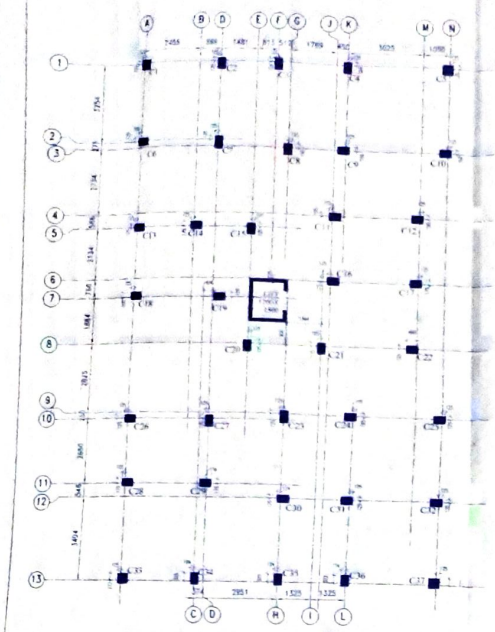
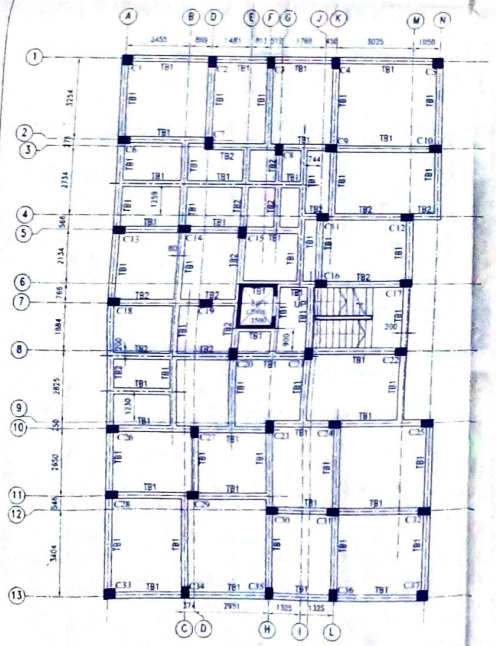


COLUMN LAYOUT PLAN(BLOCK-A)

SCALE- 1:100

SCHEDULE OF COLUMNS

COLUMN MARKED	NOS. OF COLUMNS	COLUMN SIZE (mm x mm)	FOUNDATION TO ROOF AND ABOVE ROOF	STIRRUP ARRANGEMENT AND SPACING NEAR JUNCTION	STIRRUP ARRANGEMENT AND SPACING REST PORTION
C1, C33, C37	03	400X400	MAIN RNF.:- 8-16Φ●	LINKS: 8 Φ@75 C/C (2 NOS. CLOSED LINK PER SET)	LINKS: 8 Φ@150 C/C (2 NOS. CLOSED LINK PER SET)
C7, C23	02	300X500	MAIN RNF. - 10-16Φ●	LINKS: 8 Φ@75 C/C (2 NOS. CLOSED & 1 NO. OPEN LINK PER SET)	LINKS: 8 Φ@150 C/C (2 NOS. CLOSED & 1 NO. OPEN LINK PER SET)
C4,C9,C10	03	300X450	MAIN RNF.:- 10-20Φ●	LINKS: 8 Φ@75 C/C (2 NOS. CLOSED & 1 NO. OPEN LINK PER SET)	LINKS: 8 Φ@150 C/C (2 NOS. CLOSED & 1 NO. OPEN LINK PER SET)
C2,C3,C6,C8,C11,C12 C13,C14,C15,C16,C17 C18,C19,C20,C21,C22, C24,C25,C26,C27,C28, C29,C30,C31,C32,C34, C35,C36	28	300X450	MAIN RNF.:- 10-16Φ●	LINKS: 8 Φ@75 C/C (2 NOS. CLOSED & 1 NO. OPEN LINK PER SET)	LINKS: 8 Φ@150 C/C (2 NOS. CLOSED & 1 NO. OPEN LINK PER SET)
C5	01.	400X400	MAIN RNF.:- 4-20Φ● +8-16Φ○	LINKS: 8 Φ@75 C/C (3 NOS. CLOSED LINK PER SET)	LINKS: 8 Φ@150 C/C (3 NOS. CLOSED LINK PER SET)
STOOL COLUMNS					
ST1,ST2,ST3,ST4 (FROM ROOF TO LMR ROOF LEVEL)	04	250X250	MAIN RNF.:- 4-16Φ● +4-12Φ○	LINKS: 8 Φ@150 C/C (2 NOS. CLOSED LINK PER SET)	



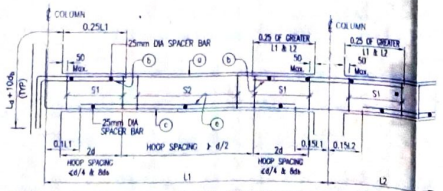
BLOCK-A

TIE BEAM LAYOUT PLAN AT LEVEL (±) 0.00 m.

SCALE- 1:100

SCHEDULE OF TIE BEAMS

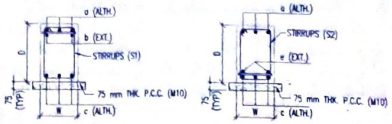
BEAM MARKED	BEAM SIZE WIDTH (W) (mm)	BEAM SIZE DEPTH (D) (mm)	TOP REINFORCEMENT ALTHROUGH (a)	TOP REINFORCEMENT EXTRA AT SUPPORT (b)	BOTTOM REINFORCEMENT ALTHROUGH (c)	BOTTOM REINFORCEMENT EXTRA AT SPAN (e)	STIRRUPS (AT SUPPORT) (S1)	STIRRUPS (AT SPAN) (S2)
TB1	250	400	2-16Φ +1-12Φ	-	2-16Φ +1-12Φ	-	2L-8Φ@100 C/C	2L-8Φ@150 C/C
TB2	250	400	3-16Φ	-	3-16Φ	-	2L-8Φ@100 C/C	2L-8Φ@150 C/C



TYPICAL ARRANGEMENT OF REINFORCEMENT IN TIE BEAM

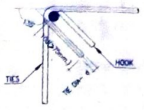
AS PER SP 34-1987 & 13920-1998

d= EFFECTIVE DEPTH OF BEAM
Ld= DEVELOPMENT LENGTH IN TENSION
db= DIAMETER OF LONGITUDINAL BAR



AT SUPPORT AT SPAN

TYPICAL CROSS SECTION OF TIE BEAM

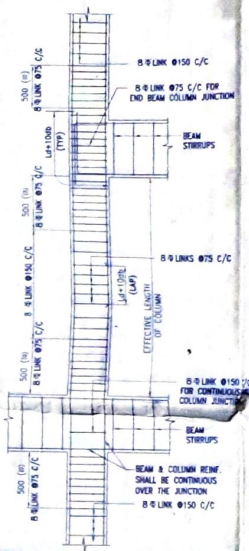


DETAIL : A

(TYPICAL DETAIL OF 135° HOOK)

DETAIL : A

DETAILS OF COLUMN HOOP REINFORCEMENT



TYPICAL DUCTILE DETAIL OF BEAM COLUMN JUNCTION

SCALE 1:25

Ld= DEVELOPMENT LENGTH IN TENSION
db= DIAMETER OF LONGITUDINAL BAR

NOTES:-

1. UNLESS OTHERWISE STATED ALL CONSTRUCTION ACTIVITIES SHALL BE CARRIED OUT CONFORMING TO RELEVANT INDIAN STANDARD CODES OF PRACTICE.
2. ALL DIMENSIONS ARE IN MILLIMETERS & LEVELS ARE IN METER EXCEPT OTHERWISE MENTIONED ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. ALL LEVELS GIVEN IN STRUCTURAL DRAWINGS ARE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS AND INDICATE STRUCTURAL LEVEL ONLY (WITHOUT FINISH). HOWEVER ARCHITECTURAL DRAWING TO BE COORDINATED FOR ALL LEVELS.
3. ANY DISCREPANCY IN THE STRUCTURAL AND ARCHITECTURAL DRAWINGS SHALL BE BROUGHT TO THE NOTICE OF STRUCTURAL CONSULTANT BEFORE EXECUTION OF WORK.
4. UNLESS OTHERWISE SPECIFIED ALL REINFORCEMENT TO BE USED SHALL BE TMT BARS OF GRADE Fe-500/500 D CONFORMING TO IS-1786-2008.
5. UNLESS OTHERWISE STATED LAP LENGTH OF BARS SHALL BE DEVELOPMENT LENGTH + 50MM DIA.
6. CONCRETE CLEAR COVER SHALL BE AS FOLLOWS.
   (i) COLUMNS - 40 mm
   (ii) LIFT SHEAR WALL - 20 mm.
   (iii) TIE BEAMS -50 mm.
7. GRADE OF CONCRETE SHALL BE AS FOLLOWS :-
   FOUNDATION AND SUBER STRUCTURE - M25
8. VIBRATOR SHALL BE USED FOR PROPER COMPACTION OF CONCRETE AND CURING SHALL BE DONE PROPERLY.
9. DEVELOPMENT LENGTH SHALL BE FOR LAP & SPLICES SHOULD BE PROVIDED AS PER THE PROVISIONS LAID DOWN IN SP34 1987.
10. WHEREVER A SUPPORTED MEMBER TERMINATES AT A SUPPORTING MEMBER THE BARS OF THE SUPPORTED MEMBER SHOULD HAVE AN ANCHORAGE OF 50Db IN THE SUPPORTING MEMBER DRAWING.
11. WHEN TWO BEAMS MEET AT A COLUMN LOCATION ALONG THE SAME LINE THE HIGHER REINFORCEMENT AT THE TOP SHOULD BE CONTINUED AT THE BOTH SIDE.

TITLE

PROPOSED STRUCTURAL DRAWING G+4 STORIED RESIDENTIAL BUILDING PLAN AT MOUZA - JATRAGACHI, R.S. & L.R DAG No.- 822;L.R. KHATIAN NO :-1365;TOUZI NO.:- 174&179;R.S. NO.:- ;J.L.No. - 24, DIST.-24 PGS.(N.) UNDER JYANGRA HATIARA-2 GRAM PANCHAYET

CERTIFICATE OF STRUCTURAL ENGINEER

THE STRUCTURAL DESIGN AND DRAWING OF BOTH FOUNDATION AND SUPERSTRUCTURE OF THE BUILDING HAS BEEN MADE BY ME, CONSIDERING ALL POSSIBLE LOADS INCLUDING THE SEISMIC LOAD AS PER THE NATIONAL BUILDING CODE OF INDIA AND CERTIFIED THAT IT IS SAFE AND STABLE IN ALL RESPECT.

Dipanjan Mani 06/03/2018

DIPANJAN MANI
CIVIL ENGINEER (TECH)
MAKAUT(W.B.)

SIGNATURE OF STRUCTURAL ENGINEER

SIGNATURE OF THE VETTING AUTHORITY

DR. BIJANJALI CHATTERJEE
PRINCIPAL
JALPAIGURI GOVERNMENT ENGINEERING COLLEGE
JALPAIGURI

CERTIFICATE OF ARCHITECT/ENGINEEER

SIGNATURE OF ARCHITECT

NAME OF THE OWNERS

M/S MUSKAN RESIDENCY PVT. LTD

MUSKAN RESIDENCY PVT. LTD

DIRECTOR

SIGNATURE OF OWNERS

DRAWING TITLE

COLUMN LAYOUT PLAN, COLUMN SCHEDULE, TIE BEAM LAYOUT PLAN,TIE BEAM SCHEDULE AND TYPICAL DUCTILE DETAIL OF BEAM COLUMN JUNCTION (BLOCK-A).

SCALE - 1:100, OR AS SHOWN
DATE - 03.08.2018
SHEET NO. - 2 OF 5