



public works

Department:  
Public Works  
REPUBLIC OF SOUTH AFRICA

**PAFURI LAND PORT OF ENTRY (LPOE):  
SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY  
WCS 052476**

**MECHANICAL ENGINEERING SERVICES**

NO.	DESCRIPTION.	DRAWING NO.
1.	LIST OF DRAWINGS	ME10492/00/01/A3
2.	MECHANICAL : ENERGY STORAGE & EQUIPMENT ROOM - VENTILATION DETAILS	ME10492/ACV/01/A6
3.	FIRE : ENERGY STORAGE & EQUIPMENT ROOM - FIRE SIGNAGE & PROTECTION	ME10492/FPE/01/A3

No.	DATE	AMENDMENT	D.P.W.
A2	06-08-19	DRAWING REGISTER REVISED TO SUIT REVISIONS	M de KOCK
A3	14-08-23	PROJECT DESCRIPTION REVISED AND DRAWING REGISTER REVISED TO SUIT REVISIONS	CJ LOURENS

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as-built drawings


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cad file name	page type
ME10492/00/A3	A 1



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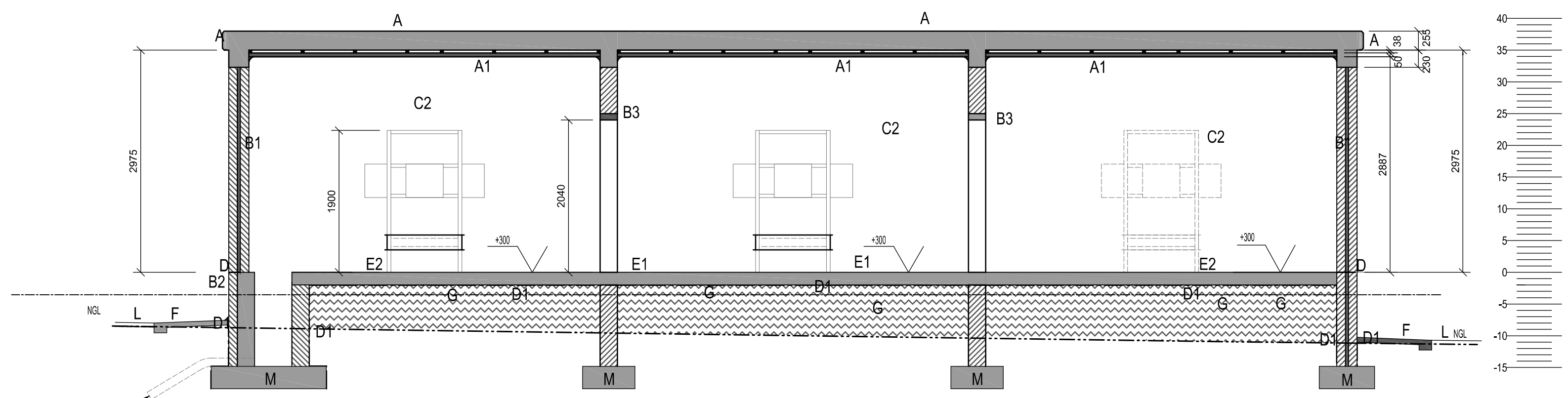
discipline  
**MECHANICAL ENGINEERING SERVICES**

service  
PAFURI LAND PORT OF ENTRY (LPOE):  
SUPPLY AND INSTALLATION OF  
SOLAR PANEL AND WASTE WATER  
FACILITY

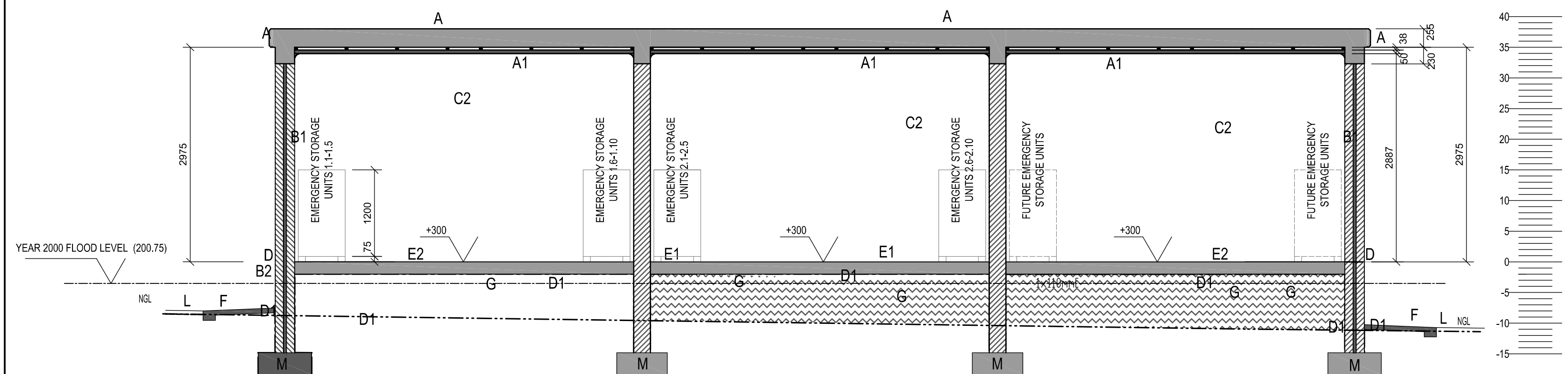
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**052476**

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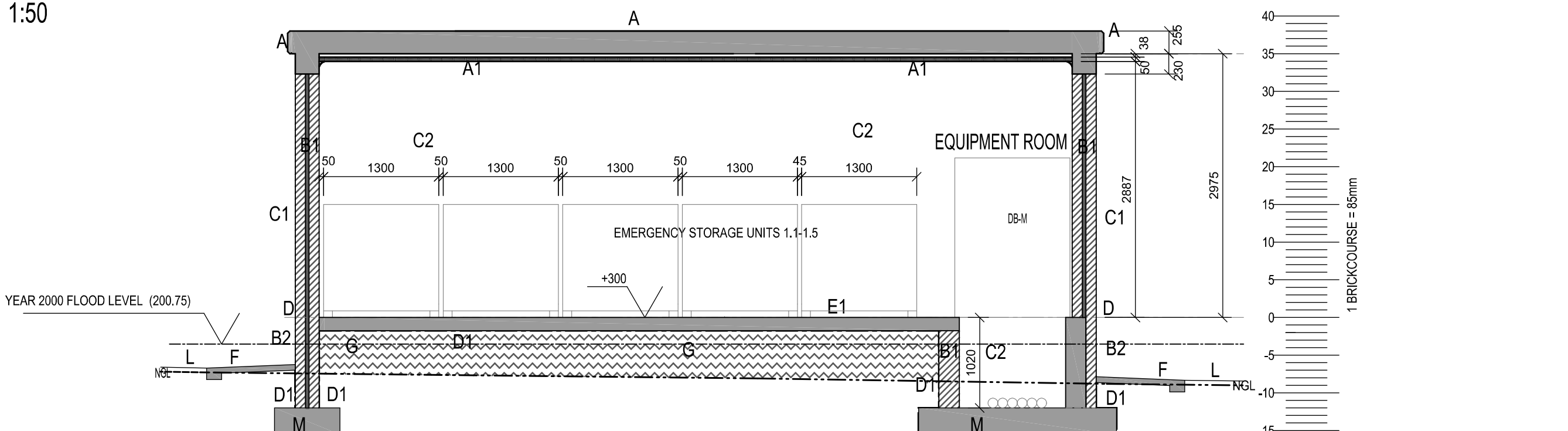
ref.no. 6022/0079/20B designed M de KOCK  
scale NTS drawn Draftplan  
date 04 / 07 / 2019 checked M de KOCK  
DPW drawing number  
**ME10492/00/A3**



ENERGY STORAGE AND EQUIPMENT ROOM  
SECTION B-B  
1:50



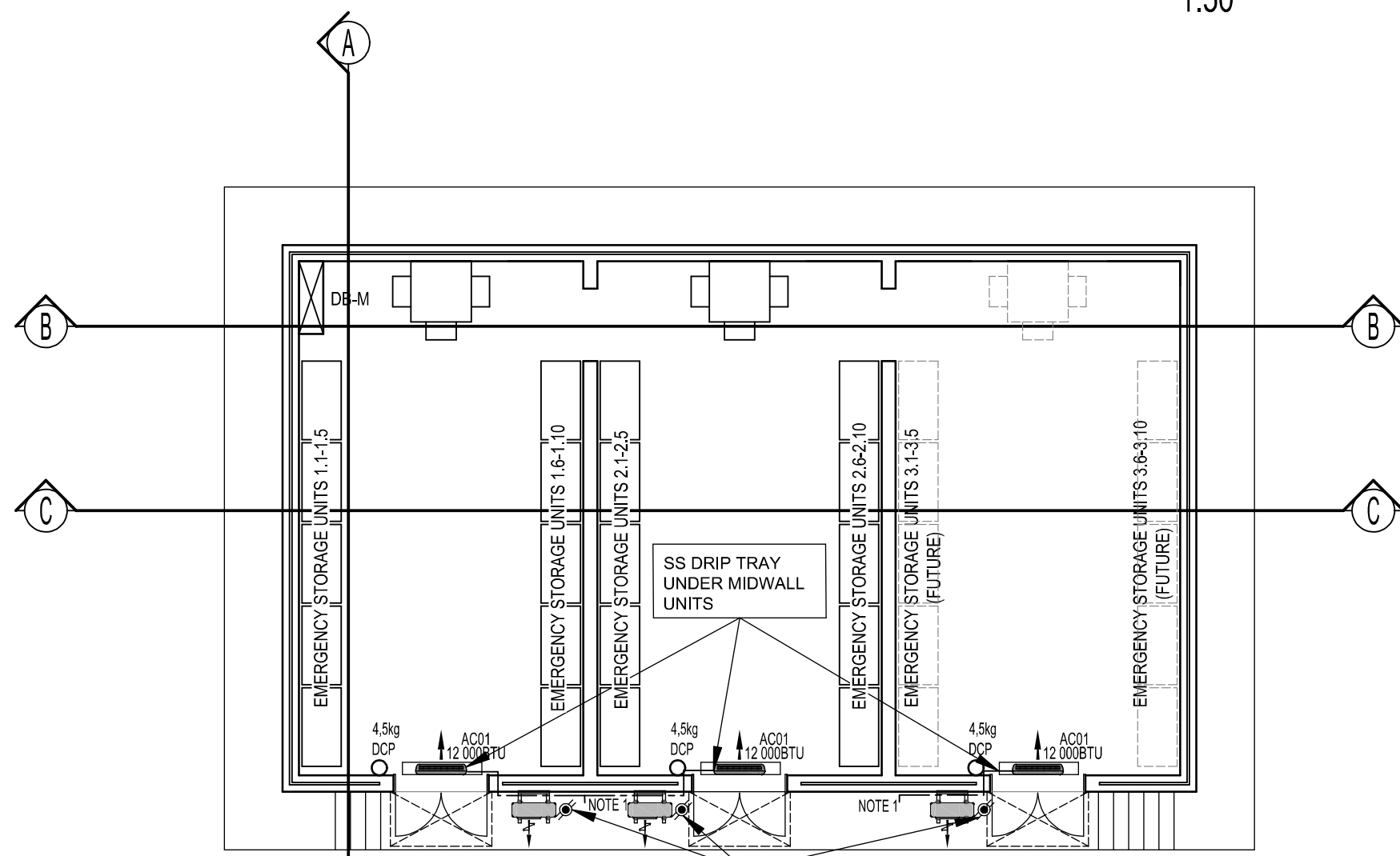
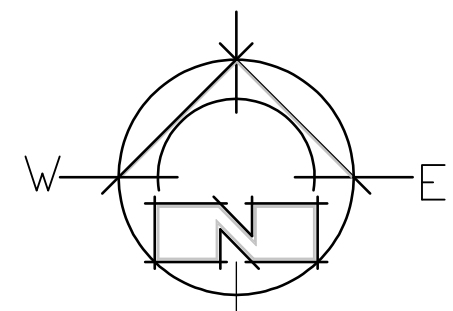
ENERGY STORAGE AND EQUIPMENT ROOM  
SECTION C-C  
1:50



ENERGY STORAGE AND EQUIPMENT ROOM  
SECTION A-A  
1:50

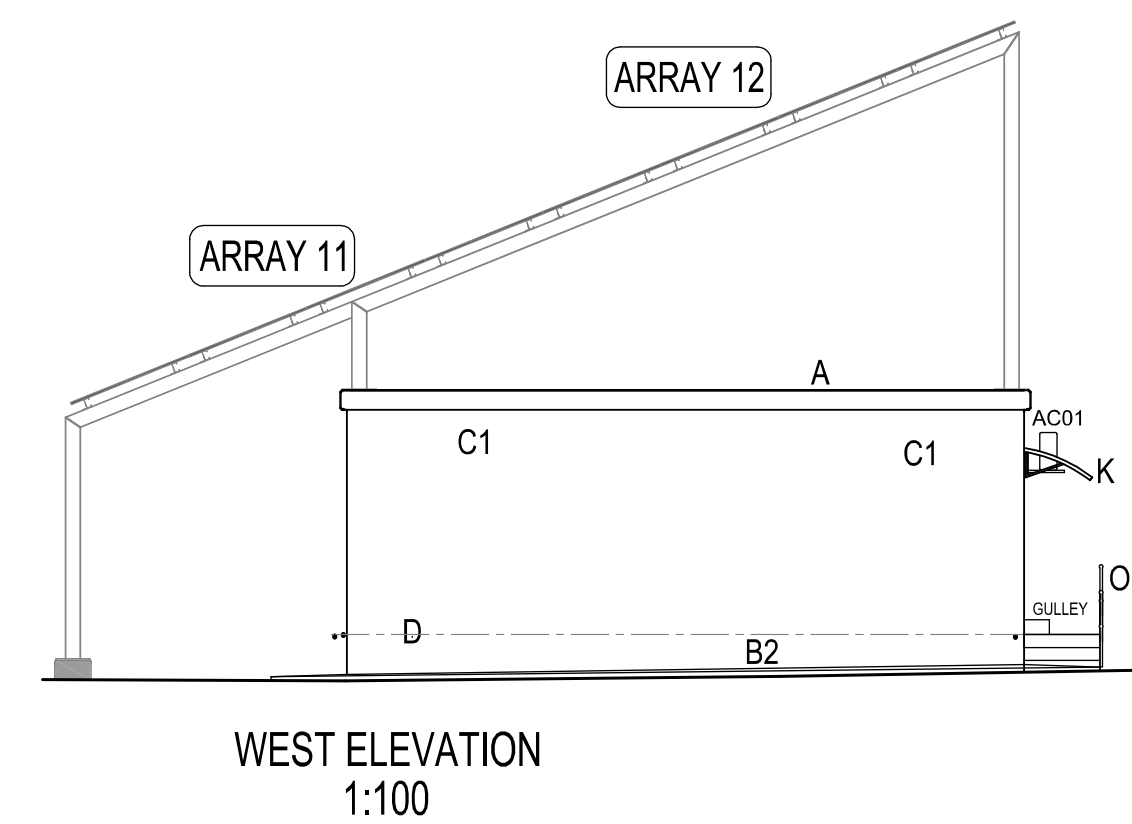
Split Unit Schedule			
Code	Type	Btu	Quantity
AC 01	Midwall Split Unit - Inverter Type (cooling only)	12 000	3

NOTE 1:  
50mm dia UPVC DRAINAGE PIPE FOR EACH SS DRIP TRAY  
BUILT INTO WALL AND TO DRAIN INTO GULLEY.

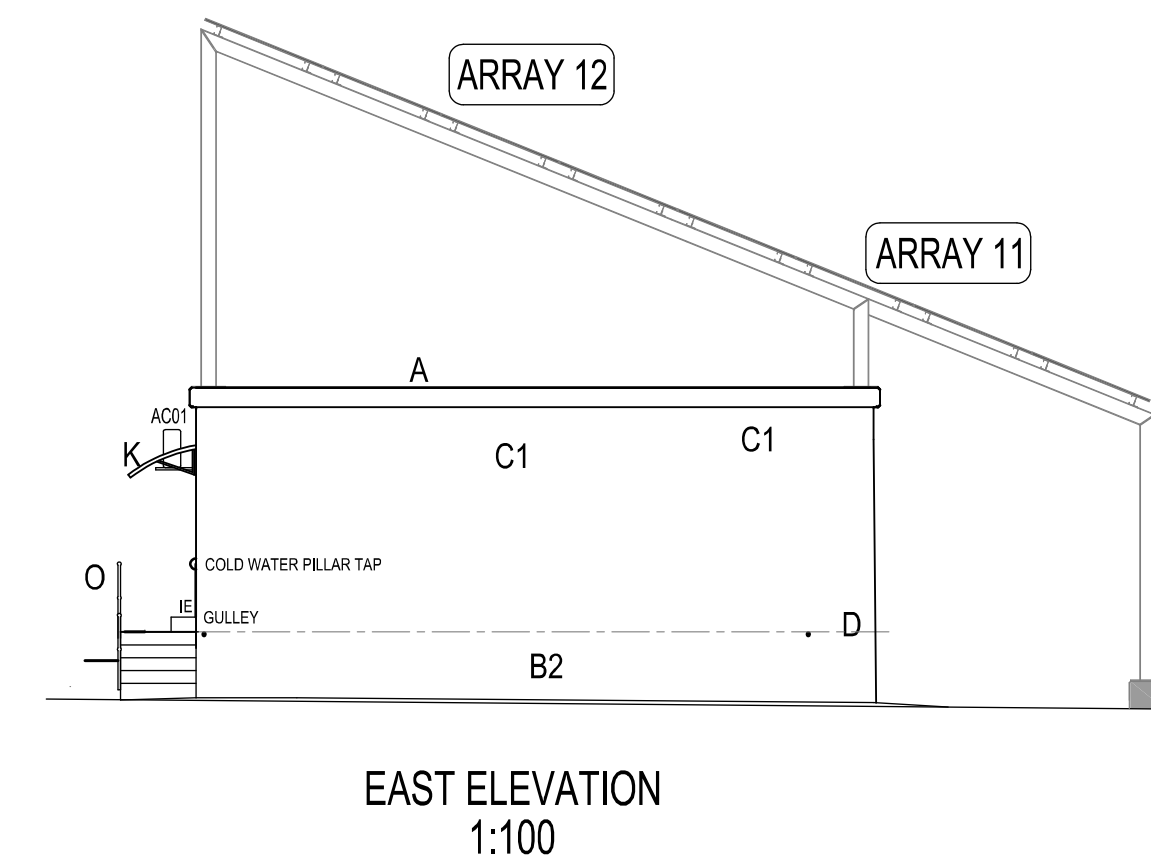


ENERGY STORAGE AND EQUIPMENT ROOM  
ENERGY STORAGE AND EQUIPMENT LAYOUT 1:100

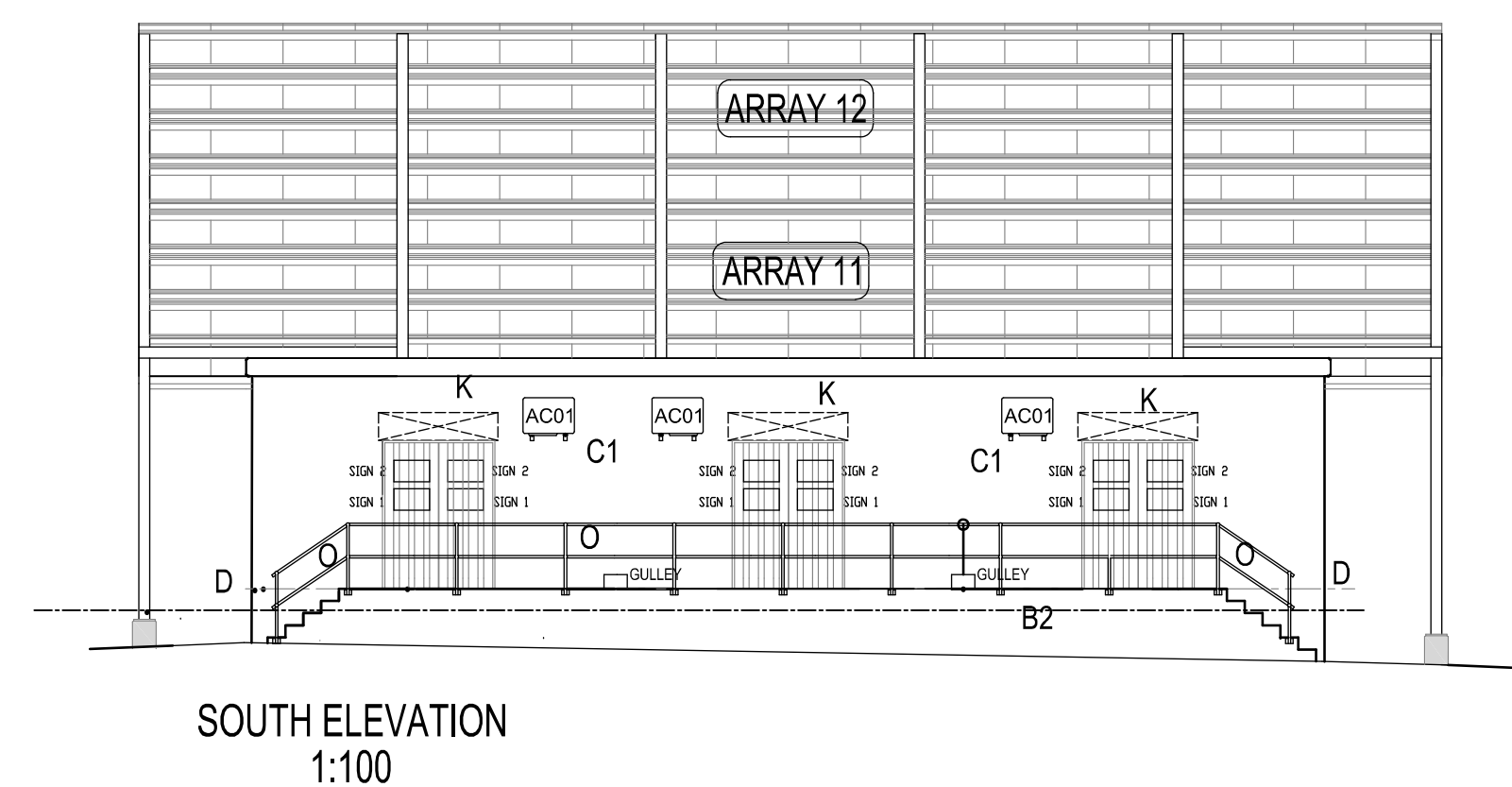
Approved by Design Leader  
Johann Erwee  
Professional Engineer  
ECSA: 780325



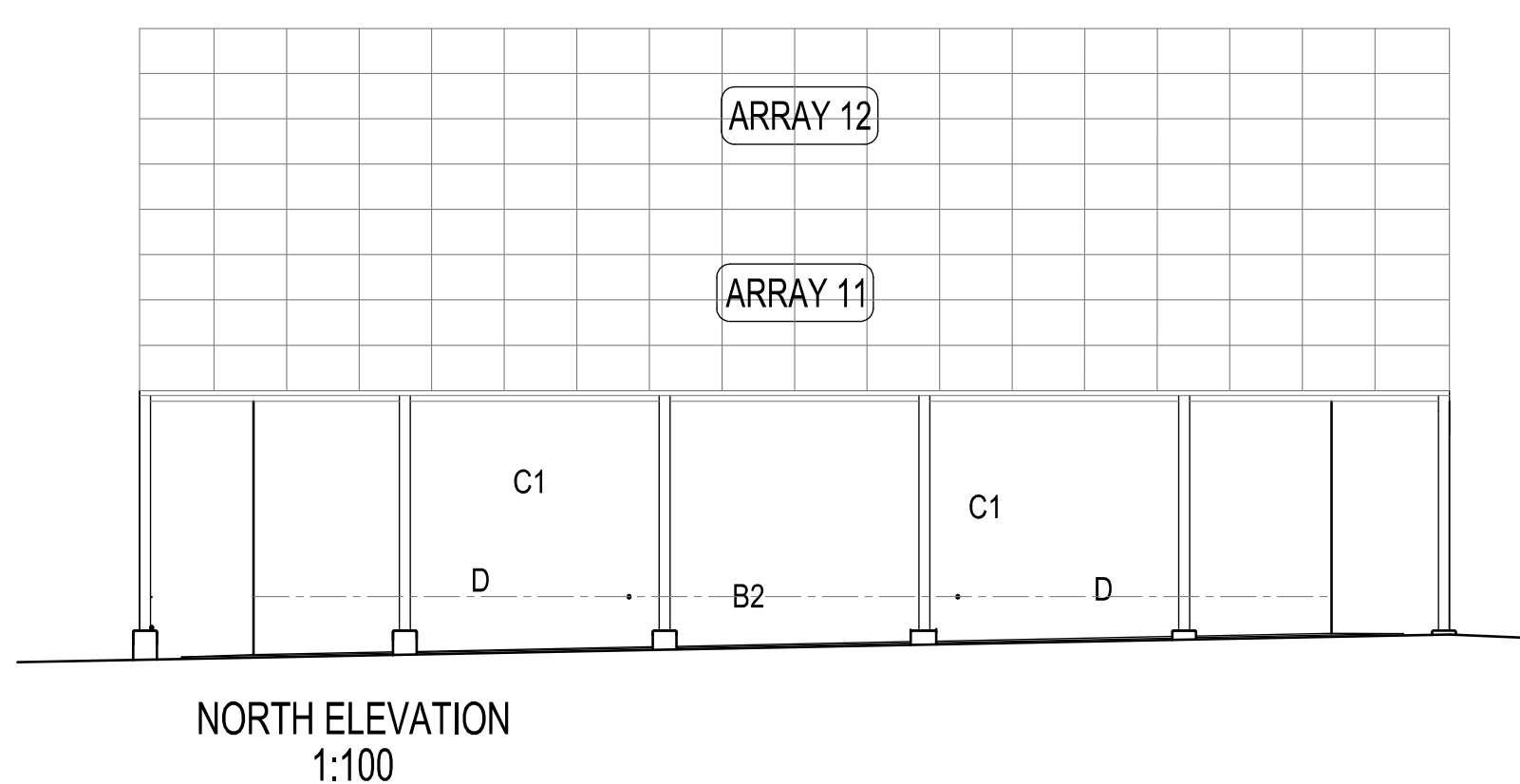
WEST ELEVATION  
1:100



EAST ELEVATION  
1:100



SOUTH ELEVATION  
1:100

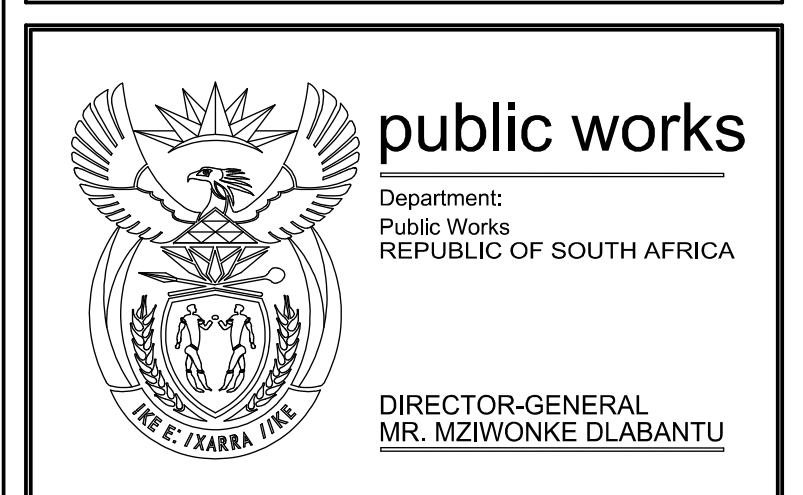


NORTH ELEVATION  
1:100

No.	DATE	AMENDMENT	D.P.W.
A2	02-11-17	ENERGY STORAGE & EQUIPMENT ROOM LAYOUT REVISED	M de KOCK
A3	18-05-18	AC UNITS INDICATED ON ELEVATIONS	M de KOCK
A4	10-06-19	FLOOR LEVEL RAISED AND FOUNDATION WALLS ADJUSTED	M de KOCK
A5	06-08-19	SPLIT UNIT SCHEDULE AND DPC SIZE REVISED	M de KOCK
A6	14-08-23	PROJECT DESCRIPTION REVISED	CJ LOURENS

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cad file name: ME10492/ACV/01/A6  
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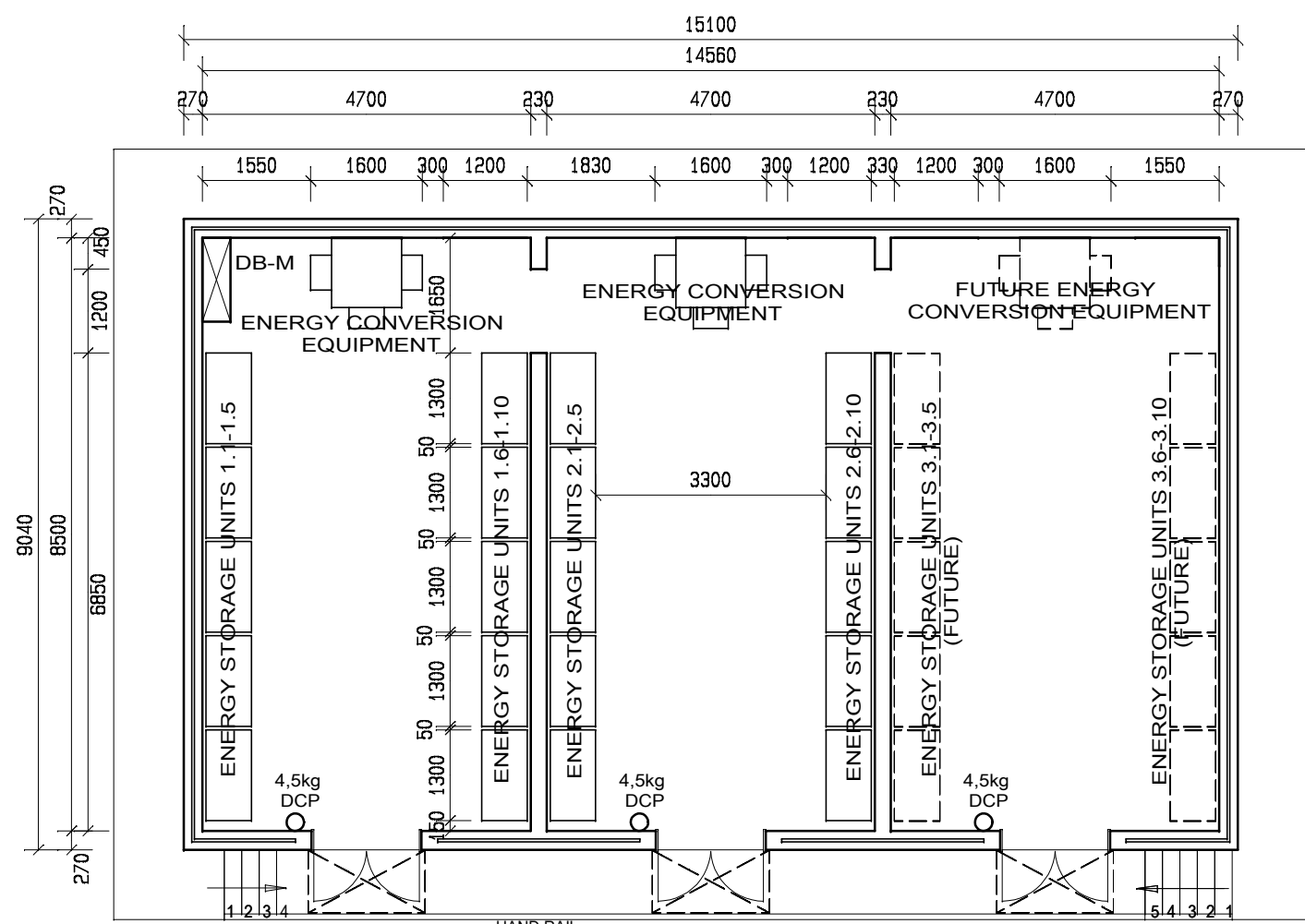


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discipline  
**MECHANICAL ENGINEERING SERVICES**  
service  
PAFURI LAND PORT OF ENTRY (LPOE):  
SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

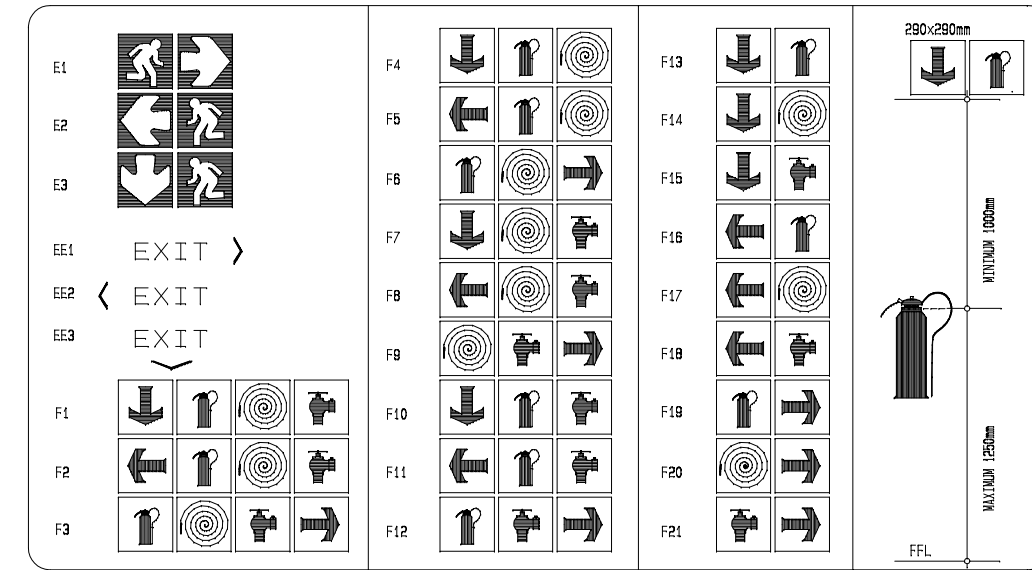
WCS number: 052476  
drawing title  
**ENERGY STORAGE & EQUIPMENT ROOM: VENTILATION DETAILS**  
ref.no. 6022/0079/20B designed M de KOCK  
scale SHOWN drawn Draftplan  
date 12 / 03 / 2014 checked M de KOCK  
DPW drawing number  
ME10492/ACV/01/A6





NOTES ON FIRE PROTECTION:

1. FIRE HYDRANTS, FIRE HOSE REELS AND FIRE EXTINGUISHERS ALL ACCORDING TO SANS 0400 SECTIONS TT34, TT35 AND TT37 IN POSITIONS AS INDICATED.
2. ALL FIRE FIGHTING EQUIPMENT AND ESCAPE ROUTES TO BE CLEARLY INDICATED WITH SABS APPROVED SIGNAGE IN ACCORDANCE WITH SANS 0400 SECTION TT.
3. FOR GENERAL LAYOUT REFER TO FLOOR AND SERVICE PLANS.



-FIRE EXTINGUISHERS :  
1x 9kg DCP PER 400sq m.



ALL SIGNS IN ACCORDANCE WITH SANS AND ISO STANDARDS



ALL SIGNS IN ACCORDANCE WITH SANS AND ISO STANDARDS

No.	DATE	AMENDMENT	D.P.W.
A2	05-08-19	FIRE EXTINGUISHERS SPECIFICATION REVISED	M de KOCK
A3	14-08-23	PROJECT DESCRIPTION REVISED	CJ LOURENS

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discipline: MECHANICAL ENGINEERING SERVICES

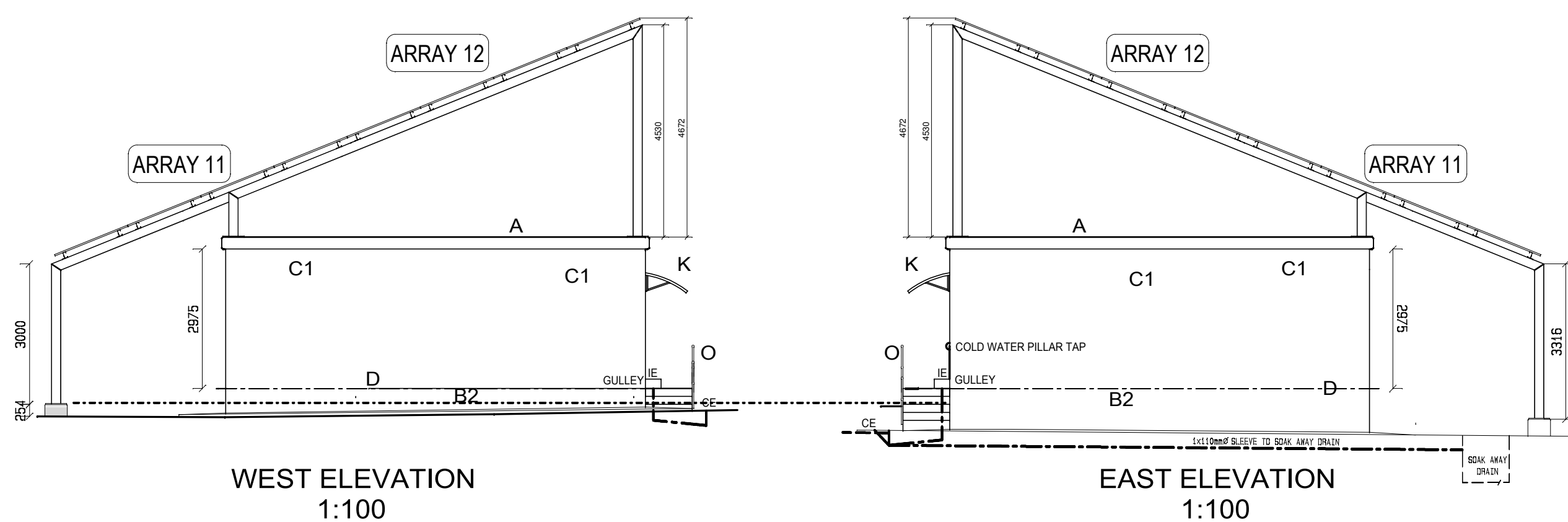
service: PAFURI LAND PORT OF ENTRY (LPOE):  
SUPPLY AND INSTALLATION OF SOLAR PANEL AND WASTE WATER FACILITY

WCS number: 052476

drawing title: ENERGY STORAGE & EQUIPMENT ROOM:  
FLOOR PLANS, ELEVATION & DETAILS  
FIRE SIGNAGE AND PROTECTION EQUIPMENT

ref.no: 6022/0079/20B designed M de KOCK  
scale: SHOWN drawn Draftplan  
date: 12 / 03 / 2014 checked M de KOCK  
DPW drawing number

ME10492/FPE/01/A3



Approved by Design Leader  
Johann Erwee  
Professional Engineer  
ECOSA : 780325

CONSTRUCTION NOTES

- 25mm THICK CONCRETE ROOF SLAB AS PER STRUCTURAL ENGINEER DESIGN AND DETAIL. ENTIRE EXTERNAL AREA OF ROOF SLAB, OVERHANGS AND UNDERSIDE OF OVERHANGS TO BE PAINTED / TREATED WITH MCC MULTI HYSEAL 210/211 SLURRY IN GREY COLOUR.
- 50mm THICK LAMDBOARD CONCEALED CLIP BRACKET DIRECTLY BELOW CONCRETE ROOF SLAB. INSTALLED ON 38x38 SAP BRANDIRINGS @ 700cc max. WITH PERIMETER BARANDERINGS. CEILING TO RECEIVE STANDARD HIGH DENSITY POLYSTYRENE 80 WIDE CORNICES FIXED VIA ALCOLIN CORNICE ADHESIVE. CEILING INSTALLATION IN ACCORDANCE WITH LAMDBOARD INSTALLATION SPECS & GUIDELINES. AN 'R' VALUE OF 3.25m<sup>2</sup>/kg MUST BE ACHIEVED. CEILING PAINTED WITH 1 x COAT UNDER COAT SUITABLE FOR CEILING AND 2 x COATS INTERIOR PVA PAINT. (SIMILAR OR EQUAL TO DULUX CEILING WHITE).
- 270mm CAVITY CLAY BRICK WALL (SABS APPROVED) IN STRECHER BOND @ 85mm BRICK LAYERS, WITH 25mm THICK LAMDBOARD INSULATING BOARD BUILT INTO CAVITY. WALL INSULATION TO ACHIEVE A 'R' VALUE OF 1.6m<sup>2</sup>/kg. KW. STANDARD BRICKFORCE & WALLTIES TO BE BUILT INTO EVERY 4th LAYER & IN ACCORDANCE WITH ISOBOARD GUIDE LINE FOR CAVITY WALL CONSTRUCTION. BOTH INTERNAL AND EXTERNAL WALLS TO RECEIVE PLASTER (C1 & C2).
- ALL VISIBLE WALLS BELOW DPC (PLINTH WALLS) TO BE SEMI FACE BRICK IN STRECHER BOND @ 85mm BRICK LAYERS, WITH STANDARD BRICKFORCE BUILT INTO EVERY 4th LAYER. ALL VERTICAL AND HORIZONTAL JOINTS TO BE RAKED AND JOINTED 10mm DEEP.
- 2x CONCRETE LINTOLS OVER ALL OPENINGS 1m AND WIDER.
- 20mm THICK PLASTER. WOOD FLOATED AND PAINTED WITH 1 x COAT UNDER COAT SUITABLE FOR EXTERNAL WALLS AND 2 x COATS EXTERIOR PVA PAINT. (SIMILAR OR EQUAL TO DULUX WEATHERSAURD LA CASA).
- 20mm THICK PLASTER. STEEL FLOATED AND PAINTED WITH 1 x COAT DULUX TRADE BONDING LIQUID, AND 1 x COAT UNDER COAT SUITABLE FOR INTERNAL WALLS. 2 x COATS ENAMEL PAINT. (SIMILAR OR EQUAL TO DULUX TRADE ENAMEL WHITE).
- 1 LAYER BRICKGRIP SABS 375 MICRON PVC DAMP COURSE OVERLAP 300 AT JOINTS 40mm UNDER ALL WALLS.
- 250 MICRON USE TYPE GUNDEL PVC (GREEN) MEMBRANE UNDER ENTIRE FLOOR SLAB AND VERTICALLY AGAINST FOUNDATION WALLS (OVERLAPS MIN 300mm).
- 1500mm THICK FLOORS LAB AS PER STRUCTURAL ENGINEER DESIGN IN EQUIPMENT AREA AND BATTERY ROOMS. FLOOR TO BE FINISHED WITH PLASTERED SKIRTING 100mm HIGH.
- ALL INTERNAL FLOORS TO BE PREPARED AND TREATED TO RECEIVE AN EPOXY FLOOR COATING AS PER MANUFACTURER SPEC. EPOXY COATING SIMILAR OR EQUAL TO DULUX TRADE TUFFCOTE WB EPOXY IN LIGHT GREY.
- 1000mm WIDE CONCRETE APRON WITH TOE. (WOOD FLOAT FINISH)
- SELECTED HARD CORE FILLING - WELL WETTED AND COMPACTED TO ENGINEERS SPEC. ENTIRE FLOOR AND FOUNDATIONS AREA TO BE TREATED WITH A SABS APPROVED ANT AND WEED POISON.
- CONCRETE FOUNDATIONS AS PER ENGINEER
- DOORS AS PER SCHEDULE
- REBOSS TYPE P-SERIES 1200mm DEEP x 1500mm WIDE ALUMINIUM FRAMED AWNINGS OVER ALL DOORS. FITTED AS PER MANUFACTURER SPEC
- 25mm PEBBLE STONE 50mm THICK
- FOUNDATIONS AND FOUNDATION WALLS AS PER STRUCTURAL ENGINEER
- STANDARD PRECAST CONCRETE GULLEYS WITH GULLEY TRAP AND GRID. 1x110mm dia UNDERGROUND UPVC PIPING WITH Y-CONNECTIONS TO SOAK AWAY DRAIN.
- INDUSTRIAL TYPE HANDRAIL - SIMILAR OR EQUAL TO MACSTEEL INTER-LINK HANDRAIL SYSTEMS. BALL TYPE STANCHIONS (MS90 & MS35) AND PIPE RAILINGS. ENDS OF RAILINGS PLUGGED WITH RUBBER PLUGS (ITEM 10). STANCHIONS FIXED TO STAIR AND PLATFORM VIA CHEMICAL ANCHORS. HANDRAIL PRIMED AND PAINTED SIMILAR TO DOOR FINISH.

NOTE: STANDARD 25mm BRASS PILLAR TAP WITH GALVANISED PIPE UP STAND SADDLED TO WALL. WATER SUPPLY VIA 25mm HDP PVC PIPE AS DETERMINED ON SITE

NOTE: 110mm dia DRAINAGE SLEEVE UNDER BUILDING TO BE ENCASED IN 350x350 CONCRETE AND TO EXTEND TO 1000mm BEYOND BUILDING EDGE.

