

RAND WATER
VEREENIGING PUMPING STATION
CONTRACT RW01491/18


CATHEDRAL HEADER UPGRADE
ELECTRICAL AUXILIARY SUPPLIES

GENERAL ARRANGEMENT, SBS &
SCHEMATIC WIRING DIAGRAMS
COVER SHEET

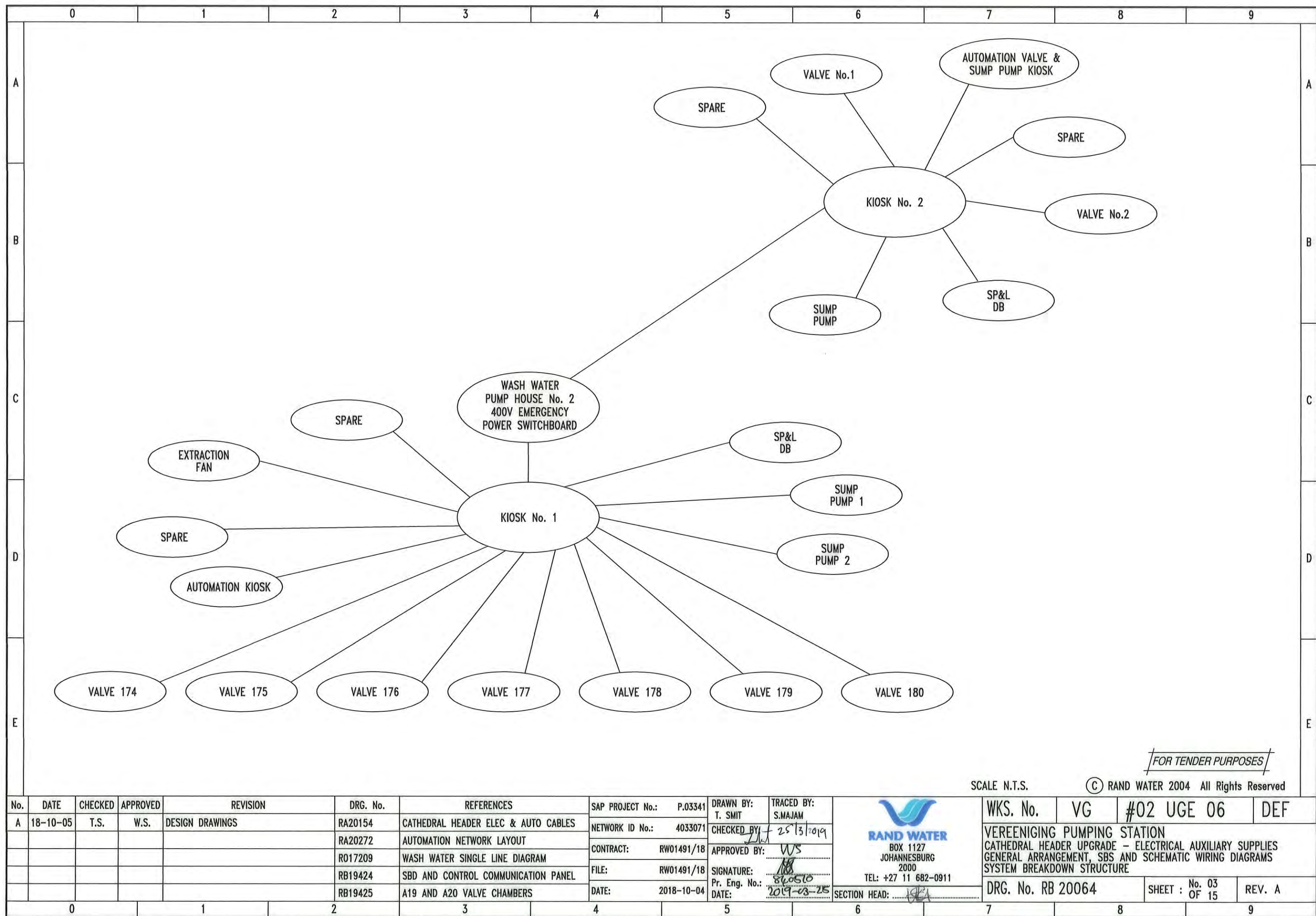
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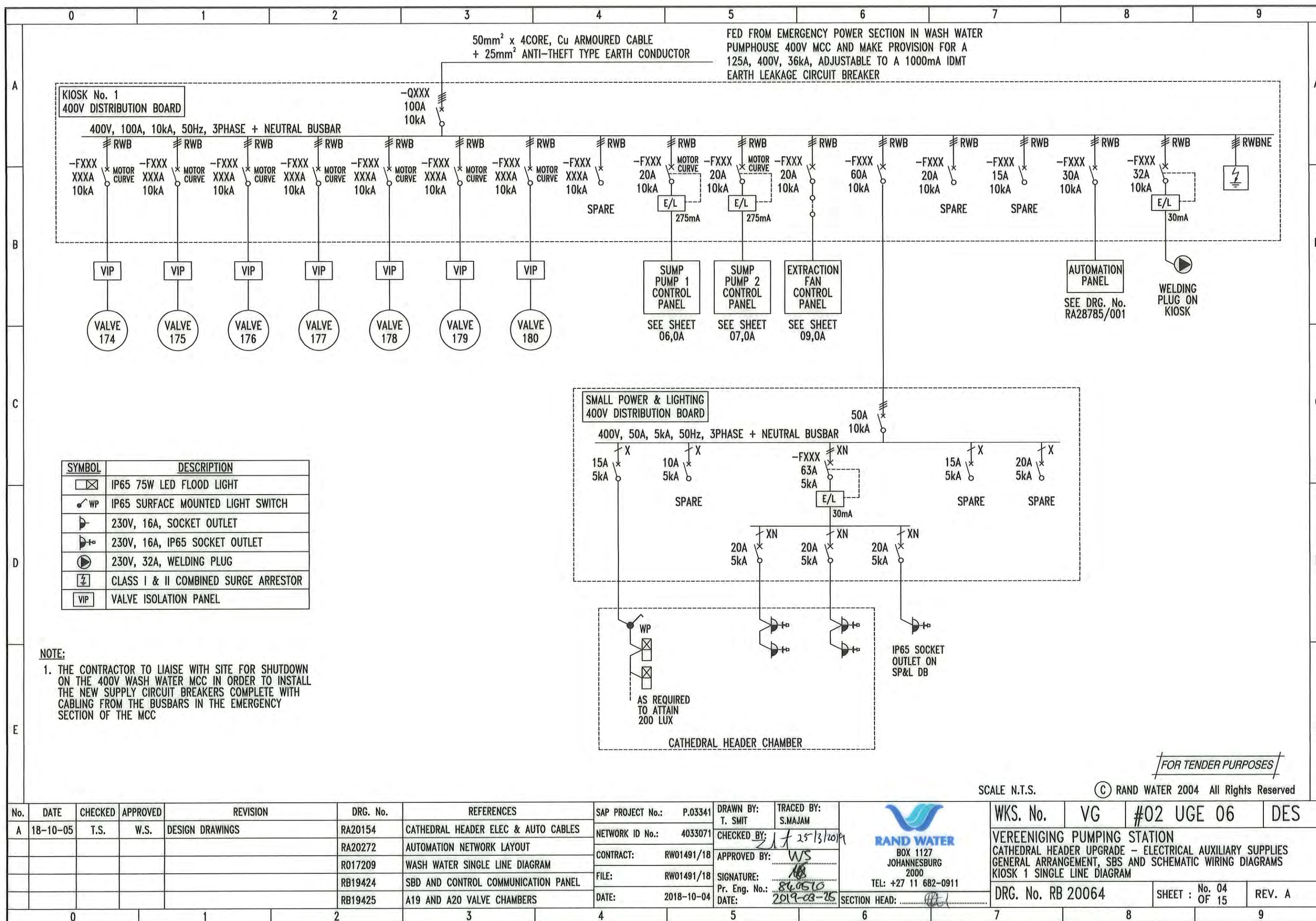
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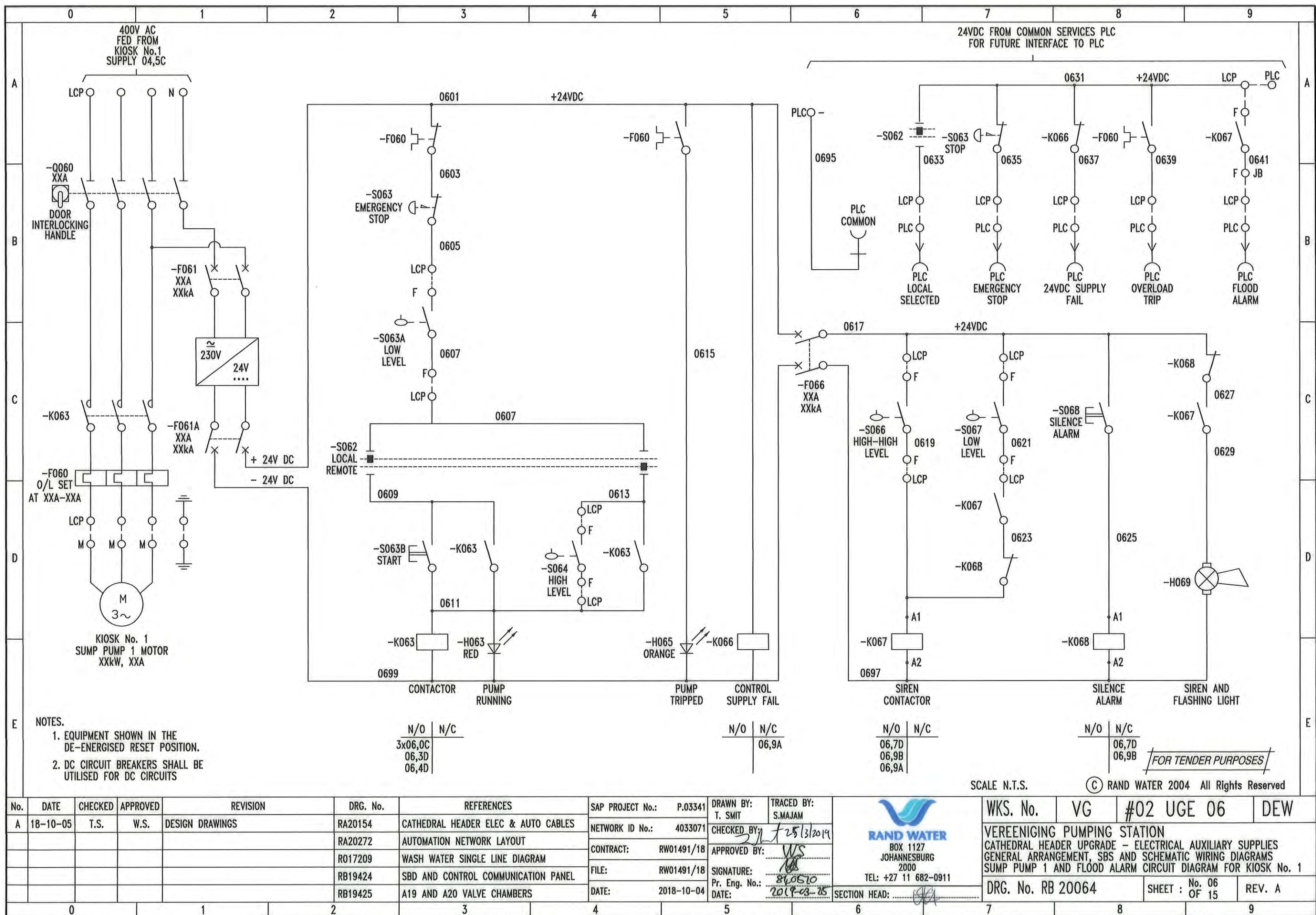
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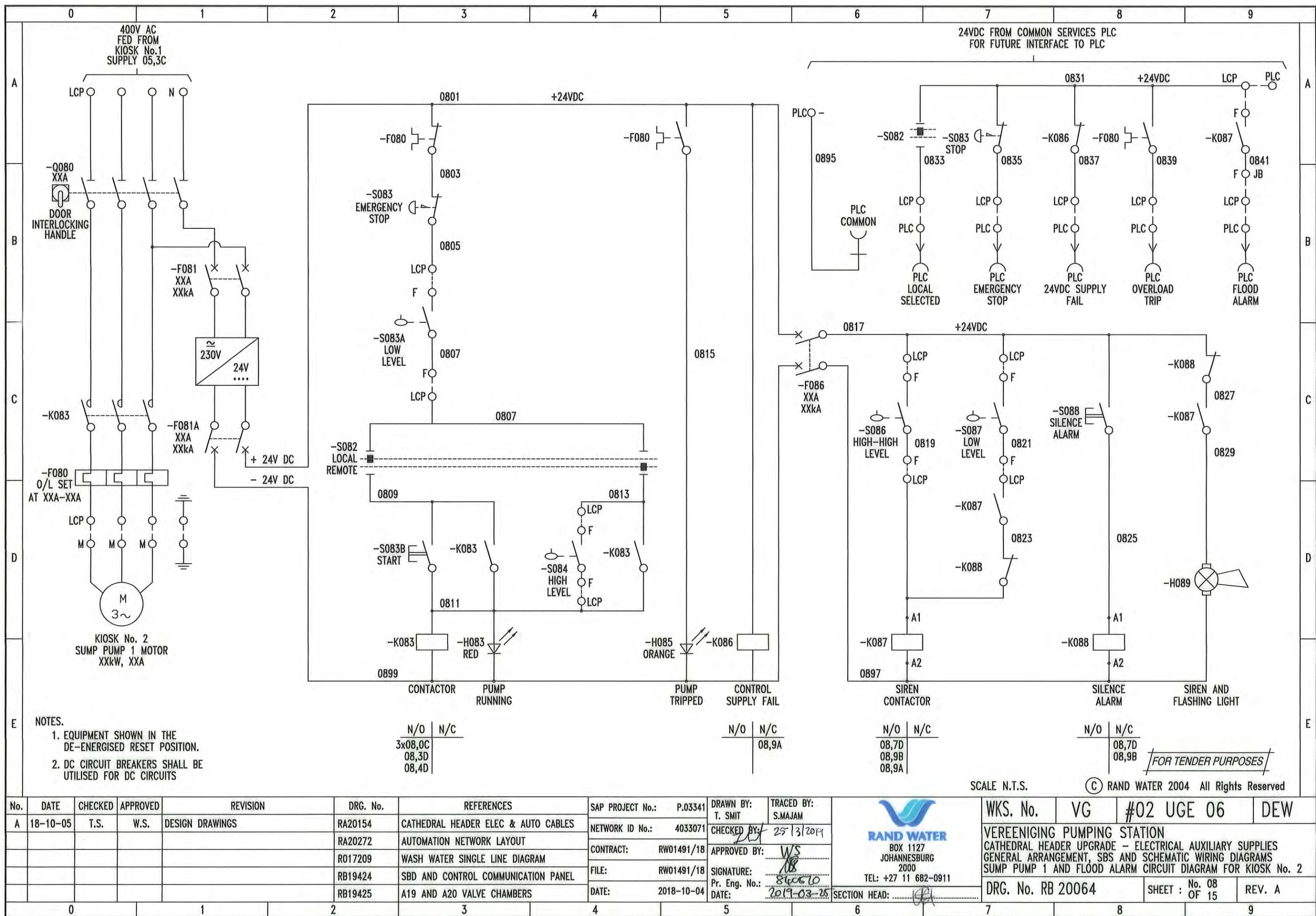
No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03341	DRAWN BY: T. SMIT	TRACED BY: S.MAJAM	 RAND WATER BOX 1127 JOHANNESBURG 2000 TEL: +27 11 682-0911	WKS. No.	VG	#02 UGE 06	DEX					
A	18-10-05	T.S.	W.S.	DESIGN DRAWINGS	RA20154	CATHEDRAL HEADER ELEC & AUTO CABLES	NETWORK ID No.: 4033071	CHECKED BY: <i>[Signature]</i> 25/3/2019	APPROVED BY: <i>WS</i>		VEREENIGING PUMPING STATION CATHEDRAL HEADER UPGRADE – ELECTRICAL AUXILIARY SUPPLIES GENERAL ARRANGEMENT, SBS AND SCHEMATIC WIRING DIAGRAMS COVER SHEET								
					RA20272	AUTOMATION NETWORK LAYOUT	CONTRACT: RW01491/18	SIGNATURE: <i>[Signature]</i> 840610	Pr. Eng. No.: 840610		DRG. No. RB 20064								
					R017209	WASH WATER SINGLE LINE DIAGRAM	FILE: RW01491/18	DATE: 2018-10-04	SECTION HEAD: <i>[Signature]</i>		SHEET : No. 01 OF 15		REV. A						
					RB19424	SBD AND CONTROL COMMUNICATION PANEL													
					RB19425	A19 AND A20 VALVE CHAMBERS													
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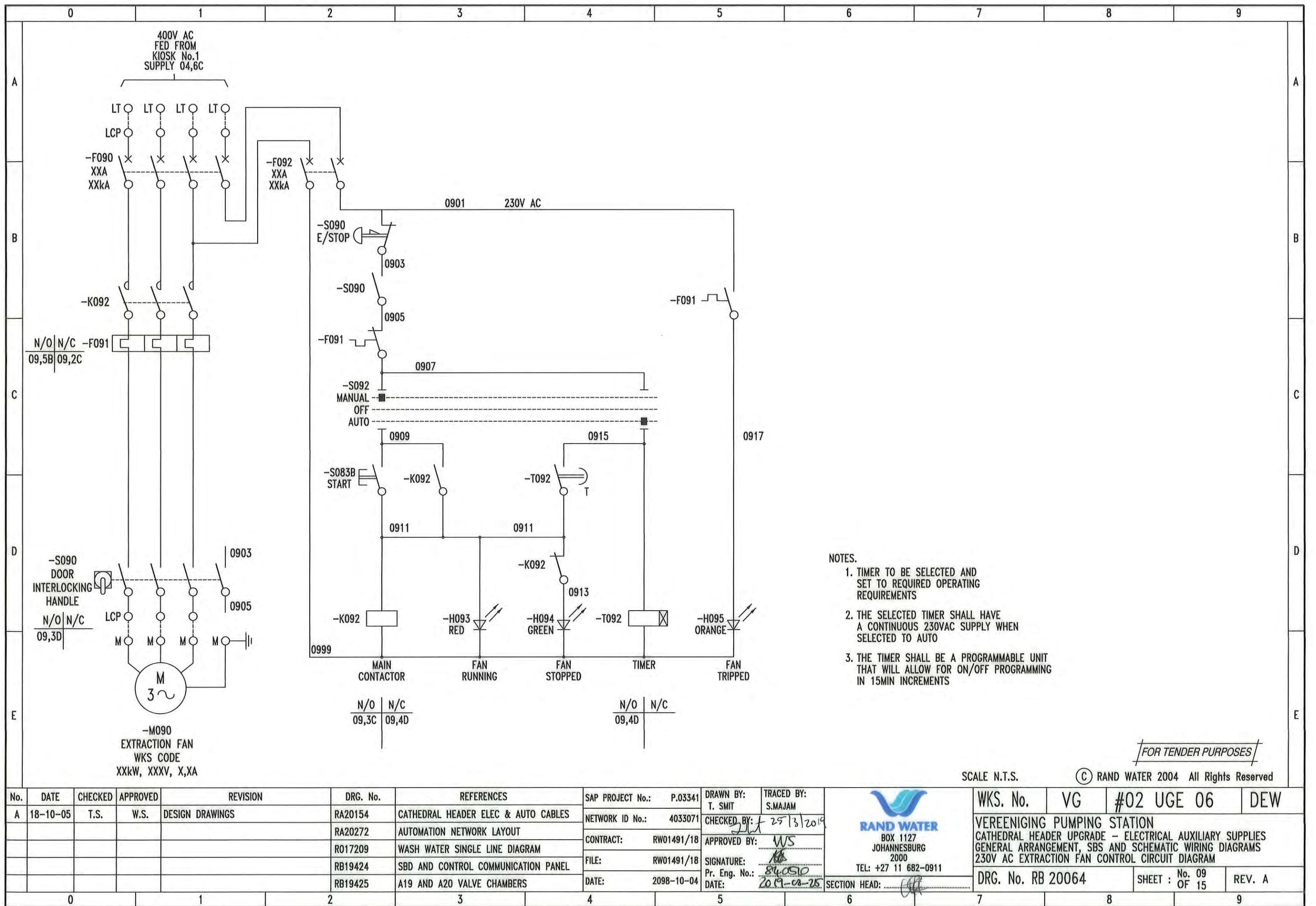
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REV INDEX					LEGEND						
A	A	01.	COVER SHEET								
	A	02.	INDEX SHEET								
	A	03.	SYSTEM BREAKDOWN STRUCTURE								
	A	04.	KIOSK No.1 SINGLE LINE DIAGRAM								
	A	05.	KIOSK No.2 SINGLE LINE DIAGRAM								
	A	06.	SUMP PUMP 1 AND FLOOD ALARM CIRCUIT DIAGRAM FOR KIOSK No. 1								
	A	07.	SUMP PUMP 2 AND FLOOD ALARM CIRCUIT DIAGRAM FOR KIOSK No. 1								
	A	08.	SUMP PUMP 1 AND FLOOD ALARM CIRCUIT DIAGRAM FOR KIOSK No. 2								
	A	09.	230V AC EXTRACTION FAN CONTROL CIRCUIT DIAGRAM								
	A	10.	GENERAL ARRANGEMENT OF 400V DISTRIBUTION KIOSK No. 1								
B	A	11.	GENERAL ARRANGEMENT OF ER4 VALVE CHAMBER KIOSK No. 2								
	A	12.	TYPICAL GENERAL ARRANGEMENT OF VALVE CHAMBER DB								
	A	13.	TYPICAL GENERAL ARRANGEMENT OF VALVE ISOLATION PANEL								
	A	14.	MATERIALS LIST								
	A	15.	CABLE SCHEDULE								
					EF - EXTRACTION FAN CONTROL PANEL						
					LDB - LIGHTING AND SMALL POWER DISTRIBUTION BOARD						
					SP - SUMP PUMP CONTROL PANEL						
					VCP - VALVE CONTROL PANEL						
					VIP - VALVE ISOLATION PANEL						
C											
D											
					REVISION STATUS						
					A+ - PRELIMINARY DESIGN						
					0 - DESIGN DRAWINGS						
					0.A+ - DESIGN CHANGES DURING MANUFACTURE						
					1 - AS BUILD IN FACTORY						
					1.A+ - MODIFICATION ON SITE						
					2 - AS COMMISSIONED ON SITE						
					2.A+ - POST COMMISSIONING MODIFICATIONS						
E											
					FOR TENDER PURPOSES						
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No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03341	DRAWN BY: T. SMIT	TRACED BY: S.MAJAM	WKS. No. VG #02 UGE 06 DEX	
A	18-10-05	T.S.	W.S.	DESIGN DRAWINGS	RA20154	CATHEDRAL HEADER ELEC & AUTO CABLES	NETWORK ID No.: 4033071	CHECKED BY: Jlt 25/3/2019	APPROVED BY: WS	VEREENIGING PUMPING STATION	
					RA20272	AUTOMATION NETWORK LAYOUT	CONTRACT: RWD1491/18	SIGNATURE: [Signature]	Pr. Eng. No.: 860810	CATHEDRAL HEADER UPGRADE - ELECTRICAL AUXILIARY SUPPLIES	
					R017209	WASH WATER SINGLE LINE DIAGRAM	FILE: RWD1491/18	DATE: 2019-02-25	SECTION HEAD: [Signature]	GENERAL ARRANGEMENT, SBS AND SCHEMATIC WIRING DIAGRAMS	
					RB19424	SBD AND CONTROL COMMUNICATION PANEL				INDEX SHEET	
					RB19425	A19 AND A20 VALVE CHAMBERS	DATE: 2018-10-04			DRG. No. RB 20064	
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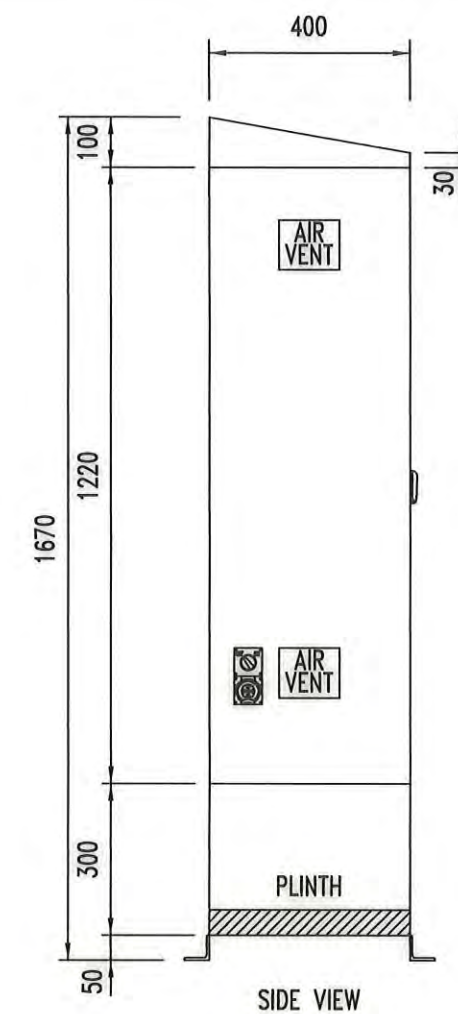









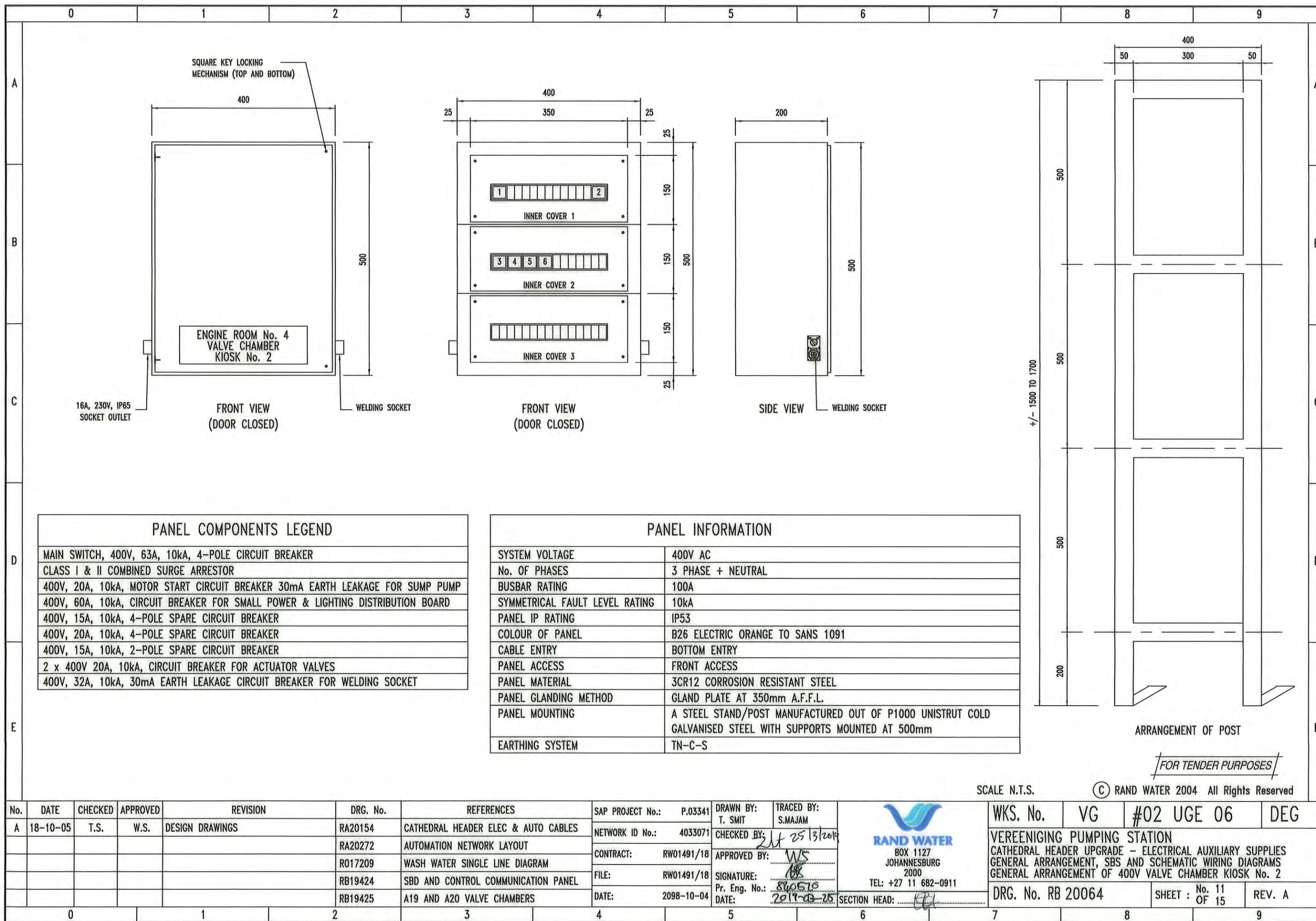


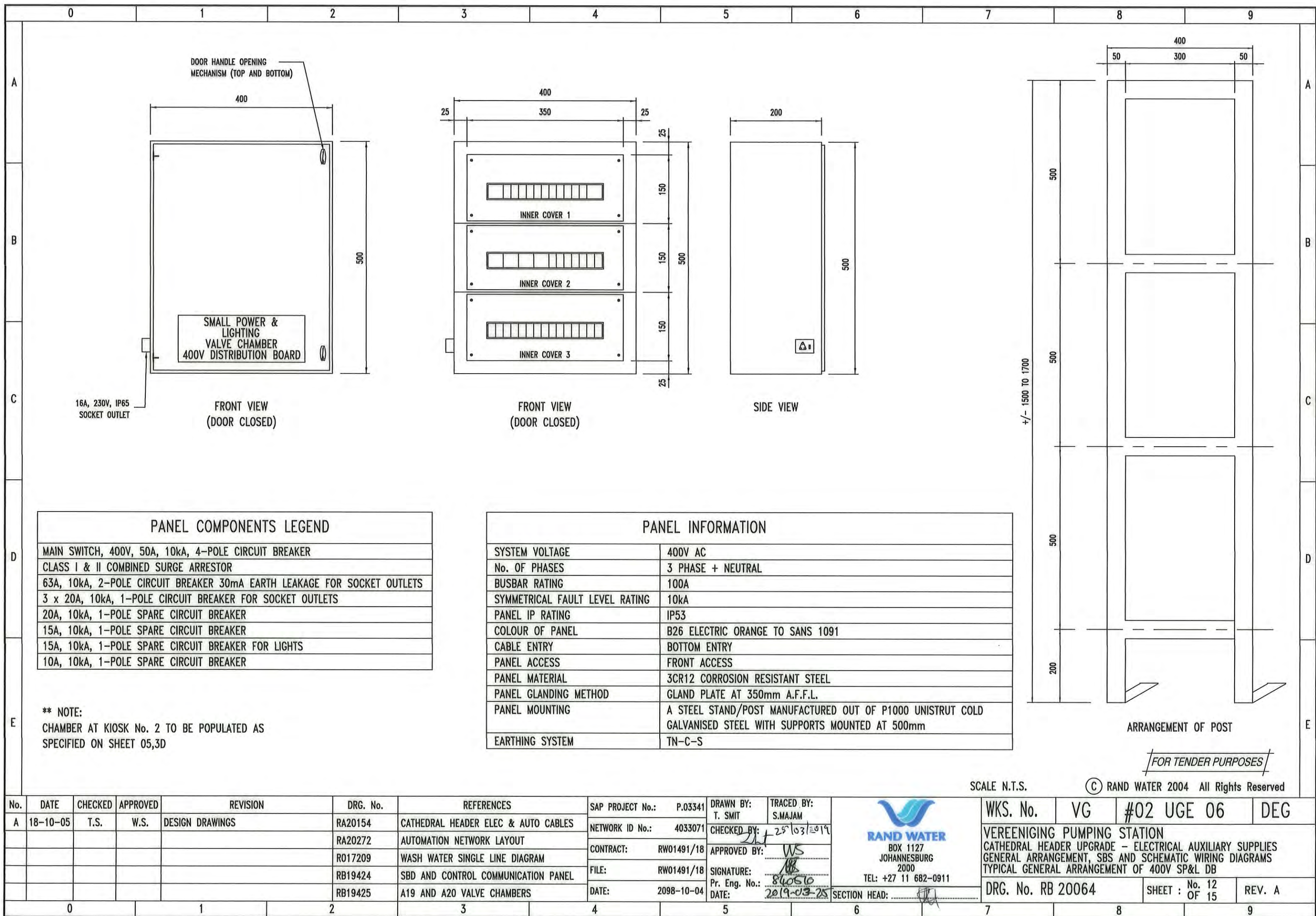


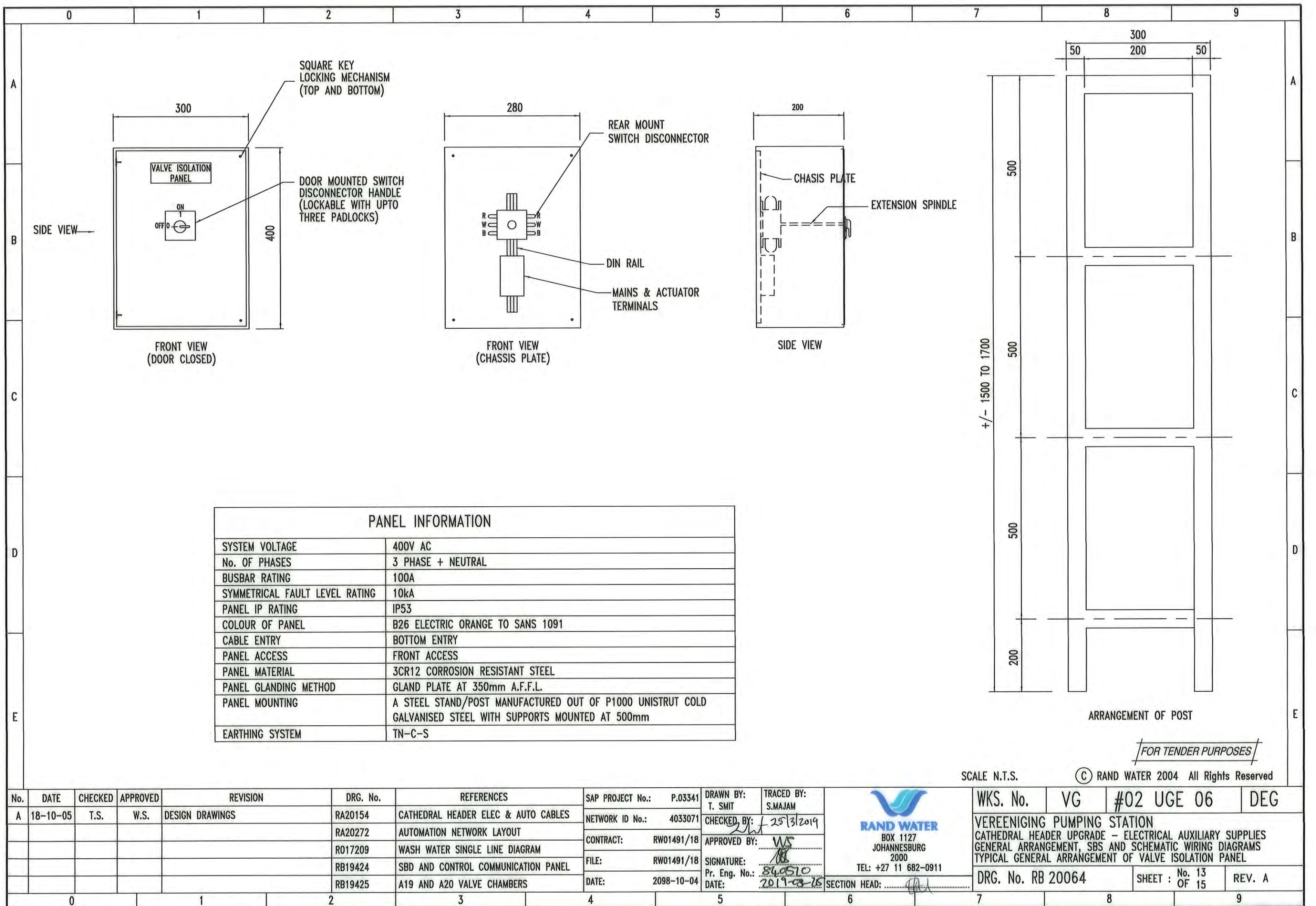
PANEL INFORMATION	
SYSTEM VOLTAGE	400V AC
No. OF PHASES	3 PHASE + NEUTRAL
BUSBAR RATING	100A
SYMMETRICAL FAULT LEVEL RATING	10ka
PANEL IP RATING	IP53
COLOUR OF PANEL	B26 ELECTRIC ORANGE TO SANS 1091
CABLE ENTRY	BOTTOM ENTRY
PANEL ACCESS	FRONT ACCESS
PANEL MATERIAL	3CR12 CORROSION RESISTANT STEEL
PANEL GLANDING METHOD	GLAND PLATE AT 350mm A.F.F.L.
PANEL MOUNTING	FLOOR STANDING ON A 50mm HIGH ANGLE IRON STAN BOLTED TO THE CONCRETE SLAB / PLINTH
EARTHING SYSTEM	TN-C-S

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No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03341	DRAWN BY: T. SMIT	TRACED BY: S.MAJAM	 RAND WATER BOX 1127 JOHANNESBURG 2000 TEL: +27 11 682-0911	WKS. No.	VG	#02 UGE 06	DEG					
A	18-10-05	T.S.	W.S.	DESIGN DRAWINGS	RA20154	CATHEDRAL HEADER ELEC & AUTO CABLES	NETWORK ID No.: 4033071	CHECKED BY: <i>[Signature]</i> 25/3/2019			VEREENIGING PUMPING STATION CATHEDRAL HEADER UPGRADE – ELECTRICAL AUXILIARY SUPPLIES GENERAL ARRANGEMENT, SBS AND SCHEMATIC WIRING DIAGRAMS GENERAL ARRANGEMENT OF 400V DISTRIBUTION KIOSK No. 1	DRG. No. RB 20064			SHEET : No. 10 OF 15	REV. A			
					RA20272	AUTOMATION NETWORK LAYOUT	CONTRACT: RW01491/18	APPROVED BY: <i>WS</i>											
					R017209	WASH WATER SINGLE LINE DIAGRAM	FILE: RW01491/18	SIGNATURE: <i>[Signature]</i>											
					RB19424	SBD AND CONTROL COMMUNICATION PANEL	Pr. Eng. No.: <i>[Signature]</i>												
					RB19425	A19 AND A20 VALVE CHAMBERS	DATE: 2019-03-15												
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No.	DATE	CHECKED	APPROVED	REVISION	DRG. No.	REFERENCES	SAP PROJECT No.: P.03341	DRAWN BY: T. SMIT	TRACED BY: S.MAJAM	 <div>BOX 1127 JOHANNESBURG 2000 TEL: +27 11 682-0911</div>	WKS. No.	VG	#02 UGE 06	DEG
A	18-10-05	T.S.	W.S.	DESIGN DRAWINGS	RA20154	CATHEDRAL HEADER ELEC & AUTO CABLES	NETWORK ID No.: 4033071	CHECKED BY: <i>[Signature]</i> 25/3/2019	APPROVED BY: <i>[Signature]</i>		VEREENIGING PUMPING STATION CATHEDRAL HEADER UPGRADE – ELECTRICAL AUXILIARY SUPPLIES GENERAL ARRANGEMENT, SBS AND SCHEMATIC WIRING DIAGRAMS MATERIALS LIST			
					RA20272	AUTOMATION NETWORK LAYOUT	CONTRACT: RW01491/18	SIGNATURE: <i>[Signature]</i>	Pr. Eng. No.: 810510		DRG. No. RB 20064			
					R017209	WASH WATER SINGLE LINE DIAGRAM	FILE: RW01491/18	DATE: 2019-03-25	SECTION HEAD: <i>[Signature]</i>		SHEET : No. 14 OF 15			
					RB19424	SBD AND CONTROL COMMUNICATION PANEL	DATE: 2098-10-04				REV. A			

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XXXX PUMPING STATION ELECTRICAL CABLES NUMBERS AND DETAILS																									CABLE INFORMATION 2: - TESTED 3: - TERMINATED 4: - INVOICED							
SCHEME: XX										CATEGORY: POWER AND CONTROL CABLES																						
A: 600/1000V PVCSWAPVC B: 600/1000V OA-SC-PVCSWAPVC C: 300/500V 1ND/OA-SC-MP-PVCSWAPVC										D: 8.7/15kV XLPEWAPVC TYPE A1 E: 600/1000V PILCPVA TYPE A1 F: 6.35/11kV XLPESWAPVC TYPE A					G: 1900/3300V PVIPSWAPVC H: 8.75/15kV PILCSWAPVC TYPE A1 I: 6.35/11kV XLPESWAPVC TYPE B					J: 12.7/22kV XLPEPVC TYPE B K: 3.8/6.6kV XLPESWAPVC TYPE A L: 150/250 IND/OA/-SC-TwPrPVCSWAPVC					M: 150/250V ID/OA-SC-TrPVCSWAPVC N: 12.7/22kV PILCSWAPVC P: TRIAD TEMPERATURE CABLE							
ITEM	CABLE	FROM	TO	GRADE	SIZE	No. OF	CABLE	1(R)	2(W)	3(B)	4(BK)	5(G)	6(BR)	7(Y)	8	9	10	11	12	13	14	15	16	17	18	19	LENGTH	CABLE	FROM	TO		
	NUMBER			(V)	mm ²	CORES	TYPE	1A/20	2A/21	3A/22	4A/23	5A/24	6A/25	7A/26	8A/27	9A/28	10A/29	11A/30	12A/31	13A/32	14A/33	15A/34	16A/35	17A/36	18A/37	19A/38	(m)	INFO				
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