PUMPROOM

DB PUMPROOM		80A TP		25mmSQ 4C)		FED FROM FP9	
BREAKER	10 SP	10 SP	30ELCB	10 TP	60 TP	20 TP	TOTAL
CONTROL							
CIRCUIT NO	L1	L2	P1	P2	P3	P4	
LOAD/PHASE	LGT	SPARE	SSO	W/PUMP	F/PUMP	JOCKEY	
WIRE(mm)	1C/1.5	SPARE	1C/2.5	4C/2.5	4C/10	4C/4.0	
Watts	288	SPARE	2000	2200	30000	7500	41,988
KW	0.288	SPARE	2	2.2	30	7.5	42
Div KW	**0.3**	SPARE	**1.6**	**1.8**	**30.0**	**7.5**	41

DIV LOAD **41**

SINGLE PHASE (RED,YELLOW,BLUE)
THREE PHASE

100 MEN ACCOMMODATION HANGAR

DB-1 & DB-2					45A TP				6mmSQ 4C)			FED FROM FP4							
BREAKER	10 SP	10 SP	10 SP	10 SP	10 SP	10 SP		30ELCB	30ELCB	30ELCB	20A SP	20A SP	5A SP	5A SP	5A SP	5A SP	5A SP	TOTAL
CONTROL																		
CIRCUIT NO	L1	L2	L3	L4	L5	L6	L7	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	
LOAD/PHASE	LGT	LGT	LGT	LGT	LGT	LGT	SPARE	SSO	SSO	SSO	SSO	SSO	EXTRACT	EXTRACT	CALORIFIER	CALORIFIER	SPARE	
WIRE(mm)	1C/1.5	1C/1.5	1C/1.5	1C/1.5	1C/1.5	1C/1.5	SPARE	1C/2.5	1C/2.5	1C/2.5	1C/2.5	1C/2.5	1C/1.5	1C/1.5	4C/4.0	4C/4.0	SPARE	
Watts	1,260	660	660	660	660	660	SPARE	2000	2000	2000	2000	2000	157	157	6500	6500	SPARE	27,874
KW	1.26	0.66	0.66	0.66	0.66	0.66	SPARE	2	2	2	2	2	0.157	0.157	6.5	6.5	SPARE	28
Div KW	**1.3**	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**SPARE**	**1.6**	**1.6**	**1.6**	**1.6**	**1.6**	**0.1**	**0.1**	**6.5**	**6.5**	**SPARE**	26

SINGLE PHASE (RED,YELLOW,BLUE)
THREE PHASE

DIV LOAD **23**

FUEL PUMP

DB FP				20A TP MAIN BREAKER				4mmSQ 4C)		FED FROM FP3			
BREAKER	10 SP	10 SP		30ELCB	30ELCB	30ELCB	20A SP	20A SP	5A SP	5A SP	5A SP	20A TP	TOTAL
CONTROL													
CIRCUIT N	L1	L2	L4	P1	P2		P4	P5	P6	P7	P14	P15	
LOAD/PHA	LGT	LGT	SPARE	SSO	SSO		HD1	HD2	EXTRACT	EXTRACT	FCU	ODU2	
WIRE(mm	1C/1.5	1C/1.5	SPARE	1C/2.5	1C/2.5		1C/2.5	1C/2.5	1C/1.5	1C/1.5	1C/1.6	1C/2.5	
Watts	900	900	SPARE	3679	3680		1000	1000	157	550	1000	5700	**9,407**
KW	0.9	0.9	SPARE	3.679	3.68		1	1	0.157	0.55	1	5.7	**9**
Div KW	**0.9**	**0.9**	SPARE	**2.9**	**2.9**		**0.8**	**0.8**	**0.1**	**0.4**	**0.8**	**5.7**	**9**

SINGLE PHASE (RED,YELLOW,BLUE)
THREE PHASE

EF	Extract Fan
FCU	Fan Control Unit/Casette

SUBSTATION

DB SUBSTATION			30A SP MAIN BREAKER			6mmSQ (3C)	FED FROM LOCAL
BREAKER	10 SP	10 SP		30ELCB	30ELCB	30ELCB	TOTAL
CONTROL							
CIRCUIT N	L1	L2	L4	P1	P2	L4	
LOAD/PHA	LGT	LGT	SPARE	SSO	SSO	SPARE	
WIRE(mm	1C/1.5	1C/1.5	SPARE	1C/2.5	1C/2.5	SPARE	
Watts	900	900	SPARE	3679	3680	SPARE	**5,700**
KW	0.9	0.9	SPARE	3.679	3.68	SPARE	**6**
Div KW	**0.9**	**0.9**	SPARE	**2.9**	**2.9**	SPARE	**6**

SINGLE PHASE (RED,YELLOW,BLUE)
THREE PHASE

GATE-HOUSE 2

DB GH-2			30A SP MAIN BREAKER			6mmSQ (3C)
BREAKER	10 SP	10 SP		30ELCB	30ELCB	30ELCB	TOTAL
CONTROL							
CIRCUIT N	L1	L2	L4	P1	P2	L4	
LOAD/PHA	LGT	LGT	SPARE	SSO	SSO	SPARE	
WIRE(mm	1C/1.5	1C/1.5	SPARE	1C/2.5	1C/2.5	SPARE	
Watts	900	900	SPARE	3679	3680	SPARE	**5,700**
KW	0.9	0.9	SPARE	3.679	3.68	SPARE	**6**
Div KW	**0.9**	**0.9**	SPARE	**2.9**	**2.9**	SPARE	**6**

SINGLE PHASE (RED,YELLOW,BLUE)
THREE PHASE

NOTES:

1. ALL CABLES ENTRIES TO EQUIPMENT LOCATED OUTDOORS AND IN WASH DOWN AREAS SHALL BE FROM BELOW.
2. SUFFICIENT CABLE SPARE LENGTHS SHALL BE PROVIDED FOR EQUIPMENT WHICH NEEDS FUTURE ADJUSTMENTS.
3. SINGLE CORE CABLES FOR 3 PHASES AC SHALL BE RUN IN TREFOIL FORMATION.
4. THE MINIMUM BENDING RADIUS OF CABLES SPECIFIED BY THE MANUFACTURER SHALL BE ADHERED TO.
5. ON CROSSING PIPED SERVICES,A MINIMUM DISTANCE OF 150mm SEPARATION SHALL BE MAINTAINED, AND CONCRETE SLABS SHALL BE USED TO SEPARATE THE ERVICES.SEPARATION FROM COMMUNICATION CABLES SHALL BE 200mm MINIMUM.
6. ALL THE DIMENSIONS SHOWN ON DRAWINGS ARE METRIC (IN mm)
7. THE INLET OF THESE DARWINGS IS TO GUIDE THE CONTRACTOR IN THE SCHEME OF WORKS. CONTRACTOR SHALL MAKE PROPER SHOP DRAWINGS FOR THE APPROVAL OF THE ENGINEER AND SUMIT IT BEFORE THE WORK COMMENCES AT SITE.
8. ALL ELECTRICAL WORKS SHALL BE EXECUTED IN STRICT ACCORDANCE WITH THE PROJECT SPECIFICATION.
9. THE ROUTING OF CABLES SHOWN ON THE DRAWINGS IS FOR GUIDANCE ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK AT THE STAGE OF TENDER. THE RUNS OF ALL CABLES IN RELATION TO STRUCTURAL RESTRICTION SO THAT ALL MATERIALS SUCH AS CONDUITS AND THEIR ACCESSORIES ARE INCLUDED IN HIS PRICE. ACTUAL LOCATIONS OF ALL OUTLETS MUST BE VERIFIED BY THE SITE ENGINEER BEFORE INSTALLATION COMMENCES.
10. ALL ELECTRICAL EQUIPMENT SHALL BE SUPPLIED BY AN APPROVED MANUFACTURER AND THE CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT ARE SUITABLE FOR THE PURPOSE FOR WHICH IT IS TO BE USE AND THAT IT IS FUNCTIONING PROPERLY AFTER INSTALLATION.

LIGHTING AND SMALL POWER NOTES:-

1. MOUNTING HEIGHTS SHALL BE GENERALLY AS INDICATED BELOW OR AS INSTRUCTED BY THE ENGINEER WITHOUT ANY COST APPLICATION TO THE CONTRUCTOR.
   - LIGHTING SWITCH = 1500mm AFFL.
   - GENERAL SOCKET OUTLET = 450mm AFFL.
   - SOCKET OUTLET AT KITCHEN = 1100mm AFFL.
   - HAND DRYERS = AS MENSIONED IN INTERIOR DESIGN DRAWINGS
   - ISOLATOR SWITCH = ADJACENT TO EQUIPMENT
2. WIRE SIZES SHALL BE STRICTLY FOLLOWED ACCORDING TO THE INDICATED SIZES SHOWN IN THE PANEL DETAILS. WIRES SHALL BE COLOR CODED AS SPECIFIED.
3. WIRING FOR SMALL POWER AND LOW CURRENT CIRCUITS SHALL BE TOTALLY SEGREGATED.THIS IS INCLUDING PANELS, RACEWAYS, WIRES, BOXES, SWITCHES ETC.
4. ALL ISOLATORS DESIGNATED FOR ELECTRIC APPLIANCES OR EQUIPMENT SHALL BE LABELED WITH THE EQUIPMENT REFERENCE
5. CONDUIT INSTALLATIONS SHALL BE AS PER SPECS.
6. REFER TO ARCHITECTURAL REFLECTED CEILING DRAWINGS AND FINISHING TABLES FOR EXACT ARRANGEMENT OF LUMINAIRE.
7. CORD (FLEXIBLE) OUTLET SHALL BE INSTALLED FOR ANY REMOTE
8. WIRING FOR LIGHTING CIRCUITS ARE FOR GUIDANCE ONLY THE CONTRACTOR MAY CHOOSE THE MOST CONVENIENT ROUTE. MATCHING THE PROJECT SPECIFICATIONS AND SHOW IT IN HIS SHOP DRAWINGS.
9. THE CONTRACTOR SHALL SUBMIT PANEL BOARDS DETAILS ALONG WITH THE REQUIRED SUBMITTALS AND SHOP DRAWINGS SHOWING,
   - CIRCUIT REFERENCE SHOWN ON LAYOUTS
   - ACTUAL LOAD OF EACH CIRCUIT PER PHASE IN VA
   - SUMMATION OF EACH PHASE LOAD ASSURING 3 PHASE LOAD
   - AREARS SERVED BY EACH CIRCUIT
   - RATING OF ALL COMPONENTS
   - WIRE SIZE AND No. OF WIRES
   - SCHEMATIC DIAGRAMS FOR CONTROL CIRCUITS IF ANY ENCLOSURE AND BUSES SPECIFICATIONS
11. CONVENIENCE SOCKET OUTLETS FED FRO EMERGENCY PANELS OR UPS SHALL BE SELECTED WITH DIFFERENT COLOUR COVER PLATES

TENDER

STAGE : TENDER

	INITIAL	SIGN	DATE
G4 Project Engineer			
Project Manager			
Project Architect			
Client			

REV	DESCRIPTION	DATE	INITIAL

CLIENT

SOUTHERN AFRICAN DEVELOPMENT COMMUNITY

PROJECT

SADC STANDBY FORCE REGIONAL LOGISTICS DEPOT, AT RASESA, GABORONE, BOTSWANA,

DRAWING TITLE

DB ONE-LINE DRAWING-ARMOURY, KITCHEN, WAREHOUSE, GYM, PUMPROOM

G4 CONSULTING ENGINEERS
PRIVATE BAG BR 297
GABORONE
BOTSWANA
TEL. 3972510 FAX 3972504

DESIGNED	: HG	JOB NO.	: g4448
DRAWN	: HG	SCALE	: 1:100
APPROVED	:	DATE	: JUN 2021

DRAWING NO. SADC/ELEC/4024C

REV. 1