

MECHANICAL WORKS DRAWINGS



ELECTRICAL WORK:									
ELECTRICAL SUPPLY TO HVAC EQUIPMENT SHALL BE THROUGH A SUITABLE ISOLATOR/POWER SUPPLY POINT BY ELECTRICAL ENGINEER									
FINAL DISTRIBUTION FROM THE ISOLATOR/POWER SUPPLY POINT, INCLUDING CONTROL PANEL, BOARDS,WIRING, CONTROLLERS ETC, SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.									
ALL ELECTRICAL INSTALLATION WORK UNDERTAKEN BY THE HVAC CONTRACTOR SHALL BE DONE BY A QUALIFIED ELECTRICIAN / MASTER ELECTRICIAN AND A CERTIFICATE OF COMPLIANCE SHALL BE PROVIDED ON COMPLETION OF WORK.									
MECHANICAL WORK:									
AIR-CONDITIONING AND VENTILATION SYSTEM SHALL COMPLY WITH HVAC SPECIFICATION (TPD: 005-1-HVAC).									
AC OUTDOOR UNITS SHALL BE PROVIDED WITH WATER PROOF ISOLATORS.									
ALL DRAIN PIPES SHALL BE CONNECTED TO THE NEAREST DRAIN POINT.									
BUILDERS WORK:									
AC CONTRACTOR MUST MARK UP ON SITE PRIOR TO INSTALLATION FOR CORING OF HOLES FOR DRAINAGE, REFRIGERANT PIPES, HVAC DUCT, WALL LOUVRE INSTALLATION, FAN INSTALLATION AND ELECTRICAL CONDUIT.									

BC SCHEDULE				AIR CONDITIONING UNIT SCHEDULE							
BC REF.	QUANTITY	UNIT REF.	UNIT REF.	QUANTITY	DESCRIPTION	MODEL	AIR QTY (L/s)	CAPACITY		POWER REQUIREMENTS	
BC-03	1	*GF-E-13						COOLING (kW)	HEATING (kW)	(V/Ph/Hz)	ABSORBED (kW)
		*GF-E-14a	*GF-E-13	1	IN-CEILING DUCTED UNIT		220	9	10	220-240/1/50	0.6
		*GF-E-14b	*GF-E-14a	1	4-WAY CASSETTE UNIT		50	5.6	6.3	220-240/1/50	0.04
		*GF-E-14c	*GF-E-14b	1	4-WAY CASSETTE UNIT		50	5.6	6.3	220-240/1/50	0.04
		*GF-E-14d	*GF-E-14c	1	4-WAY CASSETTE UNIT		50	5.6	6.3	220-240/1/50	0.04
		ODU-G-06	*GF-E-14d	1	4-WAY CASSETTE UNIT		50	5.6	6.3	220-240/1/50	0.04
OUTDOOR UNIT REFERENCE No.											

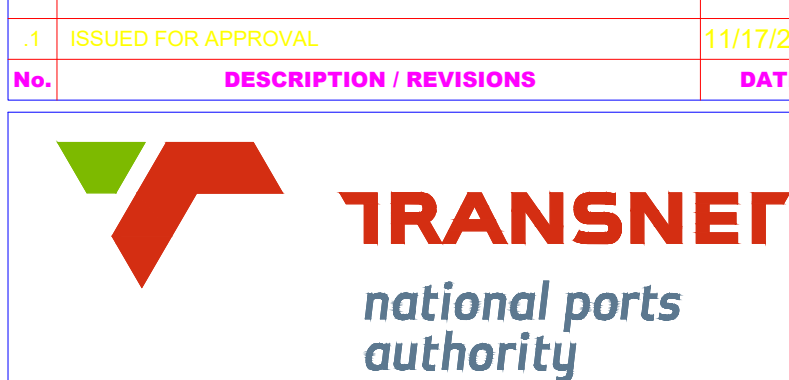
BC SCHEDULE			AIR CONDITIONING UNIT SCHEDULE									
BC REF.	QUANTITY	UNIT REF.	UNIT REF.	QUANTITY	DESCRIPTION	MODEL	AIR QTY	CAPACITY		POWER REQUIREMENTS		
BC-04	1	*GF-W-34					(l/s)	COOLING (kW)	HEATING (kW)	(V/Ph/Hz)	ABSORBED (kW)	
		*GF-W-35	*GF-W-34	1	IN-CEILING DUCTED UNIT		220	9	10	220-240/1/50	0.6	
		*GF-W-36	*GF-W-35	1	IN-CEILING DUCTED UNIT		100	9	10	220-240/1/50	0.6	
			*GF-W-36	1	4-WAY CASSETTE UNIT		75	7.1	8	220-240/1/50	0.04	
OUTDOOR UNIT REFERENCE No.		ODU-GF-FF-01										

- NOTES:**
- ALL DUCTWORK TO BE MANUFACTURED FROM GALVANISED SHEET METAL AND INSTALLED IN ACCORDANCE WITH SABS 1238 AND SABS 0172. DUCT SIZES INDICATE CLEAR INSIDE DIMENSIONS, ROUND DUCTING TO BE OF THE SPIRAL WOUND TYPE UNLESS INDICATED OTHERWISE.
 - SUPPLY AIR DUCTING, INCLUDING FLEXIBLES, TO BE EXTERNALLY INSULATED WITH 25mm FRK UNLESS OTHERWISE SHOWN. PLENUM BOXES TO BE INTERNALLY INSULATED. EXPOSED SUPPLY AIR DUCTING WITHIN THE CONDITIONED SPACE NEED NOT BE INSULATED UNLESS SPECIFICALLY REQUESTED. VENTILATION DUCTING IS NOT TO BE INSULATED UNLESS SPECIFICALLY REQUESTED. WHERE REQUIRED, INTERNAL INSULATION TO BE 25mm SONG LINER WITH ANTI-EROSION LINER. ALL INSULATION IS TO BE INSTALLED IN ACCORDANCE WITH SABS 1238.
 - FLEXIBLE DUCTING TO HAVE A CLASS 1 FIRE RATING COMPLYING WITH SABS 0177 PART 3, TO BE EUROPLEX OR EQUAL, AND TO BE LESS THAN 1.5m IN LENGTH. ENDS ARE TO BE SEALED AND FIXED WITH JUBILEE TYPE CLAMPS. FLEXIBLE DUCTING SHOWN CONNECTED TO SMALL FANS IS TO BE 1.5m LONG OF THE ACOUSTIC TYPE FOR NOISE REDUCTION.
 - DAMPERS ARE TO BE OF THE OPPOSED BLADE TYPE AND FITTED WITH A MANUAL LOCKING QUADRANT. ROUND DUCT DAMPERS ARE TO BE OF THE UNITX TYPE WITH LOCKING QUADRANTS.
 - PRIMARY FILTERS FOR FRESH AIR DIRECT FROM THE OUTSIDE ARE TO BE OF THE WP77 WASHABLE PANEL TYPE, 50mm THICK, SECONDARY FILTERS SHALL BE OF SELF-SUPPORTED POCKET FILTERS, HOUSED IN EASILY ACCESSIBLE FILTER FRAMES PROVIDED WITH SEALS BETWEEN THE FILTER AND FRAME. TEMPORARY FILTERS ARE TO BE USED DURING TESTING. A SPARE SET OF FILTERS IS TO BE SUPPLIED AT HANDOVER.
 - ALL GRILLES, DIFFUSERS AND LOUVRES ARE TO BE AS SET OUT IN THE SCHEDULES OR EQUAL AND APPROVED. FRESH AIR GRILLES TO DUCTED HIDEAWAYS ARE TO BE FITTED WITH PLENUM BOXES WHERE SHOWN THAT ARE SUITABLY SIZED TO ACCOMMODATE THE FLEXIBLE DUCT CONNECTION.
 - SOUND AND VIBRATION DEADENING EQUIPMENT IS TO BE PROVIDED WHERE INDICATED. ALL OUTDOOR SPLIT AND VRF UNITS ARE TO BE ISOLATED FROM THE STRUCTURE BY TICO PADS, OR SIMILAR. THOSE MOUNTED ON THE GROUND ARE TO BE BOLTED TO A SUITABLE SIZED (BY STRUCTURAL ENGINEERS) PAVING SLABS AND THOSE MOUNTED ON WALLS ARE TO BE FIXED TO UNISTRUT BRACKETS. SMALL TUBE AND BOX FANS ARE TO BE ISOLATED FROM THE STRUCTURE BY RUBBER MOUNTS AND FROM THE DUCTWORK BY ACOUSTIC FLEXIBLE DUCTING. ALL OTHER FANS ARE TO BE MOUNTED ON SPRING MOUNTS AND ISOLATED FROM THE DUCTWORK BY FLEXIBLE COLLARS.
 - ALL HVAC EQUIPMENT AND DUCTING TO BE HUNG AS HIGH AS POSSIBLE. THE AC CONTRACTOR IS TO LIASE WITH THE OTHER TRADES ON SITE TO CO-ORDINATE WITH THE OTHER SERVICES.
 - CONDENSATE DRAINS TO BE TRAPPED AT AC INDOOR UNITS AND RUN TO NEAREST FOUL SEWER OR CONNECTION POINT PROVIDED BY THE PLUMBER AT A FALL GREATER THAN 1:80. CONDENSATE DRAINS FROM OUTDOOR UNITS TO BE RUN TO NEAREST FULL-BORE PIPING TO BE 40mm PVC WITH 75mm CENTRES. ALL DRAINS TO BE TESTED PRIOR TO COMMISSIONING THE AIR CONDITIONING UNITS. HEAT PUMP TYPE UNITS ARE TO BE PROVIDED WITH DRAIN PANS FOR THE OUTDOOR UNITS.
 - REFRIGERATION PIPING TO BE RUN AS SHOWN ON CABLE TRAYS SUPPORTED AT 2000mm CENTRES. PIPE INSULATION TO BE ARMAFLEX AF, AT LEAST 13mm THICK, ON BOTH SUCTION AND LIQUID LINES FOR HEAT PUMPS. ALL INSULATION JOINTS TO BE GLUED AND SEALED. THE CABLE TRAY CARRYING THE REFRIGERATION PIPING IS TO BE FIXED AS HIGH AS POSSIBLE UNDER THE FLOOR SLAB/CELING VOID. PIPEWORK EXPOSED TO THE ELEMENTS IS TO BE PROTECTED BY GALVANISED STEEL COVERS. UNPROTECTED CONNECTIONS TO THE OUTDOOR UNITS MAY NOT EXCEED 900mm AND MUST BE PROTECTED WITH CANVASS WRAPPING COATED WITH FOSTER SEALFAS 30-36.
 - ALL SUPPORT STEELWORK, INCLUDING HANGER RODS AND BRACKETS MUST BE GALVANISED. STEELWORK EXPOSED TO THE ELEMENTS MUST BE HOT DIP GALVANISED AFTER ALL FABRICATION WORK IS COMPLETE. FASTENERS ARE TO BE GALVANISED AND WHERE EXPOSED TO THE ELEMENTS ARE TO BE STAINLESS STEEL. FRING SCREWS FOR GRILLES AND LOUVRES ARE TO BE STAINLESS STEEL. ALL DISSIMILAR METALS ARE TO BE GALVANICALLY ISOLATED FROM EACH OTHER BY NYLON SPACERS.
 - ALL EQUIPMENT, DUCTING AND PIPING EXPOSED TO THE ELEMENTS TO BE PAINTED. ALL OUTDOOR UNIT COILS TO BE TREATED AS FOLLOWS: VRF ARE TO BE FACTORY ACRYLIC PRECOATED AND CHROMIUM COATED ANNUALLY. OTHER UNITS ARE TO BE FACTORY CHROMATE TREATED. SPLIT UNITS ARE TO BE FACTORY ACRYLIC PRE-TREATED AND CHROMIUM COATED ANNUALLY.
 - ALL DOUBLE DOORS TO HAVE A 25mm undercut.
 - NO MORE THAN 2 DUCT JOINTS BETWEEN DUCT SUPPORTS OR A MIN OF 3m BETWEEN DUCT SUPPORTS.

SUPPORTED			
HARBOUR MASTER		FINANCIAL MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
A			
RISK MANAGER		ENVIRONMENTAL MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
B			
SECURITY MANAGER		PROPERTY MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
C			
CORPORATE AFFAIRS MANAGER		MAINTENANCE MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
D			
TRAINING MANAGER		CHIEF FIRE OFFICER	
SIGNATURE	DATE	SIGNATURE	DATE
E			

FOR PROCUREMENT

No.	DESCRIPTION / REVISIONS	DATE
1	ISSUED FOR APPROVAL	11/17/2022



PORT OF NGQURA

EMENDI BUILDING

DRAWING TITLE			
GROUND FLOOR HVAC SYSTEM FOR NEW SPACE USAGE			
DATE	11/17/2022	DESIGNED BY	ENGINEER
SCALE	1:100	SIGNED	DATE 11/17/2022
DESIGNED BY	KH	ASLAN MOHAMMED KH.201909023	
CHECKED BY	AH	SIGNATURE	DATE 11/17/2022
DRAWN BY	JOI	CLIENT	
CHECKED BY	AH	SIGNATURE	DATE
PAPER SIZE	A0+	TRANSNET DRW. NO.	SHEET REV.
CONSULTANT / CONTRACTOR DRW. NO.			

ORIGINAL PHASE 1

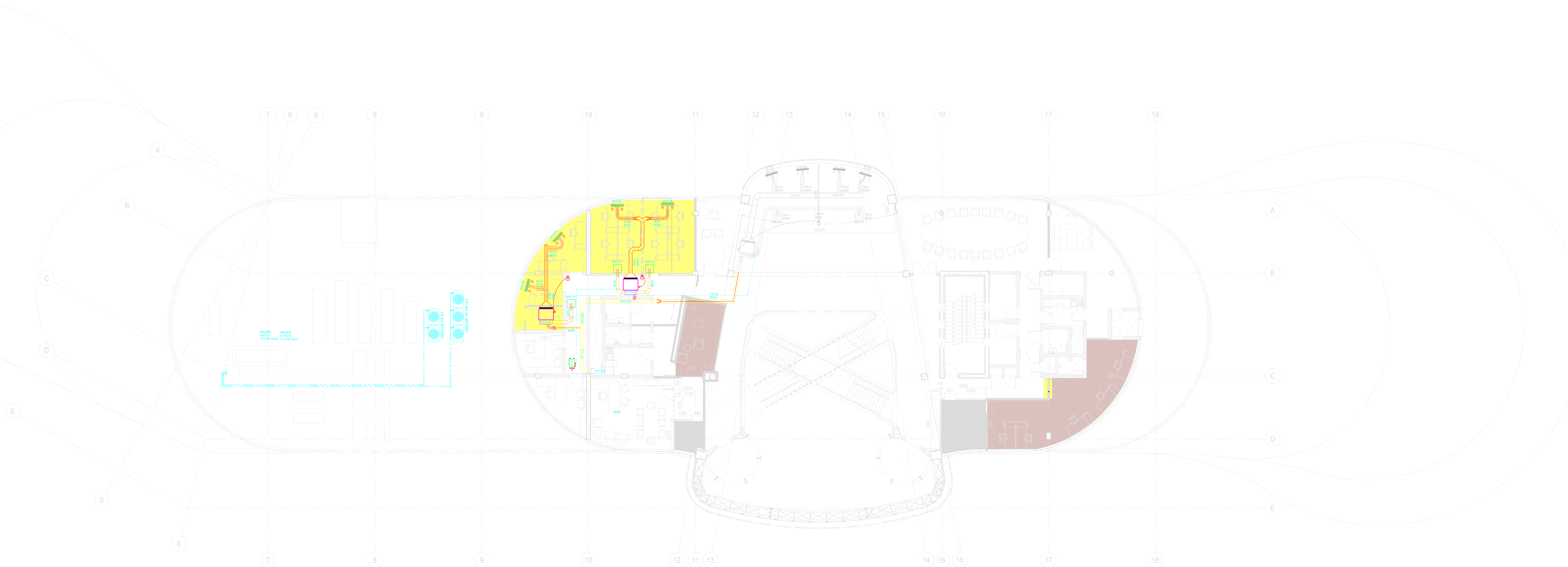
ADDENDUM TO PHASE 1

PHASE 2

ELECTRICAL WORK:	
ELECTRICAL SUPPLY TO HVAC EQUIPMENT SHALL BE THROUGH A SUITABLE ISOLATOR/POWER SUPPLY POINT BY ELECTRICAL ENGINEER	
FINAL DISTRIBUTION FROM THE ISOLATOR/POWER SUPPLY POINT, INCLUDING CONTROL PANEL, BOARDS,WIRING, CONTROLLERS ETC, SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.	
ALL ELECTRICAL INSTALLATION WORK UNDERTAKEN BY THE HVAC CONTRACTOR SHALL BE DONE BY A QUALIFIED ELECTRICIAN / MASTER ELECTRICIAN AND A CERTIFICATE OF COMPLIANCE SHALL BE PROVIDED ON COMPLETION OF WORK.	
MECHANICAL WORK:	
AIR-CONDITIONING AND VENTILATION SYSTEM SHALL COMPLY WITH HVAC SPECIFICATION (TPD: 005-1-HVAC). AC OUTDOOR UNITS SHALL BE PROVIDED WITH WATER PROOF ISOLATORS. ALL DRAIN PIPES SHALL BE CONNECTED TO THE NEAREST DRAIN POINT.	
BUILDERS WORK:	
AC CONTRACTOR MUST MARK UP ON SITE PRIOR TO INSTALLATION FOR CORING OF HOLES FOR DRAINAGE, REFRIGERANT PIPES, HVAC DUCT, WALL LOUVRE INSTALLATION, FAN INSTALLATION AND ELECTRICAL CONDUIT.	

BC SCHEDULE			AIR CONDITIONING UNIT SCHEDULE										AIR TERMINAL SCHEDULE				OUTDOOR UNIT SCHEDULE							
BC REF.	QUANTITY	UNIT REF.	UNIT REF.	QUANTITY	DESCRIPTION	MODEL	AIR QTY (L/s)	CAPACITY COOLING (kW)	HEATING (kW)	POWER REQUIREMENTS (V/Ph/Hz)	ABSORBED (kW)	GRILLE REF.	QUANTITY	DESCRIPTION	AIR QTY (L/s)	UNIT REF.	QUANTITY	DESCRIPTION	MODEL	CAPACITY COOLING (kW)/HEATING (kW)	POWER REQUIREMENTS (V/Ph/Hz)	ABSORBED (kW)		
BC-02	1	*FP-E-04	*FP-E-04	1	IN-CEILING DUCTED UNIT		40	9	10	220-240/1/50	0.6	RAG-01	2	*600x600 RETURN AIR GRILLE - Ø250 CONNECTION	70	ODU-GF-FF-01	1	*HEAT RECOVERY OUTDOOR UNIT		50 56	380-415/3/50	14.58		
		*FP-E-05	*FP-E-05	1	IN-CEILING DUCTED UNIT		66	9	10	220-240/1/50	0.6	SLD-04	4	*900 LONG SLOT DIFFUSER - Ø200 CONNECTION	78	ODU-SF-TF-FF-01	1	*HEAT RECOVERY OUTDOOR UNIT		73 81.5	380-415/3/50	20.47		
		*FP-AT-04	*FP-AT-04	1	IN-CEILING DUCTED UNIT		312	14	16	220-240/1/50	1.4	SLD-05	4	*900 LONG SLOT DIFFUSER - Ø2150 CONNECTION	34									
OUTDOOR UNIT REFERENCE No.		ODU-SF-TF-FF-01																						

- NOTES:**
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 - SUPPLY AIR DUCTING, INCLUDING FLEXIBLES, TO BE EXTERNALLY INSULATED WITH 25mm FRK UNLESS OTHERWISE SHOWN. PLENUM BOXES TO BE INTERNALLY INSULATED. EXPOSED SUPPLY AIR DUCTING WITHIN THE CONDITIONED SPACE NEED NOT BE INSULATED UNLESS SPECIFICALLY REQUESTED. VENTILATION DUCTING IS NOT TO BE INSULATED UNLESS SPECIFICALLY REQUESTED. WHERE REQUIRED, INTERNAL INSULATION TO BE 25mm SONG LINER WITH ANTI-EROSION LINER. ALL INSULATION IS TO BE INSTALLED IN ACCORDANCE WITH SABS 1235.
 - FLEXIBLE DUCTING TO HAVE A CLASS 1 FIRE RATING COMPLYING WITH SABS 9177 PART 3, TO BE EUROPLEX OR EQUAL, AND TO BE LESS THAN 1.5m IN LENGTH. ENDS ARE TO BE SEALED AND FIXED WITH JUBILEE TYPE CLAMPS. FLEXIBLE DUCTING SHOWN CONNECTED TO SMALL FANS IS TO BE 1.5m LONG OF THE ACOUSTIC TYPE FOR NOISE REDUCTION.
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 - REFRIGERATION PIPING TO BE RUN AS SHOWN ON CABLE TRAYS SUPPORTED AT 2000mm CENTRES. PIPE INSULATION TO BE ARMAFLEX AF, AT LEAST 13mm THICK. ON BOTH SUCTION AND LIQUID LINES FOR HEAT PUMPS. ALL INSULATION JOINTS TO BE GULDED AND SEALED. THE CABLE TRAY CARRYING THE REFRIGERATION PIPING IS TO BE FIXED AS HIGH AS POSSIBLE UNDER THE UNDER THE FLOOR SLAB/CEILING VOID. PIPEWORK EXPOSED TO THE ELEMENTS IS TO BE PROTECTED BY GALVANISED STEEL COVERS. UNPROTECTED CONNECTIONS TO THE OUTDOOR UNITS MAY NOT EXCEED 500mm AND MUST BE PROTECTED WITH CANVASS WRAPPING COATED WITH FOSTER SEALFAS 30-36.
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 - ALL DOUBLE DOORS TO HAVE A 25mm undercut.
 - NO MORE THAN 2 DUCT JOINTS BETWEEN DUCT SUPPORTS OR A MIN OF 3m BETWEEN DUCT SUPPORTS.



SUPPORTED	
HARBOR MASTER	FINANCIAL MANAGER
SIGNATURE	DATE
RISK MANAGER	ENVIRONMENTAL MANAGER
SIGNATURE	DATE
SECURITY MANAGER	PROPERTY MANAGER
SIGNATURE	DATE
CORPORATE AFFAIRS MANAGER	MAINTENANCE MANAGER
SIGNATURE	DATE
MARKETING MANAGER	CHIEF FIRE OFFICER
SIGNATURE	DATE
FOR PROCUREMENT	
1. ISSUED FOR APPROVAL	
No.	DATE
TRANSNET	
national ports authority	
PROJECT / AREA / ASSET / SUBJECT	
PORT OF NGQURA	
EMENDI BUILDING	
DRAWING TITLE	
FORTH FLOOR HVAC SYSTEM FOR NEW SPACE USAGE	
DATE	11/17/2022
SCALE	1:100
DESIGNED BY	AM
CHECKED BY	AM
DRAWN BY	AM
CHECKED BY	AM
PAPER SIZE	A0+
TRANSNET DRW. NO.	
SHEET	REV.
CONSULTANT / CONTRACTOR DRW. NO.	

ELECTRICAL WORK:

ELECTRICAL SUPPLY TO HVAC EQUIPMENT SHALL BE THROUGH A SUITABLE ISOLATOR/POWER SUPPLY POINT BY ELECTRICAL ENGINEER

FINAL DISTRIBUTION FROM THE ISOLATOR/POWER SUPPLY POINT, INCLUDING CONTROL PANEL, BOARDS, WIRING, CONTROLLERS ETC, SHALL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.

ALL ELECTRICAL INSTALLATION WORK UNDERTAKEN BY THE HVAC CONTRACTOR SHALL BE DONE BY A QUALIFIED ELECTRICIAN / MASTER ELECTRICIAN AND A CERTIFICATE OF

MECHANICAL WORK:

AIR-CONDITIONING AND VENTILATION SYSTEM SHALL COMPLY WITH HVAC SPECIFICATION (TPD: 005-1-HVAC).
AC OUTDOOR UNITS SHALL BE PROVIDED WITH WATER PROOF ISOLATORS.
ALL DRAIN PIPES SHALL BE CONNECTED TO THE NEAREST DRAIN POINT.

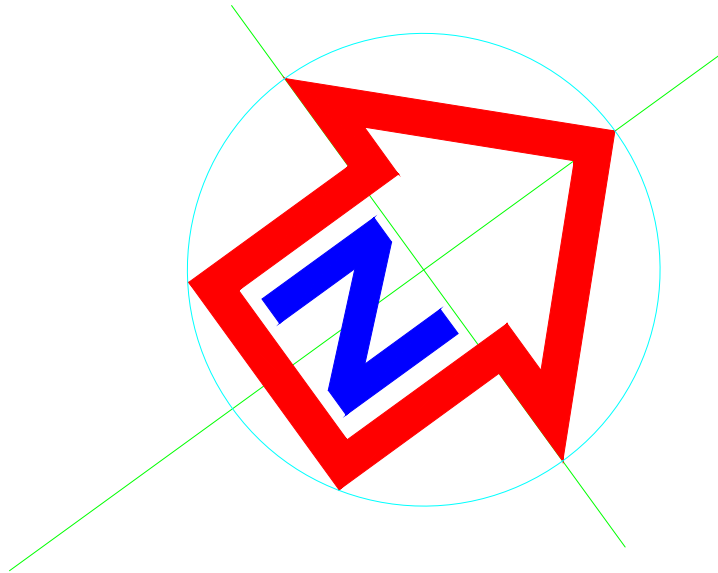
BUILDERS WORK:

AC CONTRACTOR MUST MARK UP ON SITE PRIOR TO INSTALLATION FOR CORING OF HOLES FOR DRAINAGE, REFRIGERANT PIPES, HVAC DUCT, WALL LOUVRE INSTALLATION, FAN INSTALLATION AND ELECTRICAL CONDUIT.

OUTDOOR UNIT SCHEDULE							
UNIT REF.	QUANTITY	DESCRIPTION	MODEL	CAPACITY		POWER REQUIREMENTS	
				COOLING (kW)	HEATING (kW)	(V/Ph/Hz)	ABSORBED (kW)
ODU-G-06	1	*HEAT RECOVERY OUTDOOR UNIT		50	56	380-415/3/50	14.58

NOTES:

- [illegible]



PURPOSED		FINANCIAL MANAGER	
HARBOR MASTER			
SIGNATURE	DATE	SIGNATURE	DATE
RISK MANAGER		ENVIRONMENTAL MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
SECURITY MANAGER		PROPERTY MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
CORPORATE AFFAIRS MANAGER		MAINTENANCE MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
MARKETING MANAGER		CHIEF FIRE OFFICER	
SIGNATURE	DATE	SIGNATURE	DATE

[illegible]

1	ISSUED FOR APPROVAL	11/17/2022
No.	DESCRIPTION / REVISIONS	DATE




PROJECT / AREA / ASSET / SUBJECT

PORT OF NGQURA

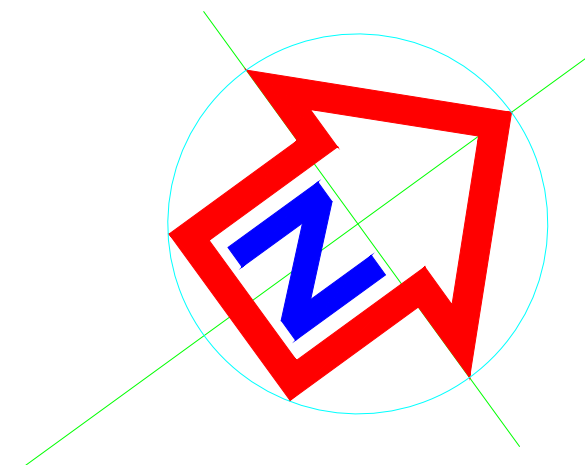
eMENDI BUILDING

DRAWING TITLE

**FIFTH FLOOR
HVAC SYSTEM
FOR NEW SPACE USAGE**

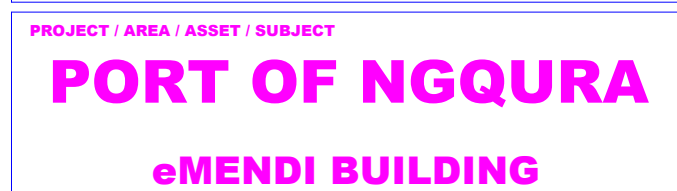
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SCALE	1:100	SIGNATURE		
DESIGNED BY	KOI	CHECKED BY		
CHECKED BY	AH	SIGNATURE		
DRAWN BY	KOI	DATE		
CHECKED BY	AH	CUSTOMER		
		SIGNATURE	DATE	



PAPER SIZE	TRANSNET DRW. NO.	SHEET	REV.
A0+			
CONSULTANT / CONTRACTOR DRW. NO.			



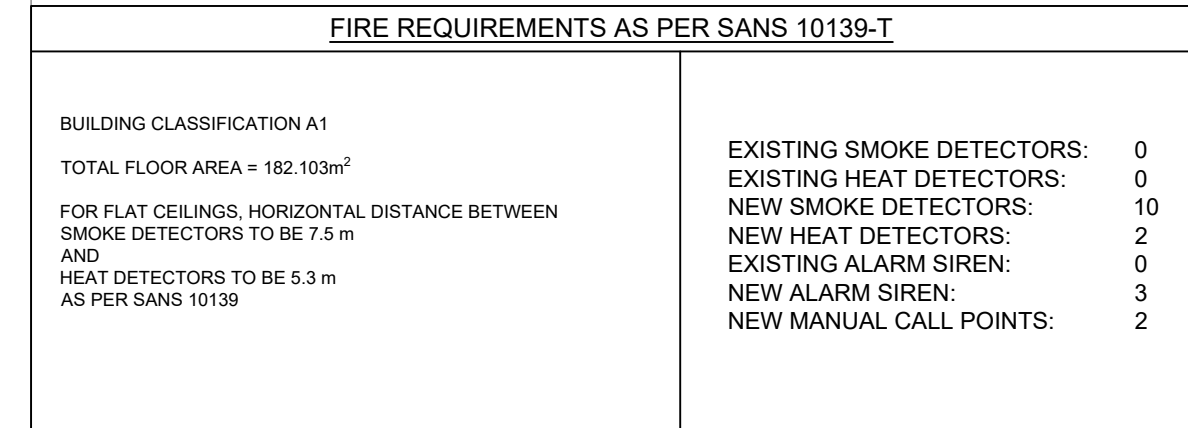
SUPPORTED

1.	ISSUED FOR APPROVAL	2022-11-20
No.	DESCRIPTION / REVISIONS	DATE



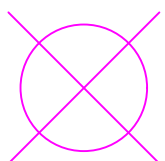
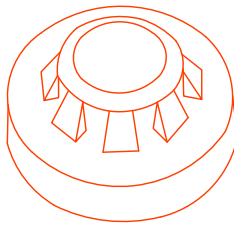
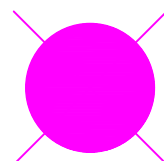
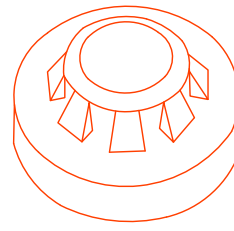
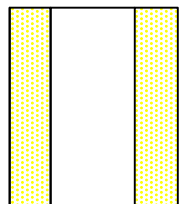
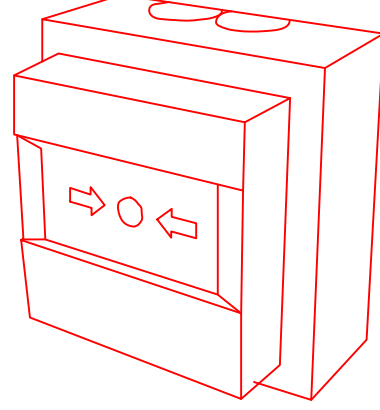
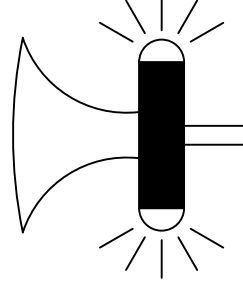
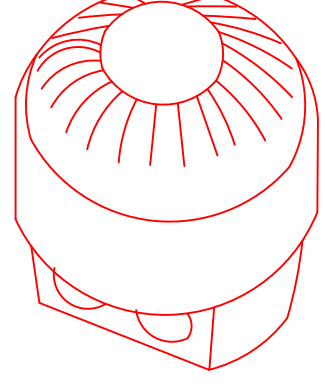
DATE	2022-11-20	ENGINEER KHALEEL RITHESH	DESIGN & DRAWING SIGN OFF
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DESIGNED BY	KN	SENIOR ENGINEER ASLAM HAFEEZE PH.20190923	
CHECKED BY	AH	SIGNATURE  DATE 2022-11-20	
DRAWN BY	KN	CLIENT	
CHECKED BY	AH	SIGNATURE _____ DATE _____	

PAPER SIZE: A0 extended length by 297mm



GROUND FLOOR FIRE SUPPRESSION
SCALE 1:100

<p>PLANT</p> <p>THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED DESIGN OF THE FIRE PROTECTION SYSTEMS INCLUDING FIRE HYDRANTS, FIRE HOSE REELS, EXTINGUISHERS, EMERGENCY AND EVACUATION SIGNAGE AND PLANS AS WELL AS ANY OTHER ITEMS TO ENSURE COMPLETE COMPLIANCE WITH ALL SANS CODES AND LOCAL AUTHORITY LAWS.</p> <p>THE DRAWINGS ARE SCHEMATIC REPRESENTATIONS OF THE SYSTEMS THAT NEED TO BE INSTALLED. THE DETAILED WORKSHOP DRAWINGS OF THE SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.</p> <p>THE WORKS INFORMATION AND TECHNICAL SPECIFICATIONS CONTAIN THE FULL SPECIFICATIONS AND REQUIREMENTS OF THE PLANT. IT IS IMPERATIVE THAT THE DOCUMENT BE READ TOGETHER WITH THE DRAWINGS AND ALL EQUIPMENT BE SELECTED ACCORDINGLY TO MEET THE DESIGN INTENT.</p> <p>THE CONTRACTOR SHALL ENSURE THAT ALL FIRE DESIGNS ARE APPROVED BY THE LOCAL AND TRANSNET FIRE DEPARTMENTS.</p>
<p>MECHANICAL / BUILDER'S WORK :</p> <p>UNDER NO CIRCUMSTANCES SHALL ANY PIPING BE DIRECTLY CONNECTED TO NOISE GENERATING PLANT SUCH AS PUMPS, ETC. CONNECTIONS TO SUCH PLANT SHALL BE MADE WITH CORRECTLY SELECTED FLEXIBLE RUBBER TYPE CONNECTORS OF THE SPHERICAL TYPE.</p>
<p>ELECTRICAL WORK:</p> <p>ELECTRICAL SUPPLY TO PLANT SHALL BE THROUGH A SUITABLE ISOLATOR/POWER SUPPLY POINT BY THE ELECTRICAL ENGINEER.</p> <p>FINAL DISTRIBUTION FROM THE ISOLATOR/POWER SUPPLY POINT, INCLUDING CONTROL PANEL, MCC'S, BOARDS, WIRES, WIRING, CONTROLLERS ETC. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.</p> <p>ALL ELECTRICAL INSTALLATION WORK UNDERTAKEN BY THE CONTRACTOR SHALL BE DONE BY A QUALIFIED ELECTRICIAN / MASTER ELECTRICIAN AND A CERTIFICATE OF COMPLIANCE SHALL BE SUBMITTED ON COMPLETION OF WORK.</p> <p>ELECTRICAL PLANT SHALL BE EQUAL OR SIMILAR APPROVED TO SCHOENIDER.</p>
<p>NOTES ON PIPING</p> <p>ALL REQUIREMENTS LAID DOWN BY THE LOCAL AUTHORITY, SANS AND CODES OF PRACTICE MUST BE STRICTLY ADHERED TO. DETAILS OF THE SPECIFICATIONS AND STANDARDS CAN BE FOUND IN THE WORKS INFORMATION.</p> <p>PIPE RUNS ARE DIAGRAMMATICALLY INDICATED ON THE DRAWINGS. THE EXACT POSITION OF PIPES SHOULD HOWEVER BE ESTABLISHED ON SITE. MAJOR RE-POSITIONING OF PIPE WORK MAY AFFECT THE CRITERIA ON WHICH THE CALCULATIONS ARE BASED AND SHOULD THUS BE RE-QUOTED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE INSTALLATION. THE PIPE WORK SHOP DRAWINGS SHOULD BE SUBMITTED TO THE TOP ENGINEER FOR ACCEPTANCE PRIOR TO PROCUREMENT OF MATERIALS.</p> <p>ALL PIPE WORK SHALL BE OF THE MATERIAL AS SPECIFIED IN THE WORKS INFORMATION AND SHALL BE PRESSURE RATED TO AT LEAST 1.5 TIMES THE WORKING PRESSURE OF THE FLUID CONTAINED. ALL FITTINGS AND VALVES SHALL BE SUITABLY RATED IN LINE WITH THE RATING OF THE PIPE WORK. CERTIFICATED SHALL BE PROVIDED TO THE TOP ENGINEER FOR ACCEPTANCE.</p> <p>ALL PIPE RUNS SHOULD BE FLUSHED AND FASTENED PRIOR TO THE APPLICATION OF ANY TERMINAL FITTINGS. ALL PIPE AND OTHER FITTINGS TO BE INSTALLED IN COMPLIANCE WITH THE MANUFACTURER'S SPECIFICATION. THE PIPE WORK SHALL BE PRESSURE TESTED DURING COMMISSIONING AND THE RESULTS SUBMITTED TO THE TOP ENGINEER FOR ACCEPTANCE.</p> <p>ALL MATERIAL USED SHALL BE SANS COMPLIANT AND WHERE POSSIBLE MUST CARRY THE SABS MARK.</p> <p>INSTALLATION TO BE CONDUCTED BY A PROFESSIONAL AND REGISTERED PIPING CONTRACTOR.</p> <p>EARTHING AND BONDING OF PIPE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.</p>

<p align="center">SMOKE DETECTOR SCHEDULE</p>		<p align="center">HEAT DETECTION SCHEDULE</p>	
 		 	
<p align="center">DESCRIPTION</p>		<p align="center">DESCRIPTION</p>	
<p>LOCATION : GROUND FLOOR</p> <p>TYPE : XP 95 OPTICAL SMOKE DETECTOR MODEL : AP-IP40 IP RATING : 23D VOLTAGE : 17 - 28V DC CURRENT : 4mA (UNDER ALARM CONDITIONS) TEMP : -20 TO +60 DEGREES CELSIUS</p> <p>Sd1 MATERIAL : WHITE POLYCARBONATE V-0 RATED TO UL94 INDICATOR : LED EMITTING RED LIGHT COMPLY : SANS 10139, SANS 50054-7, EN 54 NO. OFF : 11</p> <p>SUPPLY & INSTALLED BY CONTRACTOR</p>		<p>LOCATION : GROUND FLOOR</p> <p>TYPE : XP 95 MULTI-SENSOR OPTICAL-HEAT DETECTOR MODEL : 55000-885APO IP RATING : IP44 VOLTAGE : 17 - 28V DC CURRENT : 4mA (UNDER ALARM CONDITIONS) TEMP : -20 TO +60 DEGREES CELSIUS</p> <p>HD1 MATERIAL : WHITE POLYCARBONATE V-0 RATED TO UL94 INDICATOR : LED EMITTING RED LIGHT COMPLY : SANS 10139, SANS 50054-7, EN 54 NO. OFF : 2</p> <p>SUPPLY & INSTALLED BY CONTRACTOR</p>	
<p align="center">MANUAL CALL POINT SCHEDULE</p>		<p align="center">SOUNDER BEACON SCHEDULE</p>	
 		 	
<p align="center">DESCRIPTION</p>		<p align="center">DESCRIPTION</p>	
<p>LOCATION : GROUND FLOOR</p> <p>TYPE : INTELLIGENT MCP MODEL : AP-DS-MCP IP RATING : IP44 VOLTAGE : 17-35 V DC CURRENT : 4mA (UNDER ALARM CONDITIONS) RATING : CONTINUOUS TEMP : -40 TO +70 DEGREES CELSIUS</p> <p>M WEIGHT : 180g MATERIAL : FLAME RETARDANT POLYCARBONATE COMPLY : SANS 50054-11 (TYPE A); EN54 EXTRAS : MCP HINGED PROTECTIVE FLAP NO. OFF : 2</p> <p>SUPPLY & INSTALLED BY CONTRACTOR</p>		<p>LOCATION : GROUND FLOOR</p> <p>TYPE : XP95 OPEN AREA SOUNDER BEACON (SONOS) MODEL : AP-35PWSD-SBR IP RATING : IP65 VOLTAGE : 17 - 60 V DC CURRENT : 5mA RATING : CONTINUOUS TEMP : -26 TO +70 DEGREES CELSIUS</p> <p>S1 MATERIAL : FLAME RETARDANT POLYCARBONATE VOLUME : 1000(A8) COMPLY : SANS 10139, EN 54 EXTRAS : SOUNDER BEACON BASE NO. OFF : 3</p> <p>SUPPLY & INSTALLED BY CONTRACTOR</p>	

HARBOUR MASTER		FINANCIAL MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
RISK MANAGER		ENVIRONMENTAL MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
SECURITY MANAGER		PROPERTY MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
CORPORATE AFFAIRS MANAGER		MAINTENANCE MANAGER	
SIGNATURE	DATE	SIGNATURE	DATE
MARKETING MANAGER		CHIEF FIRE OFFICER	
SIGNATURE	DATE	SIGNATURE	DATE

FOR PROCUREMENT		
1	ISSUED FOR APPROVAL	11/17/2022
No.	DESCRIPTION / REVISIONS	DATE





PROJECT / AREA / ASSET / SUBJECT

PORT OF NGQURA

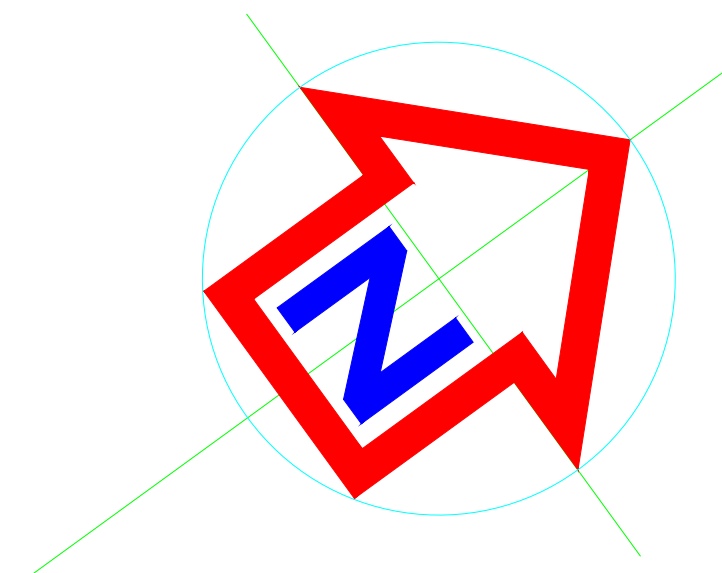
eMENDI BUILDING

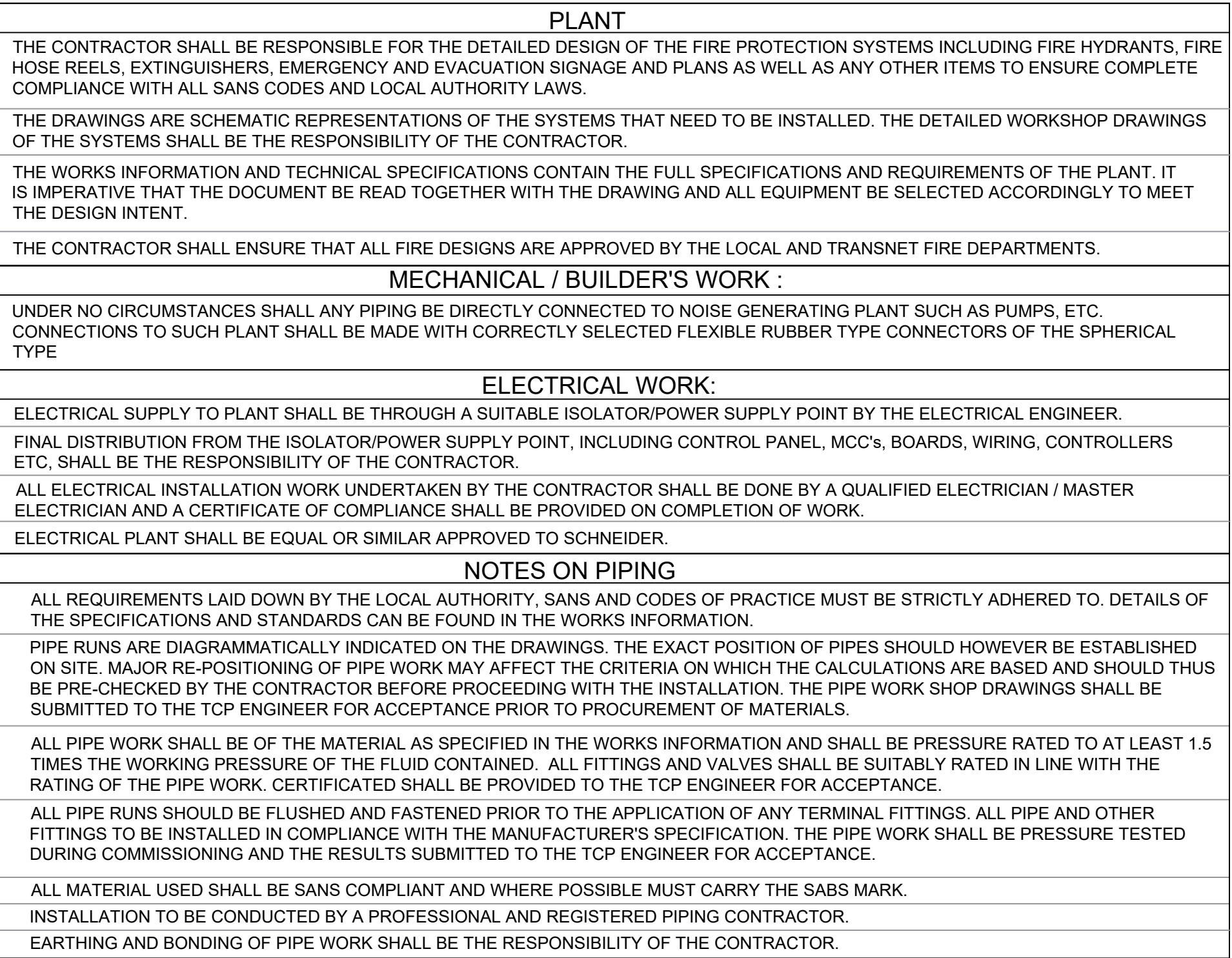
DRAWING TITLE

**FIRE DETECTION SYSTEM
CONCEPT LAYOUT
OUTDOOR CANTEEN**

DATE	11/17/2022	ENGINEER CLAYTON GOWDER	DESIGN & DRAWING HIGH OFF
SCALE	1:100	SIGNATURE  DATE 11/17/2022	
DESIGNED BY	GG	SENIOR ENGINEER ASLAIN HAFEEZEE PR.20.109052	
CHECKED BY	AH	SIGNATURE  DATE 11/17/2022	
DRAWN BY	GG	CLIENT	
CHECKED BY	AH	SIGNATURE _____ DATE _____	

PAPER SIZE	TRANSNET DRW. NO.	SHEET	REV.
A0			
CONSULTANT / CONTRACTOR DRW. NO.			





GROUND FLOOR FIRE SUPPRESSION
SCALE 1:100

FOR PROCUREMENT		
.Y	ISSUED FOR APPROVAL	11/17/2022
No.	DESCRIPTION / REVISIONS	DATE

