



# ELECTRICAL DESIGN GROUP

ELECTRICAL BUILDING SERVICES CONSULTANTS

P.O. Box 15, SHERWOOD Q. 4075

Phone: (07) 3278 4375

Website: www.edg.net.au Email: brisbane@edg.net.au

C3294a - LLEWELLYN MOTORS SPRINGFIELD - LOT 32

C3294a-0001(4).xls

## ELECTRICAL SERVICES CONTRACT DOCUMENT SCHEDULE

REVISION 4 - 05 NOVEMBER 2025

ISSUING INFORMATION				DATE OF ISSUE							
	DAY	07	28	14	24	16	30	19	22	05	
	MONTH	11	11	02	02	05	05	06	07	11	
	YEAR	24	24	25	25	25	25	25	25	25	
REASON FOR ISSUE				P	50D	80D	80D	C	C	C	C
A = APPROVAL C = CONSTRUCTION D = % DEVELOPED AS NOTED P = PRELIMINARY T = TENDER											

DISTRIBUTION	NUMBER OF COPIES							
WWW.EDG.NET.AU	1E	1E	1E	1E	1E	1E	1E	1E
ROHRIG CONSTRUCTIONS	1E	1E	1E	1E	1E	1E	1E	1E
P = PRINT T = TRACING D = DISC E = EMAIL F = FAX								

DOCUMENTS		REVISION									
C3294a-E01.dwg	LEGEND & DETAILS	A	B	D	E	F	1		2		
C3294a-E02.dwg	NOTES	A	B	C	D	E	1				
C3294a-E03.dwg	SITE PLAN	A	B	C	D	E	1		2		
C3294a-E04.dwg	GROUND LEVEL FLOOR PLAN	A	B	C	D	E	1		2		
C3294a-E05.dwg	GROUND LEVEL REFLECTED CEILING PLAN	A	B	C	D	E	1				2
C3294a-E06.dwg	MEZZANINE LEVEL FLOOR & CEILING PLANS	A	B	C	D	E	1				
C3294a-E07.dwg	ROOF PLAN & ELEVATIONS	A	B	C	D	E	1	2			
C3294a-E08.dwg	POWER & LIGHTING CONTROL SCHEMATICS	A	B	D		E	1				
C3294a-EN01.dwg	ENERGEX SUBSTATION SITE PLAN & DETAILS	A	B	E			1				
C3294a-EN02.dwg	ENERGEX SUBSTATION STANDARD DETAILS	A	B	E			1				
C3294a-EN03.dwg	ENERGEX SUBSTATION STANDARD NOTES	A	B	E			1				
C3294a-0001.xls	CONTRACT DOCUMENT SCHEDULE	A	B	C	D	E	1	2	3	4	
C3294a-0002.xls	EQUIPMENT SCHEDULE	A	B	C	D	E	1				
C3294a-0004.xls	DISTRIBUTION BOARD DB-B SCHEDULE	A				B	1	2	3		



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## ELECTRICAL EQUIPMENT SCHEDULE

REVISION 1 - 30 MAY 2025

THE EQUIPMENT SUPPLIER CONTACT DETAILS MAY BE AVAILABLE ON THE EDG WEBSITE VIA THE FOLLOWING LINK  
[www.edg.net.au/links.html](http://www.edg.net.au/links.html)

TYPE	LAMPS	DESCRIPTION	COLOUR / ACCESSORY	CATALOGUE No	REV
L1	A SINGLE HORIZONTAL RUN UNDER THE OVERHEAD CUPBOARDS HARD AGAINST THE SPLASHBACK LED STRIP LIGHT 4000K WHITE LEDS AT 12MM SPACING WITH REMOTE CONTROL GEAR. 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
L2	34W 4000K LED	600 X 600 LAY IN FLAT PLATE LED FITTING C/W REMOTE DRIVER MOUNTED IN THE CEILING T BAR	WHITE TRIM	GAMMA ILLUMINATION AXIS 1548-4K-34W	A
L3	34W 4000K LED	600 X 600 LAY IN FLAT PLATE LED FITTING C/W REMOTE DRIVER AND A RECESS KIT	WHITE TRIM	GAMMA ILLUMINATION AXIS 1548-4K-34W + RECESS KIT	A
L4	13W 3000K LED	AMENITY RECESSED DOWNLIGHT C/W REMOTE DRIVER	WHITE	GAMMA ILLUMINATION MYLO 1004-WFL-4K-13W	A
L5	22W 4000K LED	RECESSED 62 DEG DOWNLIGHT C/W REMOTE DRIVER	WHITE	GAMMA ILLUMINATION COBALT 1441-4K-22W	A
L6	60W 4000K LED	RECESSED 54 DEG DOWNLIGHT C/W REMOTE DRIVER	WHITE	GAMMA ILLUMINATION COBALT 1444-4K-60W	A
L7	36W 4000K LED	RECESSED 62 DEG DOWNLIGHT C/W REMOTE DRIVER	WHITE	GAMMA ILLUMINATION COBALT 1441-4K-36W	A
L8	28W 4000K LED	RECESSED 41 DEG DOWNLIGHT C/W REMOTE DRIVER	WHITE	GAMMA ILLUMINATION COBALT 1442-4K-28W	A
L9	22W 4000K LED	RECESSED 41 DEG DOWNLIGHT C/W REMOTE DRIVER	WHITE	GAMMA ILLUMINATION COBALT 1402-4K-22W	A
L10	150W 4000K LED	SUSPENDED HIGH BAY C/W INTEGRAL DRIVER SUSPEND AS HIGH AS PRACTICAL	BLACK	GAMMA ILLUMINATION ORBIT 881483-4K-WFL	A
L11	45W LED 4000K	1200 LONG IP65 DIFFUSED BATTEN C/W INTEGRAL ELECTRONIC CONTROL GEAR AND A NON MAINTAINED AS2293 EMERGENCY PACK SUSPENDED / SURFACE MOUNTED AS REQUIRED. THE L11 FITTINGS ARE NOT SWITCHED AND ARE TO ONLY OPERATE UPON POWER SUPPLY FAILURE IN ACCORDANCE WITH AS2293	NA	GAMMA ILLUMINATION STORM 1311-4K	A
L12	180W 5000K LED	SURFACE MOUNTED IP 65 CARPARK ENTRY LIGHT C/W INTEGRAL DIMMABLE DRIVER AND ILLUMINATION LEVEL / MOVEMENT SENSOR. PROVIDE THE L12 FITTINGS WITH AN enLIGHTEN CECS CONTROLLER.	BLACK	EQUAL TO enLIGHTEN TAURO BLACK TB180D-57-S1-CECS	A



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L13	2250LUMEN/M 4000K LED	3800 LONG RECESSED EXTRUSION C/W INTEGRAL DRIVER	WHITE	KLIK SYSTEMS KALLI 060 BEAM DR	A
L14	36W LED 4000K	1200 LONG SURFACE MOUNTED IP65 DIFFUSED BATTEN C/W INTEGRAL ELECTRONIC CONTROL GEAR AND PRESENCE DETECTION SENSOR	LIGHT GREY	GAMMA ILLUMINATION STORM 1558-CCT-36W-MS	A
L15	36W LED 4000K	1200 LONG SURFACE MOUNTED IP65 DIFFUSED BATTEN C/W INTEGRAL ELECTRONIC CONTROL GEAR	LIGHT GREY	GAMMA ILLUMINATION STORM 1558-CCT-36W	A
L16	50W 4000K LED	WALL MOUNTED CARPARK LIGHT C/W INTEGRAL DRIVER	BLACK FITTING	MELEC ML-ROX-50-4K-PE-BK	A
L17	50W 4000K LED	9M POLE AND CARPARK LIGHT C/W INTEGRAL DRIVER ALL 240 VOLT CABLING TO THE POLES ARE TO BE RUN IN CONDUITS AT LEAST 50MM TO FACILITATE FUTURE POWER CABLING. ALL CONDUITS ARE TO HAVE A SPARE DRAW WIRE AND BE SHOWN ON THE AS CONSTRUCTED DOCUMENTS.	BLACK FITTING BLACK POLE	MELEC ML-ROX-50-4K-PE-BK	C
L18	150W 4000K LED	9M POLE AND CARPARK LIGHT C/W INTEGRAL DRIVER ALL 240 VOLT CABLING TO THE POLES ARE TO BE RUN IN CONDUITS AT LEAST 50MM TO FACILITATE FUTURE POWER CABLING. ALL CONDUITS ARE TO HAVE A SPARE DRAW WIRE AND BE SHOWN ON THE AS CONSTRUCTED DOCUMENTS.	BLACK FITTING BLACK POLE	MELEC ML-ROX-150-4K-PE-BK	C
L19	28W 4000K LED	RECESSED 75 DEG DOWNLIGHT C/W REMOTE DRIVER	WHITE	GAMMA ILLUMINATION COBALT 1442-WR-4K-28W	A
L20	4500LUMEN/M 4000K LED	7000 LONG SURFACE MOUNTED EXTRUSION C/W INTEGRAL DRIVER	WHITE	KLIK SYSTEMS KALLI 080 BEAM D	A
L21	140W 4000K LED	ROD SUSPENDED HIGH BAY C/W INTEGRAL DRIVER	SILVER	GAMMA ILLUMINATION MAXIS 1678-4K-140W	A
L22	200W 4000K LED	SUSPENDED HIGH BAY C/W INTEGRAL DRIVER SUSPEND AS HIGH AS PRACTICAL	BLACK	GAMMA ILLUMINATION ORBIT 881503-4K-WFL	C



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L23	100W 4000K LED	9M POLE AND CARPARK LIGHT C/W INTEGRAL DRIVER . ALL 240 VOLT CABLING TO THE POLES ARE TO BE RUN IN CONDUITS AT LEAST 50MM TO FACILITATE FUTURE POWER CABLING. ALL CONDUITS ARE TO HAVE A SPARE DRAW WIRE AND BE SHOWN ON THE AS CONSTRUCTED DOCUMENTS.	BLACK FITTING BLACK POLE	MELEC ML-ROX-100-4K-PE-BK	C
L24	2 X 50W 4000K LED	9M POLE AND TWO CARPARK LIGHTS C/W INTEGRAL DRIVER. ALL 240 VOLT CABLING TO THE POLES ARE TO BE RUN IN CONDUITS AT LEAST 50MM TO FACILITATE FUTURE POWER CABLING. ALL CONDUITS ARE TO HAVE A SPARE DRAW WIRE AND BE SHOWN ON THE AS CONSTRUCTED DOCUMENTS.	BLACK FITTINGS BLACK POLE	2 X MELEC ML-ROX-50-4K-PE-BK	C
L25	36W LED 4000K	1200 LONG IP65 DIFFUSED BATTEN C/W INTEGRAL ELECTRONIC CONTROL GEAR MOUNT THE BATTEN AT2200 AFFL ON A WALL OR SUSPENDED IF THERE IS NO WALL AVAILABLE. PROVIDE EACH L25 WITH A DEDICATED LOCAL MANUAL SWITCH AT 1000 AFFL BELOW THE BATTEN.	LIGHT GREY	GAMMA ILLUMINATION STORM 1558-CCT-36W	D
E1	LED	EMERGENCY LIGHT: RECESSED NON-MAINTAINED EMERGENCY LIGHT. AS2293 CLASSIFICATION C0-D63 - C90-D63.	WHITE	CLEVERTRONICS LLIFE	A
EX BOH	LED	BACK OF HOUSE 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-D2	WHITE	CLEVERTRONICS LCFLED	A
EX FOH	LED	FRONT OF HOUSE EXIT LIGHT: MAINTAINED 24M VIEWING DISTANCE EXIT LIGHT C/W DIFFUSERS & DIRECTIONAL ARROWS AS SHOWN. CEILING SURFACE MOUNT 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-D2	WHITE	CLEVERTRONICS LUBPRO-SM	A



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EX WP	LED	EXIT LIGHT: MAINTAINED WEATHER PROOF 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-D2	WHITE	CLEVERTRONICS LWELED	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.	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 1100mm AFFL UNLESS NOTED OTHERWISE.	WHITE	CLIPSAL C2000 SERIES 30USM	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	WHITE	CLIPSAL	D
SWITCH PANEL (SPB1)		CONTROL SWITCH PANEL TO BE PROVIDED AS PER THE CONTROL SCHEMATIC ENGRAVE THE USE OF EACH SWITCH WITH BLACK TEXT	STAINLESS STEEL	CLIPSAL B SERIES 30USM	A
SWITCH PANEL (SPB2)		CONTROL SWITCH PANEL TO BE PROVIDED AS PER THE CONTROL SCHEMATIC ENGRAVE THE USE OF EACH SWITCH WITH BLACK TEXT	STAINLESS STEEL	CLIPSAL B SERIES 30USM	A
SWITCH PANEL (SPB3)		CONTROL SWITCH PANEL TO BE PROVIDED AS PER THE CONTROL SCHEMATIC ENGRAVE THE USE OF EACH SWITCH WITH BLACK TEXT	STAINLESS STEEL	CLIPSAL B SERIES 30USM	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	-	-	B



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SINGLE POWER OUTLET		SINGLE POWER OUTLET C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND MOUNT AT 300 AFFL U.N.O.	WHITE	CLIPSAL C2000 SERIES	A
DOUBLE POWER OUTLET		DOUBLE POWER OUTLET C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND MOUNT AT 300 AFFL U.N.O.	WHITE	CLIPSAL C2000 SERIES	A
DOUBLE POWER OUTLET (USB)		DOUBLE POWER OUTLET C/W USB CHARGER AND CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND MOUNT AT 300mm AFFL U.N.O. RATING 10A U.N.O.	WHITE	CLIPSAL 2000 SERIES + 30USBCM MECH	A
SINGLE POWER OUTLET FOR THE AUTO DOOR (AD)		SINGLE 10 AMP POWER OUTLET C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND MOUNTED WITHIN THE AUTO DOOR MULLION	WHITE	CLIPSAL C2000 SERIES	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
HAND DRYER CONNECTION (HD)		SINGLE POWER OUTLET C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND FOR THE HAND DRYER MOUNT THE GPO AS PER THE HD DETAIL	WHITE UNLESS NOTED AS BLACK (BK)	CLIPSAL C2000 SERIES	A
HOIST DROPPER OUTLET (HR)		DOUBLE POWER OUTLET C/W CIRCUIT IDENTIFICATION ON THE FACEPLATE BEHIND THE SURROUND MOUNT AT 1000 AFFL ON THE HOIST SUPPORT. SUPPLY THE OUTLET FROM ABOVE	BLACK	CLIPSAL C2000 SERIES	E
SIGN CONNECTION		COORDINATE THE LOCATION AND CONNECTION WITH THE SIGN CONTRACTOR ENSURING THE GPO / ISOLATORS ARE PROVIDED WITH APPROPRIATE WEATHER PROTECTION AND ARE CONCEALED FROM VIEW.			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
FLOOR BOX TYPE 1 (FB1)		INSITU FLUSH FLOOR BOX C/W A DOUBLE GPOS+ FACILITY FOR A COMMUNICATIONS OUTLETS FACEPLATE. PROVIDE A 32 DIA CONDUIT C/W A SPARE DRAW WIRE FROM THE REAR OF THE COMMUNICATIONS FACEPLATE TO THE CEILING SPACE ABOVE THE COMMUNICATIONS RACK CR-B. PROVIDE THE GPOS AS PER THE STANDARD DESCRIPTIONS.	STAINLESS STEEL	ECD FB2SHD	D



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FLOOR BOX TYPE 2 (FB2)		INSITU FLUSH FLOOR BOX C/W A DOUBLE GPOS + FACILITY FOR A COMMUNICATIONS FACEPLATE . PROVIDE A 32 DIA CONDUIT C/W A SPARE DRAW WIRE FROM THE REAR OF THE COMMUNICATIONS FACEPLATE TO THE CEILING SPACE ABOVE THE COMMUNICATIONS RACK CR-B. PROVIDE THE GPOS AS PER THE STANDARD DESCRIPTIONS.	STAINLESS STEEL	ECD FB2SHD	D
FLOOR BOX TYPE 3 (FB3)		INSITU FLUSH FLOOR BOX C/W A DOUBLE GPOS + FACILITY FOR A COMMUNICATIONS FACEPLATE . PROVIDE A 32 DIA CONDUIT C/W A SPARE DRAW WIRE FROM THE REAR OF THE COMMUNICATIONS FACEPLATE TO THE CEILING SPACE ABOVE THE COMMUNICATIONS RACK CR-B. PROVIDE THE GPOS AS PER THE STANDARD DESCRIPTIONS.	STAINLESS STEEL	ECD FB2SHD	D
EV CHARGER (EVx)		CONNECT THE SUBMAIN TO THE EV CHARGER AS PER THE EV CHARGER INSTRUCTIONS			A
NBN PREMISE CONNECTION DEVICE (PCD)		NBN COMPLIANT PREMISES CONNECTION DEVICE AS PER THE PCD DETAIL TO BE CONNECTED TO THE NTD VIA AN NBN COMPLIANT DROP CONDUIT. CONNECT THE PCD TO THE TELSTRA PIT VIA AN NBN COMPLIANT LEAD-IN CONDUIT.			A
NBN NETWORK TERMINATION UNIT (NTD)		NBN COMPLIANT NETWORK TERMINATION UNIT TO BE PROVIDED IN ACCORDANCE WITH THE NBN REQUIREMENTS. CONNECT THE NBN NTD TO A DEDICATED PATCH PANEL WITHIN THE COMMUNICATIONS RACK VIA TWO CONCEALED CAT 6 RJ45 CABLES. THESE NTD CONNECTION CABLES ARE TO BE A DIFFERENT COLOUR TO THE REMAINING COMMUNICATIONS CABLES.			A
CAT 6 COMMUNICATIONS OUTLET		COMMUNICATIONS OUTLET BY THE TENANTS COMMUNICATIONS SPECIALIST.			D
COMMUNICATIONS RACK CR-B		COMMUNICATIONS RACK BY THE TENANTS COMMUNICATIONS SPECIALIST.			D
PIT C		PROVIDE PIT C AS PLASTIC PIT 450 X 450 INTERNALLY WITH A CLASS C LID WITH THE PIT LID FRAME CAST INTO THE CONCRETE DRIVE WAY. DRAIN THE PIT TO STORMWATER.			C
DB-B		BUILDING B DISTRIBUTION BOARD DB-B AS PER THE DB-B SCHEDULE AND NOTES. PROVIDE A SHOP DRAWING OF DB-B FOR APPROVAL.			A
MSB-B		MAIN SWITCHBOARD AS PER THE POWER SCHEMATIC AND THE NOTES. PROVIDE A SHOP DRAWING OF THE MAIN SWITCHBOARD FOR APPROVAL.			A
REVENUE METER (KWH)		NEM CODE COMPLIANT CT RETAIL METER INCLUDING ALL ASSOCIATED COMPONENTS			A



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METERING TEST BLOCK METER (MTB)		QECM V4 COMPLIANT METERING TEST BLOCK INCLUDING ALL ASSOCIATED COMPONENTS			A
NETWORK DEVICE (ND)		NO LONGER REQUIRED			C
DEMAND METER (DM)		ELECTRIC VEHICLE CHARGING DEMAND MANAGEMENT SYSTEM CURRENT TRANSFORMER			C
ELECTRIC VEHICLE CHARGING ISOLATION SWITCH (CIS)		ELECTRIC VEHICLE CHARGING ISOLATION SWITCH PUSH BUTTON WIRED TO THE EV CHARGER SUPPLY CIRCUIT BREAKER SHUNT TRIP TO ISOLATE THE POWER TO THE ELECTRIC VEHICLE CHARGERS. MOUNTED AT 1800mm AFFL UNLESS NOTED OTHERWISE. PROVIDE COLOURED ENGRAVED TEXT AS PER THE CIS ELEVATION.	WHITE	CLIPSAL C2000 SERIES 30USM	C
CONTACTOR (Cx)		EV CONTROL LOAD BREAK CONTACTOR RATED ABOVE THE CIRCUIT BREAKER FAME SIZE			A
GENERATION SIGNALLING DEVICE (GSD)		QECM V4 COMPLIANT GENERATION SIGNALLING DEVICE INCLUDING ALL ASSOCIATED COMPONENTS			A
DEMAND RESPONSE SITE CONTROLLER (DRSC)		QECM V4 COMPLIANT DEMAND RESPONSE SITE CONTROLLER INCLUDING ALL ASSOCIATED COMPONENTS			A
MANUAL TRANSFER SWITCH (MTS)		MECHANICALLY INTERLOCKED MANUAL TRANSFER SWITCH.			C
MSSB -B		BUILDING B MECHANICAL SERVICES SWITCHBOARD PROVIDED BY THE MECHANICAL SUB CONTRACTOR. COORDINATE THE SUBMAIN CONNECTION WITH THE MECHANICAL SUB CONTRACTOR ON SITE.			A
CHANNEL Bx		CONTROL CHANNEL WITH A NUMERICAL REFERENCE. REFER TO THE POWER AND LIGHTING CONTROL SCHEMATIC			A
CABLE TRAY		GALVANIZED CABLE TRAY SIZED AS INDICATED COMPLIANT WITH AS1170.4			A
SECURITY EQUIPMENT		SECURITY EQUIPMENT BY THE TENANTS SPECIALIST SECURITY CONTRACTOR			D
PV INVERTER (INV-B)		33KW IP 66 3 PHASE PV INVERTER C/W 5 YEAR REPLACEMENT WARRANTY CONNECTED TO THE PV PANELS. REFER TO THE NOTES FOR ADDITIONAL REQUIREMENTS. PROVIDE DETAILS OF THE PV SYSTEM AND DESIGN FOR APPROVAL. CONNECT THE INVERTER TO THE ENERGEX GENERATION SIGNALLING DEVICE / DEMAND RESPONSE SITE CONTROLLER AS PER THE QECM V4			A





# ELECTRICAL DESIGN GROUP

ELECTRICAL BUILDING SERVICES CONSULTANTS

P.O. Box 15, SHERWOOD Q. 4075

Phone: (07) 3278 4375 Fax: (07) 3716 0222

Web Site: [www.edg.net.au](http://www.edg.net.au) Email: [brisbane@edg.net.au](mailto:brisbane@edg.net.au)

C3294a - LLEWELLYN MOTORS SPRINGFIELD - LOT 32

C3294a-0002(1).xls

## ELECTRICAL EQUIPMENT SCHEDULE

REVISION 1 - 30 MAY 2025

THE EQUIPMENT SUPPLIER CONTACT DETAILS MAY BE AVAILABLE ON THE EDG WEBSITE VIA THE FOLLOWING LINK  
[www.edg.net.au/links.html](http://www.edg.net.au/links.html)

TYPE	LAMPS	DESCRIPTION	COLOUR / ACCESSORY	CATALOGUE No	REV
PV PANELS		33KW OF PV PANELS C/W GALVANIZED MOUNTING BRACKET. PROVIDE PV PANELS WITH A 10 YEAR PRODUCT WARRANTY AND A 25 YEAR PANEL PERFORMANCE WARRANTY . REFER TO THE NOTES FOR ADDITIONAL REQUIREMENTS.			A



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C3294a - LLEWELLYN MOTORS SPRINGFIELD - LOT 32

C3294a-0004(3).xls

DISTRIBUTION BOARD DB-B (GROUND SOUTH)

REVISION 3 - 22 JULY 2025

FAULT CURRENT: 6KA USING CASCADING							REV
MAIN SWITCH: 250A NON AUTO LOAD BREAK							A
CHASSIS SIZE: 2 X 96 POLE							A
SUPPLIED FROM: MSB							A
CHASSIS RATING: 250A							A
SUPPLY CABLE: 4C70							A
PHASES: 3							A
PROVIDE THE DB WITH A FULL WIDTH EMPTY DIN RAIL TO ACCOMMODATE FUTURE CONTACTORS AND CONTROLS. PROVIDE THE DB WITH AN AS2293 EMERGENCY LIGHTING CONTROL SYSTEM TO CONTROL THE ASSOCIATED EMERGENCY LIGHTS. PROVIDE THE DB WITH SURGE PROTECTION. EACH CUBICAL MUST BE 800 WIDE. REFER TO THE NOTES FOR ADDITIONAL REQUIREMENTS							A
CIRC	PH	CIRCUIT BREAKER (amps)	CONTROL EQUIPMENT	CABLE SIZE ( mm <sup>2</sup> )	LOCATION	CIRCUIT USE	
P1	3	40	MCB	6.0	OIL STORE	COMPRESSOR	3
P2	3	20	RCBO	2.5	EXTERNAL	GPO	B
P3	3	20	RCBO	2.5	WORKSHOP	RSD	B
P4	3	20	RCBO	2.5	AMENITY	HWS	B
P5	1	20	RCBO	2.5	AMENITY	HWS	B
P6	3	20	RCBO	2.5	WORKSHOP	HOIST	B
P7	3	20	RCBO	2.5	WORKSHOP	HOIST	B
P8	3	20	RCBO	2.5	WORKSHOP	HOIST	B
P9	3	20	RCBO	2.5	WORKSHOP	HOIST	B
P10	1	20	RCBO	2.5	WORKSHOP	WHEEL ALIGNMENT	B
P11	1	20	RCBO	2.5	WORKSHOP	GPO	B
P12	1	20	RCBO	2.5	WORKSHOP	GPO	B
P13	1	20	RCBO	2.5	WORKSHOP	GPO	B
P14	1	20	RCBO	2.5	WORKSHOP	GPO	B
P15	1	20	RCBO	2.5	WORKSHOP	GPO	B
P16	1	20	RCBO	2.5	WORKSHOP	GPO	B
P17	1	20	RCBO	2.5	WORKSHOP	GPO	B
P18	1	20	RCBO	2.5	CONTROL COUNTER	GPO	B
P19	1	20	RCBO	2.5	RECEPTION	GUEST COUNTER	B
P20	1	20	RCBO	2.5	RECEPTION	GPO	B
P21	1	20	RCBO	2.5	RECEPTION	COUNTER	B
P22	1	20	RCBO	2.5	RECEPTION	PWD LIFT	B
P23	1	20	RCBO	2.5	RECEPTION	AUTO DOOR	B
P24	1	20	RCBO	2.5	SERVICE KIT	GPO	B
P25	1	20	RCBO	2.5	SERVICE KIT	ZIP	B
P26	1	20	RCBO	2.5	SERVICE KIT	DW	B
P27	1	20	RCBO	2.5	SERVICE KIT	REF	B
P28	1	20	RCBO	2.5	CUST KIT	GPO	B
P29	1	20	RCBO	2.5	CUST KIT	ZIP	B
P30	1	20	RCBO	2.5	CUST KIT	DW	B
P31	1	20	RCBO	2.5	CUST KIT	REF	B
P32	1	20	RCBO	2.5	SALES	GPO	B
P33	1	20	RCBO	2.5	SHOWROOM	GPO	B
P34	1	20	RCBO	2.5	AMENITY	HWS	B
P35	1	20	RCBO	2.5	AMENITY	HD	B
P36	1	20	RCBO	2.5	SHOWROOM	FLOOR BOXES	B
P37	1	20	RCBO	2.5	SHOWROOM	BLINDS	B
P38	1	20	RCBO	2.5	SHOWROOM	AUTO DOOR	B
P39	1	20	RCBO	2.5	SHOWROOM	FLOOR BOXES	B
P40	1	20	RCBO	2.5	SHOWROOM	FLOOR BOXES	B
P41	1	20	RCBO	2.5	SHOWROOM	FLOOR BOXES	B
P42	1	20	RCBO	2.5	SHOWROOM	FLOOR BOXES	B
P43	1	20	RCBO + SHUNT TRIP	2.5	SHOWROOM	7KW EV CHARGER	3
P44	1	20	RCBO	2.5	SHOWROOM	GPO	B
P45	1	20	RCBO	2.5	TRAINING	GPO	B
P46	1	20	RCBO	2.5	TRAINING	GPO	B
P47	1	20	RCBO	2.5	TRAINING	DW	B
P48	1	20	RCBO	2.5	TRAINING	REF	B
P49	1	20	RCBO	2.5	OFFICE	GPO	B
P50	1	20	RCBO	2.5	COMMS ROOM	SECURITY	B
P51	1	20	RCBO	2.5	COMMS ROOM	AC	B
P52	1	20	RCBO	2.5	COMMS ROOM	CR-A	B
P53	1	20	RCBO	2.5	COMMS ROOM	CR-A	B
P54	1	20	RCBO	2.5	SPECIAL TOOLS	GPO	B



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C3294a - LLEWELLYN MOTORS SPRINGFIELD - LOT 32

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DISTRIBUTION BOARD DB-B (GROUND SOUTH)

REVISION 3 - 22 JULY 2025

FAULT CURRENT: 6KA USING CASCADING							REV
MAIN SWITCH: 250A NON AUTO LOAD BREAK							A
CHASSIS SIZE: 2 X 96 POLE							A
SUPPLIED FROM: MSB							A
CHASSIS RATING: 250A							A
SUPPLY CABLE: 4C70							A
PHASES: 3							A
PROVIDE THE DB WITH A FULL WIDTH EMPTY DIN RAIL TO ACCOMMODATE FUTURE CONTACTORS AND CONTROLS. PROVIDE THE DB WITH AN AS2293 EMERGENCY LIGHTING CONTROL SYSTEM TO CONTROL THE ASSOCIATED EMERGENCY LIGHTS. PROVIDE THE DB WITH SURGE PROTECTION. EACH CUBICAL MUST BE 800 WIDE. REFER TO THE NOTES FOR ADDITIONAL REQUIREMENTS							A
CIRC	PH	CIRCUIT BREAKER (amps)	CONTROL EQUIPMENT	CABLE SIZE ( mm <sup>2</sup> )	LOCATION	CIRCUIT USE	
P55	1	20	RCBO	2.5	SPECIAL TOOLS	GPO	B
P56	1	20	RCBO	2.5	SPECIAL TOOLS	GPO	B
P57	1	20	RCBO	2.5	SPECIAL TOOLS	GPO	B
P58	1	20	RCBO	2.5	UNIT REPAIR	GPO	B
P59	1	20	RCBO	2.5	UNIT REPAIR	GPO	B
P60	1	20	RCBO	2.5	PARTS	GPO	B
P61	1	20	RCBO	2.5	PARTS	HWS	B
P62	1	20	RCBO	2.5	LUNCHROOM	GPO	B
P63	1	20	RCBO	2.5	LUNCHROOM	GPO	B
P64	1	20	RCBO	2.5	LUNCHROOM	DW	B
P65	1	20	RCBO	2.5	LUNCHROOM	REF	B
P66	1	20	RCBO	2.5	AMENITY	HD GPOS	B
P67	1	20	RCBO	2.5	REFUSE	GPO	B
P68	1	20	RCBO	2.5	REFUSE	GPO	B
P69	1	20	RCBO	2.5	EXTERNAL	PUMP	B
P70	1	20	RCBO	2.5	EXTERNAL	PUMP	B
P71	1	20	RCBO	2.5	EXTERNAL	PUMP	B
P72	1	20	RCBO	2.5	EXTERNAL	GPO	B
P73	1	20	RCBO	2.5	MEZZANINE	SIGN	B
P74	1	20	RCBO	2.5	BOARDROOM	GPO	B
P75	1	20	RCBO	2.5	BOARDROOM	REF	B
P76	1	20	RCBO	2.5	BOARDROOM	DW	B
P77	1	20	RCBO	2.5	BOARDROOM	KIT	B
P78	1	20	RCBO	2.5	MEZZ OFFICES	GPO	B
P79	1	20	RCBO	2.5	MEZZ AMENITY	GPO	B
P80	1	20	RCBO	2.5	MEZZANINE	GPO	B
P81	1	20	RCBO	2.5	MEZZANINE	TV	B



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REVISION 3 - 22 JULY 2025

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CHASSIS SIZE: 2 X 96 POLE							A
SUPPLIED FROM: MSB							A
CHASSIS RATING: 250A							A
SUPPLY CABLE: 4C70							A
PHASES: 3							A
PROVIDE THE DB WITH A FULL WIDTH EMPTY DIN RAIL TO ACCOMMODATE FUTURE CONTACTORS AND CONTROLS. PROVIDE THE DB WITH AN AS2293 EMERGENCY LIGHTING CONTROL SYSTEM TO CONTROL THE ASSOCIATED EMERGENCY LIGHTS. PROVIDE THE DB WITH SURGE PROTECTION. EACH CUBICAL MUST BE 800 WIDE. REFER TO THE NOTES FOR ADDITIONAL REQUIREMENTS							A
CIRC	PH	CIRCUIT BREAKER (amps)	CONTROL EQUIPMENT	CABLE SIZE ( mm <sup>2</sup> )	LOCATION	CIRCUIT USE	
L1	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	PYLON	B
L2	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	SIGN	B
L3	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	SIGN	B
L4	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	SIGN	B
L5							2
L6	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	SIGN	B
L7	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	SIGN	B
L8	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	SIGN	B
L9							2
L10	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	LIGHTING	B
L11	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	LIGHTING	B
L12	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	LIGHTING	B
L13	1	20	RCBO PE CELL ON DUSK OFF DAWN	2.5	EXTERNAL	SIGN	B
L14	1	20	RCBO	2.5	GROUND	LIGHTING	B
L15	1	20	RCBO	2.5	GROUND	LIGHTING	B
L16	1	20	RCBO	2.5	GROUND	LIGHTING	B
L17	1	20	RCBO	2.5	GROUND	LIGHTING	B
L18	1	20	RCBO	2.5	GROUND	LIGHTING	B
L19	1	20	RCBO	2.5	DROP OFF	LIGHTING	B
L20	1	20	RCBO	2.5	DROP OFF	LIGHTING	B
L21	1	20	RCBO	2.5	DROP OFF	LIGHTING	B
L22	1	20	RCBO	2.5	RECEPTION	LIGHTING	B
L23	1	20	RCBO	2.5	CUSTOMER LOUNGE	LIGHTING	B
L24	1	20	RCBO	2.5	CIRCULATION	LIGHTING	B
L25	1	20	RCBO	2.5	SHOWROOM	LIGHTING	B
L26	1	20	RCBO	2.5	SHOWROOM	LIGHTING	B
L27	1	20	RCBO	2.5	SHOWROOM	LIGHTING	B
L28	1	20	RCBO	2.5	SHOWROOM	LIGHTING	B
L29	1	20	RCBO	2.5	SHOWROOM	LIGHTING	B
L30	1	20	RCBO	2.5	SHOWROOM	LIGHTING	B
L31	1	20	RCBO	2.5	WORKSHOP	LIGHTING	B
L32	1	20	RCBO	2.5	WORKSHOP	LIGHTING	B
L33	1	20	RCBO	2.5	WORKSHOP	LIGHTING	B
L34	1	20	RCBO	2.5	RECEPTION	LIGHTING	B
L35	1	20	RCBO	2.5	RECEPTION	LIGHTING	B
L36	1	20	RCBO	2.5	MEZZANINE	LIGHTING	B
L37	1	20	RCBO	2.5	MEZZANINE	LIGHTING	B
L38	1	20	RCBO	2.5	MEZZANINE	LIGHTING	B

LEGEND

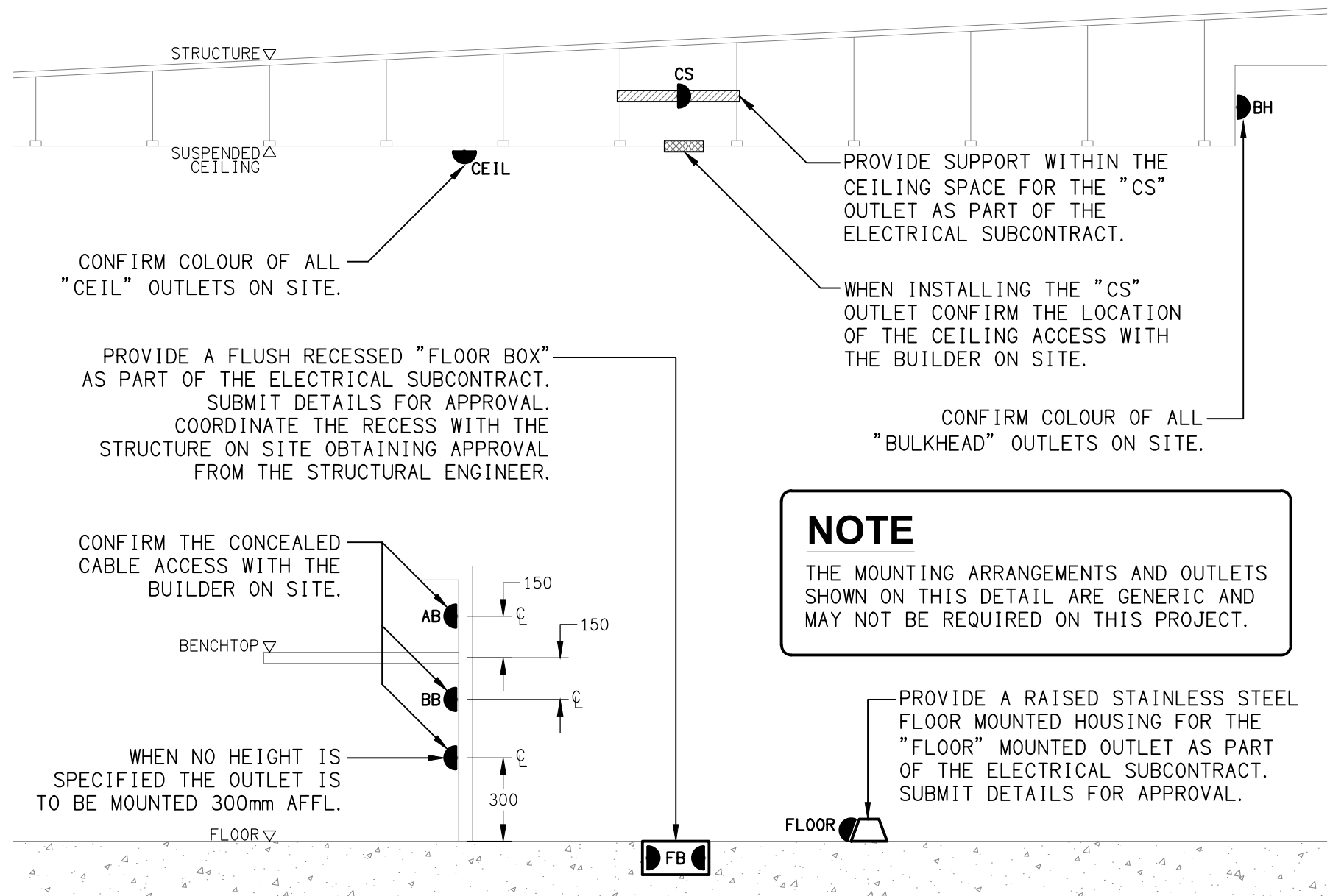
	ELECTRICAL SERVICES SWITCHBOARD.
	SWITCHBOARD / CONTROL PANEL NOT PROVIDED AS PART OF THE ELECTRICAL SUBCONTRACT.
	SINGLE POWER OUTLET.
	DOUBLE POWER OUTLET.
	DOUBLE POWER OUTLET C/W INTEGRAL USB CHARGERS.
	SPECIAL PURPOSE POWER OUTLET.
	SIGN OUTLET / CONNECTION.
	SINGLE PHASE ISOLATOR.
	THREE PHASE ISOLATOR.
	JUNCTION BOX.
	CONDUIT ROUTE.
	CABLE TRAY AS NOTED.
	ELECTRICAL PIT, TYPE AS NOTED.
	TELSTRA PIT.
	ELECTRICAL FLOOR BOX, TYPE AS NOTED.
	HAND DRYER CONNECTION.
	LIGHTING CONTROL SWITCH PANEL, TYPE AS NOTED.
	ONE-WAY LIGHT SWITCH.
	TWO-WAY LIGHT SWITCH.
	OCCUPANCY PRESENCE DETECTOR SWITCH.
	CIRCUIT LINE.
	SWITCH LINE.
	POWER CIRCUIT DESIGNATION. DENOTES DB AND CIRCUIT.
	LIGHTING CONTROL CHANNEL REFERENCE.
	MAIN DISTRIBUTION FRAME.
	ELECTRICAL EQUIPMENT AS NOTED.
	NBN NETWORK TERMINATION DEVICE.
	NBN PREMISES CONNECTION DEVICE.
	SUPPLY AUTHORITY CODE COMPLIANT LV MAXIMUM DEMAND TARIFF METER.
	METERING TEST BLOCK METER.
	CONTACTOR.
	GENERATION SIGNALLING DEVICE.
	DEMAND RESPONSE SITE CONTROLLER.
	MANUAL TRANSFER SWITCH.
	MAXIMUM DEMAND EV CTs.
	ELECTRIC VEHICLE CHARGING ISOLATION SWITCH.

LEGEND

	CIRCUIT BREAKER C/W SHORT TRIP.
	FUSE.
	SINGLE PHASE.
	THREE PHASE.
	CURRENT TRANSFORMER C/W REMOVABLE LINK.
	FUSE LINK.
	COMBINED FUSE SWITCH.
	CIRCUIT BREAKER. (ST) DESIGNATES THE CIRCUIT BREAKER IS TO BE PROVIDED WITH A SHUNT TRIP.
	ISOLATOR.
	RESIDUAL CURRENT DEVICE.
	CONTACTOR - NORMALLY OPEN.
	CONTACTOR - NORMALLY CLOSED.
	REFER TO DETAIL NOTED FOR THE AREA SHOWN HATCHED. ADDITIONAL OUTLETS & FITTINGS MAY BE SHOWN ON DETAIL.
	E1: GENERAL LED EMERGENCY LIGHT.
	EX: EMERGENCY LED EXIT LIGHT.
	Lx: LIGHT FITTING C/W NON-MAINTAINED EMERGENCY BATTERY PACK. TYPE AS NOTED.
	L1: OVERHEAD CUPBOARD LED STRIP LIGHT.
	L2: 600 x 600 RECESSED T-BAR FLAT PLATE.
	L3: 600 x 600 RECESSED FLAT PLATE.
	L4: AMENITY RECESSED DOWNLIGHT.
	L5: RECESSED DOWNLIGHT.
	L6: RECESSED DOWNLIGHT.
	L7: RECESSED DOWNLIGHT.
	L8: RECESSED DOWNLIGHT.
	L9: RECESSED DOWNLIGHT.
	L10: 150W SUSPENDED HIGH BAY FITTING.
	L11: 1200 LONG IP65 BATTEN C/W EMERGENCY PACK.
	L12: SURFACE MOUNTED CAR PARK LIGHT C/W MOVEMENT SENSOR.
	L13: 3800 LONG RECESSED EXTRUSION FITTING.
	L14: 1200 LONG IP65 SURFACE MOUNTED BATTEN C/W MOVEMENT SENSOR.
	L15: 1200 LONG IP65 SURFACE MOUNTED BATTEN.
	L16: WALL MOUNTED CARPARK LIGHT.
	L17: 50W CARPARK LIGHT ON A 9m HIGH POLE.
	L18: 150W CARPARK LIGHT ON A 9m HIGH POLE.
	L19: RECESSED DOWNLIGHT.
	L20: 7000 LONG SURFACE MOUNTED EXTRUSION.
	L21: ROD SUSPENDED HIGH BAY FITTING.
	L22: 200W SUSPENDED HIGH BAY FITTING.

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.

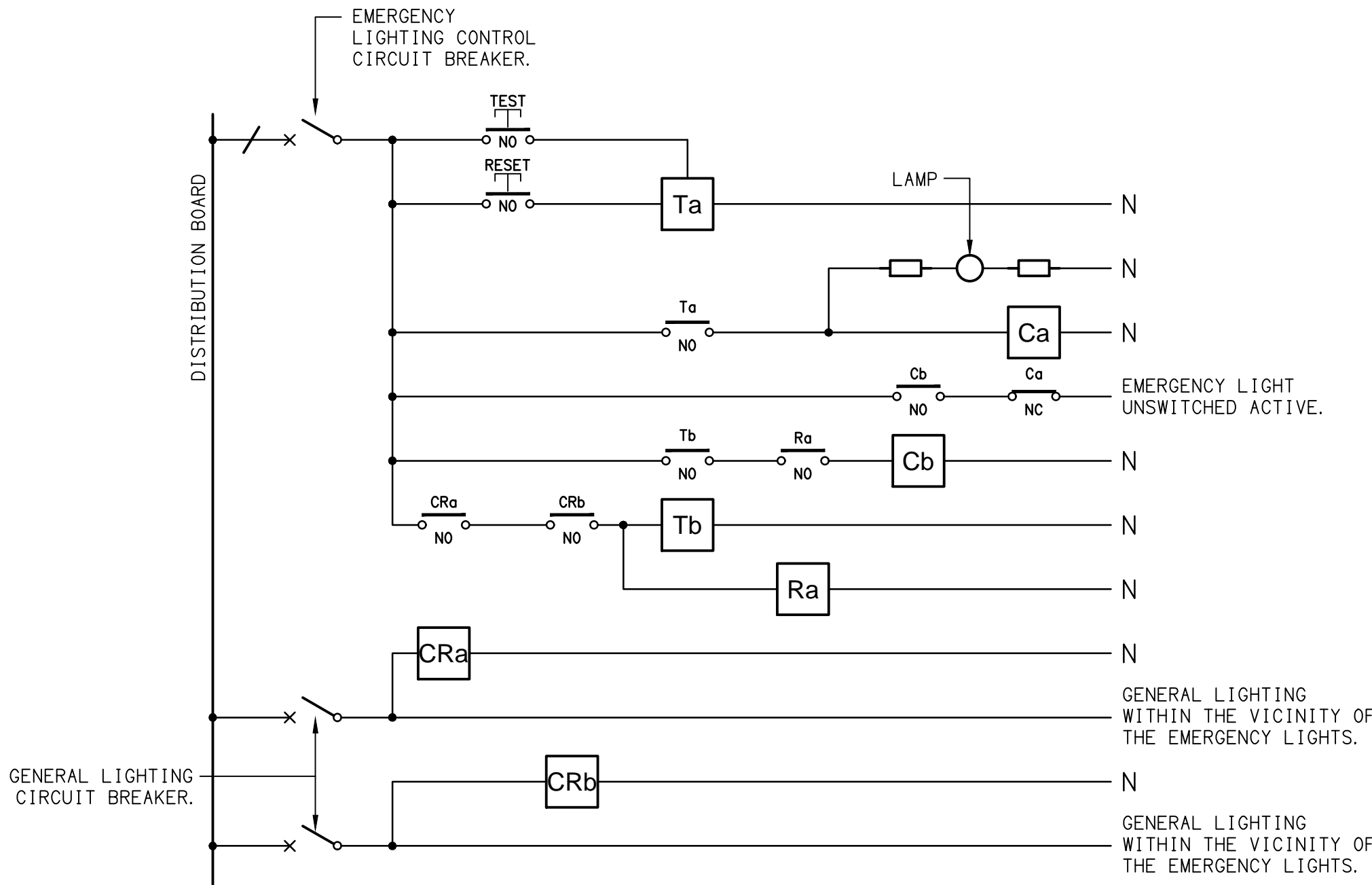


DETAIL

TYPICAL OUTLET MOUNTINGS  
NOT TO SCALE

EQUIPMENT:

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.

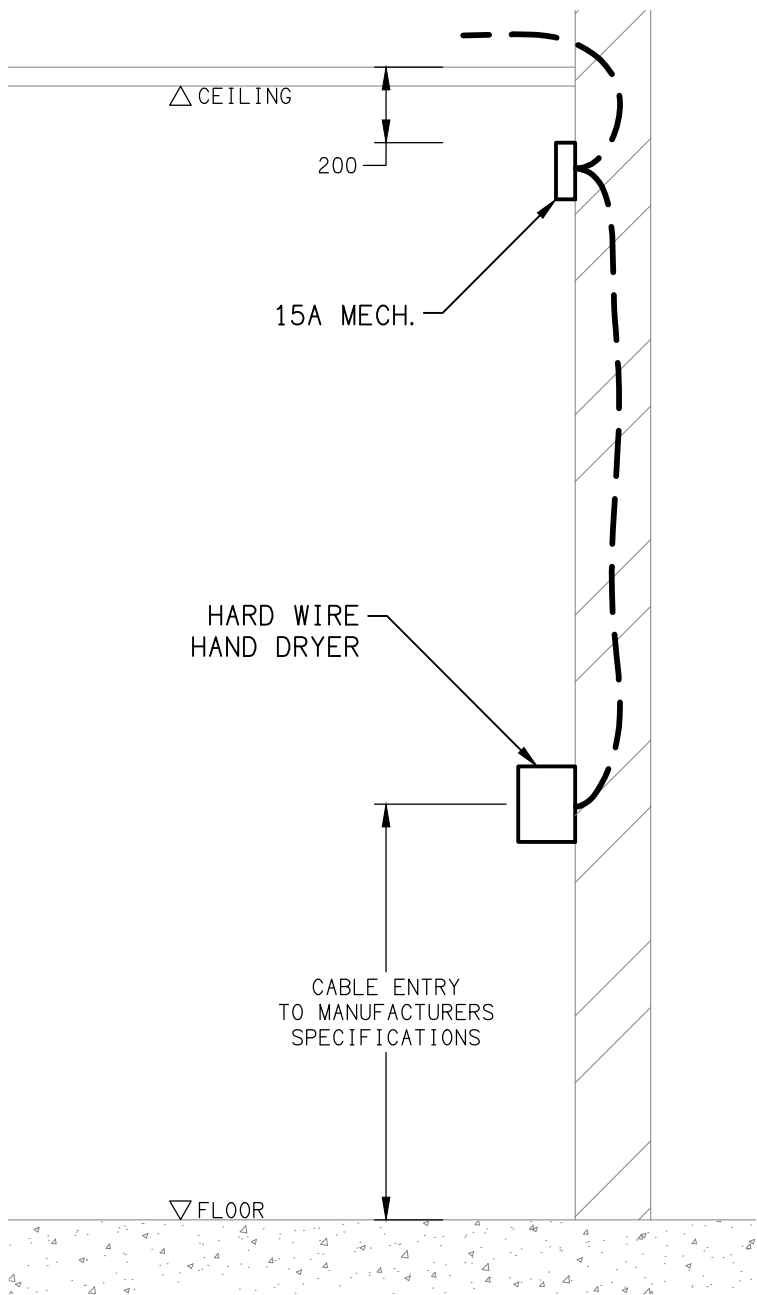


NOTES

- THE EMERGENCY LIGHT UNSWITCHED ACTIVE / GENERAL LIGHTING SWITCHED ACTIVE CIRCUIT ARRANGEMENT AND CONTROL IS TYPICAL FOR ALL CIRCUITS SUPPLYING EMERGENCY LIGHTS.
- 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.

SCHEMATIC

EMERGENCY LIGHTING  
NOT TO SCALE



DETAIL

HAND DRYER CONNECTION  
NOT TO SCALE



NOTES

1. EXTENT OF WORKS

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

- SUPPLY AND INSTALLATION OF ALL COMPONENTS FORMING PART OF THE ELECTRICAL SERVICES.
- CO-ORDINATION.
- INSPECTIONS.
- TESTING AND COMMISSIONING.
- MAINTENANCE.
- AS BUILT DRAWINGS.
- OPERATION AND MAINTENANCE MANUAL.
- CABLING, CABLE SUPPORT SYSTEMS AND ACCESS.
- POWER DISTRIBUTION.
- LIGHTING.
- TELECOMMUNICATIONS SERVICE.
- 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.

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.

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.

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.

NOTES

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 BUILDING THE POWER DISTRIBUTION COMPONENT OF THE ELECTRICAL SERVICES SUB-CONTRACT INCLUDES ESTABLISHING AN ON SITE ENERGEX PADMOUNT SUBSTATION.

ENSURE THE NEW ENERGEX SUPPLY 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. ARRANGE WITH ENERGEX TO HAVE A 2000 AMP SUPPLY PROVIDED TO THE SITE. PROVIDE CONSUMERS MAINS FROM THE SUBSTATION TO THE MAIN SWITCHBOARD.

PROVIDE THE SITE MAIN SWITCHBOARD (MSB) AS FOLLOWS:

- PLINTH MOUNTED.
- NATIONAL ELECTRICITY MARKET (NEM) COMPLIANT RETAIL METERING.
- PROVIDE A COPY OF THE ENERGEX APPROVAL OF THE MSB.
- IP66 FORM 2A
- 316 STAINLESS STEEL OR ALUMINIUM ENCLOSURE, DOORS AND ESCUTCHEONS.
- CUSTOM COLOUR POWDER COATED ENCLOSURE AND DOORS WITH THE ARCHITECT NOMINATING THE COLOUR.
- POWDER COATED GLOSS WHITE ESCUTCHEONS.
- ENSURE THE MSB IS DESIGNED TO OPERATE IN DIRECT SUNLIGHT WITH AN AMBIENT TEMPERATURE OF 45 DEGREES.
- DOORS ON ALL CUBICLES WITH 3 POINT 92268 KEY LOCKABLE FLUSH HANDLES OTHER THAN THE METER CUBICAL DOOR WHICH IS TO HAVE AN ENERGEX PADLOCK.
- 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 SHOP DRAWINGS FOR APPROVAL.
- ALL COMPONENTS ARE TO BE LABELLED WITH NON-STICK LABELS.
- ENERGEX PADLOCK ON THE METER CUBICAL.
- TWO ENERGEX PADLOCK KEYS AND TWO 92268 KEYS.

PROVIDE THE DISTRIBUTION BOARD AS FOLLOWS:

- WALL MOUNTED.
- IP44 FORM 1.
- LIGHT GREY ENCLOSURE WHITE ESCUTCHEON.
- 3 POINT 92268 KEY LOCKABLE FLUSH 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 SHOP DRAWINGS FOR APPROVAL.
- 25% SPARE POLES AT PRACTICAL COMPLETION.
- ALL COMPONENTS ARE TO BE LABELLED WITH NON-STICK LABELS.

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 TENANTS REPRESENTATIVE.

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

- POWER DISTRIBUTION.
- ENERGEX NEGOTIATIONS AND APPLICATION.
- ENERGEX PADMOUNT SUBSTATION.
- RETAIL METERING.
- CONSUMERS MAINS.
- MAIN SWITCHBOARD.
- SUBMAINS.
- DISTRIBUTION BOARD.
- PV SYSTEM INCLUDING THE ENERGEX APPLICATION.
- CABLE ACCESS WAYS.
- CIRCUITS.
- ISOLATORS AND OUTLETS.
- TESTING AND COMMISSIONING.
- THERMOSCAN THE MSB AND THE DISTRIBUTION BOARD ONE WEEK AFTER PRACTICAL COMPLETION.

PROVIDE A CHART RECORDING OF THE MAINS CURRENT, VOLTAGE, FREQUENCY FOR THE FIRST 14 DAYS FOLLOWING PRACTICAL COMPLETION AND SUBMIT THE THERMOSCAN CHART RECORDING AND FOR APPROVAL. PROVIDE A 33KW SOLAR PHOTOVOLTAIC SYSTEM IN ACCORDANCE WITH AS 5033 WITH THE PV INSTALLATION UNDERTAKEN BY AN ACCREDITED INSTALLER MEMBER OF THE CLEAN ENERGY COUNCIL.

PROVIDE PV PANELS WITH AN EFFICIENCY IN EXCESS OF 20% AND A MANUFACTURERS 15-YEAR PRODUCT WARRANTY AND A PERFORMANCE WARRANTY GUARANTYING 80% OF THE PANELS RATED OUTPUT AFTER 25 YEARS. PROVIDE AN INVERTER THAT HAS A WI FI INTERNET CONNECTION, A LOSS OF LESS THAN 5% AND A MANUFACTURERS PRODUCT WARRANTY OF 5 YEARS. PROVIDE THE PV SYSTEM DC AND AC CABLING THAT HAS A LESS THAN COMBINED LOSS LESS THAN 3%. PROVIDE SHOP DRAWINGS AND TECHNICAL DETAILS OF THE PV SYSTEM INCLUDING ALL COMPONENTS AND THE PV PANEL LAYOUT FOR APPROVAL.

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. TELECOMMUNICATIONS SERVICE

THE COMMUNICATIONS CABLING COMPONENT OF THIS CONTRACT INCLUDES THE PROVISION OF A NEW FIBRE TELECOMMUNICATIONS SERVICE TO THE SITE WITH AN EXTERNAL PCD AND NTD ADJACENT THE COMMUNICATIONS RACK. ARRANGE FOR THE TELECOMMUNICATIONS SERVICE TO BE INSTALLED INCLUDING ALL CABLE ACCESS WAYS AND DOCUMENTATION IN ACCORDANCE WITH THE TELECOMMUNICATIONS SERVICE SUPPLIERS REQUIREMENTS.


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.
- HWS - HOT WATER SYSTEM.
- 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.

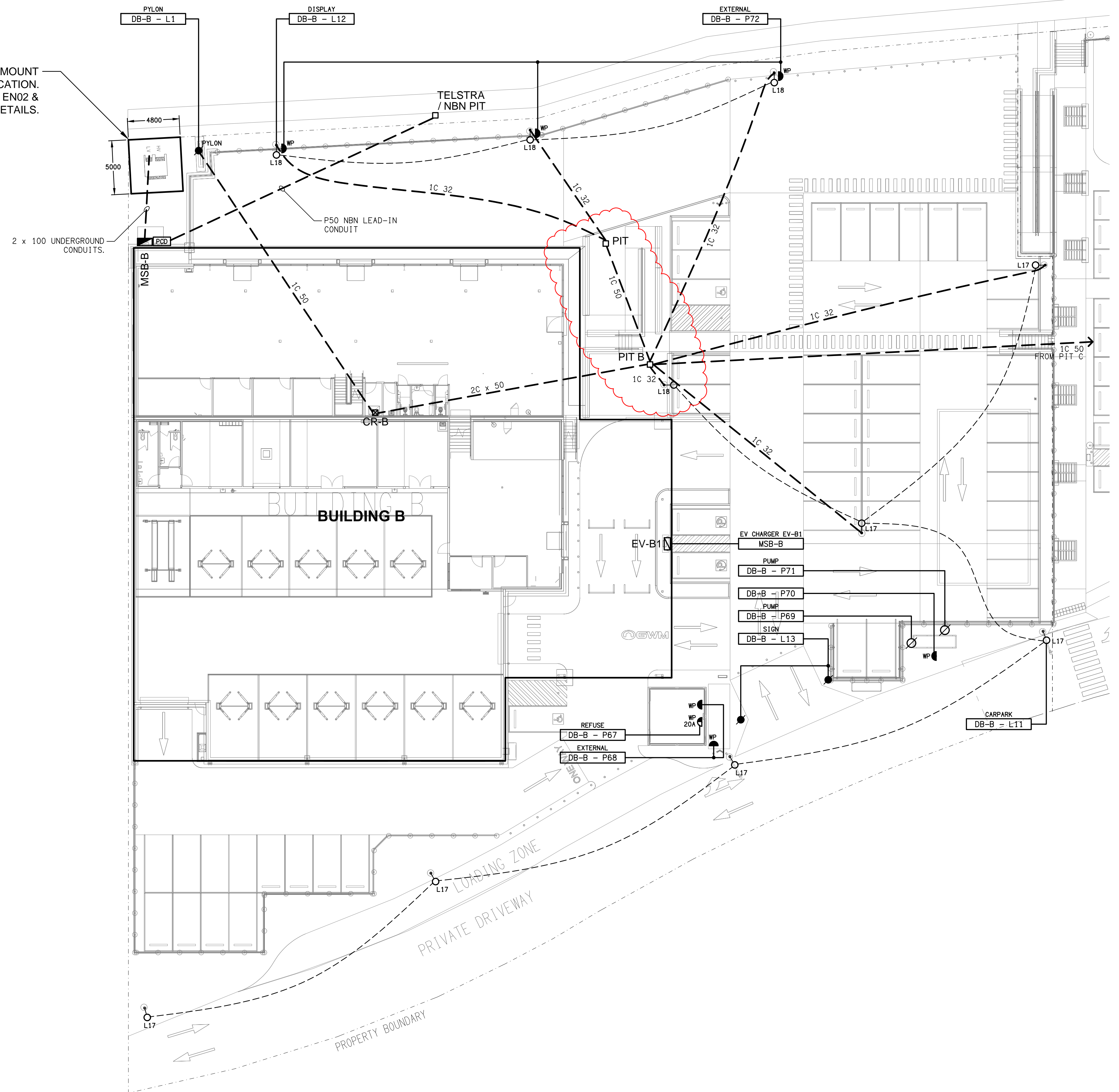
9. MANAGED SOLUTIONS

COORDINATE WITH THE TENANTS SPECIALIST CONTRACTOR MANAGED SOLUTIONS WHO WILL BE PROVIDING THE FOLLOWING SYSTEMS AND CABLING DIRECTLY TO THE TENANT:

- COMMUNICATIONS.
  - TIE CABLES.
  - COMMUNICATIONS RACK.
  - UPS AND ALL ACTIVE NETWORK EQUIPMENT.
  - PATCH PANELS, PATCH LEADS AND RACK CABLE MANAGEMENT.
  - COMMUNICATIONS CABLING AND OUTLETS.
- CCTV.
  - ACTIVE CENTRAL PROCESSING AND RECORDING EQUIPMENT.
  - CABLING, OUTLETS AND CAMERAS.
  - MONITORS.
  - CAMERA HOUSINGS AND MOUNTINGS.
- INTRUDER DETECTION.
  - ACTIVE CENTRAL PROCESSING EQUIPMENT.
  - CABLING, DETECTORS, KEY PANELS , STROBES AND SIRENS.
  - MONITORING.
- ACCESS CONTROL.
  - ACTIVE CENTRAL PROCESSING EQUIPMENT.
  - CABLING, DOOR CONTROLLERS, STRIKES, AND DOOR HOLDERS.
  - CARD READERS AND CARDS.
- BACK GROUND MUSIC.
  - ACTIVE CENTRAL SOURCE, CONTROL AND AMPLIFICATION EQUIPMENT.
  - CABLING AND SPEAKERS.
- MATV.
  - ANTENNA.
  - HEADEND AND DISTRIBUTION EQUIPMENT.
  - CABLING AND OUTLETS.
  - MONITORS.

ELECTRICAL DESIGN GROUP BRISBANE PTY LTD ACN 092 710 793		THE COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF THE ELECTRICAL DESIGN GROUP.		 Rohrig (Qld) Pty Ltd ABN 67 093 753 970 QBSA LIC NO 740842 250 Abbotsford Road, Bowen Hills Qld 4006 PO Box 86 Albion DC Qld 4010 T+61 (7) 3257 4411 F+61 (7) 3257 2211 www.rohrig.com.au		 <b>ELECTRICAL DESIGN GROUP</b> ELECTRICAL BUILDING SERVICES CONSULTANTS BRISBANE GOLD COAST		PROJECT: <b>LLEWELLYN MOTORS SPRINGFIELD - LOT 32</b>		DRAWING: <b>ELECTRICAL SERVICES NOTES</b>		1 CONSTRUCTION 30/05/2025	
TRADING AS: ELECTRICAL DESIGN GROUP		USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.		ALL DIMENSIONS TO BE VERIFIED ONSITE.		P.O.Box 15, Sherwood Q.4075 Phone: (07) 3278 4375 Email: brisbane@edg.net.au Web: www.edg.net.au		LOT 32 AUGUSTA PARKWAY, AUGUSTINE HEIGHTS		SCALE: NOT TO SCALE AT A1		PROJECT NO: <b>C3294a</b>	
										DRAWING NO: <b>E02</b>		REVISION: <b>1</b>	





NBN DROP CONDUIT  
 TO THE NTD.

PROVIDE THE ENCLOSURE DOOR  
 WITH A PERMANENT FIXED LABEL  
 "NBN". ENSURE THE ENCLOSURE  
 HAS 200mm CLEAR ON ALL SIDES.

PCD

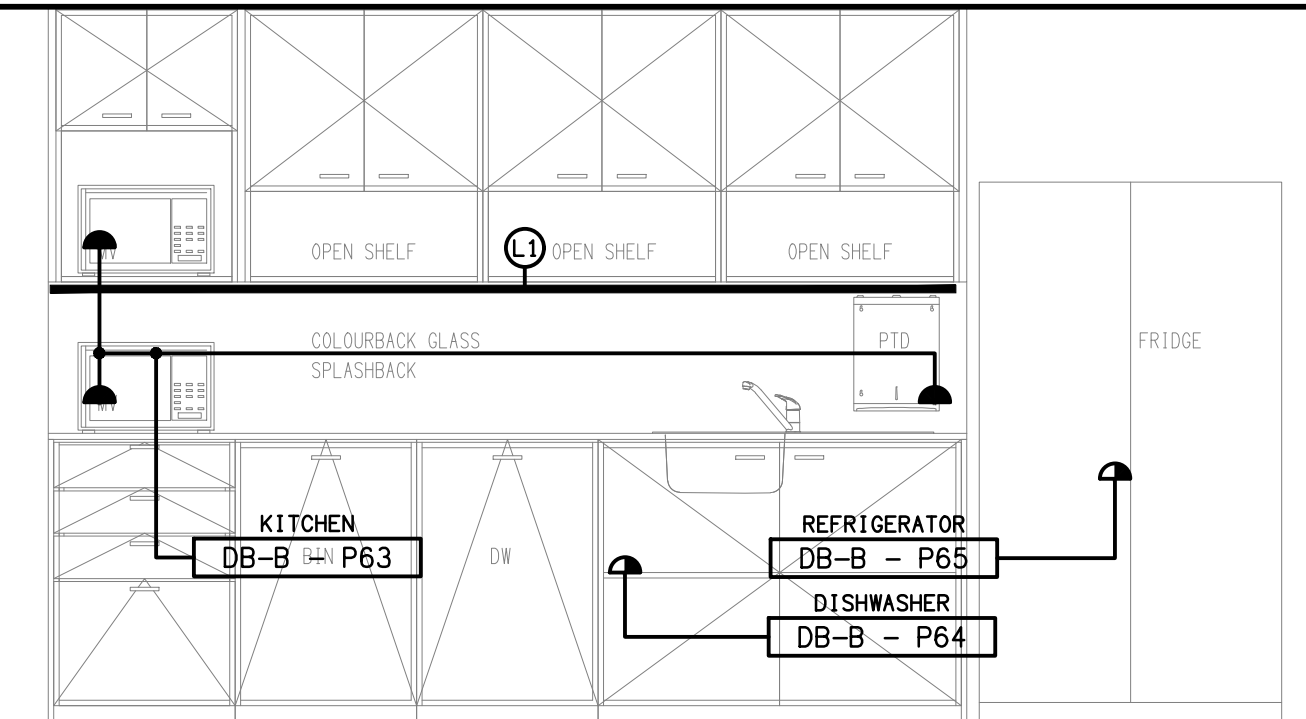
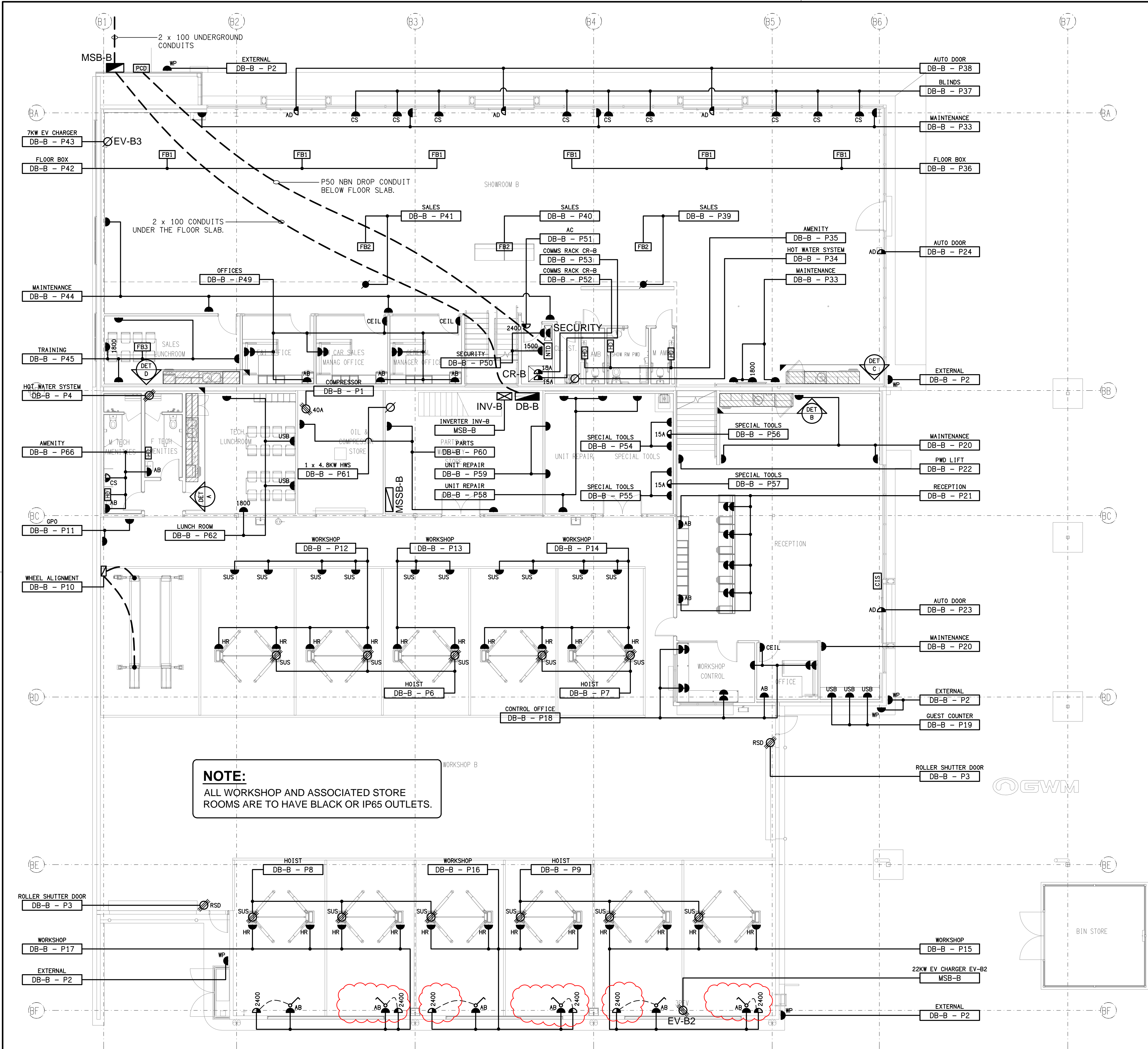
600 x 600 x 300 DEEP IP55 NBN  
 COMPLIANT PCD ENCLOSURE  
 SURFACE MOUNTED C/W 2No. 1/4  
 TURN 5mm DOUBLE BIT KEY  
 CABINET LOCKS ON A DOOR WITH  
 120DEG MINIMUM OPENING. THE  
 ENCLOSURE IS TO BE  
 POWDERCOATED A COLOUR TO MATCH  
 THE ADJACENT WALL COLOUR.

600

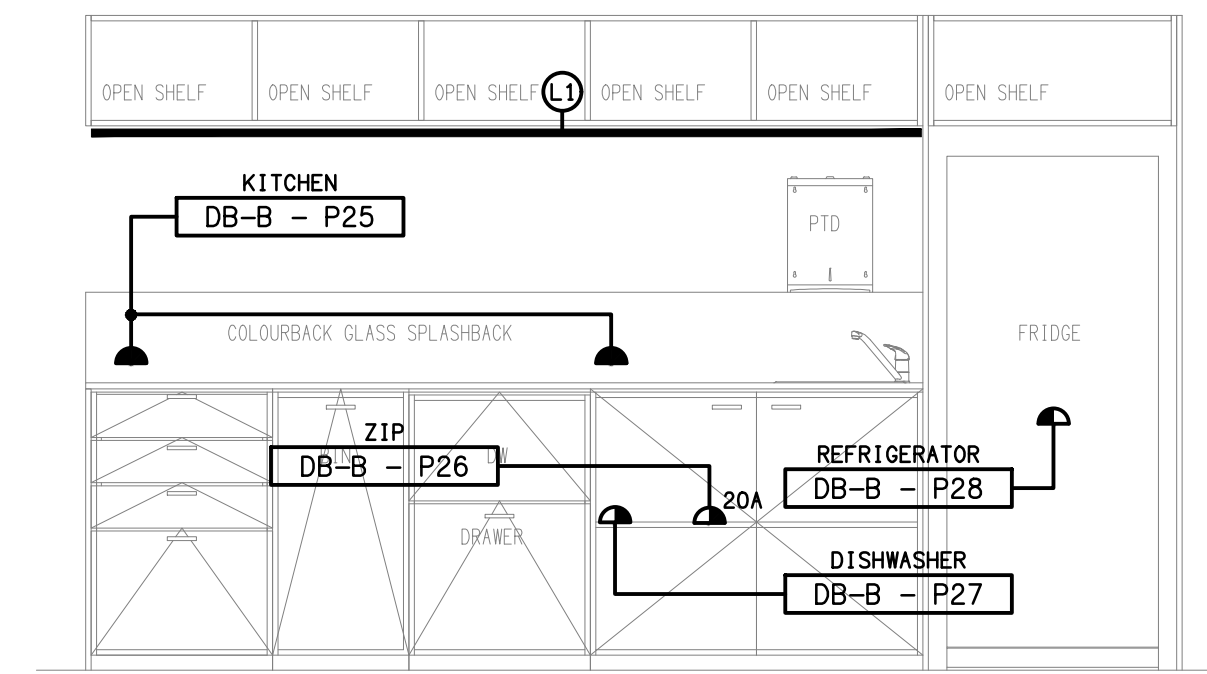
▽ GROUND

P50 NBN LEAD-IN  
 CONDUIT.

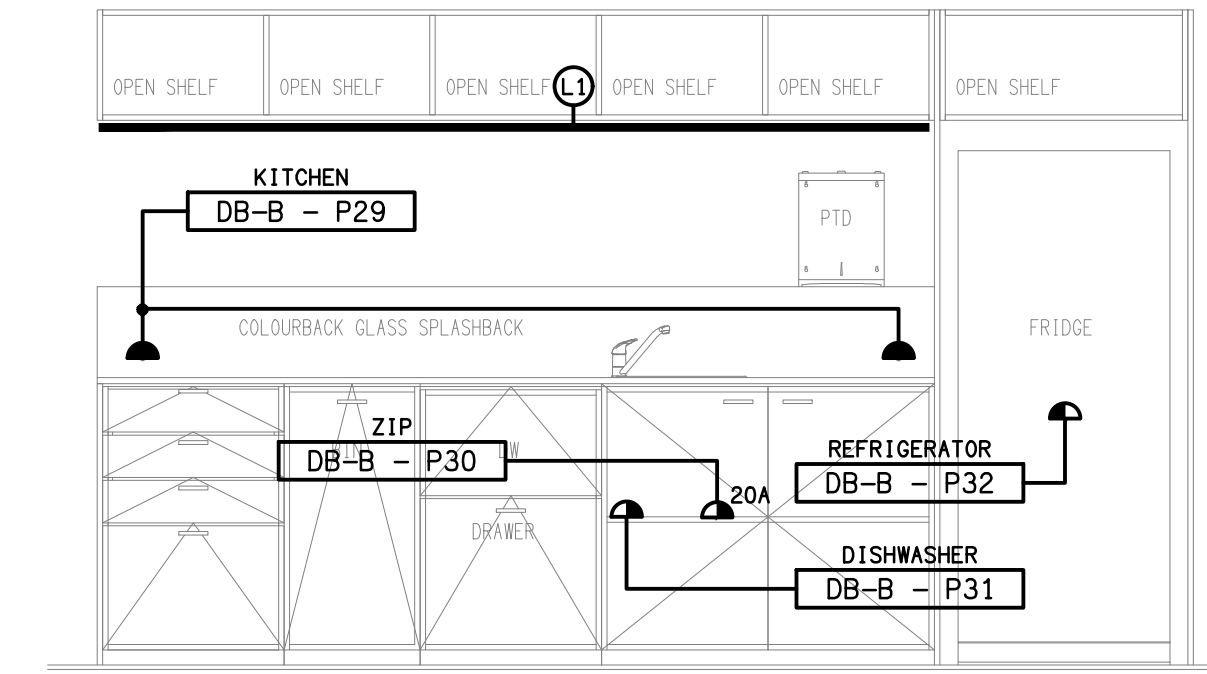
<div><div><div><div><div></div><div></div></div><div><div><div><span>ELECTRICAL DESIGN GROUP BRISBANE</span></div><div><span>PTY LTD</span></div><div><span>ACN 092 710 793</span></div></div></div></div></div></div>	<div><div><div><div>THE COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF THE ELECTRICAL DESIGN GROUP.</div></div><div><div>USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.</div></div><div><div>ALL DIMENSIONS TO BE VERIFIED ONSITE.</div></div></div></div>	<div><div><div><div><div></div><div></div></div><div><div><div><span>rohrig</span></div><div><span>constructions</span></div></div></div></div></div><div><div><div><div><div>Rohrig (Qld) Pty Ltd</div><div>ABN 67 093 753 370</div><div>QBSA LIC NO 740842</div><div>250 Abbotsford Road, Bowen Hills Qld 4006</div><div>PO Box 86 Albion DC Qld 4010</div><div>T+61 (7) 3257 4411 F+61 (7) 3257 2211</div><div>www.rohrig.com.au</div></div></div></div></div></div>	<div><div><div><div><div><div></div><div></div></div><div><div><div><span>ELECTRICAL DESIGN GROUP</span></div></div></div><div><div><div><span>ELECTRICAL</span></div><div><span>BUILDING</span></div><div><span>SERVICES</span></div><div><span>CONSULTANTS</span></div></div></div><div><div><div><span>BRISBANE</span></div><div><span>GOLD COAST</span></div></div></div></div></div><div><div><div><div><div>P.O.Box 15, Sherwood Q.4075</div><div>Phone: (07) 3278 4375</div><div>Email: <a href="mailto:brisbane@edg.net.au">brisbane@edg.net.au</a></div><div>Web: <a href="http://www.edg.net.au">www.edg.net.au</a></div></div></div></div></div></div></div>	<div><div><div><div>PROJECT:</div><div>LLEWELLYN MOTORS SPRINGFIELD - LOT 32</div></div></div><div><div><div>LOT 32 AUGUSTA PARKWAY, AUGUSTINE HEIGHTS</div></div></div></div>
				<div><div><div><div>DRAWING:</div><div><span>ELECTRICAL SERVICES</span></div><div><span>SITE PLAN</span></div></div></div><div><div><div><div>SCALE:</div><div>1:200</div></div><div><div>AT A1</div></div></div></div><div><div><div><div><div>PROJECT NO:</div><div><span>C3294a</span></div></div><div><div>DRAWING NO:</div><div><span>E03</span></div></div><div><div>REVISION:</div><div><span>2</span></div></div></div></div></div></div>



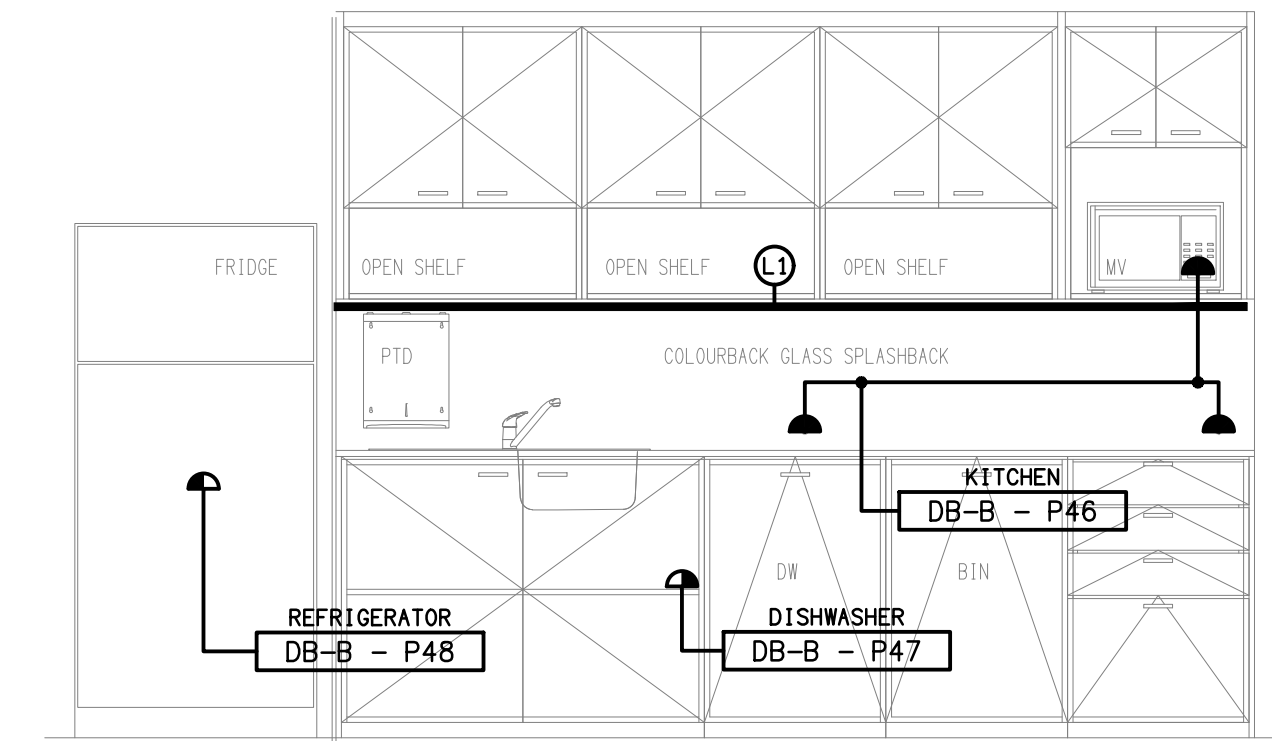
**DETAIL A**  
LUNCH ROOM 1 KITCHENETTE ELEVATION  
SCALE 1:25



**DETAIL B**  
RECEPTION CAFE KITCHENETTE  
SCALE 1:25

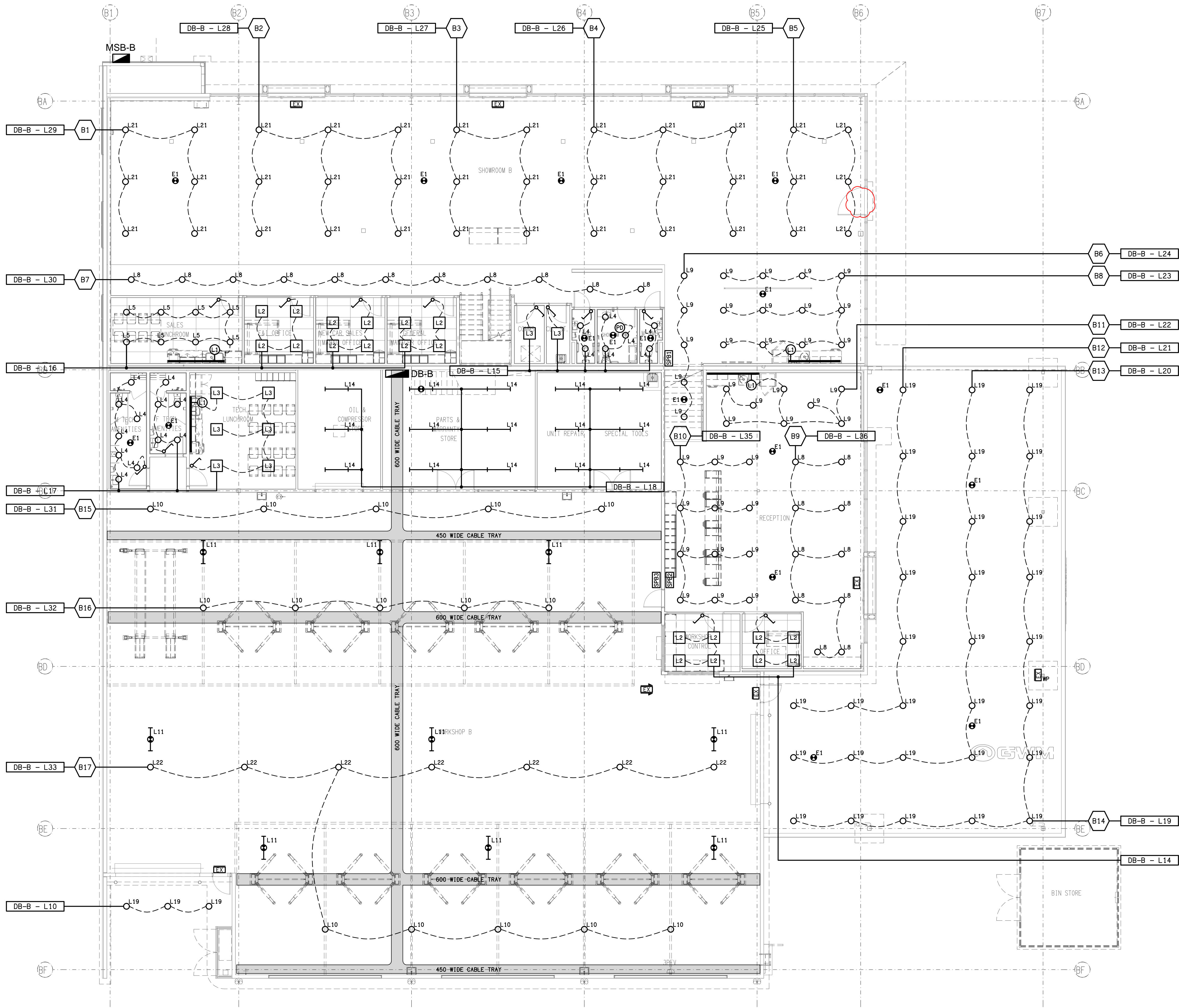


**DETAIL C**  
SHOWROOM CAFE KITCHENETTE  
SCALE 1:25



**DETAIL D**  
LUNCH ROOM 2 KITCHENETTE ELEVATION  
SCALE 1:25





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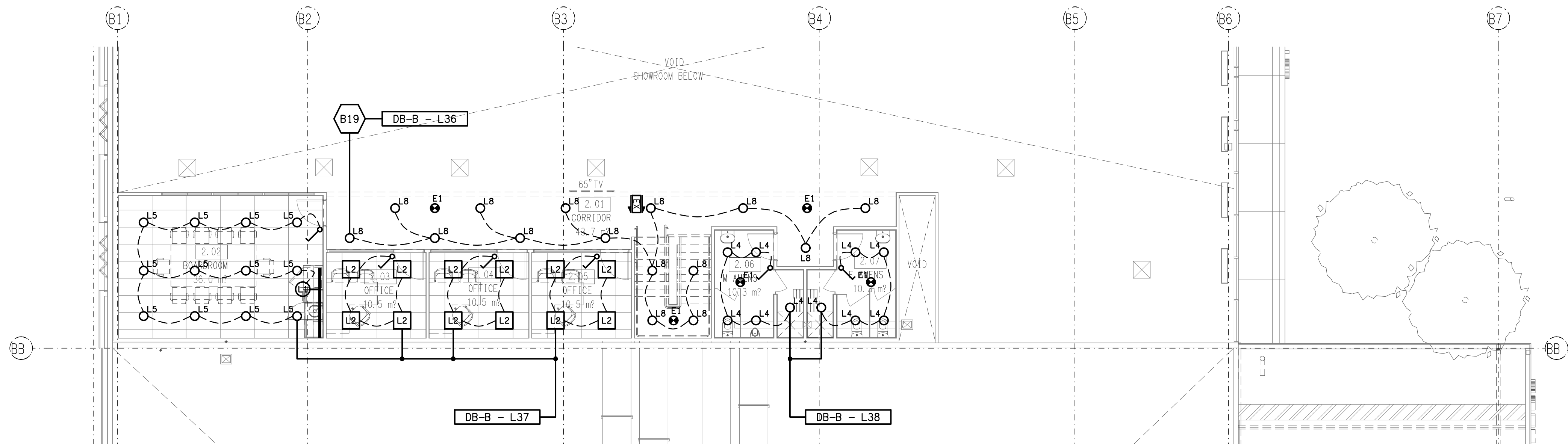
PROJECT:  
**LLEWELLYN MOTORS SPRINGFIELD - LOT 32**

LOT 32 AUGUSTA PARKWAY, AUGUSTINE HEIGHTS

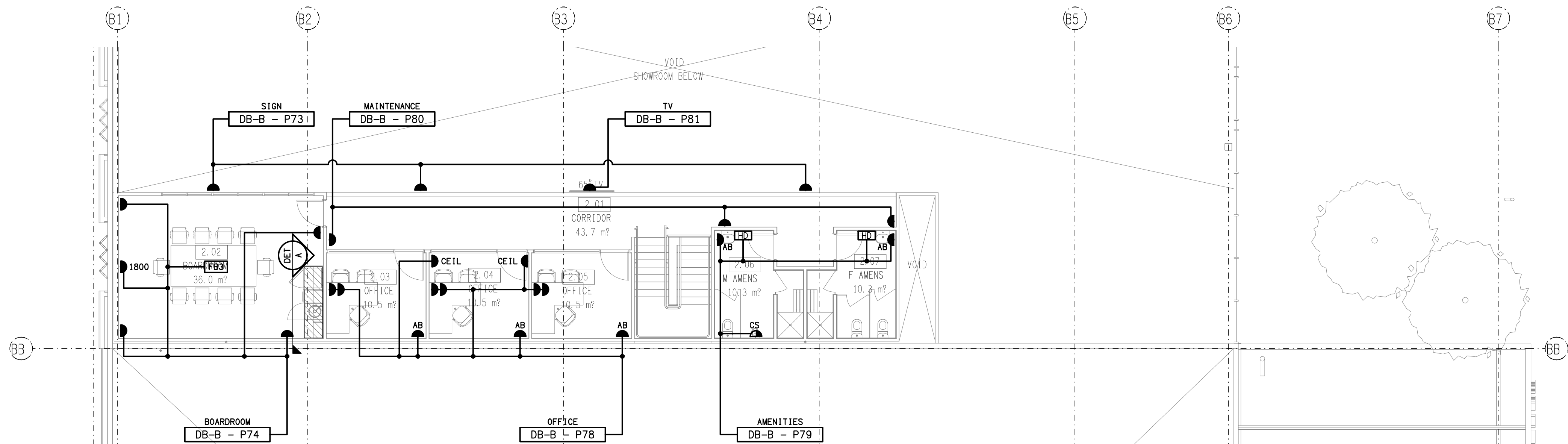
2	CONSTRUCTION	05/11/2025
REV:	DESCRIPTION:	DATE:

DRAWING:  
**ELECTRICAL SERVICES**  
**GROUND LEVEL REFLECTED CEILING PLAN**

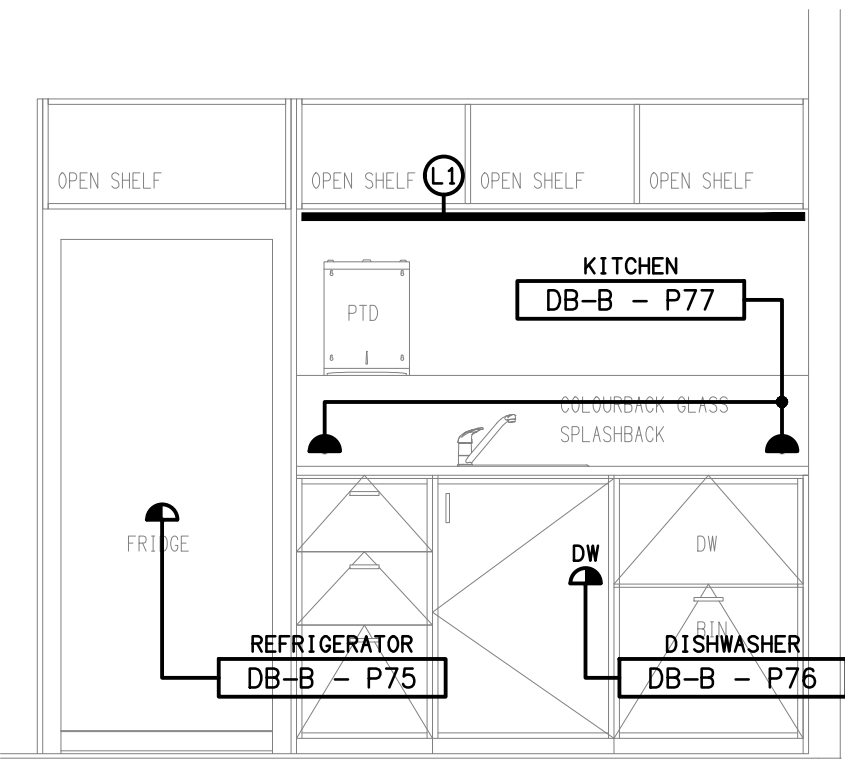
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**REFLECTED CEILING PLAN**  
MEZZANINE LEVEL  
SCALE 1: 100

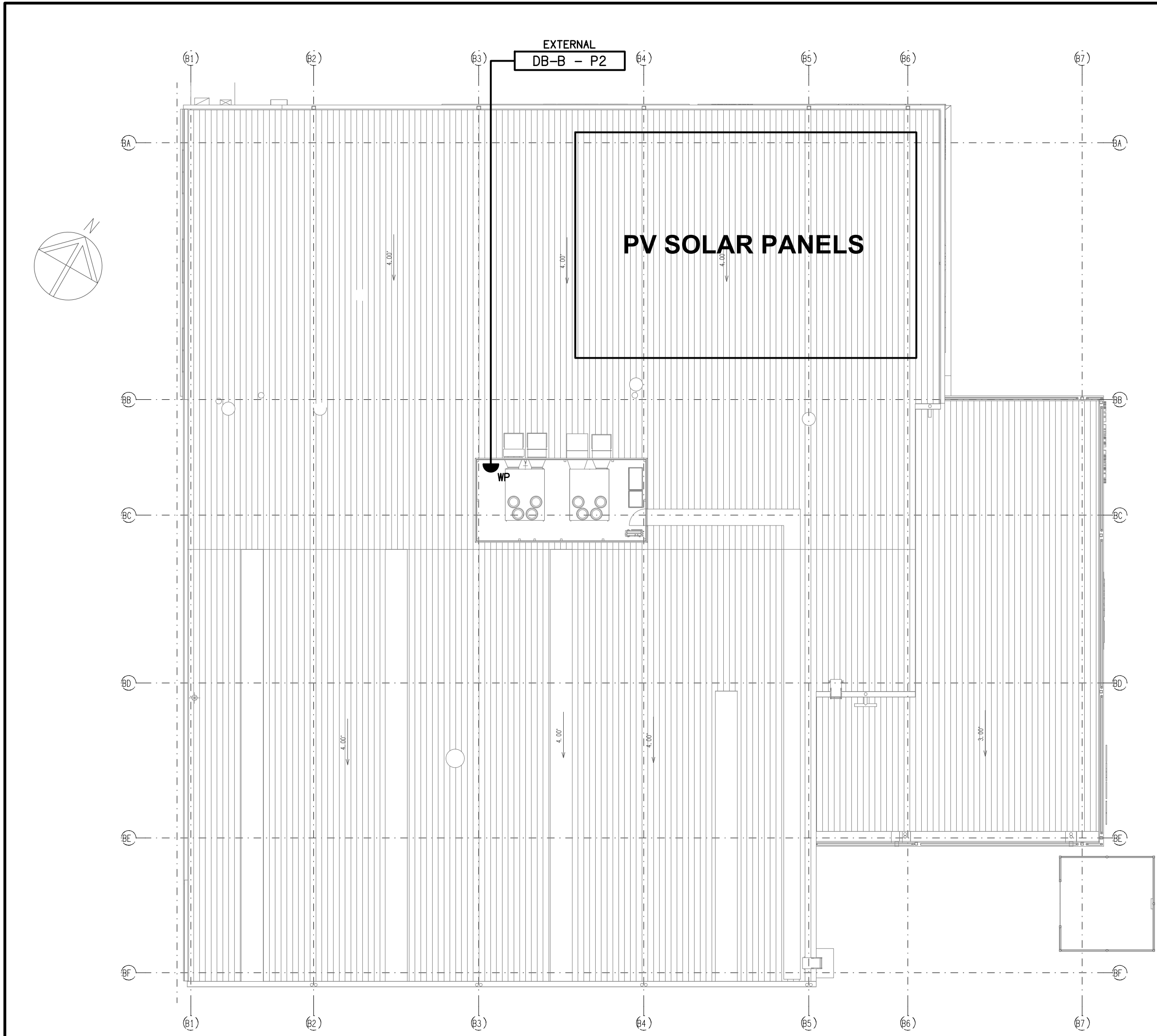


**FLOOR PLAN**  
MEZZANINE LEVEL  
SCALE 1: 100

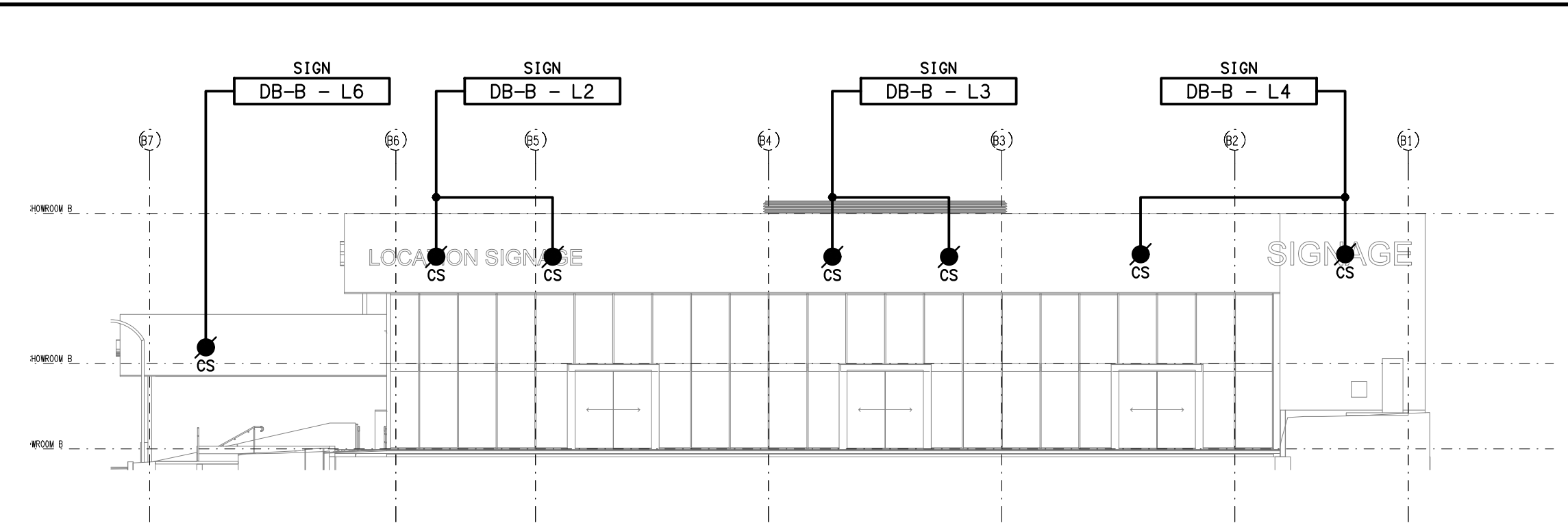


**DETAIL A**  
BOARD ROOM KITCHENETTE ELEVATION  
SCALE 1: 25

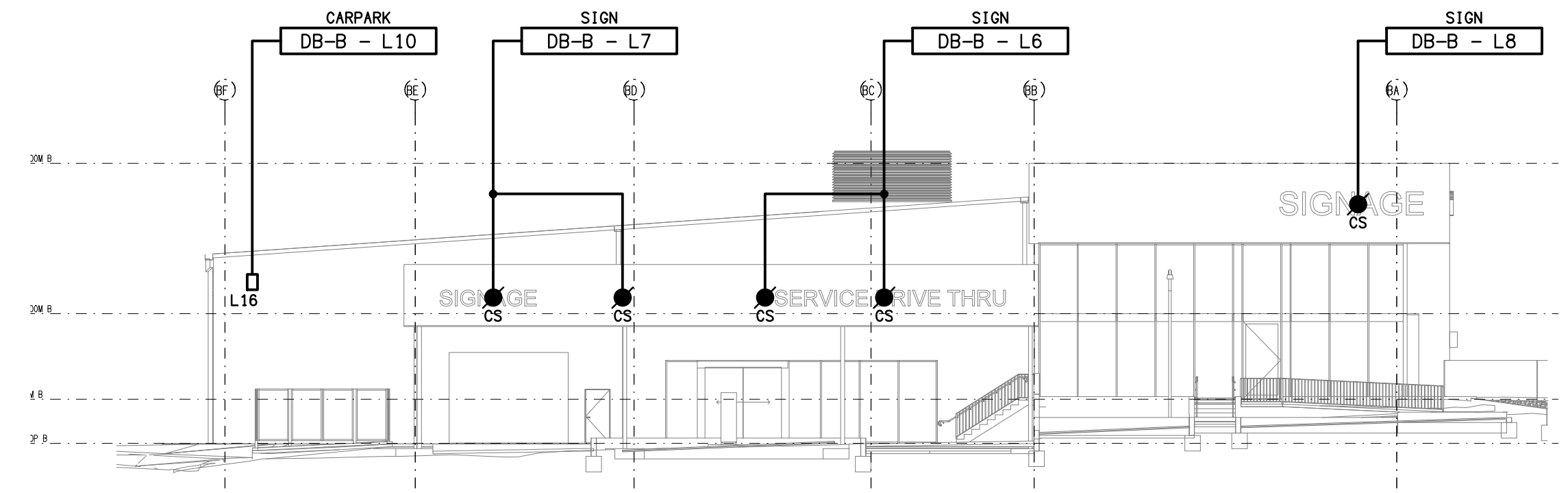




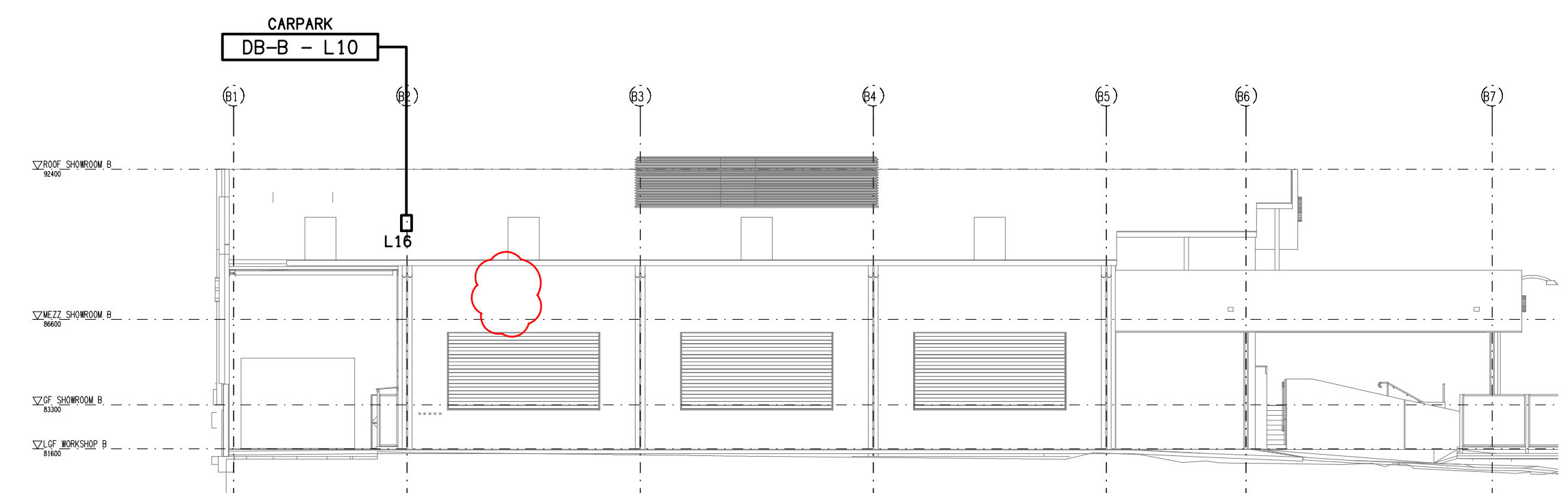
**ROOF LEVEL**  
**FLOOR PLAN**  
SCALE 1: 200



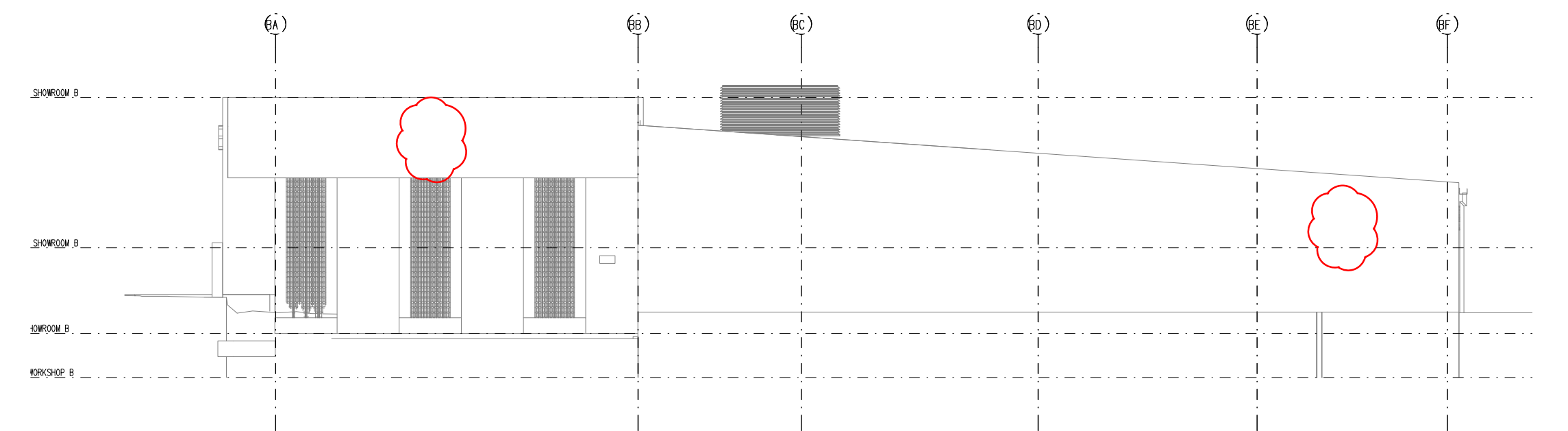
**NORTHERN ELEVATION**



**EASTERN ELEVATION**

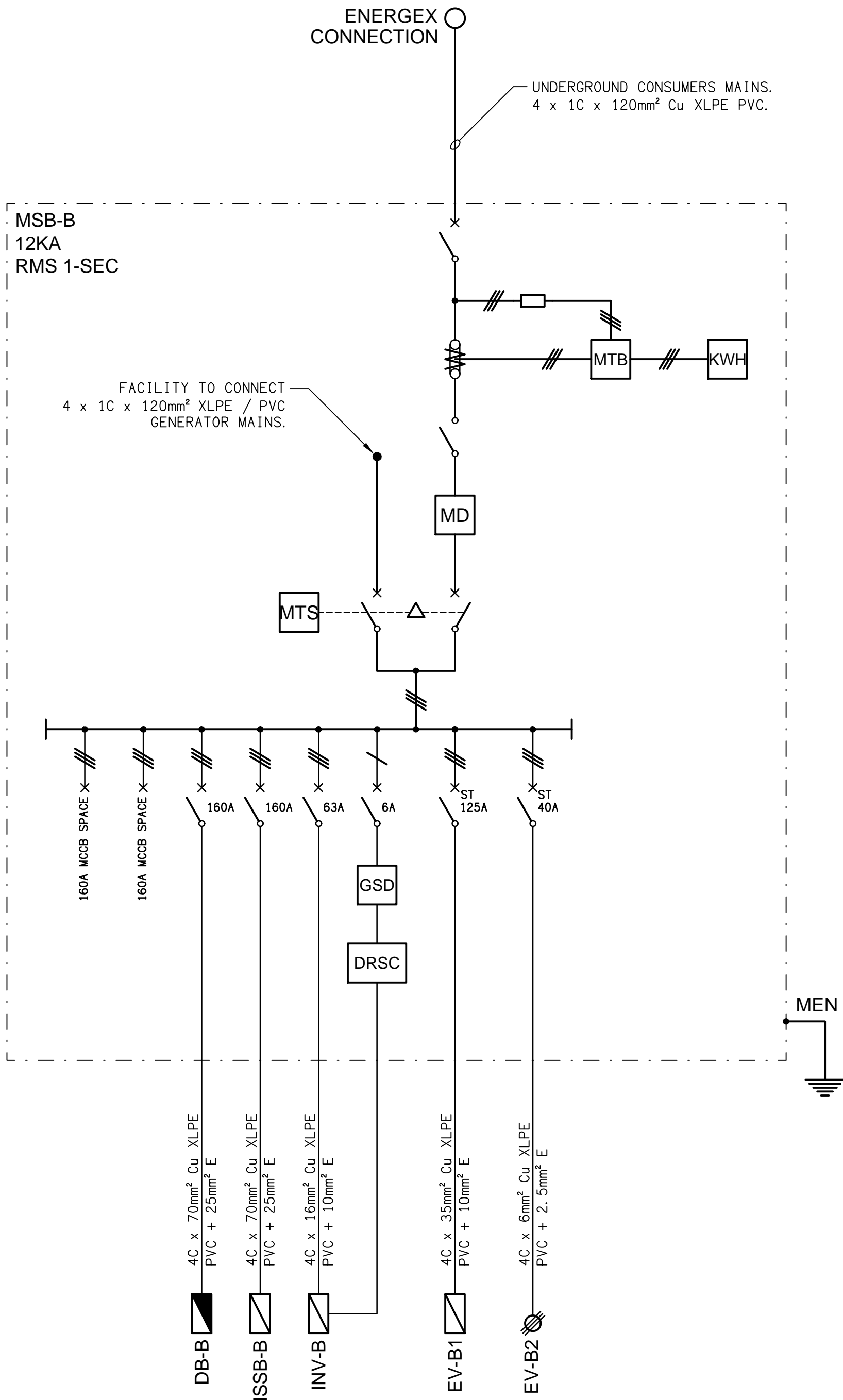


**SOUTHERN ELEVATION**

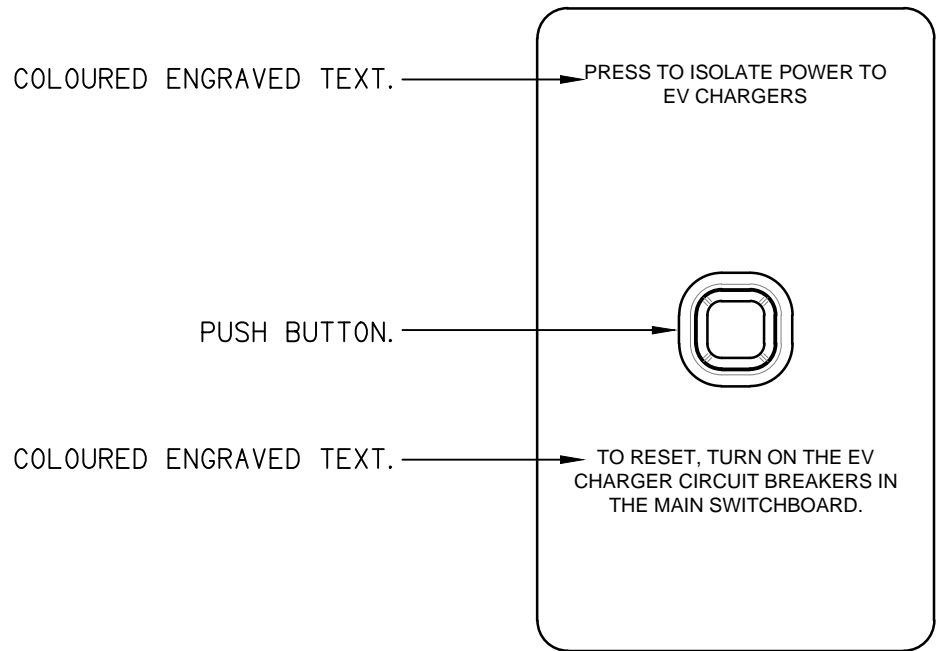


**WESTERN ELEVATION**

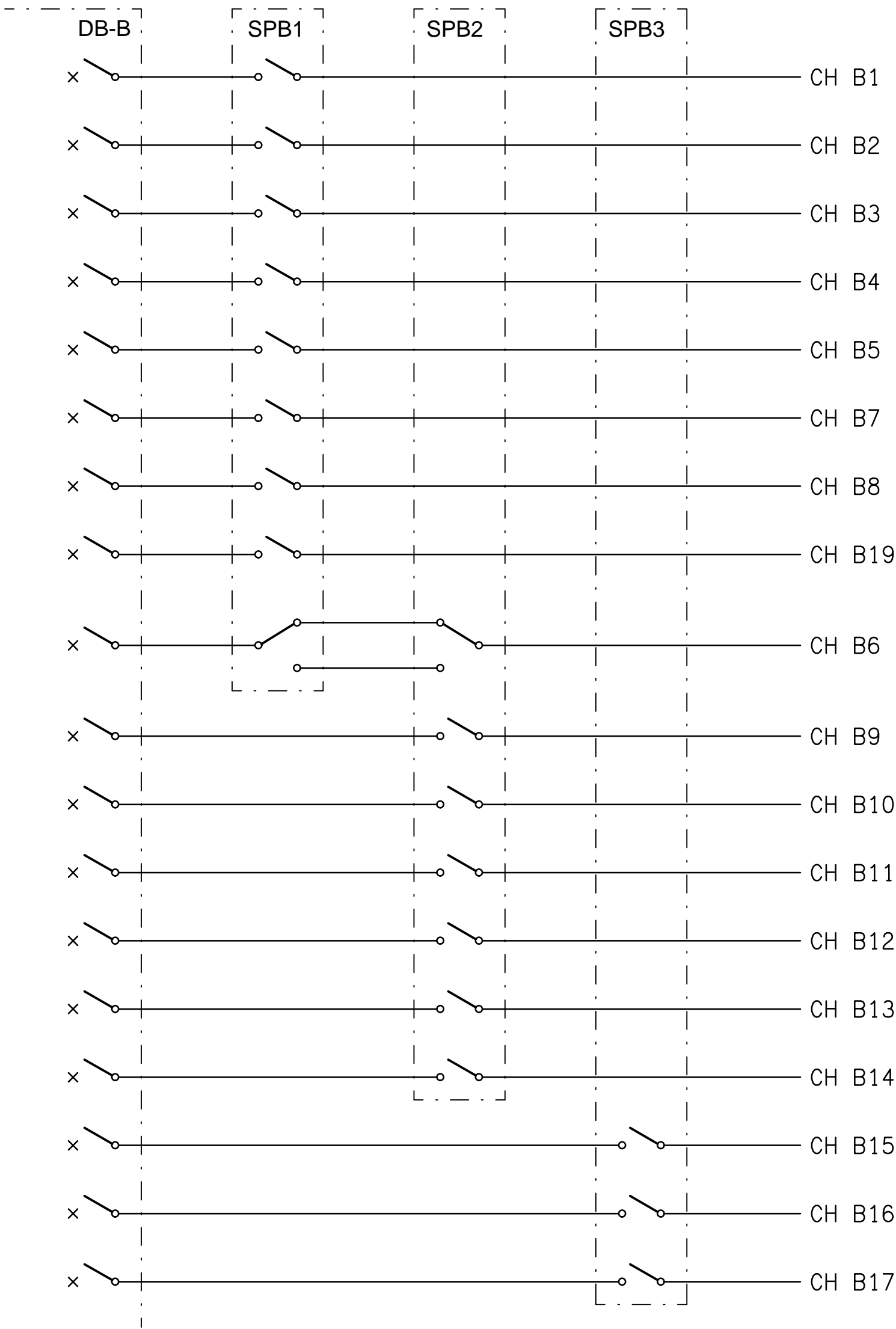
**DETAILS**  
**EXTERNAL BUILDING ELEVATIONS**  
SCALE 1: 200



**SCHEMATIC**  
MSB-B CONFIGURATION  
NOT TO SCALE



**DETAIL**  
ELECTRIC VEHICLE CHARGING ISOLATION SWITCH (CIS)  
NOT TO SCALE



**SCHEMATIC**  
LIGHTING CONTROL  
NOT TO SCALE



**NOTE:**  
THERE ARE NO HYDRANTS WITHIN 25m OF THE PADMOUNT SUBSTATION TRANSFORMER.

PROPOSED 4800 x 5000 PADMOUNT SUBSTATION TRANSFORMER LOCATION.

CLOSEST COMMUNICATIONS PIT (TELSTRA / NBN) 25m PLUS FROM PADMOUNT SUBSTATION TRANSFORMER.

1 x 100mm DIA WHITE AND 6 x 125mm DIA ORANGE CONDUITS WITHIN THE ENERGEX FOOTPATH ZONE.

UNDERGROUND CONDUIT

MSB-B

BUILDING B

LOADING ZONE  
PRIVATE DRIVEWAY

PROPERTY BOUNDARY

**SITE PLAN**  
PROPOSED PADMOUNT SUBSTATION  
SCALE 1: 250

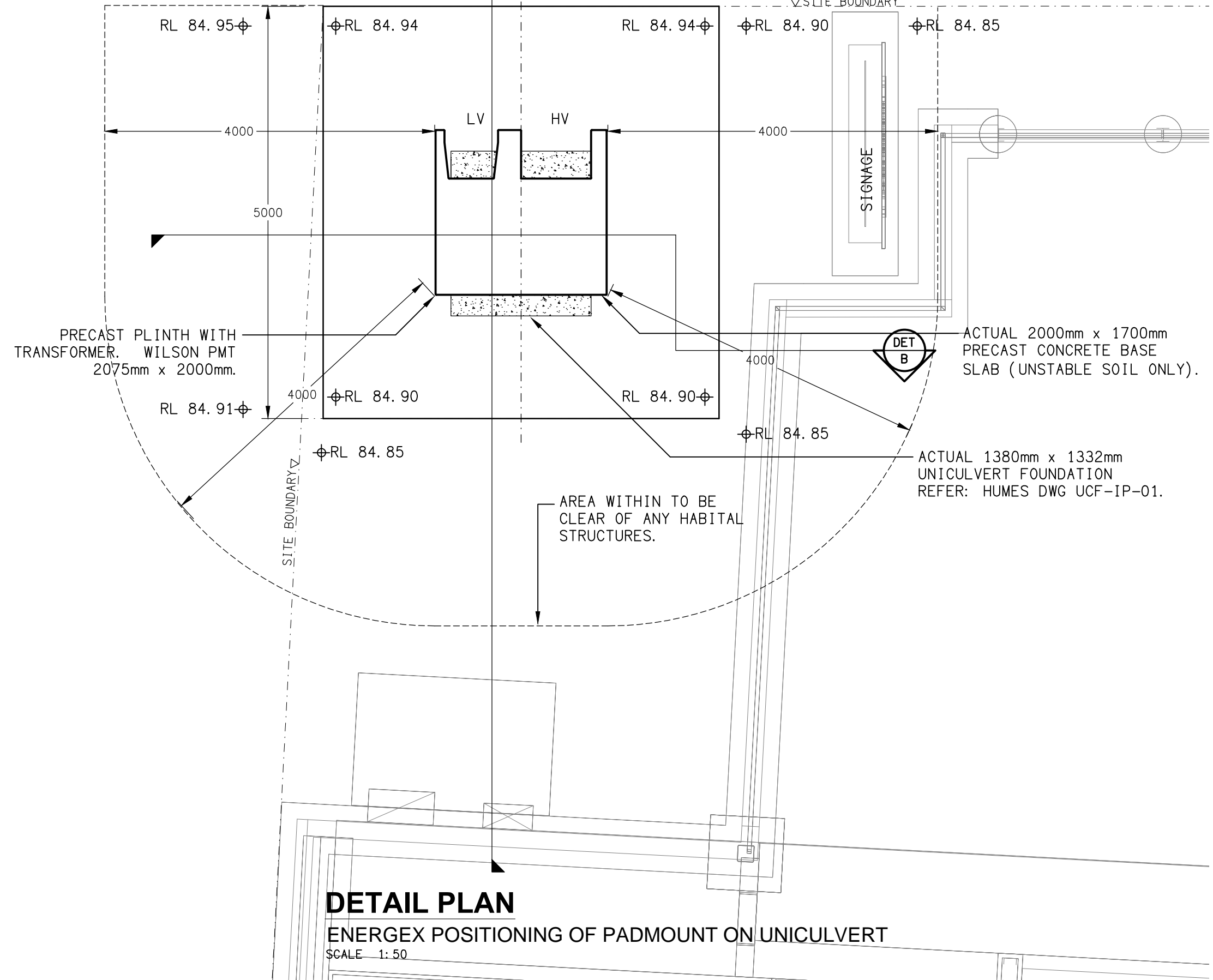
**NOTE:**  
AS PER THE CITY OF IPSWICH HISTORICAL FLOOD INFORMATION PACK, THE SITE IS NOT SUBJECT TO FLOODING AND DOES NOT HAVE A DEFINED Q100 FLOOD LEVEL.

building in background

ADJACENT SITE

**DETAIL B**  
PADMOUNT SECTION VIEW  
SCALE 1: 50

**NOTE:**  
DO NOT RUN PRIVATE SERVICE CABLE THROUGH CULVERT



**DETAIL A**  
PADMOUNT SECTION VIEW  
SCALE 1: 50



CULVERT INSPECTION REQUIRED BEFORE TRANSFORMER IS DELIVERED  
- 5 BUSINESS DAYS PRIOR NOTICE NEEDED.  
CONTACT: PAUL HAWKINS PH: 0419 756 501 EMAIL: ProjectCoordinationsesth@energex.com.au

TRANSFORMER WILL NOT BE ENERGISED UNTIL ALL REQUIREMENTS ARE MET.

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PROJECT:  
LLEWELLYN MOTORS SPRINGFIELD - LOT 32

LOT 32 AUGUSTA PARKWAY, AUGUSTINE HEIGHTS

1	CONSTRUCTION	30/05/2025
REV:	DESCRIPTION:	DATE:

DRAWING:  
**ELECTRICAL SERVICES  
ENERGEX PADMOUNT SUBSTATION  
SITE PLAN & DETAILS**

SCALE: 1:250 & 1:50 AT A1  
PROJECT NO: **C3294a**  
DRAWING NO: **EN01**  
REVISION: **1**

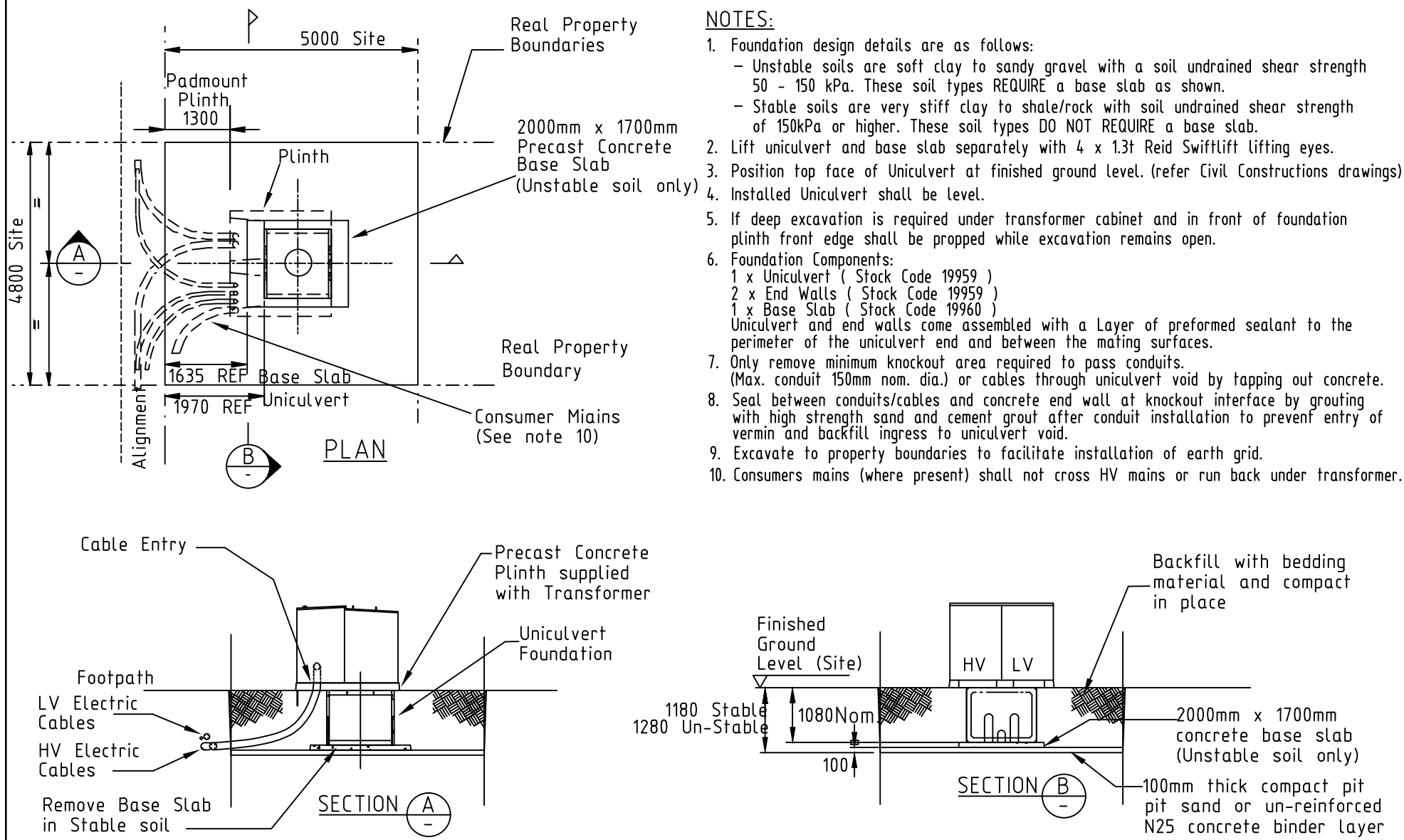


The diagram illustrates the plan and section of a roadway. The **PLAN** view shows a cross-section of the road with a central roadway of 5000 units (common earth) and 8900 units (separate earth). It includes a 1300-unit wide shoulder, an 800-unit wide reserve area, and a 4800-unit high embankment. The **SECTION** view shows the road profile with a 150-unit maximum fill and a 150-unit maximum cut, relative to the R.P. Street Alignment.

**NOTE:**

1. ENERGEK's padmount clearance zone shall be levelled and surrounding area graded to ensure no water ponding.
2. No services other than the ENERGEK's electric cables shall pass through this substation site.
3. Clear access to the transformer shall be maintained for ENERGEK's personnel and heavy equipment.
4. After installation is complete the site surface is to be finished with a concrete slab, refer C3-2.5.
5. Mature landscaping (including trees, sprinklers etc.) shall not encroach onto the substation site.
6. 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.

NOTE. × if applicable.

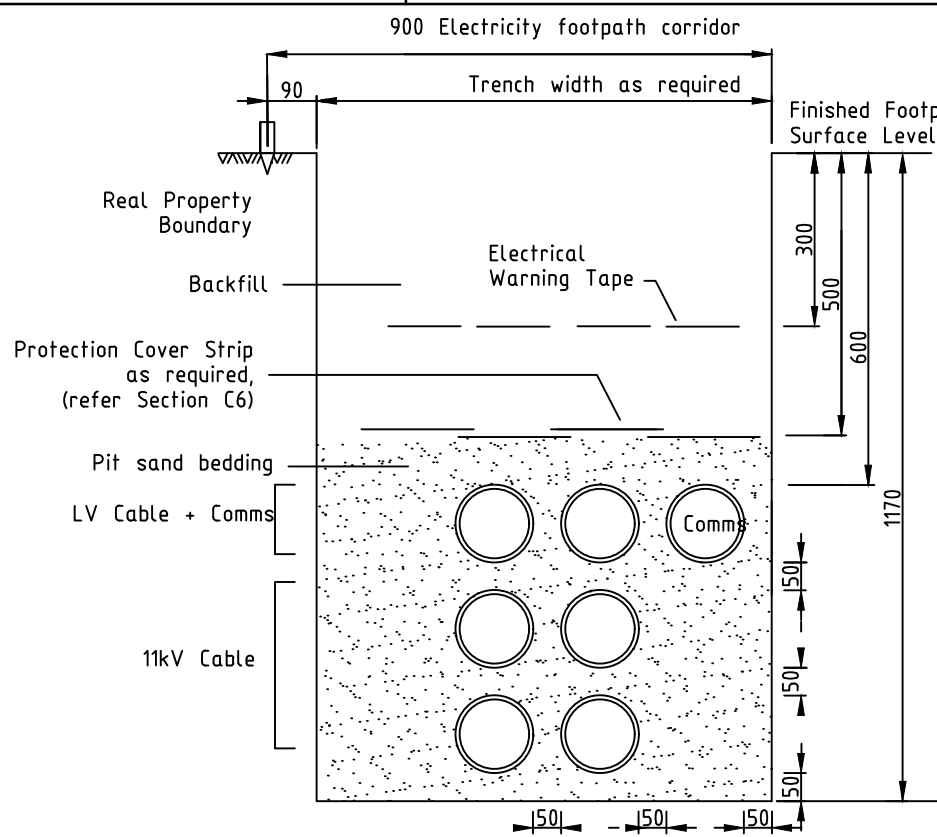


**Note**  
ENERGEX will not commission the transformer until the transformer site has been completed to ENERGEX specifications (including the concrete surround).

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](https://swp.energex.com.au/service_providers/technical_docs/asp/technical_documents.asp)

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.



## NOTES

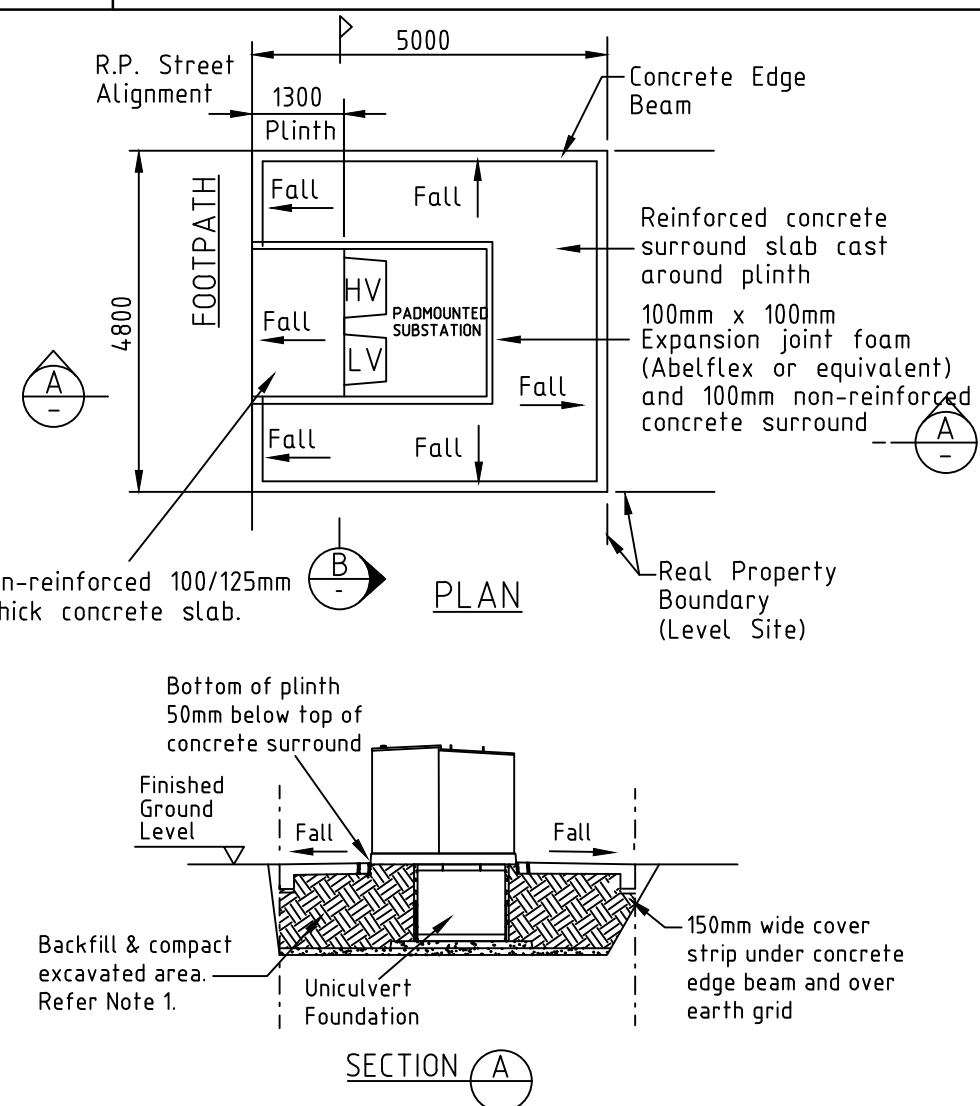
1. CABLE CONDUIT SHALL BE OF THE FOLLOWING TYPE: LIGHT DUTY ELECTRICAL CONDUIT TO AS/NZS 2053. CONDUIT BENDS SHALL HAVE A MINIMUM RADIUS OF 1830mm.
2. CONDUITS SHALL BE 125mm ORANGE FOR ELECTRICAL AND 100MM WHITE (LOCATED TOP KERBSIDE) AS SPECIFIED BY ENERGEY AND SHALL BE SUPPLIED AND INSTALLED BY THE DEVELOPER OR ENERGEY. CONDUIT SHALL BE SECURELY SEALED TO PREVENT INGRESS OF DIRT UNTIL CABLE INSTALLATION AND THEN RESEALED.
3. EACH CONDUIT TO BE FITTED WITH A 6mm BRAID POLYPROPYLENE DRAW ROPE TO PULL IN HAULAGE ROPE. (MINIMUM BREAKING STRENGTH OF 1.0kN.)
4. ENERGEY MAY NEED TO INSTALL AN EARTH WIRE AND EARTH RODS IN CONDUIT TRENCHES FROM THE SUBSTATION SITE.
5. ELECTRICITY SUPPLY CONDUITS AND CABLES SHALL HAVE POLYMERIC CABLE PROTECTION COVER STRIPS PLACED 100mm ABOVE THE TOP CONDUIT FACE OF THE ELECTRICITY SUPPLY CONDUITS AND CABLES. CABLE PROTECTION COVER STRIP SHALL BE LAPPED WHEN PLACED TOGETHER; 100mm MINIMUM ALONG THE LONGITUDINAL AXIS, 40mm MINIMUM ALONG THE TRANSVERSE AXIS AND SHALL EXTEND 40mm MINIMUM PAST THE EXTERNAL EDGES OF THE CONDUIT/CABLE BANK.
6. POLYMERIC CABLE PROTECTION COVER SHALL BE A MINIMUM OF 5mm THICK AS DESCRIBED IN THE AUSTRALIAN STANDARD; AS4702 FPR POLYMERIC CABLE PROTECTION COVERS.
7. REDUCED CONDUIT SEPARATION MAY BE ACCEPTED TO AVOID SPECIFIC OBSTACLES
8. MIN. DEPTHS SHOWN ARE THOSE DEPTHS REQUIRED BY CODE OF PRACTICE, WORKS (MINOR ROADS) AND DMR (ARTERIAL ROADS).

Notes:

- (1) Energex Communication conduit to be 100mm white located top kerbside.
- (2) Power cable conduits to be 125mm orange, light duty.
- (3) Separation for conduits - 50mm minimum, up to 160mm desirable.
- (3) Increased cover required for road crossings.
- (4) Select Backfill and Pit sand bedding complying with ENERGEX UDCM Section C2
- (5) For de-rating factors for cables in duct bank, refer to the Plant Rating Manual

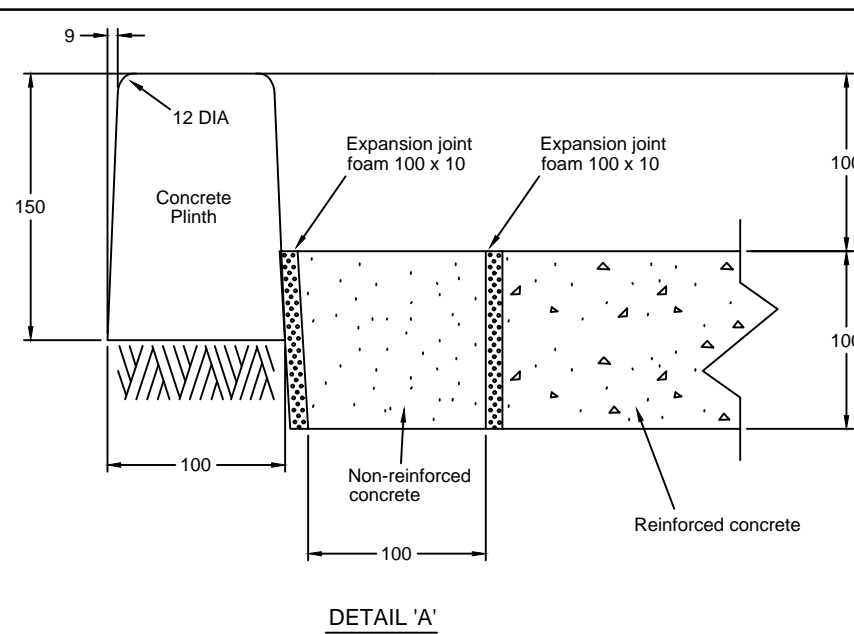
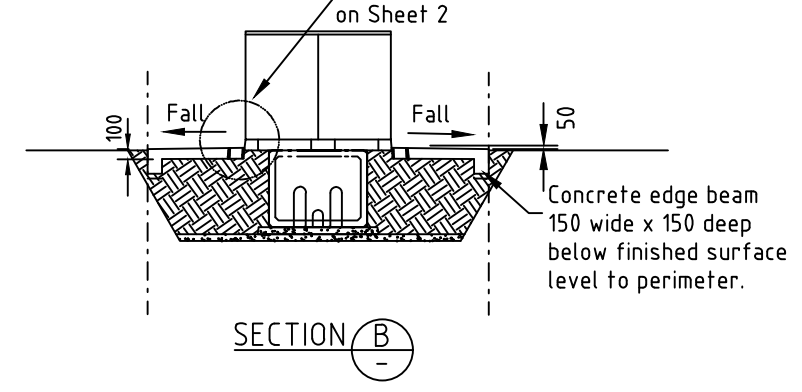
**BEFORE  
YOU DIG**  
[www.byda.com.au](http://www.byda.com.au)

TRANSFORMER WILL NOT BE ENERGISED UNTIL ALL REQUIREMENTS ARE MET.



NOTES:

1. Backfill excavated area with crusher dust, deco or bedding material and compact in place. Ensuring that only bedding material is used around cables.
2. Reinforced concrete surround slab:
  - a. 100 / 125mm thick slab;
  - b. F62 mesh reinforcement in centre of slab;
  - c. 25 MPa grade concrete;
  - d. Finish by wood float or by nylon broom.
3. The top face of the concrete surround slab shall be 25mm above the final surface level (when turf is laid)
4. The concrete slab is to slope away from plinth falling at a slope of 1 in 25.
5. Cable apertures through the precast concrete plinth shall be backfilled to 50mm from the top of the plinth, using bedding material.
6. The top surface of the surround slab may be finished with a stencil pattern surface to match the surrounding pavements of the development.  
(Use texture or equivalent product. Construct to supplier's specifications.



NOTES:

1. Backfill excavated area with crusher dust/deco or bedding material and compact in place.  
Ensuring that only bedding material is used around cables.
2. Reinforced concrete surround slab:
  - a. 100 / 125mm thick slab;
  - b. F12 mesh reinforcement in centre of slab;
  - c. 25 MPa grade concrete;
  - d. Finish by wood float or by nylon broom.
3. The top face of the concrete surround slab shall be 25mm above the final surface level (when turf is laid).
4. The concrete slab is to slope away from plinth falling at a slope of 1 in 25.
5. Cable apertures through the precast concrete plinth shall be backfilled to 50mm from the top of the plinth, using bedding material.
6. The surface of the surround slab may be finished with a stencil pattern surface to match the surrounding pavements of the development.  
Use texture or equivalent product. Construct to supplier's specifications.

DRAWING:  
**ELECTRICAL SERVICES**  
ENERGEX PADMOUNT SUBSTATION  
STANDARD DETAILS

**rohrig**  
constructions

Rohrig (Qld) Pty Ltd  
ABN 67 093 753 970  
QBSA LIC NO 740842  
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[www.rohrig.com.au](http://www.rohrig.com.au)

**FOR ALL ENERGEX  
RELATED  
CONSTRUCTION QUERIES  
THE ELECTRICAL DESIGN  
GROUP ON (07) 3278 4375  
IS THE FIRST POINT OF  
CALL.**

P.O.Box 15, Sherwood Q.4075  
Phone: (07) 3278 4375  
Email: [brisbane@edg.net.au](mailto:brisbane@edg.net.au)  
Web: [www.edg.net.au](http://www.edg.net.au)

LOT 32 AUGUSTA PARKWAY, AUGUSTINE HEIGHTS

SCALE: NOT TO SCALE AT A1	PROJECT NO: <b>C3294a</b>	DRAWING NO: <b>EN02</b>	REVISION: <b>1</b>
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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 5000mm 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.



CULVERT INSPECTION REQUIRED BEFORE TRANSFORMER IS DELIVERED  
- 5 BUSINESS DAYS PRIOR NOTICE NEEDED.  
CONTACT: PAUL HAWKINS PH: 0419 756 501 EMAIL: ProjectCoordinationsesth@energex.com.au

TRANSFORMER WILL NOT BE ENERGISED UNTIL ALL REQUIREMENTS ARE MET.

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 polymeric 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.

TRANSFORMER WILL NOT BE ENERGISED UNTIL ALL REQUIREMENTS ARE MET.										1	CONSTRUCTION	30/05/2025	
										REV:	DESCRIPTION:	DATE:	
ELECTRICAL DESIGN GROUP BRISBANE PTY LTD ACN 092 710 793  TRADING AS: ELECTRICAL DESIGN GROUP		THE COPYRIGHT OF THIS DRAWING REMAINS THE PROPERTY OF THE ELECTRICAL DESIGN GROUP.  USE FIGURED DIMENSIONS IN PREFERENCE TO SCALE.  ALL DIMENSIONS TO BE VERIFIED ONSITE.		  Rohrig (Qld) Pty Ltd ABN 67 093 753 970 QBSA LIC NO 740842 250 Abbotsford Road, Bowen Hills Qld 4006 PO Box 86 Albion DC Qld 4010 T+61 (7) 3257 4411 F+61 (7) 3257 2211 www.rohrig.com.au		FOR ALL ENERGEX RELATED CONSTRUCTION QUERIES THE ELECTRICAL DESIGN GROUP ON (07) 3278 4375 IS THE FIRST POINT OF CALL.		 ELECTRICAL BUILDING SERVICES CONSULTANTS  BRISBANE  GOLD COAST  P.O.Box 15, Sherwood Q.4075 Phone: (07) 3278 4375 Email: brisbane@edg.net.au Web: www.edg.net.au		PROJECT: LLEWELLYN MOTORS SPRINGFIELD - LOT 32          LOT 32 AUGUSTA PARKWAY, AUGUSTINE HEIGHTS		DRAWING: <b>ELECTRICAL SERVICES</b> <b>ENERGEX PADMOUNT SUBSTATION</b> <b>STANDARD NOTES</b>  SCALE: NOT TO SCALE AT A1  PROJECT NO: <b>C3294a</b>  DRAWING NO: <b>EN03</b>  REVISION: <b>1</b>	