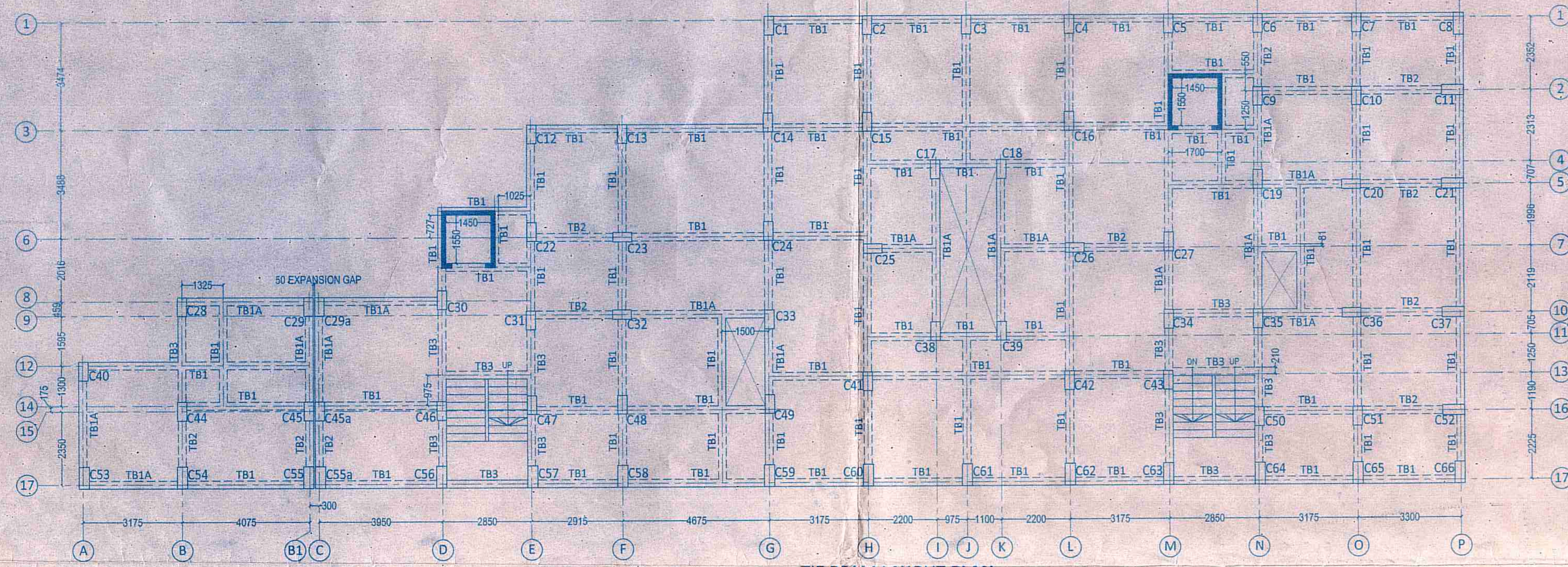
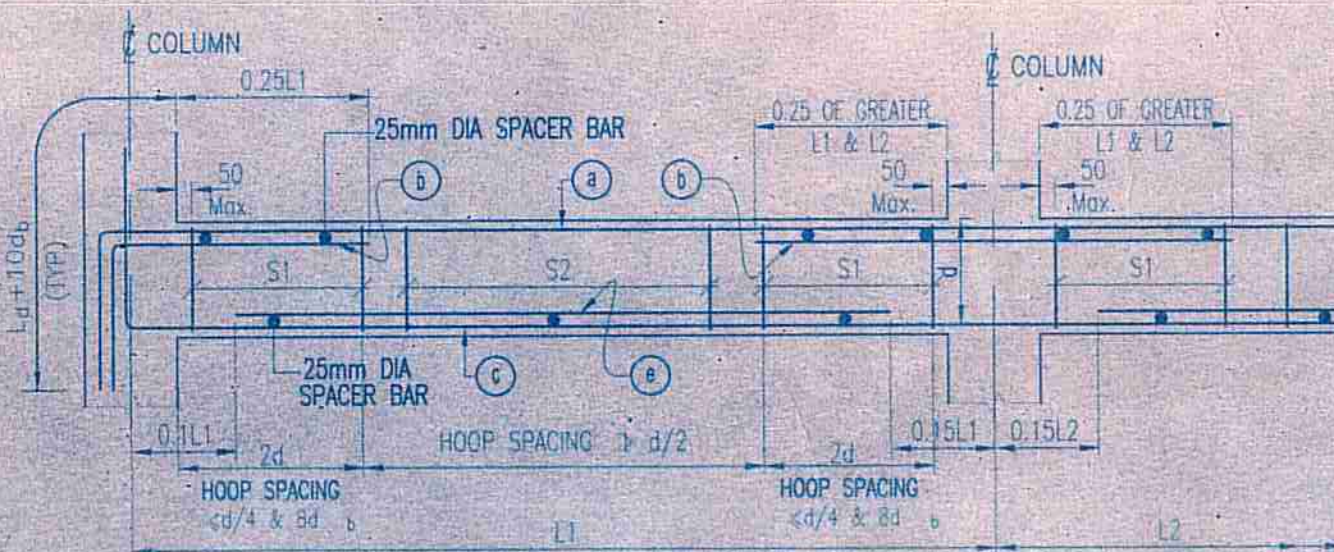


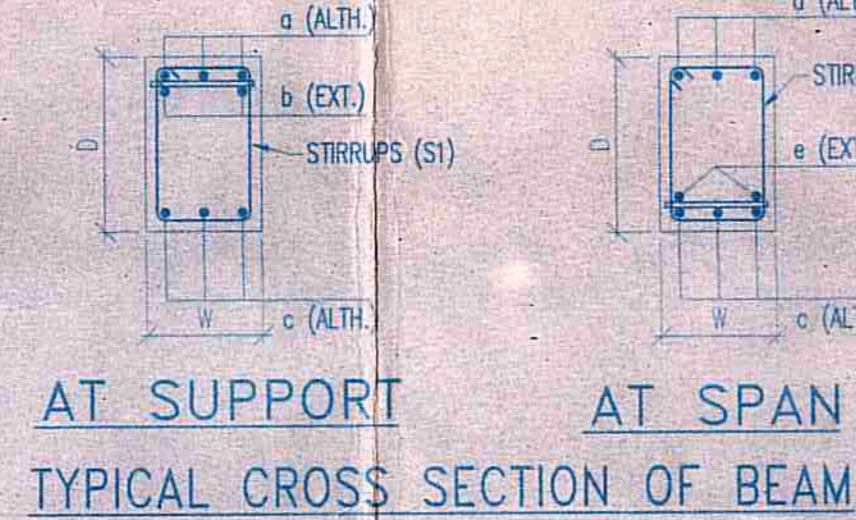
COLUMN LAYOUT PLAN
SCALE - 1 : 100



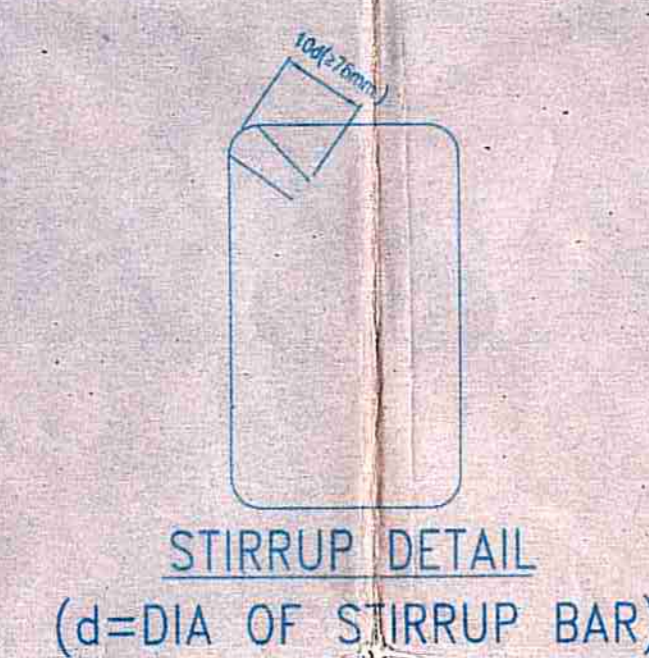
TIE BEAM LAYOUT PLAN
AT ±0.00 LVL.
SCALE - 1 : 100



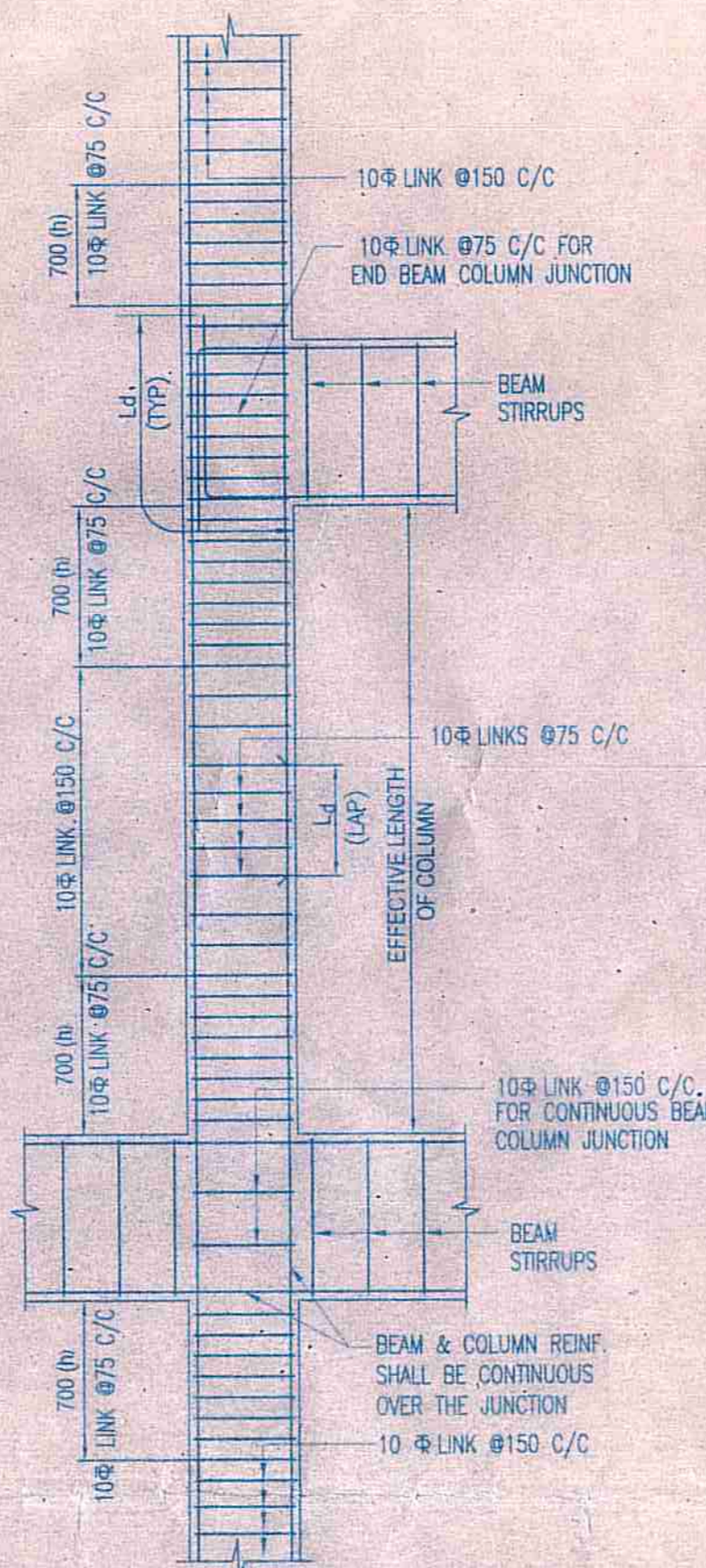
TYPICAL ARRANGEMENT OF REINFORCEMENT IN BEAM
AS PER SP 34-1987 & 1992-1998



AT SUPPORT AT SPAN
TYPICAL CROSS SECTION OF BEAM

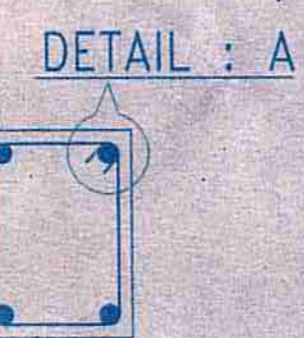


STIRRUP DETAIL
(d=DIA OF STIRRUP BAR)

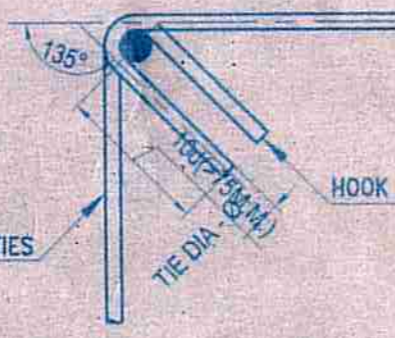


TYPICAL DUCTILE DETAIL OF BEAM COLUMN JUNCTION
SCALE 1:25

DEVELOPMENT LENGTH IN TENSION
d = DIAMETER OF LONGITUDINAL BAR



DETAILS OF COLUMN HOOP REINFORCEMENT



DETAIL : A
(TYPICAL DETAIL OF 150' HOOK)

| COLUMN MARKED | NOS. OF COLUMNS | COLUMN SIZE (mm x mm) | FOUNDATION TO 2nd FLOOR | 2nd FLOOR TO 5TH FLOOR | 5TH FLOOR TO ROOF | STIRRUP | | SHAPE STIRRUP | | |
|--|-----------------|-----------------------|--------------------------------|--------------------------------|-------------------------------|-------------------|-----------------|-------------------------|------------------------|-------------------|
| | | | | | | NEAR JUNCTION (h) | AT REST PORTION | FOUNDATION TO 2nd FLOOR | 2nd FLOOR TO 5TH FLOOR | 5TH FLOOR TO ROOF |
| C21, C37, C54 | 03 | 325X700 | MAIN RNF.:- 12-25-0 | MAIN RNF.:- 6-25-0 +6-12-0 | MAIN RNF.:- 4-25-0 +6-12-0 | 100 75 C/C | 100 150 C/C | | | |
| C11, C52, C55, C55a | 04 | 325X700 | MAIN RNF.:- 14-20-0 | MAIN RNF.:- 8-20-0 +6-12-0 | MAIN RNF.:- 4-20-0 +6-12-0 | 100 75 C/C | 100 150 C/C | | | |
| C59, C64 | 02 | 325X700 | MAIN RNF.:- 14-20-0 | MAIN RNF.:- 8-20-0 +6-12-0 | MAIN RNF.:- 4-20-0 +6-12-0 | 100 75 C/C | 100 150 C/C | | | |
| C56, C57, C63 | 03 | 325X700 | MAIN RNF.:- 14-20-0 | MAIN RNF.:- 8-20-0 +6-12-0 | MAIN RNF.:- 4-20-0 +6-12-0 | 100 75 C/C | 100 150 C/C | | | |
| C8, C53, C58, C60, C61, C62, C65, C66 | 08 | 325X700 | MAIN RNF.:- 12-20-0 | MAIN RNF.:- 6-20-0 +6-12-0 | MAIN RNF.:- 4-20-0 +6-12-0 | 100 75 C/C | 100 150 C/C | | | |
| C5, C28, C29, C29a, C55, C48 | 06 | 300X600 | MAIN RNF.:- 10-20-0 +4-16-0 | MAIN RNF.:- 10-20-0 +4-16-0 | MAIN RNF.:- 4-20-0 +6-12-0 | 100 75 C/C | 100 150 C/C | | | |
| C23, C25, C36 | 03 | 300X600 | MAIN RNF.:- 10-20-0 +4-16-0 | MAIN RNF.:- 6-20-0 +6-12-0 | MAIN RNF.:- 4-20-0 +6-12-0 | 100 75 C/C | 100 150 C/C | | | |
| C2, C3, C10, C13, C14, C17, C18, C19, C20, C26, C38, C39, C45, C45a, C51 | 15 | 300X600 | MAIN RNF.:- 12-20-0 | MAIN RNF.:- 6-20-0 +4-16-0 | MAIN RNF.:- 4-20-0 +6-12-0 | 100 75 C/C | 100 150 C/C | | | |
| C4, C6, C7, C24, C32, C33, C43, C44, C49 | 09 | 300X600 | MAIN RNF.:- 10-20-0 | MAIN RNF.:- 6-20-0 +4-16-0 | MAIN RNF.:- 4-20-0 +6-16-0 | 100 75 C/C | 100 150 C/C | | | |
| C12, C15, C16, C27, C30, C31, C41, C42, C46 | 09 | 300X600 | MAIN RNF.:- 8-20-0 +4-16-0 | MAIN RNF.:- 6-20-0 +4-16-0 | MAIN RNF.:- 4-20-0 +6-16-0 | 100 75 C/C | 100 150 C/C | | | |
| C1, C9, C22, C34, C40, C47, C50 | 07 | 300X600 | MAIN RNF.:- 10-16-0 | MAIN RNF.:- 10-16-0 | MAIN RNF.:- 4-16-0 +4-12-0 | 100 75 C/C | 100 150 C/C | | | |
| STOOL COLUMNS (ROOF TO L.M.R ROOF) | | | | | | | | | | |
| ST1, ST2, ST3 | 03 | 250X250 | MAIN RNF.:- 4-16-0 | | | | 8 150 C/C | | | |
| STOOL COLUMNS (MUMTY ROOF TO WATER TANK BOTTOM SLAB) | | | | | | | | | | |
| ST4 | 01 | 250X250 | MAIN RNF.:- 4-16-0 | | | | 8 150 C/C | | | |

- NOTES:-
- UNLESS OTHERWISE STATED ALL CONSTRUCTION ACTIVITIES SHALL BE CARRIED OUT CONFORMING TO RELEVANT (INDIAN) STANDARD CODES OF PRACTICE.
 - ALL DIMENSIONS ARE IN MILLIMETERS & LEVELS ARE IN METERS, EXCEPT OTHERWISE MENTIONED. 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 DRAWINGS TO BE COORDINATED FOR ALL LEVELS.
 - ANY DISCREPANCY IN THE STRUCTURAL AND ARCHITECTURAL DRAWINGS SHALL BE BROUGHT TO THE NOTICE OF STRUCTURAL CONSULTANT BEFORE EXECUTION OF WORK.
 - UNLESS OTHERWISE SPECIFIED ALL REINFORCEMENT TO BE USED SHALL BE TMT BARS OF GRADE Fe-500/500 D CONFORMING TO IS-1786-2008.
 - ADEQUATE CHAIR BARS TO BE PROVIDED TO KEEP THE TOP REINFORCEMENT IN PROPER POSITION.
 - UNLESS OTHERWISE STATED LAP LENGTH OF BARS SHALL BE DEVELOPMENT LENGTH=50BAR DIA.
 - UNLESS OTHERWISE SPECIFIED DISTRIBUTION REINFORCEMENT SHALL BE 8 T @ 250 C/C.
 - CONCRETE NOMINAL COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS:
 (A) COLUMNS - 40 MM
 (B) BEAMS - 30 MM
 (C) FOUNDATION TO 4TH FLOOR - 150
 (D) 4TH FLOOR TO ROOF - 125
 - DEVELOPMENT LENGTH FOR LAP & SPICES SHOULD BE PROVIDED AS PER THE PROVISIONS LAID DOWN IN SP34-1987.
 - WHEREVER A SUPPORTED MEMBER TERMINATES AT A SUPPORTING MEMBER THE BARS OF THE SUPPORTED MEMBER SHOULD HAVE AN ANCHORAGE OF 500 IN THE SUPPORTING MEMBER DRAWING.
 - NOMINAL COVER TO MEET ALL TIME PERIOD OF FIRE RESISTANCE
 (A) BEAM - 75 MM
 (B) SLAB - 65 MM
 FOR STAIRCASE AND ITS SURROUNDINGS LIKELY TO BE AFFECTED BY FIRE BUT EFFECTIVE DEPTH WILL REMAIN SAME

TITLE

PROPOSED STRUCTURAL DRAWING OF G+7 STORIED RESIDENTIAL BUILDING OF SRI PRABAL BARAN CHATTERJEE & SRI SHAIHAL CHATTERJEE OVER R.S. PLOT NO.- 1570, L.R. PLOT NO. - 1661, KHATIAN NO. - 2877, 2879 OF MOUZA- ARRAB J.L. NO.- 91, P.S.- KANKSA, DIST- BURDWAN.

CERTIFICATE OF STRUCTURAL ENGINEER

CERTIFIED THAT THE STRUCTURAL DRAWING AND DESIGN OF BOTH THE FOUNDATION AND SUPERSTRUCTURE OF THE BUILDING/BUILDINGS HAS BEEN MADE CONSIDERING THE SOIL TEST REPORT AS PER THE RULES, THE REGULATIONS AND CODE MADE AND ALSO CONSIDERING ALL POSSIBLE LOADS, SEISMIC LOAD AND THE MOMENTS GENERATED BY THE PROPOSED STRUCTURE AS PER CURRENT CODES THE BUREAU OF INDIAN STANDARD AND NATIONAL BUILDING CODE OF INDIA AND CERTIFIED THAT IT IS SAFE AND STABLE IN ALL RESPECT UP TO G+7 STORIED AND THESE PROVISIONS SHALL BE ADHERED TO DURING THE CONSTRUCTION.

Soumyadip Datta
SOUMYADIP DUTTA
CIVIL ENGINEER (B.TECH)
W.B.U.C.

NIRMALE CHATTERJEE
B.TECH, M.E. (STRUCTURAL)
REGISTERED STRUCTURAL ENGINEER IN INDIA
Lic No. ENR/1202

CERTIFICATE OF ARCHITECT

I CERTIFY THAT ALL THE ARCHITECTURAL DRAWING OF THIS PROJECT PREPARED BY ME COMPLYING WITH THE PROVISIONS OF NATIONAL BUILDING CODE/WEST BENGAL MUNICIPAL BUILDING RULES (CURRENT). NO SUCH WRONG AND INCORRECT INFORMATION HAS BEEN FURNISHED BY ME INCLUDING AREA CALCULATION CHART IN THIS DRAWING & NO VIOLATION OF THE PROVISION OF THESE RULES WILL BE FOUND IN ANY OF THE DRAWING & DOCUMENTS, SUBMITTED TO THE SANCTIONING AUTHORITY FOR SANCTION.

Vijay Singh
VIJAY SINGH
Consulting Architect
ENR Registered
LIC NO.-DNCR/196180

SIGNATURE OF GEOTECHNICAL ENGINEER

IT IS CERTIFIED THAT THE COMPREHENSIVE GEO-TECHNICAL REPORT ON SOIL INVESTIGATION HAS BEEN PREPARED BY ME FOR DESIGN AND CALCULATION OF THE FOUNDATION BY ANALYZING THE SOIL SAMPLE FOR ESTIMATING THE BEARING CAPACITY OF THE SOIL ON WHICH FOUNDATION OF THE STRUCTURE WILL BE CONSTRUCTED. I SHALL ALSO CHECK THE NATURE OF THE SOIL AFTER EXCAVATION AT SITE SO THAT FOUNDATION IS EXTENDED UP TO APPROPRIATE DEPTH THAT HAS BEEN PROPOSED IN THE GEO-TECHNICAL REPORT.

ALOK ROY
Empanelled Geotechnical Engineer
Kolkata Municipal Corporation
Class-I, No.- 67/11
54, Milan Park
Kolkata-700 054

CERTIFICATE OF OWNER

I SHALL NOT CONSTRUCT THE BUILDING IN DEVIATION OF THE SUBMITTED PLANS & DRAWINGS.

Shibal Chatterjee
Approved with license NO - 1155 / AE / ASL / BT - 19/05/2017
by Assistant Engineer, Baranhaman, Billa parishad
(Asansol div)

APPROVED
Gyanendra Prasad
Pradhani
Malandighi G.P.

APPROVED
Pradip Kumar
Pradhan
Malandighi Gram Panchayat

REV - R1

DRAWING TITLE:
COLUMN & TIE BEAM LAYOUT PLAN & REINFORCEMENT SCHEDULE

SCALE - 1:100 OR AS SHOWN
DATE - 17.03.17

SHEET NO. - SA-G+7-STR-0002

CHECKED & VETTED

DR. D. K. BHASKAR MUKHERJEE
Professor, Civil Engineering Department,
Jadavpur University, Kolkata-720032
B.Tech (Hons), Gold Medalist
M.Tech (Hons) - Gold Medalist,
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