

**BOOK OF DRAWINGS FOR PROPOSED EMMMAUS
BOREHOLE
WATER SUPPLY PROJECT**

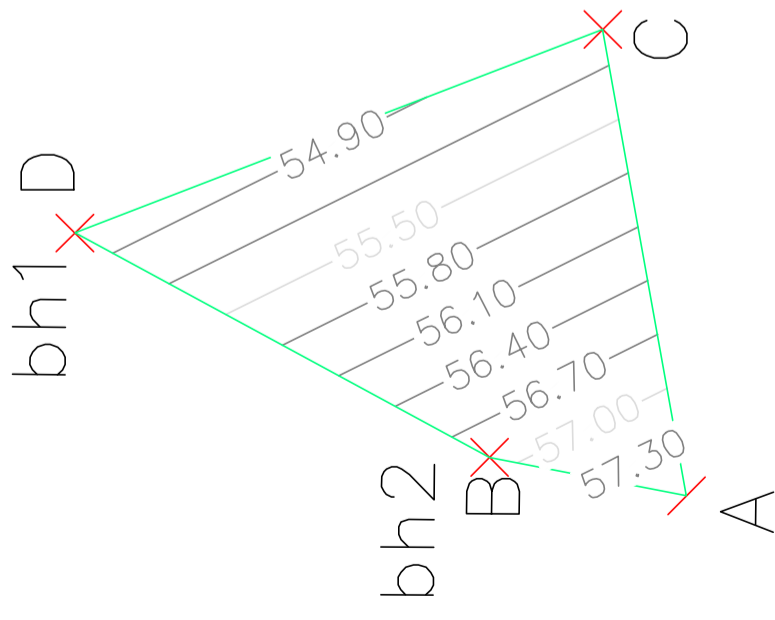


INTERNATIONAL COMMITTEE
FOR DEVELOPMENT OF PEOPLE
NAIROBI OFFICE # 117
MANYANI EAST ROAD, OFF
JAMES GICHURU, LAVINGTON,
NAIROBI , KENYA
Email: kenya@cisp-ngo.org

NOTES:

1. All Levels are in metres based on National Datum
2. All dimensions are in meters unless otherwise specified.

LEGEND:-



Location	X	y
A	9829917.848	616260.162
B	9829921.712	616278.910
C	9829962.208	616268.358
D	9829943.159	616318.316
bh1	BORE HOLE 1	
bh2	BORE HOLE 2	

REV	REVISIONS	DATE	APPROVED
4	BY		
3	BY		
2	BY		
1	BY		

PROJECT:
 WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANJA-RIVER COUNTY

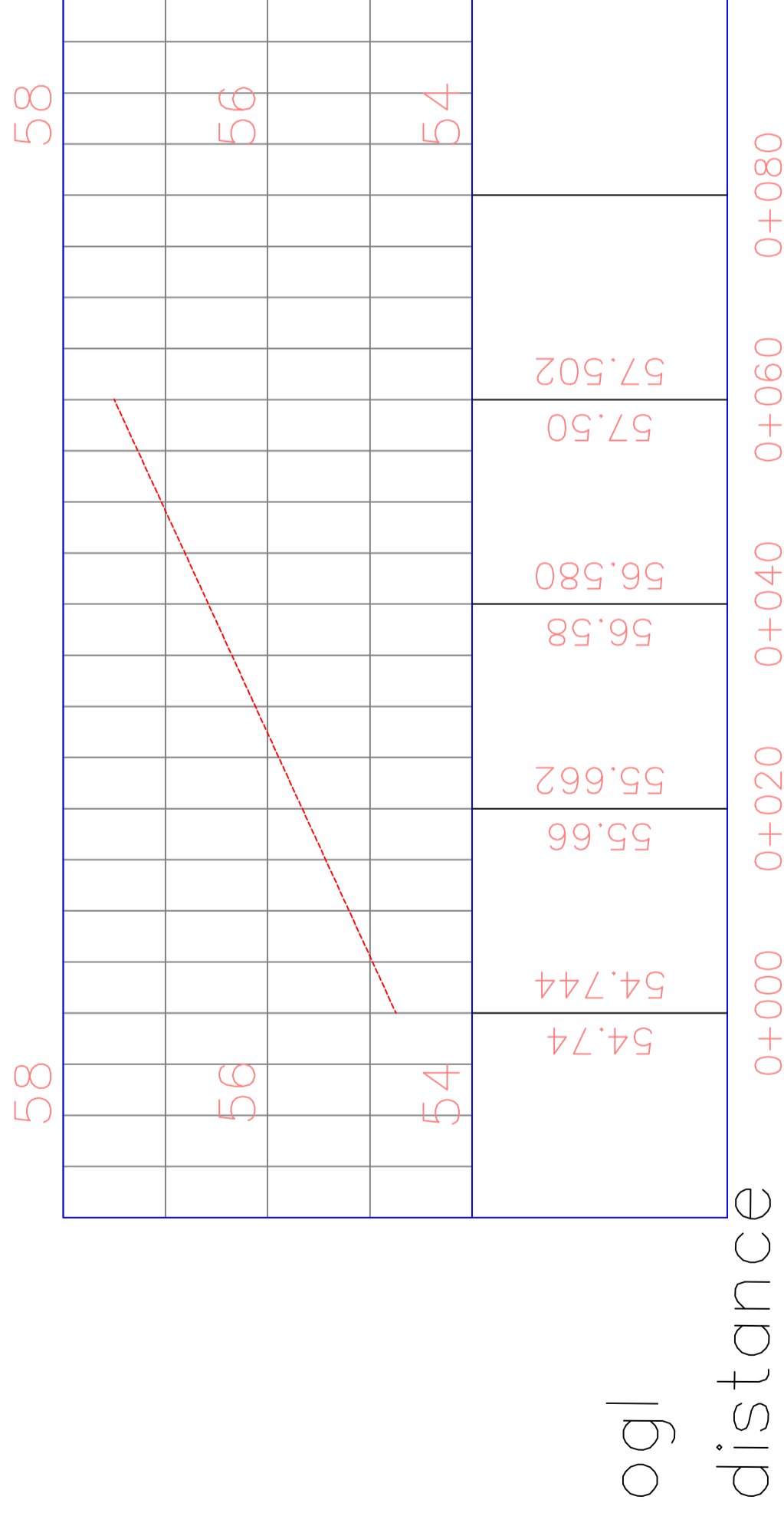


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 JAMES GICHURU LIVINGSTON,
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 ENG. JMR
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 Nairobi, KENYA
 Telephone: +254 - 722617042 Email: ramesso@yahoo.com

Drawing title:
Layout of borehole site

Alignment – EMAUS PROFILE



Pipe Dia.(mm) hdpe 110mm Dia. 12.5 PN

NOTES:

1. All Levels are in metres based on National Datum
2. All dimensions are in meters unless otherwise specified.

LEGEND: -



NORTH



SURVEY BENCHMARK

REV	REVISIONS	BY	DATE	APPROVED
4		BY		
3		BY		
2		BY		
1		BY		

PROJECT: WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANARIVER COUNTY.



INTERNATIONAL COMMITTEE FOR DEVELOPMENT OF PEOPLE
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Drawing No.

Borehole site Profile

Scale: 1:20

Date: JUNE 2022

DWG NO

Emmaus 02

4/8

NOTES

- CONCRETE CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S.
- CONCRETE AGGREGATE TO COMPLY WITH B.S. 882
- WATER IN CONCRETE MIXES TO B.S. 5148
- CONCRETE CLASSES TO BE AS FOLLOWS: MASS CONCRETE FILL AND BUILDING MIX CLASS 15/40
- REINFORCED CONCRETE CLASS II
- MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS:
 - SLABS - 20 mm
 - BEAMS - 25 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & FOOTINGS - 50 mm (f)
- WALLS/COLUMNS SHOULD BE POURED, IF POSSIBLE, IN A FULL HEIGHT POUR AS SOON AS POSSIBLE AFTER THE BASE HAS BEEN CONCRETED (2 TO 3 DAYS)
 - REINFORCEMENT:
 - REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4461
 - BENDING DIMENSIONS TO B.S. 4468
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER (c) BLOCKS, CHAIRS AND Tying WIRE
 - EXAMPLE: 16 T12 - 07 - 150 SPACERS 16 No. HIGH TENSILE (c) 12mm DIA. BARS IDENTIFICATION MARK 07 AT 150mm CENTRE TO CENTRE SPACING
 - JOINTS:
 - THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS.
 - BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE ROUGHENED AND ALL LANTANCE AND LOOSE MATERIAL REMOVED. THE SURFACE SHALL BE HANDRAILY WETTED. EXCESS WATER SHOULD BE REMOVED AND THE JOINTS SHOULD BE KEPT OPEN FOR 20 MINUTES BEFORE JOINTS ARE IN PLACE.
 - ALL WALL/COLUMN BASE CONNECTIONS SHOULD HAVE 100mm COVER UNLESS OTHERWISE SPECIFIED.
 - THE WORK WATER STOP SHALL BE 20mm WIDE UNLESS OTHERWISE SPECIFIED.
 - JOINT FILLER TO B.S. 5282 AND TO BE APPROVED BY THE ENGINEER.

ABBREVIATIONS

- G.C.I. = GALVANISED CORRUGATED IRON
- mm = MILLIMETERS
- DIG. = DIAMETER
- MIN. = MINIMUM
- NO. = NUMBER
- C.I. = CAST IRON
- G.C.I. = GALVANISED IRON
- T10 = REINFORCEMENT BAR 10mm DIAMETER
- P.C.C. = PRECAST CONCRETE
- T&G = TONGUE AND GROOVE
- G.S. = GALVANISED STEEL
- C.I. = CAST IRON
- ALT. = ALTERNATIVE
- GV = GATE VALVE

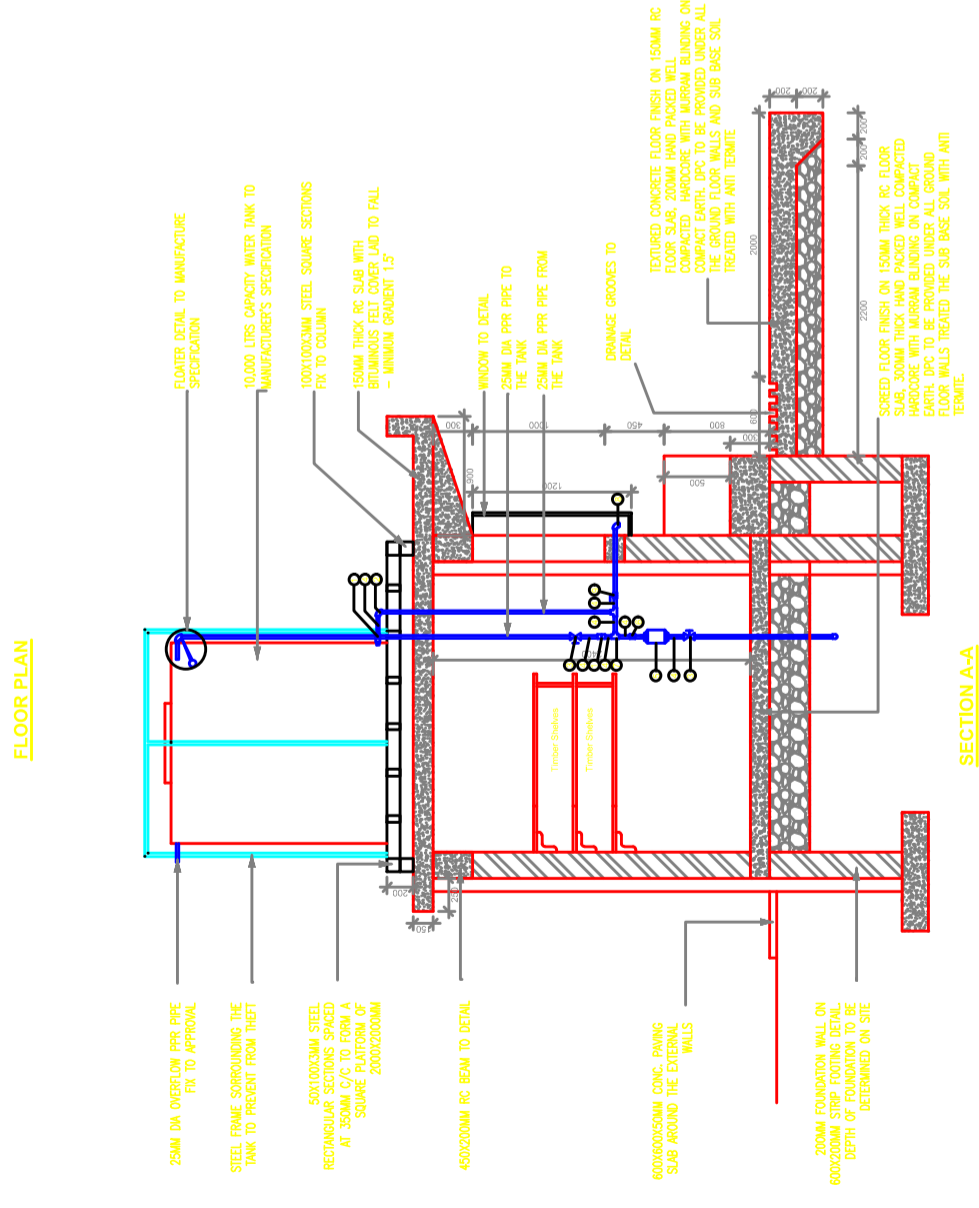
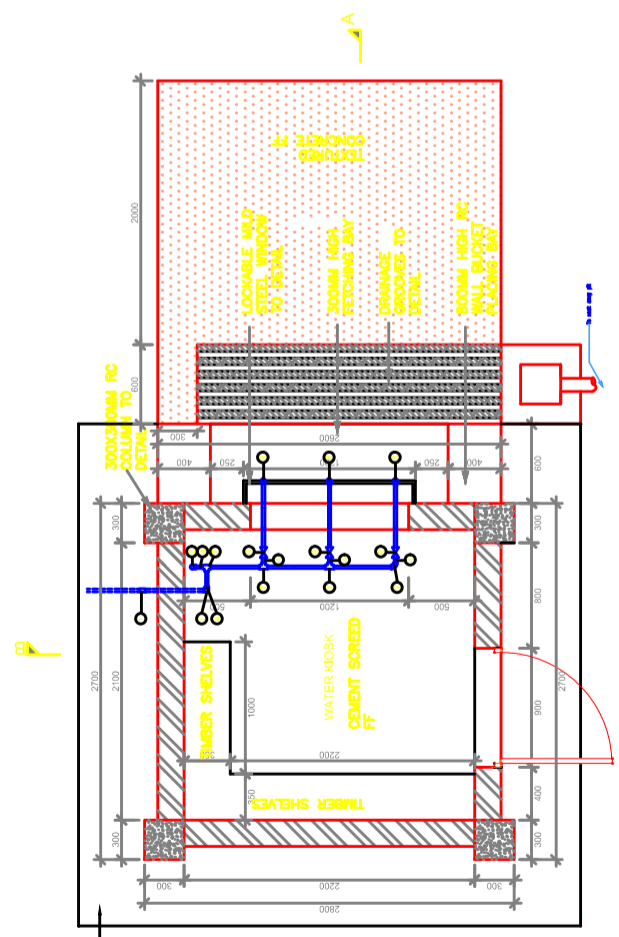
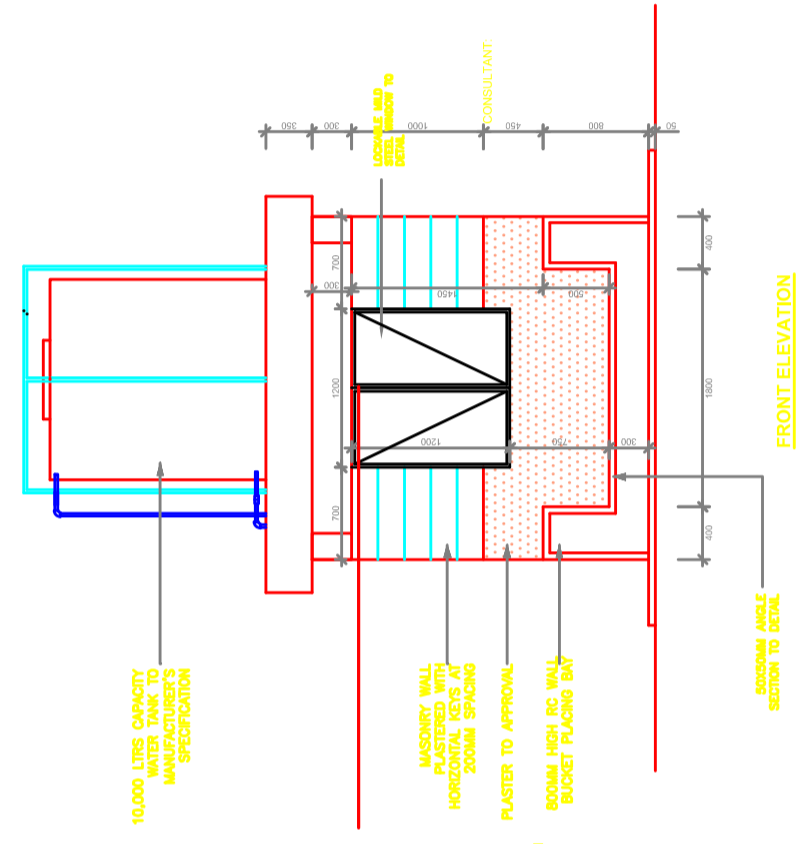
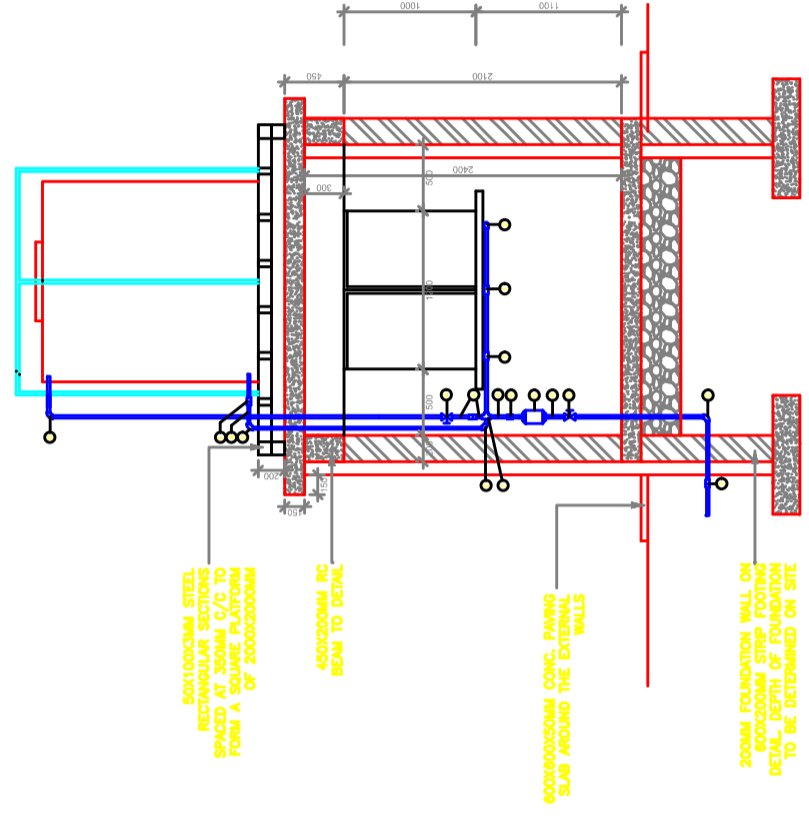
PROJECT: WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANA-RIVER COUNTY



INTERNATIONAL COMMITTEE FOR DEVELOPMENT OF PEOPLE
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 Telephone: +254 - 722617042
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Borehole site Profile



NOTES

1. CONCRETE
 - a. CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - b. CONCRETE AGGREGATE TO COMPLY WITH B.S. 882
 - c. WATER IN CONCRETE MIXES TO B.S. 3146
 - d. CONCRETE TESTS TO BE AS FOLLOWS - MASS CONCRETE FILL AND BUILDING WALL CLAS 15/40
 - e. REINFORCED CONCRETE CLASS II
 - f. MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BUILDINGS:
 - BEAMS - 25 mm
 - SLABS - 20 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & FOOTINGS - 50 mm (Ø)
2. REINFORCEMENT
 - a. WALLS/COLUMNS SHOULD BE POURED, IF POSSIBLE, IN A FULL HEIGHT POUR AS SOON AS POSSIBLE AFTER THE BASE HAS BEEN CONCRETED (2 TO 3 DAYS)
 - b. REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4461
 - c. BENDING DIMENSIONS TO B.S. 4468
 - d. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER (Ø) BLOCKS, CHAIRS AND TIES WIRE
 - e. EXAMPLE: 16 T12 - Ø7 - 150 SPACERS 16 No.
 - f. HIGH TENSILE (Ø) 12mm DIA. BARS IDENTIFICATION MARK Ø7 AT 150mm CENTRE TO CENTRE SPACING
3. JOINTS
 - a. THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS.
 - b. BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE ROUGHENED AND ALL LINTHACK AND LOOSE MATERIAL REMOVED. THE SURFACE SHALL BE THOROUGHLY WETTED BUT EXCESS WATER SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINTS ARE IN A SATISFACTORY STATE.
 - c. ALL WALL/COLUMN BARS CROSSINGS SHOULD HAVE A MINIMUM LAP OF 400mm.
 - d. THE MAX. WATER STOP SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED.
 - e. JOINT FILLER TO B.S. 6822 AND TO BE APPROVED BY THE ENGINEER.

ABBREVIATIONS

1. G.C.I. = GALVANISED CORRUGATED IRON
2. DIA. = DIAMETER
3. MIN. = MINIMUM
4. M.R. = NUMBER OF METRE
5. C.L. = CENTRE LINE
6. G.L. = GALVANISED IRON
7. T10 = REINFORCEMENT BAR 10mm DIAMETER
8. P.C.C. = PRECAST CONCRETE
9. T&G = TONGUE AND GROOVE
10. G.S. = GALVANISED STEEL
11. C.I. = CAST IRON
12. A.L.T. = ALTERNATIVE
13. ØV = GATE VALVE

TYPICAL WATER KIOSK DETAILS

PROJECT: WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANA-RIVER COUNTY



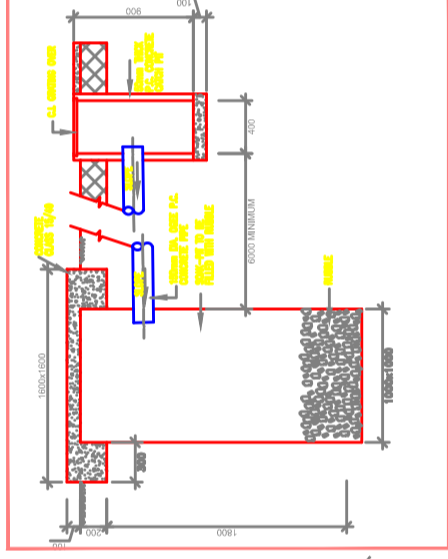
INTERNATIONAL COMMITTEE FOR DEVELOPMENT OF PEOPLE
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 Email: kenya@cisp-ngo.org

INDIVIDUALCONSULTANT
 ENG. JMR

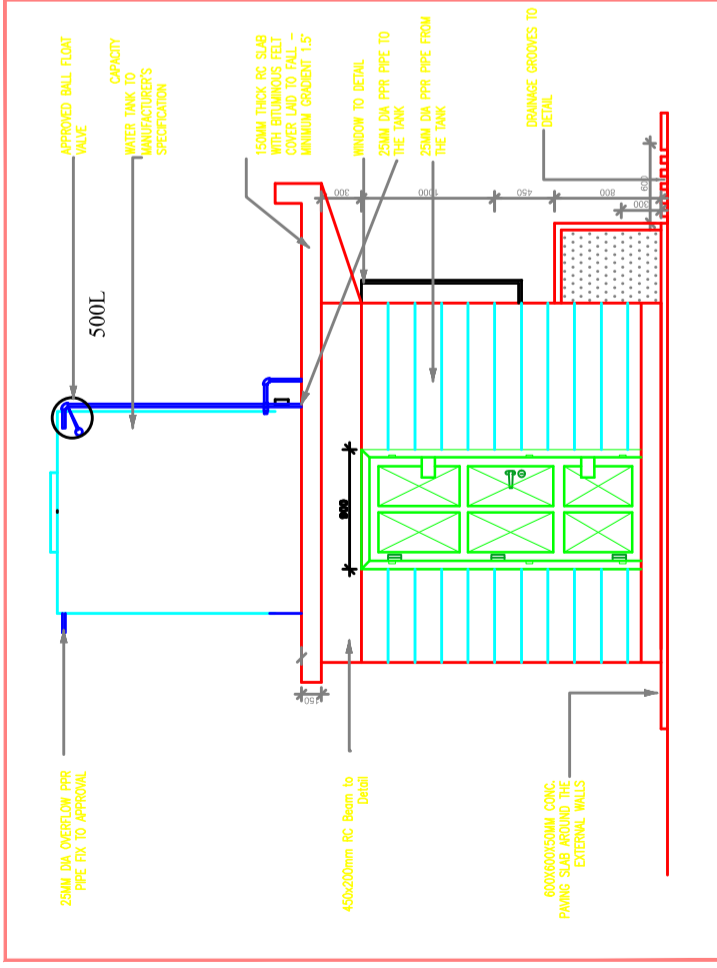
P.O BOX 72398-0200
 Nairobi, KENYA
 Telephone: +254 - 722617042
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SCHEDULE OF FITTINGS

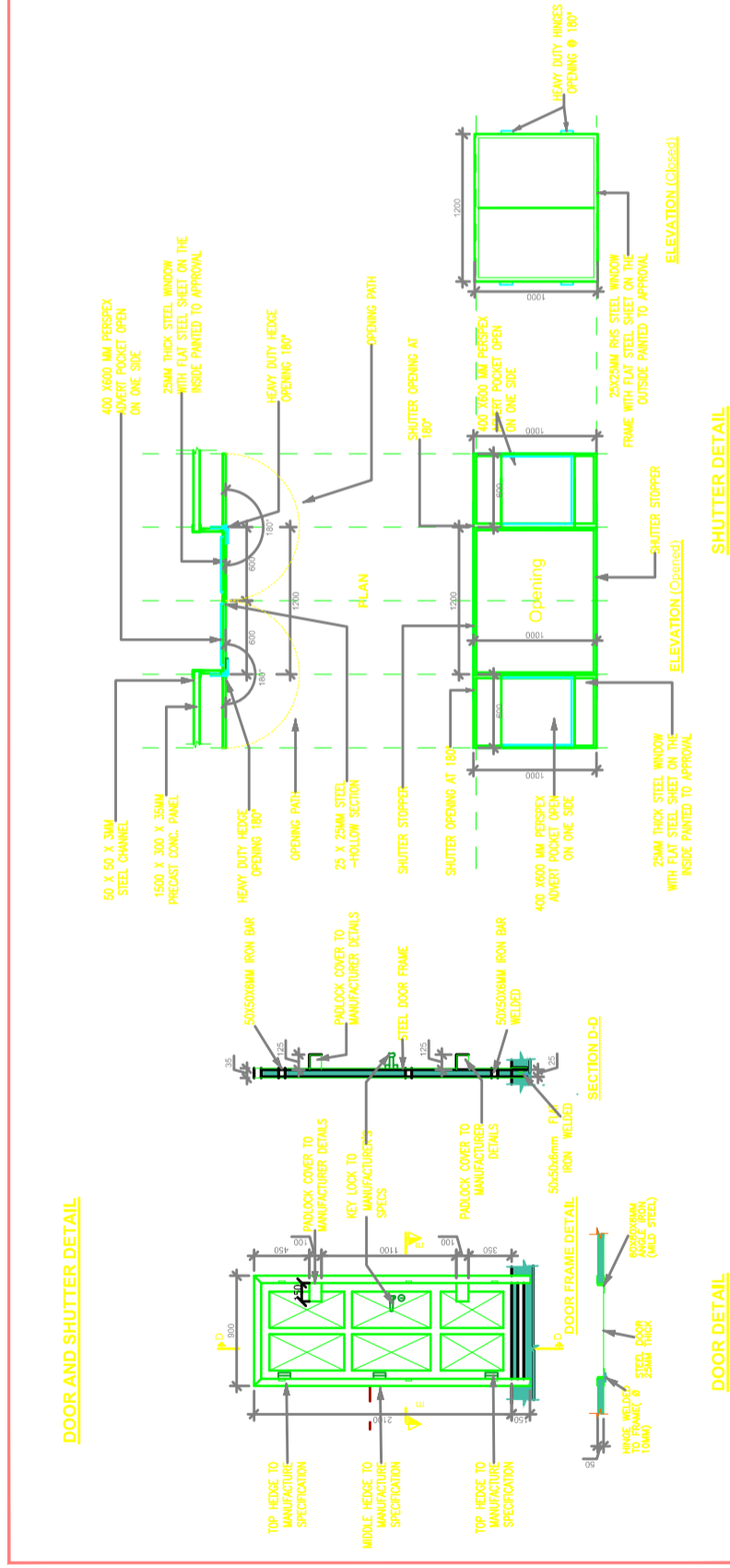
ITEM/Nr	DESCRIPTION	UNIT	QUANTITY
1	25mm Dia PPR Union	Nr	3
2	25mm Dia PPR Elbow	Nr	3
3	25mm Dia Gate Valve (PEGLER)	Nr	2
4	25mm Dia PPR Nipple	Nr	11
5	25mm Dia PPR Water Meter (KENT)	Nr	1
6	25mm Dia Non Return Valve	Nr	1
7	25mm Dia PPR Tee	Nr	5
8	25mm Dia PPR Bend	Nr	4
9	25mm Dia Ball Cock Water Taps	Nr	3
10	25mm Dia PPR Long Threaded Nipple	Nr	2
11	25mm Dia GI Black Nut	Nr	4
12	25mm Dia PPR Class B Pipe	Nr	4



DETAIL OF SOAK-PIT AND CATCH PIT



SIDE ELEVATION



DOOR AND SHUTTER DETAIL

DOOR DETAIL

NOTES

- CONCRETE:
 - CEMENT TO BE ORDINARY PORTLAND CEMENT TO B.S. 12
 - CONCRETE AGGREGATE TO COMPLY WITH B.S. 682
 - WATER IN CONCRETE MIXES TO B.S. 3146
 - CONCRETE CLASSES TO BE AS FOLLOWS- M35 CONCRETE FILL AND BLINDING MK, CLASS 19/40 REINFORCED CONCRETE CLASS B
 - MINIMUM COVER TO ALL REINFORCEMENT TO BE 40mm UNLESS AS SPECIFIED BELOW FOR BALUNGS:
 - SLABS - 25 mm
 - BEAMS - 25 mm
 - COLUMNS - 40 mm
 - FOUNDATIONS & FOOTINGS - 50 mm (Ø)
- WALLS/COLUMNS SHOULD BE POURED, IF POSSIBLE, IN A FULL HEIGHT POUR AS SOON AS POSSIBLE AFTER THE BASE HAS BEEN CONCRETED (2 TO 3 DAYS)
 - REINFORCEMENT TO BE HIGH YIELD SQUARE TWISTED BARS TO B.S. 4461
 - BENDING DIMENSIONS TO B.S. 4469
 - THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SPACER (Ø) BLOCKS, CHAIRS AND TIES WIRE
 - EXAMPLE: 1Ø 12 - Ø7 - 150 SPACERS 1Ø 16 HIGH TENSILE (Ø) 12mm DIA. BARS IDENTIFICATION MARK Ø7 AT 150mm CENTRE TO CENTRE SPACING
- JOINTS:
 - THE POSITION AND NUMBER OF INTERMEDIATE JOINTS TO BE AS DIRECTED BY THE ENGINEER OR AS SHOWN IN THE DRAWINGS.
 - BEFORE PLACING FRESH CONCRETE THE OLD SURFACE SHALL BE ROUGHENED AND ALL LANTANCE AND LOOSE MATERIAL REMOVED. THE SURFACE SHALL BE THOROUGHLY WETTED BUT EXCESS WATER SHOULD BE REMOVED SO THAT THE CONSTRUCTION JOINTS ARE IN A SOUND BUT SURFACE DRY CONDITION
 - ALL WALL/COLUMN BASE CONNECTIONS SHOULD HAVE 100mm COVER UNLESS OTHERWISE SPECIFIED
 - THE JOINTS SHALL BE 200mm WIDE UNLESS OTHERWISE SPECIFIED
 - JOINT FILLER TO B.S. 6882 AND TO BE APPROVED BY THE ENGINEER

ABBREVIATIONS

- G.C.I. = GALVANISED CORRUGATED IRON
- mm = MILLIMETERS
- Ø = DIAMETER
- M.N. = MINIMUM
- No. = NUMBER
- G.L. = GROUND LEVEL
- G.I. = GALVANISED IRON
- T10 = REINFORCEMENT BAR 10mm DIAMETER
- P.C.C. = PRECAST CONCRETE
- T&G = TONGUE AND GROOVE
- G.S. = GALVANISED STEEL
- C.I. = CAST IRON
- G.L.T. = GATE VALVE
- ØV = GATE VALVE

TYPICAL WATER KIOSK DETAILS

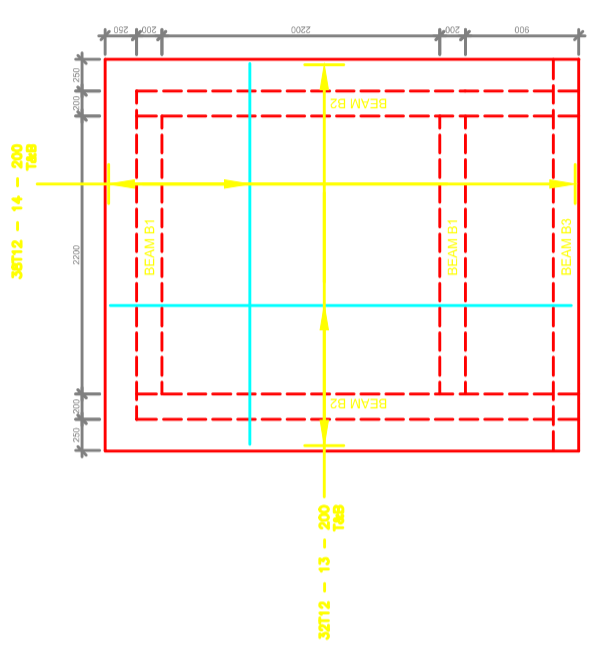
PROJECT:
 WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANA-RIVER COUNTY



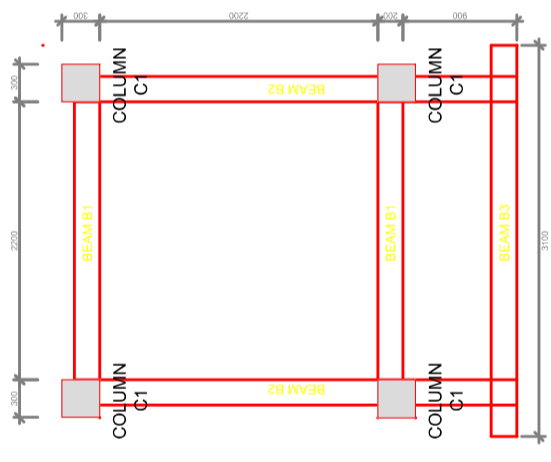
INTERNATIONAL COMMITTEE FOR DEVELOPMENT OF PEOPLE
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 MANYANI EAST ROAD, OFF JAMES GICHURU, LAVINGTON, NAIROBI, KENYA
 Email: kenya@cisp-ngo.org

INDIVIDUALCONSULTANT

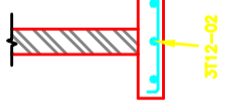
ENG. JMR
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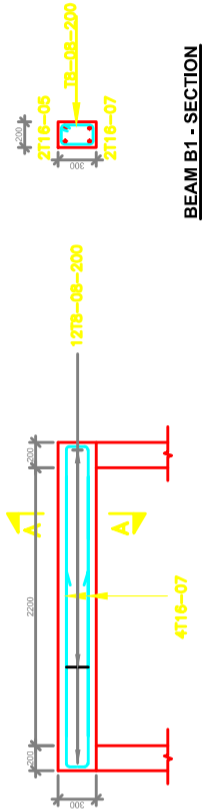
PLAN OF THE SUSPENDED ROOF SLAB



PLAN OF THE BEAMS AND COLUMNS

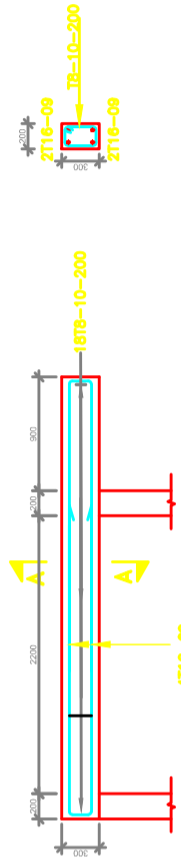


SECTION X-X FOUNDATION



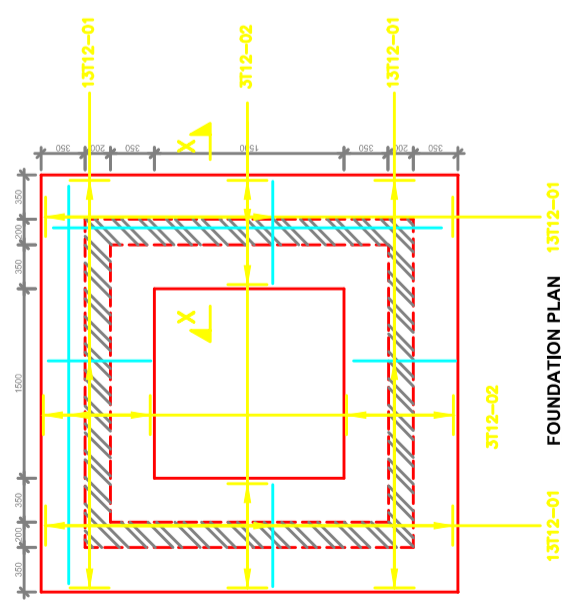
BEAM B1 - SECTION

**BEAM B1
2No. REQUIRED**

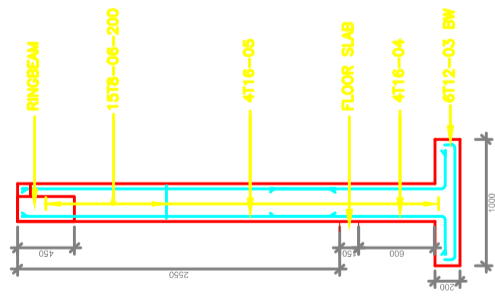


BEAM B2 - SECTION

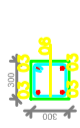
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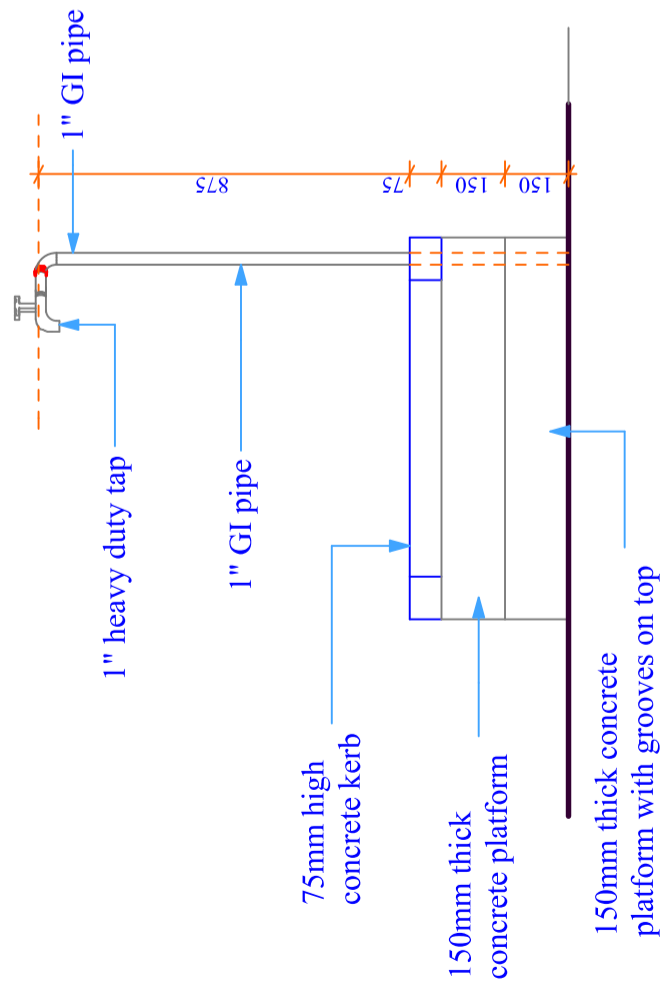
FOUNDATION PLAN



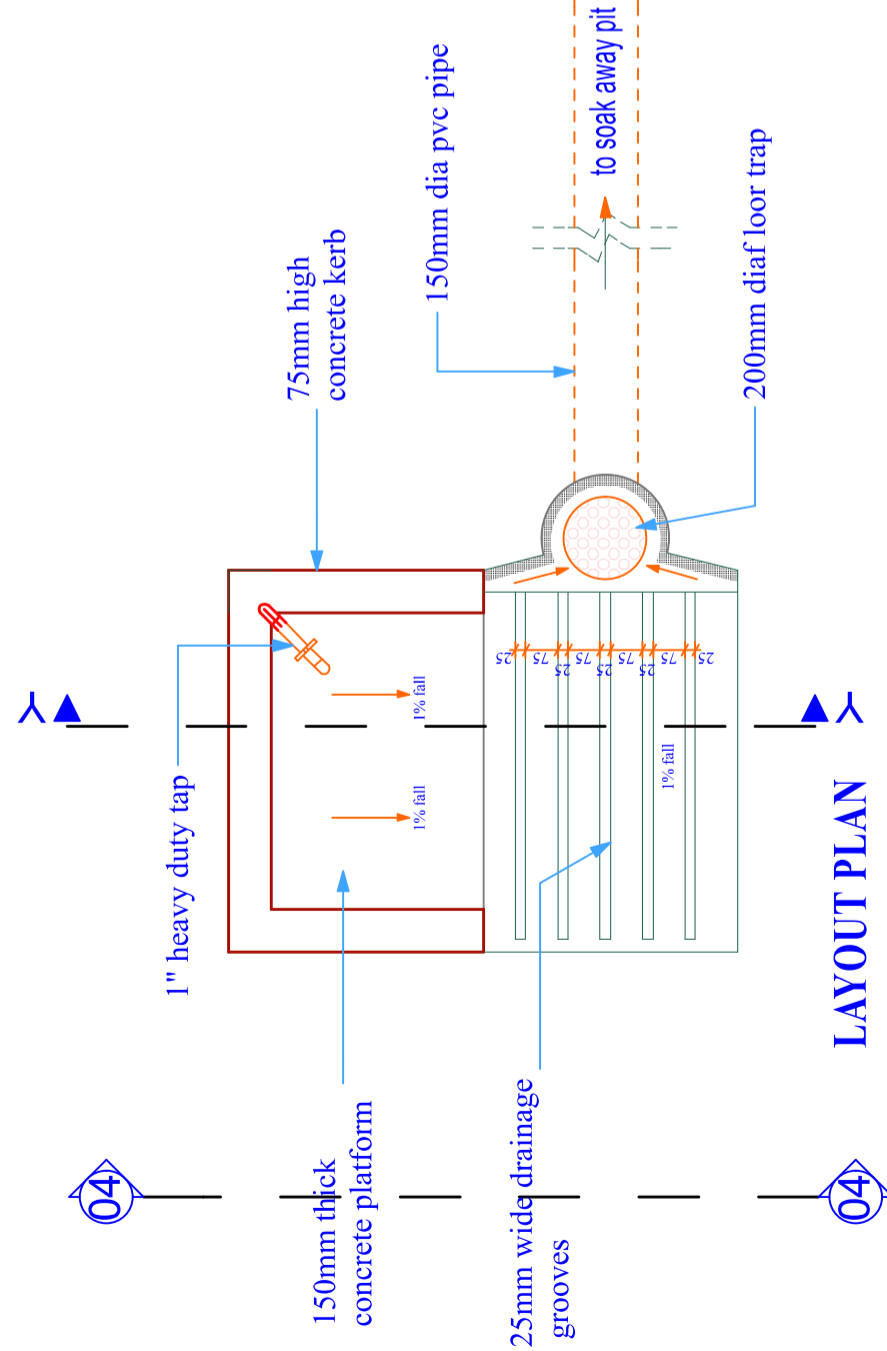
**COLUMN C1 - SECTION
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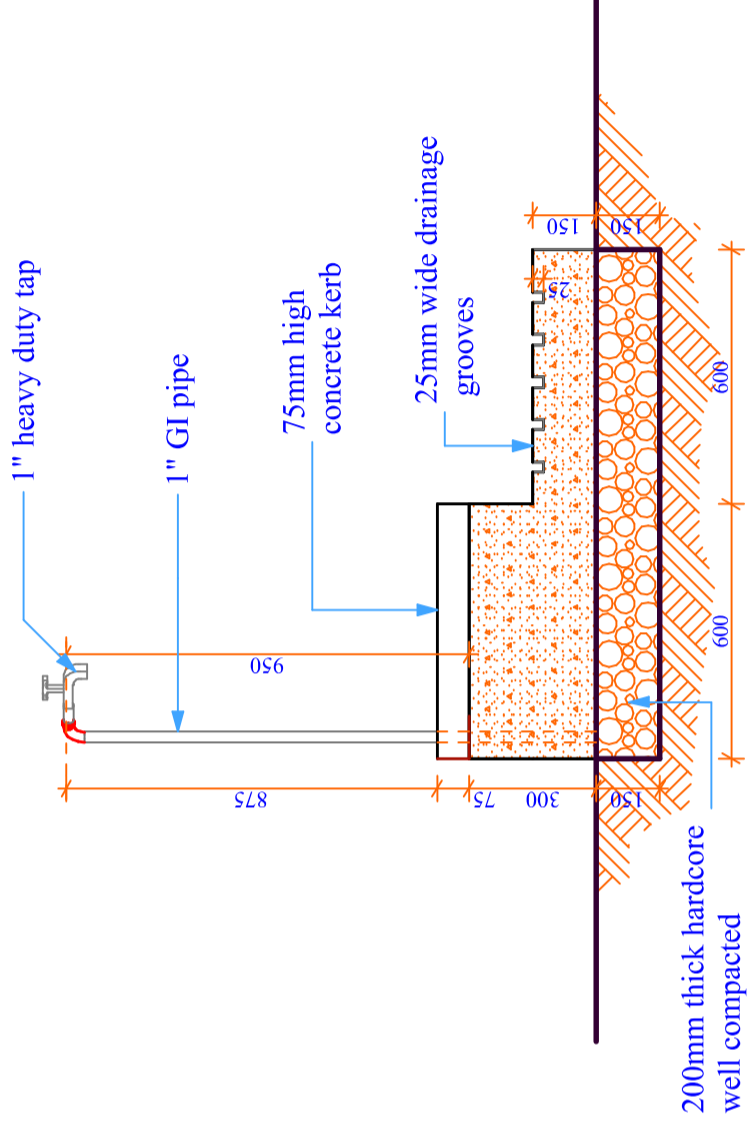
**COLUMN C1 - PLAN
4No.**



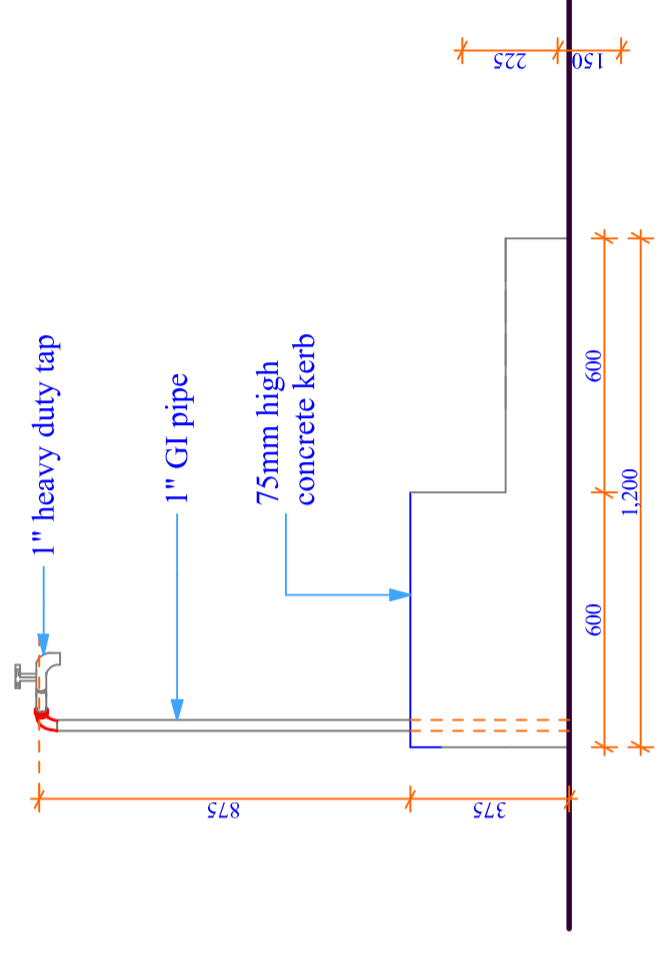
ELEVATION 03



LAYOUT PLAN



SECTION Y-Y



ELEVATION 04

TYPICAL WATER KIOSK DETAILS

WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANARIVER COUNTY

CISP
 INTERNATIONAL COMMITTEE FOR DEVELOPMENT OF PEOPLE
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Project Title:
 WATER KIOSK
 (open)

Client:

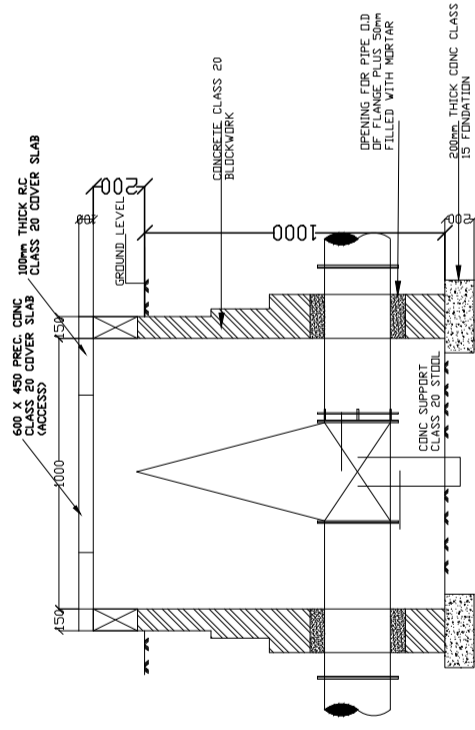


drq title:
 Yard tap

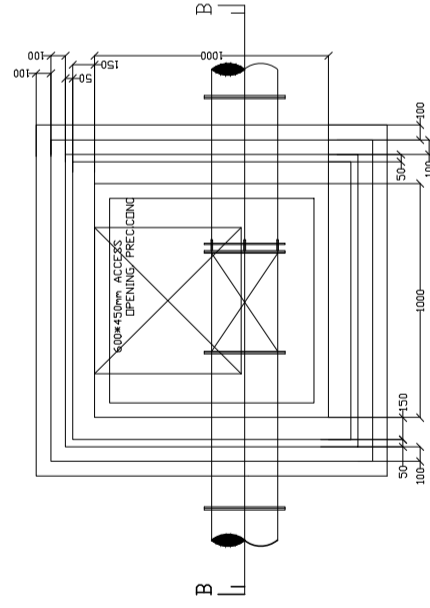
designed by
Checked By:

Consultant:

Scale

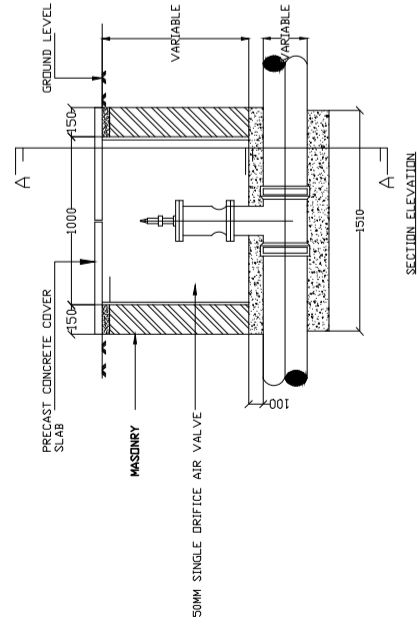


SECTION B - B



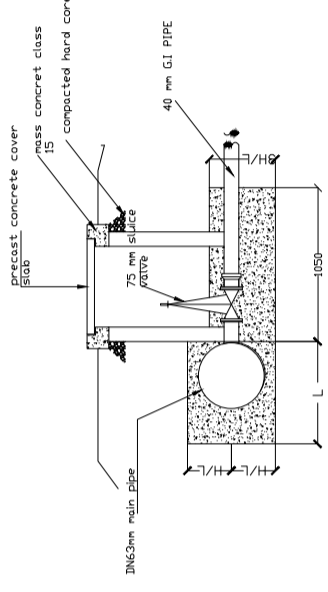
PLAN

SLUICE VALVE DETAILS

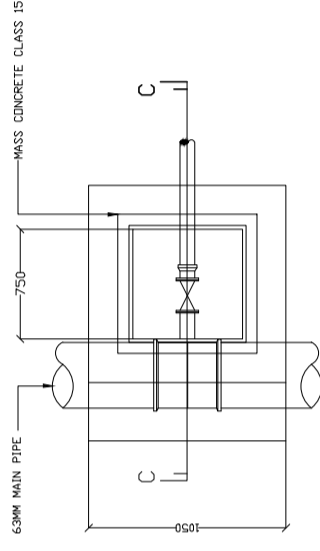


SECTION ELEVATION

DETAILS OF SINGLE DRIFICE AIR VALVE CHAMBER



SECTION C - C



PLAN VIEW

DETAILS OF WASHOUT CHAMBER FOR WATER MAINS

WASH OUT & AIR VALVES DETAILS

PROJECT
WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANA-RIVER COUNTY

CISP
 COMITATO INTERNAZIONALE PER LO SVILUPPO DEI POPOLI
 INTERNATIONAL COMMITTEE FOR DEVELOPMENT OF PEOPLE
 NAIROBI OFFICE # 117
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REVISIONS:

NOTES:

PROJECT
 WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANA-RIVER COUNTY

DRAWING TITLE VALVES AND WASH OUT DETAILS-

DATE	Checked JM
PROJECT	Approved JM
DRAWING No.	Scale 1:50, 1:25

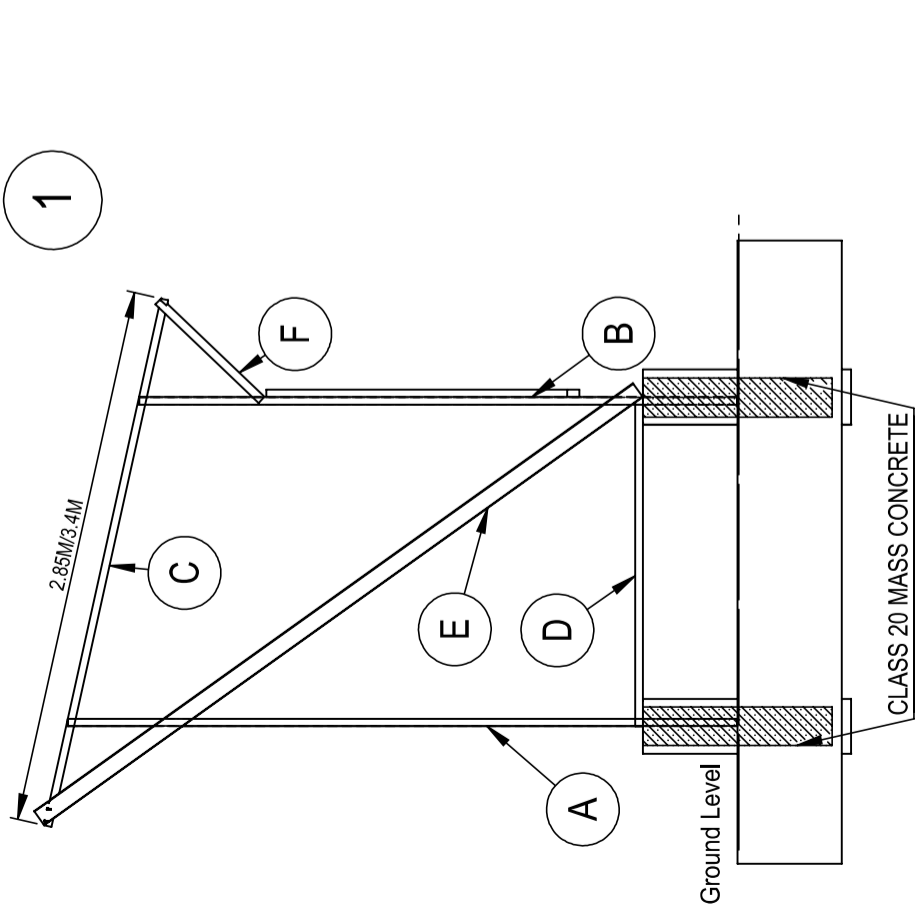
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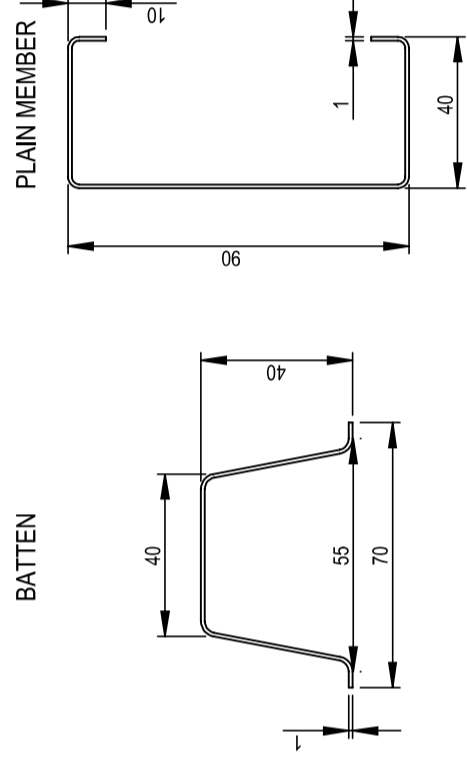
PROJECT
 WASH-COMMUNITY RESILIENCE BUILDING IN LIVELIHOOD & DISASTER RISK MANAGEMENT (REBUILD) IN TANA-RIVER COUNTY

**SOLAR PANEL STEEL STRUCTURE MOUNTED 3M FROM THE
GROUND**

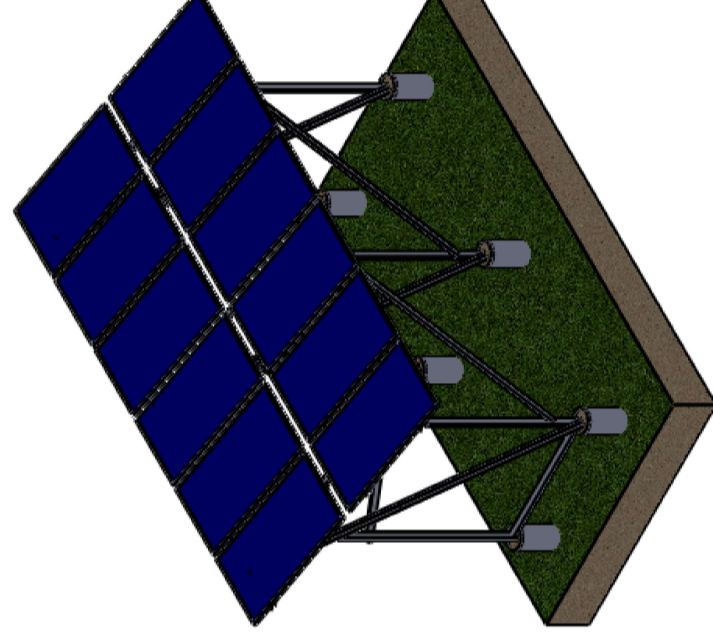
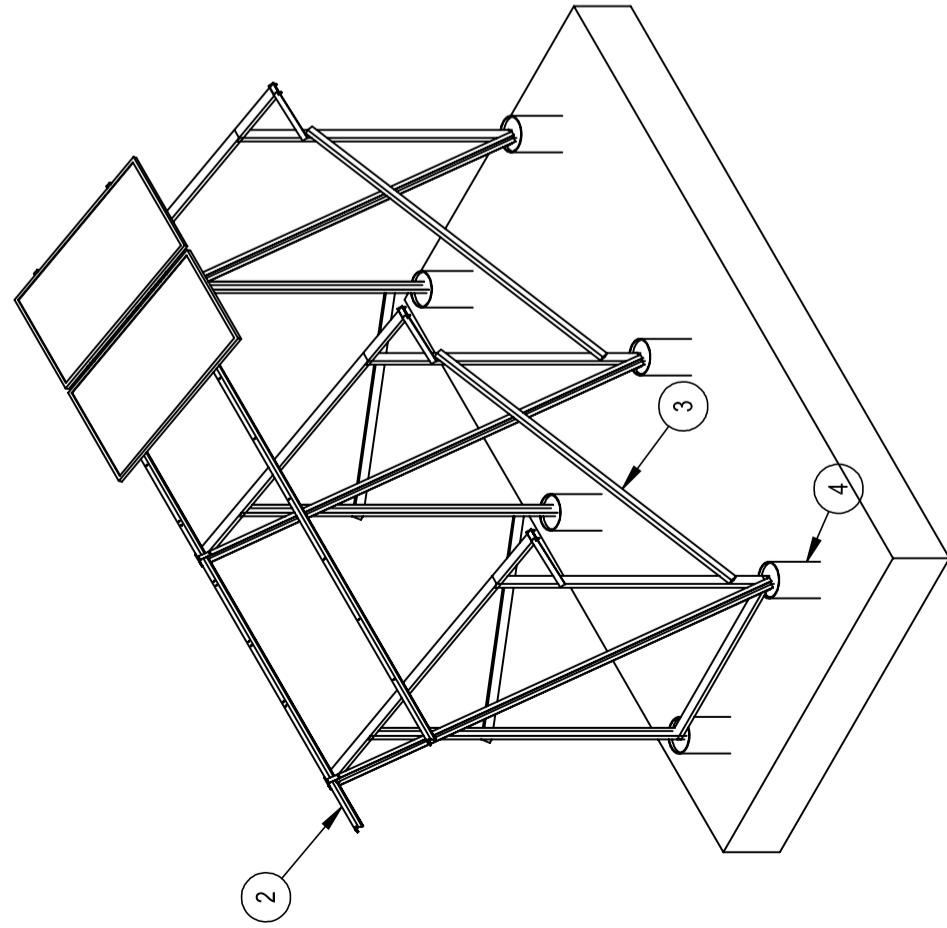
10No. 200W - 24VDC



ITEM	SPECIFICATION	SECTION
1	SECTION SIDE PROFILE	
	A LEG A	PLAIN MEMBER
	B LEG B	PLAIN MEMBER
	C MAIN BEARER	PLAIN MEMBER
	D BOTTOM STRUT	PLAIN MEMBER
	E BRACING	PLAIN MEMBER
2	BATTENS	BATTEN
3	DIAGONAL BRACING	BATTEN
4	PVC FOOTING SLEEVES	200MM PVC CLASS B



STRUCTURAL STEEL WORK
 LIGHT GAUGE GALVANISED STEEL GRADE S550
 STANDARD 89S41



NOTES:

1. All dimensions in mm.

REVISION:

Rev	Description	By	Date

TITLE:

DIMENSION AND LAYOUT
 STEEL STRUCTURE
 DETAILS

PART NO:

SCALE: 1:100

DRWG NO:

PROJECT:

WASH-COMMUNITY RESILIENCE BUILDING IN
 LIVELIHOOD & DISASTER RISK MANAGEMENT
 (REBUILD) IN TANA-RIVER COUNTY



INTERNATIONAL COMMITTEE
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NOTES:

1. All dimensions in mm.

REVISION:

Rev	Description	By	Date

TITLE:

DIMENSION AND LAYOUT
DETAILS

PART NO:

SCALE: 1:40

DRWG NO:

PROJECT:

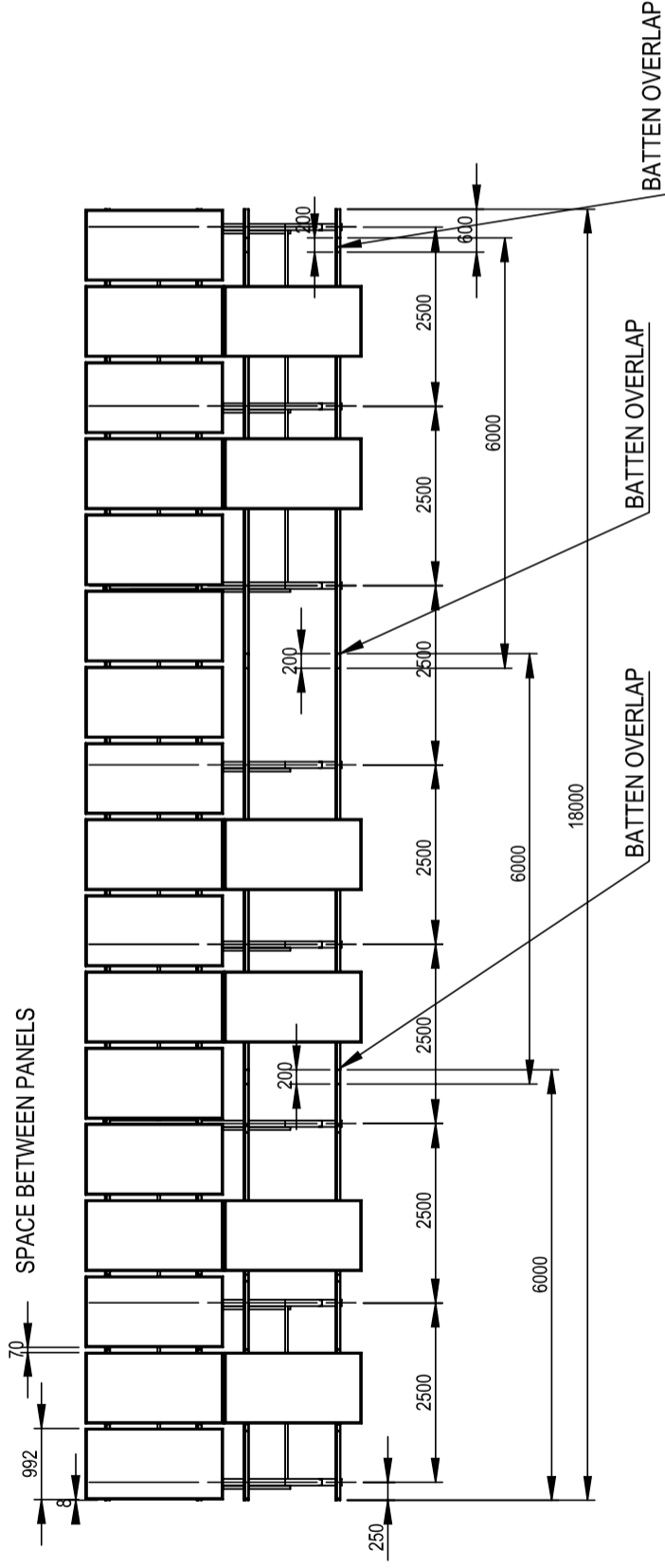
LIVELIHOOD & DISASTER RISK MANAGEMENT
(REBUILD) IN TANJA-RIVER COUNTY



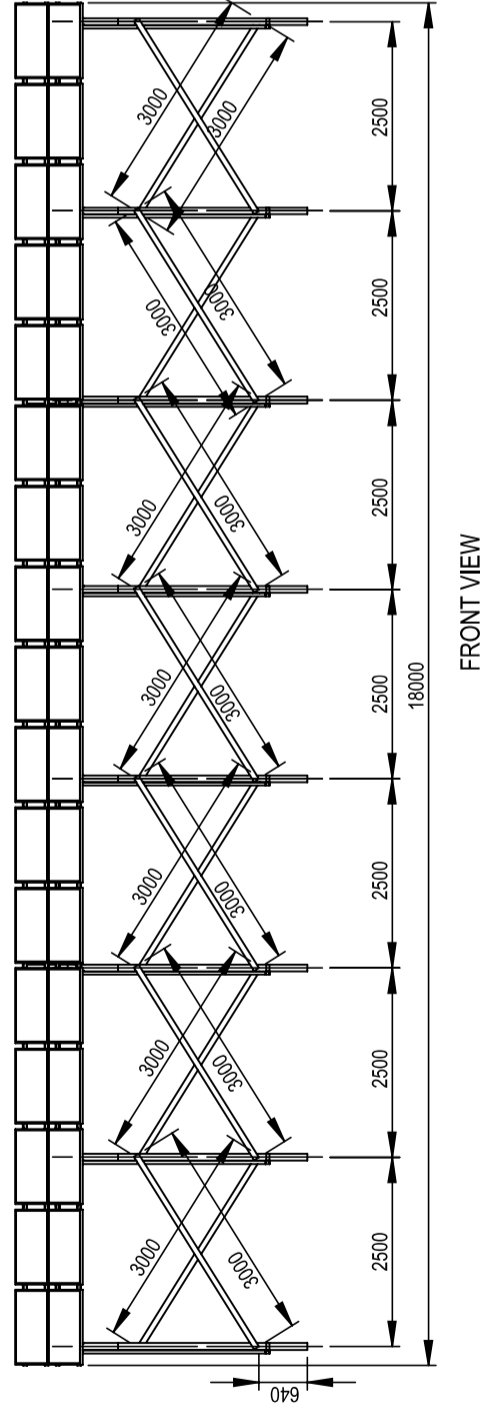
INTERNATIONAL COMMITTEE
FOR DEVELOPMENT OF PEOPLE
NAIROBI OFFICE # 117
MANYANI EAST ROAD, OFF
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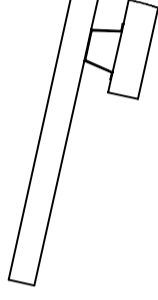
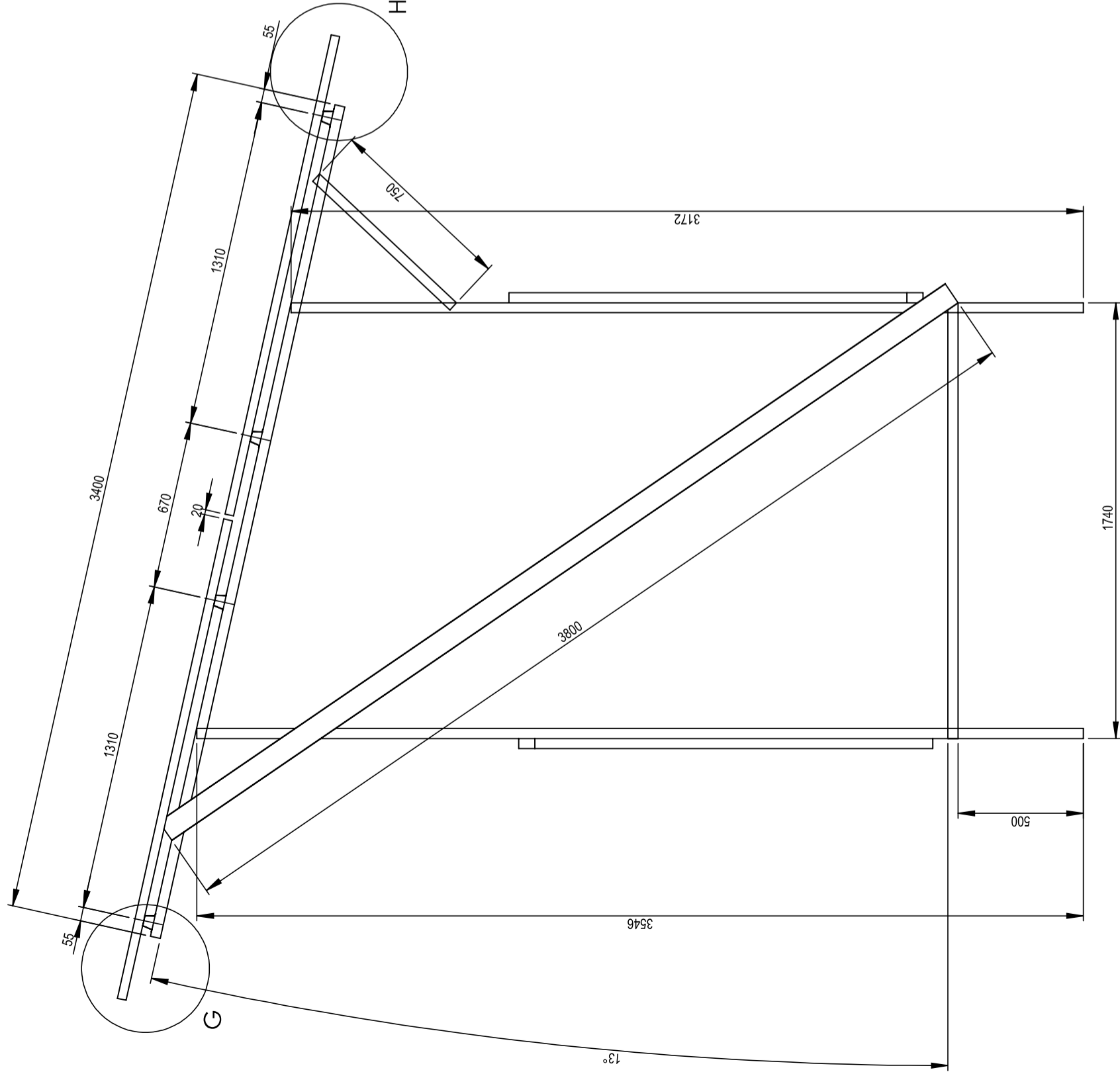
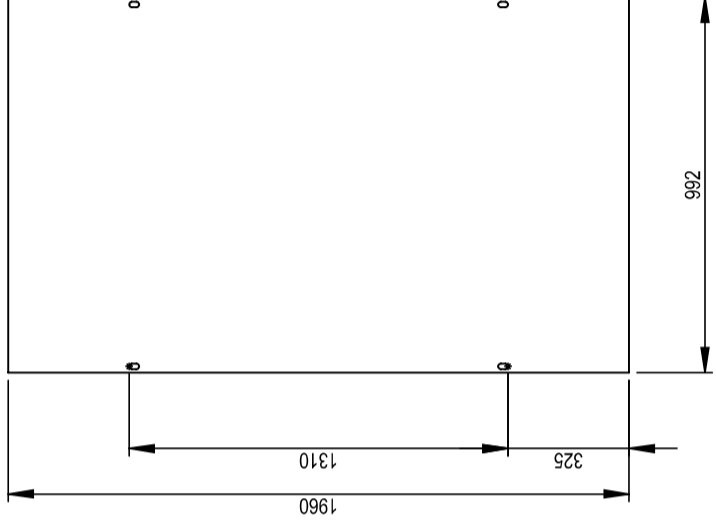


PLAN VIEW



FRONT VIEW

DETAIL C: YSM 300



DETAIL G
SCALE 1 : 10



DETAIL H
SCALE 1 : 10

NOTES:

1. All dimensions in mm.

REVISION:

Rev	Description	By	Date

TITLE:

DIMENSION AND LAYOUT
DETAILS

PART NO:

SCALE: 1:40

DRWG NO:

PROJECT:

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(REBUILD) IN TANA-RIVER COUNTY



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SIDE VIEW