

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.	AT THE DESIGNATED ENTRANCE TO THE BATTERY ROOM.	DCSS 10-DT-5022 SHEET 1
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.		
a) THIS NOTICE SHOWS THAT OPEN FLAMES ARE PROHIBITED INSIDE THE BATTERY ROOM	ON WALL DIRECTLY OPPOSITE THE ENTRANCE TO THE BATTERY ROOM.	DCSS 30-DT-5022 SHEET 3
b) IT ALSO SHOWS THAT AN APRON, EYE PROTECTION AND GLOVES SHALL BE WORN.		
A NOTICE INDICATING THE LOCATION OF THE EMERGENCY SHOWER.		GA 200-DT-5023 SHEET 1
A NOTICE INDICATING THE LOCATION OF THE EYEWASH EQUIPMENT.		GA 190-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 40-DT-5023 SHEET 3
BATTERY ROOM CIVILS TO COMPLY WITH SPECIFICATION FOR BATTERY ROOMS.		DSP 34-479

LEGEND: TO BATTERY ROOM FITTINGS	
①	N.B. SUPPLIED PIPING TO BE EITHER COPPER OR POLYCOY WITH SABS MARK. 1x WHITE GLAZED DRAINER ON WALL BRACKETS ON DOOR SIDE. DRAINER TO DRAIN DIRECTLY INTO SINK.
②	HAND SHOWER TO BE COBRA NO.519-21, COMPLETE WITH TRIGGER ACTION CONTROL NOZZLE, WALL BRACKET, HOSE, CP WALL MOUNTED ELBOW ACTION TAP.
③	WALL MOUNTED ELBO ACTION TAP WITH THREADED SPOUT.
④	WHITE GLAZED 600x400x200mm LABORATORY SINK AS VAAL CODE 2360 OR EQUALLY APPROVED, COMPLETE WITH WALL BRACKETS, PLUG & CHAIN, 38mm ACID RESISTANT WASTEPIPE.
⑤	PVC P-TRAP.
⑥	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.

1. ALL CONCRETE TO BE CLASS 25/19.
2. CONCRETE WORK TO BE IN ACCORDANCE WITH SANS 1200.
3. CONCRETE STRENGTH AT 28 DAYS = 25MPa.
4. CONCRETE STRENGTH FOR BLINDING LAYER AT 28 DAYS = 15MPa.
5. 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.
6. COMPACTION AT THE BOTTOM OF FLOOR SHALL BE COMPACTED TO 95% MOD. AASHTO.
7. PLASTER TO BE 1:1:6 (CEMENT/LIME/SAND) MIX.
8. INLET & OUTLET T-PIECES MADE UP OF DPI PLASTICS (PTY) LTD "FREE FLOW" RANGE OR EQUAL APPROVED.
9. USE ONLY DPI PLASTICS OR COMPATIBLE CLEANING FLUID AND NON-PRESSURE CEMENT.
10. 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.
11. INSPECTION PIPE MADE UP OF DPI PLASTICS "FREE FLOW" RANGE OR EQUALLY APPROVED BY ESKOM.
  - A. Ø110mm WASTE PIPE CODE S110/4.01.
  - B. DOUBLE SOLVENT WELD SOCKET CODE S100S.
  - C. RODDING EYE SCREW CAP CODE S110SC.

BATTERY ROOM

1. FOR HYGIENE REASONS, STERILE EYEWASH BOTTLES TO BE ON HAND OR AVAILABLE.

2. MAX. VOLUME OF ELECTROLYTE OF BATTERY BANKS:

1 50V BANK: 25x4CP33 (10.3 LITRES PER CELL x 25 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**

1. 1500 LITRE PVC TANK AS SUPPLIED BY MESSRS JOJO TANKS OR EQUALLY APPROVED BY ESKOM.

2. TANK SIZE:  $\phi 1550\text{mm} \times 1220\text{mm}$  HIGH.

**INSTALLATION**


1. 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.

2. CONCRETE SAND TO BE PLACED ON TOP OF SLAB TO FILL VOID FORMED BY CURVE AT BOTTOM OF TANK.

3. 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

1. CONCRETE SLAB 1000x1000x100mm 25MPa TO BE CAST AROUND ACCESS SEPTIC TANK LID.
2. WATER SUPPLY - TO RUN IN 420mm POLYCO PIPING FROM WATER TANK TO SUPPLY BATTERY ROOM SINK, WC, BATH AND EXTERNAL TAP COBRA 1075-10S 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-RE-VALVE AND 32mm DISCHARGE PORT. WATER PUMP TO BE COMPLETE WITH PC15 PRESET 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.
3. 2500L CAPACITY, 1800mm HIGH 1x420mm JOJO OR EQUALLY APPROVED WATER TANK. WATER TANK IS TO BE TIED ONTO THE WATERBANK BASE. WATER TANK BASE AS PER D-07-5281 SHEET 1A.
4. A STAINLESS STEEL SEIVE IS TO BE INSTALLED ON THE TOP ON THE WATER TANK ENTRANCE. NO CUTTING OF THE WATER TANK IS ALLOWED IN ORDER TO PIPE ROOF PIPES.

D-DT-5281		SHEET 1A		CONTROL ROOM SECTIONS AND DETAILS			
ORD. NO.		SHEET NO.		REFERENCE DRAWINGS			
THIS DRAWING IS THE NEW OFFICIAL REVISION AND IT SUPERSEDES ALL OTHER PUBLISHED DRAWINGS							
1	UPDATED REFERENCE DRAWINGS			BWH	NSH	NWM	23/04/2018
0	NEW DRAWING						
REV	REVISION DESCRIPTION			BY	CHKD	AUTH	DATE
				<p style="text-align: center;">SUBSTATION CONTROL ROOM TOILET, BATTERY ROOM AND SEPTIC TANK DETAILS</p>			
AUTH: N WEBBER							
DATE: 07/01/2015							
CHKD: B HLOMENDINI							
DATE: 07/01/2015				SET		SHEET	REVISION
DRAWN: G BEETGE				D-DT-5281		5E	1
DATE: 05/01/2015							