

# STRUCTURAL 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 CONSULTANT AND CLARIFICATION OBTAINED IN WRITING PRIOR TO EXECUTION OF WORK.
- [4] HIGH YIELD STRENGTH DEFORMED BARS OF YIELD STRESS 550N/MM<sup>2</sup> (TMT-550) WHICH SHALL CONFORM TO I.S. 1786-2008 SHALL BE USED AS REINFORCEMENT.
- [5] NOMINAL COVER OF REINF. SHALL BE AS FOLLOWS.
  - (a) FOOTING = 50 mm. (b) COLUMN = 40 mm. (c) BEAM = 25mm. OR DIA OF BAR WHICHEVER IS MORE
  - (d) SLAB = 20 mm. (e) WAIST SLAB = 20mm.
- [6] END COVER OF ALL REINFORCEMENT IN BEAMS & SLAB = 25mm. OR 2xDIA. 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 (Ld) FOR DIFFERENT DIA METER OF FOR CONC. MIX OF GRADE M-25=49XDIA OF BAR.
- [9] CONC. MIX FOR R.C.C. WORK SHALL BE OF GRADE M-25 CONFORMING TO I.S. 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 WITH IMPORTANCE FACTOR 1 AS PER I.S.:1893-2002.
- [12] P.C.C. (1:4:8) SHALL BE PROVIDED.
- [13] ALL PLAIN CONCRETE & RCC SHALL BE STRICTLY IN ACCORDANCE WITH THE PROVISION OF IS-456:2000.
- [14] 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 DONE FROM THE ARCH. DRG.
- [2] THE DESIGN DATA FOR FOUNDATION HAS BEEN TAKEN FROM SOIL TEST REPORT PROVIDED.
- [3] FOUNDATION IS DESIGNED FOR G+9 (AS PER ARCH. DRG.). SBC OF SOIL IS TAKEN AS 13.3T/SQ.MT. AT 2.8M DEPTH.

## 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 PLINTH 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 –

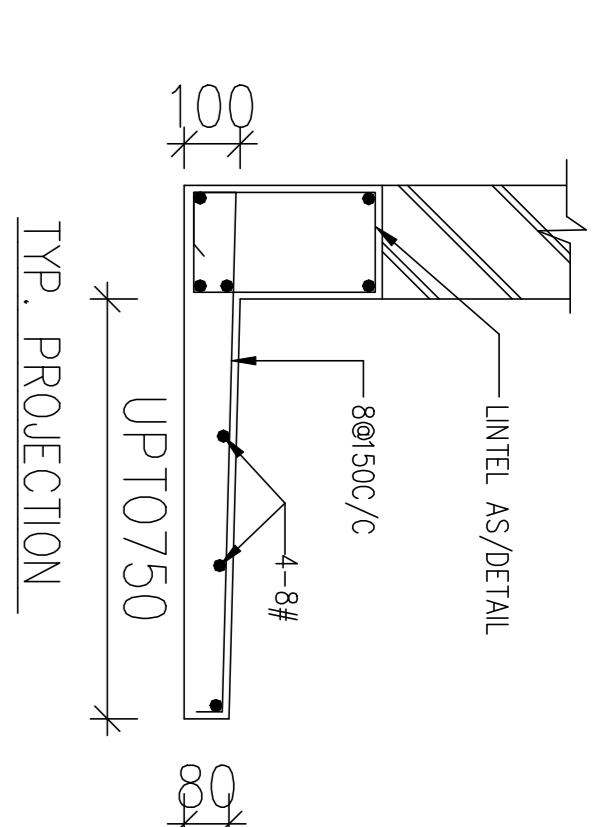
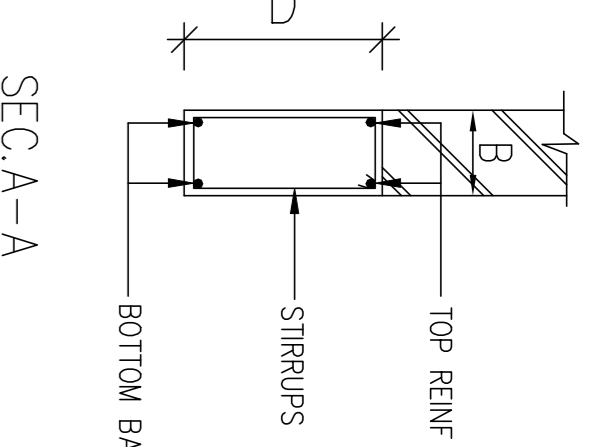
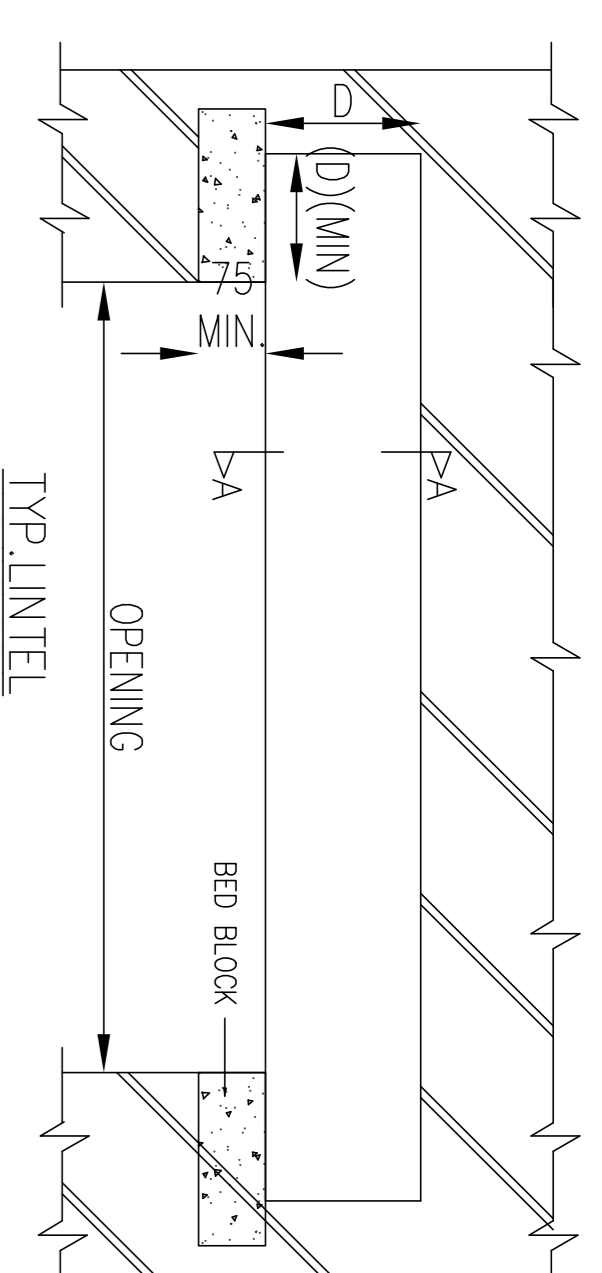
- [1] FOR LOCATION OF BEAMS REFER SLAB PLAN.
- [2] THE SPACING OF STIRRUPS AT OVERLAPS SHOULD NOT EXCEED 150 MM. C/C.
- [3] WHERE TWO LAYERS OF REINF. BARS ARE TO BE PROVIDED, SPACER BAR ARE TO BE PROVIDED AT SPACING OF 1000MM. MAX. AND THE DIA OF THE SPACER BAR SHALL BE HIGHER OF DIA OF LONGITUDINAL BARS OR 25MM.
- [4] AT THE JUNCTION OF TWO DIFF. NUMBER OF BEAMS THE HIGHER REINF. AT THE SUPPORT SHALL BE ADOPTED.
- [5] OVER LAP IN TOP BARS SHALL BE NEAR MID SPAN & IN BOTTOM BARS SHALL BE NEAR/AT SUPPORT.
- [6] THE DEPTH OF BEAM / LINTEL MONOLITHIC WITH SLAB AS SPECIFIED IN SCHEDULE SHALL BE INCLUSIVE OF SLAB THICKNESS UNLESS OTHERWISE SPECIFIED.
- [7] HOOKS IN STIRRUPS OF BEAMS SHALL BE BENT INSIDE AT 135° & LENGTH OF HOOKS SHALL BE 6XDIA OF BAR OF STIRRUPS OR IF BENT AT 90° THAN LENGTH OF BAR SHALL BE EXTENDED BY 8XDIA OF BAR.

## SLABS –

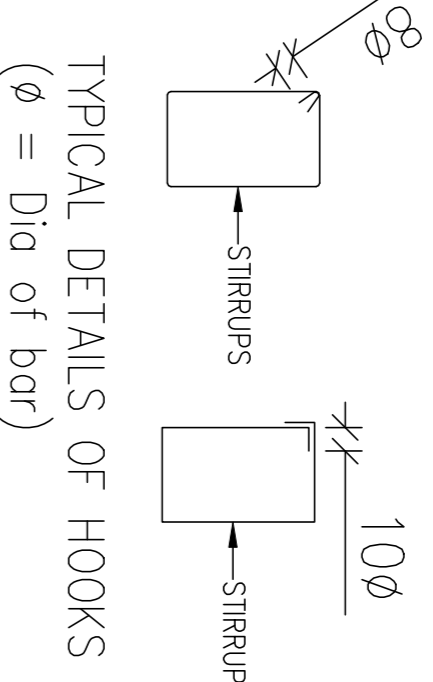
- [1] DOTTED LINES ARE SHOWN AS TOP FACE REINFORCEMENT AND FIRM LINES AS BOTTOM FACE REINFORCEMENT.
- [2] ALTERNATE BARS OF BOTTOM REINF. SHALL BE CURTAILED AT 0.1xSPAN OF SLAB FROM SUPPORT.
- [3] ALL TOP FACE REINF. AT CONTINUOUS EDGE OF SLAB SHALL BE CONTINUED UP TO L/3 OF SPAN & AT DISCONTINUOUS EDGE SHALL BE PROVIDED UP TO L/7 OF SPAN.
- [4] THE CROSS REINF. / TEMP. REINF. BELOW TOP REINF. OF SLAB i.e. #8@300c/c IS TO BE PROVIDED JUST BELOW THE MAIN TOP STEEL WHICH HAS NOT BEEN SHOWN IN THE DRG.
- [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
- [6] HIGHER REINFORCEMENT OF TOP OF TWO ADJACENT SLAB SHALL BE PROVIDED AT CONTINUOUS SLAB.

## MASONRY WORK –

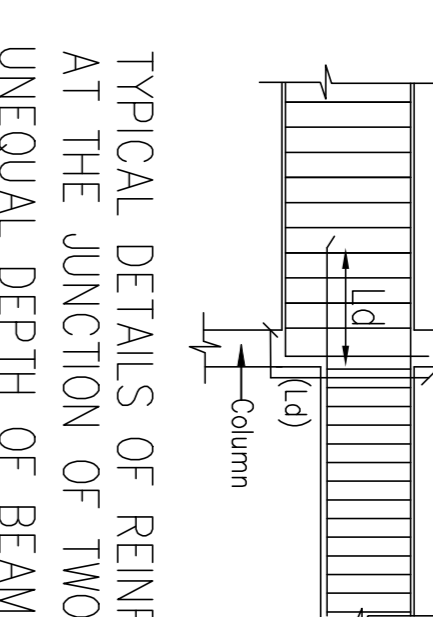
- [1] 115 TH.(1/2 BRICK) WALL –1:4 CEMENT: SAND MORTAR SHALL BE USED & #8-1 NOS. BARS AT EVERY
- [2] 4th COURSE SHALL BE PROVIDED.
- [3] 230 TH.(1 BRICK) WALL – 1:6 CEMENT: SAND MORTAR SHALL BE USED.
- [4] THE VERTICAL FACE OF CONCRETE AT JUNCTION OF WALL & RCC MEMBER SHALL BE RAKED TO GIVE A ROUGH SURFACE & 1:4 CEMENT:SAND MORTAR SHOULD BE APPLIED TO DEVELOPED BOND BETWEEN BRICK & RCC MEMBER.
- [5] 115 TH. (1/2 BRICK) WALL EXCEEDING 3.0M. IN LENGTH & 230TH. BRICK WALL EXCEEDING 4.5M. IN LENGTH, VERTICAL STIFFENER HAS TO BE PROVIDE.



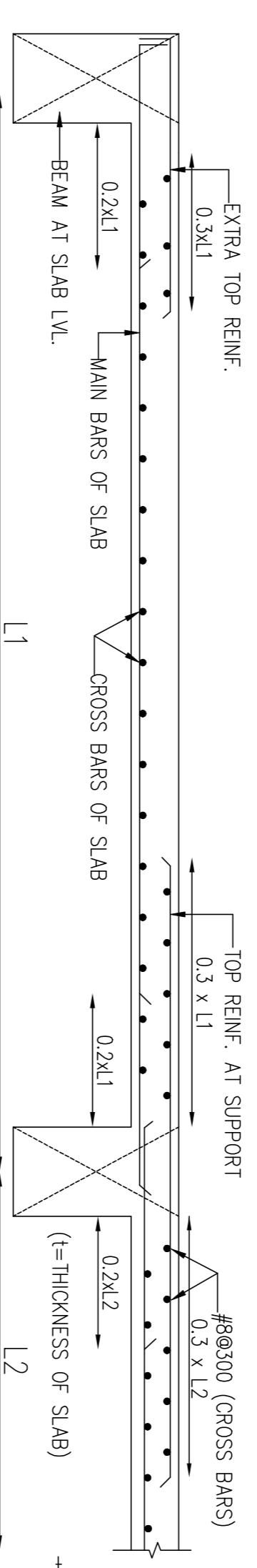
OPENING SIZE	B X D	BOTTOM REINF	TOP REINF	STIRRUPS
1200	230 X 150	3-10#	2-10#	8#-1000/C
1800	230 X 150	3-12#	2-10#	8#-1000/C
2400	230 X 225	3-12#	2-10#	8#-1200/C
4800	230 X 450	3-20#	2-16#	8#-1200/C



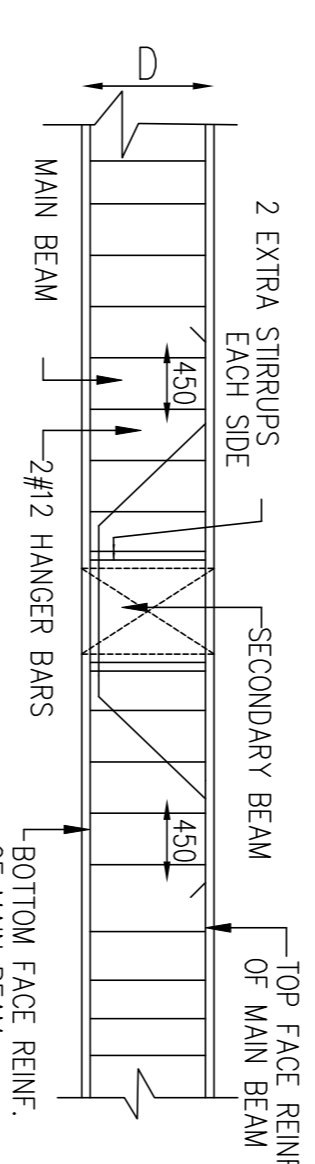
TYPICAL DETAILS OF HOOKS  
(φ = Dia of bar)



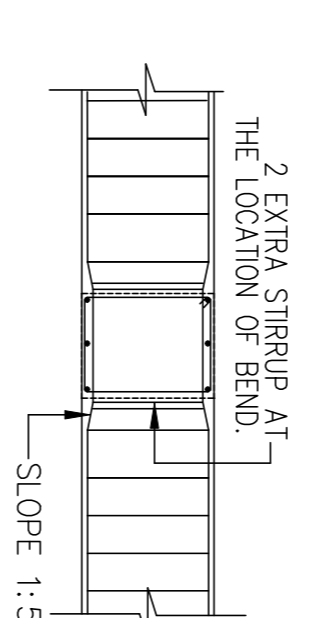
TYPICAL DETAILS OF REINF. AT THE JUNCTION OF TWO UNEQUAL DEPTH OF BEAMS.



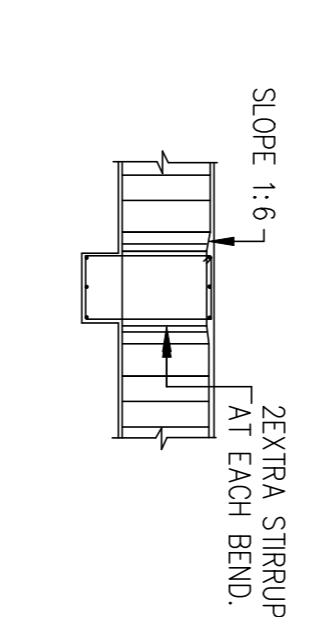
TYPICAL CROSS SECTION OF SLAB ALONG SHORTER SPAN OF SLAB



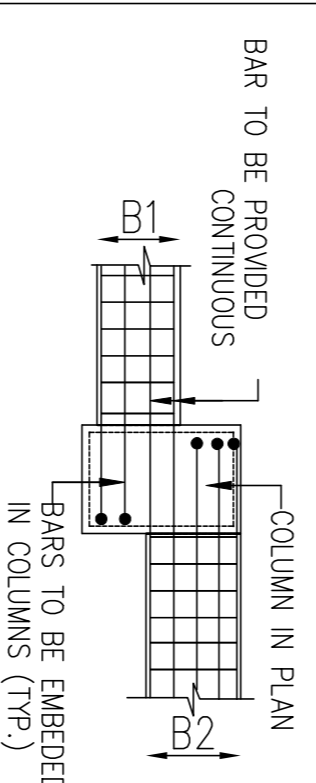
TYP. DETAILS OF HANGER BARS BELOW SECONDARY BEAM RESTING ON MAIN BEAM



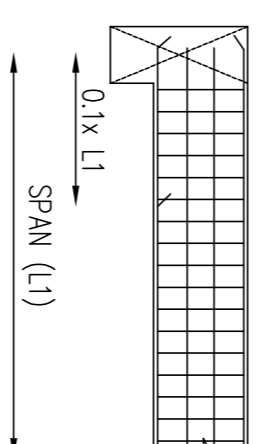
TYP. DETAILS OF REINF. AT JUNCTION OF TWO BEAMS OF EQUAL DEPTH.



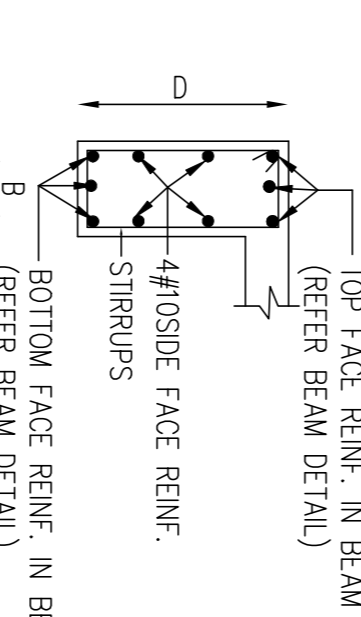
DETAILS OF REINF. AT JUNCTION OF TWO BEAMS OF UNEQUAL DEPTH.



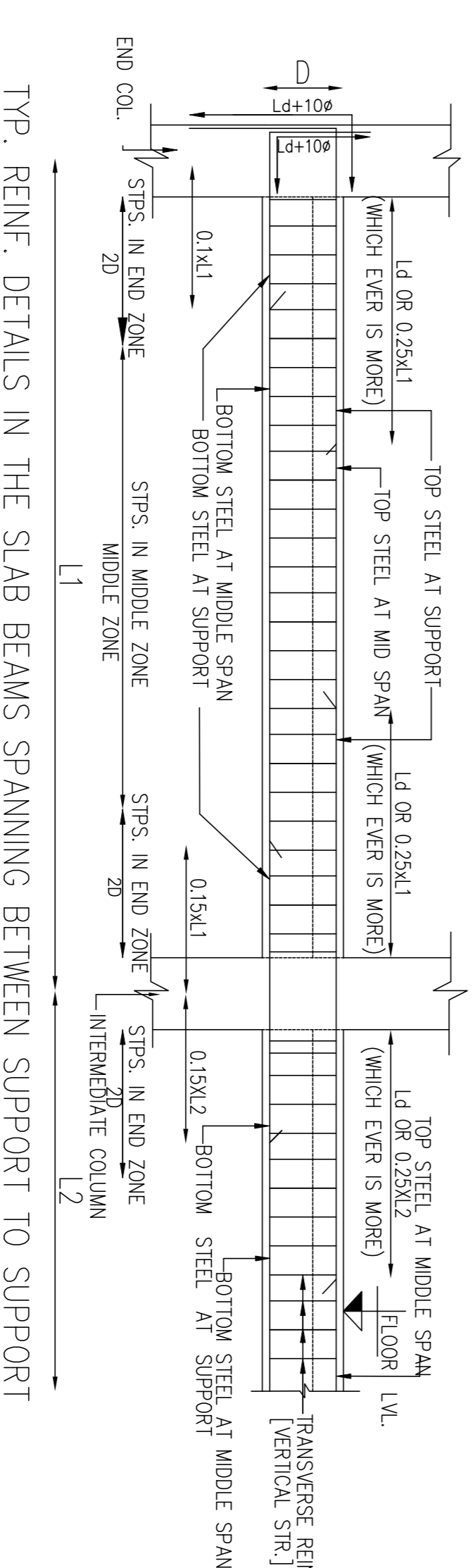
TYP. DETAIL OF REINF. IN BEAM AT JUNCTION OF COLUMNS, BEAM HAVING UNEQUAL WIDTH AT THE DIFFERENT FACE OF COLUMNS



DETAILS OF BEAM AT END RESTING ON THE ANOTHER BEAM OF HIGHER BEAM



DETAILS OF SIDE FACE REINF. IN ALL OUTER BEAMS FOR DEPTH (D) 450MM OR MORE



TYP. REINF. DETAILS IN THE SLAB BEAMS SPANNING BETWEEN SUPPORT TO SUPPORT

PROJECT: – PROPOSED TEACHING STAFF QUARTERS HIMS BHADWAR VARANASI.	ARCHITECT – ARCHITECTS KAPoor AND ASSOCIATES FLAT NO. 3, BLOCK NO.1 DIDWANIA SQUARE, MAHMOORGANJ, VARANASI PH: 0542-2974212, 98390-89413	DRAWING TITLE: – STANDARD NOTES & DETAILS STRUCTURAL CONSULTANTS –
DRG. NO.: – ATS/22-23/B018/01-07	DATE: – 15/07/2022	
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