

SSD Report

St Matthews High School, Mudgee – Building Services



PREPARED FOR CATHOLIC EDUCATION DIOCESE OF
BATHURST

DOCUMENT CONTROL

ISSUE	DATE	ISSUE DETAILS	AUTHOR	CHECKED	APPROVED
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03	14.04.2020	SSD Application	JW / CM	JW	RS

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1 Introduction

1.1 Project Description

The SSD DA seeks consent for the construction of a new multi-purpose secondary education facility within the Mudgee Region that meets future demands for the developing region.

The new secondary school to be known as St Matthews Catholic High School Mudgee School will cater for 680 secondary school students (4-Stream Year 7-12) and will comprise of a cluster of five low-rise school buildings (1-2 storeys) including;

- Block A - Professional Hub (office and administration)
- Block B - Spiritual Hub (Chapel)
- Block C - Community Hub (Multi purpose hall, Music/Dance Studio and canteen)
- Block D – STEM Research Hub (teaching spaces)
- Block E - Knowledge and Learning Hubs (General Teaching spaces)
- Yarning Circle (Outdoor learning area)
- Outdoor Student Assembly Area and COLA
- Student free play area
- Staff and student amenities
- Associated site landscaping and public domain improvements
- On-site parking and access arrangements off Bruce Road, including:
 - On-grade car park for staff, students and visitors (75 spaces – including 2 accessible spaces)
 - A 12 bay student drop-off and pick-up area
 - A 3-bay bus drop-off and layover area
 - Bus turning area and servicing access
 - Dedicated separate driveway for service vehicles
 - Bicycle parking for 30 bicycles
- Associated earthworks, civil works, perimeter roadworks, fencing, services and utilities connections and augmentation, including:
 - Roadworks to Broadhead Road and Bruce Road to the full extent of the site frontages
 - Roadworks to the Broadhead Road and Bruce Road intersection to cater for bus movements
 - Footpath along the site frontage of Broadhead Road and suitable pedestrian crossing to connect to existing footpath.
 - Stormwater infrastructure upgrades adjacent to and within the site, including new culverts and drains, levee, and bioswale.
 - Connection to existing sewer line within the site
 - Electrical and water connections into the site

1.2 Purpose and SEARS

The purpose of this report is to inform the design and planning team of the likely required building services infrastructure relating to the connection and continued operation of the electrical and hydraulics services.

This report addressed components of the following SEAR's:

- Item 8 Ecological Sustainable Design; detailing proposed servicing options, in the areas of:
 - Renewable energy
 - Water efficiency
- Item 13 Utilities; detailing information on capacity and augmentation required, in the areas of:
 - Electrical supply
 - Telecommunications supply

- Sanitary plumbing and drainage supply
- Portable water supply and usage
- Non-potable water usage

1.3 Limitations

This report has been prepared by Calibre Professional Services Pty Ltd (Calibre) for Catholic Education Diocese of Bathurst (Client) for the purposes agreed between the Client and Calibre (Purpose). Calibre accepts no responsibility for the validity, appropriateness, sufficiency or consequences of the Client using the report for any Purpose other than that stated. This report is not intended for general publication or circulation, nor is it intended for use by third parties and may not be used by third parties.

The information presented in this report is not based on detailed design, but on a concept planning and desktop assessment using preliminary, assumed and selective data to enable the assessment to be undertaken for planning approval. Where information has been sourced from third parties, Calibre is unable to verify the accuracy of the source material.

Any supply authority and utility information shown is a potential outcome only. Each supply authority and utility will nominate their own final connection locations and methods during the detailed design phase where connections are required. No confirmation or certified designs have been received due to the preliminary nature of a planning application.

2 Infrastructure Management Plan

2.1 Power

The site does not currently have an established electricity supply suitable for use as part of the development and will require a new Essential Energy electricity service to be provided. Submissions have been made to Essential Energy and Design Information Pack (DIP) received to determine the extent of network augmentation required.

There is an existing overhead high voltage network reticulating adjacent the site on Bruce Road and Broadhead Road. Electricity will be supplied from the overhead lines on Bruce road to a pad mounted substation within the site via underground high voltage cables.

From the pad mounted substation, low voltage consumer mains will reticulate to a site main switch board which will then distribute power to individual school blocks and services. The internal reticulation will be capable of connecting a decentralised photovoltaic system as part of the renewable energy initiatives.

2.1.1 Demand Calculations

The electrical maximum demand has been estimated based on engineering experience and AS/NZS 3000:2018 methods as can best be applied with the architectural and planning information on hand. Design assumptions are made in providing these figures which need to be reviewed and updated as detailed design occurs for each block on the school site.

The estimated maximum demand for the secondary school is approximately 700kVA with future expansion allowance of 200kVA. This maximum capacity calculated is within the standard size of a single pad mounted transformer of 1000kVA which has been applied for from Essential Energy. For the purposes of planning, the proposed maximum current draw is based on standard National Construction Code (NCC), Building Code of Australia (BCA) 2019 edition and AS/NZS 3000:2018 requirements.

In producing the maximum demand as shown in Table 1, the following general allowances have been applied:

- An average of 100VA/m² for air-conditioned, general use building areas
- An average of 120VA/m² for technology and science orientated building areas
- An average of 220VA/m² for special purpose buildings/area power such as catering and hospitality

It is anticipated that the actual maximum demand will be further reduced through GBCA Star Green Star approaches, renewable energy sources and energy efficient building design. As future development occurs, the collected metering data will inform the schools actual demand profile to inform any addition spare capacity available.

Table 1 - Estimated Electrical Maximum Demand

Area	Estimated Maximum Demand (kVA)	Estimated Maximum Demand (A/Phase at PF=1)
Block A	90	130
Block B	20	29
Block C	127	184
Block D	136	197
Block E	250	361
Site Infrastructure	50	72

Site Total	673	973
Future allowance	200	289
Estimated Site Capacity (Rounded)	873	1262

2.1.2 Reticulation Plan

The existing and proposed incoming services are shown in Appendix A and B respectively.

2.1.3 Metering and Building Management

The site will include provision of a single, integrated site wide network (as required to support the ICT systems) with building services integration which will allow smart monitoring and reporting of connected systems which can be expanded to include:

- Electrical and energy systems (metering data)
- Heating, Ventilation and Air Conditioning (HVAC) systems (metering data)
- Hot and cold water systems (metering data)
- Renewable energy systems (generation data)
- Electric car charging systems (future metering data and control)
- Information, wayfinding and display systems

2.1.4 Renewable Energy

It is proposed to install a 99kWp rooftop photovoltaic solar system on the site to provide renewable energy generation and peak load reduction. This system has allowance to be split over north facing roof area on Blocks C and E for maximum impact. The system is estimated to provide an annual energy yield of 163MWh as shown in Figure 2.2.

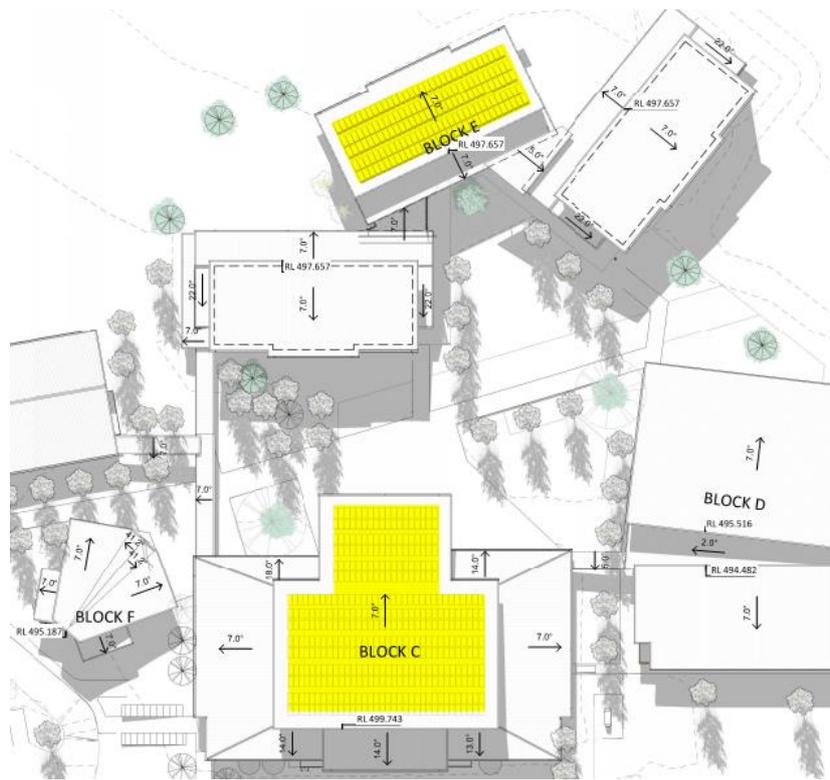


Figure 2.1 - Area Identified for Potential Solar Panels (Highlighted Yellow)

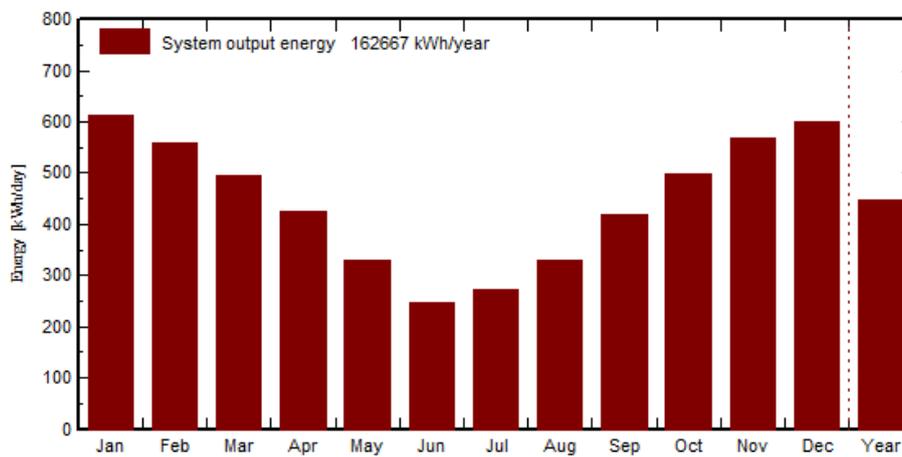


Figure 2.2 - Estimated Monthly Energy Yield (99kWp and Local Weather Data)

2.2 Telecommunications

The site does not currently have an established telecommunication supply suitable for use as part of the development and will require new services to be provided. This will need to be considered from the aspect of:

- Commercial business fibre connection
- NBN connection as service provider of last resort
- Mobile coverage (3G and 4G) for general amenity and dual GSM dialling systems (such as lifts and security systems)

2.2.1 Commercial Business Fibre

The school will make application to their existing telecommunications services provider to reticulate a commercial fibre service to the site which is expected to operate the following services:

- Telephony systems (VoIP)
- Internet (TCP-IP)
- Wide Area Network (WAN) to the existing school

As this is a private dedicated service, the telecommunications service provider will undertake all backhaul works relating to the reticulation of services to the site via existing and new underground pit and pipe networks.

An NBN connection will be utilised as a ‘backup’ service for base level connectivity should the commercial service experience down time.

2.2.2 NBN Services

The site is not currently within range of the existing NBN fixed service connections and has wireless NBN access readily available. A build has commenced with fixed line NBN being reticulated down Broadhead Road to another development, therefore in the future there is potential for this to be extended into the proposed site should the school have preference for fixed line over wireless connection.

Sufficient conduits will be reticulated to the property boundary to enable connection of both commercial and NBN services for current or future use.

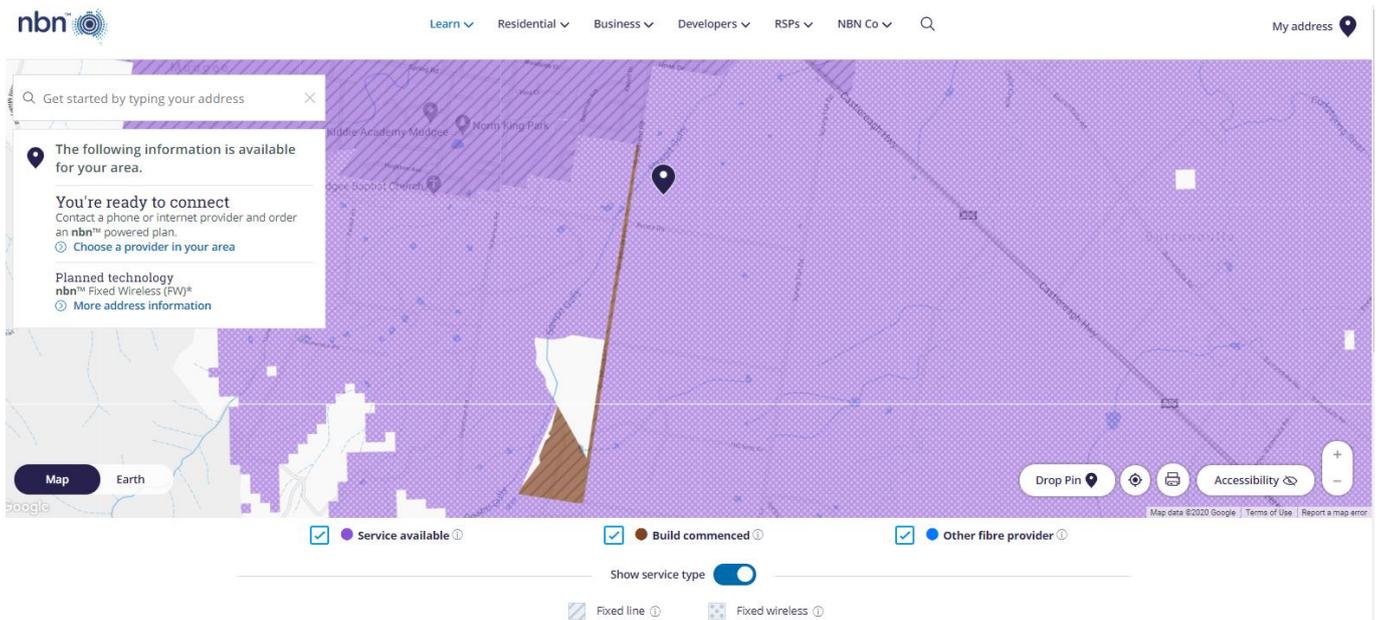


Figure 2.3 - NBN Coverage Map 14 April 2020

2.2.3 Mobile Coverage

The school is expected to have existing mobile coverage with at least one major service provider based on an ACMA network search. It is recommended during later phases in the project that the signal strength is surveyed so any local booster/distributed antenna system can be accommodated within the built form as required.

There are several other Local Council or privately owned ACMA registered transmitters around the site which will not impact the development.

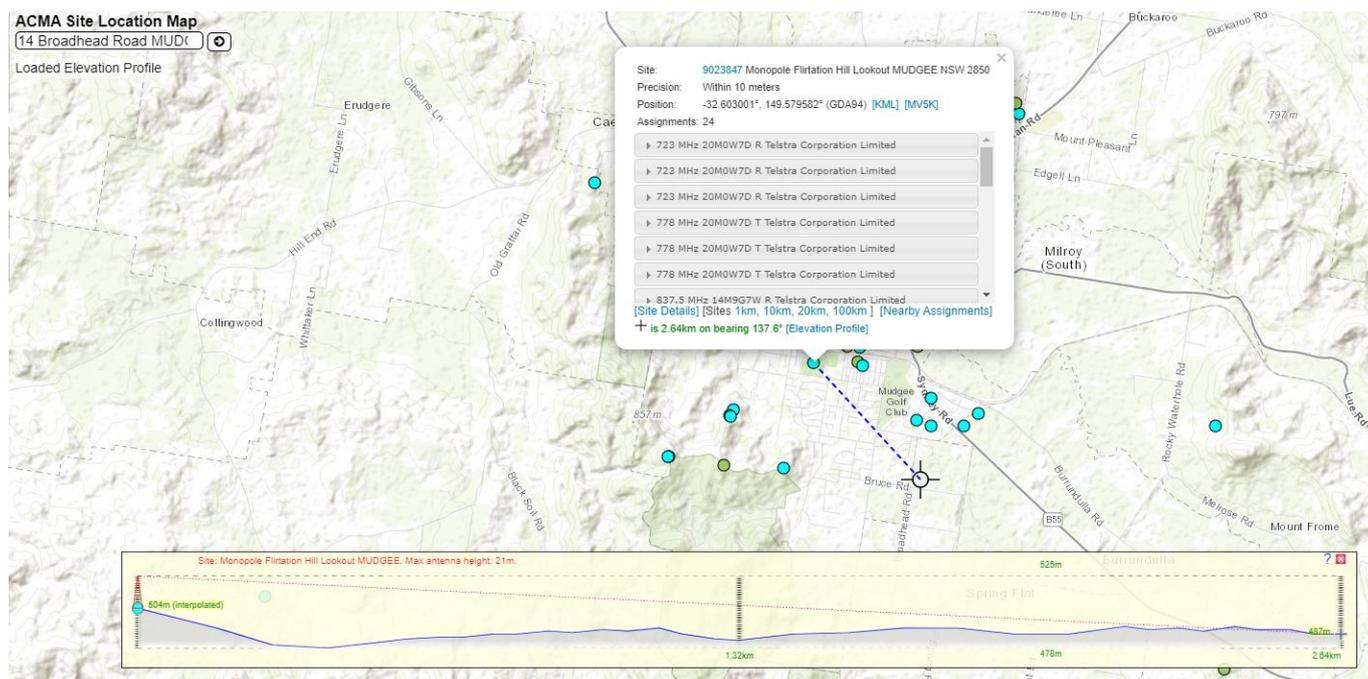


Figure 2.4 - ACMA Mobile Coverage Search 14 April 2020 (Town Centre)

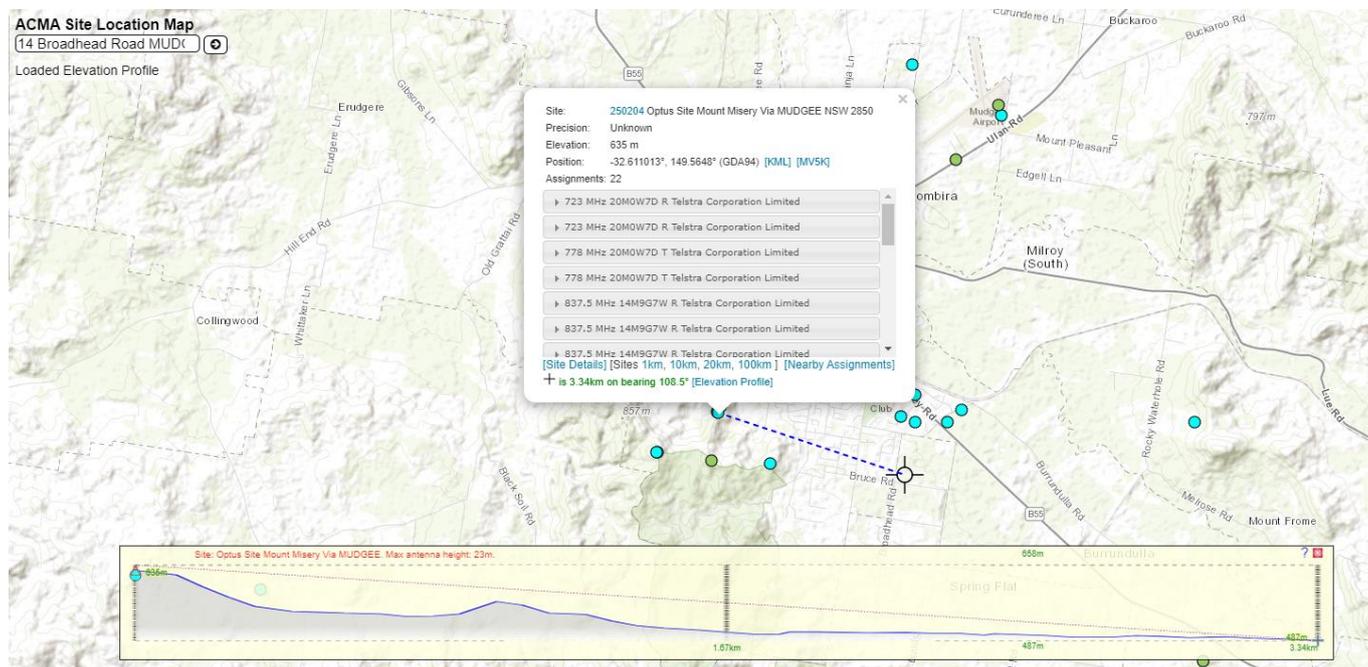


Figure 2.5 - ACMA Mobile Coverage Search 14 April 2020 (Mount Misery)

2.3 Sanitary Plumbing and Drainage

The Mid-Western Regional Council are responsible for the sewer mains, and information has been requested to confirm the existing sewer information available to date.

A report undertaken by Abel & Brown Pty Ltd in 2017, indicates that the property is serviced by a 225mm diameter Local Authority sewer main that is located in Broadhead Road and gravitates north through the property, adjacent a swale. The sewer has been found to be approximately 1.5m deep at the manhole.

The sewer main is shown in Appendix B to this report and comprises of a 225mm diameter gravity main.

2.3.1 Demand Calculations

The internal sanitary drainage demand and size shall be determined in accordance with the requirements set out in the Australian Standard AS/NZS 3500.2 – Sanitary plumbing and Drainage.

The sanitary drainage demand and service size within the property boundary is calculated based on the total number of sanitary drainage fixture unit ratings. Each sanitary fixture proposed to be installed on site has been assigned a fixture unit rating, and the sum total will determine the overall size of the property sanitary drainage size.

The maximum fixture unit loading for each size drain is also determined by the minimum grade of the pipework allowed as shown in Table 2.

Table 2 – Maximum Fixture Unit Loading for Vented Drains

Nominal Size of Drain	Minimum Grade	Maximum Fixture Units
100mm	1 in 60 (1.65%)	165
150mm	1 in 100 (1.00%)	855
225mm	1 in 150 (0.65%)	3250

The preliminary fixture unit Loading count, as shown in the Table 3, indicates even with a 50% allowance for future growth, that a 150mm internal sanitary drain, connected from the Local Authority Sewer, will be adequate to service the requirements of the new development.

Table 3 - Estimated Sewer Demand

Area	Fixture Units	Estimated sanitary drainage size
Block A	53	100mm
Block B	8	100mm
Block C	104	100mm
Block D	36	100mm
Block E	64	100mm

Site Infrastructure		
Site Total	265	150mm
Future allowance (+50%)	133	
Minimum Site Capacity	398	150mm

2.3.2 Reticulation Plan

Waste outlets from all Sanitary fixtures in each building shall connect to an in-ground sanitary drainage system.

The in-ground sanitary drainage system shall connect to the Local Authority Sewer at existing manhole X8 as marked on the Works As Executed plan MX 10270.01 C01. The sewer is located on the low side of the property which means the internal sanitary drainage can be gravity drained to the connection point.

Refer to Hydraulic services sketch plan layout BR-H5510 in Appendix B.

2.4 Trade and Laboratory Waste Drainage

The canteen and laboratory areas will have activities within that will generate liquid waste other than sewerage of a domestic nature, this waste shall be classified as trade waste. The trade waste requirements shall be in accordance with the Mid Western Regional Council Liquid Trade Waste Regulation Policy.

2.4.1 Site Requirements

Table 4 - Trade Waste Minimum Requirements

Area	Trade waste discharge	Minimum Pre-treatment Requirement
Block C - Kitchen	Greasy waste from cooking and dishwashing	2,000 Litre Grease Interceptor Trap installed externally in ground
Block D - Laboratory	Chemical waste	2,000 Litre dilution chamber installed externally in ground with a remote pump out point located within 40m of a hardstand area

2.5 Domestic Cold and Hot Water

The Mid-Western Regional Council are responsible for the water mains.

The survey drawing, 307060-L07, produced by Barnson Pty Ltd, indicates that the Local Authority water main servicing the property is located at the intersection of Bruce and Broadhead Road.

Mid-Western Regional Council have undertaken a flow and pressure test on the street water main. The information received indicates that the water main size is 250mm.

Table 5 - Water Pressure and Flow Test Results

Test Location	Flow Rate (L/s)	Residual pressure at hydrant (kPa)	Comments
Street hydrant located in Broadhead Road	No Flow	500	
	10L/s	500	
	20L/s	500	
	22L/s (Max)	490	

The test results indicate that the proposed development can be serviced without the requirement for on-site booster pumps or water storage.

2.5.1 Demand Calculations

Table 6 - Estimated Potable Water Demand

Area	Loading Units	Probable Simultaneous Flow Required	Potable Water Service Required
Block A	40	0.45L/s	25mm
Block B	6	0.23L/s	20mm
Block C	107	1.10L/s	32mm
Block D	116	1.20L/s	40mm
Block E	56	0.55L/s	25mm
Site Infrastructure			
Site Total	325	2.42L/s	50mm
Future allowance (+50%)	163		
Minimum Site Capacity	488	3.10L/s	50mm

The preliminary potable water demand calculation below indicates that the school will require a probable simultaneous demand of 3.10L/s. This will require a 50mm domestic service.

2.5.2 Reticulation Plan

A new water service shall be provided to the property via a Local Authority Water Meter, connected from the Local Authority Water main. Refer to Civil drawing TX134843.00-C9.0. The potable water service shall then reticulate through the property by means of a ring main, with suitably sized service take-offs to each building.

Each branch connection to the buildings shall have a main isolating valve and sub-water meter installed.

The potable water service shall rise to high level within each building and reticulate out to service each fixture.

The system shall be designed to provide the necessary fixtures with the minimum flow rates and pressures as required by the Australian Standards. The minimum flow and pressure requirements shall be provided as a minimum;

- Water velocity within pipework shall be 1.2m/s to 1.8m/s
- Maximum operational pressure at fixtures and fittings shall be 450kPa
- Minimum operational pressure at fixtures and fittings shall be 200kPa

Fixtures and fittings shall be supplied with the following minimum flow rates;

- WC Cistern 6/3 dual flush 3 star WELS, target 5 star WELS for Greenstar
- Basins 6L/min 4 star WELS rating, target 6 star WELS for Greenstar
- Sinks 6L/min 4 star WELS rating, target 6 star WELS for Greenstar
- Showers 9L/min 3 star WELS rating.

The cold water system shall be designed and supplied to comply with AS/NZS 3500.1 and local authority requirements.

The cold water system shall be provided with isolation valves for, shut down and maintenance, at the following locations, as a minimum;

- In-coming water supply
- At each fixture or fitting.

RPZD valve assemblies shall provide backflow protection to the relevant areas. The following areas shall be provided with RPZD valve assemblies;

- Water supply to laboratory sinks
- Landscape irrigation supply
- Hose taps in plant rooms.
- Dishwasher to Canteen.
- Hose taps within 18m of Grease Interceptor trap/ Dilution Chamber

2.5.3 Hot Water Services

The hot water system shall be designed to the most economical energy efficient for its use and peak demand requirements, complying with AS/NZS 3500.1 & 4 and local authority requirements. Proposed system configuration and arranged is shown in Table 7.

The system shall avoid dead legs where possible but shall not exceed 12m length. Full temperature hot water shall be delivered within 10-15 seconds of operation of the fixtures.

Table 7 - Estimated Hot Water Demand

Area	Hot Water Usage	Peak Demand	Proposed Hot Water System
Block A	Hand washing	Spread over school day	Heat Pump
Block B	Hand washing	Spread over school day	Heat Pump
Block C	Hand Washing	1h over break times	Heat Pump
	Canteen Cooking	2 hours over lunch	Heat Pump
Block D	Hand washing	Spread over school day	Heat Pump
	Art Sinks	Spread over school day	Heat Pump

2.6 Fire Hydrant and Hose Reel

2.6.1 Site Requirements

Table 8 - Estimated Fire Service Demand

Area	Gross Floor Area (m2)	Service Requirement	Minimum Flow and Pressure Required
Block A	730	Hydrants and Hose Reels	10L/s @ 250kPa
Block B	200	No requirement	
Block C	1,450	Hydrants and Hose Reels	20L/s @ 250kPa
Block D	1,206	Hydrants and Hose Reels	20L/s @ 250kPa
Block E	2,264	Hydrants, fire hydrant booster assembly required as GFA exceeds 2,000sqm.	20L/s @ 250kPa
Site Overall	Largest fire compartment is Block E	Hydrants and Hose Reels, as above. Fire hydrant booster assembly required for building exceeding 2,000sqm	20L/s @ 250kPa maximum flow required based on largest fire compartment.

2.6.2 Hydrants

The minimum flow and pressure requirements for the property are as follows;

- Fire hydrants: 20L/s @ 250kPa at the most dis-advantaged hydrant.

A new fire service connection shall be provided to the property, with a backflow prevention & by-pass metering device installed in accordance with Mid-Western Regional Council requirements. The new service will be a 150mm diameter supply.

A fire service ring main shall reticulate through the property, connecting several dual outlet pillar fire hydrants, located adjacent the buildings to provide fire-fighting coverage in accordance with AS 2419.1.

The fire hydrants shall not all be able to be located within 20m of a suitable hard stand for the fire brigade appliance, so shall be attack hydrants. A fire hydrant booster assembly is required to be located adjacent the principle site entrance, to enable the fire brigade to boost the fire system from the fire appliance.

The Local Authority water main will not be able to provide a water supply with adequate water pressure to maintain the minimum fire-fighting pressure on-site. A fire hydrant pressure boosting pump will be required. This shall be installed adjacent the fire hydrant booster assembly in a locked enclosure.

2.6.3 Hose Reels

Fire hose reels shall be provided to all buildings with a fire compartment/ GFA that exceeds 500sqm, except for the classrooms or associated corridors in the school.

The fire hose reel service shall be connected from the fire service.

Fire hose reels shall be provided throughout each required building so that all parts of the building will be within 40m of a hose reel.

Fire hose reels shall be located within 4m of fire isolated stairs/ exits.

Areas where compliant coverage is not achieved shall be provided with additional fire hose reels.

3 Building Integrated Water Management

3.1 Town Water Supply

All potable water to the property is to be supplied from the Local Authority water main, located at the intersection of Bruce and Broadhead Road.

The Mid-Western Regional Council are responsible for the water mains.

The survey drawing, 307060-L07, produced by Barnson Pty Ltd, indicates that the Local Authority water main servicing the property is located at the intersection of Bruce and Broadhead Road.

Mid-Western Regional Council have undertaken a flow and pressure test on the street water main. The information received indicates that the water main size is 250mm.

3.2 Storage Tanks (Domestic and Fire)

On-site water storage tanks are not required at this stage.

3.3 Rainwater Collection and Reuse

It is proposed that above ground rainwater tanks shall be installed adjacent to the toilet areas of the relevant buildings, to harvest rainwater from the roof catchment, and re-use it for toilet flushing. The rainwater tanks shall be sized based on the available roof catchment area, and calculated rainwater collection versus the usage within the building.

The rainwater re-use shall have a mains water by-pass system that will switch to mains potable water supply in the event of the rainwater tanks being empty.

Where possible, the rainwater tanks will overflow into a central underground water tank used for irrigation. This underground tank and overflow connection is documented on the Stormwater Management Plan.

3.4 Fixtures and Fittings

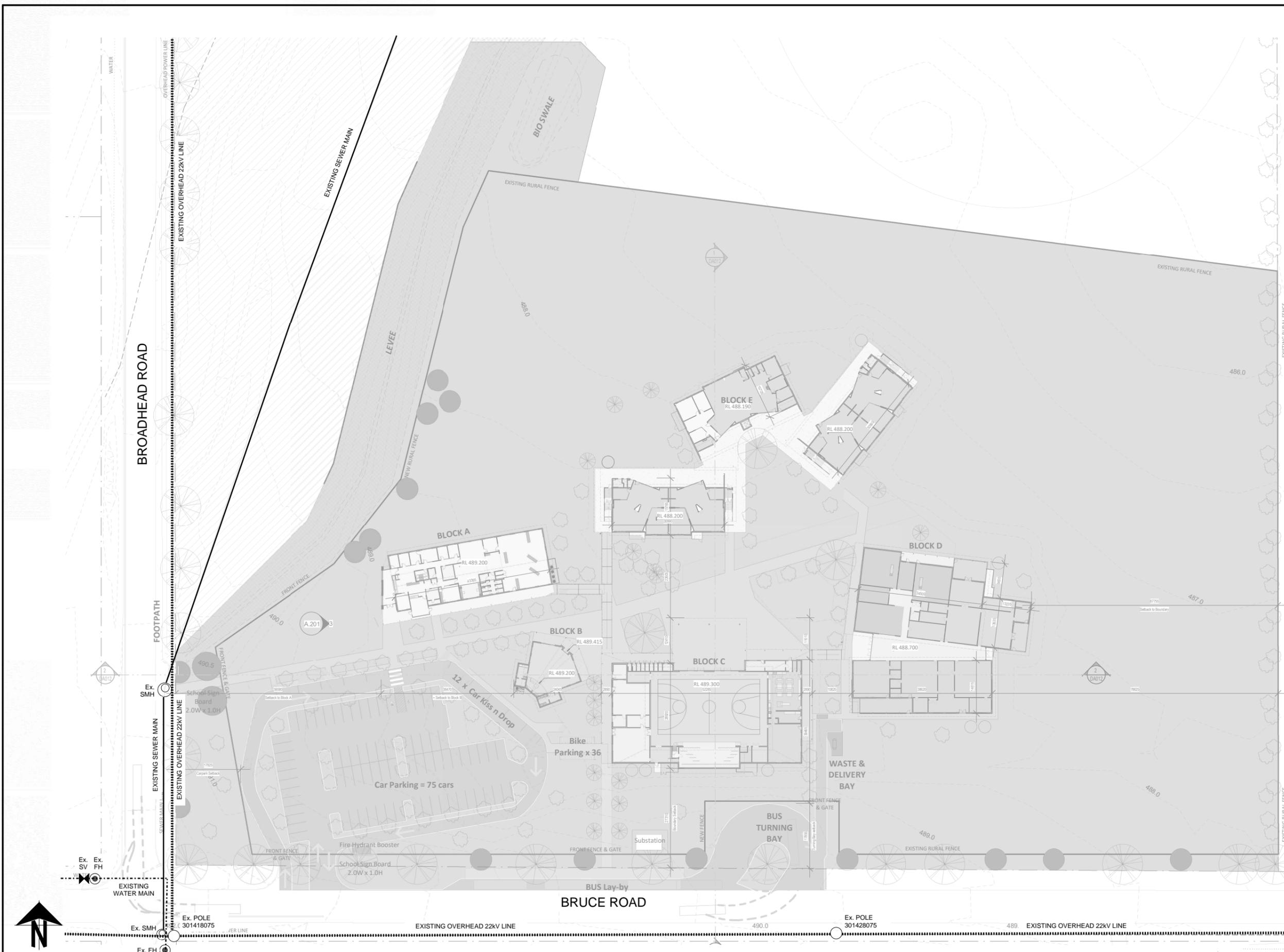
Water efficient fixtures and fittings are to be selected using the Water Efficiency Labelling and Standards (WELS) scheme.

ST MATTHEWS HIGH SCHOOL, MUDGEE – BUILDING SERVICES

Appendix A Existing Site Services

CATHOLIC EDUCATION DIOCESE OF BATHURST

- LEGEND**
- EXISTING SEWER MAIN
 - - - - - EXISTING POTABLE WATER MAIN
 - ⊙ EXISTING SEWER MANHOLE
 - ⊕ EXISTING FIRE HYDRANT
 - ✦ EXISTING SLUICE VALVE
 - ⋯ EXISTING OVERHEAD 22KV LINE



REVISION	DATE	ISSUE DETAILS	DESIGN	DRAWN	CHECK	STATUS
A	24.05.19	SSDA INITIAL ISSUE	JW / CM	JW	CM	
B	14.04.20	SSDA ISSUE	JW / CM	JW	CM	

PRELIMINARY
NOT FOR CONSTRUCTION

SCALE
1:500 @ A1

CLIENT
CATHOLIC EDUCATION DIOCESE OF BATHURST

ARCHITECT
ALLEANZA ARCHITECTURE



PROJECT
ST MATTHEW'S CATHOLIC SCHOOL

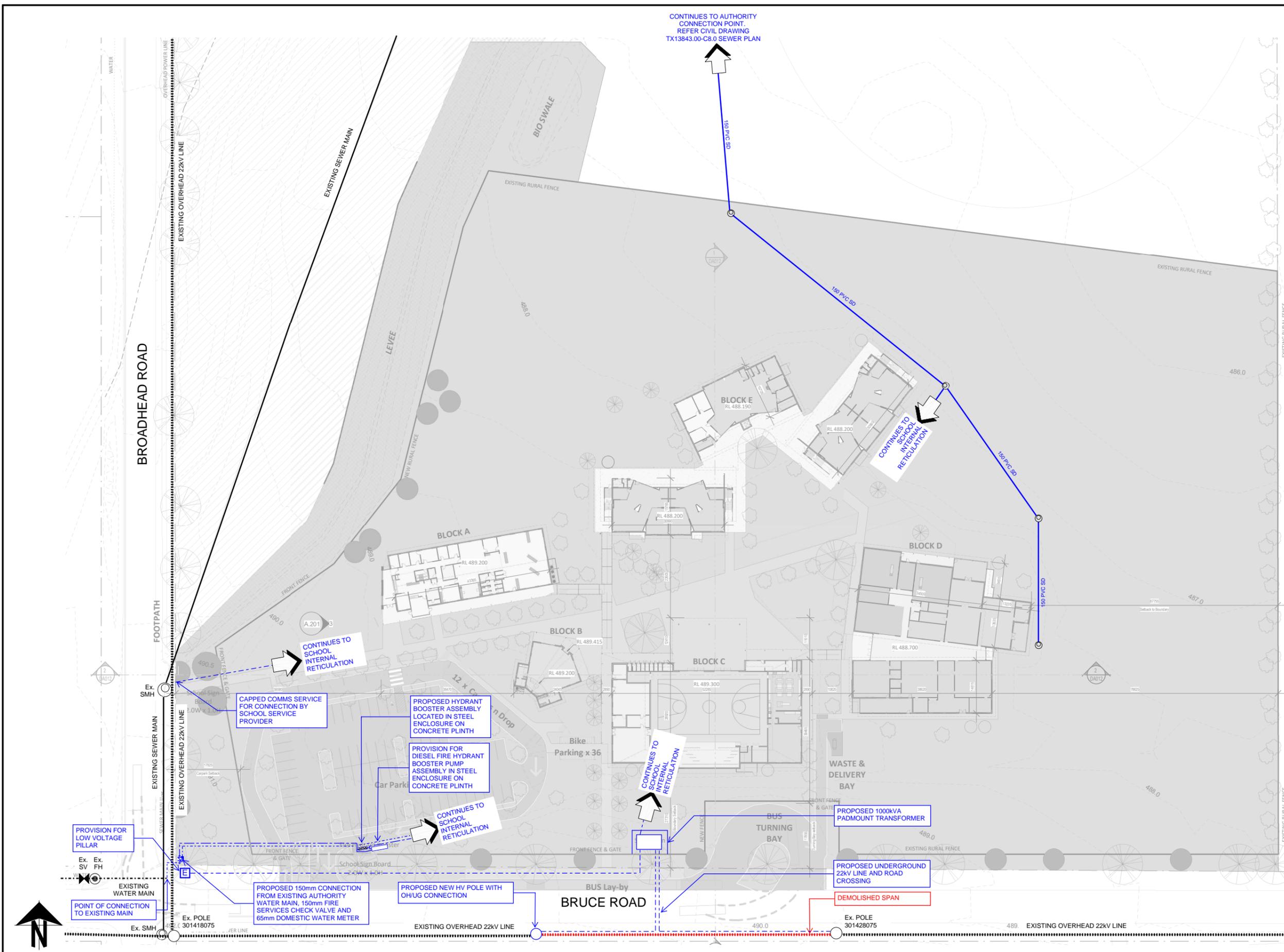
CORNER OF BROADHEAD AND BRUCE RD, MUDGEES NSW 2850

DRAWING TITLE		
SSDA EXISTING SERVICES LAYOUT		
PROJECT No.	DRAWING No.	REVISION
19-000307	BR-DA001	B

ST MATTHEWS HIGH SCHOOL, MUDGEE – BUILDING SERVICES

Appendix B Proposed Site Services

CATHOLIC EDUCATION DIOCESE OF BATHURST



- LEGEND**
- EXISTING SEWER MAIN
 - - - - - EXISTING POTABLE WATER MAIN
 - EXISTING SEWER MANHOLE
 - ⊕ EXISTING FIRE HYDRANT
 - ✦ EXISTING SLUICE VALVE
 - ⋯ EXISTING OVERHEAD 22kV LINE
 - PROPOSED SEWER SERVICE
 - - - - - PROPOSED WATER SERVICE
 - - - - - PROPOSED FIRE SERVICE
 - - - - - PROPOSED ELECTRICAL SERVICE
 - ⋯ DEMOLISHED ELECTRICAL SERVICE
- NOTE:**
- ALL PROPOSED WORKS SHOWN ARE THE ANTICIPATED SERVICING INTENT BASED ON AVAILABLE INFORMATION AND ARE SUBJECT TO AUTHORITY DETAILED DESIGN APPLICATIONS, SCOPING AND APPROVALS. FINAL SITE SERVICING APPROACH MAY DIFFER TO THAT SHOWN

REVISION	DATE	ISSUE DETAILS	DESIGN	DRAWN	CHECK	STATUS
A	24.05.19	SSDA INITIAL ISSUE	JW / CM	JW	CM	
B	14.04.20	SSDA ISSUE	JW / CM	JW	CM	

PRELIMINARY
NOT FOR CONSTRUCTION

SCALE
1:500 @ A1

CLIENT
CATHOLIC EDUCATION DIOCESE OF BATHURST

ARCHITECT
ALLEANZA ARCHITECTURE



PROJECT
ST MATTHEW'S CATHOLIC SCHOOL

CORNER OF BROADHEAD AND BRUCE RD, MUDGEES NSW 2850

DRAWING TITLE		
SSDA PROPOSED SERVICES LAYOUT		
PROJECT No.	DRAWING No.	REVISION
19-000307	BR-DA002	B



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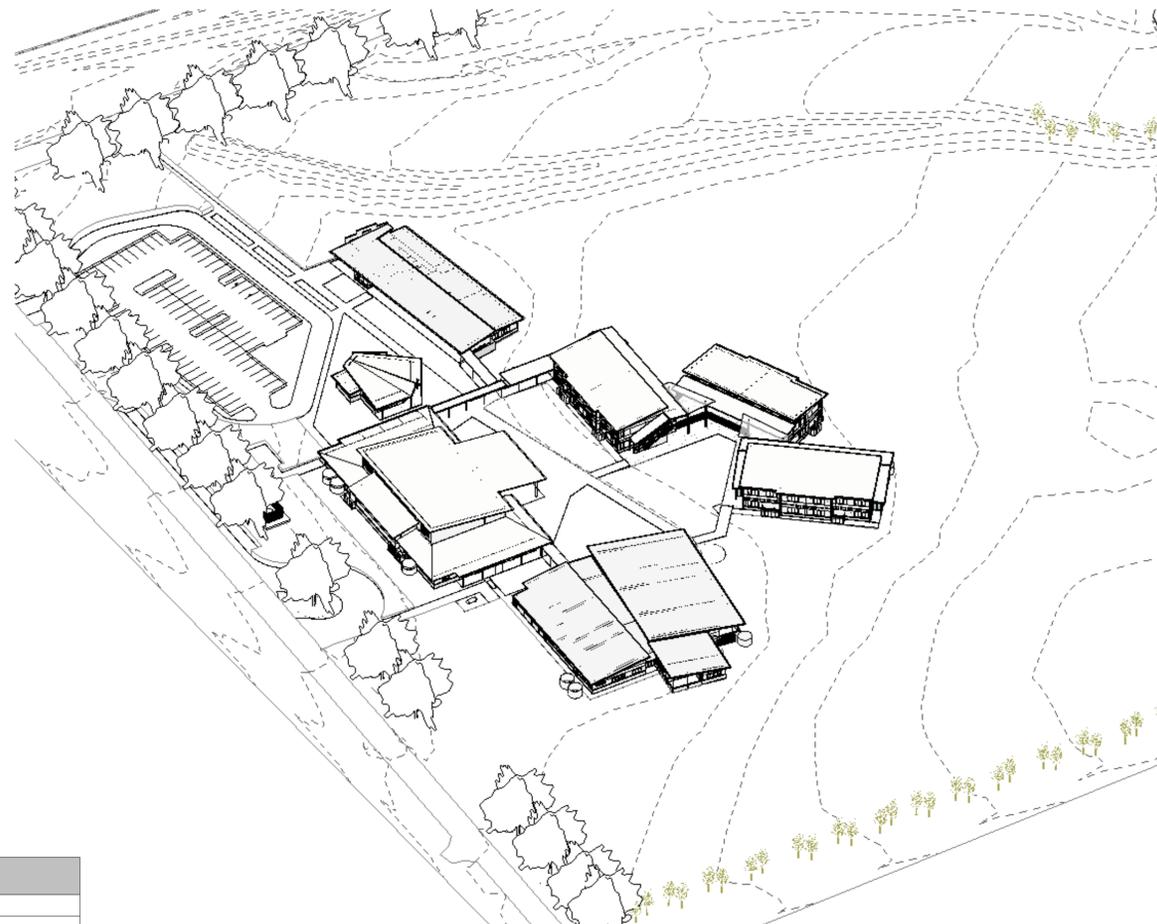
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ST MATTHEW'S CATHOLIC SCHOOL

CORNER OF BROADHEAD & BRUCE RD

MUDGEEE, NSW 2850

ELECTRICAL SERVICES



LOCALITY PLAN

DRAWING LIST ELECTRICAL

BR-E5250	SITE_BR-E5250_COVER SHEET & DRAWING LIST
BR-E5251	SITE_BR-E5251_LEGEND
BR-E5261	SITE_BR-E5261_SITE PLAN
BR-E5262	SITE_BR-E5262_PART SITE PLAN
BR-E5300	BLOCK A_BR-E5300_POWER, COMMS & SECURITY LAYOUT
BR-E5302	BLOCK C_BR-E5302_POWER, COMMS & SECURITY LAYOUT
BR-E5303	BLOCK D_BR-E5303_POWER, COMMS & SECURITY LAYOUT
BR-E5304	BLOCK E_BR-E5304_OVERALL POWER, COMMS & SECURITY LAYOUT
BR-E5305	BLOCK E_BR-E5305_BUILDING 1 POWER, COMMS & SECURITY LAYOUT
BR-E5306	BLOCK E_BR-E5306_BUILDING 2 POWER, COMMS & SECURITY LAYOUT
BR-E5307	BLOCK E_BR-E5307_BUILDING 3 POWER, COMMS & SECURITY LAYOUT
BR-E5308	BLOCK F_BR-E5308_POWER, COMMS & SECURITY LAYOUT
BR-E5400	BLOCK A_BR-E5400_LIGHTING LAYOUT
BR-E5402	BLOCK C_BR-E5402_LIGHTING LAYOUT
BR-E5403	BLOCK D_BR-E5403_LIGHTING LAYOUT
BR-E5404	BLOCK E_BR-E5404_OVERALL LIGHTING LAYOUT
BR-E5405	BLOCK E_BR-E5405_BUILDING 1 LIGHTING LAYOUT
BR-E5406	BLOCK E_BR-E5406_BUILDING 2 LIGHTING LAYOUT
BR-E5407	BLOCK E_BR-E5407_BUILDING 3 LIGHTING LAYOUT
BR-E5408	BLOCK F_BR-E5408_LIGHTING LAYOUT
BR-E5450	SITE_BR-E5450_DETAIL SHEET 1
BR-E5451	SITE_BR-E5451_DETAIL SHEET 2
BR-E5452	SITE_BR-E5452_DETAIL SHEET 3
BR-E5453	SITE_BR-E5453_DETAIL SHEET 4
BR-E5454	SITE_BR-E5454_DETAIL SHEET 5

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
NOT FOR CONSTRUCTION

SCALE @ A1
NOT TO SCALE



PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEEE, NSW 2850

DRAWING TITLE
SITE_BR-E5250_COVER SHEET & DRAWING LIST

PROJECT No. 19-000307	DRAWING No. BR-E5250	REVISION B
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LIGHTING	
SYMBOL	DESCRIPTION
	1R TROFFER
	2R DOWNLIGHT - GENERAL
	3R DOWNLIGHT - WET AREA
	4R DOWNLIGHT - OUTDOOR
	5R LED PANEL
	6R RECESSED LINEAR
	1P SUSPENDED LINEAR PENDENT
	2P ACOUSTIC PENDENT
	1S 1200 INDOOR BATTEN
	2S 600 INDOOR BATTEN
	3S 1200 OUTDOOR BATTEN
	4S 1200 OUTDOOR BATTEN HIGH OUTPUT
	5S LOWBAY
	6S HIGHBAY
	7S 600 OUTDOOR BATTEN
	1T TRACK SPOTLIGHT
	1X BOLLARD
	2X STREET LIGHT WITH POLE (SINGLE OUTREACH)
	3X STREET LIGHT WITH POLE (DOUBLE OUTREACH)
	4X STREET LIGHT WITH POLE (SINGLE OUTREACH)
	1W WALL LIGHT
SWITCHING	
SYMBOL	DESCRIPTION
	ISOLATING SWITCH MOUNTED AT 1000 AFL UNO
	ISOLATING SWITCH WITH DALI PRESS DIMMER MOUNTED AT 1000 AFL UNO
	LIGHTING CONTROL PANEL (7" TOUCH SCREEN)
	PHOTO ELECTRICAL CELL/DAYLIGHT SWITCH
	360° OCCUPANCY SENSOR
	SWITCHING LINE
	TO SWITCH
EMERGENCY LIGHTING	
SYMBOL	DESCRIPTION
	1E CIRCULAR RECESSED LED EMERGENCY LUMINAIRE, SELF CONTAINED, SINGLE POINT, NON-MAINTAINED, MINIMUM CLASSIFICATION C0=D63, C90=D63.
	2E SURFACE MOUNT LED EXIT LUMINAIRE, SELF CONTAINED, SINGLE POINT, MAINTAINED WITH PICTORAL ELEMENTS, MINIMUM VIEWING DISTANCE = 24m, MINIMUM CLASSIFICATION C0=E2.5, C90=B12.5.
	3E SURFACE MOUNT LED EXIT LUMINAIRE, SELF CONTAINED, SINGLE POINT, MAINTAINED WITH PICTORAL ELEMENTS AND DIRECTION ARROW IN DIRECTION INDICATED, MINIMUM VIEWING DISTANCE = 24m, MINIMUM CLASSIFICATION C0=E2.5, C90=B12.5. D = DOUBLE SIDED
	4E WEATHER PROOF SURFACE MOUNT LED EXIT LUMINAIRE, SELF CONTAINED, SINGLE POINT, MAINTAINED WITH PICTORAL ELEMENTS, MINIMUM VIEWING DISTANCE = 24m, MINIMUM CLASSIFICATION C0=E2, C90=E2.
	5E 3.5 WATT SURFACE MOUNT LED EXIT LUMINAIRE, SELF CONTAINED, SINGLE POINT, MAINTAINED WITH PICTORAL ELEMENTS AND DIRECTION ARROW IN DIRECTION INDICATED, MINIMUM VIEWING DISTANCE = 24m, MINIMUM CLASSIFICATION C0=E2.5, C90=B12.5. D = DOUBLE SIDED
	6E SURFACE MOUNT LED EMERGENCY LUMINAIRE, SELF CONTAINED, SINGLE POINT, NON-MAINTAINED, MINIMUM CLASSIFICATION C0=D63, C90=D63.
	7E WEATHERPROOF WALL MOUNT LED EMERGENCY FLOOD LUMINAIRE, IP65, SELF CONTAINED, SINGLE POINT, NON-MAINTAINED.
	8E SURFACE MOUNT LED EXIT LUMINAIRE, BLACK THEATRE MASK, SELF CONTAINED, SINGLE POINT, MAINTAINED WITH PICTORAL ELEMENTS, MINIMUM VIEWING DISTANCE = 24m, MINIMUM CLASSIFICATION C0 =E2.5, C90=B12.5.

COMMUNICATIONS	
SYMBOL	DESCRIPTION
	RJ45 CAT 6A COMMUNICATIONS OUTLET, MOUNT AT 300 AFL UNO
	DOUBLE RJ45 CAT 6A COMMUNICATIONS OUTLET, MOUNT AT 300 AFL UNO
	TRIPLE RJ45 CAT 6A COMMUNICATIONS OUTLET, MOUNT AT 300 AFL U.N.O
	CEILING MOUNTED RJ45 CAT 6A COMMUNICATIONS OUTLET FOR WIRELESS ACCESS POINT (WAP)
	COMMUNICATIONS CABINET/RACK
	AUDIO AMPLIFIER RACK LOCATION
	PA EQUIPMENT AS NOTED ON LAYOUTS
	PA SPEAKER - CEILING RECESSED
	PA SPEAKER - HORN
	LOCKDOWN AND EVAC PANEL
	THEATRE PROJECTOR
	AUDIO SYSTEM SPEAKER
	CARBON DIOXIDE SENSOR
	TELEVISION TYPICAL ARRANGMENT (REFER DETAILS), TV SIZE AS NOTED
	NOTE: WHERE DUPLICATE ANNOTATION OPTIONS ARE SHOWN THEY REFER TO THE SAME ITEM

POWER	
SYMBOL	DESCRIPTION
	SWITCHBOARD MSB = MAIN SWITCHBOARD DB = DISTRIBUTION BOARD
	SWITCHBOARD BY OTHER TRADE MSSB = MECHANICAL SERVICES SWITCHBOARD
	10A SINGLE SWITCHED SOCKET OUTLET (SSO), MOUNTED 300 AFFL UNO 15A = 15 AMP OUTLET 20A = 20 AMP OUTLET CM = CEILING MOUNTED CL = CLEANER DESIGNATED OUTPUT CS = CHAIN SUSPENDED P = PENDANT CAPTIVE SOCKET TYPE WP = WEATHERPROOF IP RATED CLIPSAL 56 SERIES RCD = RCD PROTECTED. CLIPSAL C2025RC OR APPROVED EQUAL RCD = RCD PROTECTED L = KEY LOCKABLE IN OFF POSITION SP = SURGE PROTECTED OUTLET (CLIPSAL 25SF)
	10A DOUBLE SSO AS ABOVE, MOUNTED 300 AFL UNO
	SINGLE PHASE ISOLATOR, RATING AS SHOWN
	THREE PHASE ISOLATOR, RATING AS SHOWN
	SINGLE PHASE DIRECT CONNECTION, RATING AS SHOWN
	THREE PHASE SOCKET OUTLET, RATING AS SHOWN
	STAGE LIGHTING OUTLET
	SERVICE COLUMN
	JUNCTION BOX
	STAINLESS STEEL WITH 4 x RJ45 OUTLETS AND 8 x AUTO SWITCHED POWER OUTLETS. CMS ELECTRACOM
	STAINLESS STEEL WITH 2 x RJ45 OUTLETS, AV PLATE AND STARTER SOCKET. CMS ELECTRACOM
	STAINLESS STEEL WITH 2 x RJ45 OUTLETS, 2 x AV PLATE AND 4 x SWITCHED POWER OUTLETS. CMS ELECTRACOM
	EMERGENCY MUSHROOM HEAD STOP BUTTON

SUB-CIRCUIT SCHEDULE	
	DB - L1
	CIRCUIT REFERENCE NUMBER
	SERVICE
	L = LIGHTING
	P = POWER
	DB DESIGNATION
	1 = DB-X

NBN SERVICES	
SYMBOL	DESCRIPTION
	NETWORK TERMINATION DEVICE
	FLOOR DISTRIBUTION TERMINAL
	PREMISES DISTRIBUTION TERMINAL
	CABLE TRANSITION LOCATION
	NBN SERVICES ACCESS PANEL

FIRE ALARMS	
SYMBOL	DESCRIPTION
	ADDRESSABLE FIRE INDICATOR PANEL, RECESS MOUNTED
	FIRE SUB INDICATOR PANEL, RECESS MOUNTED
	MANUAL CALL POINT/BREAK GLASS AT 1500
	EXTERNAL ALARM INDICATOR (AUDIO/VISUAL)
	VISUAL INDICATING LIGHT (AMBER/RED) CEILING MOUNTED
	REMOTE VISUAL INDICATOR
	FIRE ALARM SHUTDOWN SIGNAL
	ELECTROMAGNETIC DOOR HOLDER WITH MANUAL OVERRIDE PUSH BUTTON AND DOOR RELEASE FACILITY
	FIRE ALARM DOOR RELEASE SIGNAL
	LOUD SPEAKER, FLUSH MOUNTED
	LOUD SPEAKER, SURFACE MOUNTED
	ALARM SOUNDER, SURFACE MOUNTED
	ADDRESSABLE HEAT DETECTOR (EXPOSED OR SURFACE MOUNTED)
	HEAT DETECTOR IN CONCEALED SPACE
	ADDRESSABLE SMOKE DETECTOR (PHOTOELECTRIC TYPE)
	SMOKE DETECTOR IN CONCEALED SPACE

SECURITY	
SYMBOL	DESCRIPTION
	SECURITY ALARM PANEL
	DATA GATHERING PANEL
	CYPHER PAD
	ELECTROMAGNETIC DOOR LOCK
	ELECTRIC DOOR STRIKE
	DOOR RELEASE PUSHBUTTON
	BREAK GLASS TO EXIT (FAIL SAFE)
	INTERNAL PIEZO SOUNDER
	COMBINED SIREN/STROBE
	ALARM (A = AUDIBLE, V = VISUAL)
	CARD READER (PROXIMITY TYPE)
	MOTION DETECTOR
	360 DEGREE CEILING MOUNT MOTION DETECTOR
	DURESS BUTTON
	VIDEO DISPLAY MONITOR
	CCTV HEAD END EQUIPMENT
	CCTV CAMERA
	IP VIDEO INTERCOM ENTRANCE STATION

PIT REFERENCE	
	PIT (REFER BELOW)
	E1-(A)
	PIT TYPE ALL PITS TO BE PROVIDED WITH 2x50mm DIA DRAIN PIPE TO BE CONNECTED TO DRAINAGE SYSTEM. PROVIDE A 200x200mm CONCRETE COLLAR WHEN INSTALLED IN GRASS AREAS.
	A = ACO TYPE 6 WITH CLASS B GALVANISED STEEL LID
	B = MIN. 1500x1500x1200 CONCRETE WITH CLASS D GATIC LID
	C = ACO TYPE 99 WITH RISERS AND CLASS B GATIC LID
	PIT REFERENCE NUMBER
	SERVICE E = ELECTRICAL C = COMMUNICATIONS T = NBN / TELECOM PROVIDER (BUILT TO NBN SPECIFICATION) EP = ACO EARTH PIT WITH LOCKABLE HINGED LID

HEAVY DUTY CONDUIT REFERENCE	
	HEAVY DUTY CONDUIT (REFER BELOW)
	E-1x100
	NOMINAL INTERNAL DIAMETER OF CONDUIT (mm)
	NUMBER OF CONDUITS
	CONDUIT TYPE E = ELECTRICAL C = COMMUNICATIONS T = TELSTRA
	LINTYPE

SITE WORKS, CABLE SUPPORTS AND EARTHING	
SYMBOL	DESCRIPTION
	COMMUNICATIONS CABLE TRAY, SIZE AS SHOWN
	ELECTRICAL CABLE LADDER, SIZE AS SHOWN
	ELECTRICAL PILLAR
	PACKAGE SUBSTATION
	POLE
	POLE MOUNTED SUBSTATION
	TERMINATION HV - SWITCHLINK
	STREET LIGHT AND BRACKET
	AIR TERMINAL
	EARTH ROD PIT
	EARTHING BOND - CADWELD JOINT
	CONDUIT IN WALL CAVITY TO ASSESSIBLE CEILING SPACE
	2x CONDUIT IN WALL CAVITY TO ASSESSIBLE CEILING SPACE
	3x CONDUIT IN WALL CAVITY TO ASSESSIBLE CEILING SPACE
	4x CONDUIT IN WALL CAVITY TO ASSESSIBLE CEILING SPACE

SWITCHBOARD SCHEMATICS	
SYMBOL	DESCRIPTION
	ONE PHASE
	TWO PHASE
	THREE PHASE
	ON LOAD ISOLATOR
	CIRCUIT BREAKER
	COMBINED RESIDUAL CURRENT DEVICE/CIRCUIT BREAKER (30mA SENSITIVITY UNO)
	MOTOR DRIVEN CIRCUIT BREAKER
	WITHDRAWABLE CIRCUIT BREAKER
	FUSE COMBINATION UNIT (FCU)
	NORMALLY CLOSED CONTACT
	NORMALLY OPEN CONTACT
	SWITCH
	AUTO/OFF/MANUAL SWITCH
	SUPPLY AUTHORITY / RETAILER ENERGY METER
	PRIVATE METER. REFER ESPEC FOR TIERS
	COIL
	LINK
	CURRENT TRANSFORMER
	HRC FUSE BASE CARTRIDGE
	SURGE DIVERTER WITH FUSE
	CONTACTOR
	RELAY
	TIME SWITCH
	TIME DELAY RELAY
	UNDER VOLTAGE RELAY - 3 PHASES (SET AT 80% NOMINAL)
	LED INDICATOR LIGHT
	EARTH
	AUTOMATIC TRANSFER SWITCH
	MECHANICAL AND ELECTRICAL INTERLOCK
	GENERATING SET
	TRANSFORMER
	240V AC / 24V DC RECTIFIER

ABBREVIATIONS		
GENERAL LOCATION	SYMBOL	DESCRIPTION
+1200		HEIGHT ABOVE FINISHED FLOOR LEVEL
ab		ABOVE BENCH
bb		BELOW BENCH
AFL		ABOVE FLOOR LEVEL
AFLL		ABOVE FINISHED FLOOR LEVEL
CM		MOUNTED TO UNDERSIDE OF CEILING OR STRUCTURE
IC		MOUNTED IN CEILING SPACE
IJ		MOUNTED IN JOINERY
WM		MOUNTED TO WALL OR STRUCTURE
ABBREVIATIONS		
EQUIPMENT SPECIFIC	SYMBOL	DESCRIPTION
AC		AIR CONDITIONING UNIT. LOCATE ISOLATOR FOR CONNECTION BY MECHANICAL CONTRACTOR. COORDINATE FINAL LOCATION WITH MECHANICAL CONTRACTOR.
BBS		BRANCH SELECTOR BOX. COORDINATE AND LOCATE ISOLATOR FOR CONNECTION BY MECHANICAL CONTRACTOR.
CBWU		CHILLED/BOILING WATER UNIT. COORDINATE FINAL LOCATION WITH HYDRAULICS CONTRACTOR AND LOCATE OUTLET IN ACCESSIBLE LOCATION TO EQUIPMENT SPECIFICATIONS. UNIT COMPLETE WITH TIMER TO BCA J6 REQUIREMENTS.
CT		COOKTOP. LOCATE OUTLET WITH ISOLATOR SWITCH IN ACCESSIBLE LOCATION COMPLYING WITH AS3000.
DW		DISHWASHER. LOCATE OUTLET IN ACCESSIBLE LOCATION WITHIN ADJACENT JOINERY.
EF		EXHAUST FAN (BY MECHANICAL SERVICES). COORDINATE AND LOCATE ISOLATOR FOR CONNECTION BY MECHANICAL CONTRACTOR.
HD		HAND DRYER. HAND DRYER. LOCATE ISOLATOR AT HIGH LEVEL WITH HARDWIRED CONNECTION TO APPLIANCE.
HWU		HOT WATER UNIT. COORDINATE AND LOCATE ISOLATOR FOR CONNECTION BY HYDRAULICS CONTRACTOR.
INV		SOLAR INVERTER
NW		MICROWAVE. LOCATE OUTLET IN ACCESSIBLE LOCATION WITH APPLIANCE IN PLACE.
OAF		OUTSIDE AIR FAN. COORDINATE AND LOCATE ISOLATOR FOR CONNECTION BY MECHANICAL CONTRACTOR.
OV		OVEN. LOCATE ISOLATOR IN ACCESSIBLE LOCATION WITHIN ADJACENT JOINERY WITH HARDWIRED CONNECTION TO OVEN REFRIGERATOR. LOCATION OUTLET IN ACCESSIBLE LOCATION WITH APPLIANCE IN PLACE.
REF		RANGE HOOD. LOCATE OUTLET IN ACCESSIBLE LOCATION WITHIN ADJACENT JOINERY WHERE POSSIBLE.
WM		WASHING MACHINE
ABBREVIATIONS		
GENERAL	SYMBOL	DESCRIPTION
15A		CURRENT RATING (15 AMP EXAMPLE)
3PH		THREE PHASE (400V LINE-LINE)
ACC		LIGHTING: SWITCHED ON ACCESS CONTROL CIRCUIT
AV		AUDIO VISUAL
P		PENDENT
SEC		SECURITY SERVICE
UNO		UNLESS NOTED OTHERWISE
SSO		SWITCHED SOCKET OUTLET
WP		WEATHER PROOF (MINIMUM IP 65 RATED)

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS

PRELIMINARY
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SCALE @ A1

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PROJECT

ST MATTHEW'S CATHOLIC SCHOOL

CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

DRAWING TITLE

SITE_BR-E5251_LEGEND

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5251	B

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BROADHEAD RD

BROADHEAD RD

BRUCE ROAD

BRUCE ROAD

FUTURE DEVELOPMENT AREA

BLOCK E BUILDING 2

BLOCK E BUILDING 3

BLOCK E BUILDING 1

BLOCK A

BLOCK D

BLOCK F

BLOCK C

FUTURE DEVELOPMENT AREA

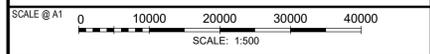
NOTES

1. ALL POWER SUPPLY UPGRADE WORKS ARE SUBJECT TO ESSENTIAL ENERGY DIP AND REQUIREMENTS
2. ALL COMMERCIAL FIBRE WORKS SUBJECT TO CEDB SERVICE PROVIDER REQUIREMENTS AND BACKHAUL WORKS
3. REFER TO E5260 FOR SITE INTERNAL PIT AND PIPE LAYOUT
4. REFER TO L3 ASP DESIGN FOR ALL ESSENTIAL ENERGY WORKS. SHOWN FOR COORDINATION ONLY.
5. ONLY MAJOR SERVICE RUNS ARE SHOWN. ALLOW FOR ALL MINOR CONDUIT RETICULATIONS TO FINAL CONNECTIONS AND DEVICES AS PER DOCUMENTATION AND ESPEC

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS

PRELIMINARY
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PROJECT

ST MATTHEW'S CATHOLIC SCHOOL

CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

DRAWING TITLE

SITE_BR-E5261_SITE PLAN

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5261	B

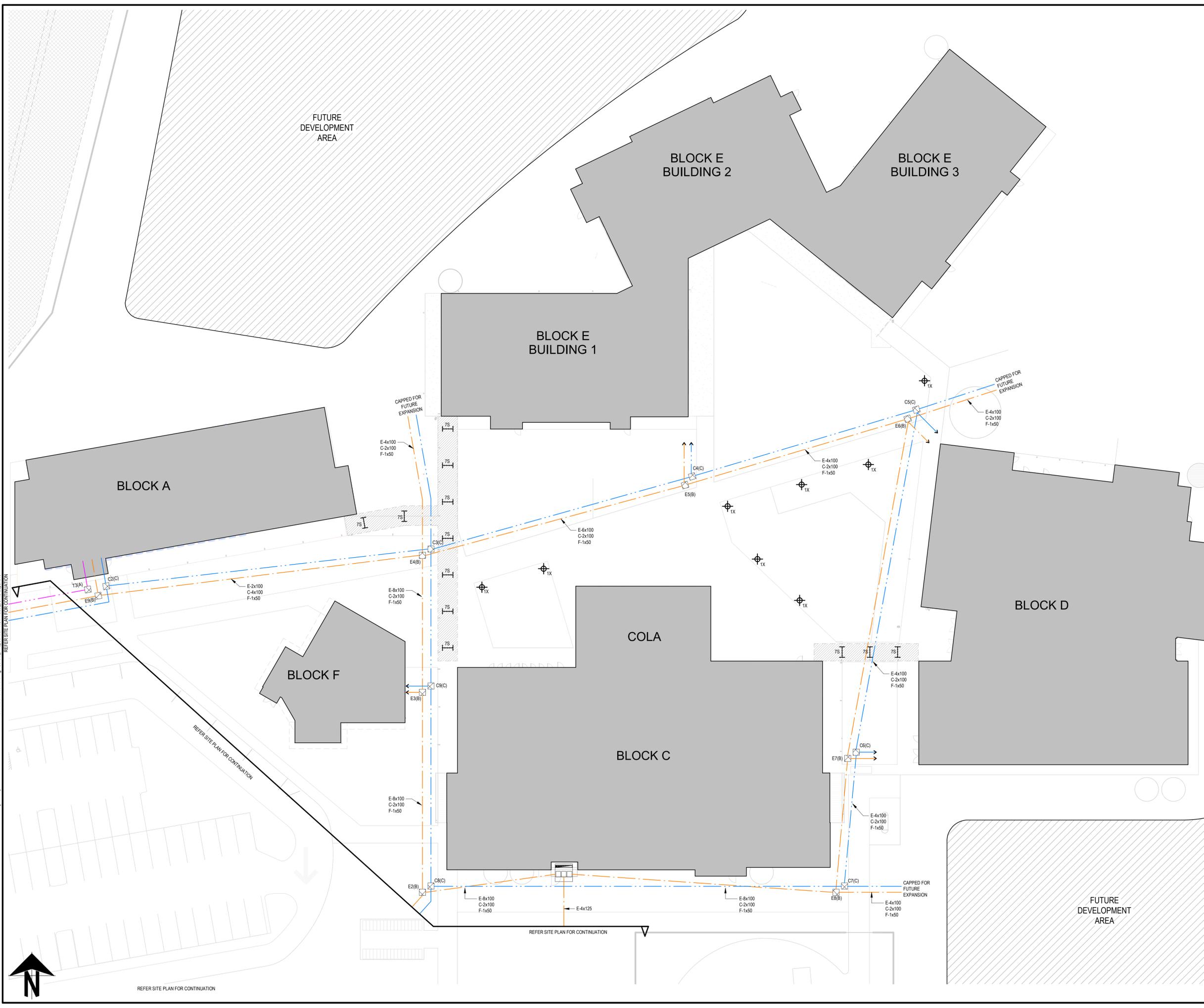
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NOTES

1. UNDERGROUND FIRE SERVICES TO BE SLEEVED THROUGH COMMUNICATIONS PITS, PROTECTED, SEGREGATED AND LABELED.
2. ONLY MAJOR SERVICE RUNS ARE SHOWN. ALLOW FOR ALL MINOR CONDUIT RETICULATIONS TO FINAL CONNECTIONS AND DEVICES AS PER DOCUMENTATION AND ESPEC.



REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
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SCALE @ A1
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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEES, NSW 2850

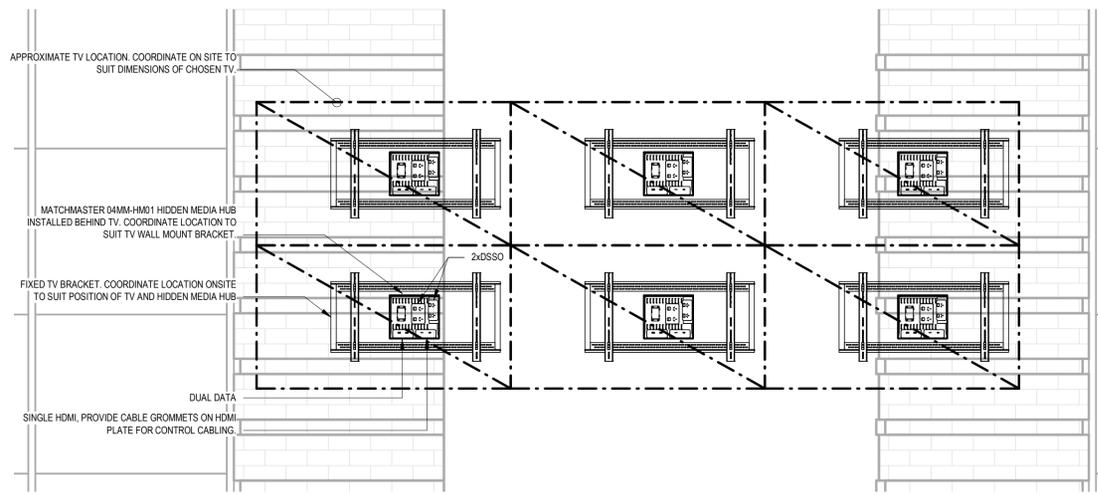
DRAWING TITLE
SITE_BR-E5262_PART SITE PLAN

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5262	B

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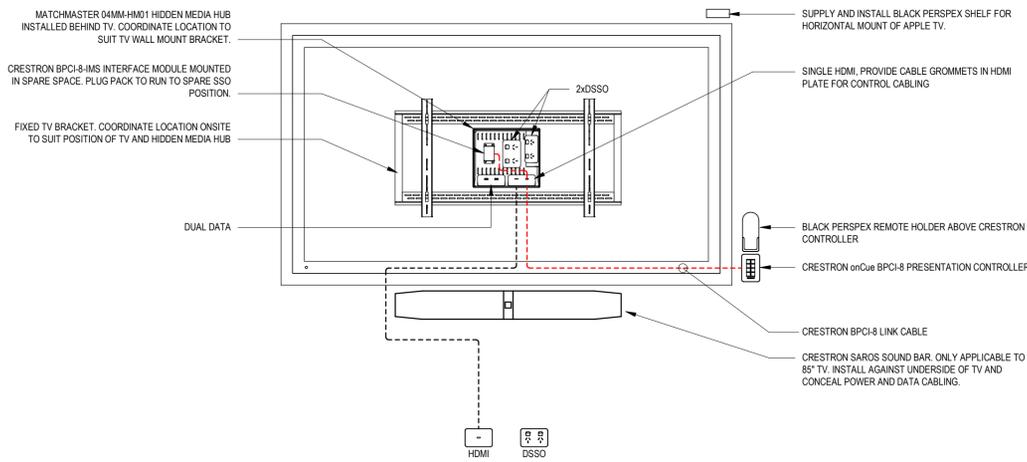
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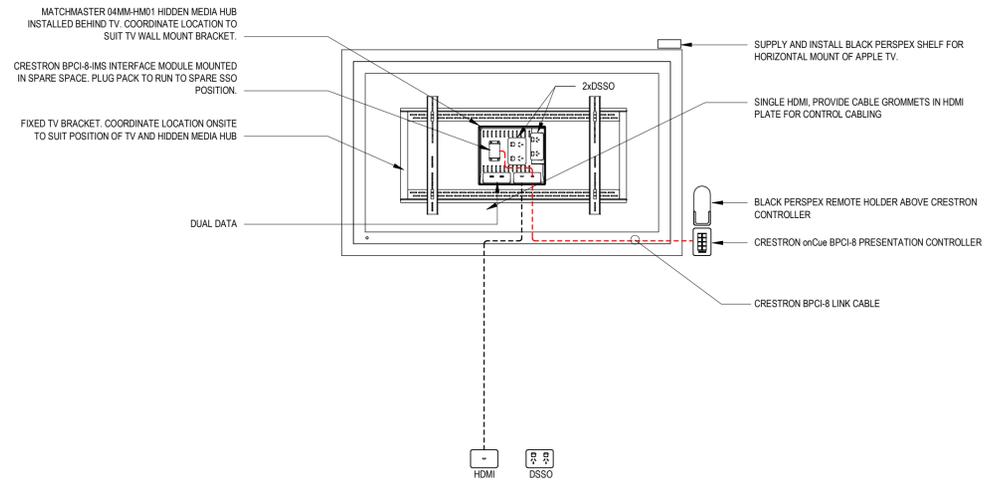
NOT TO SCALE
TYPICAL COMBINED TV LAYOUT

- NOTES:**
1. REFER ARCHITECTURAL SCHEDULES, LAYOUTS AND ELEVATIONS FOR QUANTITIES AND DETAILS OF ALL TELEVISIONS. ALL ARCHITECTURAL DOCUMENTATION SHALL TAKE PRECEDENCE IN THIS REGARD.
 2. TYPICAL LAYOUT DISPLAYED. ADJUST MOUNTING HEIGHTS AND LOCATIONS TO SUIT TV LOCATIONS.
 3. SUPPLY & INSTALL COMPLETE AV SYSTEM. REFER ESPEC.



NOT TO SCALE
TYPICAL 85" TV LAYOUT

- NOTES:**
1. REFER ARCHITECTURAL SCHEDULES, LAYOUTS AND ELEVATIONS FOR QUANTITIES AND DETAILS OF ALL TELEVISIONS. ALL ARCHITECTURAL DOCUMENTATION SHALL TAKE PRECEDENCE IN THIS REGARD.
 2. TYPICAL LAYOUT DISPLAYED. ADJUST MOUNTING HEIGHTS AND LOCATIONS TO SUIT TV LOCATIONS.
 3. SUPPLY & INSTALL COMPLETE AV SYSTEM. REFER ESPEC.



NOT TO SCALE
TYPICAL 55", 65" & 75" TV LAYOUT

- NOTES:**
1. REFER ARCHITECTURAL SCHEDULES, LAYOUTS AND ELEVATIONS FOR QUANTITIES AND DETAILS OF ALL TELEVISIONS. ALL ARCHITECTURAL DOCUMENTATION SHALL TAKE PRECEDENCE IN THIS REGARD.
 2. TYPICAL LAYOUT DISPLAYED. ADJUST MOUNTING HEIGHTS AND LOCATIONS TO SUIT TV LOCATIONS.
 3. SUPPLY & INSTALL COMPLETE AV SYSTEM. REFER ESPEC.

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION

SCALE @ A1
 NOT TO SCALE

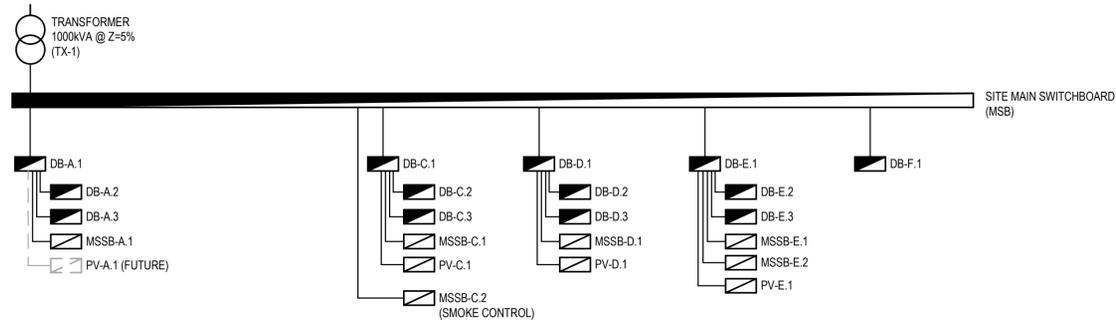


PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
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DRAWING TITLE
SITE_BR-E5450_DETAIL SHEET 1

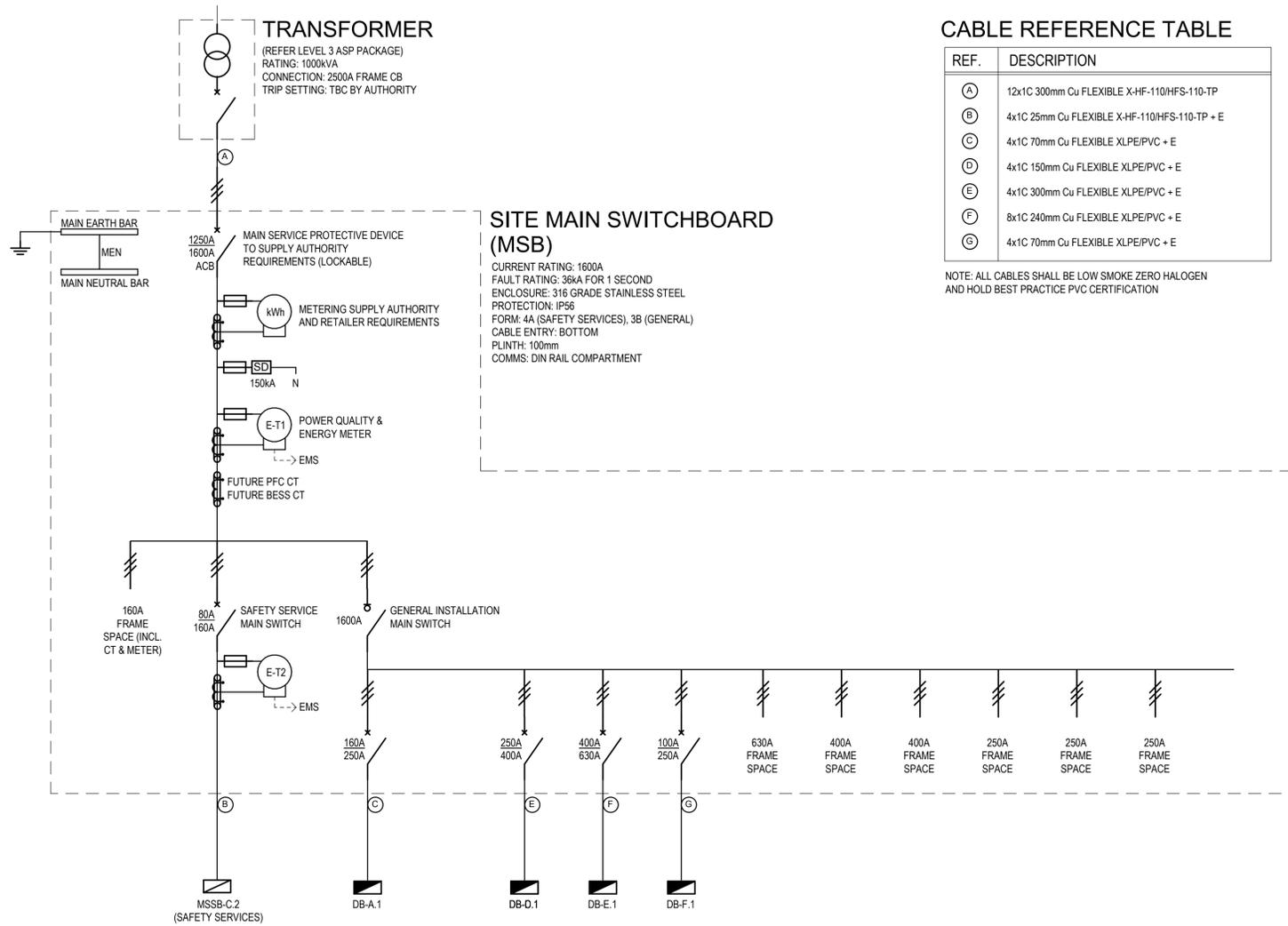
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19-000307	BR-E5450	B

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POWER DISTRIBUTION BLOCK DIAGRAM

SCALE NTS



CABLE REFERENCE TABLE

REF.	DESCRIPTION
(A)	12x1C 300mm Cu FLEXIBLE X-HF-110/HFS-110-TP
(B)	4x1C 25mm Cu FLEXIBLE X-HF-110/HFS-110-TP + E
(C)	4x1C 70mm Cu FLEXIBLE XLPE/PVC + E
(D)	4x1C 150mm Cu FLEXIBLE XLPE/PVC + E
(E)	4x1C 300mm Cu FLEXIBLE XLPE/PVC + E
(F)	8x1C 240mm Cu FLEXIBLE XLPE/PVC + E
(G)	4x1C 70mm Cu FLEXIBLE XLPE/PVC + E

NOTE: ALL CABLES SHALL BE LOW SMOKE ZERO HALOGEN AND HOLD BEST PRACTICE PVC CERTIFICATION

MAIN SWITCHBOARD SINGLE LINE SCHEMATIC

SCALE NTS

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
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STATUS

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PROJECT

ST MATTHEW'S CATHOLIC SCHOOL

CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

DRAWING TITLE

SITE_BR-E5451_DETAIL SHEET 2

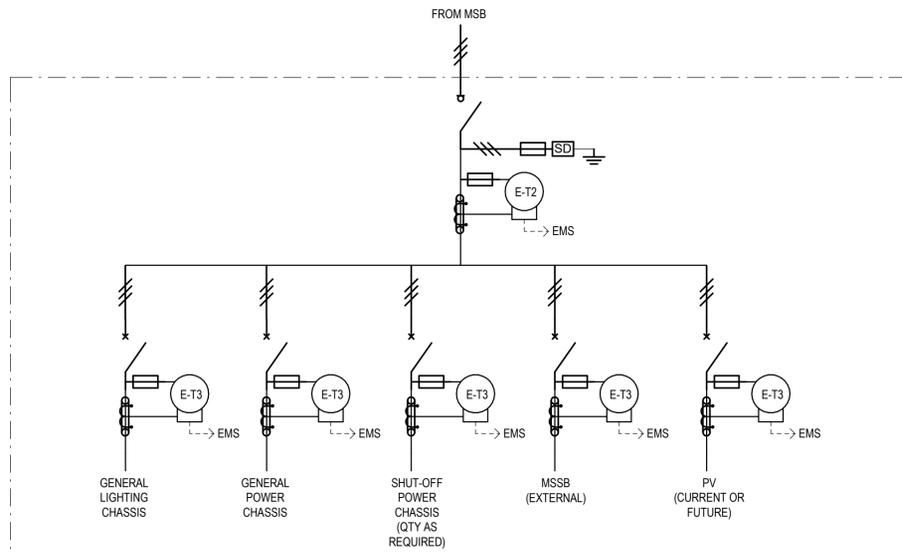
PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5451	B

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LIGHTING CHASSIS		CIRCUIT		CABLE SIZE (mm ²)		RATING		PHASES		NO. OF PHASES		CIRCUIT	
X		2.5	16	1		1		20	4			X	
X		2.5	16	1		1		20	4			X	

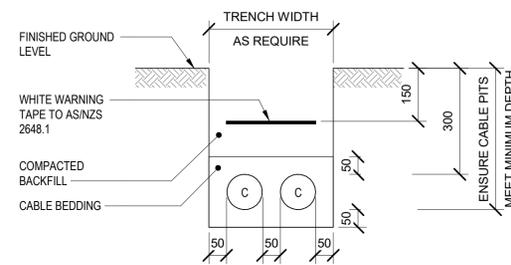
POWER CHASSIS		CIRCUIT		CABLE SIZE (mm ²)		RATING		PHASES		NO. OF PHASES		CIRCUIT	
X		2.5	16	1		1		20	4			X	
X		2.5	16	1		1		20	4			X	

SHUT-OFF CHASSIS (VIA EPO OR KEYSWITCH AS REQUIRED)		CIRCUIT		CABLE SIZE (mm ²)		RATING		PHASES		NO. OF PHASES		CIRCUIT	
X		2.5	16	1		1		20	4			X	
X		2.5	16	1		1		20	4			X	

LOCATION	EDP CUPBOARDS
FAULT LEVEL	15kA FOR 1 SEC
IP RATING	IP42
FORM	1
MIN. POLES	USED + 30% SPARE
DIN SPACE	USED + 25% SPARE
CURRENT RATING	250A/400A/630A
MOUNTING	WALL OR FLOOR
SPD	40KA 8/20us MOV
SWITCHGEAR	SCHNEIDER, NHP OR ABB

- NOTES:
- CIRCUIT BREAKERS SHALL HAVE MINIMUM FAULT CURRENT RATING OF 6kA. PROVIDE HIGHER AS REQUIRED FOR ACTUAL FAULT CURRENTS OR CASCADING AND SELECTIVITY
 - CABLE SIZES SHOWN ARE MINIMUM SIZES ONLY. INCREASE AS REQUIRED TO ACCOMMODATE DERATING DUE TO INSTALLATION CONDITIONS, VOLTAGE DROP AND EARTH FAULT LOOP IMPEDANCE
 - PROVIDE SUITABLE COMPARTMENTS FOR CONTACTORS AND CONTROL SYSTEMS COMPONENTS AS REQUIRED FOR EACH LOCATIONS

TYPICAL DB ARRANGEMENT SINGLE LINE SCHEMATIC

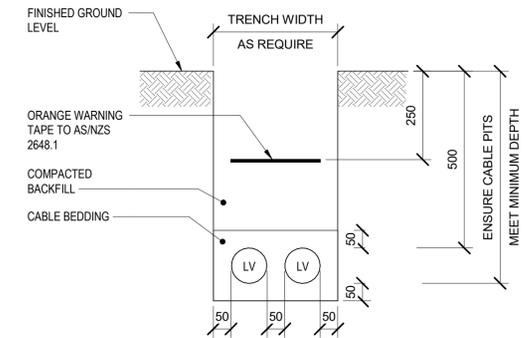


TYPICAL COMMUNICATIONS TRENCH DETAIL

SCALE: 1:10

NOTES

- CONDUIT COVER AND BEDDING CLEARANCES SHOWN ARE MINIMUM DIMENSIONS ONLY. INCREASE AS REQUIRED TO MEET INSTALLATION REQUIREMENTS AND CLEARANCE OF OTHER SERVICES. WHITE WARNING TAPE SHALL BE LOCATED HALF WAY BETWEEN FINISHED GROUND LEVEL AND TOP OF CONDUIT
- ARRANGE CONDUIT BANKS TO BEST SUIT CONNECTING CABLE PIT CUT-OUTS AND DEPTHS
- MAINTAIN MINIMUM CLEARANCE IN ACCORDANCE WITH TELECOMMUNICATIONS, GAS, WATER AND ELECTRICITY DISTRIBUTOR REQUIREMENTS. NOMINALLY MAINTAIN 100mm SEPARATION FROM ALL SERVICES AND 300mm SEPARATION FROM ELECTRICAL CABLES ABOVE 1kV

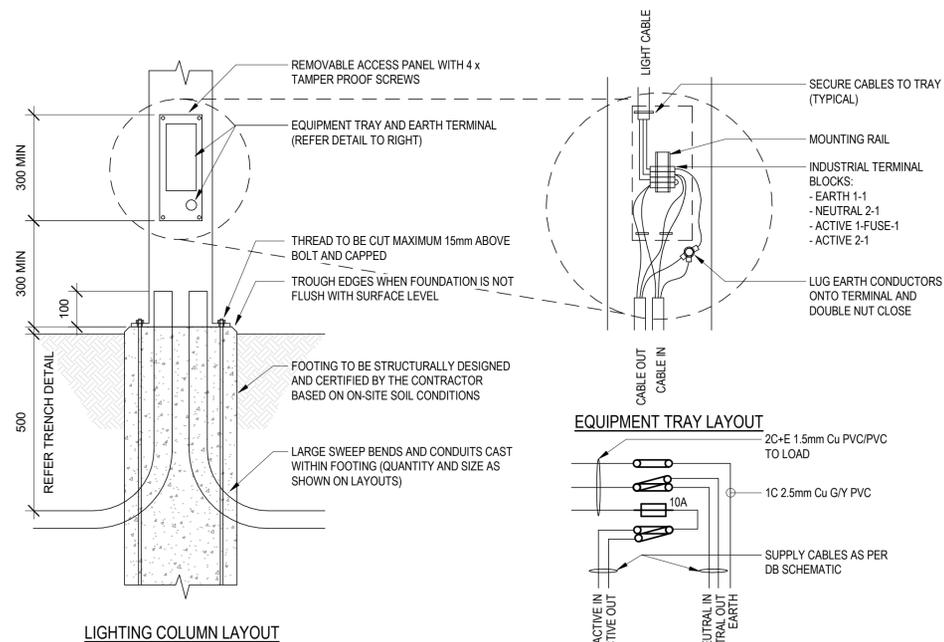


TYPICAL ELECTRICAL TRENCH DETAIL

SCALE: 1:10

NOTES

- TYPICAL DETAIL BASED ON AS/NZS 3000 CATEGORY A CABLE WIRING ENCLOSURE
- CONDUIT COVER AND BEDDING CLEARANCES SHOWN ARE MINIMUM DIMENSIONS ONLY. INCREASE AS REQUIRED TO MEET INSTALLATION REQUIREMENTS AND CLEARANCE OF OTHER SERVICES. ORANGE WARNING TAPE SHALL BE LOCATED HALF WAY BETWEEN FINISHED GROUND LEVEL AND TOP OF CONDUIT
- ARRANGE CONDUIT BANKS TO BEST SUIT CONNECTING CABLE PIT CUT-OUTS AND DEPTHS
- MAINTAIN MINIMUM CLEARANCE IN ACCORDANCE WITH AS/NZS 3000 TABLE 3.7 AND TELECOMMUNICATIONS, GAS, WATER AND ELECTRICITY DISTRIBUTOR REQUIREMENTS



LIGHTING COLUMN LAYOUT

TYPICAL LIGHT POLE ARRANGEMENT

SCALE: NTS

NOTES

- EQUIPMENT TRAY ACCESS PANEL IS TO BE INSTALLED ON THE POLE FACE ADJACENT ACCESSIBLE AREA
- POLE TO BE POWDERCOATED BLACK

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
NOT FOR CONSTRUCTION

SCALE @ A1
NOT TO SCALE

CLIENT
CATHOLIC EDUCATION
DIOCESE OF BATHURST

TSA
MANAGEMENT

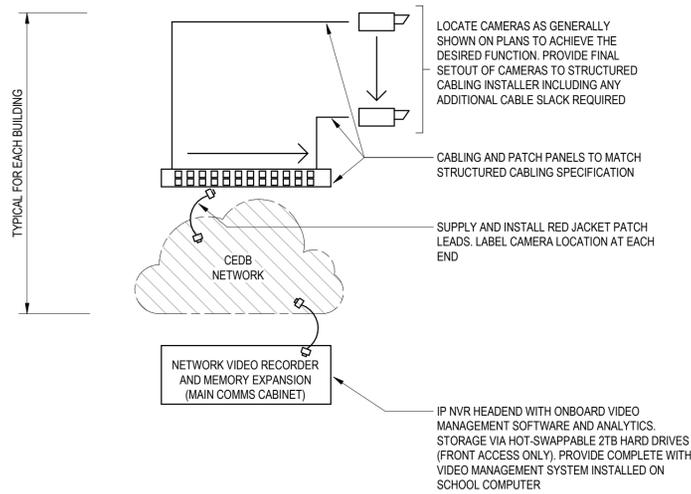
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ARCHITECTURE

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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEES, NSW 2850

DRAWING TITLE
SITE_BR-E5452_DETAIL SHEET 3

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5452	B

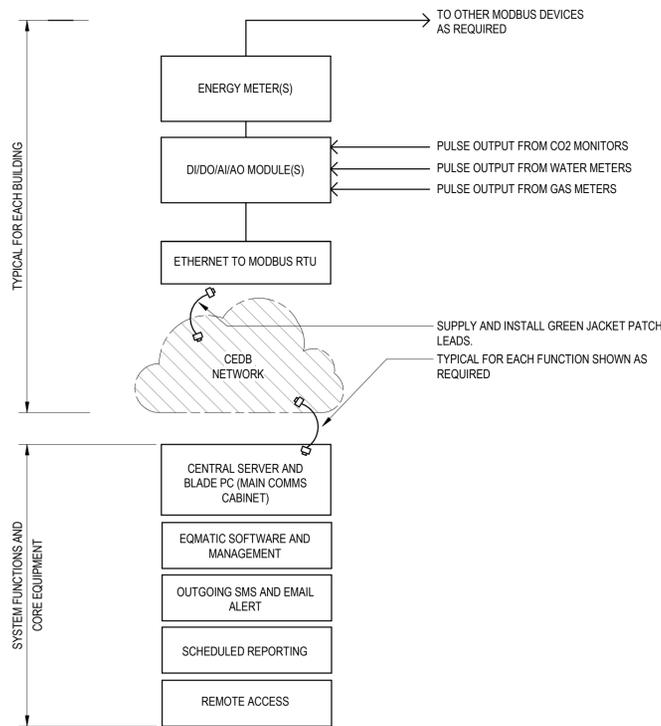


CCTV BLOCK DIAGRAM

SCALE: NTS

NOTES

1. THE ELECTRICAL CONTRACTOR SHALL ENGAGE A SPECIALIST SECURITY SERVICES SUBCONTRACTOR TO DESIGN, SUPPLY AND INSTALL SECURITY SERVICES.
2. SCHEMATIC SHOWN IS DIAGRAMMATIC ONLY TO DEMONSTRATE DESIGN INTENT. PROVIDE COMPLETE SYSTEM DESIGN, SCHEMATICS, LAYOUTS AND EQUIPMENT SCHEDULES FOR A FUNCTIONAL SYSTEM.
3. SELECT LENS AND LOCAL LENGTHS TO ACHIEVE OPTIMAL SITE COVERAGE, SPECIFICALLY THOSE AREAS MENTIONED WITHIN THE CAMERA SCHEDULE. WHERE COVERAGE WOULD BEST BE PROVIDED BY A SECONDARY CAMERA, ALLOW FOR ONE WITHIN TENDER SUBMISSION.
4. PROVIDE WALL BRACKETS, SURFACE MOUNT KITS, BACKING PLATES AND POLE CLAMPS ETC. AS REQUIRED TO MOUNT CAMERAS IN EACH LOCATION, AT HEIGHTS AND IN SITUATIONS SUITABLE FOR ONGOING MAINTENANCE

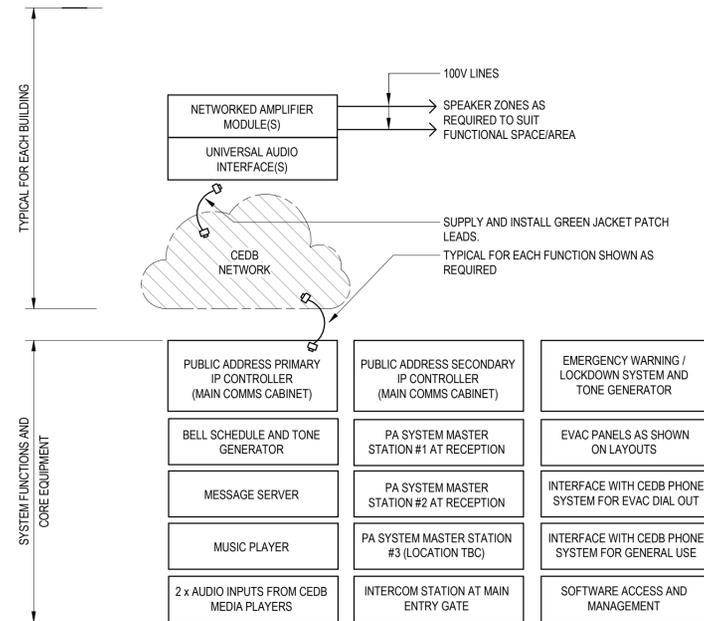


ENERGY MANAGEMENT SYSTEM SYSTEM BLOCK DIAGRAM

SCALE: NTS

NOTES

1. THE ELECTRICAL CONTRACTOR SHALL ENGAGE A SPECIALIST BMS/AUTOMATION SUBCONTRACTOR TO DESIGN, SUPPLY AND INSTALL THE IP BASED KNX ENERGY MANAGEMENT SYSTEM
2. SCHEMATIC SHOWN IS DIAGRAMMATIC ONLY TO DEMONSTRATE DESIGN INTENT. PROVIDE COMPLETE SYSTEM DESIGN, SCHEMATICS, LAYOUTS AND EQUIPMENT SCHEDULES FOR A FUNCTIONAL SYSTEM.
3. INCLUDE ALL EQUIPMENT, COMPONENTS, DEVICES, INTERFACES AND CONVERTERS TO PROVIDE A COMPLETE SOLUTION, INCLUDING INTEGRATION OF ANALOGUE SERVICES OVER THE IP SYSTEM
4. SYSTEM TO BE KNX PLATFORM USING ABB DEVICES AND EQMATIC ENERGY ANALYSER (OR EQUAL)
5. ALLOW TO CONFIGURE THE SOFTWARE AND SETUP ALL DASHBOARDS AND AUTOMATIC REPORTING TO GREENSTAR REQUIREMENTS

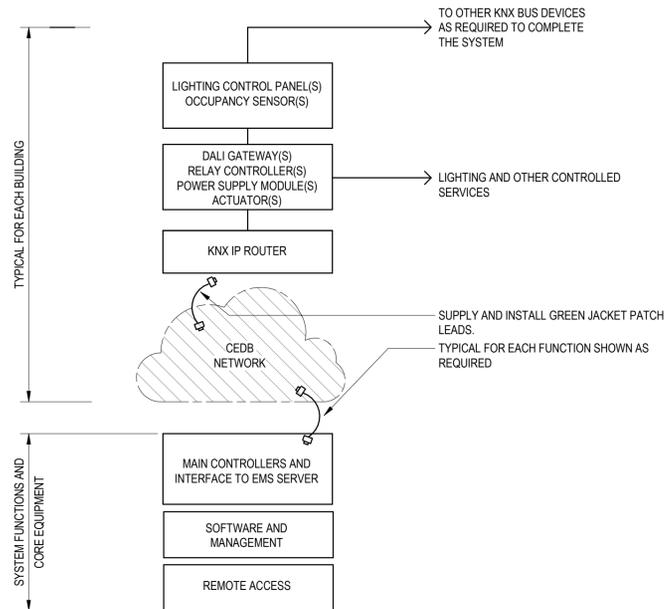


PUBLIC ADDRESS AND INTERCOM SYSTEM BLOCK DIAGRAM

SCALE: NTS

NOTES

1. THE ELECTRICAL CONTRACTOR SHALL ENGAGE A SPECIALIST PUBLIC ADDRESS SUBCONTRACTOR TO DESIGN, SUPPLY AND INSTALL THE IP BASED PUBLIC ADDRESS SERVICES.
2. SCHEMATIC SHOWN IS DIAGRAMMATIC ONLY TO DEMONSTRATE DESIGN INTENT. PROVIDE COMPLETE SYSTEM DESIGN, SCHEMATICS, LAYOUTS AND EQUIPMENT SCHEDULES FOR A FUNCTIONAL SYSTEM.
3. INCLUDE ALL EQUIPMENT, COMPONENTS, DEVICES, INTERFACES AND CONVERTERS TO PROVIDE A COMPLETE SOLUTION, INCLUDING INTEGRATION OF ANALOGUE SERVICES OVER THE IP SYSTEM
4. SYSTEM TO BE JACQUES OR EQUAL

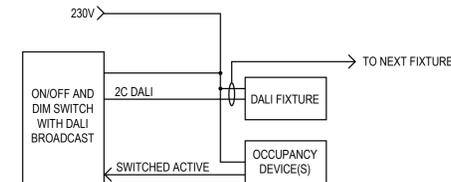


LIGHTING CONTROL SYSTEM (BLOCK C & OPTION 1 BLOCKS A, B, D AND E)

SCALE: NTS

NOTES

1. THE ELECTRICAL CONTRACTOR SHALL ENGAGE A SPECIALIST LIGHTING AUTOMATION SUBCONTRACTOR TO DESIGN, SUPPLY AND INSTALL THE IP BASED KNX ENERGY MANAGEMENT SYSTEM
2. SCHEMATIC SHOWN IS DIAGRAMMATIC ONLY TO DEMONSTRATE DESIGN INTENT. PROVIDE COMPLETE SYSTEM DESIGN, SCHEMATICS, LAYOUTS AND EQUIPMENT SCHEDULES FOR A FUNCTIONAL SYSTEM.
3. INCLUDE ALL EQUIPMENT, COMPONENTS, DEVICES, INTERFACES AND CONVERTERS TO PROVIDE A COMPLETE SOLUTION, INCLUDING INTEGRATION OF ANALOGUE SERVICES OVER THE IP SYSTEM
4. SYSTEM TO BE KNX PLATFORM USING ABB DEVICES AND EQMATIC ENERGY ANALYSER (OR EQUAL)
5. ALLOW TO CONFIGURE THE SOFTWARE AND SETUP ALL DASHBOARDS AND AUTOMATIC REPORTING TO GREENSTAR REQUIREMENTS



LIGHTING CONTROL SYSTEM (OPTION 2 BLOCKS A, B, D AND E)

SCALE: NTS

NOTES

1. BASED ON STANDALONE DALI BROADCAST DIMMING SWITCHES FOR INDIVIDUAL ZONES AND SPACES
2. INTEGRATE WITH STANDARD 230V OCCUPANCY SENSOR SYSTEM (BEG (A)AUTOMATION) WIRED IN MASTER/SLAVE ARRANGEMENT WHERE MULTIPLE SENSORS ARE WITHIN A ZONE
3. BUTTON SHALL BE ON/OFF WITH MOMENTARY PUSH, AND DIMMING EITHER VIA HOLD OR ROTARY ACTION

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS

PRELIMINARY
NOT FOR CONSTRUCTION

SCALE @ A1

NOT TO SCALE



PROJECT

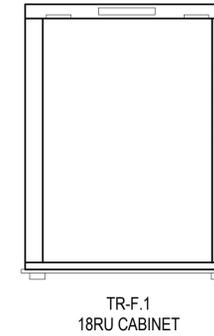
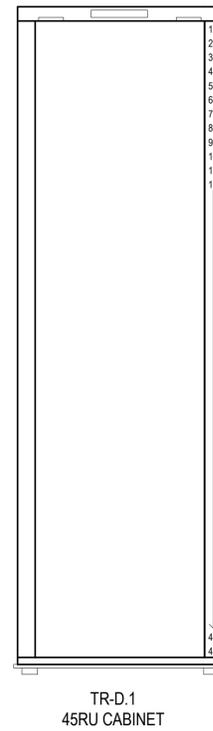
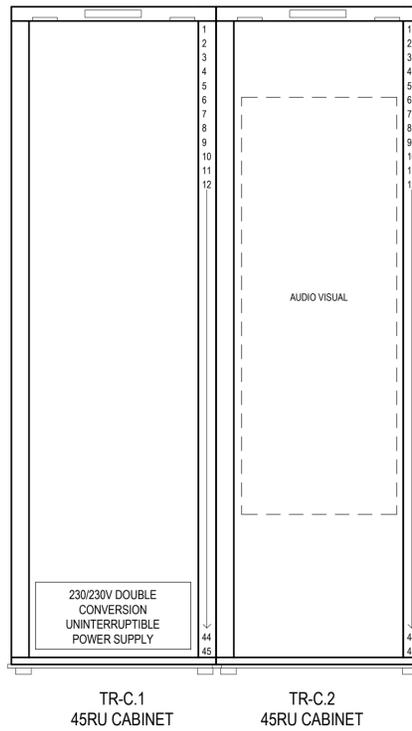
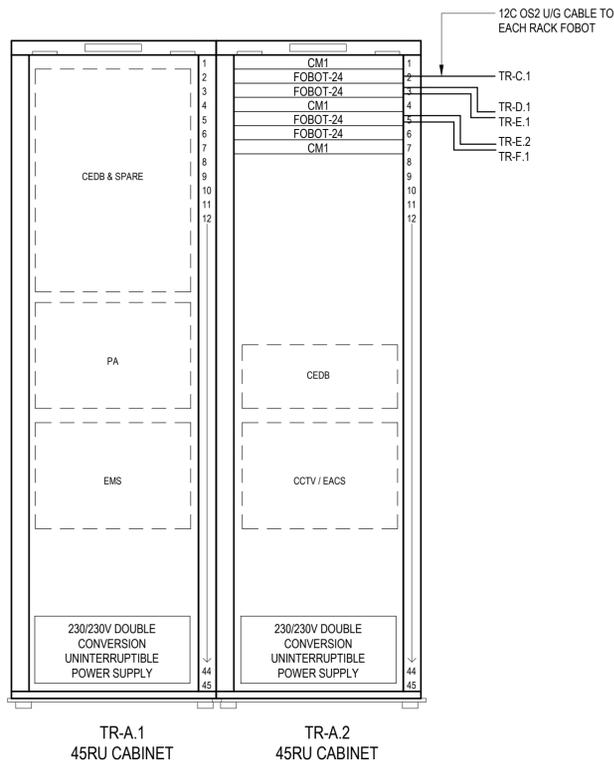
ST MATTHEW'S CATHOLIC SCHOOL

CORNER OF BROADHEAD & BRUCE RD
MUDGEES, NSW 2850

DRAWING TITLE

SITE_BR-E5453_DETAIL SHEET 4

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5453	B



COMMUNICATIONS SINGLE LINE SCHEMATIC/ARRANGEMENT

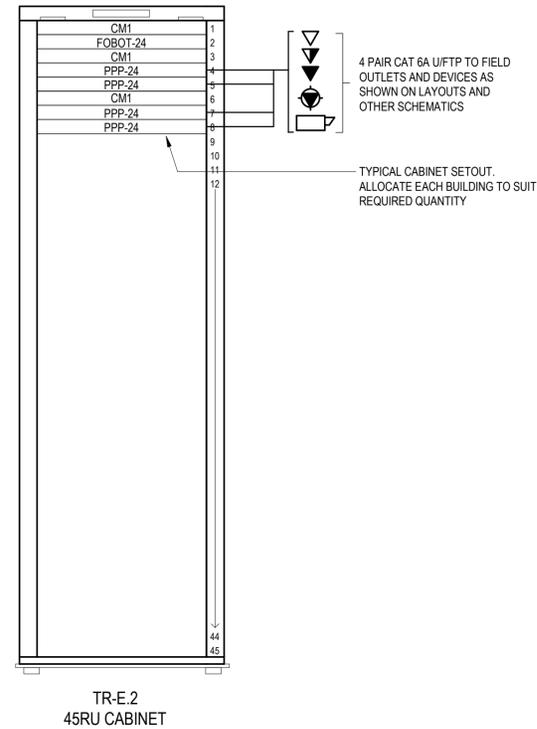
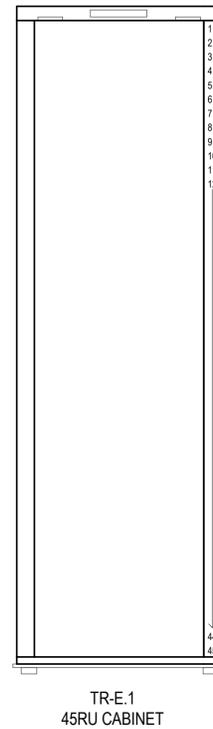
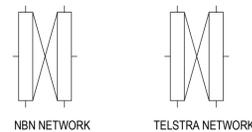
SCALE: NTS

NOTES:

- PROVIDE HORIZONTAL CABLING AND PLUG TO EACH ANCILLARY IP DEVICE (E.G. CCTV CAMERA) TESTED AND CERTIFIED UNDER THE STRUCTURED CABLING INSTALLATION. COORDINATE FINAL LOCATION AND REQUIREMENTS WITH EACH SPECIFIC SERVICE. ALLOW TO LEAVE 2m CABLE COIL AT EACH LOCATION WITHIN CEILING SPACE.

LEGEND

- | | |
|--|---|
| | 1RU CABLE MANAGEMENT |
| | 2RU CABLE MANAGEMENT |
| | ACTIVE VOICE (PPP-24) |
| | 24 PORT PASSIVE PATCH PANEL |
| | 48 PORT HD ANGLED PASSIVE PATCH PANEL |
| | 24 PORT FIBRE OPTIC BREAKOUT TRAY |
| | 48 PORT HD ANGLED FIBRE OPTIC BREAKOUT TRAY |
| | INTER RACK TIE (PPP-24) |
| | VOICE DISCONNECT MODULES |
| | NETWORK SWITCH AS SPECIFIED ON SCHEMATICS |
| | NETWORK SWITCH BY CLIENT |
| | PERFORATED EQUIPMENT SHELF |
-
- | | |
|--|--|
| | CCTV MANAGEMENT EQUIPMENT |
| | SPACE FOR EQUIPMENT AS INDICATED |
| | <ul style="list-style-type: none"> 3kVA RACK MOUNTED UPS INTERNAL BYPASS EXPANDABLE CAPACITY OR SUITABLE FOR PARALLEL OPERATION EXPANDABLE BATTERY CAPACITY (50%) MIN. 15min RUNTIME AT 80% LOAD INPUT VIA 15A PLUG/SOCKET OUTPUT TO POWER RAILS WITHIN CABINET (2x10A RATED) |



REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
NOT FOR CONSTRUCTION

SCALE @ A1
NOT TO SCALE

CLIENT

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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEES, NSW 2850

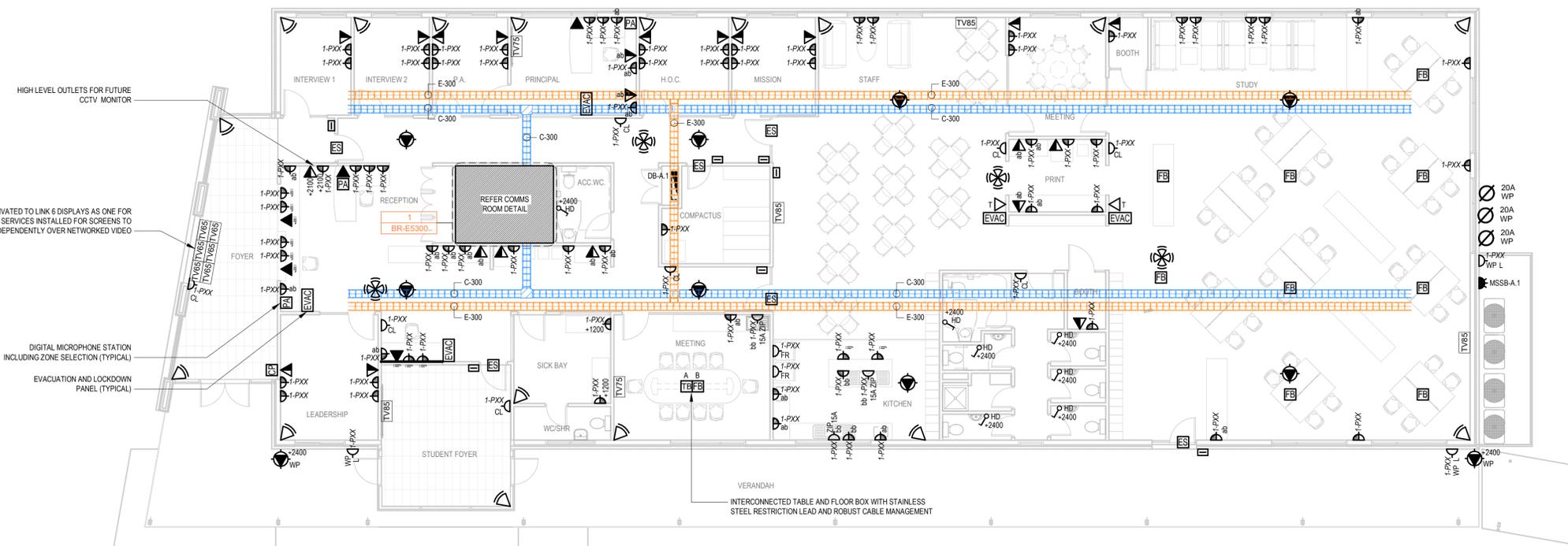
DRAWING TITLE
SITE_BR-E5454_DETAIL SHEET 5

PROJECT No. 19-000307	DRAWING No. BR-E5454	REVISION B
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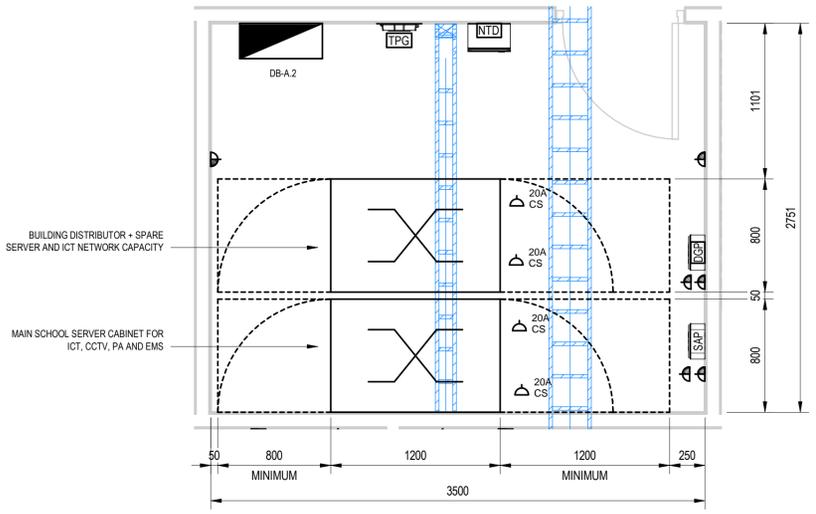
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A1



BLOCK A - GROUND LEVEL POWER
SCALE: 1 : 100

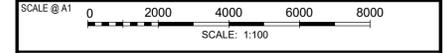


BLOCK A - COMMS ROOM LAYOUT
SCALE: 1 : 25

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS

PRELIMINARY
NOT FOR CONSTRUCTION



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CATHOLIC EDUCATION **TSA** MANAGEMENT
DIOCESE OF BATHURST

ARCHITECT

ALLEANZA ARCHITECTURE

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PROJECT

ST MATTHEW'S CATHOLIC SCHOOL

CORNER OF BROADHEAD & BRUCE RD
MUDGEES, NSW 2850

DRAWING TITLE

BLOCK A_BR-E5300_POWER, COMMS & SECURITY LAYOUT

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5300	B



REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS

PRELIMINARY
NOT FOR CONSTRUCTION



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PROJECT

ST MATTHEW'S CATHOLIC SCHOOL

CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

DRAWING TITLE

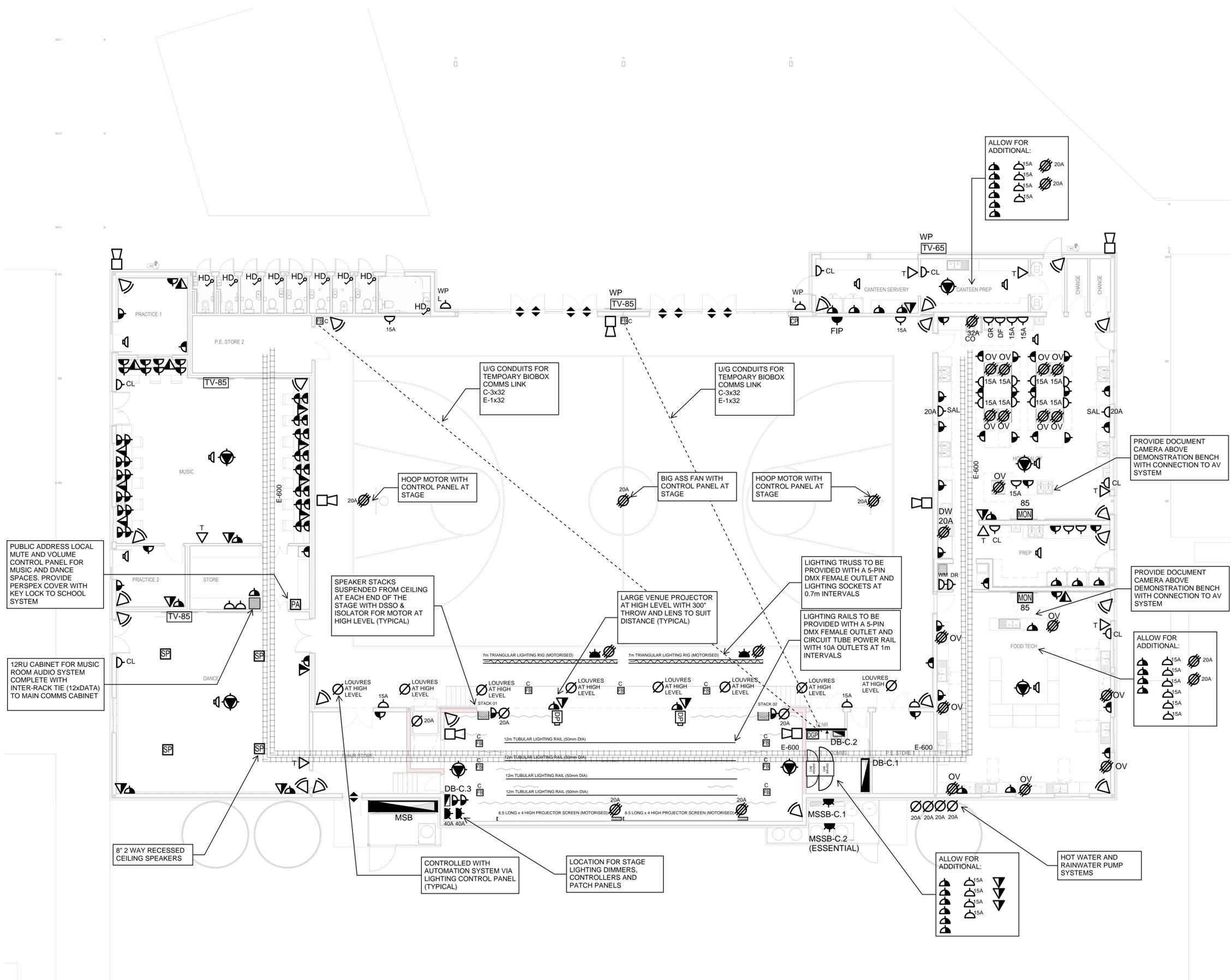
BLOCK A_BR-E5400_LIGHTING LAYOUT

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5400	B

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A1



PUBLIC ADDRESS LOCAL MUTE AND VOLUME CONTROL PANEL FOR MUSIC AND DANCE SPACES. PROVIDE PERSPEX COVER WITH KEY LOCK TO SCHOOL SYSTEM

12RU CABINET FOR MUSIC ROOM AUDIO SYSTEM COMPLETE WITH INTER-RACK TIE (12xDATA) TO MAIN COMMS CABINET

8" 2 WAY RECESSED CEILING SPEAKERS

SPEAKER STACKS SUSPENDED FROM CEILING AT EACH END OF THE STAGE WITH DSSO & ISOLATOR FOR MOTOR AT HIGH LEVEL (TYPICAL)

CONTROLLED WITH AUTOMATION SYSTEM VIA LIGHTING CONTROL PANEL (TYPICAL)

LOCATION FOR STAGE LIGHTING DIMMERS, CONTROLLERS AND PATCH PANELS

HOOP MOTOR WITH CONTROL PANEL AT STAGE

BIG ASS FAN WITH CONTROL PANEL AT STAGE

HOOP MOTOR WITH CONTROL PANEL AT STAGE

LARGE VENUE PROJECTOR AT HIGH LEVEL WITH 300" THROW AND LENS TO SUIT DISTANCE (TYPICAL)

LIGHTING TRUSS TO BE PROVIDED WITH A 5-PIN DMX FEMALE OUTLET AND LIGHTING SOCKETS AT 0.7m INTERVALS

LIGHTING RAILS TO BE PROVIDED WITH A 5-PIN DMX FEMALE OUTLET AND CIRCUIT TUBE POWER RAIL WITH 10A OUTLETS AT 1m INTERVALS

U/G CONDUITS FOR TEMPORARY BIOBOX COMMS LINK C-3x32 E-1x32

U/G CONDUITS FOR TEMPORARY BIOBOX COMMS LINK C-3x32 E-1x32

ALLOW FOR ADDITIONAL:
 15A 20A
 15A 20A
 15A 20A

PROVIDE DOCUMENT CAMERA ABOVE DEMONSTRATION BENCH WITH CONNECTION TO AV SYSTEM

PROVIDE DOCUMENT CAMERA ABOVE DEMONSTRATION BENCH WITH CONNECTION TO AV SYSTEM

ALLOW FOR ADDITIONAL:
 15A 20A
 15A 20A
 15A 20A

ALLOW FOR ADDITIONAL:
 15A 20A
 15A 20A
 15A 20A

HOT WATER AND RAINWATER PUMP SYSTEMS

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION

SCALE @ A1
 0 2000 4000 6000 8000
 SCALE: 1:100

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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
 CORNER OF BROADHEAD & BRUCE RD
 MUDGEE, NSW 2850
A

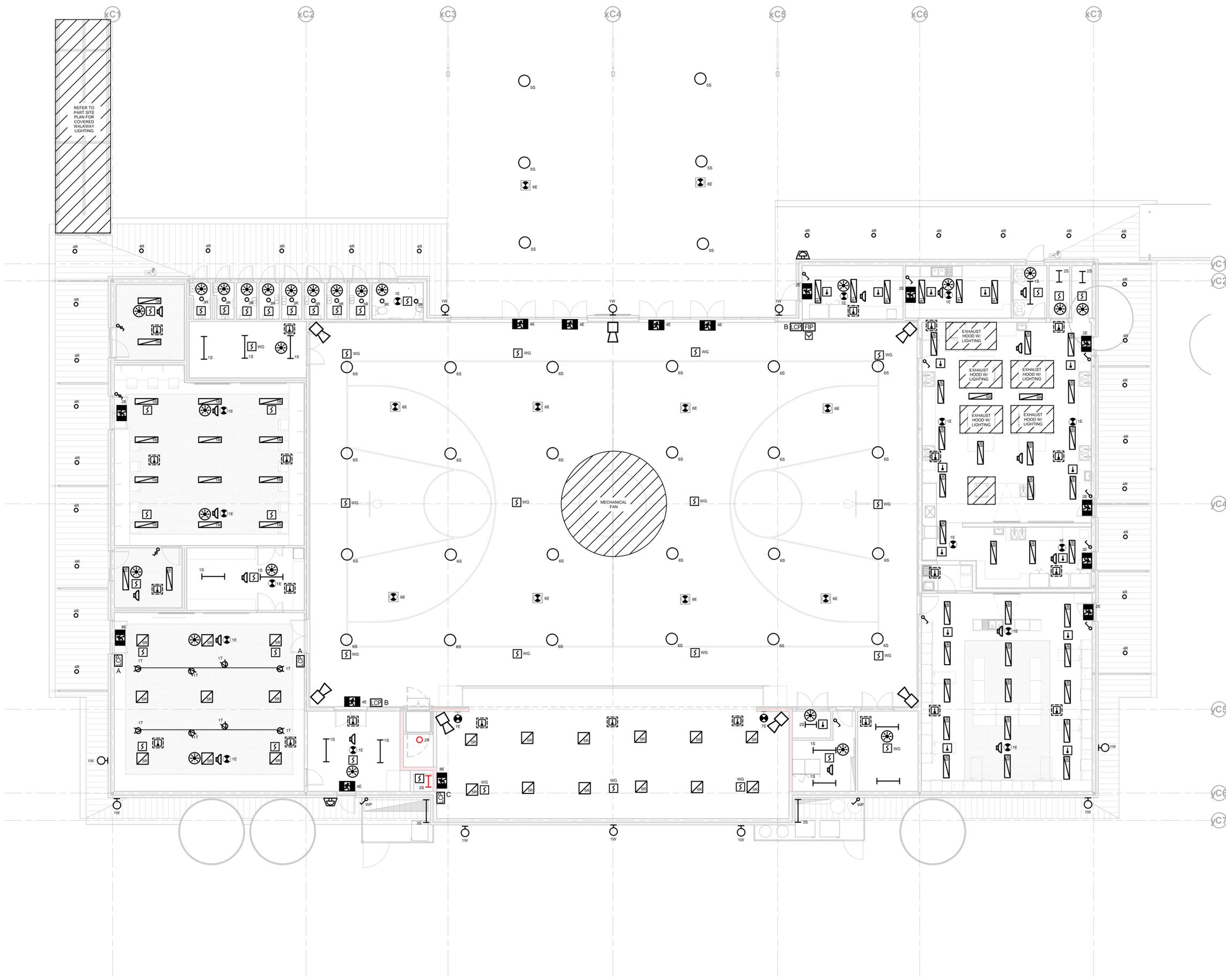
DRAWING TITLE
BLOCK C_BR-E5302_POWER, COMMS & SECURITY LAYOUT

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5302	B

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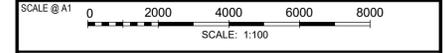
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A1



REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION



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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

DRAWING TITLE
BLOCK C_BR-E5402_LIGHTING LAYOUT

PROJECT No. 19-000307	DRAWING No. BR-E5402	REVISION B
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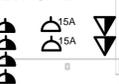
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A1

PROVIDE DOCUMENT CAMERA ABOVE DEMONSTRATION BENCH WITH CONNECTION TO AV SYSTEM

PROVIDE DOCUMENT CAMERA ABOVE DEMONSTRATION BENCH WITH CONNECTION TO AV SYSTEM

MULTIVIEW ACTIVATED TO LINK 4 DISPLAYS AS ONE FOR COLLABORATIVE LEARNING

ALLOW FOR ADDITIONAL:


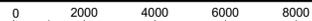
TEACHER KEY LOCKOUT SWITCH AND EMERGENCY POWER OFF MUSHROOM BUTTON TO DROP OUT ROOM CHASSIS OR CIRCUIT VIA CONTACTORS IN THE SWITCHBOARD (TYPICAL)

CHAIN SUSPENDED PENDANT OUTLETS WITH LENGTH TO 1000AFL AND RIDIG HOOKS TO STOW AT 2100AFL (TYPICAL)



REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION

SCALE @ A1

 SCALE: 1:100

CLIENT



ARCHITECT

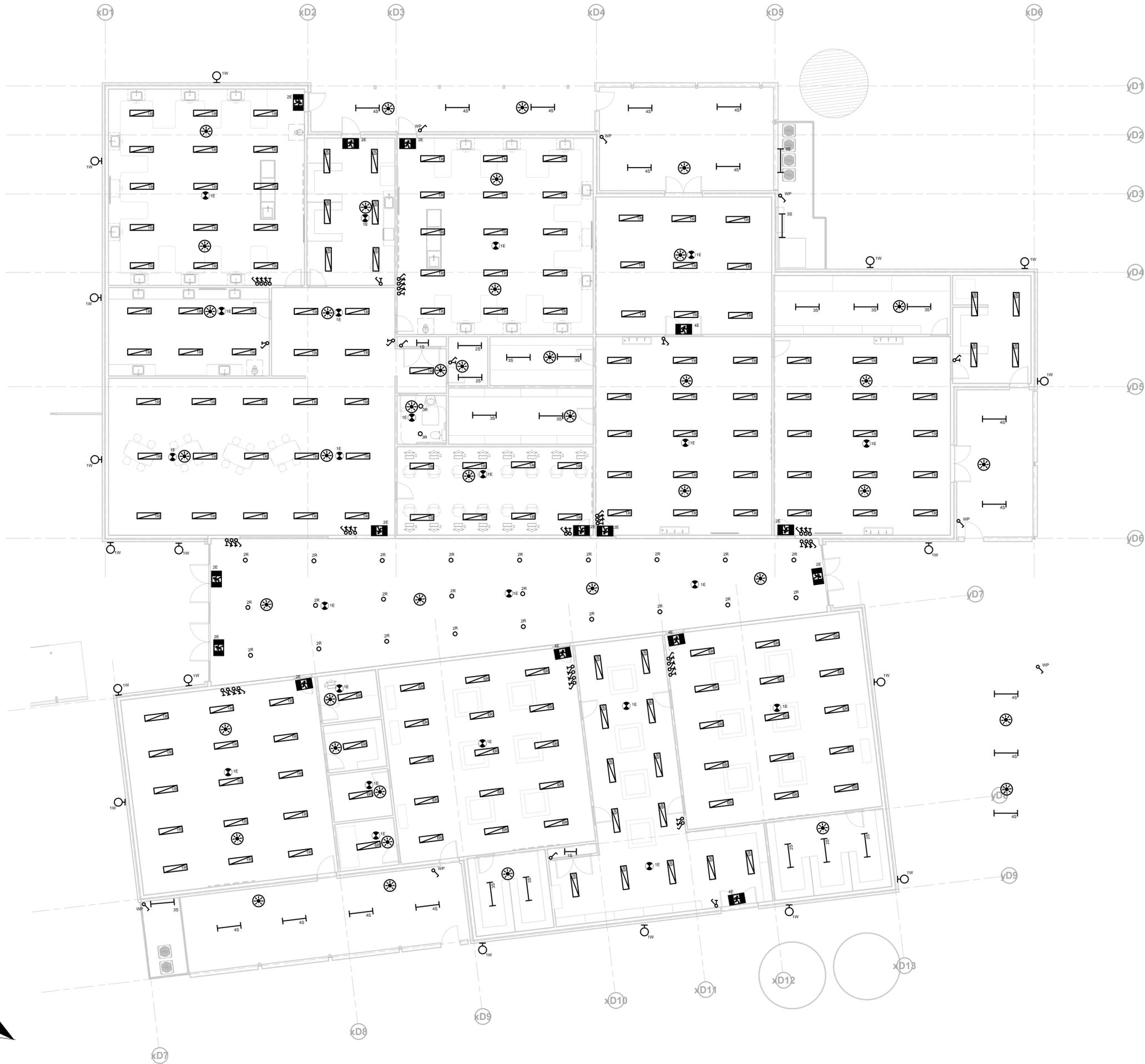



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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
 CORNER OF BROADHEAD & BRUCE RD
 MUDGEE, NSW 2850

DRAWING TITLE
BLOCK D_BR-E5303_POWER, COMMS & SECURITY LAYOUT

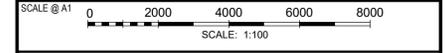
PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5303	B



REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS

PRELIMINARY
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CATHOLIC EDUCATION
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PROJECT

ST MATTHEW'S CATHOLIC SCHOOL

**CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850**

DRAWING TITLE

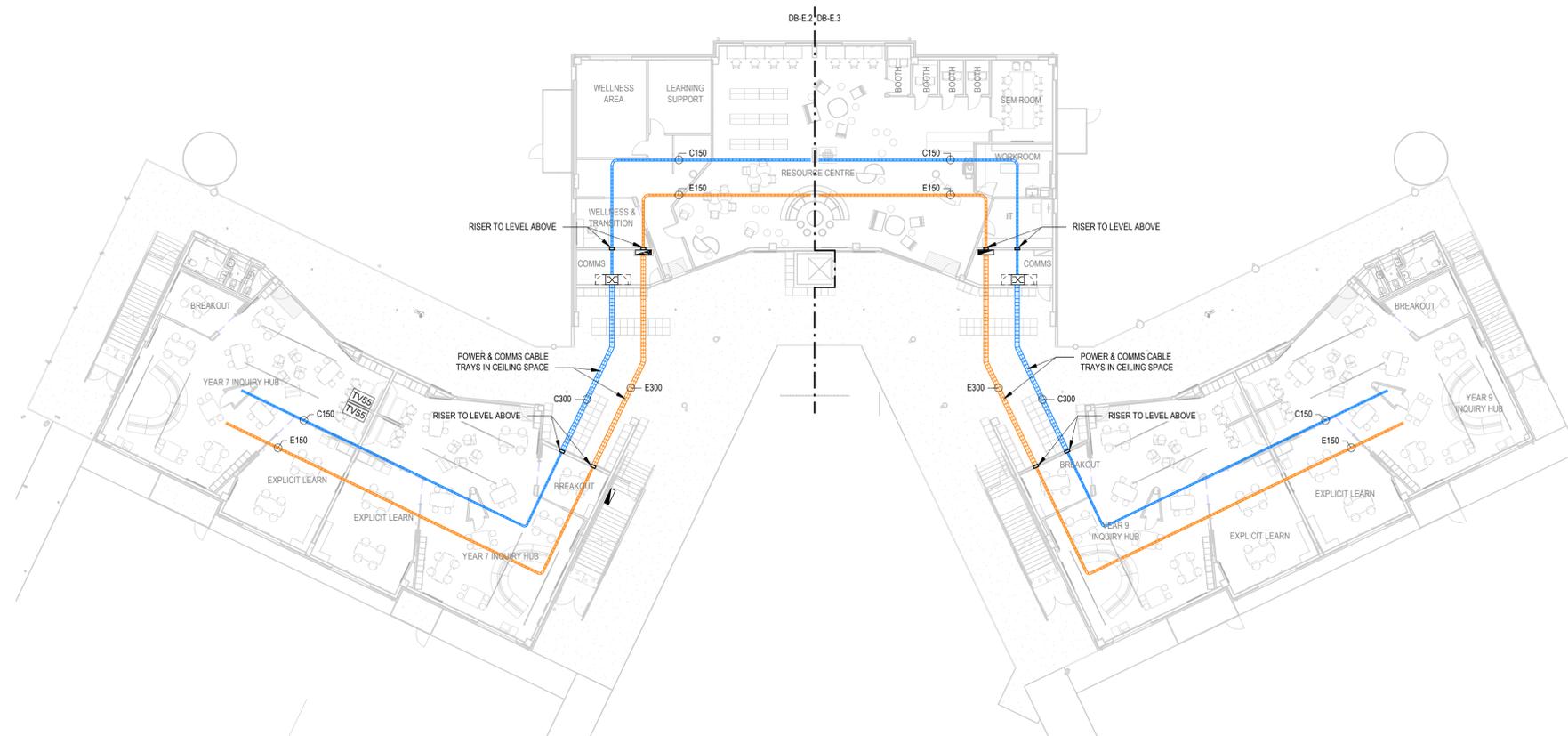
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PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5403	B

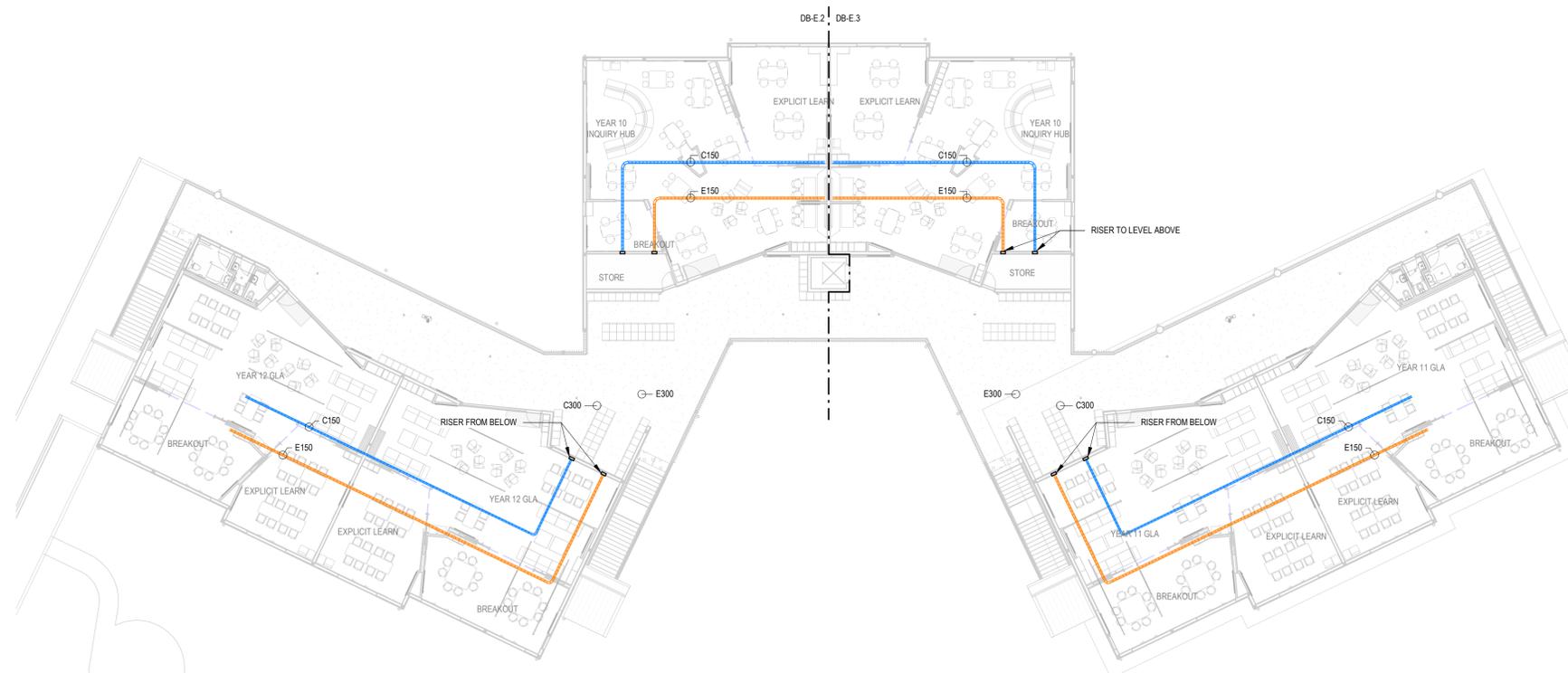
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28/02/2020 11:27:25 AM

A1



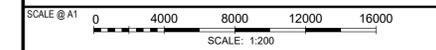
BLOCK E - GROUND LEVEL OVERALL POWER



BLOCK E - LEVEL 1 OVERALL POWER

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION



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ARCHITECT

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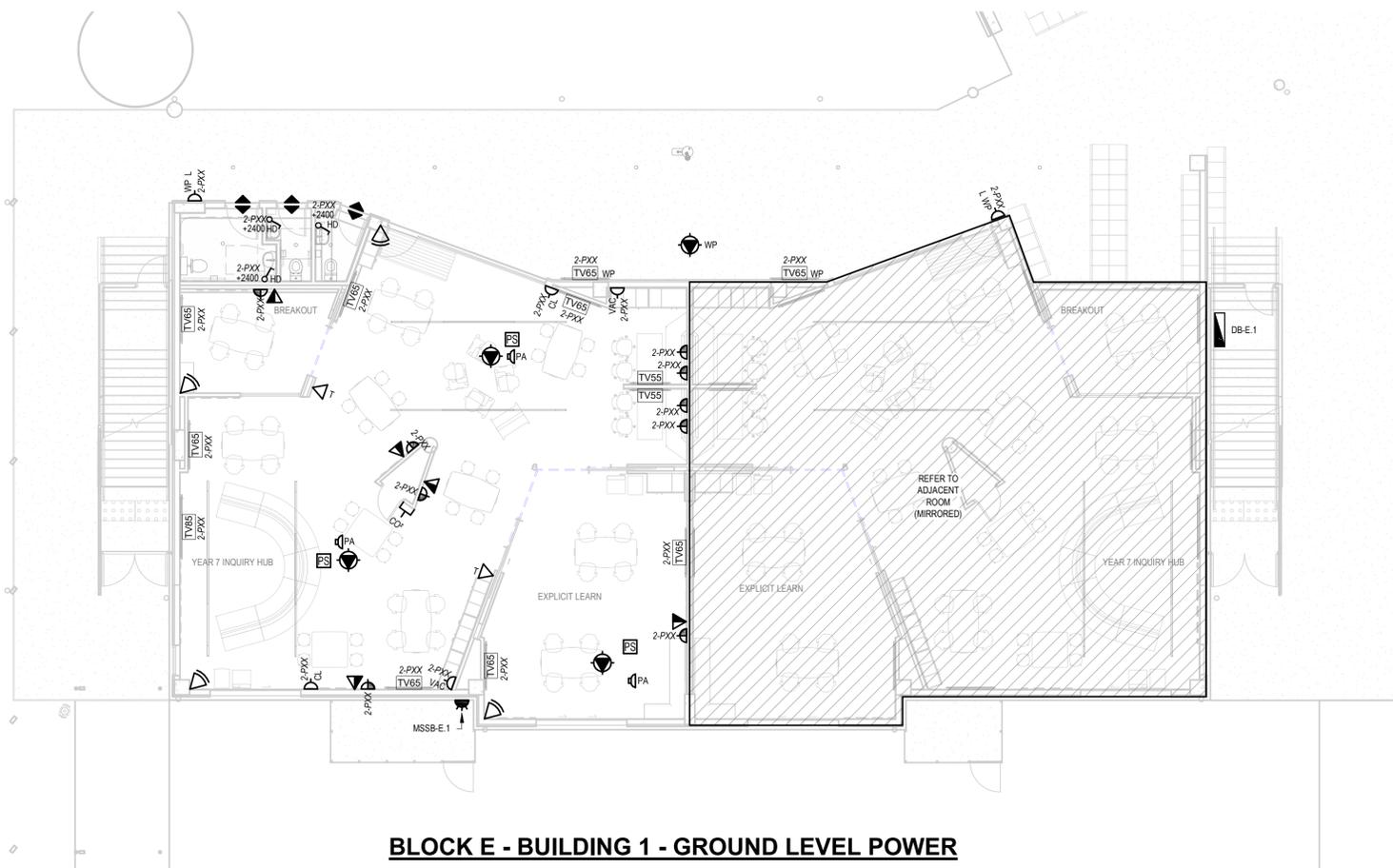
PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

DRAWING TITLE
BLOCK E_BR-E5304_OVERALL POWER,
COMMS & SECURITY LAYOUT

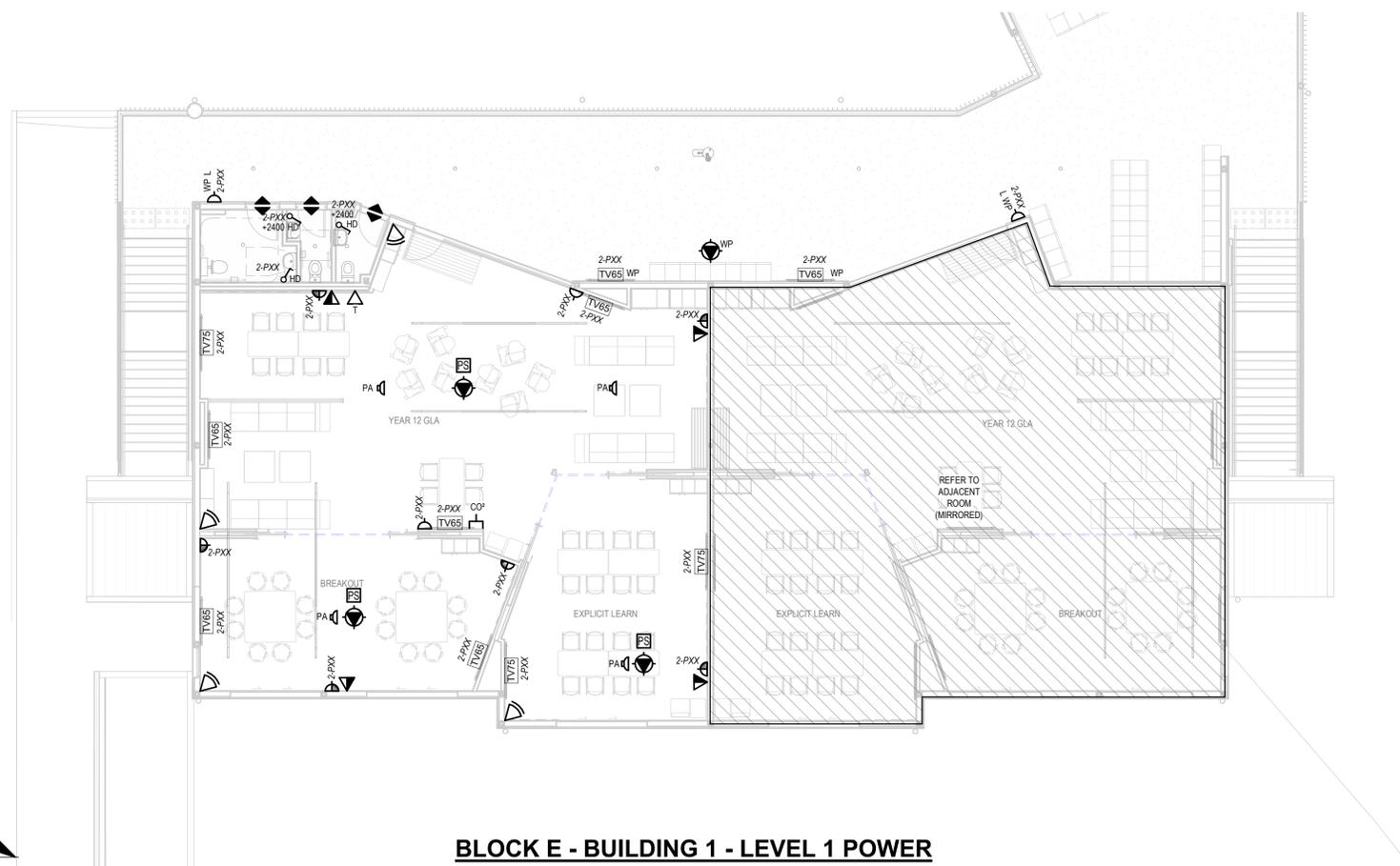
PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5304	B

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BLOCK E - BUILDING 1 - GROUND LEVEL POWER

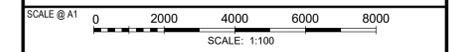


BLOCK E - BUILDING 1 - LEVEL 1 POWER

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS

PRELIMINARY
NOT FOR CONSTRUCTION



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MANAGEMENT

ARCHITECT

ALLEANZA
ARCHITECTURE

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PROJECT

ST MATTHEW'S CATHOLIC SCHOOL

**CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850**

DRAWING TITLE

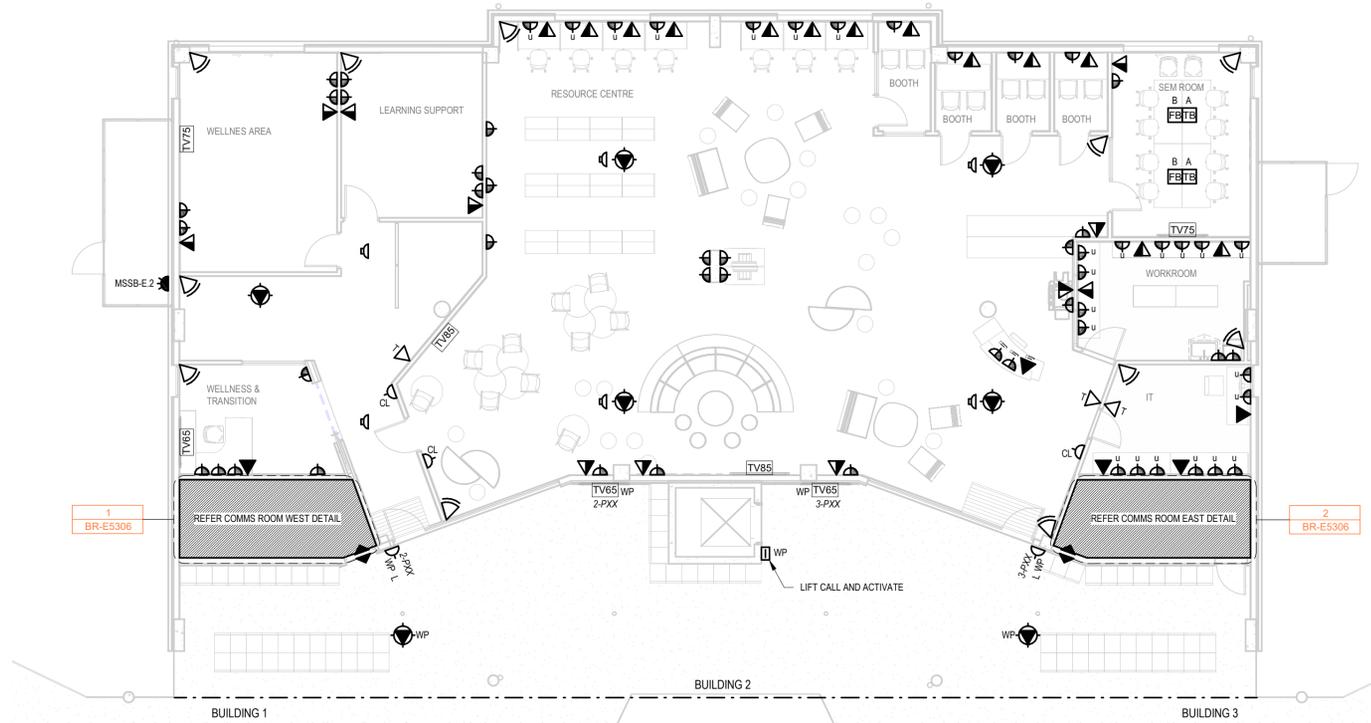
**BLOCK E_BR-E5305_BUILDING 1 POWER,
COMMS & SECURITY LAYOUT**

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5305	B

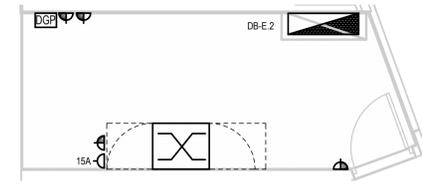
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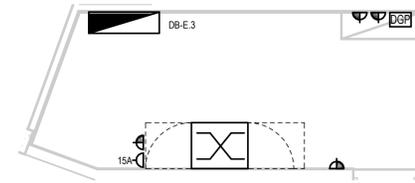


BLOCK E - BUILDING 2 - GROUND LEVEL POWER



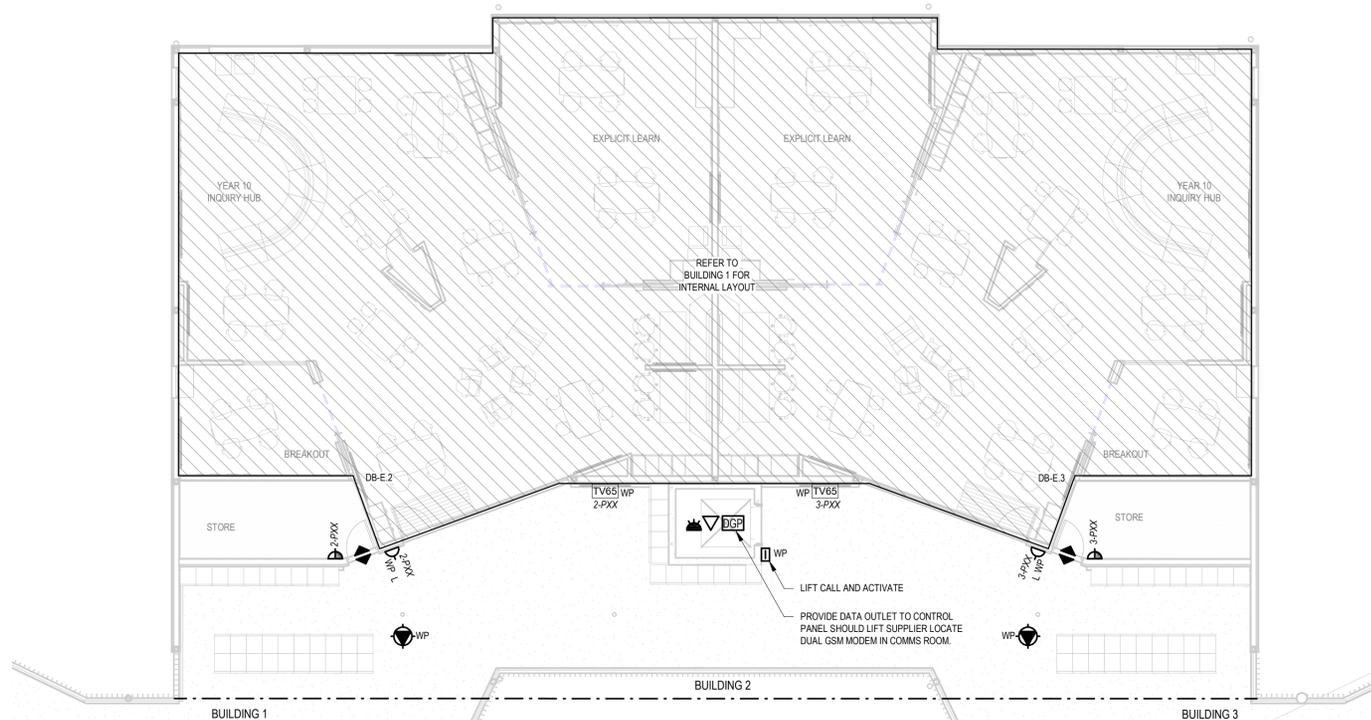
BLOCK E COMMS ROOM WEST

SCALE: 1:50



BLOCK E COMMS ROOM EAST

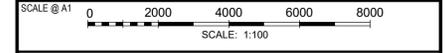
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BLOCK E - BUILDING 2 - LEVEL 1 POWER

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
NOT FOR CONSTRUCTION



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ARCHITECT

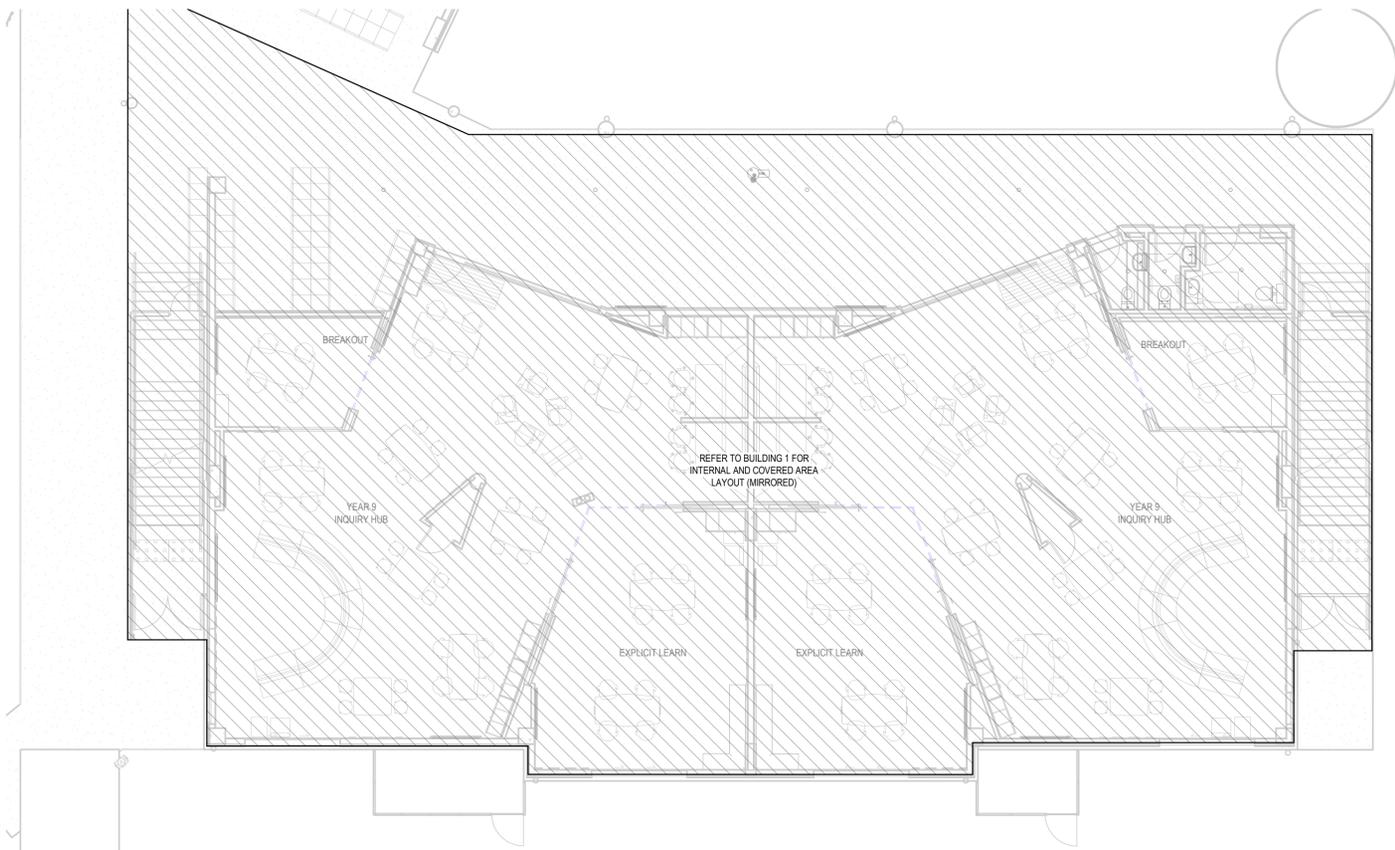
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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEES, NSW 2850

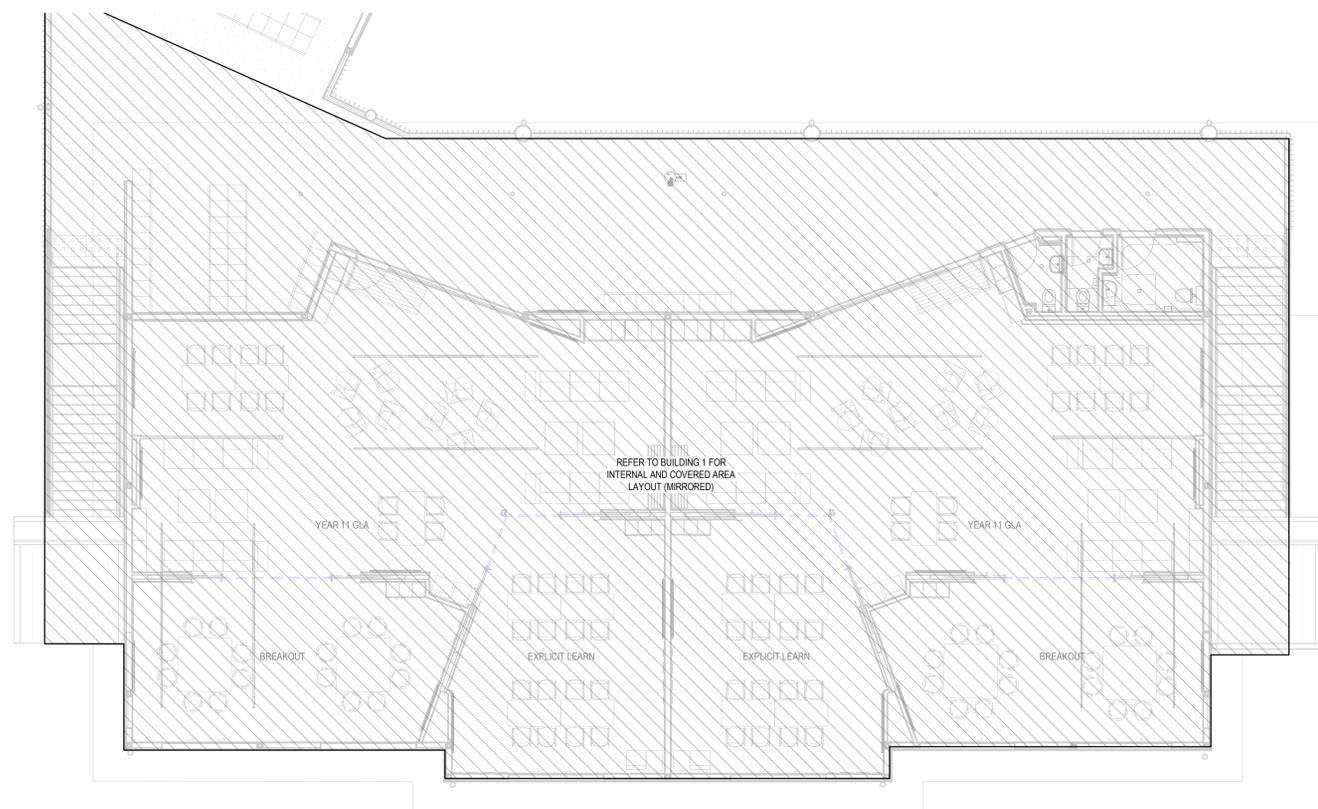
DRAWING TITLE
BLOCK E_BR-E5306_BUILDING 2 POWER,
COMMS & SECURITY LAYOUT

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5306	B

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BLOCK E - BUILDING 3 - GROUND LEVEL POWER



BLOCK E - BUILDING 3 - LEVEL 1 POWER

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS

PRELIMINARY
NOT FOR CONSTRUCTION

SCALE @ A1 0 2000 4000 6000 8000
SCALE: 1:100

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PROJECT

ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEEO, NSW 2850

DRAWING TITLE

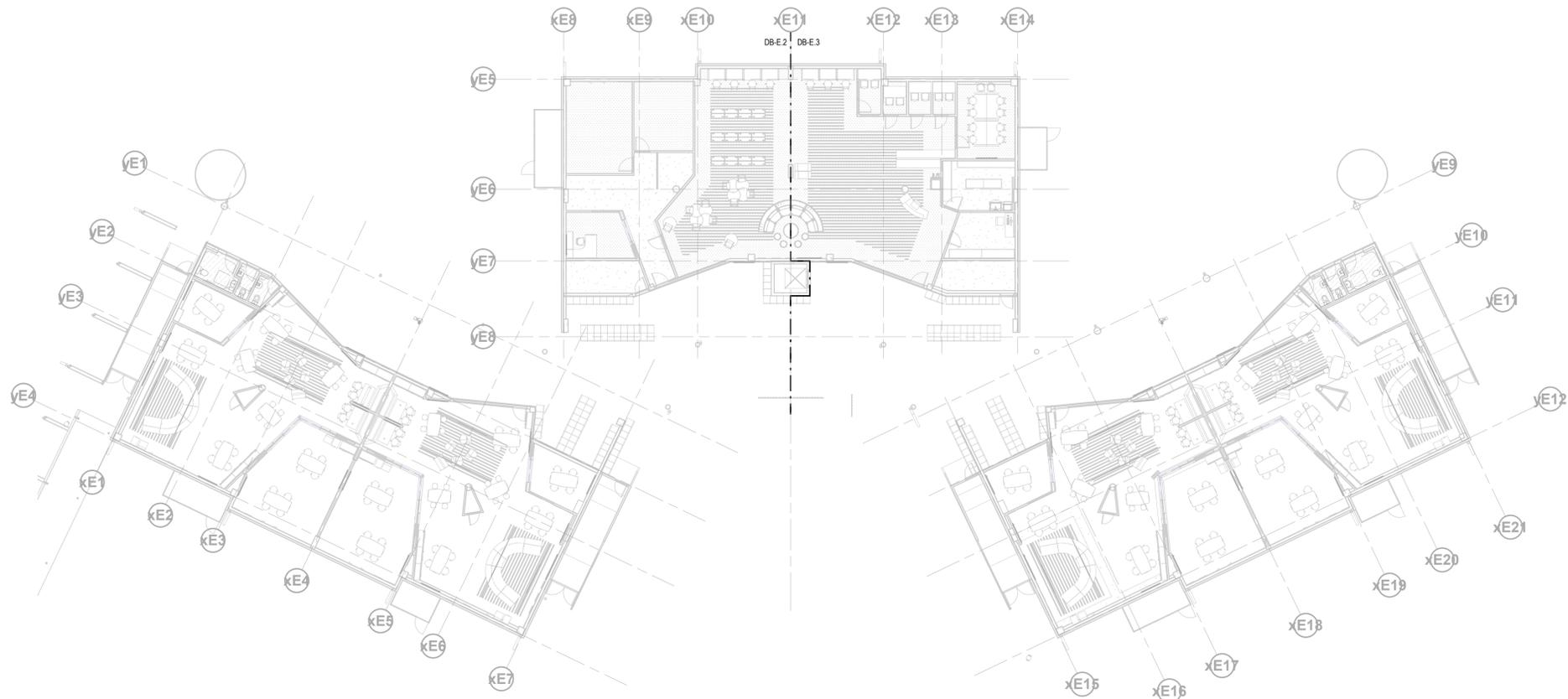
BLOCK E_BR-E5307_BUILDING 3 POWER,
COMMS & SECURITY LAYOUT

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5307	B

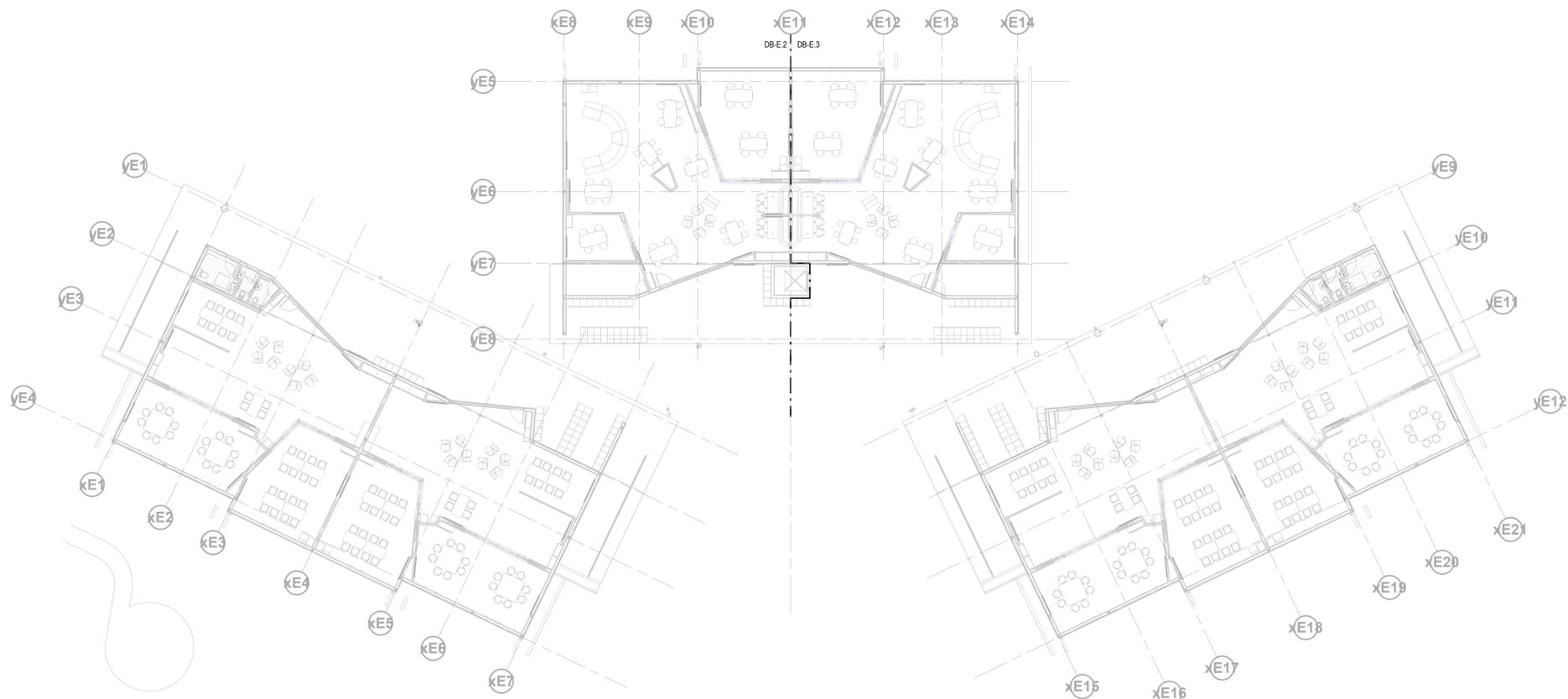
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28/02/2020 11:27:09 AM

A1



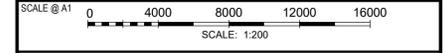
BLOCK E - OVERALL RCP - GROUND



BLOCK E - OVERALL RCP - LEVEL 1

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION



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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

DRAWING TITLE
BLOCK E_BR-E5404_OVERALL LIGHTING
LAYOUT

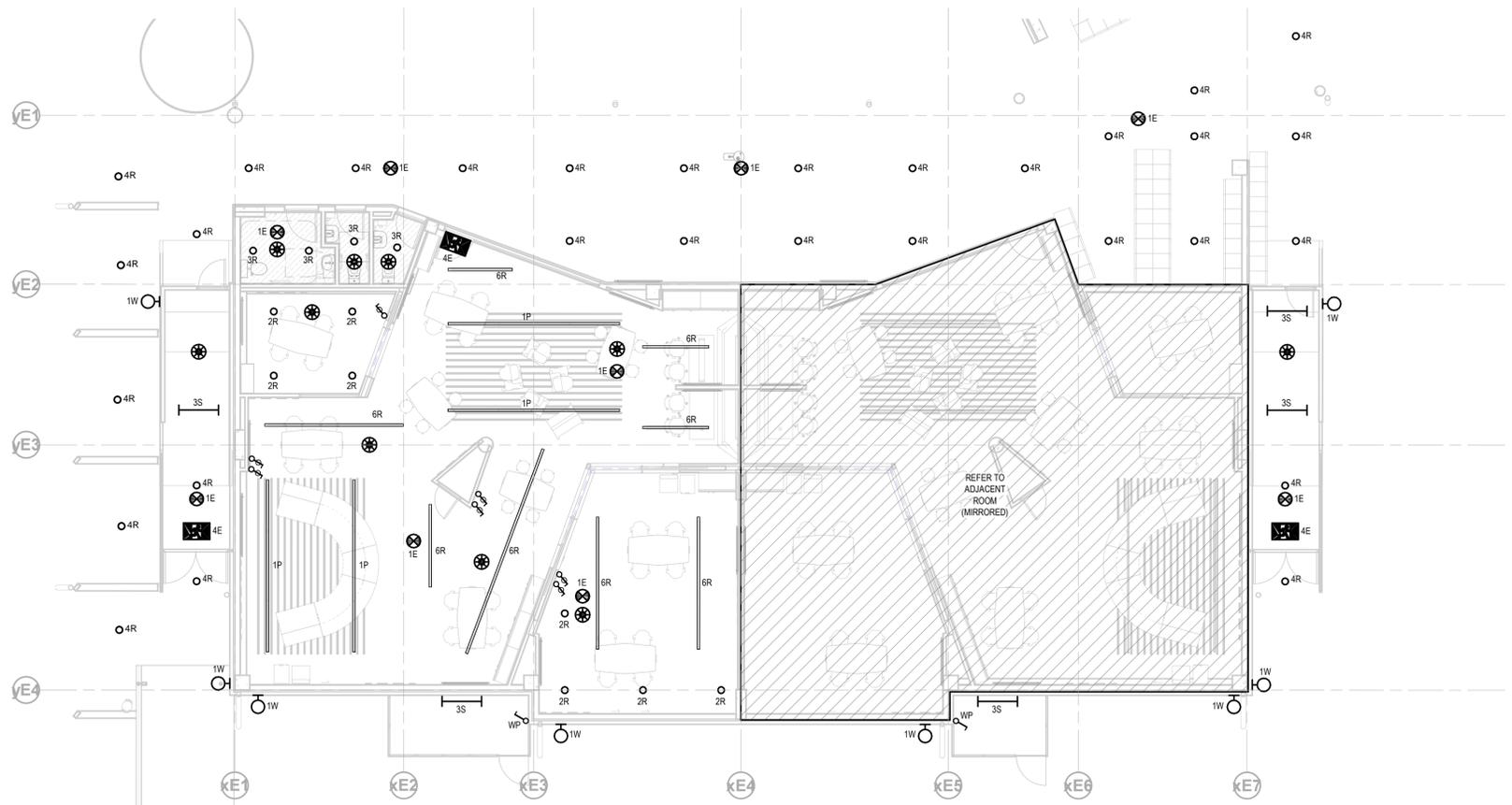
PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5404	B

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A1





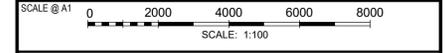
BLOCK E - BUILDING 1 RCP - GROUND



BLOCK E - BUILDING 1 RCP - LEVEL 1

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION



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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

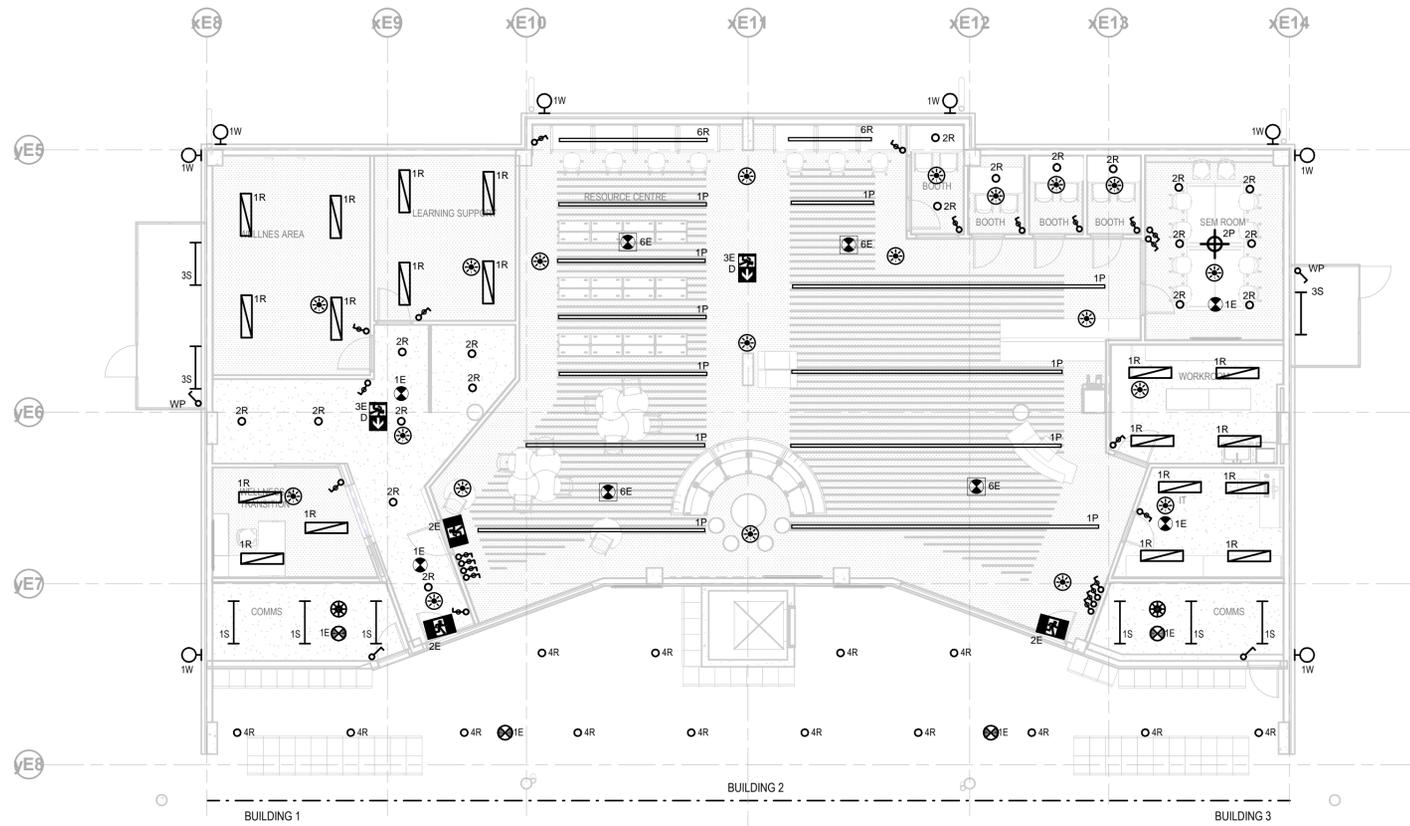
DRAWING TITLE
BLOCK E_BR-E5405_BUILDING 1 LIGHTING LAYOUT

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5405	B

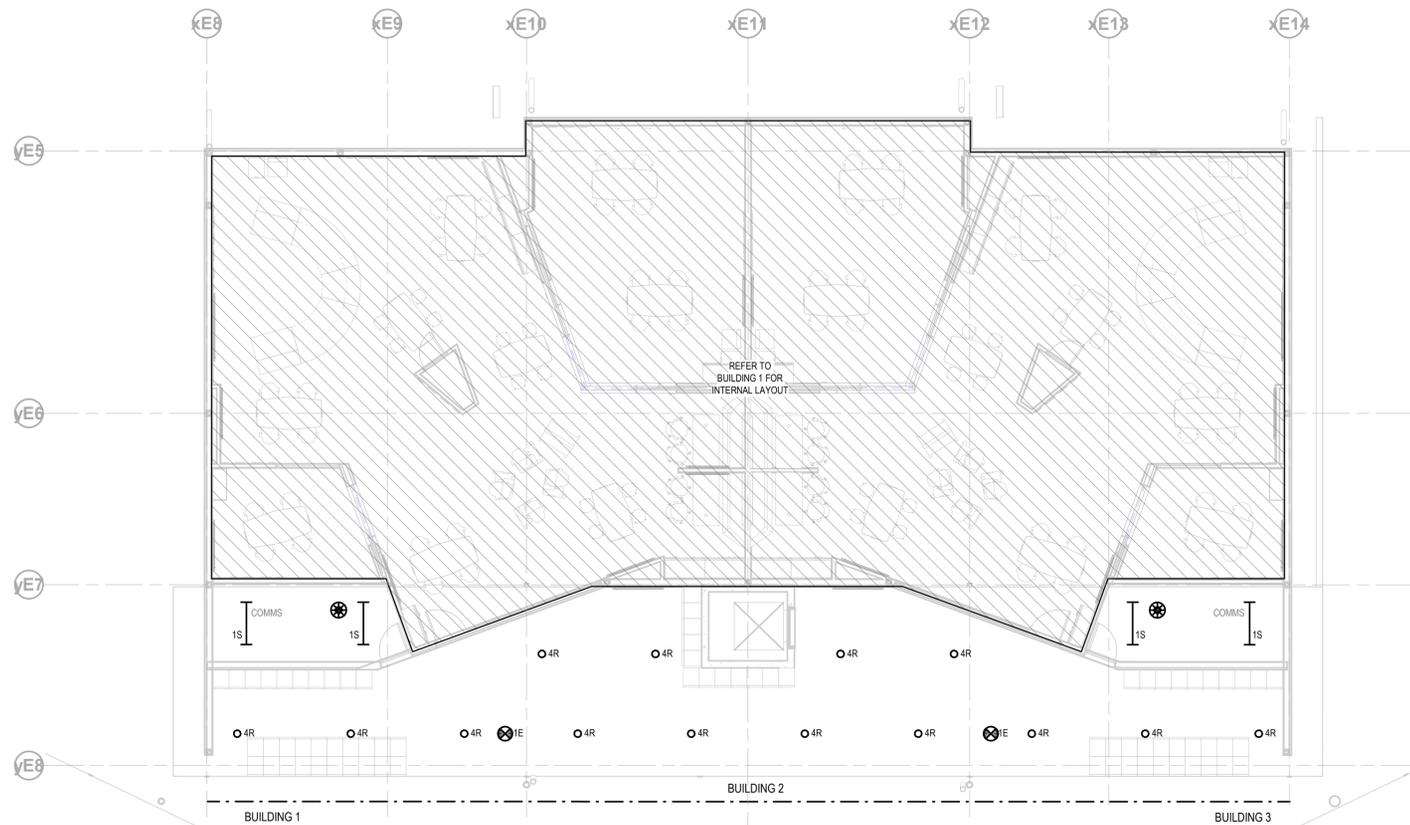
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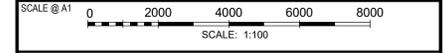
BLOCK E - BUILDING 2 RCP - GROUND



BLOCK E - BUILDING 2 RCP - LEVEL 1

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION



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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

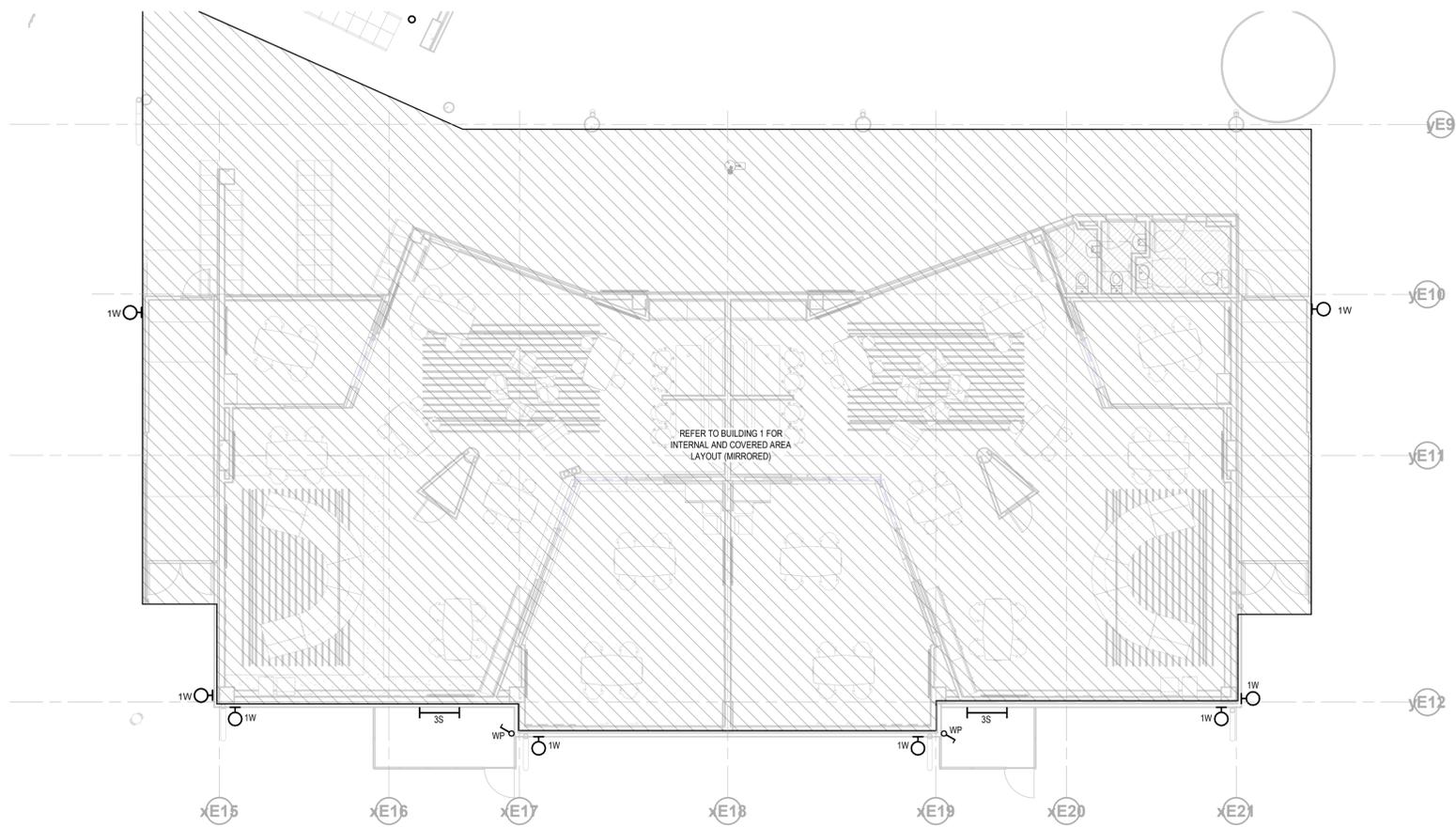
DRAWING TITLE
BLOCK E_BR-E5406_BUILDING 2 LIGHTING LAYOUT

PROJECT No.	DRAWING No.	REVISION
19-000307	BR-E5406	B

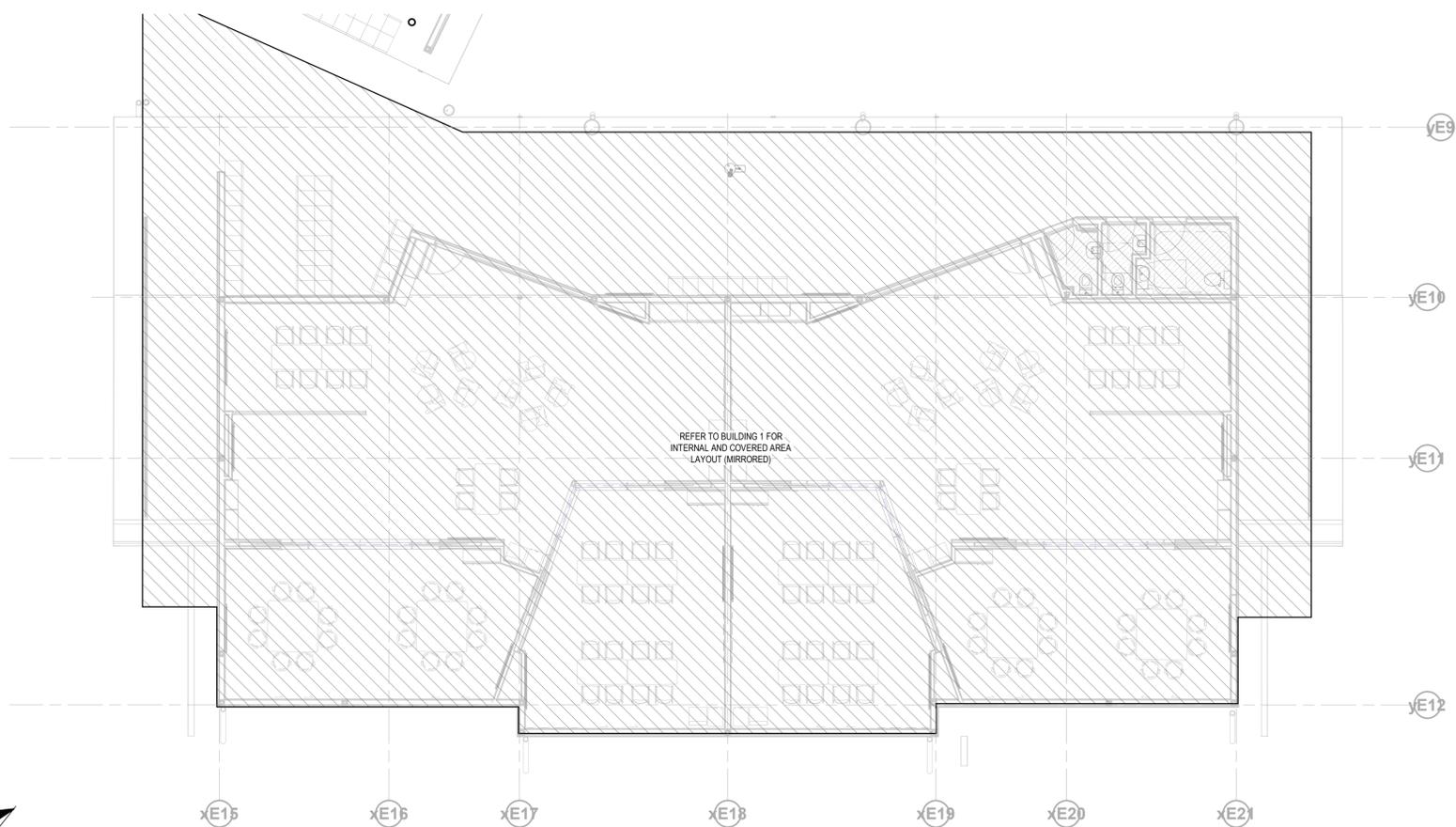
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28/02/2020 11:27:44 AM

A1



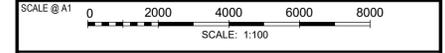
BLOCK E - BUILDING 3 RCP - GROUND



BLOCK E - BUILDING 3 RCP - LEVEL 1

REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	15.11.19	60% DESIGN ISSUE	JW	JC	JW
B	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION



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PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
CORNER OF BROADHEAD & BRUCE RD
MUDGEE, NSW 2850

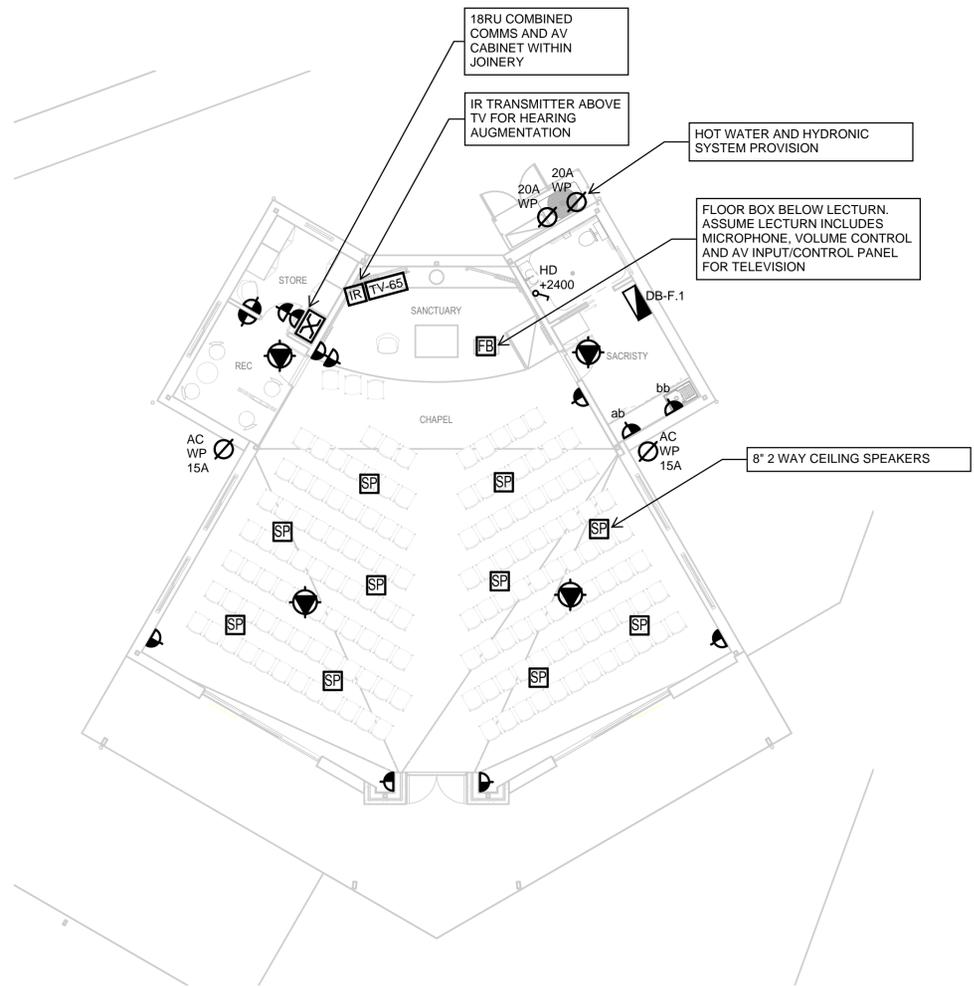
DRAWING TITLE
BLOCK E_BR-E5407_BUILDING 3 LIGHTING LAYOUT

PROJECT No. 19-000307	DRAWING No. BR-E5407	REVISION B
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28/02/2020 11:27:49 AM

A1



REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION

SCALE @ A1
 NOT TO SCALE

CLIENT

ARCHITECT

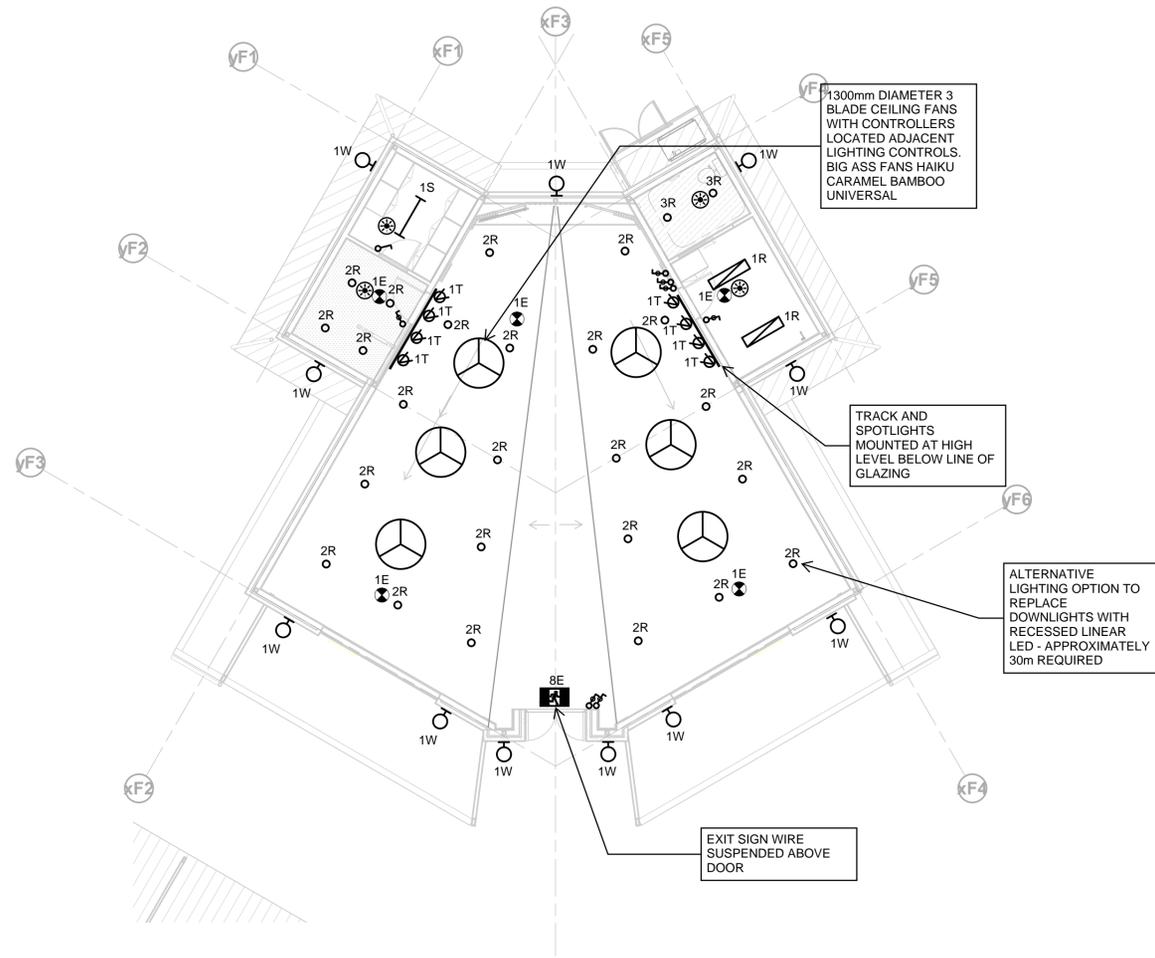
PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
 CORNER OF BROADHEAD & BRUCE RD
 MUDGEE, NSW 2850

DRAWING TITLE
BLOCK F_BR-E5308_ POWER, COMMS & SECURITY LAYOUT

PROJECT No. 19-000307	DRAWING No. BR-E5308	REVISION A
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REV	DATE	ISSUE DETAILS	DSN	DRW	CHK
A	28.02.20	60% ISSUE CP2A	JW	JC	JW

STATUS
PRELIMINARY
 NOT FOR CONSTRUCTION

SCALE @ A1
 NOT TO SCALE

CLIENT

ARCHITECT

PROJECT
ST MATTHEW'S CATHOLIC SCHOOL
 CORNER OF BROADHEAD & BRUCE RD
 MUDGEE, NSW 2850

DRAWING TITLE
BLOCK F_BR-E5408_LIGHTING LAYOUT

PROJECT No. 19-000307	DRAWING No. BR-E5408	REVISION A
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