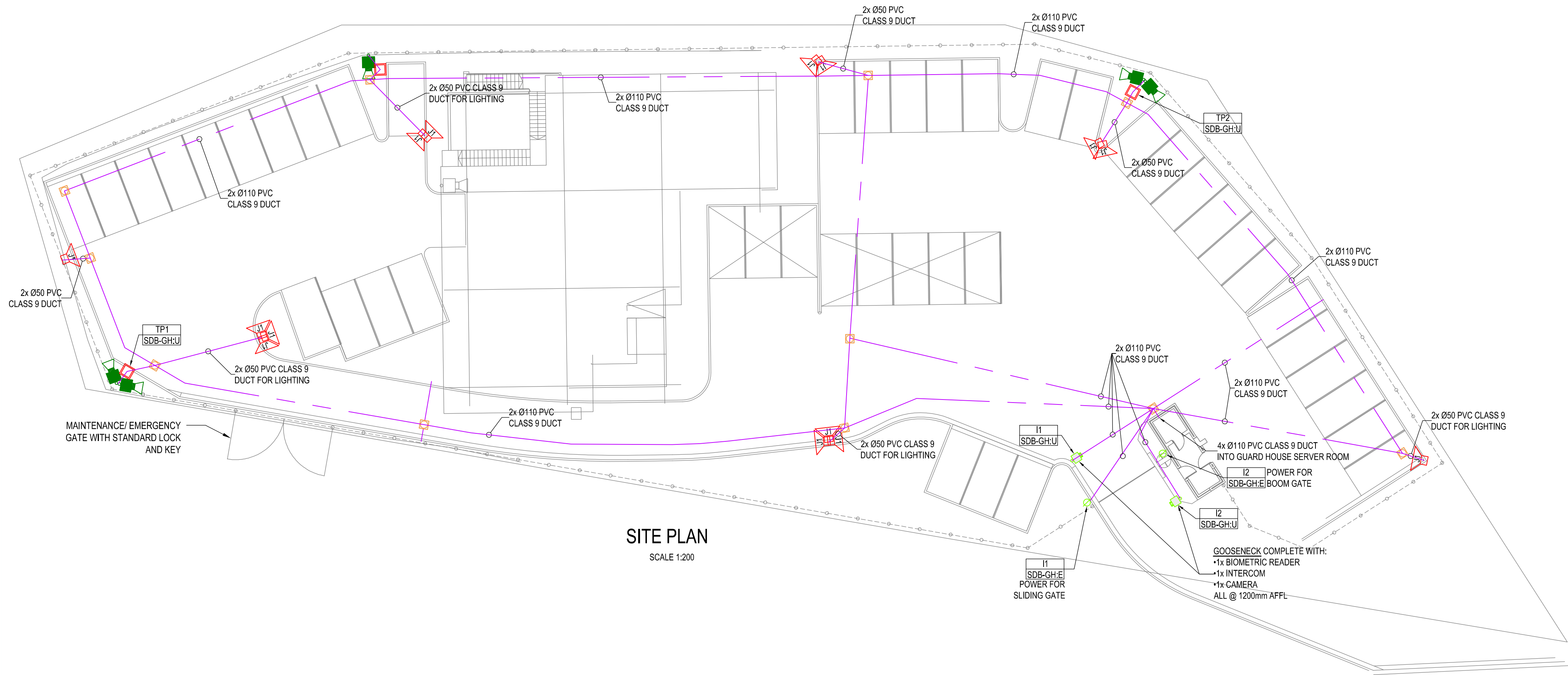


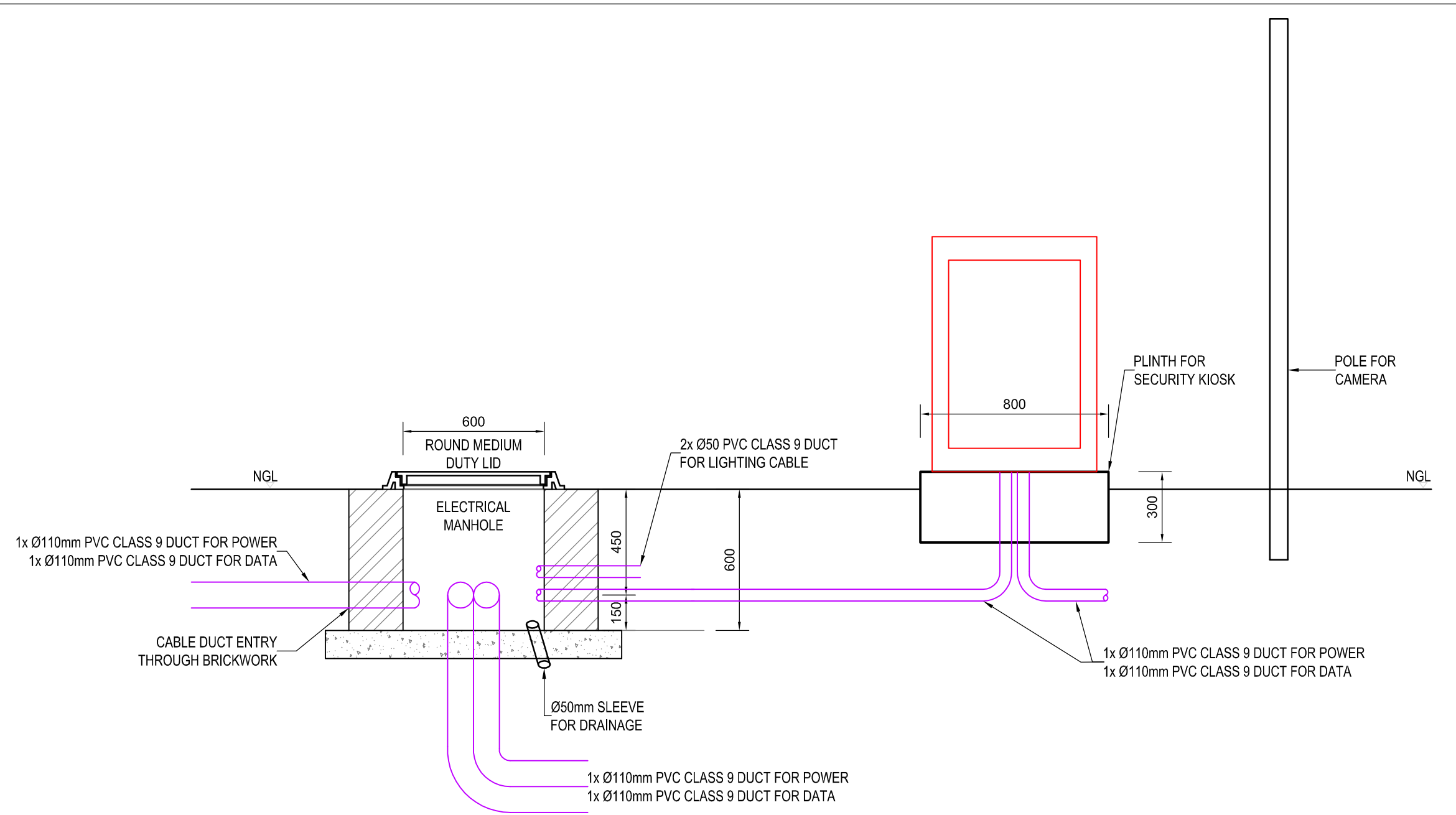


SITE PLAN
SCALE 1:200

TYPE	ELECTRICAL LEGEND
	EXISTING CCTV CAMERA
	CCTV CAMERA, POLE MOUNT
	HIGH RESOLUTION DAY / NIGHT STATIC DOME CAMERA
	FLOODLIGHT ON POLE
	AREA LIGHT ON POLE
	PROXY CARD READER
	600mm x 600mm x 600mm ELECTRICAL MANHOLE WITH ROUND MEDIUM DUTY MANHOLE COVER.
	PVC CLASS 9 RIPPED DUCT - SIZE AS INDICATED ON DRAWING. LONG RADIUS BENDS WHERE APPLICABLE.
	SECURITY KIOSK

APPROVED PORT ENGINEER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ELECTRICAL MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED MANAGER CIVIL MAINTENANCE DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED PORT FACILITIES MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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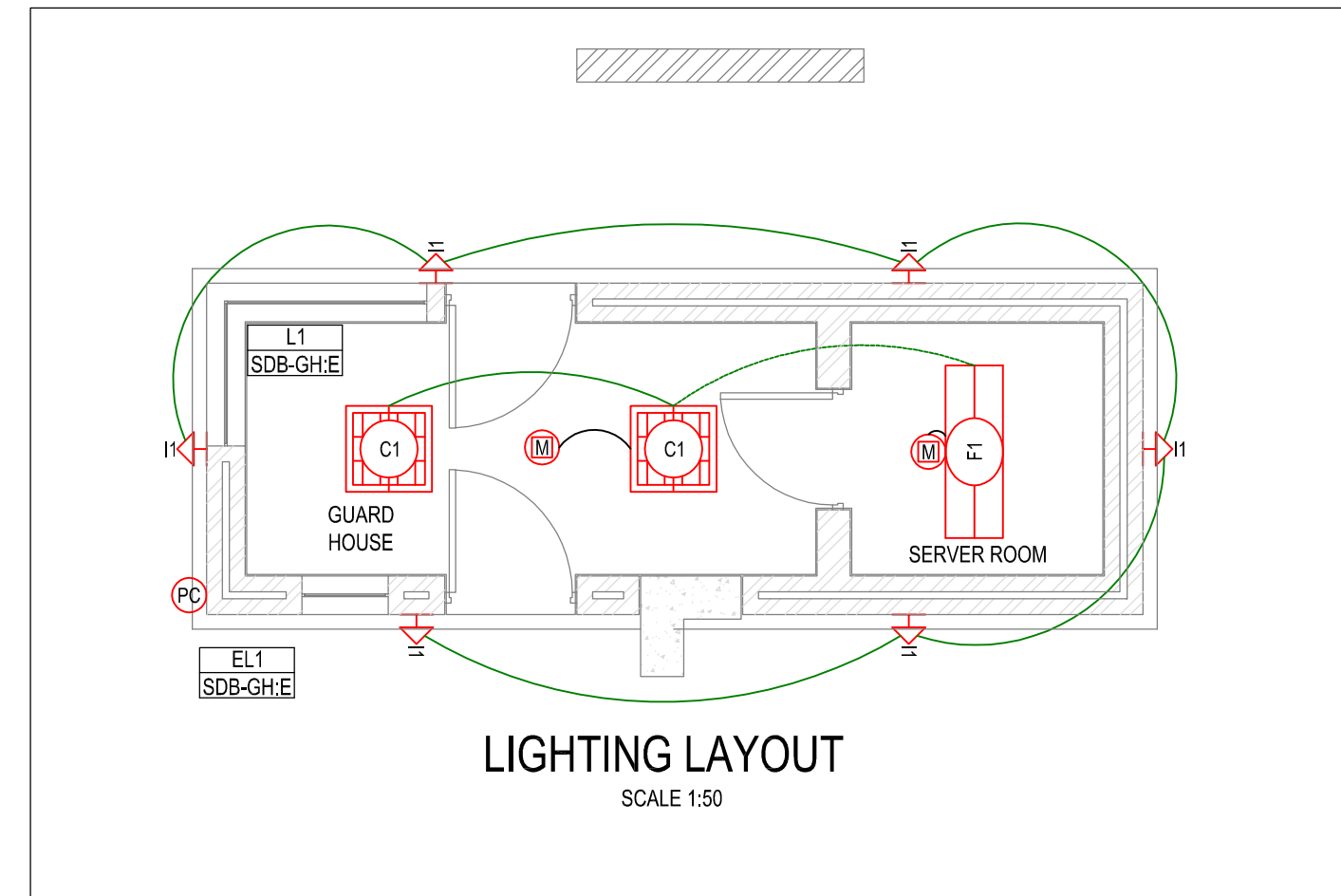
FOR TENDER



DETAIL A: ELECTRICAL MANHOLE & SLEEVES INSTALLATION

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	Rev. CODE	REVISION DESCRIPTION	CLIENT	PROVINCE	OFFICE	EMAIL	PROJECT	APPROVED BY BVI
	CITY ENGINEER / CLIENT REG. NO. _____ DATE _____	2021/11/18	W.B	T/D	FOR TENDER PURPOSES	TRANSNET national ports authority	Gauteng	Tshwane	(012) 945-1111	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT ENGINEER/TECHNOLOGIST 20080282 18 November 2021
	AMENDMENTS CODE A: BY CLIENT B: BY ARCHITECT C: BY MECHANICAL OR ELECTRICAL D: BY BIA E: BY OTHER						Free State	Pretoria	(012) 251-5400		SCALE 1:200 @ A1 DESIGNED GH PLAN NUMBER 32442.00-300-01
							Northern Cape	Upington	(053) 535-4800		DRAWN WB CHECKED GH REVISION NO. T0 DATE SAVED 18 November 2021
							KwaZulu Natal	Durban	(031) 266-6362		
							Eastern Cape	Port Elizabeth	(041) 374-5453		
							Western Cape	Cape Town	(021) 527-7000		





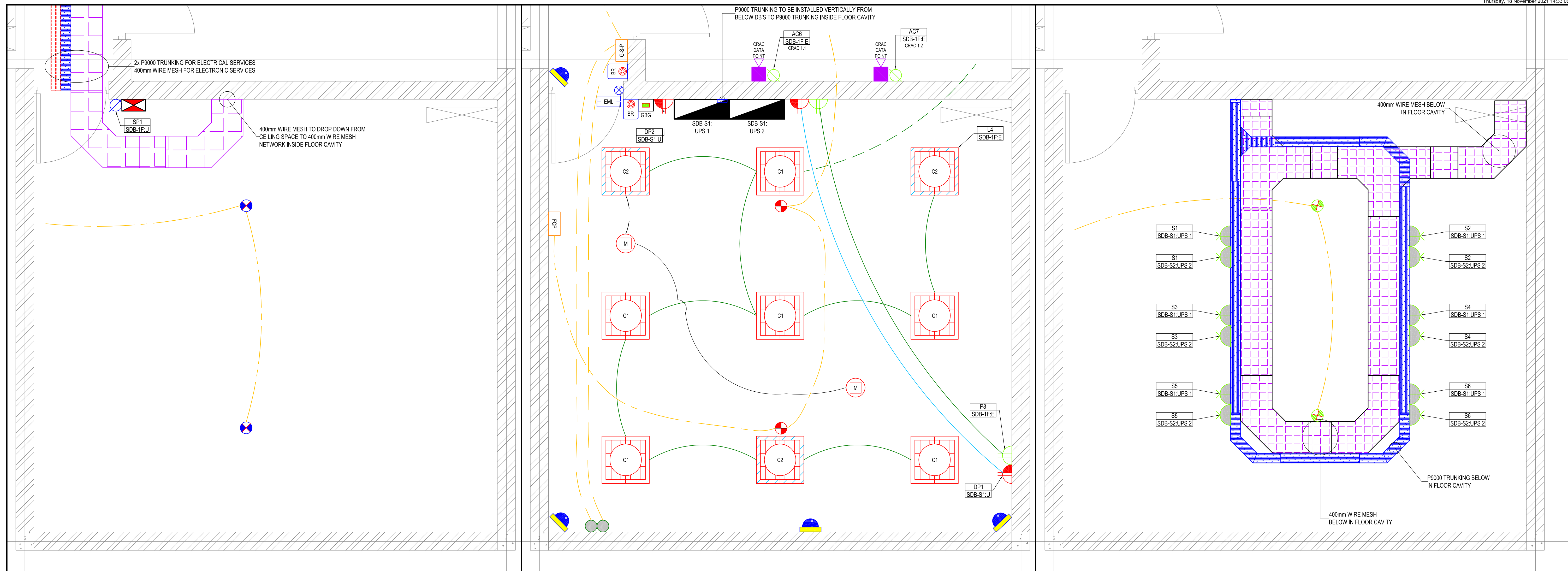
TYPE	ELECTRONIC SERVICES LEGEND	MOUNTING TYPE / HEIGHT
	DOOR RELEASE PUSH BUTTON	1250mm AFFL TO CENTER
	GREEN BREAK GLASS UNIT FOR ACCESS CONTROL SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	BIOMETRIC FINGERPRINT READERS	1250mm AFFL TO CENTER
	ELECTRO MAGNETIC DOOR LOCK ON NON FIXED LEAF (DOOR CLOSER BY OTHERS)	ON TOP OF DOOR FRAME
	ALARM SYSTEM MAGNETIC DOOR MONITOR ATTACHED ON SURFACE OF DOOR FRAME AND DOOR	ON TOP OF DOOR FRAME
	ACCESS CONTROL DOOR CONTROL UNIT FOR MAGLOCK DOOR RELEASE	IN CEILING SPACE
	HIGH RESOLUTION DAY / NIGHT STATIC DOME CAMERA.	CEILING
	CCTV CAMERA WALL MOUNT AT HEIGHT SPECIFIED.	WALL MOUNTED
	RJ 45 DATA/VOICE COMBO OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	INTERCOM OUTLET POINT	ABOVE DESK

TYPE	CONTAINMENT LEGEND SPECIFICATIONS
	GALVANIZED WIRING TRUNKING, P9000 FOR ELECTRICAL SERVICES: ESSENTIAL CIRCUITS (SIZE UNLESS OTHERWISE STATED)
	GALVANIZED WIRING TRUNKING, P9000 FOR ELECTRICAL SERVICES: UPS CIRCUITS (SIZE UNLESS OTHERWISE STATED)
	WIRE MESH CABLE TRAY, 300mm FOR ELECTRONIC SERVICES: IT & COMMUNICATIONS. (SIZE UNLESS OTHERWISE STATED)
	WIRE MESH CABLE TRAY, 400mm FOR ELECTRONIC SERVICES: IT & COMMUNICATIONS. (SIZE UNLESS OTHERWISE STATED)

APPROVED ----- PORT ENGINEER DATE ----- APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- ELECTRICAL MANAGER DATE ----- APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- MANAGER CIVIL MAINTENANCE DATE ----- APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- PORT FACILITIES MANAGER DATE ----- APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	No./CODE	REVISION DESCRIPTION	CLIENT	PROJECT				APPROVED BY BVI					
		2021/11/18	W.B	T/D	FOR TENDER PURPOSES	   	PROVINCE Gauteng Free State Northern Cape KwaZulu Natal Eastern Cape Western Cape OFFICE Tlokweng Pekaane Bonheide Walcott Ungweni Springs Durban Engeneni Port Elizabeth East London Cape Town (012) 945-1111 (015) 291-5400 (014) 447-2137 (027) 552-2499 (054) 337-4800 (031) 712-8194 (031) 298-6382 (030) 772-6112 (041) 373-4343 (043) 735-3889 (021) 527-7000 EMAIL gauteng@bvi.co.za fs@bvi.co.za ts@bvi.co.za wn@bvi.co.za eng@bvi.co.za kn@bvi.co.za db@bvi.co.za ea@bvi.co.za el@bvi.co.za cp@bvi.co.za				PROJECT RICHARDS BAY - PORT CONTROL TOWER DRAWING TITLE GUARD HOUSE: ELECTRICAL LAYOUTS			APPROVED BY BVI G. HALBERSTADT 20080282 18 November 2021		
	CITY ENGINEER / CLIENT REG. NO. DATE											ENGINEER/TECHNOLOGIST REG. NO. DATE				
	AMENDMENTS CODE											SCALE 1:50 @ A1 DRAWN WB				
	A,B,C, : BEFORE TENDER 1 : TENDER DRAWING 1,2,3, : AFTER TENDER Z : AS BUILT IA : BY CLIENT IB : BY ARCHITECT IC : BY MECHANICAL OR ELECTRICAL ID : BY BVI IE : BY OTHER											DESIGNED GH CHECKED GH				
											PLAN NUMBER 32442.00-300-02 REVISION NO. T0 DATE SAVED 18 November 2021					

ELECTRICAL & ELECTRONIC SERVICES
IN CEILING VOID

ELECTRICAL & ELECTRONIC SERVICES INSIDE ROOM

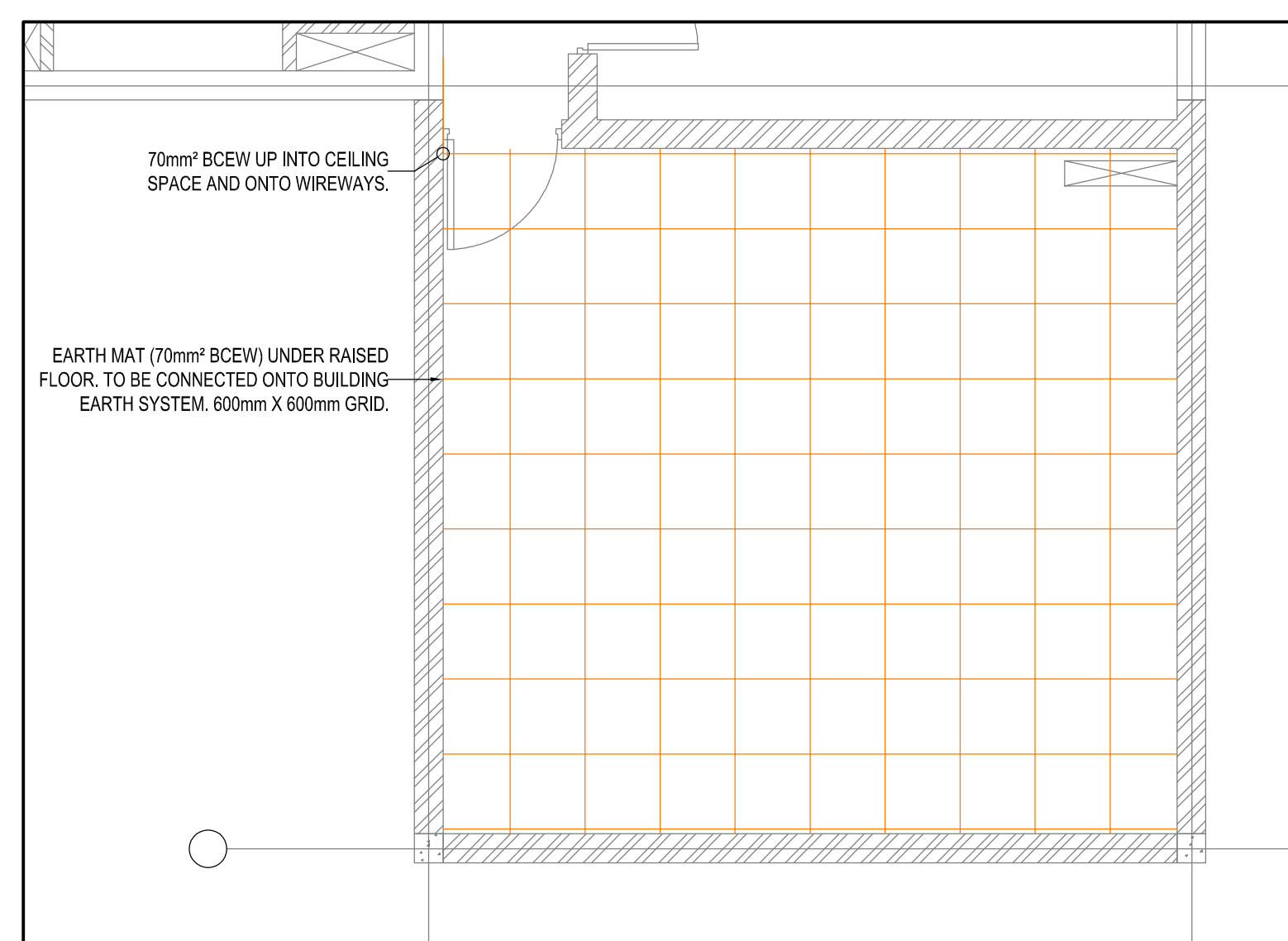
ELECTRICAL & ELECTRONIC SERVICES IN FLOOR CAVITY

TYPE	POWER OUTLETS LEGEND	MOUNTING TYPE / HEIGHT
	DOUBLE SWITCHED SOCKET OUTLET SANS 164-1, EACH RATED 16A, 100mm x 100mm (ESSENTIAL: WHITE)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	DOUBLE DEDICATED SWITCHED SOCKET OUTLET SANS 164-1, EACH RATED 16A, 100mm x 100mm (UPS: RED)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	SINGLE PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL, (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	SINGLE PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL, (UPS)	HEIGHT INDICATED ON DRAWING
	DISTRIBUTION BOARD, 250mm x 100mm x 100mm	HEIGHT INDICATED ON SINGLE LINE DIAGRAMS
	SERVER SOCKET OUTLET	AGAINST POWER TRUNKING IN FLOOR SPACE BELOW SERVER RACKS

TYPE	LIGHTING LEGEND SPECIFICATIONS	MOUNTING TYPE / HEIGHT
	TYPE C1: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS, COLOUR: WHITE.	CEILING
	TYPE C2: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS INCLUDING DALI DIMMABLE BALLASTS AND 1 HOUR BATTERY BACK UP PACKS, COLOUR: WHITE.	CEILING
	DALI OCCUPANCY SENSOR.	CEILING

TYPE	CONTAINMENT LEGEND
	GALVANIZED WIRING TRUNKING, P9000 FOR ELECTRICAL SERVICES: ESSENTIAL CIRCUITS. (SIZE UNLESS OTHERWISE STATED)
	GALVANIZED WIRING TRUNKING, P9000 FOR ELECTRICAL SERVICES: UPS CIRCUITS (SIZE UNLESS OTHERWISE STATED)
	WIRE MESH CABLE TRAY, 400mm FOR ELECTRONIC SERVICES: IT & COMMUNICATIONS. (SIZE UNLESS OTHERWISE STATED)

TYPE	ELECTRONIC LEGEND	MOUNTING TYPE / HEIGHT
	GREEN BREAK GLASS UNIT FOR ACCESS CONTROL SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	BIOMETRIC FINGERPRINT READERS	1250mm AFFL TO CENTER
	ELECTRO MAGNETIC DOOR LOCK ON NON FIXED LEAF (DOOR CLOSER BY OTHERS)	ON TOP OF DOOR FRAME
	ALARM SYSTEM MAGNETIC DOOR MONITOR ATTACHED ON SURFACE OF DOOR FRAME AND DOOR	TOP OF DOOR FRAME
	ACCESS CONTROL DOOR CONTROL UNIT FOR MAGLOCK DOOR RELEASE	IN CEILING SPACE
	HIGH RESOLUTION DAY / NIGHT STATIC DOME CAMERA.	CEILING
	RJ 45 DATA/VOICE COMBO OUTLET POINT, 100mm X 100mm.	WALL MOUNT/350mm AFFL TO CENTER.
	SMOKE DETECTOR	CEILING
	SMOKE DETECTOR IN FLOOR SPACE	IN FLOOR SPACE
	SMOKE DETECTOR IN ROOF SPACE	SOFFIT
	GAS SUPPRESSION ACTIVATION/DEACTIVATION PANEL.	1250mm AFFL TO CENTER
	INERGEN GAS SUPPRESSION CYCLINDER	-

DATA CENTER FLOOR EARTHING ARRANGEMENT IN FLOOR CAVITY
SCALE 1:50

FOR TENDER

APPROVED

PORT ENGINEER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

ELECTRICAL MANAGER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

MANAGER CIVIL MAINTENANCE

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

PORT FACILITIES MANAGER

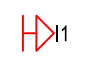
DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

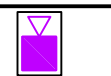
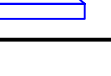
NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	Rev. CODE	REVISION DESCRIPTION	CLIENT
	CITY ENGINEER / CLIENT	2021/11/18	W.B	T.O.D	FOR TENDER PURPOSES	TRANSNET
	REG. NO. _____ DATE _____					
	AMENDMENTS CODE					
	A: BY CLIENT B: BY ARCHITECT C: BY MECHANICAL OR ELECTRICAL D: BY BIA E: BY OTHER					

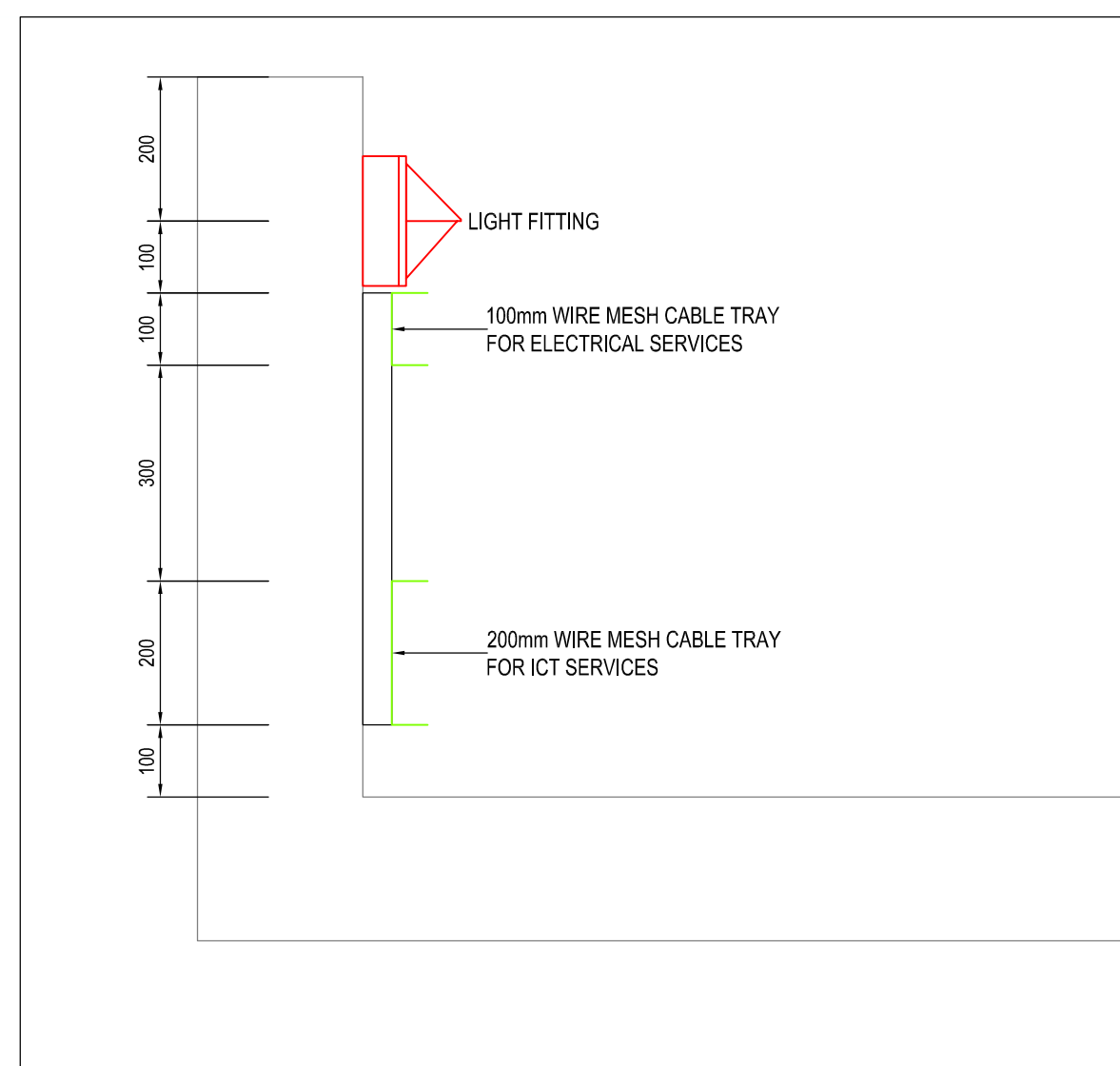
PROVINCE	OFFICE	NAME	PHONE	EMAIL
Gauteng	Telengwe	(012) 945-1111	gauteng@bvi.co.za	
Free State	Pretoria	(012) 251-5400	fs@bvi.co.za	
	Bloubaai	(051) 442-1237	bloubaai@bvi.co.za	
	Wellness	(057) 553-4569	wellness@bvi.co.za	
Northern Cape	Upington	(054) 337-4800	nc@bvi.co.za	
	Springbok	(027) 715-3814	sp@bvi.co.za	
	Orkney	(011) 266-6582	or@bvi.co.za	
	Port Elizabeth	(021) 754-1112	pe@bvi.co.za	
Eastern Cape	Port Elizabeth	(041) 374-5453	ec@bvi.co.za	
	East London	(043) 735-3859	el@bvi.co.za	
Western Cape	Cape Town	(021) 527-7000	wp@bvi.co.za	

PROJECT	APPROVED BY BVI
RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT ENGINEER/TECHNOLOGIST 2008/0282 18 November 2021
DRAWING TITLE	SCALE 1:25 @ A1 DESIGNED GH CHECKED GH
SERVER ROOM: ELECTRICAL & ELECTRONIC LAYOUTS	REVISION NO. T0 DATE SAVED 18 November 2021

TYPE	LIGHTING LEGEND SPECIFICATIONS	MOUNTING TYPE / HEIGHT
	TYPE F1: 1310mm x 172mm SURFACE MOUNT VAPOUR / WEATHER PROOF 53W LED LUMINAIRE RATED AT 4000K @ 500mA - 5385 LUMENS, IP65 RATED.	SURFACE
	TYPE H1: WALL MOUNTED RECTANGULAR BULKHEAD WITH EYELID, 18W LED FITTING RATED AT 4000K @ 700mA - 1450 LUMENS, COLOUR: BLACK.	WALL - EXTERNAL
	1 LEVER LIGHT SWITCH MOUNTED 1400mm AFFL.	WALL

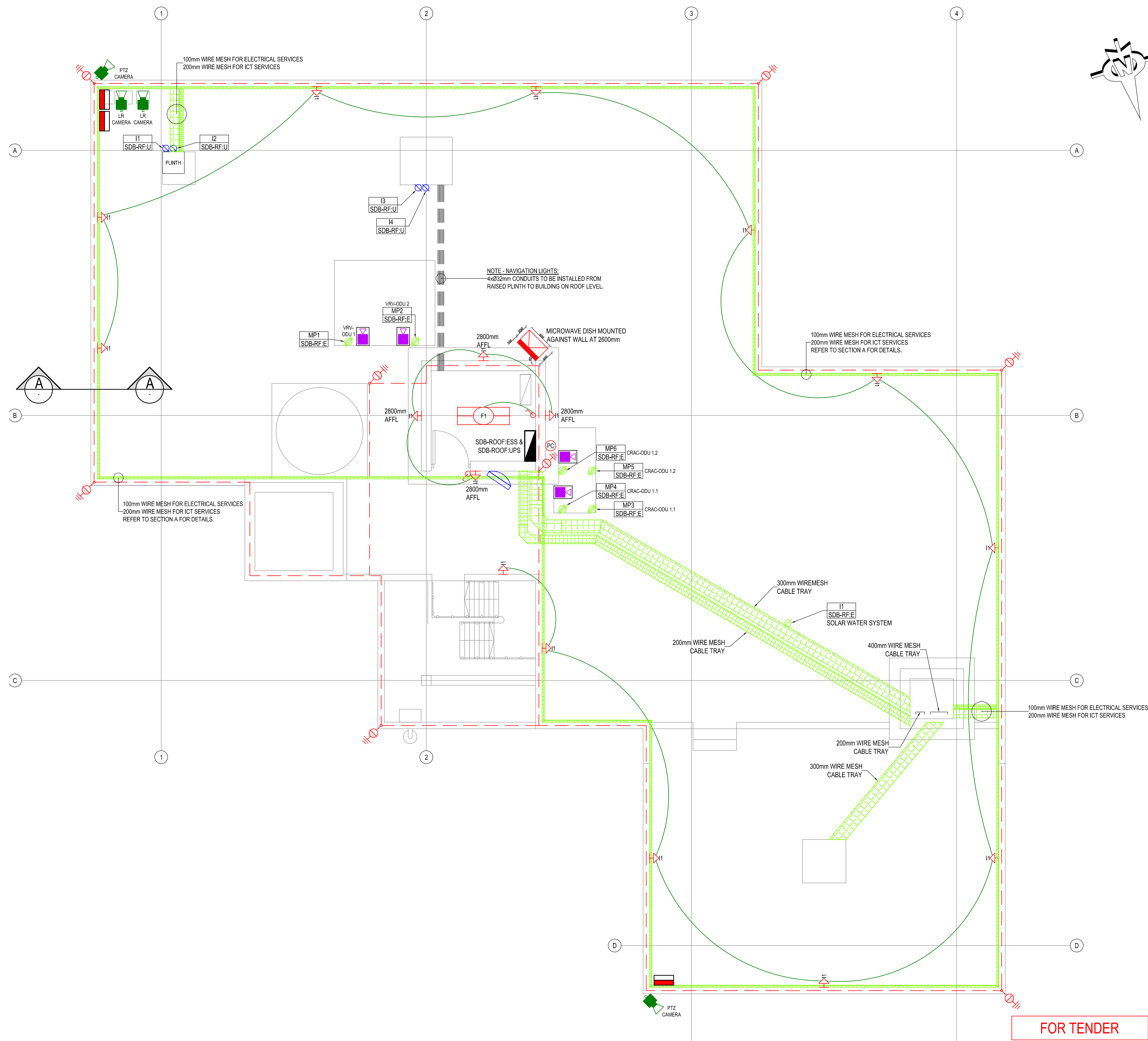
TYPE	POWER OUTLETS LEGEND	MOUNTING TYPE / HEIGHT
	DISTRIBUTION BOARD, 2100mm TO TOP OF PANEL.	HEIGHT INDICATED ON SINGLE LINE DIAGRAMS
	SINGLE PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL. (UPS)	HEIGHT INDICATED ON DRAWING
	SINGLE PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL. (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	3 PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL. (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	LIGHTNING PROTECTION	-

TYPE	ELECTRONIC LEGEND	MOUNTING TYPE / HEIGHT
	RJ 45 DATA OUTLET POINT, 100mm X 100mm INSIDE WEATHERPROOF ENCLOSURE	WALL MOUNT 350mm AFFL TO CENTER.
	CCTV CAMERA, TYPE SPECIFIED ON DRAWING.	TO BE INDICATED ON DRAWING
	CCTV CAMERA FIELD BOX	WALL MOUNT 350mm AFFL
	SATELLITE DISH	WALL MOUNT 2200mm AFFL



SECTION A

APPROVED PORT ENGINEER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ELECTRICAL MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED MANAGER CIVIL MAINTENANCE DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED PORT FACILITIES MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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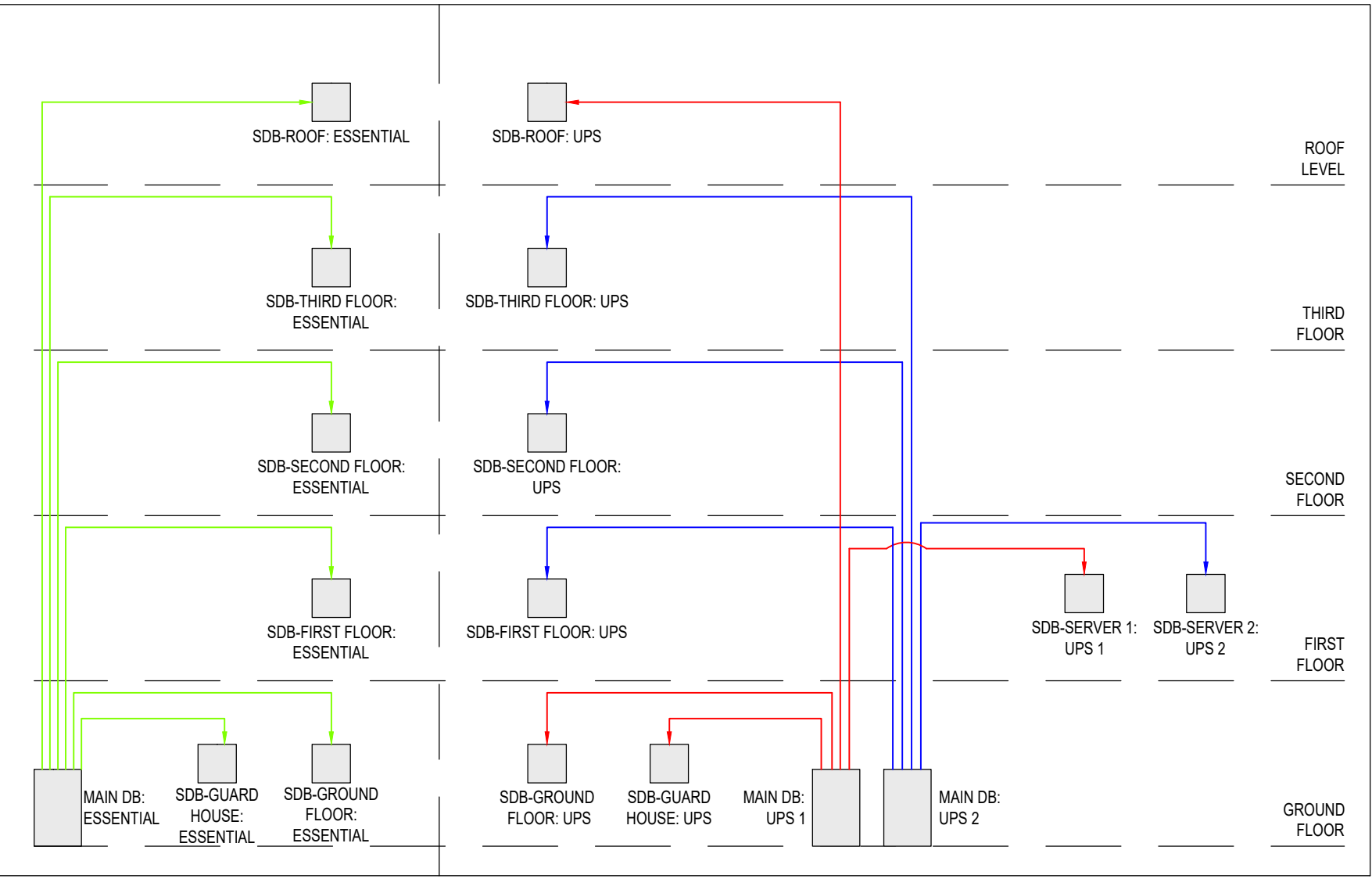
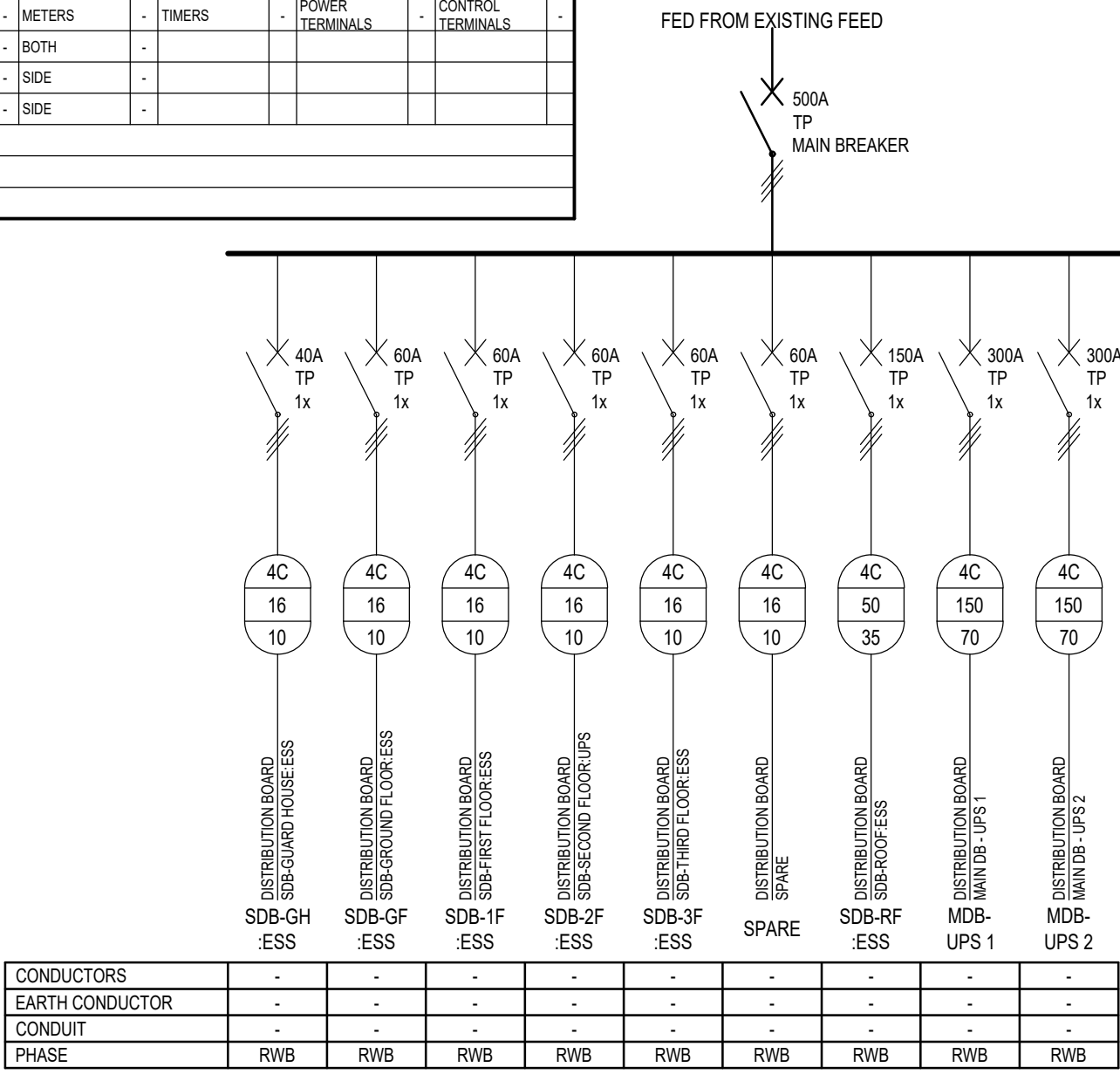
FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	Rev. CODE	REVISION DESCRIPTION	CLIENT	PROVINCE	OFFICE	EMAIL	PROJECT	APPROVED BY BVI
	CITY ENGINEER / CLIENT REG. NO. _____ DATE _____	2021/11/18	W.B	T/D	FOR TENDER PURPOSES	TRANSNET national ports authority	Gauteng	Tshwane	ptg@nrc.co.za	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT ENGINEER/TECHNOLOGIST 20080282 18 November 2021
	AMENDMENTS CODE A: BY CLIENT B: BY ARCHITECT C: BY MECHANICAL OR ELECTRICAL D: BY BIA E: BY OTHER						Free State	Pretoria	ptg@nrc.co.za		SCALE: 1:50 @ A1 DESIGNED: GH DRAWN: WB
							Northern Cape	Upington	up@nrc.co.za		CHECKED: GH
							KwaZulu Natal	Springbok	sp@nrc.co.za		PLAN NUMBER: 32442.00-301-05 REVISION NO.: T0 DATE SAVED: 18 November 2021
							Eastern Cape	Durban	dur@nrc.co.za		
							Port Elizabeth	Port Elizabeth	pe@nrc.co.za		
							Western Cape	Cape Town	cap@nrc.co.za		

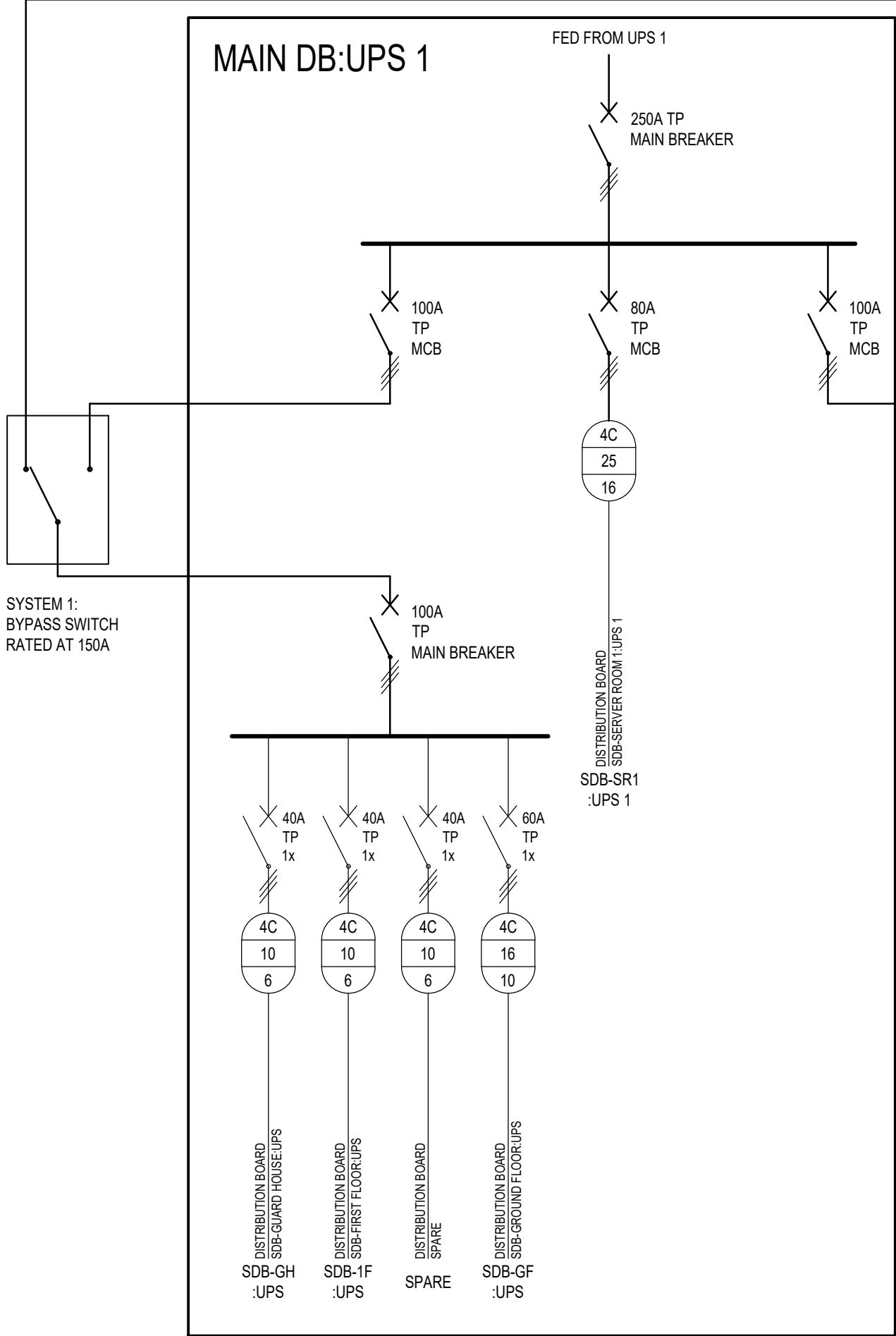
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NAME	MDB									
POSITION	GENERATOR ROOM									
INSTALLATION	FLUSH	-	SEMI-FLUSH	-	SURFACE	-	FLOOR STANDING	X	WEATHER RESISTANT	-
DOOR LOCKS	PUSH BUTTON	-	CAM-LOCK	-	PADLOCKABLE LEVER	-	T-HANDLE	X	SQUARE DRIVE	-
METAL TYPE	ELECTRO GALV	-	GALVANISED	-	SCR12	X	304 S/S	-	316 S/S	-
METAL SIZE	1.2mm	-	1.6mm	-	2.0mm	X	3.0mm	-	-	-
EQUIPMENT TYPE	CIRCUIT BREAKERS	ABB	CONTACTORS	-	METERS	-	TIMERS	-	POWER TERMINALS	-
ACCESS	FRONT	X	REAR	-	BOTH	-	-	-	CONTROL TERMINALS	-
ENTRY : INCOMING	TOP	X	BOTTOM	-	SIDE	-	-	-	-	-
ENTRY : OUTGOING	TOP	X	BOTTOM	-	SIDE	-	-	-	-	-
FAULT CURRENT	25kA									
COLOUR / FINISH	WHITE / EPOXY POWDER									
MOUNTING HEIGHT	FLOOR STANDING									

MAIN DB: ESSENTIAL

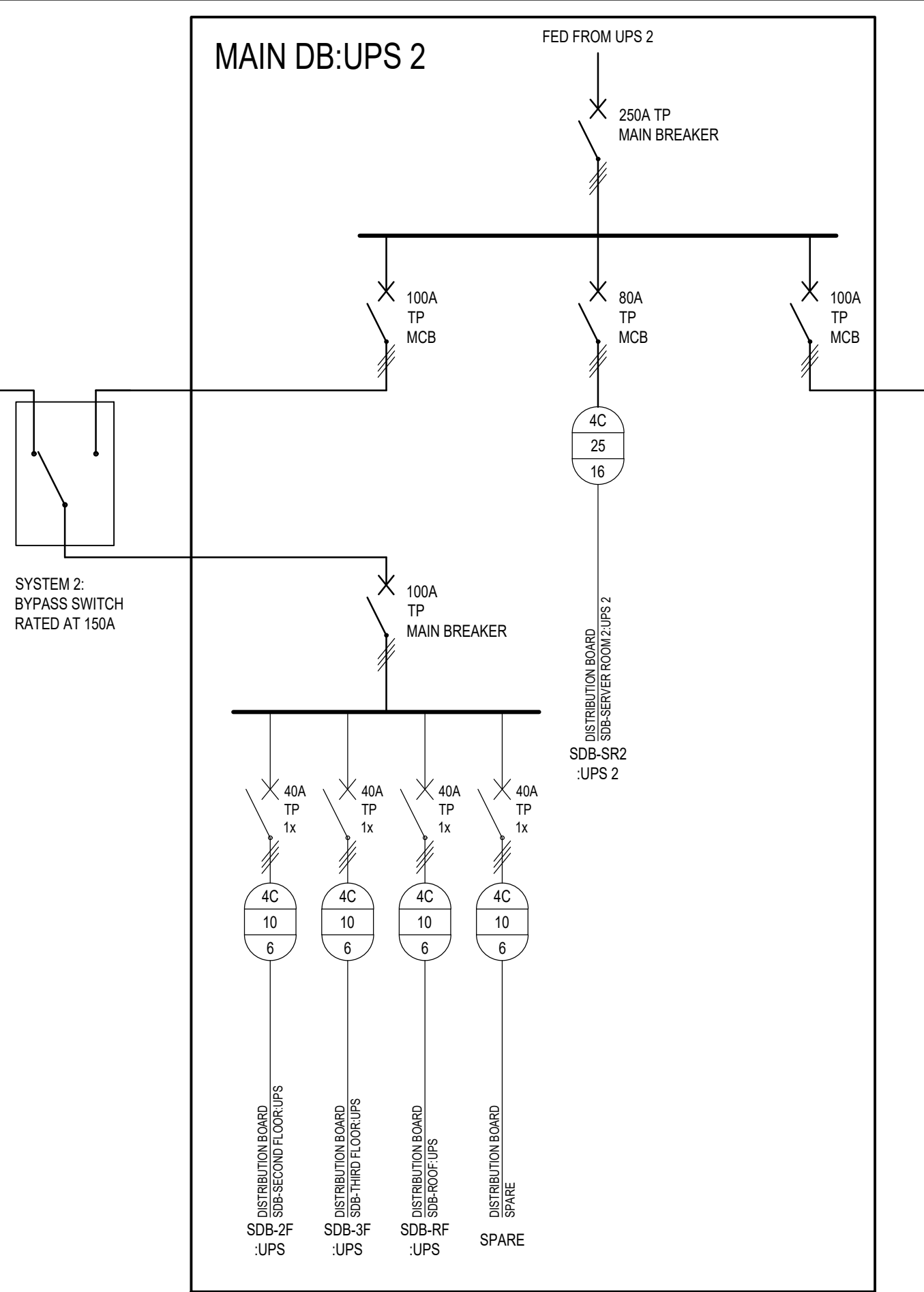


MAIN DB:UPS 1



NAME	MAIN DB:UPS 1									
POSITION	UPS ROOM									
INSTALLATION	FLUSH	-	SEMI-FLUSH	-	SURFACE	-	FLOOR STANDING	X	WEATHER RESISTANT	-
DOOR LOCKS	PUSH BUTTON	-	CAM-LOCK	-	PADLOCKABLE LEVER	-	T-HANDLE	X	SQUARE DRIVE	-
METAL TYPE	ELECTRO GALV	-	GALVANISED	-	SCR12	X	304 S/S	-	316 S/S	-
METAL SIZE	1.2mm	-	1.6mm	X	2.0mm	-	3.0mm	-	-	-
EQUIPMENT TYPE	CIRCUIT BREAKERS	-	CONTACTORS	-	METERS	-	TIMERS	-	POWER TERMINALS	-
ACCESS	FRONT	X	REAR	-	BOTH	-	-	-	CONTROL TERMINALS	-
ENTRY : INCOMING	TOP	X	BOTTOM	-	SIDE	-	-	-	-	-
ENTRY : OUTGOING	TOP	X	BOTTOM	-	SIDE	-	-	-	-	-
FAULT CURRENT	15kA									
COLOUR / FINISH	RED / EPOXY POWDER									
MOUNTING HEIGHT	FLOOR STANDING									

MAIN DB:UPS 2



NAME	MAIN DB:UPS 2									
POSITION	UPS ROOM									
INSTALLATION	FLUSH	-	SEMI-FLUSH	-	SURFACE	-	FLOOR STANDING	X	WEATHER RESISTANT	-
DOOR LOCKS	PUSH BUTTON	-	CAM-LOCK	-	PADLOCKABLE LEVER	-	T-HANDLE	X	SQUARE DRIVE	-
METAL TYPE	ELECTRO GALV	-	GALVANISED	-	SCR12	X	304 S/S	-	316 S/S	-
METAL SIZE	1.2mm	-	1.6mm	X	2.0mm	-	3.0mm	-	-	-
EQUIPMENT TYPE	CIRCUIT BREAKERS	-	CONTACTORS	-	METERS	-	TIMERS	-	POWER TERMINALS	-
ACCESS	FRONT	X	REAR	-	BOTH	-	-	-	CONTROL TERMINALS	-
ENTRY : INCOMING	TOP	X	BOTTOM	-	SIDE	-	-	-	-	-
ENTRY : OUTGOING	TOP	X	BOTTOM	-	SIDE	-	-	-	-	-
FAULT CURRENT	15kA									
COLOUR / FINISH	RED / EPOXY POWDER									
MOUNTING HEIGHT	FLOOR STANDING									

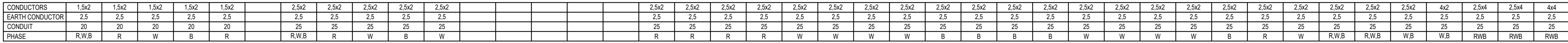
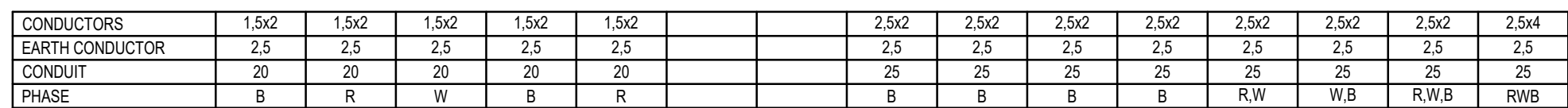
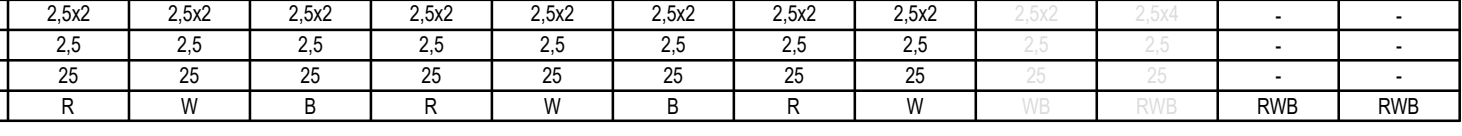
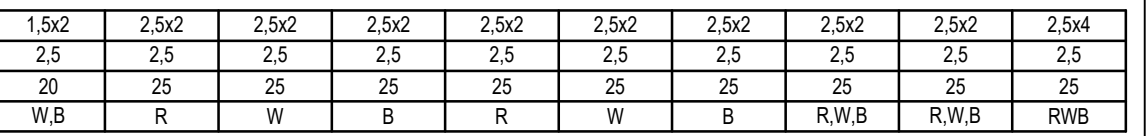
APPROVED	APPROVED	APPROVED	APPROVED
PORT ENGINEER	ELECTRICAL MANAGER	MANAGER CIVIL MAINTENANCE	PORT FACILITIES MANAGER
DATE	DATE	DATE	DATE
APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

FOR TENDER

NOTES / LEGEND		APPROVED BY COUNCIL / CLIENT		DATE	INITIAL	No. CODE	REVISION DESCRIPTION	CLIENT		PROJECT		APPROVED BY BVI	
NOTE: - TERMINALS: PRE-WIRE TERMINAL FROM MCB TO TERMINALS ON BOTTOM OF BOARD - WIRING: ALL TERMINALS AND BUSBARS MUST BE COVERED WITH POLYCARB COVERS.		CITY ENGINEER / CLIENT		2021/11/18	WB	TOD	FOR TENDER PURPOSES	TRANSNET		RICHARDS BAY - PORT CONTROL TOWER		G. HALBERSTADT	
AMENDMENTS CODE		REG. NO.		DATE		DATE		DATE		REG. NO.		DATE	
A. BY CLIENT B. BY ARCHITECT C. BY MECHANICAL OR ELECTRICAL D. BY BVI E. BY OTHER ()		DATE		DATE		DATE		DATE		DATE		DATE	
SCALE		NTS @ A1		DRAWN		WB		DESIGNED		GH		CHECKED	
PLAN NUMBER		REVISION NO.		DATE SAVED		DATE SAVED		DATE SAVED		DATE SAVED		DATE SAVED	
32442.00-312-01		T0		18 November 2021		18 November 2021		18 November 2021		18 November 2021		18 November 2021	

[illegible]

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SDB-GH:ESSSDB-GH:UPSSDB-GH:UPS

FOR TENDER

0:PROJECTS DRAWINGS\32000 - 32999\32442.00\ELECTRICAL\TENDER DRAWINGS\32442.00-312-01 REV T0.DWG

NOTE: ADDITIONAL SPACE SHALL BE PROVIDED IN A SEPARATE COMPARTMENT / BARRIER ON THE RIGHT TOP CORNER OF THE DISTRIBUTION BOARD TO ACCOMMODATE THE DAY LIGHTING AUTOMATIC TRIPPING UNIT.

THE FOLLOWING SHALL BE PROVIDED OVER THE WIDTH OF THE DISTRIBUTION BOARD COMPARTMENT :

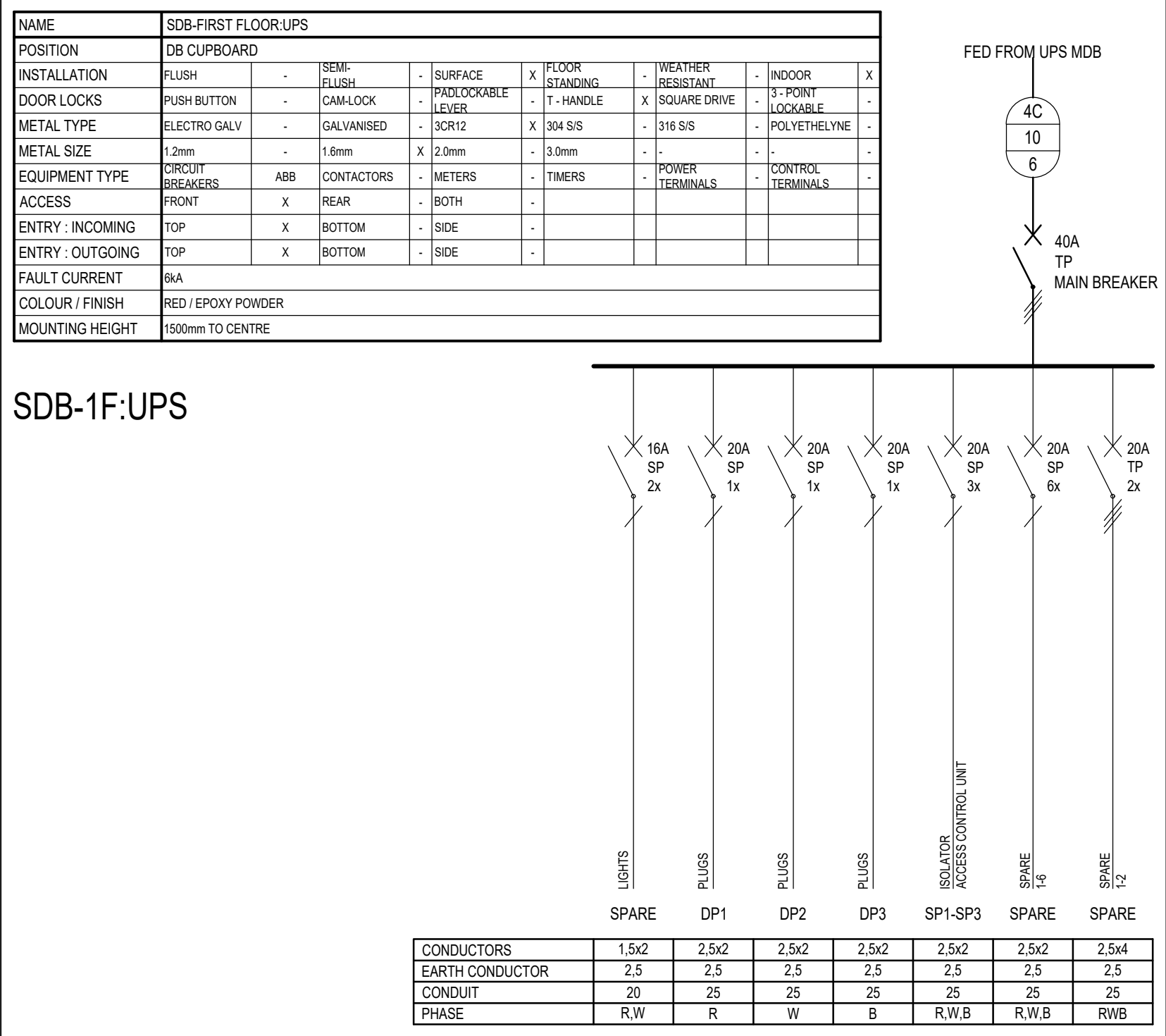
- 1 x DIN RAIL FOR TERMINALS OF ALL DALI CONTROL CIRCUITS AT THE TOP
- 2 x DIN RAIL FOR DAY LIGHTING AUTOMATIC EQUIPMENT.
- 3 60mm x 60mm SLOTTED TRUNING
- 2 60mm x 60mm SLOTTED TRUNING FOR SIDES.
- TOTAL WIDTH TO BE IN THE ORDER OF 500mm. (MINIMUM 400mm)

NOTE: - TOTAL HEIGHT RESTRICTION ON FLOOR STAND DISTRIBUTION BOARDS : 2000mm.

- TOTAL WIDTH RESTRICTION ON DISTRIBUTION BOARDS : MEDIUM SIZE : 1200mm/ LARGE SIZE : 1600mm.

- COMPACT DESIGN IS PREFERRED FOR LARGE SIZES.

- PLEASE CONTACT BYV CONSULTING ENGINEERS WHEN EXCEEDING THE RESTRICTIONS.



NAME	SDB-SERVER ROOM 1											
POSITION	SERVER ROOM											
INSTALLATION	FLUSH	-	SEMI-FLUSH	-	SURFACE PADLOCKABLE LEVER	X	FLOOR STANDING	-	WEATHER RESISTANT	X	INDOR	-
DOOR LOCKS	PUSH BUTTON	-	CAMLOCK	-	1 - HANDLE	X	SQUARE DRIVE	-	3-POINT LOCKABLE	-	-	-
METAL TYPE	ELECTRO GALV	-	GALVANISED	-	30R12	X	316 S/S	-	POLYETHYLENE	-	-	-
METAL SIZE	1.2mm	-	1.6mm	X	2.0mm	-	3.0mm	-	-	-	-	-
EQUIPMENT TYPE	CIRCUIT BREAKERS	ABB	CONTACTORS	X	METERS	-	TIMERS	-	POWER TERMINALS	-	CONTROL TERMINALS	-
ACCESS	FRONT	X	REAR	-	BOTH	-	-	-	-	-	-	-
ENTRY : INCOMING	TOP	X	BOTTOM	-	SIDE	-	-	-	-	-	-	-
ENTRY : OUTGOING	TOP	X	BOTTOM	-	SIDE	-	-	-	-	-	-	-
FAULT CURRENT	SAA											
COLOUR / FINISH	RED / EPOXY POWDER											
MOUNTING HEIGHT	1500mm TO CENTRE											

FED FROM UPS 1
 SYSTEM 1

SDB-SERVER ROOM 1 UPS 1

	DP1-DP2	SP1	SP2	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SPARE 1.3
CONDUCTORS	2.5x2	4x2	4x2	4x2	4x2	4x2	4x2	4x2	4x2	4x2	4x2
EARTH CONDUCTOR	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
CONDUIT	25	25	25	25	25	25	25	25	25	25	25
PHASE	W,B	R	W	B	R	W	B	R	W	B	R,W,B

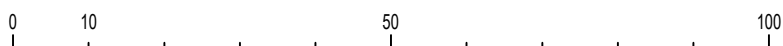
NAME		SDB-SERVER ROOM 2										
POSITION		SERVER ROOM										
INSTALLATION	FLUSH	-	SEMI-FLUSH	-	SURFACE	X	FLOOR STANDING	-	WEATHER RESISTANT	X	INDOOR	-
DOOR LOCKS	PUSH BUTTON	-	CAMLOCK	-	PADLOCKABLE LEVER	-	T-HANDLE	X	SQUARE DRIVE	-	3-POINT LOCKABLE	-
METAL TYPE	ELECTRO GALV	-	GALVANISED	-	SCR2	X	304 S/S	-	316 S/S	-	POLYETHYLENE	-
METAL SIZE	1.2mm	-	1.6mm	X	2.0mm	-	3.0mm	-	-	-	-	-
EQUIPMENT TYPE	CIRCUIT BREAKERS	ABB	CONTACTORS	-	METERS	-	TIMERS	-	POWER TERMINALS	-	CONTROL TERMINALS	-
ACCESS	FRONT	X	REAR	-	BOTH	-						
ENTRY : INCOMING	TOP	X	BOTTOM	-	SIDE	-						
ENTRY : OUTGOING	TOP	X	BOTTOM	-	SIDE	-						
FAULT CURRENT	5KA											
COLOUR / FINISH	RED / EPOXY POWDER											
MOUNTING HEIGHT	1500mm TO CENTRE											

The single-line diagram illustrates the power supply system for SDB-SERVER ROOM 2. It starts with a connection from 'FED FROM UPS 2 SYSTEM 2' at the top right. This feeds into a 'MAIN BREAKER' (represented by a switch symbol). The output of the main breaker goes to a vertical busbar labeled '80A TP'. From this busbar, horizontal feeders branch off to various busbars: DP1-DP2, SP1, SP2, SP3, SP4, SP5, SP6, SP7, SP8, SP9, and SPARE. Each feeder consists of a cable (e.g., 20A SP 2x) followed by an isolator (switch symbol) and a server unit (rectangle labeled 'SERVER UNIT'). The SPARE busbar has a note 'SPARE 1.3'.

	DP1-DP2	SP1	SP2	SP3	SP4	SP5	SP6	SP7	SP8	SP9	SPARE
CONDUCTORS	2.5x2	4x2	4x2	4x2	4x2	4x2	4x2	4x2	4x2	4x2	4x2
EARTH CONDUCTOR	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
CONDUIT	25	25	25	25	25	25	25	25	25	25	25
PHASE	R,W,B	R	W	B	R	W	B	R	W	B	R,W,B

APPROVED ----- PORT ENGINEER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- ELECTRICAL MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- MANAGER CIVIL MAINTENANCE DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- PORT FACILITIES MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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NOTES / LEGEND NOTE: - TERMINALS: PRE-WIRE TERMINAL FROM MCB TO TERMINALS ON BOTTOM OF BOARD - WIRING: ALL TERMINALS AND BUSBARS MUST BE COVERED WITH POLYCARBOXYTES.	APPROVED BY COUNCIL / CLIENT CITY ENGINEER / CLIENT _____ REG. NO. _____ DATE _____	DATE 2021/11/18 INITIAL W.B No./CODE T/D	REVISION DESCRIPTION FOR TENDER PURPOSES	CLIENT TRANSNET national ports authority	INCORPORATING basil nair and associates consulting mechanical engineers CESA	PROVINCE Gauteng _____ (012) 940-1111 _____ E-MAIL pna@pna.co.za Free State _____ (019) 291-5400 _____ psg@pna.co.za Western _____ (021) 447-1107 _____ psw@pna.co.za Northern Cape _____ (054) 553-4940 _____ pnc@pna.co.za Ungweni _____ (054) 557-6900 _____ pnc@pna.co.za Springbok _____ (027) 712-3014 _____ pnc@pna.co.za Durban _____ (031) 259-8382 _____ pnc@pna.co.za KwaZulu Natal _____ (033) 772-0112 _____ pnc@pna.co.za East London _____ (041) 375-5452 _____ pnc@pna.co.za East London _____ (041) 375-5452 _____ pnc@pna.co.za Western Cape _____ (021) 527-7000 _____ pnc@pna.co.za	PROJECT RICHARDS BAY - PORT CONTROL TOWER	APPROVED BY BVI G. HALBERSTADT _____ 200801282 _____ 18 November 2021 ENGINEER/TECHNOLOGIST _____ REG. NO. _____ DATE _____	DRAWING TITLE SINGLE LINE DIAGRAMS NO.02	SCALE NTS @ A1 DRAWN WB	DESIGNED GH CHECKED GH	PLAN NUMBER 32442.00-312-03	REVISION NO. T0	DATE SAVED 18 November 2021
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NOTE: ADDITIONAL SPACE SHALL BE PROVIDED IN A SEPARATE COMPARTMENT / BARRIER ON THE RIGHT TOP CORNER OF THE DISTRIBUTION BOARD TO ACCOMMODATE THE DALL LIGHTING EQUIPMENT COMPONENT, TRUNKING AND TERMINALS ON DALL RAIL.

THE FOLLOWING SHALL BE COVERED BY THE TOP OF THE DISTRIBUTION BOARD COMPARTMENT :

- 1 x DIN RAIL FOR TERMINALS OF DALL CABLE CIRCUITS AT THE TOP
- 2 x DIN RAIL FOR DALL LIGHTING EQUIPMENT
- 1 x 60mm x 50mm SLOTTED TRUNKING
- 2 x 60mm x 60mm SLOTTED TRUNKING FOR SIDES
- TOTAL WIDTH TO BE IN THE ORDER OF 500mm. (MINIMUM 400mm)

NOTE: - TOTAL HEIGHT RESTRICTION ON FLOOR STAND DISTRIBUTION BOARDS : 2000mm.

- TOTAL WIDTH RESTRICTION ON DISTRIBUTION BOARDS : MEDIAN SIZE : 1200mm | LARGE SIZE : 1600mm

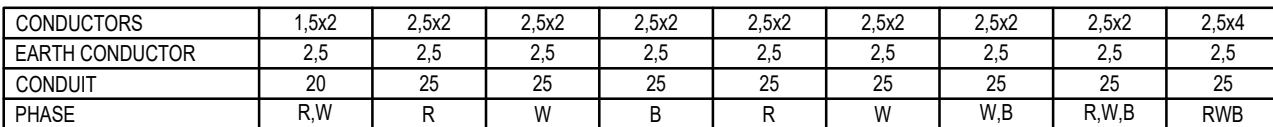
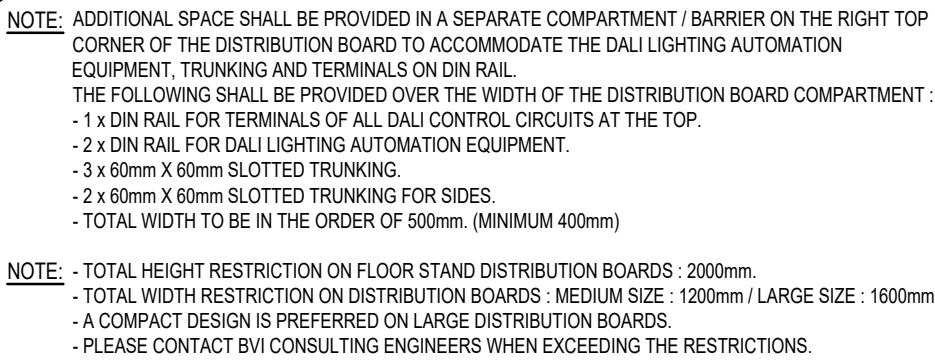
- CONTACT DESIGN IS REQUIRED FOR ALL BOARD TYPES

- PLEASE CONTACT BYV CONSULTING ENGINEERS WHEN EXCEEDING THE RESTRICTIONS

FOR TENDER

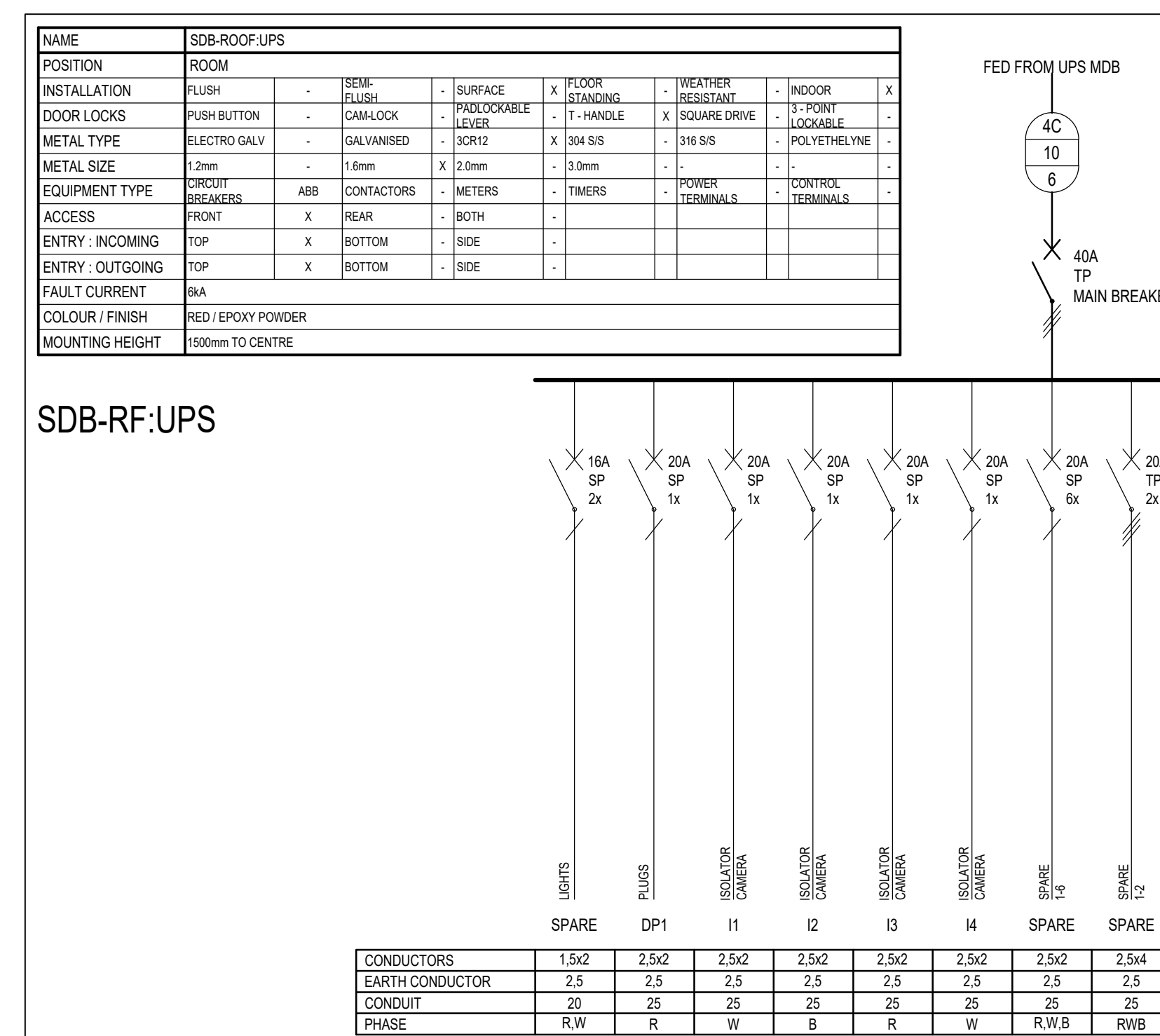
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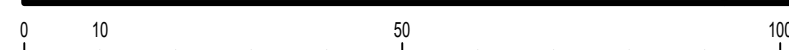
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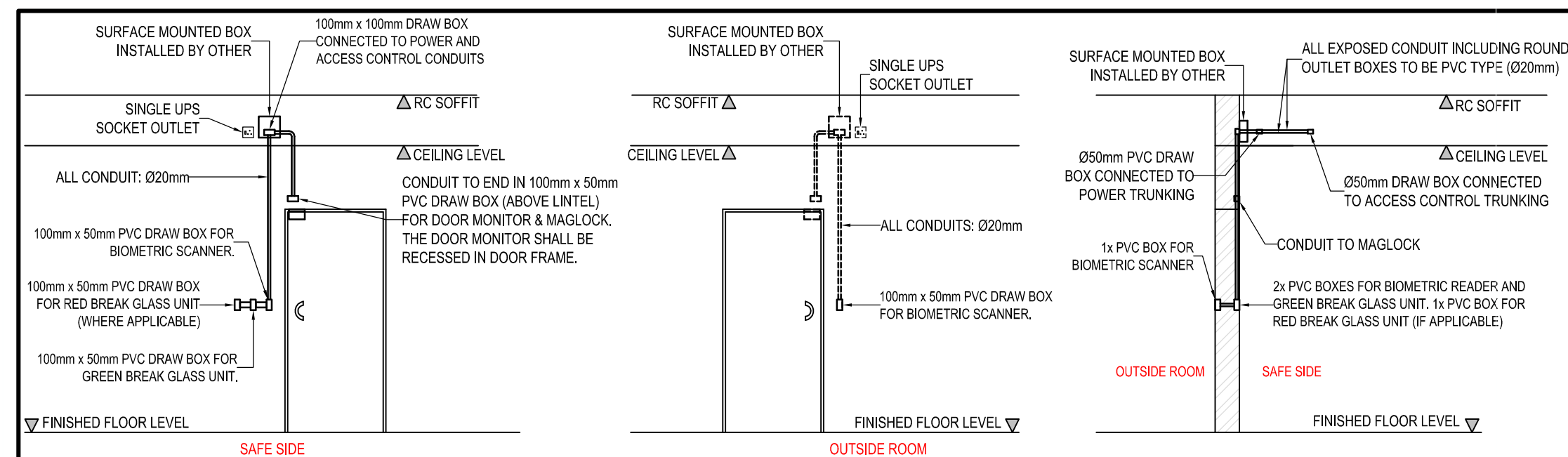
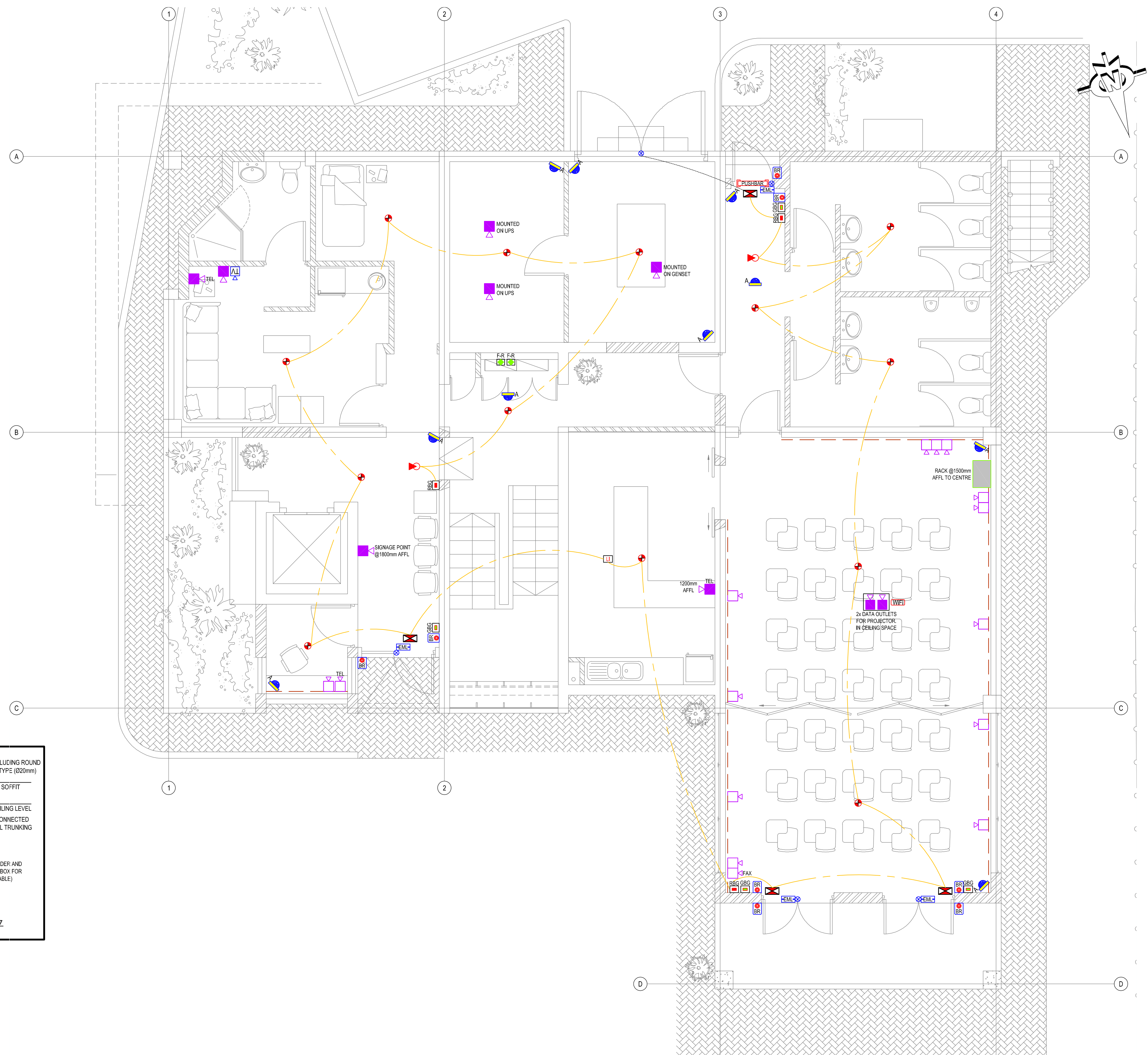


FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	No./CODE	REVISION DESCRIPTION	CLIENT		PROJECT	APPROVED BY BVI
NOTE: - TERMINALS: PRE-WIRE TERMINAL FROM MCB TO TERMINALS ON BOTTOM OF BOARD - WIRING: ALL TERMINALS AND BUSBARS MUST BE COVERED WITH POLYCARBOXYL COVERS.	CITY ENGINEER / CLIENT _____ REG. NO. _____ DATE _____	2021/11/18	W.B	TOD	FOR TENDER PURPOSES			RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT  20080292 18 November 2021 ENGINEER/TECHNOLOGIST REG. NO. DATE
	AMENDMENTS CODE					 bvi national ports authority	INCORPORATING  basil nair and associates consulting mechanical engineers 	DRAWING TITLE	SCALE NTS @ A1 DRAWN WB DESIGNED GH CHECKED GH
	A.B.C.: BEFORE TENDER D.: TENDER DRAWING 123...: AFTER TENDER Z.: AS-BUILT						PROVINCE OFFICE PHONE FAX EMAIL Gauteng Tolwane (012) 940 1111 jg@biggo.co.za Free State Polokwane (018) 291 5400 jg@biggo.co.za KwaZulu-Natal Durban (031) 266 8382 dnr@bivn.co.za Eastern Cape Port Elizabeth (041) 373 4243 bve@bivn.co.za Western Cape Cape Town (021) 527 7000 cpt@bivn.co.za Visit or contact us online at www.biggo.co.za	SINGLE LINE DIAGRAMS NO.06	PLAN NUMBER REVISION NO. DATE SAVED 32442.00-312-06 T0 18 November 2021



TYPE	ELECTRONIC LEGEND	MOUNTING TYPE / HEIGHT
	GREEN BREAK GLASS UNIT FOR ACCESS CONTROL SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	BIOMETRIC FINGERPRINT READERS	1250mm AFFL TO CENTER
	ELECTRO MAGNETIC DOOR LOCK ON NON FIXED LEAF (DOOR CLOSER BY OTHERS)	ON TOP OF DOOR FRAME
	ALARM SYSTEM MAGNETIC DOOR MONITOR ATTACHED ON SURFACE OF DOOR FRAME AND DOOR	TOP OF DOOR FRAME
	ACCESS CONTROL DOOR CONTROL UNIT FOR MAGLOCK DOOR RELEASE	IN CEILING SPACE
	PUSHBAR FOR EMERGENCY ESCAPE DOOR	AGAINST DOOR FRAME
	HIGH RESOLUTION DAY / NIGHT STATIC DOME CAMERA.	CEILING
	CCTV CAMERA WALL MOUNT AT HEIGHT SPECIFIED.	TO BE INDICATED ON DRAWING
	RJ 45 DATA/VOICE COMBO OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	RJ 45 DATA/VOICE COMBO OUTLET POINT, 100mm X 100mm.	WALL MOUNT/350mm AFFL TO CENTER.
	RJ 45 VOIP TELEPHONE TO VOICE RECORDER SWITCH OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	RED BREAK GLASS UNIT FOR FIRE DETECTION SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	SMOKE DETECTOR	CEILING
	SMOKE DETECTOR IN FLOOR SPACE	IN FLOOR SPACE
	SMOKE DETECTOR IN ROOF SPACE	SOFFIT
	LINE ISOLATORS FOR FIRE DETECTION SYSTEM	CEILING
	FIRE SOUNDER ONLY	CEILING
	MAIN FIRE CONTROL PANEL FOR FIRE DETECTION SYSTEM	1250mm AFFL TO CENTER
	GAS SUPPRESSION ACTIVATION/DEACTIVATION PANEL	1250mm AFFL TO CENTER
	INERGEN GAS SUPPRESSION CYLINDER	-
	1x CAT 6 OUTLET TERMINATED IN CEILING FOR WIFI ROUTER.	CEILING
	TV POINT WALL MOUNTED IN 100mm X 100mm WALL BOX.	1250mm AFFL TO CENTER
	FIRE RELAY TO DISABLE MECHANICAL LOADS INSIDE DB	-
	WALL MOUNTED 3 COMPARTMENT POWER SKIRTING :COLOUR: BLACK, POWDER COATED, GALVANISED METAL, O-LINE /OBO. TIER 1: POWER, TIER 2: DATA, TIER 3: VTS	FLOOR LEVEL UNLESS STATED OTHERWISE



DETAIL A: ACCESS CONTROL FOR EXIT DOOR

APPROVED	APPROVED	APPROVED	APPROVED
PORT ENGINEER	ELECTRICAL MANAGER	MANAGER CIVIL MAINTENANCE	PORT FACILITIES MANAGER
DATE _____	DATE _____	DATE _____	DATE _____
APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

FOR TENDER

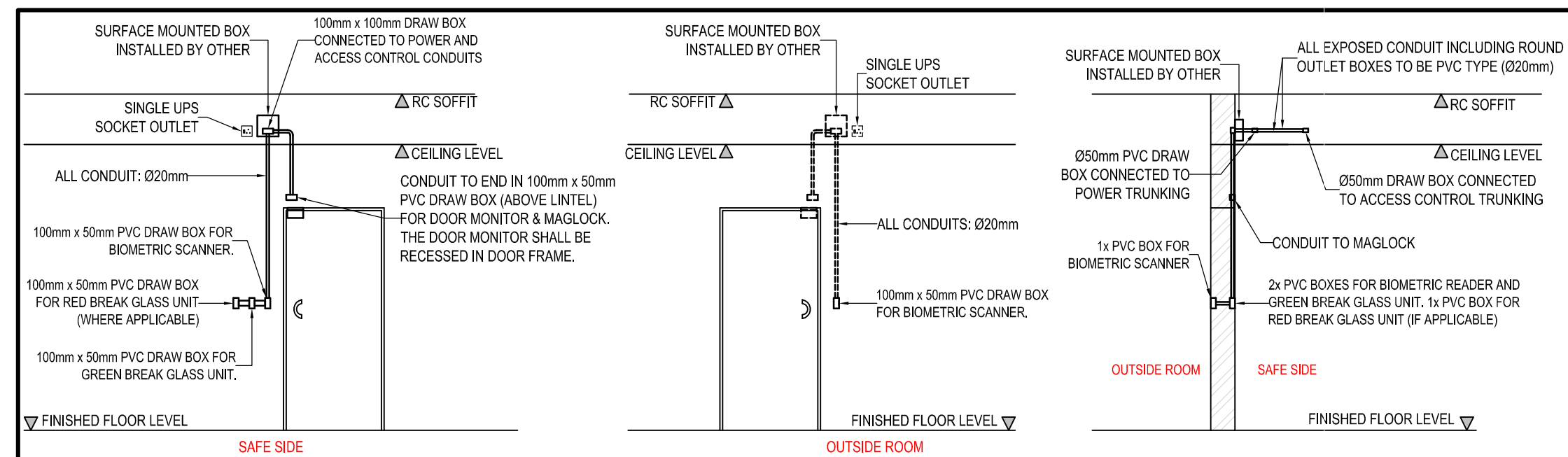
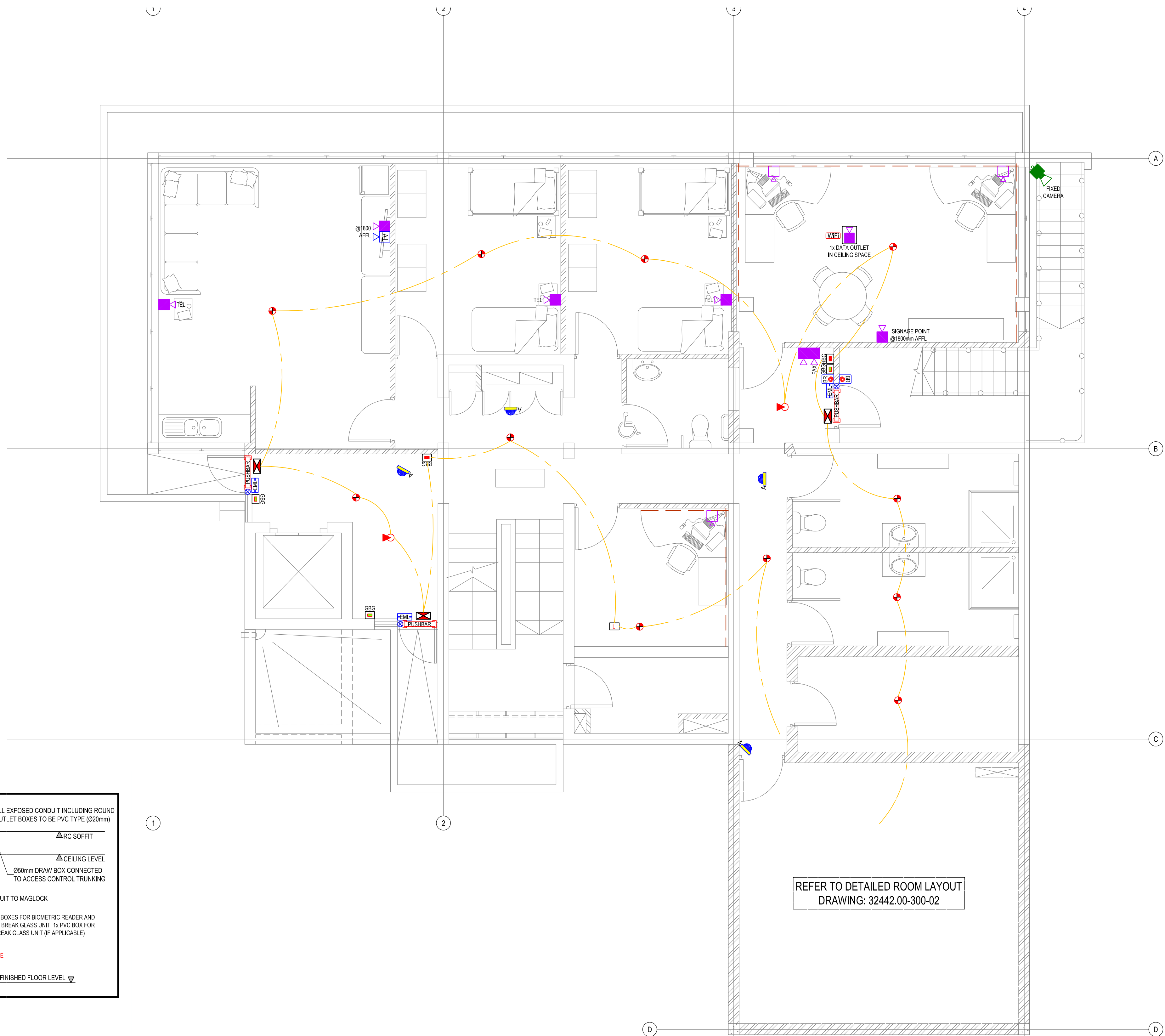
NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	No./CODE	REVISION DESCRIPTION	CLIENT	PROVINCE	OFFICE	EVAL.	PROJECT	APPROVED BY BIA
	CITY ENGINEER / CLIENT	2021/11/18	W.B	T.O.D	FOR TENDER PURPOSES	TRANSNET	Gauteng	Tshwane	(012) 945-1111	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT
	REG. NO.						Free State	Pretoria	(012) 251-5400		20080282
	AMENDMENTS CODE						Western Cape	Blantyre	(011) 442-1237		18 November 2021
	A: BY CLIENT						Northern Cape	Wellness	(057) 553-4569		REG. NO.
	B: BY ARCHITECT						Upington	Springbok	(054) 337-4800		DATE
	C: BY MECHANICAL OR ELECTRICAL						KwaZulu Natal	Durban	(031) 286-6382		SCALE
	D: BY BIA						Eastern Cape	Port Elizabeth	(041) 374-5453		1:50 @ A1
	E: BY OTHER						Western Cape	Cape Town	(021) 527-7000		DRAWN
											WB
											CHECKED
											GH
											REVISION NO.
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											DATE SAVED
											18 November 2021

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32442.00-301-01 GROUND FLOOR REV T0.DWG

TYPE	ELECTRONIC LEGEND	MOUNTING TYPE / HEIGHT
	GREEN BREAK GLASS UNIT FOR ACCESS CONTROL SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	BIOMETRIC FINGERPRINT READERS	1250mm AFFL TO CENTER
	ELECTRO MAGNETIC DOOR LOCK ON NON FIXED LEAF (DOOR CLOSER BY OTHERS)	ON TOP OF DOOR FRAME
	ALARM SYSTEM MAGNETIC DOOR MONITOR ATTACHED ON SURFACE OF DOOR FRAME AND DOOR	TOP OF DOOR FRAME
	ACCESS CONTROL DOOR CONTROL UNIT FOR MAGLOCK DOOR RELEASE	IN CEILING SPACE
	PUSHBAR FOR EMERGENCY ESCAPE DOOR	AGAINST DOOR FRAME
	HIGH RESOLUTION DAY / NIGHT STATIC DOME CAMERA.	CEILING
	CCTV CAMERA WALL MOUNT AT HEIGHT SPECIFIED.	TO BE INDICATED ON DRAWING
	RJ 45 DATA/VOICE COMBO OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	RJ 45 DATA/VOICE COMBO OUTLET POINT, 100mm X 100mm.	WALL MOUNT/350mm AFFL TO CENTER.
	RJ 45 VOIP TELEPHONE TO VOICE RECORDER SWITCH OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	RED BREAK GLASS UNIT FOR FIRE DETECTION SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	SMOKE DETECTOR	CEILING
	SMOKE DETECTOR IN FLOOR SPACE	IN FLOOR SPACE
	SMOKE DETECTOR IN ROOF SPACE	SOFFIT
	LINE ISOLATORS FOR FIRE DETECTION SYSTEM	CEILING
	FIRE SOUNDER ONLY	CEILING
	MAIN FIRE CONTROL PANEL FOR FIRE DETECTION SYSTEM	1250mm AFFL TO CENTER
	GAS SUPPRESSION ACTIVATION/DEACTIVATION PANEL	1250mm AFFL TO CENTER
	INERGEN GAS SUPPRSSION CYCLINDER	-
	1x CAT 6 OUTLET TERMINATED IN CEILING FOR WIFI ROUTER.	CEILING
	TV POINT WALL MOUNTED IN 100mm X 100mm WALL BOX.	1250mm AFFL TO CENTER
	FIRE RELAY TO DISABLE MECHANICAL LOADS INSIDE DB	-
	WALL MOUNTED 3 COMPARTMENT POWER SKIRTING - COLOUR: BLACK, POWDER COATED, GALVANISED METAL, O-LINE /OBO. TIER 1: POWER, TIER 2: DATA, TIER 3: VTS	FLOOR LEVEL UNLESS STATED OTHERWISE



DETAIL A: ACCESS CONTROL FOR EXIT DOOR

APPROVED
PORT ENGINEER
DATE _____
APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED
ELECTRICAL MANAGER
DATE _____
APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED
MANAGER CIVIL MAINTENANCE
DATE _____
APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED
PORT FACILITIES MANAGER
DATE _____
APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

FOR TENDER

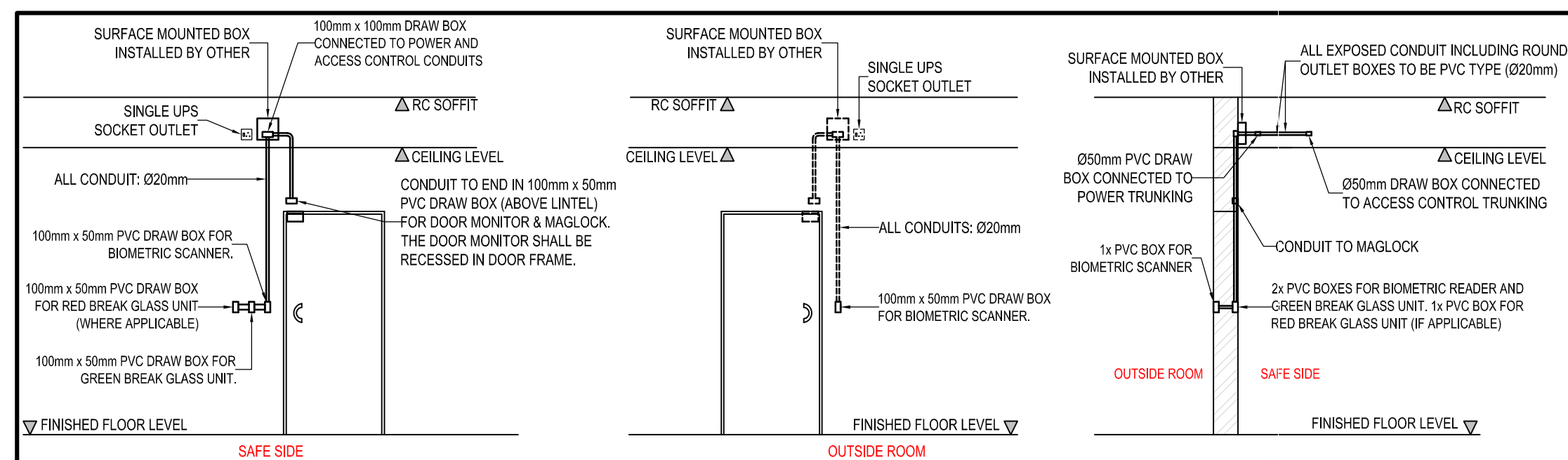
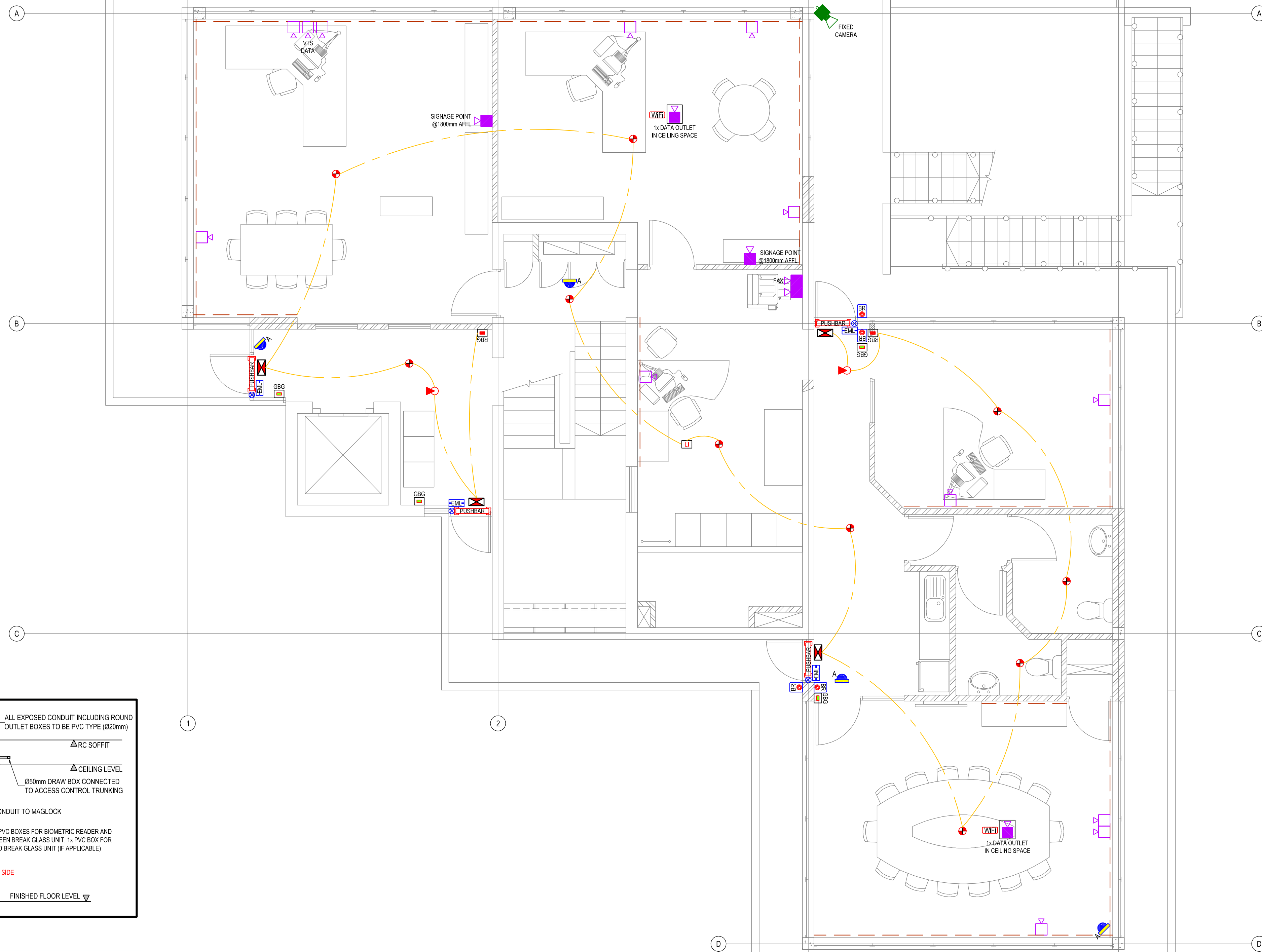
NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	Rev. CODE	REVISION DESCRIPTION	CLIENT	PROVINCE	OFFICE	PROJ. NO.	DATE	PROJECT	APPROVED BY BVI
	CITY ENGINEER / CLIENT	2021/11/18	W.B	T/D	FOR TENDER PURPOSES	TRANSNET	Gauteng	Tshwane	(012) 945-1111	18 November 2021	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT
	REG. NO.						Free State	Pretoria	(012) 251-5400	20080282		ENGINEER/TECHNOLOGIST
	AMENDMENTS CODE						North West	Bloubaai	(011) 442-1237	REG. NO.		DATE
	A: BY CLIENT						Western Cape	Worcester	(053) 553-4569	WB		
	B: BY ARCHITECT						Eastern Cape	Upington	(054) 337-4800	GH		
	C: BY MECHANICAL OR ELECTRICAL						Free State	Springs	(027) 715-3814	CHECKED	GH	
	D: BY BIA						Free State	Durban	(031) 266-6362	PLAN NUMBER		REVISION NO.
	E: BY OTHER						Free State	Port Elizabeth	(021) 754-1912	32442.00-320-02		T0
							Free State	East London	(043) 735-3869	DATE SAVED		18 November 2021
							Free State	Cape Town	(021) 527-7000			

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32442.00-301-02 FIRST FLOOR REV TO.DWG

TYPE	ELECTRONIC LEGEND	MOUNTING TYPE / HEIGHT
	GREEN BREAK GLASS UNIT FOR ACCESS CONTROL SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	BIOMETRIC FINGERPRINT READERS	1250mm AFFL TO CENTER
	ELECTRO MAGNETIC DOOR LOCK ON NON FIXED LEAF (DOOR CLOSER BY OTHERS)	ON TOP OF DOOR FRAME
	ALARM SYSTEM MAGNETIC DOOR MONITOR ATTACHED ON SURFACE OF DOOR FRAME AND DOOR	TOP OF DOOR FRAME
	ACCESS CONTROL DOOR CONTROL UNIT FOR MAGLOCK DOOR RELEASE	IN CEILING SPACE
	PUSHBAR FOR EMERGENCY ESCAPE DOOR	AGAINST DOOR FRAME
	HIGH RESOLUTION DAY / NIGHT STATIC DOME CAMERA,	CEILING
	CCTV CAMERA WALL MOUNT AT HEIGHT SPECIFIED.	TO BE INDICATED ON DRAWING
	RJ 45 DATA/VOICE COMBO OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	RJ 45 DATA/VOICE COMBO OUTLET POINT, 100mm X 100mm.	WALL MOUNT/350mm AFFL TO CENTER.
	RJ 45 VOIP TELEPHONE TO VOICE RECORDER SWITCH OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	RED BREAK GLASS UNIT FOR FIRE DETECTION SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	SMOKE DETECTOR	CEILING
	SMOKE DETECTOR IN FLOOR SPACE	IN FLOOR SPACE
	SMOKE DETECTOR IN ROOF SPACE	SOFFIT
	LINE ISOLATORS FOR FIRE DETECTION SYSTEM	CEILING
	FIRE SOUNDER ONLY	CEILING
	MAIN FIRE CONTROL PANEL FOR FIRE DETECTION SYSTEM	1250mm AFFL TO CENTER
	GAS SUPPRESSION ACTIVATION/DEACTIVATION PANEL	1250mm AFFL TO CENTER
	INERGEN GAS SUPPRESSION CYLINDER	-
	1x CAT 6 OUTLET TERMINATED IN CEILING FOR WIFI ROUTER.	CEILING
	TV POINT WALL MOUNTED IN 100mm X 100mm WALL BOX.	1250mm AFFL TO CENTER
	FIRE RELAY TO DISABLE MECHANICAL LOADS INSIDE DB	-
	WALL MOUNTED 3 COMPARTMENT POWER SKIRTING: COLOUR: BLACK, POWDER COATED, GALVANISED METAL, O-LINE/JOBO. TIER 1: POWER, TIER 2: DATA, TIER 3: VTS	FLOOR LEVEL UNLESS STATED OTHERWISE



DETAIL A: ACCESS CONTROL FOR EXIT DOOR

APPROVED	APPROVED	APPROVED	APPROVED
PORT ENGINEER	ELECTRICAL MANAGER	MANAGER CIVIL MAINTENANCE	PORT FACILITIES MANAGER
DATE _____	DATE _____	DATE _____	DATE _____
APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

FOR TENDER

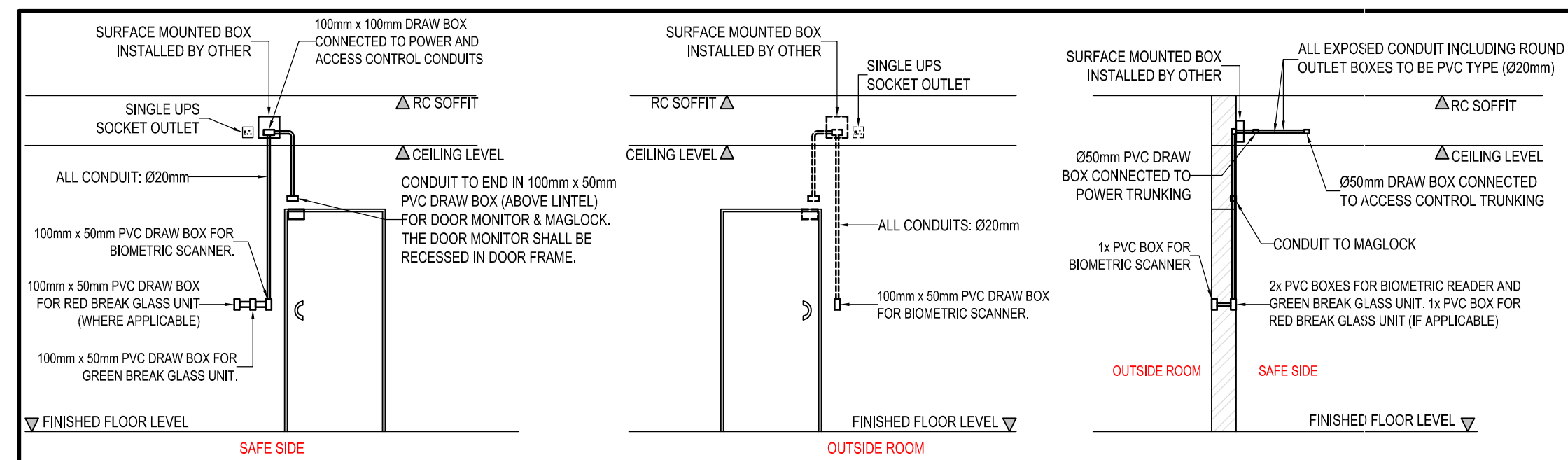
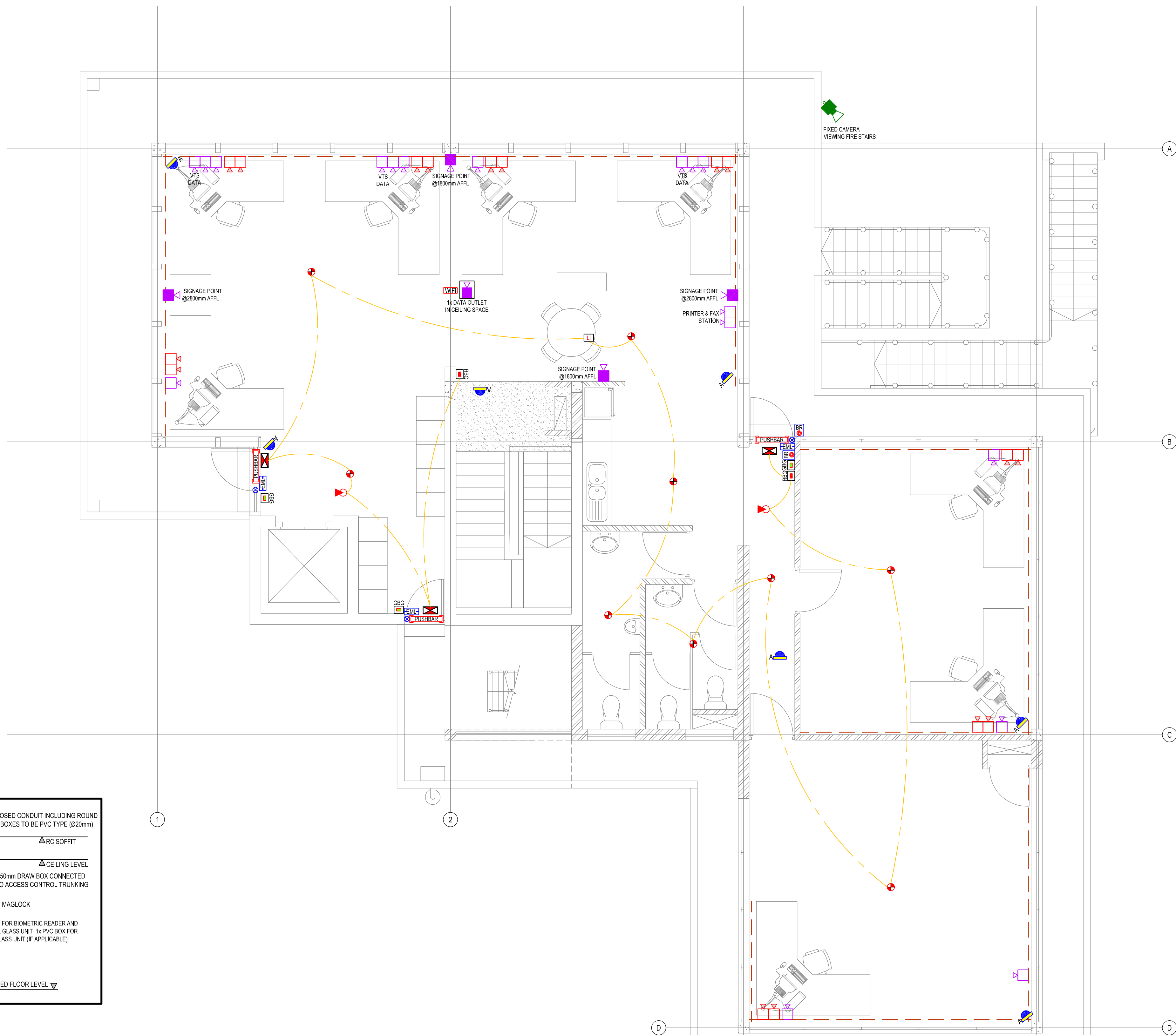
NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	No./CODE	REVISION DESCRIPTION	CLIENT	PROVINCE	OFFICE	EMAIL	PROJECT	APPROVED BY BVI
	CITY ENGINEER / CLIENT REG. NO. _____ DATE _____	2021/11/18	W.B	T/D	FOR TENDER PURPOSES	TRANSNET national ports authority	Gauteng	Tshwane	ptg@npg.co.za	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT ENGINEER/TECHNOLOGIST
	AMENDMENTS CODE A: BY CLIENT B: BY ARCHITECT C: BY MECHANICAL OR ELECTRICAL D: BY BIA E: BY OTHER						Free State	Pretoria	ptg@npg.co.za	SCALE: 1:50 @ A1	2008/282 REG. NO.
							Northern Cape	Upington	up@npg.co.za	DESIGNED: GH	DRAWN: WB
							KwaZulu Natal	Springbok	sp@npg.co.za	PLAN NUMBER	CHECKED: GH
							Eastern Cape	Durban	dur@npg.co.za	32442.00-320-03	REVISION NO. T0
							Port Elizabeth	Engenagel	eng@npg.co.za		DATE SAVED
							East London	East London	el@npg.co.za		18 November 2021
							Cape Town	Cape Town	cap@npg.co.za		

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O:\PROJECTS DRAWINGS\32000 - 32999\32442.00\ELECTRICAL\TENDER DRAWINGS\32442.00-301-03 SECOND FLOOR REV TO DWG

32442.00-301-03 SECOND FLOOR REV T0.DWG

TYPE	ELECTRONIC LEGEND	MOUNTING TYPE / HEIGHT
	GREEN BREAK GLASS UNIT FOR ACCESS CONTROL SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	BIOMETRIC FINGERPRINT READERS	1250mm AFFL TO CENTER
	ELECTRO MAGNETIC DOOR LOCK ON NON FIXED LEAF (DOOR CLOSER BY OTHERS)	ON TOP OF DOOR FRAME
	ALARM SYSTEM MAGNETIC DOOR MONITOR ATTACHED ON SURFACE OF DOOR FRAME AND DOOR	TOP OF DOOR FRAME
	ACCESS CONTROL DOOR CONTROL UNIT FOR MAGLOCK DOOR RELEASE	IN CEILING SPACE
	PUSHBAR FOR EMERGENCY ESCAPE DOOR	AGAINST DOOR FRAME
	HIGH RESOLUTION DAY / NIGHT STATIC DOME CAMERA.	CEILING
	CCTV CAMERA WALL MOUNT AT HEIGHT SPECIFIED.	TO BE INDICATED ON DRAWING
	RJ 45 DATA/VOICE COMBO OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	RJ 45 DATA/VOICE COMBO OUTLET POINT, 100mm X 100mm.	WALL MOUNT/350mm AFFL TO CENTER.
	RJ 45 VOIP TELEPHONE TO VOICE RECORDER SWITCH OUTLET POINT ON POWER SKIRTING.	POWER SKIRTING
	RED BREAK GLASS UNIT FOR FIRE DETECTION SYSTEM Ø25mm ROUND BOX WITH 25mm CONDUIT	1250mm AFFL TO CENTER
	SMOKE DETECTOR	CEILING
	SMOKE DETECTOR IN FLOOR SPACE	IN FLOOR SPACE
	SMOKE DETECTOR IN ROOF SPACE	SOFFIT
	LINE ISOLATORS FOR FIRE DETECTION SYSTEM	CEILING
	FIRE SOUNDER ONLY	CEILING
	MAIN FIRE CONTROL PANEL FOR FIRE DETECTION SYSTEM	1250mm AFFL TO CENTER
	GAS SUPPRESSION ACTIVATION/DEACTIVATION PANEL	1250mm AFFL TO CENTER
	INERGEN GAS SUPPRESSION CYLINDER	-
	1x CAT 6 OUTLET TERMINATED IN CEILING FOR WIFI ROUTER.	CEILING
	TV POINT WALL MOUNTED IN 100mm X 100mm WALL BOX.	1250mm AFFL TO CENTER
	FIRE RELAY TO DISABLE MECHANICAL LOADS INSIDE DB	-
	WALL MOUNTED 3 COMPARTMENT POWER SKIRTING :COLOUR: BLACK, POWDER COATED, GALVANISED METAL, O-LINE /OBO. TIER 1: POWER, TIER 2: DATA, TIER 3: VTS	FLOOR LEVEL UNLESS STATED OTHERWISE



DETAIL A: ACCESS CONTROL FOR EXIT DOOR

APPROVED PORT ENGINEER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ELECTRICAL MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED MANAGER CIVIL MAINTENANCE DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED PORT FACILITIES MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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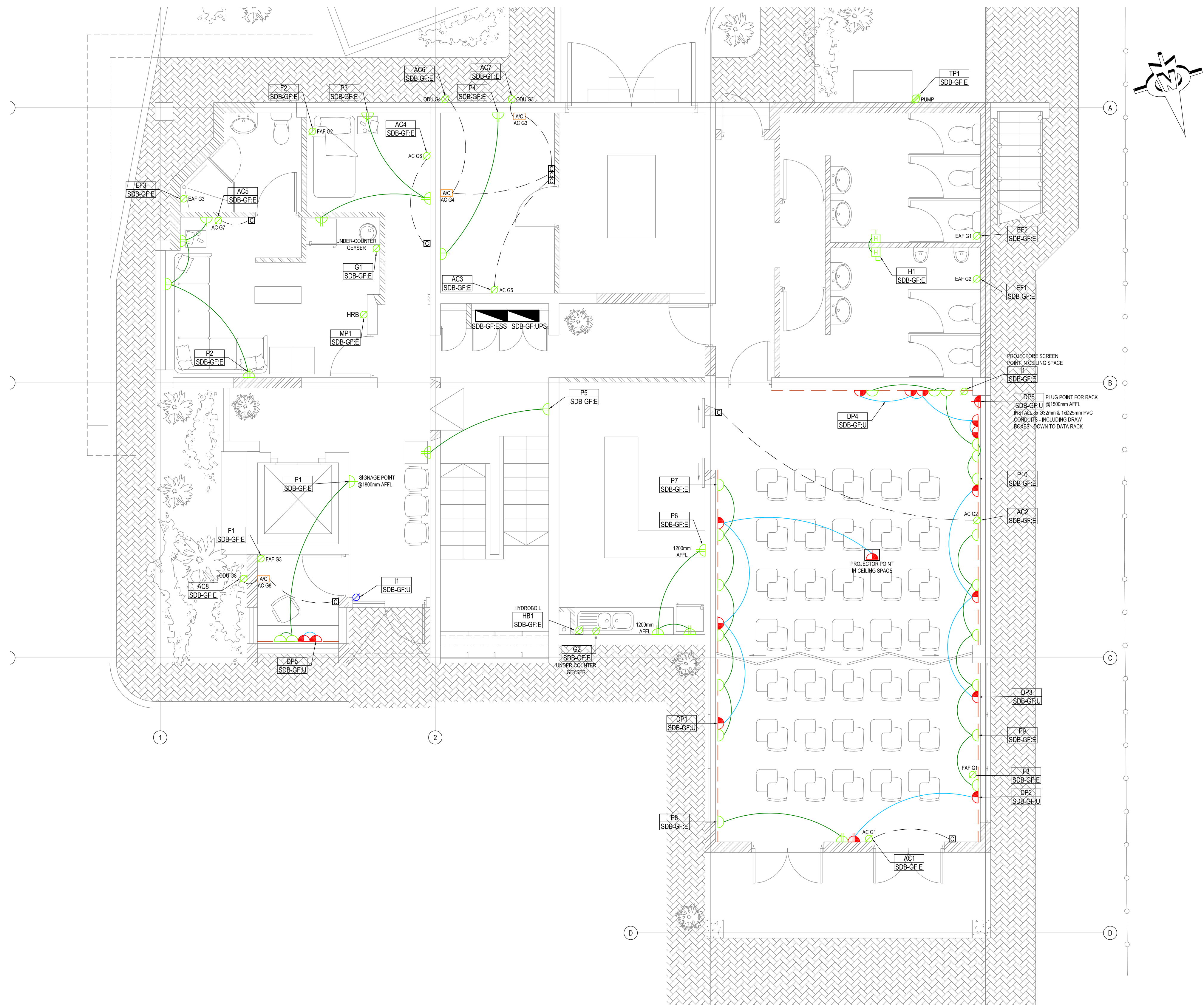
FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	Rev. CODE	REVISION DESCRIPTION	CLIENT	PROVINCE	OFFICE	EMAIL	PROJECT	APPROVED BY BVI
	CITY ENGINEER / CLIENT REG. NO. _____ DATE _____	2021/11/18	W.B	T.O.D	FOR TENDER PURPOSES	TRANSNET	Gauteng	Tshwane	(012) 940-1111	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT ENGINEER/TECHNOLOGIST 20080282 18 November 2021
	AMENDMENTS CODE A: BY CLIENT B: BY ARCHITECT C: BY MECHANICAL OR ELECTRICAL D: BY BIA E: BY OTHER						Free State	Pretoria	(012) 251-5400		SCALE: 1:50 @ A1 DRAWN: WB DESIGNED: GH CHECKED: GH
							Northern Cape	Upington	(053) 535-4569		PLAN NUMBER: 32442.00-320-04 REVISION NO.: T0 DATE SAVED: 18 November 2021
							KwaZulu Natal	Springbok	(027) 715-3814		
							Eastern Cape	Durban	(031) 266-6362		
								Port Elizabeth	(041) 374-5463		
								East London	(043) 735-3869		
								Cape Town	(021) 527-7000		

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TYPE	POWER OUTLETS LEGEND	MOUNTING TYPE / HEIGHT
	SINGLE SOCKET SWITCHED OUTLET, RATED 16A SANS 164-1, ON POWER SKIRTING (ESSENTIAL: WHITE)	POWER SKIRTING
	SINGLE DEDICATED SWITCHED SOCKET OUTLET SANS 164-1, RATED 16A, ON POWER SKIRTING (UPS: RED)	POWER SKIRTING
	SINGLE SWITCHED SOCKET OUTLET SANS 164-1, RATED 16A, 100mm x 100mm (ESSENTIAL: WHITE)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	DOUBLE SWITCHED SOCKET OUTLET SANS 164-1, EACH RATED 16A, 100mm x 100mm (ESSENTIAL: WHITE)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	DOUBLE DEDICATED SWITCHED SOCKET OUTLET SANS 164-1, EACH RATED 16A, 100mm x 100mm (UPS: RED)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	DOUBLE DEDICATED SWITCHED SOCKET OUTLET SANS 164-1, EACH RATED 16A, 100mm x 100mm (UPS: RED)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	SINGLE PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL, (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	SINGLE PHASE ISOLATOR, RECESSED IN WALL, (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	SINGLE PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL, (UPS)	HEIGHT INDICATED ON DRAWING
	3 PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL, (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	20A SINGLE PHASE HAND DRYER ISOLATOR WITH ISOLATOR POINT @ 2300mm AFFL & OUTLET POINT 1400mm AFFL.	ISOLATOR @ 2300mm AFFL & OUTLET 1400mm AFFL.
	DISTRIBUTION BOARD, 2100mm TO TOP OF PANEL.	HEIGHT INDICATED ON SINGLE LINE DIAGRAMS
	WALL MOUNTED 3 COMPARTMENT POWER SKIRTING :COLOUR: BLACK, POWDER COATED, GALVANISED METAL, O-LINE/OBO, TIER 1: POWER, TIER 2: DATA, TIER 3: VTS	FLOOR LEVEL UNLESS STATED OTHERWISE
	FD4 SURFACE FLOOR MOUNTED PEDESTAL WITH 1x16A NORMAL SSO, 1x16A DEDICATED SSO & 2x DATA POINT, UNLESS OTHERWISE STATED.	IN FLOOR SLAB - SURFACE MOUNT
	4x Ø25mm CONDUITS UNDER FLOOR TO WALL MOUNT POWER SKIRTING.	UNDER FLOOR SLAB
	Ø25mm ROUND BOX WITH Ø20mm CONDUIT MOUNTED AT 1500mm A.F.F.L. FOR AC CONTROLLERS	1500mm AFFL TO CENTER
	ISOLATOR POINT FOR A/C IN CEILING SPACE AGAINST SOFFIT. SUPPLY FROM OUTDOOR UNIT ON ROOF. (INSTALLED BY HVAC CONTRACTOR)	AGAINST SOFFIT
	SERVER SOCKET OUTLET	AGAINST POWER TRUNKING IN FLOOR SPACE BELOW SERVER RACKS

NOTE - HYDROBOIL INSTALLATION:
FLUSH MOUNTED 25A ISOLATOR FOR HYDROBOIL, MOUNTED IN 100x100mm BOX. FLUSHED WALL BELOW SINK COMPLETE WITH CONDUIT TO 60mm ROUND BOX AT 1250mm AFFL. HYDROBOIL SUPPLY AND CONNECT BY OTHERS.



APPROVED

PORT ENGINEER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

ELECTRICAL MANAGER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

MANAGER
CIVIL MAINTENANCE

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

PORT FACILITIES MANAGER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

FOR TENDER

NOTES / LEGEND		APPROVED BY COUNCIL / CLIENT		DATE	INITIAL	No. CODE	REVISION DESCRIPTION	CLIENT	PROVINCE		OFFICE	E.A.W.L.	PROJECT	APPROVED BY BWA		
		CITY ENGINEER / CLIENT	REG. NO.	DATE	2021/11/18	W.B	T/D	FOR TENDER PURPOSES	 national ports authority	 INCORPORATING	 ENGINEERING PROCUREMENT MANAGEMENT	 CONSULTING MECHANICAL ENGINEERS	 RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT ENGINEER/TECHNOLOGIST 20080282 18 November 2021		
		AMENDMENTS CODE														
													GROUND FLOOR RENOVATIONS: POWER LAYOUT		PLAN NUMBER: 32442.00-370-01 REVISION NO.: T0 DATE SAVED: 18 November 2021	

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TYPE	POWER OUTLETS LEGEND	MOUNTING TYPE / HEIGHT
	SINGLE SOCKET SWITCHED OUTLET, RATED 16A SANS 164-1, ON POWER SKIRTING (ESSENTIAL: WHITE)	POWER SKIRTING
	SINGLE DEDICATED SWITCHED SOCKET OUTLET SANS 164-1, RATED 16A, ON POWER SKIRTING (UPS: RED)	POWER SKIRTING
	SINGLE SWITCHED SOCKET OUTLET SANS 164-1, RATED 16A, 100mm x 100mm (ESSENTIAL: WHITE)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	DOUBLE SWITCHED SOCKET OUTLET SANS 164-1, EACH RATED 16A, 100mm x 100mm (ESSENTIAL: WHITE)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	DOUBLE DEDICATED SWITCHED SOCKET OUTLET SANS 164-1, EACH RATED 16A, 100mm x 100mm (UPS: RED)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	DOUBLE DEDICATED SWITCHED SOCKET OUTLET SANS 164-1, EACH RATED 16A, 100mm x 100mm (UPS: RED)	WALL MOUNT/350mm AFFL TO CENTER, UNLESS OTHERWISE STATED.
	SINGLE PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL. (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	SINGLE PHASE ISOLATOR, RECESSED IN WALL. (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	SINGLE PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL. (UPS)	HEIGHT INDICATED ON DRAWING
	3 PHASE ISOLATOR, SURFACE MOUNTED AGAINST SOFFIT OR WALL. (ESSENTIAL)	HEIGHT INDICATED ON DRAWING
	20A SINGLE PHASE HAND DRYER ISOLATOR WITH ISOLATOR POINT @ 2300mm AFFL & OUTLET POINT 1400mm AFFL.	ISOLATOR @ 2300mm AFFL & OUTLET 1400mm AFFL.
	DISTRIBUTION BOARD. 2100mm TO TOP OF PANEL.	HEIGHT INDICATED ON SINGLE LINE DIAGRAMS
	WALL MOUNTED 3 COMPARTMENT POWER SKIRTING. COLOUR: BLACK, POWDER COATED, GALVANISED METAL. O-LINE /OBO, TIER 1: POWER, TIER 2: DATA, TIER 3: VTS	FLOOR LEVEL UNLESS STATED OTHERWISE
	FD4 SURFACE FLOOR MOUNTED PEDESTAL WITH 1x16A NORMAL SSO, 1x16A DEDICATED SSO & 2x DATA POINT, UNLESS OTHERWISE STATED.	IN FLOOR SLAB - SURFACE MOUNT
	4x Ø25mm CONDUITS UNDER FLOOR TO WALL MOUNT POWER SKIRTING.	UNDER FLOOR SLAB
	Ø25mm ROUND BOX WITH Ø20mm CONDUIT MOUNTED AT 1500mm A.F.F.L. FOR AC CONTROLLERS	1500mm AFFL TO CENTER
	ISOLATOR POINT FOR A/C IN CEILING SPACE AGAINST SOFFIT. SUPPLY FROM OUTDOOR UNIT ON ROOF. (INSTALLED BY HVAC CONTRACTOR)	AGAINST SOFFIT
	SERVER SOCKET OUTLET	AGAINST POWER TRUNKING IN FLOOR SPACE BELOW SERVER RACKS

NOTE - HYDROBOIL INSTALLATION:
FLUSH MOUNTED 25A ISOLATOR FOR HYDROBOIL, MOUNTED IN 100x100mm BOX. FLUSHED WALL BELOW SINK COMPLETE WITH CONDUIT TO 60mm ROUND BOX AT 1250mm AFFL. HYDROBOIL SUPPLY AND CONNECT BY OTHERS.



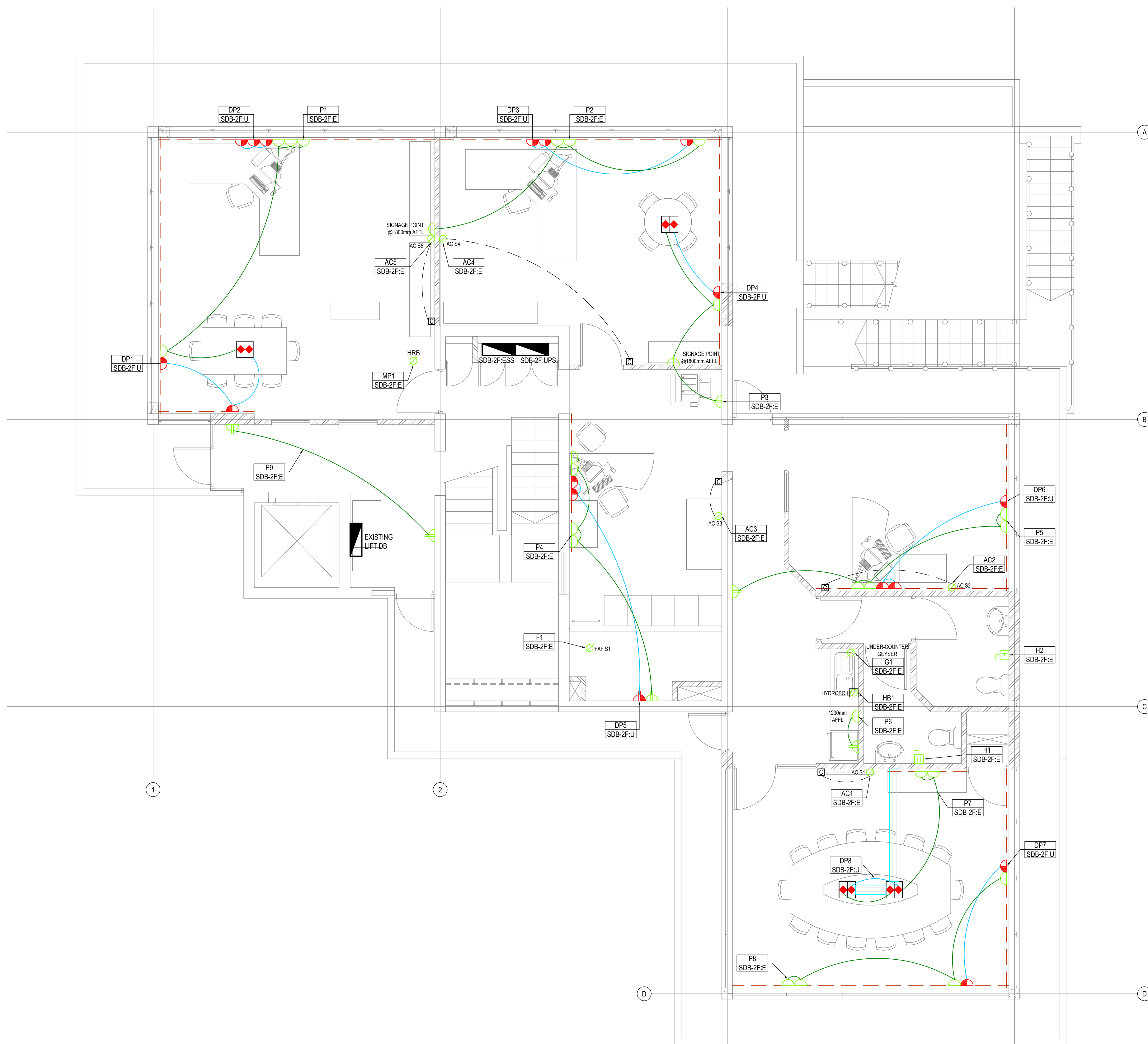
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DRAWING: 32442.00-300-02

APPROVED PORT ENGINEER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ELECTRICAL MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED MANAGER CIVIL MAINTENANCE DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED PORT FACILITIES MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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FOR TENDER

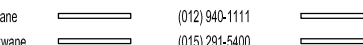
NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	Rev. CODE	REVISION DESCRIPTION	CLIENT	PROVINCE	OFFICE	EMAIL	PROJECT	APPROVED BY BVI
	CITY ENGINEER / CLIENT REG. NO. _____ DATE _____	2021/11/18	W.B	T.O.D	FOR TENDER PURPOSES		Gauteng	Tshwane	(012) 945-1111	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT ENGINEER/TECHNOLOGIST 20080282 18 November 2021
	AMENDMENTS CODE A: BY CLIENT B: BY ARCHITECT C: BY MECHANICAL OR ELECTRICAL D: BY BIA E: BY OTHER						Free State	Pretoria	(012) 251-5400	DRAWING TITLE	SCALE: 1:50 @ A1 DESIGNED: GH CHECKED: GH
							Northern Cape	Upington	(053) 535-4569	FIRST FLOOR RENOVATIONS: POWER LAYOUT	PLAN NUMBER: 32442.00-370-02 REVISION NO.: T0 DATE SAVED: 18 November 2021
							KwaZulu Natal	Durban	(031) 266-6362		
							Eastern Cape	Port Elizabeth	(041) 374-5453		
							Western Cape	Cape Town	(021) 527-7000		

NOTE - HYDROBOIL INSTALLATION:
FLUSH MOUNTED 25A ISOLATOR FOR HYDROBOIL, MOUNTED IN 100x100mm BOX. FLUSHED WALL BELOW SINK COMPLETE WITH CONDUIT TO 60mm ROUND BOX
AT 1250mm AFFL. HYDROBOIL SUPPLY AND CONNECT BY OTHERS.



APPROVED _____ PORT ENGINEER _____ DATE APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED _____ ELECTRICAL MANAGER _____ DATE APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED _____ MANAGER CIVIL MAINTENANCE _____ DATE APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED _____ PORT FACILITIES MANAGER _____ DATE APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT			DATE	INITIAL	No./CODE	REVISION DESCRIPTION	CLIENT	PROJECT				APPROVED BY BVI								
				2021/11/18	W.B	T/D	FOR TENDER PURPOSES	 TRANSNET 	 bvi INCORPORATING  basil nair and associates ENGINEERING PROCUREMENT MANAGEMENT consulting mechanical engineers 	PROVINCE Tobacco Free State Northern Cape KwaZulu-Natal Eastern Cape Western Cape OFFICE Toluenes Parkview Bloemfontein Walcott Ungweni Springside Durban Engageville Port Elizabeth East London Cape Town PHONE (012) 944-1111 (010) 291-5400 (051) 447-2137 (051) 553-5469 (084) 337-4900 (027) 713-3034 (031) 298-6382 (030) 772-8112 (041) 373-4343 (043) 733-3889 (021) 527-7000 E-MAIL psa@bvi.co.za psa@bvi.co.za tsa@bvi.co.za eng@bvi.co.za eng@bvi.co.za sa@bvi.co.za dsa@bvi.co.za eng@bvi.co.za trn@bvi.co.za bln@bvi.co.za cap@bvi.co.za				PROJECT RICHARDS BAY - PORT CONTROL TOWER DRAWING TITLE SECOND FLOOR RENOVATIONS: POWER LAYOUT				APPROVED BY BVI G. HALBERSTADT 20080282 18 November 2021 ENGINEER/TECHNOLOGIST REG. NO. DATE			
	CITY ENGINEER / CLIENT	REG. NO.	DATE																		
	AMENDMENTS CODE																				
A.B.C. / : BEFORE TENDER 0 / : TENDER DRAWING 1,2,3. / : AFTER TENDER 2 / : AS BUILT	J.A. BY CLIENT B. BY ARCHITECT C. BY MECHANICAL OR ELECTRICAL D. BY BVI E. BY OTHER																				

NOTE - HYDROBOIL INSTALLATION:
FLUSH MOUNTED 25A ISOLATOR FOR HYDROBOIL, MOUNTED IN 100x100mm BOX. FLUSHED WALL BELOW SINK COMPLETE WITH CONDUIT TO 60mm ROUND BOX
AT 1250mm AFFL. HYDROBOIL SUPPLY AND CONNECT BY OTHERS.

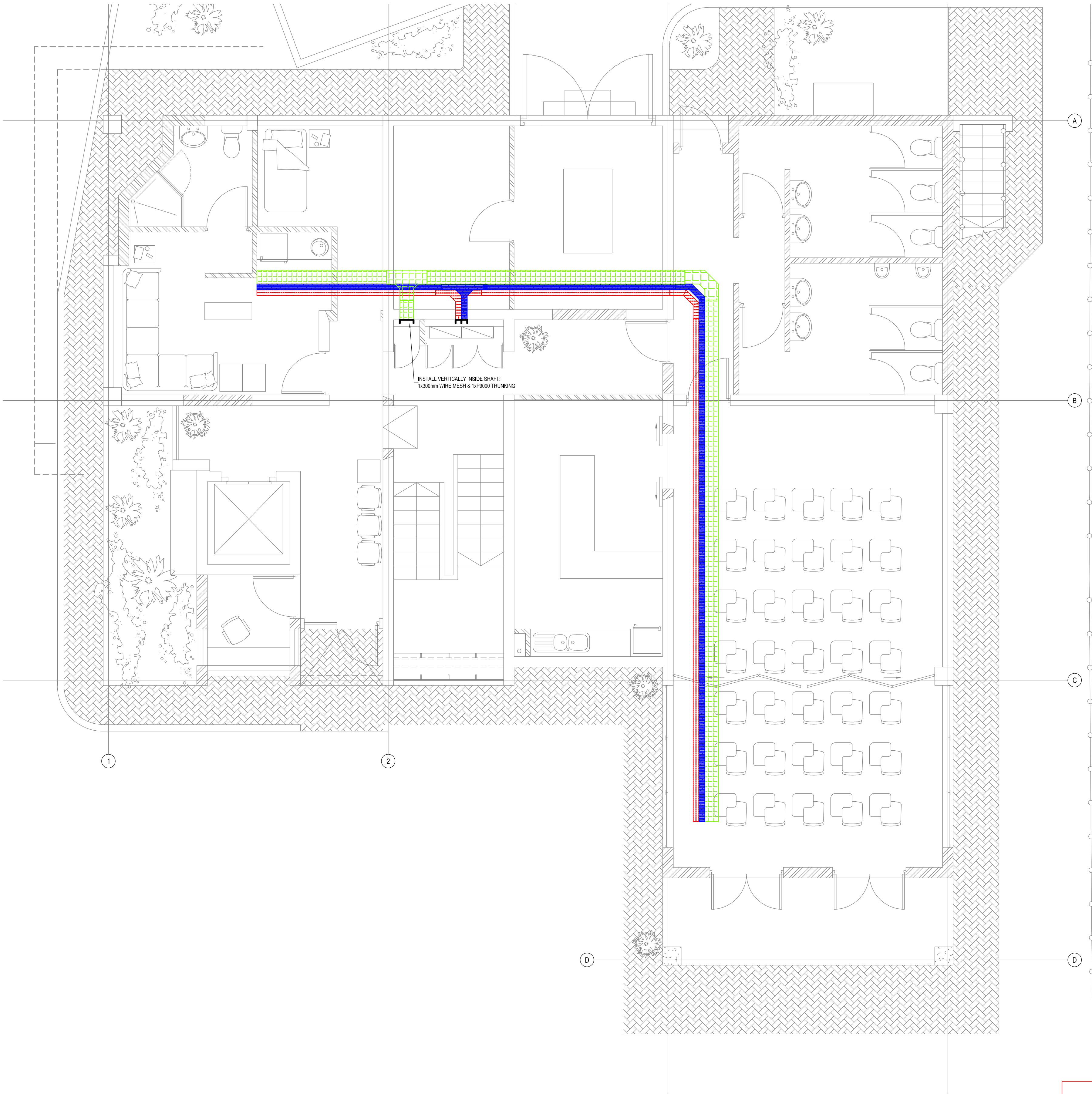
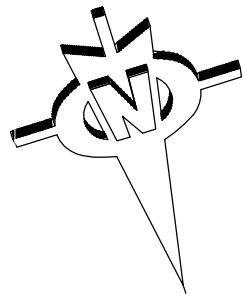


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FOR TENDER



TYPE	CONTAINMENT LEGEND SPECIFICATIONS
	CABLE LADDER, 100mm FOR POWER CABLES. (SIZE UNLESS OTHERWISE STATED)
	GALVANIZED WIRING TRUNKING, P9000 FOR ELECTRICAL SERVICES: ESSENTIAL CIRCUITS. (SIZE UNLESS OTHERWISE STATED)
	GALVANIZED WIRING TRUNKING, P9000 FOR ELECTRICAL SERVICES: UPS CIRCUITS (SIZE UNLESS OTHERWISE STATED)
	WIRE MESH CABLE TRAY, 300mm FOR ELECTRONIC SERVICES: IT & COMMUNICATIONS. (SIZE UNLESS OTHERWISE STATED)
	WIRE MESH CABLE TRAY, 400mm FOR ELECTRONIC SERVICES: IT & COMMUNICATIONS. (SIZE UNLESS OTHERWISE STATED)

NOTE: ALL CABLE WIREWAYS TO BE CORRECTLY EARTHED AND BONDED

APPROVED

PORT ENGINEER

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APPROVED

ELECTRICAL MANAGER

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APPROVED

MANAGER
CIVIL MAINTENANCE

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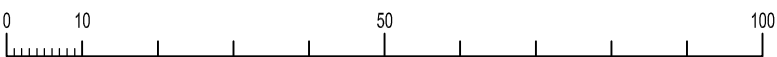
PORT FACILITIES MANAGER

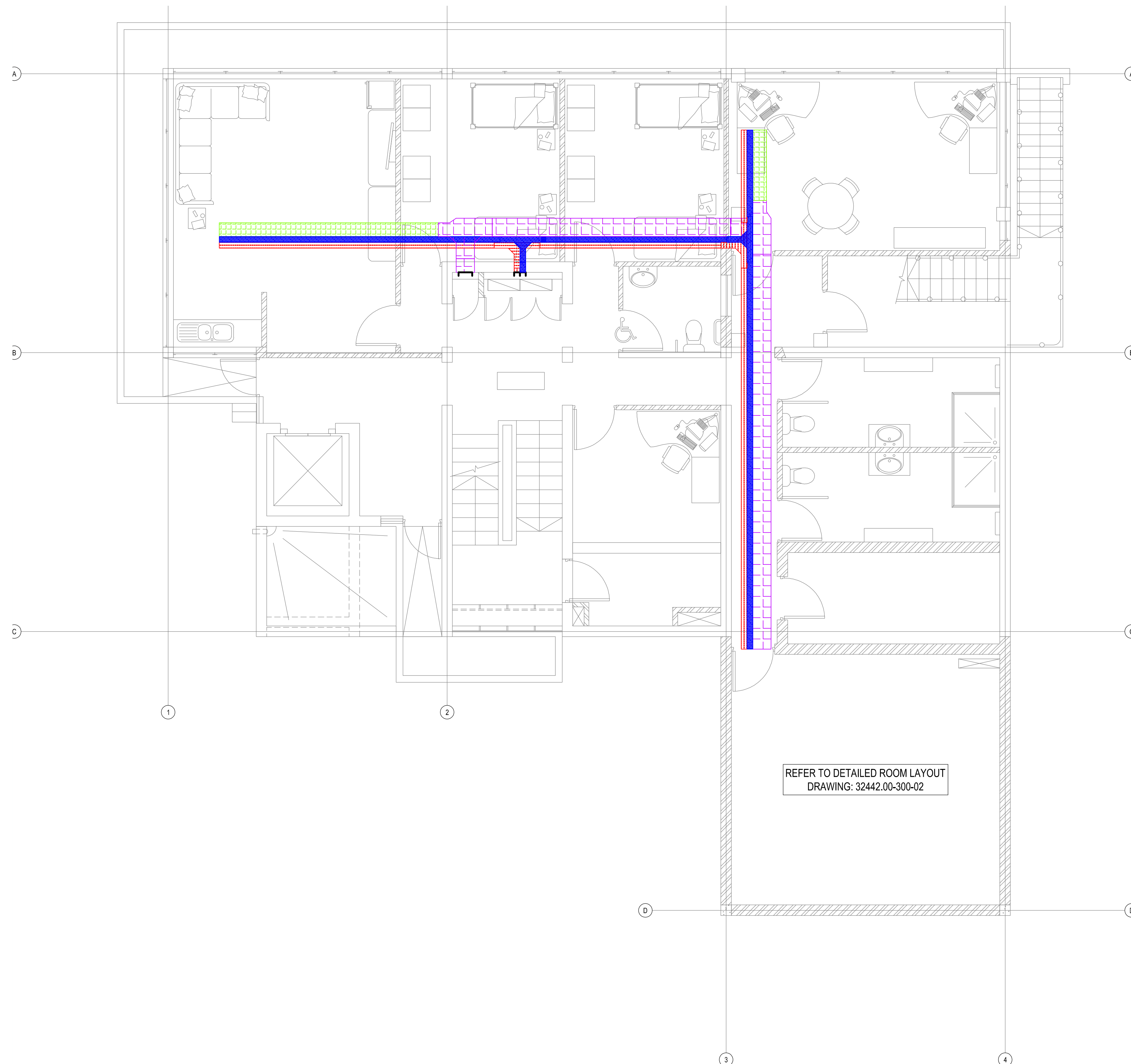
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	CITY ENGINEER / CLIENT	2021/11/18	W.B	T/D	FOR TENDER PURPOSES		Gauteng	Tshwane	(012) 945-1111	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT
	REG. NO.						Free State	Pretoria	(012) 251-5400		20080282
	AMENDMENTS CODE						North West	Bloubaan	(018) 442-1237		18 November 2021
A: BY CLIENT							Western Cape	Worcester	(053) 553-4569	SCALE	1:50 @ A1
0 : / -TENDER DRAWING							Eastern Cape	Upington	(054) 337-4800	DESIGNED	GH
1,2,3,4 : / -AFTER TENDER							Free State	Springbok	(053) 715-3814	CHECKED	WB
Z : / -AS BUILT							North West	Orkney	(018) 266-6382	PLAN NUMBER	32442.00-377-01
							Free State	Port Elizabeth	(041) 374-5453	REVISION NO.	T0
							Western Cape	East London	(043) 735-3869	DATE SAVED	18 November 2021
								Cape Town	(021) 527-7000		





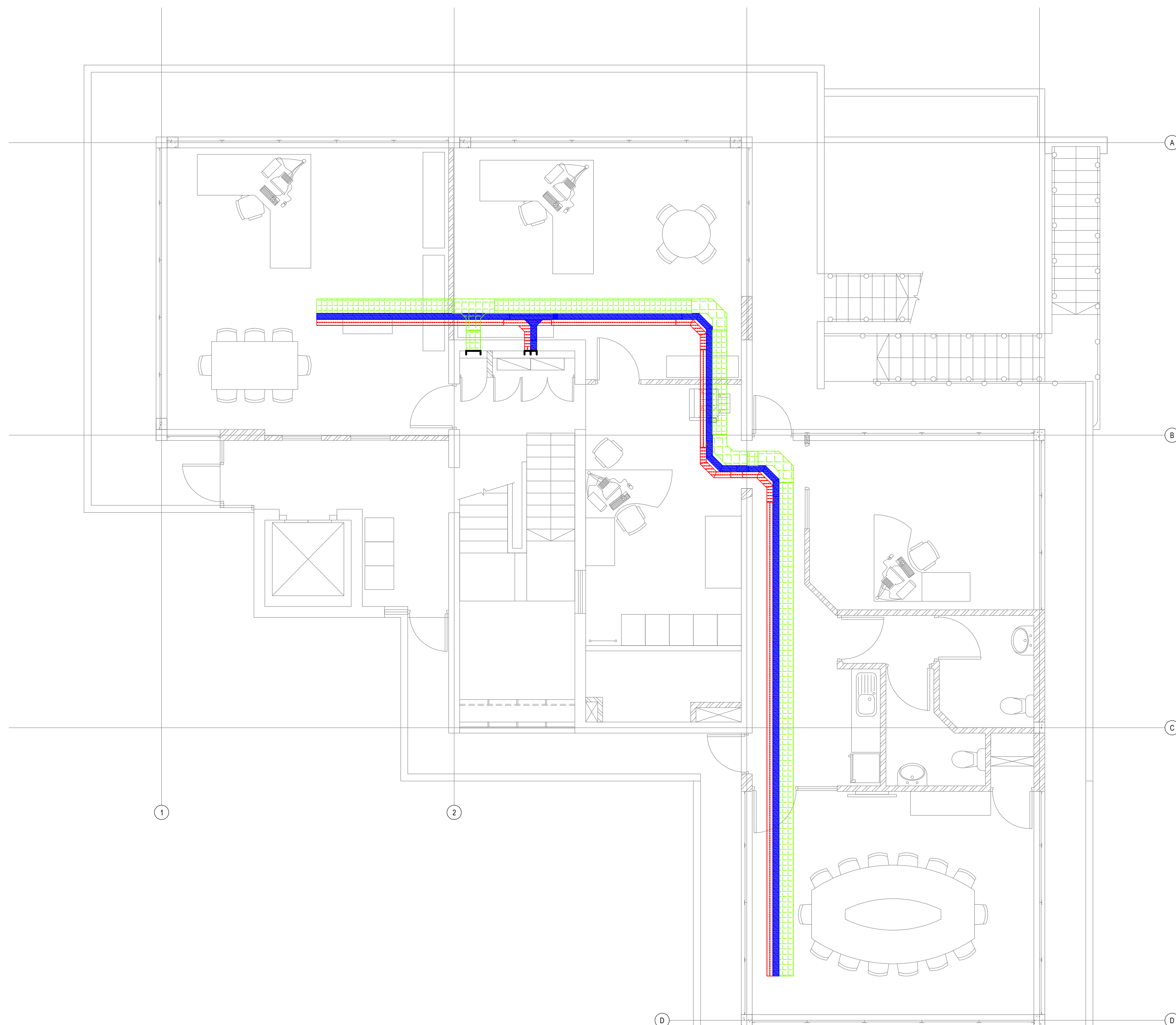
NOTE: ALL CABLE WIREWAYS TO BE CORRECTLY EARTHED AND BONDED

REFER TO DETAILED ROOM LAYOUT
DRAWING: 32442.00-300-02

APPROVED ----- PORT ENGINEER DATE ----- APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- ELECTRICAL MANAGER DATE ----- APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- MANAGER CIVIL MAINTENANCE DATE ----- APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ----- PORT FACILITIES MANAGER DATE ----- APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	No./CODE	REVISION DESCRIPTION	CLIENT	PROJECT				APPROVED BY BVI			
		2021/11/18	W.B	T/D/D	FOR TENDER PURPOSES	   	PROVINCE Gauteng Free State Northern Cape KwaZulu Natal Eastern Cape Western Cape OFFICE Tlokweng Puduvane Bonheidein Walcott Ungweni Springs Durban Engeneni Port Elizabeth East London Cape Town (012) 945-1111 (015) 291-5400 (014) 447-2137 (027) 552-2499 (054) 337-4800 (031) 712-8194 (031) 298-6382 (035) 772-8112 (041) 373-4343 (042) 735-3889 (021) 521-7000 EMAIL gauteng@bvi.co.za fs@bvi.co.za ts@bvi.co.za wn@bvi.co.za eng@bvi.co.za kn@bvi.co.za dur@bvi.co.za eng@bvi.co.za pe@bvi.co.za el@bvi.co.za ct@bvi.co.za				G. HALBERSTADT ENGINEER/TECHNOLOGIST 20080282 18 November 2021			
	CITY ENGINEER / CLIENT REG. NO. DATE						DRAWING TITLE				SCALE 1:50 @ A1 DRAWN WB CHECKED GH DATE SAVED			
	AMENDMENTS CODE						FIRST FLOOR RENOVATIONS: CONTAINMENT LAYOUT				PLAN NUMBER REVISION NO. DATE SAVED			
	A,B,C,1 : BEFORE TENDER 0 : TENDER DRAWING 123,1 : AFTER TENDER Z : AS BUILT IA : BY CLIENT IB : BY ARCHITECT IC : BY MECHANICAL OR ELECTRICAL ID : BY BVI IE : BY OTHER										32442.00-377-02 T0 18 November 2021			

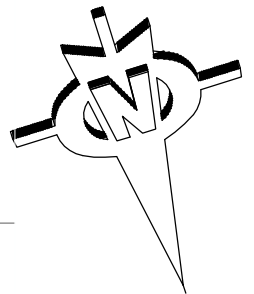


NOTE: ALL CABLE WIREWAYS TO BE CORRECTLY EARTHED AND BONDED

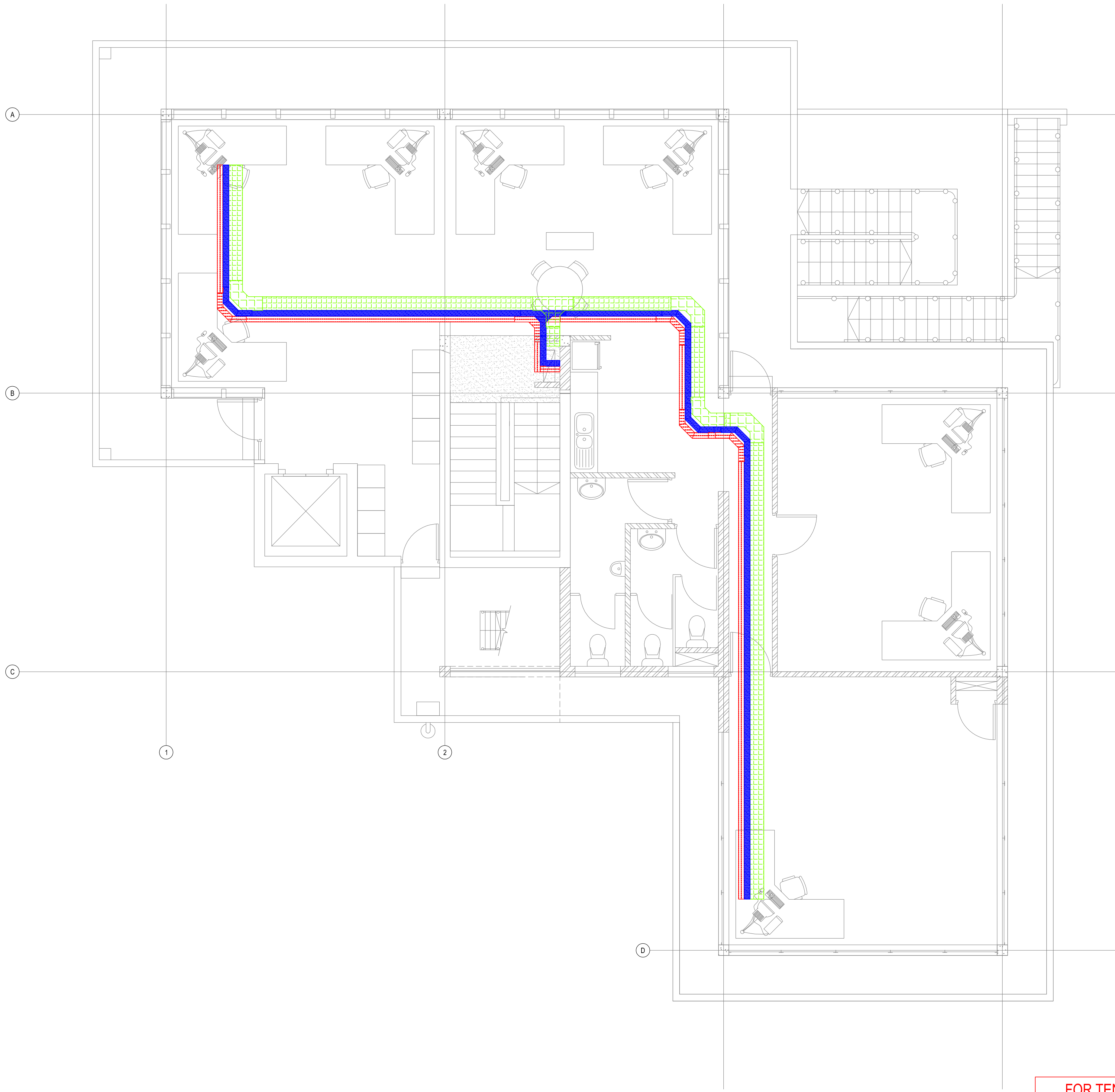
APPROVED _____ PORT ENGINEER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED _____ ELECTRICAL MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED _____ MANAGER CIVIL MAINTENANCE DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED _____ PORT FACILITIES MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT			DATE	INITIAL	No./CODE	REVISION DESCRIPTION	CLIENT	PROJECT				APPROVED BY BVI			
				2021/11/18	W.B	T/D/D	FOR TENDER PURPOSES	TRANSNET bvi national ports authority INCORPORATING basil nair and associates ENGINEERING PROCUREMENT MANAGEMENT consulting mechanical engineers CESA CONSTRUCTION ENGINEERING SOUTH AFRICA	RICHARDS BAY - PORT CONTROL TOWER				G. HALBERSTADT ENGINEER/TECHNOLOGIST 20080282 18 November 2021			
	CITY ENGINEER / CLIENT	REG. NO.	DATE						DRAWING TITLE				SCALE 1:50 @ A1 DRAWN WB CHECKED GH			
	AMENDMENTS CODE								SECOND FLOOR RENOVATIONS: CONTAINMENT LAYOUT				PLAN NUMBER 32442.00-377-03			
	A.B.C. : BEFORE TENDER 0 : TENDER DRAWING 1,2,3 : AFTER TENDER Z : AS BUILT												REVISION NO. T0 DATE SAVED 18 November 2021			
	JA: BY CLIENT IB: BY ARCHITECT IC: BY MECHANICAL OR ELECTRICAL D: BY BVI E: BY OTHER															



TYPE	CONTAINMENT LEGEND SPECIFICATIONS
	CABLE LADDER, 100mm FOR POWER CABLES. (SIZE UNLESS OTHERWISE STATED)
	GALVANIZED WIRING TRUNKING, P9000 FOR ELECTRICAL SERVICES: ESSENTIAL CIRCUITS. (SIZE UNLESS OTHERWISE STATED)
	GALVANIZED WIRING TRUNKING, P9000 FOR ELECTRICAL SERVICES: UPS CIRCUITS (SIZE UNLESS OTHERWISE STATED)
	WIRE MESH CABLE TRAY, 300mm FOR ELECTRONIC SERVICES: IT & COMMUNICATIONS. (SIZE UNLESS OTHERWISE STATED)
	WIRE MESH CABLE TRAY, 400mm FOR ELECTRONIC SERVICES: IT & COMMUNICATIONS. (SIZE UNLESS OTHERWISE STATED)



APPROVED PORT ENGINEER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED ELECTRICAL MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED MANAGER CIVIL MAINTENANCE DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES	APPROVED PORT FACILITIES MANAGER DATE _____ APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES
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FOR TENDER

NOTES / LEGEND

APPROVED BY COUNCIL / CLIENT

DATE 2021/11/18 INITIAL W.B. T.O.D. FOR TENDER PURPOSES

CITY ENGINEER / CLIENT REG. NO. DATE

AMENDMENTS CODE

A.S.C. / : BEFORE TENDER
0 / : TENDER DRAWING
1,2,3,4 / : AFTER TENDER
Z / : AS BUILT

A: BY CLIENT
B: BY ARCHITECT
C: BY MECHANICAL OR ELECTRICAL
D: BY BIA
E: BY OTHER ()

CLIENT

national ports authority

INCORPORATING

bvi
ENGINEERING
PROCUREMENT
MANAGEMENT

basil nair
and associates
consulting mechanical engineers

CESA

PROVINCE

Gauteng
Free State
Northern Cape
KwaZulu Natal
Eastern Cape
Western Cape

OFFICE

Tshwane
Pretoria
Bloemfontein
Worcester
Springbok
Durban
Empangeni
Port Elizabeth
East London
Cape Town

(012) 945-1111
(015) 291-5400
(051) 442-1237
(051) 553-4569
(054) 337-4800
(021) 715-3814
(031) 266-6362
(035) 715-4112
(041) 317-5453
(043) 735-3859
(021) 527-7000

EMAIL

gpa@ngp.co.za
jhb@nrc.co.za
bfb@nrc.co.za
wfb@nrc.co.za
sp@nrc.co.za
kna@nrc.co.za
dca@nrc.co.za
emp@nrc.co.za
pob@nrc.co.za
ela@nrc.co.za
cpt@nrc.co.za

PROJECT

RICHARDS BAY -
PORT CONTROL TOWER

DRAWING TITLE

THIRD FLOOR RENOVATIONS:
CONTAINMENT LAYOUT

APPROVED BY BVI

G. HALBERSTADT
ENGINEER/TECHNOLOGIST
20080282
18 November 2021

SCALE 1:50 @ A1

DESIGNED GH

PLAN NUMBER 32442.00-377-04

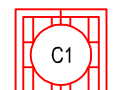
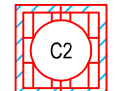
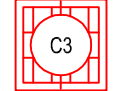
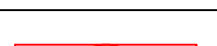
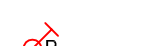
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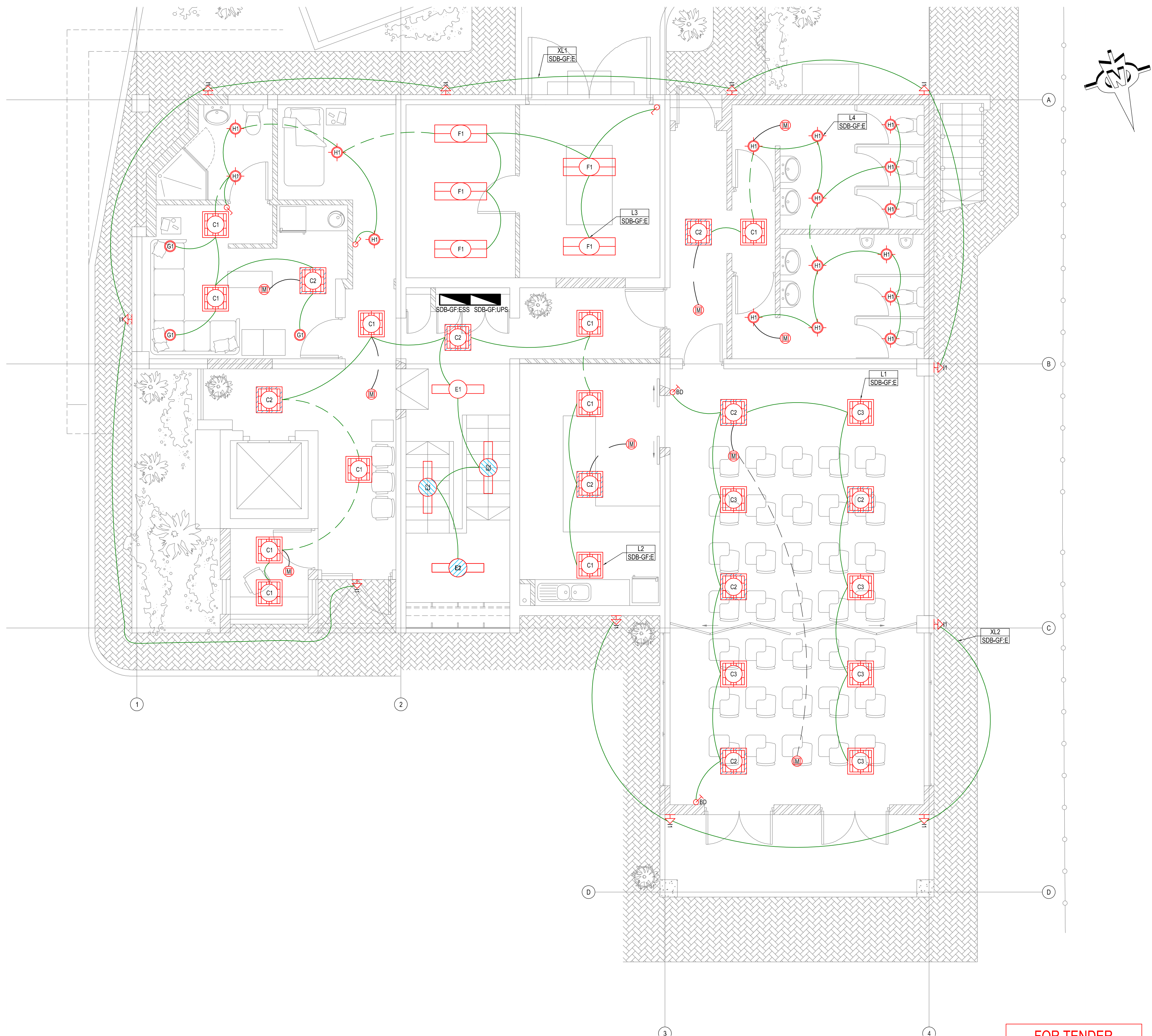
CHECKED GH

REVISION NO. T0

DATE SAVED 18 November 2021



TYPE	LIGHTING LEGEND SPECIFICATIONS	MOUNTING TYPE / HEIGHT
	TYPE C1: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS. COLOUR: WHITE.	CEILING
	TYPE C2: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS INCLUDING DALI DIMMABLE BALLASTS AND 1 HOUR BATTERY BACK UP PACKS. COLOUR: WHITE.	CEILING
	TYPE C3: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS INCLUDING DALI DIMMABLE BALLASTS. COLOUR: WHITE.	CEILING
	TYPE E1: 1200mm SURFACE MOUNT LED LUMINAIRE COMPLETE WITH 32W LED LAMP, 4000K @ 700mA - 2984 LUMENS. COLOUR: WHITE.	SURFACE
	TYPE E2: 1200mm SURFACE MOUNT LED LUMINAIRE INCLUDING 1 HOUR BATTERY BACK UP PACK, COMPLETE WITH 32W LED LAMP, 4000K @ 700mA - 2984 LUMENS. COLOUR: WHITE.	SURFACE
	TYPE F1: 1310mm x 172mm SURFACE MOUNT VAPOUR / WEATHER PROOF 53W LED LUMINAIRE RATED AT 4000K @ 500mA - 5385 LUMENS. IP65 RATED.	SURFACE
	TYPE G1: RECESSED DOWNLIGHT WITH 10W LED LAMP, 3100K @ 500mA - 865 LUMENS INCLUDING ECG. COLOUR: WHITE.	CEILING
	TYPE H1: RECESSED 240mm ROUND LUMINAIRE - 16W LED, 4000K - 1100 LUMENS. ULTRA THIN 13mm THICKNESS. COLOUR: WHITE.	CEILING
	TYPE I1: WALL MOUNTED RECTANGULAR BULKHEAD WITH EYELID. 18W LED FITTING RATED AT 4000K @ 700mA - 1450 LUMENS. COLOUR: BLACK.	WALL - EXTERNAL
	DALI OCCUPANCY SENSOR.	CEILING
	1 LEVER LIGHT SWITCH MOUNTED 1400mm AFFL. DALI	WALL
	DALI DIMMER CONTROL SWITCH MOUNTED 1400mm AFFL.	WALL
	ROTARY DALI LIGHTING DIMMER CONTROL SWITCH MOUNTED 1400mm AFFL.	WALL
	PHOTOCELL MOUNTED 2000mm AFFL.	WALL



APPROVED

PORT ENGINEER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

ELECTRICAL MANAGER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

MANAGER
CIVIL MAINTENANCE

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

PORT FACILITIES MANAGER

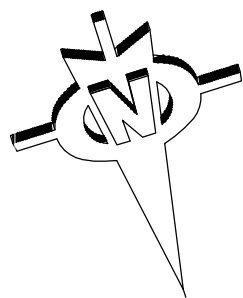
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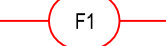
APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	No. CODE	REVISION DESCRIPTION	CLIENT	PROVINCE	OFFICE	EAWL	PROJECT	APPROVED BY BWA
	CITY ENGINEER / CLIENT REG. NO. DATE	2021/11/18	W.B	T/D	FOR TENDER PURPOSES	TRANSNET national ports authority	Gauteng	Tshwane	(012) 945-1111	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT ENGINEER/TECHNOLOGIST
	AMENDMENTS CODE						Free State	Pretoria	(015) 291-5400		20080282
A.B.C./ : BEFORE TENDER	A: BY CLIENT						North West	Bloubaai	(018) 442-1237		18 November 2021
1./ : AFTER TENDER	B: BY ARCHITECT						Western Cape	Worcester	(053) 553-4569		DATE
2./ : AS BUILT	C: BY MECHANICAL OR ELECTRICAL						Eastern Cape	Upington	(054) 337-4800		SCALE: 1:50 @ A1
	D: BY BIA						Western Cape	Springbok	(027) 715-3814		DRAWN: WB
	E: BY OTHER						Western Cape	Orkney	(021) 266-6362		CHECKED: GH
							Western Cape	Port Elizabeth	(020) 774-0112		DESIGNED: GH
							Western Cape	Cape Town	(021) 527-7000		PLAN NUMBER: 32442.00-380-01
											REVISION NO.: T0
											DATE SAVED: 18 November 2021

0 10 50 100



TYPE	LIGHTING LEGEND SPECIFICATIONS	MOUNTING TYPE / HEIGHT
	TYPE C1: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS. COLOUR: WHITE.	CEILING
	TYPE C2: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS INCLUDING DALI DIMMABLE BALLASTS AND 1 HOUR BATTERY BACK UP PACKS. COLOUR: WHITE.	CEILING
	TYPE C3: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS INCLUDING DALI DIMMABLE BALLASTS. COLOUR: WHITE.	CEILING
	TYPE E1: 1200mm SURFACE MOUNT LED LUMINAIRE COMPLETE WITH 32W LED LAMP, 4000K @ 700mA - 2984 LUMENS. COLOUR: WHITE.	SURFACE
	TYPE E2: 1200mm SURFACE MOUNT LED LUMINAIRE INCLUDING 1 HOUR BATTERY BACK UP PACK, COMPLETE WITH 32W LED LAMP, 4000K @ 700mA - 2984 LUMENS. COLOUR: WHITE.	SURFACE
	TYPE F1: 1310mm x 172mm SURFACE MOUNT VAPOUR / WEATHER PROOF 53W LED LUMINAIRE RATED AT 4000K @ 500mA - 5385 LUMENS. IP65 RATED.	SURFACE
	TYPE G1: RECESSED DOWNLIGHT WITH 10W LED LAMP, 3100K @ 500mA - 865 LUMENS INCLUDING ECG. COLOUR: WHITE.	CEILING
	TYPE H1: RECESSED 240mm ROUND LUMINAIRE - 16W LED, 4000K - 1100 LUMENS. ULTRA THIN 13mm THICKNESS. COLOUR: WHITE.	CEILING
	TYPE H1: WALL MOUNTED RECTANGULAR BULKHEAD WITH EYELID. 18W LED FITTING RATED AT 4000K @ 700mA - 1450 LUMENS. COLOUR: BLACK.	WALL - EXTERNAL
	DALI OCCUPANCY SENSOR.	CEILING
	1 LEVER LIGHT SWITCH MOUNTED 1400mm AFFL. DALI	WALL
	DALI DIMMER CONTROL SWITCH MOUNTED 1400mm AFFL.	WALL
	ROTARY DALI LIGHTING DIMMER CONTROL SWITCH MOUNTED 1400mm AFFL.	WALL
	PHOTOCELL MOUNTED 2000mm AFFL.	WALL



APPROVED

PORT ENGINEER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

ELECTRICAL MANAGER

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

MANAGER
CIVIL MAINTENANCE

DATE _____

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

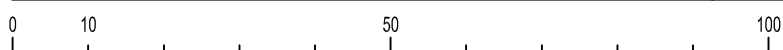
PORT FACILITIES MANAGER

DATE _____

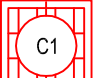
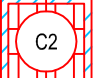
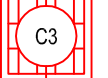
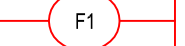
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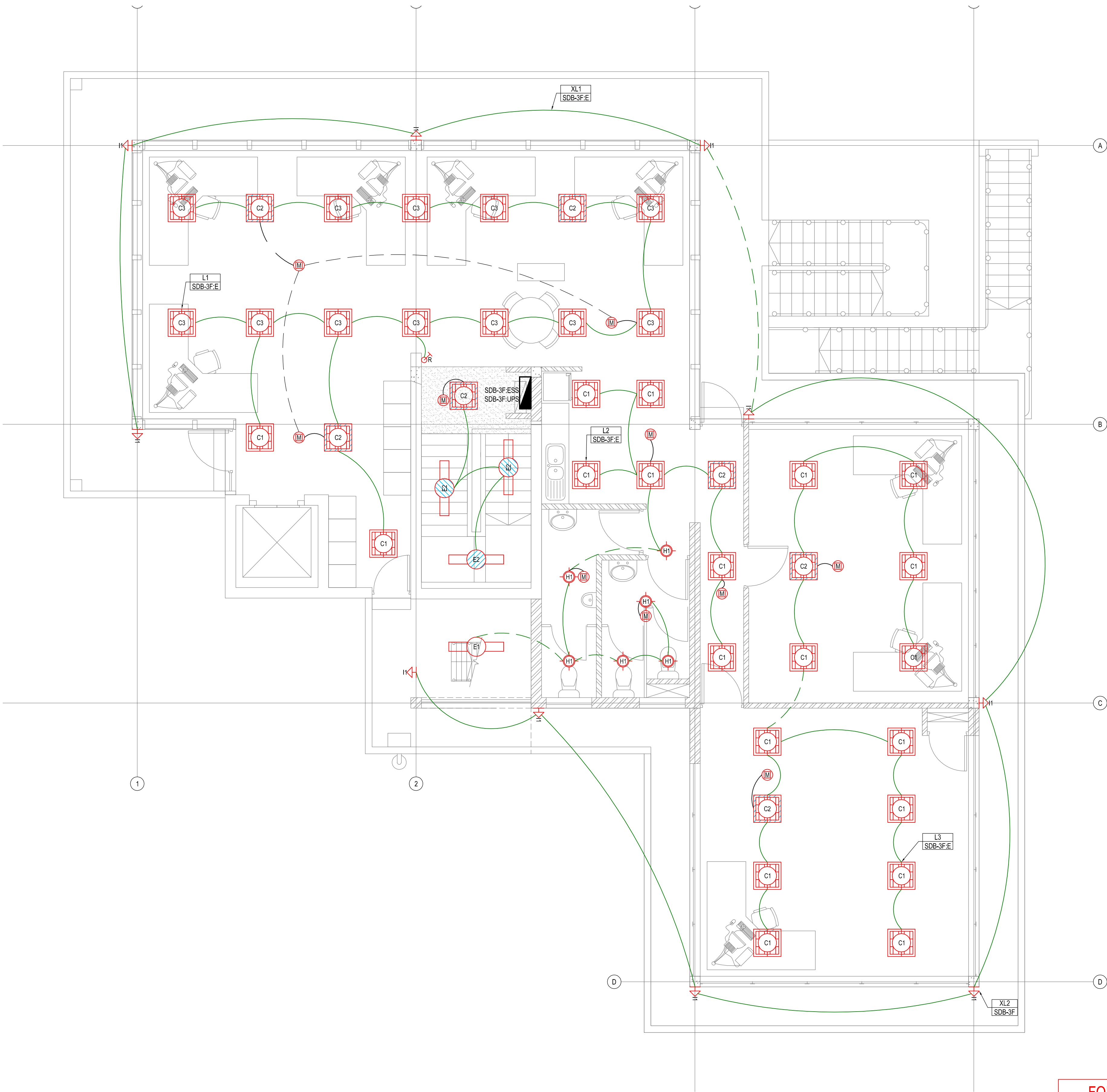
FOR TENDER

NOTES / LEGEND	APPROVED BY COUNCIL / CLIENT	DATE	INITIAL	Rev. CODE	REVISION DESCRIPTION	CLIENT	PROVINCE				PROJECT	APPROVED BY BVI		
	CITY ENGINEER / CLIENT REG. NO. DATE	2021/11/18	W.B	T/D	FOR TENDER PURPOSES		Gauteng	Office	(012) 945-1111	prg@nrc.co.za	RICHARDS BAY - PORT CONTROL TOWER	G. HALBERSTADT	20080282	18 November 2021
	AMENDMENTS CODE A,B,C, /: BEFORE TENDER 0: /: TENDER DRAWING 1,2,3,4: /: AFTER TENDER Z: /: AS BUILT					Free State	Polokwane	(015) 291-5400	jhb@nrc.co.za	ENGINEER/TECHNOLOGIST		REG. NO.	DATE	
						Western Cape	Bloemfontein	(051) 942-1237	wfb@nrc.co.za	SCALE: 1:50 @ A1		DRAWN	WB	
						Northern Cape	Upington	(054) 337-4800	up@nrc.co.za	DESIGNED: GH		CHECKED: GH		
						KwaZulu Natal	Springbok	(027) 715-3814	sp@nrc.co.za	PLAN NUMBER		REVISION NO.	DATE SAVED	
						Durban	Durban	(031) 266-6362	dur@nrc.co.za	32442.00-380-02		T0	18 November 2021	
						Eastern Cape	East London	(033) 715-4112	eng@nrc.co.za					
						Western Cape	Cape Town	(021) 527-7000	cpt@nrc.co.za					



FOR TENDER

TYPE	LIGHTING LEGEND SPECIFICATIONS	MOUNTING TYPE / HEIGHT
	TYPE C1: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS. COLOUR: WHITE.	CEILING
	TYPE C2: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS INCLUDING DALI DIMMABLE BALLASTS AND 1 HOUR BATTERY BACK UP PACKS. COLOUR: WHITE.	CEILING
	TYPE C3: 600mmx600mm RECESSED LUMINAIRE: 40W LED LAMP, 4000K @ 1050mA - 3251 LUMENS INCLUDING DALI DIMMABLE BALLASTS. COLOUR: WHITE.	CEILING
	TYPE E1: 1200mm SURFACE MOUNT LED LUMINAIRE COMPLETE WITH 32W LED LAMP, 4000K @ 700mA - 2984 LUMENS. COLOUR: WHITE.	SURFACE
	TYPE E2: 1200mm SURFACE MOUNT LED LUMINAIRE INCLUDING 1 HOUR BATTERY BACK UP PACK, COMPLETE WITH 32W LED LAMP, 4000K @ 700mA - 2984 LUMENS. COLOUR: WHITE.	SURFACE
	TYPE F1: 1310mm x 172mm SURFACE MOUNT VAPOUR / WEATHER PROOF 53W LED LUMINAIRE RATED AT 4000K @ 500mA - 5385 LUMENS. IP65 RATED.	SURFACE
	TYPE G1: RECESSED DOWNLIGHT WITH 10W LED LAMP, 3100K @ 500mA - 865 LUMENS INCLUDING ECG. COLOUR: WHITE.	CEILING
	TYPE H1: RECESSED 240mm ROUND LUMINAIRE - 16W LED, 4000K - 1100 LUMENS. ULTRA THIN 13mm THICKNESS. COLOUR: WHITE.	CEILING
	TYPE H1: WALL MOUNTED RECTANGULAR BULKHEAD WITH EYELID. 18W LED FITTING RATED AT 4000K @ 700mA - 1450 LUMENS. COLOUR: BLACK.	WALL - EXTERNAL
	DALI OCCUPANCY SENSOR.	CEILING
	1 LEVER LIGHT SWITCH MOUNTED 1400mm AFFL. DALI	WALL
	DALI DIMMER CONTROL SWITCH MOUNTED 1400mm AFFL	WALL
	ROTARY DALI LIGHTING DIMMER CONTROL SWITCH MOUNTED 1400mm AFFL	WALL
	PHOTOCELL MOUNTED 2000mm AFFL.	WALL



APPROVED

PORT ENGINEER

DATE

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

ELECTRICAL MANAGER

DATE

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

MANAGER
CIVIL MAINTENANCE

DATE

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

APPROVED

PORT FACILITIES MANAGER

DATE

APPROVAL DOES NOT INDICATE ACCEPTANCE OF ANY RESPONSIBILITY FOR SAFETY OR ADEQUACY OF STRUCTURES

FOR TENDER

NOTES / LEGEND

APPROVED BY COUNCIL / CLIENT

DATE

INITIAL

Rev CODE

REVISION DESCRIPTION

CLIENT

TRANSNET

national ports authority

bvi

INCORPORATING

basil nair

ENGINEERING PROCUREMENT MANAGEMENT

CESA

PROVINCE

OFFICE

EMAIL

PROJECT

RICHARDS BAY - PORT CONTROL TOWER

DRAWING TITLE

THIRD FLOOR RENOVATIONS: LIGHTING LAYOUT

APPROVED BY BVI

G. HALBERSTADT

ENGINEER/TECHNOLOGIST

20080282

18 November 2021

SCALE

1:50 @ A1

DRAWN

WB

DESIGNED

GH

CHECKED

GH

PLAN NUMBER

32442.00-380-04

REVISION NO.

T0

DATE SAVED

18 November 2021

