


BASED ON REVISION 1.1 OF TYP-03-00001 DRAWING SET

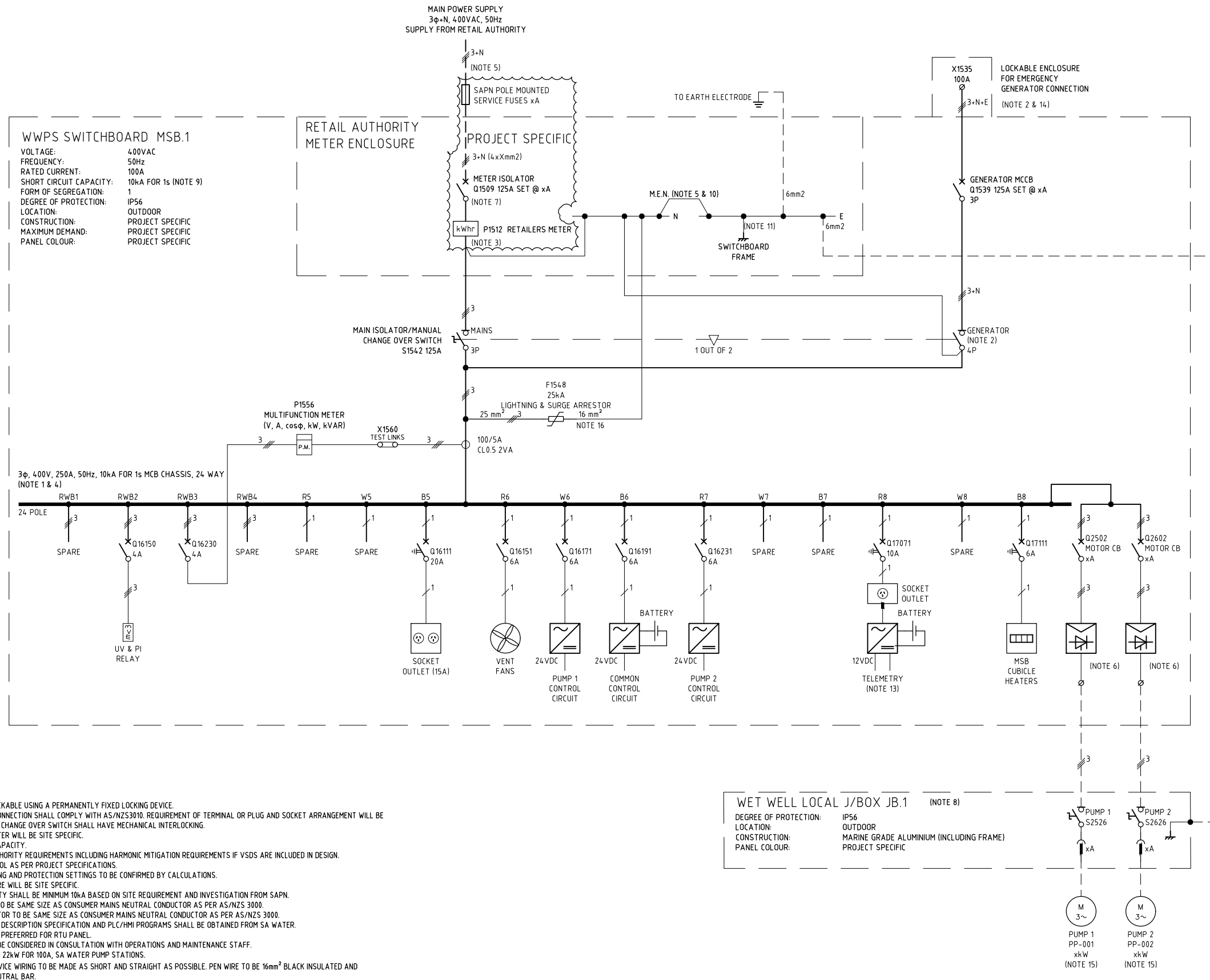
SAW DWG No.	DRAWING TITLE
TYP-03-00001-01	DRAWING INDEX
TYP-03-00001-02	SINGLE LINE DIAGRAM
TYP-03-00001-03	RTU PANEL 230VAC POWER DISTRIBUTION
TYP-03-00001-04	SPARE
TYP-03-00001-05	RTU PANEL 12VDC POWER DISTRIBUTION
TYP-03-00001-06	SPARE
TYP-03-00001-07	SPARE
TYP-03-00001-08	SPARE
TYP-03-00001-09	SPARE
TYP-03-00001-10	RTU PANEL DIGITAL I/O
TYP-03-00001-11	RTU PANEL ANALOGUE INPUTS
TYP-03-00001-12	RTU PANEL ANALOGUE OUTPUTS
TYP-03-00001-13	RTU PANEL COUNTER INPUTS & PLC COMMS
TYP-03-00001-14	SPARE
TYP-03-00001-15	400VAC METERING ENCLOSURE ELECTRICAL SCHEMATIC
TYP-03-00001-16	400VAC POWER DISTRIBUTION
TYP-03-00001-17	400VAC POWER DISTRIBUTION
TYP-03-00001-18	230VAC POWER DISTRIBUTION
TYP-03-00001-19	SPARE
TYP-03-00001-20	SPARE
TYP-03-00001-21	230VAC TO 24VDC POWER DISTRIBUTION
TYP-03-00001-22	COMMON CONTROL 24VDC SCHEMATIC
TYP-03-00001-23	SPARE
TYP-03-00001-24	SPARE
TYP-03-00001-25	PUMP 1 POWER AND CONTROL SCHEMATIC
TYP-03-00001-26	PUMP 2 POWER AND CONTROL SCHEMATIC
TYP-03-00001-27	PUMP 1 SEAL LEAKAGE DETECTION RELAY SCHEMATIC
TYP-03-00001-28	PUMP 2 SEAL LEAKAGE DETECTION RELAY SCHEMATIC
TYP-03-00001-29	SPARE
TYP-03-00001-30	SPARE
TYP-03-00001-31	SPARE
TYP-03-00001-32	SPARE
TYP-03-00001-33	SPARE

SAW DWG No.	DRAWING TITLE
TYP-03-00001-34	SPARE
TYP-03-00001-35	SPARE
TYP-03-00001-36	SPARE
TYP-03-00001-37	SPARE
TYP-03-00001-38	SPARE
TYP-03-00001-39	SPARE
TYP-03-00001-40	PLC DIGITAL INPUTS
TYP-03-00001-41	PLC DIGITAL OUTPUTS
TYP-03-00001-42	PLC ANALOG INPUTS
TYP-03-00001-43	SPARE
TYP-03-00001-44	SPARE
TYP-03-00001-45	SPARE
TYP-03-00001-46	SPARE
TYP-03-00001-47	SPARE
TYP-03-00001-48	SPARE
TYP-03-00001-49	SPARE
TYP-03-00001-50	FLOWMETER TRANSMITTER CONNECTION DIAGRAM
TYP-03-00001-51	LEVEL TRANSMITTER CONNECTION DIAGRAM
TYP-03-00001-52	SPARE
TYP-03-00001-53	SPARE
TYP-03-00001-54	SPARE
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TYP-03-00001-57	SPARE
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TYP-03-00001-62	SPARE
TYP-03-00001-63	SPARE
TYP-03-00001-64	SPARE
TYP-03-00001-65	SPARE
TYP-03-00001-66	SPARE

SAW DWG No.	DRAWING TITLE
TYP-03-00001-67	SPARE
TYP-03-00001-68	SPARE
TYP-03-00001-69	SPARE
TYP-03-00001-70	SWITCHBOARD LAYOUT - FRONT VIEW
TYP-03-00001-71	SWITCHBOARD LAYOUT - FRONT VIEW LESS DOORS
TYP-03-00001-72	SWITCHBOARD LAYOUT - FRONT VIEW LESS ESCUTCHEONS
TYP-03-00001-73	SWITCHBOARD LAYOUT - LHS & RHS VIEW
TYP-03-00001-74	SWITCHBOARD LAYOUT - BOTTOM VIEW
TYP-03-00001-75	SWITCHBOARD LAYOUT - GENERATOR CONNECTION BOX & CONSTRUCTION NOTES
TYP-03-00001-76	WET WELL JUNCTION BOX - GENERAL ARRANGEMENT
TYP-03-00001-77	SERVICE FUSE ENCLOSURE - GENERAL ARRANGEMENT
TYP-03-00001-78	SWITCHBOARD LAYOUT - REAR SUN SHIELD
TYP-03-00001-79	SPARE
TYP-03-00001-80	SPARE
TYP-03-00001-81	SPARE
TYP-03-00001-82	SPARE
TYP-03-00001-83	SPARE
TYP-03-00001-84	SPARE
TYP-03-00001-85	SPARE
TYP-03-00001-86	SPARE
TYP-03-00001-87	SPARE
TYP-03-00001-88	SPARE
TYP-03-00001-89	SPARE
TYP-03-00001-90	NETWORK ARCHITECTURE
TYP-03-00001-91	SPARE
TYP-03-00001-92	SPARE
TYP-03-00001-93	SPARE
TYP-03-00001-94	SPARE
TYP-03-00001-95	BILL OF MATERIALS (CONTRACTOR SHALL POPULATE BILL OF MATERIALS)
TYP-03-00001-96	LABEL SCHEDULE (CONTRACTOR SHALL POPULATE LABEL SCHEDULE)
TYP-03-00001-97	SPARE
TYP-03-00001-98	CABLE SCHEDULE (CONTRACTOR SHALL POPULATE CABLE SCHEDULE)
TYP-03-00001-99	DRAWING CONVENTION AND WIRING STANDARD

SWITCHBOARD SITE ID:
 SITE ADDRESS:
 GPS CO-ORDINATES: LATITUDE, LONGITUDE


REVISION PANEL					DESIGN PANEL			 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SWITCHBOARD 0 - 100A MAIN SWITCHBOARD		A3 SHT SIZE PROJECT No: NC1001 MAXIMO ID: SUPERSEDES: 5003-00001-01 DRAWING NUMBER TYP-03-00001_01	2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23	DESIGNED: 14/02/2019	AUTHORISED: 14/02/2018		TOTAL SHEETS: 45			
					AUTHORISED: JUSTIN HAMRA	SACHIN PANDEY	JUSTIN HAMRA					
2.1	13/06/23	PB	SYMBOLS & STANDARDS REVISION UPDATE	JH	SIGNATURE:	TROY O'BRIEN	SIGNATURE:					
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS		REVIEWED: 14/02/2018	ORIGINAL SIGNED					
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS		JONATHON NICHOLLS						
CURRENT REV CONTRACTOR:					CURRENT REV PROJECT:					CONTRACTOR:		



- NOTES:**
1. ALL CB'S SHALL BE LOCKABLE USING A PERMANENTLY FIXED LOCKING DEVICE.
 2. ALTERNATE SUPPLY CONNECTION SHALL COMPLY WITH AS/NZS3010. REQUIREMENT OF TERMINAL OR PLUG AND SOCKET ARRANGEMENT WILL BE SITE SPECIFIC. MANUAL CHANGE OVER SWITCH SHALL HAVE MECHANICAL INTERLOCKING.
 3. LOCATION OF SAPN METER WILL BE SITE SPECIFIC.
 4. MINIMUM 20% SPARE CAPACITY.
 5. REFER TO SUPPLY AUTHORITY REQUIREMENTS INCLUDING HARMONIC MITIGATION REQUIREMENTS IF VSIDS ARE INCLUDED IN DESIGN.
 6. SOFT STARTER/VSD/DOL AS PER PROJECT SPECIFICATIONS.
 7. CIRCUIT BREAKER RATING AND PROTECTION SETTINGS TO BE CONFIRMED BY CALCULATIONS.
 8. LOCATION OF ENCLOSURE WILL BE SITE SPECIFIC.
 9. SHORT CIRCUIT CAPACITY SHALL BE MINIMUM 10kA BASED ON SITE REQUIREMENT AND INVESTIGATION FROM SAPN.
 10. MEN LINK CONDUCTOR TO BE SAME SIZE AS CONSUMER MAINS NEUTRAL CONDUCTOR AS PER AS/NZS 3000.
 11. FRAME EARTH CONDUCTOR TO BE SAME SIZE AS CONSUMER MAINS NEUTRAL CONDUCTOR AS PER AS/NZS 3000.
 12. COPIES OF FUNCTIONAL DESCRIPTION SPECIFICATION AND PLC/HMI PROGRAMS SHALL BE OBTAINED FROM SA WATER.
 13. 24VDC POWER SUPPLY PREFERRED FOR RTU PANEL.
 14. PLUG AND SOCKET TO BE CONSIDERED IN CONSULTATION WITH OPERATIONS AND MAINTENANCE STAFF.
 15. PUMP SIZES LIMITED TO 22kW FOR 100A, SA WATER PUMP STATIONS.
 16. SURGE PROTECTION DEVICE WIRING TO BE MADE AS SHORT AND STRAIGHT AS POSSIBLE. PEN WIRE TO BE 16mm² BLACK INSULATED AND CONNECTED TO THE NEUTRAL BAR.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
DRAWN:	SIGNATURE:	DATE
TROY O'BRIEN		14/02/2018
REVIEWED:	ORIGINAL SIGNED	DATE
JONATHON NICHOLLS		14/02/2018
CONTRACTOR:		



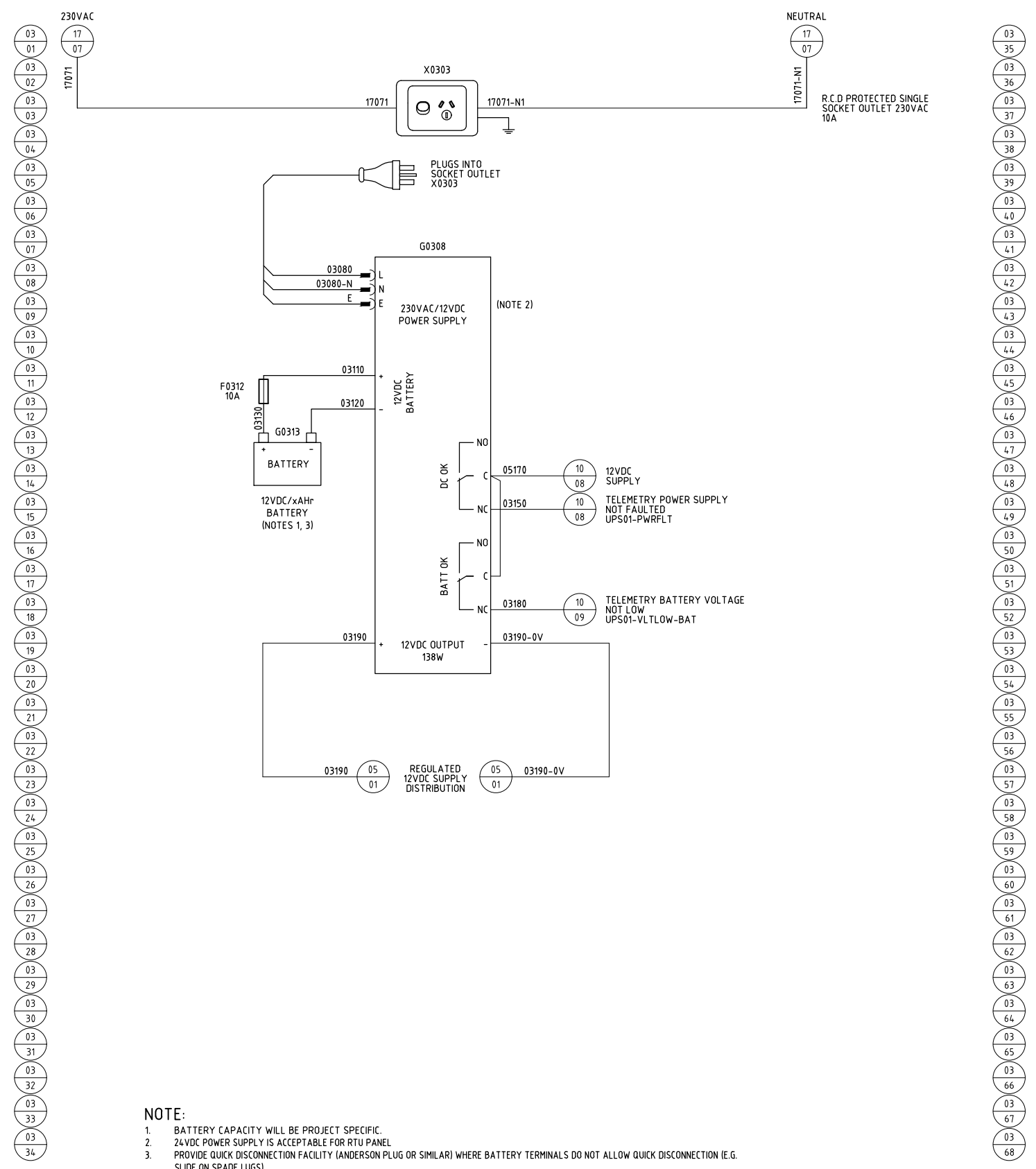
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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 ELECTRICAL
 SINGLE LINE DIAGRAM

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No:	
MAXIMO ID:		
SUPERSEDES: 5003-00001-02		
DRAWING NUMBER		
TYP-03-00001_02		



NOTE:
 1. BATTERY CAPACITY WILL BE PROJECT SPECIFIC.
 2. 24VDC POWER SUPPLY IS ACCEPTABLE FOR RTU PANEL
 3. PROVIDE QUICK DISCONNECTION FACILITY (ANDERSON PLUG OR SIMILAR) WHERE BATTERY TERMINALS DO NOT ALLOW QUICK DISCONNECTION (E.G. SLIDE ON SPADE LUGS).

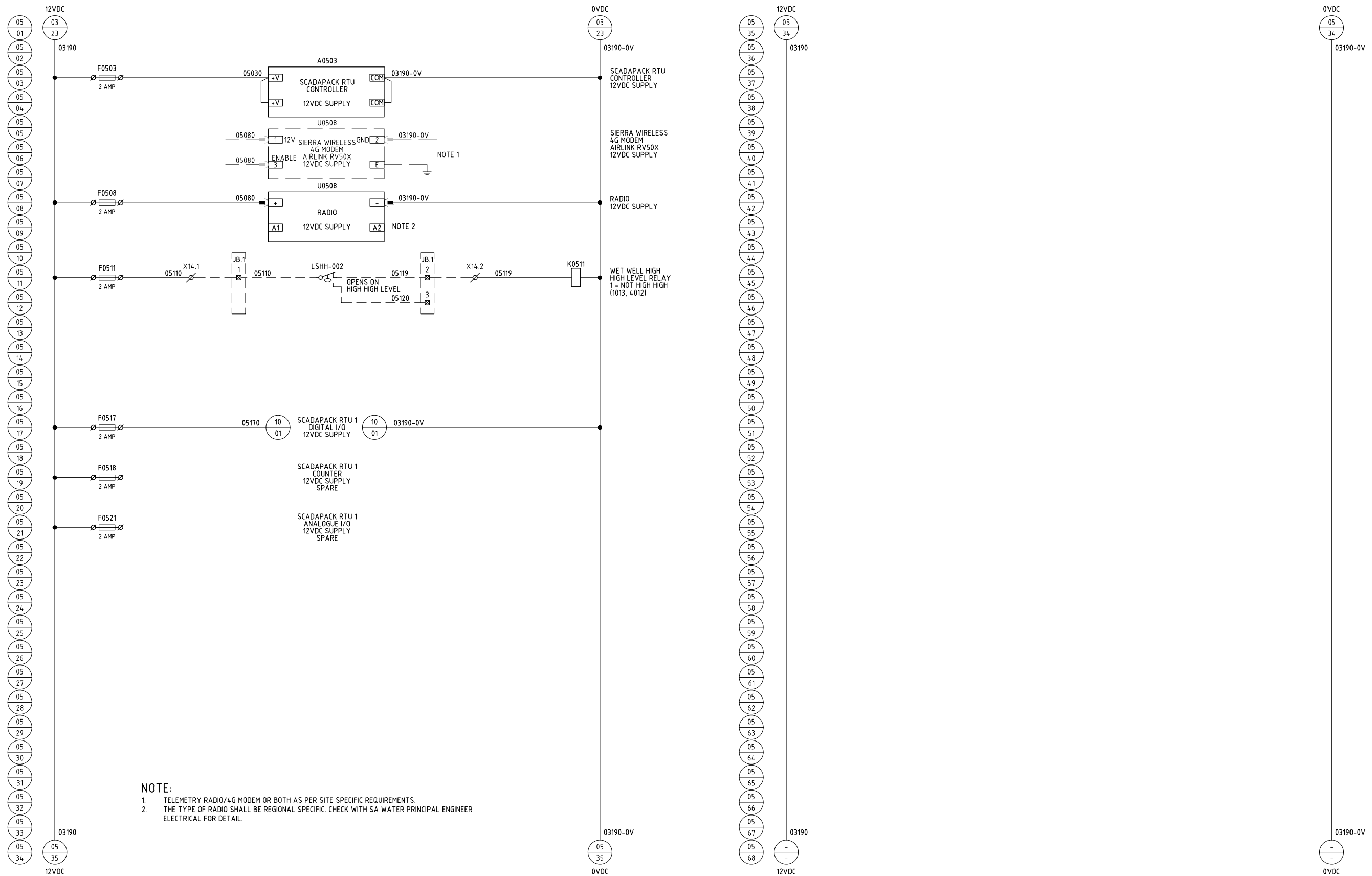
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	AUTHORISED:
14/02/2018	14/02/2018	14/02/2018
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:	SIGNATURE:	
14/02/2018		
TROY O'BRIEN		
REVIEWED:		
14/02/2018		
JONATHON NICHOLLS		ORIGINAL SIGNED
CONTRACTOR:		

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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 RTU 230VAC POWER DISTRIBUTION
 ELECTRICAL
 SCHEMATIC DIAGRAM


A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No:	REVISION
MAXIMO ID:		
SUPERSEDES: 5003-00001-03		
DRAWING NUMBER		
TYP-03-00001_03		



NOTE:
 1. TELEMETRY RADIO/4G MODEM OR BOTH AS PER SITE SPECIFIC REQUIREMENTS.
 2. THE TYPE OF RADIO SHALL BE REGIONAL SPECIFIC. CHECK WITH SA WATER PRINCIPAL ENGINEER ELECTRICAL FOR DETAIL.

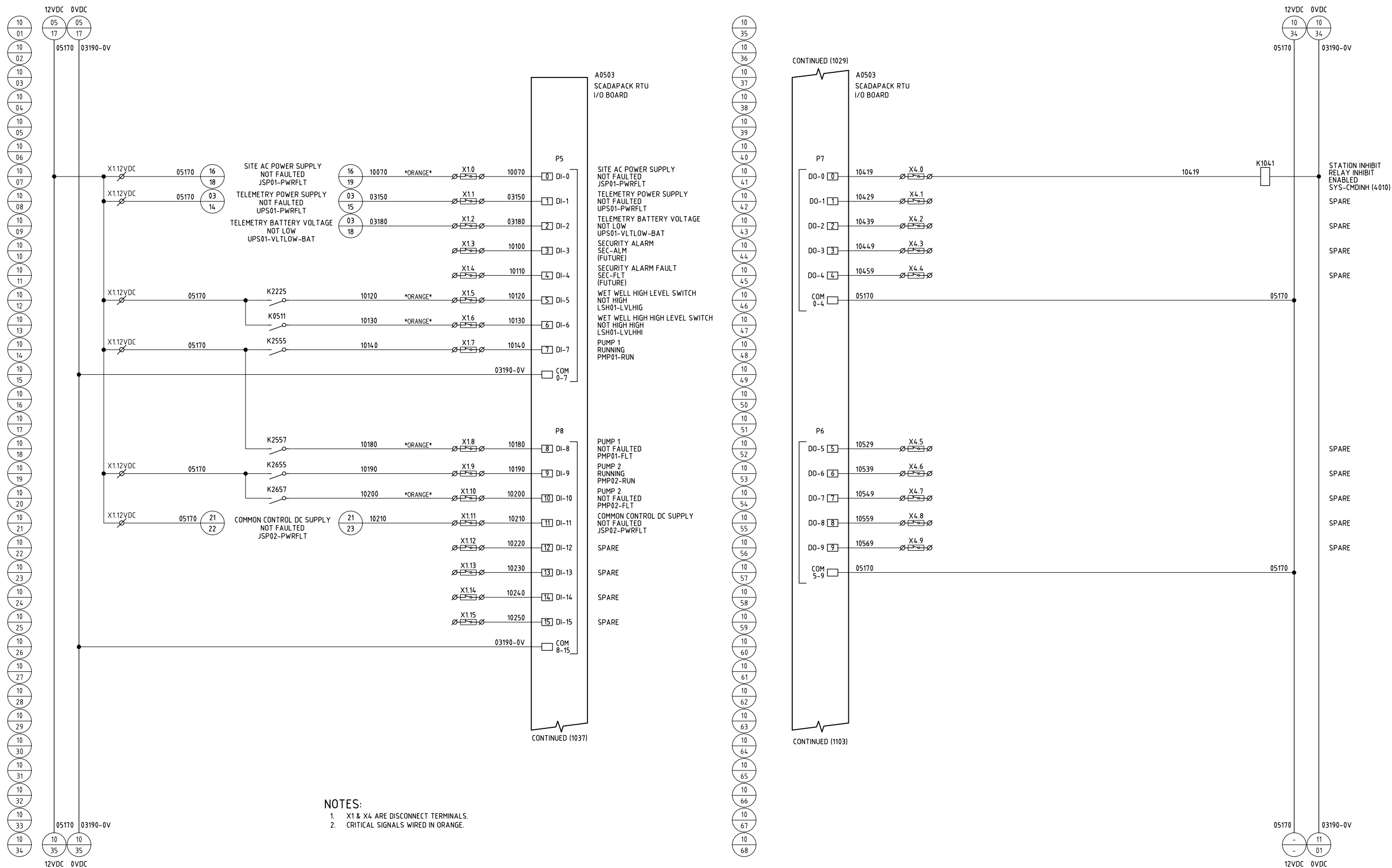
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	AUTHORISED:
14/02/2018	14/02/2018	14/02/2018
SACHIN PANDEY	JUSTIN HAMRA	JUSTIN HAMRA
DRAWN:	SIGNATURE:	SIGNATURE:
14/02/2018	TROY O'BRIEN	ORIGINAL SIGNED
14/02/2018	JONATHON NICHOLLS	
CONTRACTOR:		


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 RTU 12VDC POWER DISTRIBUTION
 ELECTRICAL
 SCHEMATIC DIAGRAM



A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No:	REVISION
MAXIMO ID:		
SUPERSEDES: 5003-00001-05		
DRAWING NUMBER		
TYP-03-00001_05		



NOTES:
 1. X1 & X4 ARE DISCONNECT TERMINALS.
 2. CRITICAL SIGNALS WIRED IN ORANGE.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

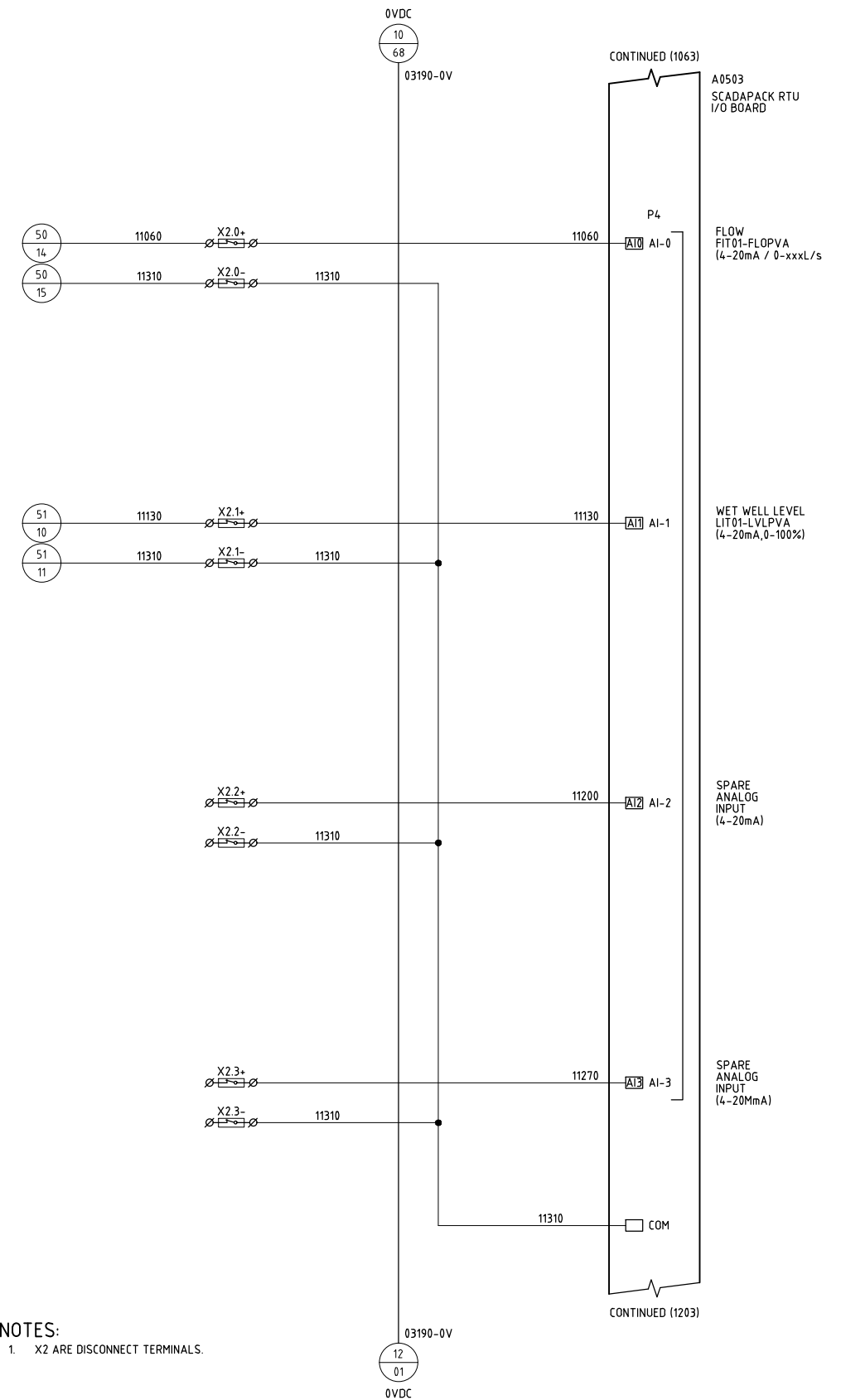
DESIGN PANEL		
DESIGNED:	14/02/2018	AUTHORISED: 14/02/2018
SACHIN PANDEY		JUSTIN HAMRA
DRAWN:	14/02/2018	SIGNATURE:
TROY O'BRIEN		ORIGINAL SIGNED
REVIEWED:	14/02/2018	
JONATHON NICHOLLS		
CONTRACTOR:		


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 RTU DIGITAL I/O
 ELECTRICAL
 SCHEMATIC DIAGRAM

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No:	
MAXIMO ID:		
SUPERSEDES: 5003-00001-10		
DRAWING NUMBER		
TYP-03-00001_10		


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NOTES:
1. X2 ARE DISCONNECT TERMINALS.

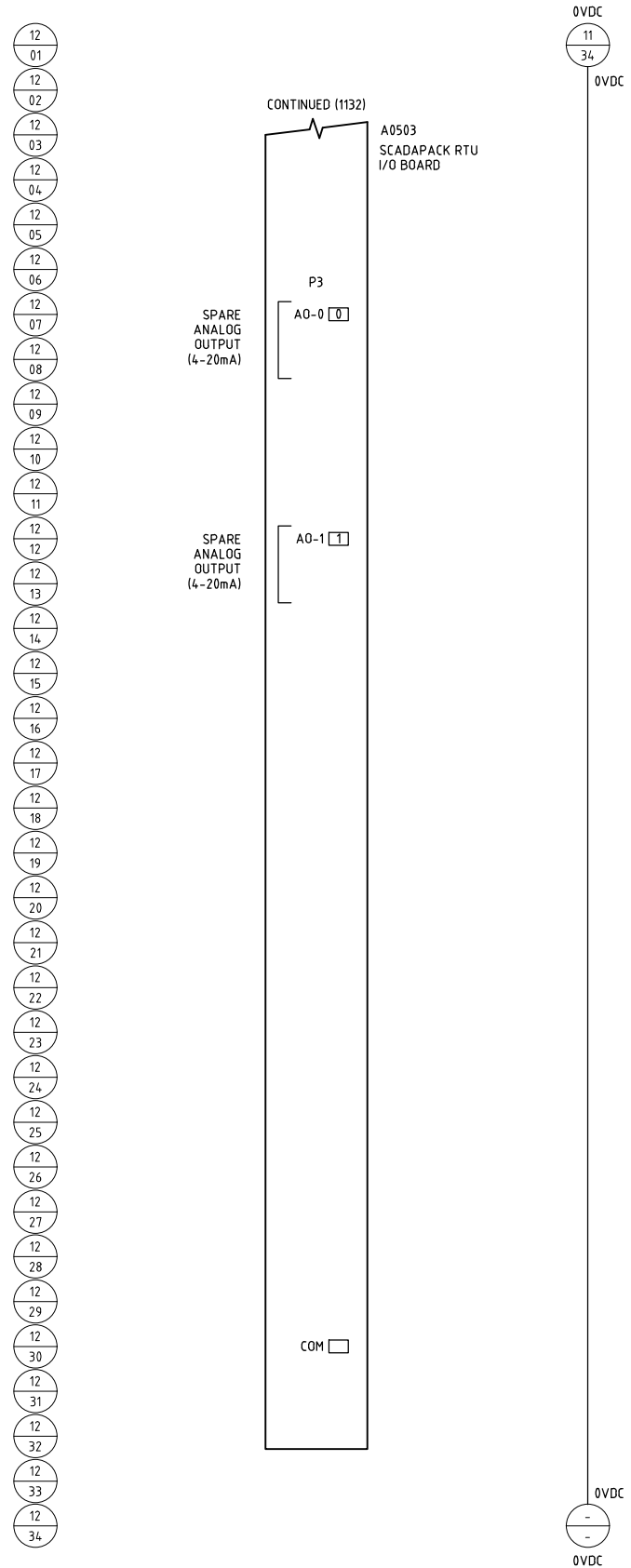
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN: 14/02/2018	SIGNATURE:	
TROY O'BRIEN	ORIGINAL SIGNED	
REVIEWED: 14/02/2018	JONATHON NICHOLLS	
CONTRACTOR:		


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 RTU ANALOGUE INPUTS
 ELECTRICAL
 SCHEMATIC DIAGRAM

A3	TOTAL SHEETS:	2.1
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-11		
DRAWING NUMBER		
TYP-03-00001_11		



REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN: 14/02/2018	SIGNATURE:	
TROY O'BRIEN	ORIGINAL SIGNED	
REVIEWED: 14/02/2018	SIGNATURE:	
JONATHON NICHOLLS	ORIGINAL SIGNED	
CONTRACTOR:		

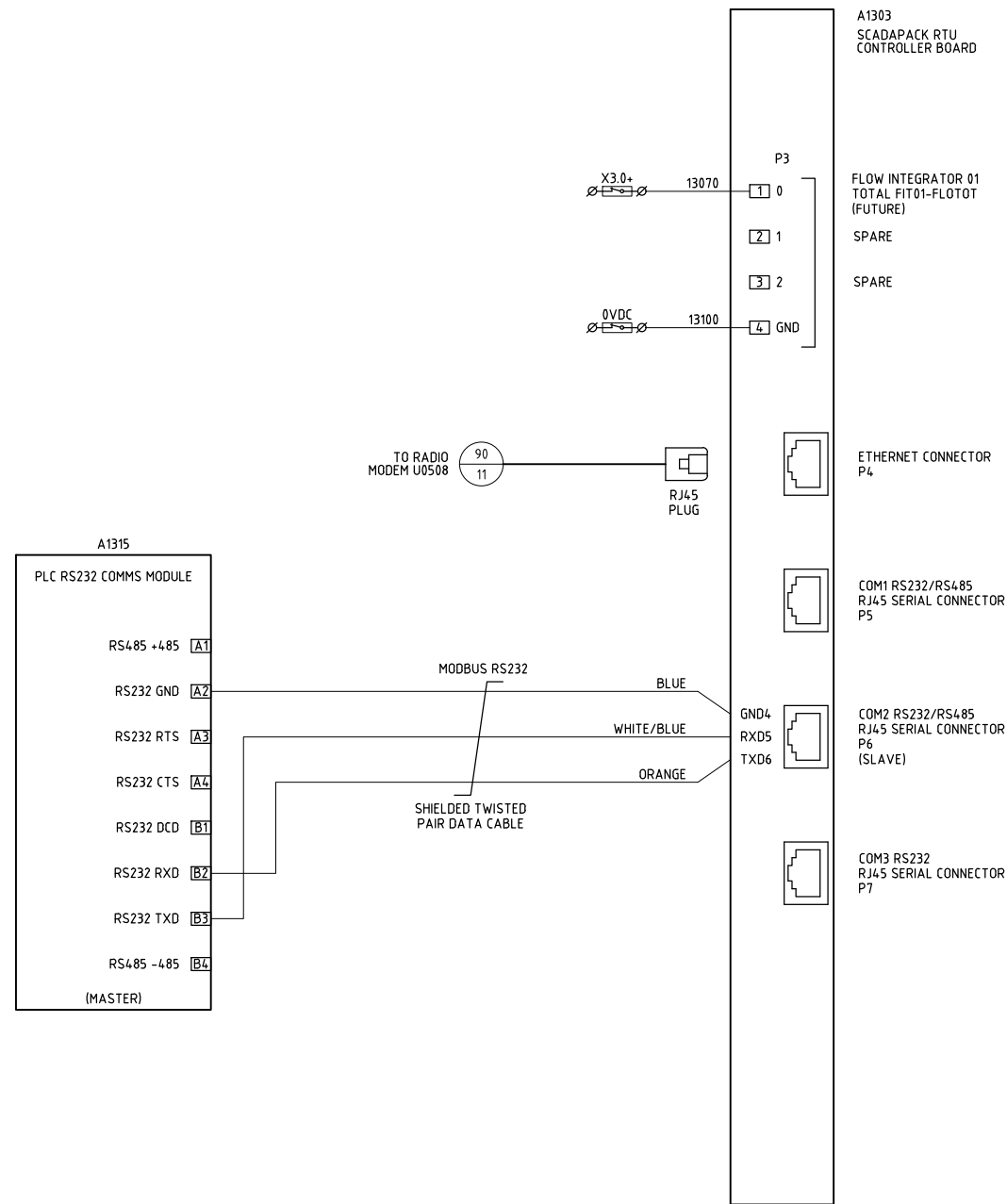
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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 RTU ANALOGUE OUTPUTS
 ELECTRICAL
 SCHEMATIC DIAGRAM


A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-12		
DRAWING NUMBER		
TYP-03-00001_12		

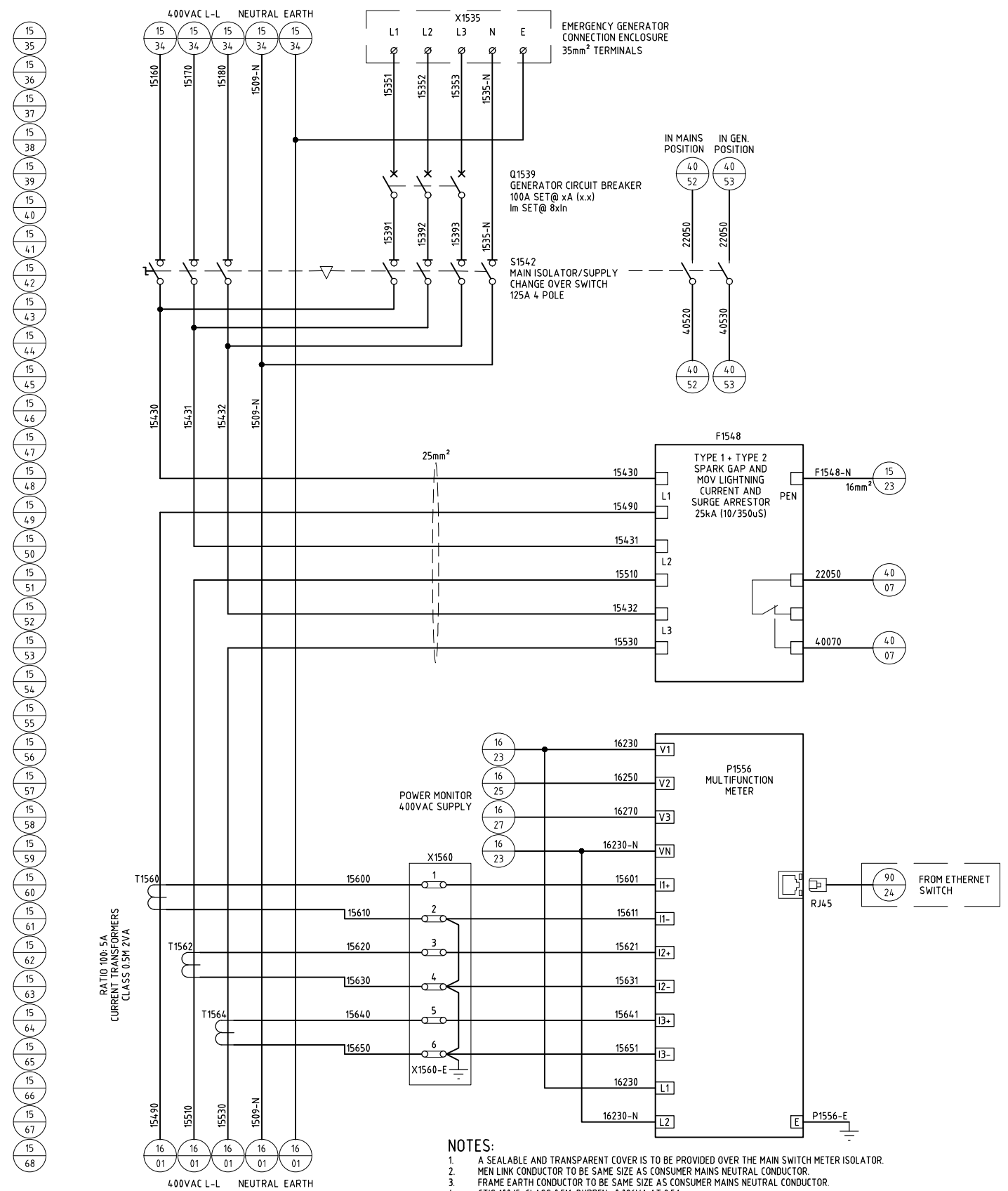
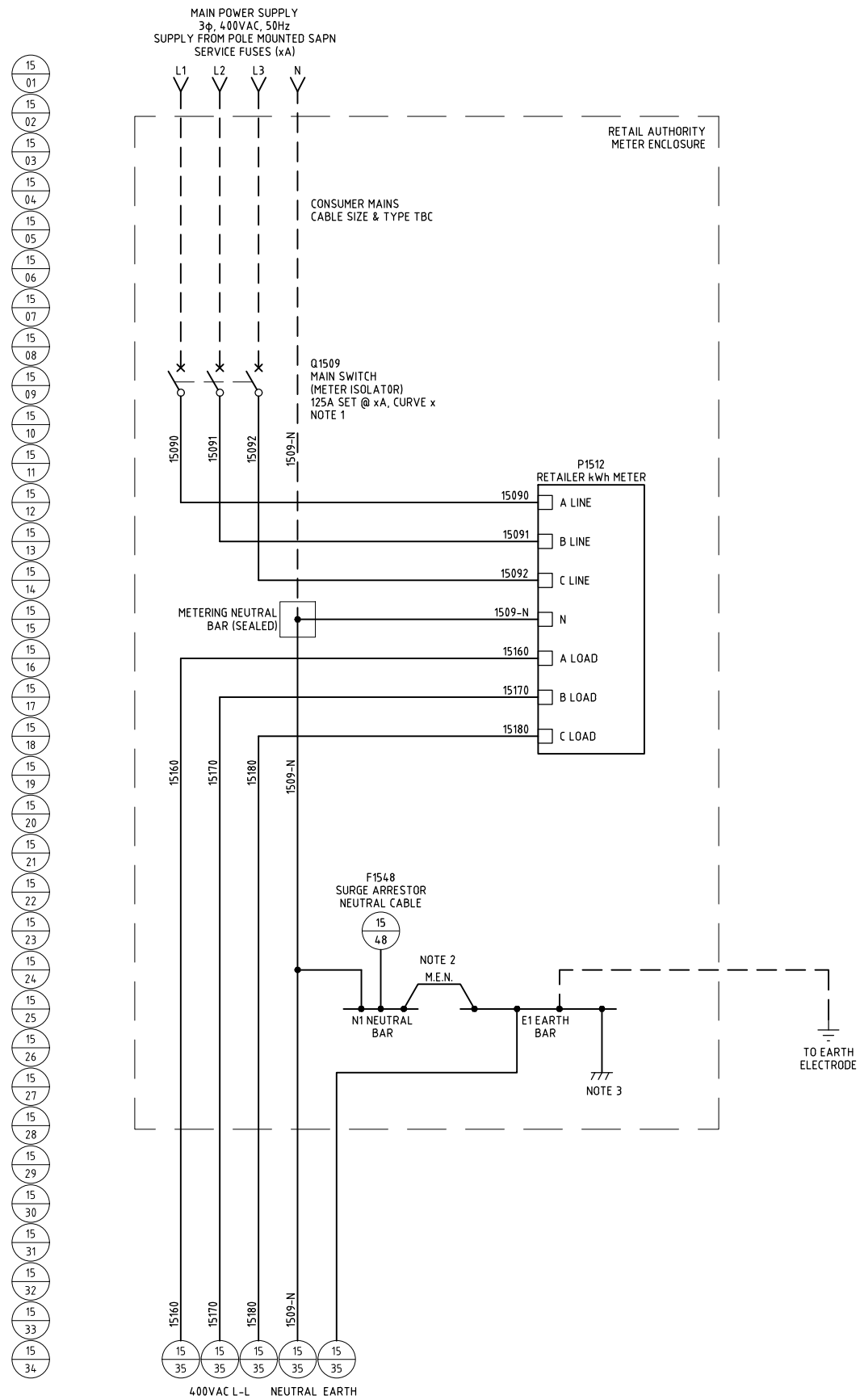
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NOTES:
1. X3 ARE DISCONNECT TERMINALS

REVISION PANEL				DESIGN PANEL			 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SWITCHBOARD 0 - 100A MAIN SWITCHBOARD		A3 SHT SIZE PROJECT No: NC1001 MAXIMO ID: SUPERSEDES: 5003-00001-13 DRAWING NUMBER TYP-03-00001_13	2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23	DESIGNED: 14/02/2018		AUTHORISED: 14/02/2018	RTU COUNTER INPUTS & PLC COMMS		
					CURRENT REV 13/06/23	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018	ELECTRICAL SCHEMATIC DIAGRAM			
					AUTHORISED: JUSTIN HAMRA SIGNATURE:	SACHIN PANDEY	JUSTIN HAMRA				
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH		DRAWN: 14/02/2018	SIGNATURE:				
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS		REVIEWED: 14/02/2018	ORIGINAL SIGNED				
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS		JONATHON NICHOLLS					
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:							



REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

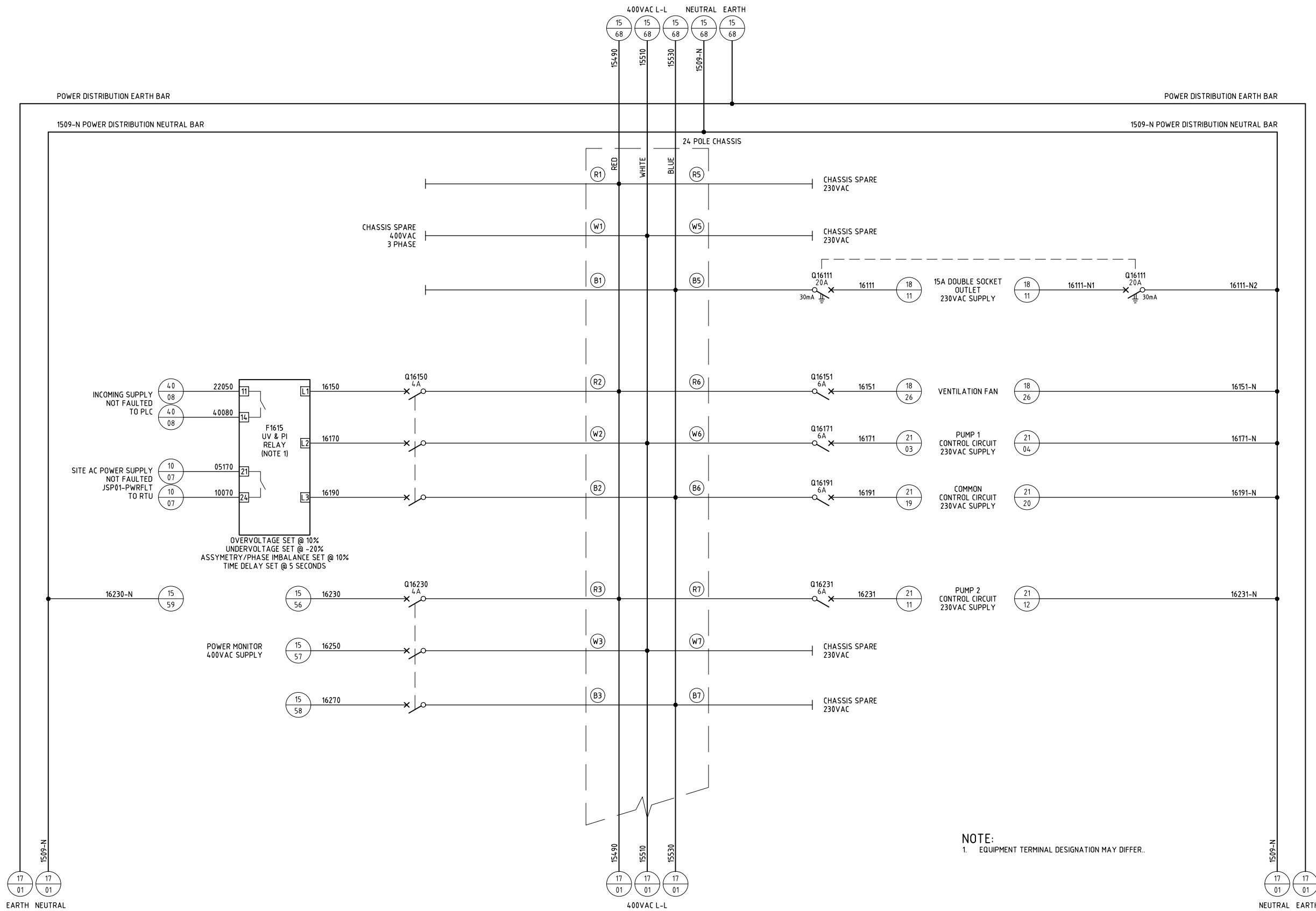
DESIGN PANEL		
DESIGNED:	AUTHORISED:	
14/02/2018	14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:	SIGNATURE:	
14/02/2018		
TROY O'BRIEN		
REVIEWED:		
14/02/2018		
JONATHON NICHOLLS		ORIGINAL SIGNED
CONTRACTOR:		


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 400VAC DISTRIBUTION
 ELECTRICAL
 SCHEMATIC DIAGRAM


A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-15		
DRAWING NUMBER		
TYP-03-00001_15		

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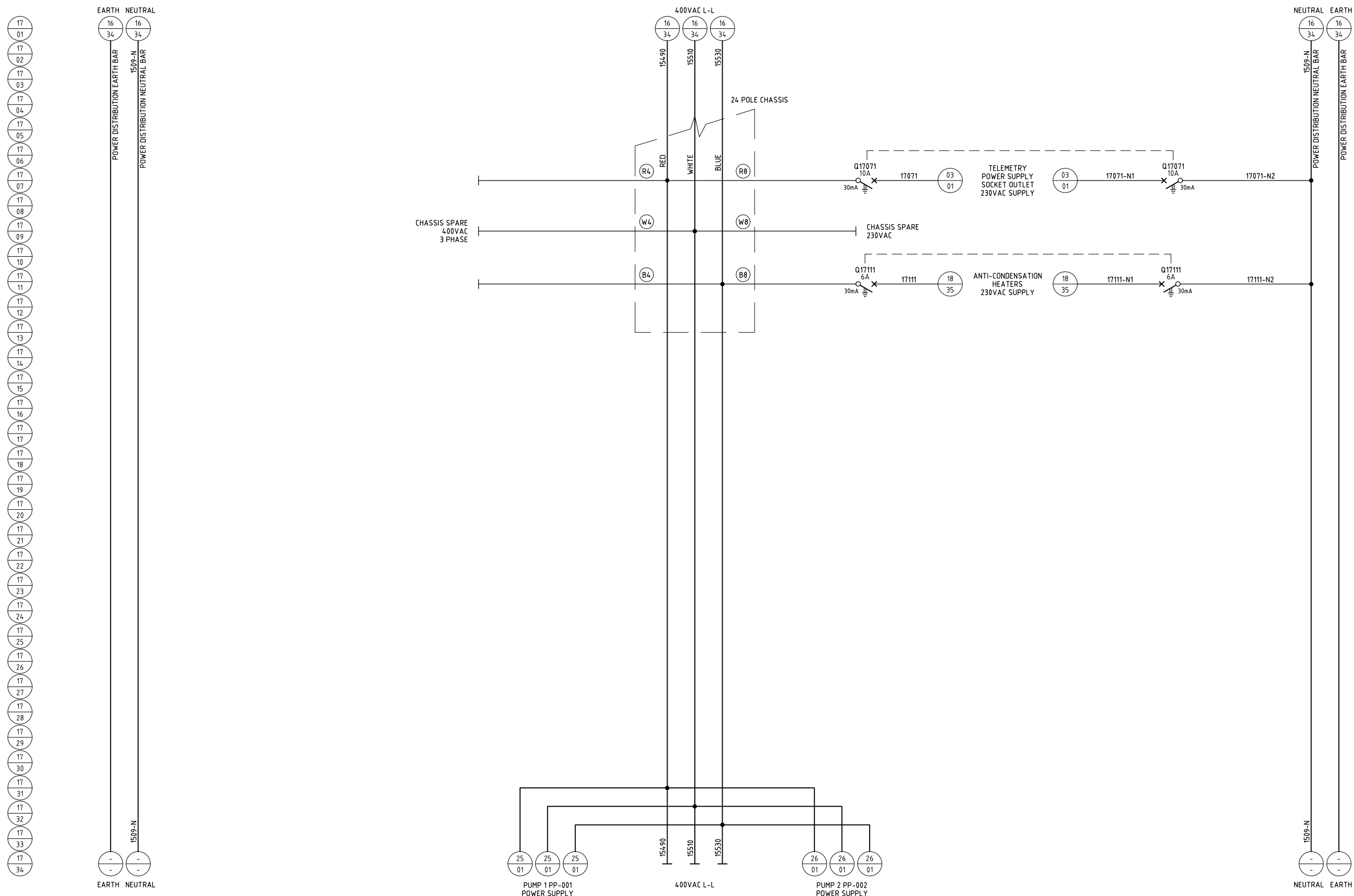
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	
14/02/2018	14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:	SIGNATURE:	
14/02/2018		
TROY O'BRIEN	ORIGINAL SIGNED	
REVIEWED:		
14/02/2018		
JONATHON NICHOLLS		
CONTRACTOR:		


 Government of South Australia
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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 400VAC DISTRIBUTION
 ELECTRICAL
 SCHEMATIC DIAGRAM SHEET 1 OF 2

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-16		
DRAWING NUMBER		
TYP-03-00001_16		



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REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS

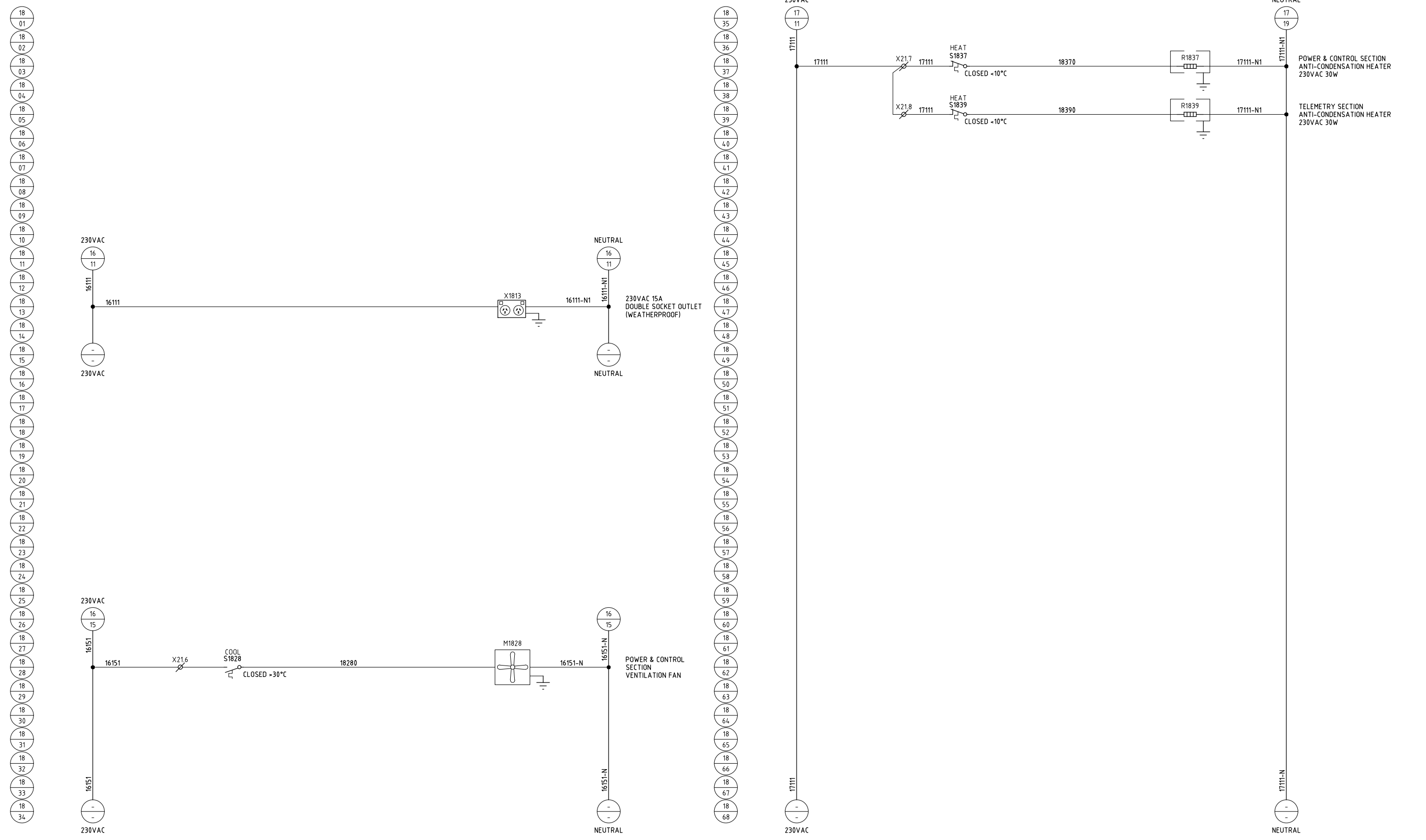
CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

DESIGN PANEL	
DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018
SACHIN PANDEY	JUSTIN HAMRA
DRAWN: 14/02/2018	SIGNATURE:
TROY O'BRIEN	ORIGINAL SIGNED
REVIEWED: 14/02/2018	
JONATHON NICHOLLS	

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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 400VAC DISTRIBUTION
 ELECTRICAL
 SCHEMATIC DIAGRAM SHEET 2 OF 2

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-17		
DRAWING NUMBER		
TYP-03-00001_17		



REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

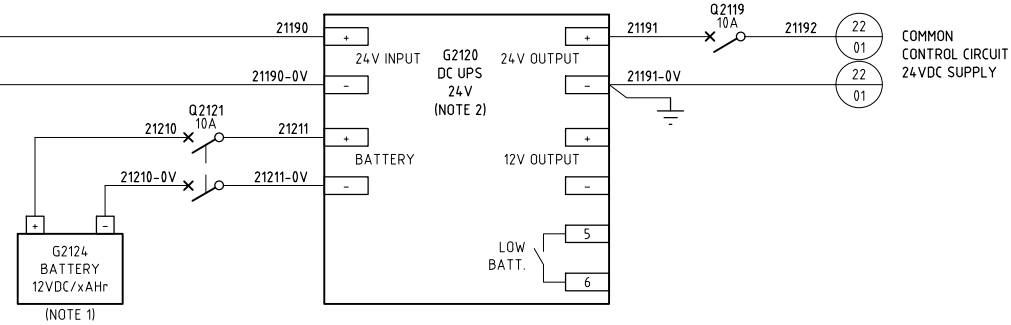
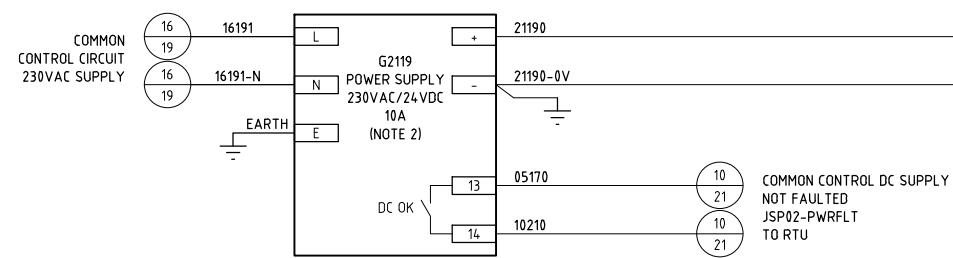
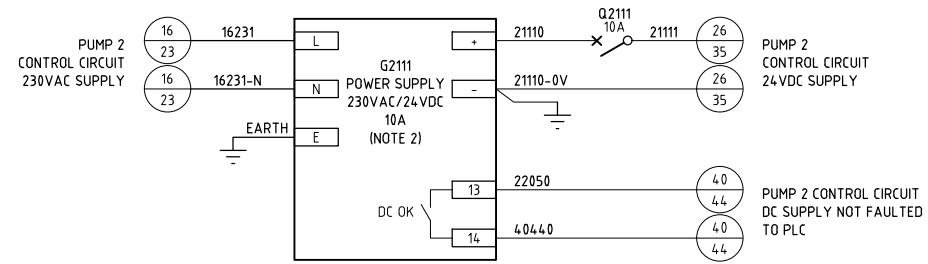
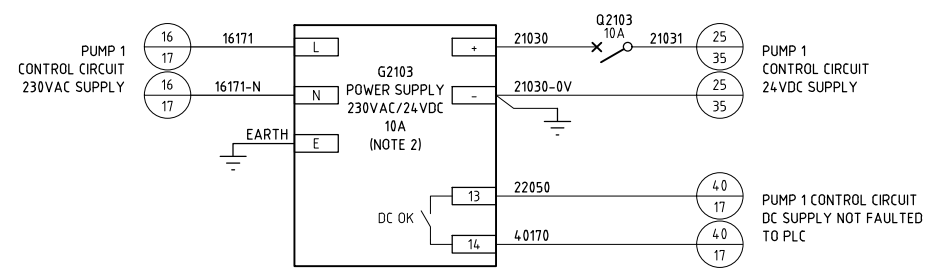
DESIGN PANEL		
DESIGNED:	14/02/2018	AUTHORISED: 14/02/2018
SACHIN PANDEY		JUSTIN HAMRA
DRAWN:	14/02/2018	SIGNATURE:
TROY O'BRIEN		ORIGINAL SIGNED
REVIEWED:	14/02/2018	
JONATHON NICHOLLS		
CONTRACTOR:		

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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 230VAC DISTRIBUTION
 ELECTRICAL
 SCHEMATIC DIAGRAM

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-18		
DRAWING NUMBER		
TYP-03-00001_18		

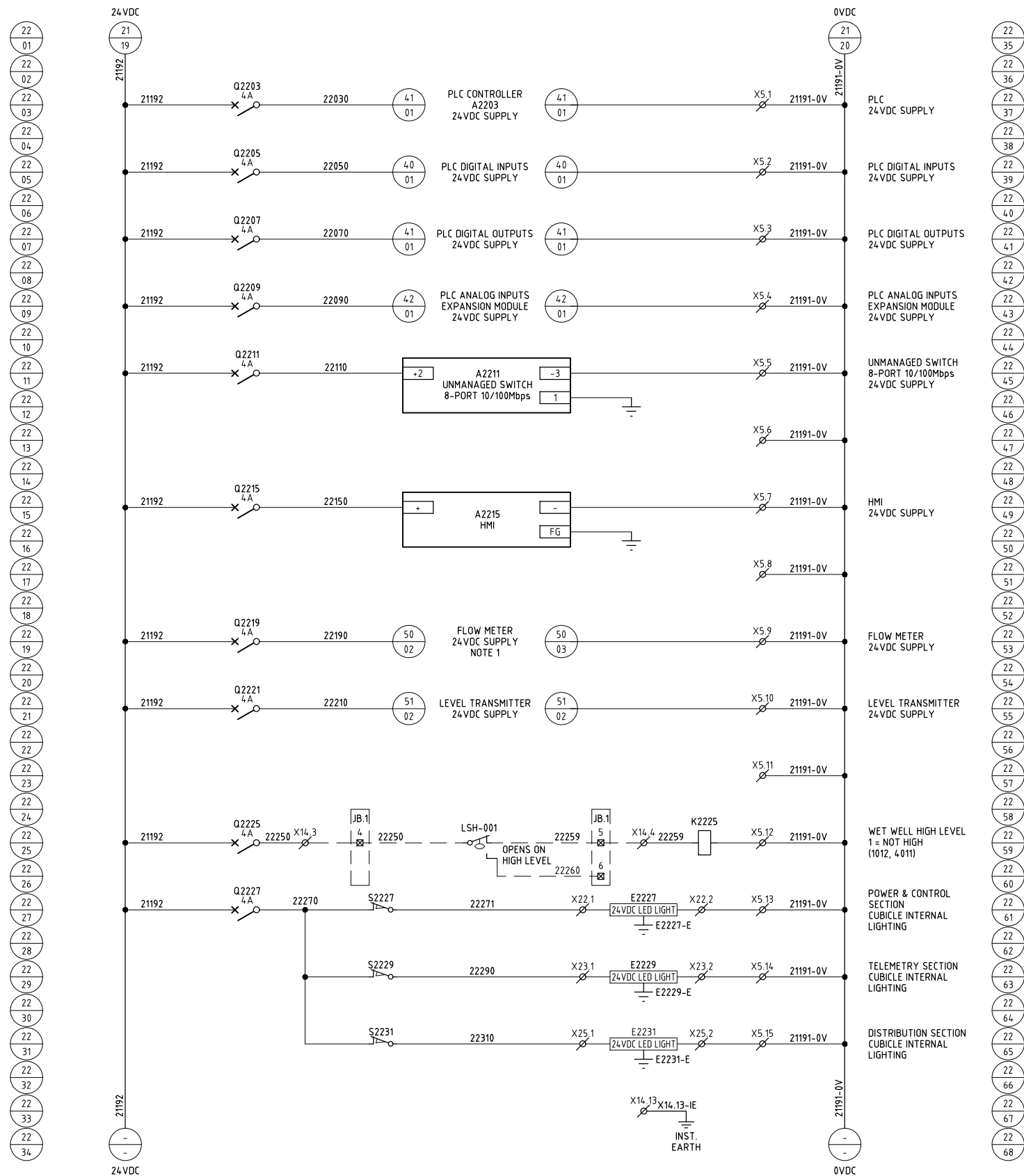
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- NOTES:**
- BATTERY CAPACITY SHALL BE THE MINIMUM TIME REQUIRED AS PER ISO300, ANYTHING GREATER SHALL BE PROJECT SPECIFIC.
 - EQUIPMENT TERMINAL MAY DIFFER.

REVISION PANEL				DESIGN PANEL		 SA Water <small>Government of South Australia</small>	SWITCHBOARD 0 - 100A MAIN SWITCHBOARD 230VAC TO 24VDC POWER DISTRIBUTION ELECTRICAL SCHEMATIC DIAGRAM	A3 <small>SHT SIZE</small> TOTAL SHEETS: PROJECT No: NC1001 MAXIMO ID: SUPERSEDES: 5003-00001-21 DRAWING NUMBER TYP-03-00001_21	2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23				
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH	CURRENT REV CONTRACTOR:	DESIGNED: 14/02/2018 SACHIN PANDEY	AUTHORISED: 14/02/2018 JUSTIN HAMRA		
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS	CURRENT REV PROJECT:	DRAWN: 14/02/2018 TROY O'BRIEN	SIGNATURE: ORIGINAL SIGNED		
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS		REVIEWED: 14/02/2018 JONATHON NICHOLLS			



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NOTES:
1. FLOWMETER REQUIREMENTS ARE PROJECT SPECIFIC.

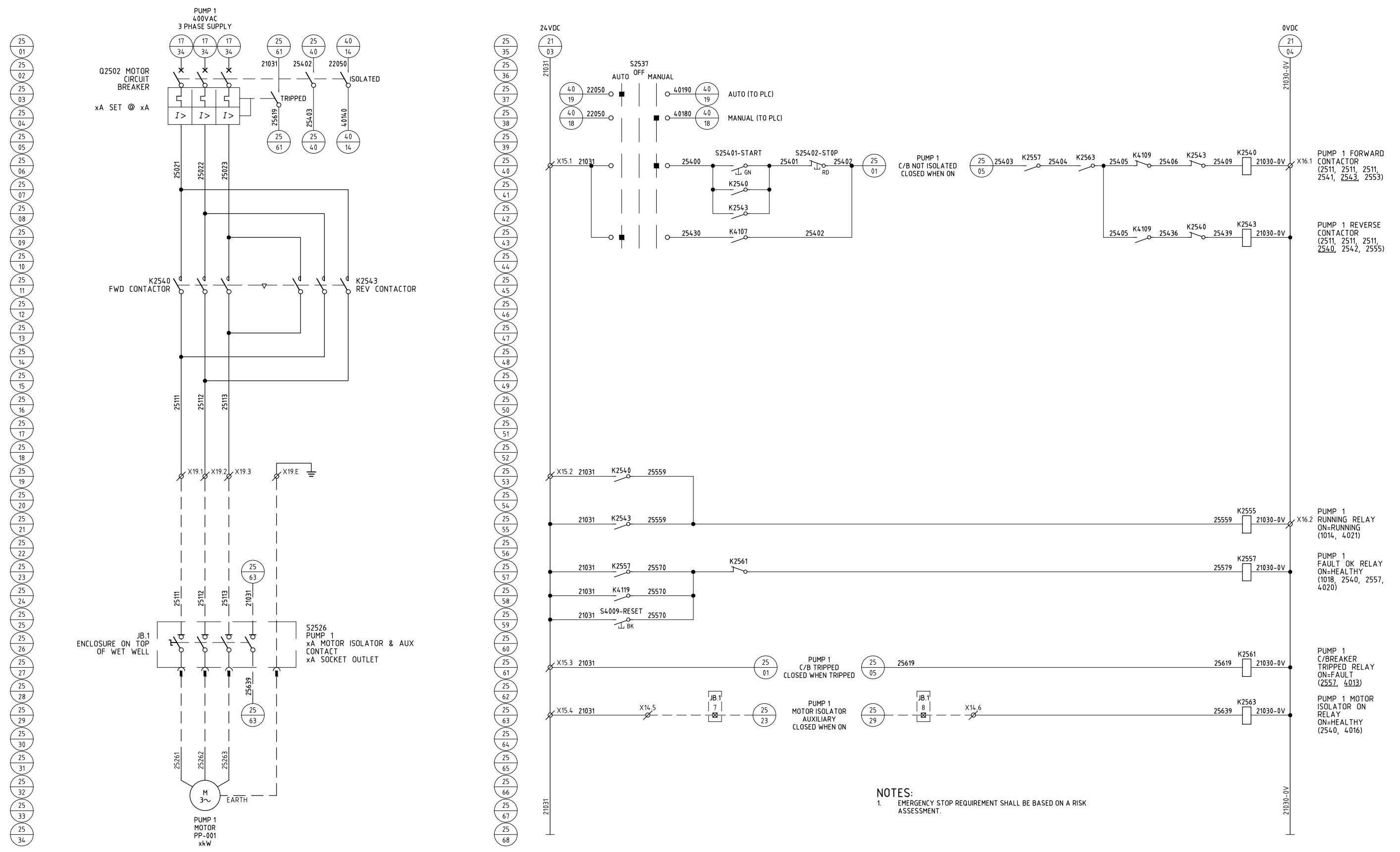
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	AUTHORISED:
14/02/2018	14/02/2018	14/02/2018
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN: 14/02/2018	SIGNATURE:	
TROY O'BRIEN	ORIGINAL SIGNED	
REVIEWED: 14/02/2018		
JONATHON NICHOLLS		
CONTRACTOR:		


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 24VDC COMMON CONTROL
 ELECTRICAL
 SCHEMATIC DIAGRAM



A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-22		
DRAWING NUMBER		
TYP-03-00001_22		



NOTES:
 1. EMERGENCY STOP REQUIREMENT SHALL BE BASED ON A RISK ASSESSMENT.

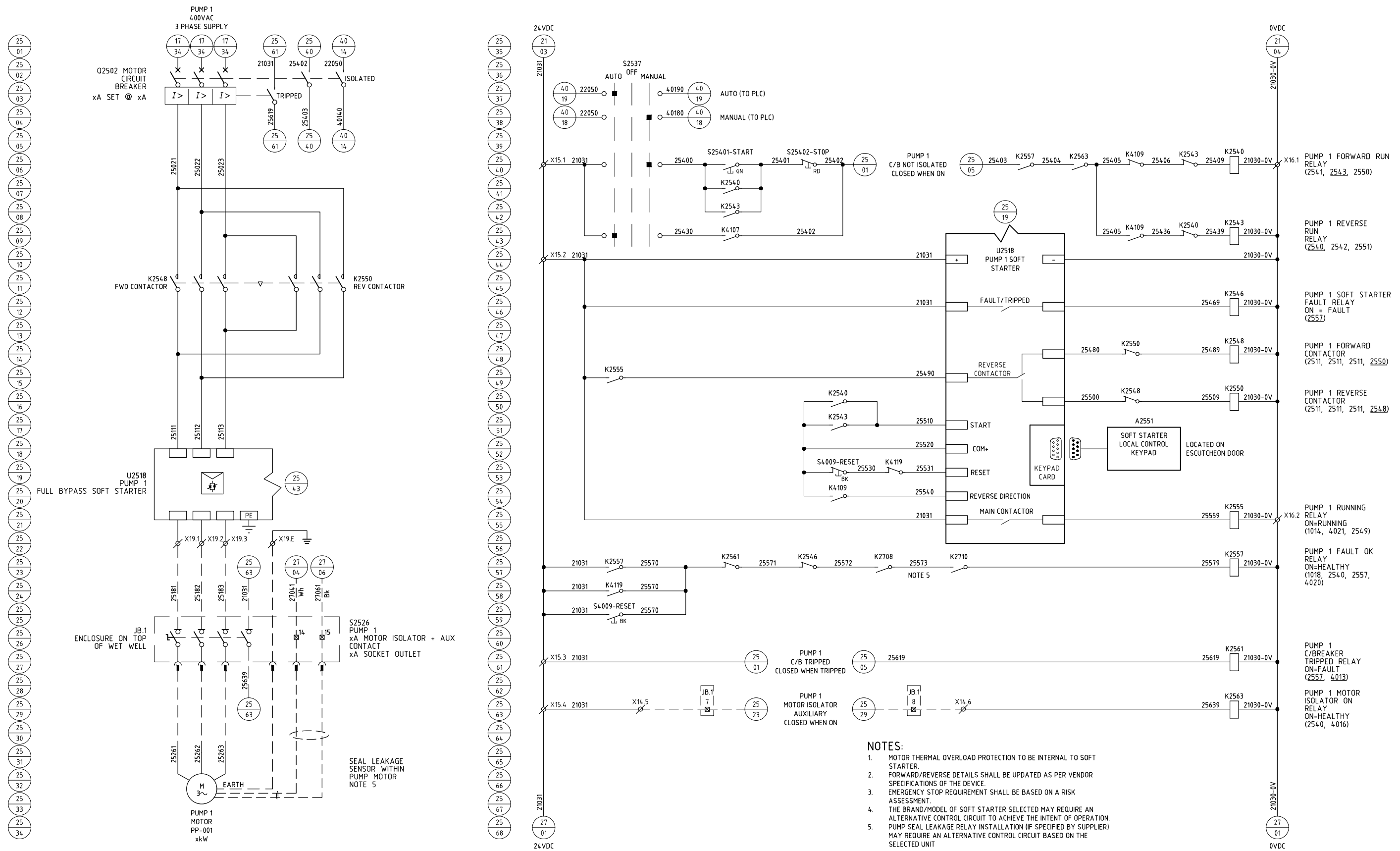
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
DRAWN:	SIGNATURE:	DATE
TROY O'BRIEN		14/02/2018
REVIEWED:	SIGNATURE:	DATE
JONATHON NICHOLLS		14/02/2018
CONTRACTOR:		


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PUMP 1 POWER & CONTROL
 ELECTRICAL
 SCHEMATIC DIAGRAM (DOL STARTER)

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-25a		
DRAWING NUMBER		
TYP-03-00001_25a		



- NOTES:**
1. MOTOR THERMAL OVERLOAD PROTECTION TO BE INTERNAL TO SOFT STARTER.
 2. FORWARD/REVERSE DETAILS SHALL BE UPDATED AS PER VENDOR SPECIFICATIONS OF THE DEVICE.
 3. EMERGENCY STOP REQUIREMENT SHALL BE BASED ON A RISK ASSESSMENT.
 4. THE BRAND/MODEL OF SOFT STARTER SELECTED MAY REQUIRE AN ALTERNATIVE CONTROL CIRCUIT TO ACHIEVE THE INTENT OF OPERATION.
 5. PUMP SEAL LEAKAGE RELAY INSTALLATION (IF SPECIFIED BY SUPPLIER) MAY REQUIRE AN ALTERNATIVE CONTROL CIRCUIT BASED ON THE SELECTED UNIT

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS

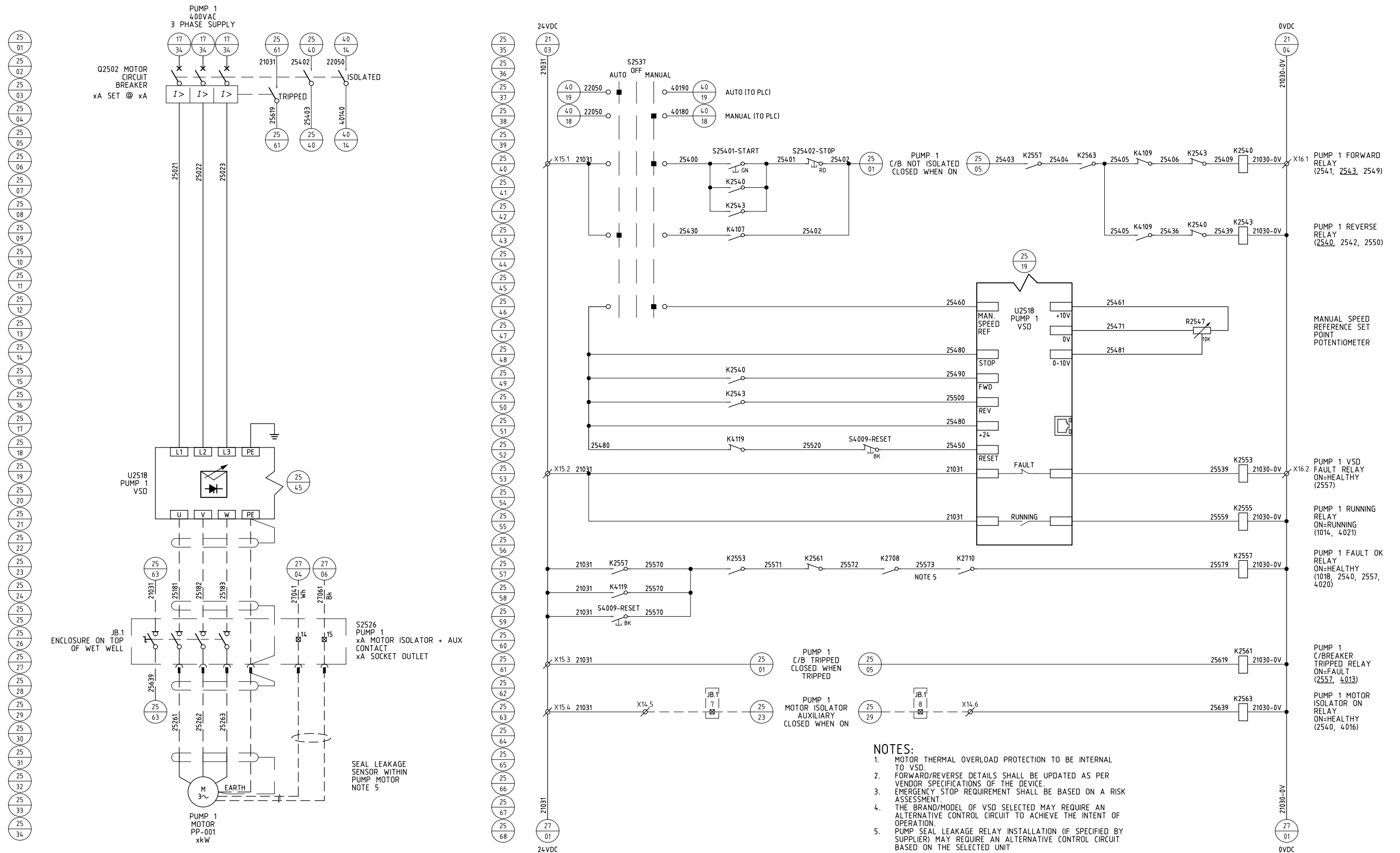
CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
TROY O'BRIEN	SIGNATURE:	14/02/2018
JONATHON NICHOLLS	ORIGINAL SIGNED	14/02/2018

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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PUMP 1 POWER & CONTROL
 ELECTRICAL
 SCHEMATIC DIAGRAM (SOFT STARTER)


A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-25b		
DRAWING NUMBER		
TYP-03-00001_25b		




- NOTES:**
- MOTOR THERMAL OVERLOAD PROTECTION TO BE INTERNAL TO VSD.
 - FORWARD/REVERSE DETAILS SHALL BE UPDATED AS PER VENDOR SPECIFICATIONS OF THE DEVICE.
 - EMERGENCY STOP REQUIREMENT SHALL BE BASED ON A RISK ASSESSMENT.
 - THE BRAND/MODEL OF VSD SELECTED MAY REQUIRE AN ALTERNATIVE CONTROL CIRCUIT TO ACHIEVE THE INTENT OF OPERATION.
 - PUMP SEAL LEAKAGE RELAY INSTALLATION (IF SPECIFIED BY SUPPLIER) MAY REQUIRE AN ALTERNATIVE CONTROL CIRCUIT BASED ON THE SELECTED UNIT

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
DRAWN:	SIGNATURE:	DATE
TROY O'BRIEN		14/02/2018
REVIEWED:	SIGNATURE:	DATE
JONATHON NICHOLLS		14/02/2018
CONTRACTOR:		

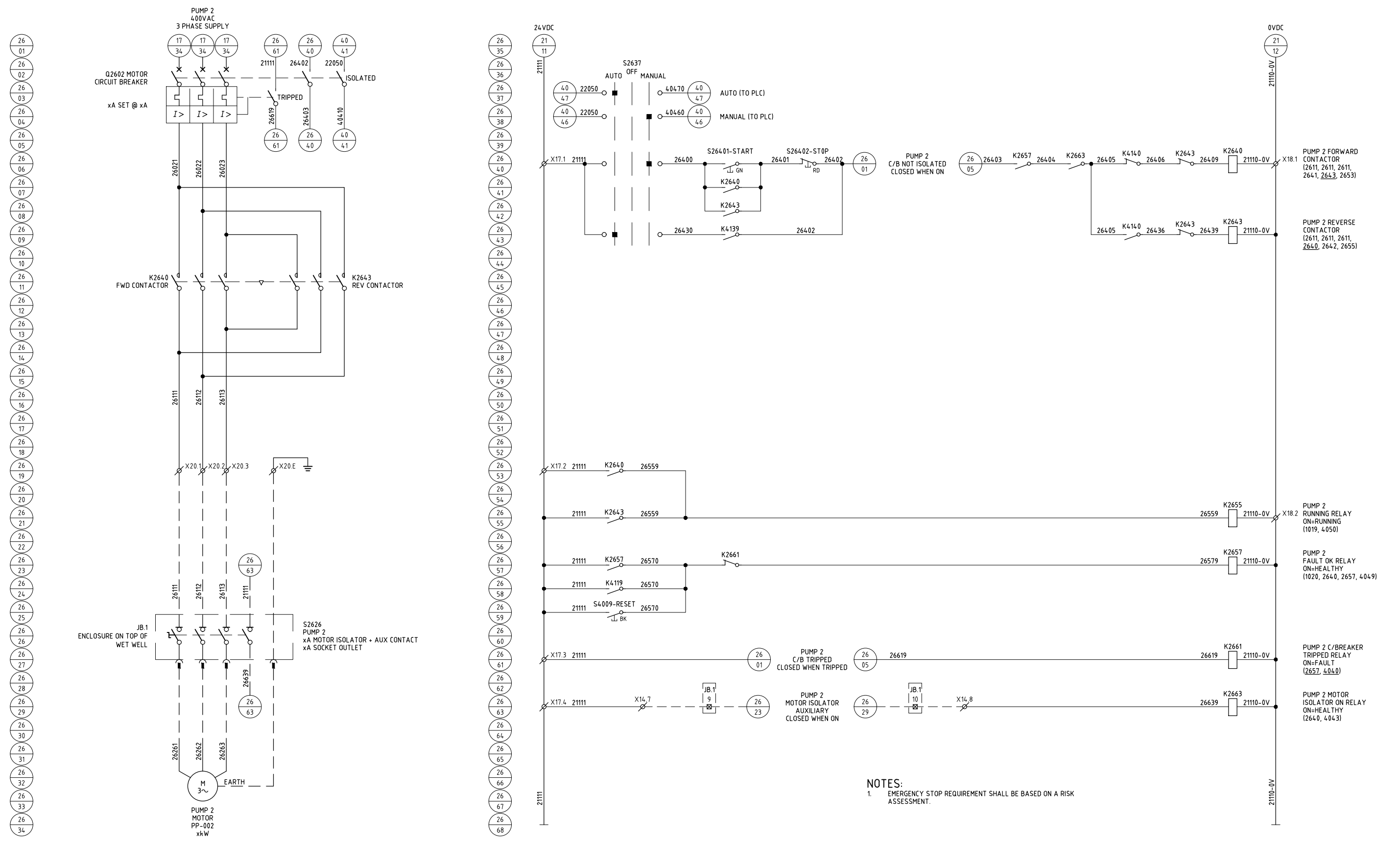


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PUMP 1 POWER & CONTROL
 ELECTRICAL
 SCHEMATIC DIAGRAM (VSD STARTER)



A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-25c		
DRAWING NUMBER		
TYP-03-00001_25c		



NOTES:
 1. EMERGENCY STOP REQUIREMENT SHALL BE BASED ON A RISK ASSESSMENT.

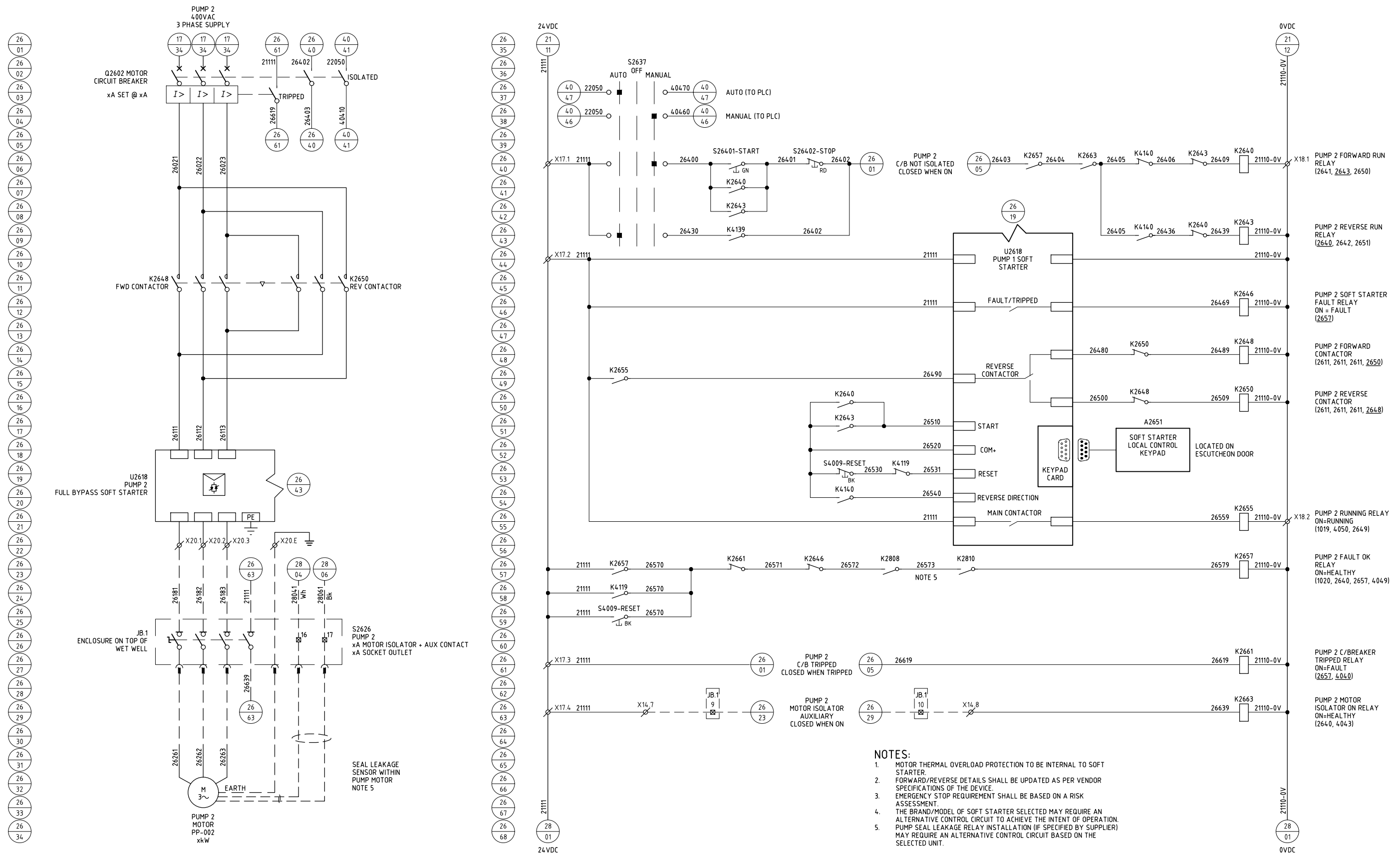
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
TROY O'BRIEN	SIGNATURE:	14/02/2018
JONATHON NICHOLLS	ORIGINAL SIGNED	


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PUMP 2 POWER & CONTROL
 ELECTRICAL
 SCHEMATIC DIAGRAM (DOL STARTER)


A3	TOTAL SHEETS:	2.1
	PROJECT No: NC1001	
MAXIMO ID:		REVISION
SUPERSEDES: 5003-00001-26a		
DRAWING NUMBER		
TYP-03-00001_26a		




- NOTES:**
- MOTOR THERMAL OVERLOAD PROTECTION TO BE INTERNAL TO SOFT STARTER.
 - FORWARD/REVERSE DETAILS SHALL BE UPDATED AS PER VENDOR SPECIFICATIONS OF THE DEVICE.
 - EMERGENCY STOP REQUIREMENT SHALL BE BASED ON A RISK ASSESSMENT.
 - THE BRAND/MODEL OF SOFT STARTER SELECTED MAY REQUIRE AN ALTERNATIVE CONTROL CIRCUIT TO ACHIEVE THE INTENT OF OPERATION.
 - PUMP SEAL LEAKAGE RELAY INSTALLATION (IF SPECIFIED BY SUPPLIER) MAY REQUIRE AN ALTERNATIVE CONTROL CIRCUIT BASED ON THE SELECTED UNIT.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

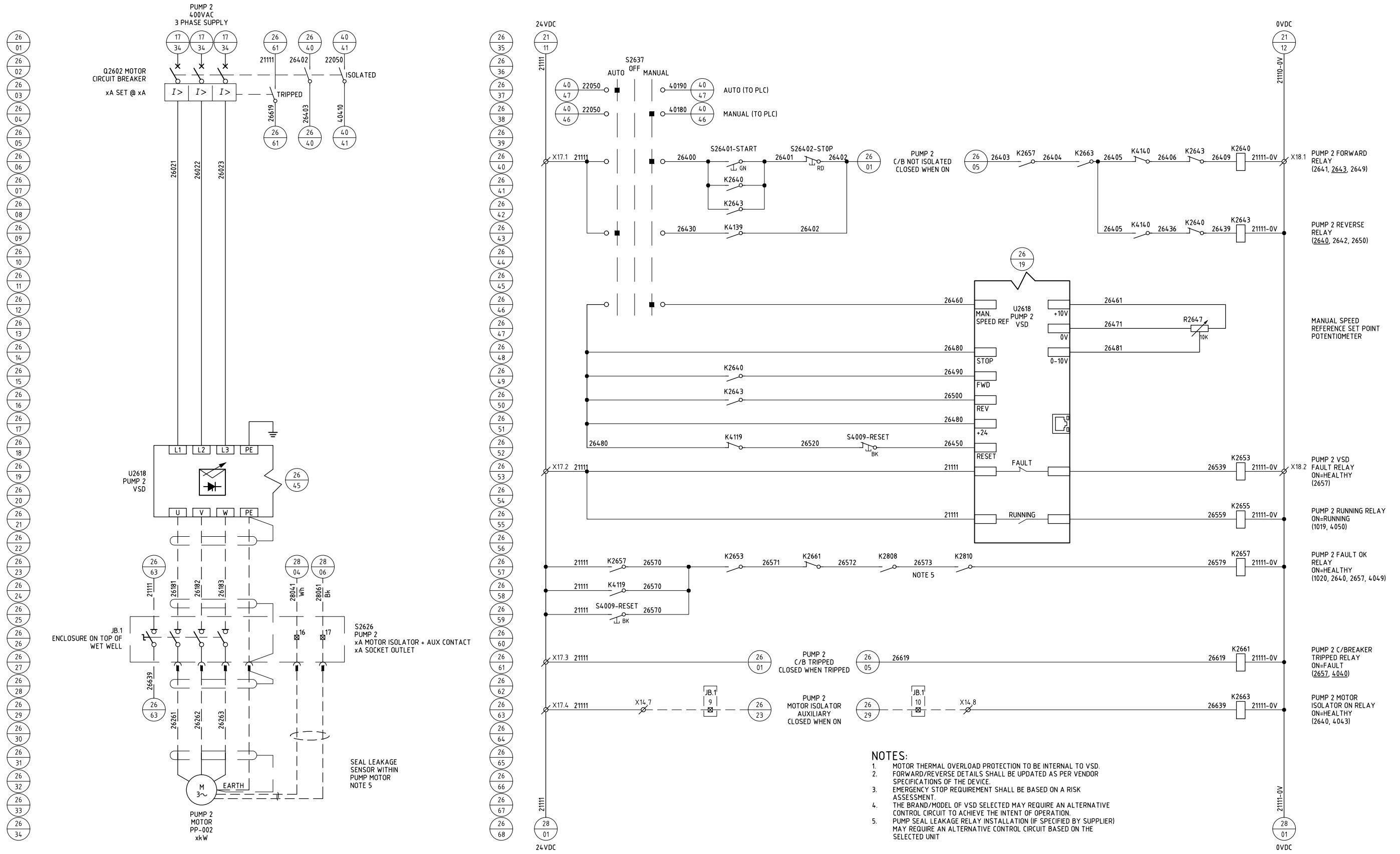
DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
TROY O'BRIEN	SIGNATURE:	14/02/2018
JONATHON NICHOLLS	ORIGINAL SIGNED	



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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PUMP 2 POWER & CONTROL
 ELECTRICAL
 SCHEMATIC DIAGRAM (SOFT STARTER)


A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-26b		
DRAWING NUMBER		
TYP-03-00001_26b		



- NOTES:**
1. MOTOR THERMAL OVERLOAD PROTECTION TO BE INTERNAL TO VSD. FORWARD/REVERSE DETAILS SHALL BE UPDATED AS PER VENDOR SPECIFICATIONS OF THE DEVICE.
 2. EMERGENCY STOP REQUIREMENT SHALL BE BASED ON A RISK ASSESSMENT.
 3. THE BRAND/MODEL OF VSD SELECTED MAY REQUIRE AN ALTERNATIVE CONTROL CIRCUIT TO ACHIEVE THE INTENT OF OPERATION.
 4. PUMP SEAL LEAKAGE RELAY INSTALLATION (IF SPECIFIED BY SUPPLIER) MAY REQUIRE AN ALTERNATIVE CONTROL CIRCUIT BASED ON THE SELECTED UNIT
 - 5.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

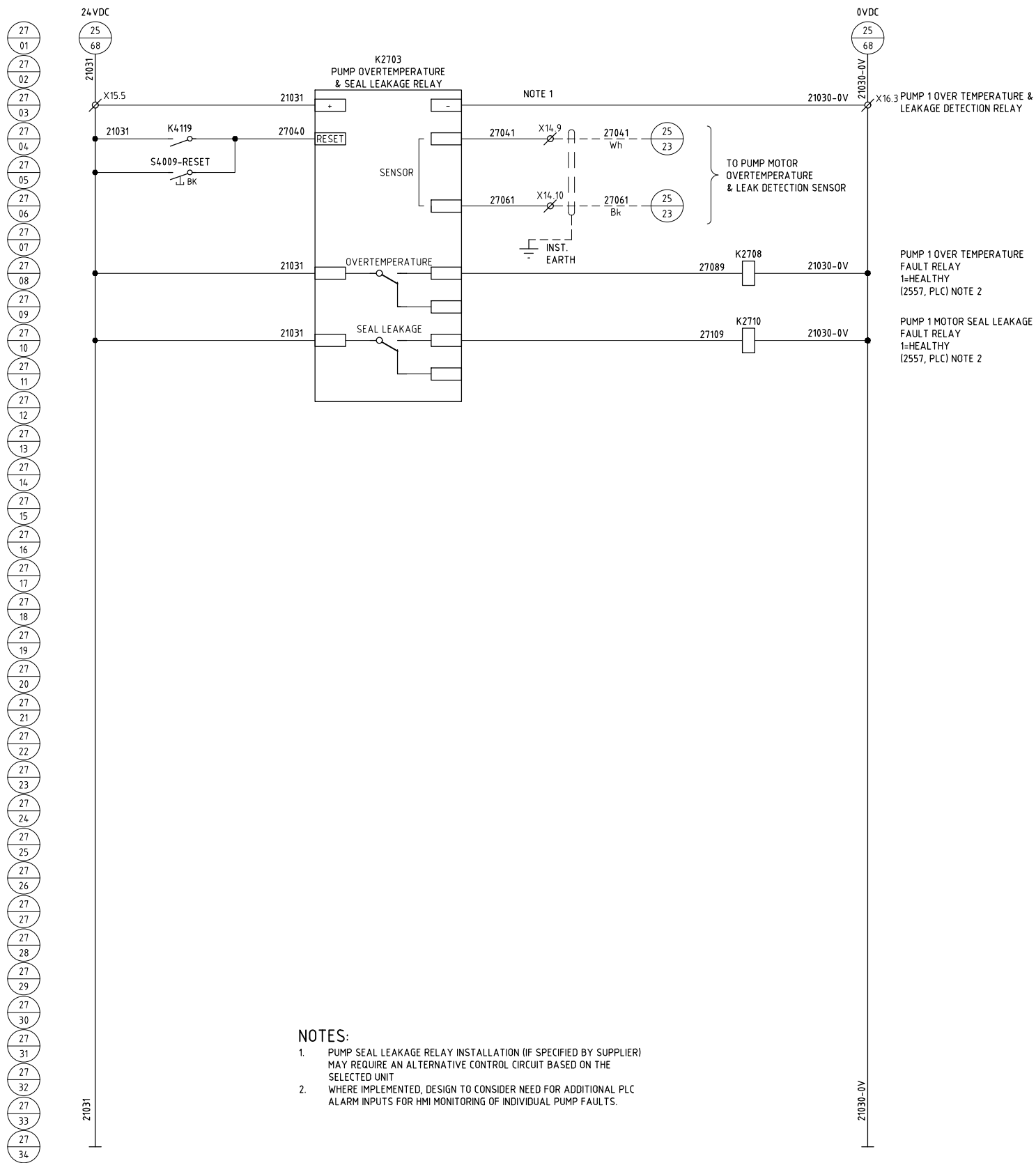
DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
DRAWN:	TROY O'BRIEN	14/02/2018
REVIEWED:	JONATHON NICHOLLS	14/02/2018
SIGNATURE:		ORIGINAL SIGNED
CONTRACTOR:		



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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PUMP 2 POWER & CONTROL
 ELECTRICAL
 SCHEMATIC DIAGRAM (VSD STARTER)

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-26c		
DRAWING NUMBER		
TYP-03-00001_26c		





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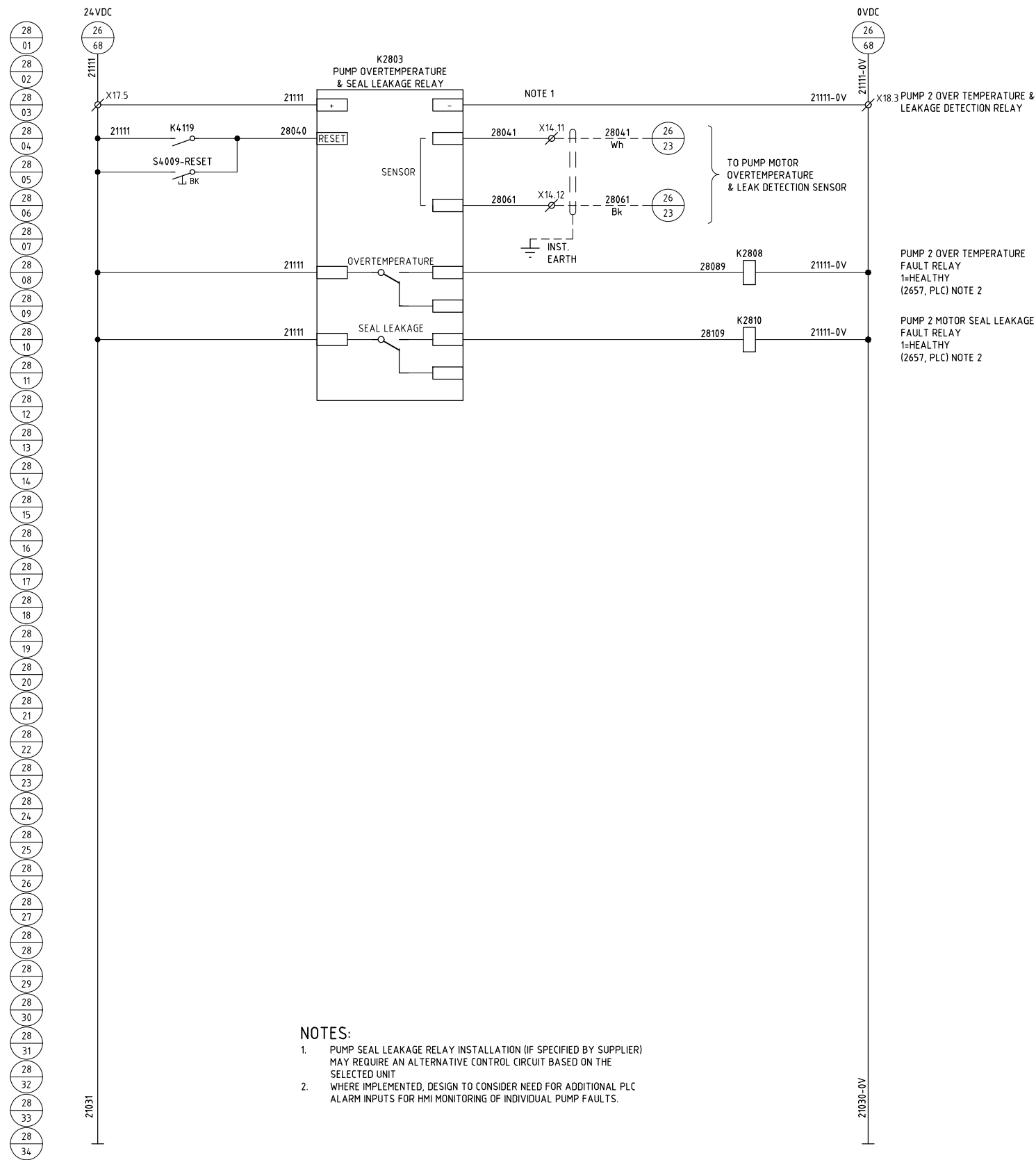
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	28/01/22	WS	PUMP SEAL LEAKAGE DETECTION CIRCUIT (WHERE APPLICABLE)	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	SIGNATURE:
28/01/2022	28/01/2022	JUSTIN HAMRA
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN: 28/01/2022		
W.SAAD		
REVIEWED: 28/01/2022		ORIGINAL SIGNED
JONATHON NICHOLLS		
CONTRACTOR:		


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PUMP 1 SEAL LEAKAGE DETECTION RELAY
 ELECTRICAL
 SCHEMATIC DIAGRAM

A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES:		
DRAWING NUMBER		
TYP-03-00001_27		




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REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	28/01/22	WS	PUMP SEAL LEAK DETECTION CIRCUIT (WHERE APPLICABLE)	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

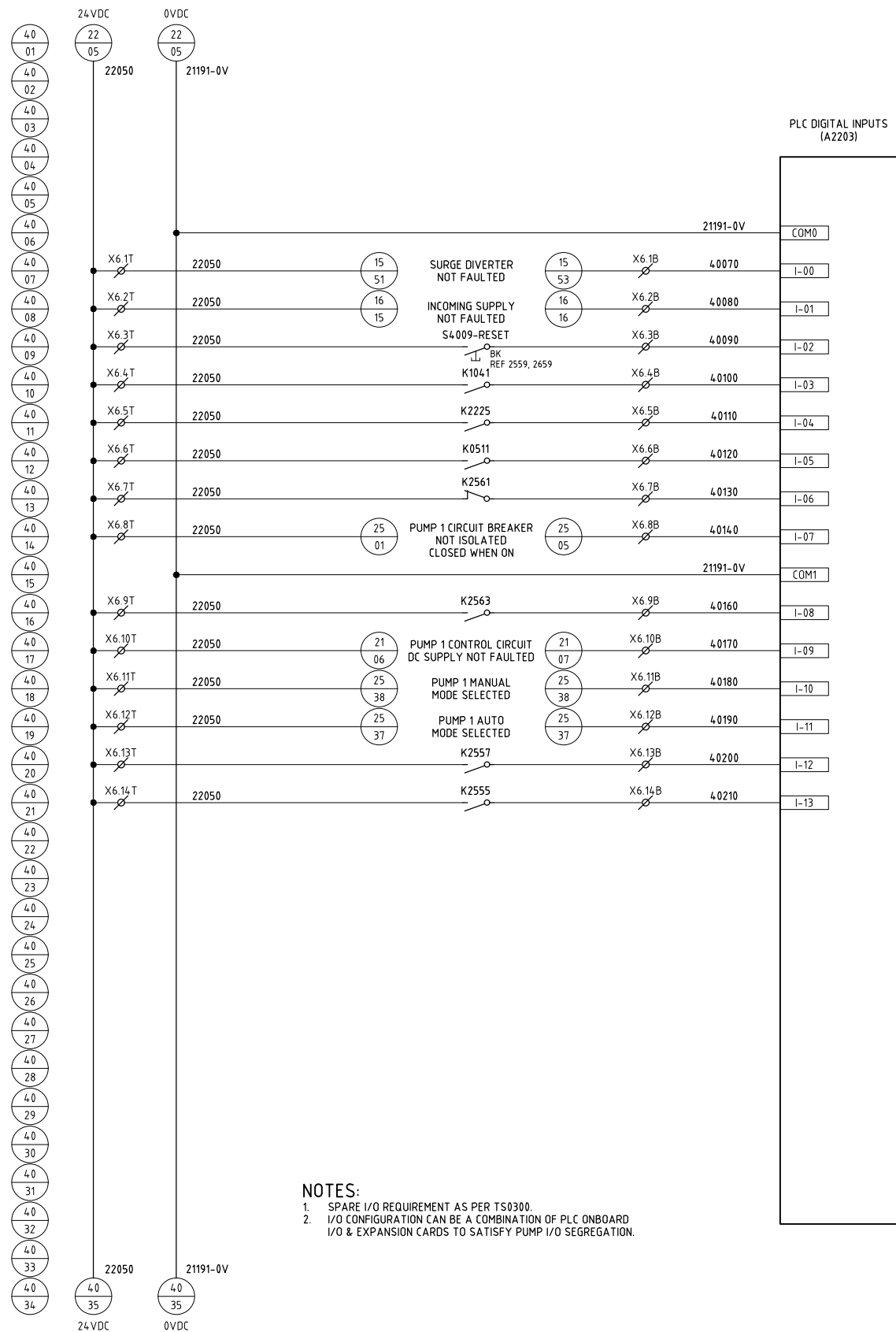
DESIGN PANEL		
DESIGNED:	AUTHORISED:	SIGNATURE:
28/01/2022	28/01/2022	JUSTIN HAMRA
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN: 28/01/2022	W. SAAD	ORIGINAL SIGNED
REVIEWED: 28/01/2022	JONATHON NICHOLLS	
CONTRACTOR:		



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SWITCHBOARD 0 ? 100A
 MAIN SWITCHBOARD
 PUMP 2 SEAL LEAKAGE DETECTION RELAY
 ELECTRICAL
 SCHEMATIC DIAGRAM

A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES:		
DRAWING NUMBER		
TYP-03-00001_28		



PLC DIGITAL INPUTS (A2203)

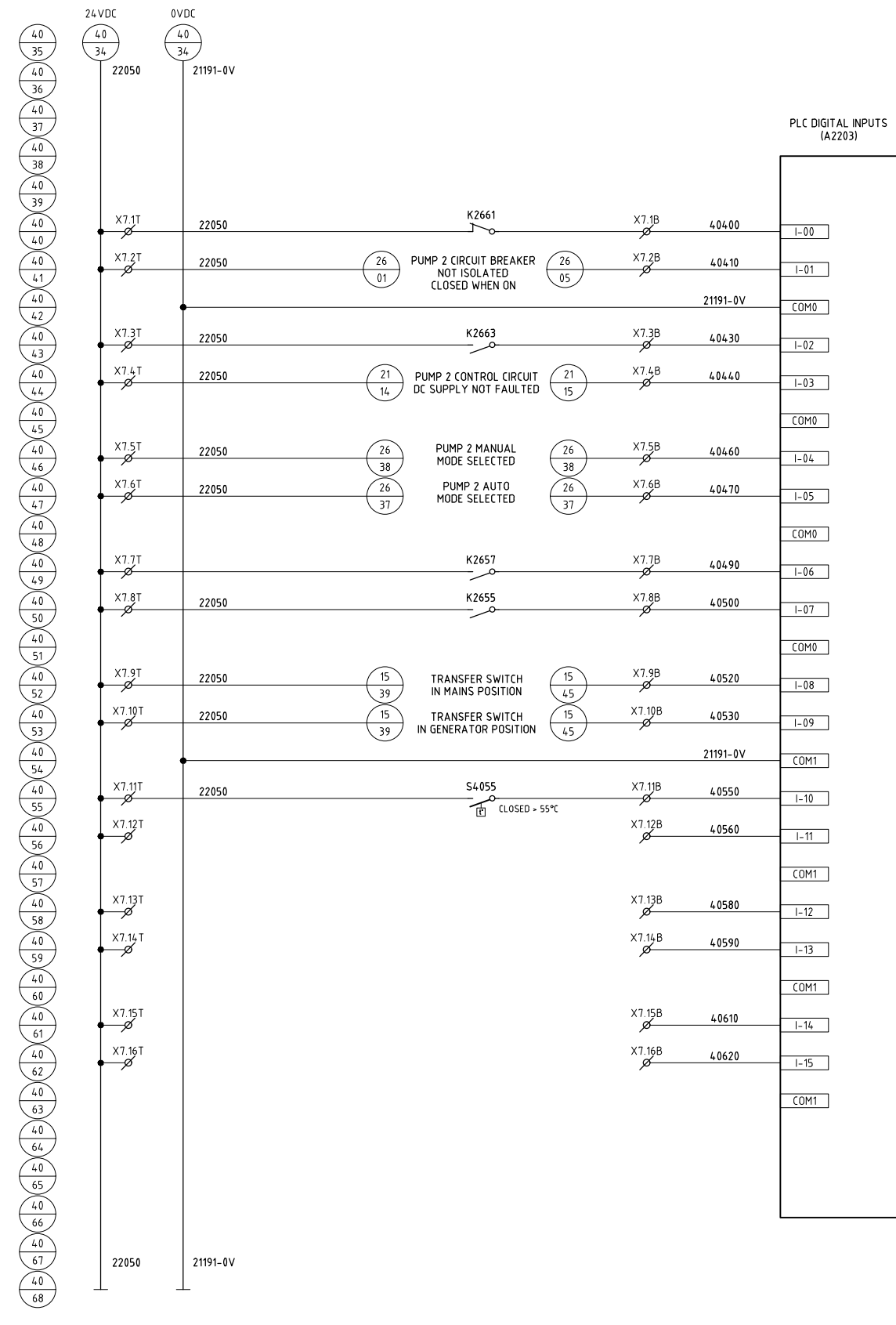
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22050 21191-0V

PLC DIGITAL INPUTS (A2203)

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22050 21191-0V



PLC DIGITAL INPUTS (A2203)

40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68

22050 21191-0V

PLC DIGITAL INPUTS (A2203)

40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68

22050 21191-0V

NOTES:
 1. SPARE I/O REQUIREMENT AS PER TS0300.
 2. I/O CONFIGURATION CAN BE A COMBINATION OF PLC ONBOARD I/O & EXPANSION CARDS TO SATISFY PUMP I/O SEGREGATION.

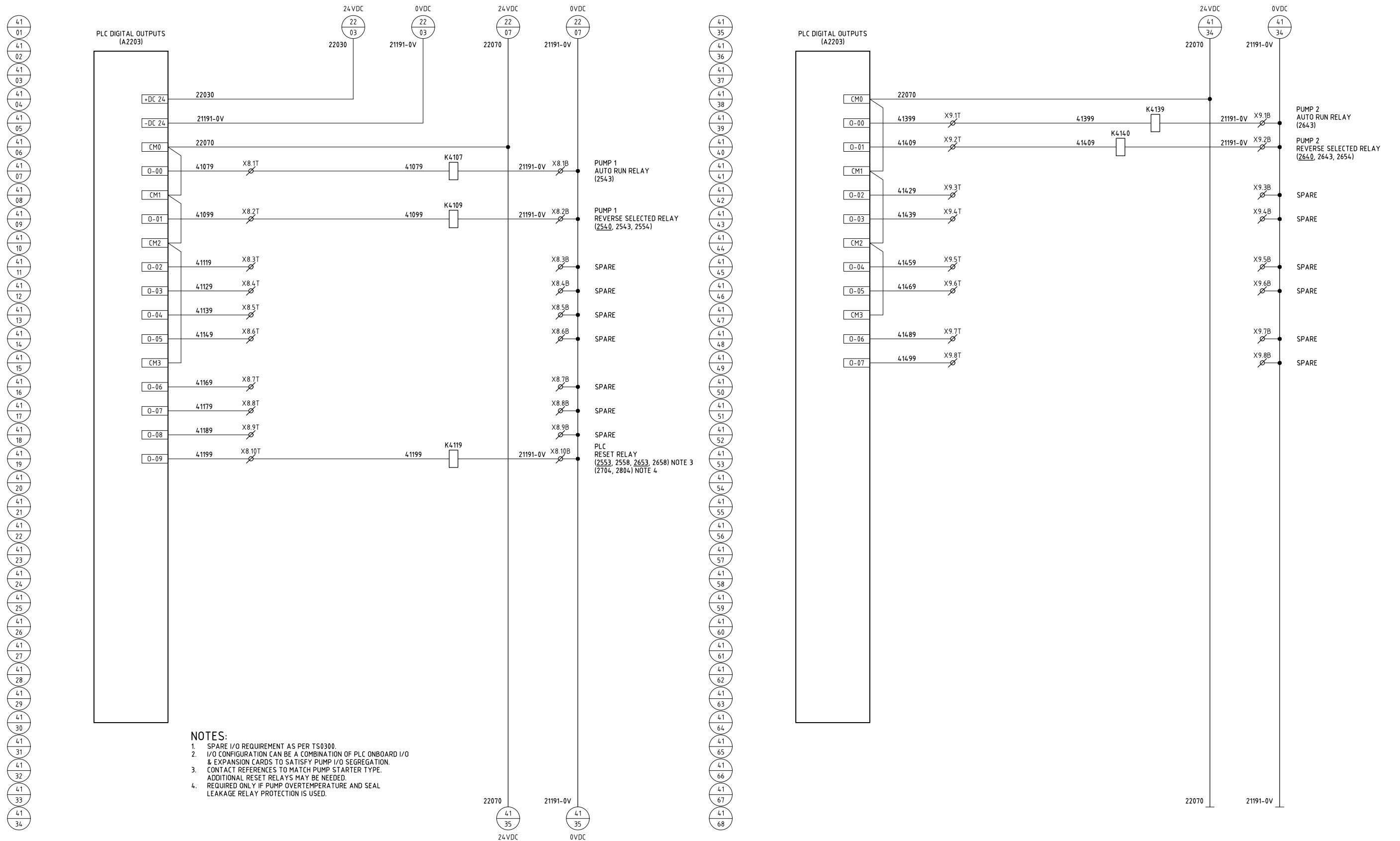
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	SIGNATURE:
14/02/2018	14/02/2018	JUSTIN HAMRA
SACHIN PANDEY		
14/02/2018		TROY O'BRIEN
14/02/2018		JONATHON NICHOLLS
CONTRACTOR:		ORIGINAL SIGNED


 Government of South Australia
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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PLC DIGITAL INPUTS
 ELECTRICAL
 SCHEMATIC DIAGRAM

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-40		
DRAWING NUMBER		
TYP-03-00001_40		




REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
DRAWN:	SIGNATURE:	DATE
TROY O'BRIEN	ORIGINAL SIGNED	14/02/2018
REVIEWED:		DATE
JONATHON NICHOLLS		14/02/2018
CONTRACTOR:		



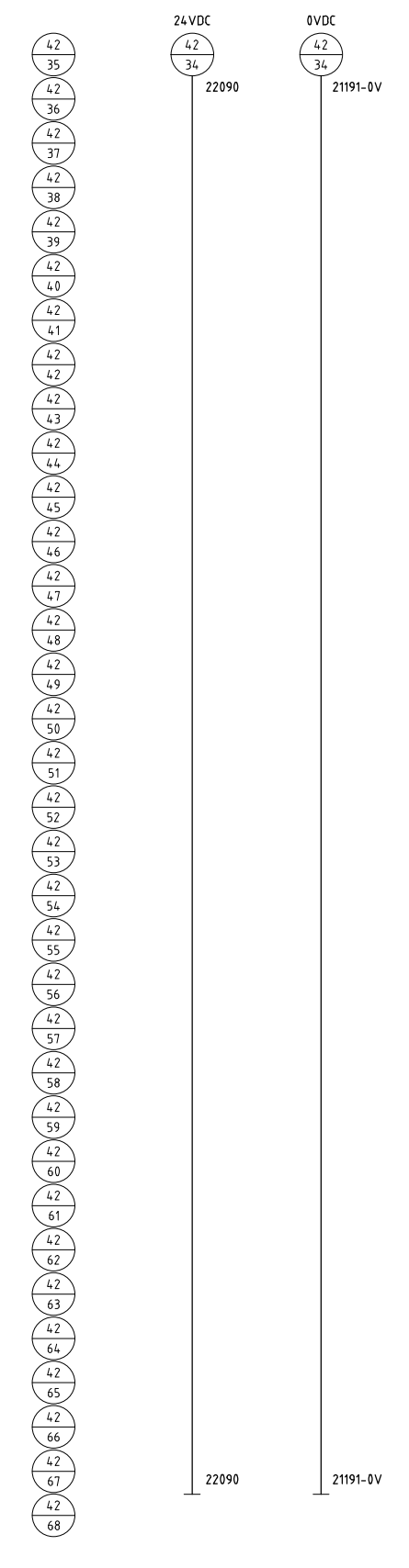
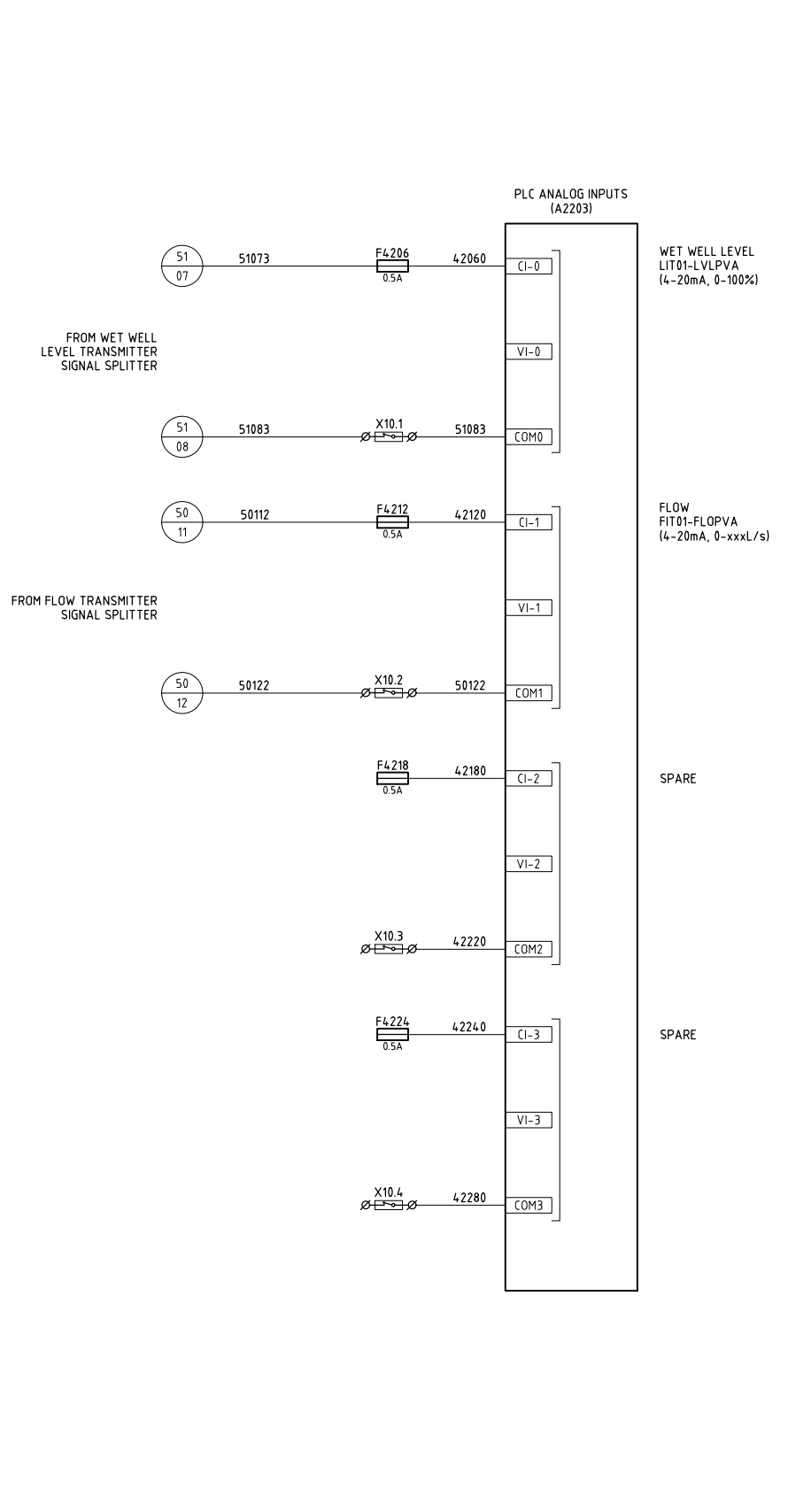
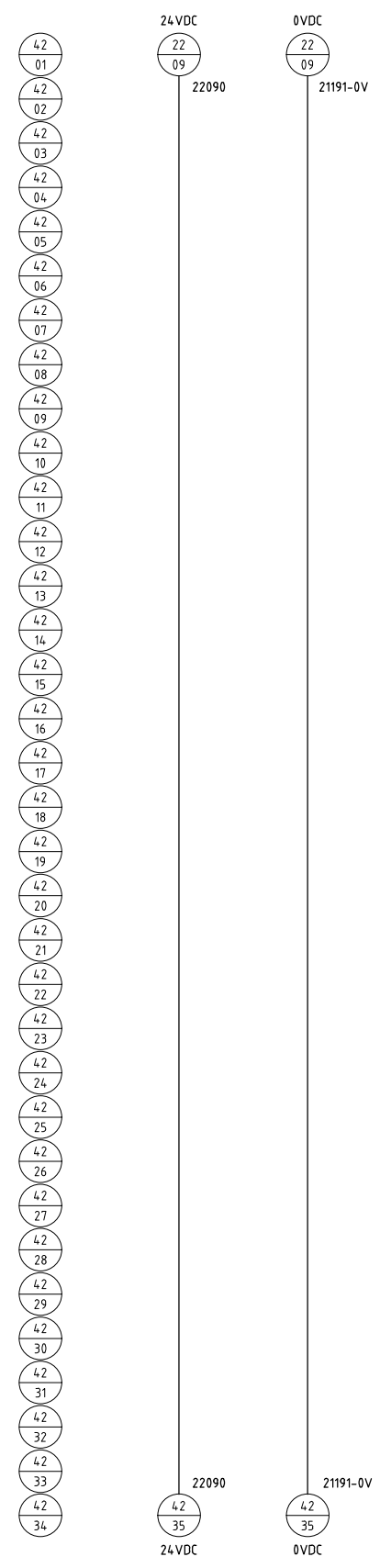
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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PLC DIGITAL OUTPUTS
 ELECTRICAL
 SCHEMATIC DIAGRAM

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-41		
DRAWING NUMBER		
TYP-03-00001_41		



REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

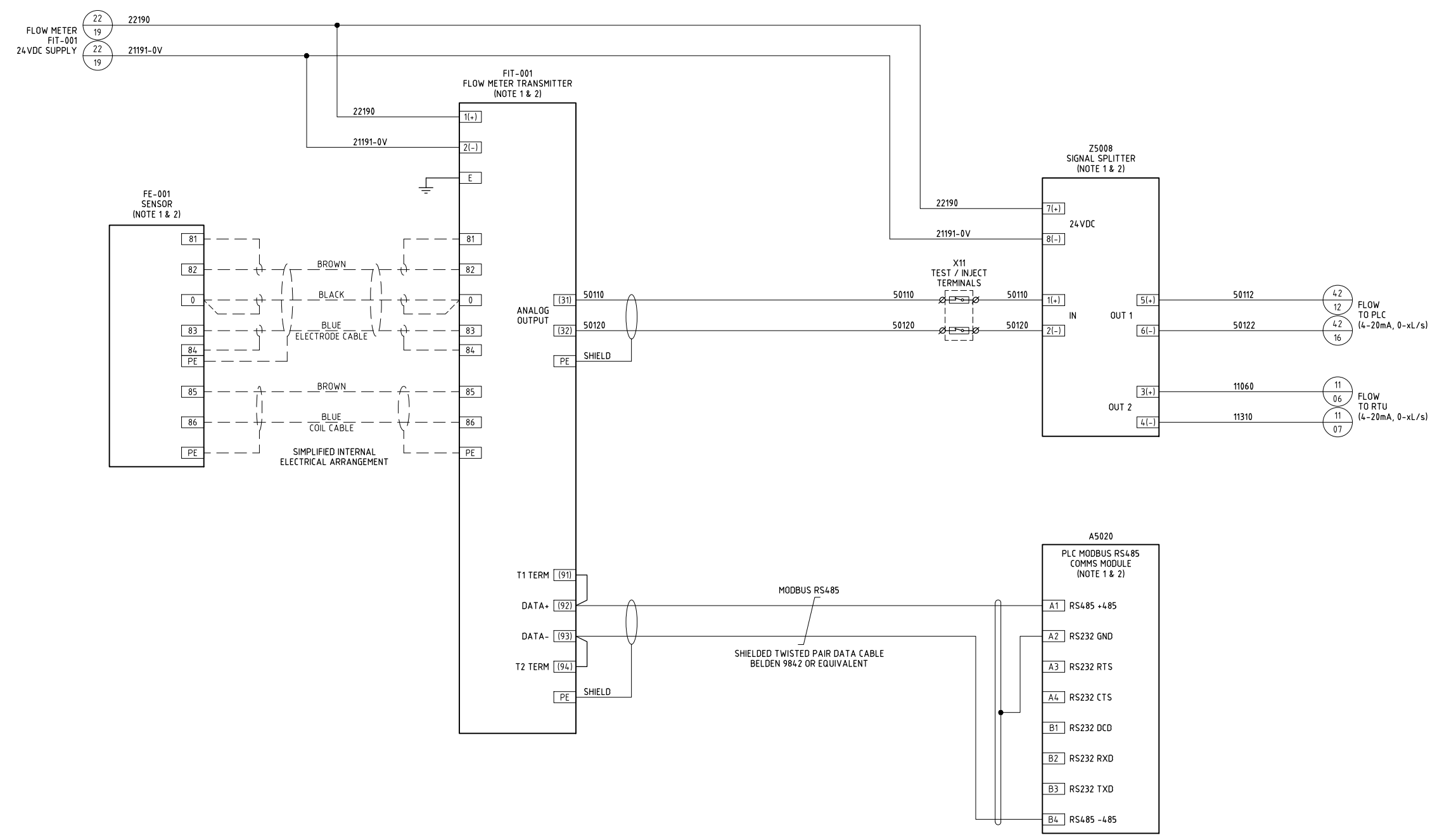
DESIGN PANEL		
DESIGNED:	AUTHORISED:	
14/02/2018	14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN: 14/02/2018	SIGNATURE:	
TROY O'BRIEN	ORIGINAL SIGNED	
REVIEWED: 14/02/2018		
JONATHON NICHOLLS		
CONTRACTOR:		

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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 PLC ANALOGUE INPUTS
 ELECTRICAL
 SCHEMATIC DIAGRAM

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-42		
DRAWING NUMBER		
TYP-03-00001_42		

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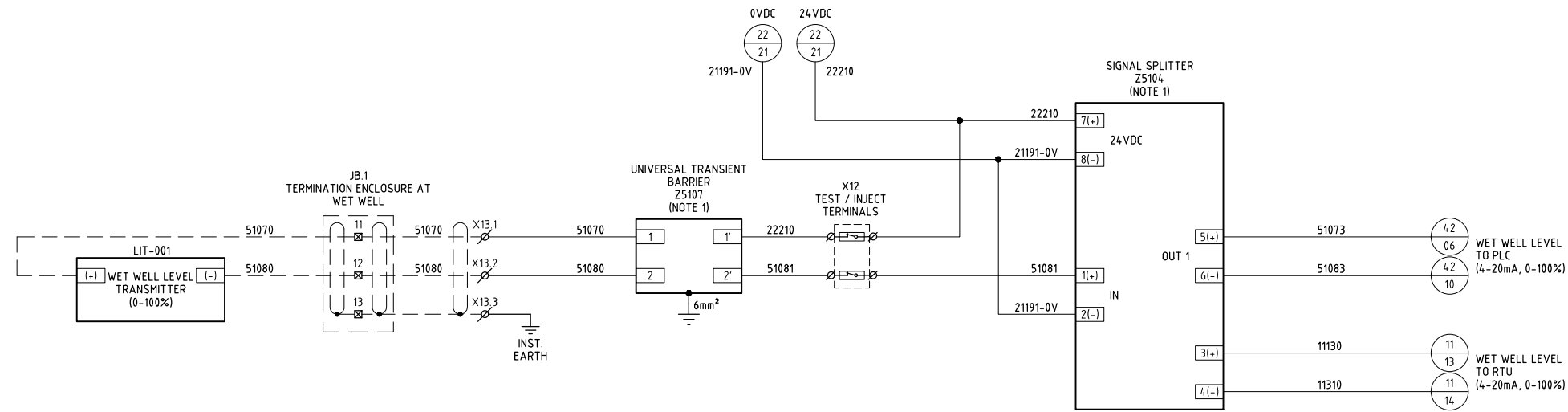


NOTE:
 1. REQUIREMENT OF FLOW METER & ASSOCIATED CONTROL EQUIPMENT IS PROJECT SPECIFIC.
 2. EQUIPMENT TERMINATION MAY DIFFER.

REVISION PANEL				DESIGN PANEL				 SWITCHBOARD 0 - 100A MAIN SWITCHBOARD FLOW METER TRANSMITTER CONNECTION ELECTRICAL SCHEMATIC DIAGRAM		A3 TOTAL SHEETS: SHT SIZE PROJECT No: NC1001		2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018			MAXIMO ID:		
					CURRENT REV 13/06/23	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018	SUPERSEDES: 5003-00001-50				
					AUTHORISED: JUSTIN HAMRA	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018	DRAWING NUMBER				
					SIGNATURE: JUSTIN HAMRA	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018	TYP-03-00001_50				
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH		DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018					
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS		DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018					
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS		DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018					
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:				CONTRACTOR:				

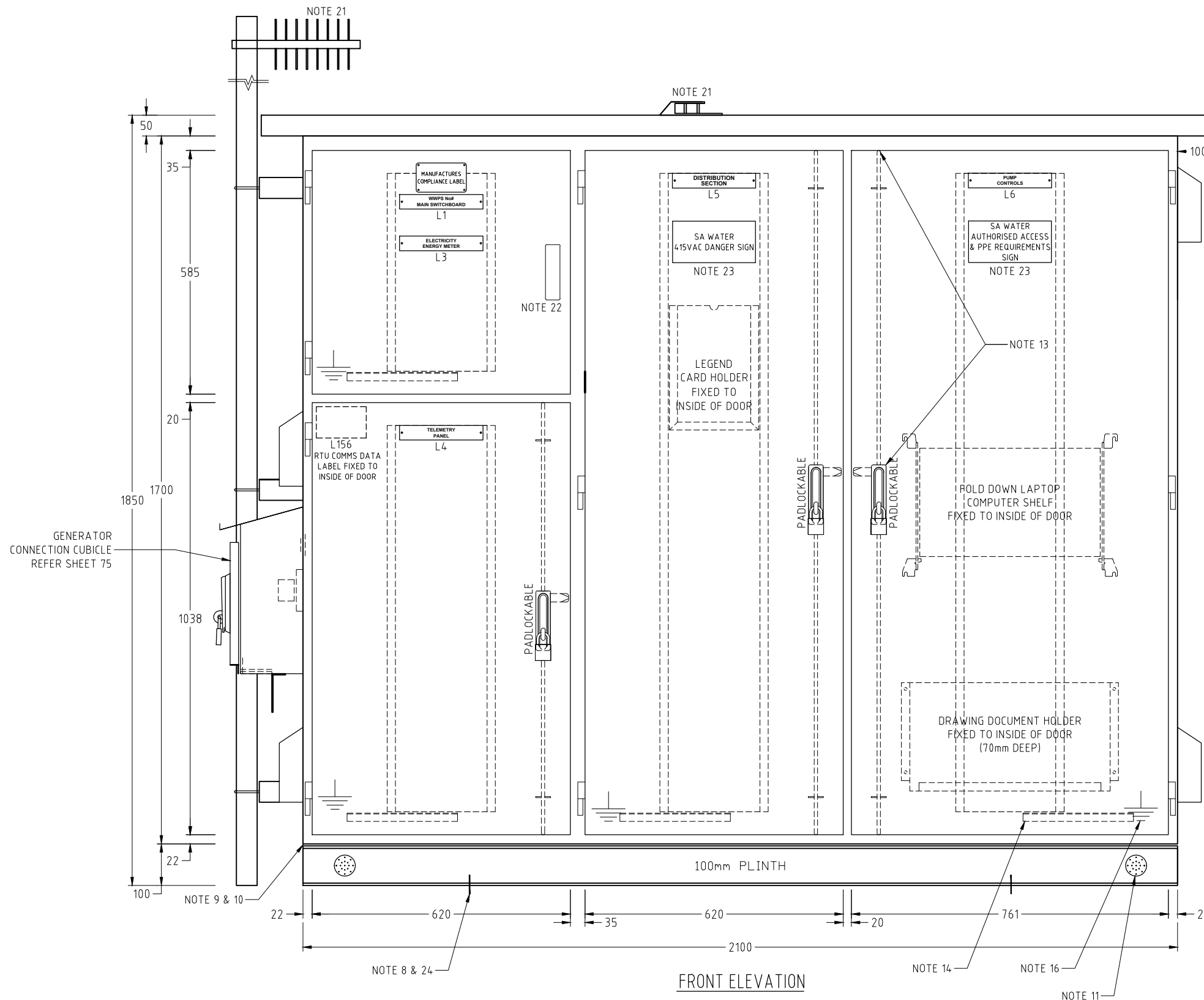
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 WATER CORPORATION
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NOTE:
1. EQUIPMENT TERMINATION MAY DIFFER.

REVISION PANEL				DESIGN PANEL				 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SWITCHBOARD 0 - 100A MAIN SWITCHBOARD		A3 SHT SIZE PROJECT No: NC1001 MAXIMO ID: SUPERSEDES: 5003-00001-51 DRAWING NUMBER TYP-03-00001_51	2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018		LEVEL TRANSMITTER CONNECTION ELECTRICAL SCHEMATIC DIAGRAM			
					CURRENT REV 13/06/23	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018					
					AUTHORISED: JUSTIN HAMRA	SACHIN PANDEY	JUSTIN HAMRA					
					SIGNATURE:	DRAWN: 14/02/2018	SIGNATURE:					
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH		TROY O'BRIEN						
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS		REVIEWED: 14/02/2018	ORIGINAL SIGNED					
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS		JONATHON NICHOLLS						
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:								




CONSTRUCTION NOTES:

- SWITCHBOARD TO BE CONSTRUCTED TO AS/NZS 61439 PARTS 1 & 3, & COMPLIANT WITH SA WATER STANDARD TS0300.
- DEGREE OF PROTECTION - IP56
- FORM OF SEGREGATION - FORM 1
- CURRENT RATING - 100A
- FAULT RATING - 10kA FOR 1 SECOND.
- CUBICLE TO BE CONSTRUCTED FROM A THICKNESS OF 1.6mm G2 GALVABOND & GROUND SMOOTH BEFORE PAINTING IN ACCORDANCE WITH TS0300.
- PLINTH MANUFACTURED FROM 100mmx50mm HOT DIPPED GALV IRON CHANNEL. PLINTH NOT TO BE PAINTED.
- 15mm PLINTH MOUNTING HOLES TO BE LOCATED IN CENTRE OF PLINTH TOES & CONSISTENTLY LOCATED USING DRILLING TEMPLATE. HOLES TO BE DRILLED PRIOR TO GALVANISING.
- PLINTH MOUNTING BOLTS TO BE HOT DIPPED GALVANISED & FIXED WITH NYLON ISOLATING WASHERS.
- PROVIDE ELECTRICAL ISOLATION BETWEEN ALL SURFACES OF DISSIMILAR METALS THAT WOULD OTHERWISE BE IN CONTACT WITH EACH OTHER, INCLUDING BETWEEN HDG PLINTH & SWITCHBOARD BASE.
- FIT VENTED PLUGS TO FILL THE 50mm PLINTH LIFTING POINTS (MAXIMUM 2mm HOLES FOR VENTING).
- CUBICLE TO BE PAINTED IN ACCORDANCE WITH TS0300 CLAUSE 8.3 OUTDOOR CUBICLE. PAINTED COLORBOND WILDERNESS 013, USING GRAFFITI RESISTANT PAINT/COATINGS. INTERNAL REMOVABLE PANELS, BACKPLATES, BRACKETS & ESCUTCHEONS SHALL BE GLOSS WHITE IN COLOUR.
- DOORS TO BE HINGED USING VANDAL PROOF 316 STAINLESS STEEL HINGES, 3 POINT LOCKING & SECURED WITH 316 STAINLESS STEEL FLUSH MOUNT PADLOCKABLE HANDLES. LOCKING RODS TO BE FIXED WITH ROLLER ENDS TO PREVENT PAINT DAMAGE.
- DOORS TO BE FITTED WITH SELF LATCHING STAYS (HOLD AT MINIMUM 90°)
- DOORS TO BE SEALED WITH WEATHERPROOF RUBBER.
- DOORS, ESCUTCHEONS & GLAND PLATES TO BE BONDED TO CUBICLE VIA WELDED EARTH STUDS.
- HINGED ESCUTCHEON DOORS TO BE PROVIDED ONLY OVER THE POWER DISTRIBUTION AND PUMP CONTROLS SECTION.
- M10 EARTH STUD IS REQUIRED IN THE INCOMER/METER ISOLATION SECTION FOR SWITCHBOARD EARTHING.
- ALL 230VAC/400VAC TERMINALS TO BE SHROUDED C/W WARNING LABELS "DANGER 230/400VAC".
- STICK ON CABLE TIE MOUNTS TO BE SCREWED DOWN.
- REQUIREMENT FOR 4G MODEM OR RADIO TYPE RTU ANTENNA WILL BE PROJECT SPECIFIC.
- PROVIDE SAPN CM LOCK INSERT & HOOK INSIDE TELEMETRY SECTION TO HOLD CM KEY FOR ACCESS TO RETAILERS METER & METER ISOLATOR.
- SIGNS FREE ISSUED SUPPLIED FROM SA WATER.
- SWITCHBOARD MOUNTING HOLES DRILLING TEMPLATE TO BE PROVIDED TO SITE INSTALLER FOR INSTALLING ANCHOR BOLTS.
- ADDITIONAL COOLING AND VENTILATION REQUIREMENTS SHALL BE DETERMINED ON A CASE BY CASE BASIS IN LINE WITH SITE AMBIENT CONDITIONS AND EQUIPMENT RATINGS AS SPECIFIED IN TS 0300.


G2 GALVABOND STEEL CONSTRUCTION	
CABINET	1.6mm G2 Z275 GALVABOND
DOORS	1.6mm G2 Z275 GALVABOND
ESCUTCHEONS	1.6mm ZINC ANNEAL MILD STEEL
EQUIPMENT PANELS	2.0mm ZINC ANNEAL MILD STEEL
PLINTH	100x50mm GR300 HOT ROLLED PARALLEL FLANGE IRON CHANNEL

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	AUTHORISED:
14/02/2018	14/02/2018	14/02/2018
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:		SIGNATURE:
14/02/2018		
TROY O'BRIEN		ORIGINAL SIGNED
REVIEWED:		
14/02/2018		
JONATHON NICHOLLS		
CONTRACTOR:		



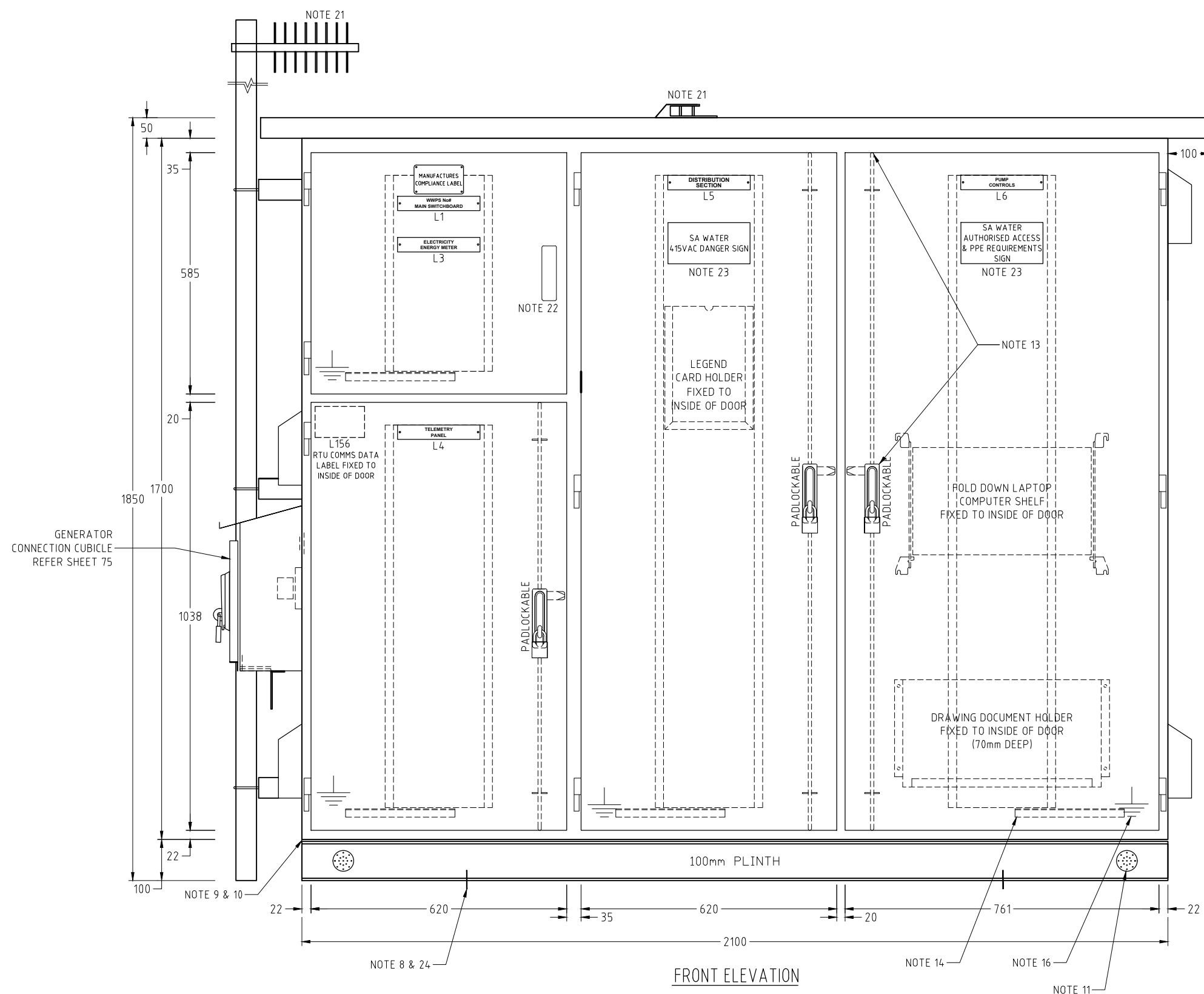
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SWITCHBOARD 0 ? 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 FRONT VIEW

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-70a		
DRAWING NUMBER		
TYP-03-00001_70a		




CONSTRUCTION NOTES:

- SWITCHBOARD TO BE CONSTRUCTED TO AS/NZS 61439 PARTS 1 & 3, & COMPLIANT WITH SA WATER STANDARD TS0300.
- DEGREE OF PROTECTION - IP56
- FORM OF SEGREGATION - FORM 1
- CURRENT RATING - 100A
- FAULT RATING - 10kA FOR 1 SECOND.
- CUBICLE TO BE CONSTRUCTED FROM A THICKNESS OF 1.6mm 316 STAINLESS STEEL & GROUND SMOOTH BEFORE POWDER COATING.
- PLINTH MANUFACTURED FROM 100mmx50mmx5mm 316 STAINLESS STEEL CHANNEL. PLINTH NOT TO BE PAINTED.
- 15mm PLINTH MOUNTING HOLES TO BE LOCATED IN CENTRE OF PLINTH TOES & CONSISTENTLY LOCATED USING DRILLING TEMPLATE. HOLES TO BE DRILLED PRIOR TO ACID ETCH.
- PLINTH MOUNTING BOLTS TO BE 316 STAINLESS STEEL.
- PROVIDE ELECTRICAL ISOLATION BETWEEN ALL SURFACES OF DISSIMILAR METALS THAT WOULD OTHERWISE BE IN CONTACT WITH EACH OTHER.
- FIT VENTED PLUGS TO FILL THE 50mm PLINTH LIFTING POINTS (MAXIMUM 20mm HOLES FOR VENTING)
- CUBICLE TO BE POWDER COATED IF SPECIFIED BY THE PROJECT SPECIFICATION. CUBICLE TO BE POWDER COATED COLORBOND WILDERNESS 013, USING GRAFFITI RESISTANT COATINGS. ROUGH SURFACES TO BE FILED, GROUND SMOOTH, SURFACES ROUGHENED, CLEANED, DEGREASED & OVEN BAKED POWDER COATED. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S DATA SHEET & SHALL INCLUDE ANY PRIMERS OR UNDERCOATS AS RECOMMENDED BY THE MANUFACTURER. INTERNAL REMOVABLE PANELS, BACKPLATES, BRACKETS & ESCUTCHEONS SHALL BE GLOSS WHITE IN COLOUR. POWDER COATING TO HAVE A DRY FILM THICKNESS NOT LESS THAN 60 MICRONS.
- DOORS TO BE HINGED USING VANDAL PROOF 316 STAINLESS STEEL HINGES, 3 POINT LOCKING & SECURED WITH 316 STAINLESS STEEL FLUSH MOUNT PADLOCKABLE HANDLES. LOCKING RODS TO BE FIXED WITH ROLLER ENDS TO PREVENT PAINT DAMAGE.
- DOORS TO BE FITTED WITH SELF LATCHING STAYS (HOLD AT MINIMUM 90°)
- DOORS TO BE SEALED WITH WEATHERPROOF RUBBER.
- DOORS, ESCUTCHEONS & GLAND PLATES TO BE BONDED TO CUBICLE VIA WELDED EARTH STUDS.
- HINGED ESCUTCHEON DOORS TO BE PROVIDED ONLY OVER THE POWER DISTRIBUTION AND PUMP CONTROLS SECTION.
- M10 EARTH STUD IS REQUIRED IN THE INCOMER/METER ISOLATION SECTION FOR SWITCHBOARD EARTHING.
- ALL 230VAC/400VAC TERMINALS TO BE SHROUDED C/W WARNING LABELS "DANGER 230/400VAC"
- STICK ON CABLE TIE MOUNTS TO BE SCREWED DOWN.
- REQUIREMENT FOR 4G MODEM OR RADIO TYPE RTU ANTENNA WILL BE PROJECT SPECIFIC.
- PROVIDE SAPN CM LOCK INSERT & HOOK INSIDE TELEMETRY SECTION TO HOLD CM KEY FOR ACCESS TO RETAILERS METER & METER ISOLATOR.
- SIGNS FREE ISSUED SUPPLIED FROM SA WATER.
- SWITCHBOARD MOUNTING HOLES DRILLING TEMPLATE TO BE PROVIDED TO SITE INSTALLER FOR INSTALLING ANCHOR BOLTS.
- ADDITIONAL COOLING AND VENTILATION REQUIREMENTS SHALL BE DETERMINED ON A CASE BY CASE BASIS IN LINE WITH SITE AMBIENT CONDITIONS AND EQUIPMENT RATINGS AS SPECIFIED IN TS 0300.

316 STAINLESS STEEL CONSTRUCTION	
CABINET	1.6mm 316 STAINLESS STEEL
DOORS	1.6mm 316 STAINLESS STEEL
ESCUTCHEONS	1.6mm 316 STAINLESS STEEL
EQUIPMENT PANELS	2.0mm ZINC ANNEAL MILD STEEL
PLINTH	100x50x5mm 316 STAINLESS STEEL PARALLEL FLANGE CHANNEL

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

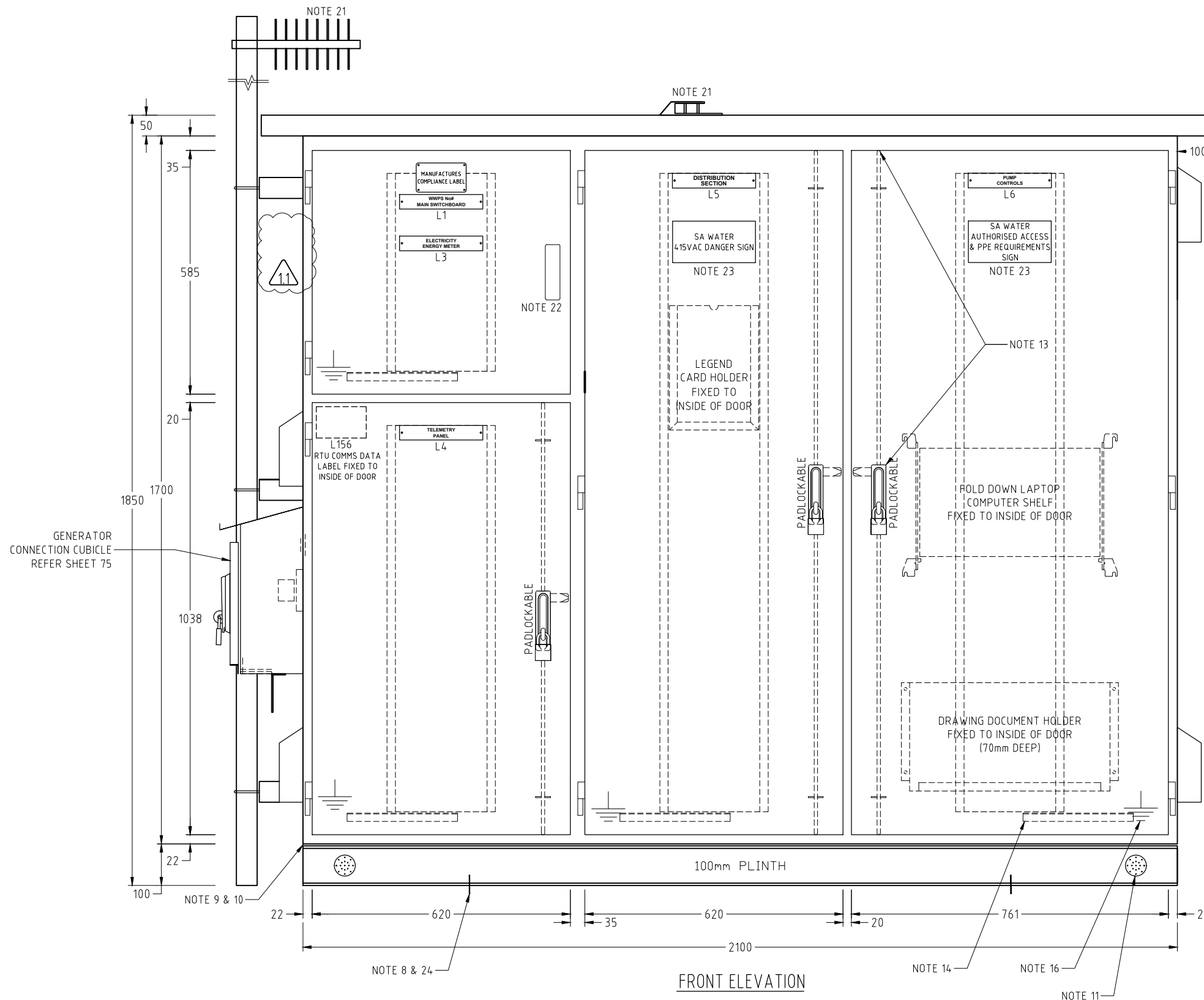
DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
DRAWN:	TROY O'BRIEN	14/02/2018
REVIEWED:	JONATHON NICHOLLS	14/02/2018
CURRENT REV PROJECT:		CONTRACTOR:



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SWITCHBOARD 0 ? 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 FRONT VIEW

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-70b		
DRAWING NUMBER		
TYP-03-00001_70b		



CONSTRUCTION NOTES:


1. SWITCHBOARD TO BE CONSTRUCTED TO AS/NZS 61439 PARTS 1 & 3, & COMPLIANT WITH SA WATER STANDARD TS0300.
2. DEGREE OF PROTECTION - IP56
3. FORM OF SEGREGATION - FORM 1
4. CURRENT RATING - 100A
5. FAULT RATING - 10kA FOR 1 SECOND.
6. CUBICLE TO BE CONSTRUCTED FROM A THICKNESS OF 3mm MARINE GRADE ALUMINIUM (5052) & GROUND SMOOTH BEFORE POWDER COATING.
7. PLINTH MANUFACTURED FROM 100mmx50mmx5mm MARINE GRADE ALUMINIUM (5052) CHANNEL. PLINTH TO BE POWDER COATED BLACK.
8. 15mm PLINTH MOUNTING HOLES TO BE LOCATED IN CENTRE OF PLINTH TOES & CONSISTENTLY LOCATED USING DRILLING TEMPLATE. HOLES TO BE DRILLED PRIOR TO POWDER COATING.
9. PLINTH MOUNTING BOLTS TO BE 316 STAINLESS STEEL & FIXED WITH NYLON ISOLATING WASHERS.
10. PROVIDE ELECTRICAL ISOLATION BETWEEN ALL SURFACES OF DISSIMILAR METALS THAT WOULD OTHERWISE BE IN CONTACT WITH EACH OTHER.
11. FIT VENTED PLUGS TO FILL THE 50mm PLINTH LIFTING POINTS (MAXIMUM 2mm HOLES FOR VENTING).
12. CUBICLE TO BE POWDER COATED COLORBOND WILDERNESS 013, USING GRAFFITI RESISTANT COATINGS. ROUGH SURFACES TO BE FILED, GROUND SMOOTH, CLEANED, DEGREASED, ETCH PRIMED & OVEN BAKED POWDER COATED. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S DATA SHEET & SHALL INCLUDE ANY PRIMERS OR UNDERCOATS AS RECOMMENDED BY THE MANUFACTURER. INTERNAL REMOVABLE PANELS, BACKPLATES, BRACKETS & ESCUTCHEONS SHALL BE GLOSS WHITE IN COLOUR. PRIME COATING TO HAVE A DRY FILM THICKNESS NOT LESS THAN 50 MICRONS. POWDER COATING TO HAVE A DRY FILM THICKNESS NOT LESS THAN 60 MICRONS.
13. DOORS TO BE HINGED USING VANDAL PROOF 316 STAINLESS STEEL HINGES, 3 POINT LOCKING & SECURED WITH 316 STAINLESS STEEL FLUSH MOUNT PADLOCKABLE HANDLES. LOCKING RODS TO BE FIXED WITH ROLLER ENDS TO PREVENT PAINT DAMAGE.
14. DOORS TO BE FITTED WITH SELF LATCHING STAYS (HOLD AT MINIMUM 90°)
15. DOORS TO BE SEALED WITH WEATHERPROOF RUBBER.
16. DOORS, ESCUTCHEONS & GLAND PLATES TO BE BONDED TO CUBICLE VIA WELDED EARTH STUDS.
17. HINGED ESCUTCHEON DOORS TO BE PROVIDED ONLY OVER THE POWER DISTRIBUTION AND PUMP CONTROLS SECTION.
18. M10 EARTH STUD IS REQUIRED IN THE INCOMER/METER ISOLATION SECTION FOR SWITCHBOARD EARTHING.
19. ALL 230VAC/400VAC TERMINALS TO BE SHROUDED C/W WARNING LABELS "DANGER 230/400VAC"
20. STICK ON CABLE TIE MOUNTS TO BE SCREWED DOWN.
21. REQUIREMENT FOR 4G MODEM OR RADIO TYPE RTU ANTENNA WILL BE PROJECT SPECIFIC.
22. PROVIDE SAPN CM LOCK INSERT & HOOK INSIDE TELEMETRY SECTION TO HOLD CM KEY FOR ACCESS TO RETAILERS METER & METER ISOLATOR.
23. SIGNS FREE ISSUED SUPPLIED FROM SA WATER.
24. SWITCHBOARD MOUNTING HOLES DRILLING TEMPLATE TO BE PROVIDED TO SITE INSTALLER FOR INSTALLING ANCHOR BOLTS.
25. ADDITIONAL COOLING AND VENTILATION REQUIREMENTS SHALL BE DETERMINED ON A CASE BY CASE BASIS IN LINE WITH SITE AMBIENT CONDITIONS AND EQUIPMENT RATINGS AS SPECIFIED IN TS 0300.

MARINE GRADE ALUMINIUM CONSTRUCTION	
CABINET	3mm MARINE GRADE ALUMINIUM (5052)
DOORS	3mm MARINE GRADE ALUMINIUM (5052)
ESCUTCHEONS	3mm MARINE GRADE ALUMINIUM (5052)
EQUIPMENT PANELS	2.0mm ZINC ANNEAL MILD STEEL
PLINTH	100x50x5mm MARINE GRADE ALUMINIUM (5052) PARALLEL FLANGE CHANNEL


FRONT ELEVATION

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS

DESIGN PANEL		
DESIGNED:	14/02/2018	AUTHORISED: 14/02/2018
SACHIN PANDEY		JUSTIN HAMRA
DRAWN:	14/02/2018	SIGNATURE:
TROY O'BRIEN		ORIGINAL SIGNED
REVIEWED:	14/02/2018	
JONATHON NICHOLLS		



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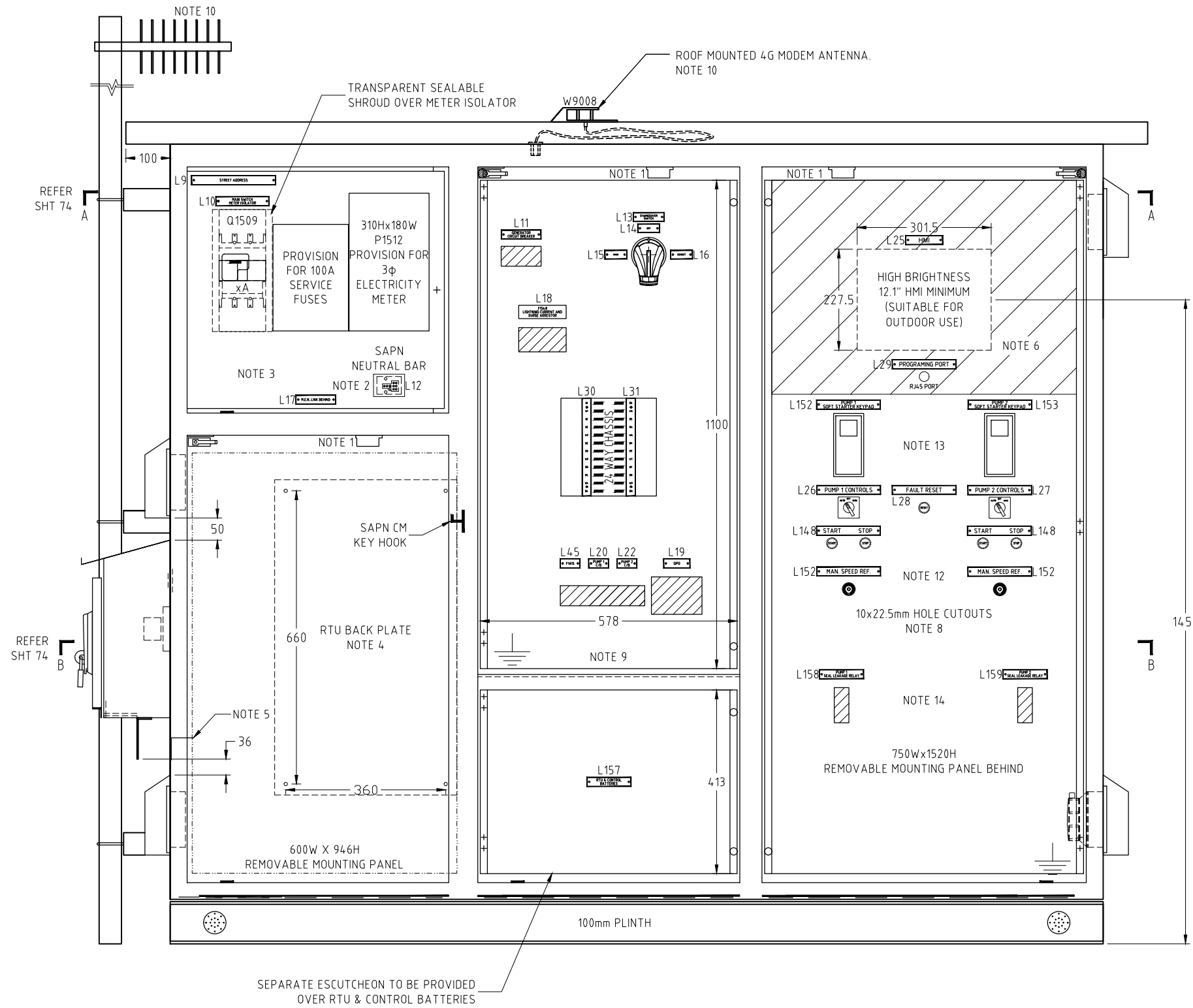
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SWITCHBOARD 0 ? 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 FRONT VIEW

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-70c		
DRAWING NUMBER		
TYP-03-00001_70c		

CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

CONTRACTOR: _____



- CONSTRUCTION NOTES:**
1. PROVIDE MOUNTING BRACKET ONLY FOR FUTURE SECURITY ALARM DOOR SWITCHES.
 2. SAPN METERING NEUTRAL BAR MOUNTED ON BACKSIDE OF METER PANEL.
 3. HINGED METERING PANEL. MOUNTING HOLES AS PER SAPN SERVICE RULES DRILLING TEMPLATE.
 4. 4x6mm STUDS (35mm LONG) TO BE FITTED TO ALLOW MOUNTING OF EXISTING RTU BACKPLATE (410W x 710H).
 5. PROVIDE ANTENNA BULKHEAD SURGE ARRESTOR MOUNTING BRACKET.
 6. ESCUTCHEON HMI SURROUND TO BE MATT BLACK TO REDUCE SUN GLARE.
 7. DIMENSIONS PROVIDED FOR GUIDE ONLY.
 8. PUSHBUTTONS & SELECTOR SWITCH SHALL BE IP56 RATED.
 9. ESCUTCHEON TO HAVE CUTOUTS FOR GENERATOR CIRCUIT BREAKER, SURGE ARRESTOR, MCB'S, PUMP MOTOR CIRCUIT BREAKERS & SOCKET OUTLET.
 10. RTU ANTENNA TYPE IS PROJECT SPECIFIC.
 11. FLOWMETER REQUIREMENT IS PROJECT SPECIFIC. FLOWMETER SIGNALS SHALL BE DISPLAYED ON HMI.
 12. MANUAL SPEED REFERENCE POTS PROJECT SPECIFIC FOR VSD'S.
 13. SOFT STARTER KEYPADS PROJECT SPECIFIC FOR SOFT STARTERS.
 14. VIEWING CUTOUTS OF PUMP SEAL LEAKAGE DETECTION RELAYS STATUS TO BE PROVIDED IF SPECIFIED BY SUPPLIER. CONSIDERATION TO ALTERNATIVE METHODS TO INFORM OPERATOR OF PUMP SEAL LEAKAGE FAULT WILL BE ACCEPTED (E.G. VIA PLC/HMI ALARMS).

FRONT ELEVATION LESS DOORS

SEPARATE ESCUTCHEON TO BE PROVIDED OVER RTU & CONTROL BATTERIES

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	SYMBOLS & STANDARDS REVISION UPDATE	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS

CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
DRAWN:	SIGNATURE:	DATE
TROY O'BRIEN	(Signature)	14/02/2018
REVIEWED:	SIGNATURE:	DATE
JONATHON NICHOLLS	(Signature)	14/02/2018

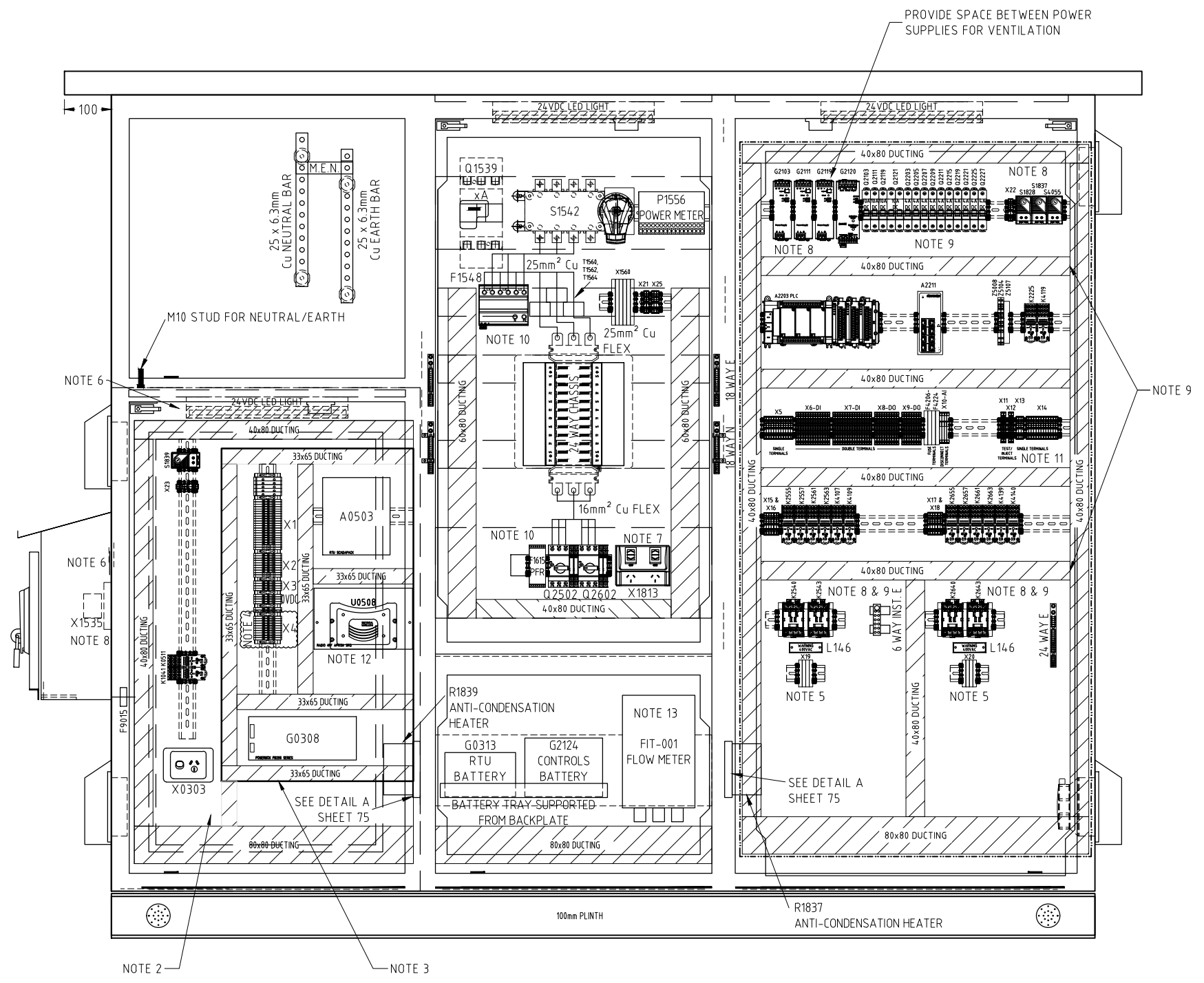
CONTRACTOR: _____



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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 FRONT VIEW LESS DOORS

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-71		
DRAWING NUMBER		
TYP-03-00001_71		

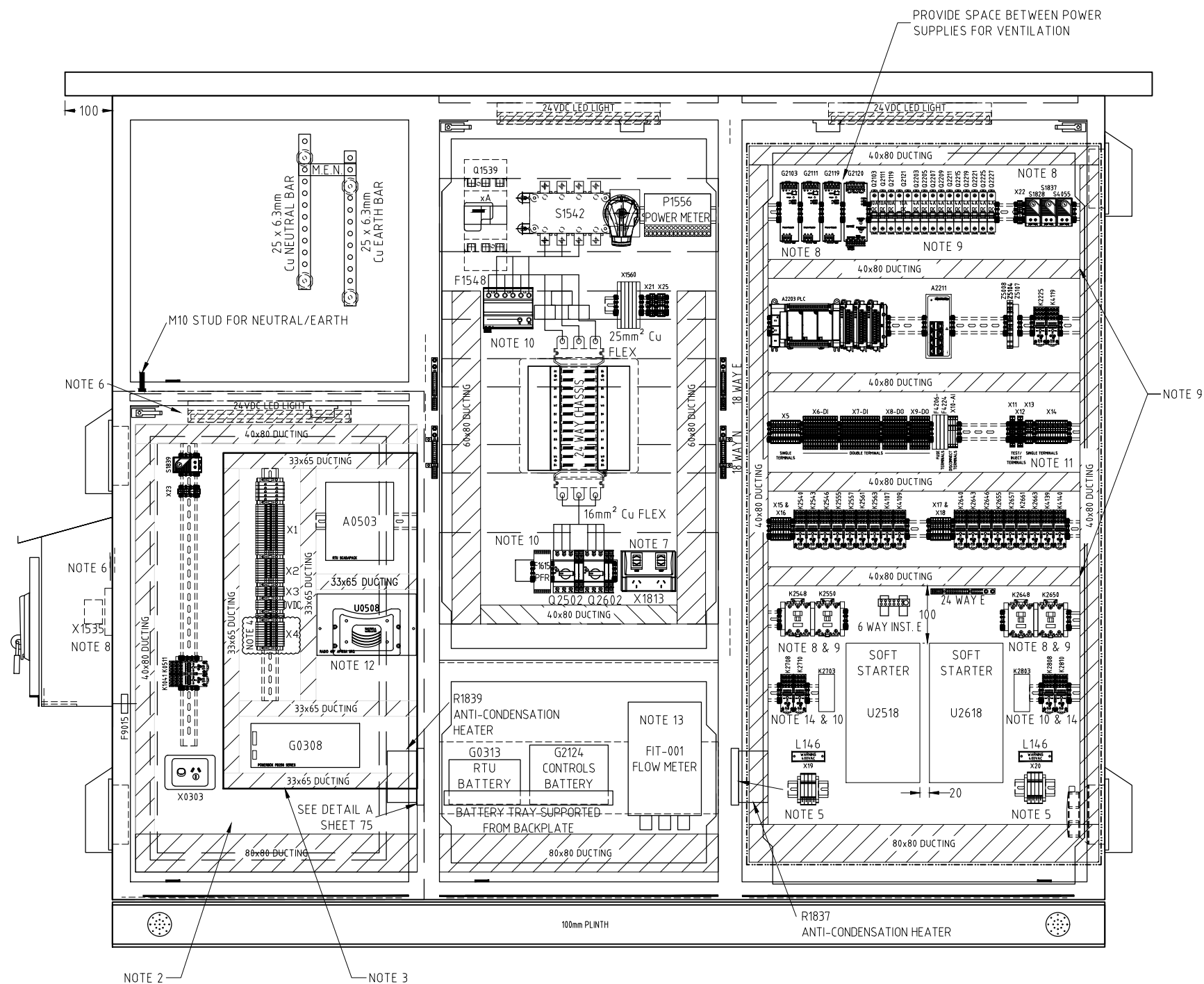


CONSTRUCTION NOTES:

1. ALL EQUIPMENT TO BE MOUNTED ABOVE 300mm FROM GROUND.
2. REMOVABLE PLATE BEHIND MOUNTING PANEL.
3. EXISTING RTU BACKPLATE MAY BE RELOCATED FROM SITE, (FREE ISSUE), MOUNTED ON STUDS.
4. ADDITIONAL DISCONNECT TERMINALS TO BE INSTALLED & WIRED.
5. SHROUD 400VAC TERMINALS.
6. SDI GENERATOR CABLES TO BE RUN IN PVC CONDUIT /DUCT FIXED TO SWITCHBOARD WHILE IN THE TELEMETRY SECTION.
7. SOCKET OUTLET IN DISTRIBUTION SECTION SHALL BE WEATHER PROOF.
8. PROVIDE WARNING LABEL STATING 400/230VAC PRESENT.
9. SEGREGATE LV & ELV WIRING WITHIN COMMON DUCTS.
10. EQUIPMENT MOUNTED ON SEPARATE TOP HAT BRACKET TO SUIT ESCUTCHEON.
11. ELV FIELD CABLING TO BE KEPT SHEATHED UP TO TERMINATION FACILITIES. SEGREGATE FROM LV WIRING.
12. TELEMETRY RTU TYPE (4G MODEM OR RADIO) WILL BE PROJECT SPECIFIC.
13. FLOWMETER REQUIREMENT WILL BE PROJECT SPECIFIC.

FRONT ELEVATION LESS DOORS AND ESCUTCHEON (INTERNAL VIEW)

REVISION PANEL				DESIGN PANEL			 SA Water Government of South Australia This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SWITCHBOARD 0 ? 100A MAIN SWITCHBOARD SWITCHBOARD LAYOUT ELECTRICAL FRONT VIEW LESS ESCUTCHEONS		A3 SHT SIZE	TOTAL SHEETS: PROJECT No: NC1001	2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23 AUTHORISED: JUSTIN HAMRA SIGNATURE:	DESIGNED: 14/02/2018 SACHIN PANDEY DRAWN: 14/02/2018 TROY O'BRIEN REVIEWED: 14/02/2018 JONATHON NICHOLLS		AUTHORISED: 14/02/2018 JUSTIN HAMRA SIGNATURE: ORIGINAL SIGNED	MAXIMO ID: SUPERSEDES: 5003-00001-72a		DRAWING NUMBER TYP-03-00001_72a	
2.1	13/06/23	PB	SYMBOLS & STANDARDS REVISION UPDATE	JH								
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS								
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS								
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:								



CONSTRUCTION NOTES:

1. ALL EQUIPMENT TO BE MOUNTED ABOVE 300mm FROM GROUND.
2. REMOVABLE PLATE BEHIND MOUNTING PANEL.
3. EXISTING RTU BACKPLATE MAY BE RELOCATED FROM SITE, (FREE ISSUE), MOUNTED ON STUDS.
4. ADDITIONAL DISCONNECT TERMINALS TO BE INSTALLED & WIRED.
5. SHROUD 400VAC TERMINALS.
6. SDI GENERATOR CABLES TO BE RUN IN PVC CONDUIT/DUCT FIXED TO SWITCHBOARD WHILE IN THE TELEMETRY SECTION.
7. SOCKET OUTLET IN DISTRIBUTION SECTION SHALL BE WEATHER PROOF.
8. PROVIDE WARNING LABEL STATING 400/230VAC PRESENT.
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10. EQUIPMENT MOUNTED ON SEPARATE TOP HAT BRACKETS TO SUIT ESCUTCHEON.
11. ELV FIELD CABLING TO BE KEPT SHEATHED UP TO TERMINATION FACILITIES. SEGREGATE FROM LV WIRING.
12. TELEMETRY RTU TYPE (4G MODEM OR RADIO) WILL BE PROJECT SPECIFIC.
13. FLOWMETER REQUIREMENT IS PROJECT SPECIFIC.
14. PUMP SEAL LEAKAGE DETECTION RELAYS TO BE PROVIDED IF SPECIFIED BY SUPPLIER. VIEWING CUTOUTS IN ESCUTCHEON TO ALLOW RELAY STATUS TO BE PROVIDED. CONSIDERATION TO ALTERNATIVE METHODS TO INFORM OPERATOR OF PUMP SEAL LEAKAGE FAULT WILL BE ACCEPTED (E.G. VIA PLC/HMI ALARMS).

FRONT ELEVATION LESS DOORS AND ESCUTCHEON (INTERNAL VIEW)

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	SYMBOLS & STANDARDS REVISION UPDATE	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS

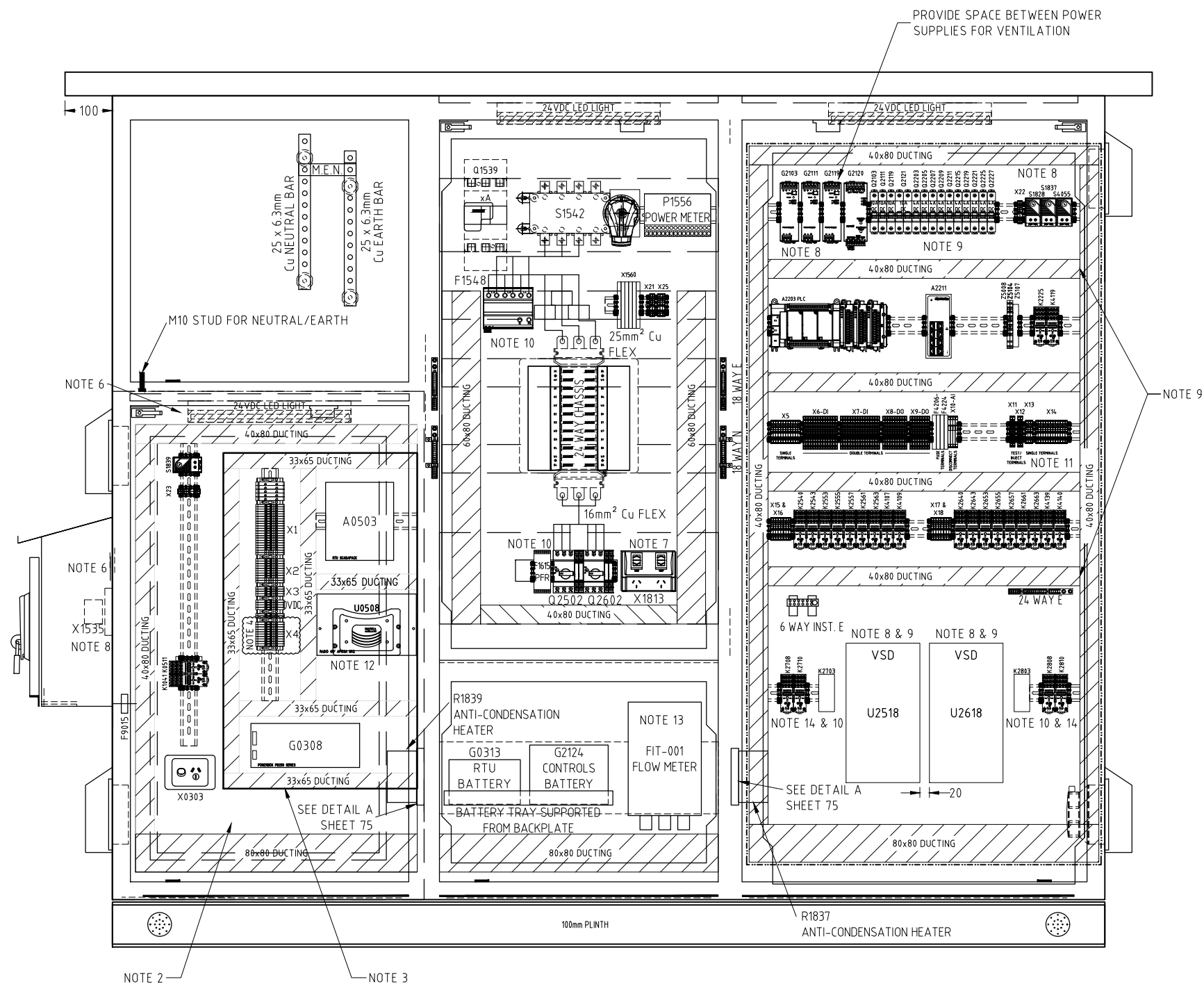
CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

DESIGN PANEL		
DESIGNED:	14/02/2018	AUTHORISED: 14/02/2018
SACHIN PANDEY		JUSTIN HAMRA
DRAWN:	14/02/2018	SIGNATURE:
TROY O'BRIEN		ORIGINAL SIGNED
REVIEWED:	14/02/2018	
JONATHON NICHOLLS		

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SWITCHBOARD 0 ? 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 FRONT VIEW LESS ESCUTCHEONS

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-72b		
DRAWING NUMBER		
TYP-03-00001_72b		



CONSTRUCTION NOTES:

1. ALL EQUIPMENT TO BE MOUNTED ABOVE 300mm FROM GROUND.
2. REMOVABLE PLATE BEHIND MOUNTING PANEL.
3. EXISTING RTU BACKPLATE MAY BE RELOCATED FROM SITE, (FREE ISSUE), MOUNTED ON STUDS.
4. ADDITIONAL DISCONNECT TERMINALS TO BE INSTALLED & WIRED.
5. SHROUD 400VAC TERMINALS.
6. SDI GENERATOR CABLES TO BE RUN IN PVC CONDUIT/DUCT FIXED TO SWITCHBOARD WHILE IN THE TELEMETRY SECTION.
7. SOCKET OUTLET IN DISTRIBUTION SECTION SHALL BE WEATHER PROOF.
8. PROVIDE WARNING LABEL STATING 400/230VAC PRESENT.
9. SEGREGATE LV & ELV WIRING WITHIN COMMON DUCTS.
10. EQUIPMENT MOUNTED ON SEPARATE TOP HAT BRACKETS TO SUIT ESCUTCHEON.
11. ELV FIELD CABLING TO BE KEPT SHEATHED UP TO TERMINATION FACILITIES. SEGREGATE FROM LV WIRING.
12. TELEMETRY RTU TYPE (4G MODEM OR RADIO) WILL BE PROJECT SPECIFIC.
13. FLOWMETER REQUIREMENT WILL BE PROJECT SPECIFIC.
14. PUMP SEAL LEAKAGE DETECTION RELAYS TO BE PROVIDED IF SPECIFIED BY SUPPLIER. VIEWING CUTOUTS IN ESCUTCHEON TO ALLOW RELAY STATUS TO BE PROVIDED. CONSIDERATION TO ALTERNATIVE METHODS TO INFORM OPERATOR OF PUMP SEAL LEAKAGE FAULT WILL BE ACCEPTED (E.G. VIA PLC/HMI ALARMS).

FRONT ELEVATION LESS DOORS AND ESCUTCHEON (INTERNAL VIEW)

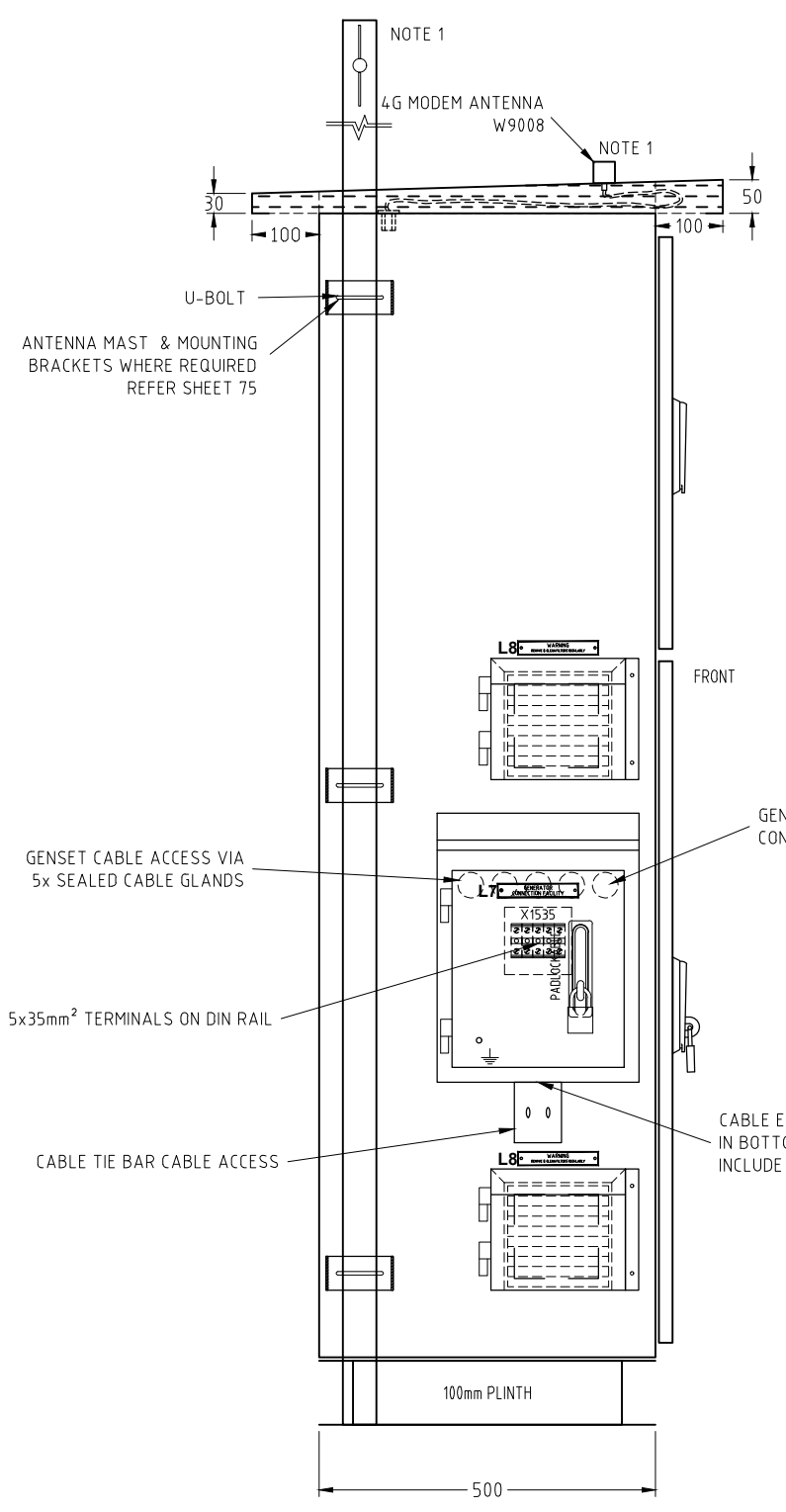
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1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
DRAWN:	SIGNATURE:	DATE
TROY O'BRIEN		14/02/2018
REVIEWED:	ORIGINAL SIGNED	DATE
JONATHON NICHOLLS		14/02/2018
CONTRACTOR:		

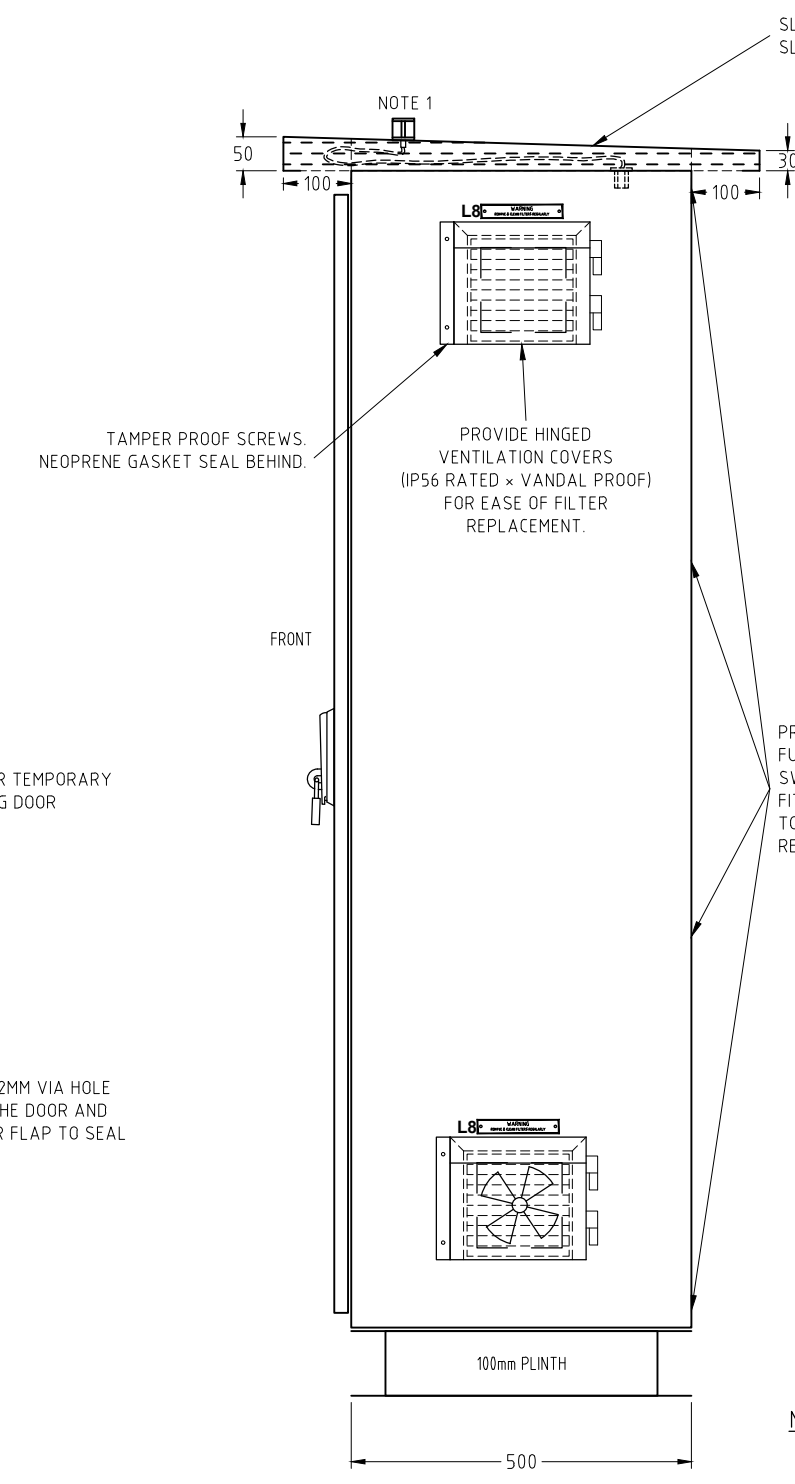
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SWITCHBOARD 0 ? 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 FRONT VIEW LESS ESCUTCHEONS

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-72c		
DRAWING NUMBER		
TYP-03-00001_72c		



LEFT SIDE VIEW
AND GENSET CONNECTION BOX





RIGHT SIDE VIEW

- NOTES:
1. RTU ANTENNA TYPE IS PROJECT SPECIFIC.
 2. ADDITIONAL COOLING AND VENTILATION REQUIREMENTS SHALL BE DETERMINED ON A CASE BY CASE BASIS IN LINE WITH SITE AMBIENT CONDITIONS AND EQUIPMENT RATINGS AS SPECIFIED IN TS 0300.

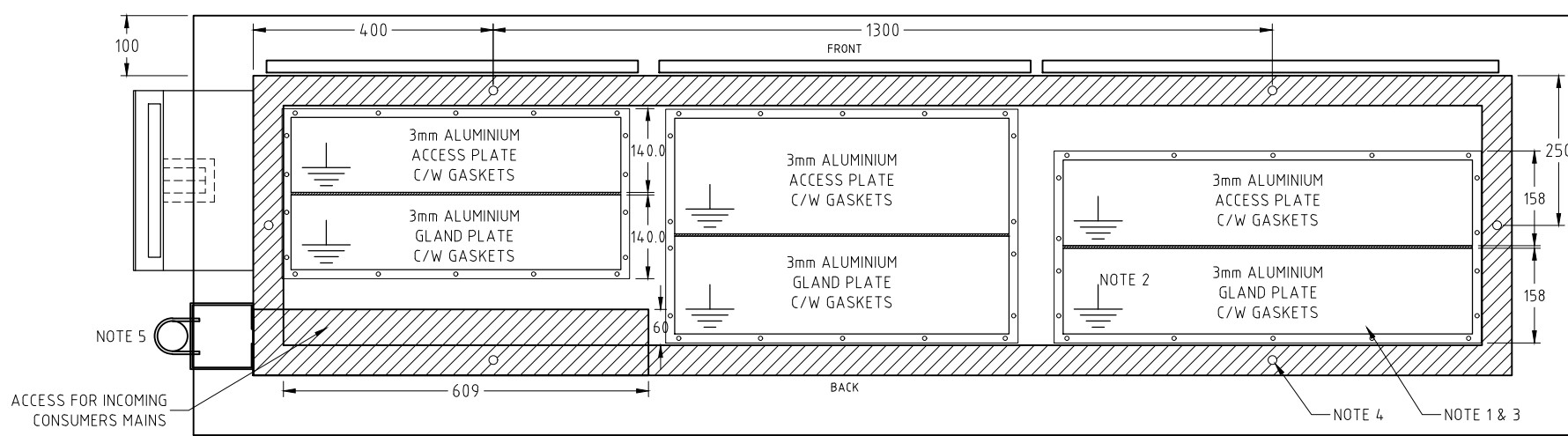
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1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	
14/02/2018	14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:	SIGNATURE:	
14/02/2018		
TROY O'BRIEN		
REVIEWED:	ORIGINAL SIGNED	
14/02/2018		
JONATHON NICHOLLS		
CONTRACTOR:		


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 LHS & RHS VIEWS

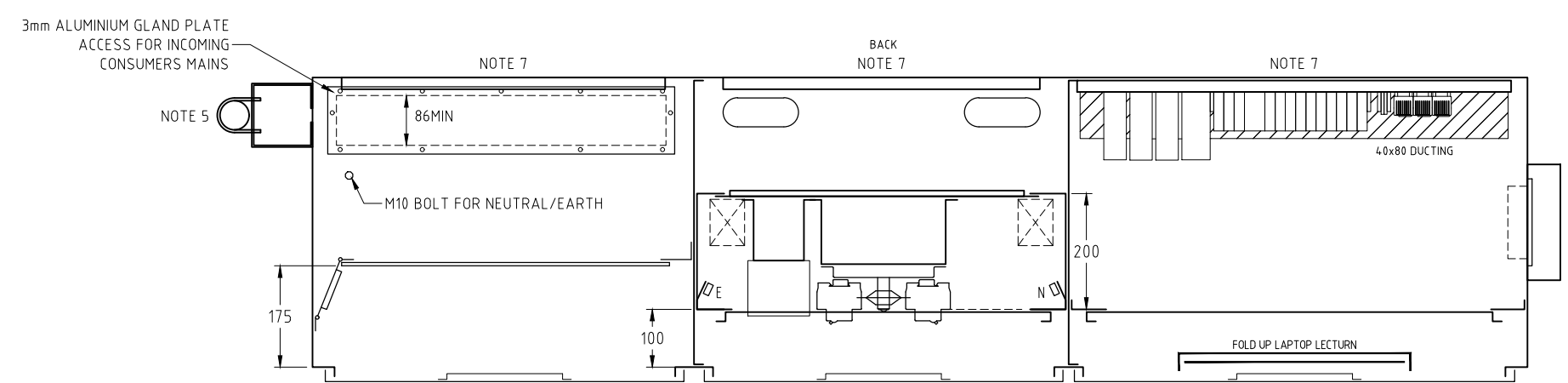
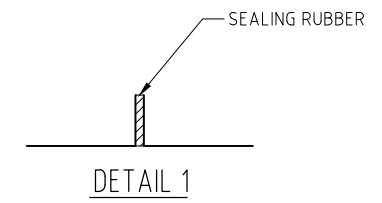
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MAXIMO ID:		
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DRAWING NUMBER		
TYP-03-00001_73		



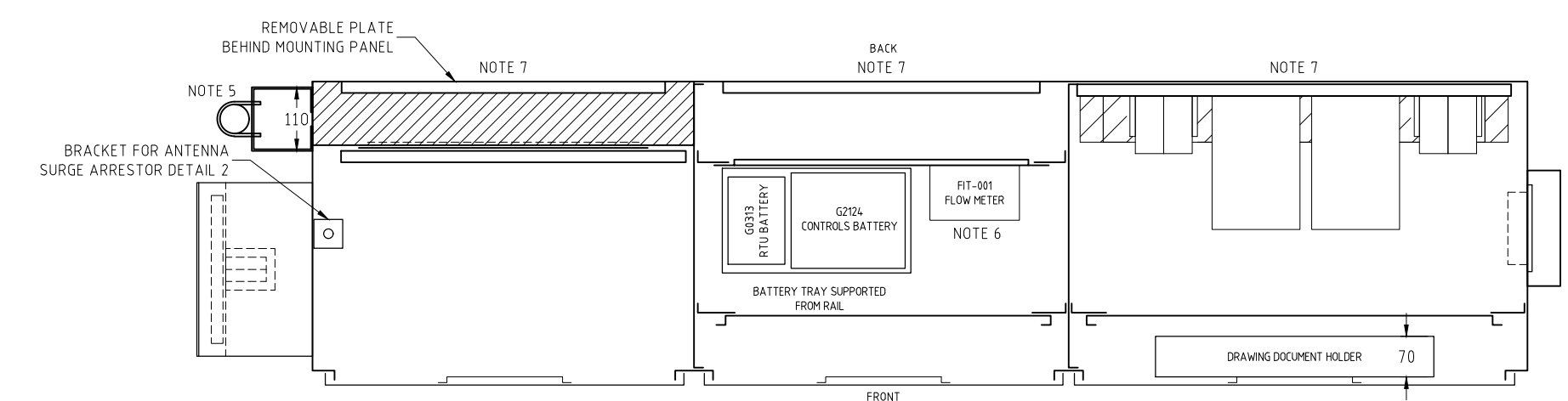
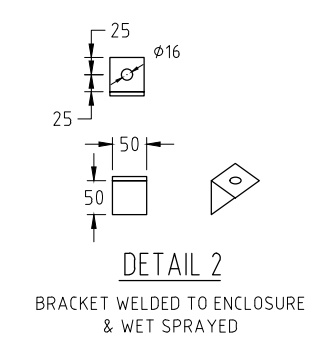
BOTTOM ELEVATION

NOTES:

1. GLAND PLATES TO BE FITTED WITH GAS SEALING RUBBER GASKETS & SPLIT GLAND PLATE TO BE AS PER DETAIL 1.
2. 6mm BRASS EARTH STUD ON EACH GLAND PLATE.
3. GLAND PLATES FASTENED WITH 6mm HEX HEAD BOLTS INTO NUT INSERTS.
4. 15mm PLINTH MOUNTING HOLES TO BE LOCATED IN CENTRE OF PLINTH TOES & CONSISTENTLY LOCATED USING DRILLING TEMPLATE. HOLES TO BE DRILLED PRIOR TO GALVANISING/ACID ETCH/POWDER COATING.
5. REQUIREMENT FOR RTU ANTENNA MAST & BRACKET IS PROJECT SPECIFIC.
6. FLOWMETER REQUIREMENT IS PROJECT SPECIFIC.
7. PROVIDE FACILITIES FOR MOUNTING FUTURE SUNSHADES TO REAR OF SWITCHBOARD. ANTI TAMPER SCREWS FITTED TO INTERNAL WELDED FIXINGS TO MAINTAIN IP RATING. REFER SHEET 78




SECTION A-A



SECTION B-B

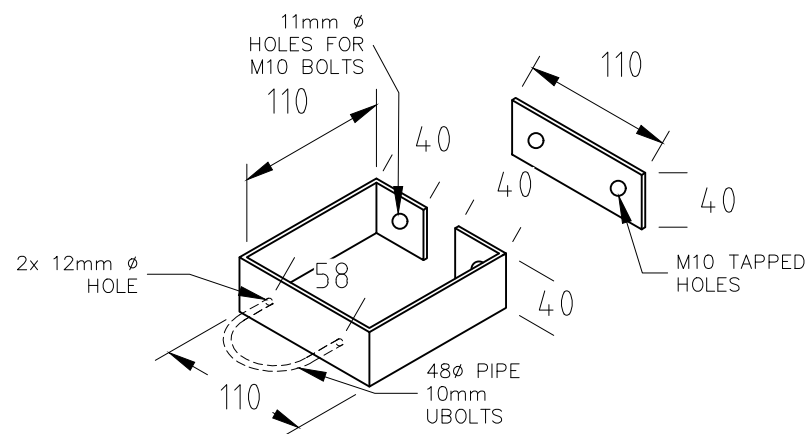
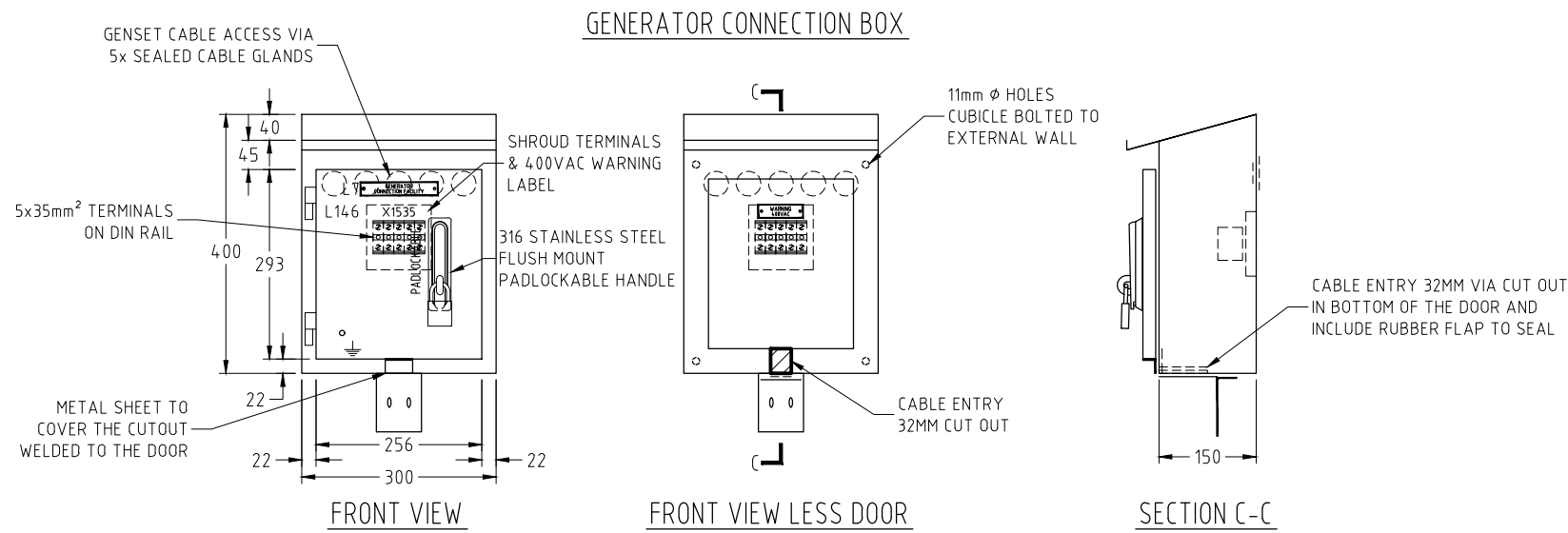
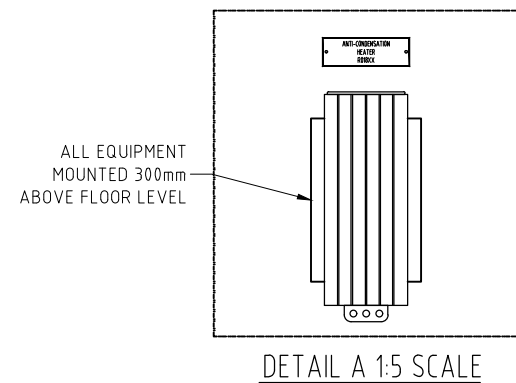
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1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	
14/02/2018	14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:	SIGNATURE:	
14/02/2018		
TROY O'BRIEN		
REVIEWED:	ORIGINAL SIGNED	
14/02/2018		
JONATHON NICHOLLS		
CONTRACTOR:		


 Government of South Australia
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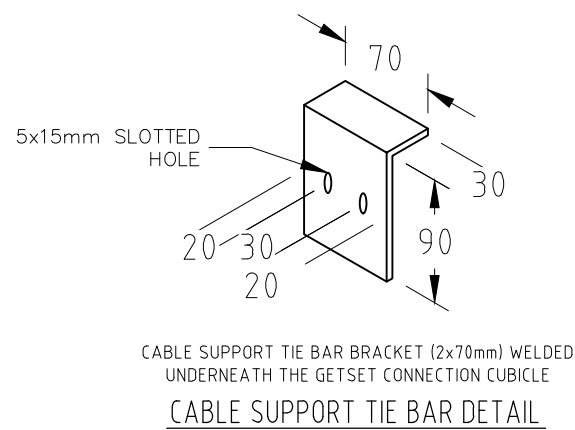
SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 BOTTOM VIEW

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-74		
DRAWING NUMBER		
TYP-03-00001_74		



ANTENNA PIPE SUPPORT BRACKET (5mmx40mm FLAT BAR) BOLTED TO EXTERNAL WALL WHERE REQUIRED

ANTENNA PIPE SUPPORT BRACKET DETAIL



REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	SYMBOLS & STANDARDS REVISION UPDATE	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL		
DESIGNED:	AUTHORISED:	
14/02/2018	14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:	SIGNATURE:	
14/02/2018		
TROY O'BRIEN		
REVIEWED:		
14/02/2018		
JONATHON NICHOLLS		ORIGINAL SIGNED
CONTRACTOR:		

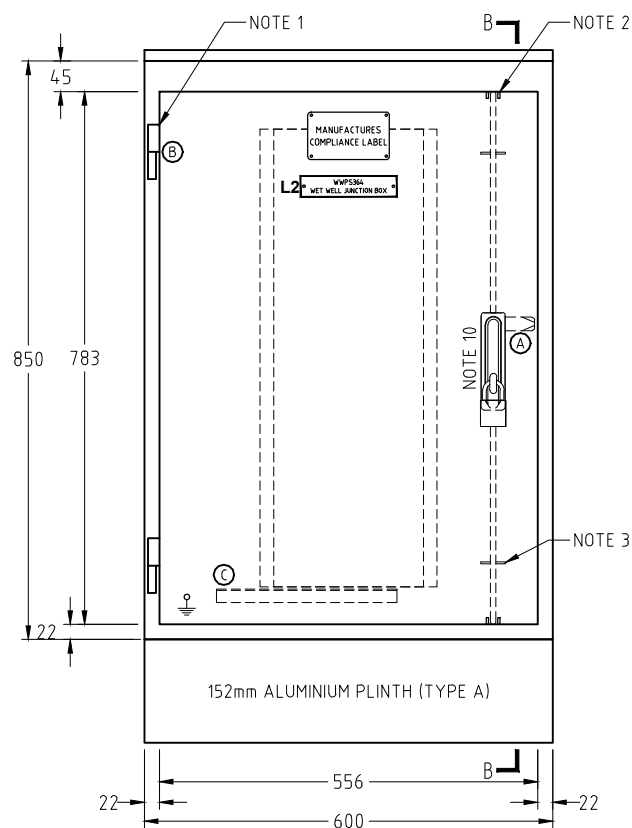
SA Water

Government of South Australia

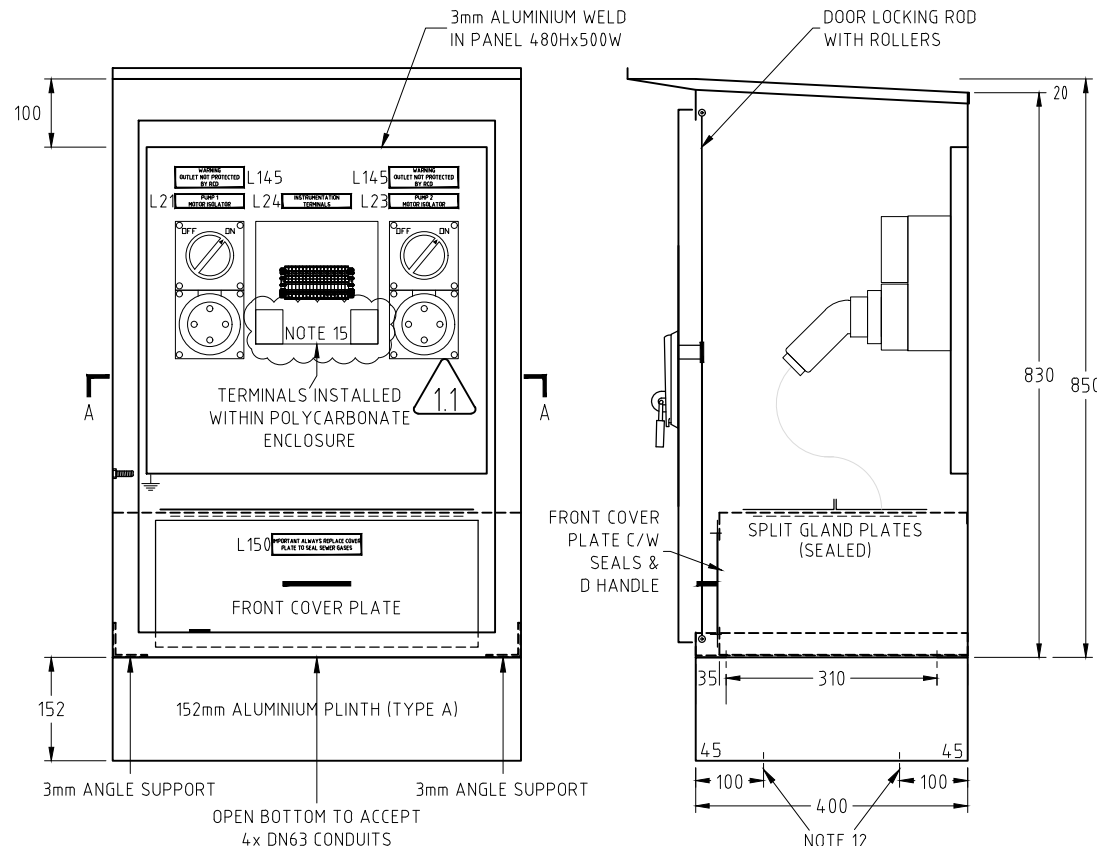
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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 SWITCHBOARD LAYOUT
 ELECTRICAL
 GENERATOR BOX & CONSTRUCTION NOTES

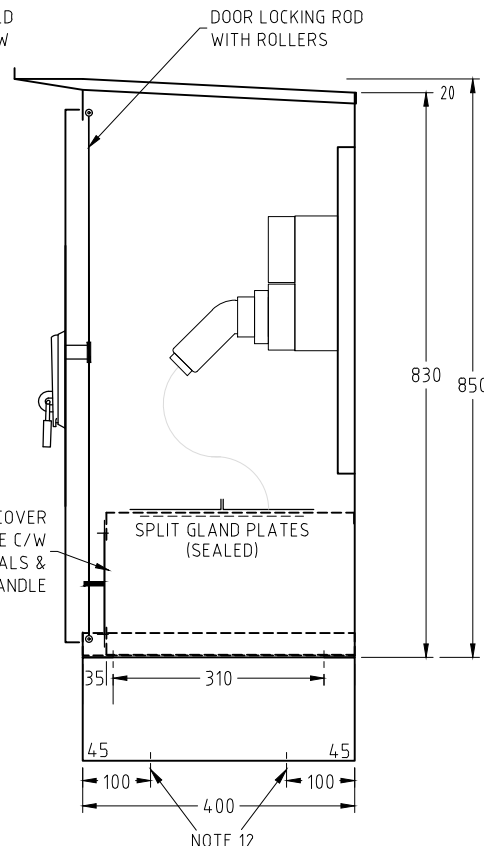
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MAXIMO ID:		
SUPERSEDES: 5003-00001-75		
DRAWING NUMBER		
TYP-03-00001_75		



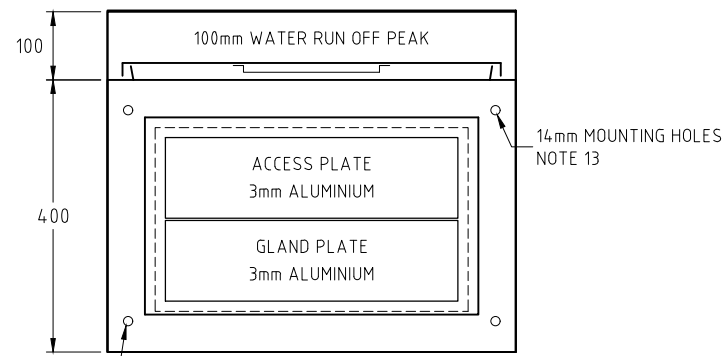
FRONT ELEVATION



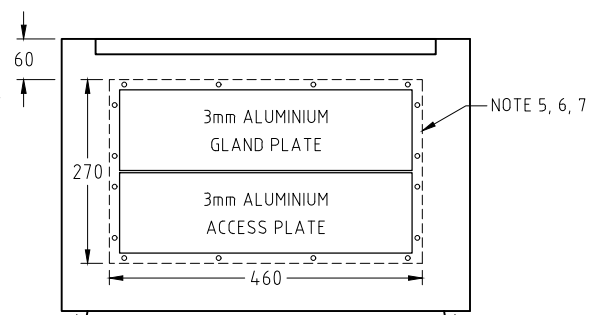
FRONT ELEVATION LESS DOOR



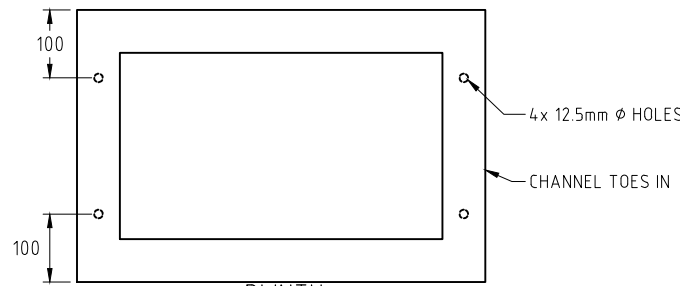
SECTION B-B



BOTTOM ELEVATION W/O PLINTH

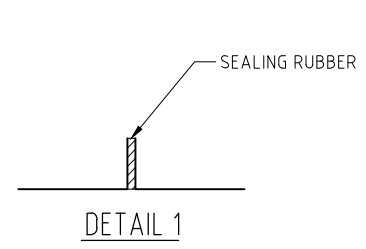


SECTION A-A

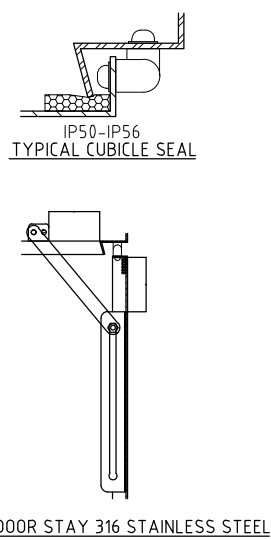


PLINTH

CONSTRUCTION NOTES	
CONSTRUCTION	MACHINE FORMED AND WELDED
CABLE ENTRY	MAINS IN: BOTTOM SUBMAINS OUT: BOTTOM
MATERIAL	CABINET: 3.0mm MARINE GRADE ALUMINIUM, (5052) DOORS: 3.0mm MARINE GRADE ALUMINIUM, (5052) ESCUTCHEONS: 3.0mm MARINE GRADE ALUMINIUM, (5052) EQUIPMENT PANELS: 3.0mm MARINE GRADE ALUMINIUM, (5052) BASE: 3.0mm MARINE GRADE ALUMINIUM, (5052) PLINTH: 152mm x 63mm x 6.3mm MARINE GRADE ALUMINIUM (G5052) CHANNEL
DEGREE OF PROTECTION	INGRESS: IP56 SEGREGATION: FORM 1 (AS/NZS 61439.2) DOOR SEAL: TESA 4773 21x6mm PVC/NITRILE CLOSED-CELL FOAM (SUITABLE -28°C TO 79°C)
FINISH	CABINET, DOORS, BASE: ROUGH SURFACES FILED, CLEAN, DEGREASE, GRIND SMOOTH, OVEN BAKED POWER COATED PANELS & PLINTH: "WILDERNESS 013" RIPPLE WITH "AG GHETTO (CLEAR 910 81797)" ANTI-GRAFFITI
COLOR	CABINET: "WILDERNESS 013" RIPPLE WITH "AG GHETTO (CLEAR 910 81797)" ANTI-GRAFFITI DOORS: "WILDERNESS 013" RIPPLE WITH "AG GHETTO (CLEAR 910 81797)" ANTI-GRAFFITI ESCUTCHEONS: "NEW BRIGHT WHITE" RIPPLE EQUIPMENT PANELS: "NEW BRIGHT WHITE" RIPPLE PLINTH: "WILDERNESS 013" RIPPLE
LABELS	MATERIAL: ROWMARK LASERMAX 2 PLY ACRYLIC FIXING: EXTERNAL: STAINLESS STEEL SCREWS INTERNAL: DOUBLE SIDED TAPE COLORING: WHITE WITH BLACK ENGRAVING (W.B.W.) FOR STANDARD LABELS RED WITH WHITE ENGRAVING (R.W.R.) FOR WARNING AND DANGER LABELS



DETAIL 1



90° DOOR STAY 316 STAINLESS STEEL

SITE INSTALLER TO PROVIDE MOUNTING HOLES TO SUIT SITE INSTALLATION METHODS

CONSTRUCTION NOTES:

- PROVIDE PLASTIC SHIM (POLYETHYLENE OR SIMILAR) ON THE ATTACHMENT POINTS FOR THE STAINLESS STEEL HINGES TO ISOLATE THE ALUMINIUM FRAME OR DOOR.
- PROVIDE PLASTIC ROLLERS AT THE TIP OF THE 3 WAY LOCKING ROD.
- PROVIDE NYLON BUSHING BETWEEN 3 WAY LOCKING ROD AND METAL TAGS.
- PROVIDE ELECTRICAL ISOLATION BETWEEN DISSIMILAR METALS.
- GLAND PLATES TO BE FITTED WITH GAS SEALING RUBBER GASKETS & SPLIT GLAND PLATE TO BE AS PER DETAIL 1.
- GLAND PLATES FASTENED WITH 6mm 316SS HEX HEAD BOLTS INTO 316SS NUT INSERTS.
- 6mm BRASS STUD ON GLAND PLATE.
- REFER TO SHEET 95 FOR WET WELL JUNCTION BOX BILL OF MATERIALS - ELECTRICAL EQUIPMENT. JUNCTION BOX BILL OF MATERIALS SHALL BE POPULATED AS PART OF SHEET 95.
- REFER TO SHEET 96 FOR WET WELL JUNCTION BOX LABELS. JUNCTION BOX LABEL DETAILS SHALL BE POPULATED AS PART OF SHEET 96.
- 316 STAINLESS STEEL FLUSH MOUNT PADLOCKABLE HANDLE
- PLINTH MANUFACTURED FROM 152x63x6.3mm MARINE GRADE (G5052) ALUMINIUM CHANNEL, POWDER COATED COLORBOND WILDERNESS 013 WITH CHANNEL TOES IN.
- MOUNTING HOLES IN PLINTH TO BE 12.5mm Ø ALLOWING FOR ACCESS FROM WITHIN CABINET. PROVIDE DRILLING TEMPLATE FOR MOUNTING TO CONCRETE PLINTH.
- BOX TO PLINTH MOUNTING BOLTS TO BE G316 STAINLESS STEEL.
- LOCATION OF JUNCTION BOX TO BE FINALISED ON SITE IN DISCUSSION WITH OPERATIONS TEAM.
- SEAL LEAKAGE DETECTION AND ASSOCIATED CABLE SOCKETS TO BE PROVIDED IF SPECIFIED BY SUPPLIER. JUNCTION BOX DIMENSIONS, TERMINAL QUANTITY AND CABLE SOCKET ARRANGEMENT MAY DIFFER DEPENDING ON EQUIPMENT SELECTED.

HARDWARE LIST				
REF.	ITEM DESCRIPTION	MANUFACTURER	QTY.	ITEM No.
Ⓐ	316 SS PADLOCKABLE SWING HANDLE	M & G GARDINER	1	2250-65316
	LOCKING ROD WITH ROLLERS - 1000mmL	SELECTLOK	2	ROD1000R
	3 POINT CAM	SELECTLOK	1	1000-1588
Ⓑ	POLISHED 316 STAINLESS STEEL BLOCK HINGE	SELECTLOK	2	HIB650SS-316NS
Ⓒ	AUTO DOOR STAY - STANDARD - 316 STAINLESS STEEL	LAI	1	DOOR STAY-AUTO STD

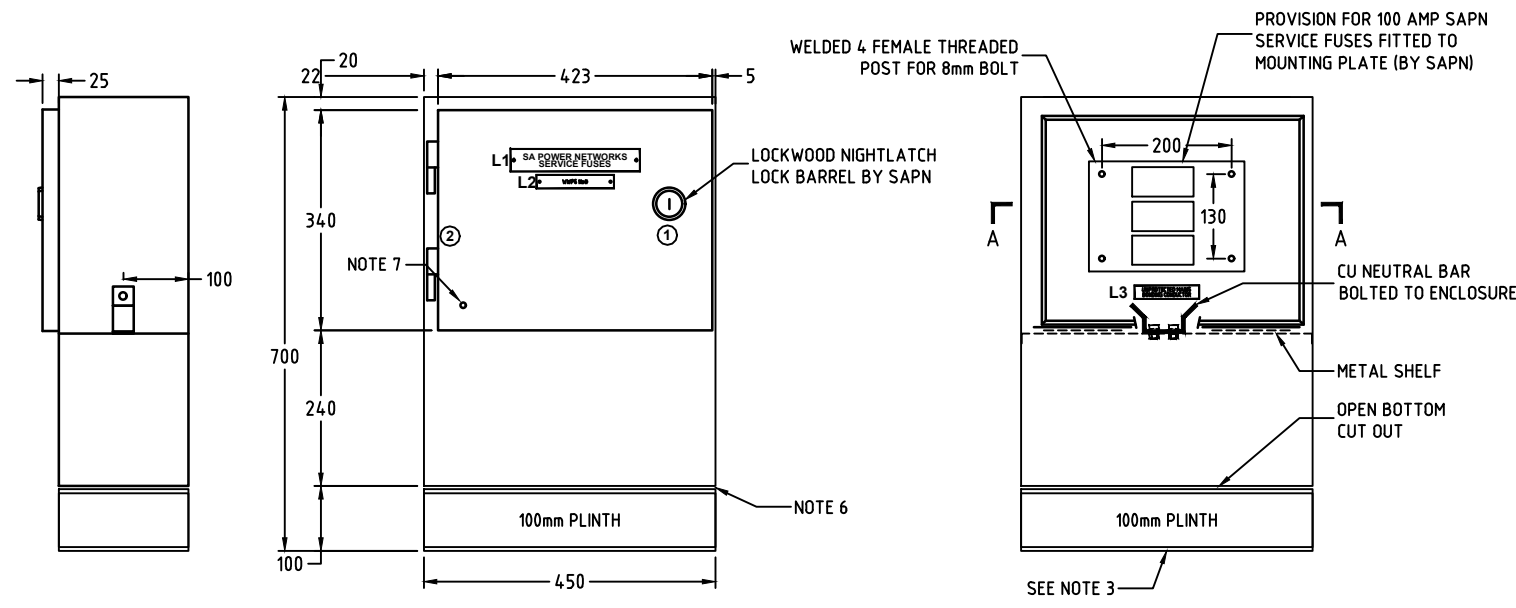
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS

DESIGN PANEL		
DESIGNED:	AUTHORISED:	DATE
SACHIN PANDEY	JUSTIN HAMRA	14/02/2018
TROY O'BRIEN		14/02/2018
JONATHON NICHOLLS		14/02/2018

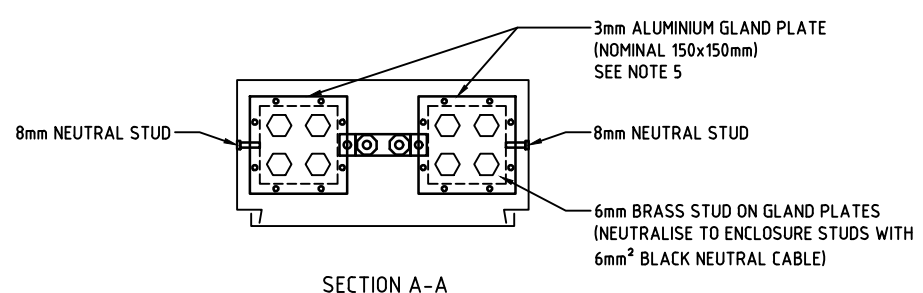
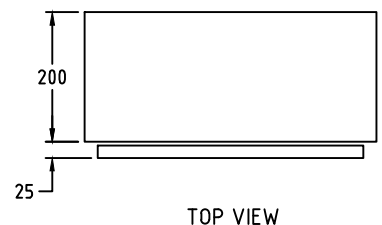
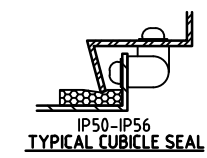
This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.

SWITCHBOARD 0 ? 100A
 MAIN SWITCHBOARD
 WET WELL JUNCTION BOX
 ELECTRICAL
 GENERAL ARRANGEMENT

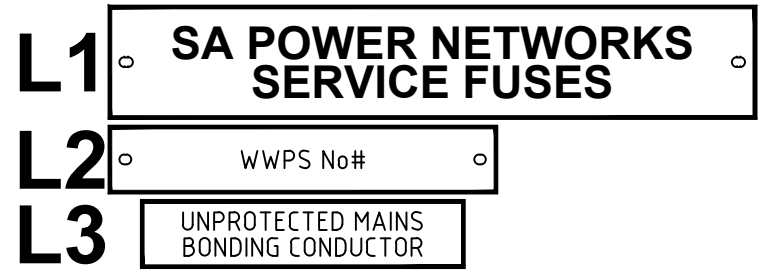
A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES: 5003-00001-76		
DRAWING NUMBER		
TYP-03-00001_76		



CONSTRUCTION NOTES	
CONSTRUCTION	MACHINE FORMED AND WELDED
CABLE ENTRY	MAINS IN: BOTTOM SUBMAINS OUT: BOTTOM
MATERIAL	CABINET: 3mm MARINE GRADE ALUMINIUM (5052) DOORS: 3mm MARINE GRADE ALUMINIUM (5052) ESCUTCHEONS: N/A EQUIPMENT PANELS: N/A PLINTH: 100mmx50mmx5mm MARINE GRADE ALUMINIUM (5052) PARALLEL FLANGE CHANNEL.
DEGREE OF PROTECTION	INGRESS: IP56 SEGREGATION: FORM 1 (AS/NZS 61439.2) DOOR SEAL: TESA 4773 21x6mm PVC/NITRILE CLOSED-CELL FOAM (SUITABLE -28°C TO 79°C) GLAND PLATE SEAL: TESA 4773 21x6mm PVC/NITRILE CLOSED-CELL FOAM (SUITABLE -28°C TO 79°C)
FINISH	CABINET, DOORS, PANELS & PLINTH: ROUGH SURFACES FILED, CLEANED, DEGREASED, GRIND SMOOTH, PRIME COATED, OVEN BAKED POWDER COATED.
COLOUR	CABINET: "WILDERNESS 013" RIPPLE WITH "AG GHETTO CLEAR 910 81797" ANTI-GRAFFITI DOORS: "WILDERNESS 013" RIPPLE WITH "AG GHETTO CLEAR 910 81797" ANTI-GRAFFITI ESCUTCHEONS: N/A EQUIPMENT PANELS: N/A PLINTH: "WILDERNESS 013" RIPPLE
LABELS	MATERIAL: ROWMARK LASERMAX 2 PLY ACRYLIC FIXING: EXTERNAL: STAINLESS STEEL SCREWS INTERNAL: DOUBLE SIDED TAPE COLOURING: WHITE WITH BLACK ENGRAVING (W.B.W.) FOR STANDARD LABELS RED WITH WHITE ENGRAVING (R.W.R.) FOR WARNING AND DANGER LABELS



ALL LABELS ARE W.B.W. UNLESS OTHERWISE NOTED



CONSTRUCTION NOTES:

- SWITCHBOARD CONSTRUCTED IN ACCORDANCE WITH AS/NZS 61439.2, SA WATER TS0300 & SAPN SERVICE AND INSTALLATION RULES.
- CUBICLE TO BE CONSTRUCTED FROM 3mm MARINE GRADE ALUMINIUM & GROUND SMOOTH BEFORE POWDER COATED IN ACCORDANCE WITH TS0300, COLORBOND WILDERNESS 013, USING GRAFFITI RESISTANT COATINGS.
- PLINTH MANUFACTURED FROM 100mmx50mmx5mm MARINE GRADE ALUMINIUM CHANNEL C/W 15mm MOUNTING HOLES. PLINTH TO BE POWDER COATED COLORBOND WILDERNESS 013.
- DOORS TO BE SEALED WITH WEATHERPROOF RUBBER.
- GLAND PLATES FASTENED BY MINIMUM 6mm HEX HEAD HARDENED BOLTS INTO NUTSERTS
- PLINTH MOUNTING BOLTS TO BE 316 STAINLESS STEEL & FITTED WITH NYLON ISOLATING WASHERS
- PROVIDE 8mm WELDED STUD TO INSIDE OF DOOR. DOOR TO BE BONDED TO ENCLOSURE WITH 6mm² BLACK NEUTRAL CABLE.

EQUIPMENT LIST				
REF.	ITEM DESCRIPTION	MANUFACTURER	QTY.	ITEM No.
①	STREAMLATCH DEADBOLT	LOCKWOOD	1	213SCA0
②	POLISHED 316 STAINLESS STEEL BLOCK HINGE	SELECTLOK	2	HIB650SS-316NS

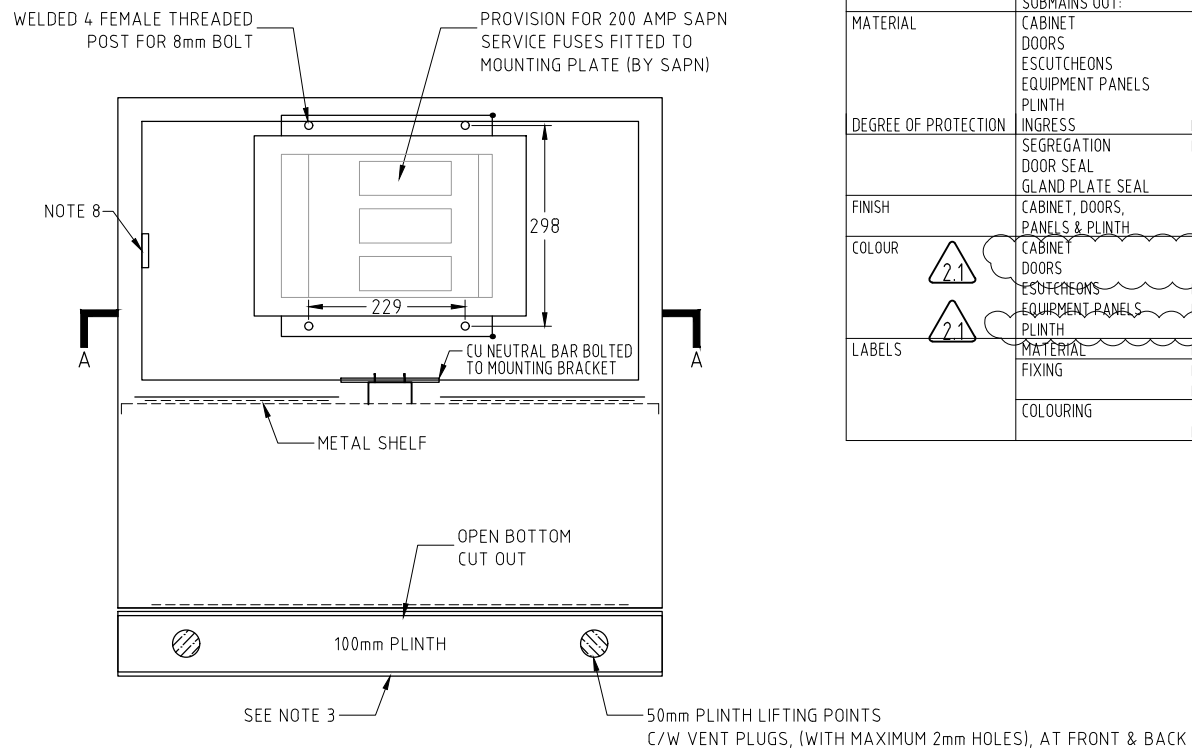
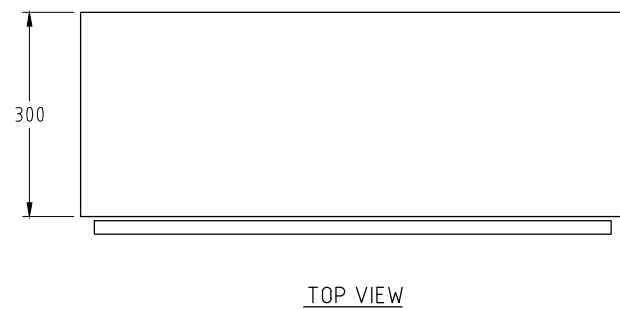
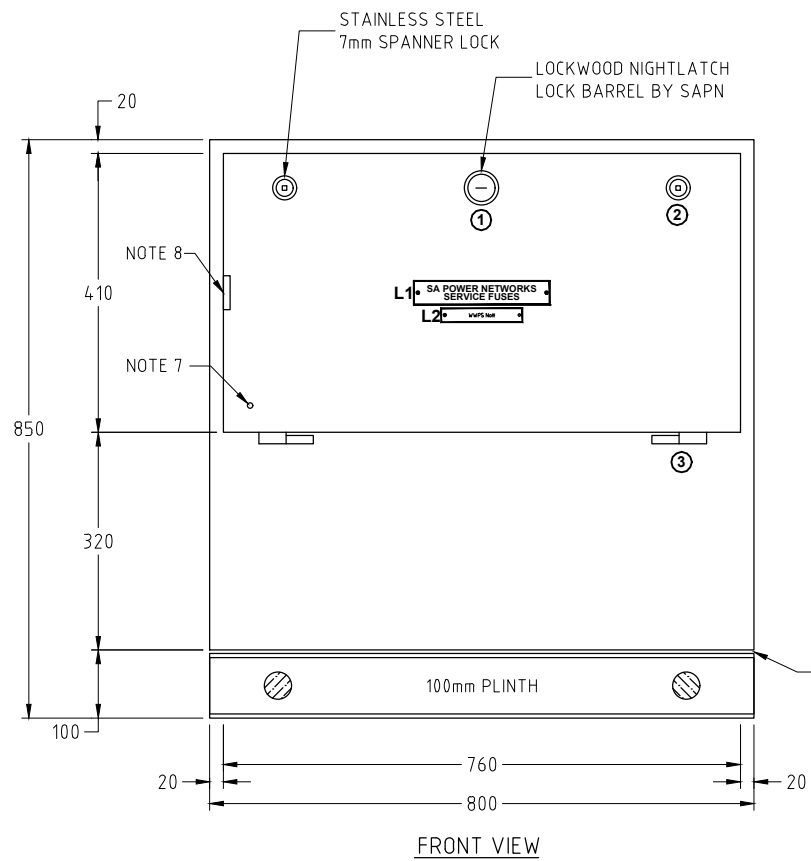
REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS

CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

DESIGN PANEL	
DESIGNED:	AUTHORISED:
14/02/2018 SACHIN PANDEY	14/02/2018 JUSTIN HAMRA
DRAWN: 14/02/2018 TROY O'BRIEN	SIGNATURE:
REVIEWED: 14/02/2018 JONATHON NICHOLLS	ORIGINAL SIGNED

SWITCHBOARD 0 ? 100A
MAIN SWITCHBOARD
SERVICE FUSE ENCLOSURE
ELECTRICAL
GENERAL ARRANGEMENT

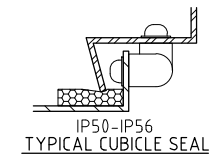
A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES: 5003-00001-77a		
DRAWING NUMBER		
TYP-03-00001_77a		



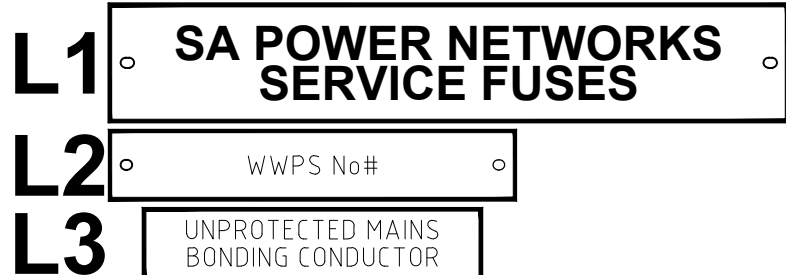
FRONT VIEW LESS DOORS

SECTION VIEW A-A

CONSTRUCTION NOTES	
CONSTRUCTION	MACHINE FORMED AND WELDED
CABLE ENTRY	MAINS IN: BOTTOM SUBMAINS OUT: BOTTOM
MATERIAL	CABINET: 3mm MARINE GRADE ALUMINIUM (5052) DOORS: 3mm MARINE GRADE ALUMINIUM (5052) ESCUTCHEONS: N/A EQUIPMENT PANELS: N/A PLINTH: 100mmx50mmx5mm MARINE GRADE ALUMINIUM (5052) PARALLEL FLANGE CHANNEL.
DEGREE OF PROTECTION	INGRESS: IP56
	SEGREGATION: FORM 1 (AS/NZS 61439.2) DOOR SEAL: TESA 4773 21x6mm PVC/NITRILE CLOSED-CELL FOAM (SUITABLE -28°C TO 79°C) GLAND PLATE SEAL: TESA 4773 21x6mm PVC/NITRILE CLOSED-CELL FOAM (SUITABLE -28°C TO 79°C)
FINISH	CABINET, DOORS, PANELS & PLINTH: ROUGH SURFACES FILED, CLEANED, DEGREASED, GRIND SMOOTH, PRIME COATED, OVEN BAKED POWDER COATED
COLOUR	CABINET: "WILDERNESS 013" RIPPLE WITH "AG GHETTO CLEAR 910 81797" ANTI-GRAFFITI DOORS: "WILDERNESS 013" RIPPLE WITH "AG GHETTO CLEAR 910 81797" ANTI-GRAFFITI ESCUTCHEONS: N/A EQUIPMENT PANELS: N/A PLINTH: "WILDERNESS 013" RIPPLE
LABELS	MATERIAL: ROWMARK LASERMAX 2 PLY ACRYLIC FIXING: EXTERNAL: DOUBLE SIDED TAPE WITH PLASTIC PINS INTERNAL: DOUBLE SIDED TAPE COLOURING: WHITE WITH BLACK ENGRAVING (W.B.W.) FOR STANDARD LABELS RED WITH WHITE ENGRAVING (R.W.R.) FOR WARNING AND DANGER LABELS



ALL LABELS ARE W.B.W. UNLESS OTHERWISE NOTED



CONSTRUCTION NOTES:

- SWITCHBOARD CONSTRUCTED IN ACCORDANCE WITH AS/NZS61439.2, SA WATER TS0300 & SAPN SERVICE AND INSTALLATION RULES.
- CUBICLE TO BE CONSTRUCTED FROM 3mm MARINE GRADE ALUMINIUM & GROUND SMOOTH BEFORE POWDER COATED IN ACCORDANCE WITH TS0300, COLORBOND WILDERNESS 013, USING GRAFFITI RESISTANT COATINGS.
- PLINTH MANUFACTURED FROM 100mmx50mmx5mm MARINE GRADE ALUMINIUM CHANNEL C/W 15mm MOUNTING HOLES. PLINTH TO BE POWDER COATED COLORBOND WILDERNESS 013.
- DOORS TO BE SEALED WITH WEATHERPROOF RUBBER
- GLAND PLATES FASTENED BY MINIMUM 6mm HEX HEAD HARDENED BOLTS INTO NUTSERTS
- PLINTH MOUNTING BOLTS TO BE 316 STAINLESS STEEL & FITTED WITH NYLON ISOLATING WASHERS.
- PROVIDE 8mm WELDED STUD TO INSIDE OF DOOR. DOOR TO BE BONDED TO ENCLOSURE WITH 6mm² BLACK NEUTRAL CABLE.
- PROVIDE 90° OPENING CABLE DOOR STAY AND WELDED BRACKETS.

EQUIPMENT LIST				
REF.	ITEM DESCRIPTION	MANUFACTURER	QTY.	ITEM No.
①	STREAMLATCH DEADBOLT	LOCKWOOD	1	Z13SCA0
②	SPANNER LOCK 7mm SQUARE 316 STAINLESS STEEL	LOCK FOCUS	2	A/SR18/TS/SS/H/T66
③	POLISHED 316 STAINLESS STEEL BLOCK HINGE	SELECTLOK	2	HIB650SS-316NS

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	PB
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS

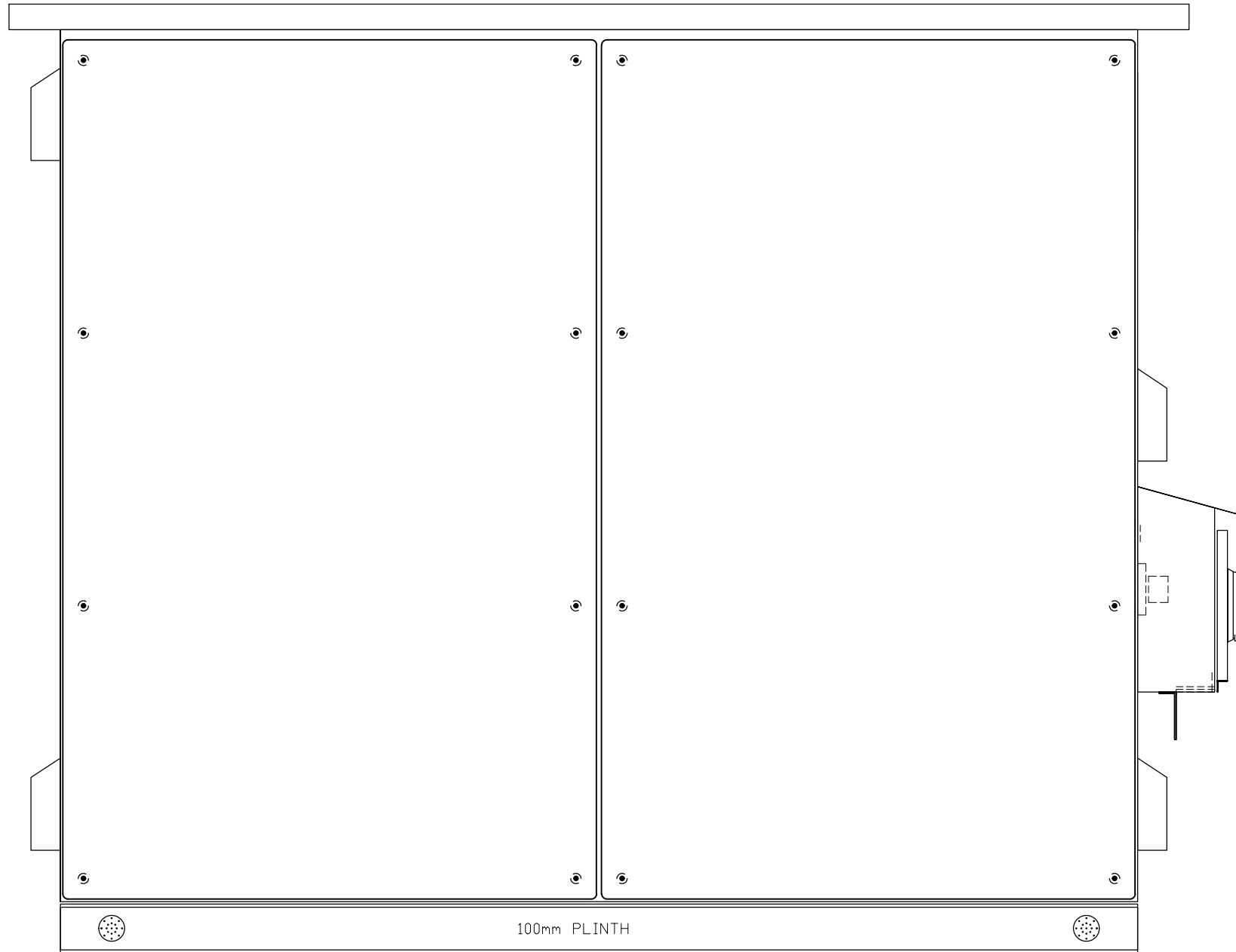
DESIGN PANEL		
DESIGNED:	AUTHORISED:	
14/02/2018	14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:	SIGNATURE:	
14/02/2018		
TROY O'BRIEN		
REVIEWED:	ORIGINAL SIGNED	
14/02/2018		
JONATHON NICHOLLS		

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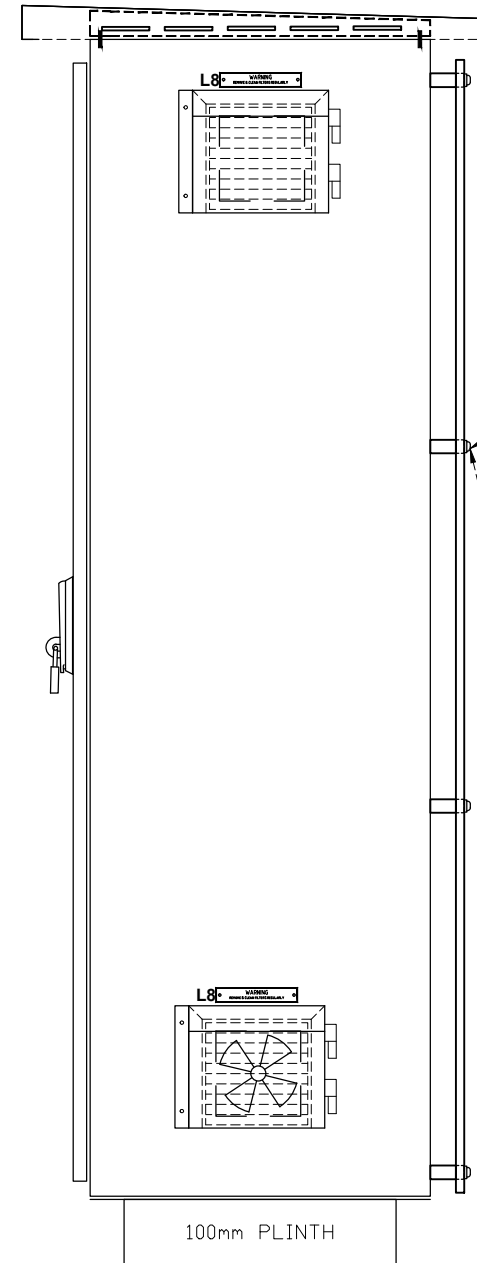
SWITCHBOARD 0 ? 100A
 MAIN SWITCHBOARD
 SERVICE FUSE ENCLOSURE
 ELECTRICAL
 GENERAL ARRANGEMENT

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-77b		
DRAWING NUMBER		
TYP-03-00001_77b		

REAR SUN SHIELDS - WHERE REQUIRED (PROJECT SPECIFIC)



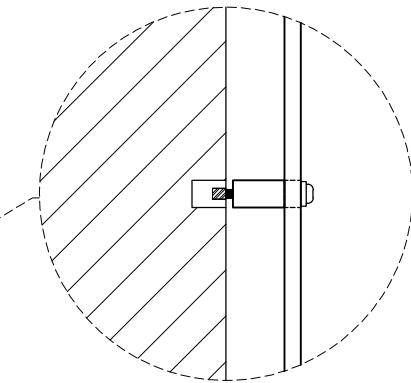
REAR ELEVATION



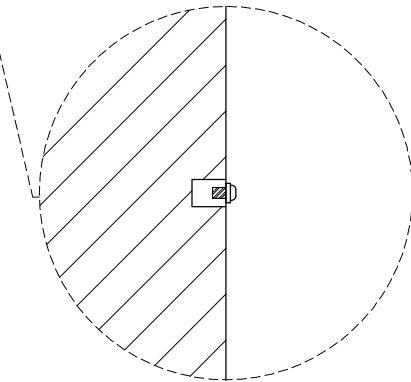
RIGHT SIDE VIEW

SUN SHIELD FIXING DETAILS

WITH SUN SHIELD



WITHOUT SUN SHIELD




SUN SHIELD CONSTRUCTION NOTES:

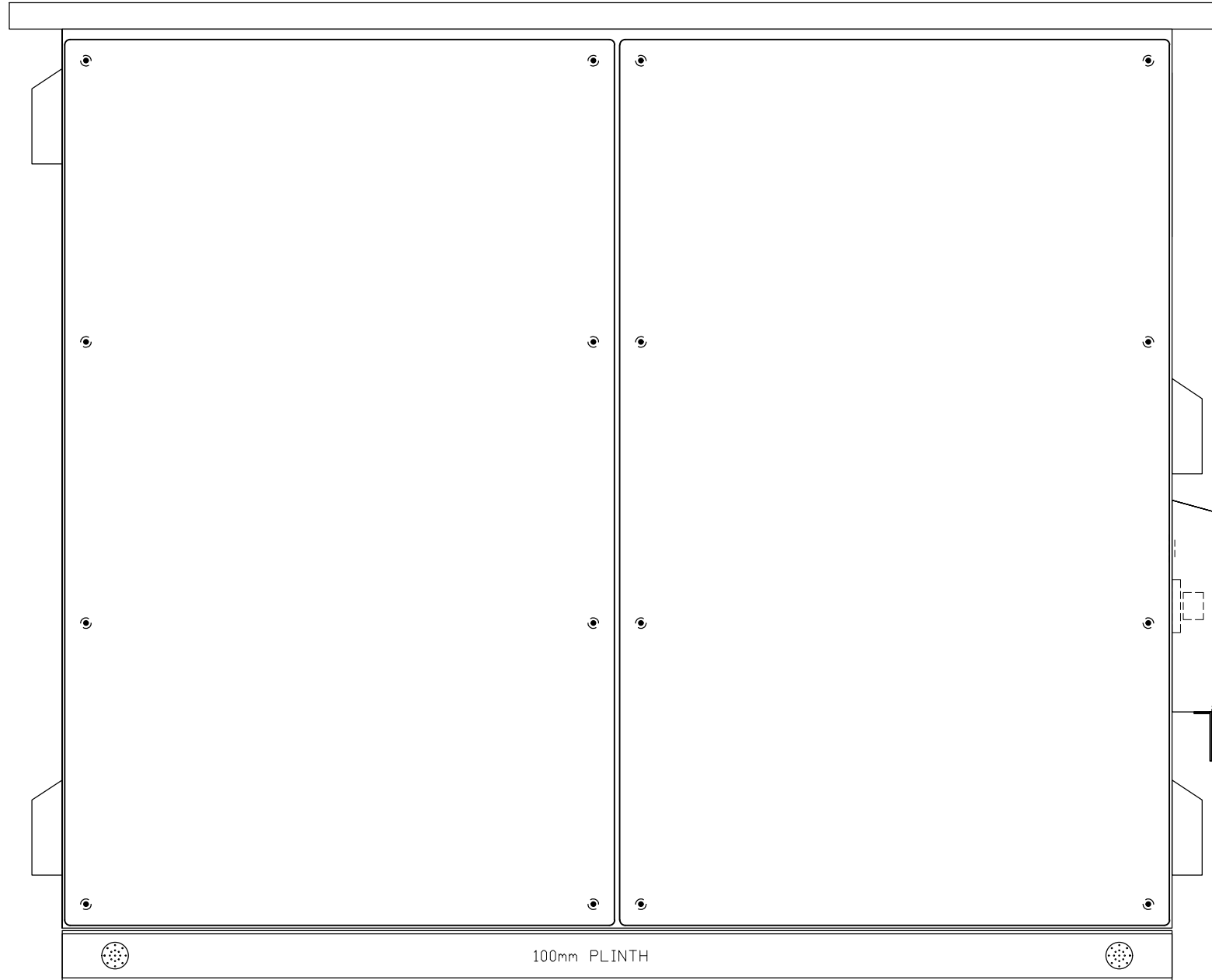
1. MATERIAL - 1.6mm G2 Z275 GALVABOND
2. FINISH - CUBICLE TO BE WET SPRAYED 2 PACK PAINTED IN ACCORDANCE WITH TS0300 CLAUSE 8.3 OUTDOOR CUBICLE. PAINTED COLORBOND WILDERNESS 013, USING GRAFFITI RESISTANT PAINT/COATINGS.
3. COLOUR - "COLORBOND WILDERNESS 013" WET SPRAY WITH "AG GHETTO CLEAR 910 81797" ANTI-GRAFFITI



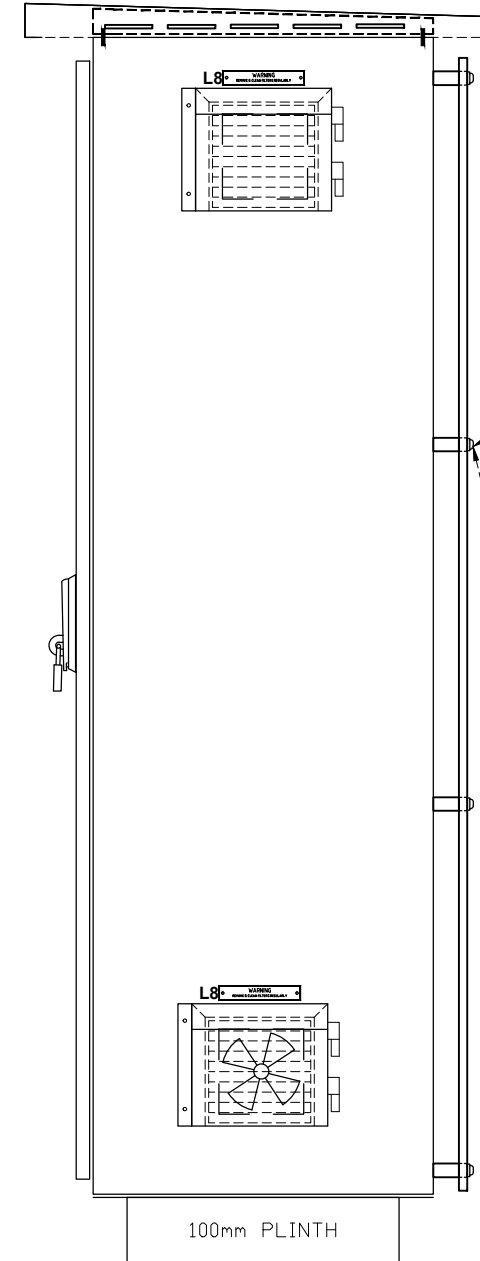
PROVISIONS FOR SUN SHIELDS SHALL BE MADE ON ALL SWITCHBOARDS BY USE OF A WELDED BLIND STANDOFF ON THE INSIDE OF THE BOARD. THIS WILL ALLOW THE SUN SHIELD TO BE FIXED WHEN NEEDED WITHOUT ALTERING THE IP RATING..

REVISION PANEL				DESIGN PANEL		 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SWITCHBOARD 0 ? 100A MAIN SWITCHBOARD		A3 SHT SIZE	TOTAL SHEETS: PROJECT No: NC1001	2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 06/07/23 AUTHORISED: JUSTIN HAMRA SIGNATURE:		DESIGNED: 14/02/2018 SACHIN PANDEY DRAWN: 14/02/2018 TROY O'BRIEN REVIEWED: 14/02/2018 JONATHON NICHOLLS	AUTHORISED:14/02/2018 JUSTIN HAMRA SIGNATURE: ORIGINAL SIGNED	MAXIMO ID:	SUPERSEDES: 5003-00001-78a	DRAWING NUMBER TYP-03-00001_78a
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	JH							
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS							
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS							
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:		CONTRACTOR:					

REAR SUN SHIELDS - WHERE REQUIRED (PROJECT SPECIFIC)



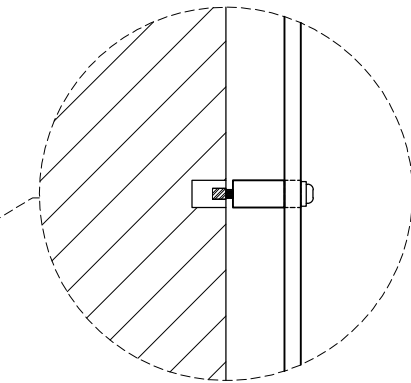
REAR ELEVATION



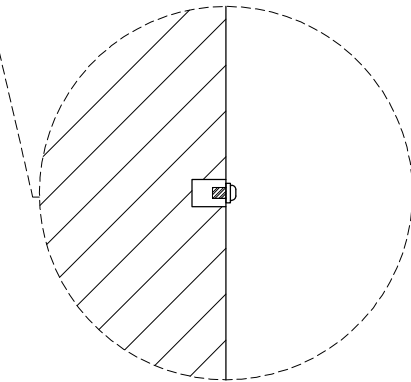
RIGHT SIDE VIEW

SUN SHIELD FIXING DETAILS

WITH SUN SHIELD



WITHOUT SUN SHIELD




SUN SHIELD CONSTRUCTION NOTES:

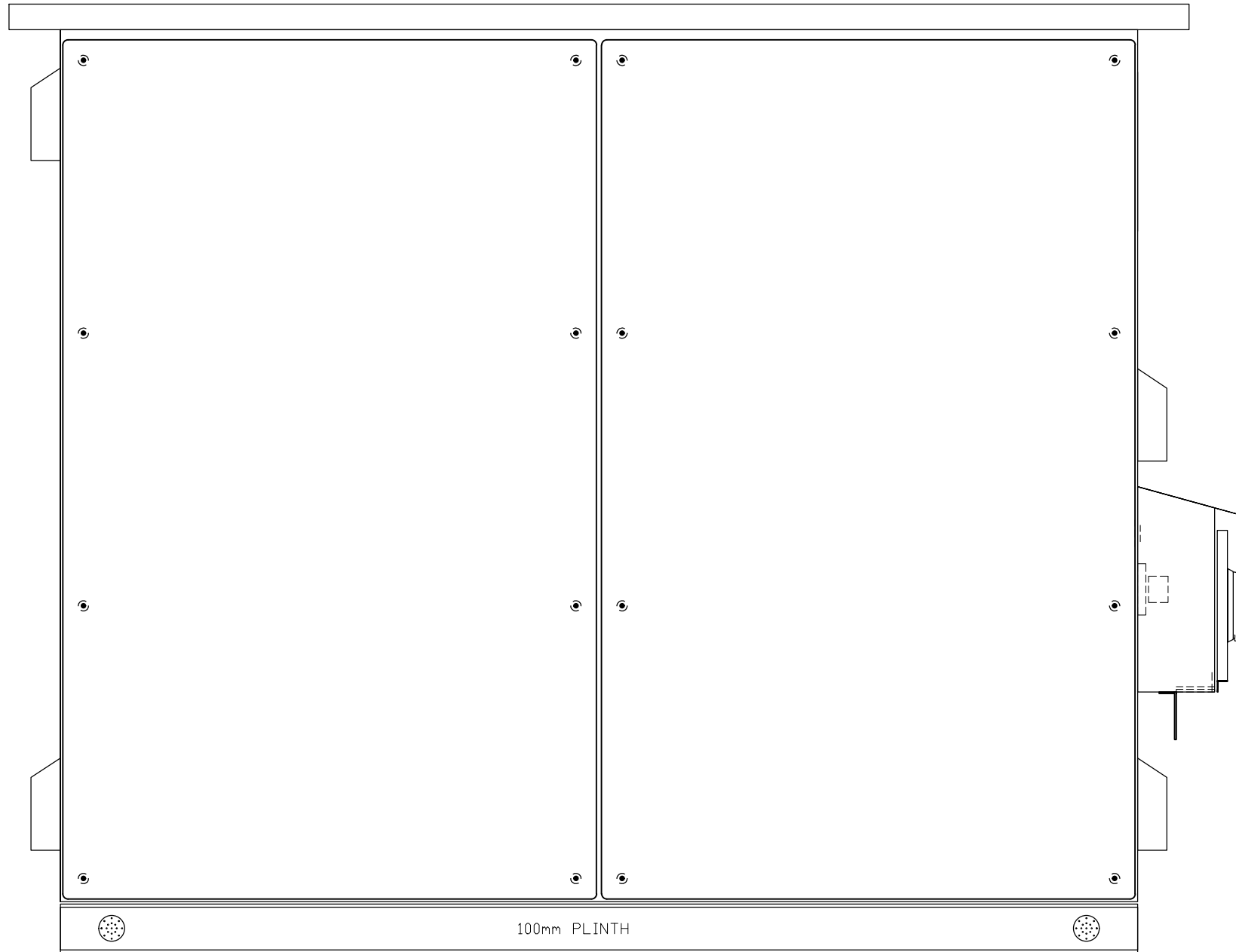
1. MATERIAL - 1.6mm 316 STAINLESS STEEL
2. FINISH - CUBICLE TO BE POWDER COATED COLORBOND WILDERNESS 013, USING GRAFFITI RESISTANT COATINGS. ROUGH SURFACES TO BE FILED, GROUND SMOOTH, SURFACES ROUGHENED, CLEANED, DEGREASED & OVEN BAKED POWDER COATED. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S DATA SHEET & SHALL INCLUDE ANY PRIMERS OR UNDERCOATS AS RECOMMENDED BY THE MANUFACTURER. INTERNAL REMOVABLE PANELS, BACKPLATES, BRACKETS & ESCUTCHEONS SHALL BE GLOSS WHITE IN COLOUR. POWDER COATING TO HAVE A DRY FILM THICKNESS NOT LESS THAN 60 MICRONS.
3. COLOUR - "COLORBOND WILDERNESS 013" OVEN BAKED POWDER COATED WITH "AG GHETTO CLEAR 910 81797" ANTI-GRAFFITI.



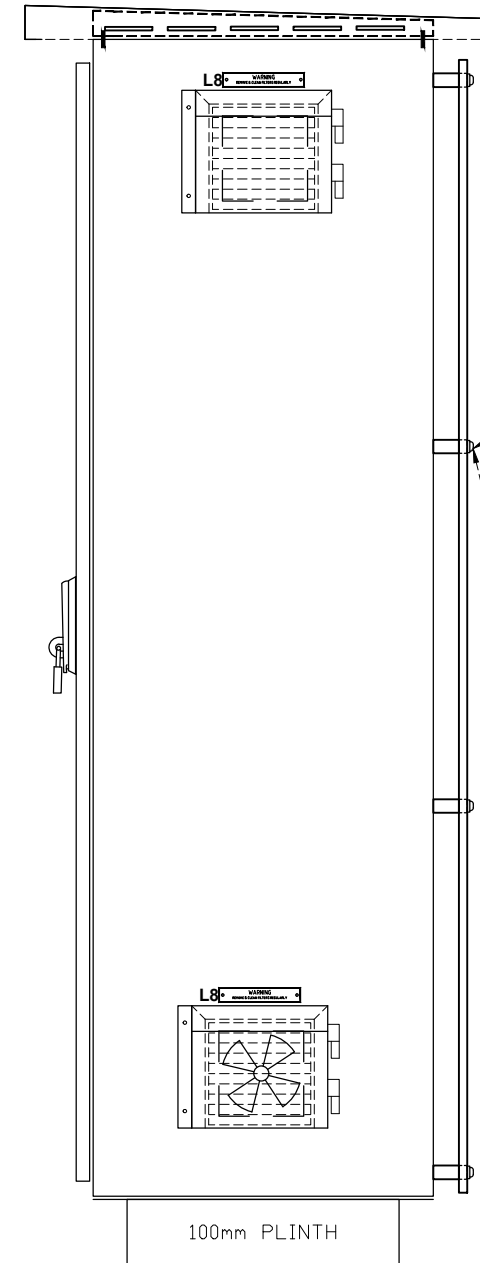
PROVISIONS FOR SUN SHIELDS SHALL BE MADE ON ALL SWITCHBOARDS BY USE OF A WELDED BLIND STANDOFF ON THE INSIDE OF THE BOARD. THIS WILL ALLOW THE SUN SHIELD TO BE FIXED WHEN NEEDED WITHOUT ALTERING THE IP RATING..

REVISION PANEL				DESIGN PANEL		 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SWITCHBOARD 0 ? 100A MAIN SWITCHBOARD		A3 TOTAL SHEETS: SHT SIZE PROJECT No: NC1001 2.1 REVISION	
REV	DATE	DRN	DETAILS	APR	CURRENT REV 06/07/23 AUTHORISED: JUSTIN HAMRA SIGNATURE:		DESIGNED: 14/02/2018 SACHIN PANDEY DRAWN: 14/02/2018 TROY O'BRIEN REVIEWED: 14/02/2018 JONATHON NICHOLLS	AUTHORISED: 14/02/2018 JUSTIN HAMRA SIGNATURE: ORIGINAL SIGNED	MAXIMO ID: SUPERSEDES: 5003-00001-78b DRAWING NUMBER TYP-03-00001_78b	
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	JH						
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS						
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS						
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:		CONTRACTOR:		ELECTRICAL REAR SUNSHADE		

REAR SUN SHIELDS - WHERE REQUIRED (PROJECT SPECIFIC)



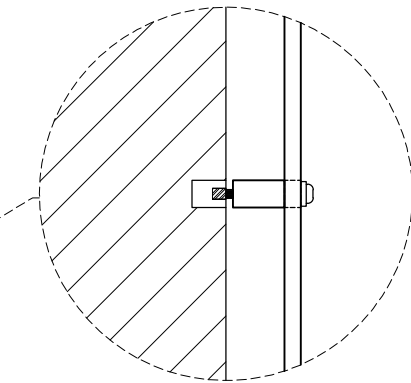
REAR ELEVATION



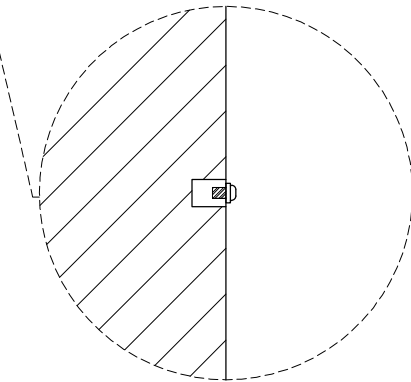
RIGHT SIDE VIEW

SUN SHIELD FIXING DETAILS

WITH SUN SHIELD



WITHOUT SUN SHIELD




SUN SHIELD CONSTRUCTION NOTES:

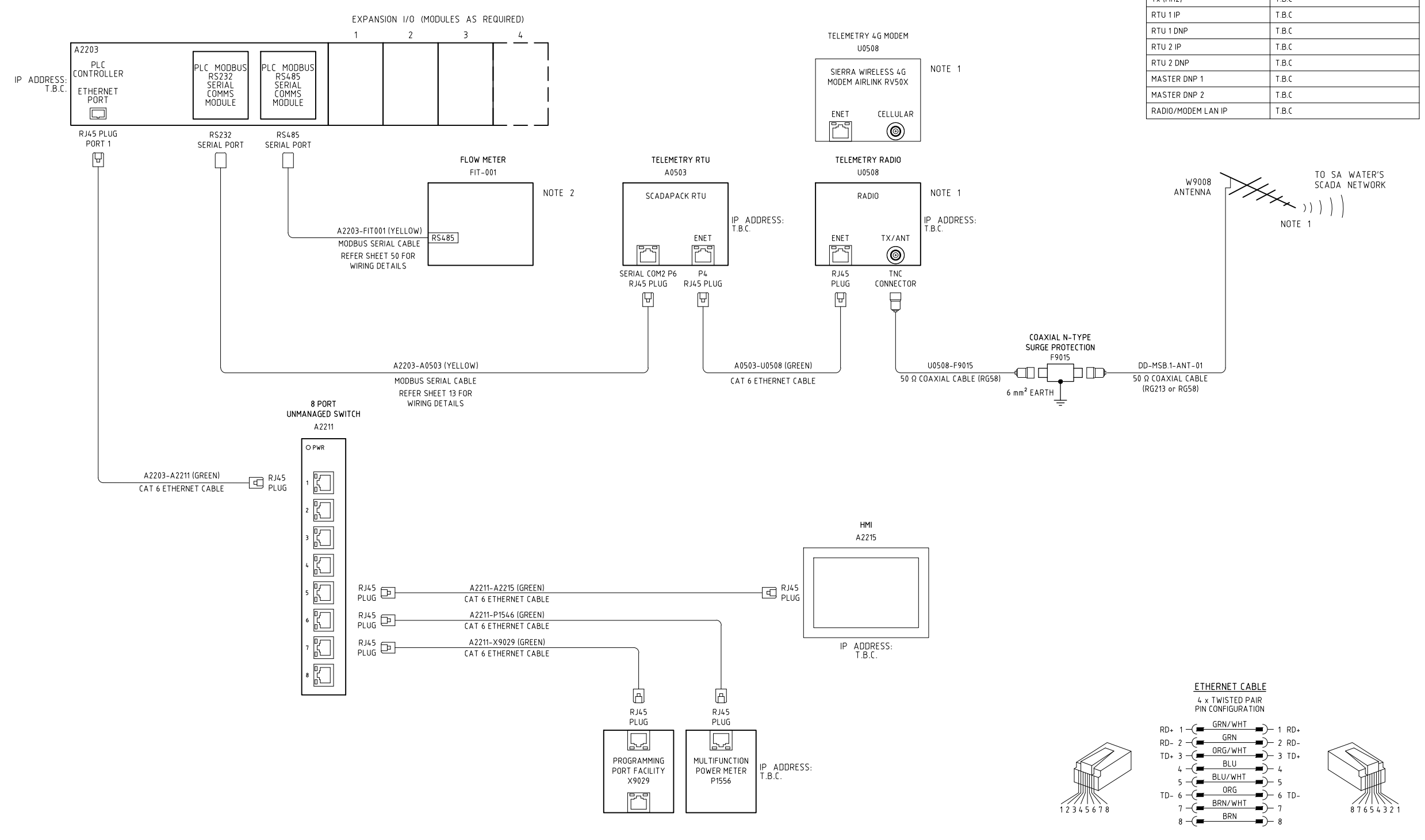
1. MATERIAL - 3mm MARINE GRADE ALUMINIUM (5052)
2. FINISH - ROUGH SURFACES TO BE FILED, GROUND SMOOTH, CLEANED, DEGREASED, ETCH PRIMED & OVEN BAKED POWDER COATED. THE COATING SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S DATA SHEET & SHALL INCLUDE ANY PRIMERS OR UNDERCOATS AS RECOMMENDED BY THE MANUFACTURER. INTERNAL REMOVABLE PANELS, BACKPLATES, BRACKETS & ESCUTCHEONS SHALL BE GLOSS WHITE IN COLOUR. PRIME COATING TO HAVE A DRY FILM THICKNESS NOT LESS THAN 50 MICRONS, POWDER COATING TO HAVE A DRY FILM THICKNESS NOT LESS THAN 60 MICRONS.
3. COLOUR - "COLORBOND WILDERNESS 013" OVEN BAKED POWDER COATED WITH "AG GHETTO CLEAR 910 81797" ANTI-GRAFFITI.



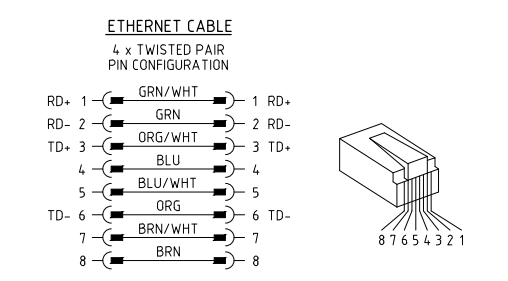
PROVISIONS FOR SUN SHIELDS SHALL BE MADE ON ALL SWITCHBOARDS BY USE OF A WELDED BLIND STANDOFF ON THE INSIDE OF THE BOARD. THIS WILL ALLOW THE SUN SHIELD TO BE FIXED WHEN NEEDED WITHOUT ALTERING THE IP RATING..

REVISION PANEL				DESIGN PANEL		 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	SWITCHBOARD 0 ? 100A MAIN SWITCHBOARD ELECTRICAL REAR SUNSHADE	A3 SHT SIZE PROJECT No: NC1001 MAXIMO ID: SUPERSEDES: 5003-00001-78c DRAWING NUMBER TYP-03-00001_78c	2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 06/07/23				
					AUTHORIZED: JUSTIN HAMRA SIGNATURE:	DESIGNED: 14/02/2018 SACHIN PANDEY DRAWN: 14/02/2018 TROY O'BRIEN REVIEWED: 14/02/2018 JONATHON NICHOLLS			
2.1	06/07/23	PB	UPDATED SWITCHBOARD COLOUR	JH					
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS					
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS					
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:		CONTRACTOR:			

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WWPS No#, SITE SUBURB	
NETWORK	T.B.C
Rx (MHz)	T.B.C
Tx (MHz)	T.B.C
RTU 1 IP	T.B.C
RTU 1 DNP	T.B.C
RTU 2 IP	T.B.C
RTU 2 DNP	T.B.C
MASTER DNP 1	T.B.C
MASTER DNP 2	T.B.C
RADIO/MODEM LAN IP	T.B.C



- NOTES:**
1. TELEMETRY RTU & ANTENNA TYPE (RADIO OR NEXT G) IS PROJECT SPECIFIC.
 2. REQUIREMENT FOR FLOWMETER IS PROJECT SPECIFIC.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	SYMBOLS & STANDARDS REVISION UPDATE	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK & MINOR UPDATES	SS

CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

DESIGN PANEL		
DESIGNED:	14/02/2018	AUTHORISED: 14/02/2018
SACHIN PANDEY		JUSTIN HAMRA
DRAWN:	14/02/2018	SIGNATURE:
TROY O'BRIEN		ORIGINAL SIGNED
REVIEWED:	14/02/2018	
JONATHON NICHOLLS		



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WATER CORPORATION
and shall not be copied or modified
in part or in whole without authorization.

SWITCHBOARD 0 - 100A
MAIN SWITCHBOARD
NETWORK ARCHITECTURE
ELECTRICAL
BLOCK DIAGRAM

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES: 5003-00001-90		
DRAWING NUMBER		
TYP-03-00001_90		

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL	
DESIGNED:	AUTHORISED:
DRAWN:	SIGNATURE:
REVIEWED:	
CONTRACTOR:	

This drawing is the property of the
 SOUTH AUSTRALIAN
 WATER CORPORATION
 and shall not be copied or modified
 in part or in whole without authorization.



SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD

ELECTRICAL
 BILL OF MATERIALS

A3 SHT SIZE	TOTAL SHEETS:	2.1 REVISION
	PROJECT No: NC1001	
MAXIMO ID:		
SUPERSEDES:		
DRAWING NUMBER TYP-03-00001_95		

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL	
DESIGNED:	AUTHORISED:
DRAWN:	SIGNATURE:
REVIEWED:	
CONTRACTOR:	

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 WATER CORPORATION
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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD

ELECTRICAL
 LABEL SCHEDULE

A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES:		
DRAWING NUMBER		
TYP-03-00001_96		

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:	

DESIGN PANEL	
DESIGNED:	AUTHORISED:
DRAWN:	SIGNATURE:
REVIEWED:	
CONTRACTOR:	

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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD

ELECTRICAL
 CABLE SCHEDULE

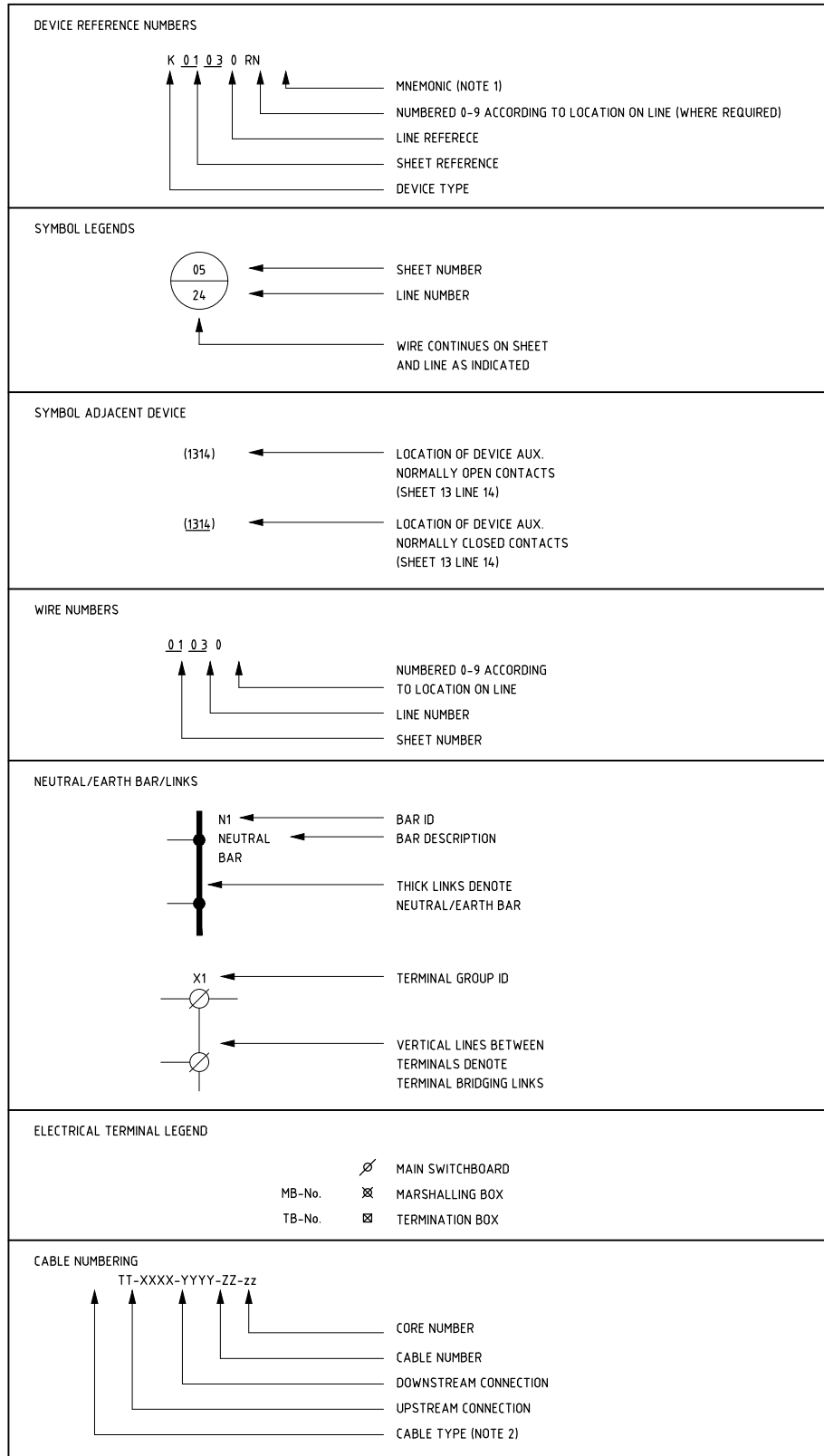
A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES:		
DRAWING NUMBER		
TYP-03-00001_98		

**TABLE 1
DEVICE TYPE**

CODE	DEVICE TYPE	EXAMPLE
A	ASSEMBLIES, SUBASSEMBLIES	PLC, IO MODULES
B	TRANSDUCERS	
C	CAPACITORS	
D	BINARY ELEMENTS, DELAY DEVICES, STORAGE DEVICES	
E	MISCELLANEOUS	
F	PROTECTIVE DEVICES	FUSE, SURGE DIVERTER
G	GENERATORS, POWER SUPPLIES	
H	SIGNALLING DEVICES	
J	-	
K	RELAYS, CONTACTORS	
L	INDUCTORS, REACTORS	
M	MOTORS	
N	ANALOG ELEMENTS	
P	MEASURING EQUIPMENT, TESTING EQUIPMENT	POWER METER
Q	SWITCHING DEVICES FOR POWER CIRCUITS	
R	RESISTORS	
S	SWITCHING DEVICES FOR CONTROL CIRCUITS, SELECTOR SWITCHES	
T	TRANSFORMERS, VOLTAGE REGULATORS (POWER)	
U	MODULATORS, CHANGERS	RADIO, VSD
V	TUBES, SEMICONDUCTORS	
W	TRANSMISSION PATHS, WAVEGUIDES, ANTENNAS	
X	TERMINALS, PLUGS, SOCKETS	
Y	ELECTRICALLY OPERATED MECHANICAL DEVICES	
Z	NETWORKS, HYBRID TRANSFORMERS, FILTERS, EQUALIZERS, LIMITERS	SIGNAL SPLITTER TRANSIENT BARRIER

NOTE 1: MNEMONICS CAN BE FOUND IN TS 0300
 NOTE 2: CABLE TYPES CAN BE FOUND IN TS 0300
 NOTE 3: CONDUCTOR SIZING AND INSULATION RATING CAN BE FOUND IN TS 0300

**TABLE 2
DRAWING CONVENTION**



**TABLE 3
WIRING STANDARD**

APPLICATION DESCRIPTION	COLOUR
400VAC L-L POWER	
L1 PHASE	RED
L2 PHASE	WHITE
L3 PHASE	BLUE
NEUTRAL	BLACK
EARTH	GRN/YEL
CURRENT TRANSFORMERS	PHASE COLOUR
230VAC POWER AND CONTROL	
ACTIVE	WHITE
NEUTRAL	BLACK
110VAC POWER AND CONTROL	
ACTIVE	WHITE
NEUTRAL	BLACK
24VAC CONTROL	
ACTIVE	BROWN
NEUTRAL (0VAC)	BLACK
24VDC CONTROL	
POSITIVE	GREY
NEGATIVE	PINK
12VDC CONTROL	
POSITIVE	GREY
NEGATIVE	PINK
ANALOG LOOPS	
UNSCREENED	VIOLET
SCREENED	AS SUPPLIED
PLC/RTU SIGNAL WIRING	
24VAC	BROWN
24VDC	GREY
0VDC	PINK
PLC/RTU CRITICAL DIGITAL SIGNALS	
CRITICAL	ORANGE
DATA	
BUSINESS NETWORK	BLUE
PLANT CONTROL	GREEN
DEVICE LEVEL	RED
NON-ETHERNET	YELLOW

REVISION PANEL				DESIGN PANEL		SWITCHBOARD 0 - 100A MAIN SWITCHBOARD		TOTAL SHEETS: 2.1 SHT SIZE PROJECT No: NC1001 REVISION	
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018	 This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.	MAXIMO ID: SUPERSEDES: 5003-00001-99 DRAWING NUMBER TYP-03-00001_99
					AUTHORISED: JUSTIN HAMRA	SIGNATURE: JUSTIN HAMRA			
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH	SIGNATURE: TROY O'BRIEN	SIGNATURE: TROY O'BRIEN			
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS	REVIEWED: 14/02/2018	SIGNATURE: JONATHON NICHOLLS			
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS					
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:		CONTRACTOR:		ELECTRICAL DRAWING CONVENTION & WIRING STANDARDS	

RELAYS, PUSH BUTTONS, CONTACTS AND SWITCHES

Symbol	Description	NOTE 1
	SWITCH - OPEN	
	SWITCH - CLOSED	
	PUSH BUTTON OPEN	
	PUSH BUTTON CLOSED	
	ROTARY SWITCH OPEN	
	ROTARY SWITCH CLOSED	
	EMERGENCY STOP PUSH BUTTON OPEN	
	EMERGENCY STOP PUSH BUTTON CLOSED	
	PRESSURE SWITCH OPEN	
	PRESSURE SWITCH CLOSED	
	THERMAL SWITCH OPEN	
	THERMAL SWITCH CLOSED	
	TEMPERATURE SWITCH OPEN	
	TEMPERATURE SWITCH CLOSED	
	FLOAT SWITCH OPEN	
	FLOAT SWITCH CLOSED	
	FLOW SWITCH OPEN	
	FLOW SWITCH CLOSED	
	LEVEL SWITCH OPEN	
	LEVEL SWITCH CLOSED	
	LIMIT SWITCH OPEN	
	LIMIT SWITCH CLOSED	
	MAKE CONTACT, DELAYED WHEN THE DEVICE CONTAINING THE CONTACT IS BEING ACTIVATED ON DELAY NCTO	
	BREAK CONTACT, DELAYED WHEN THE DEVICE CONTAINING THE CONTACT IS BEING DE-ACTIVATED OFF DELAY NCTC	
	BREAK CONTACT, DELAYED WHEN THE DEVICE CONTAINING THE CONTACT IS BEING ACTIVATED ON DELAY NCTC	
	BREAK CONTACT, DELAYED WHEN THE DEVICE CONTAINING THE CONTACT IS BEING DE-ACTIVATED OFF DELAY NCTO	
	PLUG AND SOCKET FOR PLUG IN SWITCHGEARS	
	ANTI CONDENSATION HEATER	
	POTENTIOMETER	
	3 POLE 3 POSITION SELECTOR SWITCH WITH AUTO-OFF-MANUAL SELECTOR	
	3 POSITION SELECTOR SWITCH WITH AUTO-OFF-MANUAL SELECTOR 3 POLE SPRING RETURN	

RELAYS, PUSH BUTTONS, CONTACTS AND SWITCHES

	3 POSITION SELECTOR SWITCH WITH 1 POLE
	SELECTOR SWITCH WITH AUTO-OFF-MANUAL SELECTOR SPRING RETURN
	3 POSITION SELECTOR SWITCH WITH AUTO-OFF-MANUAL SELECTOR 3 POLE
	3 POSITION SELECTOR SWITCH WITH AUTO-OFF-MANUAL SELECTOR 3 POLE SPRING RETURN
	3 POSITION SELECTOR SWITCH WITH OFF-RUN-START 3 POLE SPRING RETURN TO CENTRE
	ROTARY TYPE SWITCH WITH AUTO-OFF-MANUAL SELECTOR
	MULTI-POSITION ROTARY TYPE SWITCH
	SPDT ROTARY TYPE SWITCH WITH AUTO-OFF-MANUAL SELECTOR
	KEY OPERATED ROTARY SWITCH WITH AUTO-OFF-MANUAL SELECTOR
	MULTI-POSITION KEY OPERATED ROTARY TYPE SWITCH
	KEY OPERATED SPDT ROTARY TYPE SWITCH WITH AUTO-OFF-MANUAL SELECTOR

TIMER & RELAY, COILS

	RELAY COIL - GENERAL SYMBOL
	T.D.D. TIMER - DELAY ON DE-ENERGISING
	T.D.E. TIMER - DELAY ON ENERGISING
	T.D.E. / T.D.D. TIMER - DELAY ON BOTH ENERGISING & DE-ENERGISING
	RELAY COIL - MECHANICALLY LATCHED OR TWO-STEP TYPE
	RELAY COIL - THERMAL OPERATION
	RELAY / CONTACTOR COIL
	DELAY RELAY / CONTACTOR COIL
	LATCHING RELAY / CONTACTOR COIL
	MEASURING RELAY FOR EARTH FAULT CURRENT
	OVER CURRENT RELAY
	PHASE FAILURE RELAY
	DIFFERENTIAL CURRENT RELAY
	MEASURING RELAY FOR PERCENTAGE DIFFERENTIAL CURRENT
	MEASURING RELAY FOR CURRENT, VOLTAGE & POWER
	MEASURING RELAY FOR CURRENT IN NEUTRAL CONDUCTOR
	NO VOLT RELAY
	MEASURING RELAY FOR RESIDUAL VOLTAGE
	UNDER POWER RELAY
	ACTUATING DEVICE OF A THERMAL RELAY
	SOLENOID VALVE
	SOLENOID VALVE-DUAL


NOTE:

- HIGHLIGHTED IN BOLD DEPICTS THAT ALL SWITCHES, RELAYS AND PUSH BUTTONS IS IN ONE BLOCK. THE BLOCK TYPE CAN BE SELECTED BY CLICKING ON THE BLOCK, THEN A VISIBILITY ARROW WILL APPEAR. CLICK ON THE VISIBILITY ARROW THEN A DROP DOWN MENU WILL APPEAR WITH ALL DIFFERENT BLOCK TYPES THAT CAN BE SELECTED.
- ELECTRICAL SYMBOLS ARE BASED ON AS/NZS 1102:101 TO 110:1997.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS

CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

DESIGN PANEL		
DESIGNED:	AUTHORISED:	SIGNATURE:
14/02/2018	14/02/2018	
SACHIN PANDEY	JUSTIN HAMRA	
DRAWN:		
14/02/2018		
TROY O'BRIEN		
REVIEWED:		
14/02/2018		
JONATHON NICHOLLS		ORIGINAL SIGNED



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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 ELECTRICAL SYMBOLS
 ELECTRICAL
 RELAYS, COILS, PUSH BUTTONS, CONTACT, SWITCHES

A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES: 5003-00001-99		
DRAWING NUMBER		
TYP-03-00001_99a		

STARTERS, METERS

	TRANSDUCER		AMMETER
	RECTIFIER		ASELECT
	INVERTER		UMETER
	RECTIFIER/INVERTER		KWH KILOWATT HOUR METER
	STATIC SWITCH WITH 1 INPUT & 1 OUTPUT		VMETER
	STATIC SWITCH WITH 1 INPUT & 2 OUTPUT		VSELECT
	ANALOGUE TO DIGITAL CONVERTER		SMETER
	FILTER (GENERAL SYMBOL)		WMETER
	LOW PASS FILTER		METER
	HIGH PASS FILTER		LAMP
	BAND PASS FILTER		LAMPFL
	BAND STOP FILTER		P/MAX
	POWER SUPPLY UNIT		VAR
	VOLTAGE REGULATOR		HZ
	ELECTRICAL TO OPTICAL CONVERTER		SYNC
	OPTICAL TO ELECTRICAL CONVERTER		VUD
	MULTIPLEXER		COS
	DATA CONCENTRATOR		SINA
	GENERAL INTERFACE UNIT		OHM
	DISPLAY PANEL		WAVE
	MOTOR STARTER - RESISTANCE TYPE		WHMETER
	TIME CLOCK		HMETER
	MOTOR STARTER		P/METER
	AUTOMATIC STARTER		WHMETER
	SEMI-AUTOMATIC STARTER		METER A = AMMETER V = VOLTMETER METER SELECTOR SWITCH
	DIRECT ON LINE STARTER		ASS = AMMETER VSS = VOLTMETER
	STAR DELTA STARTER		SUPPLY AUTHORITY - kWh METER
	STARTER OPERATE IN STEPS		KILOWATT HOUR METER
	SOFT STARTER		MOTION-DETECTOR
	VARIABLE SPEED DRIVE STARTER		SUNSET-SWITCH
	REGULATOR STARTER		METERING-SELECTOR-SWITCH
	VARIABLE CONTROL STEP STARTER		ATTENUATOR
	POWER FACTOR CORRECTION UNIT		PHOTO-ELECTRIC-CELL
	HEATING ELEMENT (GENERALLY FOR MECHANICAL SERVICES)		INDICATOR-LAMP
			INDUCTOR

CIRCUIT BREAKER, ISOLATORS, CONTACTS

	CIRCUIT BREAKER	NOTE 1
	RESIDUAL CURRENT DEVICE CIRCUIT BREAKER	
	MOTORISED CIRCUIT BREAKER	
	PLUG-IN /WITHDRAWABLE/CIRCUIT BREAKER / AIR CIRCUIT BREAKER	
	LOAD BREAK SWITCH / ISOLATOR	
	LOAD BREAK SWITCH / ISOLATOR WITH TURN SWITCH	
	NORMALLY OPEN CONTACTOR	
	STANDARD FUSE SWITCH	
	ON LOAD 1P FUSE ISOLATOR	
	ON LOAD 3P FUSE ISOLATOR	
	3 POLE CIRCUIT BREAKER	
	3 POLE MOTORISED POLE CIRCUIT BREAKER	
	3 POLE PLUG-IN /WITHDRAWABLE/CIRCUIT BREAKER / AIR CIRCUIT BREAKER	
	3 POLE LOAD BREAK SWITCH / ISOLATOR	
	3 POLE LOAD BREAK SWITCH / ISOLATOR WITH TURN SWITCH	
	3 POLE NORMALLY OPEN CONTACTOR	
	MOTOR CB THERMAL OVERLOAD 3P	

CIRCUIT BREAKER, ISOLATORS, CONTACTS

	NOTE 1	3 POLE CIRCUIT BREAKER HORIZONTAL	NOTE 1
		AUXILIARY CONTACT	
		2 POLE CIRCUIT BREAKER	

NOTE:
 1. HIGHLIGHTED IN BOLD DEPICTS THAT ALL CIRCUIT BREAKERS, ISOLATOR AND CONTACTS IS IN ONE BLOCK. THE BLOCK TYPE CAN BE SELECTED BY CLICKING ON THE BLOCK. THEN A VISIBILITY ARROW WILL APPEAR. CLICK ON THE VISIBILITY ARROW THEN A DROP DOWN MENU WILL APPEAR WITH ALL DIFFERENT BLOCK TYPES THAT CAN BE SELECTED.
 2. ELECTRICAL SYMBOLS ARE BASED ON AS/NZS 1102:101 TO 110:1997.

REVISION PANEL				DESIGN PANEL				<p>Government of South Australia</p> <p>This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.</p>	SWITCHBOARD 0 - 100A MAIN SWITCHBOARD ELECTRICAL SYMBOLS ELECTRICAL ISOLATORS, CONTACTS, STARTERS, METERS	TOTAL SHEETS: 3 PROJECT No: NC1001	2.1 REVISION
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23	DESIGNED: 14/02/2018	AUTHORISED: 14/02/2018			MAXIMO ID:	
					AUTHORISED: JUSTIN HAMRA	SACHIN PANDEY	JUSTIN HAMRA			SUPERSEDES: 5003-00001-99	
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH	SIGNATURE:	TROY O'BRIEN	SIGNATURE:			DRAWING NUMBER	
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS		REVIEWED: 14/02/2018	ORIGINAL SIGNED			TYP-03-00001_99b	
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS		JONATHON NICHOLLS					
CURRENT REV CONTRACTOR:				CURRENT REV PROJECT:							

GENERAL SYMBOLS

	EARTH POTENTIAL		LIGHT EMITTING DIODE (LED)
	BATTERY		INDICATOR OR SIGNAL LAMP - FLASHING TYPE
	FUSE		SIREN
	FUSE TERMINAL		HORN
	LINK TERMINAL		PHOTO-ELECTRIC CELL
	REMOVABLE LINKS		UN-INTERRUPTED POWER SUPPLY
	NORMALLY OPEN LINKS		MAIN CONTROL CABINET TERMINAL
	LINK SHORTING		MARSHALLING BOX TERMINAL
	LINK TEST		TERMINATION/JUNCTION BOX TERMINAL
	FUSED TEE-OFF		OPERATOR STATION TERMINAL
	INTERLOCK SYMBOL		TERMINAL TYPE 2
	PLUG AND SOCKET FOR PLUG IN SWITCHGEARS		TERMINAL TYPE 3
	SURGE ARRESTOR		TERMINAL TYPE 4
	INDICATOR OR SIGNAL LAMP - STEADY TYPE		TERMINAL TYPE 5
	DIODE		TERMINAL TYPE 6
	BELL		TERMINAL TYPE 7
	BUZZER		
	CABLE MARKER		
	PLUG AND SOCKET FOR WITHDRAWABLE SWITCHGEARS		
	FRAME/CHASSIS EARTH SYMBOL		
	FEMALE TERMINAL SOCKET		
	MALE TERMINAL PLUG		
	TERMINAL SOCKETS WITH ISOLATING LINK		
	METER SELECTOR SWITCH		
	TERMINAL BLOCK		
	SINGLE PHASE CIRCUIT		
	THREE PHASE CIRCUIT		
	NEUTRAL CONDUCTOR SYMBOL		
	EARTH CONDUCTOR SYMBOL		
	NUMBER OF PARALLEL RUN CIRCUIT SYMBOL		
	SUBMAIN TEE-OFF UNIT		
	INDICATION FOR CONTACT OR SWITCH S = NON-AUTO SHUNT TRIP C = EMERGENCY POWER OFF INDICATOR		
	TERMINAL LINK		
	TERMINAL LINK - WITH TEST SOCKET		
	TERMINAL LINK - WITH TEST SOCKET		
	FLAG INDICATION FOR RELAY		
	RESISTOR - GENERAL SYMBOL		

NOTE:
 1. HIGHLIGHTED IN BOLD DEPICTS THAT ALL FUSES AND LINKS IS IN ONE BLOCK. THE FUSE/LINK TYPE CAN BE SELECTED BY CLICKING ON THE BLOCK THEN, A VISIBILITY ARROW WILL APPEAR. CLICK ON THE VISIBILITY ARROW THEN A DROP DOWN MENU WILL APPEAR WITH ALL DIFFERENT BLOCK TYPES THAT CAN BE SELECTED.
 2. ALL DIFFERENT TYPES OF TERMINALS IS IN ONE BLOCK. TERMINAL TYPES CAN BE SELECTED VIA THE DROP DOWN MENU FROM THE VISIBILITY ARROW.
 3. ELECTRICAL SYMBOLS ARE BASED ON AS/NZS 1102:101 TO 110:1997.

REVISION PANEL				
REV	DATE	DRN	DETAILS	APR
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS

CURRENT REV CONTRACTOR: _____ CURRENT REV PROJECT: _____

DESIGN PANEL		
DESIGNED:	AUTHORISED:	SIGNATURE:
14/02/2018	14/02/2018	JUSTIN HAMRA
SACHIN PANDEY		JUSTIN HAMRA
DRAWN:		SIGNATURE:
14/02/2018		TROY O'BRIEN
REVIEWED:		JONATHON NICHOLLS
14/02/2018		ORIGINAL SIGNED

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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD

ELECTRICAL
 GENERAL SYMBOLS

A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES: 5003-00001-99		
DRAWING NUMBER		
TYP-03-00001_99c		



TRANSFORMERS AND GENERATORS

	MOTOR / GENERATOR M = MOTOR G = GENERATOR		POWER TRANSFORMER/SUBSTATION		MACHINE - GENERAL SYMBOL M = MOTOR G = GENERATOR
	DELTA CONNECTION		DELTA-STAR TRANSFORMER		MACHINE - A.C. TYPE M = MOTOR G = GENERATOR
	STAR CONNECTION		MULTI-TAP TRANSFORMER		MACHINE - D.C. TYPE M = MOTOR G = GENERATOR
/	SINGLE PHASE		AUTO TRANSFORMER		MOTOR - SYNCHRONOUS SINGLE PHASE
//	TWO PHASE		CHOKE / INDUCTOR		MOTOR - SYNCHRONOUS THREE PHASE DELTA CONNECTION
///	THREE PHASE		STEP DOWN TRANSFORMER		MOTOR - SYNCHRONOUS THREE PHASE BOTH LEADS OF EACH WINDING EXTERNAL
m	CURRENT TRANSFORMER		INSTRUMENT TRANSFORMER		MOTOR - INDUCTION SINGLE PHASE
	CURRENT TRANSFORMER - SIMPLIFIED FORM		SWITCHBOARD METERS V = VOLTMETER A = AMPERE METER var = VAR METER cosφ = POWER FACTOR METER DPA = DIGITAL POWER ANALYSER A = MAXIMUM DEMAND INDICATOR Tmax = MAXIMUM DEMAND INDICATOR M = MULTIPLE READING DIGITAL METER		MOTOR - INDUCTION THREE PHASE DELTA CONNECTION
	VOLTAGE TRANSFORMER - SINGLE TAP		CURRENT TRANSFORMER		MOTOR - INDUCTION THREE PHASE BOTH LEADS OF EACH WINDING EXTERNAL
	VOLTAGE TRANSFORMER - MULTI TAP		METERING CURRENT TRANSFORMER, WITH REMOVABLE LINKS		
	CORE BALANCE TRANSFORMER (EARTH LEAKAGE)				
	BALLAST				
	HEATING ELEMENT (GENERALLY FOR MECHANICAL SERVICES)				
	MECHANICAL AND ELECTRICAL KEY INTERLOCK				
	KEY OPERATED SYMBOL				
	TRANSFORMER DELTA WINDING				HOLD CLOUD
	TRANSFORMER STAR WINDING				REVISION CLOUD
	TRANSFORMER 3 PHASE WINDING, ZIGZAG OR INTERCONNECTED STAR				REVISION TRIANGLE

NOTE:
1. ELECTRICAL SYMBOLS ARE BASED ON AS/NZS 1102:101 TO 110:1997.

REVISION PANEL					
REV	DATE	DRN	DETAILS	APR	CURRENT REV 13/06/23
					AUTHORISED: JUSTIN HAMRA SIGNATURE:
2.1	13/06/23	PB	UPDATED ELECTRICAL SYMBOLS & STANDARDS	JH	
1.1	28/01/22	WS	UPDATED WITH SA WATER REVIEW REQUIREMENTS	SS	
0.1	03/11/20	PAN	UPDATED TITLE BLOCK	SS	
CURRENT REV CONTRACTOR:			CURRENT REV PROJECT:		

DESIGN PANEL			
DESIGNED:	14/02/2018	AUTHORISED:	14/02/2018
SACHIN PANDEY		JUSTIN HAMRA	
DRAWN:	14/02/2018	SIGNATURE:	
TROY O'BRIEN		ORIGINAL SIGNED	
REVIEWED:	14/02/2018		
JONATHON NICHOLLS			
CONTRACTOR:			


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SWITCHBOARD 0 - 100A
 MAIN SWITCHBOARD
 ELECTRICAL SYMBOLS
 ELECTRICAL
 TRANSFORMERS & GENERATORS

A3	TOTAL SHEETS:	2.1
SHT SIZE	PROJECT No: NC1001	REVISION
MAXIMO ID:		
SUPERSEDES: 5003-00001-99		
DRAWING NUMBER		
TYP-03-00001_99d		