



TABLE 1-SAFETY SIGN REQUIRED FOR BATTERY ROOMS

DESCRIPTION OF SAFETY	REQUIRED LOCATION OF SAFETY SIGN	ESKOM CODE AND DRAWING NUMBER
a) A NOTICE IDENTIFYING THE ROOM AS BEING A BATTERY ROOM. b) IT CLEARLY SETS OUT THE ELEMENTARY FIRST AID PROCEDURES IN THE CASE OF EYE AND / SKIN CONTACT WITH AN ACID OR ALKALI. c) A NO-SMOKING PROHIBITIVE SIGN AND CORROSIVE SUBSTANCE WARNING SIGN ARE ALSO POSTED ON THE NOTICE. d) THE NOTICE ALSO DISPLAYS THAT UNAUTHORIZED ENTRY TO THE BATTERY ROOM IS PROHIBITED.	AT THE DESIGNATED ENTRANCE TO THE BATTERY ROOM.	DCSS 1d-DT-5022 SHEET 1
a) THIS NOTICE SHOWS THAT OPEN FLAMES ARE PROHIBITED INSIDE THE BATTERY ROOM. b) IT ALSO SHOWS THAT AN APRON, EYE PROTECTION AND GLOVES SHALL BE WORN.	ON WALL DIRECTLY OPPOSITE THE ENTRANCE TO THE BATTERY ROOM.	DCSS 3d-DT-5022 SHEET 3
A NOTICE INDICATING THE LOCATION OF THE EMERGENCY SHOWER.		GA 20d-DT-5023 SHEET 1
A NOTICE INDICATING THE LOCATION OF THE EYEWASH EQUIPMENT.		GA 19d-DT-5023 SHEET 2
A NOTICE SHOWING THAT THE DRINKING OF WATER IS PROHIBITED (WHEN APPLICABLE).	ON WALL DIRECTLY ABOVE BATTERY ROOM SINK OR WATER CONTAINER.	PV 5.d-DT-5023 SHEET 3
BATTERY ROOM CIVILS TO COMPLY WITH SPECIFICATION FOR BATTERY ROOMS.		DSP 34-479

- LEGEND: TO BATTERY ROOM FITTINGS
- N.B. SUPPLIED PIPING TO BE EITHER COPPER OR POLYCOB WITH SABS MARK.
 - 1x WHITE GLAZED DRAINER ON WALL BRACKETS ON DOOR SIDE. DRAINER TO DRAIN DIRECTLY INTO SINK.
 - HAND SHOWER TO BE COBRA NO. 519-21, COMPLETE WITH TRIGGER ACTION CONTROL NOZZLE, WALL BRACKET, HOSE, CP WALL MOUNTED ELBOW ACTION TAP.
 - WALL MOUNTED ELBO ACTION TAP WITH THREADED SPOUT.
 - WHITE GLAZED 600x400x200mm LABORATORY SINK AS VAAL CODE 2360 OR EQUALLY APPROVED, COMPLETE WITH WALL BRACKETS, PLUG & CHAIN, 38mm ACID RESISTANT WASTEPIPE.
 - PVC P-TRAP.
 - 38mm ACID RESISTANT WASTEPIPE TO DISCHARGE WASTE WATER OUTSIDE, SUPPORTED WITH HALVED PIPE HOLDER.

NOTES:
GENERAL
THIS SPECIFICATION IS TO BE READ IN CONJUNCTION WITH ESKOM'S STANDARD SPECIFICATION AND GENERAL CONDITIONS OF CONTRACT.

- ALL CONCRETE TO BE CLASS 25/19.
- CONCRETE WORK TO BE IN ACCORDANCE WITH SANS 1200.
- CONCRETE STRENGTH AT 28 DAYS = 25MPa.
- CONCRETE STRENGTH FOR BLINDING LAYER AT 28 DAYS = 15MPa.
- NO CONCRETE TO BE POURED WHERE THE AIR TEMPERATURE WILL DROP BELOW 4 DEG CELSIUS IN 8 HOURS AFTER POURING, UNLESS A SUITABLE APPROVED ADDITIVE IS ADDED TO THE CONCRETE MIXES.
- COMPACTION AT THE BOTTOM OF FLOOR SHALL BE COMPACTED TO 95% MOD. AASHTO.
- PLASTER TO BE 1:1:6 (CEMENT/LIME/SAND) MIX.
- INLET & OUTLET T-PIECES MADE UP OF DPI PLASTICS (PTY) LTD 'FREE FLOW' RANGE OR EQUAL APPROVED.
- USE ONLY DPI PLASTICS OR COMPATIBLE CLEANING FLUID AND NON-PRESSURE CEMENT.
- SOLVENT WELDING PROCEDURE:
A. CLEAN CONTACTING SURFACES WITH SOLVENT CLEANER AND ALLOW TO DRY.
B. APPLY THIN COAT OF NON-PRESSURE CEMENT TO BOTH SURFACES.
C. ASSEMBLE JOINT IMMEDIATELY, ALLOW 24 HOURS TO DRY.
- INSPECTION PIPE MADE UP OF DPI PLASTICS 'FREE FLOW' RANGE OR EQUALLY APPROVED BY ESKOM.
A. $\phi 110$ mm WASTE PIPE CODE S110/4.01.
B. DOUBLE SOLVENT WELD SOCKET CODE S110/5.
C. RODDING EYE SCREW CAP CODE S110/5C.

BATTERY ROOM

- FOR HYGIENE REASONS, STERILE EYEWASH BOTTLES TO BE ON HAND OR AVAILABLE.
- MAX. VOLUME OF ELECTROLYTE OF BATTERY BANKS:
1) 50V BANK: 25x4CP33 (10.3 LITRES PER CELL x 52 CELLS = 257.5 LITRES).
2) 110V BANK: 52x4CP23 (7.4 LITRES PER CELL x 52 CELLS = 384.8 LITRES).
TOTAL VOLUME OF ELECTROLYTE FOR 50V & 110V BANK = 642.3 LITRES
BATTERY ROOM CONTAINMENT AREA: 6640mm x 4420 x 100mm
MAX. VOLUME THAT CAN BE CONTAINED IN BATTERY ROOM = 2944 LITRES.

SEPTIC TANK

- 1500 LITRE PVC TANK AS SUPPLIED BY MESSRS JOJO TANKS OR EQUALLY APPROVED BY ESKOM.
- TANK SIZE: $\phi 1550$ mm x 1220mm HIGH.

INSTALLATION

- BOTTOM OF TRENCH TO BE FILLED WITH 50mm SAND/SABUNGA BLINDING IF TRENCH CANNOT BE LEVELLED DUE TO HARD MATERIAL. 100mm 25MPa CONCRETE SLAB WITH REF 245 WELD MESH REINFORCING MIN 50mm FROM BOTTOM OF SLAB.
- CONCRETE SAND TO BE PLACED ON TOP OF SLAB TO FILL VOID FORMED BY CURVE AT BOTTOM OF TANK.
- TANK TO BE FILLED WITH WATER TO APPROX. 600mm FROM BOTTOM PRIOR TO COMMENCEMENT OF BACKFILLING. BACKFILLING TO BE IN LAYERS NOT EXCEEDING 250mm OF SELECTED GRANULAR MATERIAL, FREE OF ANY ROCKS ETC. TO PREVENT DAMAGE TO TANK.

WATER SYSTEM

- CONCRETE SLAB 1000x1000x100mm 25MPa TO BE CAST AROUND ACCESS SEPTIC TANK LID.
- WATER SUPPLY - TO RUN IN $\phi 20$ mm POLYCOB PIPING FROM WATER TANK TO SUPPLY BATTERY ROOM SINK, WC, BASIN AND EXTERNAL TAP COBRA 107EC-15 STAR BIBTAP. WATERPUMP TO BE JET SMART COMPOSITE 0.85kW PUMP. WATER PUMP TO HAVE DRY RUN PROTECTION WITH INTEGRATED AUTOMATIC RESET, SPRING LOADED NON-RETURN VALVE AND 32mm DISCHARGE PORT. WATER PUMP TO BE COMPLETE WITH PCIS PRESSED CONTROL UNIT. PIPES ARE ONLY TO BE INSIDE THE BUILDING AND COPPER PIPES ARE TO BE USED EXTERNALLY. ANY COPPER TUBING THAT IS USED IN THE WATER SUPPLY SHOULD BE PAINT SILVER.
- 2500L CAPACITY 1800mm HIGH x 1420mm JOJO OR EQUALLY APPROVED WATERTANK. WATERTANK IS TO BE TIED ONTO THE WATERTANK BASE. WATERTANK BASE AS PER D-DT-5281 SHEET 1A.
- A STAINLESS STEEL SEIVE IS TO BE INSTALLED ON THE TOP OF THE WATER TANK ENTRANCE. NO CUTTING OF THE WATER TANK IS ALLOWED IN ORDER TO PIPE ROOF PIPES.

D-T-5281	SHEET 1A	CONTROL ROOM SECTIONS AND DETAILS				
DRG. NO.	SHEET NO.	REFERENCE DRAWINGS				
THIS DRAWING IS THE NEW OFFICIAL REVISION AND IT SUPERSEDES ALL OTHER PUBLISHED DRAWINGS						
1	UPDATED REFERENCE DRAWINGS	BHM	NSH	NMM	23/04/2018	
0	NEW DRAWING					
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
Eskom		SUBSTATION CONTROL ROOM TOILET, BATTERY ROOM AND SEPTIC TANK DETAILS				
AUTH:	N WEBBER					
DATE:	07/01/2015					
CHKD:	B HLOMENDINI					
DATE:	07/01/2015	SET	SHEET	REVISION		
SCALE	1:20				5E	1
THIS DRAWING IS THE PROPERTY OF ESKOM		D-DT-5281				