

## **PMAY-G MODEL NO.2**

**RCC FRAME STRUCTURE WITH HALF MUD BLOCKS  
& HALF EKRA WALLING**



**PROPOSED PRADHAN MANTRI AWAAS YOJANA (PMAY-G) RURAL HOUSE MODELS**

**MODEL NO.2 - RCC FRAME STRUCTURE WITH HALF MUD BLOCKS & HALF EKRA WALLING**

S.No.	GENERAL SPECIFICATIONS:-	DESCRIPTIONS
1.	Foundation	Isolated footings as per designed.
2.	Plinth Walls	Stone Masonry plinth wall.
3.	Columns	200 mm x 200 mm square RCC Columns.
4.	Superstructure	RCC frame Structure as per designed.
5.	Wallings	Stabilized adobe Mud Block 115mm thick at a height of 1 metres from P.L. & upper portions of bamboo wall panels fixed to main bamboo structural supports with Bamboo Strips - Chicken mesh Ekra Walling at a height of 1.9 metres above sill level. <b>[Note: Brick wall can also be used in place of Mud Blocks]</b>
6.	Doors	Local wood/ Timber framed full panelled doors.
7.	Windows	Local wood/ Timber frame with glass panes.
8.	Ventilators	Local wooden frame ventilators with glass panes.
9.	Flooring	Plain cement flooring over RCC bed on a back filled plinth stone masonry walls.
10.	Roof Structure	Hipped Roof with Bamboo roofing members (Rafters, ties and purlins) with an angle of slope of 30 degrees.
11.	Roof Cover	CGI Sheets used as roof cover and are fastened using J-bolts.

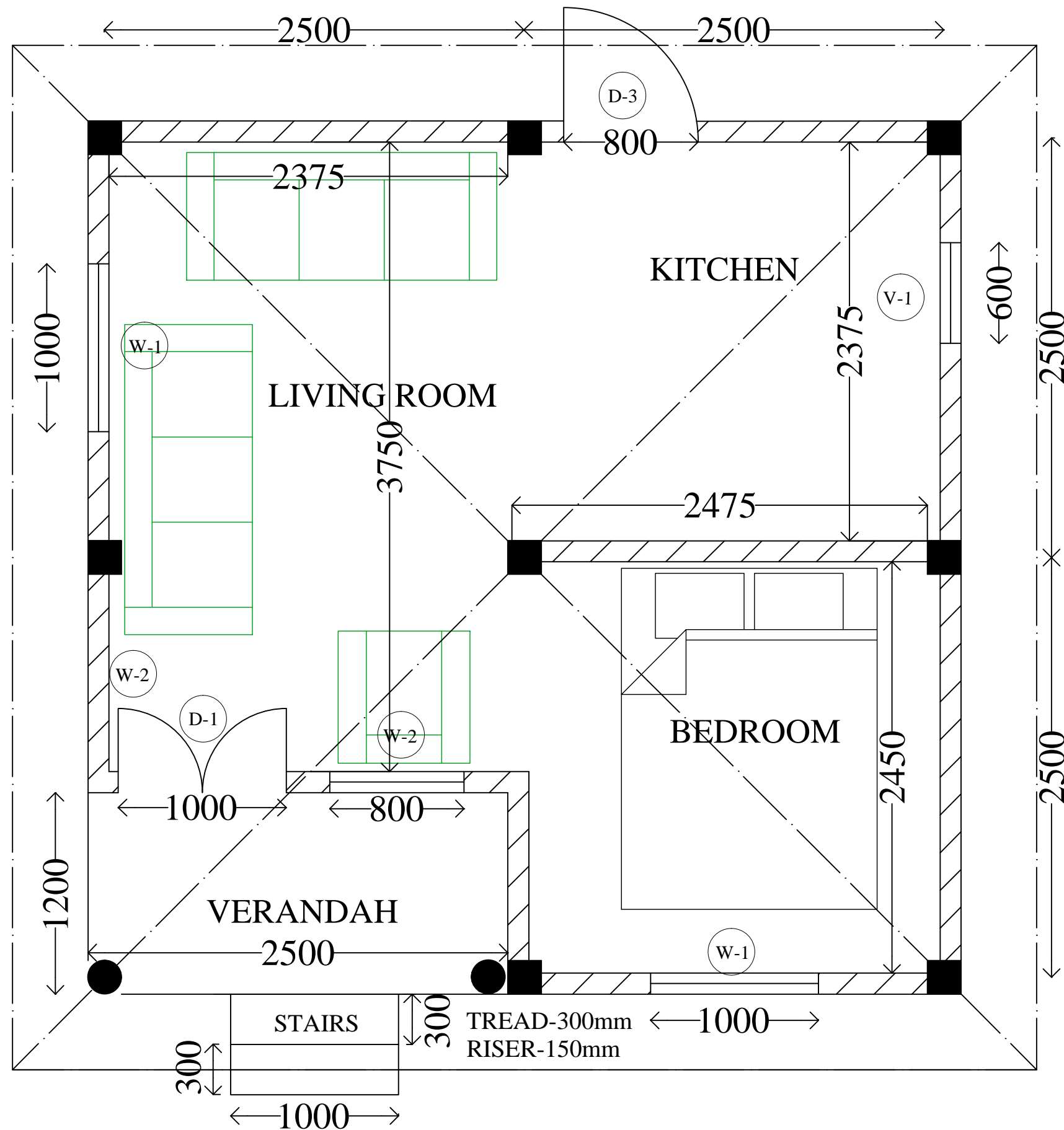
**Note:** Initial Minimum Recurring cost will incurred for the purchase of chemicals such as Boric acid and Borax powder for the treatment of Bamboos. Quantity of Borax & Boric for the treatment will be in the ratio 1:1.5 in 10 Litres of water [i.e. 1kg of Borax with 1.5 kgs of Boric acid powder to be mixed in 10 Litres of water thoroughly} (Soaking Method for Treatment of Bamboos). **Cost of Borax – Rs.240/kg and Cost of Boric – Rs.250/kg.**

	Description	Area (Sq.m)	Amount (In Rupees)
1.	Ground Floor	25	Rs.2,18,500.00
	<b>Total</b>		<b>Rs.2,18,500.00</b>

**(Rupees Two Lakhs Eighteen Thousand And Five Hundred Only)**

**PREPARED BY:**

**ASSISTANT ENGINEER (PMAY-G)  
DIRECTORATE of C&RD  
MEGHALAYA, SHIILONG.**



#### SCHEDULED OF DOORS & WINDOWS

All Dimensions Are in mm

Doors	WXH	Sill
D-1	1000X2100	0
D-2	800X2100	0
D-3	800X2100	0
Window	WXH	Sill
W-1	1000X1500	1100
W-2	800X1500	1100
Ventilation	WXH	Sill
V-1	600X1200	1100

**PROJECT : MODEL-NO.2**  
PROPOSED PMAY-G RURAL HOUSE  
(RCC COLUMN WITH HALF MUD  
BLOCKS & HALF BAMBOO  
STRIP-CHICKEN MESH EKRA  
WALLING WITH HIPPED ROOF CGI  
SHEET COVER)

**CONTENTS :**  
PLAN LAYOUT

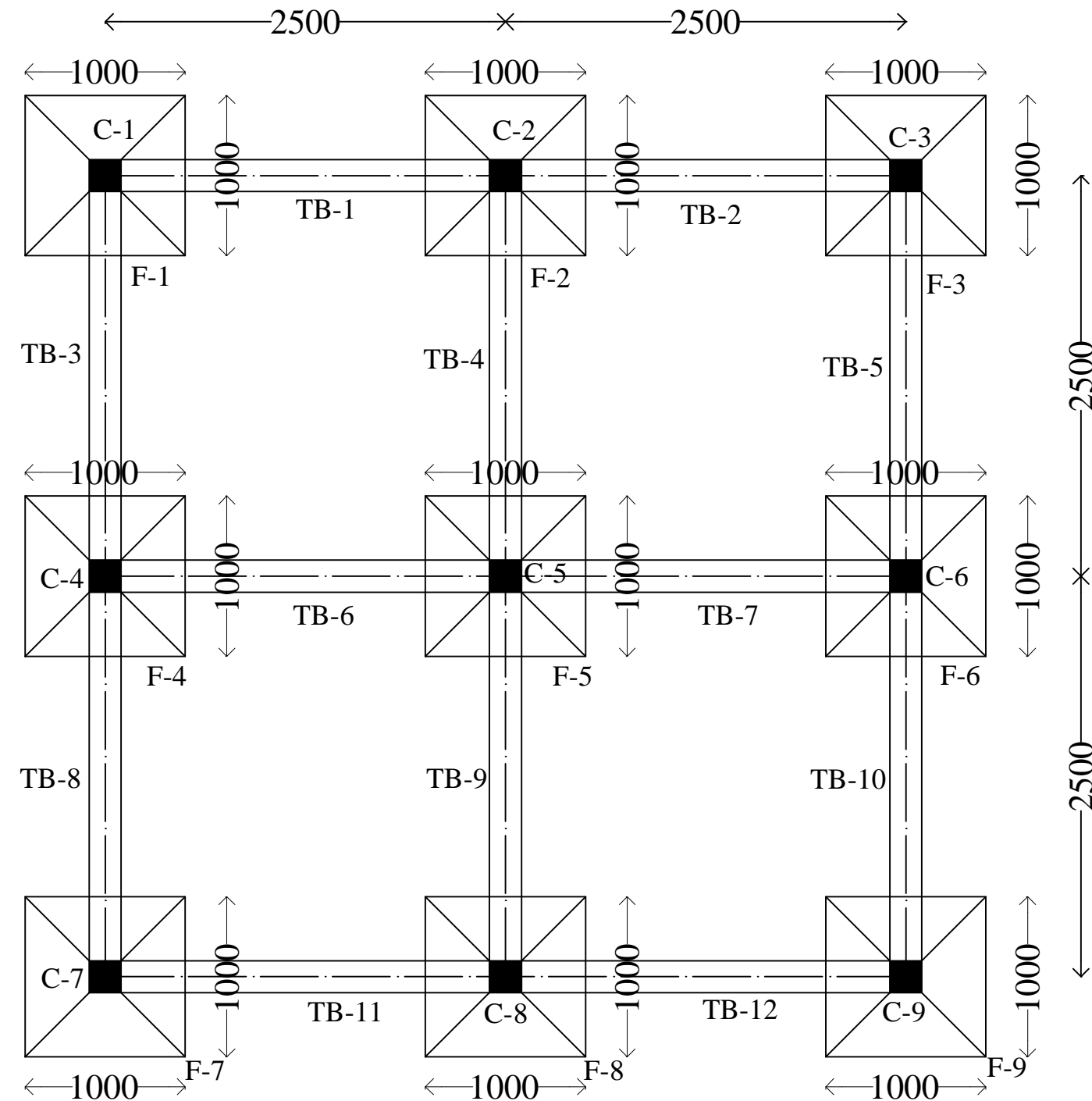
**PLINTH AREA:** 25 sq.m (268.75 Sq.ft.)

**DRAWN BY:**

Assistant Engineer (PMAY-G)  
Directorate of C&RD  
Meghalaya, Shillong.

#### GENERAL NOTES:

1. ALL THE DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE MENTIONED.
2. STRUCTURAL DRAWINGS ARE NOT TO BE SCALED.
3. BEARING CAPACITY OF SOIL= 150 KN/SQ.M. HAS BEEN ADOPTED.
4. CONCRETE MIX SHALL BE M20 i.e. 1:1.5:3
5. ROOM HEIGHT 3 METRES FROM PLINTH LEVEL.



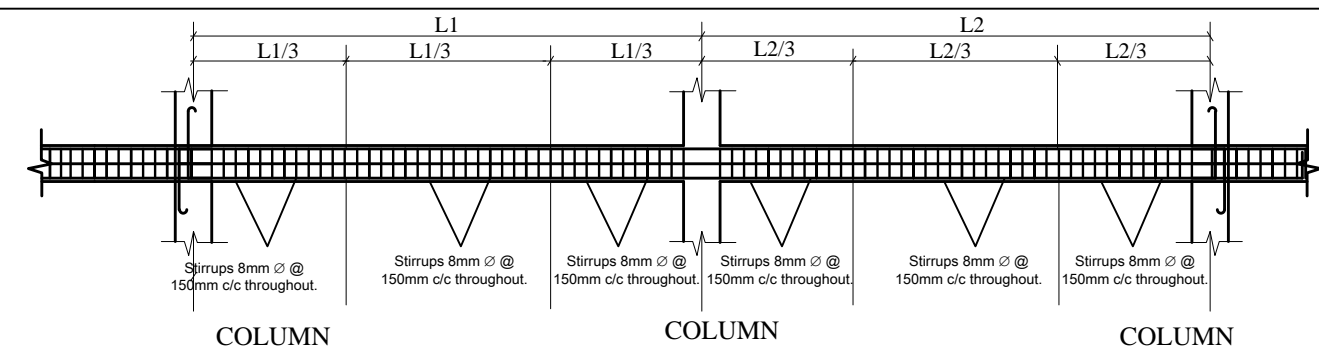
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**CONTENTS :**  
**FOOTING PLAN**

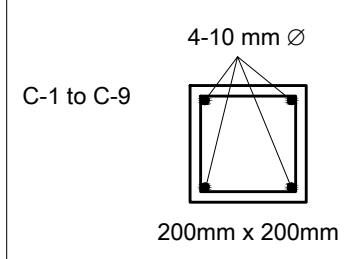
**PLINTH AREA:** 25 sq.m (268.75 Sq.ft.)

**DRAWN BY:**  
 Assistant Engineer (PMAY-G)  
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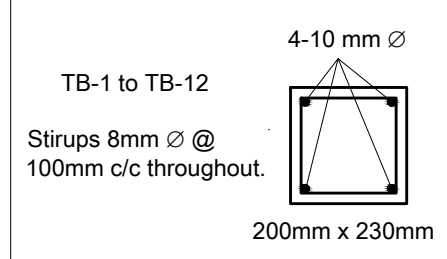
**TYPICAL LONG SECTION OF PLINTH BEAM**



**SCHEDULED OF COLUMNS**

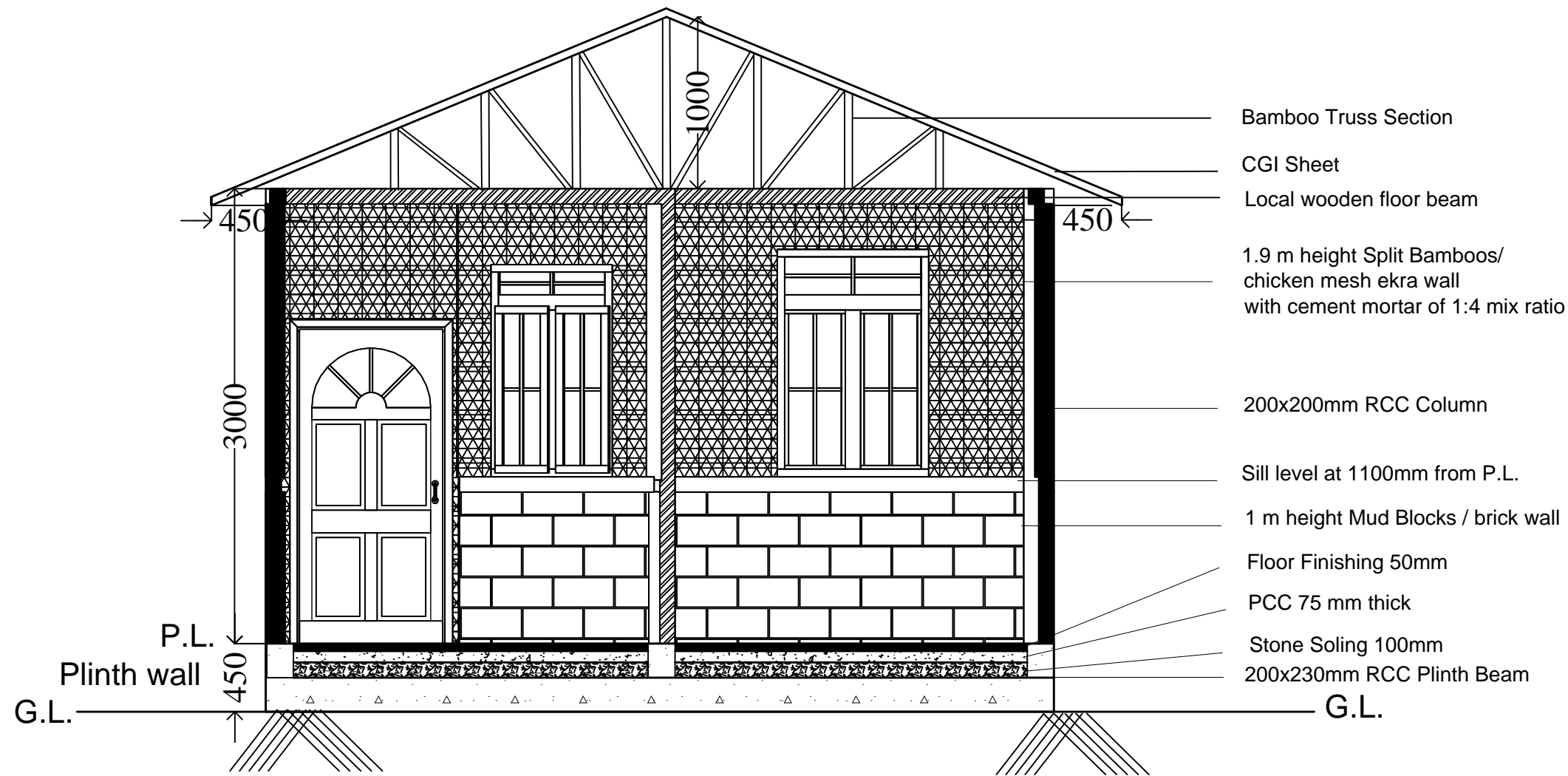


**SCHEDULED OF TIE BEAMS**



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### SCHEDULED OF DOORS & WINDOWS

All Dimensions Are in mm

Doors	WXH	Sill
D-1	1000X2100	0
D-2	800X2100	0
Window	WXH	Sill
W-1	1000X1500	1100
W-2	800X1500	1100
Ventilation	WXH	Sill
V-1	600X1200	1100

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(RCC COLUMN WITH HALF MUD  
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STRIP-CHICKEN MESH EKRA  
WALLING WITH HIPPED ROOF CGI  
SHEET COVER)

### CONTENTS : SECTION ELEVATION

PLINTH AREA: 25 sq.m (268.75 Sq.ft.)

### DRAWN BY:

Assistant Engineer (PMAY-G)  
Directorate of C&RD  
Meghalaya, Shillong.

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5. ROOM HEIGHT 3 METRES FROM PLINTH LEVEL.



FRONT VIEW



REAR VIEW



LEFT VIEW



RIGHT VIEW

SCHEDULED OF DOORS & WINDOWS		
All Dimensions Are in mm		
Doors	WXH	Sill
D-1	1000X2100	0
D-2	800X2100	0
Window	WXH	Sill
W-1	1000X1500	1100
W-2	800X1500	1100
Ventilation	WXH	Sill
V-1	600X1200	1100

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**CONTENTS :**  
FRONT, BACK, LEFT & RIGHT  
VIEWS

**PLINTH AREA:** 25 sq.m (268.75 Sq.ft.)

**DRAWN BY:**  
  
Assistant Engineer (PMAY-G)  
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Meghalaya, Shillong.

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  4. CONCRETE MIX SHALL BE M20 i.e. 1:1.5:3
  5. ROOM HEIGHT 3 METRES FROM PLINTH LEVEL.

**Detailed Cost Estimate of Proposed PMAY-G Rural House Model No.2**  
**(RCC Framed Structure with Half Mud Blocks & Half Chicken Mesh-Bamboo Strip Ekra Wall)**  
**Rate As Per Govt. of Meghalaya (P.W.D) Schedule Of Rates For Building**  
**Works 2015-2016 For Khasi Hills.**

<i>Item.no</i>	<i>Description of items</i>	<i>No</i>			<i>L</i>	<i>B</i>	<i>H</i>	<i>Quantity</i>	<i>Area Content</i>
1/1.1	Earthwork in excavation in foundation trenches including dressing of sides and ramming of bottom including stacking of serviceable stones and removal of excavated earth which lead upto 50m complete.....								
	a) In ordinary soil.								
	Footing	9	1	1	1.00	1.00	1.20	10.80	
	Plinth wall	8	1	1	1.50	0.45	0.60	3.24	
							<b>Total =</b>	<b>14.04</b>	
						@	<b>Rs. 179.00</b>	<b>Per Cum</b>	<b>Rs. 2,513.16</b>
2/1.4	Earthwork in filling including necessary carriage,watering,ramming etc. complete as directed and specified								
(b)									
	Footing	9	1	1	1.00	1.00	1.20	10.80	
	Deduct Column	9	1	1	0.25	0.25	1.20	-2.70	
	Flooring	1	1	1	5.00	5.00	0.25	-1.25	
							<b>Total =</b>	<b>6.85</b>	
						@	<b>Rs. 210.00</b>	<b>Per Cum</b>	<b>Rs. 1,438.50</b>
3/2.1	Plain cement concrete works with coarse aggregates of sizes 13mm to 32mm in foundation bed for footing steps,walls,brick worketc.as directed and specified including dewatering if necessary,and curing complete(shuttering where necessary shall be measured and paid seperately)								
(b)	In prop 1:4:8								
	Footing	9	1	1	1.00	1.00	0.08	0.68	
							<b>Total =</b>	<b>0.68</b>	
						@	<b>Rs. 5,688.00</b>	<b>Per Cum</b>	<b>Rs. 3,867.84</b>
4/2.2	Plain cement concrete floor base in prop 1:3:6 laid in alternate bays as specified with coarse aggregates of size 13mm to 32mm including dewatering if necessary,and curing etc complete.								
(b)	50 mm thick In prop 1:3:6								
	Flooring	1	1	1	5.00	5.00	-	25.00	
							<b>Total =</b>	<b>25.00</b>	
						@	<b>Rs. 354.00</b>	<b>Per Sqm</b>	<b>Rs. 8,850.00</b>
5/2.5	Providing and laying concrete in reinforced cement concrete works using concrete mixture machine with coarse sand & 20mm down graded stone aggregate including dewatering if necessary,and curing complete but excluding formwork and reinforcement for reinforced cement concrete work(form work and reinforcement will be measured and paid seperately)								

Item.no	Description of items	No			L	B	H	Quantity	Area Content
5/2.5.1	in foundation and sub-structure including footing,columns with base,tie and plinth beam,pile cap,raft slab,base slab,rcc walls,retaining walls,walls of septic tank,inspection pit and the likes and other works not less than 100mm thick up to plinth level.(witout using admixture,plasticiser)								
(a)	Footing	9	1	1	1.00	1.00	0.20	1.80	
	Column from top of footing upto top of PL	9	1	1	0.20	0.20	1.28	0.46	
	Plinth Beam	12	1	1	2.50	0.20	0.23	1.38	
							Total =	3.64	
						@	Rs. 7,514.00	Per Cum	Rs. 27,350.96
6/2.5.3	in columns,pillars,posts,struts,suspended floor,roof,landing,shelf and support,balcony,lintel,sill band,beam,girder,bressumer,cantiliver,staircase etc.above plinth level upto 1st floor level(without using admixture,plasticiser)								
(a)	M15 or prop 1:2:4								
	Column from top of PL upto top of 1st floor	9	1	1	0.20	0.20	3.00	1.08	
							Total =	1.08	
						@	Rs. 7,692.00	Per Cum	Rs. 8,307.36
7/2.8	Supplying,fitting and fixing in position reinforcement bars upto 1st floor level,conforming to relevent i.s code for rcc work/R.B walling including straightening,cleaning,cutting and bending to to proper shapes and length as per details,supplying and binding with 20G annealed black wire and placing in position with proper blocks,supports,chairs,spacers etc.complete.(rates inclusive of all wastage,lappage,hooks,chairs,anchorage etc.and no measurements for the same is required)								
(a)	From primary sources like TATA/SAIL/ESSAR/JINDAL/SHYAM/RINL								
(i)	TMT corrosion resistant steel.								
	Footing jelly	9	10	2	1.00	-	0.62	111.60	
	Column from footing upto top of PL	9	4	1	2.10	-	0.62	46.87	
	Stirrups	9	17	1	0.64	-	0.39	38.19	
	Plinth beam	12	4	1	2.50	-	0.62	74.40	
	Stirrups	12	16	1	0.64	-	0.39	47.92	
	Column from top of PL upto top of 1st floor	9	4	1	3.00	-	0.62	66.96	
	Stirrups	9	24	1	0.64	-	0.39	53.91	
							Total =	439.85	
							Say =	4.40	
						@	Rs. 9,191.00	Per Qrl	Rs. 40,426.61
8/2.10	Providing formwork of ordinary timber planking of thickness not less than 25mm and removal of the same for concrete members so as to give a rough finish including centering,shuttering,strutting and propping etc..for height of propping and centering of supporting floor to the soffit of the concrete member not exceeding 4.0m as specified for the following items:								
(a)	Foundation,footings,bases of columns,pile cap,raft and mass concrete works etc.								



Item.no	Description of items	No			L	B	H	Quantity	Area Content
	Footing	9	2	2	1.00	-	0.20	7.20	
							<b>Total =</b>	<b>7.20</b>	
						@	<b>Rs. 339.00</b>	<b>Per Sqm</b>	<b>Rs. 2,440.80</b>
2.10(b)	Plinth Beam	12	2	1	2.50	-	0.23	13.80	
							<b>Total =</b>	<b>13.80</b>	
						@	<b>Rs. 421.00</b>	<b>Per Sqm</b>	<b>Rs. 5,809.80</b>
2.10(c)	Column from top of footing upto top of PL	9	2	2	0.20	-	1.60	11.52	
	Column from top of PL upto top of 1st floor slab	9	2	2	0.20	-	3.00	21.60	
							<b>Total =</b>	<b>33.12</b>	
						@	<b>Rs. 573.00</b>	<b>Per Sqm</b>	<b>Rs. 18,977.76</b>
9/4.1	Providing brick soling in foundation and under floor with stone/best quality picked jhama brick,sand packed and laid to level and in panel after preparing the subgrade as directed including all labour and materials and if necessary dewatering,complete..								
(c)	Stone soling of thickness 100mm								
	Footing	9	1	1	1.00	1.00	-	9.00	
	Flooring	1	1	1	5.00	5.00	-	25.00	
							<b>Total =</b>	<b>34.00</b>	
						@	<b>Rs. 378.00</b>	<b>Per Sqm</b>	<b>Rs. 12,852.00</b>
10/4.11.	Stone masonry work in retaining wall,wing wall,abutment,foundation,steps,plinth etc....								
(b)(ii)	Plinth wall	8	1	1	2.30	0.45	0.60	4.97	
	Steps	1	2	1	1.00	0.30	0.15	0.09	
							<b>Total =</b>	<b>5.06</b>	
						@	<b>Rs. 4,344.00</b>	<b>Per cum</b>	<b>Rs. 21,980.64</b>
11*	Providing mud block etc.....								
	Walls	7	1	1	2.30	-	1	16.10	
	Deduct door & Window								
	D1	1	1	1	1.00	-	1.00	-1.00	
	D2	1	1	1	0.80	-	1.00	-0.80	
							<b>Total =</b>	<b>14.30</b>	
						@	<b>Rs. 1,450.00</b>	<b>Per sqm</b>	<b>Rs. 20,735.00</b>
12*	Providing & fitting chicken mesh etc...								

<i>Item.no</i>	<i>Description of items</i>	<i>No</i>			<i>L</i>	<i>B</i>	<i>H</i>	<i>Quantity</i>	<i>Area Content</i>
(c)	Ekra Wall	7	1	1	2.30	-	1.9	30.59	
	Deduct Doors & Window								
	D1	1	1	1	1.00	-	1.20	-1.20	
	D2	1	1	1	0.80	-	1.20	-0.96	
	W1	2	1	1	1.00	-	1.50	-3.00	
	W2	1	1	1	0.80	-	1.50	-1.20	
	V1	1	1	1	0.60	-	1.20	-0.72	
							<b>Total =</b>	<b>23.51</b>	
						@	<b>Rs. 101.50</b>	<b>Per sqm</b>	<b>Rs. 2,386.27</b>
13/25.2	Bamboo slit walling in timber frame with bamboo slit fitted in to the grooves of the timber frame and stiffened by means of double bamboo slits 25mm wide and not less than 6mm thick spaced at intervals of not more than 400mm apart one slit attached on each side and tied together by means of cane slit/galvd tying wire including 20 mm thick cement plaster in prop 1 cement : 6 fine sand on both sides in two coats with curing etc. complete (measurement for timber frame shall be measured and paid separately.)								
	Ekra Wall	7	1	1	2.30	-	1.9	30.59	
	Deduct Doors & Window								
	D1	1	1	1	1.00	-	1.20	-1.20	
	D2	1	1	1	0.80	-	1.20	-0.96	
	W1	2	1	1	1.00	-	1.50	-3.00	
	W2	1	1	1	0.80	-	1.50	-1.20	
	V1	1	1	1	0.60	-	1.20	-0.72	
							<b>Total =</b>	<b>23.51</b>	
						@	<b>Rs. 564.00</b>	<b>Per sqm</b>	<b>Rs. 13,259.64</b>
14/8.2	Providing wood work in frame(chowkats) of doors, windows, clerestory windows etc...								
(d)	D1	1	1	1	5.20	0.13	0.08	0.05	
	D2	1	1	1	3.70	0.13	0.08	0.03	
	W1	2	1	1	5.00	0.13	0.08	0.09	
	W2	1	1	1	4.60	0.13	0.08	0.04	
	V1	1	1	1	3.60	0.13	0.08	0.03	
							<b>Total =</b>	<b>0.21</b>	
						@	<b>Rs. 56,179.00</b>	<b>Per cum</b>	<b>Rs. 11,797.59</b>
15/8.19	Providing, fitting and fixing full panelled doors/windows etc...								
(d)	35mm thick								
	D1	1	1	1	1.00	2.10	-	2.10	
	D2	1	1	1	0.80	2.10	-	1.68	

Item.no	Description of items	No			L	B	H	Quantity	Area Content
							Total =	3.78	
						@	Rs. 3,420.00	Per Sqm	Rs. 12,927.60
16/8.19	Providing and fixing clear sheet glass bedded in putty and fixed with/without wooden beading including necessary cutting of glass to the required size (payment for wooden bead shall be made separately)								
	(a) 3.00mm thick (Area of glass panes exceeding 400 sq.cm)								
	W1	2	1	1	1.00	-	1.50	3.00	
	W2	1	1	1	0.80	-	1.50	1.20	
	V1	1	1	1	0.60	-	1.20	0.72	
							Total =	4.92	
						@	Rs. 1,221.00	Per Sqm	Rs. 6,007.32
17*	Providing bomboo post and trusses,purlin etc...								
	Bamboo Purlins	10	1	1	5.20	1.00	-	52.00	
	Truss Section	13	1	1	1.00	1.00	-	13.00	
							Total =	65.00	
						@	Rs. 167.00	Per nos.	Rs. 10,855.00
18/7.3	Providing corrugated galvanised iron sheet etc....								
(a)	0.45mm Thick	1	1	1	5.45	5.45	-	29.70	
							Total =	29.70	
						@	Rs. 817.00	Per Sqm	Rs. 24,264.90
							Total =	Rs. 2,57,048.75	
					Deduct 15% contractor profit =				Rs. 2,18,491.44
							Say =	Rs. 2,18,500.00	
(Rupees Two Lakhs Eighteen Thousand And Five Hundred Only)									

PREPARED BY:

ASSISTANT ENGINEER (PMAY-G)  
DIRECTORATE OF C&RD  
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