incorporated in the overall compartment strategy to treat the west building with an effective height of less than 25 metres and not requiring stair or zone pressurisation to the west building.	E2P2
E2D6	Zone pressurisation required to both buildings, as the west building is over 25m but previously designed as not, as above forms part of a performance solution.	E2P2

## 5 Conclusion

This statement outlines the findings of an assessment of the referenced architectural documentation for the proposed development against the Deemed-to-Satisfy provisions of the National Construction Code Series (Volume 1) Building Code of Australia 2022.

As outlined in section 2.3 of this report excludes the design basis and/or operating capabilities proposed hydraulic and fire protection services. Mains water pressure and flows must be obtained and assessed by hydraulic engineer fire services engineers immediately to ascertain if mains are adequate or onsite water storage is required which can often be substantial in size and require modification of the development consent.

In view of this assessment we can confirm that compliance with the National Construction Code Series (Volume 1) Building Code of Australia 2022 is readily achievable.

We trust that the above submission is of assistance to Council and should you wish to discuss any aspect of this advice, please do not hesitate to contact the undersigned.

Best regards,



Ethan Davies  
**Senior Building Surveyor**  
**MBC Group**

## 6 Appendix A – Design Documentation

The following documentation was used in the assessment and preparation of this statement:

Drawing No.	Title	Date	Drawn By	Revision
ar--1200	GS EAST BASEMENT FLOOR PLAN	26/02/25	dem	A01
ar--1201	GS EAST GROUND FLOOR PLAN	26/02/25	dem	A01
ar--1202	GS EAST & WEST LEVEL 1 FLOOR PLAN	26/02/25	dem	A01
ar--1203	GS EAST & WEST LEVEL 2 FLOOR PLAN	26/02/25	dem	A01
ar--1204	GS EAST & WEST LEVEL 3 FLOOR PLAN	26/02/25	dem	A01
ar--1205	GS EAST & WEST LEVEL 4 FLOOR PLAN	26/02/25	dem	A01
ar--1206	GS EAST & WEST LEVEL 5 FLOOR PLAN	26/02/25	dem	A01
ar--1207	GS EAST LEVEL 5 & GS WEST LEVEL 6 FLOOR PLAN	26/02/25	dem	A01
ar--1208	GS EAST LEVEL 6 & GS WEST LEVEL 7 FLOOR PLAN	26/02/25	dem	A01
ar--1209	GS EAST LEVEL 7 & GS WEST LEVEL 8 FLOOR PLAN	26/02/25	dem	A01
ar--1210	GS EAST LEVEL 8 & GS WEST LEVEL 9 FLOOR PLAN	26/02/25	dem	A01
ar--1211	GS EAST & WEST ROOF PLAN	26/02/25	dem	A01
ar--2210	GS EAST & WEST BUILDING SECTION 2	26/02/25	dem	A01
ar--2211	GS EAST & WEST BUILDING SECTION 4	26/02/25	dem	A01
ar--2212	GS EAST & WEST BUILDING SECTION 5	26/02/25	dem	A01
ar--2213	GS EAST BUILDING SECTION 6	26/02/25	dem	A01
ar--2501	GS EAST & WEST EAST ELEVATION	26/02/25	dem	A01
ar--2502	GS EAST & WEST NORTH ELEVATION	26/02/25	dem	A01
ar--2503	GS EAST & WEST SOUTH ELEVATION	26/02/25	dem	A01
ar--2504	GS EAST & WEST WEST ELEVATION	26/02/25	dem	A01
ar--6000	EXISTING GFA DIAGRAM SHEET 01	26/02/25	dem	A01
ar--6001	EXISTING GFA DIAGRAM SHEET 02	26/02/25	dem	A01
ar--6002	EXISTING GFA DIAGRAM SHEET 03	26/02/25	dem	A01
ar--6100	PROPOSED GFA DIAGRAM SHEET 01	26/02/25	dem	A01
ar--6101	PROPOSED GFA DIAGRAM SHEET 02	26/02/25	dem	A01
ar--6102	PROPOSED GFA DIAGRAM SHEET 03	26/02/25	dem	A01



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