



**TIE BEAM FRAMING PLAN AT G. LVL**  
(plan showing tie beam nos.)

**NOTES:-**  
**[GENERAL]**

- 1] ALL DIMENSIONS ARE IN M.M. UNLESS OTHERWISE MENTIONED.
- 2] ONLY FIGURED DIMENSIONS ARE TO BE FOLLOWED NEITHER THE BARS SHALL BE COUNTED NOR THE DIMENSIONS SCALED FROM THE DRG.
- 3] ANY DISCREPANCY IN THE DRGS. SHALL BE BROUGHT TO THE NOTICE OF THE ARCHITECT/CONSULTANT AND CLARIFICATION OBTAINED IN WRITING PRIOR TO EXECUTION OF WORK.
- 4] HIGH YIELD STRENGTH DEFORMED BARS OF YIELD STRESS 500 N/MM<sup>2</sup> (Fe-500) WHICH SHALL CONFORM TO IS 1786-1985 SHALL BE USED AS REINFORCEMENT.
- 5] CLEAR COVER OF MAIN REINF. SHALL BE AS FOLLOWS:  
(a) FOOTING = 50 mm (b) COLUMN = 40 mm (c) BEAM = 30 mm (TOP & BOTTOM) OR DIA OF BAR WHICHEVER IS MORE (e) SLAB = 20 mm (f) WAIST SLAB = 20 mm
- 6] ENDSIDE COVER OF ALL REINFORCEMENT IN BEAMS & SLAB = 25 mm OR DIA OF BAR WHICHEVER IS MORE
- 7] THE COVER BLOCK OF CEMENT MORTAR SHALL BE USED TO ENSURE THE REQD. COVER OF REINFORCEMENT
- 8] DEVELOPMENT LENGTH (L<sub>d</sub>) FOR DIFFERENT DIA METER OF BARS FOR CONC. MIX OF GRADE M-25 SHALL BE = 49 X DIA OF BAR
- 9] CONC. MIX FOR R.C.C. WORK SHALL BE OF GRADE M-25 CONFORMING TO IS 456 - 2000.
- 10] NECESSARY FIXTURE FOR ELECTRICAL, PLUMBING, ETC. SHALL BE PROVIDED IN SLAB BEAMS BEFORE EXECUTION AS PER RELEVANT DRGS.
- 11] THE STRUCTURE HAS BEEN DESIGNED FOR SEISMIC ZONE - III
- 12] THE STRUCTURE HAS BEEN DESIGNED FOR STILT +6 = 7 STOREY
- 13] P.C.C.(1:4:8) SHALL BE PROVIDED.
- 14] ALL PLAIN CONCRETE & RCC SHALL BE STRICTLY IN ACCORDANCE WITH THE PROVISION OF IS - 456:2000
- 15] CUTTING BENDING FIXING & PLACING OF BARS SHALL BE IN ACCORDANCE WITH IS - 2502:1968, IS - 5525:1969 & IS - 456:2000

**[FOUNDATION]**

- 1] THE LAYOUT OF BUILDING SHALL BE GIVEN FROM THE ARCH. DRG.
- 2] THE DESIGN DATA FOR FOUNDATION HAS BEEN TAKEN FROM SOIL TEST REPORT PROVIDED BY THE CLIENT
- 3] ALL EXTERIOR WALLS SHALL BE PROVIDED WITH TOE WALL BELOW THE BEAMS AS TYPICAL DETAIL IS GIVEN
- 4] EARTH BELOW FOUNDATION SHALL BE PROPERLY RAMMED & CONSOLIDATED BEFORE LAYING LEAN CONCRETE.

**[COLUMNS]**

- 1] TIES IN PORTION OF COL. & BEAM JUNCTION SHALL BE SAME AS END ZONE.
- 2] OVER LAPS ARE ALLOWED ONLY AT MIDDLE ZONE OF THE COLUMNS.
- 3] NOT MORE THAN 50% OF BARS SHALL BE LAPPED AT A SECTION AND LAPS SHALL BE STAGGERED.
- 4] TIES IN PORTION OF COL. BELOW THE BEAM SHALL BE SAME AS END ZONE.
- 5] VERTICAL BARS OF RCC COLUMN AT TOP SLAB SHALL BE EXTENDED UP TO TOP OF BEAM & BENT INTO BEAM BY DEVELOPMENT LENGTH.

**[BEAMS]**

- 1] FOR LOCATION OF BEAMS REFER SLAB PLAN.
- 2] THE SPACING OF STIRRUPS AT OVERLAPS SHOULD NOT EXCEED 150 MM. C/C
- 3] WHERE TWO LAYERS OF REINF. BARS ARE TO BE PROVIDED, SPACER BAR ARE TO BE PROVIDED AT SPACING OF 1000 MM. MAX. AND THE DIA OF THE SPACER BAR SHALL BE HIGHER OF DIA OF LONGITUDINAL BARS OR 25 MM.
- 4] MAX. 3 NOS. OF BARS SHALL BE PROVIDED IN A LAYER OF 230 MM WIDE BEAM.
- 5] AT THE JUNCTION OF TWO DIFF. NUMBER OF BEAMS THE HIGHER REINF. AT THE SUPPORT SHALL BE ADOPTED.
- 6] OVER LAP IN TOP BARS SHALL BE NEAR MID SPAN & IN BOTTOM BARS SHALL BE NEAR SUPPORT OR AT SUPPORT
- 7] THE DEPTH OF BEAM/INTEL MONOLITHIC WITH SLAB AS SPECIFIED IN SCHEDULE SHALL BE INCLUSIVE OF SLAB THICKNESS UNLESS OTHERWISE SPECIFIED
- 8] HOOKS IN STIRRUPS OF BEAMS SHALL BE BENT INSIDE AT 135° & LENGTH OF HOOKS SHALL BE 10 X DIA OF BAR OF STIRRUPS

**[SLABS]**

- 1] FOR SLAB REINFORCEMENT REFER TABLE-4 (DETAIL OF SLAB REINFORCEMENT)
- 2] ALTERNATE BOTTOM BARS SHALL BE CURTAILED AT L/7 OF SPAN AS SHOWN IN TYP. SECTION OF SLAB
- 3] EXTRA BARS SHALL BE PROVIDED AT TOP FACE AS SHOWN IN TYP. SECTION OF SLAB
- 4] THE CROSS REINF./TEMP. REINF. BELOW TOP REINF. OF SLAB I.E. #8@300'C/C IS TO BE PROVIDED JUST BELOW THE MAIN TOP STEEL AS SHOWN IN TYP. SEC. OF SLAB
- 5] THE FIRST MAIN BAR OF SLAB SHALL BE PLACED AT 80 MM. OR HALF THE SPACING SPECIFIED WHICHEVER IS LESS FROM THE FACE OF SUPPORT

**[MASONRY WORK]**

- 1] 115 TH.(2 BRICKS) WALL - 1:4 CEMENT: SAND MORTAR SHALL BE USED & #8.1 NOS. BARS AT EVERY 4th COURSE SHALL BE PROVIDED
- 2] 230 TH.(1 BRICK) WALL - 1:6 CEMENT: SAND MORTAR SHALL BE USED.
- 3] THE VERTICAL FACE OF CONCRETE AT JUNCTION OF WALL & RCC MEMBER SHALL BE RAKED TO GIVE A ROUGH SURFACE & 1:4 CEMENT:SAND MORTAR SHOULD BE APPLIED TO DEVELOPED BOND BETWEEN BRICK & RCC MEMBER.

REFERENCES : IS 456 - 2000, IS - 13920, - 2016, IS - 1893 PART (1) : 2016, SP-16 - SP-34 ARCH. DRG. NO. - ALL ARCH. DRGS

**REVISION**

S.N.	DATE	DESCRIPTIONS	INITIAL

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PROJECT

**PROPOSED TYPE-III HOUSING AT I.I.T. KANPUR**  
(BLOCK - 01)

DRG. TITLE:  
**TIE BEAM FRAMING PLAN AT G. LVL**

DEALT BY Himanshu	DATE NOV.-18	SHEET NO.
CKD. BY Er.Omkar Verma	SCALE N.T.S.	<b>ST-03</b>

Client :-  
**I.I.T. KANPUR**

ARCHITECT:

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