

**Distribution of Houses by Predominant Materials of Roof and Wall  
and Level of Damage Risk**

**Table No. : BH 34**

**State : BIHAR**

**GAYA**

Wall / Roof		Census Houses		Level of Risk under									
		No. of Houses	%	EQ Zone				Wind Velocity m/s				Flood Prone Area in %	
				V	IV	III	II	55 & 50	47	44 & 39	33		
				Area in %				Area in %					
						100				11.2	88.8		
<b>WALL</b>													
<b>A1 - Mud &amp; Unburnt Brick Wall</b>	Rural	362,908	46.3										
	Urban	13,238	1.7										
	<b>Total</b>	<b>376,146</b>	<b>48.0</b>				<i>M</i>			<i>H</i>	<i>M</i>		
<b>A2 - Stone Wall not packed with mortar</b>	Rural	4,399	0.6										
	Urban	2,015	0.3										
	<b>Total</b>	<b>6,414</b>	<b>0.9</b>			<i>M</i>				<i>M</i>	<i>L</i>		
<b>Total - Category - A</b>		<b>382,560</b>	<b>48.9</b>										
<b>B - Burnt Bricks Wall &amp; Stone wall packed with mortar</b>	Rural	278,260	35.5										
	Urban	83,330	10.6										
	<b>Total</b>	<b>361,590</b>	<b>46.1</b>			<i>L</i>				<i>M</i>	<i>L</i>		
<b>Total - Category - B</b>		<b>361,590</b>	<b>46.2</b>										
<b>C1 - Concrete Wall</b>	Rural	5,629	0.7										
	Urban	3,119	0.4										
	<b>Total</b>	<b>8,748</b>	<b>1.1</b>			<i>VL</i>				<i>VL</i>	<i>VL</i>		
<b>C2 - Wood wall</b>	Rural	785	0.1										
	Urban	252	-										
	<b>Total</b>	<b>1,037</b>	<b>0.1</b>			<i>VL</i>				<i>H</i>	<i>M</i>		
<b>Total - Category - C</b>		<b>9,785</b>	<b>1.2</b>										
<b>X - Other Materials</b>	Rural	26,641	3.4										
	Urban	2,552	0.3										
	<b>Total</b>	<b>29,193</b>	<b>3.7</b>			<i>VL</i>				<i>H</i>	<i>M</i>		
<b>Total - Category - X</b>		<b>29,193</b>	<b>3.7</b>										
<b>TOTAL HOUSES*</b>		<b>783,128</b>											

ROOF													
<b>R1 - Light Weight Sloping Roof</b>	Rural	227,723	29.1										
	Urban	13,172	1.7										
	<b>Total</b>	<b>240,895</b>	<b>30.8</b>			<i>L</i>				<i>VH</i>	<i>H</i>		
<b>R2 - Heavy Weight Sloping Roof</b>	Rural	252,231	32.2										
	Urban	21,275	2.7										
	<b>Total</b>	<b>273,506</b>	<b>34.9</b>			<i>L</i>				<i>M</i>	<i>L</i>		
<b>R3 - Flat Roof</b>	Rural	198,668	25.4										
	Urban	70,059	8.9										
	<b>Total</b>	<b>268,727</b>	<b>34.3</b>			Damage Risk as per that for the Wall supporting it							
<b>TOTAL HOUSES*</b>		<b>783,128</b>											

Probable Maximum Precipitation at a Station of the district in one day for arial extent of 1000 sqm. 578 mm

**Housing Category : Wall Types**

**Category - A** : Buildings in field-stone, rural structures, unburnt brick houses, clay houses

**Category - B** : Ordinary brick building; buildings of the large block & prefabricated type, half-timbered structures, building in natural hewn stone

**Category - C** : Reinforced building, well built wooden structures

**Category - X** : Other materials not covered in A,B,C. These are generally light.

**Notes** : 1. Flood prone area includes that protected area which may have more severe damage under failure of protection works. In some other areas the local damage may be severe under heavy rains and choked drainage.

2. Damage Risk for wall types is indicated assuming heavy flat roof in categories A, B and C (Reinforced Concrete) building

3. Source of Housing Data : Census of Housing, GOI, 2011

**Housing Category : Roof Type**

**Category - R1** - Light Weight (Grass, Thatch, Bamboo, Wood, Mud, Plastic, Polythene, GI Metal, Asbestos Sheets, Other Materials)

**Category - R2** - Heavy Weight (Tiles, Stone/ Slate)

**Category - R3** - Flat Roof (Brick, Concrete)

EQ Zone V : Very High Damage Risk Zone (MSK > IX)

EQ Zone IV : High Damage Risk Zone (MSK VIII)

EQ Zone III : Moderate Damage Risk Zone (MSK VII)

EQ Zone II : Low Damage Risk Zone (MSK < VI)

Level of Risk : VH = Very High; H = High;

M = Moderate; L = Low; VL = Very Low

\* Total No.of Houses excluding Vacant/Locked Houses