FLOOR PLAN DETAIL

Schedule of Door & Windows

<table>
<thead>
<tr>
<th>Name</th>
<th>Lintel</th>
<th>Width</th>
<th>Sill</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>2.10</td>
<td>0.90</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>D2</td>
<td>2.10</td>
<td>0.75</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>W1</td>
<td>2.10</td>
<td>1.50</td>
<td>0.90</td>
<td>-</td>
</tr>
<tr>
<td>W2</td>
<td>2.10</td>
<td>1.20</td>
<td>0.90</td>
<td>-</td>
</tr>
<tr>
<td>W3</td>
<td>2.10</td>
<td>0.90</td>
<td>0.90</td>
<td>-</td>
</tr>
<tr>
<td>V</td>
<td>2.10</td>
<td>0.60</td>
<td>1.80</td>
<td>-</td>
</tr>
</tbody>
</table>

NOTES:–
Clear height of DU = 2.85 m
Earthquake resistance structure as per site condition
* All the Dimensions in m
Refer is 13820:2016 for following detail:

*A* = Closer ties = Spacing of hoops
*B* = Spacing of hoops
*h*=Floor height.
*Sc*=Special confining rein.

**COLUMN**

**TYPICAL SKETCH AT COLUMN JUNCTION SHOWING SPLICES AND REINFORCEMENT DETAIL IN COLUMNS**

**FOOTING PLAN**

**SHAPe OF STIRRUPS**

**DETAIL AT 'K'**

**PLAN (VIEW AT A-A)**

**DETAIL OF ISOLATED FOOTING**

---

**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 M20.
- 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 (Ld):
  - (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.
- 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-SR Z-IV/DWG-2**

**NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR**

**BUILDING NAME**: PMAY HFA

**OPTION 3**: RCC BUILDING SLOPING ROOF ZONE IV

**DETAIL OF FOOTINGS & COLUMN**

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

---

**Dr. Hemant Kumar Vinayak**
Assistant Professor
Department of Civil Engineering
National Institute of Technology, Hamirpur -177005 (H.P.)

**Dr. Pardeep Kumar**
Associate Professor (Structural Engg.)
Civil Engineering Department
NIT, Hamirpur (H.P.-177005)
DETAIL 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: 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

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

Dr. Hemant Kumar Vinayak
Assistant Professor
Department of Civil Engineering
National Institute of Technology,
Hamirpur -177005 (H.P.)

Dr. Pardeep Kumar
Associate Professor (Structural Engg.)
Civil Engineering Department
NIT, Hamirpur (H.P.)-177005
Dr. Hemant Kumar Vinayak  
Assistant Professor  
Department of Civil Engineering  
National Institute of Technology, Hamirpur -177005 (H.P.)

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

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.
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.

<table>
<thead>
<tr>
<th>ANGLE SIZE</th>
<th>WELD THK</th>
<th>a(mm)</th>
<th>b(mm)</th>
<th>GUSSET THK</th>
</tr>
</thead>
<tbody>
<tr>
<td>L 50 x 50 x 5</td>
<td>6</td>
<td>50</td>
<td>90</td>
<td>8</td>
</tr>
</tbody>
</table>

TYPICAL DETAILS OF WELD LENGTH


NATIONAL INSTITUTE OF TECHNOLOGY HAMIRPUR

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

DRAWING TITLE: CROSS SECTION OF TRUSS

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