

**FLOOR PLAN DETAIL**

- NOTES:-**
- All dimensions are in m, unless wherever specified diameter of the bars shown in mm
  - Dimensions are not to be scaled out, only written dimensions may be taken as correct.
  - Nominal mix concrete 1:1.5:3 according IS 456 Clause 9.3
  - The reinforcement shall be of high strength deformed steel bars conforming to IS:1786-2008
  - Lap length and development length ( $L_d$ ) for 8 mm  $\Phi$  is 400 mm
  - Second class brick must be used
  - Mortar 1:5 according to Table 3 IS 4326-2013
  - All walls are one Brick Thick Masonry walls or Autoclaved Aerated Block of Class 7.5
  - Any discrepancy in the structural drawings should be correlated with architectural drawing.
  - Refer DWG-2 to DWG-5 for earthquake resistance and structural detail.

Schedule of Door & Windows				
Name	Lintel	Width	Sill M	Description
D1	2.10	0.90	--	
D2	2.10	0.75	--	
W1	2.10	1.50	0.90	
W2	2.10	1.20	0.90	
W3	2.10	0.90	0.90	
V	2.10	0.60	1.80	

**NOTES:-**  
 Clear height of DU = 2.85 m  
 Earthquake resistance structure as per site condition  
 \* All the Dimensions in m

**DRG. No. - NIT/CED/2017/PMAY-OP3-RCC-SR-ZIV/DWG-1**

**NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR**

**BUILDING NAME:  
 PMAY HFA  
 OPTION 3  
 RCC BUILDING  
 SLOPING ROOF  
 ZONE IV**

**DRAWING TITLE:  
 FLOOR PLAN**

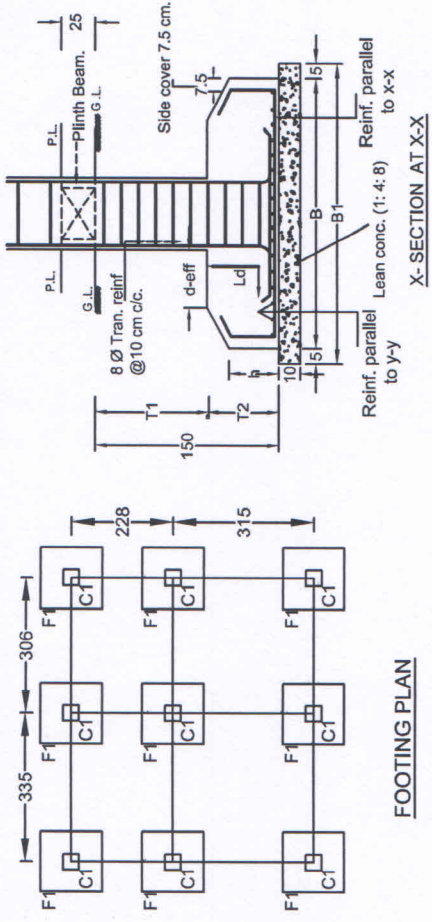
**DESIGNED BY:  
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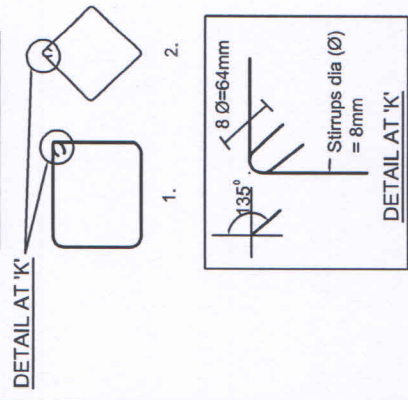
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CHART SHOWING DETAIL OF ISOLATED FOOTING REINFORCEMENT

Sr. No.	Name of footing	Size of column (bxd)	Size of footing (BXD)	Size of pit (B'XD')	Thickness of footing T2	d-eff.	h	Spacing of reinf. parallel to x-x	Spacing of reinf. parallel to y-y
1.	F1	35 X 35	120 X 120	130 X 130	30	25	20	8Ø @ 200mm C/C	8Ø @ 200mm C/C

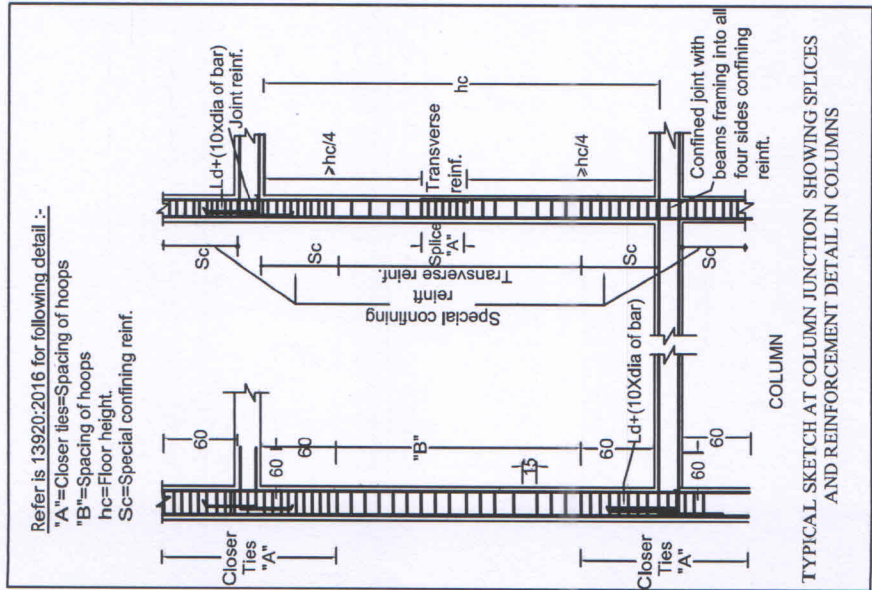


SHAPE OF STIRRUPS



Sl. No.	Column	Transverse reinforcement	Sectional plan with longitudinal reinf. Footing to, roof level
1.	C1	8Ø @ 100mm C/C "A" 8Ø @ 150mm C/C "B"	 4-16Ø + 4-12Ø

All Column Size are 35cm x 35cm and Grade is M20



NOTES:-

- All dimensions are in cm, unless wherever specified diameter of the bars shown in mm.
- Dimensions are not to be scaled out, only written dimensions may be taken as correct.
- Safe bearing capacity for design of footing is considered at 15 T/m<sup>2</sup> to be ensured at site.
- Grade of concrete M:20.
- The reinforcement shall be of high strength deformed steel bars conforming to IS:1786-2008.
- Minimum clear cover to the reinforcement including stirrups:-
  - (i) Beam 25 mm
  - (ii) Column 40 mm
  - (iii) Footing 50 mm
- Lap length and development length (L<sub>d</sub>)
  - (i) For 16 mm Ø = 800
  - (ii) For 12 mm Ø = 600
  - (iii) For 8 mm Ø = 400
- The concrete shall be mechanically mixed and vibrated with water-cement ratio not exceeding 0.55.
- In case the proposed building is at probable landslide prone area the soil should be retained properly with adequate retaining wall to prevent differential settlement of the foundation.
- Any discrepancy in the structural drawing should be correlated with architectural drawing.

DRG. No. - NIT/CED/2017/OP-3 RCC-SR  
Z-IV/DWG-2

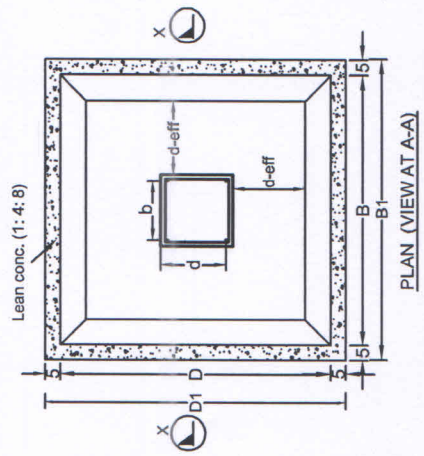
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BUILDING NAME :  
PMAY HFA  
OPTION 3  
RCC BUILDING  
SLOPING ROOF  
ZONE IV

DETAIL OF FOOTINGS & CLOUMN

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DETAIL OF ISOLATED FOOTING



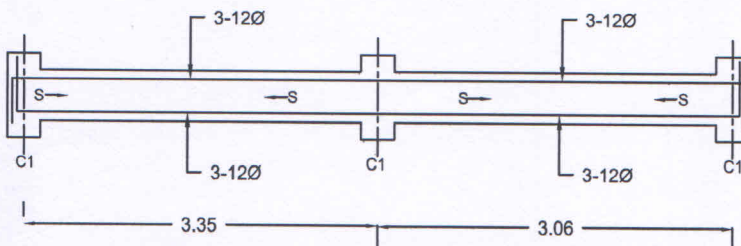
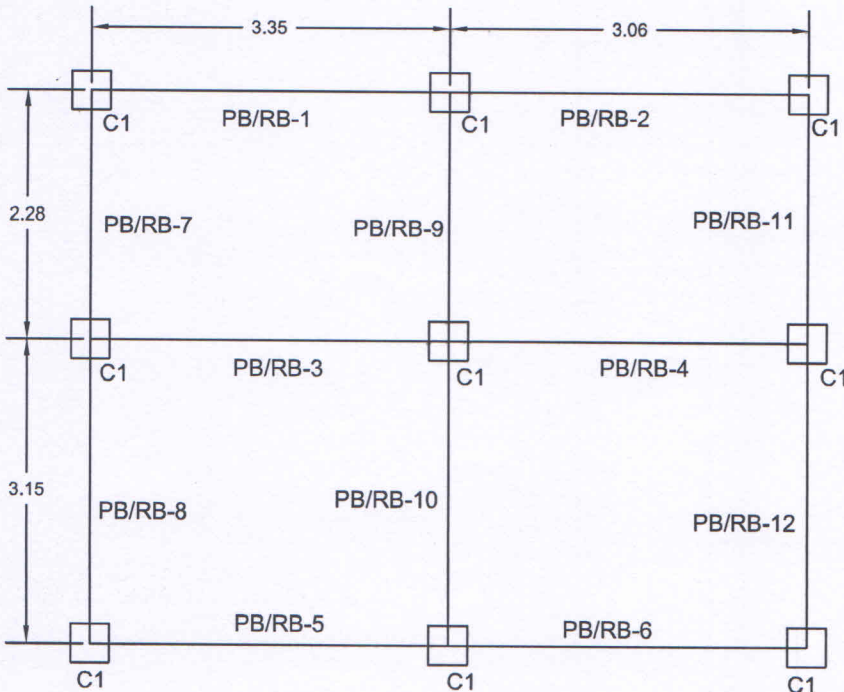
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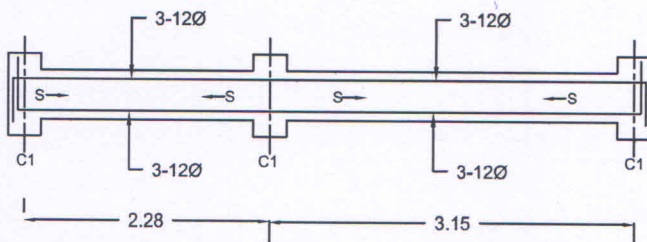


## DETAILED DRAWING OF REINFORCEMENT OF BEAMS AT PLINTH/ROOF LEVEL

S - 8 mm dia bars @ 100 mm c/c



DETAIL FOR BEAM PB/RB-1 to PB/RB-6



DETAIL FOR BEAM PB/RB-7 to PB/RB-12

### NOTES :

- All dimensions are in meters, unless wherever specified diameter of the bars shown in mm.
- Dimensions are not to be scaled out, only written dimensions may be taken as correct.
- Size of Beam is 250 X 250 mm.
- Grade of concrete shall be M20.
- All reinforcement shall be of grade Fe 415 confirming to IS:1786-2008.
- Clear Cover to reinforcement shall be 25 mm.
- Bending and fixing of reinforcement shall be as per is:2502-1963.
- Lap length and anchorage length shall be 57 times the bar diameter
- Further refer notes from the drawing of 'Detail' of footings'.

**DRG. No. - NIT/CED/2017/OP-3-RCC-SR Z-IV/DWG-3**

**NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR**

**BUILDING NAME :  
PMAY HFA  
OPTION 3  
RCC BUILDING  
SLOPING ROOF  
ZONE IV**

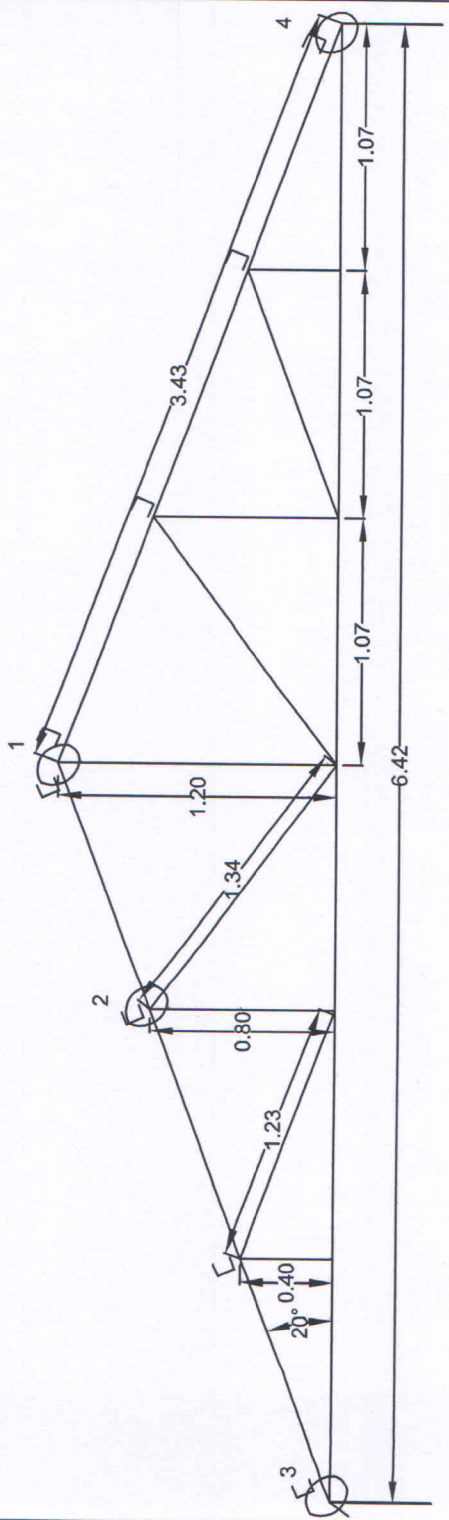
**DETAIL OF PLINTH /ROOF BEAM**

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<b>DRG. No. - NIT/CED/2017/ PMAY -OP3-RCC-SR- ZIV/DWG-4</b>
<b>NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR</b>
<b>BUILDING NAME: PMAY HFA OPTION 3 REINFORCED CONCRETE BUILDING SLOPING ROOF ZONE IV</b>
<b>DRAWING TITLE: ELEVATION OF TRUSS</b>
<b>DESIGNED BY: Dr. Pardeep Kumar Dr. Hemant Kumar Vinayak</b>



**ELEVATION OF TRUSS**

*Hemant*

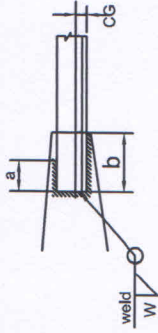
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**NOTES:-**

1. All dimensions are in mm unless specified.
2. Dimensions are not to be scaled out, only written dimensions may be taken as correct.
3. Grade of concrete M:20.
4. Any discrepancy in structural Drawings should be correlated with Architectural drawing.
5. Scale : Not to scale
6. Truss has been designed for 0.3m snow depth.



ANGLE SIZE	WELD THK W. mm	a(mm)	b(mm)	GUSSET THK mm
L 50 x 50 x 5	6	50	90	8

TYPICAL DETAILS OF WELD LENGTH

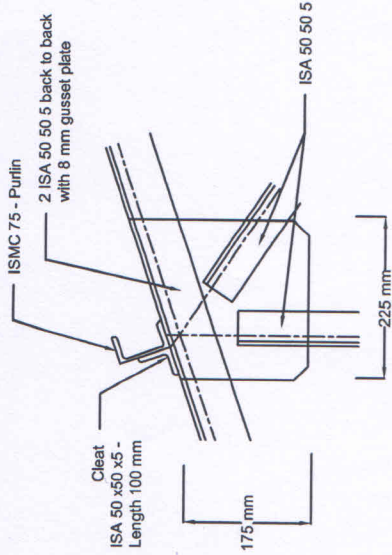
**DRG. No. - NIT/CED/2017/PMAY -OP3-RCC-SR-ZIV/DWG-5**

**NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR**

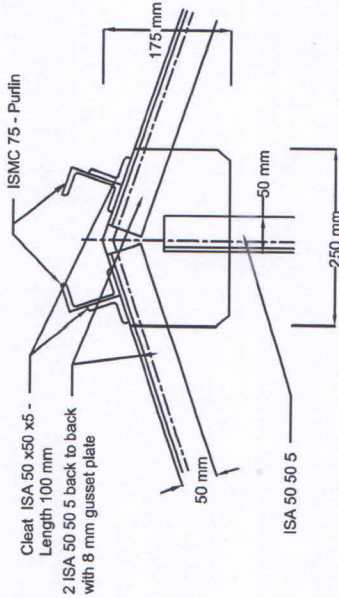
**BUILDING NAME:  
PMAY HFA  
OPTION 3  
REINFORCED CONCRETE  
BUILDING  
SLOPING ROOF  
ZONE IV**

**DRAWING TITLE:  
CROSS SECTION OF TRUSS**

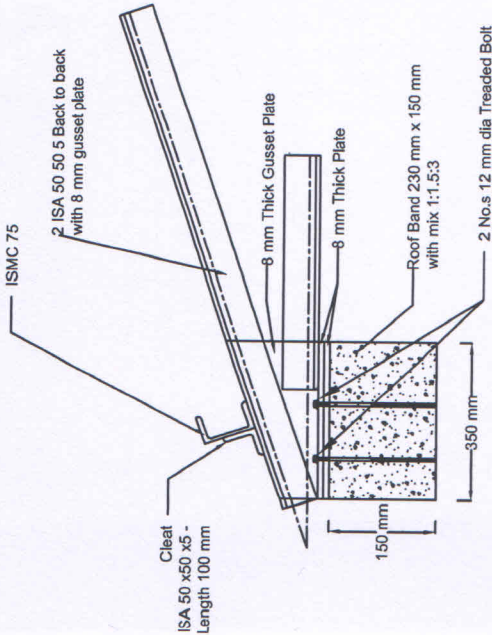
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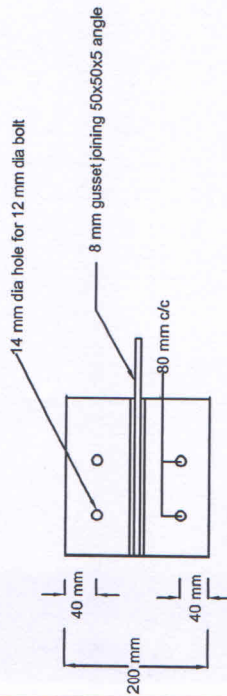
**Detail 2**



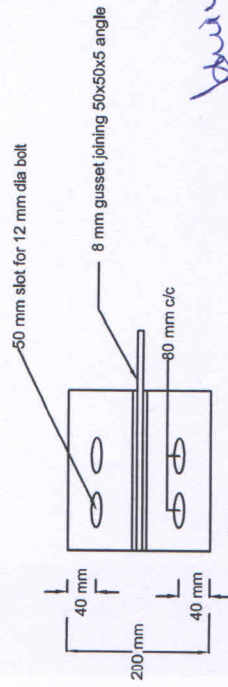
**Detail 1**



**Elevation  
Detail 3**



**Plan  
Detail 3**



**Plan  
Detail 4**

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