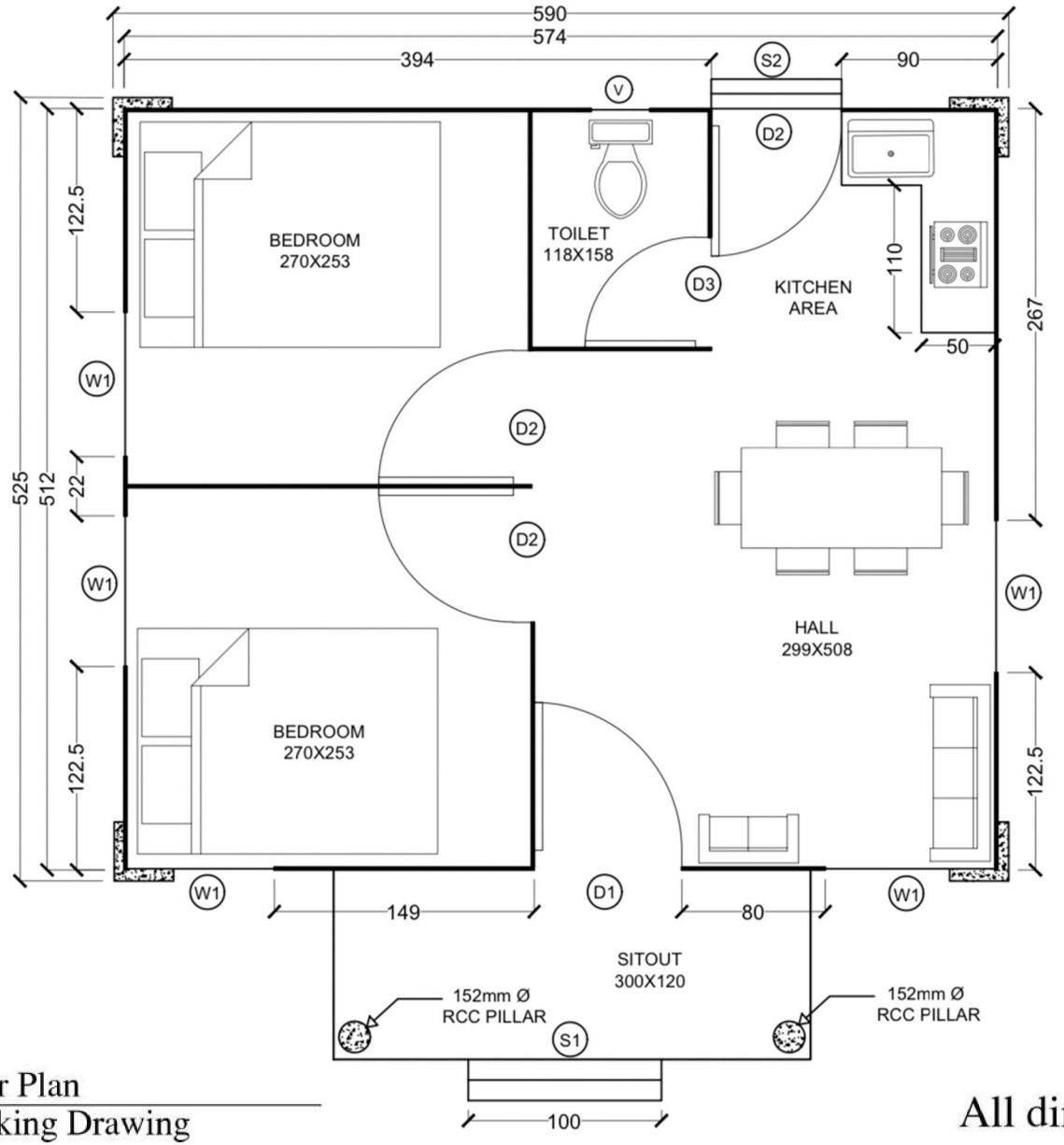


ENVISIONS SAFE AND SECURE HOMES FOR THE DEPRIVED

HRDS INDIA



Floor Plan
Working Drawing

Scale 1:200
All dimensions are in cm

NOTE

1) PCC Ratio 1:4:8
   Before PCC the bottom should be compact
   PCC should be of 5cm thickness.
2) Block work
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   At every block joint motor should be filled motor ratio 1:5
3) Back filling
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   Each layer should be made compact
4) Flooring concrete ratio 1:2:4
   Reinforced cement concrete 1:1.5:3
   Surface should be compact
   Floor tiles - 300 x 300 mm ceramic
5) Walls - 18mm fibre cement board (V board)
   8ft x 4ft and channel
6) Roof - Galvanised Iron/ Galvalume Roofing sheet
   [Aluminium-Zinc Coated] 0.45 GU including frame work,
   colour - white (Refer drawing for details)
7) Painting - All metal item should be coated with epoxy primer.
   Wall should be coated with water proof exterior primer.
   2 layer of painting of mushroom colour .
8) Doors and windows - Rf.drawing (colour white)
9) Ceiling - 2 ft x 2 ft gypsum pannel / Pvc sheet

SCHEDULE OF DOORS AND WINDOWS			
D1	DOOR	100X200 cm	1 No.
D2	DOOR	90X200 cm	3 No.
D3	DOOR	80X200 cm	1 No.
W1	WINDOW	122.5X122.5 cm	5 No.
V	VENTILATOR	45x30 cm	1 No.

STAIR MEASUREMENTS			
	LENGTH	HEIGHT	WIDTH
S1	100cm	15cm	25cm
S2	91.5cm	15cm	25cm

NOTE:- All dimensions are in cm.

PLINTH AREA = 34.37 M.sq / 370 sq.ft

Chief Functionary
Founder - Secretary: Aji Krishnan

HRDS INDIA

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E: odisha@hrdsindia.org

Drawn by : Ar. Karishma AA
Registered Architect
G6/200/2022/103/SB
Deputy Project Director
HRDS INDIA



Floor Plan
Rendered Drawing

NOTE

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   colour - white (Refer drawing for details)

7) Painting - All metal item should be coated with epoxy primer.
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   2 layer of painting of mushroom colour

8) Doors and windows - Rf.drawing (colour white)

9) Ceiling - 2 ft x 2 ft gypsum pannel / Pvc sheet

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G6/200/2022/103/SB
Deputy Project Director
HRDS INDIA



FRONT ELEVATION
Working Drawing

All dimensions are in cm

NOTE

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9) Ceiling - 2 ft x 2 ft gypsum pannel / Pvc sheet

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D3	DOOR	80X200 cm	1 No.
W1	WINDOW	122.5X122.5 cm	5 No.
V	VENTILATOR	45x30 cm	1 No.

STAIR MEASUREMENTS			
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S1	100cm	15cm	25cm
S2	91.5cm	15cm	25cm

NOTE:- All dimensions are in cm.

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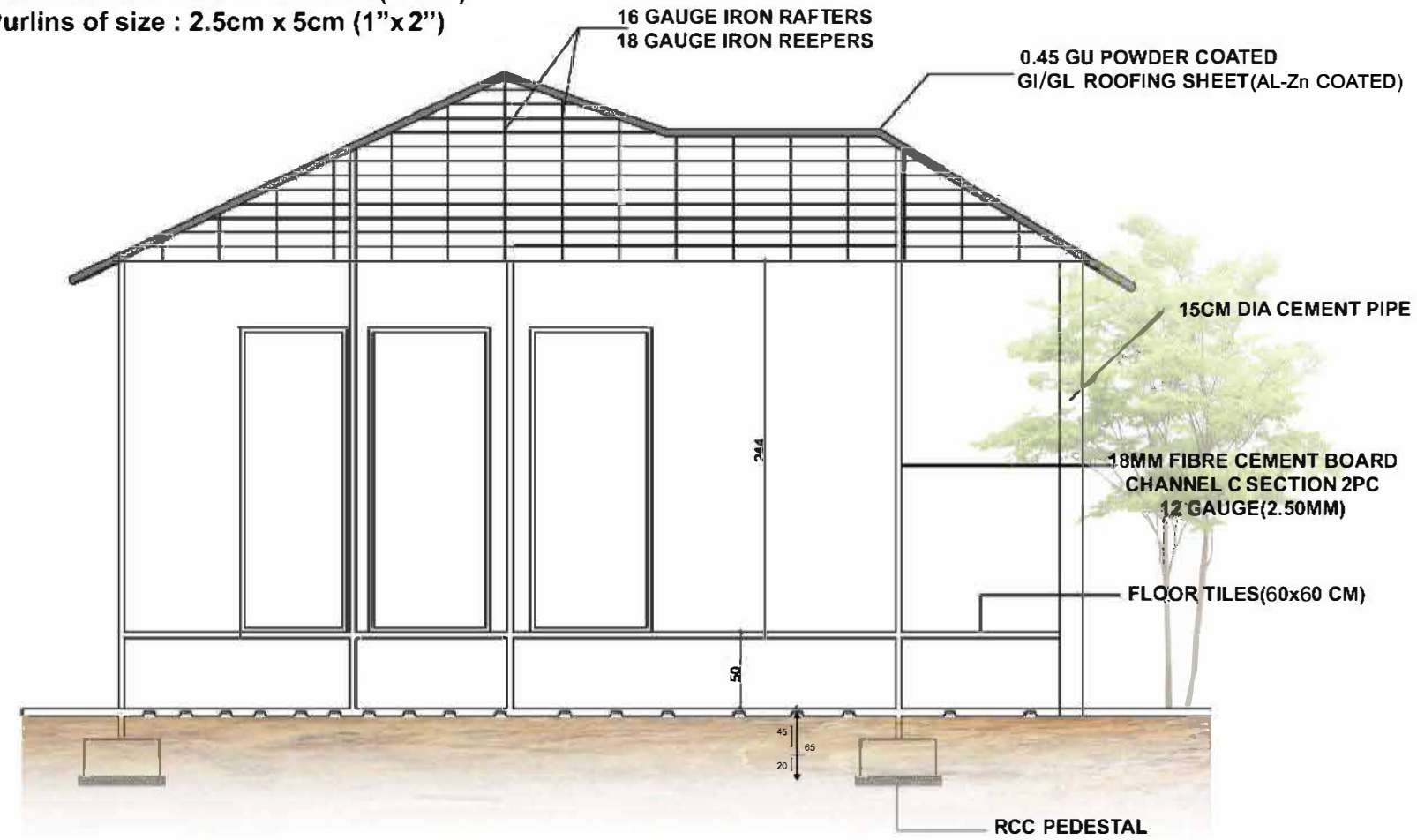
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Rafters of size : 2.5cm x 7.5cm (1"x3")
Purlins of size : 2.5cm x 5cm (1"x2")



CROSS SECTION
Working Drawing

All dimensions are in cm

NOTE

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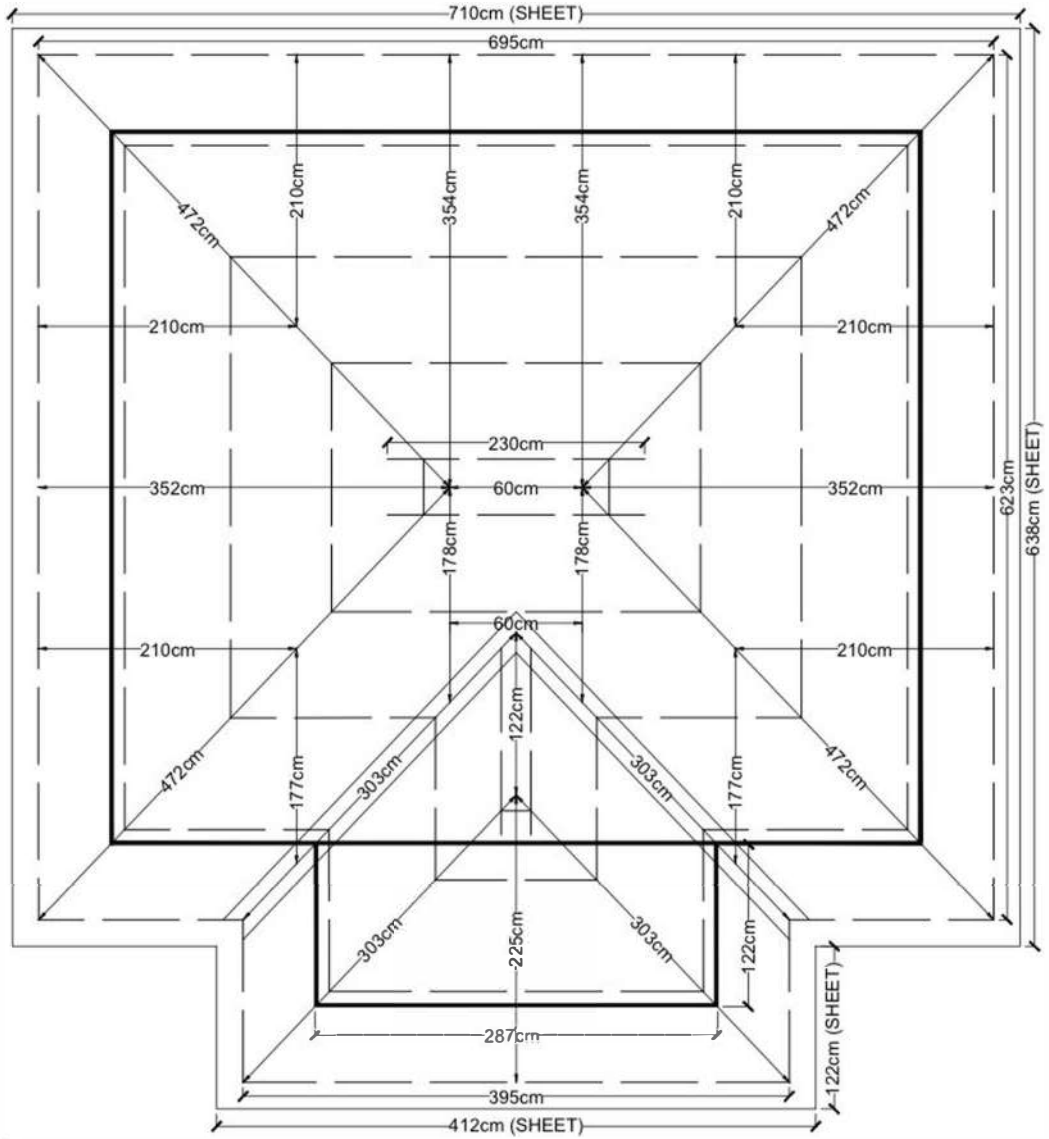
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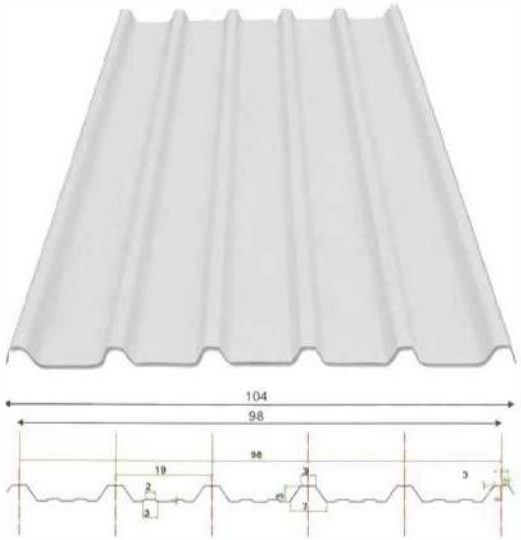
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Drawn by : Ar. Karishma AA
Registered Architect
G6/200/2022/103/SB
Deputy Project Director
HRDS INDIA



ROOF PLAN

WORKING DRAWING



Roofing Specifications

1. 0.45 Gauge White powder coated GI :- Galvanized Iron sheets to be used.
2. 16 Gauge Iron rafters to be used
3. 18 Gauge iron reepers to be used

All dimensions are in cm

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Chief Functionary
Founder - Secretary: Aji Krishnan

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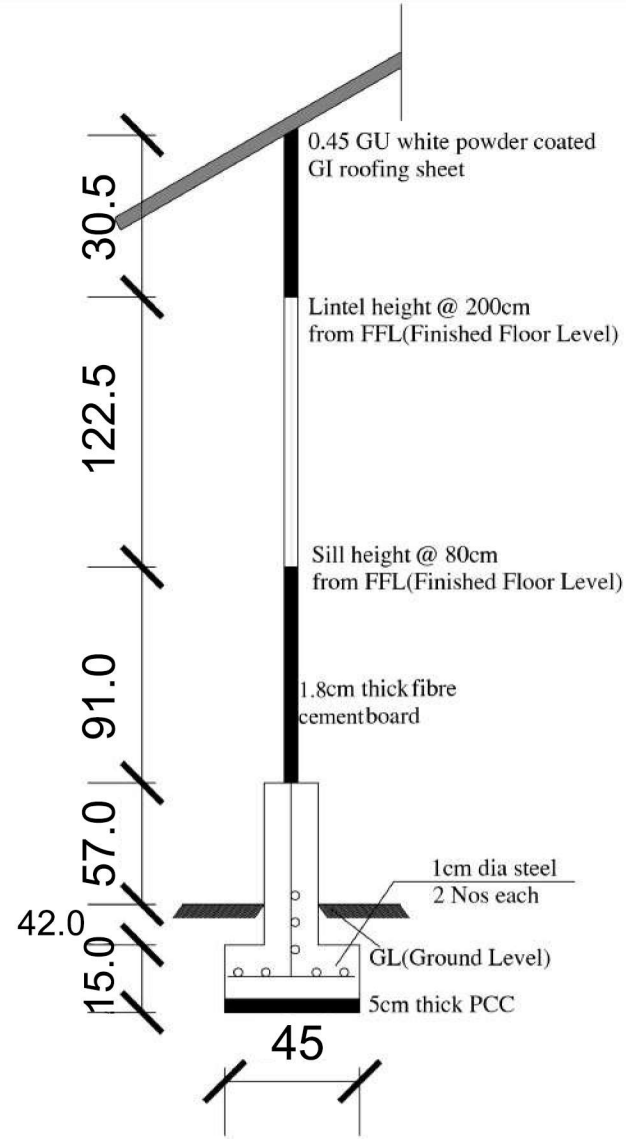
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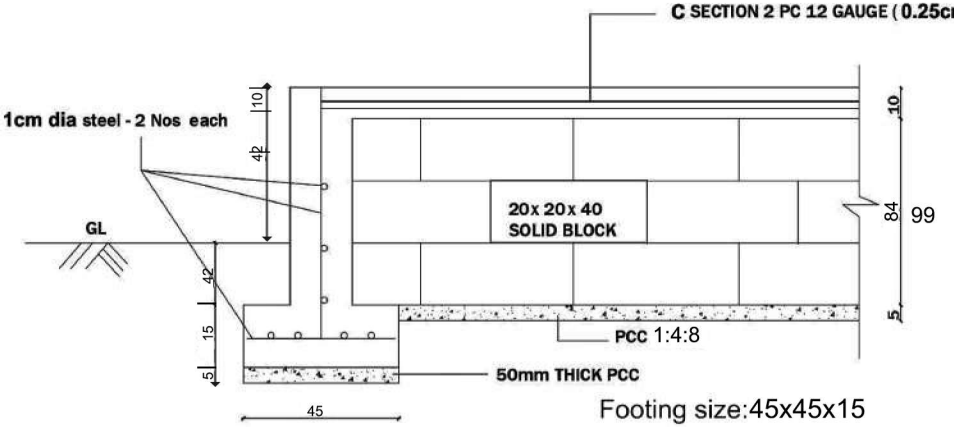
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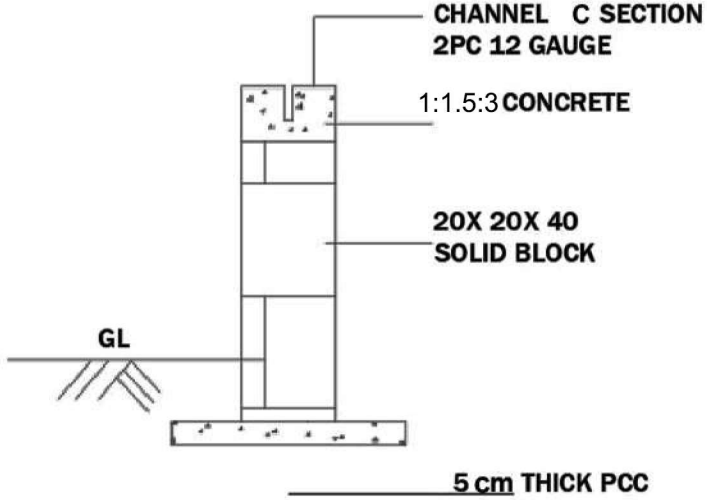
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Registered Architect
G6/200/2022/103/SB
Deputy Project Director
HRDS INDIA



Vertical Section
Working Drawing



Footing size:45x45x15



Foundation Detail
Working Drawing

All dimensions are in cm

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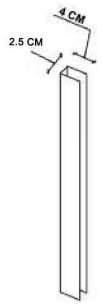
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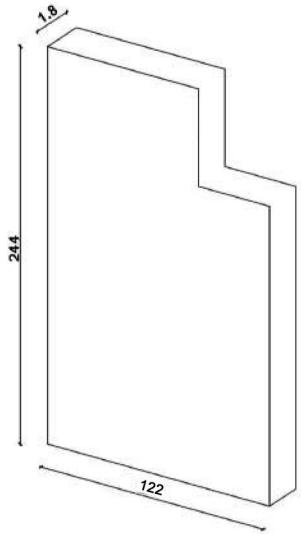
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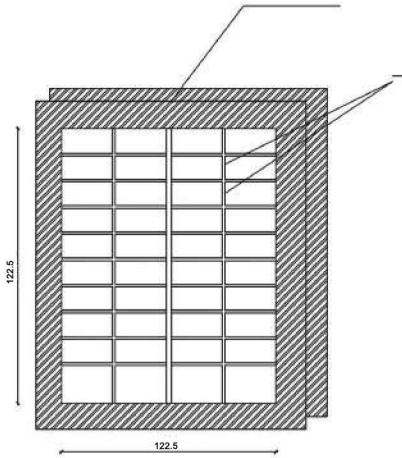


C SECTION -MS CHANNEL (12 GAUGE/2.5mm THICK
SCALE 1:50

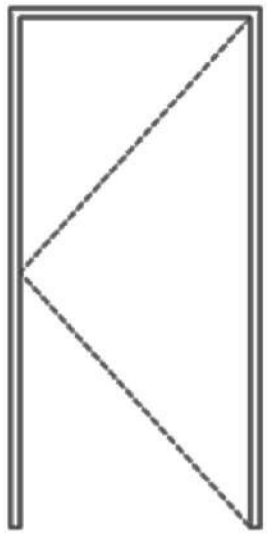


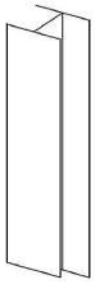
FIBRE CEMENT BOARD (18 mm thick)
NOT TO SCALE

OPEN SIZE 110 X 90 cm C SECTION - MS CHANNEL

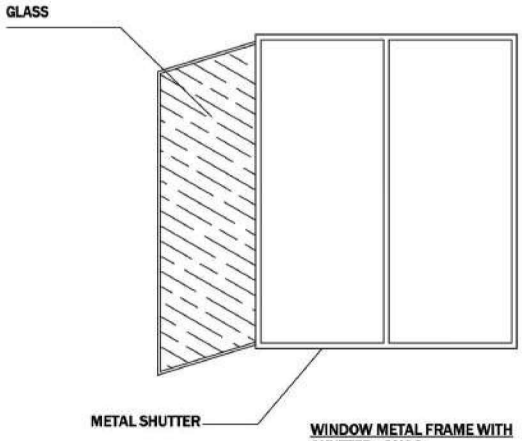


WINDOW GRILL

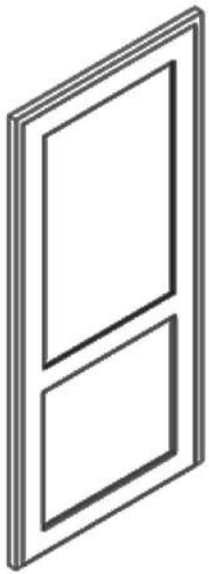




C SECTION - MS CHANNEL (2 NOS)
(12 GAUGE / 2.5MM TK
SCALE 1:50



WINDOW METAL FRAME WITH
SHUTTER - 2NOS



MAIN DOOR 100cm X 200cm
BEDROOM AND BACK DOORS 90cm X 200cm
TOILET DOOR 80cm X 200cm

ALL MEASUREMENTS IN CM

Joinery Details
Working Drawing

NOTE

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9) Ceiling - 2 ft x 2 ft gypsum pannel / Pvc sheet

SCHEDULE OF DOORS AND WINDOWS			
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NOTE:- All dimensions are in cm.

PLINTH AREA = 34.37 M.sq / 370 sq.ft

Chief Functionary
Founder - Secretary: Aji Krishnan

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Registered Architect
G6/200/2022/103/SB
Deputy Project Director
HRDS INDIA

HRDS INDIA
The Highrange Rural Development Society

SADHGRAHA TRIBAL HOUSING PROJECT

LIST OF FURNITURE

Sl.No	Things to Buy		Quantity
01.	Cot (Double- size 3.5ft x 6ft)		1
02.	Mattress(Double)		1
03.	Bed Sheet		2
04.	Pillow with cover		2
05.	Chairs (Plastic- with handrest)		2
06.	Stools for Dining Table		4
07.	Dining Table (4ft x 2ft steel framed)		1
08.	Kitchen Needed Things		Some
	a.	Fibre Plates	6
	b.	Steel Glasses	6
	c.	Bucket & Mug set	2
	d.	3 Sizes of cooking pots set (Big, Medium and Small)	1
	e.	Vessel for Tea	1
	f.	Broom & Dust Pan	1
	g.	Spoons (Big -6 Small-6)	12
	h.	Kitchen Containers Big -6 Small-6	12
	Total		**54**

Budget for the Proposed House

1. Uneven ground levelling, excavation for footings and block work, compaction with machinery, 50mm pcc below block work and footing, Rcc works for footing and above solid and block work (size 400mm x 200mm x200mm), backfilling and compaction, curing etc. (Drawing attached for ref.) **Rs** 51,475.00
2. Cement fibre Board for wall 8 ft x 4 ft x 18mm.(v board) Total no. of board 25 Nos Say 25 nos@2446/Board (Fibre Cement Board is composed of a composite matrix containing special grade cellulose fibres, ordinary Portland cement, fine silica, quartz, and some mineral additives.) **Rs** 61,150.00
3. Channel (HR Section) 2 (PC) 12GU x 20 x 40mm (575 Kg) Say 575 kg@128/kg **Rs** 73,600.00
4. Supplying and fixing door frames with wooden shutters Say 4 No's @8000/E **Rs** 32,000.00
5. Supplying and fixing steel window frames with metal shutters Say 5Nos@7300/E **Rs** 36,500.00
6. Roofing with GI Roofing sheet 0.45GU including frame work Say 63m2@1600/m2 **Rs** 1,00,800.00
7. Flooring with 1 : 5 : 10 PCC Say 28m2@1300/m2 **RS**.36,400.00
8. Floor tiles (size ceramic 12 inch x 12) Say 370 @99/ sq.ft **Rs** 36,630.00
9. White washing , Painting etc.(wall colour mash room) LS **Rs** 31,000.00
10. Toilet, Indian Closet, ST Tank, Waste water tank, door, Electrical components (Tank size 5 feet x 4 feet dia)(2 feet x 2 feet dia) **Rs** 23,000.00
11. Labour Charge **Rs** 80,623.00
12. Planting trees **Rs** 2690.00
13. Ceiling 370 sq.ft. (8mm gypsum board/ upvc sheet) **Rs** 20,000.00
14. Furniture (details attached) **Rs** 14,000.00

GRAND TOTAL **Rs.5,99,868 .00/-**

WORK METHOD STATEMENT & SPECIFICATION FOR THE SADHGRAHA TRIBAL VILLA CONSTRUCTION

CONTRACTORS ARE STRONGLY ADVISED TO ADHERE TO THESE GUIDELINES AND OBTAIN ALL NECESSARY PERMITS BEFORE COMMENCING CONSTRUCTION.

1) SITE PREPARATION & LAYOUT

a) Clear the site of all debris, trees, and other obstacles to ensure a clean and safe working environment.
b) Conduct a soil test to determine the soil's bearing capacity and ensure it meets the required standards for construction.
c) Level the ground to ensure it is even and compact the soil to achieve a stable foundation.
d) Consult with the Project Management Team (SADHGRAHA PMT) prior to commencing work to finalize the facing of the house.
e) Initiate marking the layout at least two days prior to execution to ensure accurate placement.
f) Mark the house outline on the ground using pegs and string, ensuring precise dimensions and alignment.
g) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.

2) EXCAVATION

a) Conduct earthwork excavation for the foundation to a depth of 45cm, ensuring the trench is level and compacted using a compactor.
b) Manually excavate footing column to a depth of 45cm x 45cm x 15cm below the 45cm level for column footing at all corners.
c) Ensure the trench bottom is level and compact the soil to achieve compaction strength of at least 95%.
d) If backfilling is required, compact the trench in 20cm layers to maintain structural integrity.
e) Apply anti-terminator treatment for an area of 370 sq. ft. to prevent termite infestation.
f) Commence the next activity within 12 hours of the anti-terminator treatment to maintain the effectiveness of the treatment.
g) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.

3) FOUNDATION

a) Lay 5cm PCC 1:4:8 (M7.5) at the bottom of the trenches to create a level base for the brick foundation and prevent water seepage.
b) Construct column footing reinforcement at all corners of the house using mild steel (MS) bars (10 mm) as per the structural design, with a footing size of 45cm x 45cm x 10cm of column RCC 1:1.5:3 [M20].
c) Wet the blocks prior to use and ensure the brick quality meets IS 1077 standards.
d) Construct solid brick walls of size 40cm x 20cm x 20cm (single course) on the footing, ensuring a total depth and height of 110cm, including base PCC, top floor PCC, and tiles.
e) Maintain a gap of 1cm between the blocks and fill the gap with cement mortar at a 1:5 ratio.
f) Perform proper curing twice a day for 2 days to ensure the strength and durability of the foundation.
g) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.
h) Use moisture-free backfilling material and compact each 20cm layer to achieve compaction strength of at least 95%.
i) Avoid using boulders larger than 15cm for backfilling and follow the anti-terminator process after compaction.
j) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.
k) Fix corner C-channels (section 25mm x 40mm x 2.5mm) to a minimum depth of 45cm in the column.
l) Place mild steel (MS) bars (10mm) as per the structural design, adhering to IS 456 for slab thickness of 10cm and tie beam reinforcement requirements.
m) Weld all C-channel rails lying on the foundation wall slab level into the reinforcement of the floor tie-beam.
n) Erect formwork (shuttering) for the concrete slab on top of the foundation walls, ensuring proper shoring for support and level.
o) Prepare and pour concrete mix as per the design specification using IS 456 and IS 269, ensuring proper compaction and finishing of the concrete surface.
p) Use a vibrator during concreting to ensure proper compaction and finish.
q) Allow the slab to cure for at least 2 days by keeping it moist to prevent cracks and ensure proper curing.
r) Construct 2 steps on both sides (front and back) of the house, with footsteps measuring 3 feet long, 10 inches wide, and 6 inches high.
s) Align the sit-out step with the center of the sit-out area for a symmetrical design.
t) Begin plastering from the ground level upwards to ensure a smooth finish.
u) Construct two sit-out pillars with a height of 8 feet and a radius of 15cm using mild steel (MS) bars (8 mm) as per the structural design
v) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.

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4) WALL STRUCTURE

a) Construct the superstructure using 18mm fibre cement board (8ft x 4ft) and C-channels (section 25mm x 40mm x 2.5mm), adhering to IS 15664.
b) Submit a sample of the fibre cement board for client approval prior to selection.
c) Ensure the board is fixed tightly in the channel, with straight and plumb walls. Shaking of the wall is not acceptable.
d) Apply zinc phosphate solution to clean all the channels 12 hours before applying Epoxy primer, complying with IS 808 for channel size and spacing.
e) Apply epoxy primer to all steel structures to prevent rust formation.
f) Grind the welded area and reapply epoxy primer after welding the structure.
g) Apply metal paste between the gaps of all steel structures (C-channels) to ensure a seamless finish.
h) Ensure no gaps are present in the wall after completion.
i) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.

5) ROOF STRUCTURE

a) Apply zinc phosphate solution to clean all the steel structures 12 hours before applying Epoxy primer, complying with IS 808 for channel size and spacing.
b) Apply epoxy primer to all before lifting the material for roof work.
c) Grind the welded area and reapply epoxy primer after welding the structure.
d) Seal the ends of all square tubes to prevent moisture ingress.
e) Design iron rafters (16 GU 2.5cm x 7.5cm (1" x 3")) and Purlins/Reapers (18 GU 2.5cm x 5cm (1" x 2")) for a minimum of 1 sq. m below the roofing sheet.
f) Place 3 Mopes for Logo as per the approved drawing.
g) Comply with IS 8752 for metal truss design and installation.
h) Use Galvanized Iron (GI) / Galvalume GL roofing sheets with a thickness of (0.45 GU 12ft Length) in white color, featuring Aluminium-Zinc* Coating & Anti-Corrosion technology for durability.
i) Submit a sample of the roofing sheet for client approval prior to selection.
j) Ensure the roof screws are tight and leak-free.
k) Roofing sheets must be installed in continuous lengths without any joints.
l) Maintain a minimum gap of 6cm in the valley part during roofing sheet installation and ensure the sheets are in a straight line.
m) Use valley sheets with a width of 2 feet.
n) Apply silicone to all screws after completing the roofing sheet installation.
o) Confirm the roof is leakage-free after completing the roof work.

6) KITCHEN & TOILET

a) Provide a kitchen slab (kadapa) with a height of 80cm and a width of 50cm at the corner of the hall, as per the approved drawing.
b) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.
c) Construct a septic tank with a diameter of 4 feet, using 5 concrete rings, each with a height of 1 foot.
d) Construct a wastewater tank with a depth of 2 feet, using 2 concrete rings, each with a height of 1 foot.
e) Close the septic tank and wastewater tank with a concrete slab.
f) Provide a 4-inch diameter vent pipe with a height of 6 feet and an end cap.
g) Provide an Indian closet in white color, with a size of 20-22 inches.
h) Ensure that the closet is placed 3 cm deeper from the main floor level, and that the toilet floor level (Bath space) is set 10 cm below the main floor level.
i) Ensure the size of the toilet ventilation is 45cm x 30cm.
j) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.

7) DOORS & WINDOWS INSTALLATION

a) Cover the entire door and window frame with C-channel sections.
b) Fit all door openings and window openings with C-channel sections, as per the approved drawing.
c) Ensure the door and window frames are made of steel and can withstand the weight of the door.
d) Design the frame according to the size of the door and window.
e) Accept a gap of 2.5mm on both sides and the top of doors and windows.
f) Ensure all door thicknesses are 25mm, considering the wall thickness (18mm).
g) Submit samples of door, windows, hinges and other fittings for client

8) ELECTRICAL & PLUMBING WORK

a) Install electrical wiring, switches, and sockets with a single-phase distribution box featuring five lighting circuit provisions, 3 plug points, and 3 switch boxes, following IS 10854: Code of Practice for Domestic Electrical Installations.
b) Install electrical conduits and wiring within the walls and ceiling by qualified electricians, adhering to IS 7328.
c) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.
d) Install water supply and drainage lines within the house by a qualified plumber, following IS 1172.
e) Provide a water tap on the kitchen area.
f) Provide a water tap on the right side of the closet in toilet.
g) Install plumbing pipes, fixtures, and fittings as per the approved plans and specifications.
h) Connect the kitchen pipe and toilet pipe with a T-joint connector and use an end cap.
i) Use a 4" diameter UPVC pipe for connecting the toilet and septic tank.
j) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.

9) FLOORING AND CEILING

a) Finish all internal room floors with ceramic floor tiles measuring 60cm x 60cm
b) Use non-slippery tiles for the toilet and stair/steps to ensure safety. Ensure the color of the tiles is consistent both inside and outside the houses.
c) Fix the tiles after floor concrete, ensuring straight placement and minimum gap, using cement mortar and filling the gap with white cement.
d) Ensure a slight slope for water drainage in the toilet.
e) Ensure the wall surface is smooth, level, and clean.
f) Cover the wall and floor joint with a 10cm skirting.
g) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.
h) Ensure the ceiling board measures 60cm x 60cm x 8mm, and the thickness of the board is approved by the client.
i) Ensure no leakage in the ceiling.
j) Design iron reapers for a minimum of 1 sq. m of roof ceiling.
k) Ensure the ceiling support is strong and leveled and the ceiling covers the entire sq. ft. of the building.
l) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.

10) PAINTING

a) Obtain client approval for the paint before painting.
b) Apply waterproof primer before painting.
c) Paint all doors, windows, and frames in white to contrast with the wall and foundation colors.
d) Paint the FCB board with Asian Paints in the shade Oyster Grey, bearing the Code – 8473.
e) Paint the foundation in Dark Gray to ensure a robust and elegant appearance.
f) Paint the side step wall in Dark Grey to match the foundation.
g) Ensure proper finishing and sealing of junctions and corners.
h) Ensure a smooth finish and no cracks.
i) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.\

11) LOGO & THOOVANAM

a) Ensure the thoovanam measures 100mm x 8mm to maintain aesthetic consistency.
b) Ensure the logo measures 160mm x 40mm, with an additional oval size of 20cm logo height above the frame.
c) Ensure the thoovanam covers the entire border of the roofing, as per the approved drawing.
d) Activity should be inspected by the client representative to ensure compliance with the approved plans and specifications.

12) SITE CLEANING AND HANDOVER

a) Thoroughly clean the construction site of debris upon completion.
b) Conduct a final inspection by HRDS INDIA representatives before handing over the house to the beneficiary.

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13) COMPLIANCE WITH INDIAN BUILDING CODE

Throughout the construction process, adhere to the following Indian building codes and standards:

1) Indian Standard (IS) 1893 (Part 1): 2015 "Criteria for Earthquake Resistant Design of Structures, Part 1: General Criteria"
2) Indian Standard (IS) 456: 2000 "Plain and Reinforced Concrete - Code of Practice"
3) Indian Standard (IS) 10262: 2000 "Recommended Guidelines for Concrete Mix Design"
4) Indian Standard (IS) 1080: 1991 "Code of Practice for Reinforcement of Concrete"
5) Indian Standard (IS) 875 (Part 1): 1987 "Snow Loads - Part 1: General Requirements"
6) Indian Standard (IS) 875 (Part 2): 1987 "Wind Loads - Part 2: General Requirements"
7) Indian Standard (IS) 3177: 1987 "Cement - Part 1: Requirements"

Ensure proper quality control measures are in place at each stage, maintaining documentation for materials used and tests conducted. Prioritize worker safety by providing necessary Personal Protective Equipment (PPE) and following safety protocols as per Indian labor laws.

14) BENEFICIARY AGREEMENT

The client or the owner of the house should possess a minimum of 3 cents of land with his/her ownership for the construction of the house.

General:

a) Ensure proper curing after the block work.
b) Obtain client approval for any electrical work needed.
c) Apply zinc phosphate solution to all channels 12 hours before applying primer.
d) Apply epoxy primer to all steel structures to prevent rust formation.
e) Grind the welded area and reapply epoxy primer after welding the structure. Ensure the roof screws are tight and leak-free.
f) Design iron rafters and reapers for a minimum of 1 sq. m below the roofing sheet.
g) Provide furniture as per the list given by the client.
h) Conduct plantation after client discussion.
i) Submit an inspection request to the inspection team 1 day prior to each activity.
j) Submit a copy of all inspection request forms along with the invoice after completion of work.
k) Follow these guidelines for each and every individual Tribal villa.
l) Cover the screws with silicone.
m) Close the gap between the roofing sheet and FCB with GI / GP mesh.

These guidelines are to be strictly followed to ensure the successful completion of the SADHGRAHA HOUSING PROJECT of HRDS INDIA.



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Registered with Govt. of India to receive foreign funds
Donations are exempted under section 80G(5)(V1) of IT Act

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Please send all donations and contributions to:
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