

FLOOR PLAN DETAIL

Name	Lintel	Width	Sill Ivl	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 NOTES:-	2.10	0.60	1.80	
Clear hei	ght of $DU =$	2.85 m		
Earthqual	ke resistance	structure as pe	er site condition	n
* All the	Dimensions i	n m		

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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 Φ 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-4 for earthquake resistance and structural detail.

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

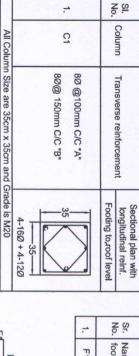
NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR

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

DRAWING TITLE: FLOOR PLAN

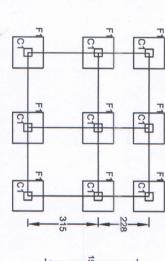
DESIGNED BY: Dr. Pardeep Kumar Dr. Hemant Kumar Vinayak

Associate Professor (Structural Engg.)
Civil Engineering Department
NIT, Hamirpur (H.P.)-177005



5mm C/C	25 20 8Ø@175mm C/C 8Ø@175mm C/C	20	25	30	35 X 35 135 X 135 145 X 145	135 X 135	35 X 35	F1	1.
of reinf. o x-x	Spacing of rei	7	d-eff.	Thickness of footing T2	Size of pit (B1XD1)	Size of footing (BXD)	Size of Size of column footing (bxd) (BXD)	Sr. Name of No. footing	No.

CHART SHOWING DETAIL OF ISOLATED FOOTING REINFORCEMENT



Refer is 13920:2016 for following detail :-

"B"=Spacing of hoops "A"=Closer ties=Spacing of hoops

Sc=Special confining reinf hc=Floor height

ZP.	-	——————————————————————————————————————	-15- 	-:			
Reinf. parallel	10	-D-		@10 cm c/c.	G.L.		
Lean con		E_	d-eff	, c	reini i	P	=
		Ш	Ш				=
Reinf, parallel			7.5	CHA	Plinth Beam.	P.	

FOOTING PLAN

to y-y

X- SECTION AT X-X

>hc/4

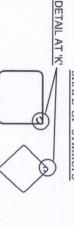
Ld+(10xdia of bar)

Joint reinf.

Ties

60

SHAPE OF STIRRUPS



Special confining reinft

ransverse rein

Transverse

ho

-H



Closer Ties "A"

Ld+(10Xdia of bar)

>hc/4

60 H





TYPICAL SKETCH AT COLUMN JUNCTION SHOWING SPLICES

COLUMN

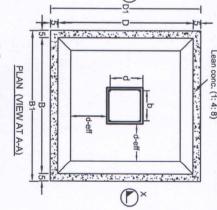
four sides confining beams framing into al Confined joint with

AND REINFORCEMENT DETAIL IN COLUMNS

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Civil Engineering Department

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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/m² to be ensured at site.
- Grade of concrete M:20.
- The reinforcement shall be of high strength IS:1786-2008. conforming
- Minimum clear cover to the reinforcement including stirrups:-
- (i) Beam 25 mm
- (ii) Column 40 mm
- (iii) Footing 50 mm
- (ii) For 12 mm Ø = 600(iii) for 8 mm $\emptyset = 400$

(i) For 16 mm Ø = 800

Lap length and development length (La)

- The concrete shall be mechanically mixed and vibrated with water- cement ratio not exceeding 0.55.
- Incase 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-FR Z-IV/DWG-2

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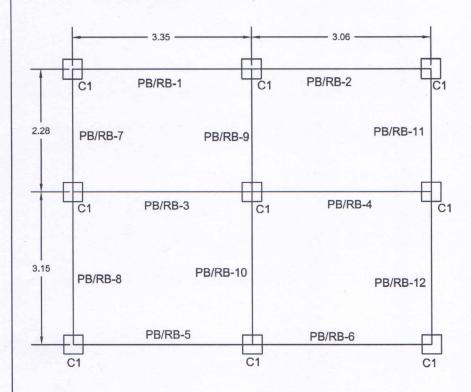
ZONE IV RCC BUILDING FLAT ROOF OPTION 3 **PMAY HFA** BUILDING NAME:

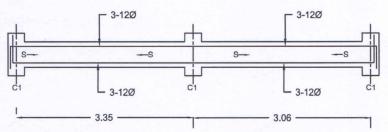
DETAIL OF FOOTINGS & CLOUMN

DESIGNED BY:

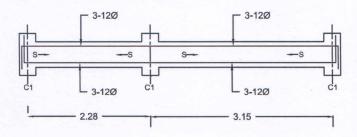
DETAILED DRAWING OF REINFORCEMENT OF BEAMS AT PLINTH/ROOF LEVEL

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

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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'.

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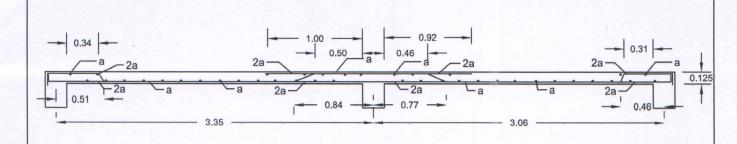
NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR

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

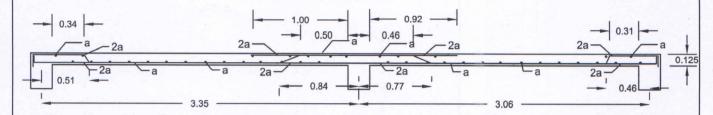
DETAIL OF PLINTH /ROOF BEAM

DESIGNED BY: Dr. Pardeep Kumar Dr. Hemant Kumar Vinayak

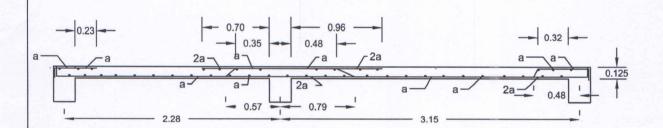
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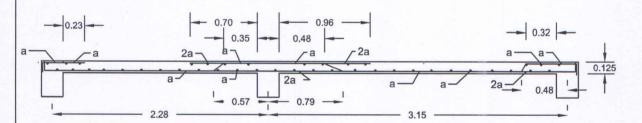
Section 1-1



Section 2-2



Section 3-3



Section 4-4

- Clear cover the slab should be 20mm.
- All dimensions are in meter

SCHEDULE OF BARS a. 8 mm Ø @ 150 mm c/c

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NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR

BUILDING NAME:

PMAY HFA

OPTION 3

REINFORCED CONCRETE

BUILDING

FLAT ROOF

ZONE IV

DRAWING TITLE:

SLAB DETAILS

DESIGNED BY:

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