

BLOCK - C & D - SERVICE ACCESS, EMERGENCY & SUPPORT SERVICE**ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

Item	Description	Qty	Unit	Rate	Amount
1.1	Distribution Boards Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrester. Special note, the accessories are inclusive on the quoted price				
1.1.1	Distribution Board	Supply Install	1 1	No. No.	
1.1.2	Security System Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.				
1.1.2.1	360 Degree resolution CCTV Camera	Supply Install	4 4	No. No.	
1.1.2.3	Double Door Access Controller Panel	Supply Install	1 1	No. No.	
1.1.2.4	Fingerprint Keypad Reader-Standalone	Supply Install	1 1	No. No.	
1.1.2.5	Magnetic Lock 544 KG Holding Force	Supply Install	1 1	No. No.	
1.1.2.6	Emergency Door Release Call Point (Breaker Glass)	Supply Install	1 1	No. No.	
1.2	Ancillary Distribution Boards and Outlets Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).				
1.2.1	Data, Telephone and Ancillary Coverplates	Supply Install	4 4	No. No.	
1.3	Cables Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.				
1.3.1	25mm ² 4C Aluminium Cable PVC Mains 600/1000V	Supply Install	35 35	m m	
1.4	Cable Terminations Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.				
1.4.1	25mm ² 4C Aluminium Cable PVC Mains 600/1000V	Supply Install	2 2	No. No.	
Total for Bill No. 1 : Carried Forward to Summary Page					

Item	Description		Qty	Unit	Rate
1.5	Cable Sleeves Supply and Installation of Cable Sleeves as specified, in trenches				
1.5.1	110mm Ø Flexible Cable Sleeve	Supply	35	m	
		Install	35	m	
	EXTRA ON upvc piping for: 100mm Diameter long radius bend		35	m3	
1.6	EXCAVATIONS In trenches for cables and sleeves		35	m3	
	Extra over soft excavation intermediate		10	m3	
	Extra over soft excavation in hard rock		10	m3	
1.7	Conduit Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees.				
1.7.1	25mm Conduit	Supply	610	m	
		Install	610	m	
1.8	Conduit Boxes and Ends Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.				
1.8.1	25mm Conduit (100 x 100mm) Galvanized Box	Supply	25	No.	
		Install	25	No.	
1.9	Conduit Ends Terminate and connect one pair of conduit ends including lock nuts, bushes, etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.				
1.9.1	25mm uPVC Conduit	Supply	35	No.	
		Install	35	No.	
1.10	Conductors Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.				
1.10.1	2,5 mm ² PVC Conductors Red	Supply	500	m	
		Install	500	m	
	2,5 mm ² PVC Conductors Black	Supply	500	m	
		Install	500	m	
	2,5 mm ² PVC Conductors Pink	Supply	500	m	
		Install	500	m	
	4 x 2 PVC Wall Box	Supply	25	No.	
		Install	25	No.	
	Hospital Saddle	Supply	20	No.	
		Install	20	No.	
	4-Way Box PVC	Supply	40	No.	
		Install	40	No.	
1.10.2	4 mm ² PVC Conductors Blue	Supply	500	m	
		Install	500	m	
	4 mm ² PVC Conductors Brown	Supply	500	m	
		Install	500	m	
	4 mm ² PVC Conductors Earth	Supply	300	m	
		Install	300	m	
Total for Bill No. 1 : Carried Forward to Summary Page					

Item	Description		Qty	Unit	Rate	Amount
	Adaptors 25mm	Supply	20	No.		
		Install	20	No.		
	4 x 4 PVC Wall Box	Supply	45	No.		
		Install	45	No.		
	Coupling 25mm	Supply	15	No.		
		Install	15	No.		
1.12	<u>Light Switches</u>					
	Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates.					
1.12.1	16A 1 Lever 1 Way	Supply	18	No.		
		Install	18	No.		
1.12.2	16A 1 Lever 2 Way	Supply	6	No.		
		Install	6	No.		
1.13	<u>Luminaires</u>					
	Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.					
1.13.1	Type B1					
	50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Regent, Beka, Rubicon					
		Supply	26	No.		
		Install	26	No.		
1.13.2	Type J1.1					
	Round LED Bulkhead Light. 18w, 220-240v ac, IP54					
		Supply	24	No.		
		Install	24	No.		
1.14	<u>Daylight Switch</u>					
	Supply and installation of approved daylight switch.					
1.14.1	Daylight Switch	Supply	1	No.		
		Install	1	No.		
1.15.2	Elbows Internal/External	Supply	15	No.		
		Install	15	No.		
1.15.3	End Caps	Supply	15	No.		
		Install	15	No.		
1.15.4	Cover Joiner Clips	Supply	15	No.		
		Install	15	No.		
1.15.5	16A SSO's c/w cover on Powerskirting	Supply	12	No.		
		Install	12	No.		
1.16.7	RJ11 Connector with cradle/ cover and mod blank	Supply	2	m		
		Install	2	m		
1.16.8	RJ45 Connector with cradle/ cover mod blank	Supply	2	m		
		Install	2	m		
1.16	<u>Socket Outlets</u>					
	Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate.					
1.16.1	5A Single SSO c/w coverplate.Legrand type.	Supply	1	No.		
		Install	1	No.		
Total for Bill No. 1 : Carried Forward to Summary Page						

Item	Description		Qty	Unit	Rate	Amount
1.16.2	16A Double SSO c/w coverplate. Legrand type.	Supply	16	No.		
		Install	16	No.		
1.16.3	16A Dedicated Double SSO c/w coverplate. Legrand type.	Supply	20	No.		
		Install	20	No.		
1.16.4	16A UPS Single SSO c/w coverplate. Legrand type.	Supply	3	No.		
		Install	3	No.		
1.16.5	Medical Gas Outlets	Supply	6	No.		
		Install	6	No.		
1.16.6	Powerskirting, Legrand Type	Supply	28	m		
		Install	28	m		
1.16.7	Bedhead Trunking					
	The adaptable HU10-01 is a wall mounted horizontal bedhead service system, which includes customized electrical and medical gas outlets to suit the clients' unique requirements.	Supply	6	m		
		Install	6	m		
1.17	Isolators					
	Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings					
1.17.1	20A Double2 Pole Flush waterproof Isolator for HVAC	Supply	6	No.		
		Install	6	No.		
1.17.2	32A Double-Pole waterproof Isolator for Handdryer	Supply	2	No.		
		Install	2	No.		
1.17.3	5A 2 Pole Flush waterproof Isolator	Supply	1	No.		
		Install	1	No.		
1.17.4	20A 2 Pole Flush waterproof Isolator - Geysler	Supply	4	No.		
		Install	4	No.		
Total for Bill No. 1 : Carried Forward to Summary Page						

Item	Description		Qty	Unit	Rate	Amount
1.18	Electrical connection of appliances and installations.					
1.18.1	Total Airconditioning Plant (Internal/External Units): Single and three phase	Connect	3	No.		
1.18.2	Hand dryers	Connect	2	No.		
1.19	TELEPHONE INSTALLATION Supply and installation of the following items for the Telephone Installation					
1.19.1	25mm PVC Conduit	Supply Install	40 40	m m		
1.19.2	25mm PVC Conduit end	Supply Install	5 5	No. No.		
1.19.3	25mm PVC Conduit box	Supply Install	5 5	No. No.		
1.20	DATA INSTALLATION Supply and installation of the following items for the Data installation					
1.20.1	25mm PVC Conduit	Supply Install	40 40	m m		
1.20.2	25mm PVC Conduit end	Supply Install	5 5	No. No.		
1.20.3	25mm PVC Conduit box	Supply Install	5 5	No. No.		
1.21	Nurse Call System Supply and installation of approved Nurse Call System.					
1.20.1	Nurse call Push Button	Supply Install	3 3	No. No.		
1.20.2	Emergency call Push Button	Supply Install	3 3	No. No.		
1.20.3	Nurse call Light	Supply Install	2 2	No. No.		
1.20.4	Loud Speaker	Supply Install	2 2	No. No.		
Total for Bill No. 1 : Carried Forward to Summary Page						

BLOCK - H - YOUTH & OUTREACH CENTER**ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION A**

Item	Description	Qty	Unit	Rate	Amount
1.1	Distribution Boards Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrester. Special note, the accessories are inclusive on the quoted price				
1.1.1	Distribution Board	Supply Install	1 1	No. No.	
1.1.2	Security System Installation of Camera Sytem equipment and All Access Control Systems as specified of the Detailed Specification.				
1.1.2.1	360 Degree resolution CCTV Camera	Supply Install	2 2	No. No.	
1.1.2.3	Double Door Access Controller Panel	Supply Install	1 1	No. No.	
1.1.2.4	Fingerprint Keypad Reader-Standalone	Supply Install	1 1	No. No.	
1.1.2.5	Magnetic Lock 544 KG Holding Force	Supply Install	1 1	No. No.	
1.1.2.6	Emergency Door Release Call Point (Breaker Glass)	Supply Install	1 1	No. No.	
1.2	Ancillary Distribution Boards and Outlets Supply and installation of the following metal Ancillary Distribution Boards and coverplates for Data and Telephone outlets. (Conduit and Conduit boxes given elsewhere).				
1.2.1	Data, Telephone and Ancillary Coverplates	Supply Install	12 12	No. No.	
1.3	Cables Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.				
1.3.1	25mm ² 4C Aluminium Cable PVC Mains 600/1000V	Supply Install	50 50	m m	
1.4	Cable Terminations Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.				
1.4.1	25mm ² 4C Aluminium Cable PVC Mains 600/1000V	Supply Install	2 2	No. No.	
Total for Bill No. 1 : Carried Forward to Summary Page					

Item	Description	Qty	Unit	Rate
1.5	Cable Sleeves Supply and Installation of Cable Sleeves as specified, in trenches			
1.5.1	110mm Ø Flexible Cable Sleeve	Supply Install	50 50	m m
	EXTRA ON upvc piping for: 100mm Diameter long radius bend		50	m3
1.6	EXCAVATIONS In trenches for cables and sleeves extra over soft excavation intermediate extra over soft excavation in hard rock		50 15 15	m3 m3 m3
1.7	Conduit Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees.			
1.7.1	25mm Conduit	Supply Install	450 450	m m
1.8	Conduit Boxes and Ends Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.			
1.8.1	25mm Conduit (100 x 100mm) Galvanized Box	Supply Install	20 20	No. No.
1.9	Conduit Ends Terminate and connect one pair of conduit ends including lock nuts, bushes. etc. connecting into board tray, wiring channel etc. including cutting holes for conduit entries, but excluding conduit box.			
1.9.1	25mm uPVC Conduit	Supply Install	25 25	No. No.
1.10	Conductors Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.			
1.10.1	2,5 mm ² PVC Conductors Red	Supply Install	500 500	m m
	2,5 mm ² PVC Conductors Black	Supply Install	500 500	m m
	2,5 mm ² PVC Conductors Pink	Supply Install	500 500	m m
	4 x 2 PVC Wall Box	Supply Install	11 11	No. No.
	Hospital Saddle	Supply Install	20 20	No. No.
	4-Way Box PVC	Supply Install	15 15	No. No.
1.10.2	4 mm ² PVC Conductors Blue	Supply Install	450 450	m m
	4 mm ² PVC Conductors Brown	Supply Install	450 450	m m
Total for Bill No. 1 : Carried Forward to Summary Page				

Item	Description		Qty	Unit	Rate	Amount
	4 mm ² PVC Conductors Earth	Supply	200	m		
		Install	200	m		
	Adaptors 25mm	Supply	20	No.		
		Install	20	No.		
	4 x 4 PVC Wall Box	Supply	24	No.		
		Install	24	No.		
	Coupling 25mm	Supply	15	No.		
		Install	15	No.		
1.11	<u>Light Switches</u>					
	Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates.					
1.11.1	16A 1 Lever 1 Way	Supply	7	No.		
		Install	7	No.		
1.11.2	16A 1 Lever 2 Way	Supply	4	No.		
		Install	4	No.		
1.12	<u>Luminaires</u>					
	Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.					
1.12.1	Type B1					
	50w 1200 x 600 LED Panel Surface Mount Non-Dimmable, 3400lm, 5000k, as per Beka, Regent, Rubicon, Altsa					
		Supply	16	No.		
		Install	16	No.		
1.12.1	Type J1.1					
	Round LED Bulkhead Light, 18w, 220-240v ac, IP54					
		Supply	15	No.		
		Install	15	No.		
1.13	<u>Daylight Switch</u>					
	Supply and installation of approved daylight switch.					
1.13.1	Daylight Switch	Supply	1	No.		
		Install	1	No.		
1.13.2	Elbows Internal/External	Supply	15	No.		
		Install	15	No.		
1.13.3	End Caps	Supply	15	No.		
		Install	15	No.		
1.13.4	Cover Joiner Clips	Supply	15	No.		
		Install	15	No.		
1.13.5	16A SSO's c/w cover on Powerskirting	Supply	13	No.		
		Install	13	No.		
Total for Bill No. 1 : Carried Forward to Summary Page						

Item	Description		Qty	Unit	Rate	Amount
1.16	Socket Outlets Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate.					
1.16.1	5A Single SSO c/w coverplate.Legrand type.	Supply	1	No.		
		Install	1	No.		
1.16.2	16A Double SSO c/w coverplate.Legrand type.	Supply	8	No.		
		Install	8	No.		
1.16.3	16A Dedicated Double SSO c/w coverplate.Legrand type.	Supply	12	No.		
		Install	12	No.		
1.16.4	16A UPS Single SSO c/w coverplate.Legrand type.	Supply	1	No.		
		Install	1	No.		
1.16.5	Powerskirting, Legrand Type	Supply	30	m		
		Install	30	m		
1.16.6	RJ11 Connector with cradle/ cover and mod blank	Supply	4	No.		
		Install	4	No.		
1.16.7	RJ45 Connector with cradle/ cover mod blank	Supply	4	No.		
		Install	4	No.		
1.17	Isolators Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings					
1.17.1	20A Double2 Pole Flush waterproof Isolator for HVAC	Supply	4	No.		
		Install	4	No.		
1.17.2	5A 2 Pole Flush waterproof Isolator	Supply	1	No.		
		Install	1	No.		
1.17.3	20A 2 Pole Flush waterproof Isolator - Geysler	Supply	2	No.		
		Install	2	No.		
1.18	Electrical connection of appliances and installations.					
1.18.1	Total Airconditioning Plant (Internal/External Units): Single and three phase	Connect	4	No.		
1.19	TELEPHONE INSTALLATION Supply and installation of the following items for the Telephone Installation					
1.19.1	25mm PVC Conduit	Supply	35	m		
		Install	35	m		
1.19.2	25mm PVC Conduit end	Supply	9	No.		
		Install	9	No.		
1.19.3	25mm PVC Conduit box	Supply	5	No.		
		Install	5	No.		
1.20	DATA INSTALLATION Supply and installation of the following items for the Data installation					
1.20.1	25mm PVC Conduit	Supply	35	m		
		Install	35	m		
1.20.2	25mm PVC Conduit end	Supply	8	No.		
		Install	8	No.		
1.20.3	25mm PVC Conduit box	Supply	5	No.		
		Install	5	No.		
1.21	Nurse Call System Supply and installation of approved Nurse Call System.					
1.20.1	Loud Speaker	Supply	1	No.		
		Install	1	No.		
Total for Bill No. 1 : Carried Forward to Summary Page						

LIGHTNING PROTECTION**BILL OF QUANTITIES****SECTION A**

Note: All rates for items contained in this Bill shall be computed excluding the applicable Value Added Tax. The Contractor shall include in the rates for any work or anything in the Conditions of Contract or Specification or shown on the Drawings not included elsewhere in the Bills of Quantities and for which he considers charges are required.

Allowance for Complete Lightning Protection Installation of all the Ideal Clinics.

The Lightning Protection installation is to be undertaken by a specialist and is required to provide two soil resistivity tests, one at the beginning of the project and one at completion. The first test is to be conducted within 14 days of the contractor being appointed. The Lightning Protection installer is to provide a Test Certificate in accordance with SANS 10313. The Contractor to provide a lightning protection design report based on Sans 10313 & 62305. The contractor to note that all conduit provisions for the Lightning Protection installation are to be recessed and provided by the Electrical Sub-Contractor.

Item	Description	Qty	Unit	Rate	Amount
1.	<u>Down Conductors</u> Supply and fixing on surface in an approved manner of aluminium conductor including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.				
1.1	50mm ² aluminium conductor	108	m		
2.	<u>Air Terminal Conductors</u> Supply and fixing on surface in an approved manner of 50mm ² aluminium conductor including all fixing accessories, such as insulating sleeves and stand-off brackets, but not including terminations. Rates quoted shall allow for wastage, off-cuts and joints.	108	m		
3.	<u>Terminations of Down Conductors to Air Terminals</u> Termination of aluminium conductor to metal roof as specified in Clause A1.4 including lugs and making off of the ends etc.				
3.1	50mm ² aluminium conductor to metal roof.	24	No.		
4.	<u>Earthing Conductors</u> Supply and laying in the ground and in conduits of copper earth wire as specified in Clause A1.5 excluding terminations. Rates quoted shall allow for wastage, off-cut and joints.				
4.1	50mm ² Green PVC insulated copper conductor	108	m		
5.	<u>Termination of Earthing Conductors to Down Conductors</u> Termination of earth conductor to aluminium down conductor and earth electrodes including making off the ends, lugs, clamps, etc.				
5.1	50mm ² Termination to 50mm ² conductor	24	No.		
5.2	Connecting conductor all around the roof	632	m		
6.	<u>Earth Electrodes</u> Supply and installation of earth electrodes generally as specified in Clause A1.3.3.				
6.1	3,6m long earth electrodes	24	No.		
7.	<u>Termination of Earth Conductors to Earth Electrodes</u> Termination of Earth Conductors to Earth Electrodes including making off of ends, lugs, clamps, etc.				
7.1	50mm ² Earth Conductor to Earth Electrode	24	No.		
8.	<u>General Earth Bonding</u> Bonding of metal drainage down pipes and items.	24	Item		
9.	<u>Testing</u> Supply and testing apparatus and testing in accordance with SABS Code.				
9.1	Testing of joint continuity	2	Item		
9.2	Testing of Lightning Protection System	2	Item		
9.3	Testing of Earthing Points	2	Item		
9.4	Soil Resistivity Test and Report	2	Item		
Total for Bill No. 2 : Carried Forward to Summary Page					

ELECTRICAL INSTALLATION MECHANICAL EQUIPMENT

BILLS OF QUANTITIES

SECTION A

Item	Description	Qty	Unit	Rate	Amount
1.1	<u>PUMPS</u> Refer to the attached Specifications for the Electrical Installation. The Tenderer must at all times read the Bills of Quantities in conjunction with the specification and drawings prior to pricing this section. Items 1-4 below applies to the entire electrical installation for the Clinic.				
1.1.1	<u>General Earthing</u> Earthing and bonding of all other metal to comply with regulations.	1	Item		
1.1	<u>Distribution Boards</u> Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrestor. Special note, the accessories are inclusive on the quoted price				
1.1.1	Distribution Board	Supply Install	1 1	No. No.	
1.2	<u>Isolators</u> Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings				
1.2.1	20A Double2 Pole Flush waterproof Isolator for Pumps	Supply Install	3 3	No. No.	
1.2.3	20A 4 Pole Flush waterproof Isolator _ Fire Jockey Pump	Supply Install	1 1	No. No.	
2.	<u>Cables</u> Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.				
2.1	70 mm ² 4 core Al PVC 400V from the Main Kiosk to the pump DB	Supply Install	50 50	m m	
2.2	16 mm ² 4 core Al PVC 400V from the Pump DB to the Isolators	Supply Install	20 20	m m	
	<u>Cable Terminations</u> Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.				
2.3	70 mm ² 4 core Al PVC 400V	Supply Install	2 2	No. No.	
2.4	16 mm ² 4 core Al PVC 400V	Supply Install	8 8	No. No.	
2.5	<u>Wireway Installation (for Electrical Supply Cables)</u> 114mm Wide Medium Duty Galvanized Return Flange Cable Tray. Mounted Underside of Ceiling Complete with all Accessories. Covers, 90° Bends, T-Junctions and rnd Caps etc.	Supply Install	20 20	m m	

3.	EXCAVATIONS				
3.1	Excavations other than bulk in soft excavation not exceeding 2m deep for: Allowance is to be made for the installation of cable markers and warning sheets				
3.2	In trenches for cables and sleeves	100	m ³		
3.3	Extra over "soft excavation" for excavation in intermediate excavations	20	m ³		
3.4	Extra over "soft excavation" for excavation in hard rock excavations	20	m ³		
3.5	Filling obtained from excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density				
3.6	Backfilling of trenches Risk of collapse of excavations other than bulk	100	m ³		
3.7	Sides of trenches and hole excavations not exceeding 0.8m deep Manholes Supply and installation of manholes as shown on the drawings. Refer to Clause B6	100	m ³		
3.8	600 x 600mm Concrete Manholes Cable Markers Allow to supply and install cable markers	2	No.		
3.9	PVC warning marking tape	100	m		
3.9.1	Concrete cable route markers	2	No.		
Total for Bill No. 1 : Carried Forward to Summary Page					

ELECTRICAL INSTALLATION EXTERNAL WORKS

BILLS OF QUANTITIES

SECTION A

Item	Description	Qty	Unit	Rate	Amount
1.1	ELECTRICAL WORK CPAP WORKGROUP NO 160 UNLESS OTHERWISE STATED PREAMBLES Refer to the attached Specifications for the Electrical Installation. The Tenderer must at all times read the Bills of Quantities in conjunction with the specification and drawings prior to pricing this section. Items 1-4 below applies to the entire electrical installation for the Clinic.				
1.1.1	General Earthing Earthing and bonding of cold and hot water pipes and all other metal to comply with regulations.	1	Item		
1.2	Commissioning and Testing Allow for testing, balancing and commissioning the whole of the electrical installation as laid down in the specification and for re-testing as may be required after the making good of all defective work to the satisfaction of the Department and the Engineer.	1	Item		
1.5	As Built Drawings Provision for the drawings showing all site cable routes, conduit routes, draw boxes and positions of outlets, etc.	1	Item		
1.6	Labelling and Marking Allow for marking and labelling of all equipment, cables, plugs, light switches etc.	1	Item		
1.7	Diesel Generator Allow for the supply and Connection with a Back-up Generator of 200KVA with ATS and Circuit breaker. Tank capacity of greater than 600l to provide for 72 hours Maximum 200kVA standby power at 230/400v @ 50Hz 1500rpm High quality and reliable six-cylinder Scania/ Volvo turbodiesel engine, Silent canopy which can stand outside with lockable doors. Fuel tank to be built into the unit base to include enough of fuel for 72 hour operation (600l). Automatic changeover (ATS) to include mains/solar/diesel generator inputs. Maintenance free batteries and trickle charger included. Four-way protection system included, H-specification insulation, brushless alternator with AVR provides stable output, digital controller with auto and manual start options. All sets must undergo a comprehensive testing/pre delivery inspection, prior to delivery and include one year/1000 hour warranty, including first fuel fill, oil filters, fuel filters and all other consumables necessary for operation. To provide all associated civil works including a plinth with corresponding cable trays and exits ducts into the ground for cables. Allowance for Profit.....%	1	Item		
	Allowance for Attendance.....%	5%			
		5%			
1.7.1	Solar Plant Design, solar modelling and installation of solar plant by engineer approved and accredited solar contractor to tie into the grid and diesel generator plant. Supply, deliver, accept and store solar panels and associated equipment including inverters, DC Cables, Earthing, Switchgear, grid tie system, Protection and Metering equipment which are to be as specified or otherwise approved. The rooftop solar system is to be sized to supply a minimum of 150kW. Alternative designs to supply the required energy value will be considered. The rooftops to be utilised is the clinic areas and must be designed to suit the panel weight by the Contractors structural engineer and well as all waterproofing and sealing for cable ways must be done. A model design must included in the tender. Erect, fix, connect and commission the following solar panels and equipment, including any galvanised additional supports and brackets which may be required. All equipment to be rated for outdoor, coastal conditions. Inverters and batteries will be stored in the pump room.				
	Allow for a 150kw Solar System	1	SUM	R 2 500 000.00	R 2 500 000.00
	Allowance for Profit.....%	5%			R 125 000.00

	Allowance for Attendance.....%		5%				R	125 000.00
1.8	New Kiosk Supply and Installation and commissioning of the Kiosk, including making off all wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). Inclusive of all Main Circuit Breakers Kiosk, Coastal	Supply Install	1 1	No. No.				
1.9	Guarantee and Maintenance Guarantee and maintenance for the complete installation of Electrical Installation including fittings, materials and workmanship for a period of TWELVE MONTHS after date of completion and handover.		1	Item				
1.9.1	Payment of 200kVA Eskom/Municipality Connection . (Inclusive of Transformer & Main Kiosk) Plus Profit and Attendance		1	Sum	R	250 000.00	R	250 000.00
1.10	CERTIFICATE OF COMPLIANCE Provision for the Certificate of Compliance to be issued on completion of the project.		5%				R	12 500.00
2.	Cables Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.							
2.1	240 mm ² 4 core Al PVC 400V from the TRF to Generator	Supply Install	100 100	m m				
2.2	240 mm ² 4 core Al PVC 400V from the Generator to the LV Kiosk	Supply Install	25 25	m m				
2.3	16 mm ² 4 core Al PVC 400V for external lights	Supply Install	140 140	m m				
	Cable Terminations Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.							
2.3	240 mm ² 4 core Al PVC 400V from the TRF	Supply Install	4 4	No. No.				
2.4	240 mm ² 4 core Al PVC 400V from the Generator	Supply Install	4 4	No. No.				
2.5	Wireway Installation (for Electrical Supply Cables) 114mm Wide Medium Duty Galvanized Return Flange Cable Tray. Mounted Underside of Ceiling Complete with all Accessories. Covers, 90° Bends, T-Junctions and end Caps etc. Allowances has been made for IT & Power	Supply Install	380 380	m m				
2.6	Server (Telecommunication Network) Supply, install of Fibre Optic cable (Fibrework/Krone/Legrand or other Approved) in wire way & CAT6A. 1-off 24 Port Internet Switches (3-Corn or Other Approved) Housed a 15U Cabinet. 1-off 24 Port Internet Switches (Krone/Legrand or Other Approved) Housed a 15U Cabinet. Multi-Mode Fibre optic cable to 24- port Switch in offices and one to 24-Port Switch in Security room. The Termination of the fibre optic cables in the 15U Cabinets							
2.6.1	Fibre Network Installation	Sum	1	Item	R	15 000.00	R	15 000.00
2.6.2	Supply and Install of Data Equipment Plus Profit and Attendance		1	Sum	R	125 000.00	R	125 000.00
2.6.3	Supply and Install of CAT6A cable Krone/Legrand for cameras, IT network & Telephones		5%					
			1200	m				

3.	EXCAVATIONS CPAP WORKGROUP NO 104 UNLESS OTHERWISE				
3.1	Excavations other than bulk in soft excavation not exceeding 2m deep for: Allowance is to be made for the installation of cable markers and warning sheets				
3.2	In trenches for cables and sleeves		100	m ³	
3.3	Extra over "soft excavation" for excavation in intermediate excavations		100	m ³	
3.4	Extra over "soft excavation" for excavation in hard rock excavations		100	m ³	
3.5	Filling obtained from excavations and/or prescribed stock piles on site compacted to 95% Mod AASHTO density				
3.6	Backfilling of trenches Risk of collapse of excavations other than bulk		100	m ³	
3.7	Sides of trenches and hole excavations not exceeding 1.5m deep Manholes Supply and installation of manholes as shown on the drawings. Refer to Clause B6		100	m ³	
3.8	600 x 600mm Concrete Manholes Cable Markers Allow to supply and install cable markers		2	No.	
3.9	PVC warning marking tape		100	m	
3.9.1	Concrete cable route markers		5	No.	
3.10	Security System Installation of Camera System equipment and All Access Control Systems as specified of the Detailed Specification. 360 Degree resolution CCTV Camera	Supply Install	2 2	No. No.	
3.11	Luminaires Supply and install and electrically connecting the following luminaires, complete with lamps. Parking areas & In front of residences				
3.11.1	Type B1.1 2 x 36w LED Fitting	Supply Install	17 17	No. No.	
3.11.2	Streetlight, Type P1.1 LED Post top Luminaire Manufactured from Powder coated die - cats, 36w Pending Height, Lumen variance, 4000lm plus, 4000K, Beka, Regent or	Supply Install	5 5	No. No.	
3.11.3	7m Pole for P1.1	Supply Install	5 5	No. No.	
3.11.4	Bollards, Type BO1 18w or 25w, LM 6 Die cast Aluminium / Plastic, Beka, Regent or Rubicon	Supply Install	6 6	No. No.	
3.11.5	Type A1+ 2 x 18 w Vapor Proof Double Tube LED Fitting, IP65, Beka, Regent or Rubicon	Supply Install	4 4	No. No.	
4	Daylight Switch Supply and installation of approved daylight switch. Daylight Switch	Supply Install	3 3	No. No.	
5	20A 4 Pole Flush waterproof Isolator for Boom Gate	Supply Install	1 1	No. No.	
6	Loud Speaker	Supply Install	2 2	No. No.	
Total for Bill No. 1 : Carried Forward to Summary Page					

RESIDENCES**ELECTRICAL INSTALLATION****PROVISIONAL BILLS OF QUANTITIES****SECTION B**

Item	Description		Qty	Unit	Rate	Amount	
1.1	Distribution Boards Supply, installation and commissioning of Kiosk, Distribution Boards, including all circuit breakers (as per load schedule), earthing straps, labels the making off of wire connections (external wiring, conduit, armoured cable and terminations given elsewhere). All DB's are to be equipped with a three phase or single phase surge arrester. Special note, the accessories are inclusive on the quoted price						
1.1.1	Distribution Board	Supply	6	No.			
		Install	6	No.			
1.2	Cables Supply, delivery and laying of PVC/SWA/PVC ECC Aluminium cables as specified, excluding terminations and cable supports. Lengths given shall be taken as measured lengths to cable runs from terminal to terminal and rates quoted shall include for off-cuts.						
1.2.1	25mm ² 4C Aluminium Cable PVC Mains 600/1000V	Supply	480	m			
		Install	480	m			
1.3	Cable Terminations Including the supply and fitting of Pratley Cable gland, shroud, making off the cable and fitting the gland to gland plates, switchgear or equipment including final connections of cable tails with lugs onto board terminals and including earth in ECC cable.						
1.3.1	25mm ² 4C Aluminium Cable PVC Mains 600/1000V	Supply	12	No.			
		Install	12	No.			
1.4	Cable Sleeves Supply and Installation of Cable Sleeves as specified, in trenches						
1.4.1	110mm Ø Flexible Cable Sleeve	Supply	180	m			
		Install	180	m			
	EXTRA ON upvc piping for: 100mm Diameter long radius bend		180	m3			
1.5	EXCAVATIONS In trenches for cables and sleeves		180	m3			
	extra over soft excavation intermediate		15	m3			
	extra over soft excavation in hard rock		15	m3			
1.6	Conduit Supply and installation of PVC conduit. Lengths given shall be taken as measured horizontal and vertical runs between conduit terminations. Rates quoted shall allow for wastage, offcuts, couplings, cuttings, bending, jointing socket and tees.						
1.6.1	25mm Conduit	Supply	2760	m			
		Install	2760	m			
Total for Bill No. 1 : Carried Forward to Summary Page						R	-

Item	Description		Qty	Unit	Amount
1.7	<u>Conduit Boxes and Ends</u> Terminate and connect one pair of conduit ends including supply and installation of 1, 2, 3 or 4 way box on surface or in brickwork. (excluding coverplates), including holes for conduit.				
1.7.1	25mm Conduit (100 x 100mm) Galvanized Box	Supply	20	No.	
		Install	20	No.	
1.8	<u>Conductors</u> Supply and installation of PVC insulated copper conductors drawn into conduit or wiring channel in groups of 2, 3, 4, etc. with the required colour coding, but excluding any wiring connections.				
1.8.1	2,5 mm ² PVC Conductors Red	Supply	800	m	
		Install	800	m	
	2,5 mm ² PVC Conductors Black	Supply	800	m	
		Install	800	m	
	4 x 2 PVC Wall Box	Supply	11	No.	
		Install	11	No.	
	4-Way Box PVC	Supply	15	No.	
		Install	15	No.	
1.8.2	4 mm ² PVC Conductors Blue	Supply	600	m	
		Install	600	m	
	4 mm ² PVC Conductors Brown	Supply	600	m	
		Install	600	m	
	4 mm ² PVC Conductors Earth	Supply	600	m	
		Install	600	m	
	Adaptors 25mm	Supply	20	No.	
		Install	20	No.	
	4 x 4 PVC Wall Box	Supply	72	No.	
		Install	72	No.	
	Coupling 25mm	Supply	15	No.	
		Install	15	No.	
1.9	<u>Light Switches</u> Supply, fitting and electrical connection of a Legrand type flush or surface mounted 16A switch in 100 x 50 excluding box (for flush type) and conduit connections, but including cover plates.				
1.9.1	16A 1 Lever 1 Way	Supply	36	No.	
		Install	36	No.	
1.9.2	16A 1 Lever 2 Way	Supply	12	No.	
		Install	12	No.	
1.1	<u>Luminaires</u> Mounting, fixing and electrically connecting the following luminaires, complete with lamps as specified in Section E of the Detailed Specification.				
1.10.1	Type R1 18w Ceiling recessed LED Non-Dimmable, 5000K, as per Regent Luxon, Beka, Rubicon	Supply	84	No.	
		Install	84	No.	
Total for Bill No. 1 : Carried Forward to Summary Page					

Item	Description		Qty	Unit	Amount
1.10.2	Type J1.1 Round LED recessed Bulkhead Light, 18w, 220-240v ac, IP54, Regent Odin, Beka, Rubicon				
		Supply	26	No.	
		Install	26	No.	
1.11	Daylight Switch Supply and installation of approved daylight switch.				
1.11.1	Daylight Switch				
		Supply	6	No.	
		Install	6	No.	
1.12	Socket Outlets Supply, fitting and electrical connection of flush or surface mounted Legrand type switched socket in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate.				
1.12.1	16A Double SSO c/w coverplate. Legrand type.				
		Supply	54	No.	
		Install	54	No.	
1.12.2	RJ11 Connector with cradle/ cover and mod blank				
		Supply	6	No.	
		Install	6	No.	
1.12.3	RJ45 Connector with cradle/ cover mod blank				
		Supply	6	No.	
		Install	6	No.	
1.12.4	RJ45 Connector with cradle/ cover mod blank				
		Supply	6	No.	
		Install	6	No.	
1.13	Isolators Supply, fitting and electrical connection of flush or surface mounted Metal Clad Isolators in either 100 x 100, 100 x 50, round box or wiring channel, <u>excluding</u> box (for flush type) and conduit connections, but including cover plate. For more details please refer to the specific drawings				
1.13.1	5A 2 Pole Flush waterproof Isolator				
		Supply	1	No.	
		Install	1	No.	
1.13.2	20A 2 Pole Flush waterproof Isolator - Geyser				
		Supply	6	No.	
		Install	6	No.	
1.13.4	20A Double Pole Flush Mounted Stove Isolator, Legrand				
		Supply	6	No.	
		Install	6	No.	
Total for Bill No. 1 : Carried Forward to Summary Page					

Item	Description		Qty	Unit	Amount
1.14	TELEPHONE INSTALLATION Supply and installation of the following items for the Telephone Installation				
1.14.1	25mm PVC Conduit	Supply	36	m	
		Install	36	m	
1.14.2	25mm PVC Conduit end	Supply	3	No.	
		Install	3	No.	
1.14.3	25mm PVC Conduit box	Supply	5	No.	
		Install	5	No.	
1.15	DATA INSTALLATION Supply and installation of the following items for the Data installation				
1.15.1	25mm PVC Conduit	Supply	36	m	
		Install	36	m	
1.15.2	25mm PVC Conduit end	Supply	8	No.	
		Install	8	No.	
1.15.3	25mm PVC Conduit box	Supply	5	No.	
		Install	5	No.	
1.16	<u>Solar Plant (Panels) with Batteries</u> Allow for a Connection with the 5kVA Solar System complete with DC cables, earthing, hybrid inverter and Batteries for 4 hour backup and required communication modules and software. Protection, Metering and monitoring equipment to be included. Erect, fix, connect and commission the following solar panels and equipment, including any galvanised additional supports and brackets which may be required. All equipment to be rated for outdoor, coastal conditions. IP65 Enclosure suitable for mounting on wall in the patio will be included.		6	Item	
Total for Bill No. 1 : Carried Forward to Summary Page					

SUMMARY PAGE

BILL NO.	Amounts brought forward from:	Amounts (R)
1	Adminstration, Main Central Area & Phamarcy	
2	Block G - Chronic Care	
3	Block F - Acute care	
4	Block A - Guard House & public Ablutions	
5	Block E - Preventive & Promotive	
6	Block D - Service Access, Block C - Emergency & Support Services	
7	Block H - Youth & Outreach Center	
8	Lightning Protection	
9	External Works	
10	Mechanical Works	
11	Residence	
	TOTAL CARRIED FORWARD TO FINAL SUMMARY OF MAIN BILLS OF QUANTITIES	

BILL 1 - AIR CONDITIONING

- A This Bill needs to be read in conjunction with HVAC Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-HVAC-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements and the installer must be accredited by the OEM to conduct such installation.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All Pricing to include for all copper tubing & trunking, housing, bracket connections, condensate drainage and electrical supply from socket point.
- I All compressor units to be installed with anti-vibration mountings.
- J Condenser units to be positioned as per the layout drawing.
- K Product offering for AC units must be Carrier or equivalent.
- L Energy Efficiency Ratings will be taken into account.
- M All units to be single phase, 220V.
- N Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- O Cooling systems, materials, components and refrigerant type must comply with SANS 10147:2014.
- P All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).
- Q All AC condensate drain piping to be chased into wall and discharged at a low level to the outside.
- R All AC condensate drain piping to be thermally insulated.

NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	12000 BTU (QH012DS) - Inverter Type (ERR & COP Ratings to be "Carrier" or Equivalent)	No.	28		

BILL 2 - MECHANICAL VENTILATION

- A This Bill needs to be read in conjunction with HVAC Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-HVAC-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All wall mounted fans to be single phase, 220V.
- I All wall mounted extraction fans to have back to back grills included.
- J Supply and Extraction Fans to be AMS or equivalent.
- K Grills and Weather Louvres to be AMS or equivalent.
- L Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- M All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	Extraction Fans				
	HV-150AE	No.	1		
	HIT-200	No.	2		
	HIT-125	No.	1		
2	Fresh Air Fans				
	HV-150AE	No.	2		
	HIT-125	No.	1		
3	Ducting (Galvanised sheet metal)				
	110mm Diameter	m	30		
	150mm Diameter	m	4		
	150mmmx180mm	m	5		
	200mmmx180mm	m	8		
	220mmmx200mm	m	4		
	300mmmx200mm	m	5		

- A This Bill needs to be read in conjunction with Hot Water Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-PHW-TD-00; KZN-MR-PHW-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H Heat Pump and Geyser sets to be supplied complete. Product offering must be Kwikot or equivalent.
- I All copper pipes to be chased into the building walls.
- J All pricing to include for 2m insulation on incoming cold water pipes and insulate all outgoing hot water pipes (including pipes chased into the walls). Product offering to be SANS 204 and XA compliant.
- K Pricing to include for necessary couplings between all pipes of similar and dissimilar materials, and between taps and valves.
- L All hot water reticulation connective fittings to be Compression Type (Cobra). To be included in the pricing.
- M Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- N All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	CuCl2 Reticulation - Diameter 15mm	m	200		
2	CuCl2 Reticulation - Diameter 22mm	m	90		
3	CuCl2 Reticulation - Diameter 28mm	m	35		
4	Cobra RB Gate Valve 1001/125 15mm SABS FXF Prestex	No.	10		
5	Cobra RB Gate Valve 1001/125 22mm SABS FXF Prestex	No.	4		
6	Cobra RB Gate Valve 1001/125 28mm SABS FXF Prestex	No.	1		
7	DSG-050-5 - KWIKOT Superline Geyser 50L (2kW)	No.	6		
	KHN3-224 - 400 kpa Multi Valve	No.	6		
	KHN4-200CX - 22mm Vacuum Breaker	No.	12		
	DRT 600 - Drip Tray	No.	6		

- A This Bill needs to be read in conjunction with Fire Installation Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-FI-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All pricing to include for bracket connections and hangers.
- I Class B Fire Doors to include Pregalvanised frame, Slam bars, Magnetic hold open device, Certifire Hinges, and Georgian wired vision panels. Product offering to be 'Firechief' or equivalent.
- J Fire Suppression to be Stat-X type, inclusive of a control panel, battery back-up, optical smoke detectors, manual gas release, bell, beacon, signage, commissioning, testing and training.
- K Pricing to include for necessary couplings between all pipes of similar and dissimilar materials, and between taps and valves.
- L Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- M All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	Fire Hose Reel (30m)	No.	7		
2	Fire Hydrant	No.	3		
3	4,5 kg DCP Fire Extinguisher	No.	16		
4	Diameter 100mm HDPE Class 16	m	85		
5	Diameter 150mm HDPE Class 16	m	45		
6	Diameter 25mm Mild Steel Medium Class	m	60		
7	Diameter 32mm Mild Steel Medium Class	m	30		
8	Diameter 100mm Mild Steel Medium Class	m	95		
9	110mm 90 Degree grooved	No.	24		
10	110mm Klambons	No.	38		
11	100mm Blank Caps	No.	5		
12	25mm Elbows	No.	38		
13	25mm Unions	No.	15		

- A This Bill needs to be read in conjunction with Signage Layout for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-FI-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D All signage to be Aluminium Framed, Photo Illuminescent.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	Signage - E3 - Fire Escape (Green) 190mm X 380mm	No.	40		
2	Signage - F4 - Fire Equipment; Fire Exit; Arrow (Red). 190mm X 190mm 190mm X 380mm 190mm X 570mm 190mm X 760mm	No. No. No. No.	15 5 10 5		

BILL 9 - STORAGE WATER TANK AND PUMP SETS

- A This Bill needs to be read in conjunction with Potable Water, Fire Installation & Pump Layouts for full project descriptions and supporting information.
- B Drawing Reference: KZN-MC-PT-TD-00.
- C All products supplied for this installation must be SABS and/or appropriate EU/IEC Standard.
- D The installation of all supplied materials must be in accordance with the OEM requirements.
- E Pricing of all these items must include for all transport, supply, labour and P&G's.
- F Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- G All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- H Corrosion protection must be suitable to the proximity of the site. It must include for appropriately galvanised structural components. Details must be provided.
- I All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	Potable Pump Set - Duty & Standby (Wilo or Equivalent); Inclusive of Stainless Steel Manifolds, Non Return & Butterfly Valve	No.	1		
2	Potable Pump Control Panel	No.	1		
3	Fire Pump Set - Jockey & Primary (Wilo or Equivalent); Inclusive of Stainless Steel Manifolds, Non Return & Butterfly Valve	No.	1		
4	Fire Pump Control Panel	No.	1		
5	Ablution Pump Set - Duty & Standby (Wilo or Equivalent); Inclusive of Stainless Steel Manifolds, Non Return & Butterfly Valve	No.	1		
6	Ablution Pump Control Panel	No.	1		
7	Abeco Tank	No.	1		
8	Diameter 54mm CuCl2	m	15		
9	Solenoid Valves (for level control - 54mm inlet) to Abeco Tank	No.	2		
10	Isolation Valves (for drain - 80mm) to Abeco Tank	No.	2		
11	80mm Overflow pipe (galvanised with welded flange)	No.	2		
12	Non-return Valves (Diameter 54mm)	No.	3		
13	Isolation Valves (Diameter 54mm)	No.	4		

- A All products supplied for this installation must be SABS approved.
- B The installation of all supplied materials must be in accordance with the OEM requirements.
- C Pricing of all these items must include for all transport, supply, labour and P&G's.
- D Pricing of all these items must include for any building repair work that may be required as a result of the installation works.
- E All product and material specifications, and warranty (offering and conditions) to be provided in the Tender reply.
- F Product offering must be Centurion D10 (industrial) or equivalent.
- G All work to be conducted in accordance with the relevant Regulations, Standards and Tender Specification Report (KZN-MC-TS-00).

NO.	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	Rack Drive Motor Set Complete (including battery & brackets)	No.	1		
2	Goosenecks (Galvanised Mild Steel)	No.	2		
3	Keypad	No.	1		
4	Anti-knock Shields	No.	2		
5	Remotes	No.	4		

MECHANICAL, WET SERVICES & FIRE

BILL NO.	DESCRIPTION	TOTAL
BILL 1	AIR CONDITIONING	
BILL 2	MECHANICAL VENTILATION	
BILL 3	POTABLE WATER	
BILL 4	HOT WATER	
BILL 5	SEWAGE	
BILL 6	FIRE INSTALLATION	
BILL 7	FIRE DETECTION	
BILL 8	SIGNAGE	
BILL 9	STORAGE TANK & PUMP SETS (FIRE & POTABLE)	
BILL 10	RAINWATER HARVESTING	
BILL 11	GATE MOTOR	

SECTION NO.	FINAL SUMMARY	AMOUNT
1	Section No. 1 Preliminaries	
2	Section No. 2 Builders Work	
3	Section No. 3 External works	
4	Section No. 4 Electrical Works (Provisional)	
5	Section No. 5 Mechanical, Wet services and Fire Installation	
Sub - total excluding VAT and contingencies		
ADD CONTINGENCIES		
Allow 10% for contingencies which shall be applied to the work as directed by the Project Manager and deducted in whole or part if not required		
Sub - total excluding VAT		
ADD: VAT @ 15%		
Carried to Form of Tender		
TOTAL		



CONSTRUCTION OF A SMALL CLINIC AT ROOSBOOM CLINIC

PART C3. SCOPE OF WORKS

**C3.1 SCOPE OF WORKS
GCC FOR CONSTRUCTION WORKS (Edition 2 of 2010)**

Scope of Works complied in accordance with SANS 10403 where reference is made to this part of SANS 1921-1:2004

Project title:	CONSTRUCTION OF A SMALL CLINIC AT ROOSBOOM CLINIC
-----------------------	----------------------------------------------------------

Tender no:	ZNB5545/2023-H	Project Code:	N/A
-------------------	-----------------------	----------------------	------------

	<u>SECTION 1</u>	
1	<u>EXTENT OF THE WORKS</u>	
1.1	EMPLOYERS OBJECTIVES	Construct and small clinic including residences
1.2	OVERVIEW OF THE WORKS	Construction of a single storey clinic including guard house, fencing, external works.
1.3	EXTENT OF THE WORKS	The works includes the construction of a new single storey clinic. The external works includes the construction of new guard house, fencing, site services, parking, water tank, borehole, bulk earthworks, etc.
1.4	LOCATION OF THE WORKS	The site is located in the Alfred Duma Municipality in the Mnambithi. The Latitude is 28° 39' 04.16"S and Longitude is 29° 43' 0.08"E.
1.5	TEMPORARY WORKS	All temporary work to comply with the Occupational Health and safety Act (Act 85 of 1993)
2	<u>ENGINEERING</u>	
2.1	EMPLOYER'S/CONTRACTOR'S DESIGN	Not applicable
2.2	DESIGN BRIEF	Not applicable
2.3	DRAWINGS	See list of Drawings/Annexures attached to this document

2.4	DESIGN PROCEDURES Not applicable
3	<u>PROCUREMENT</u> 3.1 PREFERENTIAL PROCUREMENT PROCEDURES This tender will be subject to the implementation of the Preferential Procurement Regulations, 2022 pertaining to the Preferential Procurement Policy Framework Act, Act Number 5 of 2000 and the relevant Supply Chain Management Legislation and the KwaZulu-Natal Supply Chain Management Policy Framework published by the KwaZulu-Natal Provincial Treasury. Tenderders are referred to www.kzntreasury.gov.za for access to the relevant documents. Tenderders are advised to familiarize themselves with the contents of the KwaZulu-Natal Supply Chain Management Policy Framework regarding Preference Point Systems, evaluation of tenders appeals and other matters. 3.2 RESOURCE STANDARD PERTAINING TO TARGETED PROCUREMENT NOTE : This project will be adjudicated as exceeding R 50,000 000,00 3.3 SCOPE OF MANDATORY SUBCONTRACT WORK Not applicable 3.4 PREFERRED SUBCONTRACTORS/SUPPLIERS Not applicable 3.5 SUBCONTRACTING PROCEDURES Not applicable
4	<u>CONSTRUCTION</u> 4.1 APPLICABLE SANS 2001 STANDARDS FOR CONSTRUCTION WORKS The Contractor is referred to the "Model Preambles to Trades - 2008", any "Supplementary Preambles", the Electrical Specifications and Mechanical Specification for full descriptions of materials and methods referred to in these Bills of Quantities/Lump Sum documents, insofar as they apply. The Contractor is advised to study the "Standard Preambles to all Trades", any "Supplementary Preambles", the Electrical Specifications and Mechanical Specification, before pricing Bills of Quantities/Lump Sum documents. Where the description in the Bills of Quantities/Lump Sum documents differ from those in the Standard Electrical Specifications, the descriptions in the Bills of Quantities/Lump Sum documents are to apply. No claim whatsoever will be allowed in respect of errors in pricing due to brevity of description of items in the Bills of Quantities/Lump Sum documents which are fully described when read in conjunction with the relevant Preambles and/or Specifications. Suppliers of materials and the like, whose quality systems apply with one or more of the SABS/SANS ISO 9000 Series should be used whenever possible in the absence of a particular SABS/SANS Specification Standard Mark. Wherever the words "shall be deemed to be included in the description", "shall be stated" or other words having the same effect, appear in the Standard System, it shall be deemed that all descriptions in these Bills of Quantities/Lump Sum documents incorporated such inclusions and statements whether specifically stated or not. The Contractor is hereby informed that where SABS/SANS Specifications are referred to in these Bills of Quantities/Lump Sums documents and Specifications thereto, then ONLY the Specification of Work Clauses will apply. The method of measurement and payment clauses will NOT apply to this Contract.

The Contractor is hereby informed that risk of collapse and keeping excavations free from water (excluding subterranean water) generally are deemed to be included in the descriptions unless accommodated in the system of measurement. Please refer to the Geotechnical Investigation report when included at the end of these tender documents.

Whenever reference is made to "Sub-Contractor", "Nominated Sub-Contractor" or the like in the specifications included or referred to in these Bills of Quantities/Lump Sums documents, it shall be deemed to mean "Contractor" as defined.

4.2 APPLICABLE NATIONAL AND INTERNATIONAL STANDARDS

See above 4.1

4.3 PARTICULAR / GENERIC SPECIFICATIONS

The Contractor is referred to the following documents whether attached to this document or not:

<u>SPECIFICATION</u>	<u>PAGES</u>
Specification for HIV/AIDS Awareness (CIDB)	HIV1 TO HIV3
Specific Construction, Safety, Health and Environmental Plan	
Standard Preambles for all Trades (Rev 3) - DOH 2009	1 to 95
General Electrical Specification	E/1 to E/20
Lightning Protection Installation	LP/1 to LP/6

4.4 CERTIFICATION BY RECOGNIZED BODIES

Appointed consultants must be actively registered with their relevant professional discipline

4.5 AGRÉMENT CERTIFICATES

Not applicable

4.6 PLANT AND MATERIAL PROVIDED BY THE EMPLOYER

Not applicable

4.7 SERVICES AND FACILITIES PROVIDED BY THE EMPLOYER

None.

4.8 OTHER SERVICES AND FACILITIES

The Contractor shall provide any artificial lighting which may be necessary or required for the proper execution of the works, and provide electric power and water required by all Sub-Contractors, Nominated Sub-Contractors and Sub-Contractors appointed directly by the Administration.

The Contractor shall give all notices and pay all fees in connection with temporary electrical and water connections and shall connect temporary Electrical and Water meters for and pay for all current and water consumed.

The Contractor is advised that the permanent light fittings and water points of any kind installed in the Works are not to be used to provide temporary lighting and supplement water requirements for construction purposes.

5

MANAGEMENT

5.1 APPLICABLE SANS 1921 STANDARDS

SANS 876:2016 - Cable terminations and live conductors within air-filled enclosures (insulation co-ordination) for rated a.c. voltages from 7,2 kV up to and including 36 kV.
SANS 1874:2015 - Switchgear - Metal-enclosed ring main units for rated a.c. voltages above 1 kV and up to and including 36 kV.

- o The Occupational Health and Safety Act (Act 85, 1993) as amended
- o The control panel, associated components and wiring shall be installed in compliance with the latest, relevant and applicable standards.
- o SANS 10147: Refrigerating systems, including plants associated with AC systems
- o SANS 347: Categorization and conformity assessment criteria for all pressure equipment
- o SANS 10142: Code of Practice for Wiring of Premises
- o SANS 60947-1: 2005/IEC 60947-1: 2004 to SANS 60947-8: 2004/IEC 60947-8: 2004: Low voltage switch gear and control gear.
- o A Certificate of Conformity, in accordance with the OHS Act as amended and SANS 347, will be required for all refrigeration and air-conditioning works
- o KwaZulu-Natal Department of Health Policy on Design of Mechanical Installations
- o An Electrical Certificate of Compliance, in accordance with the OHS Act as amended, will be required for all Electrical Works.
- o The Machinery and Occupational Safety Act - Act 6/1983
- o The Municipal by-laws and any special requirements of the Supply Authorities of the area or district concerned.
- o Local Fire Regulations.
- o All building works shall be in accordance with the Standard Preambles to All Trades. The contractor should fully familiarise himself with these documents prior to quoting.

5.2 RECORDING OF WEATHER

The Contractor shall keep record of abnormal climatic conditions to facilitate the adjudication of claims for extension of the contract period.

The Contractor shall allow in his programme for the following number of days for rain days (rain > 10mm per day) as per the table below:

CURRENT YEAR			YEAR + 1	YEAR + 2
January	w/days	3	3	3
February	w/days	3	3	3
March	w/days	3	3	3
April	w/days	3	3	3
May	w/days	3	3	3
June	w/days	3	3	3
July	w/days	3	3	3
August	w/days	3	3	3
September	w/days	3	3	3
October	w/days	3	3	3
November	w/days	3	3	3
December	w/days	3	3	3

5.3 MANAGEMENT MEETINGS

In order to facilitate the smooth functioning of the Works and to ensure the closest co-operation between all the parties concerned, the Employer will call for regular meetings to be held on the site, at which a senior member of the Contracting firm and the General Foreman of the Works will always be required to be present. In addition to the above, other persons will be required to attend these meetings as and when their presence is necessary, e.g., Consultants in all disciplines, representatives of the various Sub-Contractors, etc. Proper minutes of these meetings will be kept by the Employer/Principal Agent and copies will be circulated to all persons attending the meetings and to others who need to be kept informed.

5.4 FORMS FOR CONTRACT ADMINISTRATION

The Employer shall provide all necessary forms.

5.5 ELECTRONIC PAYMENTS

The Contractor shall provide all required information to the Employer to facilitate electronic payments upon request.

5.6 DAILY RECORDS

The Contractor shall keep daily records of people and equipment employed as well as a site diary in respect of work performed on the site.

At the end of each week the Contractor shall provide the Principal Agent with a written record, in schedule form, reflecting the number and description of tradesmen and labourers employed by him and all Sub-Contractors on the works each day.

At the end of each week the Contractor shall provide the Principal Agent with a written record, in schedule form, reflecting the number, type and capacity of all plant, excluding hand tools, currently used on the works.

5.7 BONDS AND GUARANTEES

The Contractor shall within 10 calendar days after receiving notice from the Engineer and prior to receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the Employer's agent (whose details are given in the contract data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the Contract Data.

5.8	<p>PAYMENT CERTIFICATES</p> <p>Requirements will be in accordance with the Employers prescriptions.</p>
5.9	<p>PERMITS</p> <p>The Contractor is advised that, in the case of an existing building or institution, all security measures in force will remain in operation and he must acquaint himself and his Employees with them as he and his Employees will at all times be subject to these measures.</p> <p>The Contractor will on no account extend his operations beyond the confines of the building site as indicated by the Employer and must ensure that all his Employees are made aware of these limits. Any Employee disregarding this instruction and found outside the limit of the building site without authority, shall be redeployed immediately and shall not again be employed on this Contract.</p> <p>The Contractor will be responsible for ensuring that this instruction is strictly enforced and must provide and remove upon completion or when directed, such other necessary temporary barriers, fences, etc., as may be required and is to allow opposite this item for any charges he may wish to make in this connection.</p> <p>The Employer will accept no responsibility whatsoever for damage to or the loss of plant, materials, etc., from the site.</p>
5.10	<p>PROOF OF COMPLIANCE WITH THE LAW</p> <p>The following certificates must be provided before first delivery is taken:</p> <ul style="list-style-type: none"> - Electrical Compliance Certificate - Lightning Certificate - Electrical and Mechanical test certificates - SANS 10400-A:2010 compliance certificates - Latest National Building Regulation - Asbestos removal compliance certificates
5.11	<p>INSURANCE PROVIDED BY THE EMPLOYER</p> <p>Not Applicable</p>
<p>Clause Numbers</p>	<p><u>SECTION 2</u></p> <p><u>SPECIFICATION DATA ASSOCIATED WITH SANS 1921-2004</u></p>
	<p>4.1.7 The requirements for drawings, information and calculations for which the Contractor is responsible are:</p>
	<p>As built drainage drawings to be submitted by the contractor to the Engineer</p>
	<p>4.2.1 The responsibility strategy assigned to the Contractor for the works is:</p>
	<p>Strategy A</p>
	<p>4.2.2 The structural engineer is:</p>
	<p>AKSHAN Engineers</p>
<p>4.2.3 Drawings & other info are to be submitted in accordance with the contractors programme</p>	
<p>Not applicable</p>	

4.3	<p>The planning, programme and method statement are to comply with the following:</p>
	N/A
4.12.1	<p>Samples of materials</p> <p>The work is to be executed with materials of the best specified and in the most substantial and workmanlike manner under the inspection of the Employer and to his satisfaction. The Contractor shall furnish, without delay, such samples as called for or may be called for by the Employer, who may reject all materials or workmanship not corresponding with the approved sample. The samples of materials, workmanship and finishes that the Contractor is to provide and deliver to the employer are: Tiles, Vinyl Sheeting, Ceiling, Insulation, Lights</p>
4.12.2	<p>Fabrication drawings that the contractor is to provide to the employer are:</p>
	None
4.12.3	<p>Office accommodation, equipment, accommodation for site meetings and other facilities for use by the employer and his agents are:</p> <p>OFFICE FOR FOREMAN</p> <p>Provide, erect, maintain and remove at completion a suitable temporary office for the Contractor or his Foreman, perfectly secured, lighted and ventilated and having a desk with drawers.</p> <p>TELEPHONE</p> <p>The Contractor shall provide a telephone on the site for the use of the Contractor and all Sub-Contractors for the duration of the Contract, and must make the necessary application for connection, give all notices and pay all fees, rentals and charges for the service and also for all calls.</p> <p>OFFICE FOR INSPECTOR OF WORKS</p> <p>Provide, erect, maintain and remove at completion a well constructed temporary office for the Inspector of Works not less than 4 x 3 m on plan and 3 m high to eaves to the approval of the Employer. The office shall be constructed of wood framing covered externally with corrugated iron or corrugated asbestos and with a lean-to roof covered with the same material as the external wall covering. The office shall be lined internally with soft board or other approved material and a ceiling shall be provided of the same material as the internal lining. A suspended wood floor shall be provided and is to finish not less than 300 mm above the ground level. A lockable door and a window, which provides adequate light and ventilation, shall be fitted. An office constructed of 115 mm thick brick-work and provided with a screeded concrete floor and roofed and ceiled as above described may be accepted as an alternative but prior permission of the Employer will be necessary before construction of such an office is commenced and his requirements shall be stated and fulfilled by the Contractor. The office shall be fitted in an approved manner with a sloping topped desk of height and length suitable for the laying out and studying of drawings, a desk or table with not less than two lock-up drawers, shelves, seating and wash-stand, and the Contractor shall provide all necessary attendance.</p> <p>TELEPHONE IN OFFICE FOR INSPECTOR OF WORKS</p> <p>The Contractor shall arrange for the installation of a lockable telephone in the Office for the Inspector of Works for the duration of the Contract. The Contractor will be required to make the necessary application for connection and give all notices on behalf of the Employer. The Employer will, however, be responsible for the direct payment of all fees, rentals and other charges by Telkom for the service for the Inspector of Works and for all calls made from this telephone.</p>

	SHED
	Provide, erect, maintain and remove at completion, ample temporary sheds for the proper storage of materials and for the use of the workmen, and remove when no longer required.
4.14.6	The requirement for provision and erection of signboards are:
	Supply, erect, maintain and remove at completion a painted notice board, size overall 2800 x 2345 mm high sign written to detail as Drawing No. T9506 which drawing is available from offices of the Department of Public Works. Only the official notice board is to be displayed on the site and no Sub-Contractor's boards will be permitted. The Contractor, at his own cost, may provide a board on which all sub-contract firms' names may be sign written. The notice board is to be to the approval of the Employer and is to be maintained in first class condition and placed where directed at the entrance to the site and remain there for the duration of the Contract.
4.17.1	Requirement for the termination, diversion or maintenance of existing services:
	Should the Contractor come in contact with any underground cables or pipes during excavations, immediate notification must be made to the Employer and all work in the vicinity of such cables, pipes, etc., shall cease until authority to proceed has been obtained from the Employer. Should the Contractor damage underground cables or pipes resulting in a disruption of services to an existing institution such damage shall be repaired immediately.
4.17.3	Services which are known to exist on the site:
	Investigate and provide detail drawings.
4.17.4	Requirement for detection apparatus
	None
4.18	ADDITIONAL HEALTH AND SAFETY REQUIREMENTS ARE:
	By the submission of a tender, any Tenderder will, if awarded the contract to which this tender document relates, be deemed to be the mandatory as envisaged by Section 37 (2) of the Act. As a mandatory the successful Tenderder will be deemed to be the "principal contractor" and an employer in his/her/their own right with duties as prescribed in the Act and accordingly will be deemed to have agreed to be solely responsible for ensuring that in connection with the service to which this tender document relates, all work will be performed and machinery and plant used in accordance with the Act. Should the Contractor, for whatever reason be unable to perform as required by the Act, the Contractor undertakes to inform the Employer accordingly. Tenderders are advised that it is a Condition of this Tender that a 'Construction Phase Safety, Health and Environmental Plan' specifically relates to the project for which tenders are being submitted and must be prepared by the Tenderder and submitted with the other tender documents at the time of tender. Failure to do so will Tenderders are therefore advised to study the 'Construction Safety, Health and Environmental Specification' which is issued as part of this tender document, the Model Preambles to Trades - 2008, any project Specification included in this tender document and any and all drawings which are referred to and issued as part of this tender document before preparing their own project specific 'Construction Phase Safety, Health and Environmental Plan' . Tenderders are also advised that such a plan which is submitted with a tender but is incomplete or considered inadequate by the Employer or his Representative will invalidate the tender. The Contractor will be deemed to have satisfied himself with his obligations in terms of the Act and to have allowed for all costs arising from compliance with the Act as no claim for extra costs arising from compliance with, and obligations in terms of the Act will be entertained.
4.22	WORK BY NOMINATED AND SELECTED SUBCONTRACTORS COMPRISE:
	List of applicable sub-contractors to be compiled post award.

C3.2 - SPECIFICATION FOR HIV/AIDS AWARENESS

1 Scope

This generic specification contains requirements applicable to the reduction of the risk of transfer of the HIV virus between and among construction workers and the local community through the following four strategies:

- a) raising awareness about HIV/AIDS;
- b) providing construction workers with access to condoms;
- c) HIV counselling, testing and referral services; and
- d) Sexually Transmitted Infection diagnosis and treatment.

2 Normative references:

The following standard contains provisions that, through reference in this text, constitute provisions of this standard:

SANS 4074 ISO 4074, *Condom Rubbers*

3 Definitions and Abbreviations

3.1 Definitions

Construction Worker: all persons in the employ of the contractor or in the employ of any of the subcontractors contracted by the contractor.

Local Community: the communities local to the site which are most likely to have contact with the construction worker and, in particular, sex workers in those communities.

Service provider: the natural or juristic person recognised by the South African Department of Health as specialist in conducting Aids Awareness Programmes.

3.2 Abbreviations

STI: Sexually transmitted infection

HIV: Human Immunodeficiency Virus

AIDS: Acquired Immune Deficiency Syndrome

4 Objectives

The objectives are to:

- a) reduce the risk of transfer of the HIV virus between and among construction workers and the local community;
- b) raise awareness amongst construction workers and the local community of the risk of infection with the HIV virus;
- c) promote early diagnosis; and
- d) assist affected individuals to access care and counselling.

- b) either place and maintain HIV/AIDS awareness posters of size of not less than A1 in areas which are highly trafficked by construction workers, or provide construction workers with a pamphlet, in languages largely understood by construction workers, which
- c) encourage voluntary HIV/STI testing;
- d) provide information concerning counselling, support and care of those that are infected services; and
- e) comply with the requirements of 5.2.

The provisions of 5.1 c) and d) do not apply to this contract.

5.2 HIV awareness programme

5.2.1 The contractor shall:

- a) engage a qualified service provider as described in the scope of works to conduct an HIV Awareness Programme which is structured to achieve the outcomes stated in 5.2.3 for contract workers as soon as a construction workers camp is established and populated or, where no such camp is established, within two weeks of the commencement of a significant portion of the works and at subsequent intervals, if any, provided for in the scope of works; and
- b) arrange for, provide a suitable venue, and instruct all construction workers to attend the HIV Awareness Programme and notify the Employer's Representative of the date, time and venue whenever a session with construction workers is conducted.

Note: The National Department of Public Works maintains a list of qualified service providers.

5.2.2 The contractor shall do nothing to dissuade construction workers from attending such an HIV Awareness Programme and shall take all reasonable steps to ensure that a minimum of 90% of construction workers engaged in the works attend such a programme, when it is conducted.

5.2.3 The outcomes of the HIV Awareness Programme shall as a minimum, result in contract workers exposed to such a programme being able to:

- a) communicate the existence of problems of HIV and be able to outline the consequences of transmission of HIV to or from the local community;
- b) recall and communicate the mode of HIV transmission and preventative measures including the proper use of the condom.

The HIV/ Aids awareness programme described in 5.2 is to be repeated at four month intervals throughout the duration of the contract. (Four times in total, including the initial one at the start of the contract)

5.3 Reporting

- 5.3.1** The contractor shall prepare and attach to his claims for payment a brief report which outlines how the actions taken by the contractor in the period for which payment is claimed satisfy the requirements and a schedule which lists the names, identity numbers, trade / occupation and name of employer of all construction workers exposed to the programme (see **HIV/STI Compliance Report**).
- 5.3.2** The employer's representative shall certify the report and schedule described in 5.3.1 whenever a claim for payment is issued to the employer.

Note: In the event that the contractor fails to satisfy the requirements of this specification, the employer (Head: Public Works) may apply any of the sanctions provided for in the contract. Sanctions may include the application of a financial penalty of .04% of the Contract Sum.

The *HIV /Aids* awareness programme *described* in 5.2 shall in addition *be conducted* for the benefit of the local community on two occasions in the community centre nearest to the building site. The contractor shall be *responsible* for inviting identifiable community-based *institutions and organisations, churches, and schools to participate in the* programme.

C3.3 - HIV/STI COMPLIANCE REPORT

Pro-forma reporting format in terms of the SPECIFICATION FOR HIV/AIDS AWARENESS

Project Code:

0

Payment Claim number:

Period covered by payment claim:

1. Distribution of condoms (briefly describe where and how condoms are distributed).

2. Posters / pamphlets (briefly describe where posters were placed / how pamphlets were distributed).

3. Voluntary testing (briefly describe the actions taken / information provided to promote testing).

4. Counselling, support and care (summarise information provided).

5. HIV awareness programme (briefly describe action).



CONSTRUCTION OF A SMALL CLINIC AT ROOSBOOM CLINIC

PART C4. SITE INFORMATION

C4.1 SITE INFORMATION GCC FOR CONSTRUCTION WORKS (2 Edition of 2010)			
Project title:	CONSTRUCTION OF A SMALL CLINIC AT ROOSBOOM CLINIC		
Tender No.	ZNB5545/2023-H	Project Code:	N/A
C4.1 Site Information			
C4.1	GENERAL		
(a)	The condition of the soil will not affect construction as blasting will not be required. The water table is not visible and should not hamper construction.		
(b)	0		
(c)	0		
C4.2	GEOTECHNICAL INVESTIGATION REPORT		
(a)	Not applicable		



CONSTRUCTION OF A SMALL CLINIC AT ROOSBOOM CLINIC

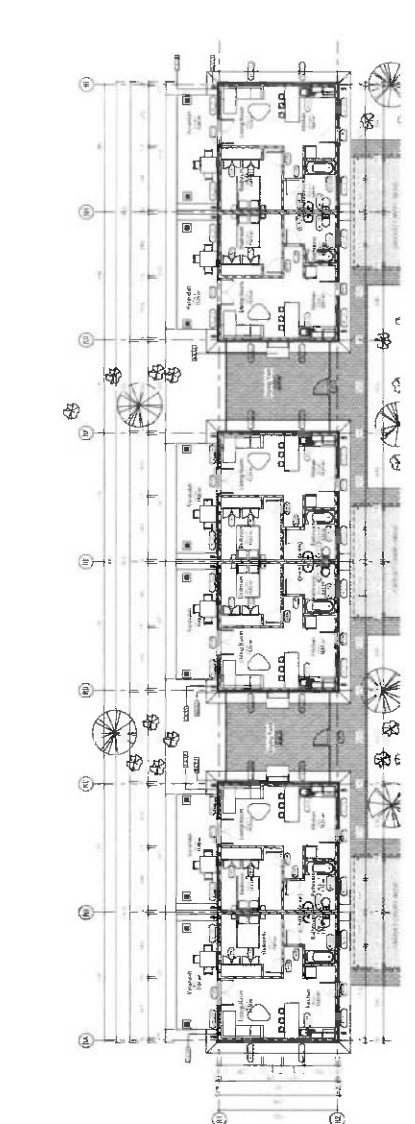
PART C5 - DRAWINGS / ANNEXURES

PROJECT NAME	RESIDENTIAL
CLIENT	ROOFSOOR CLINIC
DATE	2024
SCALE	1:100

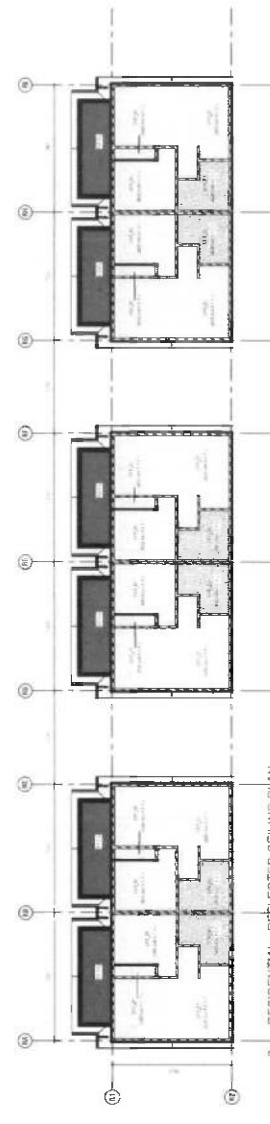
GENERAL NOTES

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
2. REFER TO ARCHITECTURAL DRAWINGS FOR FINISHES AND MATERIALS.
3. ALL WORK IS TO BE IN ACCORDANCE WITH THE NATIONAL BUILDING REGULATIONS.
4. THE CLIENT IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
5. ALL UTILITIES (ELECTRICITY, WATER, SEWER) ARE TO BE LOCATED AND DELETED PRIOR TO CONSTRUCTION.
6. THE FOUNDATION IS TO BE AS PER THE STRUCTURAL DRAWINGS.
7. ALL ROOFING IS TO BE IN ACCORDANCE WITH THE LOCAL WEATHER CONDITIONS.
8. ALL EXTERIOR WALLS ARE TO BE FINISHED WITH PLASTER AND PAINT.
9. ALL INTERIOR WALLS ARE TO BE FINISHED WITH PLASTER AND PAINT.
10. ALL FLOORS ARE TO BE FINISHED WITH POLISHED CONCRETE.
11. ALL CEILING ARE TO BE FINISHED WITH PLASTER AND PAINT.
12. ALL DOORS AND WINDOWS ARE TO BE AS PER THE ARCHITECTURAL DRAWINGS.
13. ALL STAIRS ARE TO BE FINISHED WITH POLISHED CONCRETE.
14. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
15. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
16. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
17. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
18. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
19. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
20. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.

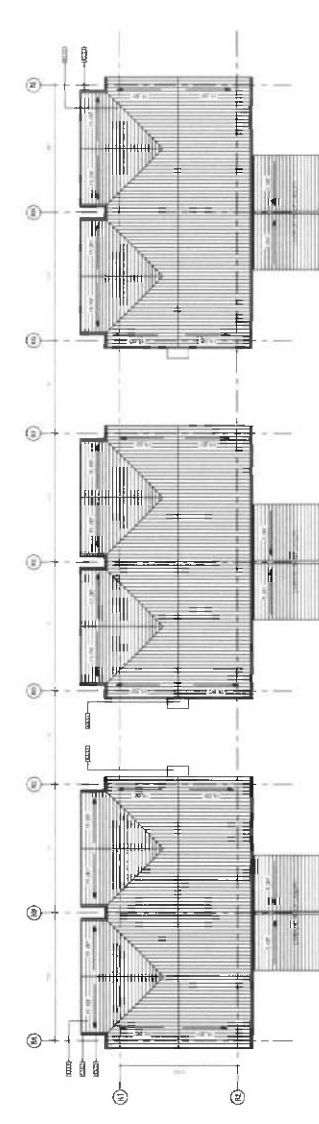
PROJECT NAME	RESIDENTIAL
CLIENT	ROOFSOOR CLINIC
DATE	2024
SCALE	1:100



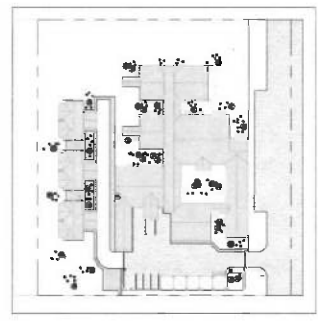
RESIDENTIAL - FLOOR PLAN



RESIDENTIAL - CEILING PLAN



RESIDENTIAL - ROOF PLAN



LOCALITY PLAN

GENERAL NOTES

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
2. REFER TO ARCHITECTURAL DRAWINGS FOR FINISHES AND MATERIALS.
3. ALL WORK IS TO BE IN ACCORDANCE WITH THE NATIONAL BUILDING REGULATIONS.
4. THE CLIENT IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
5. ALL UTILITIES (ELECTRICITY, WATER, SEWER) ARE TO BE LOCATED AND DELETED PRIOR TO CONSTRUCTION.
6. THE FOUNDATION IS TO BE AS PER THE STRUCTURAL DRAWINGS.
7. ALL ROOFING IS TO BE IN ACCORDANCE WITH THE LOCAL WEATHER CONDITIONS.
8. ALL EXTERIOR WALLS ARE TO BE FINISHED WITH PLASTER AND PAINT.
9. ALL INTERIOR WALLS ARE TO BE FINISHED WITH PLASTER AND PAINT.
10. ALL FLOORS ARE TO BE FINISHED WITH POLISHED CONCRETE.
11. ALL CEILING ARE TO BE FINISHED WITH PLASTER AND PAINT.
12. ALL DOORS AND WINDOWS ARE TO BE AS PER THE ARCHITECTURAL DRAWINGS.
13. ALL STAIRS ARE TO BE FINISHED WITH POLISHED CONCRETE.
14. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
15. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
16. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
17. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
18. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
19. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.
20. ALL ROOFING IS TO BE FINISHED WITH GALVANIZED IRON SHEET.

DESIGNER
ARCHITECT
PROJECT NO.
DATE

health
PROVINCE OF WESTERN CAPE
Orben reddy architects

ROOFSOOR CLINIC
KWA-ZULU NATAL
GA-RESIDENTIAL PLANS

PROJECT NAME	RESIDENTIAL
CLIENT	ROOFSOOR CLINIC
DATE	2024
SCALE	1:100

FOR APPROVAL

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

WINDOW DETAILS

DESCRIPTION
 Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.

FINISHES
 Frame: White
 Glazing: Clear
 Sill: White
 Linings: White

CONSTRUCTION
 1. 100mm concrete slab
 2. 100mm brickwork
 3. 100mm concrete slab
 4. 100mm brickwork
 5. 100mm concrete slab

Health
 Health Services of KWAZULU NATAL
 ruben ready architects

KWAZULU NATAL

WINDOW SCHEDULE

NO.	DESCRIPTION	UNIT	QTY	REMARKS
1	Window with grid pattern, 1200mm x 1200mm, 12mm glass, 100mm frame, 100mm depth.	m ²	100	

DATE: 15/01/2024
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT: KwaZulu Natal Health Services - KwaZulu Natal

DOOR SCHEDULE

DOOR SCHEDULE - COUNT		
Type Mark	Count	Description
CD02	16	TYPICAL CUPBOARD DOUBLE DOOR
D6	1	600x900 INTERNAL ROLLER SHUTTER DOOR
DBD01	1	TYPICAL FIRE CUPBOARD DOUBLE DOOR
FCD01	6	TYPICAL FIRE CUPBOARD DOUBLE DOOR
FD03	1	1600x2032 DOUBLE 'CLASS B' FIRE DOOR GMS CLADDED WITH THUMB TURN & LOCK
FD05	3	1400x2032 UNEVEN DOUBLE CLASS B FIRE DOOR WITH HOLD OPEN
FD07	1	813x2032 SINGLE ACCESS CONTROLLED CLASS B FIRE DOOR
FD10	1	813x2032 SINGLE CLASS B FIRE DOOR GMS CLADDED WITH THUMB TURN & LOCK
G2	4	2000 x 1200 GALVANISED STEEL SWING GATE. PRIMED AND PAINTED
G3	3	2100 x 1500 1.5 LEAF GALVANISED STEEL SECURITY GATE. PRIMED AND PAINTED
G4	3	2125 x 900 GALVANISED STEEL SWING GATE. PRIMED AND PAINTED
G5	2	1800 x 900 GALVANISED STEEL SWING GATE. PRIMED AND PAINTED
G6	8	2130 x 1850 GALVANISED STEEL DOUBLE SWING GATE. PRIMED AND PAINTED
G7	1	1950 x 2100 GALVANISED STEEL DOUBLE SWING GATE. PRIMED AND PAINTED
SD02	2	1050x2100 SINGLE STEEL LOUVRED SERVICE DOOR
SED	1	SPECIALISED SECURITY MANAGEMENT DOUBLE DOOR
SFD02	6	1400 x2050 DOUBLE SHOPFRONT DOOR
SFD04	3	1600x2050 DOUBLE SHOPFRONT DOOR WITH LOCK
SFD05	3	1600x2050 DOUBLE SHOPFRONT DOOR WITH PANIC BAR
SFD06	1	1400x2050 UNEVEN DOUBLE EXTERNAL ALUMINIUM GLASS DOOR
SFD07	7	1300x2050 UNEVEN DOUBLE EXTERNAL ALUMINIUM GLASS DOOR
SFD11	1	1600x2032 DOUBLE SHOPFRONT DOOR
SPD01	2	SPECIALISED RECORDS ROOM DOOR BY SPECIALIST MANUFACTURERS DETAILS
WD04	7	813x2032 SOLID CORE HARDWOOD TIMBER BATTEN EXTERNAL DOOR
WD05	3	1350x2032 UNEVEN DOUBLE SOLID TIMBER DOOR
WD06	4	1400x2032 UNEVEN DOUBLE SOLID TIMBER DOOR WITH VIEWING PANEL
WD06B	3	1350x2032 UNEVEN DOUBLE SOLID TIMBER DOOR WITH VIEWING PANEL WITHOUT LOCK
WD07	4	813x2032 ACCESS CONTROLLED SOLID TIMBER DOOR
WD08	19	813x2032 SOLID TIMBER DOOR WITH LEVER & LOCK SET
WD09	9	900x2032 SOLID TIMBER DOOR WITH PUSH/PULL ACTION
WD10	5	900x2032 SOLID CORE TIMBER DOOR FOR DISABLE WC
WD11	12	813x2032 SOLID TIMBER DOOR FOR WC
WD13	16	813x2032 SOLID TIMBER DOOR WITH CLOSER & LOCK SET
WD14	15	900x2032 SOLID TIMBER DOOR WITH CLOSER & LOCK SET
Grand total	174	

26/06/2023 11:22:52: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.001

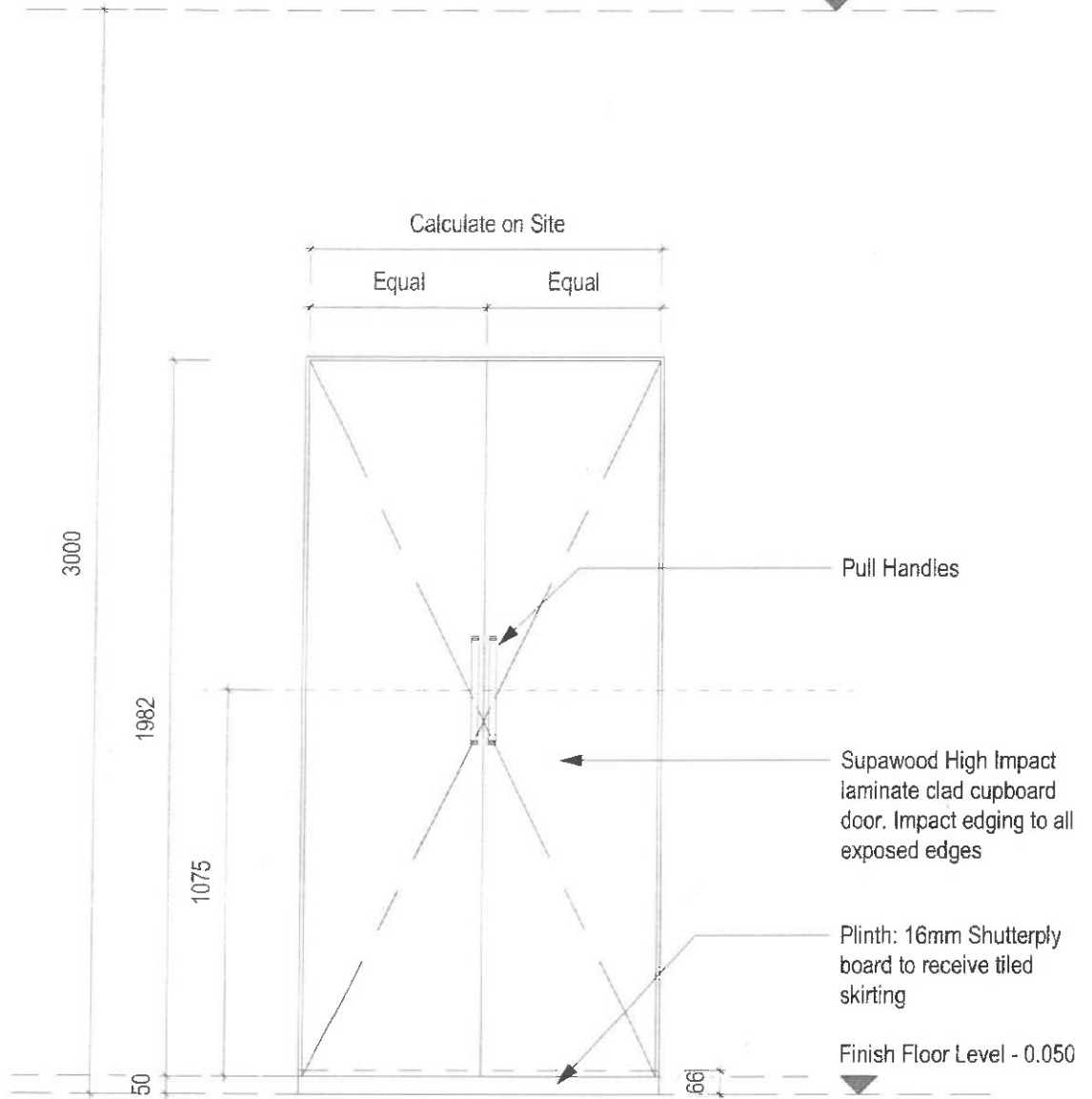
 ruben reddy architects

Dubai | Gurgaon | Cape Town | Bangalore | Pune | Hyderabad | Chennai | Kolkata | Mumbai | New York | London | Sydney | Melbourne | Perth | Auckland | Wellington | Christchurch | Dunedin | Invercargill | Queenstown | Timaru | Nelson | Blenheim | Picton | Christchurch | Dunedin | Invercargill | Queenstown | Timaru | Nelson | Blenheim | Picton

DOOR SCHEDULE

Door Type : CD02

Ceiling Level Level



DESCRIPTION:	C.O.S x 2032 x 16mm Demountable Supawood Cupboard door. Door to be equal leaves. Supawood to be clad with HPL. Max on Top Colour: TBC	
FRAME:	Compact High Pressure Laminate Frame section to suit door opening - supplied complete with door by specialist.	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	1 of Gelmar Strip Handles per leaf, 192mm. Brushed Satin Nickel finish	
LOCKS:	Locking system to suit application, installed by manufacturer. Sample to be approved by Architects.	
CYLINDERS:	As per manufacturers specifications	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:		EXTRAS:
DOOR STOP:		FLUSH BOLT: 2 of Flushbolt 150mm ST/C to suit application by manufacturer
ACCESS CONTROL:		
HINGES:	2 Pairs per leaf of Hafele 90° with integrated soft close. Hinge - 311,60, 565, - Plate: 311,60,566 or equal approved	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:22:55 TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

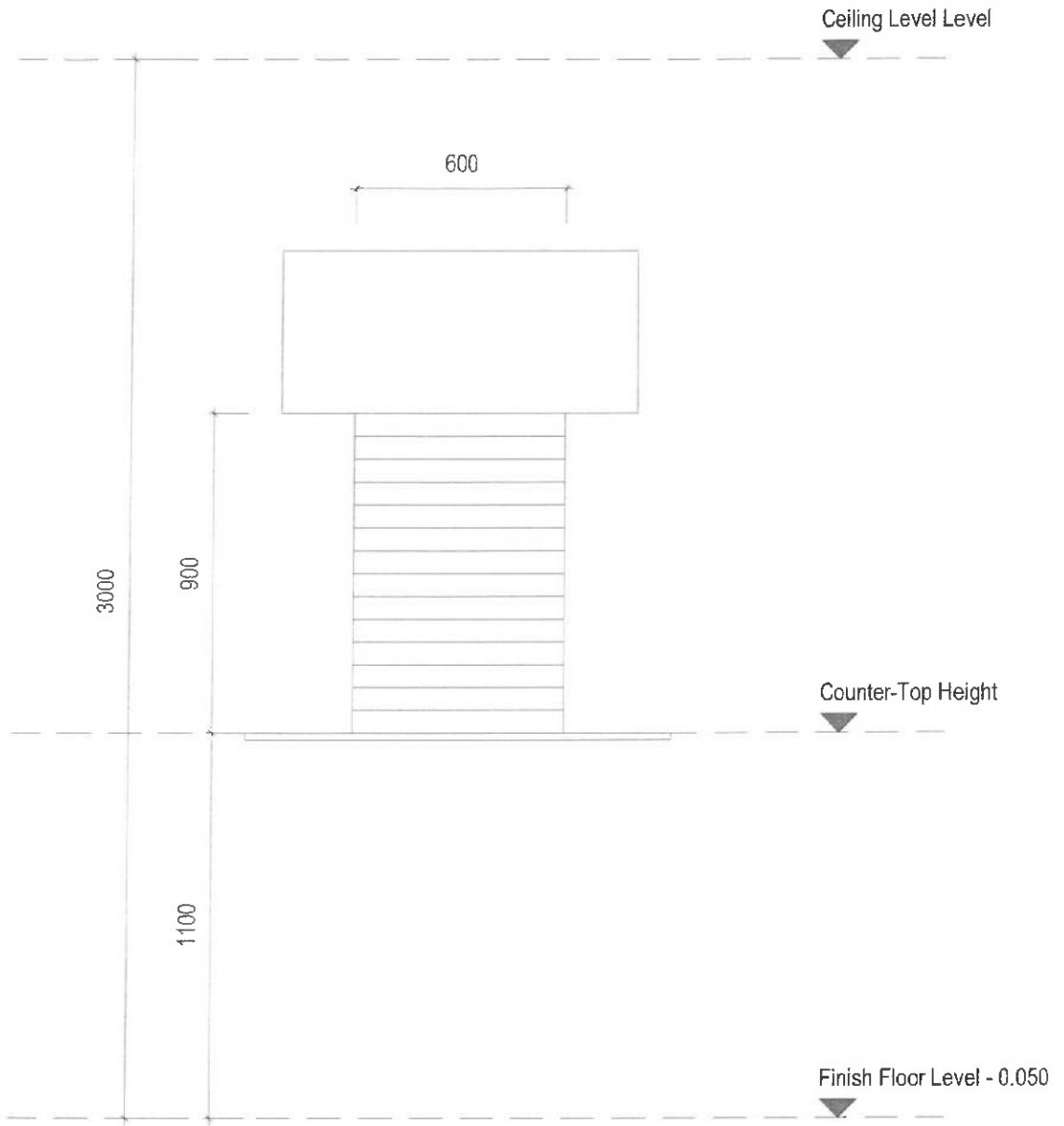
2023_F480-RRR-A-B00-XX-SH-A-06.01.002

Oruben reddy architects

Oruben | Architecture | Interiors | Design | Construction | Project Management
 11/11/2023 | 11/11/2023 | 11/11/2023 | 11/11/2023

DOOR SCHEDULE

Door Type : **D6**



DESCRIPTION:	600 x 900 Roll-up shutter door. Galvanized steel primed and painted with chain operated on inside.	
FRAME:	As per manufacturers specifications	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	N/A	
LOCKS:	As per manufacturers specifications	
CYLINDERS:	As per manufacturers specifications	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:		EXTRAS: Door locking latch as per manufacturers specifications
DOOR STOP:		FLUSH BOLT:
ACCESS CONTROL:		
HINGES:		
KICKPLATE:		
SIGNAGE:		

26/06/2023 11:22:57 TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

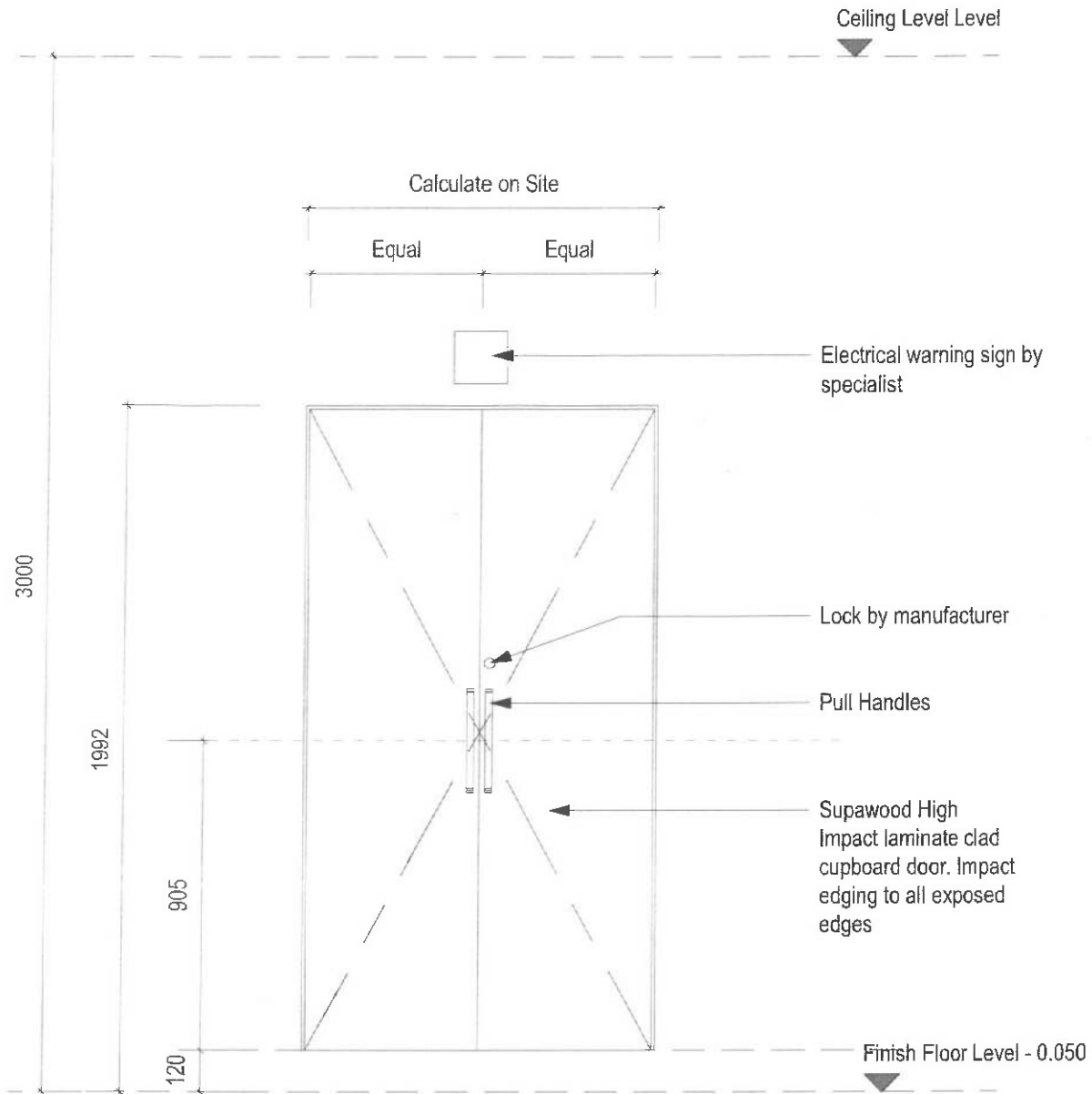
2023_F480-RRR-B00-XX-SH-A-06.01.003

ruben reddy architects

Gurgaon | Hyderabad | Cape Town | Bloemfontein | Auckland
 11 Rudranshwarinagar, Plot No. 10, Sector 14, Gurgaon, Haryana, India

DOOR SCHEDULE

Door Type : DBD01



DESCRIPTION:	C.O.S x 2032 x 16mm Demountable Supawood MEP Services duct door. Door to be equal leaves. Supawood to be clad with HPL. Max on Top Colour: TBC	
FRAME:	Compact High Pressure Laminate Frame section to suit door opening - supplied complete with door by specialist.	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	1 of Hafele Bar Handle per leaf, 200mm. Steel handle Brushed Nickel plated finish. Cat.No. 117.97.043	
LOCKS:	Locking system to suit application, installed by manufacturer. Sample to be approved by Architects.	
CYLINDERS:	As per manufacturers specifications	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:		EXTRAS:
DOOR STOP:		FLUSH BOLT: 2 of Flushbolt 150mm ST/C to suit application by manufacturer
ACCESS CONTROL:		
HINGES:	2 Pairs per leaf of Hafele 90° with integrated soft close. Hinge - 311.60.565, - Plate: 311.60.566 or equal approved	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:22:59: TIME STAMP

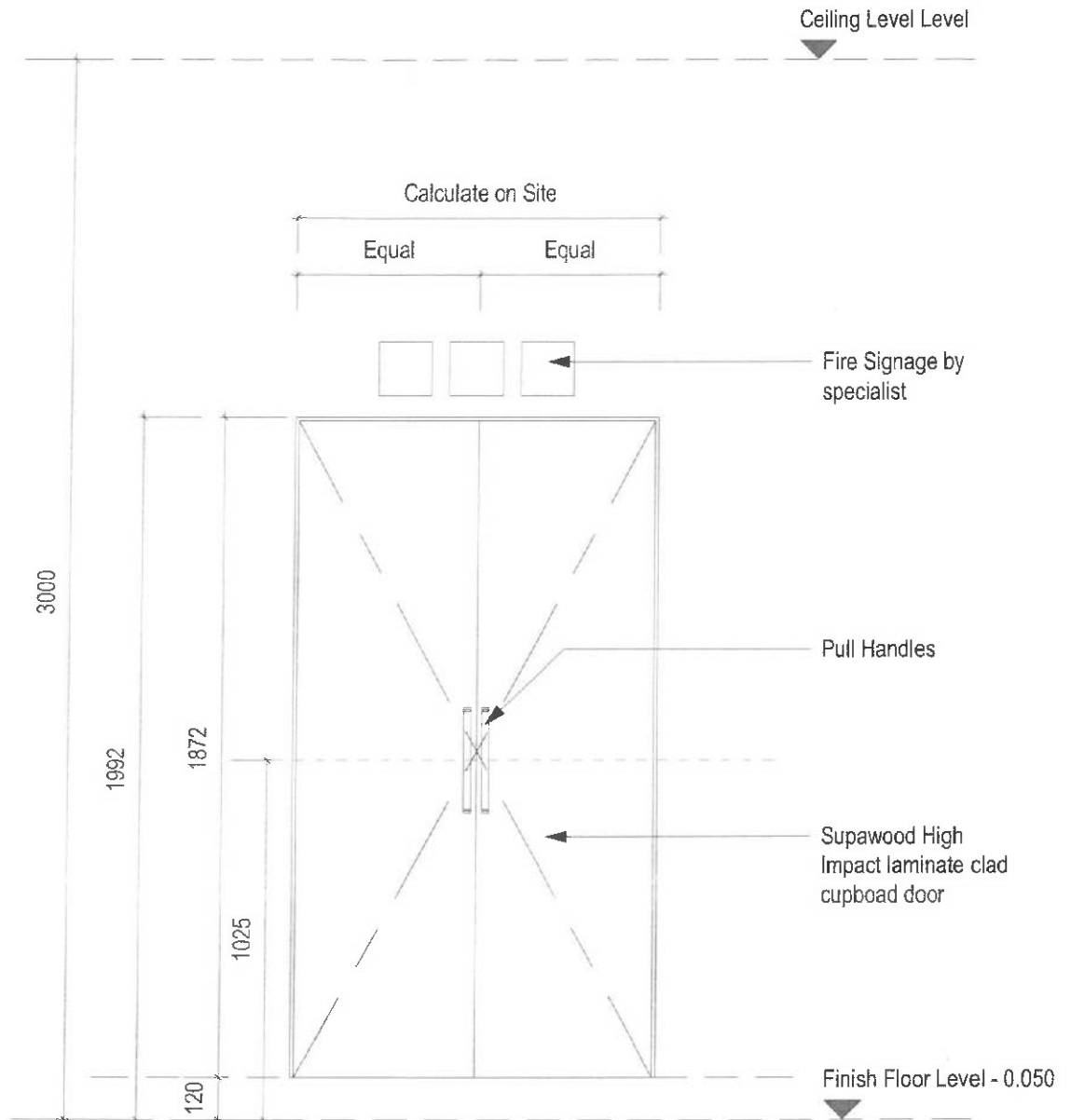
- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-A00-XX-SH-A-06.01.004

ruben reddy architects

DOOR SCHEDULE

Door Type : FCD01



DESCRIPTION:	
C.O.S x 2032 x 16mm Demountable Supawood MEP Services duct door. Door to be equal leaves. Supawood to be clad with HPL. Max on Top Colour: TBC	
FRAME:	Compact High Pressure Laminate Frame section to suit door opening - supplied complete with door by specialist.
GLAZING:	N/A
IRONMONGERY:	
HANDLES:	1 of Hafele Bar Handle per leaf, 200mm. Steel handle Brushed Nickel plated finish. Cat.No. 117.97.043
LOCKS:	Locking system to suit application, installed by manufacturer. Sample to be approved by Architects.
CYLINDERS:	As per manufacturers specifications
SUNDRY 1:	
SUNDRY 2:	
DOOR CLOSER:	EXTRAS:
DOOR STOP:	FLUSH BOLT: 2 of Flushbolt 150mm ST/C to suit application by manufacturer
ACCESS CONTROL:	
HINGES:	2 Pairs per leaf of Hafele 90° with integrated soft close. Hinge - 311,60, 565, - Plate: 311,60,566 or equal approved
KICKPLATE:	
SIGNAGE:	Signage as per detail

26/06/2023 11:23:01: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.005

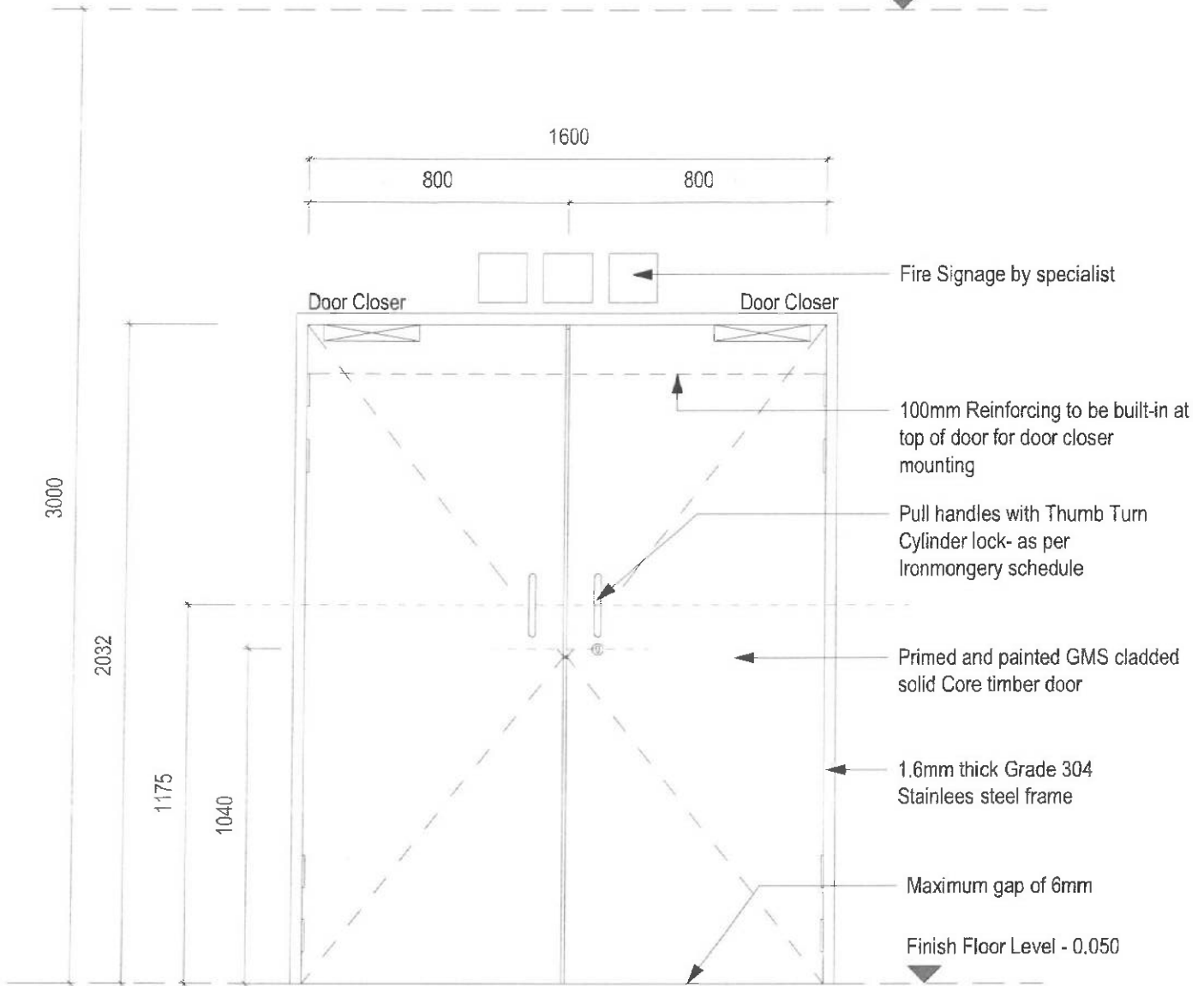
ruben reddy architects

Dubai | Johannesburg | Cape Town | Bluewater | Potchefstroom

DOOR SCHEDULE

Door Type : FD03

Ceiling Level Level



DESCRIPTION:	Fire certified and approved 1600x2032x46mm, CLASS B 2 hour fire rated double door completely clad in GMS sheeting with all edges sealed. Supplied complete with frame in accordance with SANS 1253. Primed & painted with 2 coats Dulux Pearlgló Waterbased Enamel applied in strict accordance with the manufacturers specifications. Colour TBC	
FRAME:	Fire door frame as supplied complete with door by manufacturer. Stainless steel Grade 316 with approximately 48mm rebate to suit door. Brush steel finish.	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	4 of Geze B/B Pull Handles	
LOCKS:	1 of Geze 194/01 Thumb Turn and Lock TT001SS	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5034SR TS5000 Door Closer C/W ISM Guide Rail	EXTRAS: 2 of Geze AD4001 Mounting Plate for TS5000 Door Closer
DOOR STOP:	2 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	2 Pairs Stainless Steel Hinges per leaf supplied complete with door and frame by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:03: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.006

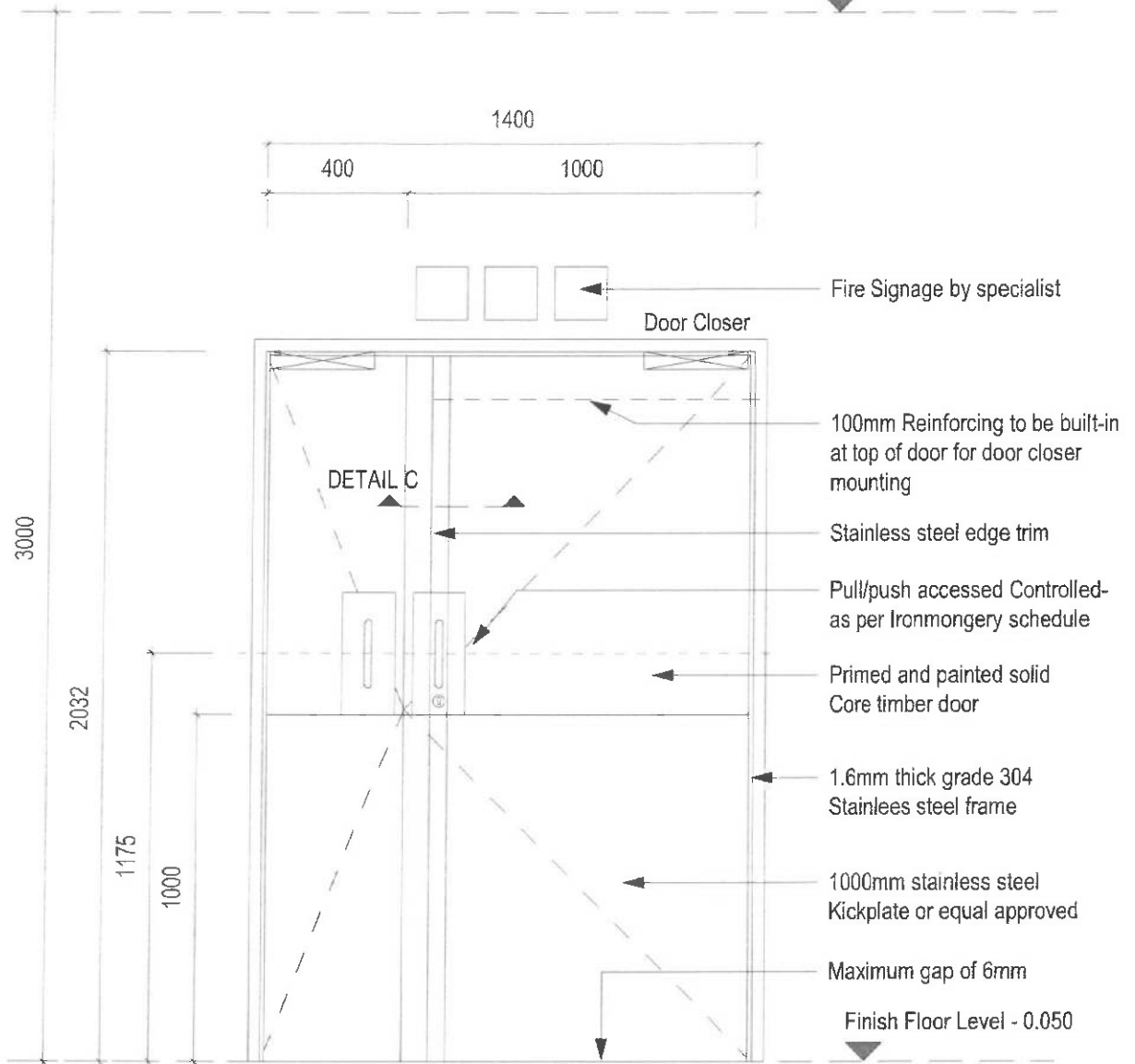
ruben reddy architects

Gurpur | Johannesburg | Cape Town | Bloemfontein | Durban
 011 462 0000 | 021 462 0000 | www.rubenreddy.co.za

DOOR SCHEDULE

Door Type : FD05a

Ceiling Level Level



DESCRIPTION: Fire certified and approved 1400x2032x46mm Hold Open CLASS B 2 hour fire rated single door with masonite veneer and meeting stiles with overlapping stainless steel edge trimming as per Detail C by manufacturer. Front & back edges dressed in stainless steel as per detail A by manufacturer. All exposed sides incl top & bottom to be Primed and Painted with 2 Coats of Dulux Pearlgo Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC Supplied complete with frame in accordance with SANS 1253.

FRAME: Fire door frame as supplied complete with door by manufacturer. Stainless steel Grade 316 with approximately 48mm rebate to suit door. Brush steel finish.

GLAZING:

IRONMONGERY:

HANDLES: 2 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes

LOCKS: 1 of Geze 742/68 Euro Profile Cyl Deadlock S/S 76mm

CYLINDERS: 1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK

SUNDRY 1: 2 x Geze 079/350/B Push Plate on 350x150x1.6mm S/S 6 fix holes with "Push" Engraved

SUNDRY 2:

DOOR CLOSER: 1 of Geze AZ5034SR TS5000 Door Closer C/W ISM Guide Rail | EXTRAS: 6 of Geze ND0501 Patent Fixing Screws

DOOR STOP: 2 of Geze 140/69 S/S Floor Mounted Door Stop | FLUSH BOLT: 1 of Geze 120/150 Flushbolt 150mm ST/C & 1 of Geze 120/300 Flushbolt 300mm ST/C

ACCESS CONTROL:

HINGES: 1.5 pairs Stainless Steel hinges per leaf supplied complete with door and frame by manufacturer

KICKPLATE: 1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.

SIGNAGE:

26/06/2023 11:23:06 TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

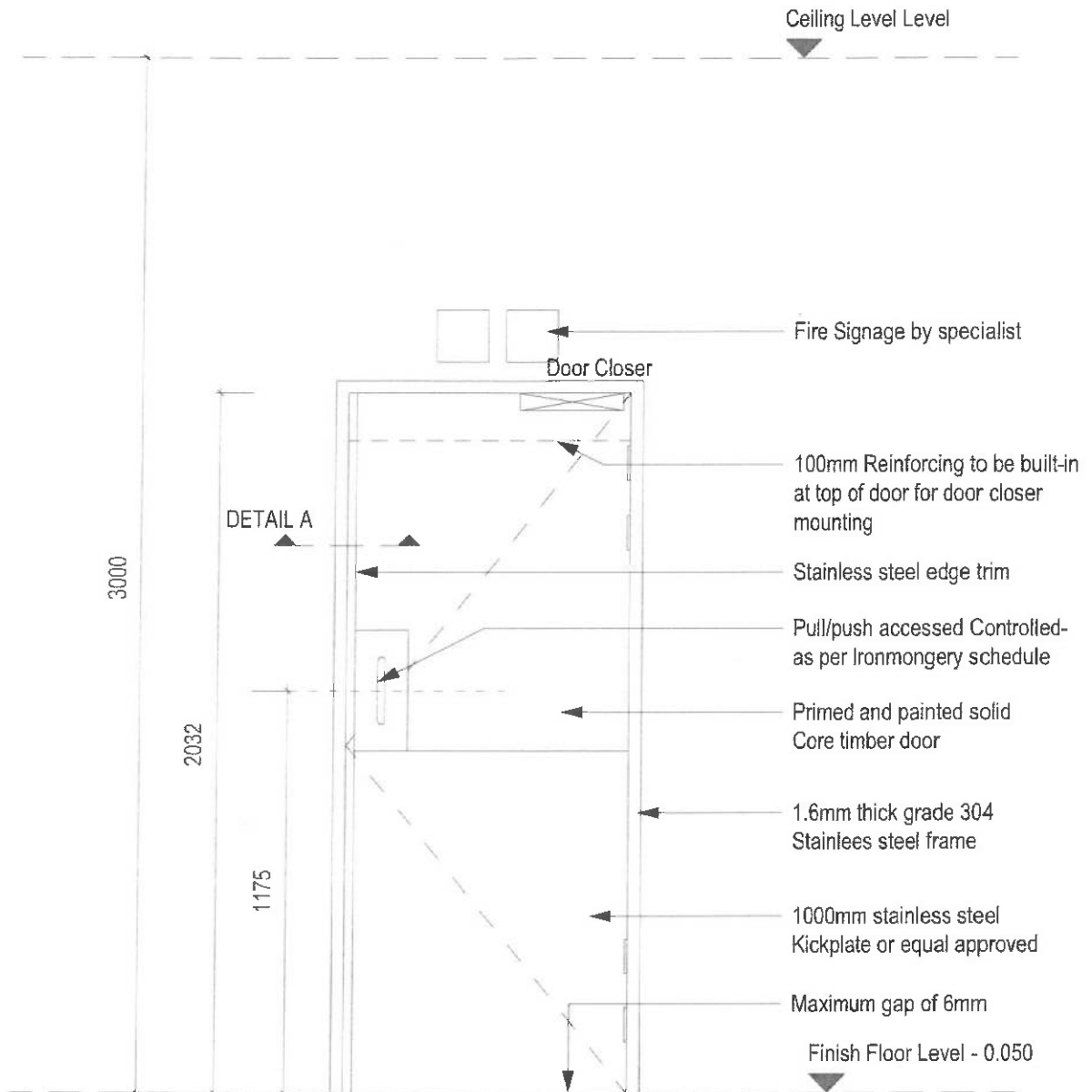
2023_F480-RRA-B00-XX-SH-A-06.01.007

ruben reddy architects

Durban | Johannesburg | Cape Town | Bloemfontein | Richards Bay
 info@rubenreddy.co.za | www.rubenreddy.co.za

DOOR SCHEDULE

Door Type : FD07



DESCRIPTION:	Fire certified and approved 813x2032x46mm Accessed Controlled CLASS B 2 hour fire rated single door with masonite veneer. Front & back edges dressed in stainless steel as per detail A by manufacturer. All exposed sides incl top & bottom to be Primed and Painted with 2 Coats of Dulux Pearlgló Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC Supplied complete with frame in accordance with SANS 1253.	
FRAME:	Fire door frame as supplied complete with door by manufacturer. Stainless steel Grade 304 with approximately 48mm rebate to suit door. Brush steel finish.	
GLAZING:		
IRONMONGERY:		
HANDLES:	1 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes	
LOCKS:		
CYLINDERS:		
SUNDRY 1:	1 x Geze 079/350/B Push Plate on 350x150x1.6mm S/S 6 fix holes with "Push" Engraved	
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5003SR TS5000 with Guide Rail	EXTRAS: 6 of Geze ND0501 Patent Fixing Screws
DOOR STOP:	1 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:	Access Control by Specialist	
HINGES:	2 Pairs Stainless Steel Hinges per leaf supplied complete with door and frame by manufacturer	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:08 : TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

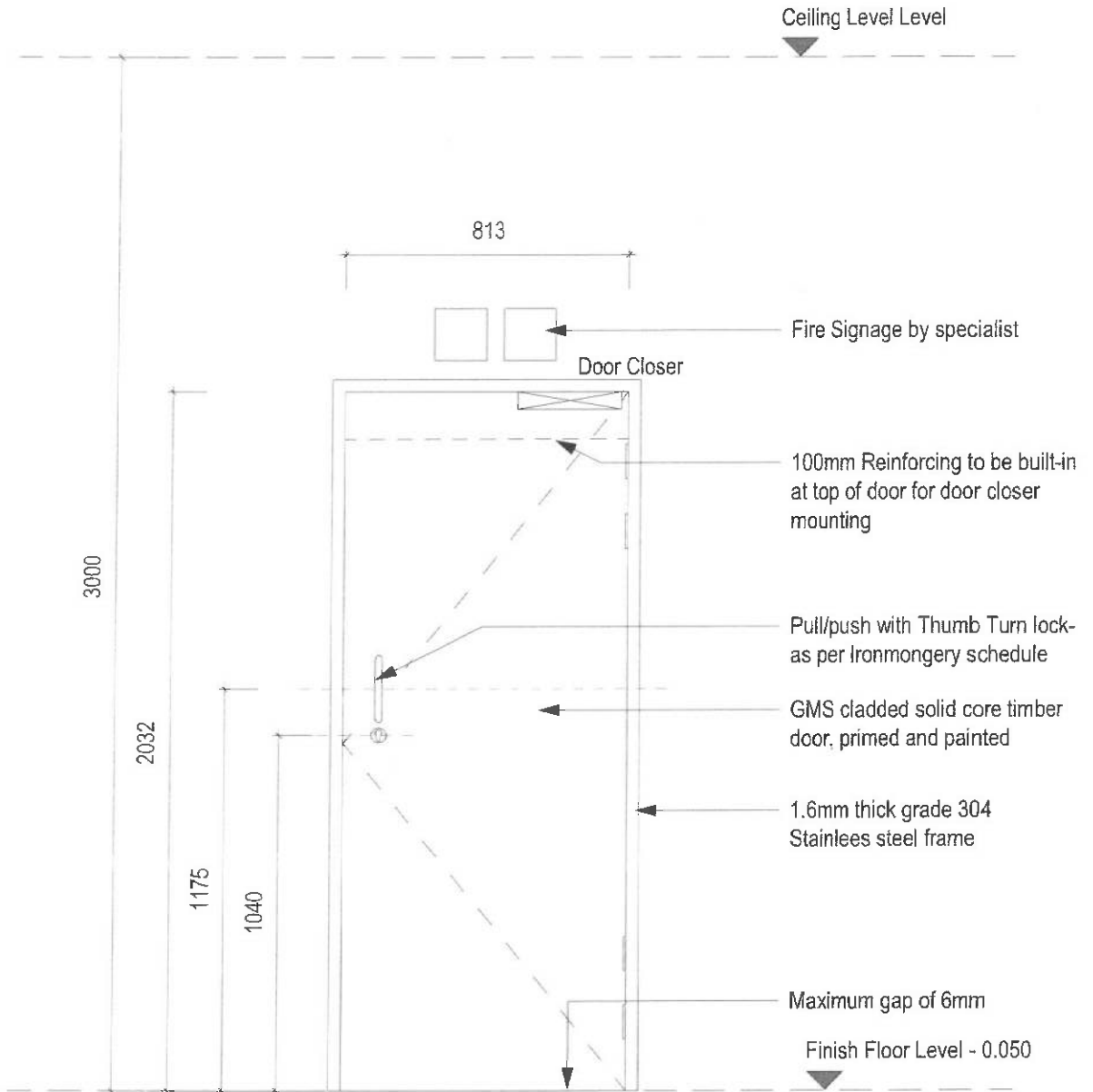
2023_F480-RRA-B00-XX-SH-A-06.01.008

Oruben reddy architects

Office | Johannesburg | Cape Town | Bloemfontein | Polokwane
info@rubenreddyarchitects.co.za | www.rubenreddyarchitects.co.za

DOOR SCHEDULE

Door Type : FD10



DESCRIPTION:	Fire certified and approved 813x2032x46mm CLASS B 2 hour fire rated single door with masonite veneer. Front & back edges dressed in stainless steel as per detail A by manufacturer. All exposed sides incl top & bottom to be Primed and P	
FRAME:	Fire door frame as supplied complete with door by manufacturer. Stainless steel Grade 304 with approximately 48mm rebate to suit door. Brush steel finish.	
GLAZING:		
IRONMONGERY:		
HANDLES:	1 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes	
LOCKS:	1 of Geze 194/01 Thumb Tum and Lock TT001SS	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:	1 x Geze 079/350/B Push Plate on 350x150x1.6mm S/S 6 fix holes with "Push" Engraved	
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5003SR TS5000 with Guide Rail	EXTRAS: 2 of Geze AD4001 Mounting Plate for TS5000 Door Closer
DOOR STOP:	1 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	1.5 pairs Stainless Steel hinges per leaf supplied complete with door and frame by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:10: TIME STAMP

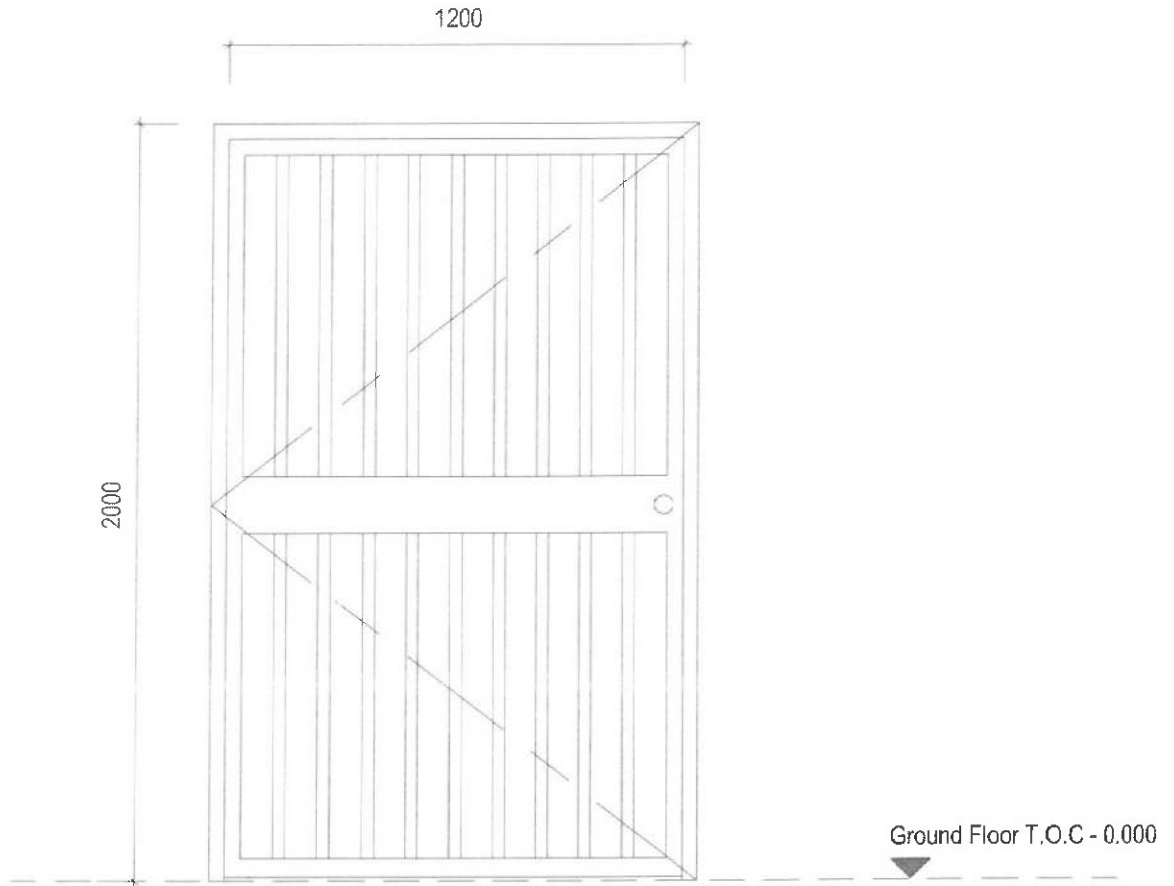
- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRA-B00-XX-SH-A-06.01.009

ruben reddy architects
 Durban | Johannesburg | Cape Town | Bloemfontein | Polokwane
 info@rubenreddyarch.co.za | www.rubenreddyarch.co.za

DOOR SCHEDULE

Door Type : G2



DESCRIPTION:	2000 x 1200 Galvanised Steel swing gate. Primed and painted as per manufacturers specifications	
FRAME:	GMS Primed and painted. To manufacturers specification	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	As per manufacturers specifications	
LOCKS:	As per manufacturers specifications	
CYLINDERS:		
SUNDRY 1:		
SUNDRY 2:	N/A	
DOOR CLOSER:		EXTRAS:
DOOR STOP:		FLUSH BOLT:
ACCESS CONTROL:		
HINGES:		
KICKPLATE:		
SIGNAGE:		

26/06/2023 11:23:12: TIME STAMP

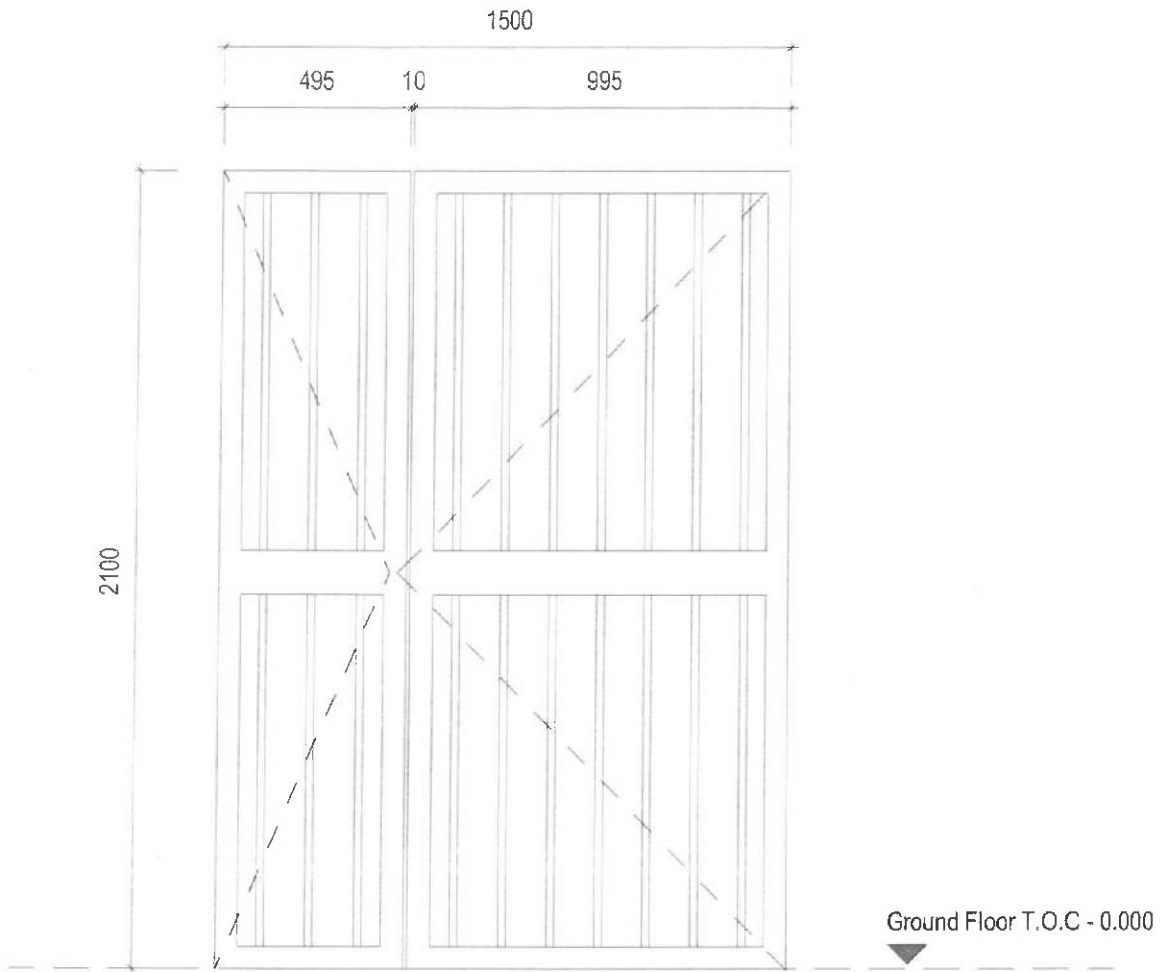
- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.010

ruben reddy architects
 Durban | Johannesburg | Cape Town | Bloemfontein | Polokwane
 info@rubenreddy.co.za | www.rubenreddy.co.za

DOOR SCHEDULE

Door Type : G3



DESCRIPTION:	2130 x 1500 1.5 Leaf Galvanised Steel security gate. Primed and painted as per manufacturers specifications	
FRAME:	GMS Primed and painted. To manufacturers specification	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	As per manufacturers specifications	
LOCKS:	As per manufacturers specifications	
CYLINDERS:		
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:	As per manufacturers specifications	EXTRAS:
DOOR STOP:		FLUSH BOLT:
ACCESS CONTROL:		
HINGES:		
KICKPLATE:		
SIGNAGE:		

26/06/2023 11:23:14: TIME STAMP

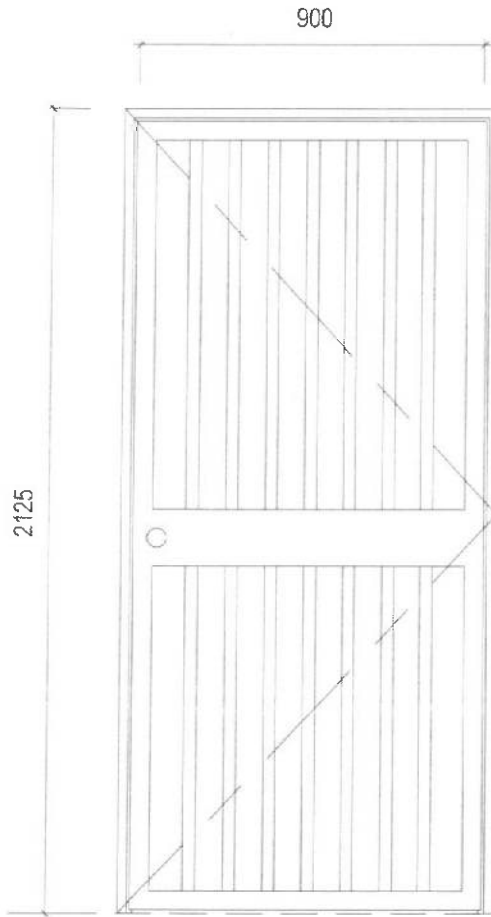
- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.011

ruben reddy architects

(Dubai) | (Chennai) | (Cape Town) | (Buenos Aires) | (Pretoria)

rubenreddyarchitects.com | www.rubenreddy.com



Ground Floor T.O.C - 0.000

DESCRIPTION:	
2130 x 900 Galvanised Steel swing gate. Primed and painted as per manufacturers specifications	
FRAME:	GMS Primed and painted. To manufacturers specification
GLAZING:	N/A
IRONMONGERY:	
HANDLES:	As per manufacturers specifications
LOCKS:	As per manufacturers specifications
CYLINDERS:	As per manufacturers specifications
SUNDRY 1:	
SUNDRY 2:	
DOOR CLOSER:	EXTRAS:
DOOR STOP:	FLUSH BOLT:
ACCESS CONTROL:	
HINGES:	
KICKPLATE:	
SIGNAGE:	

26/06/2023 11:23:16: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

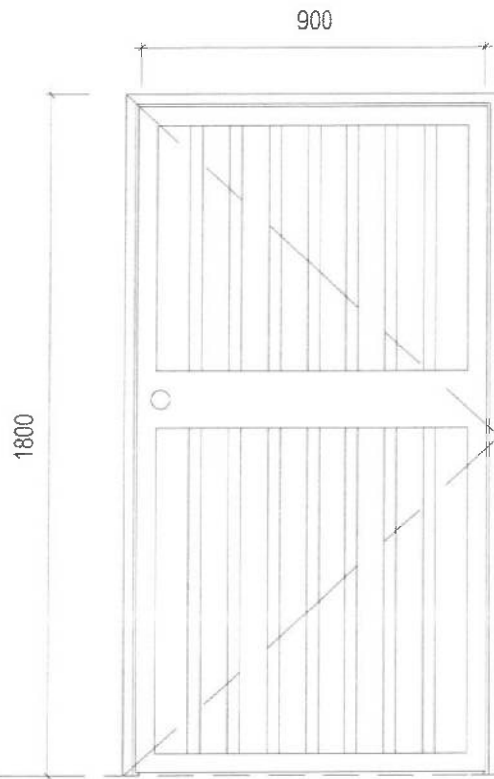
2023_F480-RRR-B00-XX-SH-A-06.01.012

ruben reddy architects

18/2008/2009/2010/2011/2012/2013/2014/2015/2016/2017/2018/2019/2020/2021/2022/2023/2024/2025/2026/2027/2028/2029/2030/2031/2032/2033/2034/2035/2036/2037/2038/2039/2040/2041/2042/2043/2044/2045/2046/2047/2048/2049/2050/2051/2052/2053/2054/2055/2056/2057/2058/2059/2060/2061/2062/2063/2064/2065/2066/2067/2068/2069/2070/2071/2072/2073/2074/2075/2076/2077/2078/2079/2080/2081/2082/2083/2084/2085/2086/2087/2088/2089/2090/2091/2092/2093/2094/2095/2096/2097/2098/2099/2100/2101/2102/2103/2104/2105/2106/2107/2108/2109/2110/2111/2112/2113/2114/2115/2116/2117/2118/2119/2120/2121/2122/2123/2124/2125/2126/2127/2128/2129/2130/2131/2132/2133/2134/2135/2136/2137/2138/2139/2140/2141/2142/2143/2144/2145/2146/2147/2148/2149/2150/2151/2152/2153/2154/2155/2156/2157/2158/2159/2160/2161/2162/2163/2164/2165/2166/2167/2168/2169/2170/2171/2172/2173/2174/2175/2176/2177/2178/2179/2180/2181/2182/2183/2184/2185/2186/2187/2188/2189/2190/2191/2192/2193/2194/2195/2196/2197/2198/2199/2200/2201/2202/2203/2204/2205/2206/2207/2208/2209/2210/2211/2212/2213/2214/2215/2216/2217/2218/2219/2220/2221/2222/2223/2224/2225/2226/2227/2228/2229/2230/2231/2232/2233/2234/2235/2236/2237/2238/2239/2240/2241/2242/2243/2244/2245/2246/2247/2248/2249/2250/2251/2252/2253/2254/2255/2256/2257/2258/2259/2260/2261/2262/2263/2264/2265/2266/2267/2268/2269/2270/2271/2272/2273/2274/2275/2276/2277/2278/2279/2280/2281/2282/2283/2284/2285/2286/2287/2288/2289/2290/2291/2292/2293/2294/2295/2296/2297/2298/2299/2300/2301/2302/2303/2304/2305/2306/2307/2308/2309/2310/2311/2312/2313/2314/2315/2316/2317/2318/2319/2320/2321/2322/2323/2324/2325/2326/2327/2328/2329/2330/2331/2332/2333/2334/2335/2336/2337/2338/2339/2340/2341/2342/2343/2344/2345/2346/2347/2348/2349/2350/2351/2352/2353/2354/2355/2356/2357/2358/2359/2360/2361/2362/2363/2364/2365/2366/2367/2368/2369/2370/2371/2372/2373/2374/2375/2376/2377/2378/2379/2380/2381/2382/2383/2384/2385/2386/2387/2388/2389/2390/2391/2392/2393/2394/2395/2396/2397/2398/2399/2400/2401/2402/2403/2404/2405/2406/2407/2408/2409/2410/2411/2412/2413/2414/2415/2416/2417/2418/2419/2420/2421/2422/2423/2424/2425/2426/2427/2428/2429/2430/2431/2432/2433/2434/2435/2436/2437/2438/2439/2440/2441/2442/2443/2444/2445/2446/2447/2448/2449/2450/2451/2452/2453/2454/2455/2456/2457/2458/2459/2460/2461/2462/2463/2464/2465/2466/2467/2468/2469/2470/2471/2472/2473/2474/2475/2476/2477/2478/2479/2480/2481/2482/2483/2484/2485/2486/2487/2488/2489/2490/2491/2492/2493/2494/2495/2496/2497/2498/2499/2500/2501/2502/2503/2504/2505/2506/2507/2508/2509/2510/2511/2512/2513/2514/2515/2516/2517/2518/2519/2520/2521/2522/2523/2524/2525/2526/2527/2528/2529/2530/2531/2532/2533/2534/2535/2536/2537/2538/2539/2540/2541/2542/2543/2544/2545/2546/2547/2548/2549/2550/2551/2552/2553/2554/2555/2556/2557/2558/2559/2560/2561/2562/2563/2564/2565/2566/2567/2568/2569/2570/2571/2572/2573/2574/2575/2576/2577/2578/2579/2580/2581/2582/2583/2584/2585/2586/2587/2588/2589/2590/2591/2592/2593/2594/2595/2596/2597/2598/2599/2600/2601/2602/2603/2604/2605/2606/2607/2608/2609/2610/2611/2612/2613/2614/2615/2616/2617/2618/2619/2620/2621/2622/2623/2624/2625/2626/2627/2628/2629/2630/2631/2632/2633/2634/2635/2636/2637/2638/2639/2640/2641/2642/2643/2644/2645/2646/2647/2648/2649/2650/2651/2652/2653/2654/2655/2656/2657/2658/2659/2660/2661/2662/2663/2664/2665/2666/2667/2668/2669/2670/2671/2672/2673/2674/2675/2676/2677/2678/2679/2680/2681/2682/2683/2684/2685/2686/2687/2688/2689/2690/2691/2692/2693/2694/2695/2696/2697/2698/2699/2700/2701/2702/2703/2704/2705/2706/2707/2708/2709/2710/2711/2712/2713/2714/2715/2716/2717/2718/2719/2720/2721/2722/2723/2724/2725/2726/2727/2728/2729/2730/2731/2732/2733/2734/2735/2736/2737/2738/2739/2740/2741/2742/2743/2744/2745/2746/2747/2748/2749/2750/2751/2752/2753/2754/2755/2756/2757/2758/2759/2760/2761/2762/2763/2764/2765/2766/2767/2768/2769/2770/2771/2772/2773/2774/2775/2776/2777/2778/2779/2780/2781/2782/2783/2784/2785/2786/2787/2788/2789/2790/2791/2792/2793/2794/2795/2796/2797/2798/2799/2800/2801/2802/2803/2804/2805/2806/2807/2808/2809/2810/2811/2812/2813/2814/2815/2816/2817/2818/2819/2820/2821/2822/2823/2824/2825/2826/2827/2828/2829/2830/2831/2832/2833/2834/2835/2836/2837/2838/2839/2840/2841/2842/2843/2844/2845/2846/2847/2848/2849/2850/2851/2852/2853/2854/2855/2856/2857/2858/2859/2860/2861/2862/2863/2864/2865/2866/2867/2868/2869/2870/2871/2872/2873/2874/2875/2876/2877/2878/2879/2880/2881/2882/2883/2884/2885/2886/2887/2888/2889/2890/2891/2892/2893/2894/2895/2896/2897/2898/2899/2900/2901/2902/2903/2904/2905/2906/2907/2908/2909/2910/2911/2912/2913/2914/2915/2916/2917/2918/2919/2920/2921/2922/2923/2924/2925/2926/2927/2928/2929/2930/2931/2932/2933/2934/2935/2936/2937/2938/2939/2940/2941/2942/2943/2944/2945/2946/2947/2948/2949/2950/2951/2952/2953/2954/2955/2956/2957/2958/2959/2960/2961/2962/2963/2964/2965/2966/2967/2968/2969/2970/2971/2972/2973/2974/2975/2976/2977/2978/2979/2980/2981/2982/2983/2984/2985/2986/2987/2988/2989/2990/2991/2992/2993/2994/2995/2996/2997/2998/2999/3000/3001/3002/3003/3004/3005/3006/3007/3008/3009/3010/3011/3012/3013/3014/3015/3016/3017/3018/3019/3020/3021/3022/3023/3024/3025/3026/3027/3028/3029/3030/3031/3032/3033/3034/3035/3036/3037/3038/3039/3040/3041/3042/3043/3044/3045/3046/3047/3048/3049/3050/3051/3052/3053/3054/3055/3056/3057/3058/3059/3060/3061/3062/3063/3064/3065/3066/3067/3068/3069/3070/3071/3072/3073/3074/3075/3076/3077/3078/3079/3080/3081/3082/3083/3084/3085/3086/3087/3088/3089/3090/3091/3092/3093/3094/3095/3096/3097/3098/3099/3100/3101/3102/3103/3104/3105/3106/3107/3108/3109/3110/3111/3112/3113/3114/3115/3116/3117/3118/3119/3120/3121/3122/3123/3124/3125/3126/3127/3128/3129/3130/3131/3132/3133/3134/3135/3136/3137/3138/3139/3140/3141/3142/3143/3144/3145/3146/3147/3148/3149/3150/3151/3152/3153/3154/3155/3156/3157/3158/3159/3160/3161/3162/3163/3164/3165/3166/3167/3168/3169/3170/3171/3172/3173/3174/3175/3176/3177/3178/3179/3180/3181/3182/3183/3184/3185/3186/3187/3188/3189/3190/3191/3192/3193/3194/3195/3196/3197/3198/3199/3200/3201/3202/3203/3204/3205/3206/3207/3208/3209/3210/3211/3212/3213/3214/3215/3216/3217/3218/3219/3220/3221/3222/3223/3224/3225/3226/3227/3228/3229/3230/3231/3232/3233/3234/3235/3236/3237/3238/3239/3240/3241/3242/3243/3244/3245/3246/3247/3248/3249/3250/3251/3252/3253/3254/3255/3256/3257/3258/3259/3260/3261/3262/3263/3264/3265/3266/3267/3268/3269/3270/3271/3272/3273/3274/3275/3276/3277/3278/3279/3280/3281/3282/3283/3284/3285/3286/3287/3288/3289/3290/3291/3292/3293/3294/3295/3296/3297/3298/3299/3300/3301/3302/3303/3304/3305/3306/3307/3308/3309/3310/3311/3312/3313/3314/3315/3316/3317/3318/3319/3320/3321/3322/3323/3324/3325/3326/3327/3328/3329/3330/3331/3332/3333/3334/3335/3336/3337/3338/3339/3340/3341/3342/3343/3344/3345/3346/3347/3348/3349/3350/3351/3352/3353/3354/3355/3356/3357/3358/3359/3360/3361/3362/3363/3364/3365/3366/3367/3368/3369/3370/3371/3372/3373/3374/3375/3376/3377/3378/3379/3380/3381/3382/3383/3384/3385/3386/3387/3388/3389/3390/3391/3392/3393/3394/3395/3396/3397/3398/3399/3400/3401/3402/3403/3404/3405/3406/3407/3408/3409/3410/3411/3412/3413/3414/3415/3416/3417/3418/3419/3420/3421/3422/3423/3424/3425/3426/3427/3428/3429/3430/3431/3432/3433/3434/3435/3436/3437/3438/3439/3440/3441/3442/3443/3444/3445/3446/3447/3448/3449/3450/3451/3452/3453/3454/3455/3456/3457/3458/3459/3460/3461/3462/3463/3464/3465/3466/3467/3468/3469/3470/3471/3472/3473/3474/3475/3476/3477/3478/3479/3480/3481/3482/3483/3484/3485/3486/3487/3488/3489/3490/3491/3492/3493/3494/3495/3496/3497/3498/3499/3500/3501/3502/3503/3504/3505/3506/3507/3508/3509/3510/3511/3512/3513/3514/3515/3516/3517/3518/3519/3520/3521/3522/3523/3524/3525/3526/3527/3528/3529/3530/3531/3532/3533/3534/3535/3536/3537/3538/3539/3540/3541/3542/3543/3544/3545/3546/3547/3548/3549/3550/3551/3552/3553/3554/3555/3556/3557/3558/3559/3560/3561/3562/3563/3564/3565/3566/3567/3568/3569/3570/3571/3572/3573/3574/3575/3576/3577/3578/3579/3580/3581/3582/3583/3584/3585/3586/3587/3588/3589/3590/3591/3592/3593/3594/3595/3596/3597/3598/3599/3600/3601/3602/3603/3604/3605/3606/3607/3608/3609/3610/3611/3612/3613/3614/3615/3616/3617/3618/3619/3620/3621/3622/3623/3624/3625/3626/3627/3628/3629/3630/3631/3632/3633/3634/3635/3636/3637/3638/3639/3640/3641/3642/3643/3644/3645/3646/3647/3648/3649/3650/3651/3652/3653/3654/3655/3656/3657/3658/3659/3660/3661/3662/3663/3664/3665/3666/3667/3668/3669/3670/3671/3672/3673/3674/3675/3676/3677/3678/3679/3680/3681/3682/3683/3684/3685/3686/3687/3688/3689/3690/3691/3692/3693/3694/3695/3696/3697/3698/3699/3700/3701/3702/3703/3704/3705/3706/3707/3708/3709/3710/3711/3712/3713/3714/3715/3716/3717/3718/3719/3720/3721/3722/3723/3724/3725/3726/3727/3728/3729/3730/3731/3732/3733/3734/3735/3736/3737/3738/3739/3740/3741/3742/3743/3744/3745/3746/3747/3748/3749/3750/3751/3752/3753/3754/3755/3756/3757/3758/3759/3760/3761/3762/3763/3764/3765/3766/3767/3768/3769/3770/3771/3772/3773/3774/3775/3776/3777/3778/3779/3780/3781/3782/3783/3784/3785/3786/3787/3788/3789/3790/3791/3792/3793/3794/3795/3796/3797/3798/3799/3800/3801/3802/3803/3804/3805/3806/3807/3808/3809/3810/3811/3812/3813/3814/3815/3816/3817/3818/3819/3820/3821/3822/3823/3824/3825/3826/3827/3828/3829/3830/3831/3832/3833/3834/3835/3836/3837/3838/3839/3840/3841/3842/3843/3844/3845/3846/3847/3848/3849/3850/3851/3852/3853/3854/3855/3856/3857/3858/3859/3860/3861/3862/3863/3864/3865/3866/3867/3868/3869/3870/3871/3872/3873/3874/3875/3876/3877/3878/3879/3880/3881/3882/3883/3884/3885/3886/3887/3888/3889/3890/3891/3892/3893/3894/3895/3896/3897/3898/3899/3900/3901/3902/3903/3904/3905/3906/3907/3908/3909/3910/3911/3912/3913/3914/3915/3916/3917/3918/3919/3920/3921/3922/3923/3924/3925/3926/3927/3928/3929/3930/3931/3932/3933/3934/3935/3936/3937/3938/3939/3940/3941/3942/3943/3944/3945/3946/3947/3948/3949/3950/3951/3952/3953/3954/3955/3956/3957/3958/3959/3960/3961/3962/3963/3964/3965/3966/3967/3968/3969/3970/3971/3972/3973/3974/3975/3976/3977/3978/3979/3980/3981/3982/3983/3984/3985/3986/3987/3988/3989/3990/3991/3992/3993/3994/3995/3996/3997/3998/3999/4000/4001/4002/4003/4004/4005/4006/4007/4008/4009/4010/4011/4012/4013/4014/4015/4016/4017/4018/4019/4020/4021/4022/4023/4024/4025/4026/4027/4028/4029/4030/4031/4032/4033/4034/4035/4036/4037/4038/4039/4040/4041/4042/4043/4044/4045/4046/4047/4048/4049/4050/4051/4052/4053/4054/4055/4056/4057/4058/4059/4060/4061/4062/4063/4064/4065/4066/4067/4068/4069/4070/4071/4072/4073/4074/4075/4076/4077/4078/4079/4080/4081/4082/4083/4084/4085/4086/4087/4088/4089/4090/4091/4092/4093/4094/4095/4096/4097/4098/4099/4100/4101/4102/4103/4104/4105/4106/4107/4108/4109/4110/4111/4112/4113/4114/4115/4116/4117/4118/4119/4120/4121/4122/4123/4124/4125/4126/4127/4128/4129/4130/4131/4132/4133/4134/4135/4136/4137/4138/4139/4140/4141/4142/4143/4144/4145/4146/4147/4148/4149/4150/4151/4152/4153/4154/4155/4156/4157/4158/4159/4160/4161/4162/4163/4164/4165/4166/4167/4168/4169/4170/4171/4172/4173/4174/4175/4176/4177/4178/4179/4180/4181/4182/4183/4184/4185/4186/4187/4188/4189/4190/4191/4192/4193/4194/4195/4196/4197/4198/4199/4200/4201/4202/4203/4204/4205/4206/4207/4208/4209/4210/4211/4212/4213/4214/4215/4216/4217/4218/4219/4220/4221/4222/4223/4224/4225/4226/4227/4228/4229/4230/4231/4232/4233/4234/4235/4236/4237/4238/4239/4240/4241/4242/4243/4244/4245/4246/4247/4248/4249/4250/4251/4252/4253/4254/4255/4256/4257/4258/4259/4260/4261/4262/426

DOOR SCHEDULE

Door Type : G5



Ground Floor T.O.C - 0.000

DESCRIPTION:		1800 x 900 Galvanised Steel swing gate. Primed and painted as per manufacturers specifications
FRAME:		GMS Primed and painted. To manufacturers specification
GLAZING:		N/A
IRONMONGERY:		
HANDLES:		As per manufacturers specifications
LOCKS:		As per manufacturers specifications
CYLINDERS:		
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:		EXTRAS:
DOOR STOP:		FLUSH BOLT:
ACCESS CONTROL:		
HINGES:		
KICKPLATE:		
SIGNAGE:		

26/06/2023 11:23:19 TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.013

ruben reddy architects
 Durban | Johannesburg | Cape Town | Bloemfontein | Polokwane
 rre@rubenreddy.co.za | www.rubenreddy.co.za

DOOR SCHEDULE

Ground Floor T.O.C - 0.000



26/06/2023 11:23:21: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

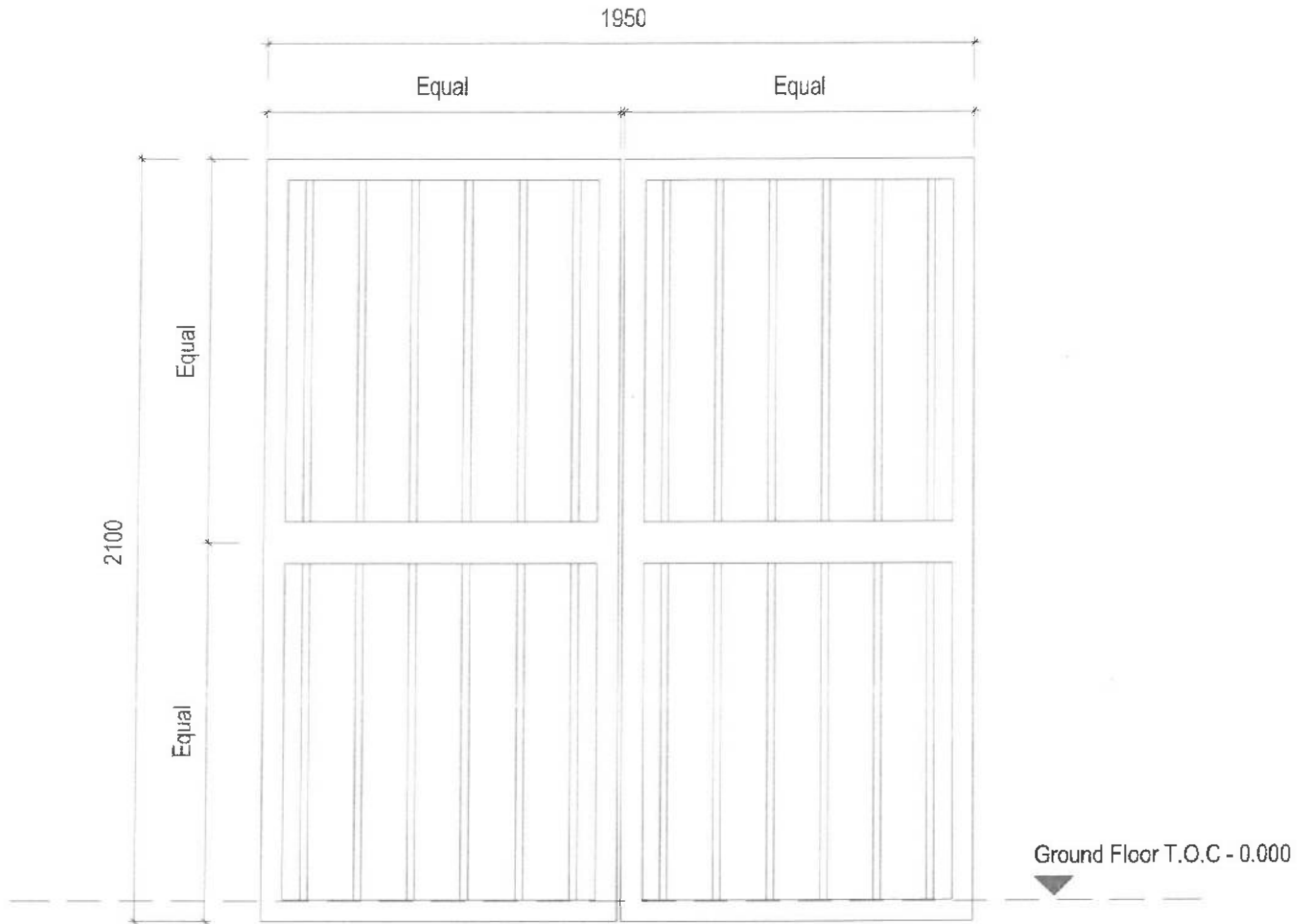
2023_F480-RRA-B00-XX-SH-A-06.01.014

 ruben reddy architects

Durga | Chhara | Bangalore | Cape Town | Düsseldorf | Edinburgh
11 South Street, 5th Floor, Suite 501, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

DOOR SCHEDULE

Door Type : G7



DESCRIPTION:	
1950 x 2100 Galvanised Steel Double swing gate. Primed and painted as per manufacturers specifications	
FRAME:	GMS Primed and painted. To manufacturers specification
GLAZING:	N/A
IRONMONGERY:	
HANDLES:	As per manufacturers specifications
LOCKS:	As per manufacturers specifications
CYLINDERS:	
SUNDRY 1:	
SUNDRY 2:	
DOOR CLOSER:	EXTRAS:
DOOR STOP:	FLUSH BOLT:
ACCESS CONTROL:	
HINGES:	
KICKPLATE:	
SIGNAGE:	

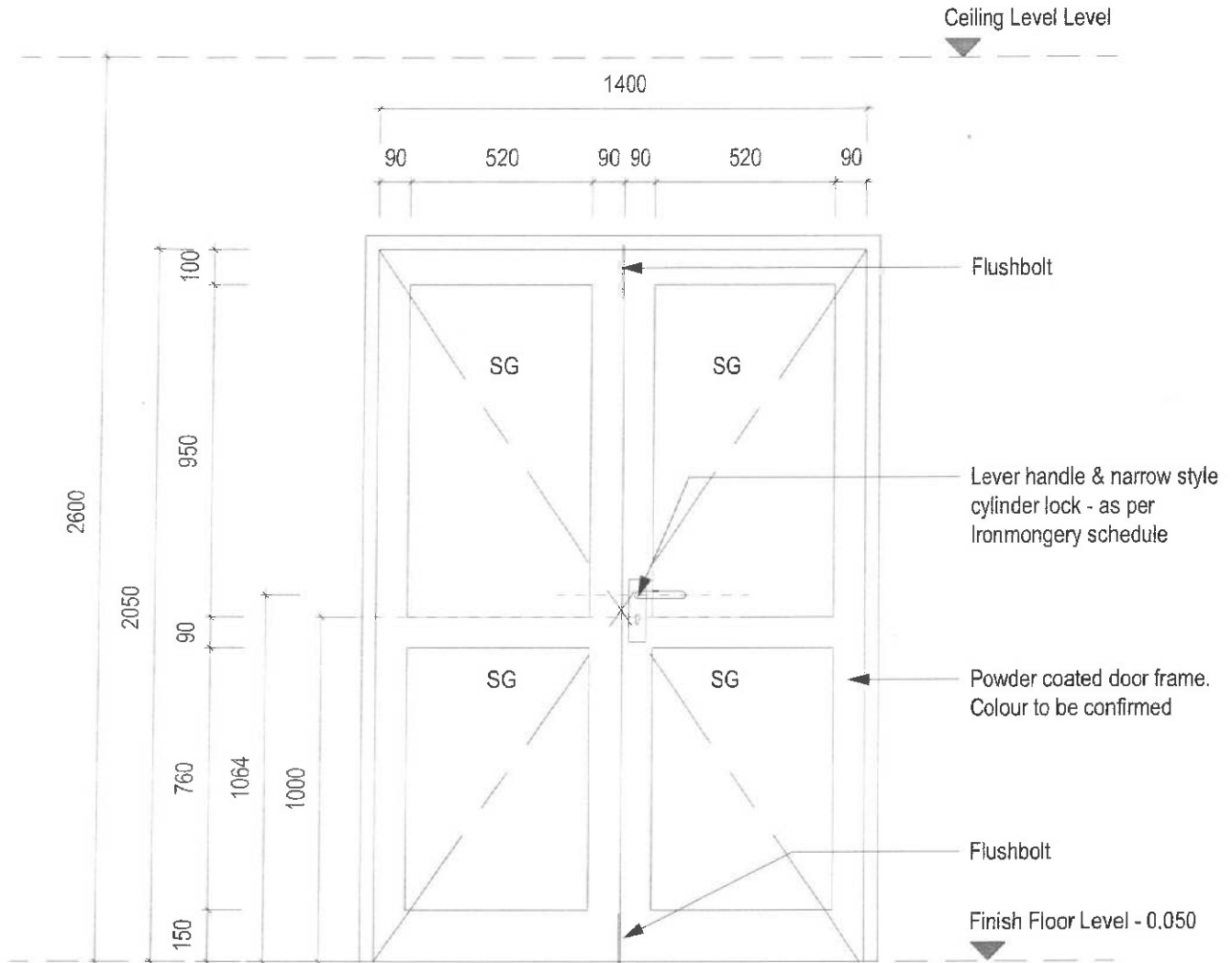
26/06/2023 11:23:23 : TIME STAMP

2023_F480-RRA-B00-XX-SH-A-06.01.015

ruben reddy architects
 Durban | Johannesburg | Cape Town | Rosebank | Durban
 info@rubenreddy.co.za | www.rubenreddy.co.za

DOOR SCHEDULE

Door Type : SFD02



DESCRIPTION:	1400 x 2050 Powder Coated Double Aluminium Swing Door with Glazing Panels and Aluminium Signage Plate. Alum Sizes and Door Configuration as per Detail Drawing on this page.	
FRAME:	Powder Coated Aluminium Door Frame to suit Door and Wall. Powder Coating Colour : To match Door	
GLAZING:	AAAMSA & SAGGA approved safety glazing to suit aluminium door as shown	
IRONMONGERY:		
HANDLES:	1 x Geze DB171BNC01 Tokyo Lever on Narrowstyle Backplate Cyl S/A	
LOCKS:	1 of Geze 625/35 Euro Cyl Sashlock with Drawback Latch N/S S/S 35mm BS	
CYLINDERS:		
SUNDRY 1:	1 of Geze GZZW4405 S/S Narrowstyle Escutcheon	
SUNDRY 2:		
DOOR CLOSER:		EXTRAS:
DOOR STOP:		FLUSH BOLT: 2 of Flushbolts by Manufacturer
ACCESS CONTROL:		
HINGES:	4 pairs Sinkless Hinges per leaf supplied by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:25: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

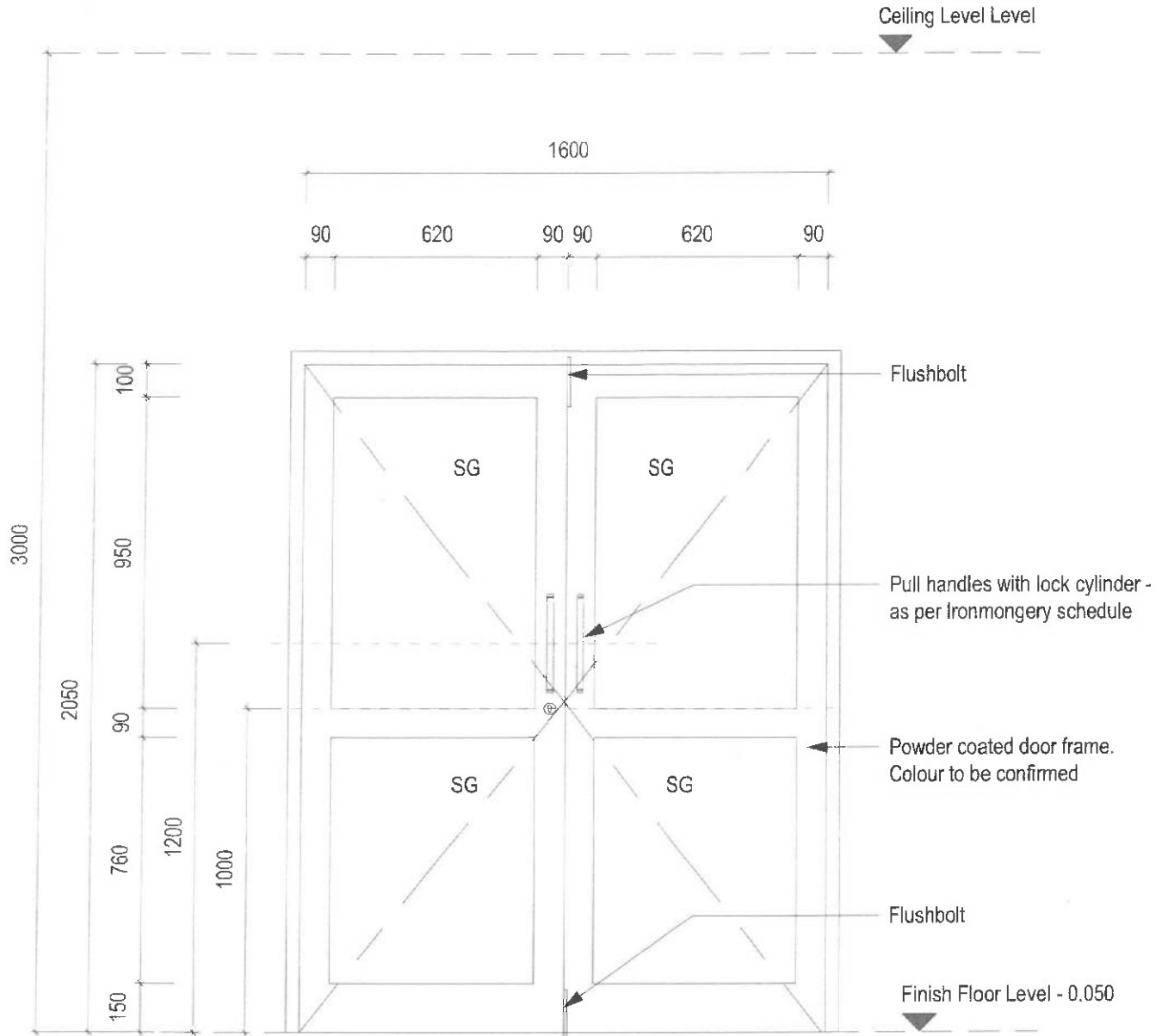
2023_F480-RRA-B00-XX-SH-A-06.01.016

ruben reddy architects

Durban | Johannesburg | Cape Town | Bloemfontein | Rustenburg
 45 Albert Heysing Drive, 4013 | www.rubenreddyarch.co.za

DOOR SCHEDULE

Door Type : SFD04



DESCRIPTION:	1600 x 2050 Powder Coated Double Aluminium Swing Door with Glazing Panels and Aluminium Signage Plate. Alum Sizes and Door Configuration as per Detail Drawing on this page.	
FRAME:	Powder Coated Aluminium Door Frame to suit Door and Wall. Powder Coating Colour : To match Door	
GLAZING:	AAAAMSA & SAGGA approved safety glazing to suit aluminium door as shown	
IRONMONGERY:		
HANDLES:	2 of Geze JDC215/350 BTB S/S Pull Handle 375x350x25mm	
LOCKS:	1 of Geze 642/35 Euro Cyl Deadlock N/S S/S 35mm BS	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:	1 of Geze GZZW4405 S/S Narrowstyle Escutcheon	
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5034SR TS5000 Door Closer C/W ISM Guide Rail	EXTRAS: 2 of Geze AD4001 Mounting Plate for TS5000 Door Closer
DOOR STOP:	2 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT: 2 of Flushbolts by Manufacturer
ACCESS CONTROL:		
HINGES:	4 pairs Sinkless Hinges per leaf supplied by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

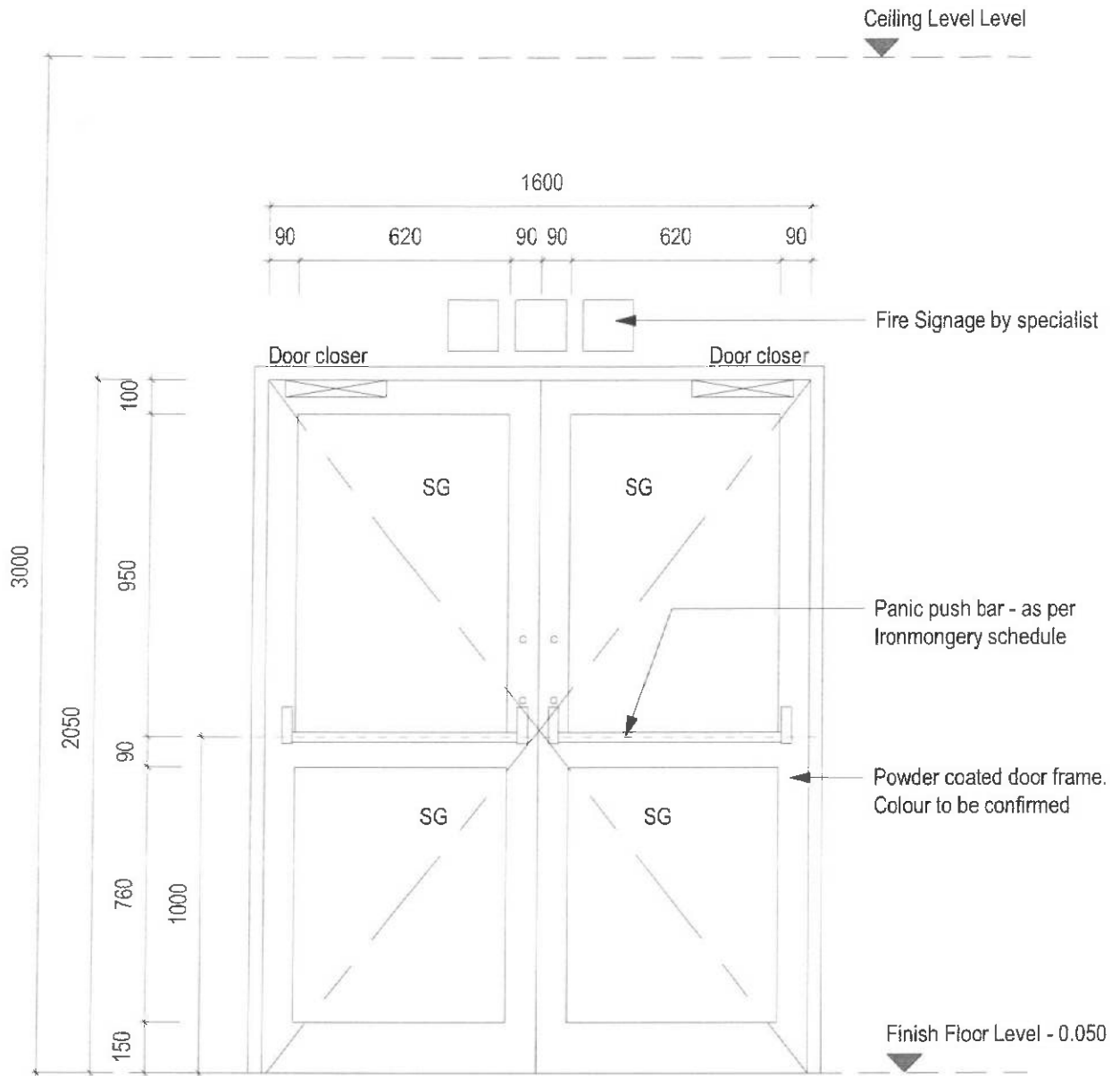
26/06/2023 11:23:27: TIME STAMP

2023_F480-RRA-B00-XX-SH-A-06.01.017

ruben reddy architects
 Durban | Johannesburg | Cape Town | Bloemfontein | Polokwane
 info@rubenreddyarch.co.za | www.rubenreddyarch.co.za

DOOR SCHEDULE

Door Type : SFD05



DESCRIPTION:	1600 x 2050 Powder Coated Double Aluminium Swing Door with Glazing Panels and Aluminium Signage Plate, Alum Sizes and Door Configuration as per Detail Drawing on this page.	
FRAME:	Powder Coated Aluminium Door Frame to suit Door and Wall. Powder Coating Colour : To match Door	
GLAZING:	AAAMSA & SAGGA approved safety glazing to suit aluminium door as shown	
IRONMONGERY:		
HANDLES:	1 of GEZE HZ595 Slimline Double Panic Hardware	
LOCKS:	1 of HA3020 Outside Access Device	
CYLINDERS:	1 of GEZE HB302C Outside Access Device Single Cylinder	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:	1 of GEZE AZ5041SR Opp Hinge ISM Door Closer complete with bracket and MC1001002 Selector Bracket	EXTRAS: 2 of Geze AD4001 Mounting Plate for TS5000 Door Closer
DOOR STOP:		FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	2 pairs Sinkless Hinges per leaf supplied by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:30: TIME STAMP

2023_F480-RRA-B00-XX-SH-A-06.01.018

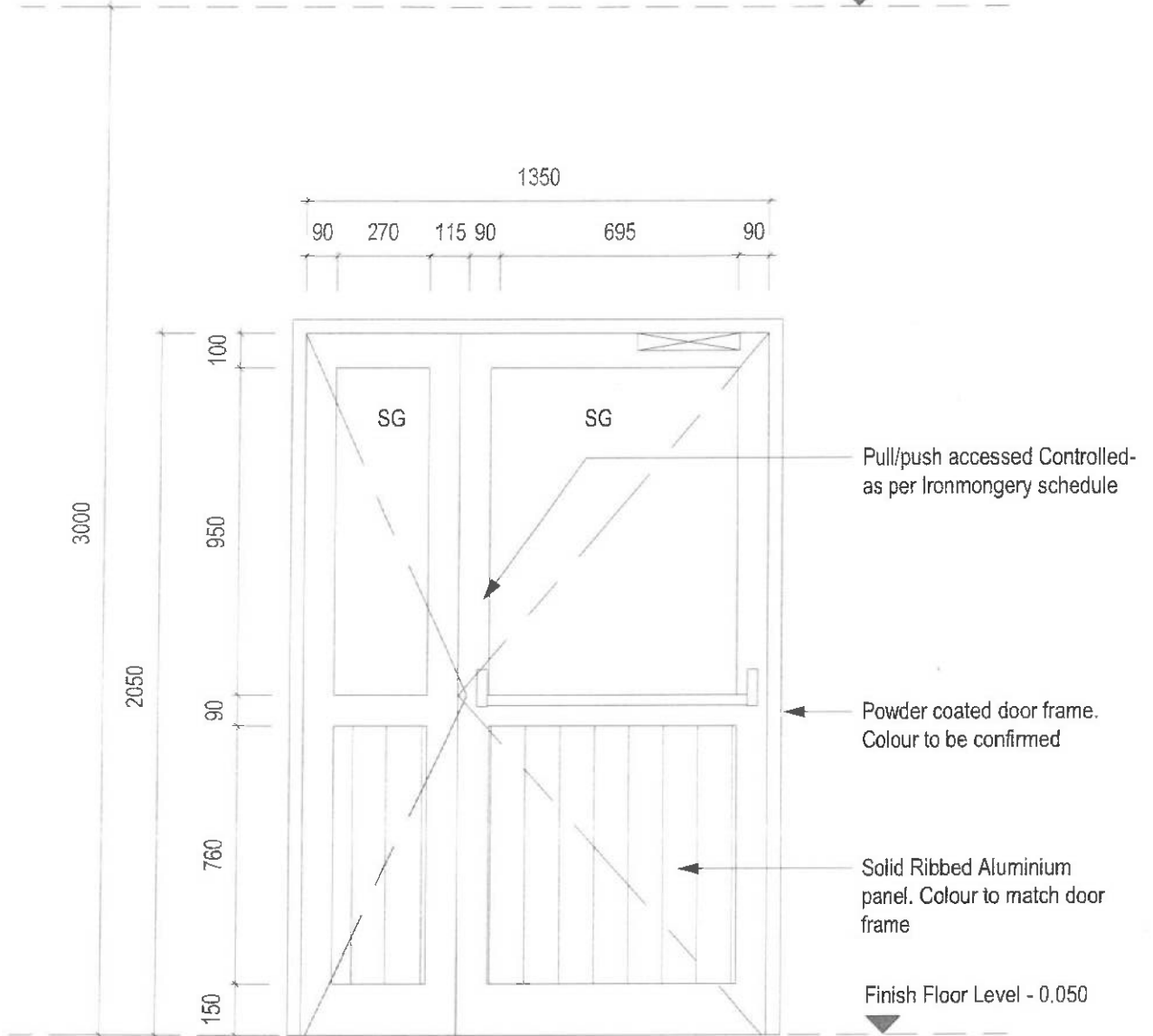
ruben reddy architects

Garden | Durbanville | Cape Town | Bloemfontein | Johannesburg
info@rubenreddy.co.za | www.rubenreddy.co.za

DOOR SCHEDULE

Door Type : SFD06

Ceiling Level Level



DESCRIPTION:	1400x2050mm Powder Coated 1.5 Leaf Aluminium Door with Glazing Panels and Aluminium Signage Plate. Alum Sizes and Door Configuration as per Detail Drawing on this page.	
FRAME:	Powder Coated Aluminium Door Frame to suit Door and Wall. Powder Coating Colour : To match Door	
GLAZING:	AAAMSA & SAGGA approved safety glazing to suit aluminium door as shown	
IRONMONGERY:		
HANDLES:	2 of Geze JDC215/350 BTB S/S Pull Handle 375x350x25mm	
LOCKS:	1 of Geze 642/35 Euro Cyl Deadlock N/S S/S 35mm BS	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:	1 of Geze GZZW4405 S/S Narrowstyle Escutcheon	
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5034SR TS5000 Door Closer C/W ISM Guide Rail	EXTRAS: 2 of Geze AD4001 Mounting Plate for TS5000 Door Closer
DOOR STOP:	2 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT- 2 of Flushbolts by Manufacturer
ACCESS CONTROL:		
HINGES:	2 pairs Sinkless Hinges per leaf supplied by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:32 - TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

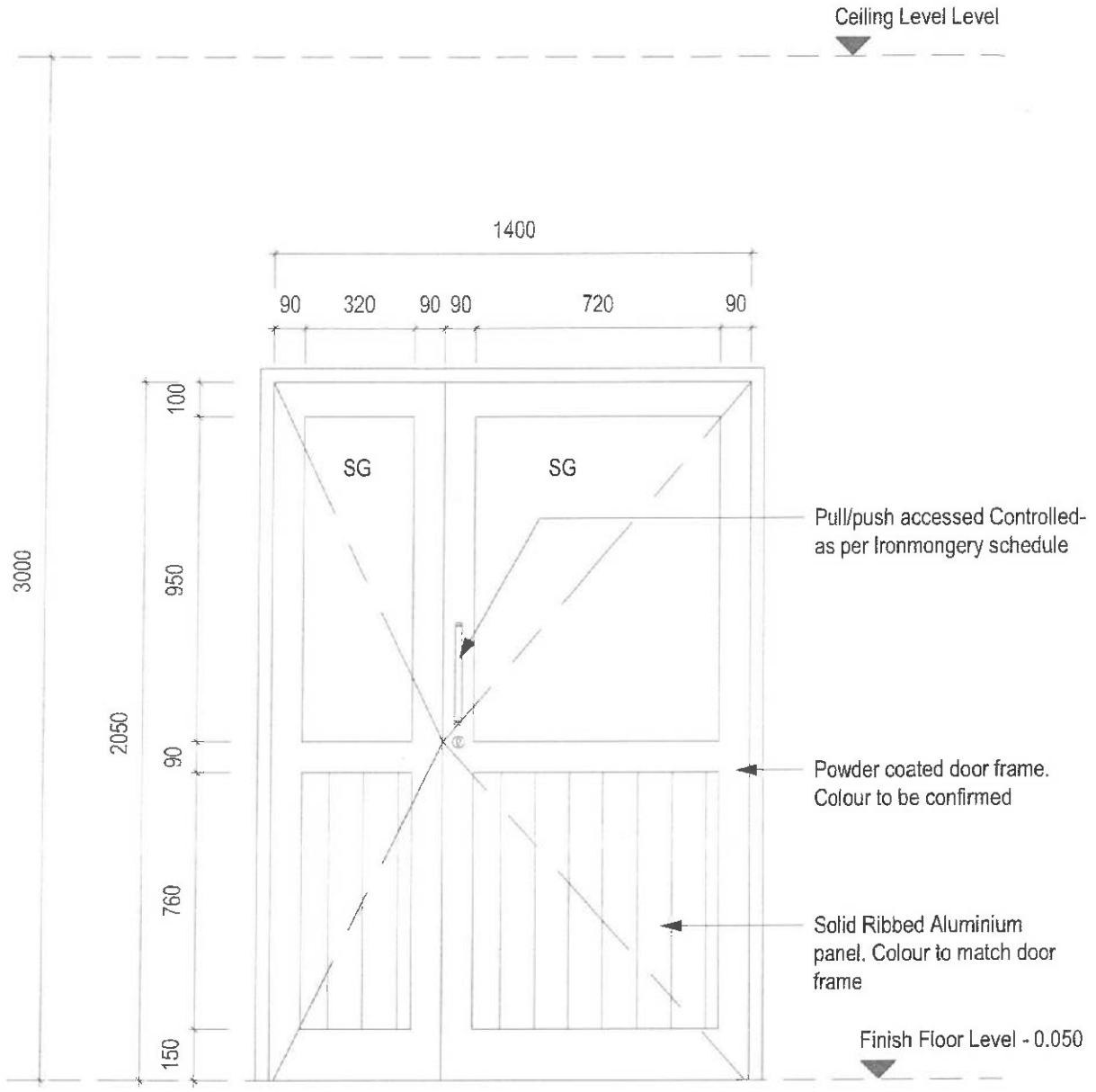
2023_F480-RRR-B00-XX-SH-A-06.01.019

ruben reddy architects

Durban | Johannesburg | Cape Town | Bloemfontein | Pietermaritzburg
info@rubenreddyarch.co.za | www.rubenreddyarch.co.za

DOOR SCHEDULE

Door Type : SFD07



DESCRIPTION:	1400x2050mm Powder Coated 1.5 Leaf Aluminium Door with Glazing Panels and Aluminium Signage Plate. Alum Sizes and Door Configuration as per Detail Drawing on this page.	
FRAME:	Powder Coated Aluminium Door Frame to suit Door and Wall. Powder Coating Colour : To match Door	
GLAZING:	AAAMSA & SAGGA approved safety glazing to suit aluminium door as shown	
IRONMONGERY:		
HANDLES:	2 of Geze JDC215/350 BTB S/S Pull Handle 375x350x25mm	
LOCKS:	1 of Geze 642/35 Euro Cyl Deadlock N/S S/S 35mm BS	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:	1 of Geze GZZW4405 S/S Narrowstyle Escutcheon	
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5034SR TS5000 Door Closer C/W ISM Guide Rail	EXTRAS: 2 of Geze AD4001 Mounting Plate for TS5000 Door Closer
DOOR STOP:	2 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT: 2 of Flushbolts by Manufacturer
ACCESS CONTROL:		
HINGES:	4 pairs Sinkless Hinges per leaf supplied by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:34 TIME STAMP

• DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
 • ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 • ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
 • ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
 • ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
 • ALL UNDERFITTING OF DOORS IS TO BE CALCIATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
 • ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

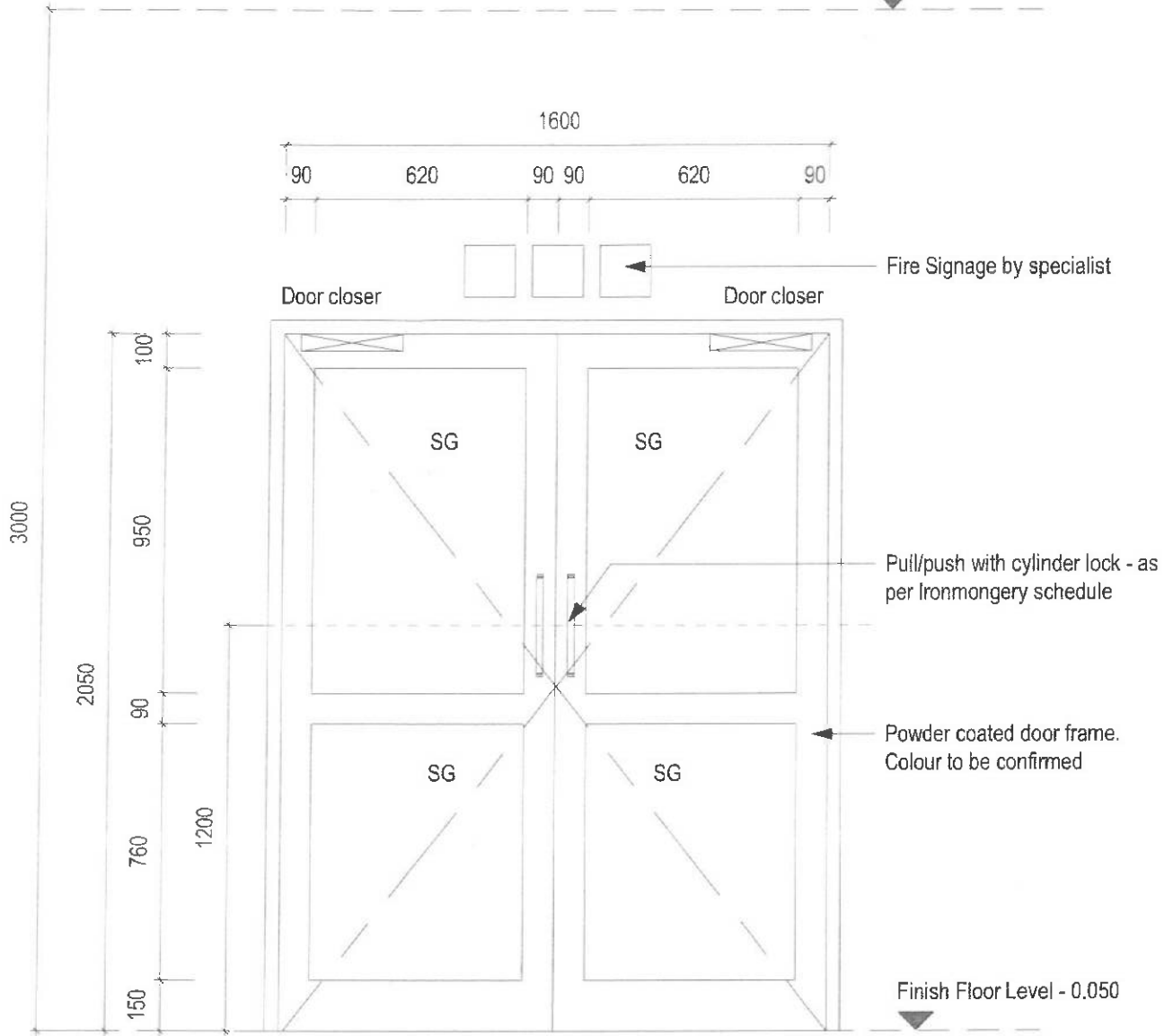
2023_F480-RRA-B00-XX-SH-A-06.01.020

ruben reddy architects
 Durban | Johannesburg | Cape Town | Bloemfontein | Polokwane
 info@rubenreddy.com | 031 261 1111 | 0800 900 900

DOOR SCHEDULE

Door Type : SFD11

Ceiling Level Level



DESCRIPTION:	1600 x 2050 Powder Coated Double Aluminium Swing Door with Glazing Panels and Aluminium Signage Plate. Alum Sizes and Door Configuration as per Detail Drawing on this page.	
FRAME:	Powder Coated Aluminium Door Frame to suit Door and Wall. Powder Coating Colour : To match Door	
GLAZING:	AAAMSA & SAGGA approved safety glazing to suit aluminium door as shown	
IRONMONGERY:		
HANDLES:	4 of Geze B/B Pull Handles	
LOCKS:		
CYLINDERS:		
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5034SR TS5000 Door Closer C/W ISM Guide Rail	EXTRAS: 6 of Geze ND0501 Patent Fixing Screws
DOOR STOP:		FLUSH BOLT.
ACCESS CONTROL:		
HINGES:	2 pairs Sinkless Hinges per leaf supplied by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:43: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL HINDRICATIONS OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAIL ON CONSTRUCTION DRAWINGS
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

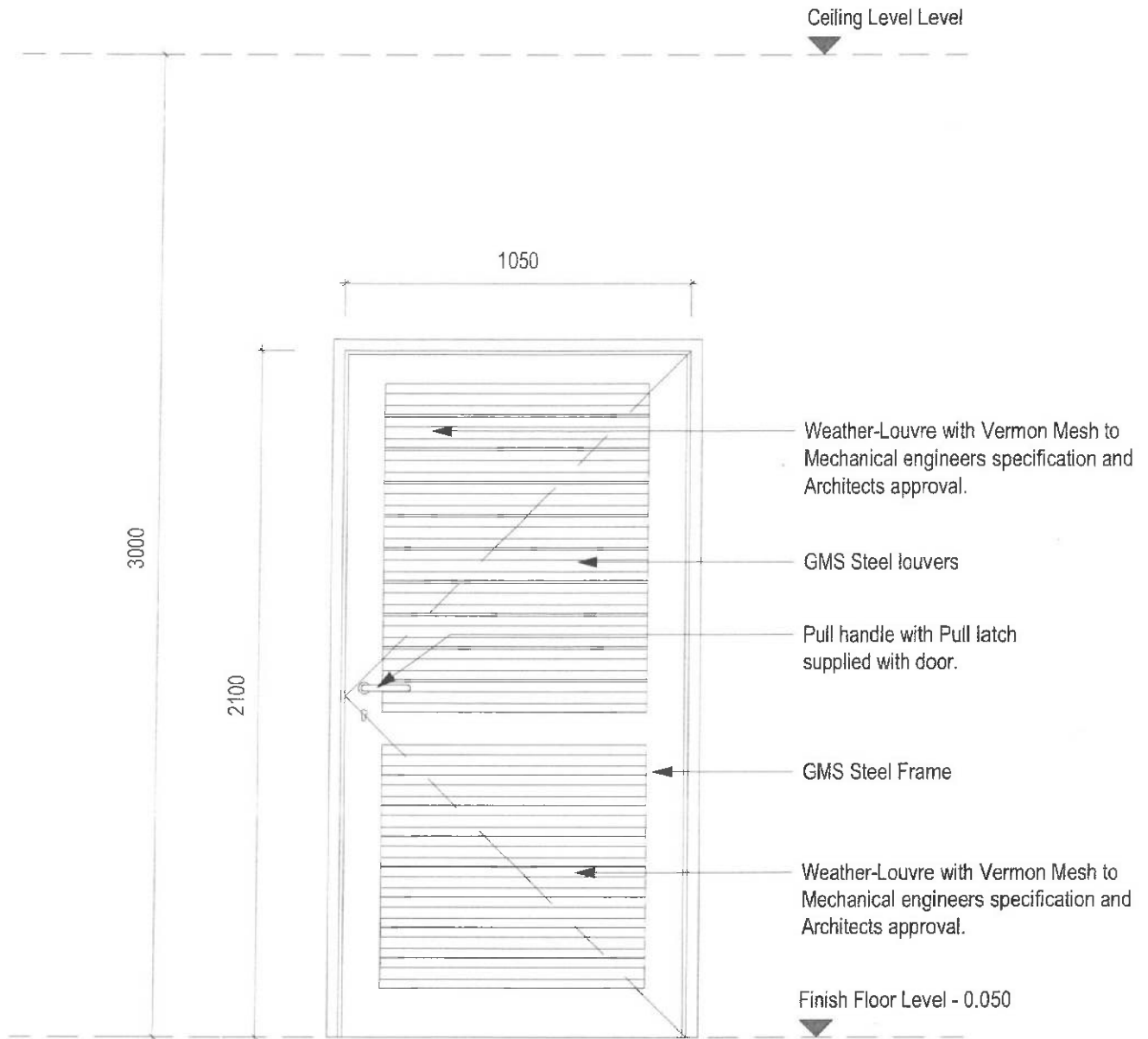
2023_F480-RRA-B00-XX-SH-A-06.01.021

ruben reddy architects

Claremont, Johannesburg | Cape Town | Bloemfontein | Durban
 info@rubenreddyarchitects.co.za | www.rubenreddyarch.co.za

DOOR SCHEDULE

Door Type : SD02



DESCRIPTION:	1050 x 2100 GMS Steel Single Weather Louvred Service Door by specialist manufacturer. To have Vernon Mesh on the inner side. Primed and Painted with Dulux Pearligo Waterbased Enamel - Colour TBC. Weather Louvre to Mechanical engineers specification and Architects approval.	
FRAME:	GMS Primed and painted. To manufacturers specification	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	As per manufacturers specifications	
LOCKS:	As per manufacturers specifications	
CYLINDERS:	As per manufacturers specifications	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:	As per manufacturers specifications	EXTRAS:
DOOR STOP:		FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	1.5 pairs Stainless Steel hinges per leaf supplied complete with door and frame by manufacturer	
KICKPLATE:		
SIGNAGE:		

26/06/2023 11:23:45: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERFITTING OF DOORS IS TO BE CAL CULATED FROM MECHANICAL DETAIL FOR CONSTRUCTION DRAWINGS
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRA-B00-XX-SH-A-06.01.022

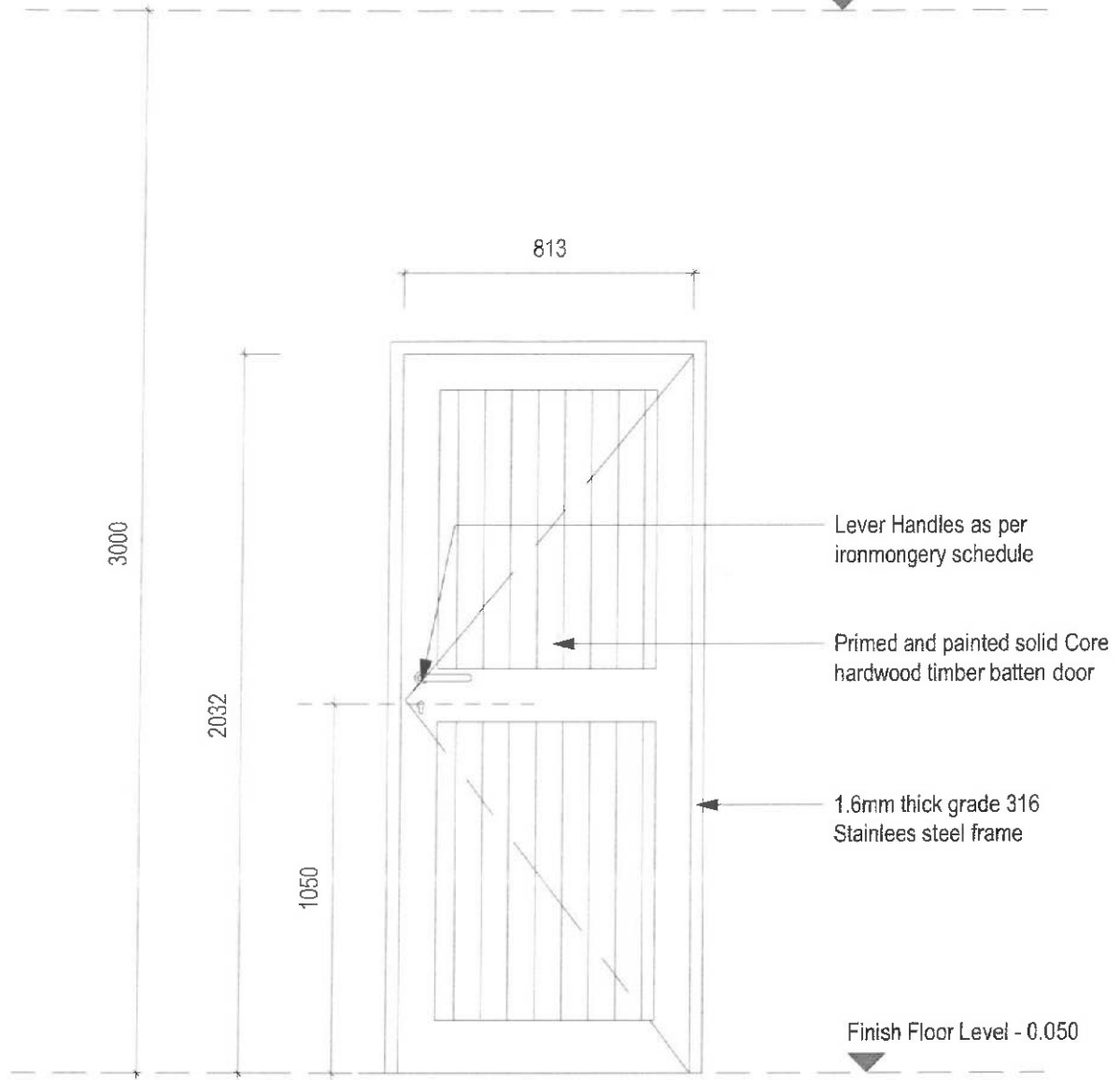
ruben reddy architects

Durban | Johannesburg | Cape Town | Bloemfontein | Ekurhuleni
info@rubenreddyarch.co.za | www.rubenreddyarch.co.za

DOOR SCHEDULE

Door Type : WD04

Ceiling Level Level



DESCRIPTION:	813x2032x40mm Solid Hardwood Timber Batten Door - weatherproofed, primed and painted on all sides & edges with 2 Coats of Dulux PearlGlo Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accomodate door. To suit door and wall. Brushed steel finish.	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	1 of Geze EDE101C69 Daytona Lever 160x160x1.6mm Cyl C/O S/S B/PL	
LOCKS:	1 of Geze 730/68 Euro Profile Cyl Sashlock S/S 76mm	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:		EXTRAS:
DOOR STOP:	1 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	1.5pairs per leaf Stainless Steel 100x75x2.7mm 4 Ball Bearing Butt Hinges	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:47 TIME STAMP

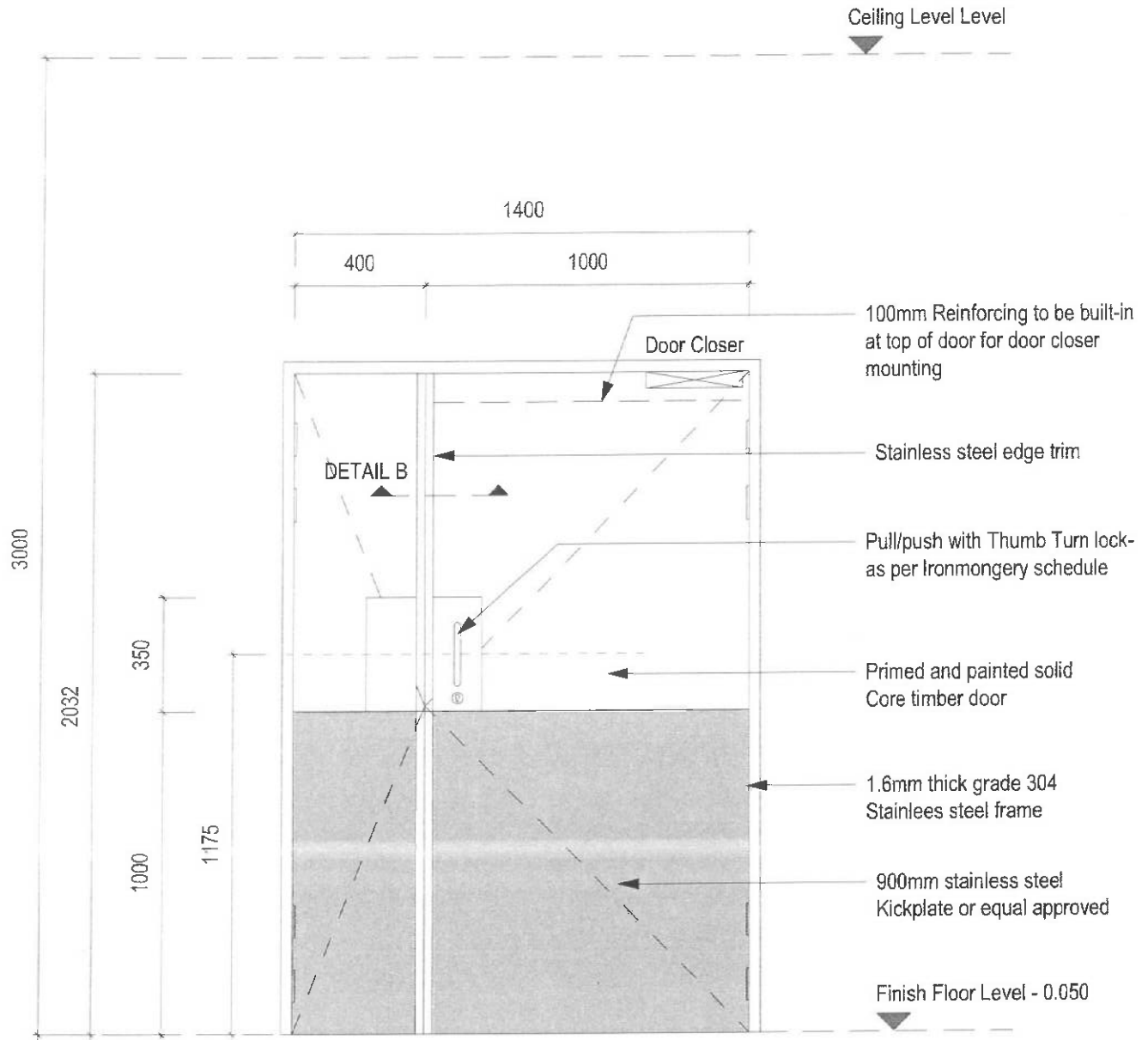
- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERFITTING OF DOORS IS TO BE CAL (U) ATFD FROM MECHANICAL DETAIL FD CONSTRUCTION DRAWINGS
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.023

ruben reddy architects
 Durban | Johannesburg | Cape Town | Bloemfontein | Polokwane
 info@rubenreddy.co.za | www.rubenreddy.co.za

DOOR SCHEDULE

Door Type : WD05



DESCRIPTION:	1400x2032x40mm Solid Core Timber Uneven Double doors with single overlapping stainless steel trim as per Detail B. Vertical edges dressed in stainless steel as per detail A. All exposed sides incl top & bottom to be Primed and Painted on all exposed sides with 2 Coats of Dulux PearlGlo Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accomodate door. To suit door and wall. Brushed steel finish.	
GLAZING:		
IRONMONGERY:		
HANDLES:	2 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes	
LOCKS:	1 of Geze 742/68 Euro Profile Cyl Deadlock S/S 76mm	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:	2 x Geze 079/350/B Push Plate on 350x150x1.6mm S/S 6 fix holes with "Push" Engraved	
SUNDRY 2:	1 of Geze 131/69 Rebate Conversion Set for 700 Series Lock	
DOOR CLOSER:	1 of Geze AZ5003SR TS5000 with Guide Rail	EXTRAS: 3 of Geze ND0501 Patent Fixing Screws
DOOR STOP:		FLUSH BOLT: 2 of Geze 120/150 Flushbolt 150mm ST/C
ACCESS CONTROL:		
HINGES:	1.5pairs per leaf Stainless Steel 100x75x2.7mm 4 Ball Bearing Butt Hinges	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:49: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

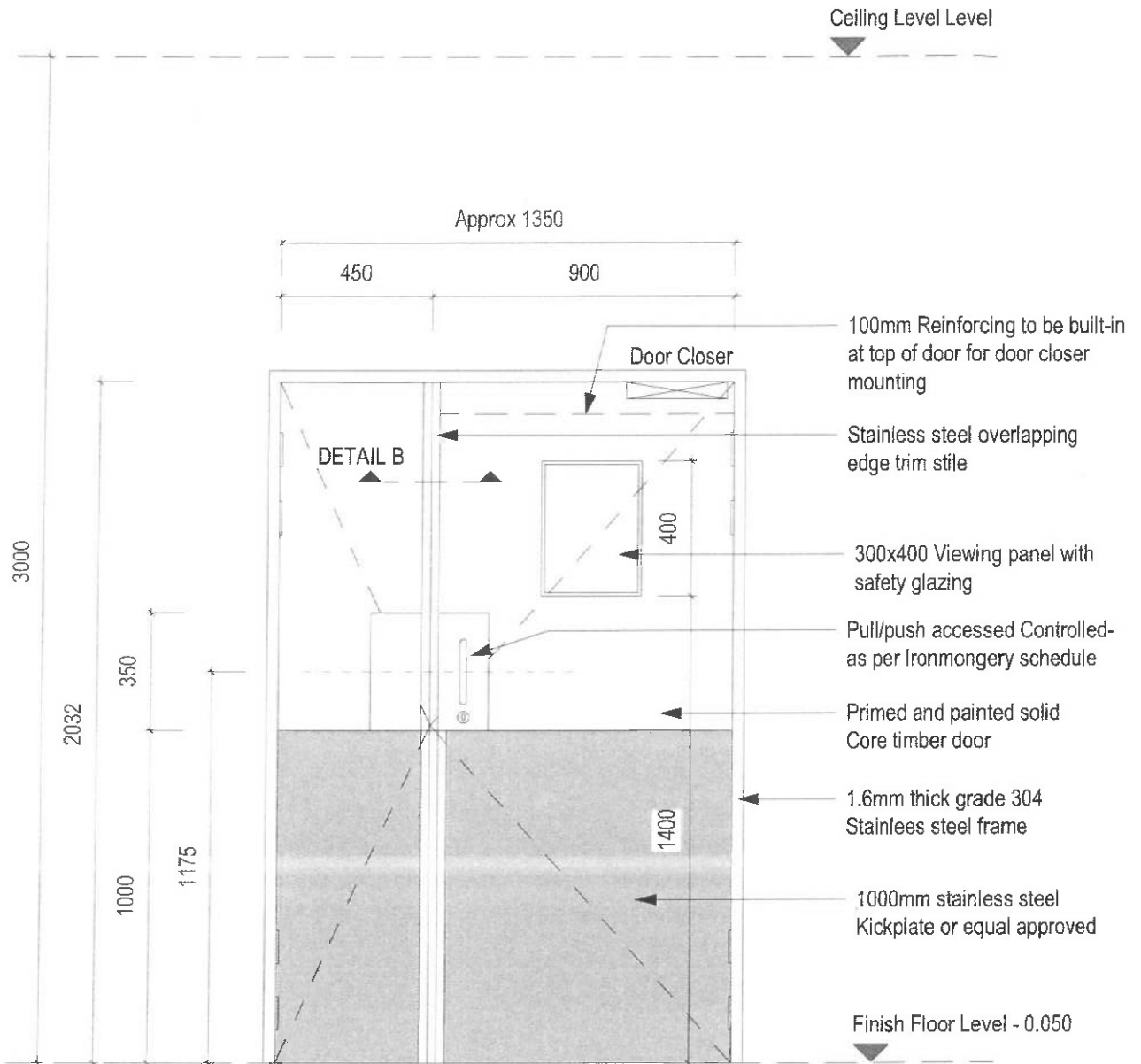
2023_F480-RRR-B00-XX-SH-A-06.01.024

ruben reddy architects

rubenreddyarchitects.com

DOOR SCHEDULE

Door Type : WD06



DESCRIPTION:	1350x2032x40mm Solid Core Timber Uneven Double doors with viewing pane & single overlapping stainless steel trim as per Detail B. Vertical edges dressed in stainless steel as per detail A. All exposed sides incl top & bottom to be Primed and Painted on all exposed sides with 2 Coats of Dulux Pearlgló Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accomodate door. To suit door and wall. Brushed steel finish.	
GLAZING:	AAAMSA & SAGGA approved safety glazing to suit door as shown	
IRONMONGERY:		
HANDLES:	2 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes	
LOCKS:	1 of Geze 742/68 Euro Profile Cyl Deadlock S/S 76mm	
CYLINDERS:	1 of Geze IG950933338M N/Pl. Double Cylinder 66mm Master Key CMK	
SUNDRY 1:	1 x Geze 079/350/B Push Plate on 350x150x1.6mm S/S 6 fix holes with "Push" Engraved	
SUNDRY 2:	1 of Geze 131/69 Rebate Conversion Set for 700 Series Lock	
DOOR CLOSER:	1 of Geze AZ5003SR TS5000 with Guide Rail	EXTRAS: 3 of Geze ND0501 Patent Fixing Screws
DOOR STOP:	2 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT: 1 of Geze 120/150 Flushbolt 150mm ST/C & 1 of Geze 120/300 Flushbolt 300mm ST/C
ACCESS CONTROL:		
HINGES:	1.5pairs per leaf Stainless Steel 100x75x2.7mm 4 Ball Bearing Butt Hinges	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:51: TIME STAMP

DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
 ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
 ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
 ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
 ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
 ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

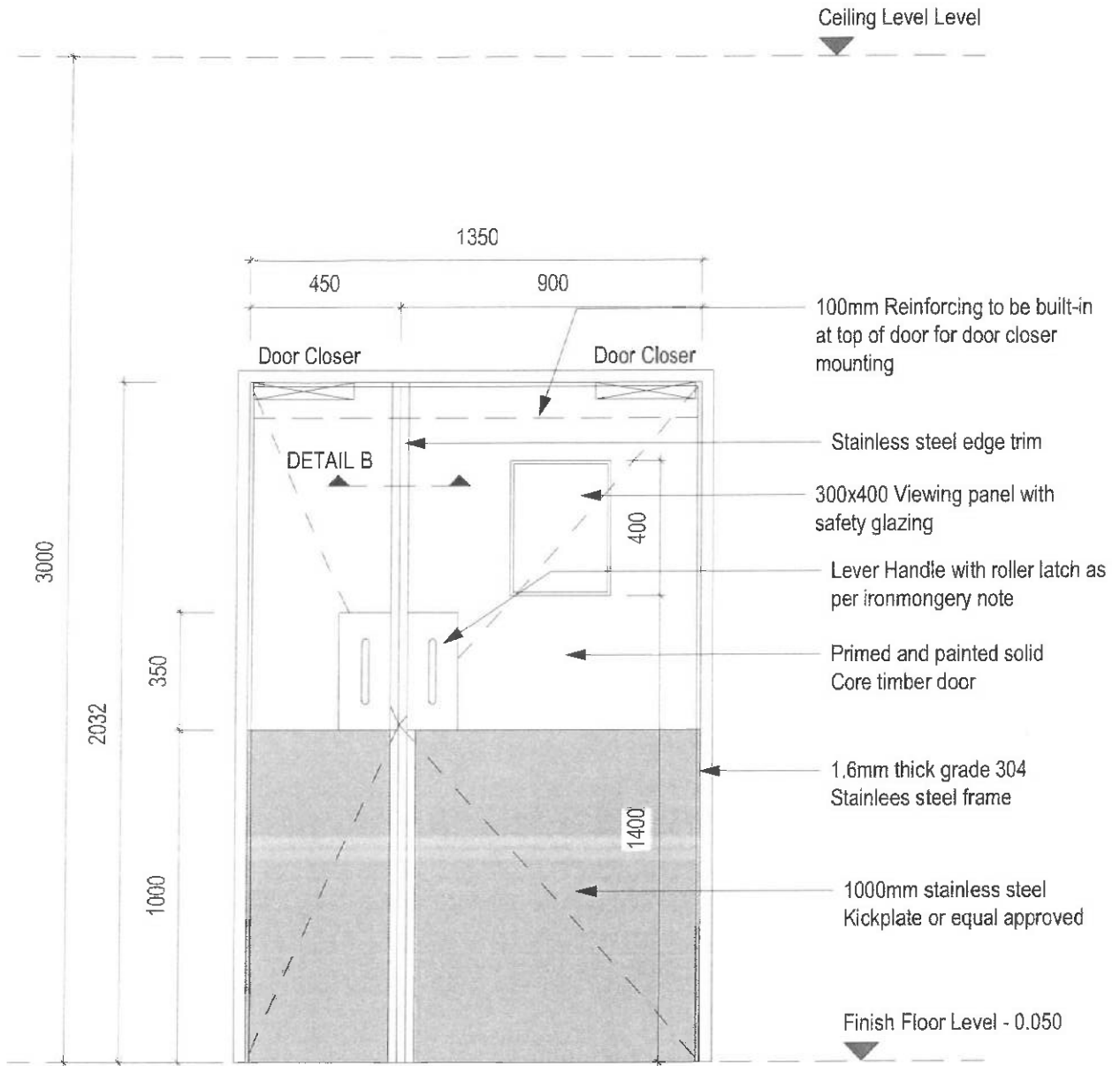
2023_F480-RRA-B00-XX-SH-A-06.01.025

Oruben reddy architects

Oruben reddy architects | Floor Plans | Elevations | IFC | 3D Renders
 info@rubenreddyarch.co.za | www.rubenreddyarch.co.za

DOOR SCHEDULE

Door Type : WD06B



DESCRIPTION:	1350x2032x40mm Solid Core Timber Uneven Double doors with viewing pane & single overlapping stainless steel trim as per Detail B. Vertical edges dressed in stainless steel as per detail A. All exposed sides incl top & bottom to be Primed and Painted on all exposed sides with 2 Coats of Dulux PearlGlo Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accomodate door. To suit door and wall. Brushed steel finish.	
GLAZING:	AAAMSA & SAGGA approved safety glazing to suit door as shown	
IRONMONGERY:		
HANDLES:	2 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes	
LOCKS:		
CYLINDERS:		
SUNDRY 1:	1 x Geze 079/350/B Push Plate on 350x150x1.6mm S/S 6 fix holes with "Push" Engraved	
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5003SR TS5000 with Guide Rail	EXTRAS: 3 of Geze ND0501 Patent Fixing Screws
DOOR STOP:	2 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT: 1 of Geze 120/150 Flushbolt 150mm ST/C & 1 of Geze 120/300 Flushbolt 300mm ST/C
ACCESS CONTROL:		
HINGES:	1.5pairs per leaf Stainless Steel 100x75x2.7mm 4 Ball Bearing Butt Hinges	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:54 : TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRA-B00-XX-SH-A-06.01.026

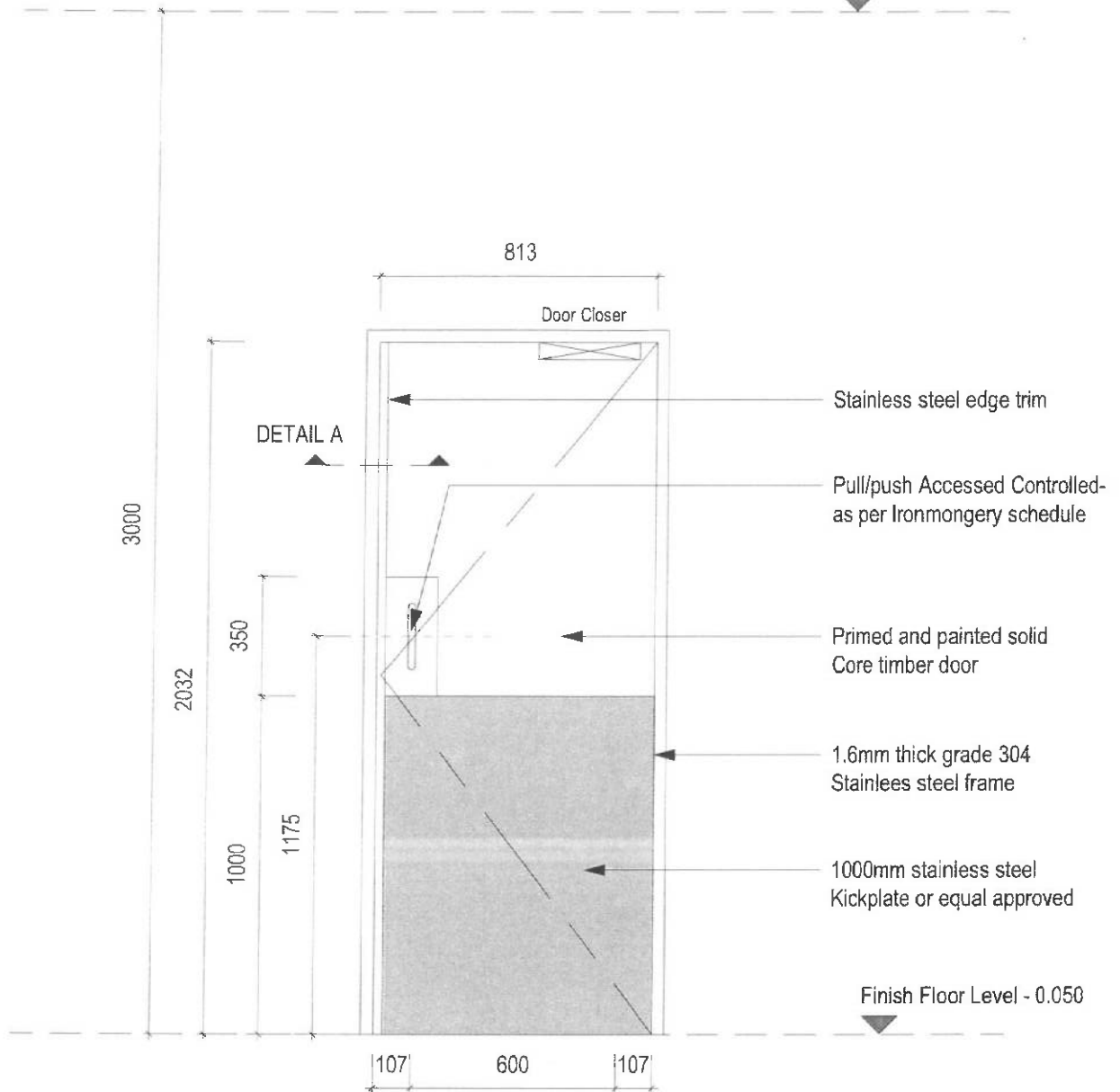
ruben reddy architects

Cape Town | Durbanville | Johannesburg | Port Elizabeth | Grahamstown | East London | Cape Town | Durbanville | Johannesburg | Port Elizabeth | Grahamstown | East London | Cape Town | Durbanville | Johannesburg | Port Elizabeth | Grahamstown | East London

DOOR SCHEDULE

Door Type : WD07

Ceiling Level Level



Finish Floor Level - 0.050

DESCRIPTION:	813x2032x40mm Solid Core Access Control Timber door with vertical edges dressed in steel as per detail A. All exposed sides incl top & bottom to be Primed and Painted with 2 Coats of Dulux PearlGlo Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accomodate door. To suit door and wall. Brushed steel finish.	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	2 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes	
LOCKS:	1 of Geze 662/60 Euro Cyl Deadlock with Rollerbolt N/S S/S 60mm B/S	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:		EXTRAS:
DOOR STOP:	1 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:	Access Control by Specialist	
HINGES:	1.5pairs per leaf Stainless Steel 100x75x2.7mm 4 Ball Bearing Butt Hinges	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:56 TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRA-B00-XX-SH-A-06.01.027

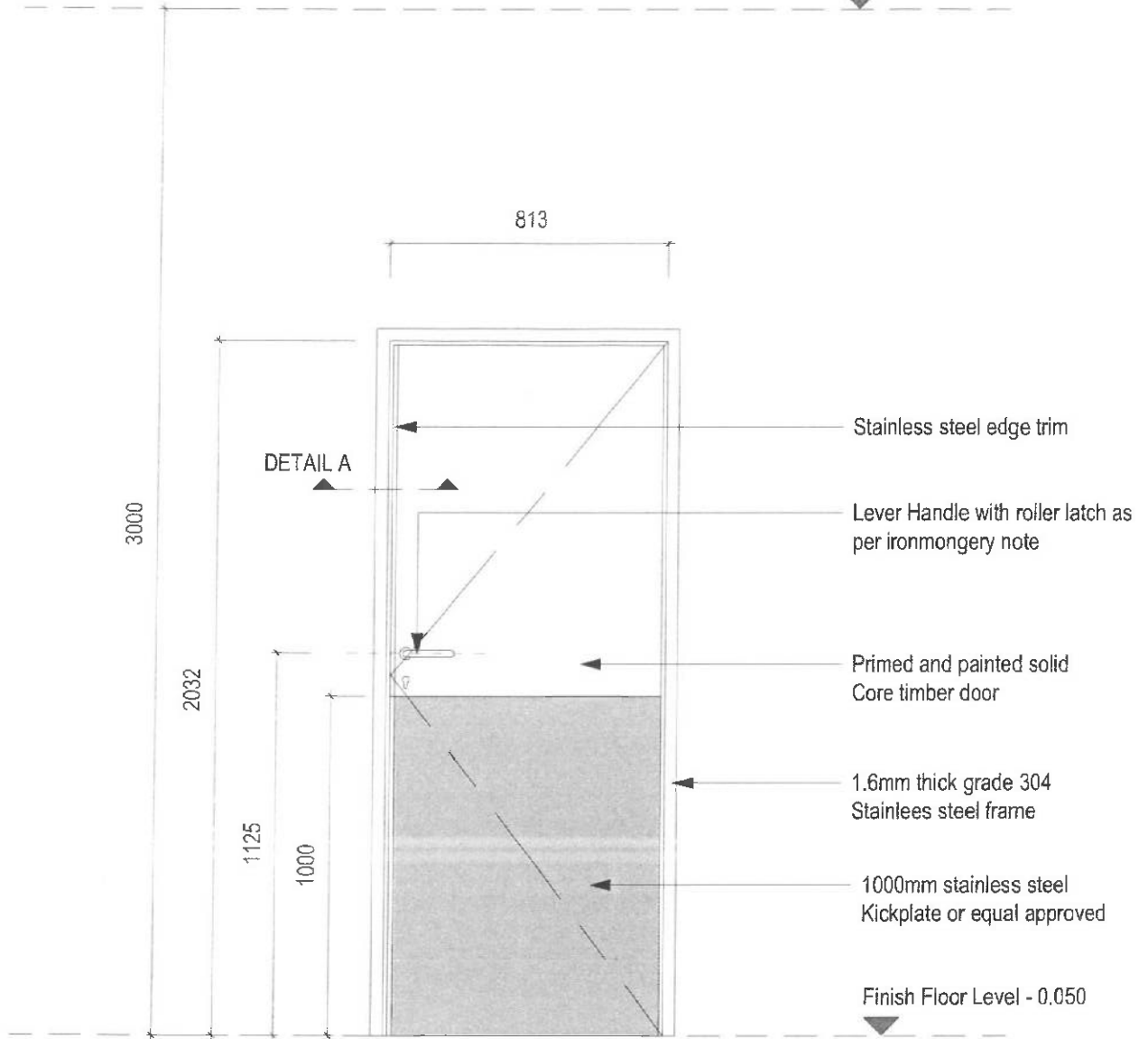
ruben reddy architects

Durban | Johannesburg | Cape Town | Richards Bay | Polokwane
 info@rubenreddyarch.co.za | www.rubenreddyarch.co.za

DOOR SCHEDULE

Door Type : WD08

Ceiling Level Level



DESCRIPTION:	813x2032x40mm Solid Core Timber door with vertical edges dressed in steel as per detail A. All exposed sides incl top & bottom to be Primed and Painted with 2 Coats of Dulux Pearlgló Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accommodate door. To suit door and wall. Brushed steel finish.	
GLAZING:	N/A	
IRONMONGERY:		
HANDLES:	1 of Geze EDE101C69 Daytona Lever 160x160x1.6mm Cyl C/O S/S B/PL	
LOCKS:	1 of Geze 730/68 Euro Profile Cyl Sashlock S/S 76mm	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:		EXTRAS
DOOR STOP:	1 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	1.5 pairs per leaf Stainless Steel 100x75x2.7mm rising Butt Hinges	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

26/06/2023 11:23:58: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRA-B00-XX-SH-A-06.01.028

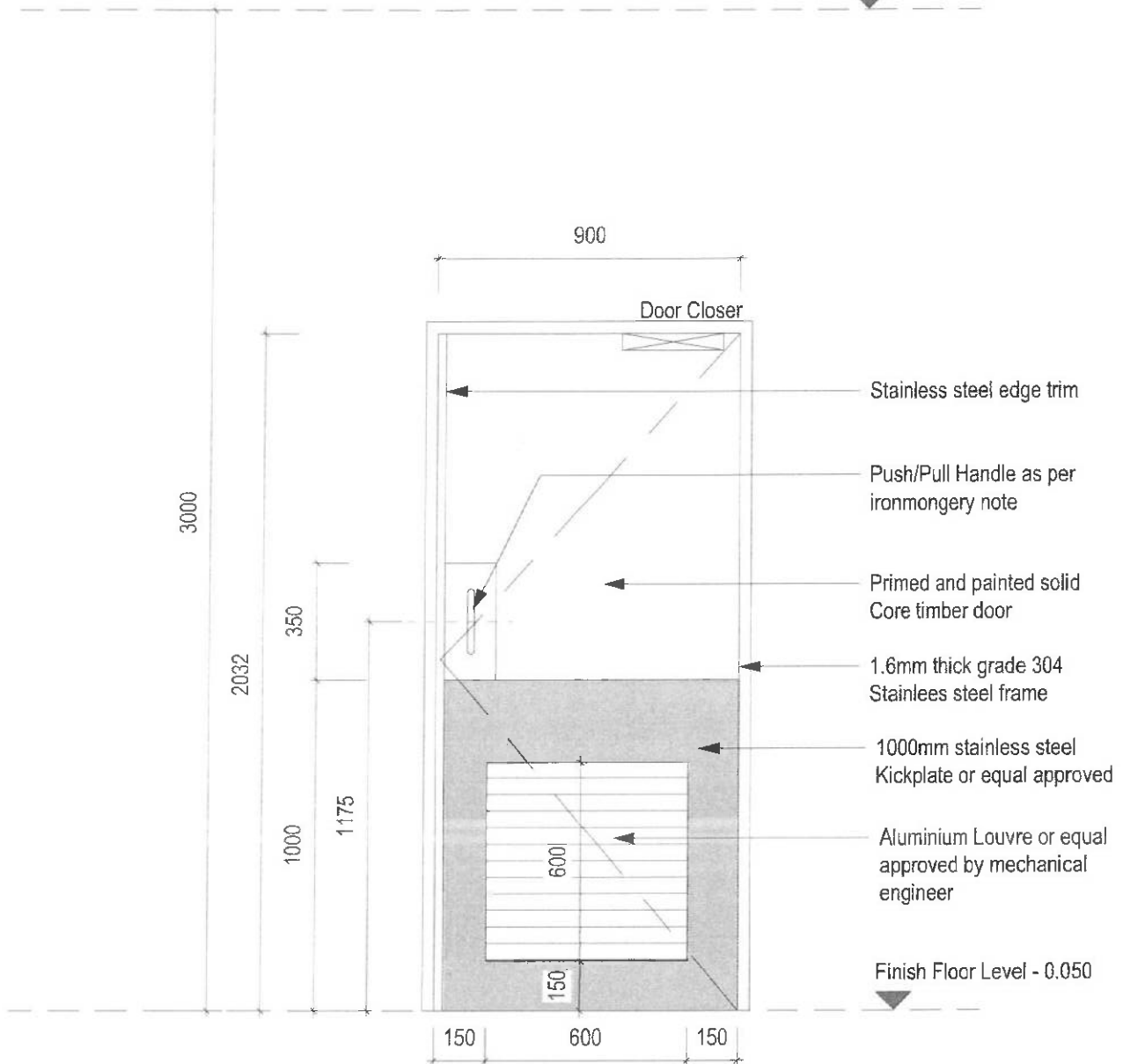
ruben reddy architects

Curator | Architecture | Core Team | Residential | Products
 15, London Road, London, SE16 6LW | www.rubenreddy.co.uk

DOOR SCHEDULE

Door Type : WD09

Ceiling Level Level



DESCRIPTION:	900x2032x40mm Push/Pull Solid Core Timber door with vertical edges dressed in steel as per detail A. All exposed sides incl top & bottom to be Primed and Painted with 2 Coats of Dulux Pearlglo Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accomodate door. To suit door and wall. Brushed steel finish.	
GLAZING:		
IRONMONGERY:		
HANDLES:	1 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes	
LOCKS:		
CYLINDERS:		
SUNDRY 1:	1 x Geze 079/350/B Push Plate on 350x150x1.6mm S/S 6 fix holes with "Push" Engraved	
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5003SR TS5000 with Guide Rail	EXTRAS: 3 of Geze ND0501 Patent Fixing Screws
DOOR STOP:	1 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	1.5pairs per leaf Stainless Steel 100x75x2.7mm 4 Ball Bearing Butt Hinges	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

26/06/2023 11:24:00: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.029

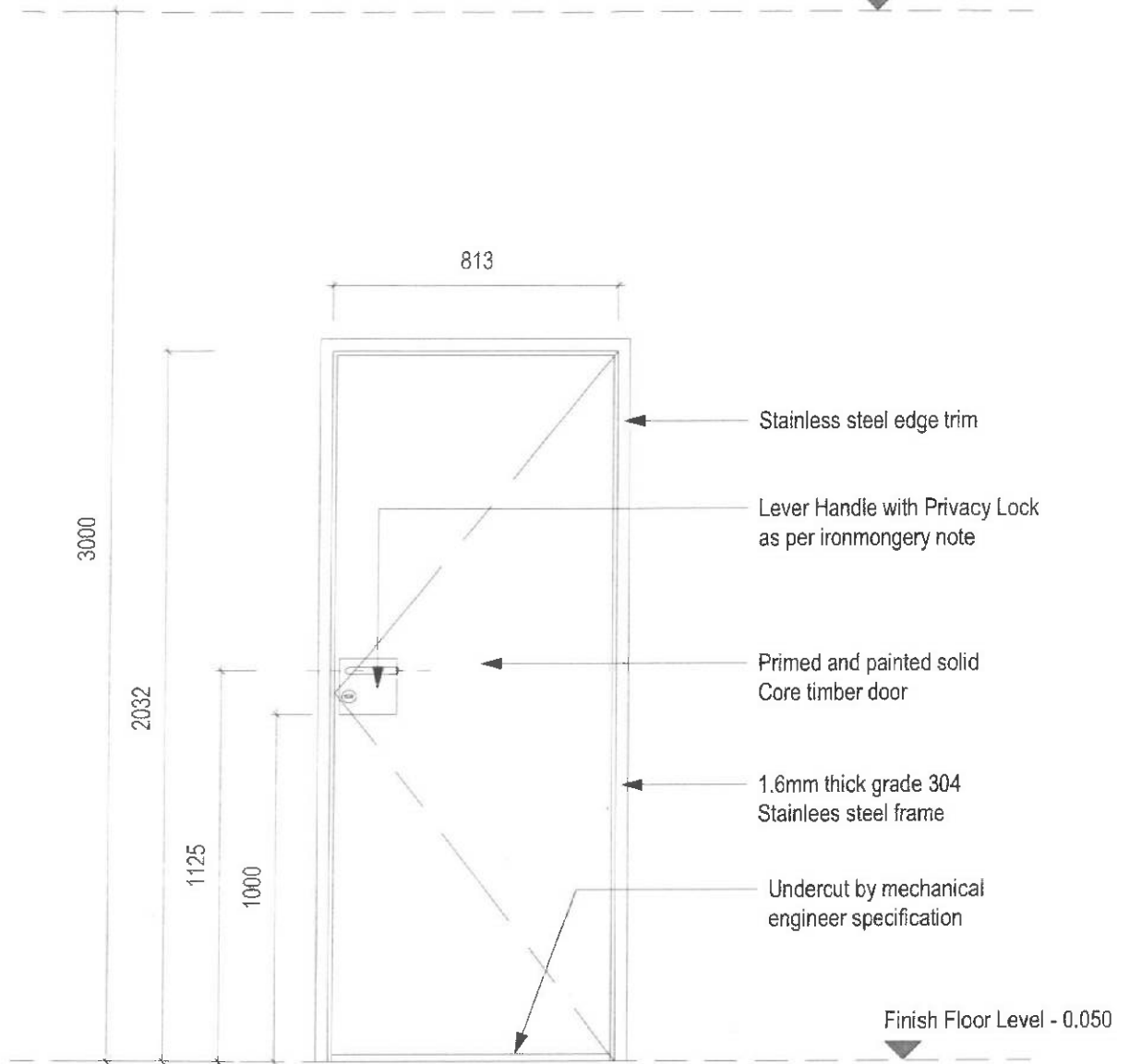
ruben reddy architects

Gurgaon | Bangalore | Cape Town | Hyderabad | Pune
r.reddy@rubenreddyarchitects.com | www.rubenreddyarchitects.com

DOOR SCHEDULE

Door Type : WD11

Ceiling Level Level



DESCRIPTION:	813x2032x40mm Solid Core Timber Door. Primed and Painted with 2 Coats of Dulux Pearlglb Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accommodate door. To suit door and wall. Brushed steel finish.	
GLAZING:		
IRONMONGERY:		
HANDLES:	1 of Geze EDE101W69 Daytona Lever 160x160x1.6mm WC Indicator S/S B/PI	
LOCKS:	1 of Geze 734/68 Profile Architectural WC Lock	
CYLINDERS:		
SUNDRY 1:	1 of Geze 154/69 Hat and Coat Hook with R/Buf S/S	
SUNDRY 2:		
DOOR CLOSER:		EXTRAS:
DOOR STOP:		FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	1.5 pairs per leaf Stainless Steel 100x75x2.7mm rising Butt Hinges	
KICKPLATE:		
SIGNAGE:		

26/06/2023 11:24:05: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-B00-XX-SH-A-06.01.031

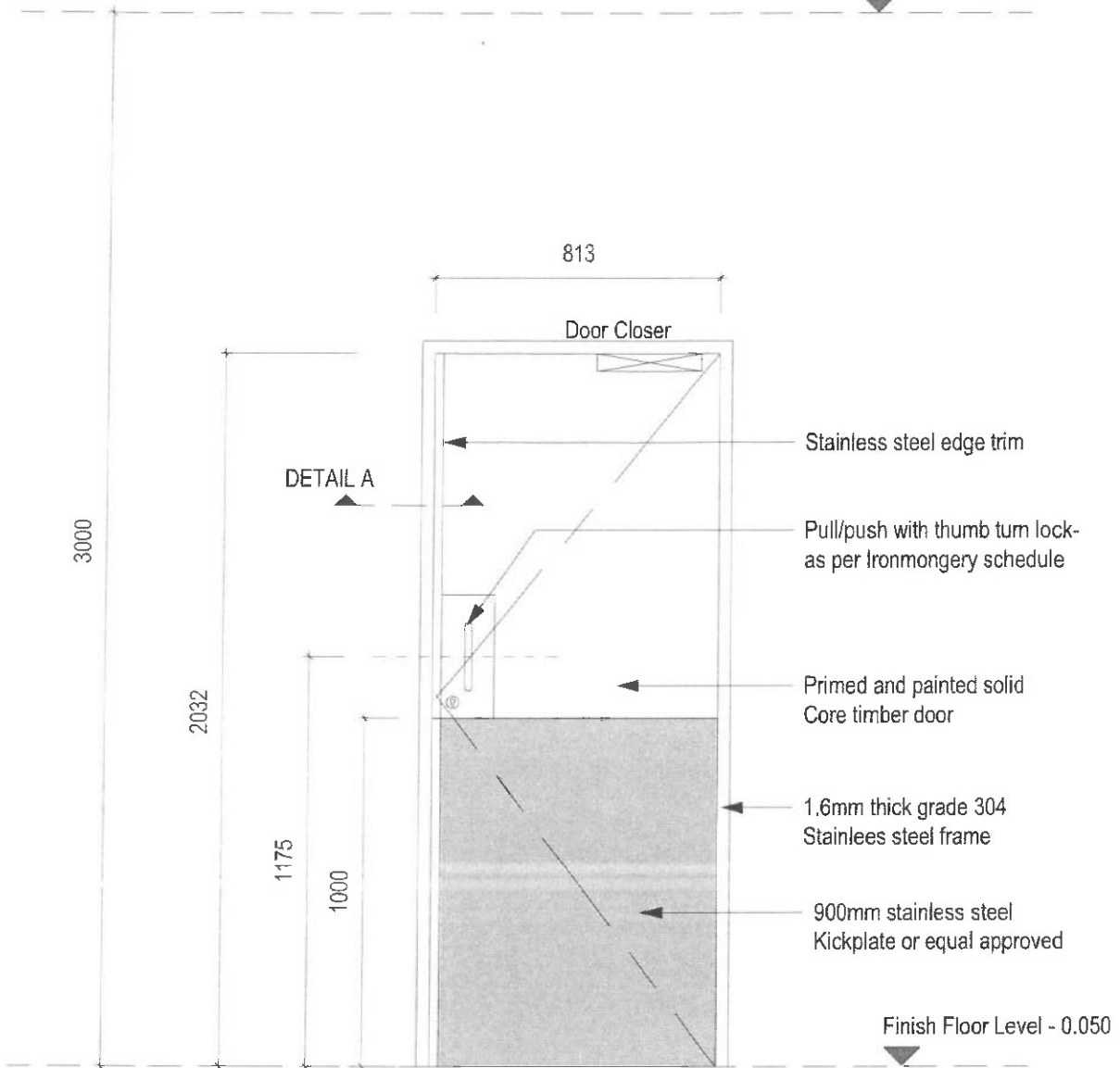
ruben reddy architects

Chennai | Johannesburg | Cape Town | Bangalore | Pune
 91 9886666666 | 91 9886666666 | www.rubenreddy.com

DOOR SCHEDULE

Door Type : **WD13**

Ceiling Level Level



DESCRIPTION:	813x2032x40mm Solid Core Timber door with vertical edges dressed in steel as per detail A. All exposed sides incl top & bottom to be Primed and Painted with 2 Coats of Dulux Peartglo Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accomodate door. To suit door and wall. Brushed steel finish.	
GLAZING:		
IRONMONGERY:		
HANDLES:	1 of Geze 075/350/B Pull Handle on 350x150x1.6mm Blank S/S 6 Fix Holes	
LOCKS:	1 of Geze 194/01 Thumb Tum and Lock TT001SS	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
SUNDRY 1:	1 x Geze 079/350/B Push Plate on 350x150x1.6mm S/S 6 fix holes with "Push" Engraved	
SUNDRY 2:		
DOOR CLOSER:	1 of Geze AZ5003SR TS5000 with Guide Rail	EXTRAS: 3 of Geze ND0501 Patent Fixing Screws
DOOR STOP:	1 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	1.5pairs per leaf Stainless Steel 100x75x2.7mm 4 Ball Bearing Butt Hinges	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

26/06/2023 11:24:07: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE FLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

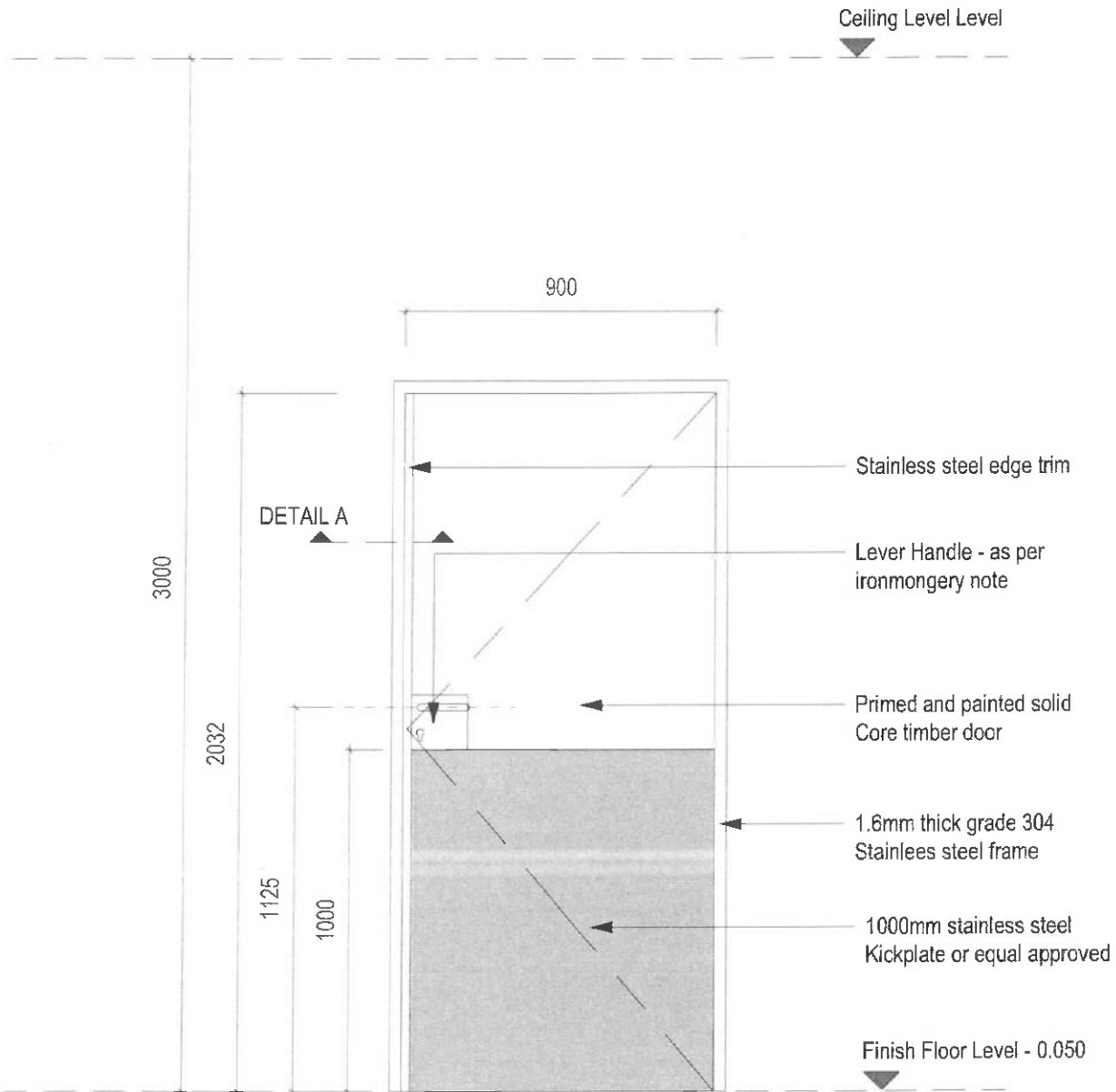
2023_F480-RRA-B00-XX-SH-A-06.01.032

ruben reddy architects

Garden | Johannesburg | Cape Town | Bloemfontein | Polokwane
info@rubenreddy.com | www.rubenreddy.com

DOOR SCHEDULE

Door Type : **WD14**



DESCRIPTION:	900x2032x40mm Solid Core Timber door with vertical edges dressed in steel as per detail A. All exposed sides incl top & bottom to be Primed and Painted with 2 Coats of Dulux Pearlgló Waterbased Enamel applied in Strict Accordance to Manufacturers Specs. Colour - TBC	
FRAME:	Stainless Steel 1.6mm Grade 304 frame with 45mm rebate to accommodate door. To suit door and wall. Brushed steel finish.	
FINISHING:		
IRONMONGERY:		
HANDLES:	1 of Geze EDE101C69 Daytona Lever 160x160x1.6mm Cyl C/O S/S B/PL	
LOCKS:	1 of Geze 194/01 Thumb Turn and Lock TT001SS	
CYLINDERS:	1 of Geze IG950933338M N/PL Double Cylinder 66mm Master Key CMK	
DRY 1:		
DRY 2:		
DOOR CLOSER:		EXTRAS:
DOOR STOP:	1 of Geze 140/69 S/S Floor Mounted Door Stop	FLUSH BOLT:
ACCESS CONTROL:		
HINGES:	1.5pairs per leaf Stainless Steel 100x75x2.7mm 4 Ball Bearing Butt Hinges	
KICKPLATE:	1000 High Stainless Steel kick plate on passage side with Epoxy Adhesive or screwed with countersunk stainless steel screws +/- 20mm long screwed along the edges at 150mm c/c.	
SIGNAGE:	Signage as per detail	

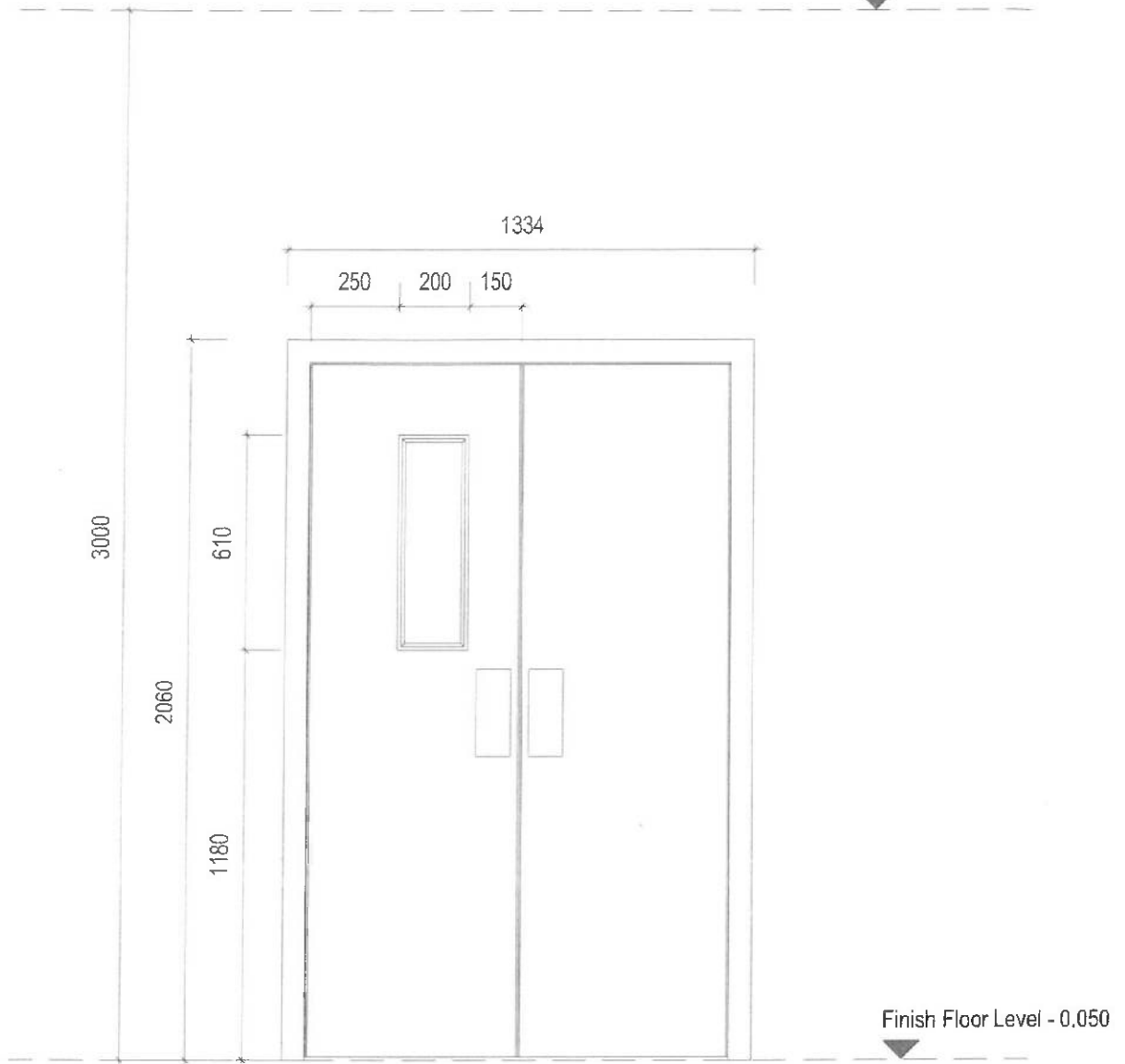
26/06/2023 11:24:09, TIME STAMP

<ul style="list-style-type: none"> • DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS. • ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION. • ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION. • ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION. • ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS. • ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS. • ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED. 	<p>2023_F480-RRA-B00-XX-SH-A-06.01.033</p> <p>ruben reddy architects</p> <p><small>Durban Johannesburg Cape Town Pietermaritzburg Durbanville</small></p> <p><small>info@rubenreddy.com Tel: +27 31 234 1111 www.rubenreddy.com</small></p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

DOOR SCHEDULE

Door Type : SED

Ceiling Level Level



DESCRIPTION:	SPACIALISED SECURITY MANAGEMENT DOUBLE DOOR	
FRAME:	Stainless Steel 1.6mm Grade 304 stainless steel frame with 45mm rebate to accomodate door. To suit door and wall. Brushed steel finish.	
GLAZING:	AAAMSA & SAGGA approved safety glazing to suit door as shown	
IRONMONGERY:		
HANDLES:	As per manufacturers specifications	
LOCKS:	As per manufacturers specifications	
CYLINDERS:	As per manufacturers specifications	
SUNDRY 1:		
SUNDRY 2:		
DOOR CLOSER:	As per manufacturers specifications	EXTRAS:
DOOR STOP:		FLUSH BOLT:
ACCESS CONTROL:	Access Control by Specialist	
HINGES:	2 Pairs Stainless Steel Hinges per leaf supplied complete with door and frame by manufacturer	
KICKPLATE:		
SIGNAGE:	Signage as per detail	

26/06/2023 11:24:12: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

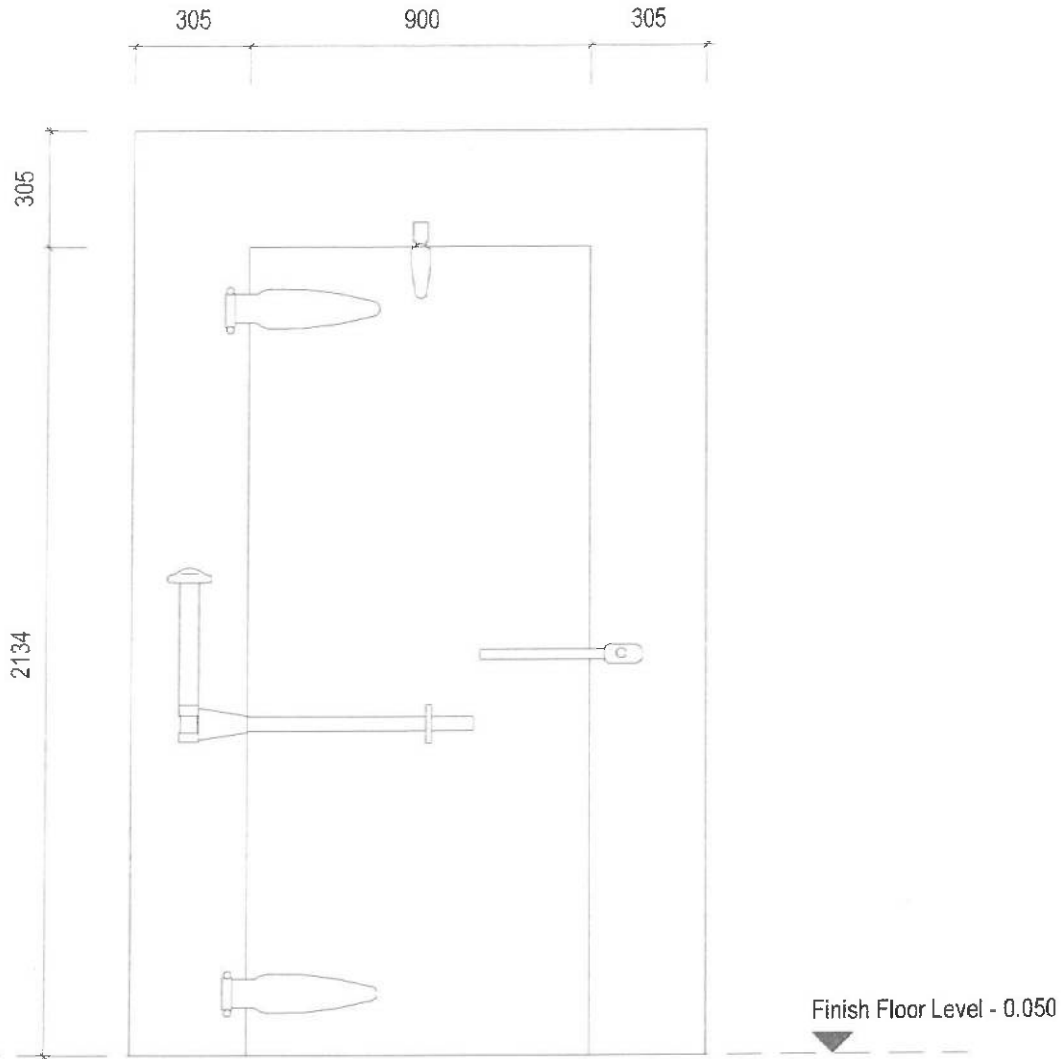
2023_F480-RRA-B00-XX-SH-A-06.01.034

ruben reddy architects

Architects | Interiors | Urban Planning | Landscape Architecture | Project Management

DOOR SCHEDULE

Door Type : SPD01



DESCRIPTION:	Specialised Record Romm Door by Manufacturers specifications
FRAME:	As per manufacturers specifications
GLAZING:	
IRONMONGERY:	
HANDLES:	As per manufacturers specifications
LOCKS:	As per manufacturers specifications
CYLINDERS:	
SUNDRY 1:	
SUNDRY 2:	
DOOR CLOSER:	EXTRAS
DOOR STOP:	FLUSH BOLT
ACCESS CONTROL:	
HINGES:	As per manufacturers specification
KICKPLATE:	
SIGNAGE:	

26/06/2023 11:24:14 TIME STAMP

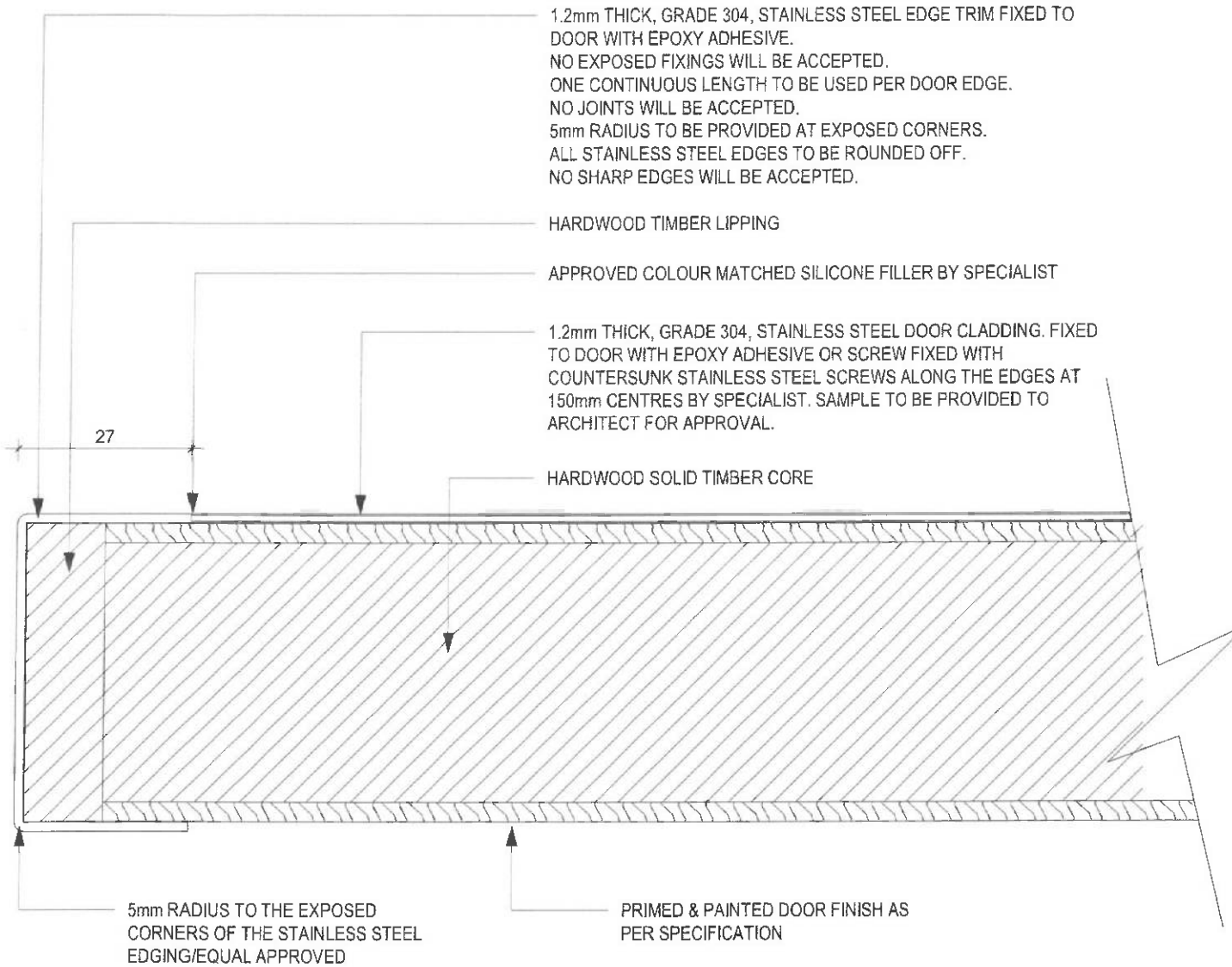
- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRA-B00-XX-SH-A-06.01.035

ruben reddy architects

Capetown | Johannesburg | Cape Town | Bloemfontein | Port Elizabeth
info@rubenreddyarch.co.za | www.rubenreddyarch.co.za

DOOR SCHEDULE



26/06/2023 11:24:16 TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

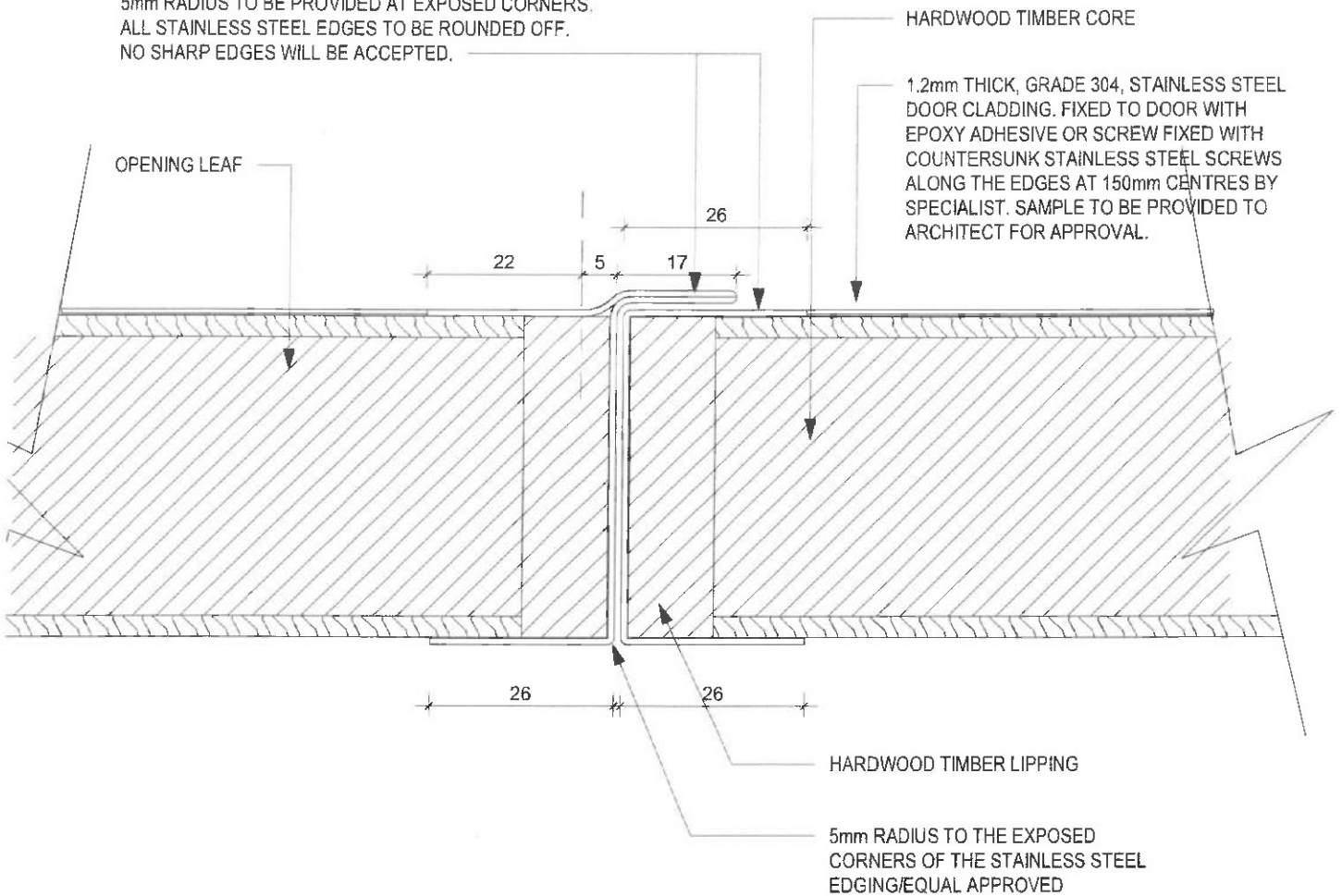
2023_F480-RRR-A-B00-XX-SH-A-06.01.040

 ruben reddy architects

Gautier | Johannesburg | Cape Town | Bloemfontein | Pietermaritzburg
Tel: +27 (0)21 462 1000 | www.rubenreddy.co.za

DOOR SCHEDULE


1.5mm THICK, GRADE 304, STAINLESS STEEL EDGE TRIM
FIXED TO DOOR WITH EPOXY ADHESIVE.
NO EXPOSED FIXINGS WILL BE ACCEPTED.
ONE CONTINUOUS LENGTH TO BE USED PER DOOR EDGE.
NO JOINTS WILL BE ACCEPTED.
5mm RADIUS TO BE PROVIDED AT EXPOSED CORNERS.
ALL STAINLESS STEEL EDGES TO BE ROUNDED OFF.
NO SHARP EDGES WILL BE ACCEPTED.



26/06/2023 11:24:18. TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

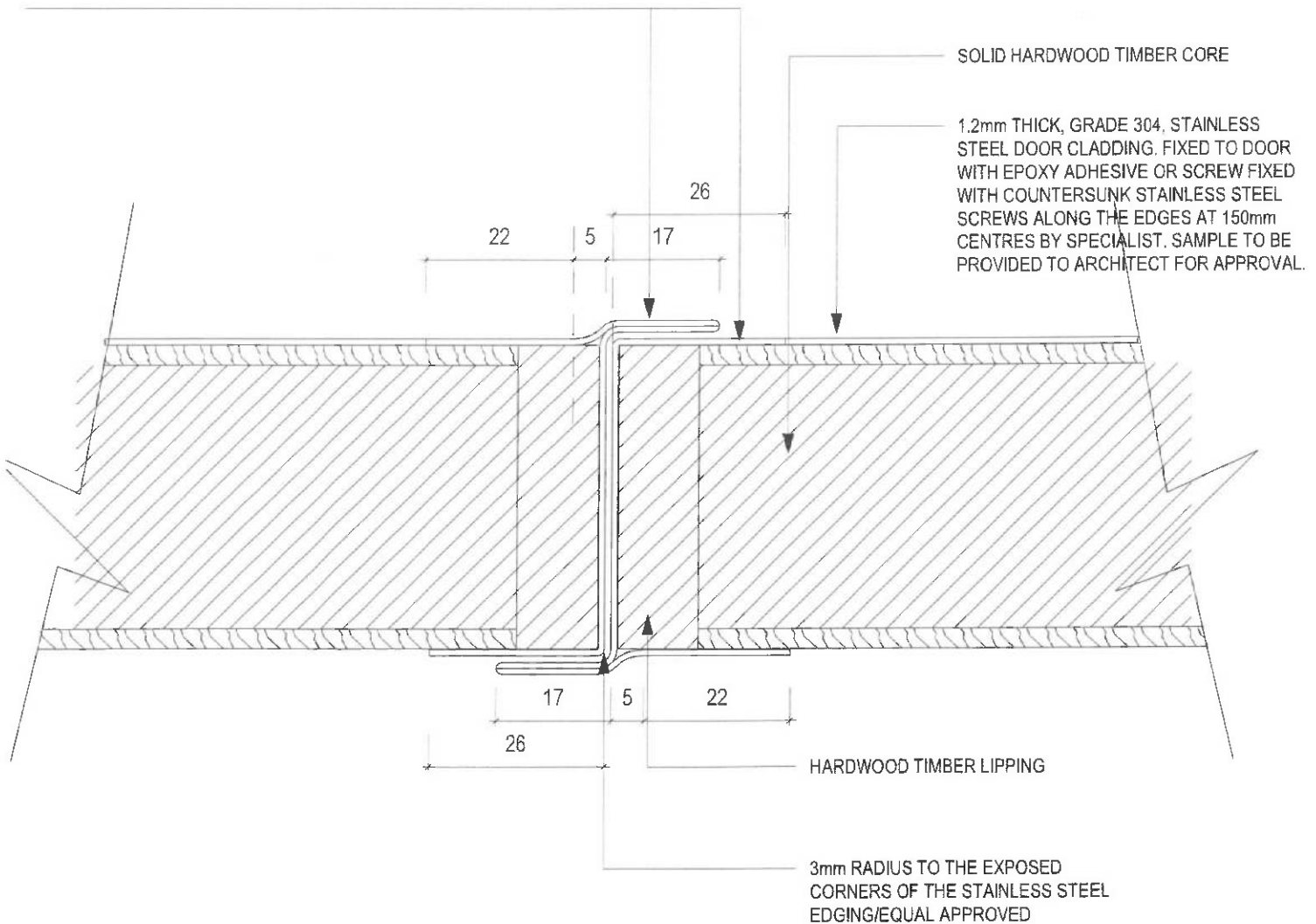
2023_F480-RRR-B00-XX-SH-A-06.01.041

 ruben reddy architects

Office | Sydney | Melbourne | Cape Town | Johannesburg | Brisbane
#RubenReddyArchitects | www.rubenreddyarchitects.com

DOOR SCHEDULE

- 1.5mm THICK, GRADE 304, STAINLESS STEEL EDGE TRIM FIXED TO DOOR WITH EPOXY ADHESIVE.
- NO EXPOSED FIXINGS WILL BE ACCEPTED.
- ONE CONTINUOUS LENGTH TO BE USED PER DOOR EDGE.
- NO JOINTS WILL BE ACCEPTED.
- 3mm RADIUS TO BE PROVIDED AT EXPOSED CORNERS.
- ALL STAINLESS STEEL EDGES TO BE ROUNDED OFF.
- NO SHARP EDGES WILL BE ACCEPTED.



26/06/2023 11:24:20: TIME STAMP

- DOOR SWINGS AND POSITIONS TO BE CALCULATED FROM THE DOOR REFERENCE PLANS.
- ALL DIMENSIONS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- ANY DISCREPANCIES ON THIS DRAWING ARE TO BE REPORTED TO THE OFFICE OF THE ARCHITECT PRIOR TO CONSTRUCTION.
- ALL ALUMINIUM AND STEEL IS TO BE ISOLATED FROM ONE ANOTHER TO PREVENT GALVANIC ACTION.
- ALL QUANTITIES ARE TO BE CHECKED ON SITE BY THE CONTRACTOR PRIOR TO PLACING ORDERS.
- ALL UNDERCUTTING OF DOORS IS TO BE CALCULATED FROM MECHANICAL DETAILED CONSTRUCTION DRAWINGS.
- ALL SHOP FRONT DOORS ARE TO BE AAAMSA APPROVED.

2023_F480-RRR-A-B00-XX-SH-A-06.01.042

ruben reddy architects
 Dubai | Johannesburg | Cape Town | Bloemfontein | Polokwane
 info@rubenreddyarch.com | www.rubenreddyarch.com

REV	DATE	DESCRIPTION	APPROVED

Notes

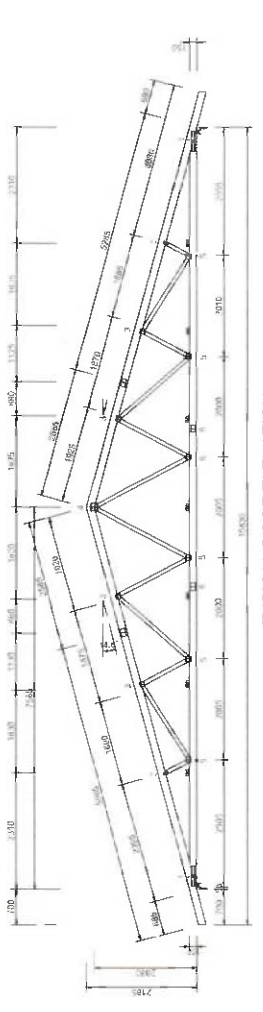
AKSHAN ENGINEERING
 Project Engineer
 S. HANSHU
 A. HANSHU
 S. HANSHU

Checked By
 S. HANSHU
 S. HANSHU
 S. HANSHU

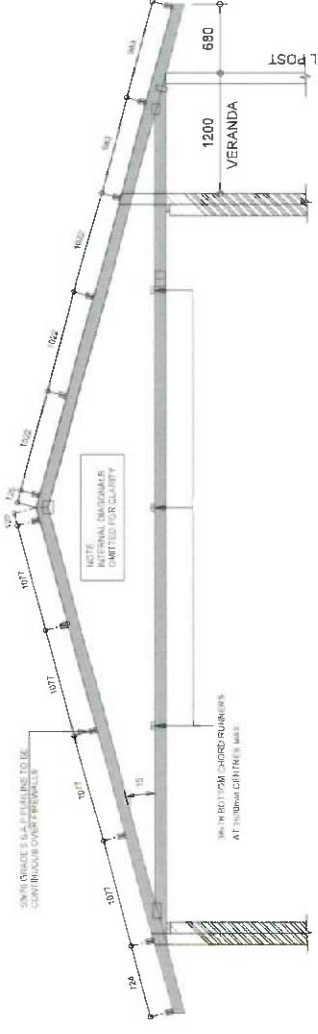


Project Name
 Health Department
 Province of KwaZulu-Natal
 Drawing Number
 AE-480-00-004

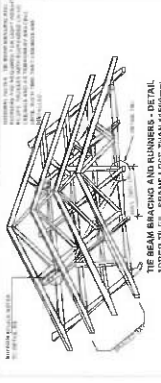
TRUSS TYPE - A@ 1185mm CTS U.O.S
BOTTOM CHORD - 3x111 GRADE 5 S.A.P
TOPCHORD(RIGHT) - 3x111 GRADE 5 S.A.P
TOPCHORD(LEFT) - 3x111 GRADE 5 S.A.P
WEBS - 3x111 GRADE 5 S.A.P



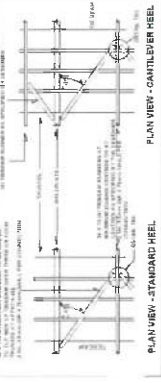
TYPICAL ROOF ELEVATION
 SCALE: 1:50



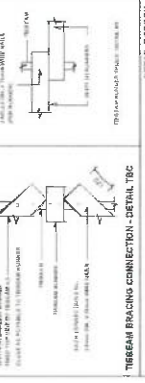
TYPICAL ROOF SECTION
 SCALE: 1:50



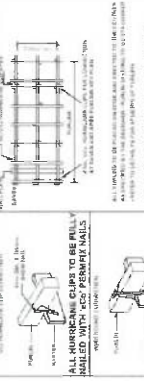
BEAM BRACING AND RUNNERS - DETAIL
 JOIST TILES - SPANS LESS THAN 1500mm
 SHEETING - SPANS LESS THAN 1500mm



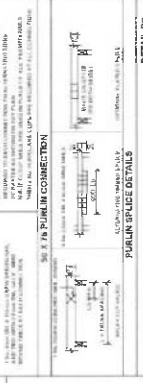
PLAN VIEW - STANDARD HEEL
 PLAN VIEW - CANTILEVER HEEL



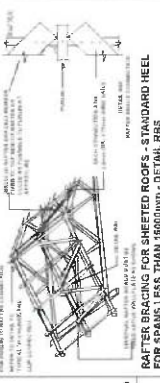
THREE-BEAM TRUSS CONNECTION - DETAIL TBC



DETAIL PBC

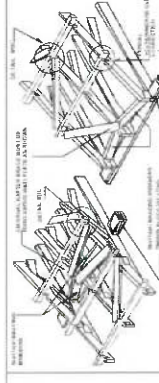


DETAIL PC



RAFTER BRACING FOR SHEETED ROOFS - STANDARD HEEL
 FOR SPANS LESS THAN 1500mm - DETAIL RB

DETAIL RB

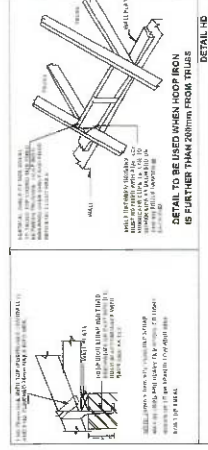


RAFTER BRACING FOR SHEETED ROOFS - STEEL POST OR CANTILEVER HEEL
 FOR SPANS LESS THAN 1500mm



DETAIL RB

- GENERAL NOTES FOR SHEETED ROOFS
1. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 2. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 3. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 4. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 5. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 6. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 7. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 8. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 9. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.
 10. ALL ROOFS SHALL BE SHEETED WITH 1185mm CTS U.O.S.



DETAIL IR

DETAIL RB

DETAIL RB

DETAIL RB

DETAIL RB

DETAIL RB

DETAIL RB

DETAIL RB

REV	DATE	DESCRIPTION	APPROVED


Notes

Project Engineer:
AKSHAN ENGINEERING
 113 RODGER SIBH ROAD, WESTVILLE, DURBAN
 TEL: (031) 700 1845
 Checked by Professional Consultant

Name: S. HANSRAJ ECSA Reg Number: 925440
 Signature: _____ Date: _____

Designed By	Drawn By	Checked By
S. HANSRAJ	A. HANSRAJ	S. HANSRAJ

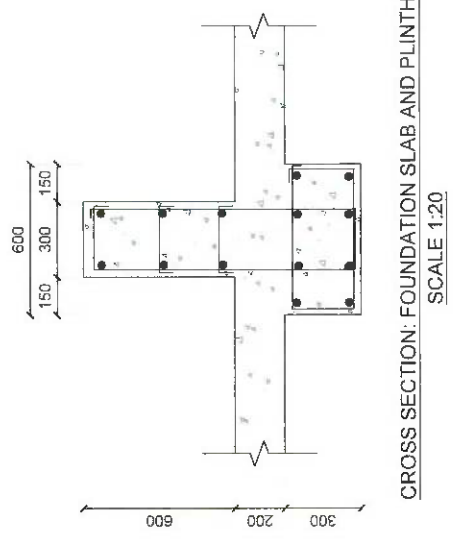
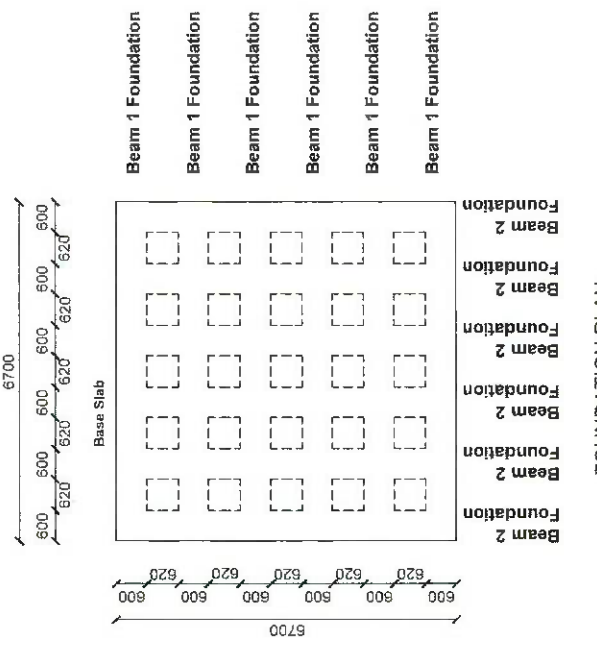
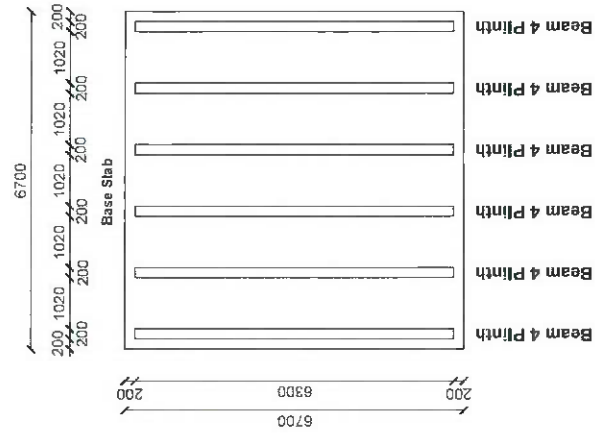
Client



Signature: _____ Date: _____
 Project: SMALL CLINIC
 KWA-ZULU NATAL

Drawing Description: WATER TANK FOUNDATION DETAILS

Date: 18/07/2023
 Scale: 1:100 (Page Size A1)
 Rev: 00
 Drawing Number: AE-480-501-001



ANNEXURES	
Annexure 1	Standard Preambles for all Trades (Rev 3) - DOH 2009
Annexure 2	General Electrical Specifications
Annexure 3	Lightning Protection Specifications
Annexure 4	Map of Tender submission location
Annexure 5	Joint Venture Agreement
Annexure 6	Health and Safety Specification
Annexure 7	Health and Safety Bill of Quantities
Annexure 8	Builders Lien Agreement
Annexure 9	Geotechnical Investigation Report (If applicable)
Annexure 10	EPWP Employment Contract
Annexure 11	Attendance Register - Infrastructure and Other projects
Annexure 12	EPWP Data Collection tool for Phase 3 system




KWAZULU-NATAL PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

CONSTRUCTION OF A SMALL CLINIC AT ROOSBOOM CLINIC

ANNEXURES

Project: KZN DOH CLINICS

Electrical Specification

	PROJECT		KDOH CLINICS
	PROJECT NO		23~TE~R~DOH001
	REFERENCE		
DEPARTMENT OF KWAZULU NATAL HEALTH ROOSBLOM CLINIC		DATE	JULY 2023
		DISCIPLINE	ELECTRICAL
		DOCUMENT TYPE	SPECIFICATION
		STATUS	REVISION 1
		REVISION	0
<i>THIS DOCUMENT HAS BEEN COMPILED AND REVIEWED BY:</i>			
NAME	DIVISION	DATE	SIGNATURE
AR MAHARAJ	ENGINEERING	Compiled 13 JULY 2023	
APPROVED BY			
NAME	POSITION	COMPANY	SIGNATURE
REVISION	DESCRIPTION OF REVISION.	AUTHORIZED.	DATE
Key Words		DATE OF COMPILATION	13 JULY 2023
		DATE OF NEXT REVISION	

Project: KZN DOH CLINICS
Electrical Specification

Table of Contents

1	SECTION 1 – GENERAL	4
1.1	Intent of Document.....	4
1.2	Standards and Codes	4
1.3	Regulations	4
1.4	Electrical Contractor.....	5
1.5	Design Rationale.....	5
1.5.1	Power Supply.....	5
1.5.2	Renewable Energy	5
1.5.3	Clinic	5
1.5.4	Residence.....	6
1.6	Scope of Work	6
1.7	Limits of Scope of Work	7
1.8	Environmental Conditions.....	8
1.9	Co-ordination	8
1.10	Test Certificates and Inspections	8
1.11	Guarantee, Warranty and Maintenance.....	8
1.12	Materials and Workmanship.....	9
1.13	Schedule of Fitting.....	9
1.14	Quality of Materials.....	10
1.15	Workmanship and Staff.....	10
1.16	Certificate of Compliance	10
1.17	Submittals.....	10
2	SECTION 2 LOW VOLTAGE DISTRIBUTION	11
A.	EQUIPMENT REQUIREMENTS	11
2.1	Quality, Standards & Regulations.....	11
2.1.1	Standards	11
2.1.2	Regulations and Rights of Engineer	11
2.2	Low Voltage Equipment	12
2.2.1	General	12
2.2.2	Earthing and Bonding	12
2.2.3	Earth Continuity	13
2.2.4	Distribution Boards	13
2.2.5	Wall Switches and Accessories.....	14
2.2.6	Switched Socket Outlets.....	14
2.2.7	Lighting	14
2.2.8	Surface Wiring and Accessories.....	15
2.2.9	PVC Conduit and Conduit Accessories	15

Project: KZN DOH CLINICS

Electrical Specification

2.2.10	Diesel Generator.....	15
2.3	ELECTRONIC EQUIPMENT	16
2.3.1	Server Cabinets and room.....	16
2.3.2	PA System	16
2.3.3	IT Network - Data – coms	16
2.4	CCTV Camera Network	17
B.	INSTALLATION DETAILS	17
2.5	Cable Sleeve Pipes.....	17
2.6	Notices	17
2.7	Electrical Equipment	17
2.8	Drawings	18
2.9	Balancing of Load	18
2.10	Service Conditions	18
2.11	Switches and Socket Outlets	18
2.12	Earthing and Bonding.....	18
2.13	Maintenance of Electrical Supply	18
2.14	Extent of Work.....	18
2.15	Bulk Supply and Connection	19
2.16	Diesel Generator	19
2.17	Power Points	19
2.18	Lighting Circuits.....	19
2.19	Switches	19
2.20	Cables trays	20
2.21	Cables	20
2.22	Conduits	20
2.23	Lights and Fittings	20
2.24	Distribution Boards.....	21
C.	SCHEDULES OF TECHNICAL INFORMATION	26
2.25	LOAD SCHEDULE	26
2.25.1	SCHEDULE OF POWER POINTS	26
2.25.2	SCHEDULE OF CABLES, CONDUIT AND WIRING	26
2.25.3	SCHEDULE OF DISTRIBUTION BOARD	26
2.26	PRICE SCHEDULES	26
2.26.1	GENERAL.....	26
3	Drawing List.....	27

1 SECTION 1 – GENERAL

1.1 Intent of Document

The specification is intended to cover the complete supply, delivery, off-loading, installation, commissioning, testing and handover documentation of the Electrical and Electronic services at the Small Clinic and Residences The Clinic is set on a greenfield site therefore the solution includes an installation and supply of new main incomer boards and metering as well as sub distribution boards, lighting installation and plug circuits installation, and all associated cabling from the loads that require power to the main/sub distribution board as per design drawings and BOM. The Small Clinic is not a 24 hour operation clinic.

The minimum equipment requirements are outlined in the relevant sections of this document. The details and construction of the equipment is not covered in this document due to this being the sole responsibility of the Contractor.

In all cases where a device or part of the equipment is referred to in the singular, it is intended that such reference shall apply to as many devices as are required to complete the installation.

1.2 Standards and Codes

- a) All work and equipment shall be in accordance with the requirements of the latest SANS Standards, regulations and local municipality codes and shall comply with the Occupational Health and Safety Act, No 85 of 1993 and current regulations of all other codes applicable to this work.
- b) Refer to Section 2 for the relevant standards and codes as a guideline.
- c) All equipment shall be compliant with the latest relevant standards and codes.
- d) Refer to Department of Health Ideal Clinic (Prototype) Standard (Volume 1-6)

1.3 Regulations

The following documents contain provisions that, whether referenced in the text or not, constitute requirements of these guidelines.

- a) SANS 10142-1: The Wiring of Premises Part 1: Low-voltage installations, as amended
- b) The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended,
- c) National Building Regulations and Building Standards Act, Act 103 of 1977, as amended
- d) National Building Regulations, GNR 2378 of 12 October 1990, as amended
- e) Electrical Installation Regulations, 2009 as amended (Promulgated in terms of the Occupational Health and Safety Act by GNR 242 of 6 March 2009)

Project: KZN DOH CLINICS

Electrical Specification

- f) National Guidelines: NRS 098: Guidelines for the Installation and Safe Use of Portable Generators on Utilities' Networks
- g) Applicable City By-Laws and Guidelines Electricity Supply.
- h) The Local Government Ordinance 1939 (Ordinance 17 of 1939) as amended and the municipal by-laws and any special requirements of the local supply authority,
- i) The Electricity Act 1984 (Act 41 of 1984) as amended

1.4 Electrical Contractor

- a) Electrical contractors must be registered by the Department of Labour in compliance with Regulation 6(1) of the Electrical Installation Regulations.
- b) Electrical contractors must produce the registration certificate issued by the Department of Labour on request of an Installation Inspector, Law Enforcement Officer or any other authorized ESD official

1.5 Design Rationale

1.5.1 Power Supply

The Power will be supplied by the local Supply Utility (Eskom) via a 200kVA 3 phase transformer as the load is calculated to be 180KVA, for both the Small Clinic and the Residences. The design also includes a renewable power supply source which is solar and a final backup of a diesel generator should there be a prolonged outage. There will be no batteries supplied other than in the Residences which is to accommodate the night time outages up to 4 hours.

1.5.2 Renewable Energy

Due to the location of the Small Clinic, only solar plant was considered. The Contractor shall be responsible for the design including PVsys, Helioscope or equivalent study showing the yield of the plant. The plant shall be sized to supply:

- 150KW for the Small Clinic
- 5kW each for the Residence, sized in groups of one or two. A total of 6 Residences comprising of 3 buildings of 2 units each. The equipment will be stored in the patio in a fire proof enclosure.
- All inverters will be of hybrid type
- Batteries supplied for the Residence will be Lithium Iron Batteries rated for at least 4 hours.
- All measuring and monitoring equipment
- The power produced must be guaranteed for a period of 10 years.

1.5.3 Clinic

The design of the clinic areas was guided by the Ideal Clinic standard/Prototype. As lux levels were not explicitly stated in the document, the designer used SANS10114 Interior lighting & Exterior lighting as a guide. All LED lights were used and no localised batteries were added to the light fittings due to the inclusion of both solar plant and a diesel generator. All lights are non-dimmable. Ceiling panels lights were used in offices and consulting rooms, giving an average of 500lux. Specialised lighting is allowed for in procedure rooms.

Project: KZN DOH CLINICS

Electrical Specification

Power outlets are classified into normal, dedicated and UPS supply. As the facility is supplied by solar, generator and mains, all the power outlets will have power after a very short switching period. The IT server and other electronic equipment will be supplied by a 5kVA UPS to provide safe shutdown of equipment and supply for 2 hours, via socket outlets fed from the localised UPS. Dedicated circuits are provided for medical equipment and fire detection equipment.

The following equipment has been provided in the clinic as part of this supply:

- Access control in administration and dedicated patient care areas.
- Access control doors to be fitted with fire escape door release mechanism.
- CCTV at entrances and passage ways
- Nurse call in emergency room areas
- PA system
- Earthing and Lightning Protection

1.5.4 Residence

The Residence electrical network has been designed with a solar and mains source to supply LED indoor and outdoor lights, power outlets for kitchen and household appliances. Each unit will have its own distribution board. A stove isolator and geyser supply is included. Earthing rods for local DB's and surge protection is included. Lightning protection is included.

No heating or cooling loads have been accommodated for.

1.6 Scope of Work

- a) This specification covers the supply, delivery, installation and commissioning of the low voltage distribution system. This includes the complete installation and commissioning of cables, compliance of entire installation of all power distribution board, lighting and plug circuits as per the following:
- (1) Power cabling from main incomer kiosk to all DB's
 - (2) Lighting cabling to all light fittings
 - (3) Lightning Protection and Earthing of installation
 - (4) Conduits and cable trays for power
 - (5) Cable trays and conduits for lighting
 - (6) Cable trays and conduits for IT, Access control, Speaker, CCTV And Audio distribution separated from power routes by at least 300mm edge to edge from single phase circuits.
 - (7) Cabling from the main distribution board to ATS,
 - (8) Cabling from generator to the ATS including communications cabling,
 - (9) Cabling from the ATS to the main kiosk, and
 - (10) Cabling from the distribution board to the relevant the lighting and plug circuits
 - (11) All plaster boxes as per BOM
- b) The main distribution board is fed from a three phase supply from the Utility with associated metering. All associated permits and application as per legislation would be necessary for power is part of this scope. The main electricity kiosk is to be housed at the back of the property with a diesel generator, away from patient areas.
- c) The Contractor shall also apply for a fibre cable supply to the site and cable from the intake point into the building main Data Board. The IT portions of the work will include:

Project: KZN DOH CLINICS

Electrical Specification

- 1) Network distribution to all server cabinets
 - 2) Installation of all network cabling
 - 3) Installation and termination of IT, Access control PA & Speakers, CCTV, Nurse Call and other electronic equipment as per BOQ.
 - 4) Conduits and cable trays for IT, Speakers wiring, CCTV and Audio distribution separated from power routes by at least 300mm edge to edge from single phase circuits.
 - 5) All plaster boxes as per BOQ
 - 6) Supply and install of IT cables (CAT6/6A)
 - 7) Commissioning of all IT, Audio and Video
- d) Conduit to Switches plaster mounting boxes 4 x 2 and 4x4 plaster boxes supplied and installed
- e) Earthing as per design including earthmats/rods at Distribution Boards, Generator and pumps. 16mm² earth cable as needed and per BOM
- f) The supply and install of lights, plugs and isolators at the residences.
- g) Supply and install of all solar panels, DC cabling, inverters & batteries as per the bill for residences and clinic as two sperate system.
- h) Electrical compliance (3 phase certification) of the installation as per legislation for lighting, and power DB included.
- i) Supply and install including Termination of speaker cables as per BOM.
- j) Conduits sizes as per BOM and design
- k) Supply, install and terminate all power distribution single and 3 phase as well as all power required by all third party devices such as pumps.
- l) Labelling of cables as per design
- m) Testing continuity of all cables prior to termination
- n) Hold points for inspection by Engineer and authorities will be detailed in the Quality plans and 1 week notice would be required or as per Inspection Test plans

1.7 Limits of Scope of Work

The complete backup power solution includes the integration of the scope of work to be completed by both the Electrical Contractor and the Utility Contractor. The limits of the scope of work for the contractor will be the terminals of the Utility supplied transformer or Kiosk and the Fibre Optic supplier Kiosk terminals.

Project: KZN DOH CLINICS

Electrical Specification

1.8 Environmental Conditions

The electrical installation shall be capable of withstanding any combination of the following environmental conditions in which it must operate and without any electrical or mechanical damage or degradation of the operating characteristics:

- a) Altitude : up to 1300m height above sea level
- b) Ambient Temperature : -10 to 47 degrees
- c) Relative Humidity : up to 90%

1.9 Co-ordination

- a) Due to the nature of the installation, a fixed sequence of operation is required to properly install the complete solution. The Contractor shall perform the installation of all electrical and electronic works and shall co-ordinate his program to ensure that the works is completed and ready for commissioning of the end users of power.
- b) The work shall be closely scheduled in order not to delay the entire project. and proper planning to ensure that the works is carried out with minimum interruptions.
- a) Delays due to lack of co-ordination between the Contractor shall not form a basis for claims by the Contractor of this Contract.

1.10 Test Certificates and Inspections

The following tests are to be carried out:

- (a) After completion of the works and before first delivery is taken, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the installation will be inspected and the Contractor shall make good, to the satisfaction of the Representative/Agent, any defects which may arise.
- (b) The Contractor shall provide all instruments and equipment required for testing and commissioning of the installation at completion.
- (c) The Contractor shall ensure that he is a qualified electrician and completes the testing and commissioning of the complete installation. The electrician shall provide a valid Certificate of Compliance (CoC) for the completed installation. The CoC must be accompanied by a test report in the format stipulated in SANS 10142.
- (d) Due to possible load changes at the main existing metering board, the Contractor shall ensure that the application for extra power as calculated by new load requirements is included and any necessary upgrades are performed accordingly and the necessary applications for such upgrades as well as obtaining the local permits.
- (e) Test reports and CoC as specified above are to be submitted to the Department.

1.11 Guarantee, Warranty and Maintenance

- a) The Contractor shall guarantee the complete plant for a period of 24 months for any defects on equipment and installation.

Project: KZN DOH CLINICS

Electrical Specification

- b) If during this period the plant is not in working order, or not working satisfactorily owing to faulty material, design or workmanship, the Contractor will be notified and immediate steps shall be taken by him to rectify the defects and/or replace the affected parts or installation on site at his own expense.
- c) The Contractor shall offer technical support where required during normal working hours i.e. phone, email support.

1.12 Materials and Workmanship

- (a) The work throughout shall be executed to the highest standards and to the entire satisfaction of the Representative/Agent who shall interpret the meaning of the Contract Document and shall have the authority to reject any work and materials, which, in his judgement, are not in full accordance therewith. All condemned material and workmanship shall be replaced or rectified as directed and approved by the Engineer.
- (b) All work shall be executed in a first-class manner by qualified tradesman.
- (c) The Contractor shall warrant that the materials and workmanship shall be of the highest grade, that the equipment shall be installed in a practical and first-class manner in accordance with the best practices and ready and complete for full operation. It is specifically intended that all material or labour which is usually provided as part of such equipment as is called for and which is necessary for its proper completion and operation shall be provided without additional cost whether or not shown or described in the Contract Document.
- (d) The Contractor shall thoroughly acquaint himself with the work involved and shall verify on site all measurements necessary for proper installation work. The Contractor shall also be prepared to promptly furnish any information relating to his own work as may be necessary for the proper installation work and shall co-operate with and co-ordinate the work of others as may be applicable.
- (e) All components and their respective adjustment, which do not form part of the equipment installation work, but influence the optimum and safe operation of the equipment shall be considered to form part of, and shall be included in the Contractor's scope of works.
- (f) The Contractor shall make sure that all safety regulations and measures are applied and enforced during the installation.
- (g) The Contractor is to include for all scaffolding required to complete the work required.

1.13 Schedule of Fitting

In all instances where schedule of light, socket outlet and power points are attached to or included on the drawings, these schedules are to be regarded as forming part of the specification.

Project: KZN DOH CLINICS

Electrical Specification

1.14 Quality of Materials

- (a) All materials procured for the installation shall be in compliance with the requirements of SANS 10142.
- (b) Only materials of first class quality shall be used and all materials shall comply with the relevant South African Bureau of Standards, specifications, or to IEC Standard Specifications, where no SABS Specifications exist.
- (c) Materials wherever possible, must be of South African manufacture.

1.15 Workmanship and Staff

- (a) The workmanship shall be of the highest grade and to the satisfaction of the owner.
- (b) All inferior work shall, on indication by the Engineers inspecting officers, immediately be removed and rectified by and at the expense of the Contractor.

1.16 Certificate of Compliance

- (a) On completion of the service, a certificate of compliance must be issued to the Department's Representative/Agent in terms of the Occupational Health and Safety Act, 1993 (Act 85 of 1993).
- (b) The certificate of compliance shall be for the complete installation including the power side of the IT Boards as well as to free issue distribution boards if applicable.
- (c) A test report shall be accompanied with the certificate of compliance.

1.17 Submittals

The following information must accompany the tender documents

No	List of Technical Tender Returnable	Compliant	
		Yes	No
1	Certification of Master Electrician		
2	Certification of Electrician		
3	Wireman's License		
6	Low voltage distribution board type test		
7	OSHACT Compliance		
8	Previous Experience (Projects similar size and nature of this project for last 3 years)		
10	Price Schedules		
11	Deviations from specification		
11	High level schedule		

2 SECTION 2 LOW VOLTAGE DISTRIBUTION

A. EQUIPMENT REQUIREMENTS

2.1 Quality, Standards & Regulations

All material and equipment supplied for this contract shall be new and the best of their respective kind. All new materials and equipment supplied, shall comply fully with the requirements laid down in the specification. The whole of the works shall be executed in accordance with best practice and to approval of the engineer. The equipment shall comply with the latest issues of the following standard specifications:

2.1.1 Standards

The low voltage system must be designed and produced in compliance with the following standards but not limited to:

- SANS 10142-1 Wiring Code of Practice.
- SANS 1765 Distribution Boards
- SANS 1507 PVC Cables
- SANS 950 PVC Conduit
- SANS 156 Circuits Breakers
- SANS 60947-2 Circuit Breakers
- SANS 556-1 Circuit Breakers
- SANS1239 Socket outlets
- SANS 1433-1 Terminals
- SANS 61008-1 Earth Leakage Devices
- SABS 150 Insulated wire
- SANS 1213 Cable Glands

2.1.2 Regulations and Rights of Engineer

Apart from any other authority, which the engineer may have in terms of the contract, he shall have the right to set the standard and to accept or reject part of the specified equipment depending on the quality of material and workmanship offered.

The Contractor shall be notified if the quality of such materials and/or workmanship is not acceptable. In such an event, the contractor shall replace the specific part or repair it to the satisfaction of the engineer, all at the cost of the contractor. Such an instruction shall not exempt the contractor from any of his obligations in terms of the contract.

The installation shall be erected and carried out in accordance with:

- a) The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended.
- b) The local Municipality by-laws and Regulations as well as the regulations of the local Supply Authority.
- c) The local Fire regulations.

Project: KZN DOH CLINICS

Electrical Specification

- d) The Standard Regulations of any Government Department or public service company where applicable.

In addition the Contractor shall at his cost issue all notices in respect of the installation to the local authorities, and shall exempt the client from all losses, costs or expenditures which may arise as a result of the Contractor's failure to comply with the requirements of the regulations enumerated above.

It shall be assumed that the Contractor is conversant with the above-mentioned requirements. Should any requirements, by-law or regulation, which contradicts the requirements of this document, apply or become applicable during erection of the installation, the Contractor shall immediately inform the engineer of such a contradiction. Under no circumstances shall the Contractor carry out variations to the installation in terms of such contradictions without obtaining the written permission to do so from the engineer.

2.2 Low Voltage Equipment

2.2.1 General

The installation shall be in accordance with SANS 10142 and at handover the Contractor shall give the end user a Certificate of Compliance in accordance with the Occupational Health and Safety Act.

(A readable copy of the Certificate of Compliance is to be submitted to the project manager)

The low voltage connection shall consist of:

1. All cabling for the generator, ATS and main and sub distribution board and all loads.
2. Main and sub distribution boards.
3. All solar plant
4. All protection and metering plant
5. Circuit wiring from the distribution board to sub distribution board to loads:
 - a) Switched socket outlets;
 - b) Electronic boards such as data & telephones
 - c) External lighting to sub distribution board

2.2.2 Earthing and Bonding

Main earthing

- a) Where the supply authority does not provide an earth terminal or conductor, an earth electrode system that complies with the requirements of SANS 10142 shall be supplied.
- b) At least one earth electrode shall be installed for the main distribution board or ready board irrespective of whether the supply authority provides an earth terminal (or conductor) or not: the earth electrode shall comply with SANS 10142. The earth wire shall be protected by a steel pipe.
- c) Where the supply authority provides an earth terminal, it shall be connected to the consumer's earth terminal.
- d) Installations shall be effectively earthed in accordance with the "Wiring Code" and

Project: KZN DOH CLINICS

Electrical Specification

to the requirements of the supply authority. All earth conductors shall be stranded copper with or without green PVC installation with suitable thickness.

- e) Earthmat for the generator as per design

Sub-distribution boards

- a) A separate earth connection shall be supplied between the earth busbar in each sub-distribution board and the earth busbar in the Main Switchboard. These connections shall consist of a bare or insulated stranded copper conductors installed along the same routes as the supply cables or in the same conduit as the supply conductors. Alternatively armoured cables with earth continuity conductors included in the armouring may be utilised where specified or approved.

Sub-circuits

- a) The earth conductors of all sub-circuits shall be connected to the earth busbar in the supply board in accordance with SABS 0142.

Connection

- a) Under no circumstances shall any connection points, bolts, screws, etc., used for earthing be utilised for any other purpose. It will be the responsibility of the Contractor to supply and fit earth terminals or clamps on equipment and materials that must be earthed where these are not provided. Unless earth conductors are connected to proper terminals, the end shall be tinned and lugged.

Bonding

- a) Bonding shall be in accordance with the requirements of SANS 10142.

2.2.3 Earth Continuity

- a) Earth continuity conductors and resistances shall be installed in accordance with SANS 10142.

2.2.4 Distribution Boards

- a) Distribution Boards and equipment used within the board shall comply with relevant SANS Standards.
- b) Each distribution board shall comprise of a main circuit breaker, busbar, plug and light circuit breakers, earth leakage unit, neutral and earth bar, etc.
- c) Each distribution board shall be controlled by main circuit breaker mounted in the board.
- d) Each distribution board shall have appropriate labelling (main switch, loads, generator supply, etc.) and danger notices as per SANS Standards.
- e) Each distribution board shall include adequately rated cabling for jumpers as per SANS.
- f) The distribution board shall be suitable for the environment conditions in which it operates and the boards shall be protected against corrosion.
- g) The distribution board shall be mounted at a suitable height above the existing floor level in order to obtain access during normal operation.
- h) The position of the distribution board shall allow safe operation and maintenance.
- i) Each unoccupied opening of the distribution board shall be fitted with a blanking plate.

- j) All circuit breakers shall be adequately rated for the prospective short circuit current.
- k) All Coastal rating materials (3CR12) to be used.

2.2.5 Wall Switches and Accessories

The IT supplier and install provide all switches and coverplates necessary for installation.

- a) All switches are suitable for mounting in standard wall outlet boxes.
- b) NOTE – Exterior switches shall be mounted in positions protected from rain or water ingress.
- c) Cover plates for wall outlet boxes shall be supplied and installed by the specialist.

2.2.6 Switched Socket Outlets

- a) This section covers switched socket outlets for use in general installations under normal conditions.
- b) Switched socket outlets shall be surface mounted and comply with SABS 163, SABS 164, and SABS 1085 and be rated 16A, 22 V/250 V and shall have 2 switched 3-pin sockets.
- c) Switch socket outlet covers shall be white. There will be a combination of 2 x 4, 4x4 and 6 and 8 way boxes depending on application
- d) The sockets shall be level and mounted equally distance and as per design heights.
- e) The contractor shall be asked to remove the plaster boxes and redo should the design heights and distances not be correct.



2.2.7 Lighting

- a) All lights shall be provided as per the bill and drawings.
- b) Where lights are indicated on panel ceilings, these should be 1200x600mm panel fittings.
- c) Where lights are on plaster ceilings, fittings will be flush surface mounted type.
- d) All outdoor lighting shall be IP65 or better.
- e) All light fittings shall be rated for coastal conditions including screws.

2.2.8 Surface Wiring and Accessories

- a) This section covers the requirements for wiring and accessories for general installations under normal conditions.
- b) All surface wiring shall comply with SABS 1574 and SABS 1507.
- c) The installation shall comply with SANS 10142.
- d) Surface wiring shall enter wall boxes and luminaires using the correct size compression glands. Wiring for lighting circuits is to be carried out with 2 x 1.5mm² conductors and earth conductor. For socket outlet circuits the wiring shall comprise 2 x 2.5mm² conductors and earth conductor.
- e) Surface wiring shall be connected and interconnected in draw and junction boxes with push wire type connectors. No terminations shall be made in conduit junction boxes. These should only be used for draw wires. All terminations are to be done in DB's, Equipment, Switch boxes and or sockets.
- f) Only for power circuits can the single stands be used but colored as per the phase color and enclosed in suitable trays as per SANS requirement.
- g) Lighting circuits shall be as per item d and no single stands will be permitted.

2.2.9 PVC Conduit and Conduit Accessories

This section covers the requirements for conduit and conduit accessories for general installations under normal environmental conditions.

- a) All PVC conduit shall comply with SABS 950 and be fitted and glued with the correct size coupler and lock nut where the conduit terminates in any box.
- b) PVC accessories shall be suitable for the PVC conduit.
- c) The installation of conduit and accessories shall be symmetrical, vertical and parallel to the respective walls and floors and saddled and screwed down where surface mounted.

2.2.10 Diesel Generator

The generator will be as follows:

- a) Maximum 200kVA standby power at 230/400v @ 50Hz 1500rpm High quality and reliable six-cylinder Scania/ Volvo turbodiesel engine, Silent canopy which can stand outside with lockable doors. Fuel tank to be built into the unit base to include enough of fuel for 72hours operation and a minimum of 600l.
- b) Automatic changeover (ATS) to include mains/solar/diesel generator inputs.
- c) Maintenance free batteries and trickle charger included.
- d) Four-way protection system included, H-specification insulation, brushless alternator with AVR provides stable output, digital controller with auto and manual start options,
- e) All sets must undergo a comprehensive testing/pre delivery inspection, prior to delivery and include one year/1000 hour warranty. Including first fuel fill, oil filters, fuel filters and all other consumables necessary for operation.
- f) Must be positioned away from patient areas

2.3 ELECTRONIC EQUIPMENT

2.3.1 Server Cabinets and room

- a) Server cabinets and equipment used within the server cabinets shall comply with relevant Standards.
- b) Each distribution board shall comprise of network switch, patch panel, patch leads, brushes, all network equipment and UPS.
- c) The Contractor to design the server rooms and plan the termination points for all network points. The network must be planned and installed that best suits the layout of server rooms
- d) Each server room to have raised flooring for cable routes.
- e) Each server room shall include adequately rated cabling for jumpers as per SANS.
- f) The server cabinet shall be suitable for the environment conditions in which it operates and must be protected against corrosion.
- g) The position of the server cabinet shall allow safe operation and maintenance.

2.3.2 PA System

Complete PA sound system has been designed for audio distributed throughout the Clinic by using ceiling, Wall mount and Horn speaker. The main front end Mic is to be in the Admin building at the reception desk as indicated on the drawings.

The Contractor must provide as listed

1. The Position all speaker has been marked on the design layout drawing. Speaker points must be moved on site to the most suitable position.
2. The Contractor to run all speaker cable from the server room to the speaker point. Contractor must install and terminate all speakers.
3. The Contractor must install all amplifiers in server cabinet and programme the complete system as per the specification below and comply with the standards below.
4. The Contractor must test the installation that audio is distributed throughout the Clinic. The Contractor shall install additional speakers were required.

2.3.3 IT Network - Data – coms

The IT network has been designed with the infrastructure to house all IT equipment and provide WIFI and LAN through the Clinic as per guideline provided.

Bulk infrastructure service sleeves in trenches/cable routes for main cables and routes to interconnect or enter buildings as been designed throughout the project site.

Adequate cable trays (for IT and Electrical) has been allowed to accommodate all the electronic/Electrical cabling.

Listed is the typical allowance in the Server cabinets includes as listed

- 1 x 42-20 U 800x800mm cabinet depending on space required
- 1 x 24 port network POE switch
- 1 x 24 port patch panel
- 1 x Surge protection PDU
- 1 x Fibre Panel to link server rooms
- 48 x panel leads

Project: KZN DOH CLINICS

Electrical Specification

- 1 x 6 KVA Rack mounted UPS

Additional space has been allowed in each cabinet to house all ICT equipment from all systems. There is also additional space for future expansion.

Each server room will be fitted with as listed:

- Air-con split units for cooling
- Environment monitoring kits for alarm

2.4 CCTV Camera Network

The CCTV Network will cover all areas as listed for security. This to provide security to all staff and visitors using the clinic. The main front end screens will be house in designated control room in the security building for monitoring. The system can be linked to the principle PC for remote monitoring.

Typical camera system function is listed below:

- All cameras with IP protocol type
- All with day and night vision
- Each camera is fully programable
- Infrared cameras will be used
- All camera is outdoor ready IP 66. Low maintenance
- The complete system is linked to main control room for monitoring
- This link can also be on principle PC and remote access

B. INSTALLATION DETAILS

2.5 Cable Sleeve Pipes

Where cables cross under roadways, paved areas, other services and where cables enter buildings, the cables shall be installed in asbestos-cement pipes, earthenware or high-density polyethylene pipes.

The ends of all sleeves shall be sealed with a non-hardening watertight compound after the installation of cables. All sleeves intended for future use shall likewise be sealed.

2.6 Notices

If required, the Contractor shall issue all notices and make the necessary arrangements with Supply Authorities and other authorities as may be required with respect to the installation.

2.7 Electrical Equipment

All equipment and fittings supplied must be in accordance with the relevant SANS Standards and suitable for the relevant supply voltage, and frequency.

Project: KZN DOH CLINICS

Electrical Specification

2.8 Drawings

The drawings generally show the scope and extent of the proposed work and shall not be held as showing every minute detail of the work to be executed.

The position of power points, switches and light points that may be influenced by built-in furniture must be established on site, prior to these items being built in.

Drawings that form part of this Specification are included in Section 3:

2.9 Balancing of Load

- a) The Contractor is required to balance the load as nearly as is practicable, over the multiphase supply. The Single line diagram will be provided and this shall be used to balance the load. Updates are to be made on the drawing should changes be required
- b) In cases where the single phase loads for the new distribution board causes an imbalance of currents, the Contractor is required to reallocated some of the loads on the existing main distribution board in order to balance all loads as nearly as is practicable, over all three phases.

2.10 Service Conditions

All plant shall be designed for the climatic conditions as pertaining to the service.

2.11 Switches and Socket Outlets

The installation of switches and socket outlets must conform SANS Standards and Section 2 of this specification.

2.12 Earthing and Bonding

The Contractor will be responsible for all earthing and bonding of the building and installation. The earthing and bonding is to be carried out strictly as described Section 2 of this specification and the SANS Standards.

2.13 Maintenance of Electrical Supply

All interruptions of the electrical supply that may be necessary for the execution of the work, will be subject to prior arrangement between the Contractor and the Department's representative.

2.14 Extent of Work

The work covered by this contract comprises the complete electrical installation, in working order, as shown on the drawings and as per this specification, including the

Project: KZN DOH CLINICS

Electrical Specification

supply and installation of all fittings and also the installation of such equipment supplied by the Department.

2.15 Bulk Supply and Connection

The supply will be applied for to the local electricity utility (Eskom).

2.16 Diesel Generator

- a) The 200kVA diesel generator complete with automatic changeover control panel will be supplied, installed and commissioned. It shall be noted that supply of cabling from the generator to the ATS will be provided by the generator Contractor. Installation of the cabling shall be included as part of this scope of work.
- b) The Contractor will be responsible for the supply and installation of all other cabling in order to provide a complete solution. The cabling includes connection between the main DB and the ATS, the ATS and new sub DB, generator and ATS, all plug and lighting circuits.
- c) The supply cables are listed in the Schedule of Cables and measured in the Bill of Quantities.
- d) The Diesel Generator must be positioned away from patient areas but as close as possible to the main incomer

2.17 Power Points

- a) Allow for the installation of power points as listed in the schedule and indicated on the drawings.
- b) All plaster boxes that are 6 or 8 way shall be galvanized
- c) The boxes shall be installed level and maximum 12mm from plaster edge
- d) The power sockets are Legrand modular therefore contractor shall allow for multiple wiring with sockets in one box.
- e) All terminations shall be in boxes or DB and never in ceilings

2.18 Lighting Circuits

- a) All lighting circuits must not exceed the breaker rating of 80% of rated load amperage for continuous current i.e. 8A for 10A breaker and 12A for 15A breaker.
- b) All terminations shall be in boxes or DB and never in ceilings

2.19 Switches

- a) All switch boxes shall be mounted 4 x 2 (vertically mounted) unless specified otherwise.

Project: KZN DOH CLINICS

Electrical Specification

- b) The switch boxes shall be supplied and installed by contractor and shall be standard PVC 4 x2 or 4x 4 if specified
- c) Supply, install and termination of bus is done by others unless otherwise specified
- d) All terminations shall be in boxes or DB and never in ceilings

2.20 Cables trays

The Contractor shall supply and completely install all distribution cables as per BOM. If single strands used for power then these have to be enclosed in galvanized trays

The cables trays for IT shall be 300mm apart from power cables and shall be open

2.21 Cables

The Contractor shall supply and completely install all distribution cables as indicated on the drawings, and listed in the Schedule of Cables. All power cables shall comply with the relevant SANS standards.

The storage, transportation, handling and laying of the cables shall be according to first class practice, and the Contractor shall have adequate and suitable equipment and labour to ensure that no damage is done to cables during such operations.

The Contractor to assess sites conditions for the installation of the main cable from generator ATS to the main/sub distribution board. The preference is to consider running the cabling on the surface. All cabling shall be inserted metal conduit to protect cabling from mechanical damage and exposure. The installation shall be done in accordance with SANS 10142.

All lighting cables shall be 2 wire and earth surflex 1.5mm² and not single strands

Single strands for power is permitted however colour codes shall be in line with phase it connected too.

All cables shall be labelled with suitable permit markers with 4 digit number as per design

Outdoor power cables shall be armoured and installed as per SANS requirements, No joints are permitted on outdoor cables.

2.22 Conduits

The Contractor shall supply and completely install all conduits, junction boxes as per BOM.

The sizing of conduits are as per BOM

All conduits that are installed but are not for power and lighting shall include a draw wire for others to install cables

All conduits for Cameras shall end with a round junction box plastered in the wall

2.23 Lights and Fittings

The Contractor shall install

- a) All lighting to be installed as per the manufacturers instructions.
- b) Install all light fittings are to free issued by Owner as applicable
- c) All light fittings are to be handled with care and in a professional manner
- d) All screws for outside mounting should be of a quality to minimize rusting

Project: KZN DOH CLINICS

Electrical Specification

- e) All outdoor fitting should be correctly installed to avoid any water ingress

2.24 Distribution Boards

The Contractor shall install the distribution board as indicated on the drawings and listed in the distribution Board Schedule below and must contain the circuit breakers and isolators as per this list. The loads have been optimized from the Ideal Clinic Prototype by considering smaller supplies for security scanners, making provision only for hand dryers and using LED lights only. The design loading has increased as a result of the inclusion of fire fighting pumps and water pumps, air conditioning load, ventilation fans and geysers all of which were not included in the Ideal Clinic Design.

Main LV kiosk				
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
DBM-P-001	Main supply		1	400A-4P
DBM-P-002	Generator	200000	1	400A-4P
DBM-L-001	Carport Lights	50	6	20A- 1PH
DBM-L-002	Streetlights	50	6	20A- 1PH
DBM-P-001	DB A	50	6	20A- 1PH
DBM-P-002	DB B	50	6	20A- 1PH
DBM-P-003	DB CD	50	6	20A- 1PH
DBM-P-004	DB E	50	6	20A- 1PH
DBM-P-005	DB MECH	50	6	20A- 1PH
DBM-P-006	DB RESIDENTS	50	6	20A- 1PH
DBM-P-007	DB RESIDENTS	50	6	20A- 1PH
DBM-P-008	DB RESIDENTS	50	6	20A- 1PH
DBM-P-009	DB RESIDENTS	50	6	20A- 1PH
DBM-P-010	DB RESIDENTS	50	6	20A- 1PH
DBM-P-011	DB RESIDENTS	50	6	20A- 1PH

Block A	Guard house/Public Services	DB-A		
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
	Main incomer			60A 3PH
	Surge Arrestor			
DBA-L-001	Lights	50	6	20A- 1PH
DBA-L-002	Lights	50	6	20A- 1PH
DBA-L-003	Lights	18	7	20A- 1PH
DBA-L-004	Lights	18	7	20A- 1PH
DBA-P-001	Plugs	300	5	20A- 1PH
DBA-P-002	Plugs	300	5	20A- 1PH
DBA-P-003	Plugs	300	5	20A- 1PH

Project: KZN DOH CLINICS

Electrical Specification

DBA-P-004	Plugs	300	5	20A- 1PH
DBA-P-005	Plugs - Dedicated	300	5	20A- 1PH
DBA-P-006	Security Scanner	400	2	40A-4P
DBA-P-007	Airconditioning	2000	2	20A-2P
DBA-P-008	Airconditioning	2000	2	20A-2P
DBA-P-009	Hand dryer	5888	1	32A-2P
DBA-P-010	Fans	200	1	20A- 1PH
DBA-P-011	Geyser	1500	1	20A- 1PH
Block B	Main Central Area & Admin	DB - B		
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
	Main incomer			60A 3PH
	Surge Arrestor			
DBB-L-001	Lights	50	11	20A- 1PH
DBB-L-002	Lights	50	11	20A- 1PH
DBB-L-003	Lights	50	11	20A- 1PH
DBB-L-004	Lights	50	11	20A- 1PH
DBB-L-005	Lights	18	2	20A- 1PH
DBB-L-006	Lights	18	7	20A- 1PH
DBB-L-007	Lights	18	7	20A- 1PH
DBB-P-001	Plugs	300	5	20A- 1PH
DBB-P-002	Plugs	300	5	20A- 1PH
DBB-P-003	Plugs	300	5	20A- 1PH
DBB-P-004	Plugs	300	5	20A- 1PH
DBB-P-005	Plugs	300	5	20A- 1PH
DBB-P-006	Plugs	300	5	20A- 1PH
DBB-P-007	Plugs	300	5	20A- 1PH
DBB-P-008	Plugs	300	5	20A- 1PH
DBB-P-009	Plugs - Dedicated	300	5	20A- 1PH
DBB-P-010	Airconditioning	2000	2	20A-2P
DBB-P-011	Airconditioning	2000	2	20A-2P
DBB-P-012	Airconditioning	2000	2	20A-2P
DBB-P-013	Hand dryer	5888	1	32A-2P
DBB-P-014	Fans	200	1	20A- 1PH
DBB-P-015	Geyser (1.5 &2KW)	2000	2	20A- 1PH
Block C	Services and Stores	DB C-D		
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
	Main incomer			60A 3PH

Project: KZN DOH CLINICS

Electrical Specification

Surge Arrestor				
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
DBC-L-001	Lights	50	5	20A- 1PH
DBC-L-002	Lights	18	14	20A- 1PH
DBC-P-001	Plugs	300	5	20A- 1PH
DBC-P-002	Fans	200	1	20A- 1PH
DBC-P-003	Geyser	2000	1	20A- 1PH
Block D				
Emergency and Support Services		DB C-D		
Main incomer				
Surge Arrestor				
DBD-L-001	Lights	50	11	20A- 1PH
DBD-L-002	Lights	50	11	20A- 1PH
DBD-L-003	Lights	50	11	20A- 1PH
DBD-L-004	Lights	50	11	20A- 1PH
DBD-L-005	Lights	18	2	20A- 1PH
DBD-L-006	Lights	18	14	20A- 1PH
DBD-P-001	Plugs	300	5	20A- 1PH
DBD-P-002	Plugs	300	5	20A- 1PH
DBD-P-003	Plugs	300	5	20A- 1PH
DBD-P-004	Plugs	300	5	20A- 1PH
DBD-P-005	Plugs	300	5	20A- 1PH
DBD-P-006	Plugs	300	5	20A- 1PH
DBD-P-007	Plugs - Dedicated	300	5	20A- 1PH
DBD-P-008	Plugs - Dedicated	300	5	20A- 1PH
DBD-P-009	Airconditioning	2000	2	20A-2P
DBD-P-010	Airconditioning	2000	2	20A-2P
DBD-P-011	Airconditioning	2000	2	20A-2P
DBD-P-012	Hand dryer	5888	1	32A-2P
DBD-P-013	Fans	200	1	20A- 1PH
DBD-P-014	Geyser	2000	3	20A- 1PH
Block E				
Acute Care		DB C-D		
Fed from DB-B				
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
Fed from DB-B				
DBE-L-001	Lights	50	10	20A- 1PH
DBE-L-002	Lights	50	14	20A- 1PH
DBE-L-003	Lights	50	10	20A- 1PH
DBE-L-004	Lights	18	12	20A- 1PH

Project: KZN DOH CLINICS

Electrical Specification

DBE-P-001	Plugs	300	5	20A- 1PH
DBE-P-002	Plugs	300	5	20A- 1PH
DBE-P-003	Plugs	300	5	20A- 1PH
DBE-P-004	Plugs - Dedicated	300	5	20A- 1PH
DBE-P-005	Airconditioning	2000	2	20A-2P
DBE-P-006	Airconditioning	2000	2	20A-2P
DBE-P-007	Hand dryer	5888	1	32A-2P
DBE-P-008	Fans	200	1	20A- 1PH
DBE-P-009	Geyser	2000	4	20A- 1PH
Block G & F (One DB) Chronic Care				
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
	Fed from DB-B			60A 3PH
DBG-L-001	Lights	50	10	20A- 1PH
DBG-L-002	Lights	50	14	20A- 1PH
DBG-L-003	Lights	50	10	20A- 1PH
DBG-P-001	Lights	18	12	20A- 1PH
DBG-P-002	Plugs	300	5	20A- 1PH
DBG-P-003	Plugs	300	5	20A- 1PH
DBG-P-004	Plugs	300	5	20A- 1PH
DBG-P-005	Plugs - Dedicated	300	5	20A- 1PH
DBG-P-006	Airconditioning	2000	2	20A-2P
DBG-P-007	Airconditioning	2000	2	20A-2P
DBG-P-008	Hand dryer	5888	1	32A-2P
DBG-P-009	Fans	200	1	20A- 1PH
DBG-P-010	Geyser	2000	1	20A- 1PH
Block F & G (one DB) Preventative & Promotive Care				
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
	Fed from DB-B			60A 3PH
DBD-L-001	Lights	50	10	20A- 1PH
DBD-L-002	Lights	50	14	20A- 1PH
DBD-L-003	Lights	50	10	20A- 1PH
DBD-L-004	Lights	18	12	20A- 1PH
DBD-P-001	Plugs	300	5	20A- 1PH
DBD-P-002	Plugs	300	5	20A- 1PH
DBD-P-003	Plugs	300	5	20A- 1PH
DBD-P-004	Plugs	300	5	20A- 1PH
DBD-P-005	Plugs - Dedicated	300	5	20A- 1PH
DBD-P-006	Airconditioning	2000	2	20A-2P
DBD-P-007	Airconditioning	2000	2	20A-2P

Project: KZN DOH CLINICS

Electrical Specification

DBD-P-008	Hand dryer	5888	1	32A-2P
DBD-P-009	Fans	200	1	20A- 1PH
Block H	Youth and Outreach Centre	DB-H		
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
	Main incomer			60A 3PH
	Surge Arrestor			
DBD-L-001	Lights	50	10	20A- 1PH
DBD-L-002	Lights	50	14	20A- 1PH
DBD-L-003	Lights	50	10	20A- 1PH
DBD-L-004	Lights	18	12	20A- 1PH
DBD-P-001	Plugs	300	5	20A- 1PH
DBD-P-002	Plugs	300	5	20A- 1PH
DBD-P-003	Plugs	300	5	20A- 1PH
DBD-P-004	Plugs	300	5	20A- 1PH
DBD-P-005	Plugs	300	5	20A- 1PH
DBD-P-006	Plugs - Dedicated	300	5	20A- 1PH
DBD-P-007	Airconditioning	2000	2	20A-2P
DBD-P-008	Airconditioning	2000	2	20A-2P
DBD-P-009	Hand dryer	5888	1	32A-2P
DBD-P-010	Fans	200	1	20A- 1PH
DBD-P-011	Geyser	2000	2	20A- 1PH

External	Mechanical Services	DB-MECH		
CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
	Main incomer			60A 3PH
	Surge Arrestor			
DBM-P-001	Fire Pump	22000	1	40A- 3PH
DBM-P-002	Jockey Pump	1500	1	20A- 1PH
DBM-P-003	Potable Pump	11000	1	40A- 1PH
DBM-P-004	Ablution Pump	3000	1	20A- 1PH

Residences	Unit 1-6	DB-R (1-6)	REQUIRED IN EACH OF THE 6 DB's
-------------------	-----------------	-------------------	---------------------------------------

Project: KZN DOH CLINICS

Electrical Specification

CIRCUIT	EQUIPMENT	WATTAGE(W)	QUANTITY	ACTUAL CB
	Main incomer			60A 1PH
	Surge Arrestor			
DBR1-L-001	Lights	18	8	20A- 1PH
DBR1-L-002	Lights	18	8	20A- 1PH
DBR1-L-003	Lights	18	5	20A- 1PH
DBR1-P-001	Plugs	500	5	20A- 1PH
DBR1-P-002	Plugs	500	4	20A- 1PH
DBR1-P-003	Stove Isolator	2000	1	40A- 1PH
DBR1-P-004	Geyser	1200	1	20A- 1PH

C. SCHEDULES OF TECHNICAL INFORMATION

2.25 LOAD SCHEDULE

2.25.1 SCHEDULE OF POWER POINTS

Supply and install switch socket outlets at various points indicated in the layout drawing. Note all items are re-measurable as per the bill of materials.

2.25.2 SCHEDULE OF CABLES, CONDUIT AND WIRING

Supply, install and connect the following cable, conduit and wiring. Note all items are re-measurable as per the bill of materials.

2.25.3 SCHEDULE OF DISTRIBUTION BOARD

The indicated fault current rating (kA) is the minimum value that the switchgear must comply with for connecting to the busbars (10kA) of the respective panels-distribution boards. Selective Circuits will be fed from Generator ATS during mains power failure.

2.26 PRICE SCHEDULES

2.26.1 GENERAL

- 1.1 The descriptions in this Price Schedule shall be read in conjunction with the specification.
- 1.2 The unit rate for each item in the Price Schedules shall include for all materials, labour, profit, transport, etc., everything necessary for the execution and complete installation of the work in accordance with the description.

Project: KZN DOH CLINICS

Electrical Specification

- 1.3 The Price Schedules shall not be used for ordering purposes. The Contractor shall check the lengths of cables and overhead conductors on site before ordering any of the cables. Any allowance for off-cuts shall be made in the unit rates.
- 1.4 The rates shall exclude Value Added Tax
- 1.5 All material covered by this **Specification** shall, wherever possible, be of South African manufacture.

SECTION 3 DRAWINGS

Refer to attachments.

3 Drawing List

No	Description	Drawing Number
1.	Power Reticulation Layout of Site Plan Small Clinics - Revision 1	TE-KDOH-RSC-001
2.	Single Line Diagram Layout of Site Plan Small Clinics - Revision 1	TE-KDOH-RSC-002
3.	Lighting Layout of Site Plan Small Clinics - Revision 1	TE-KDOH-RSC-003
4.	Power Layout of Site Plan Small Clinics -Revision 1	TE-KDOH-RSC-004
5.	Cable Tray-Wireway Layout of Site Plan Small Clinics - Revision 1	TE-KDOH-RSC-005
6.	Lightning Protection Layout of Site Plan Small Clinics - Revision 1	TE-KDOH-RSC-006
7.	Access & Security System Layout of Site Plan Small Clinics - Revision 1	TE-KDOH-RSC-007
8.	Nurse Call Layout of Site Plan Small Clinics - Revision 1	TE-KDOH-RSC-008
9.	Residences Electrical Layout	TE-KDOH-RSC-009

PREPARED FOR:



health

Department:
Health
PROVINCE OF KWAZULU-NATAL

**KZN SMALL CLINIC
ROOSBOOM**

**MECHANICAL, WET SERVICES & FIRE
TENDER SPECIFICATION**

REPORT NO. KZN-RC-TS REV 0

PREPARED BY:

7E Thabile Engineering

Name:	Date:	Signature:
Mr S R Bechoo Pr Tech Eng Mechanical, Wet Services & Fire	28/06/2023	

TABLE OF CONTENT

1	INTRODUCTION	3
2	SCOPE OF WORK	3
2.1	FIRE SERVICES	3
2.2	MECHANICAL SERVICES	3
2.3	WET SERVICES.....	3
3	REGULATIONS AND STANDARDS	4
3.1	DEPARTMENT OF HEALTH NORMS AND STANDARDS	4
3.2	GENERAL REGULATIONS	4
3.3	FIRE SERVICES	4
3.4	MECHANICAL INSTALLATIONS.....	4
3.5	WET SERVICES – PLUMBING AND DRAINAGE	4
4	GENERAL SITE / PROJECT REQUIREMENTS	5
4.1	PROGRAMME.....	5
4.2	QUALITY OF MATERIALS AND WORKMANSHIP	5
4.3	SCAFFOLDING AND PLANT	6
4.4	FINISHING AND TIDYING.....	6
4.5	RATING OF EQUIPMENT	6
4.6	SPACE REQUIREMENTS AND ACCESS	6
5	MECHANICAL, WET SERVICES AND FIRE REQUIREMENTS.....	6
5.1	HVAC REQUIREMENTS	6
5.2	FIRE INSTALLATION, PROTECTION, DETECTION & SIGNAGE REQUIREMENTS	7
5.3	WATER RETICULATION REQUIREMENTS	7
5.4	SEWAGE REQUIREMENTS	9
6	DESIGN AND DRAWINGS	9
6.1	BUILDER'S WORK DRAWINGS.....	9
6.2	MECHANICAL DRAWINGS.....	9
7	DAMAGE AND PROTECTION OF WORKS	11
8	CORROSION PROTECTION	11
9	COMMISSIONING, MAINTENANCE AND GUARANTEE.....	11
10	STAFF TRAINING	11
11	OPERATION MANUALS AND MAINTENACE INSTRUCTIONS.....	12
12	SCOPE OF WORK DEFINED IN SPECIFICATIONS.....	13

1 INTRODUCTION

This Mechanical, Wet Services and Fire Tender Specification is for the development of a new Typical Small Clinic for the Department of Health in Roosboom, KZN.

The design drawings form part of the project specification and shall be read in conjunction with this document.

Conflicts, errors or discrepancies found in this specification or drawings shall be brought to the Engineer's attention for resolution immediately.

Any deviations from the specifications, drawings and / or equipment specified shall be listed together with the alternatives offered and shall be submitted as part of the tender (for consideration).

If no deviations are listed, it will be assumed that the Tenderer complies with all the requirements of this specification.

Any installations shall be complete in all respects and the appointed contractor/sub-contractor (Mechanical, Wet Services, Fire) shall allow for the completion and successful operation of the complete installation, irrespective of whether every separate item is specified or not.

2 SCOPE OF WORK

Mechanical, Wet and Fire Services installation scope of work will include the following:

2.1 FIRE SERVICES

- Fire Installation – Hydrants, Hose reels, and Extinguishers
- Fire Water Reticulation - Storage Water Tanks and Pump Sets
- Fire Signage – Photoluminescent Signs
- Fire Separation Elements – Fire Doors, Fire Rated Compartments, and Fire Stopping
- Fire Detection – Fire Detectors, Sounder Beacons, Manual Call Points (Break Glass), and Fire Control Panel

2.2 MECHANICAL SERVICES

- Mechanical Installation – Heating, Ventilation, and Airconditioning
- SANS 10400 XA Compliance – Energy use in buildings

2.3 WET SERVICES

- Rainwater Harvesting
- Potable Water Reticulation
- Hot Water Generation
- Sewage

3 REGULATIONS AND STANDARDS

The installation shall be carried out in accordance with the following standard specifications and regulations:

3.1 DEPARTMENT OF HEALTH NORMS AND STANDARDS

- Infrastructure Unit Support Systems (IUSS)

3.2 GENERAL REGULATIONS

- National Building Regulations: SANS 10400:2011
- Occupational Health and Safety Act No. 85 of 1993
- The Local Municipal by-laws and any special requirements of the supply authorities of the area or district
- Local Authority Fire Regulations

3.3 FIRE SERVICES

- SANS 10400 – National building regulations, Part T:2020 – Fire Protection
- SANS 10400 – National building regulations, Part W:2011 – Fire Installation
- SANS 10400 – National building regulations, Part S:2011 – Facilities for persons with disabilities
- SANS 10139:2012 – Fire detection and alarm systems for buildings — System design, installation and servicing
- SANS 1186 – Safety Signs
- SANS 1253 – Fire doors and fire shutters
- SABS 543 – Fire hose reels
- SABS 810 – Portable rechargeable fire extinguishers

3.4 MECHANICAL INSTALLATIONS

- SANS 10400:2011 – National building regulations, particularly Part O – Lighting and Ventilation
- SANS 10400 Part XA – Energy efficiency in buildings
- SANS 204 – Energy efficiency in buildings

3.5 WET SERVICES – PLUMBING AND DRAINAGE

- SANS 10400:2011 – National building regulations, Part P – Drainage
- SANS 10252-2:1993 – Drainage installations for buildings
- SANS 10252-1:2018 – Water supply installations for buildings
- SANS 10400 Part XA – Energy efficiency in buildings

The appointed contractor/sub-contractor shall work strictly according to this specification and shall ensure that the installation is handed over as a complete working system.

Where trade names and references to catalogues are found in the specification, the intention is to set a particular standard of equipment. Where "or equivalent" equipment is specified, the Tenderer shall obtain written approval from the Engineer before he may deviate from the specified equipment. This approval must be obtained at the tender stage.

4 GENERAL SITE / PROJECT REQUIREMENTS

The site is situated in Roosboom, Kwa-Zulu Natal. Tenderers are advised to visit the site and acquaint themselves with the nature of the work involved prior to submitting their tenders.

4.1 PROGRAMME

The appointed contractor/sub-contractor will be required to generate a programme (for submission to the Client for acceptance), and to complete the mechanical installation with the approved schedule to the main contract.

The appointed contractor/sub-contractor shall submit a programme to the Engineer (MS Projects):

The following items shall be programmed in consultation with the Engineer:

- a. Workshop Drawings
- b. Approval of Workshop Drawings
- c. Equipment Detail Submission for Approval
- d. Ordering of Material
- e. Ducting Installation
- f. Piping Installation
- g. Approval of First Fix
- h. Plant Equipment & Tanks Installation
- i. Second Fix
- j. Electrical Installation
- k. Commissioning and Testing
- l. Final Inspection
- m. Handover of the Systems
- n. Scheduled Maintenance

4.2 QUALITY OF MATERIALS AND WORKMANSHIP

All materials shall be new, undamaged, and free from rust or other defects. Only material of good quality, which has been approved by the Engineer, shall be used.

Where applicable, all material shall be in accordance with the relevant standard specifications of the South African Bureau of Standards and the British Standard Specifications. The installation shall be carried out according to the latest modern engineering practices.

The Engineer reserves the right to reject any work or part thereof that, according to his judgement, does not meet the highest standards of material and workmanship.

4.3 SCAFFOLDING AND PLANT

All plant required for the execution of the contract shall be supplied by the appointed contractor/sub-contractor under this contract.

The appointed contractor/sub-contractor shall provide his own scaffolding. For installation purposes the appointed contractor/sub-contractor shall allow for his own lifting equipment, cranes etc. which may be necessary to complete the installation.

4.4 FINISHING AND TIDYING

In view of the intense concentration of construction activities likely to be experienced during the contract period, progressive and systematic finishing and tidying will form an essential part of this contract.

Finishing and tidying must be done daily and not be left to the end of the contract. All finishing and tidying shall be carried out to the best advantage of the project as a whole.

4.5 RATING OF EQUIPMENT

The appointed contractor/sub-contractor shall issue the sizes and rating of all the equipment offered to the Engineer for approval prior to purchasing or ordering such equipment.

All equipment offered shall operate well within the manufacturer's ratings, and equipment to be operated beyond these limits will not be considered.

4.6 SPACE REQUIREMENTS AND ACCESS

The appointed contractor/sub-contractor shall ensure that the equipment offered by them can be installed in the available space as shown on the drawings.

The equipment shall be installed in such a manner that complete access is provided for operating and maintenance purposes.

The appointed contractor/sub-contractor shall also ensure that the equipment offered by them will pass through available building openings. Large equipment shall be made up in sections and each section shall be small enough for access through doors and other building openings.

5 MECHANICAL, WET SERVICES AND FIRE REQUIREMENTS

5.1 HVAC REQUIREMENTS

The air-conditioning units shall be of the reverse cycle heat pump type.

The air-conditioning units shall be standard factory assembled, piped, and wired. The units shall be thoroughly tested for all operating conditions. Spares shall be freely available in South Africa.

On request, the appointed contractor/sub-contractor shall provide the Engineer with performance test certificates.

The air-conditioning units and installation in general shall be in accordance with the high/mid wall unit's supplier's recommendations.

Any discrepancies between this specification and the supplier's recommendations that may influence the unit's performance or guarantee shall be clarified with the Engineer during the tender stage.

The indoor unit and condensing unit shall be interconnected with refrigerant piping, electrical wiring, and interlocking control cabling. The pipe and cable connections shall be made in accordance with the unit supplier's recommendations.

The refrigerant shall be of the correct type to comply with regulatory requirements. High/mid wall units shall consist of a direct expansion, indoor fan coil evaporator unit and a separate, remote, and externally located, air-cooled, condensing unit.

Each condensing unit with a connected evaporator unit shall be clearly labelled to identify different split units. The outdoor unit coil shall be treated for corrosion.

High/mid wall split indoor units shall have integral condensate drain tray with drain hose connections.

Electrical interlocking shall be provided to ensure that:

- a. Compressor cannot run without both evaporator and condenser fans running.
- b. It shall not be possible to switch cooling and heating on simultaneously.

General good practice requirements must be adhered to (OEM requirements take preference).

Drawing Reference: KZN-RC-HVAC-TD-00

5.2 FIRE INSTALLATION, PROTECTION, DETECTION & SIGNAGE REQUIREMENTS

Fire Installation, Fire protection, Fire Detection and Signage shall be installed in accordance with the following drawings and report.

Drawing Reference: KZN-RC-FI-TD-00
KZN-RC-FD-TD-00
KZN-RC-PT-TD-00

Report Reference: KZN-RC-FR-00

5.3 WATER RETICULATION REQUIREMENTS

The appointed contractor/subcontractor shall include for necessary ground works (in accordance with the Civil/Structural Engineer's Requirements), including digging trenches, laying in ground, provision for risk of collapse to side of excavations, keeping excavations free from water, bedding and filling, and for ramming in 150mm layer.

The installation work shall be done by, or under the adequate control of a trained plumber as defined by SANS 10400-A, A-18.

Materials, components, fittings and fixtures shall be so selected that they are suitable to withstand, without damage or deterioration, sustained temperatures in accordance with SANS 10252.

The appointed contractor/sub-contractor shall include for necessary couplings between all pipes of similar and dissimilar materials, and between taps and valves.

Geysers to be min Ø22 copper and discharge over gully / full bore. All relevant details, levels, dimensions, etc. must be checked on site prior to commencement of work.

All hot taps to be LHS and cold taps on RHS of fitting except paraplegic where cold water is nearest to WC.

All piping and valves to be colour coded and labelled as described in the specification. All pipe sizes to conform to architect's sanitary schedule.

All piping, whether painted or not, must be clearly labelled as to the pipe contents and the direction of flow. All such labelling must be painted on and must be permanent in nature.

Such labelling must occur at all valves and branches in the piping and on straight lengths at intervals of 10 meters unless otherwise specified. In addition, colour banding must be applied at all points where piping penetrates walls and particularly at entry and exit points from plant rooms.

Colour coding and/or banding to indicate pipe contents must conform to SANS 10140 – Code of Practice for identification and Colour Marking of Piping.

Provision will be made in the pump house pipework for the installation of a direct reading flow meter. This is to be installed in accordance with the manufacturer's requirements.

The fire pumps will be tested and commissioned on site by the appointed contractor/sub-contractor and full operating instructions will be given to designated persons, who will be responsible for the routine maintenance of the plant on an on-going basis.

Drawings are generally diagrammatic and indicative of work to be installed. The run and arrangement of piping (as indicated) will be subject to modifications as required to suit building conditions, to avoid interference with work of other trades, and for convenient and accessible location of all parts of piping systems.

Due to the small scale of the drawings, all required offsets, fittings, valves, drains, etc. are not indicated.

On completion of installation, the appointed contractor/sub-contractor shall submit a full set of 'as-built' drawings and test certificates to be supplied.

Support structures and loading bearing foundations for the water tanks must be designed and approved by the Structural Engineer.

Drawing Reference: KZN-RC-PHW-TD-00
KZN-RR-PHW-TD-00
KZN-RC-PT-TD-00

5.4 SEWAGE REQUIREMENTS

All drainage installations shall be in accordance with the municipal by-laws.

The installation work shall be done by, or under the adequate control of a trained plumber as defined by SANS 10400-A, A-18.

The installation work must be confirmed by the plumber with the appointed Wet Services Engineer on site, prior to commencement.

Materials, components, fittings and fixtures shall be so selected that they are suitable for the expected conditions of use and shall comply with SANS 10252.

Pipe sizes to comply with SANS 10252.

All sewer and waste drainage to comply with SANS 10400-P

Piping under walls or foundations need to be encased in concrete as per Structural Engineers requirements.

All coring is subject to approval by the Structural Engineer.

Drawing Reference: KZN-RC-SW-TD-00
KZN-RR-SW-TD-00

6 DESIGN AND DRAWINGS

The design of the facility is subject to change.

The dimensions and positions of equipment shown on the Engineer's drawings are for design and tender purposes only.

The responsibility for dimensional and layout accuracy remains with the appointed contractor/sub-contractor. The exact positions will be pointed out on site where necessary.

The following drawings shall be submitted by the appointed contractor/sub-contractor to the Engineer for approval:

6.1 BUILDER'S WORK DRAWINGS

All building requirements are to be indicated on these drawings to meet the dimensional requirements of the equipment and materials to be installed by the appointed contractor/sub-contractor.

6.2 MECHANICAL DRAWINGS

The term 'Mechanical Drawings' means any drawings of items or plants to be manufactured away from the site.

No work shall be proceeded with on or off the site unless these shop drawings have been approved in writing by the Engineer.

6.2.1 DUCTWORK FABRICATION AND INSTALLATION DRAWINGS

The appointed contractor/sub-contractor shall, prior to the commencement of any ductwork manufacture, submit to the Engineer for technical appraisal and approval the fabrication 'Shop Drawings' and 'Installation Drawings' of the ductwork demonstrating the proposed final details of the manufacturing and erection methods of the ductwork.

Ductwork Drawings shall indicate:

- Length of each ductwork section,
- Internal dimensions of the galvanised sheet steel or other materials to be used as specified,
- Dimensions of bends and fittings,
- Thickness of metal; sizes and positions of all stiffeners,
- Angles flanges, etc. Including the methods of fixing and bolting,
- Location of all supports,
- Outline of all insulation,
- Position and sizes of all access doors; test points.

6.2.2 PIPEWORK INSTALLATION DRAWINGS

Prior to the commencement of any manufacture, fabrication, or installation, the appointed contractor/sub-contractor shall submit to the Engineer for technical appraisal installation drawings for the pipework installation.

The drawings shall indicate the location, with dimensions given, of all pipework in relation to the building structure and other pipework and equipment. The position of all ancillaries such as valves, strainers, oil traps, filters, and filter driers, etc. shall be shown together with clearances necessary for removal of strainer baskets, internal parts of all valves, motors for motorized valves, solenoids, etc.

Positions and details of all hangers and supports shall be shown with the positions dimensioned.

Positions of control equipment, test pockets and similar devices shall be shown and dimensioned including clearances required for their removal. Details and outline of insulation and insulation boxes shall be shown including clearances required for removal of the boxes.

6.2.3 AS BUILT DRAWINGS

The appointed contractor/sub-contractor shall submit to the Engineer a complete set of accurately marked-up, CAD drawings of all services installed at completion.

The drawings shall be prepared in accordance with the accepted drawing standards applicable at the time of tender.

The drawings shall be on CAD, a hard copy of each drawing shall be submitted as well as a digital copy containing relevant drawing titles.

7 DAMAGE AND PROTECTION OF WORKS

The appointed contractor/sub-contractor shall take all precautions necessary for the protection of life, equipment and property in connection with the works during installation.

The appointed contractor/sub-contractor shall be accountable for any damage of equipment during transport and installation.

Equipment delivered to site shall be stored in a well-protected area where it cannot be damaged by either the weather or other trades.

8 CORROSION PROTECTION

Where applicable, all paint shall be SABS certified for industrial use and shall be approved by the Engineer.

Equipment shall be painted according to the National Colour Standards, SANS 1091.

9 COMMISSIONING, MAINTENANCE AND GUARANTEE

The installation shall be commissioned in accordance with the relevant codes and recognised commissioning procedure, or code approved by the Engineer:

The appointed contractor/sub-contractor shall submit a commissioning programme to the Engineer at least two weeks prior to the commencement of commissioning with the code or procedure to which the plant will be commissioned.

The results of all checks and measurements shall be recorded in writing during the commissioning period. Commissioning records shall be handed over to the Engineer prior to the first acceptance of the plant.

The commissioning records shall also be included in the operation manuals.

All equipment supplied and work done as part of this contract shall be maintained and guaranteed as per the contract requirements.

10 STAFF TRAINING

The appointed contractor/sub-contractor shall be responsible for the training of the client's site staff after the commissioning has been completed. The site staff shall receive enough instruction to ensure that they are fully conversant with the equipment concerned. The operating manuals shall be used during training.

Upon completion of the training exercise the appointed contractor/sub-contractor is to obtain the client's representative's written acceptance of this handover tuition, thus acknowledging complete understanding of the operational procedures for this installation.

Site staff shall be instructed on:

- a. The general operating method of the plant,
- b. Starting and stopping instructions,
- c. Stopping the plant in an emergency and warning against restarting after an emergency,
- d. Positions and normal settings of control equipment,
- e. Safety measures,
- f. Operational checks on gauges, flow switches, indicator lights, etc.
- g. Contact details of competent person responsible for the maintenance of the plant.

11 OPERATION MANUALS AND MAINTENACE INSTRUCTIONS

The appointed contractor/sub-contractor shall submit two (2) hard copies and a soft copy of the operation and maintenance manuals to the Engineer.

Manuals shall consist of:

The operation manuals shall be sturdily bound in a strong hard cover file. Material in the manual shall be clear, legible and well-arranged and provided with an index.

The above manuals shall be available three weeks before first handover / practical completion of the installation and no handover shall be considered without these manuals.

- a. Comprehensive literature of the different components of the installation.
- b. Paper prints of all approved drawings and diagrams where applicable.
- c. Soft copies of the as-built drawings in DWG and PDF format.
- d. Start-up and shutdown procedures.
- e. Commissioning data of all equipment in tabulated form.
- f. Prescriptions for routine tests, which shall be performed by the user together with the time when such tests shall be performed (e.g., pressure tests).
- g. Schedule of apparatus and equipment complete with model numbers, optional extras, modifications, electrical requirements, etc.
- h. Detailed daily, weekly, monthly, quarterly, bi-annual or annual preventative maintenance procedures where applicable.
- i. Manufacturer's catalogues.
- j. List of spares for all equipment.
- k. Suppliers telephone numbers and addresses.
- l. Wiring diagrams.
- m. Test certificates.

12 SCOPE OF WORK DEFINED IN SPECIFICATIONS

The specification covers the following:

NO.	SPECIFICATIONS	DRAWING NO.
1	HVAC	KZN-RC-HVAC-TD-00
2.	Fire Installation, Protection & Signage	KZN-RC-FI-TD-00
3.	Fire Detection	KZN-RC-FD-TD-00
4.	Potable Water	KZN-RC-PHW-TD-00 KZN-RR-PHW-TD-00
5.	Hot Water	KZN-RC-PHW-TD-00 KZN-RR-PHW-TD-00
6.	Sewage	KZN-RC-SW-TD-00 KZN-RR-SW-TD-00
7.	Storage Tank & Water Pump Sets	KZN-RC-PT-TD-00
8.	Rainwater Harvesting	As per BOQ
9.	Gate Motors	As per BOQ