



ELECTRICAL DESIGN GROUP

ELECTRICAL BUILDING SERVICES CONSULTANTS

P.O. Box 15, SHERWOOD Q. 4075

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C2717a - KINGS CHRISTIAN COLLEGE - REEDY CREEK - GLAS & STUDENT SERVICES KCC49

C2717a-0001(H).xls

ELECTRICAL SERVICES CONTRACT DOCUMENT SCHEDULE

REVISION H - 24 MARCH 2025

ISSUING INFORMATION				DATE OF ISSUE							
	DAY	09	22	29	24	29	17	07	24		
	MONTH	07	07	07	09	11	11	02	03		
	YEAR	24	24	24	24	24	25	25	25		
REASON FOR ISSUE				P	P	T	C	C	A	C	C
A = APPROVAL C = CONSTRUCTION N = COORDINATION				P = PRELIMINARY T = TENDER							

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DOCUMENTS	REVISION	A	B	C	D	E	F	G	H
C2717a-E01.dwg	LEGEND & DETAILS	A	B	C	D				E
C2717a-E02.dwg	NOTES	A	B	C	D				
C2717a-E03.dwg	EXISTING SITE PLAN	A	B	C	D				
C2717a-E04.dwg	EXISTING PART SITE PLAN	A	B	C	D				
C2717a-E05.dwg	PROPOSED PART SITE PLAN	A	B	C	D				
C2717a-E06.dwg	GROUND LEVEL FLOOR PLAN	A	B	C	D				
C2717a-E07.dwg	GROUND LEVEL REFLECTED CEILING PLAN	A	B	C	D				
C2717a-E08.dwg	GROUND LEVEL TUCKSHOP FLOOR PLAN	A	B	C	D			E	
C2717a-E09.dwg	LEVEL 1 FLOOR PLAN	A	B	C	D				
C2717a-E10.dwg	LEVEL 1 REFLECTED CEILING PLAN	A	B	C	D				E
C2717a-E11.dwg	LEVEL 2 FLOOR & REFLECTED CEILING PLANS	A	B	C	D				E
C2717a-E12.dwg	ROOF LEVEL PLAN	A	B	C	D				
C2717a-E13.dwg	POWER SCHEMATICS	A	B	C	D				
C2717a-E14.dwg	EXISTING OVAL CONDUIT & CABLING WORKS		A	B	C	D			
C2717a-E15.dwg	ENERGEX SUBSTATION LOCATION PLAN		A	B	C	D	E		
C2717a-E16.dwg	ENERGEX SUBSTATION PLAN		A	B	C	D	E		
C2717a-E17.dwg	ENERGEX SUBSTATION STANDARD DETAILS		A	B	C		E		
C2717a-E18.dwg	ENERGEX SUBSTATION STANDARD NOTES		A	B	C		E		
C2717a-0001.xls	CONTRACT DOCUMENT SCHEDULE	A	B	C	D	E	F	G	H
C2717a-0002.xls	EQUIPMENT SCHEDULE		A	B					C
C2717a-0008.xls	DISTRIBUTION BOARD DB-MS SCHEDULE		A	B	C				D
C2717a-0009.xls	DISTRIBUTION BOARD DB-DS SCHEDULE		A		B				
C2717a-0010.xls	DISTRIBUTION BOARD DB-TS SCHEDULE		A		B			C	
C2717a-0001.zip	FITTING & OUTLET DATASHEETS			A					



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ELECTRICAL EQUIPMENT SCHEDULE

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THE EQUIPMENT SUPPLIER CONTACT DETAILS MAY BE AVAILABLE ON THE EDG WEBSITE VIA THE FOLLOWING LINK
www.edg.net.au/links.html

TYPE	LAMPS	DESCRIPTION	COLOUR / ACCESSORY	CATALOGUE No	REV
L1	34W 4000K LED	600 X 600 LAY IN FLAT PLATE LED FITTING C/W REMOTE DRIVER MOUNTED IN A FLUSH RECESSED PB MOUNTING KIT	WHITE TRIM	GAMMA ILLUMINATION AXIS 1548-4K-34W C/W FLUSH RECESS PB KIT	A
L2	34W 4000K LED	300 X 1200 LAY IN FLAT PLATE LED FITTING C/W REMOTE DRIVER AND RECESSED PB KIT	WHITE TRIM	GAMMA ILLUMINATION AXIS 1549-4K-34W C/W FLUSH RECESS PB KIT	A
L3	22W 4000K LED	RECESSED 52 DEG BEAM DOWNLIGHT C/W REMOTE DRIVER	WHITE TRIM	GAMMA ILLUMINATION COBALT 1402-4K-22W	A
L4	20W LED 4000K	600 LONG SURFACE MOUNTED IP65 DIFFUSED BATTEN C/W INTEGRAL ELECTRONIC CONTROL GEAR AND PRESENCE DETECTION SENSOR	LIGHT GREY	GAMMA ILLUMINATION STORM 1557-CCT-20W-4K-MS	A
L5	36W LED 4000K	1200 LONG SURFACE MOUNTED IP65 DIFFUSED BATTEN C/W INTEGRAL ELECTRONIC CONTROL GEAR AND PRESENCE DETECTION SENSOR	LIGHT GREY	GAMMA STORM 1558-CCT-36W-MS	A
L6	28W 4000K LED	SURFACE MOUNTED EXTERNAL BUNKER FITTING C/W INTEGRAL DRIVER	BLACK	GAMMA ILLUMINATION 1354-4K-28W	A
L7	26W 4000K LED	600 X 600 LAY IN FLAT PLATE LED FITTING C/W REMOTE DRIVER AND RECESSED PB KIT	WHITE TRIM	GAMMA ILLUMINATION AXIS 1548-4K-26W PB RECESS KIT	A
L8	22W 4000K LED	SURFACE MOUNTED DOWNLIGHT C/W REMOTE DALI DIMMABLE DRIVER	WHITE	GAMMA ILLUMINATION 1326 TONDO-162 1326-4K-22W	B
L9	8W 4000K LED	RECESSED 47 DEG BEAM DOWNLIGHT C/W REMOTE DRIVER	WHITE TRIM	GAMMA ILLUMINATION MYLO 1004-WFL-4K-8W	A
L10	22W 4000K LED	RECESSED 52 DEG BEAM DOWNLIGHT C/W REMOTE DRIVER	WHITE TRIM	GAMMA ILLUMINATION COBALT 1402-4K-22W	A



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L11	22W 4000K LED	RECESSED 52 DEG BEAM DOWNLIGHT C/W REMOTE DRIVER	WHITE TRIM	GAMMA ILLUMINATION COBALT 1402-4K-22W	A
L12	34W 4000K LED	600 X 600 LAY IN FLAT PLATE LED FITTING C/W REMOTE DALI DIMMABLE DRIVER MOUNTED IN A FLUSH RECESSED PB MOUNTING KIT	WHITE TRIM	GAMMA ILLUMINATION AXIS 1548-4K-34W DALI C/W FLUSH RECESS PB KIT	A
L13	A SINGLE HORIZONTAL RUN OF LED STRIP LIGHT 4000K WHITE LEDS AT 12MM SPACING WITH REMOTE CONTROL GEAR. MOUNT THE LED STRIP UNDER THE OVERHEAD CUPBOARDS HARD AGAINST THE SPLASHBACK AS PER THE ARCHITECTURAL JOINERY DETAILS THE SUPPLIER IS TO CUT / JOIN THE LED STRIPS TO SUIT THE SITE DIMENSIONS. DO NOT CUT THE LED STRIPS ON SITE SCREW FIX THE ALUMINIUM SUPPORT IN PLACE.			NEON PRODUCTS AUSTRALIA LF-DFB-NW-300-12 + PR-LIN172153-F	A
L14	A SINGLE HORIZONTAL RUN OF LED STRIP LIGHT 4000K WHITE LEDS AT 12MM SPACING WITH REMOTE CONTROL GEAR. MOUNT THE LED STRIP WITHIN THE SEAT SKIRTING RECESS AS PER THE ARCHITECTURAL JOINERY DETAILS THE SUPPLIER IS TO CUT / JOIN THE LED STRIPS TO SUIT THE SITE DIMENSIONS. DO NOT CUT THE LED STRIPS ON SITE SCREW FIX THE ALUMINIUM SUPPORT IN PLACE. ENSURE THE DIFFUSER IS SECURED SUCH THAT IT CAN ONLY BE REMOVED VIA THE USE OF A TOOL. LOCATE THE DRIVER / POWER SUPPLY IN A CONCEALED ACCESSIBLE POSITION.			NEON PRODUCTS AUSTRALIA LF-DFB-NW-300-12 + PR-LIN172153-F	A
L15	20W LED 4000K	600 LONG SURFACE MOUNTED IP65 DIFFUSED BATTEN C/W INTEGRAL ELECTRONIC CONTROL GEAR	LIGHT GREY	GAMMA ILLUMINATION STORM 1557-CCT-20W-4K	A
L16	36W LED 4000K	1200 LONG SURFACE MOUNTED IP65 DIFFUSED BATTEN C/W INTEGRAL ELECTRONIC CONTROL GEAR	LIGHT GREY	EQUAL TO GAMMA STORM 1558-CCT-36W	A
E1	LED	EMERGENCY LIGHT: RECESSED NON-MAINTAINED EMERGENCY LIGHT. AS2293 CLASSIFICATION C0-D40 - C90-D40.	WHITE	STANILITE SF1LEDP	A
E2	LED	EMERGENCY LIGHT: SURFACE MOUNTED NON-MAINTAINED EMERGENCY LIGHT. AS2293 CLASSIFICATION C0-D40 - C90-D40.	WHITE	STANILITE ECOSPITFIREBOX	B
EX	LED	EXIT LIGHT: MAINTAINED 24M VIEWING DISTANCE EXIT LIGHT C/W DIFFUSERS & DIRECTIONAL ARROWS AS SHOWN. CEILING OR WALL MOUNT BETWEEN 2100mm & 2700mm AFFL IF THERE IS NO VERTICAL SURFACE TO MOUNT THE FITTING ON WITHIN THIS RANGE CONFIRM THE MOUNTING HEIGHT WITH THE ENGINEER. AS2293 CLASSIFICATION C0-D8 - C90-E3.2.	WHITE	STANILITE PQFLEDP	A



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EX WP	LED	EXIT LIGHT: MAINTAINED 24M VIEWING DISTANCE EXIT LIGHT C/W DIFFUSERS & DIRECTIONAL ARROWS AS SHOWN. CEILING OR WALL MOUNT BETWEEN 2100mm & 2700mm AFFL IF THERE IS NO VERTICAL SURFACE TO MOUNT THE FITTING ON WITHIN THIS RANGE CONFIRM THE MOUNTING HEIGHT WITH THE ENGINEER. AS2293 CLASSIFICATION C0-D1.25 - C90-c1.25	WHITE	STANILITE PWEXLEDP1	A
EMERGENCY PACK		LIGHT FITTINGS THAT ARE DESIGNATED AS BEING PROVIDED WITH AN EMERGENCY PACK ARE TO BE PROVIDED WITH AN INTEGRAL AS2293 EMERGENCY PACK. THE FITTINGS ARE TO BE NON MAINTAINED WITH ALL LAMPS SWITCHED AS PER THE LIGHTING CONTROL FOR THAT SPACE UNLESS NOTED OTHERWISE. REFER TO THE SPECIFICATION FOR FURTHER DETAILS OF THE CONFIGURATION AND SWITCHING OF EMERGENCY LIGHTS.			A
ONE-WAY LIGHT SWITCH		ONE-WAY LIGHT SWITCH C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND, MOUNTED AT 1000mm AFFL UNLESS NOTED OTHERWISE. "A" INDICATES THE SWITCH IS TO BE PROVIDED AS AN ARCHITRAVE SWITCH MOUNTED ON THE DOORS ALUMINIUM MULLION	WHITE	CLIPSAL C2000 SERIES 30USM	A
TWO-WAY LIGHT SWITCH		TWO-WAY LIGHT SWITCH C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND, MOUNTED AT 1000mm AFFL UNLESS NOTED OTHERWISE. "A" INDICATES THE SWITCH IS TO BE PROVIDED AS AN ARCHITRAVE SWITCH MOUNTED ON THE DOORS ALUMINIUM MULLION	WHITE	CLIPSAL C2000 SERIES 30USM	A
ROTARY DALI LIGHT SWITCH		ROTARY STANDALONE DALI DIMMER /LIGHT SWITCH C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND MOUNTED AT 1000mm AFFL UNLESS NOTED OTHERWISE.	WHITE	CLIPSAL C2000 SERIES C/W SMARTSCAPE AUTOMATION DALI-RD20-M	A
PROXIMITY DETECTOR SWITCH (PD)		ADJUSTABLE FLUSH RECESSED 360 DEGREE PIR PRESENCE DETECTOR TO OPERATE THE ASSOCIATED LIGHTS FOR A PRE-SET AMOUNT OF TIME. ADJUST THE TIME AND SENSITIVITY ON SITE AS DIRECTED BY THE ENGINEER. SUBMIT DETAILS OF THE MOVEMENT DETECTOR SWITCH FOR APPROVAL PRIOR TO ORDERING. "SM" INDICATES THE DETECTOR IS TO BE PROVIDED WITH A SURFACE MOUNT KIT.	WHITE	CLIPSAL	A
DOOR SWITCH (DS)		HEAVY DUTY PLUNGER STYLE 10 AMP 240 VOLT DOOR SWITCH MOUNTED ON THE DOOR FRAME HEAD TO TURN ON THE ASSOCIATED LIGHT WHEN THE DOOR IS OPENED.	WHITE	REPLEC ETSPDP	A
SINGLE POWER OUTLET		SINGLE POWER OUTLET C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND. MOUNT AT 300mm AFFL U.N.O. RATING 10A U.N.O.	WHITE UNLESS NOTED AS BLACK	CLIPSAL C2000 SERIES	B



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DOUBLE POWER OUTLET		DOUBLE POWER OUTLET C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND. MOUNT AT 300mm AFFL U.N.O. RATING 10A U.N.O.	WHITE UNLESS NOTED AS BLACK	CLIPSAL C2000 SERIES	B
SINGLE 15A POWER OUTLET SUSPENDED (SUS)		SINGLE 15A POWER OUTLET SUSPENDED TO 1600 AFFL UNLESS NOTED OTHERWISE VIA A 3MM STAINLESS STEEL WIRE ROPE.	WHITE	CLIPSAL "56 SERIES" 56SPO315	A
DOUBLE POWER OUTLET (USB)		DOUBLE POWER OUTLET C/W USB A AND USB C CHARGER, CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND MOUNT AT 300mm AFFL U.N.O. RATING 10A U.N.O.	WHITE UNLESS NOTED AS BLACK	CLIPSAL C2000 SERIES FACEPLATE	B
STAINLESS STEEL (SS)		SS DESIGNATES THE OUTLET IS TO BE PROVIDED AS FLUSH STAINLESS STEEL.	STAINLESS STEEL	CLIPSAL B STYLE	A
DRINK FOUNTAIN OUTLET (DF)		IP54 WEATHERPROOF SINGLE 10 AMP POWER OUTLET C/W COVER FLAP OVER SOCKET MOUNTED WITHIN THE DRINK FOUNTAIN HOUSING.	-	CLIPSAL WSCF227F	A
WEATHERPROOF POWER OUTLET (WP)		IP54 WEATHERPROOF SINGLE / DOUBLE POWER OUTLET AS NOTED ON DRAWING C/W COVER FLAP OVER SOCKET. MOUNT AT MINIMUM 1100mm AFFL U.N.O. RATING 10A U.N.O.	-	CLIPSAL WSCF227F	A
IP56 WEATHERPROOF POWER OUTLET (WP)		IP56 WEATHERPROOF SINGLE / DOUBLE POWER OUTLET AS NOTED ON DRAWING. MOUNT AT MINIMUM 1100mm AFFL U.N.O. RATING 10A U.N.O.	-	CLIPSAL "56 SERIES"	A
RECESS KIT (RK)		VERTICALLY ORIENTATED WALL BOX TO ALLOW THE OUTLET TO BE RECESSED WITHIN THE WALL CAVITY	WHITE	REPELEC RECWP1WH	A
SPECIAL PURPOSE POWER OUTLET		SPECIAL PURPOSE POWER OUTLET. MOUNT AT 300mm AFFL U.N.O. RATING 10A U.N.O. SIZE AND TYPE AS NOTED	-	-	A
HAND DRYER CONNECTION (HD)		THE ELECTRICAL SUB CONTRACTOR IS TO TAKE POSSESSION OF THE HAND DRYER AND INSTALL IT WITH 20A ISOLATING SWITCH WALL MOUNTED CONNECTED TO THE HAND DRYER UNIT AS PER DETAIL. PROVIDE CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND	WHITE	CLIPSAL "C2000 SERIES"	A
SINGLE-PHASE ISOLATOR		SINGLE-PHASE WEATHERPROOF ISOLATOR. MOUNT AT 1350mm AFFL U.N.O. RATING 20A U.N.O. CONNECT TO EQUIPMENT VIA FLEXIBLE CONDUIT.	-	CLIPSAL WHT20	A
THREE-PHASE ISOLATOR		THREE-PHASE WEATHERPROOF ISOLATOR. MOUNT AT 1350mm AFFL U.N.O. RATING 20A U.N.O. CONNECT TO EQUIPMENT VIA FLEXIBLE CONDUIT. "RSD" DENOTES ROLLER SHUTTER DOOR SUPPLY - COORDINATE LOCATION ONSITE WITH MOTOR.	-	CLIPSAL WHT35	A



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MSB		NEW MAIN SWITCHBOARD REFER TO THE NOTES FOR CONSTRUCTION DETAILS AND ADDITIONAL REQUIREMENTS OF MSB. ARRANGE FOR ENERGEX TO APPROVE THE MSB SHOP DRAWINGS			A
EXISTING WESTERN MSB-W		EXISTING WESTERN MAIN SWITCHBOARD MSB-W AND ASSOCIATED CONSUMERS MAINS TO BE REMOVED. REFER TO THE NOTES FOR DETAILS REGARDING THE STAGING / TIMING OF THE REMOVAL OF THE EXISTING MSB-W			A
EXISTING EASTERN MSB-E		EXISTING EASTERN MAIN SWITCHBOARD MSB-E TO REMAIN AS IS. REFER TO THE NOTES FOR DETAILS OF ADDITIONAL DOCUMENTATION REQUIRED TO BE PROVIDED WITHIN MSB-E.			A
MDB		NEW MAIN DISTRIBUTION BOARD REFER TO THE NOTES AND POWER SCHEMATIC FOR CONSTRUCTION DETAILS AND ADDITIONAL REQUIREMENTS OF MDB			A
DB-MS		DISTRIBUTION BOARD DB-MS TO BE PROVIDED AS PER THE DB-MS SCHEDULE REFER TO THE NOTES FOR CONSTRUCTION DETAILS AND ADDITIONAL REQUIREMENTS OF DB-MS			A
DB-DS		DISTRIBUTION BOARD DB-DS TO BE PROVIDED AS PER THE DB-DS SCHEDULE REFER TO THE NOTES FOR CONSTRUCTION DETAILS AND ADDITIONAL REQUIREMENTS OF DB-DS			A
DB-TS		DISTRIBUTION BOARD DB-TS TO BE PROVIDED AS PER THE DB-TS SCHEDULE REFER TO THE NOTES FOR CONSTRUCTION DETAILS AND ADDITIONAL REQUIREMENTS OF DB-TS			A
DB-BD		REPLACE THE EXISTING BUS DEPOT SHED DISTRIBUTION BOARD DB-BD WITH A NEW 72 POLE WALL MOUNTED PANEL BOARD EQUAL TO THE EXISTING DB IN SPECIFICATION. RECONNECT ALL OF THE EXISTING OUTGOING CIRCUITS AND PROVIDE NEW SWITCHGEAR AS NECESSARY TO SUPPLY DB-R. REMOVE THE EXISTING SUPPLY TO THE EXISTING DB-BD AND PROVIDE A NEW CONCEALED SUBMAIN FROM THE NEW MSB AS PER THE POWER SCHEMATIC			A
DB-R		REMOVE THE EXISTING ENERGEX SUPPLY TO THE EXISTING DISTRIBUTION BOARD DB-R ALONG WITH THE EXISTING MAINS, METERING, MEN LINK AND EARTH. PROVIDE DB-R WITH A NEW 63 AMP SUPPLY FROM DB-BS VIA A NEW AERIAL SUBMAIN			A
MSSB-A		NEW BUILDING A MSSB PROVIDED AS PART OF THE MECHANICAL SERVICES SUB CONTRACT. PROVIDE A SUPPLY TO MSSB-A AS PER THE SCHEMATIC.			A
MSSB-B		NEW BUILDING B MSSB PROVIDED AS PART OF THE MECHANICAL SERVICES SUB CONTRACT. PROVIDE A SUPPLY TO MSSB-B AS PER THE SCHEMATIC.			A
DB-TOILET		EXISTING TOILET BLOCK DISTRIBUTION BOARD TO BE REMOVED			B
DB-D		EXISTING BLOCK D DISTRIBUTION BOARD TO BE REMOVED			A
DB-C1		EXISTING DISTRIBUTION BOARD TO REMAIN AS IS JOIN THE EXISTING DB-C1 SUPPLY SUBMAIN IN THE EXISTING PIT BELOW THE REDUNDANT MSB AND EXTEND IT TO THE NEW MDB.			A
DB-G		EXISTING DISTRIBUTION BOARD TO REMAIN AS IS REMOVE THE EXISTING DB-G SUPPLY SUBMAIN AND REPLACE IT WITH A NEW SUBMAIN SUPPLIED FROM THE NEW MDB.			A
DB-S		EXISTING DISTRIBUTION BOARD TO REMAIN AS IS JOIN THE EXISTING DB-S SUPPLY SUBMAIN IN THE EXISTING PIT BELOW THE REDUNDANT MSB AND EXTEND IT TO THE NEW MDB.			A
DB-K		EXISTING DISTRIBUTION BOARD TO REMAIN AS IS JOIN THE EXISTING DB-K SUPPLY SUBMAIN IN THE EXISTING PIT BELOW THE REDUNDANT MSB AND EXTEND IT TO THE NEW MDB.			A



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DB-LP		EXISTING DISTRIBUTION BOARD TO REMAIN AS IS REMOVE THE EXISTING DB-LP SUPPLY SUBMAIN AND REPLACE IT WITH A NEW SUBMAIN SUPPLIED FROM THE NEW MDB.			A
DB-LP - P1		PROVIDE A NEW 3 PHASE 6MM CIRCUIT DB-LP - P1 SUPPLIED FROM DB-LP PROTECTED VIA A 40 AMP THREE PHASE CIRCUIT BREAKER C/W 30mA RCD PROTECTION TO THE NEW SEWAR PUMP CONTROL PANEL COORDINATE THE LOCATION AND CONFIRM THE REQUIRED SIZE WITH THE HYDRAULIC CONTRACTOR ON SITE			B
DB-NS		EXISTING DISTRIBUTION BOARD TO REMAIN AS IS JOIN THE EXISTING DB-NS SUPPLY SUBMAIN IN THE EXISTING PIT BELOW THE REDUNDANT MSB AND EXTEND IT TO THE NEW MDB.			A
M1		SUPPLY AUTHORITY NATIONAL ELECTRICITY MARKET CODE COMPLIANT LV MAXIMUM DEMAND TARIFF METER C/W ALL NECESSARY CABLING AND CTS ETC.			A
M2		PROVIDE A MULTIFUNCTION METER THAT LOGS THE FOLLOWING ACROSS EACH PHASE, DEMANDS , VOLTAGES, POWER FACTORS, AND HARMONICS.			A
COMMUNICATIONS RACK CR-LP		EXISTING LP BUILDING COMMUNICATIONS RACK TO BE PROVIDED WITH ADDITIONAL PATCH PANELS TO ACCOMMODATE THE NEW COMMUNICATIONS OUTLETS. LOWER THE EXISTING RACK MOUNTED EQUIPMENT AS NECESSARY.			A
COMMUNICATIONS RACK CR-G		EXISTING BLOCK G COMMUNICATIONS RACK TO REMAIN AS IS			B
DATA GATHERING PANEL (DGP)		EXISTING BLOCK G SECURITY DATA GATHERING PANEL TO REMAIN AS IS			B
COMMUNICATIONS OUTLET		RJ45 CAT-6 COMMUNICATIONS OUTLET, CABLED BACK TO A CAT 6 PATCH PANEL IN COMMUNICATIONS RACK CR-LP VIA 4-PAIR CAT-6 UTP CABLE. MOUNT UP TO 3 RJ45 OUTLETS PER MULTI-GANG FACEPLATE WITH SEPARATE PERMANENT LABELLING FOR EACH OUTLET. MOUNT AT 300 AFFL U.N.O	WHITE	CLIPSAL C2000 SERIES	A
CABLE ACCESS (A1)		PROVIDE A1 AS MULTIPLE WALL MOUNTED FACEPLATES POSITIONED AS PER THE ARCHITECTURAL DETAIL. PROVIDE THE OUTLET CONFIGURATION AND CABLING AS PER THE A1 / A2 FACEPLATE SCHEMATIC. PROVIDE THE GPO AS A CONVENTIONAL GPO CIRCUITED AS SHOWN AND THE RJ45 OUTLETS AS CONVENTIONAL COMMUNICATIONS OUTLETS CABLED TO THE COMMUNICATIONS RACK. PROVIDE THE HDMI PORT AS A FACTORY TERMINATED FEMALE PORT CABLED TO THE A2 HDMI PORT VIA A HDMI 2 CABLE LESS THAN 5M IN LENGTH.	BLACK	CLIPSAL C2000 SERIES	A



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TYPE	LAMPS	DESCRIPTION	COLOUR / ACCESSORY	CATALOGUE No	REV
CABLE ACCESS (A2)		PROVIDE A2 AS MULTIPLE WALL MOUNTED FACEPLATES POSITIONED AS PER THE ARCHITECTURAL DETAIL. PROVIDE THE OUTLET CONFIGURATION AND CABLING AS PER THE A1 / A2 FACEPLATE SCHEMATIC. PROVIDE THE GPO AS A CONVENTIONAL GPO CIRCUITED AS SHOWN AND THE RJ45 OUTLETS AS CONVENTIONAL COMMUNICATIONS OUTLETS CABLED TO THE COMMUNICATIONS RACK. PROVIDE THE HDMI PORT AS A FACTORY TERMINATED FEMALE PORT CABLED TO THE A1 HDMI PORT VIA A HDMI 2 CABLE LESS THAN 5M IN LENGTH.	BLACK	CLIPSAL C2000 SERIES	A
FIRE CURTAIN (Cx)		FIRE CURTAIN TO BE PROVIDED AND INSTALLED BY THE FIRE CURTAIN SUPPLIER. PROVIDE A TWO CORE 2.5mm CABLE FROM THE FIRE CURTAIN MOTOR IN THE CEILING SPACE BACK TO THE FIRE CURTAIN CONTROL PANEL AS PER THE FIRE CUURTAIN SCHEMATIC. PROVIDE SUFFICIENT LENGTH TO ALLOW THE FIRE CURTAIN INSTALLER TO TERMINATE THE CABLE AT BOTH ENDS.			C
SMOKE DETECTOR (Sx)		PROVIDE A SMOKE DETECTOR CABLED VIA A 3 CORE 1.5MM CABLE A TO THE FIRE CURTAIN CONTROL PANEL AS PER THE FIRE CUURTAIN SCHEMATIC TO ACITVATE THE ACCOCIATED FIRE CUTAINS VIA A VOLT FREE CONTACT CLOSURE UPON ALARM. PROVIDE THE SMOKE DETECTORS WITH A MAINS POWER SUPPLY AND A INTEGRAL 10 YEAR BATTERY BACKUP.			C
FIRE CURTAIN CONTROL PANEL (CPx)		FIRE CURTAIN CONTROL PANEL TO BE PROVIDED AND INSTALLED BY THE FIRE CURTAIN SUPPLIER.			C



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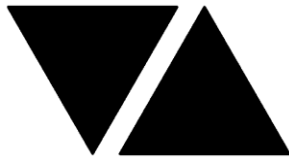
DISTRIBUTION BOARD DB-MS

REVISION D - 24 MARCH 2025

							REV
FAULT CURRENT:		6KA		MAIN SWITCH:		250A NON AUTO LOAD BREAK ISOLATOR	A
CHASSIS SIZE:		2 X 84 POLES		SUPPLIED FROM:		MDB	A
CHASSIS RATING:		250A		SUPPLY CABLE:		4C70	A
PHASES:		3					A
PROVIDE THE DB WITH A FULL WIDTH EMPTY DIN RAIL TO ACCOMMODATE FUTURE CONTACTORS AND CONTROLS. ACCURATELY LABEL EACH CIRCUIT BREAKER WITH THE USE AND THE POSITION. PROVIDE THE DB WITH AN AS2293 EMERGENCY LIGHT TESTING FACILITY AND SURGE PROTECTION. REFER TO THE NOTES FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.							A
CIRC	PH	CIRCUIT BREAKER (amps)	CONTROL EQUIPMENT	CABLE SIZE (mm ²)	LOCATION	CIRCUIT USE	
P1	1	20	RCBO	2.5	EXTERNAL	GPO	A
P2	1	20	RCBO	2.5	GROUND	CIRCULATION GPO	A
P3	1	20	RCBO	2.5	GROUND	RECEPTION GPO	A
P4	1	20	RCBO	2.5	GROUND	CHAPLAIN GPO	B
P5	1	20	RCBO	2.5	GROUND	MEETING GPO	A
P6	1	20	RCBO	2.5	GROUND	WELLBEING GPO	A
P7	1	20	RCBO	2.5	GROUND	SICK BAY GPO	A
P8	1	20	RCBO	2.5	GROUND	CONSULT GPO	A
P9	1	20	RCBO	2.5	GROUND	NURSE GPO	A
P10	1	20	RCBO	2.5	GROUND	KITCHENETTE GPO	A
P11	1	20	RCBO	2.5	GROUND	PRINTER	A
P12	1	20	RCBO	2.5	GROUND	AUTO BOILER	A
P13	1	20	RCBO	2.5	GROUND	KITCHENETTE GPO	A
P14	1	20	RCBO	2.5	GROUND	MICROWAVE	A
P15	1	20	RCBO	2.5	GROUND	AUTO BOILER	A
P16	1	20	RCBO	2.5	GROUND	ICE	A
P17	1	20	RCBO	2.5	GROUND	UTILITY GPO	A
P18	1	20	RCBO	2.5	GROUND	WORKSTATION	A
P19	1	20	RCBO	2.5	GROUND	REF	A
P20	1	20	RCBO	2.5	GROUND	LAUNDRY GPO	A
P21	1	20	RCBO	2.5	GROUND	DR / WM	A
P22	1	20	RCBO	2.5	GROUND	DRINK FOUNTAIN	A
P23	1	20	RCBO	2.5	GROUND	OFFICE GPO	A
P24	1	20	RCBO	2.5	GROUND	CHARGER	A
P25	1	20	RCBO	2.5	GROUND	CHARGER	A
P26	3	32	RCBO	6.0	LEVEL 1	EXTERNAL SCREEN	A
P27	1	20	RCBO	2.5	LEVEL 1	FIRE DOORS	A
P28	1	20	RCBO	2.5	LEVEL 1	GLA 1 POWER	A
P29	1	20	RCBO	2.5	LEVEL 1	STAFF GPO	A
P30	1	20	RCBO	2.5	LEVEL 1	DRINK FOUNTAIN	A
P31	1	20	RCBO	2.5	LEVEL 1	CIRCULATION GPO	A
P32	1	20	RCBO	2.5	LEVEL 1	CUBE GPO	B
P33	1	20	RCBO	2.5	LEVEL 1	GLA 6 POWER	A
P34	1	20	RCBO	2.5	LEVEL 1	GLA 5 POWER	A
P35	1	20	RCBO	2.5	LEVEL 1	FLA 1 POWER	A
P36	1	20	RCBO	2.5	LEVEL 1	GLA 4 POWER	A
P37	1	20	RCBO	2.5	LEVEL 1	GLA 3 POWER	A
P38	1	20	RCBO	2.5	LEVEL 1	GLA 2 POWER	A
P39	1	20	RCBO	2.5	LEVEL 2	DRINK FOUNTAIN	A
P40	1	20	RCBO	2.5	LEVEL 2	FIRE DOORS	A
P41	1	20	RCBO	2.5	LEVEL 2	GLA 3 POWER	A
P42	1	20	RCBO	2.5	LEVEL 2	GLA 2 POWER	A
P43	1	20	RCBO	2.5	LEVEL 2	GLA 1 POWER	A
P44	3	40	RCD TYPE B	6.0	LEVEL 2	LIFT	A
P45	1	40	RCBO	6.0	LEVEL 2	HWS	C

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Pages inc. any attach. 1 of 2



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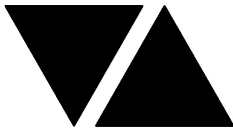
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DISTRIBUTION BOARD DB-MS

REVISION D - 24 MARCH 2025

							REV
FAULT CURRENT:		6KA		MAIN SWITCH:		250A NON AUTO LOAD BREAK ISOLATOR	A
CHASSIS SIZE:		2 X 84 POLES		SUPPLIED FROM:		MDB	A
CHASSIS RATING:		250A		SUPPLY CABLE:		4C70	A
PHASES:		3					A
PROVIDE THE DB WITH A FULL WIDTH EMPTY DIN RAIL TO ACCOMMODATE FUTURE CONTACTORS AND CONTROLS. ACCURATELY LABEL EACH CIRCUIT BREAKER WITH THE USE AND THE POSITION. PROVIDE THE DB WITH AN AS2293 EMERGENCY LIGHT TESTING FACILITY AND SURGE PROTECTION. REFER TO THE NOTES FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.							A
CIRC	PH	CIRCUIT BREAKER (amps)	CONTROL EQUIPMENT	CABLE SIZE (mm ²)	LOCATION	CIRCUIT USE	
P46	1	20	RCBO	2.5	LEVEL 2	GLA 6 POWER	A
P47	1	20	RCBO	2.5	LEVEL 2	GLA 5 POWER	A
P48	1	20	RCBO	2.5	LEVEL 2	GLA 4 POWER	A
P49	1	20	RCBO	2.5	LEVEL 2	FLA POWER	A
P50	1	20	RCBO	2.5	LEVEL 2	FLA POWER	A
P51	3	40	RCBO	6.0	WELLNESS	HWS	C
P52	1	20	RCBO	2.5	LEVEL 1	LEVEL 2 FIRE CURTAINS	D
P53	1	20	RCBO	2.5	LEVEL 1	LEVEL 1 FIRE CURTAINS	D
L1	1	20	RCBO	2.5	GROUND	CIRCULATION LIGHTS	A
L2	1	20	RCBO	2.5	GROUND	CIRCULATION LIGHTS	A
L3	1	20	RCBO	2.5	GROUND	CIRCULATION LIGHTS	A
L4	1	20	RCBO	2.5	GROUND	WELLNESS LIGHTS	A
L5	1	20	RCBO	2.5	GROUND	WELLNESS LIGHTS	A
L6	1	20	RCBO	2.5	LEVEL 1	STAIR 2 LIGHTS	A
L7	1	20	RCBO	2.5	LEVEL 1	GLA 1 LIGHTS	A
L8	1	20	RCBO	2.5	LEVEL 1	CIRCULATION LIGHTS	A
L9	1	20	RCBO	2.5	LEVEL 1	CIRCULATION LIGHTS	A
L10	1	20	RCBO	2.5	LEVEL 1	GLA 6 LIGHTS	A
L11	1	20	RCBO	2.5	LEVEL 1	GLA 5 LIGHTS	A
L12	1	20	RCBO	2.5	LEVEL 1	CIRCULATION LIGHTS	A
L13	1	20	RCBO	2.5	LEVEL 1 & 2	STAIR 1 LIGHTS	A
L14	1	20	RCBO	2.5	LEVEL 1	GLA 4 LIGHTS	A
L15	1	20	RCBO	2.5	LEVEL 1	GLA 3 LIGHTS	A
L16	1	20	RCBO	2.5	LEVEL 1	GLA 2 LIGHTS	A
L17	1	20	RCBO	2.5	LEVEL 1	CIRCULATION LIGHTS	A
L18	1	20	RCBO	2.5	LEVEL 1	CIRCULATION LIGHTS	A
L19	1	20	RCBO	2.5	LEVEL 2	GLA 4 LIGHTS	A
L20	1	20	RCBO	2.5	LEVEL 2	SKY LIGHTS	A
L21	1	20	RCBO	2.5	LEVEL 2	FLA LIGHTS	A
L22	1	20	RCBO	2.5	LEVEL 2	FLA LIGHTS	A
L23	1	20	RCBO	2.5	LEVEL 2	GLA 5 LIGHTS	A
L24	1	20	RCBO	2.5	LEVEL 2	GLA 3 LIGHTS	A
L25	1	20	RCBO	2.5	LEVEL 2	GLA 2 LIGHTS	A
L26	1	20	RCBO	2.5	LEVEL 2	GLA 1 LIGHTS	A
L27	1	20	RCBO	2.5	LEVEL 2	FLA LIGHTS	A
L28	1	20	RCBO	2.5	LEVEL 2	GLA 6 LIGHTS	B
L29	1	20	RCBO	2.5	GROUND	WELLNESS LIGHTS	A



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DISTRIBUTION BOARD DB-DS

REVISION B - 24 SEPTEMBER 2024

							REV	
		FAULT CURRENT:	6KA			MAIN SWITCH:	250A NON AUTO LOAD BREAK ISOLATOR	A
		CHASSIS SIZE:	2 X 60 POLES			SUPPLIED FROM:	MDB	A
		CHASSIS RATING:	250A			SUPPLY CABLE:	4C70	A
		PHASES:	3					A
PROVIDE THE DB WITH A FULL WIDTH EMPTY DIN RAIL TO ACCOMMODATE FUTURE CONTACTORS AND CONTROLS. ACCURATELY LABEL EACH CIRCUIT BREAKER WITH THE USE AND THE POSITION. PROVIDE THE DB WITH AN AS2293 EMERGENCY LIGHT TESTING FACILITY AND SURGE PROTECTION. REFER TO THE NOTES FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.							A	
CIRC	PH	CIRCUIT BREAKER (amps)	CONTROL EQUIPMENT	CABLE SIZE (mm ²)	LOCATION	CIRCUIT USE		
P1	1	20	RCBO	2.5	EXTERNAL	GPO	A	
P2	1	20	RCBO	2.5	FEMALE CHANGE	HAND DRYER	A	
P3	1	20	RCBO	2.5	FEMALE AMENITIES	HAND DRYER	A	
P4	1	20	RCBO	2.5	MALE CHANGE	HAND DRYER	A	
P5	1	20	RCBO	2.5	MALE AMENITIES	HAND DRYER	A	
P6	3	20	RCBO	2.5	GROUND	HWS	A	
P7	3	20	RCBO	2.5	GROUND	HWS	A	
P8	3	20	RCBO	2.5	GROUND	HWS	A	
P9	1	20	RCBO	2.5	GROUND	HWS PUMP	A	
P10							B	
P11	1	20	RCBO	2.5	LEVEL 1	DRINK FOUNTAIN	A	
P12	1	20	RCBO	2.5	LEVEL 1	FLA 3 POWER	A	
P13	3	32	RCBO	6.0	LEVEL 1	HWS	B	
P14	1	20	RCBO	2.5	LEVEL 1	MUSIC POWER	A	
P15	1	20	RCBO	2.5	LEVEL 1	DANCE POWER	A	
P16	1	20	RCBO	2.5	LEVEL 1	MAINTENANCE	A	
P17	1	20	RCBO	2.5	LEVEL 1	MUSIC POWER	A	
P18	1	20	RCBO	2.5	FEMALE AMENITIES	GPO	A	
P19	1	20	RCBO	2.5	MALE AMENITIES	GPO	A	
L1	1	20	RCBO	2.5	GROUND	FEMALE LIGHT	A	
L2	1	20	RCBO	2.5	GROUND	MALE LIGHTS	A	
L3	1	20	RCBO	2.5	GROUND	CIRCULATION LIGHTS	A	
L4	1	20	RCBO	2.5	GROUND	CIRCULATION LIGHTS	A	
L5	1	20	RCBO	2.5	LEVEL 1	FLA 1 LIGHTS	A	
L6	1	20	RCBO	2.5	LEVEL 1	CIRCULATION LIGHTS	A	
L7	1	20	RCBO	2.5	LEVEL 1	CIRCULATION LIGHTS	A	
L8	1	20	RCBO	2.5	LEVEL 1	MUSIC LIGHTS	A	
L9	1	20	RCBO	2.5	LEVEL 1	DANCE LIGHTS	A	



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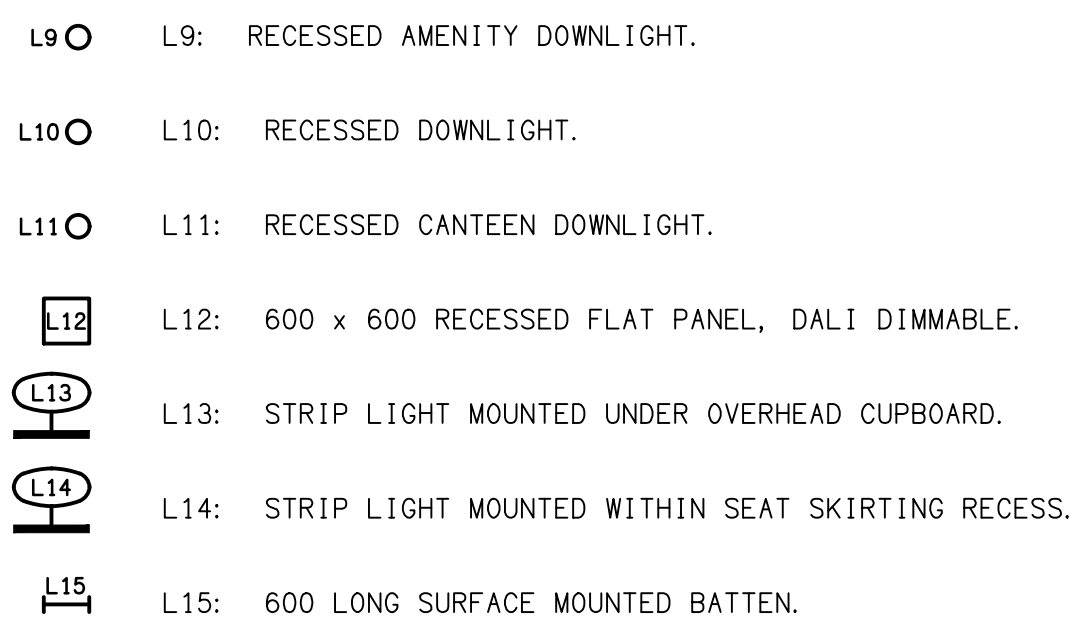
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DISTRIBUTION BOARD DB-TS

REVISION C - 07 FEBRUARY 2025

FAULT CURRENT: 6KA CHASSIS SIZE: 60 POLES CHASSIS RATING: 250A PHASES: 3 MAIN SWITCH: 250A NON AUTO LOAD BREAK ISOLATOR SUPPLIED FROM: MDB SUPPLY CABLE: 4C25							REV
							A
							A
							A
							A
PROVIDE THE DB WITH A FULL WIDTH EMPTY DIN RAIL TO ACCOMMODATE FUTURE CONTACTORS AND CONTROLS. ACCURATELY LABEL EACH CIRCUIT BREAKER WITH THE USE AND THE POSITION. PROVIDE THE DB WITH AN AS2293 EMERGENCY LIGHT TESTING FACILITY AND SURGE PROTECTION. REFER TO THE NOTES FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.							A
CIRC	PH	CIRCUIT BREAKER (amps)	CONTROL EQUIPMENT	CABLE SIZE (mm ²)	LOCATION	CIRCUIT USE	
P1	3	20	RCBO	2.5	ROOF	FREEZER CONDENSER	A
P2	1	20	RCBO	2.5	OFFICE	GPOs	A
P3	1	20	RCBO	2.5	KITCHEN	AB GPO	A
P4	1	32	RCBO	6.0	KITCHEN	TURBO FAN	C
P5	1	32	RCBO	6.0	KITCHEN	TURBO FAN	C
P6	1	20	RCBO	2.5	KITCHEN	SUS GPO	A
P7	3	32	RCBO	6.0	KITCHEN	COOTOP / OVEN	C
P8	1	20	RCBO	2.5	KITCHEN	SUS GPO	A
P9	3	20	RCBO	2.5	KITCHEN	DISHWASHER	A
P10	1	20	RCBO	2.5	KITCHEN	COOLROOM	A
P11	3	40	RCBO	6.0	KITCHEN	HWS	B
P12	1	20	RCBO	2.5	KITCHEN	AB GPO	A
P13	1	20	RCBO	2.5	KITCHEN	POS	A
P14	1	20	RCBO	2.5	KITCHEN	SERVERY	A
P15	1	20	RCBO	2.5	KITCHEN	REF / DISPLAY	C
P16	1	20	RCBO	2.5	KITCHEN	BAINE MARIE	A
P17	1	20	RCBO	2.5	KITCHEN	BAINE MARIE	A
P18	1	20	RCBO	2.5	KITCHEN	PIE WARMER	A
P19	1	20	RCBO	2.5	KITCHEN	PIE WARMER	A
P20	1	20	RCBO	2.5	KITCHEN	REF / DISPLAY	C
P21	1	20	RCBO	2.5	STORE	GPOs	A
P22	1	20	RCBO	2.5	KITCHEN	FREEZER	A
P23	1	20	RCBO	2.5	ROOF	REF CONDENSER	A
P24	3	20	RCBO	2.5	KITCHEN	12KW GRILL	C
L1	1	20	RCBO	2.5	TUCKSHOP	LIGHTING	A

LEGEND

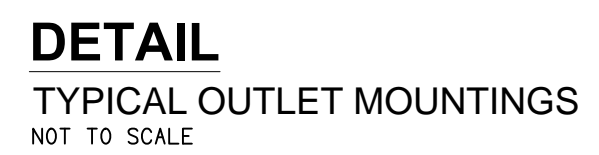


L16: 1200 LONG WEATHERPROOF SURFACE BATTEN

○x FIRE CURTAIN, TYPE x.

○x FIRE SMOKE DETECTOR, TYPE x.

□Px FIRE CURTAIN CONTROL PANEL, TYPE x.



NOTE

THE MOUNTING ARRANGEMENTS AND OUTLETS SHOWN ON THIS DETAIL ARE GENERIC AND MAY NOT BE REQUIRED ON THIS PROJECT.

PROVIDE A RAISED STAINLESS STEEL FLOOR MOUNTED HOUSING FOR THE "FLOOR" MOUNTED OUTLET AS PART OF THE ELECTRICAL SUBCONTRACT. SUBMIT DETAILS FOR APPROVAL.



TEST - TEST PUSH BUTTON MOUNTED ON THE DISTRIBUTION BOARD ESCUTCHEON.

RESET - RESET PUSH BUTTON MOUNTED ON THE DISTRIBUTION BOARD ESCUTCHEON.

LAMP - AMBER TEST INDICATING LAMP MOUNTED ON THE DISTRIBUTION BOARD ESCUTCHEON.

Ta - ADJUSTABLE 0-3 HOUR TIMED RELAY.

Tb - 15 MINUTE RUN-ON TIMER TO OPERATE UPON THE RETURN OF MAINS POWER.

Cx - CONTACTOR x.

CRx - CONTROL RELAY x.

Rx - RELAY x.

— EMERGENCY



1. THE EMERGENCY LIGHT UNSWITCHED ACTIVE / GENERAL LIGHTING SWITCHED ACTIVE CIRCUIT ARRANGEMENT AND CONTROL IS TYPICAL FOR ALL CIRCUITS SUPPLYING EMERGENCY LIGHTS.
2. PROVIDE ADDITIONAL CONTROL RELAYS (CRx) CONFIGURED AS PER CRa AND CRb FOR ALL ADDITIONAL LIGHTING CIRCUITS THAT SUPPLY LIGHTS IN THE VICINITY OF THE EMERGENCY LIGHTS.



**PROPOSED TWO
STOREY BUILDING B**

PROPOSED PADMOUNT SUBSTATION & MSB WORKS.

SITE PLAN

BUILDINGS A & B WORKS

SCALE 1: 2000

E	CONSTRUCTION	24/03/2025
REV:	DESCRIPTION:	DATE:

DRAWING:
ELECTRICAL SERVICES
LEGEND & DETAILS

SCALE:
NOT TO SCALE AT A1

PROJECT NO:
C2717a

DRAWING NO:
E01

REVISION:
E

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PTY LTD
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PROJECT: KINGS CHRISTIAN COLLEGE - REEDY CREEK
GLAs & STUDENT SERVICES KCC49

68 GEMVALE ROAD, REEDY CREEK, QUEENSLAND

NOTES

1. EXTENT OF WORKS

THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

- SURVEY OF ALL EXISTING UNDERGROUND SERVICES IN THE VICINITY OF THE WORKS.
- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE ELECTRICAL SERVICES.
- CO-ORDINATION.
- INSPECTIONS.
- TESTING AND COMMISSIONING.
- MAINTENANCE.
- UPDATE THE SCHOOLS EXISTING AS BUILT DRAWINGS.
- UPDATE THE SCHOOLS EXISTING MAINTENANCE MANUAL.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- POWER DISTRIBUTION.
- LIGHTING.
- COMMUNICATIONS CABLING.
- MODIFICATION, RELOCATION AND EXTENSION AS NECESSARY OF ALL EXISTING SERVICES THAT ARE IMPACTED BY THE WORKS OR REQUIRED TO BE EXTENDED BY THE WORKS.
- REMOVAL OF ALL EXISTING SERVICES MADE REDUNDANT BY THE WORKS.
- ANY TEMPORARY WORKS REQUIRED TO KEEP THE SCHOOL OPERATING DURING THE CONSTRUCTION PROCESS.
- ALL MINOR COMPONENTS AND INCIDENTAL WORKS NOT SPECIFICALLY REFERRED TO, HOWEVER NECESSARY TO COMPLETE THE ELECTRICAL SERVICES INSTALLATION SUCH THAT IT IS HANDED OVER COMPLETE, OPERATIONAL AND FIT FOR THE INTENDED USE.

SUPPLY ALL LABOUR, MATERIALS, EQUIPMENT, AND ALL OTHER ITEMS, WHETHER MENTIONED IN DETAIL OR NOT, REQUIRED FOR THE SATISFACTORY COMPLETION OF THE ELECTRICAL SERVICES INSTALLATION, LEAVING IN FULL WORKING ORDER TO THE SATISFACTION OF THE PROJECT MANAGER.

PRIOR TO COMMENCING WORK CONSULT THE SCHOOL MANAGEMENT FOR ANY HAZARDOUS MATERIAL AND OR ASBESTOS REGISTERS AS WELL AS UNDERTAKE A THOROUGH INSPECTION OF THE SITE TO IDENTIFY ANY POTENTIAL HAZARDOUS MATERIALS, ASBESTOS AND HEALTH OR SAFETY RISKS. ADVISE THE CONTRACTOR OF ANY POTENTIAL HAZARDOUS MATERIALS, ASBESTOS AND HEALTH OR SAFETY RISKS IF IDENTIFIED AND DO NOT COMMENCE WORK UNTIL AN APPROPRIATE MANAGEMENT PLAN HAS BEEN DEVELOPED AND AGREED TO BY ALL PARTIES

PRIOR TO COMMENCING WORK UNDERTAKE A DETAILED ACTIVE SURVEY OF ALL EXISTING UNDERGROUND SERVICES IN THE VICINITY OF THE WORKS. IDENTIFY ALL EXISTING UNDERGROUND SERVICES WITHIN THE SCOPE OF THE WORKS. THE SURVEY WILL NEED TO INCLUDE VACUUM EXCAVATION. PROVIDE A COPY OF THE SURVEY FOR APPROVAL INCLUDING ALL PITS AND CONDUITS DIMENSIONED OFF EXISTING BUILDINGS, THE CONTENTS OF THE CONDUITS INCLUDING THE CABLE TYPE SOURCE AND DESTINATION.

SUPPLY ALL LABOUR, MATERIALS, EQUIPMENT, AND ALL OTHER ITEMS, WHETHER MENTIONED IN DETAIL OR NOT, REQUIRED FOR THE SATISFACTORY COMPLETION OF THE ELECTRICAL SERVICES INSTALLATION, LEAVING IN FULL WORKING ORDER TO THE SATISFACTION OF THE PROJECT MANAGER.

ACCEPT FULL RESPONSIBILITY FOR LIASING, ARRANGING AND CO-ORDINATION OF ALL WORKS THAT HAVE AN EFFECT ON OR WILL BE AFFECTED BY THE ELECTRICAL SERVICES.

CONFIRM THE POSITION OF ALL OUTLETS ON SITE WITH THE SCHOOL PRIOR TO ROUGH-IN.

UPDATE THE SCHOOLS EXISTING AS BUILT DOCUMENTS AND MAINTENANCE MANUAL TO INCLUDE THE NEW WORKS.

PROVIDE ALL FITTINGS MOUNTED WITHIN THE PERFORATED SECTIONS OF THE PLASTER BOARD CEILING WITH AN EXTENDED MOUNTING TRIM THE SAME COLOUR AS THE FITTING. PROVIDE DETAILS OF THE MOUNTING TRIM TO THE ARCHITECT FOR APPROVAL.

ANY INTERRUPTION TO ANY ELECTRICAL SERVICES OUTSIDE OF THE AREA OF WORKS MUST BE RESTRICTED TO OUTSIDE OF THE SCHOOLS OPERATING HOURS AND MUST BE ADVISED TO THE SCHOOL IN WRITING TWO WEEKS PRIOR AND LIMITED TO FOUR HOURS.

2. WORKMANSHIP

ENSURE THAT THE ELECTRICAL WORK IS PERFORMED BY THE HOLDER OF A CURRENT ELECTRICAL SUB CONTRACTOR LICENSE AND THE SERVICES COVERED BY THE ACMA IS PERFORMED BY THE HOLDER OF THE APPROPRIATE CURRENT ACMA LICENSE. ENSURE THE INSTALLATION AND ALL COMPONENTS, FIXTURES, FITTINGS, OUTLETS AND CABLES ARE SUPPLIED AND INSTALLED TO A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS. ENSURE ALL MATERIALS AND COMPONENTS OF A SIMILAR TYPE ARE OF THE SAME MANUFACTURER AND INSTALLED IN A UNIFORM MANNER.

IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE INSTALLATION IS FIT FOR PURPOSE AND IS PROVIDED AS A COMPLETE WORKING INSTALLATION. IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL COMPONENTS, FITTINGS, FIXTURES, SYSTEMS, PROGRAMMING ETC IRRESPECTIVE OF THE LEVEL DETAILED IN THE DOCUMENTS SUCH THAT THE INSTALLATION IS PROVIDED AS A COMPLETE WORKING INSTALLATION.

CONCEAL ALL WIRING AND CONDUITS. EXPOSED CABLING OR CONDUITS ARE GENERALLY NOT ACCEPTABLE. IT IS NOTED THAT CHASING AND REINSTATEMENT WILL BE REQUIRED. ENSURE ALL COMPONENTS, EQUIPMENT AND MATERIALS SUPPLIED ARE NEW, UNUSED, DESIGNED AND SELECTED TO ENSURE SATISFACTORY OPERATION UNDER VARYING ATMOSPHERIC, CLIMATIC, HUMID TROPICAL CONDITIONS WITHOUT DISTORTION AND DETERIORATION IN ANY PART AFFECTING EFFICIENCY AND RELIABILITY OF THE SYSTEMS. DESIGN AND SELECT ALL EQUIPMENT TO PROVIDE THE NECESSARY SAFETY TO HUMAN LIFE AND PROPERTY DURING OPERATION AND MAINTENANCE WITH PARTICULAR ATTENTION GIVEN TO ELECTRICAL SAFETY AND SEGREGATION PRECAUTIONS.

CHECK THE FINISHED PAINTWORK AROUND THE AREA OF EACH INSTALLATION AND TOUCH UP ALL DAMAGED PARTS AND FINISHES AFTER THE INSTALLATION OF THE ELECTRICAL SERVICES.

ALL WORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDER'S PROGRAM. ENSURE ALL FINAL LOCATIONS OF OUTLETS AND FITTINGS ARE CO-ORDINATED ONSITE WITH THE ARCHITECT AND ALL OTHER SERVICES, TO THE APPROVAL OF THE PROJECT MANAGER. ALLOW TO CO-ORDINATE THE FINAL LOCATION OF ALL EQUIPMENT, FITTINGS, & OUTLETS, SUCH THAT THEY ARE INSTALLED IN ACCORDANCE WITH THE AS3000 RESTRICTED ZONES, AND ARE NOT COVERED INAPPROPRIATELY.

ENSURE THAT ALL METAL SURFACES ARE SUITABLY PROTECTED AGAINST CORROSION, AND THAT ALL PLASTIC MATERIALS ARE UV STABILISED.

PROVIDE ALL MATERIALS AS NEW, AND OF THE HIGHEST CLASS AVAILABLE FOR THEIR RESPECTIVE TYPES. ENSURE ALL ASPECTS OF THE WORK ARE OF A HIGH STANDARD THROUGHOUT, AND INSTALLED IN A NEAT AND TRADESMAN LIKE MANNER, TO THE CURRENT INDUSTRY STANDARDS.

IRRESPECTIVE OF INFORMATION CONTAINED IN THE ELECTRICAL SERVICES DOCUMENTS OR IN INSTRUCTIONS, IT IS THE ELECTRICAL SUB CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL ELECTRICAL SERVICES WORKS ARE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FOLLOWING. REFER ANY DISCREPANCIES BETWEEN THE REQUIREMENTS OF THE FOLLOWING AND/OR THE ELECTRICAL SERVICES DOCUMENTS AND INSTRUCTIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO THE PLACING OF ORDERS, FABRICATION OR INSTALLATION OF THE ITEMS/METHODS IN DISCREPANCY.

- NCC BUILDING CODE OF AUSTRALIA.
- ELECTRICITY ACT.
- ELECTRICAL SAFETY ACT.
- ENERGEX REQUIREMENTS.
- THE QUEENSLAND ELECTRICITY CONNECTION MANUAL V4 (QECM) AND THE NATIONAL ELECTRICITY METERING STANDARDS (NEM).
- AS/NZS3000.
- AS3008.
- LOCAL BRIGADE.
- WORKPLACE HEALTH AND SAFETY ACT.
- TELECOMMUNICATIONS ACT.
- ACMA REQUIREMENTS.

NOTES

3. AUTHORITIES

ENSURE ALL OF THE ELECTRICAL SERVICES COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AUTHORITIES HAVING JURISDICTION OVER THE SITE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- ACMA.
- LOCAL COUNCIL.
- ENERGEX.
- STATE GOVERNMENT DEPARTMENT OF ENVIRONMENT AND HERITAGE.
- QLD GOVERNMENT, DIVISION OF WORKPLACE, HEALTH AND SAFETY.
- QLD FIRE AND EMERGENCY SERVICES.

4. CABLES

UNLESS OTHERWISE SPECIFIED, INSTALL AND TERMINATE CABLES IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS. DETERMINE THE FINAL ROUTES TO SUIT THE BUILDING STRUCTURE AND SITE CONDITIONS. UNLESS NOTED OTHERWISE, PROVIDE ALL 240 VOLT POWER AND LIGHTING WIRING AS 2.5mm² TWIN & EARTH STRANDED COPPER CONDUCTORS, PVC INSULATED 0.6/1kV V75 GRADE TO AS3174, PROTECTED BY A 20 AMP CIRCUIT BREAKER. ALL CONDUIT AND FITTINGS TO BE RIGID UPVC TO AS2053, UNLESS NOTED OTHERWISE.

5. POWER DISTRIBUTION

IN ADDITION TO THE WORKS ASSOCIATED WITH THE BUILDINGS THE POWER DISTRIBUTION COMPONENT OF THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES REPLACING THE EXISTING WESTERN ENERGEX POLE MOUNT TRANSFORMER AND ASSOCIATED MSB WITH A NEW ENERGEX PADMOUNT SUBSTATION AND MSB.

ENSURE THE NEW ENERGEX SUPPLY, MSB AND MDB ARE COMPLETE AT LEAST TWO MONTHS PRIOR TO PRACTICAL COMPLETION FOR COMMISSIONING. ARRANGE WITH THE BUILDER FOR THE SUBSTATION STRUCTURE TO BE COMPLETE AT LEAST SIX WEEKS PRIOR TO THE INSTALLATION OF THE ENERGEX TRANSFORMER. CUT OVER THE POWER SUPPLY FROM THE EXISTING MSB AND POLE MOUNT TRANSFORMER TO THE NEW PADMOUNT SUBSTATION DURING SCHOOL HOLIDAYS.

CONFIRM A MINIMUM 25M SEPARATION BETWEEN THE POWER INSTALLATION ZONE A AND THE POWER INSTALLATION ZONE B IS MAINTAINED WITH NO MAINS POWER ENTERING THE SEPARATION AREA BETWEEN THE TWO ZONES. SUBMIT TO ENERGEX FOR APPROVAL A COMPUTER-AIDED DESIGN (CAD) DIAGRAM WHICH IDENTIFIES ZONES ON THE LOT FOR THE TWO SEPARATE ELECTRICAL INSTALLATIONS WHICH INCLUDES THE FOLLOWING:

- THE LOT NUMBER AND;
- THE NETWORK SUPPLY POINTS WITH NMIs SHOWN;
- BOTH GEOGRAPHICAL AND ELECTRICAL DEMONSTRATION OF THE EXTENT OF THE ZONES;
- THE ZONES SHALL BE NAMED A AND B.
- THE ZONE BOUNDARIES SHOULD BE AS SIMPLE AS POSSIBLE, USING OBVIOUS BOUNDARIES SUCH AS ROADS, FENCES OR WATERWAYS.
- ALL SWITCHBOARDS AS WELL AS ANY EQUIPMENT REMOTE OF A BUILDING (SUCH AS LIGHTING, GATES ETC.) SHALL BE LABELLED ON THE DIAGRAM WITH A UNIQUE IDENTIFIER TO THE PREMISES, WITH THE ZONE LETTER AS PART OF THE NAMING.
- THE ADDRESS OF EACH ENERGEX SUPPLY.

PROVIDE A LAMINATED COPY OF THE EXISTING ENERGEX DUAL POINTS OF SUPPLY DISPENSATION AND THE ABOVE PLAN IN THE NEW MSB AND THE EXISTING EASTERN BOUNDARY MSB-E ADJACENT GEMVALE ROAD. AN ELECTRONIC COPY OF THE DISPENSATION WILL BE PROVIDED BY THE ELECTRICAL DESIGN GROUP WHEN REQUESTED BY EMAIL.

RECOVER THE EXISTING MSB AND RETURN IT TO THE COLLEGE UNLOADED IN A REMOTE POSITION ON THE REEDY CREEK SITE AS DIRECTED BY THE COLLEGE.

ARRANGE WITH ENERGEX TO HAVE THE NEW PADMOUNT SUBSTATION INSTALLED. PROVIDE AN UNDERGROUND CONSUMERS MAIN FROM THE SUBSTATION TO A NEW MAIN SWITCHBOARD.

THE EXISTING WESTERN MSB-W IS TO BE REMOVED. THE EXISTING ENERGEX SUPPLIES TO THE RESIDENCES AND THE BUS DEPOT ARE TO BE REMOVED.

A NEW MAIN DISTRIBUTION BOARD MDB IS TO BE PROVIDED AND SUPPLIED FROM THE NEW MSB VIA AN EXTENSION OF THE EXISTING UNDERGROUND CONDUITS. THE EXISTING SUBMAINS THAT SUPPLY DB-K, DB-C1, DB-NS AND DB-S (SERVER) ARE TO BE JOINED IN THE PIT UNDER THE EXISTING MSB WITH WATERPROOF JOINS AND EXTENDED TO THE MDB. THE EXISTING SUBMAINS TO DB-G AND DB-LP ARE TO BE REMOVED AND REPLACED WITH NEW SUBMAINS SUPPLIED FROM THE NEW MDB.

NEW DISTRIBUTION BOARDS DB-TS, DB-MS AND DB-DS ARE TO BE PROVIDED AND SUPPLIED WITH NEW SUBMAINS FROM THE NEW MDB. NEW SUBMAINS ARE TO BE PROVIDED FROM THE NEW MDB TO MSSB-1 AND MSSB-2.

THE POWER DISTRIBUTION COMPONENT OF THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES THOUGH IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- ENERGEX PADMOUNT SUBSTATION INCLUDING ALL CIVIL WORKS REQUIRED BY ENERGEX.
- ARRANGE THE ENERGEX SUPPLY CONNECTION AND METERING.
- UNDERGROUND CONSUMERS MAINS FROM THE ENERGEX PADMOUNT SUBSTATION TO THE MSB.
- MAIN SWITCHBOARD (MSB).
- UNDERGROUND SUBMAIN FROM THE MSB TO DB-G.
- DISTRIBUTION BOARD DB-G.
- SUBMAIN FROM THE DB-G PROTECTED BY A MCCB TO THE MSSB.
- EARTHING.
- CIRCUITS.
- ISOLATORS AND OUTLETS.
- SWITCH PANELS.
- INSTALLATION OF THE HAND DRYERS.
- CABLE ACCESS WAYS.
- CABLE ACCESS HAT SECTION.
- TESTING AND COMMISSIONING.
- REMOVAL OF THE EXISTING ENERGEX AERIAL SERVICE, POLE MOUNT TRANSFORMER, WESTERN CONSUMERS MAINS AND WESTERN MAIN SWITCHBOARD MSB-W.
- REMOVAL OF THE EXISTING ENERGEX LV AERIAL SERVICE TO THE BUILDING ON THE SOUTHERN BOUNDARY INCLUDING THE MEN, AND METERING.
- REMOVAL OF ALL EXISTING SERVICES MADE REDUNDANT BY THE WORKS.
- THERMOSCAN ALL OF THE SWITCHBOARDS SUPPLIED OR MODIFIED AS PART OF THE WORKS WITHIN THE FIRST WEEK SCHOOL HAS COMMENCED AND SUBMIT THE THERMOSCAN FOR APPROVAL.

REFER TO THE POWER SCHEMATIC DRAWING FOR ADDITIONAL SWITCHBOARD REQUIREMENTS AND CONSTRUCTION NOTES. ENSURE ALL THREE PHASE CIRCUITS ARE PROVIDED WITH CORRECT PHASE ROTATION.

ENSURE ALL OUTLETS AND ISOLATORS ARE POSITIONED SUCH THAT THEY ARE NOT COVERED BY THE EQUIPMENT. THE FINAL POSITION OF ALL OUTLETS AND ISOLATORS ARE TO BE CONFIRMED ON SITE BY THE SCHOOLS REPRESENTATIVE.

NOTES

6. LIGHTING

THE LIGHTING COMPONENT OF THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES ALL OF THE INTERNAL AND EXTERNAL LIGHT FITTINGS, LAMPS AND ACCESSORIES. PROVIDE ALL NECESSARY ACCESSORIES TO FACILITATE THE COMPLETE LIGHTING INSTALLATION. THE LIGHTING COMPONENT OF THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES THOUGH IT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- INTERNAL AND EXTERNAL LIGHTING.
- EMERGENCY AND EXIT LIGHTING.
- EARTHING OF THE LIGHTING INSTALLATION.
- LIGHTING CONTROL.
- LIGHTING SUBCIRCUITS.
- TESTING AND COMMISSIONING.

PROVIDE A SINGLE POINT EMERGENCY LIGHTING SYSTEM THAT COMPLIES WITH THE LATEST ISSUE OF ALL PARTS AS2293 AND THE RELEVANT PARTS OF THE NCC BCA. INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS MAINTAINED WITH THE LAMP PERMANENTLY ON SUPPLIED VIA AN UNSWITCHED ACTIVE MAINS SUPPLY WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE, THE LAMP IS TO REMAIN ON SUPPLIED BY THE EMERGENCY PACK. SINGLE LAMP MAINTAINED EMERGENCY LIGHTS ARE NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ALWAYS ON.)

INSTALL EMERGENCY LIGHT FITTINGS NOMINATED AS NON-MAINTAINED AS FOLLOWS:

- IF THE FITTING IS NOT BEING SWITCHED, THE LAMP IS TO REMAIN OFF WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE THE LAMP IS TO BE SWITCHED ON SUPPLIED BY THE EMERGENCY PACK. UNSWITCHED SINGLE LAMP NON-MAINTAINED EMERGENCY LIGHTS ARE NOT SWITCHED WITH THE LOCAL GENERAL AREA LIGHTING. (THE LAMP IS ON ONLY WHEN THE MAINS SUPPLY IS NOT AVAILABLE.)
- IF THE FITTING IS BEING SWITCHED, THE LAMP IS TO BE SUPPLIED AND CONTROLLED WITH THE LOCAL GENERAL AREA LIGHTING WHEN THE MAINS SUPPLY IS AVAILABLE. WHEN THE MAINS SUPPLY IS NOT AVAILABLE THE LAMP IS TO BE SWITCHED ON, SUPPLIED BY THE EMERGENCY PACK. (THE LAMP IS ON WHEN TURNED ON WITH THE LOCAL GENERAL LIGHTING OR THE MAIN SUPPLY IS NOT AVAILABLE.)

7.0 COMMUNICATIONS CABLING

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES NEW COMMUNICATION CAT 6 RJ45 OUTLETS CABLED TO MODULAR PATCH PANELS IN THE EXISTING COMMUNICATIONS RACK CR-LP VIA CAT 6 UTP CABLING.

PROVIDE THE STRUCTURED CABLING SOLUTION TO MATCH THE EXISTING USED ACROSS THE SITE AND PROVIDED IT WITH A MANUFACTURERS 15 YEAR WARRANTY.

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING EXTENT OF WORK:

- CAT 6 COMMUNICATIONS OUTLETS.
- CAT 6 CABLING.
- MODIFICATIONS TO COMMUNICATIONS RACK CR-LP TO ACCOMMODATE THE NEW PATCH PANELS.
- PATCH PANELS.
- FACTORY TERMINATED HDMI CABLES.
- LABELLING.
- TESTING AND COMMISSIONING.

ALL COMMUNICATIONS CABLING IS TO BE UNDERTAKEN BY AN ACMA LICENCE HOLDER. THE PATCH LEADS, FLY LEADS, POE SWITCH AND UPS WILL BE PROVIDED BY THE SCHOOL.

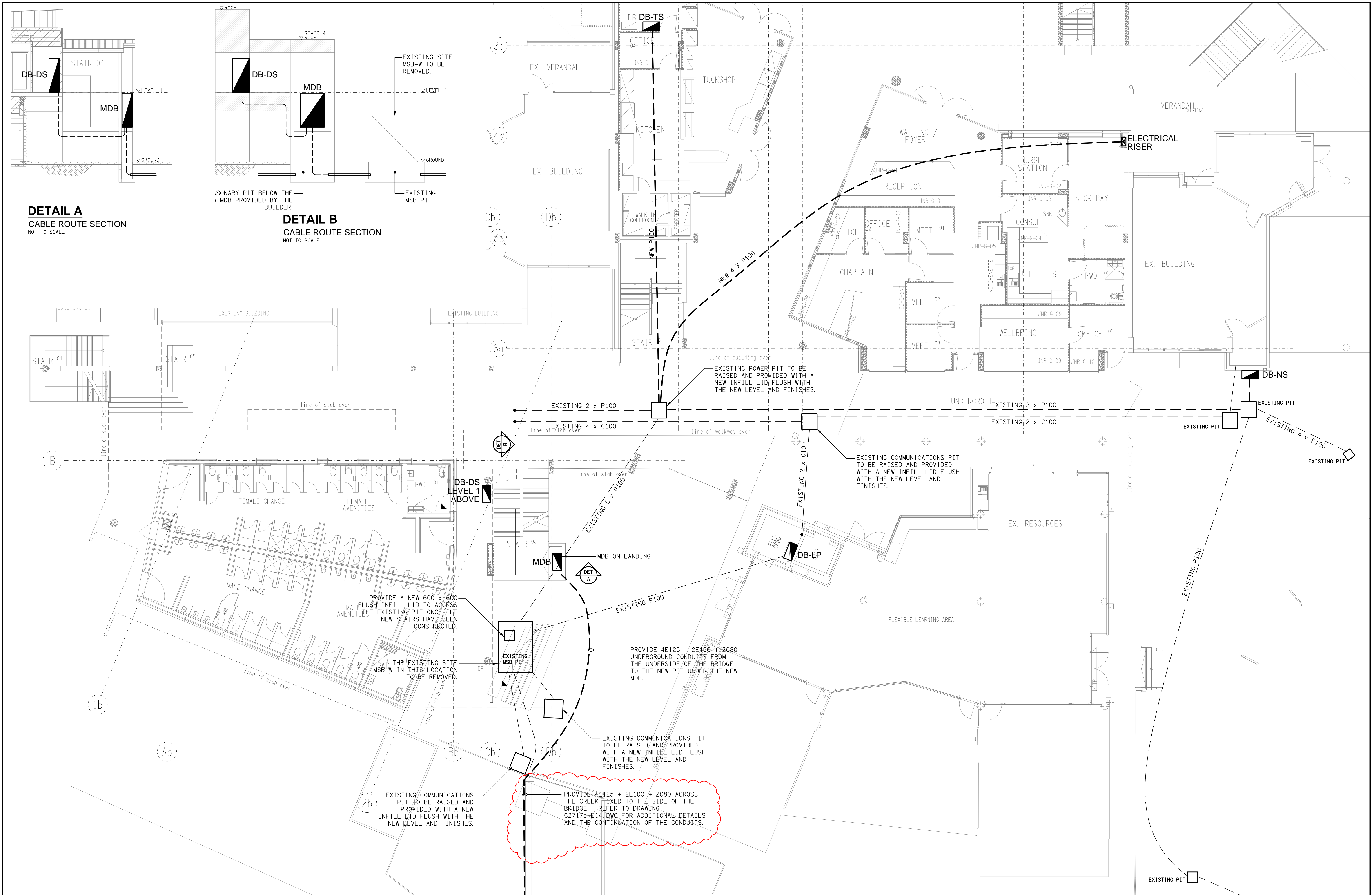
8. ABBREVIATIONS

- A - AMP CURRENT RATING
- AB - MOUNT ABOVE BENCH.
- AFFL - ABOVE FINISHED FLOOR LEVEL.
- BB - MOUNT BELOW BENCH.
- BH - MOUNT ON BULKHEAD.
- CEIL - MOUNT ON CEILING.
- CS - MOUNT WITHIN CEILING SPACE.
- C/W - COMPLETE WITH.
- DR - DRYER.
- DW - DISHWASHER.
- MCB - MINIATURE CIRCUIT BREAKER.
- MCCB - MOLDED CASE CIRCUIT BREAKER.
- MDB - MAIN DISTRIBUTION BOARD.
- MEN - MULTIPLE EARTH NEUTRAL LINK.
- MSB - MAIN SWITCHBOARD.
- MSSB - MECHANICAL SERVICES SWITCHBOARD.
- MW - MICROWAVE.
- N - NEON / LED INDICATOR WHEN ON.
- NTS - NOT TO SCALE.
- OV - OVEN.
- RCBO - CIRCUIT PROTECTED VIA A 30ma RESIDUAL CURRENT DEVICE INTEGRAL TO THE CIRCUIT BREAKER.
- REF - REFRIGERATOR.
- UNO - UNLESS NOTED OTHERWISE.
- WM - WASHING MACHINE.
- WP - WEATHERPROOF TO IP56 UNO.
- 500 - NUMBER DENOTES MOUNTING HEIGHT AFFL.

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												REV: DESCRIPTION: DATE:	
TRADING AS: ELECTRICAL DESIGN GROUP												DRAWING: ELECTRICAL SERVICES NOTES	
												SCALE: NOT TO SCALE AT A1	
												PROJECT NO: C2717a	
												DRAWING NO: E02	
												REVISION: D	

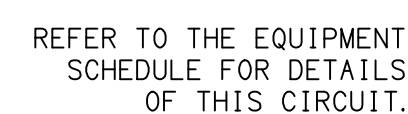
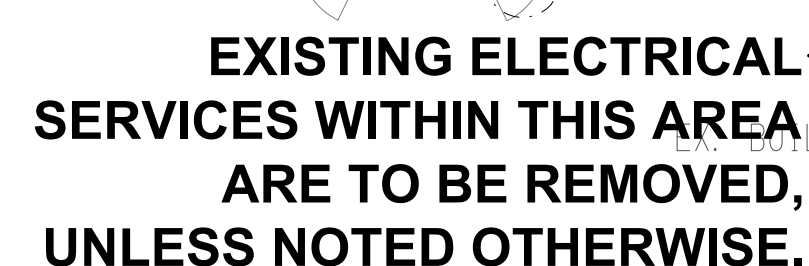


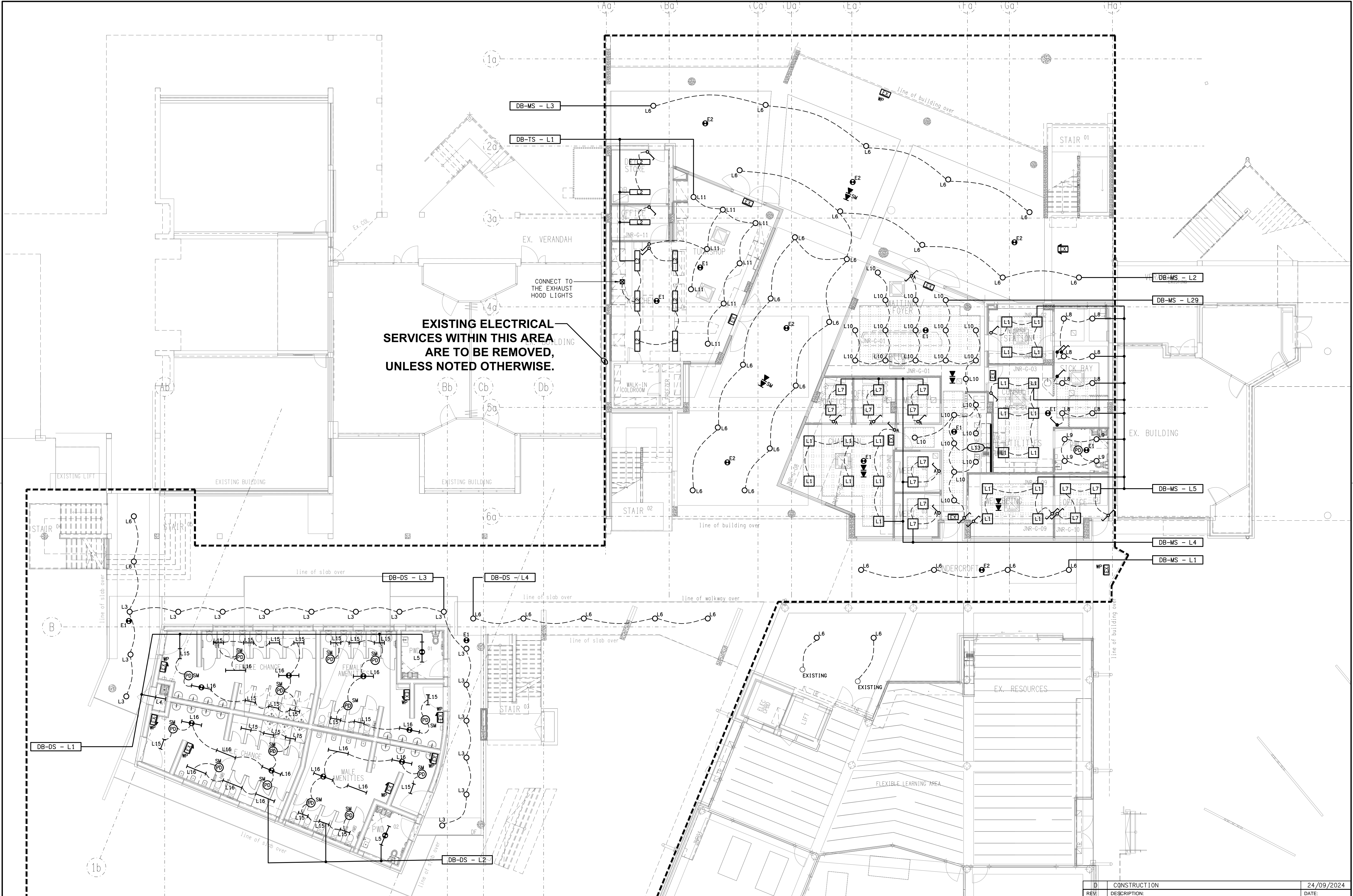
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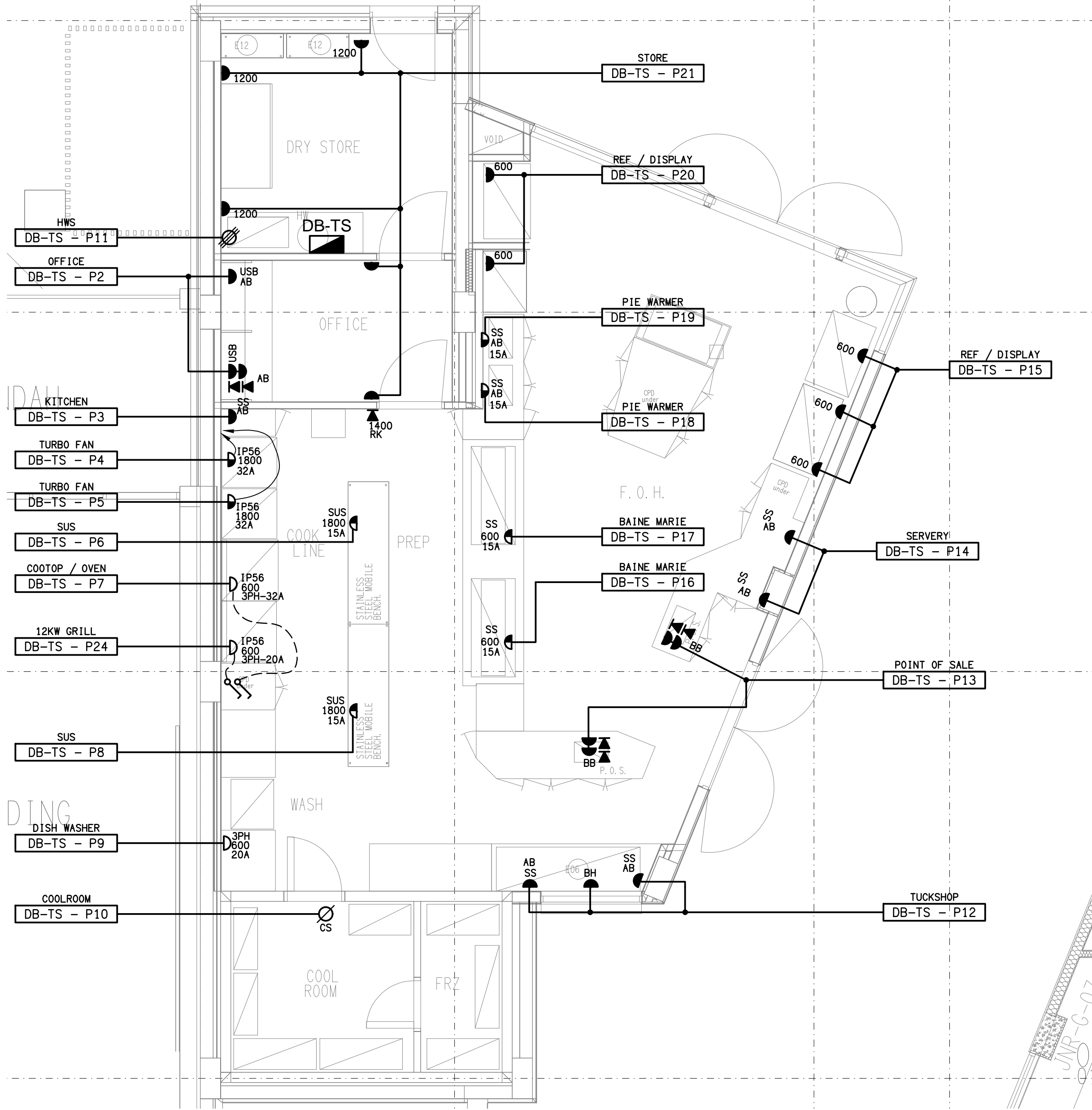


DETAIL A
CABLE ROUTE SECTION
NOT TO SCALE

DETAIL B
CABLE ROUTE SECTION
NOT TO SCALE

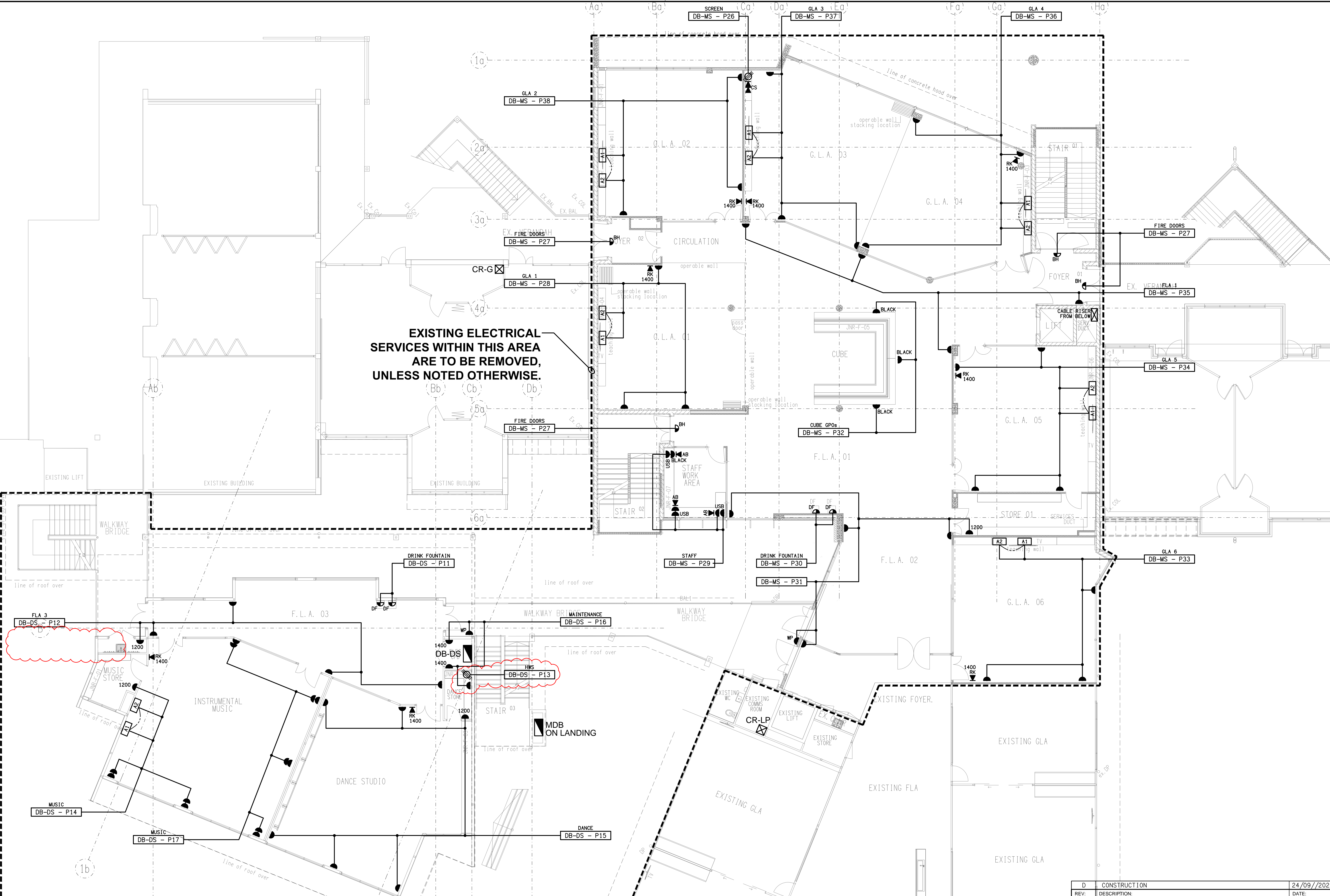






TUCKSHOP
GROUND LEVEL FLOOR PLAN
SCALE 1:50

NOTE:
CORRUGATED CONDUIT MUST NOT BE USED
IN THE KITCHEN OR SERVERY AREAS.





— FIRE CURTAIN CONTROL
PANELS AND ASSOCIATE
POWER OUTLETS AT HIGH
LEVEL AS PER THE FIRE
CURTAIN SCHEMATIC.

NEW	REWORK	OWNER
DRAWING:		
ELECTRICAL SERVICES LEVEL 1 REFLECTED CEILING PLAN		

SCALE: 1:100	AT A1	PROJECT NO: C2717a	DRAWING NO: E10	REVISION: E
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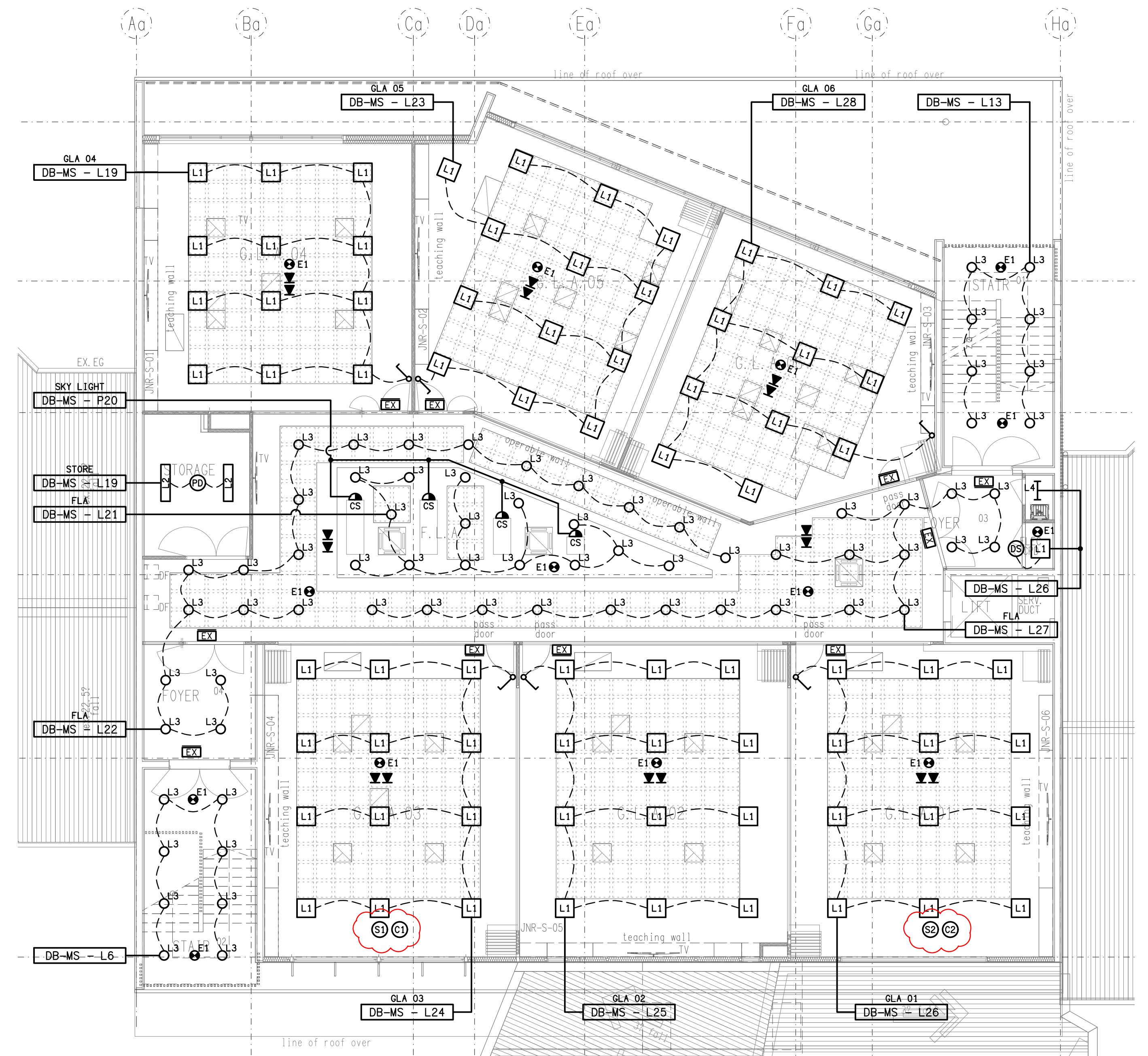
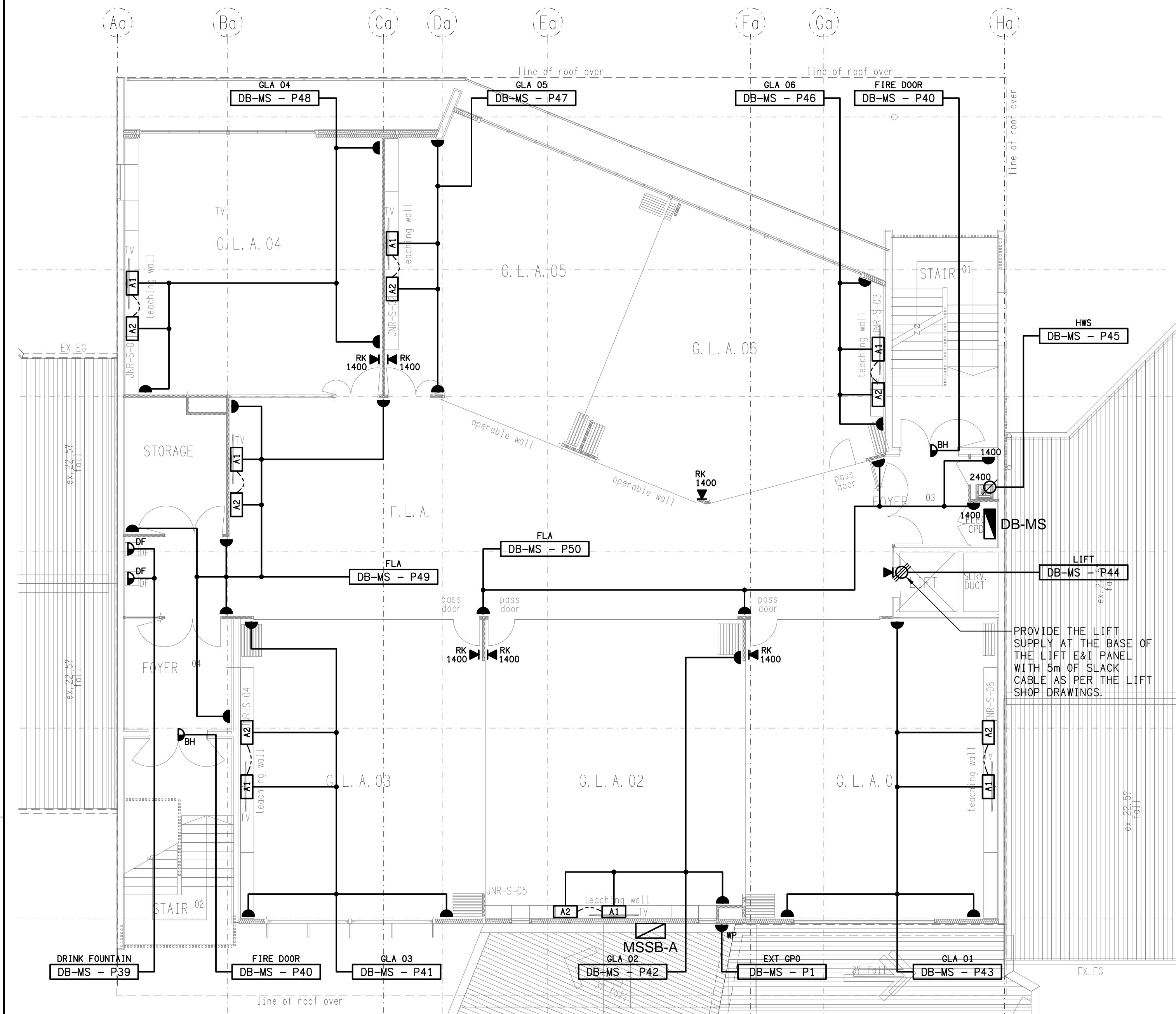
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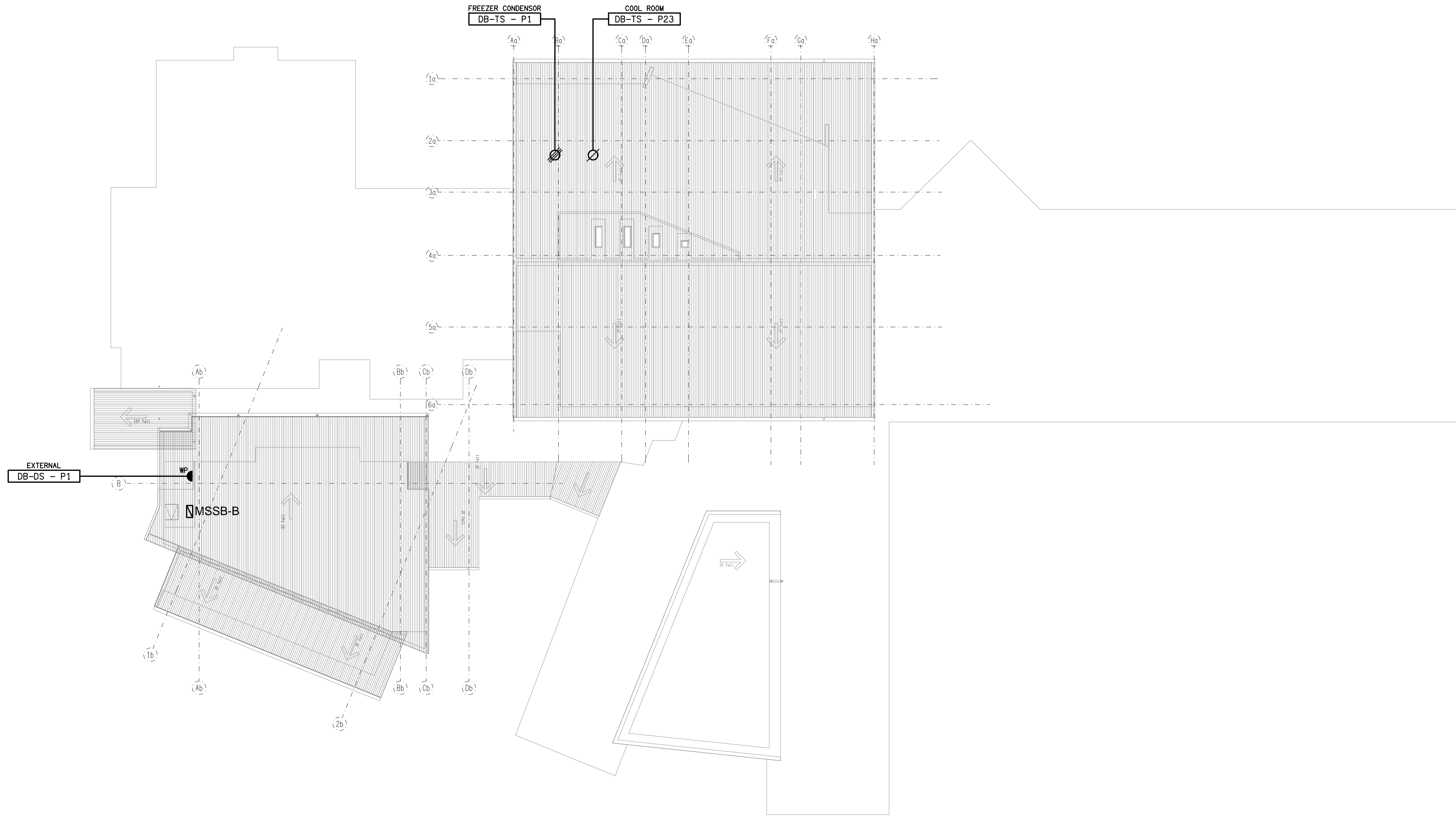
68 GEMVALE ROAD, REEDY CREEK, QUEENSLAND

DRAWING: ELECTRICAL SERVICES LEVEL 1 REFLECTED CEILING PLAN			
SCALE: 1:100	AT A1	PROJECT NO: C2717a	DRAWING NO: E10
		REVISION: E	



NOTE

ALL ELECTRICAL PENETRATIONS THROUGH THE ROOF SHEETING ARE TO BE IN LINE WITH THE STRUCTURAL OR MECHANICAL SERVICES PENETRATIONS TO AVOID DEDICATED FLASHINGS FOR THE ELECTRICAL SERVICES.



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PROJECT:
KINGS CHRISTIAN COLLEGE - REEDY CREEK
GLAS & STUDENT SERVICES KCC49

68 GEMVALE ROAD, REEDY CREEK, QUEENSLAND

D	CONSTRUCTION	23/09/2024
REV.	DESCRIPTION:	DATE:

DRAWING:
ELECTRICAL SERVICES
ROOF LEVEL PLAN

SCALE:
1:200

AT A1

PROJECT NO:
C2717a

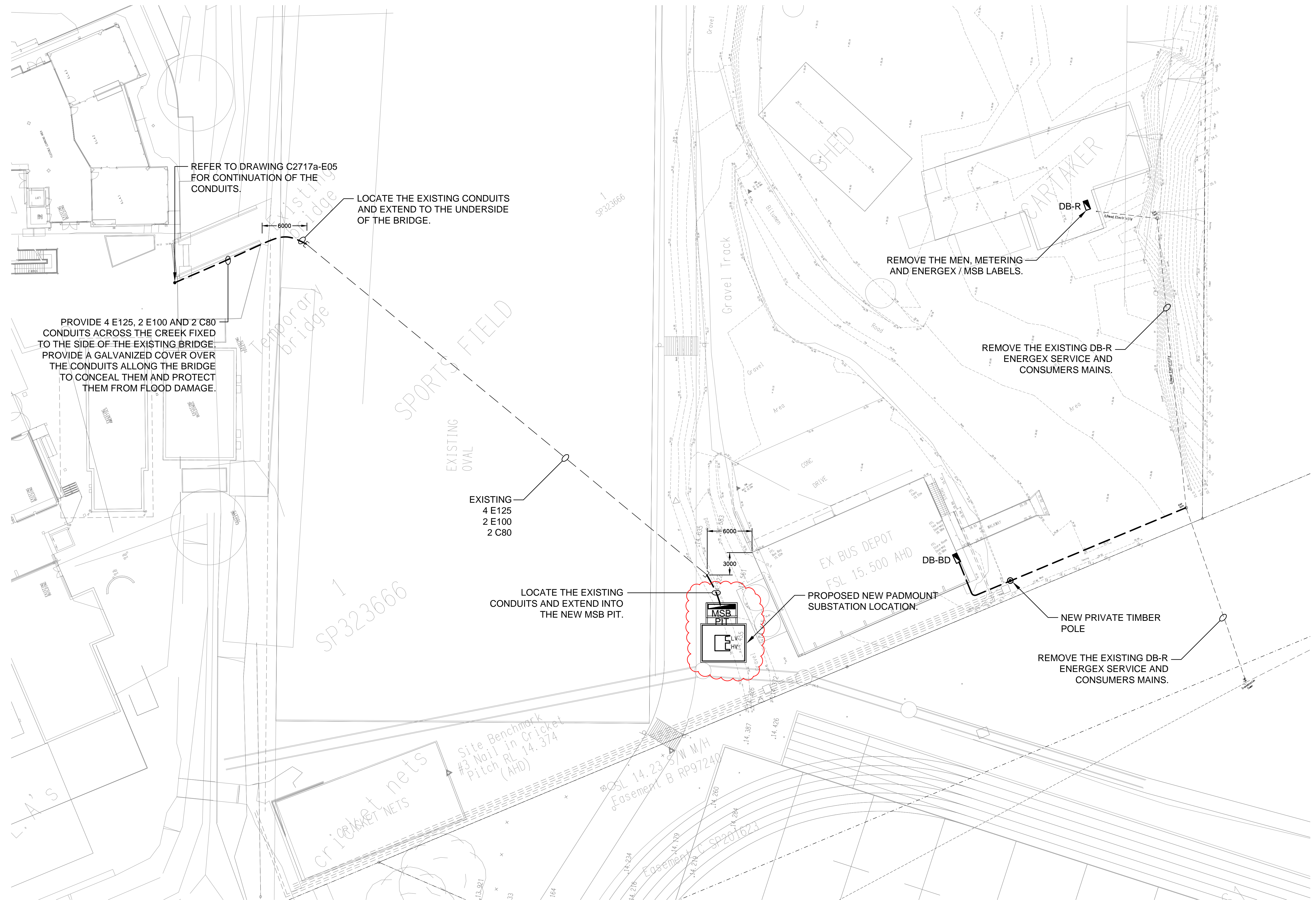
DRAWING NO:
E12

REVISION:
D



- WALL MOUNTED.
- TOP AND BOTTOM ENTRY CABLE ACCESS.
- IP44.
- LIGHT GREY ENCLOSURE WHITE ESCUTCHEON.
- 3 POINT LOCKABLE HANDLES ON ALL DOORS.
- LIFT OFF HINGES ON ALL DOORS AND ESCUTCHEONS.
- 1/4 TURN LATCHES AND D HANDLES ON ALL ESCUTCHEONS.
- ALL SWITCHGEAR TO BE SCHNEIDER OR NHP/ TERASAKI.
- PROVIDE EACH DB WITH A REMOVABLE HAT SECTION THE SAME WIDTH DEPTH AND COLOUR AS THE DB FROM THE UNDERSIDE OF THE DB TO THE FLOOR AND THE TOP OF THE DB TO THE CEILING ABOVE TO PROVIDE CABLE ACCESS FROM THE DB TO THE FLOOR AND THE CEILING SPACE. PROVIDE THE HAT SECTIONS WITH A CONCEALED VERTICAL CABLE TRAY.
- PROVIDE SHOP DRAWINGS FOR APPROVAL.

D	CONSTRUCTION	24/09/2024
REV:	DESCRIPTION:	DATE:
DRAWING: ELECTRICAL SERVICES POWER SCHEMATICS		
SCALE: NOT TO SCALE AT A1	PROJECT NO: C2717a	DRAWING NO: E13
		REVISION: D



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PROJECT:
**KINGS CHRISTIAN COLLEGE - REEDY CREEK
GLAs & STUDENT SERVICES KCC49**

68 GEMVALE ROAD, REEDY CREEK, QUEENSLAND

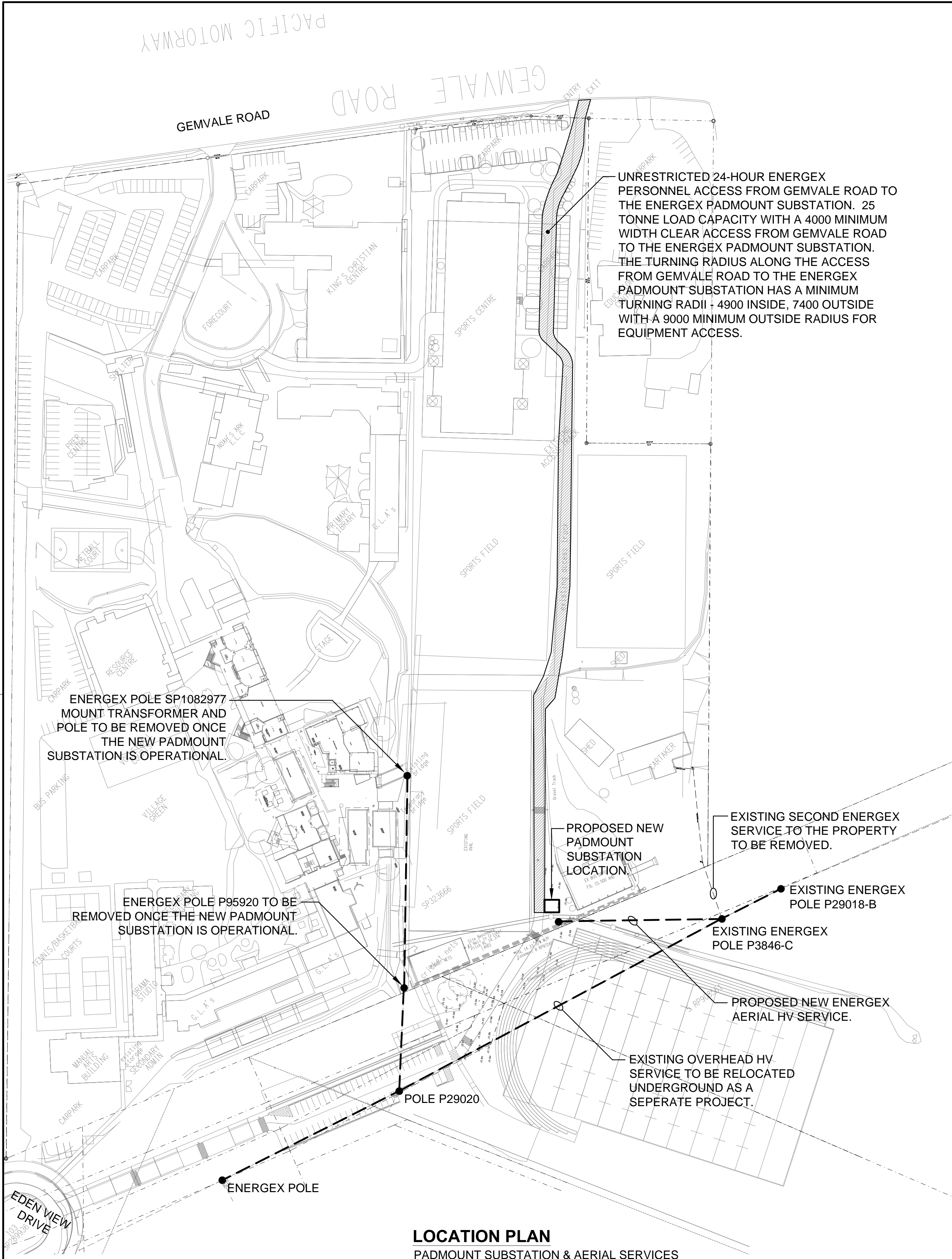
D	CONSTRUCTION	29/11/2024
REV:	DESCRIPTION:	DATE:

DRAWING:
**ELECTRICAL SERVICES
EXISTING OVAL CONDUIT & CABLING PLAN**

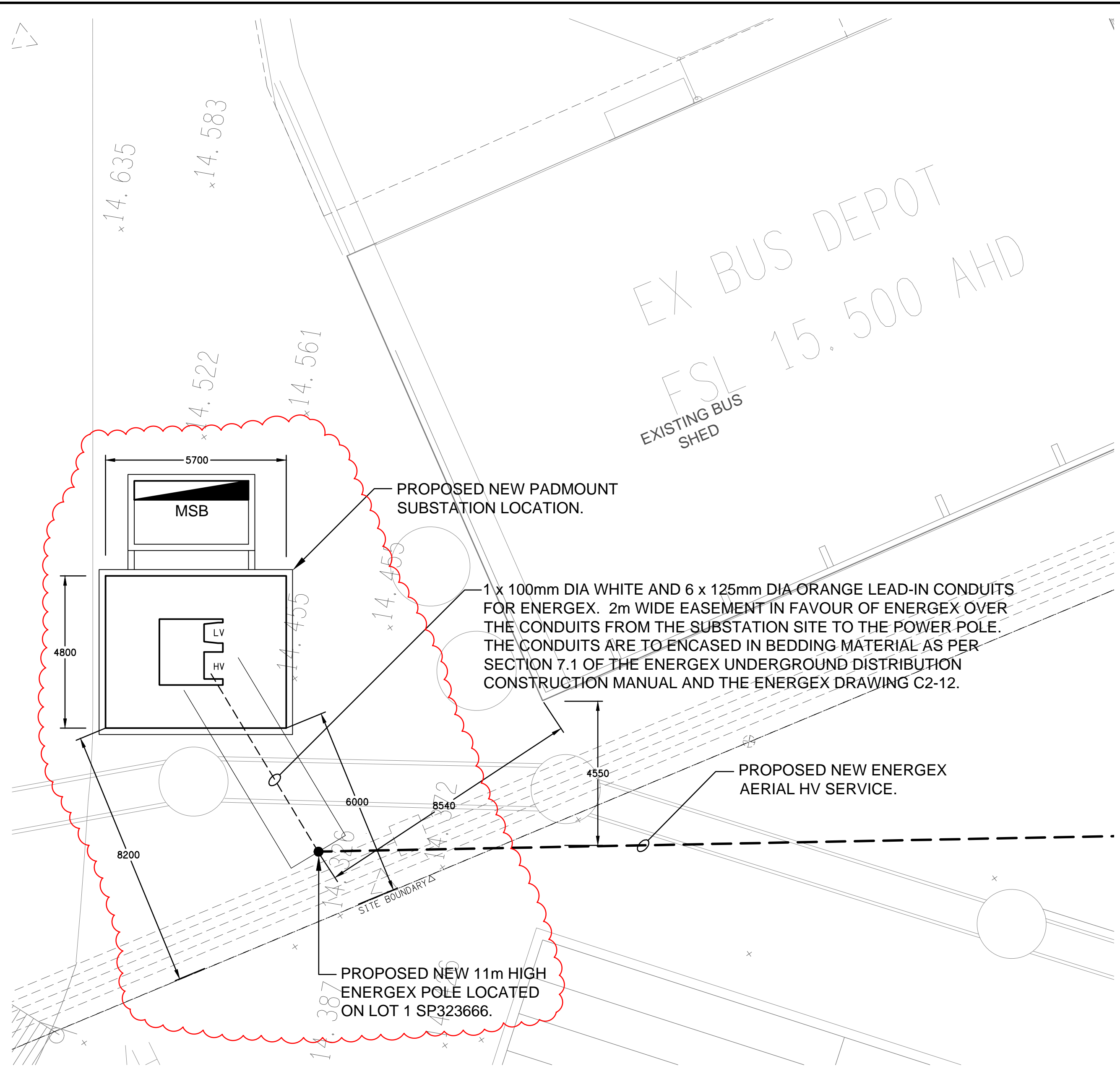
SCALE:
1:250

AT A1

PROJECT NO:
C2717a
DRAWING NO:
E14
REVISION:
D



LOCATION PLAN
PADMOUNT SUBSTATION & AERIAL SERVICES
SCALE 1: 1000



DETAIL
PADMOUNT SUBSTATION & AERIAL SERVICE
SCALE 1: 100

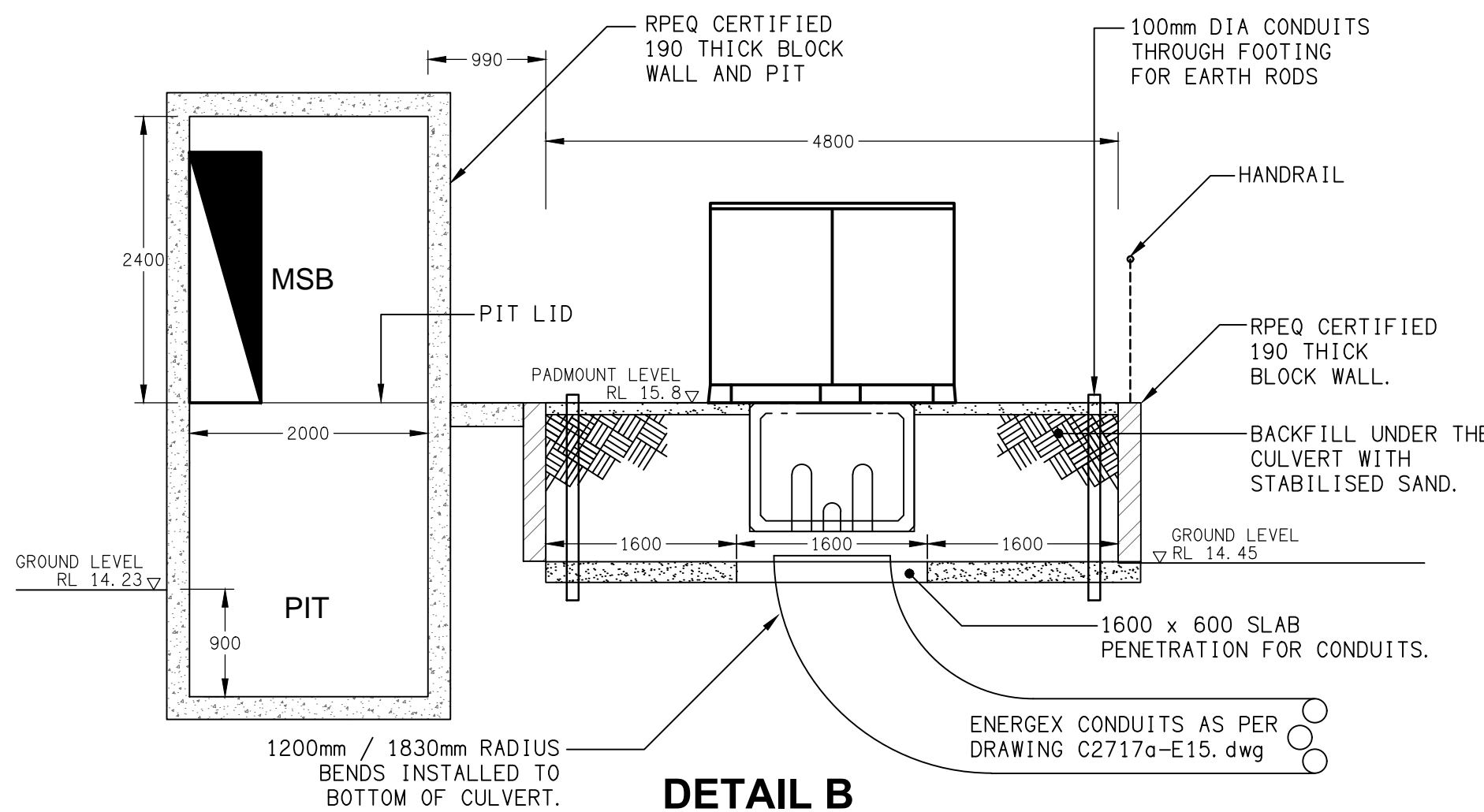


ENERGEX ACCEPTANCE	
NAME
OFFICE
SIGNED
DATE	/ /
ENERGEX takes no responsibility for	

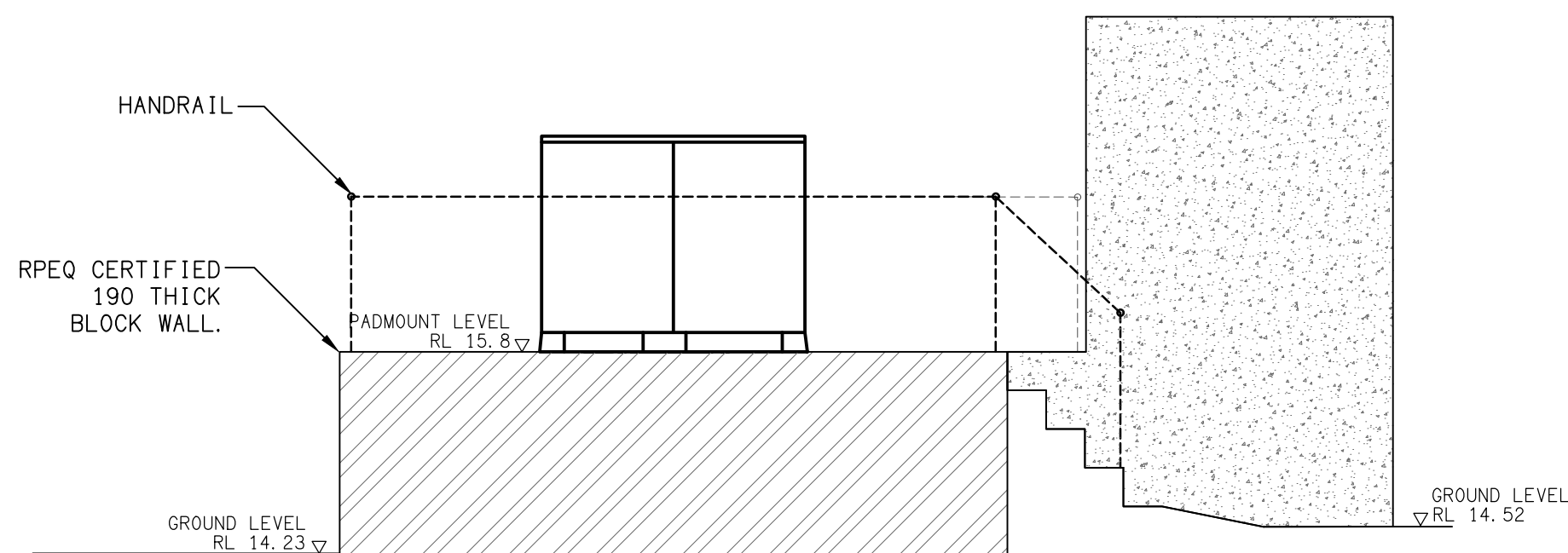
NOTES:

- DEFINED FLOOD LEVEL RL 15.3 AHD.
- PADMOUNT SUBSTATION RL 15.8 AHD.
- FOR ALL ENERGEX RELATED CONSTRUCTION QUERIES THE ELECTRICAL DESIGN GROUP ON (07) 3278 4375 IS THE FIRST POINT OF CALL.
- THERE ARE NO HYDRANTS WITHIN 20m OF THE PADMOUNT SUBSTATION.
- THERE ARE NO TELSTRA / NBN PITS OR PILLARS WITHIN 2m OF THE PADMOUNT SUBSTATION.
- NO OTHER SERVICES ARE TO PASS THROUGH OR UNDER THE 4800 x 5700 PADMOUNT SUBSTATION SITE.
- THE PADMOUNT SUBSTATION SITE IS TO BE INSPECTED BY AND HANDED TO ENERGEX AT LEAST 6-WEEKS PRIOR TO THE DATE SUPPLY IS REQUIRED.
- THE ELECTRICAL SUBCONTRACTOR IS TO BACKFILL AND COMPACT THE PADMOUNT SUBSTATION SITE AFTER ENERGEX WORKS ARE COMPLETE.
- FOLLOWING BACKFILLING AND COMPACTION THE ELECTRICIAN IS TO PROVIDE THE SUBSTATION CONCRETE SURROUND AS PER THE ENERGEX SPECIFICATION.
- CIVIL RPEQ FORM 15 CERTIFICATION TO BE PROVIDED FOR THE MSB AND SUBSTATION RETAINING WALL DESIGN.
- CIVIL RPEQ FORM 15 CERTIFICATION TO BE PROVIDED FOR THE MSB AND SUBSTATION RETAINING WALL CONSTRUCTION.

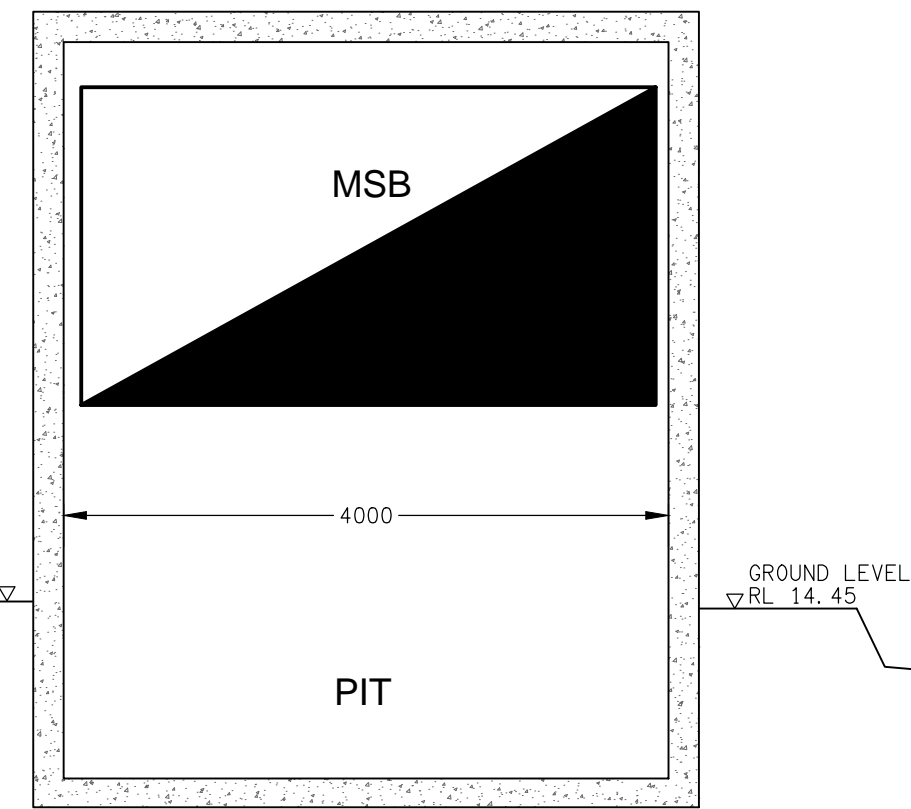
PART SITE PLAN
MSB PADMOUNT LOCATION
SCALE 1:250



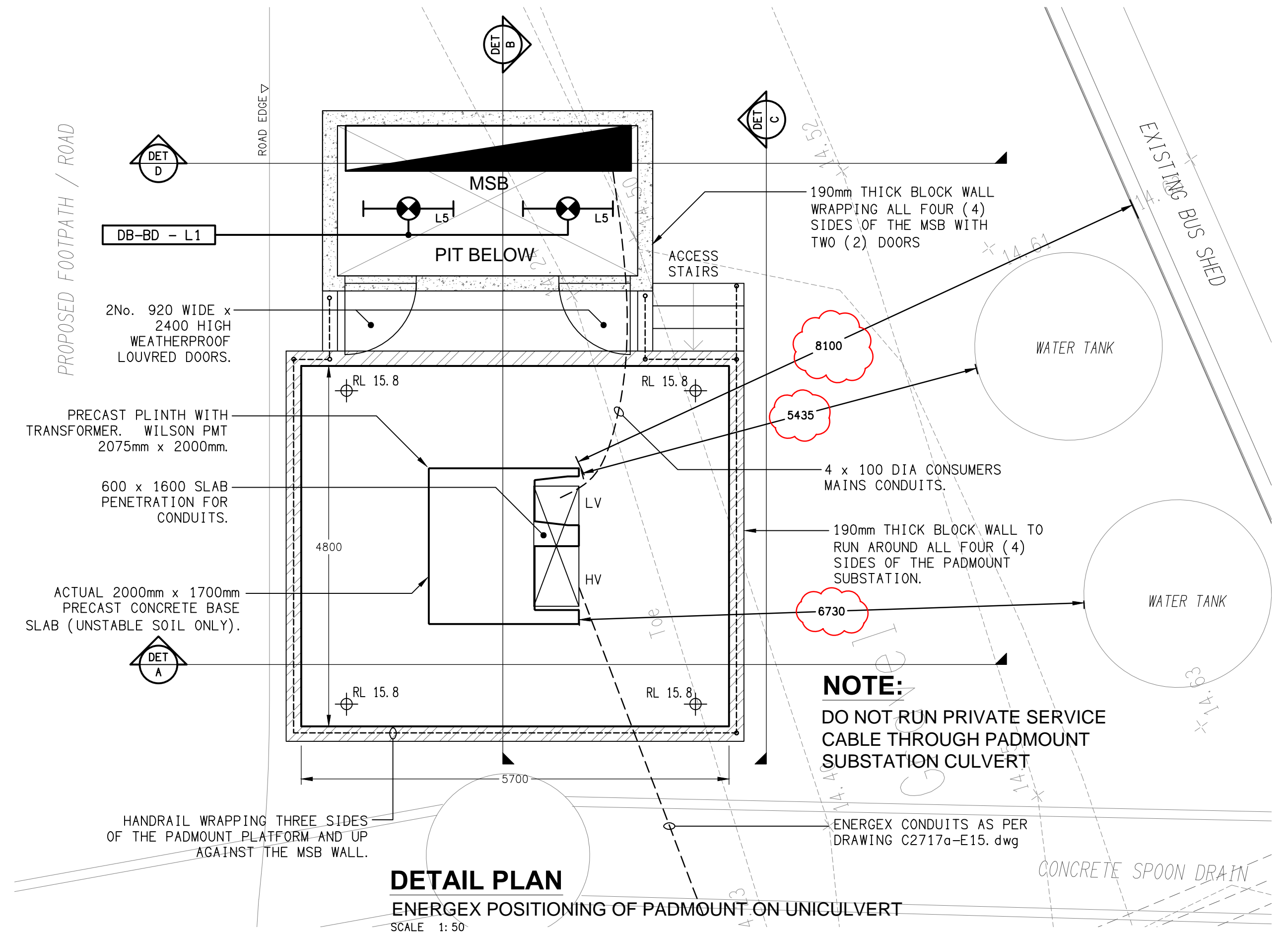
DETAIL B
PADMOUNT SECTION VIEW
SCALE 1:50



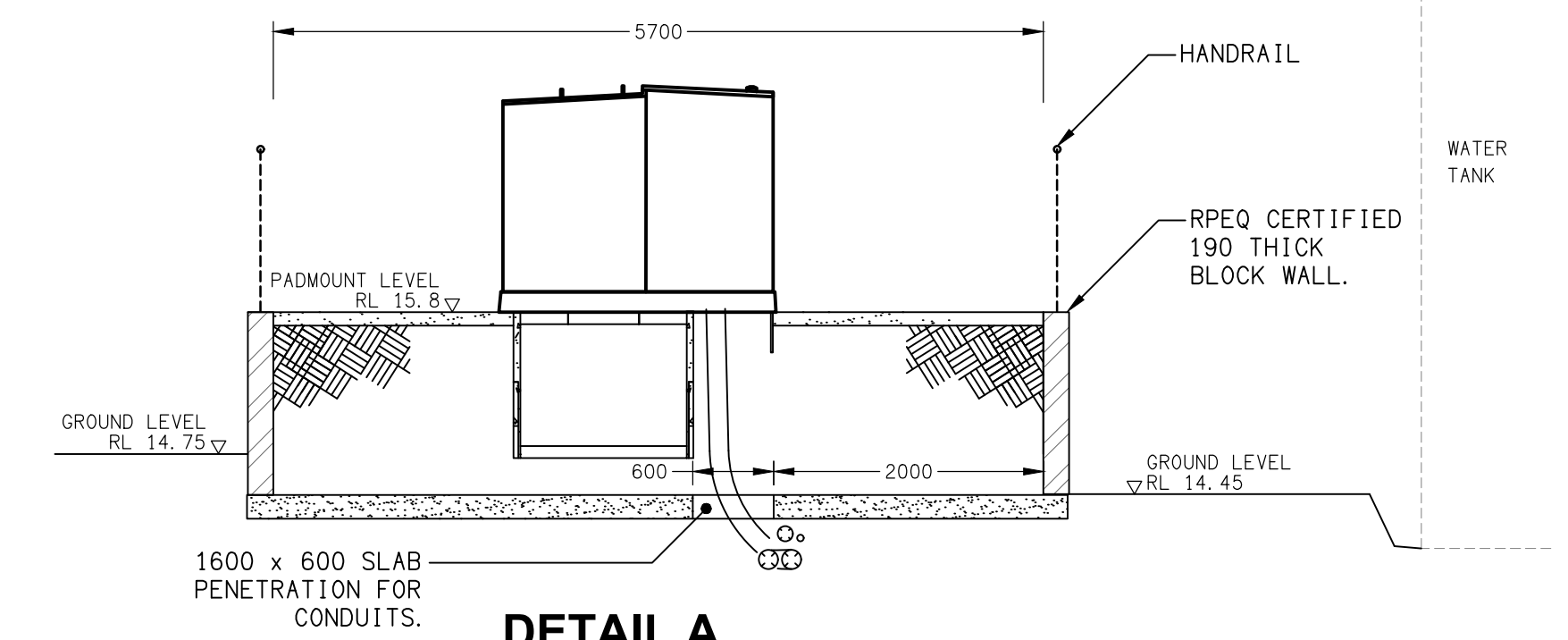
DETAIL C
PADMOUNT SECTION VIEW
SCALE 1:50



DETAIL D
MSB & PIT SECTION VIEW
SCALE 1:50



DETAIL PLAN
ENERGEX POSITIONING OF PADMOUNT ON UNICULVERT
SCALE 1:50



DETAIL A
PADMOUNT SECTION VIEW
SCALE 1:50

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CONTACT: MATTHEW RITCHIE PH: 0409766249 EMAIL: matthewritchie@energex.com.au
TRANSFORMER WILL NOT BE ENERGISED UNTIL ALL REQUIREMENTS ARE MET.

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PROJECT:
**KINGS CHRISTIAN COLLEGE - REEDY CREEK
GLAS & STUDENT SERVICES KCC49**

68 GEMVALE ROAD, REEDY CREEK, QUEENSLAND

DRAWING:
**ELECTRICAL SERVICES
ENERGEX PADMOUNT SUBSTATION PLAN**

SCALE: AS NOTED AT A1 PROJECT NO: **C2717a** DRAWING NO: **E16** REVISION: **E**



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DATE / /

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NOTE:

- ENERGEX's padmount clearance zone shall be levelled and surrounding area graded to ensure no water ponding.
- No services other than the ENERGEX's electric cables shall pass through this substation site.
- Clear access to the transformer shall be maintained for ENERGEX's personnel and heavy equipment.
- After installation is complete the site surface is to be finished with a concrete slab.
- Mature landscaping (including trees, sprinklers etc.) shall not encroach onto the substation site.
- Cut and fill levels greater than 150mm will require a Civil RPEQ certified design to ensure levels, compaction standards, drainage have been considered, Sites requiring retaining walls shall be designed in accordance with C3-2.6.

SITE PREPARATION DETAIL

REQUIRED TASKS	DATE COMPLETED	CHECKED BY
CUSTOMER RESPONSIBILITIES	YES	NO
24 HOUR ACCESS PROVIDED.		
PADMOUNTED SUBSTATION SITE IS LEVEL.		
PADMOUNTED SUBSTATION SITE SIZE - 5.7M x 4.8M		
RETAINING WALLS (INCL. RPEQ APPROVAL IF REQUIRED).		
PADMOUNTED SUBSTATION SITE IS CLEAR OF ALL SERVICES.		
CORRECT FOUNDATION INSTALLED.		
CONDUITS ARE INSTALLED (INCLUDING BUNGS & DRAW WIRES)		
CONDUITS TRENCHES BACKFILLED & COMPACTED.		
FENCES INSTALLED.		
HAVE 2000mm DEDICATED CLEAR ZONE IN FRONT OF PLINTH.		
CUSTOMER RESPONSIBILITIES PRIOR TO COMMISSIONING		
SITE BACKFILLED & COMPACTED (INCLUDING UNDER PLINTH)		
BOUNDARY SURROUND & SITE SURFACE CONCRETED.		
AREA SUITABLY DRAINED (NO PONDING)		
SITE CLEANED-UP NEATLY.		

NOTE: x if applicable.

NOTE:

- Foundation design details are as follows:
 - Unstable soils are soft clay to sandy gravel with a soil strength 50 - 150 kPa. These soil types REQUIRE a base slab as shown.
 - Stable soils are very stiff clay to shale/rock with soil strength of 150KPa or higher. These soil types DO NOT REQUIRE a base slab.
- Lift unculvert & base slab separately with 4 x 1.3t Reid Swiftlift lifting eyes.
- Position top face of Unculvert at finished ground level. (refer Civil Constructions drawings)
- Installed Unculvert shall be level.
- If deep excavation is required under transformer cabinet and in front of foundation, plinth front edge shall be propped while excavation remains open.
- Foundation Components:
 - 1 x Unculvert (Stock Code 19959)
 - 2 x End Walls (Stock Code 19959)
 - 1 x Base Slab (Stock Code 19960)
 - Unculvert and End Walls come assembled with a Layer of Preformed Sealant to the perimeter of the Unculvert End and between the Mating Surfaces.
- Only remove minimum Knockout Area required to pass Conduits (Max. Conduit 150mm Nom. Dia.) or Cables through unculvert void by tapping out Concrete.
- Seal between conduits/cables and concrete and wall at knockout interface by grouting with high strength sand and cement grout after conduit installation to prevent entry of vermin and backfill ingress to unculvert void.
- Excavate to property boundaries to facilitate installation of earth grid.
- Consumers mains (where present) shall not cross HV mains or run back under transformer.

FOUNDATION DETAIL

NOTE:

- Backfill excavated area with crusher dust, deco or silt sand and compact in place. Ensuring that only pit sand is used around direct laid cables.
- Reinforced concrete surround slab:
 - a) 100/125mm thick slab;
 - b) 11 TM trench mesh reinforcement in centre of slab;
 - c) 25 MPa grade concrete;
 - d) Finish by wood float or by nylon broom.
- The top face of the concrete surround slab shall be 25mm above the final surface level (when tuff is laid).
- The concrete slab is to slope away from plinth falling at a slope of 1 in 25.
- Cable apertures through the precast concrete plinth shall be backfilled to 50mm from the top of plinth. A 30mm deep layer of 1:1.5 ratio weak mix concrete shall be placed to seal aperture.
- The surface of the surround slab may be finished with a stencil pattern surface to match the surrounding pavements of the development. (Use testcrete or equivalent product. Construct to supplier's specifications.)

REINSTATEMENT DETAIL

Cable conduit shall be of the following type;
125mm Dia UPVC Light Duty Rigid Pressure pipe to AS/NZS2053. Conduit bends shall have a Minimum radius of 1830mm.

The conduits shall be laid in a straight line with sealed joints. Should any deviation be required in conduit route, 1830mm radius bends shall be used. Bends shall not be greater than 30 degrees. Cable pits shall be used for greater deviations. Refer to ENERGEX Planner for details.

The conduits shall have 750mm minimum cover and shall be bedded on compacted sand or fine granular soil free of rocks. The socket ends of conduits shall finish 150mm beyond the R.P. alignment and shall have 750mm min cover below finished footpath level at the R.P. alignment.

A bellmouth shall be provided where the conduits terminate in the substation wall or wall of a substation trench. A 2.5mm plastic coated steel draw wire or 6mm braided Polypropylene Rope "BORAL KA10850" shall be installed in each conduit (1kN min. breaking strength).

Because of the physical distortion likely in large groups of buried UPVC conduits, High Density conduits shall be used for groups of more than 6 conduits. Conduits shall be 125mm or 150mm as specified by ENERGEX and shall be supplied and installed by the developer. Conduits shall be securely sealed by builder to prevent ingress of dirt until cable installation by ENERGEX and then resealed by ENERGEX.

ENERGEX may need to install an earth wire and earth rods in conduit trenches from the substation site.

Electricity Supply Conduits and Cables shall have polymeric cable protection covers placed 100mm above the top conduit face of the electricity supply conduits and cables. Cable protection cover strips shall be lapped when placed together; 100mm minimum along the longitudinal axis, 40mm minimum along the traverse axis and shall extend 40mm minimum past the external edges of the conduit/cable bank.

Polymeric cable protection cover shall be a minimum of 5mm thick as described in Australian Standard; AS/NZS 4702 for Polymeric Cable Protection Covers.

TYPICAL TRENCH CROSS SECTION FOR ENERGEX CONDUITS IN PRIVATE PROPERTY

Note

ENERGEX will not commission the transformer until the transformer site has been completed to ENERGEX specifications (including the concrete surround).

ENERGEX specifications for construction of the transformer site and installation of conduits on private property are available at the following web address.
https://swp.energex.com.au/service_providers/technical_docs/asp/technical_documents.asp

Underground Distribution Construction Manual 00305 v16
Section C1 - Conduits
Section C2 - Excavations & Reinstatements
Section C3 - Padmount Transformer Sites

Commercial and Industrial Substations Manual 00293 v11
Section 14 - Drawing 11040-A4-14-33 Sht 2

The site contractor is to refer all substation construction queries to their electrical consultant.

TYPICAL CIVIL WORKS - RETAINING WALLS

TYPICAL STEEL POST MOUNTING - FENCING

ENERGEX ACCEPTANCE

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CONTACT: MATTHEW RITCHIE PH: 0409766249 EMAIL: matthewritchie@energex.com.au

TRANSFORMER WILL NOT BE ENERGISED UNTIL ALL REQUIREMENTS ARE MET.

ELECTRICAL DESIGN GROUP

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PROJECT:
**KINGS CHRISTIAN COLLEGE - REEDY CREEK
GLAS & STUDENT SERVICES KCC49**

68 GEMVALE ROAD, REEDY CREEK, QUEENSLAND

E	ENERGEX APPROVAL	17/01/2025
REV:	DESCRIPTION:	DATE:
DRAWING:	ELECTRICAL SERVICES ENERGEX PADMOUNT SUBSTATION STANDARD DETAILS	
SCALE:	PROJECT NO:	DRAWING NO:
NOT TO SCALE AT A1	C2717a	E17
		REVISION: E

ENERGEX SPECIFICATION

1.0 INTRODUCTION

This specification caters for padmounted transformer stations on customers premises within property and not fronting road reserve.

Padmounted transformer foundations to be built according to site sketch and design standards contained in this document.

It is the responsibility of the customer’s consultant to ensure that the information contained herein is passed on to the relevant contractors.

2.0 NEGOTIATIONS BETWEEN ENERGEX AND CUSTOMER

- 1. An application is made to ENERGEX giving information with regards to the size and type of load, site plans and drawings, and the location of the required supply.
- 2. If a substation is required, the substation site is agreed upon by ENERGEX and the customer.
- 3. ENERGEX accepts a site sketch detailing the substation construction details, specification, standard drawings (An RPEQ approved drawing may be required for structural plans).
- 4. ENERGEX prepares a Network Connection Contract with a request for payment (if required). Customer to accept Network Connection Contract and returns with any payment required.
- 5. Customer excavates PMT site, installs foundation and conduit trenches.
- 6. Customer leaves PMT site and conduit trench open for ENERGEX inspection as required..
- 7. ENERGEX inspects PMT site and conduit installation.
- 8. ENERGEX installs earthing and PMT cubicle
- 9. Customer installs their LV consumers mains
- 10. Customer reinstates PMT surface with concrete apron surround
- 11. ENERGEX energizes substation providing that:
 - a. Customer responsibilities are fulfilled.
 - b. All payments have been received (including storage fee if applicable).
 - c. ENERGEX has a signed Network Connection Contract.
 - d. ENERGEX easements secured (if required).

3.0 BUILDING GENERAL

3.1 Building Services:-

No services other than ENERGEX’s electric lines and approved parts of the customer’s electrical mains shall pass through or under the substation area.

3.2 Workmanship:-

Building work shall be completed in a neat tradesman like manner and shall be as detailed on the drawings.

3.3 Construction:-

All civil construction works must be undertaken in accordance with the requirements specified in ENERGEX Work Category Specification WCS61 "Underground Civil Construction".

The padmounted transformer site shall be prepared by the customer. An access area of 4800mm x 5700mm is required for cabling, earthing, installation and safe operation of apparatus. Proposed overhangs must be approved by Energex & be greater than 5.0m above padmount site.

The transformer site shall be above the local flood level (Q100/DFL which ever is higher) with the top of the concrete plinth 25mm above the finished yard level. Cable apertures through the precast concrete plinth shall be backfilled to 50mm from the top of plinth.

The concrete slab is to slope away from plinth falling at a slope of 1 in 25.

The transformer site shall be level ±25mm with a maximum cut and fill of ±150 mm and shall be concreted in accordance with ENERGEX Underground Distribution Construction Manual Sect C3.

Concrete filled 140mm OD 5.6mm thick galvanised steel pipes may be required outside the site for protection from vehicles in car parks, etc. Refer to ENERGEX Underground Distribution Construction Manual Section C3.

For a steep sloping site a retaining wall and guard rail will be required to be constructed by the customer. Refer to ENERGEX Underground Distribution Construction Manual.

4.0 ACCESS

4.1 Personnel:-

ENERGEX’s staff shall have access to the substation at all times without having to enter security areas. The onus will be on the customer to maintain said access 24 hours a day, 7 days a week.

A minimum of 2.0 metres of clear access shall be provided in front of the substation cabinet. This will provide a safe working platform and access around the lockable doors when opened for emergency operations.

4.2 Heavy Equipment – Stable Ground Sites:-

Padmounted transformers are hauled by flat bed trucks and "Franna" style mobile cranes.

Any access or manoeuvring area which will be used for the purpose of off loading or loading transformers should be constructed to take a minimum loading of 31 tonnes in all weather conditions.

The headroom along the access route is required to be 5.0m with no obstructions over the crane manoeuvring area. The width of access required for reasonably straight routes should be increased on bends and in the manoeuvring area near the substation equipment access door required for the off loading of the transformer from the truck by the mobile

Any reinstatement which may be necessary in the event of damage to concrete slab, paving tiles or road surfaces etc. is the responsibility of the owner of the property.

5.0 CABLE CONDUITS

All conduits, associated fittings and bends shall comply with the requirements of AS/NZS 2053 as specified by ENERGEX and shall be supplied and installed by the developer. Conduits shall be securely sealed by builder to prevent ingress of dirt until cable installation by ENERGEX and then resealed by ENERGEX. All above ground conduits shall be U.V. stabilised.

Refer to ENERGEX Underground Distribution Construction Manual for details of conduit installation within the padmount transformer site.

Each conduit to be fitted with a 6mm braided polypropylene draw rope.

ENERGEX may need to install an earth wire and earth rods in conduit trenches from the substation site.

Polymeric cable protection cover shall be placed over all conduits and cables outside the electricity footpath alignment. To provide protection, electricity supply conduits and cables shall have polymetric cable protection covers placed 100mm above the top conduit face of the electricity supply conduits and cables. Cable protection covers shall be lapped when placed together; 100mm minimum along the logitudinal axis, 40mm minimum along the transverse axis and shall extend 40mm minimum past the external edges of the conduit/cable bank.

Polymeric cable protection cover shall be a minimum of 5mm thick as described in Australian Standard; AS/NZS 4702 for Polymeric Cable Protection Covers. The supply of polymeric cable protection covers and marked plastic warning tape shall be the responsibility of the developer and they shall be manufactured and supplied in accordance with the ENERGEX Underground Distribution Construction Manual Section C6.

6.0 EARTHING

An earthing system consisting of driven earth rods, a continuous earth ring around the substation connecting the rods and earthing tails connected to ENERGEX equipment and gates will be installed by ENERGEX. The earthing system may be required to be extended into cable trenches adjoining the transformer site.

The builder shall notify ENERGEX’s works co-ordinator one week prior to trench and site foundation excavation to allow the installation of the earthing system and location of the earthing tails for equipment earthing.

7.0 CUSTOMER’ S CABLES

Where supply is made available from the LV busbars of the transformer, the customer shall supply all connectors, stainless steel bolts, nuts, washers, cable cleats and supports and connect to the terminals as directed by ENERGEX.

Where supply is made available from a circuit of a low voltage distribution board, the customer shall supply all connectors, stainless steel bolts, nuts, washers and connect to the terminals as directed by ENERGEX.

Under no circumstances shall the customer cabling pass though or under the padmounted transformer culvert, nor the culvert end wall "knock-out" sections be removed.

8.0 UNDERGROUND CABLE PITS

Refer to ENERGEX Underground Distribution Construction Manual Section C5 for concrete pits.

9.0 EASEMENTS

The builder/developer is to provide Energex initially with a written undertaking that the easements will granted so that the project may proceed during the design process. Easement shall cover the HV cable route, substation site and remote earth grid area (if applicable). The ENERGEX network will not be commissioned until all the required easements have been registered.

The developer/builder is required to grant the easements as noted on the Easement/Site Plans referred to by Energex in the Network Connection Contract prior to the supply being made available.

All costs associated with the registering, surveying, document perpetration etc shall be bourne by the builder/ developer.

The builder/developer shall Liaise with Energex’s property department in relation to ensuring that all necessary documentation is completed. Contact Energex Property on propertyenquiries@energex.com.au including your project reference number.

The following general details will apply:
- all documents shall be acceptable to the Department of Natural Resources
- The grantee should be shown as "Energex Limited (ACN 078 849 055)"
- refer to Memorandum No 708346714 for underground electricity (memorandum is registered with Natural Resources)

The builder/developer will forward the document to Energex for review and execution. Energex will then return the documents to the builder/developer for registration with The department of Natural Resources.

The builder/developer is to return a copy of the Registration Confirmation Statement to Energex.

All private services easements must be registered prior to supply being made available to the future development sites.

10.0 RETAINING WALLS / FENCES

Retaining walls shall be installed where a change in ground level of 300mm or more occurs within 2000mm of the substation clearance zone. Fences shall be installed for:
- Residential areas (Typically 1200mm high)
- Sloping sites (either front to back or left-right).

Fences and Retaining walls shall be constructed to ENERGEX standards to satisfy minimum clearance zones of common earth configurations. Refer to section C3-1 for retaining wall construction notes. Alternative designs to those provided in this manual will require a Civil Engineer’s Certification.

Safety fences shall comply with the requirements of the Workplace Health and Safety Act, AS1657 and AS1926 and all amendments.
Metal retaining wall fences shall be used in CMEN areas. (Refer UDCM C3.1 Sheet 6)

All retaining walls and safety fencing on private property shall be maintained by the owner at no cost to Energex.

All fencing materials shall be galvanised or finished in an equally durable manner. All chainwire and support wires shall be PVC coated and coloured black or green.

All elevated areas shall be provided with toe boards and infill type fencing.


11.0 ENERGEX COMMUNICATION CONDUIT

Conduit
ENERGEX communication conduit shall be white, Medium Duty (MD), UPVC to AS/NZS 2053, Energex Technical Specification TS270 and AS1345. Conduit couplings shall comply with all the above requirements.

Tracer/Draw Rope
The electricity communications conduit when installed shall be fitted with a continuous metallic tracer/draw rope suitable for passing an electricity current through to accurately identify the conduit.

Installation
ENERGEX communication conduit installation:
100mm conduit shall be located adjacent to the top Low Voltage conduits on the kerb side of the trench, between the LV conduits and any Public Lighting conduit.

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ALL DIMENSIONS TO BE VERIFIED ONSITE.				68 GEMVALE ROAD, REEDY CREEK, QUEENSLAND		SCALE: NT TO SCALE AT A1		C2717a E18 E	