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- GENERAL NOTES:-
1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
  2. RELEVANT ARCHITECTURAL DRAWINGS IN CASE OF DISCREPANCY WITH THIS DRAWING SHALL BE CONSIDERED AS CORRECT. ANY DISCREPANCY IMMEDIATELY BROUGHT TO NOTICE TO THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
  3. THE BUILDING HAS BEEN DESIGNED FOR LGP+0.2 STOREY.
  4. THE FOUNDATION IS TO BE PLACED ON THE VIRON SOIL IF FILLED WITH VIRON MATERIAL. IMMEDIATELY BROUGHT TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
  5. FOR BRICKBLOCK WALL LOAD-BRICK WITH DENSITY 1800KG.
  6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS-456:2000.

- CONCRETE:-
- ALL CONCRETE SHALL BE AS FOLLOWS:
- A. COLUMN: SHEAR WALLS: M25
  - B. FOOTING/PILE CAP: M30
  - C. FLOOR SLAB: M25
  - D. BEAMS & SLABS: M25
  - E. RETAINING WALLS: M30

- COVER:-
- THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:
- A. COLUMN: SHEAR WALLS: 40 mm
  - B. FOOTING/PILE CAP: 75 mm
  - C. FLOOR BEAM: 25 mm
  - D. RETAINING WALLS: 30 mm

- REINFORCEMENT:-
1. HIGH YIELD STRENGTH DEFORMED BARS: GRADE - F<sub>y</sub> 600
  2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO BE 1786
  3. MAX. SPACING TO BE 16mm OR 1/4th OF SLAB THICKNESS

WATERPROOFING  
TYPE FOR ALL STRUCTURAL WORKS

ALL WATERPROOFING SHALL BE AS FOLLOWS:-

PROFFING AS PER DWG OR ASSPES

N. M. Krishnan  
Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

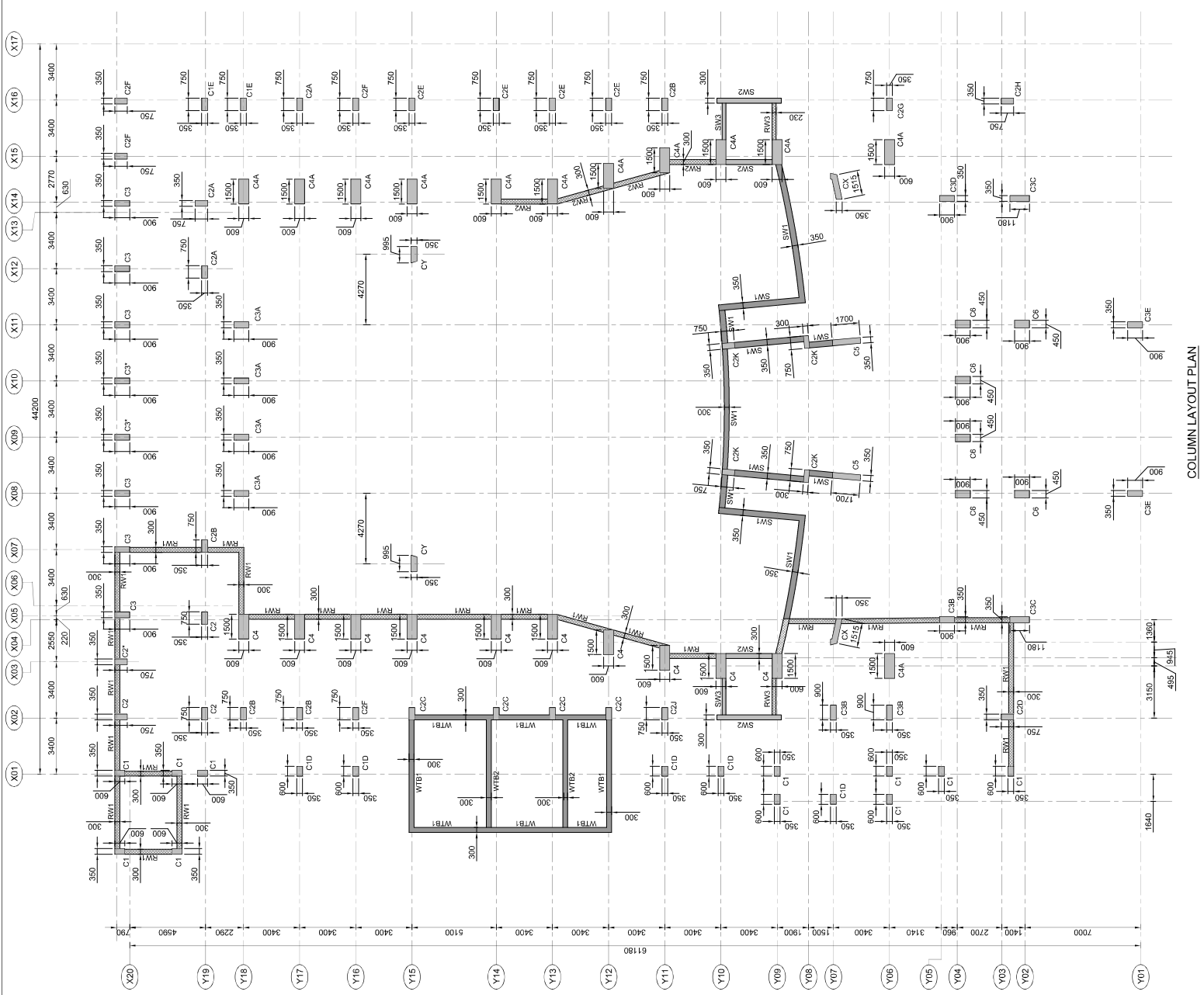
| REVISIONS | NO. | DATE | BY | REVISIONS |
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| TENDER DRAWING                     |   |
|------------------------------------|---|
| CONVENTION CENTRE (SITE - 10)      |   |
| AUDITORIUM (1000 SEATING CAPACITY) |   |
| COLUMN LAYOUT PLAN                 |   |
| DRAWN                              | SAURAV  |
| DATE                               | 26/07/2023  |
| DESIGN BY                          | MARTY   |
| APPROVED BY                        | ABTRUSE CONSULTING ENGINEERING SERVICES PVT. LTD. |
| PROJECT                            | IM SHILLONG, UMAMALI CAMPUS, SHILLONG             |

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REFERENCE DRAWING



COLUMN LAYOUT PLAN











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2. RELEVANT ARCHITECTURAL DRAWINGS IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL DRAWINGS AND STRUCTURAL DRAWINGS, IMMEDIATELY BROUGHT TO NOTICE TO THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
3. THE BUILDING HAS BEEN DESIGNED FOR LG+0.0 STOREY.
4. THE FOUNDATION IS TO BE PLACED ON THE IRON SOIL IF FILLED WITH GRAVEL. IN CASE OF IRON SOIL, THE FOUNDATION IS TO BE PLACED ON THE IRON SOIL IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
5. FOR BRICKWORK WALL LOAD BRICK WITH DENSITY 1800KG.
6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

CONCRETE:-

1. ALL CONCRETE SHALL BE AS FOLLOWS:
  - A. COLUMN: SHEAR WALLS - M35
  - B. FOOTING/PILE CAP: M30
  - C. FLOOR SLAB: M25
  - D. BEAMS & SLABS: M35
  - E. RETAINING WALLS: M30

COVER:-

1. THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:
  - A. COLUMN: SHEAR WALLS = 40 mm
  - B. FOOTING/PILE CAP = 75 mm
  - C. FLOOR BEAM = 25 mm
  - D. FLOOR SLAB = 25 mm
  - E. RETAINING WALLS = 30 mm
  - F. PILE SHAFT = 50 mm\*
  - G. RETAINING WALLS = 30 mm

REINFORCEMENT:-

1. HIGH YIELD STRENGTH DEFORMED BARS - GRADE - F<sub>y</sub> 600
2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786
3. LAP LENGTH TO BE 16 DIA. OR UP BAR MINIMUM
4. LAP LENGTH TO BE 16 DIA. OR UP BAR MINIMUM

WATER PROOFING:-

TYPE FOR ALL STRUCTURAL WORKS

ALL EXPOSED SURFACES SHALL BE PROTECTED BY WATER PROOFING AS PER IS 8087 OR AS PER IS 8087

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TENDER DRAWING

CONVENTION CENTRE (SITE - 10)  
AUDITORIUM (1000 SEATING CAPACITY)  
COLUMN REIN. DETAILS (Sheet - 4 of 5)

|             |                                       |             |                      |
|-------------|---------------------------------------|-------------|----------------------|
| DRAWN       | SAURAV                                | DWG. NUMBER | ACES-IMA-AUD-SIT-208 |
| DESIGN BY   | MARTY                                 | SCALE       | VARIOUS              |
| APPROVED BY | ABHINAV                               | PAPER SIZE  | A1(90x40)            |
| DATE        | 26/07/2023                            | REVISIONS   | RD                   |
| PROJECT     | IMA SHILLONG, UMAMAL CAMPUS, SHILLONG |             |                      |

ARCHITECT

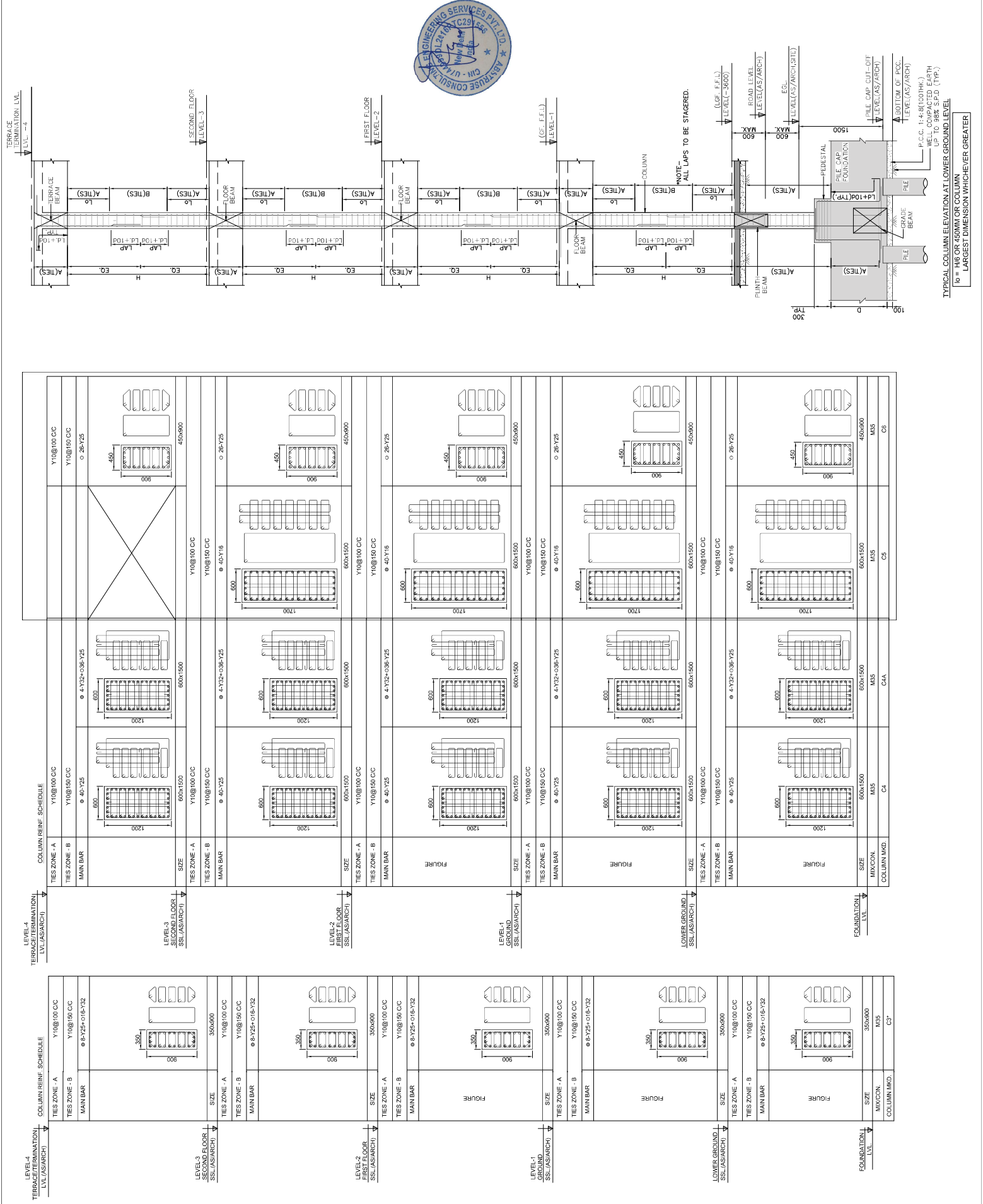
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REFERENCE DRAWING



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GENERAL NOTES:-

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2. REINFORCEMENT SHALL BE PROVIDED AS PER THE RELEVANT ARCHITECTURAL DRAWING. IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL DRAWING AND STRUCTURAL DRAWING, THE LATTER SHALL PREVAIL. ANY CHANGES SHALL BE IMMEDIATELY BROUGHT TO NOTICE OF THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
3. THE BUILDING HAS BEEN DESIGNED FOR LGF+0+2 STOREY.
4. THE FOUNDATION IS TO BE PLACED ON THE VIRON SOIL IF FILLED. IN CASE OF VIRON SOIL IS NOT AVAILABLE, IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
5. FOR BRICKBLOCK WALL LOAD BRICK WITH DENSITY 1800KG.
6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

CONCRETE:-

1. ALL CONCRETE SHALL BE AS FOLLOWS.
- A. COLUMN & SHEAR WALLS - M35
  - B. FOOTING/PILE CAP - M30
  - C. FLOOR SLAB - M25
  - D. BEAMS & SLABS - M35
  - E. RETAINING WALLS - M30

COVER:-

- \* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS
- A. COLUMN: SHEAR WALLS = 40 mm
  - B. FOOTING/PILE CAP: 75 mm
  - C. FLOOR BEAM = 25 mm
  - D. RETAINING WALLS = 30 mm

REINFORCEMENT:-

- 1. HIGH YIELD STRENGTH DEFORMED BARS - GRADE - F<sub>y</sub> 600
- 2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786
- 3. LAP LENGTH TO BE AS PER TO IS 1786
- 4. LAP LENGTH TO BE AS PER TO IS 1786

WATERPROOFING

TP FOR ALL STRUCTURAL WORKS

ALL WORKS SHALL BE CARRIED OUT AS PER THE PROFFING AS ARCH DNG OR ASSP/PCS

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Indian Institute of Technology Delhi  
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| REVISIONS | NO. | DATE | DRAWN | CONTENTS |
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|           |     |      |       |          |

TENDER DRAWING

CONVENTION CENTRE (SITE - 10)

AUDITORIUM (1000 SEATING CAPACITY)

COLUMN REIN. DETAILS (Sheet - 5 of 5)

|             |  |            |                      |
|-------------|--|------------|----------------------|
| DRAWN       | SAURAV                                 | DWG NUMBER | ACES-HIM-AUD-SIT-207 |
| DESIGN BY   | MARTK                                  | SCALE      | VARIOUS              |
| APPROVED BY | ABHAY                                  | PAPER SIZE | A1(594x841)          |
| DATE        | 26.07.2023                             | REVISIONS  | RD                   |
| PROJECT     | IIM SHILLONG, UMAMALI CAMPUS, SHILLONG |            |                      |

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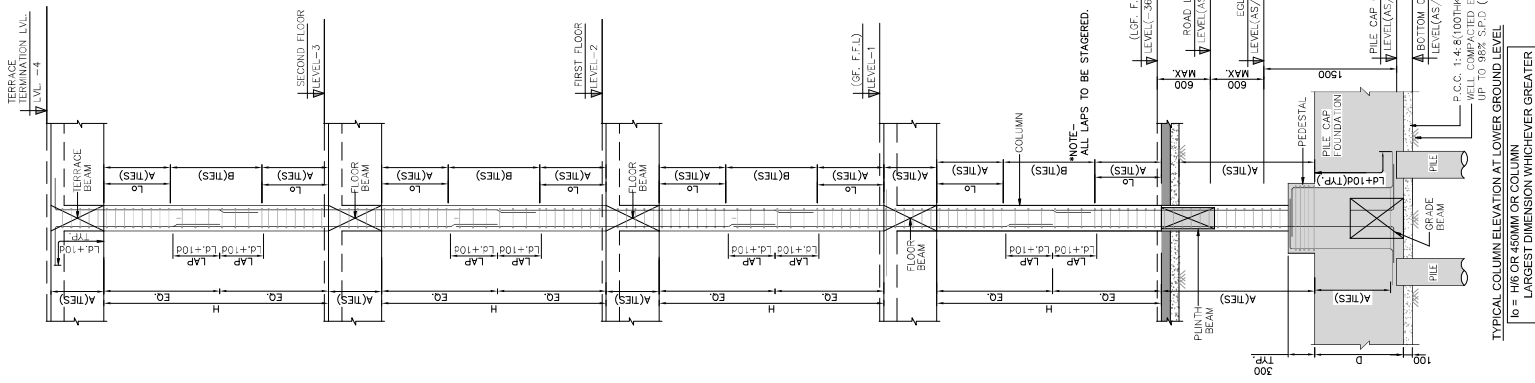
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PNO: 0124-4119648, 9843949445

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REFERENCE DRAWING



| LEVEL-4<br>TERRACE/TERMINATION<br>LVL (AS ARCH) |  |               |  | COLUMN REIN. SCHEDULE |  |             |  |
|---|--|---------------|--|-----------------------|--|-------------|--|
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@100 C/C |  |
| TIES ZONE - A                                   |  | TIES ZONE - B |  | MAIN BAR              |  | Y10@150 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@100 C/C |  |
| MAIN BAR  |  | MAIN BAR      |  | MAIN BAR              |  | Y10@150 C/C |  |
| FIGURE  |  | FIGURE        |  | FIGURE                |  | FIGURE      |  |
| SIZE  |  | SIZE          |  | SIZE                  |  | SIZE        |  |
| TIES ZONE - A                                   |  |               |  |                       |  |             |  |

## REFERENCE DRAWING

FOR COLUMN LAYOUT PLAN REFER DWG  
NO.- ACES-IIM-AUDI-ST-102



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N. M. Krishnan  
Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

- GENERAL NOTES:**
1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
  2. ALL DIMENSIONS ARE TO BE TAKEN FROM THE EXTERIOR FACE OF THE WALL.
  3. RELEVANT ARCHITECTURAL DRAWING IN CASE OF DISCREPANCY IMMEDIATELY BROUGHT TO NOTICE TO THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
  4. THE BUILDING HAS BEEN DESIGNED FOR LG+G+1 STOREY.
  5. THE FOUNDATION IS TO BE PLACED ON THE IRON SOIL IF FILLED FOR BRICKWORK WALL LOAD-BRICK WITH DENSITY 1800KG/M<sup>3</sup>.
  6. FOR BRICKWORK WALL LOAD-BRICK WITH DENSITY 1800KG/M<sup>3</sup>.
  7. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

**CONCRETE:**

- A. CUMULATIVE SHEAR WALLS - M25
- B. FOOTING/PILE CAP - M30
- C. FLOOR BEAM - M25
- D. BEAMS & SLABS - M30
- E. RETAINING WALLS - M30

**COVER:**

- \* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS
- A. CUMULATIVE SHEAR WALLS - 40 mm
- B. FLOOR BEAM - 75 mm
- C. FLOOR BEAM - 25 mm
- D. BEAMS & SLABS - 25 mm
- E. RETAINING WALLS - 30 mm

**REINFORCEMENT:**

- 1. HIGH YIELD STRENGTH DEFORMED BARS - GRADE - Fe 500
- 2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786
- 3. LAP LENGTH TO BE 1.5 TIMES OF BAR MINIMUM

**WATER PROOFING:**

- 1. TYPICAL FOR ALL STRUCTURAL WORKS
- 2. ALL CONCRETE WORKS SHALL BE WATER PROOFED BY WATER PROOFING AS PER IS 8755

**PILE NOTES:**

- 1. FOR MATERIAL AND WORKMANSHIP LATEST IS CODES SHALL BE THE GUIDING CRITERIA
- 2. ALL PILES SHALL BE OF TESTED QUALITY AS PER TO IS 1786
- 3. THE MINIMUM TENSILE CONTENT SHALL BE 400 KG/CM<sup>2</sup>
- 4. METER OF CONCRETE FOR PILING WORK
- 5. 150 TO 200 MM OF CLEAR SPACE SHALL BE MAINTAINED BETWEEN PILES FOR PROPER VIBRATION
- 6. NO MECHANICAL VIBRATORS SHALL BE USED.
- 7. CONCRETING SHALL BE DONE AS SOON AS POSSIBLE
- 8. CONCRETE SHALL CONFORM TO IS 456:2000
- 9. CLEAR COVER TO MAIN REINFORCEMENT IN PILE SHALL BE 75 mm
- 10. CLEAR COVER TO MAIN REINFORCEMENT IN PILE CAP SHALL BE 75 mm
- 11. IF THE PILE CAP IS CAST IN SITU PILES SHALL CONFORM TO IS 456:2000 (PART 1) SECTION 2 LATEST REVISION
- 12. 10% EXTRA CEMENT SHALL BE USED FOR PILES IN SUB GRADE
- 13. LAP LENGTH FOR BARS SHALL BE AS UNDER:  
(a) IN M30 MIX - 30 D WHERE D IS DIA OF BAR WITHOUT WELD  
(b) IN M25 MIX - 40 D WHERE D IS DIA OF BAR WITHOUT WELD  
(c) NOT MORE THAN 300 mm REINFORCEMENT SHALL BE CURTAILED FOR LAP AT A SECTION.
- 14. ALL PILES SHALL BE PROVIDED WITH 10% EXTRA CEMENT. PLEASE REFER STANDARD DWG. REQUIREMENT.

**TENDER DRAWING**

CONVENTION CENTRE (SITE - 10)  
AUDITORIUM (1000 SEATING CAPACITY)

GRADE BEAM & RCC WALL LAYOUT & REIN. DETAIL

DESIGN BY: SAURAV DINGRA  
SCALE: VARIOUS  
APPROVED BY: MIBRAV PAPER SIZE: A1 (90x41)

DATE: 26/07/2023  
REVISIONS: RD

PROJECT: IIM SHILLONG, UMAMBAI CAMPUS SHILLONG

**ARCHITECT**  
AKSHAYA JAIN & ASSOCIATES  
ARCHITECTURE, PLANNING, INTERIOR DESIGN  
C-8/1688 VASANT KUNJ, NEW DELHI - 110070  
TEL: 011-26100000, 26100001, 26100002, 26100003, 26100004, 4160 615  
E-Mail: mail@akshayajain.com

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FAX: 0122-4110048, 4110049, 4110050  
CLIENT: REFERENCE DRAWING





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GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
2. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EARTHQUAKE RESISTANT DESIGN SPECIFICATIONS FOR STRUCTURES.
3. RELEVANT ARCHITECTURAL DRAWINGS IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL DRAWINGS AND STRUCTURAL DRAWINGS, IMMEDIATELY BROUGHT TO NOTICE TO THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
4. THE BUILDING HAS BEEN DESIGNED FOR GP+G+1 STOREY.
5. THE FOUNDATION IS TO BE PLACED ON THE IRON SOIL IF FILLED TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
6. FOR BRICKBLOCK WALL LOAD-BRICK WITH DENSITY 1800KG/M<sup>3</sup>.
7. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

CONCRETE :-

- A. COLUMN: 150mm CLEARANCE SHALL BE AS FOLLOWS.
- B. FOOTING/PILE CAP: M30
- C. BEAMS & SLABS: M30
- D. RETAINING WALLS: M30

COVER:-

- \* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS
- A. COLUMN: SHEAR WALLS = 40 mm
- B. FOOTING/PILE CAP: 75 mm
- C. FLOOR BEAM: 25 mm
- D. RETAINING WALLS: 30 mm
- E. RETAINING WALLS: 30 mm
- F. PILE SHAFT: 50 mm
- G. RETAINING WALLS: 30 mm

REINFORCEMENT:-

1. HIGH YIELD STRENGTH DEFORMED BARS: GRADE - Fe 600
2. ALL REINFT. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786
3. LAP LENGTH TO BE 1.00 DIA OF BAR MINIMUM.

WATER PROOFING:-

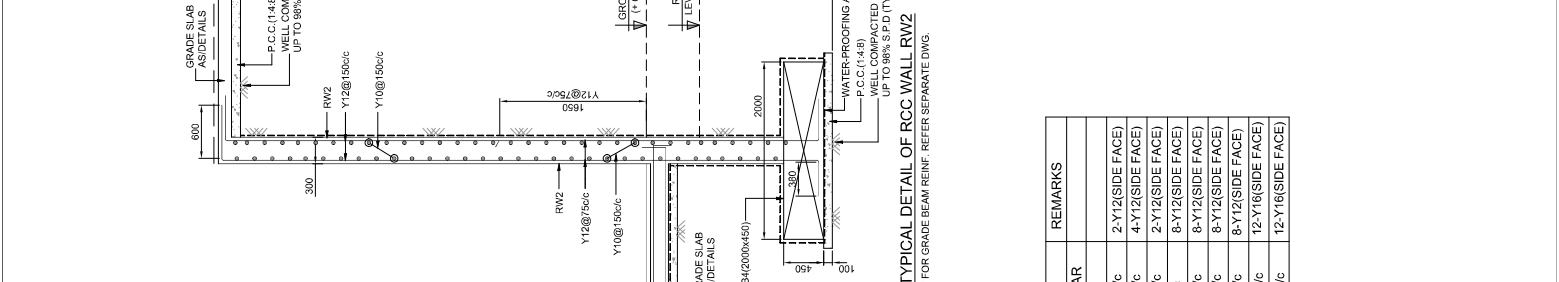
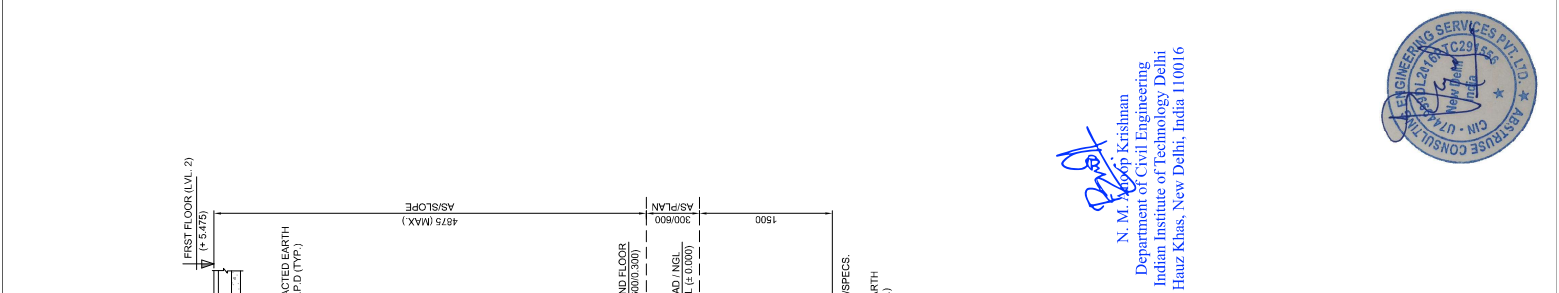
TYP FOR ALL STRUCTURAL WORKS

A) ALL REINFORCEMENT SHALL BE PROTECTED BY WATER PROOFING AS PER DWG OR AS PER SPECIFICATIONS

PILE NOTES:-

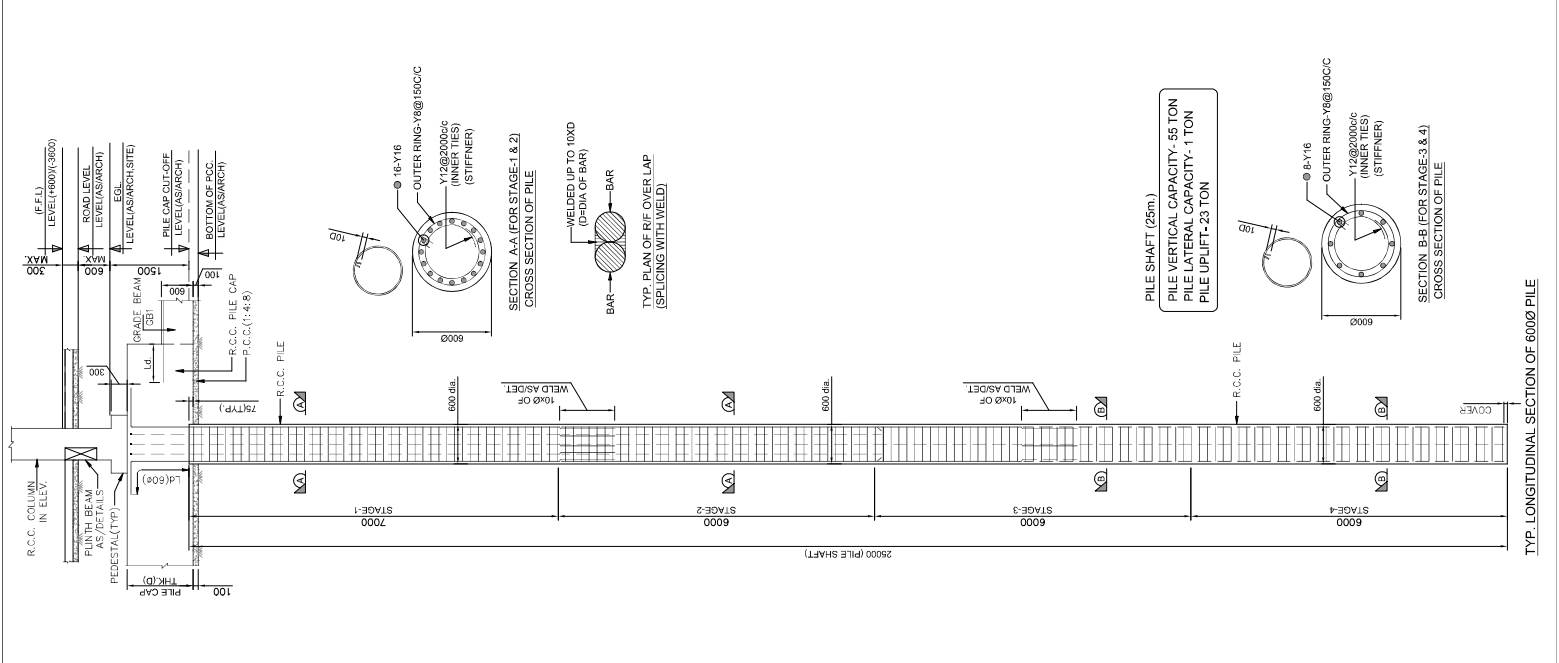
1. FOR MATERIAL AND WORKMANSHIP LATEST IS CODES SHALL BE THE GUIDING CRITERIA.
2. THE MINIMUM TENSILE STRENGTH SHALL BE 400 N/MM<sup>2</sup>.
3. THE MINIMUM TENSILE CONTENT SHALL BE 400 K.G./CUBIC METER OF CONCRETE FOR PILING WORK.
4. 150 TO 200 MM OF CONCRETE SHALL BE RANGE BETWEEN 150 TO 200 MM OF CONCRETE FOR PILING WORK.
5. NO MECHANICAL VIBRATORS SHALL BE USED.
6. ENCASED CONCRETING IN THE SHAFT PORTION SHALL BE ENSURED.
7. CONCRETING SHALL BE DONE AS SOON AS POSSIBLE.
8. CLEAR COVER TO MAIN REINFORCEMENT IN PILE CAP SHALL BE 75 mm.
9. CONCRETE SHALL CONFORM TO IS 456:2000.
10. CLEAR COVER TO MAIN REINFORCEMENT IN PILE CAP SHALL BE 75 mm.
11. THE PILE CAP SHALL BE CAST IN PILES SHALL CONFORM TO IS 456:2000 (PART 1) SECTION 2 LATEST REVISION.
12. 10% EXTRA CEMENT SHALL BE USED FOR PILES IN SUB.
13. LAP LENGTH FOR BARS SHALL BE AS UNDER:  
(a) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(b) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(c) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(d) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(e) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(f) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(g) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(h) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(i) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(j) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(k) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(l) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(m) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(n) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(o) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(p) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(q) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(r) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(s) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(t) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(u) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(v) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(w) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(x) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(y) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)  
(z) IN 1500 MM = 300 (WHERE IS DIA OF BAR WITHOUT WELD)

16. Y12@200mm CIRCULAR REINFORCEMENT SHALL BE PROVIDED AS PER SITE'S REQUIREMENT.



| PILE CAP REINF. ASCHEDULE |              |                  |                      |           | REMARKS           |           |
|---------------------------|--------------|------------------|----------------------|-----------|-------------------|-----------|
| PILE CAP MARKED           | NO. OF PILES | DEPTH OF PILECAP | BOTTOM REINFORCEMENT |           | TOP REINFORCEMENT |           |
|                           |              |                  | LONG BAR             | SHORT BAR | LONG BAR          | SHORT BAR |
| PGC1                      | 2            | 750              | Y12@100/c            | Y12@100/c | Y12@150/c         | Y12@150/c |
| PGC2                      | 3            | 900              | Y16@100/c            | Y16@100/c | Y12@100/c         | Y12@100/c |
| PGC3                      | 4            | 750              | Y16@100/c            | Y16@100/c | Y12@100/c         | Y12@100/c |
| PGC4                      | 5            | 1300             | Y12@75/c             | Y12@75/c  | Y12@75/c          | Y12@75/c  |
| PGC5                      | 6            | 1400             | Y16@100/c            | Y16@100/c | Y16@100/c         | Y16@100/c |
| PGC6                      | 8            | 1500             | Y16@75/c             | Y16@75/c  | Y16@150/c         | Y16@150/c |
| PGC7                      | 10           | 1300             | Y16@100/c            | Y16@100/c | Y12@100/c         | Y12@100/c |
| PGC8                      | 20           | 2000             | Y20@125/c            | Y20@125/c | Y20@125/c         | Y20@125/c |
| PGC9                      | 37           | 1650             | Y25@75/c             | Y25@75/c  | Y16@100/c         | Y16@100/c |

| PEDESTAL REINF. SCHEDULE |               |                 |                | PEDESTAL TIES. |  |
|--------------------------|---------------|-----------------|----------------|----------------|--|
| COLUMN SIZE              | PEDESTAL SIZE | PEDESTAL REINF. | PEDESTAL TIES. |                |  |
| 350x600                  | 850x1100      | 20nos.-Y12      | 20nos.-Y12     |                |  |
| 350x750                  | 850x1250      | 22nos.-Y12      | 22nos.-Y12     |                |  |
| 350x900                  | 850x1400      | 22nos.-Y12      | 22nos.-Y12     |                |  |
| 600x1500                 | 1100x2100     | 52nos.-Y12      | 52nos.-Y12     |                |  |
| 350x1180                 | 850x1680      | 32nos.-Y12      | 32nos.-Y12     |                |  |
| 4000                     | 900x900       | 24nos.-Y12      | 24nos.-Y12     |                |  |
| COMBINED                 | 1145x1750     | 32nos.-Y12      | 32nos.-Y12     |                |  |
| COMBINED                 | 1500x1700     | 36nos.-Y12      | 36nos.-Y12     |                |  |



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2. ALL DIMENSIONS ARE TO BE TAKEN FROM THE EXTERIOR FACE OF THE RELEVANT ARCHITECTURAL DRAWING. IN CASE OF DISCREPANCY BETWEEN DIMENSIONS, THE DIMENSIONS SHOWN IN THE DRAWING SHALL PREVAIL.
3. THE BUILDING HAS BEEN DESIGNED FOR GP+G+1 STOREY.
4. THE FOUNDATION IS TO BE PLACED ON THE VIRGIN SOIL IF FILLED WITH BRICKWORK, THE FOUNDATION SHALL BE IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
5. FOR BRICKWORK WALL LOAD - BRICK WITH DENSITY 1800KG.
6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

CONCRETE :

1. ALL CONCRETE WORKS SHALL BE AS FOLLOWS:
- A. COLUMN: S200 X 200
  - B. FOOTING/PILE CAP: M30
  - C. FLOOR SLAB: M30
  - D. BEAMS & SLABS: M30
  - E. RETAINING WALLS: M30

COVER:

- \* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:
- A. COLUMN: SHEAR WALLS = 40 mm
  - B. FOOTING/PILE CAP: 75 mm
  - C. EXTERIOR BEAM: 25 mm
  - D. FLOOR BEAM: 25 mm
  - E. RETAINING WALLS: 30 mm
  - F. FLOOR SLAB: 25 mm
  - G. RETAINING WALLS: 30 mm

REINFORCEMENT:

1. HIGH YIELD STRENGTH DEFORMED BARS: GRADE - Fe 500
2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786
3. LAP LENGTH TO BE 1.00 L (LAP MINIMUM)

WATER PROOFING:

TYPICAL SECTION THROUGH TANK AND PUMP ROOM

1. ALL WATER PROOFING SHALL BE AS FOLLOWS:

A. GRADE SLAB: 1.500

B. ROOF SLAB: 1.500

C. PUMP ROOM: 1.500

D. TANK: 1.500

PROFFING AS PER DRAWING OR AS PER SPECIFICATIONS

N. M. Krishnan  
Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

| REVISIONS | NO. | DATE | BY | REVISIONS |
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|           |     |      |    |           |
|           |     |      |    |           |
|           |     |      |    |           |
|           |     |      |    |           |

TENDER DRAWING

CONVENTION CENTRE (SITE - 10)  
AUDITORIUM (1000 SEATING CAPACITY)  
WATER TANK STRUCTURAL DETAILS

|             |  |            |                     |
|-------------|--|------------|---------------------|
| DRAWN       | SAURAV                                 | DWG NUMBER | ACES-IMA-ALD-ST-211 |
| DESIGN BY   | ARTK                                   | SCALE      | VARIOUS             |
| APPROVED BY | ABIR                                   | PAPER SIZE | A1(594x841)         |
| DATE        | 26.07.2023                             | REVISIONS  | RD                  |
| PROJECT     | IIM SHILLONG, UMBAWLA CAMPUS, SHILLONG |            |                     |

ARCHITECT

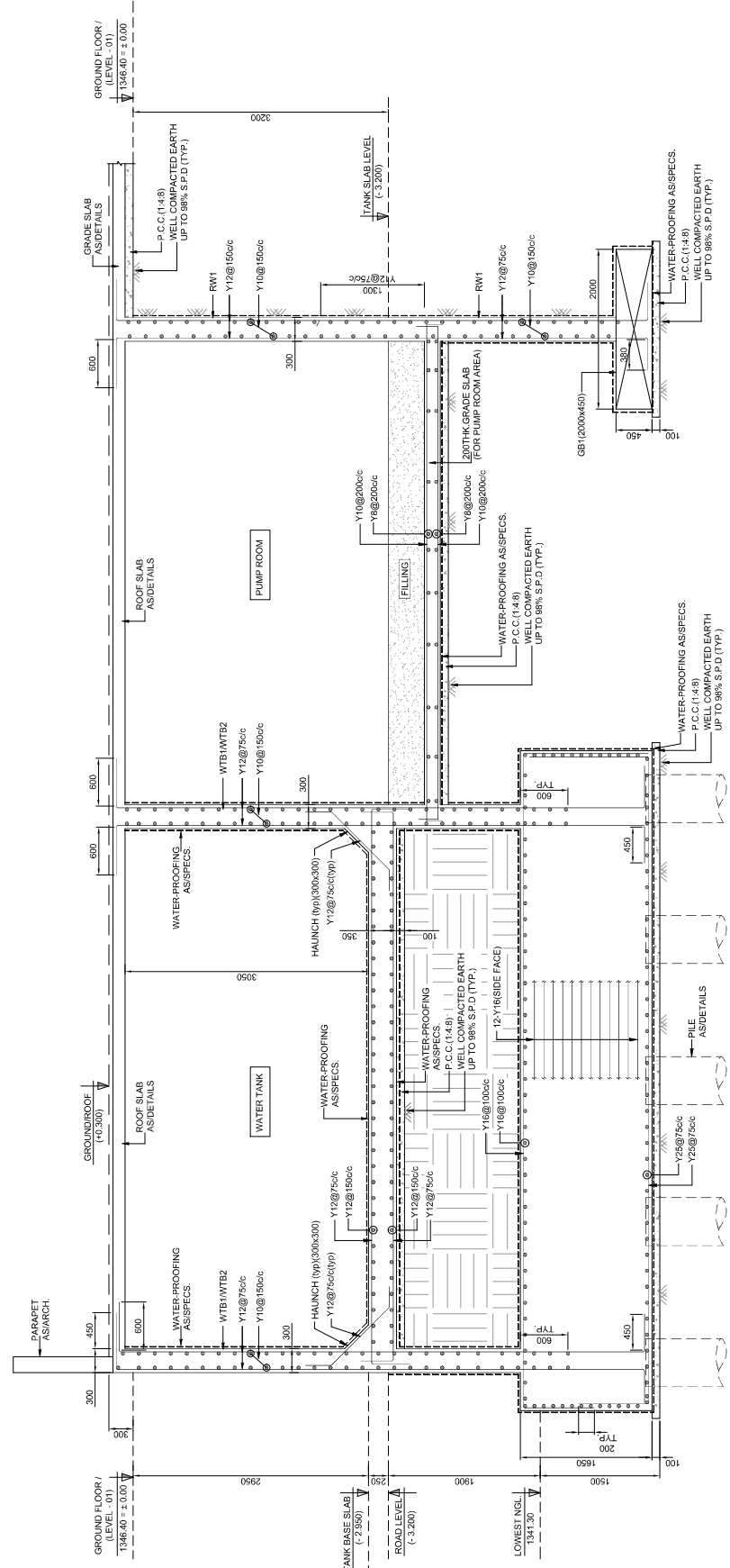
AKSHAYA JAIN & ASSOCIATES  
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C-8/16083, VASANT KUNJ, NEW DELHI - 110070  
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Phone: +91-124-4119648, 3664394045  
CLIENT

REFERENCE DRAWING



TYPICAL SECTION THROUGH TANK AND PUMP ROOM





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- GENERAL NOTES:-
1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
  2. ALL DIMENSIONS ARE TO BE TAKEN FROM THE FACE UNLESS SPECIFICALLY MENTIONED OTHERWISE.
  3. RELEVANT ARCHITECTURAL DRAWING IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL DRAWING AND STRUCTURAL DRAWING, THE ARCHITECTURAL DRAWING SHALL PREVAIL.
  4. BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED DIMENSIONS ARE CORRECTLY AS PER THE ARCHITECTURAL DRAWING.
  5. THE BUILDING HAS BEEN DESIGNED FOR LG+0.1 STOREY.
  6. THE FOUNDATION IS TO BE PLACED ON THE FIRM SOIL. IF FILLED SOIL IS ENCOUNTERED, THE FOUNDATION SHALL BE IMMEDIATELY TO BE DEEPENED TO THE FIRM SOIL BEFORE EXECUTION.
  7. FOR BRICK/GRAVEL WALL LOAD - BRICK WITH DENSITY 1800KG/M<sup>3</sup>.
  8. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS-456:2000.

CONCRETE :  
1. DESIGN MIX CONCRETE SHALL BE AS FOLLOWS  
a) FLOOR SLAB (M20)  
b) FOOTING/PILE CAP (M30)  
c) BEAMS & SLABS (M25)  
d) PCC - 1:4:8

COVER:  
\* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS  
a) TOP OF SLAB - 25 mm  
b) BOTTOM OF SLAB - 25 mm  
c) PILE BEAM - 50 mm  
d) PILE CAP - 50 mm  
e) BEAMS & SLABS - 25 mm  
f) PILE SHAFT - 50 mm

REINFORCEMENT:  
1. HIGH YIELD STRENGTH DEFORMED BARS GRADE - Fe 500D  
2. TOP OF SLAB SHALL BE REINFORCED AS PER TO IS-1786  
3. LAP LENGTH TO BE AS PER TO IS-1786

CAMBER  
1. UNLESS NOTED OTHERWISE (U.N.O.) UPWARD CAMBERS SHALL BE PROVIDED IN BEAM & SLABS AS FOLLOWS  
a) SPANS - 1M TO 2M - 5MM BEAMS/SLABS  
b) SPANS - 2M TO 3M - 10MM BEAMS/SLABS  
c) SPANS - 3M TO 4M - 15MM BEAMS/SLABS

1. DESIGN MIX CONCRETE SHALL BE AS FOLLOWS  
a) FLOOR SLAB (M20)  
b) FOOTING/PILE CAP (M30)  
c) BEAMS & SLABS (M25)  
d) PCC - 1:4:8

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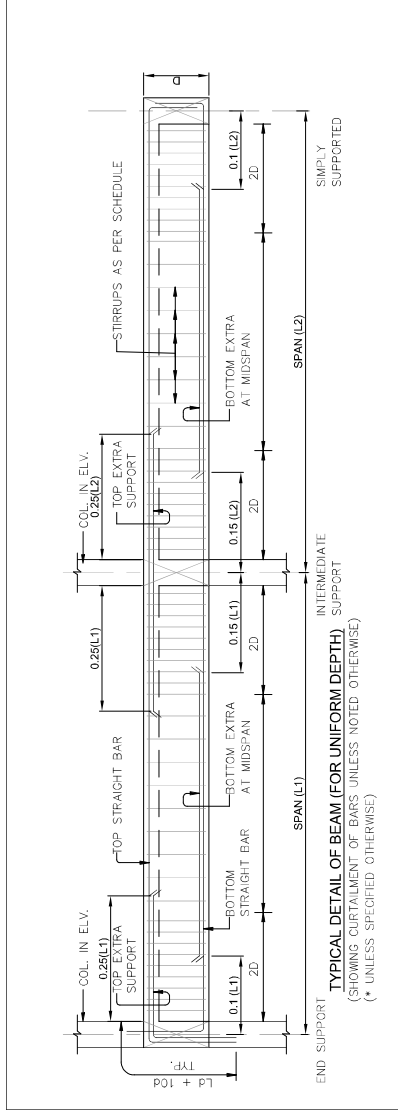
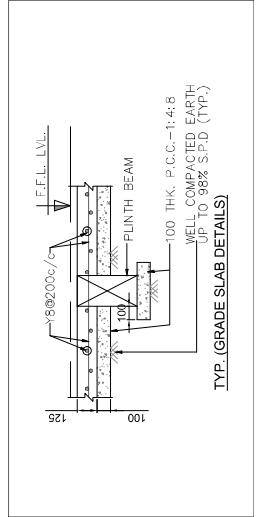
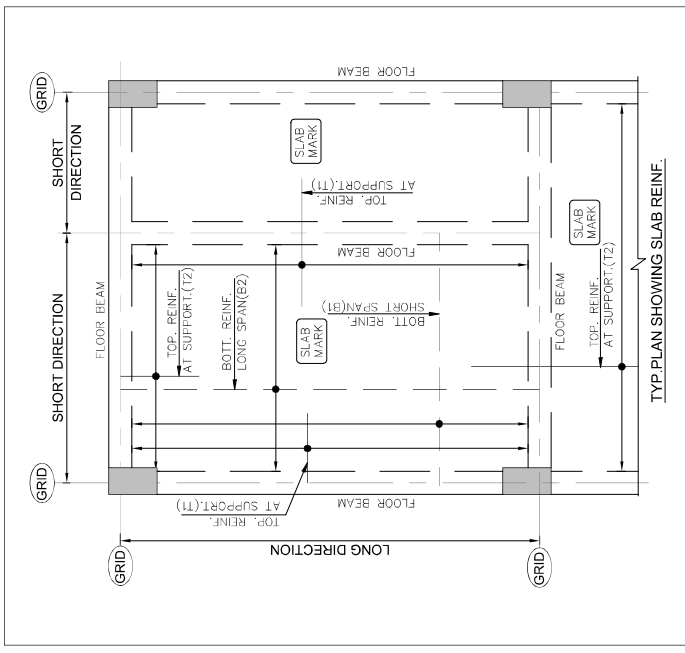
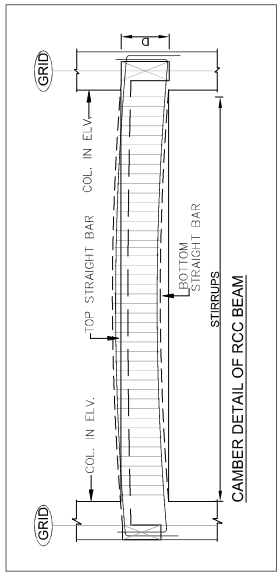
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|      |      |       |          |
|      |      |       |          |

TENDER DRAWING  
CONVENTION CENTRE (SITE - 10)  
GROUND FLOOR (LEVEL - 01)  
BEAM / SLAB REIN. DETAILS  
DRAWN: SAURAV / DWG NUMBER: ACES-INDIA-SD-214  
DESIGN BY: MATHY / SCALE: VARIOUS  
APPROVED BY: MATHY / PAPER SIZE: A1(594x841)  
DATE: 31-05-2024 / REVISIONS: RD  
PROJECT: IIM SHILLONG, UMBAWAL CAMPUS, SHILLONG

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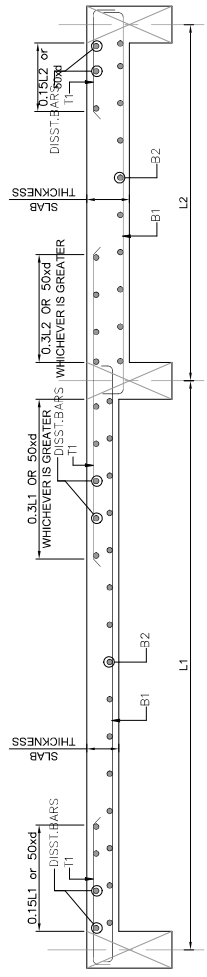
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PHNO - 0124-4119648, 9643949145  
CLIENT

REFERENCE DRAWING



| GROUND FLOOR (LEVEL - 01) BEAM REINFORCEMENT SCHEDULE |      |      |                      |                   |                             |        |          |         |         |       |              |
|---|------|------|----------------------|-------------------|-----------------------------|--------|----------|---------|---------|-------|--------------|
| BEAM MARK   | SIZE |      | BOTTOM REINFORCEMENT |                   | TOP REINFORCEMENT           |        | STIRRUPS |         | REMARKS |       |              |
|   | B    | D    | THROUGH BAR          | EXTRA AT MID SPAN | EXTRA AT CONTINUOUS SUPPORT | LEGS   | DIA      | SPACING | LEGS    | DIA   |              |
| GBF1  | 230  | 600  | 3-Y16                | 2-Y12             | 3-Y16                       | 2L Y8  | Y8       | 100cc   | 2L Y8   | 150cc | 2L Y8 100cc  |
| GBF2  | 230  | 600  | 3-Y16                | 2-Y12             | 3-Y16                       | 2L Y8  | Y8       | 100cc   | 2L Y8   | 150cc | 2L Y8 100cc  |
| GBF3  | 230  | 450  | 3-Y16                | ---               | ---                         | 2L Y8  | Y8       | 100cc   | 2L Y8   | 150cc | 2L Y8 100cc  |
| GBF4  | 230  | 1350 | 3-Y16                | 2-Y16             | 3-Y16                       | 2L Y10 | Y10      | 100cc   | 2L Y10  | 150cc | 2L Y10 100cc |
| GBF5  | 300  | 750  | 3-Y16                | 2-Y16             | 3-Y16                       | 2L Y10 | Y10      | 100cc   | 2L Y10  | 150cc | 2L Y10 100cc |
| BKT1  | 230  | 450  | 3-Y12                | ---               | ---                         | 2L Y8  | Y8       | 100cc   | 2L Y8   | 150cc | 2L Y8 100cc  |
| GB1   | 230  | 450  | 3-Y16                | ---               | ---                         | 2L Y8  | Y8       | 100cc   | 2L Y8   | 150cc | 2L Y8 100cc  |
| GB2   | 230  | 600  | 3-Y16                | 2-Y16             | 3-Y16                       | 2L Y8  | Y8       | 100cc   | 2L Y8   | 150cc | 2L Y8 100cc  |
| GB3   | 230  | 600  | 3-Y16                | 2-Y12             | 3-Y16                       | 2L Y8  | Y8       | 100cc   | 2L Y8   | 150cc | 2L Y8 100cc  |
| GB4   | 230  | 1350 | 3-Y20                | ---               | ---                         | 2L Y10 | Y10      | 150cc   | 2L Y10  | 150cc | 2L Y10 100cc |
| GB5   | 300  | 750  | 3-Y20                | 2-Y16             | 3-Y16                       | 2L Y8  | Y8       | 100cc   | 2L Y8   | 125cc | 2L Y8 100cc  |
| GB6   | 300  | 900  | 3-Y20                | 2-Y16             | 3-Y16                       | 2L Y10 | Y10      | 100cc   | 2L Y10  | 150cc | 2L Y10 100cc |

\* PROVIDE 5-Y12 FACE BAR (BOTH FACE) FOR BEAM DEPTH 1350mm.



TYP. SLAB SECTION SHOWING SLAB REIN. (FOR VARIOUS DEPTH)

SCHEDULE OF SLAB REIN.

| SLAB MARK | THICKNESS (mm) | BOTTOM REIN.    | TOP REIN.                 | REMARKS.        |
|-----------|----------------|-----------------|---------------------------|-----------------|
| S1        | 130            | SHORT SPAN (B1) | TOP REIN. AT SUPPORT (T1) | AT SUPPORT (T1) |
| S2        | 150            | SHORT SPAN (B1) | TOP REIN. AT SUPPORT (T1) | AT SUPPORT (T1) |

DISST. BARS - Y8 - 200cc/c (U.N.O.)

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2. RELEVANT ARCHITECTURAL DRAWINGS IN CASE OF DISCREPANCY SHALL BE GIVEN PRECEDENCE OVER DIMENSIONS.
3. BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
4. THE FOUNDATION IS TO BE PLACED ON THE IRON SOIL IF FILLED WITH IRON RAGS. CONTRACTOR TO BE ENSURE IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
5. FOR BRICKWORK WALL LOAD-BRICK WITH DENSITY 1800KG.
6. ALL A.C.C. WORKS SHALL BE CARRIED OUT AS PER IS-462:2000.

CONCRETE:-

1. DESIGN MIX CONCRETE SHALL BE AS FOLLOWS:  
A. GRADE: M20  
B. FORTHING (C/P) : 1:1.5:3  
C. RATIO: 1:1.5:3  
D. BEAMS & SLABS: M20  
E. RCC-1: M20

COVER:-

- \*THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:  
A. GRADE: M20  
B. FORTHING (C/P) : 1:1.5:3  
C. RATIO: 1:1.5:3  
D. BEAMS & SLABS: 25 mm  
E. S.A.S = 20 mm  
F. PILE SHAFT = 50 mm

REINFORCEMENT:-

1. HIGH YIELD STRENGTH DEFORMED BARS GRADE - F650D  
2. BARS SHALL BE PROVIDED AS PER TO IS:1786  
3. LAP LENGTH TO BE 1.35 L<sub>d</sub> MINIMUM

CAMBER

ALL CAMBER SHALL BE AS FOLLOWS:-

1. SPANS - 6M TO 12M - 1:10 CAMBER  
2. SPANS - 12M TO 18M - 1:12 CAMBER  
3. SPANS - 18M TO 24M - 1:15 CAMBER

ALL CAMBER SHALL BE AS FOLLOWS:-

1. SPANS - 6M TO 12M - 1:10 CAMBER  
2. SPANS - 12M TO 18M - 1:12 CAMBER  
3. SPANS - 18M TO 24M - 1:15 CAMBER

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1. SPANS - 6M TO 12M - 1:10 CAMBER  
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1. SPANS - 6M TO 12M - 1:10 CAMBER  
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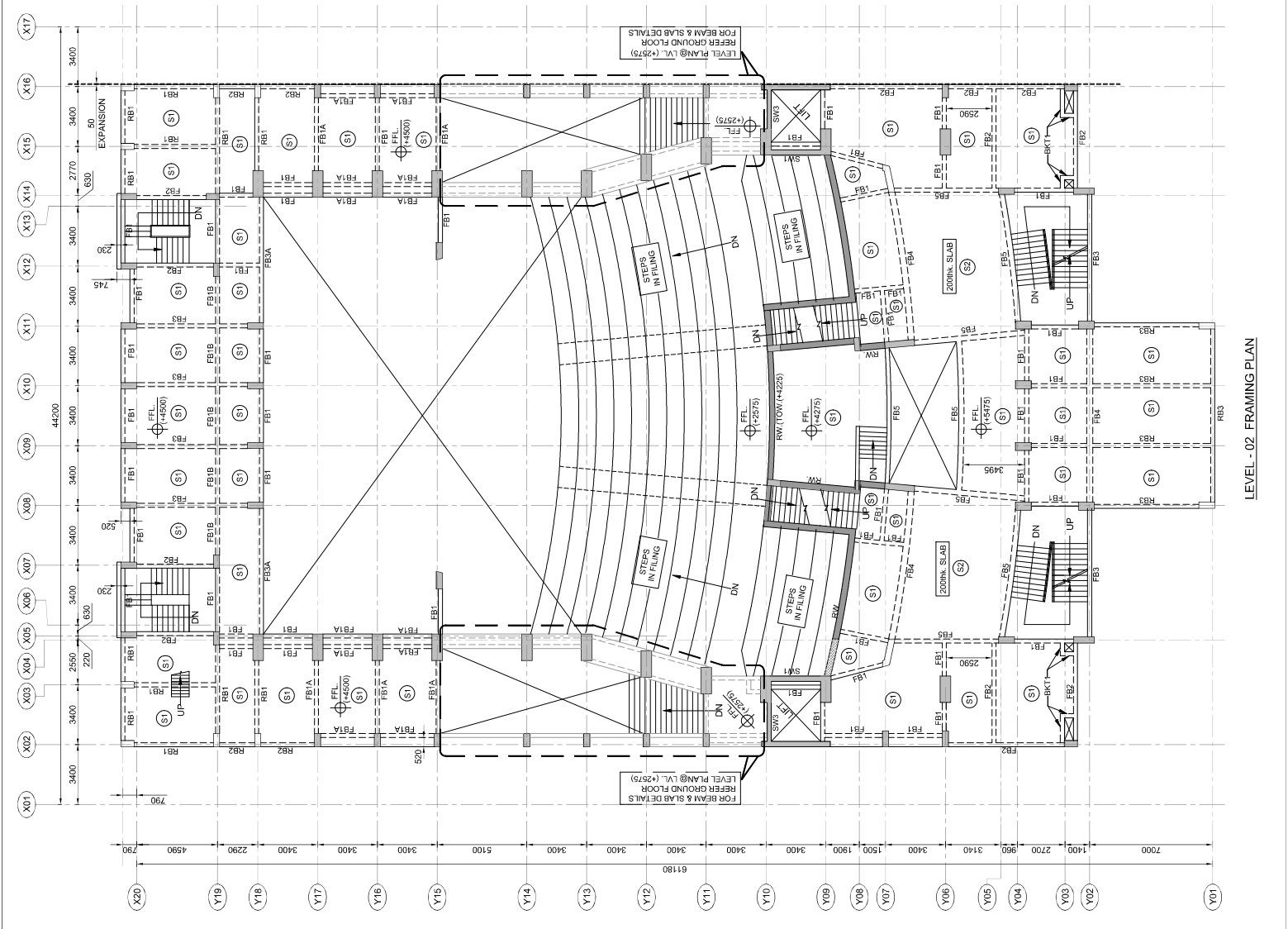
ALL CAMBER SHALL BE AS FOLLOWS:-

1. SPANS - 6M TO 12M - 1:10 CAMBER  
2. SPANS - 12M TO 18M - 1:12 CAMBER  
3. SPANS - 18M TO 24M - 1:15 CAMBER

ALL CAMBER SHALL BE AS FOLLOWS:-

1. SPANS - 6M TO 12M - 1:10 CAMBER  
2. SPANS - 12M TO 18M - 1:12 CAMBER  
3. SPANS - 18M TO 24M - 1:15 CAMBER

ALL CAMBER SHALL BE AS FOLLOWS:-



LEVEL - 02 FRAMING PLAN



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Hauz Khas, New Delhi, India 110016

| REV. | DATE | BY | CHKD | CONTENTS |
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|      |      |    |      |          |
|      |      |    |      |          |
|      |      |    |      |          |

TENDER DRAWING

CONVENTION CENTRE (SITE - 10)

AUDITORIUM (1000 SEATING CAPACITY)

LEVEL - 02 FRAMING PLAN

|             |            |            |                     |
|-------------|------------|------------|---------------------|
| DRAWN       | SAURAV     | DWG NUMBER | ACES-IMA-ALD-ST-215 |
| DESIGN BY   | MARTI      | SCALE      | VARIOUS             |
| APPROVED BY | ABHAY      | PAPER SIZE | A1(964x611)         |
| DATE        | 31-05-2024 | REVISIONS  | RD                  |

PROJECT: IIM SHILLONG, UMAMAL CAMPUS, SHILLONG

ARCHITECT

AKSHAYA JAIN & ASSOCIATES

ARCHITECTURE, PLANNING, INTERIOR DESIGN

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BEAM SIZES TABLE

| BEAM MARK | SIZE      |
|-----------|-----------|
| RB1       | 230 x 600 |
| RB2       | 230 x 450 |
| RB3       | 300 x 750 |

| BEAM MARK | SIZE      |
|-----------|-----------|
| FB1       | 230 x 750 |
| FB1A      | 230 x 450 |
| FB2       | 230 x 750 |
| FB3       | 300 x 600 |
| FB4       | 350 x 750 |
| FB5       | 300 x 750 |
| BKT1      | 230 x 450 |

LEGEND:

|  |                      |
|--|----------------------|
|  | RCC COLUMN           |
|  | RCC COLUMN TERMINATE |
|  | RCC RETAINING WALL   |
|  | TERMINATE            |



**GENERAL NOTES:**

1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. STRUCTURAL Dwg SHOULD BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWING IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWING IT SHOULD BE IMMEDIATELY BROUGHT TO NOTICE TO THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURED ASSUMED.
3. THE BUILDING HAS BEEN DESIGNED FOR LG+GA STOREY. THE FOUNDATIONS IS BASED AS ON THIS. IF ANY SOIL IS FILLER UP SOILS IS CONSULTANT IT SHOULD BE BROUGHT IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION
4. FOR BRICKBLOCK WALL LOAD - BRICK WITH DENSITY 2000KG.
5. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

**COVER:**

\* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS

- A. COLUMN & WALLS = 40 mm
- B. FOOTING/PILE CAP = 75 mm
- C. PLINTH BEAM = 30 mm
- D. FLOOR BEAM = 25 mm
- E. SLABS = 20 mm\*
- D. PILE SHAFT = 50 mm\*

**REINFORCEMENT:**

**CAMBER**

A) UNLESS NOTED OTHERWISE (U.N.O) UPWARD CAMBERS SHALL BE PROVIDED IN BEAM & SLABS AS FOLLOW:

1. SPANS - 6M TO 7.5M - 5MM BEAM/SLABS  
2. SPANS - 7.5M TO 12.0M - 10MM BEAMS/SLABS

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Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

[illegible]

|   |                      |                                  |
|---|----------------------|----------------------------------|
| LEVEL - 02 - BEAM & SLAB REINF. DETAILS | DRAWN: SAURAV        | DWG NUMBER: ACES-IIM-AUDI-ST-216 |
|   | DESIGN BY: KARTIK    | SCALE: VARIOUS                   |
|   | APPROVED BY: VAIBHAV | PAPER SIZE: A1(594x841)          |
|   | DATE: 31-05-2024     | REVISIONS: R0                    |
| PROJECT                                 |                      |                                  |

TELEPHONES +91-11-26136098, 26132304, 41601615  
E-Mail : mail@akshayajain.com

**STRUCTURAL CONSULTANT**

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BUILDINGS RISE WITH IIS

## REFERENCE DRAWING



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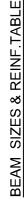
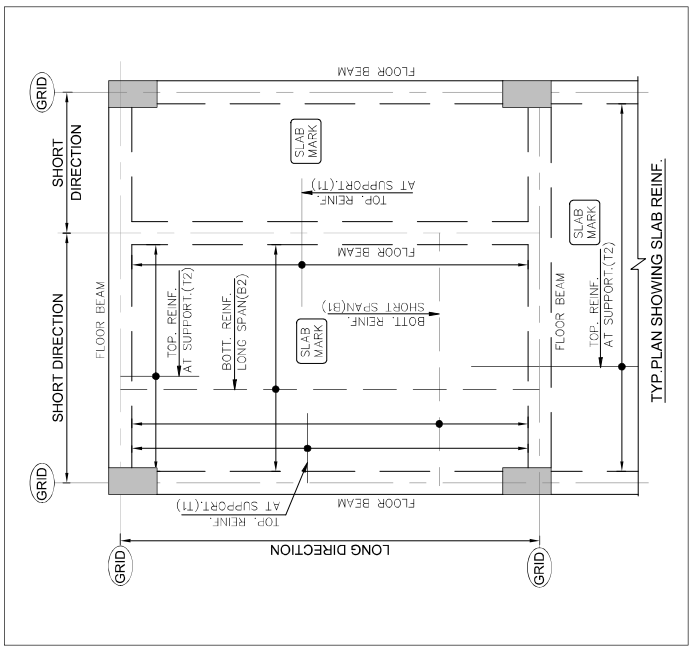
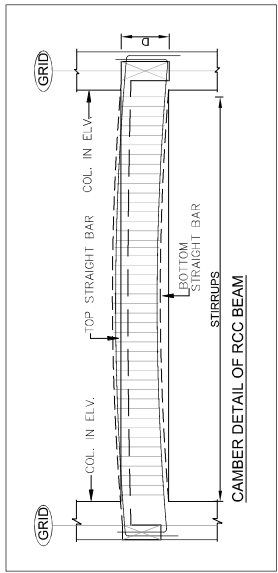
## REFERENCE DRAWING

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Hauz Khas, New Delhi, India 110016

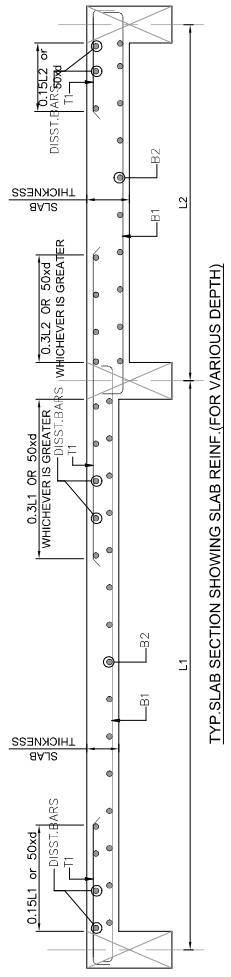
|                                       |   |             |                     |         |  |
|---------------------------------------|---|-------------|---------------------|---------|--|
| DWG. STAGE                            | <b>TENDER DRAWING</b>   |             |                     |         |  |
| CONTENT                               | CONVENTION CENTRE (SITE - 10)<br>AUDITORIUM (1000 SEATING CAPACITY) |             |                     |         |  |
| LEVEL - 03-BEAM / SLAB REINF. DETAILS |   |             |                     |         |  |
| DRAWN                                 | SU/PAV  | DWG. NUMBER | ACES-IM-AUDI-ST-218 | VARIOUS |  |
| DESIGN BY:                            | MARTK   | SCALE       |                     |         |  |
| APPROVED BY:                          | MAHAW   | PAPER SIZE: | A1(594x841)         |         |  |
| DATE:                                 | 31-05-2024  | REVISIONS   | RO                  |         |  |
| PROJECT                               | IM SHILLONG, UNISAWAL CAMPUS, SHILLONG                              |             |                     |         |  |

CLIENT

#### REFERENCE DRAWING



| BEAM<br>MARK | SIZE           |                     |       | LEVEL 03 BEAM REINFORCEMENT SCHEDULE |                     |       |        |                   |         |        |          |        |                     |  |  | REMARKS |
|--------------|----------------|---------------------|-------|--------------------------------------|---------------------|-------|--------|-------------------|---------|--------|----------|--------|---------------------|--|--|---------|
|              |                |                     |       | BOTTOM REINFORCEMENT                 |                     |       |        | TOP REINFORCEMENT |         |        |          | STRIPS |                     |  |  |         |
|              | THROUGH<br>BAR | EXTRACT MID<br>SPAN |       | THROUGH<br>BAR                       | EXTRACT MID<br>SPAN |       | LEGGS  | DIA               | SPACING | LEGGS  | MID SPAN | DIA    | SPACING             |  |  |         |
| R81          | 230            | 750                 | 3-Y12 | 3-Y16                                | 3-Y12               | 3-Y12 | 3-Y12  | 2L Y8             | 1000c   | 2L Y8  | 1500c    | 2L Y8  | 1000c               |  |  |         |
| R82          | 230            | 750                 | 3-Y12 | 3-Y16                                | 3-Y12               | 3-Y12 | 3-Y12  | 2L Y8             | 1000c   | 2L Y8  | 1500c    | 2L Y8  | 1000c               |  |  |         |
| R83          | 300            | 600                 | 3-Y16 | 3-Y16                                | 3-Y16               | 3-Y16 | 3-Y16  | 2L Y10            | 1000c   | 2L Y10 | 1500c    | 2L Y10 | 1000c               |  |  |         |
| R81A         | 230            | 450                 | 3-Y16 | 3-Y16                                | 2-Y12               | 2-Y12 | 2L Y8  | 1000c             | 2L Y8   | 1500c  | 2L Y8    | 1000c  |                     |  |  |         |
| F81          | 230            | 450                 | 3-Y20 | 3-Y20                                | 3-Y20               | 3-Y20 | 2L Y10 | 1000c             | 2L Y10  | 1500c  | 2L Y10   | 1000c  |                     |  |  |         |
| F82          | 230            | 600                 | 3-Y20 | 2-Y16                                | 3-Y16               | 3-Y16 | 2L Y10 | 1000c             | 2L Y10  | 1250c  | 2L Y10   | 1000c  |                     |  |  |         |
| F83          | NOT IN USE     |                     |       |                                      |                     |       |        |                   |         |        |          |        |                     |  |  |         |
| F84          | 230            | 600                 | 3-Y20 | 3-Y16                                | 3-Y20               | 3-Y20 | 2L Y8  | 1000c             | 2L Y8   | 1500c  | 2L Y8    | 1000c  |                     |  |  |         |
| F85          | 350            | 750                 | 4-Y20 | 4-Y20                                | 4-Y20               | 4-Y20 | 4L Y10 | 1000c             | 4L Y8   | 1500c  | 4L Y8    | 1000c  |                     |  |  |         |
| F86          | 230            | 600                 | 3-Y20 | 2-Y16                                | 3-Y20               | 3-Y20 | 2L Y8  | 750c              | 2L Y8   | 1250c  | 2L Y8    | 750c   |                     |  |  |         |
| F87          | 230            | 900                 | 3-Y20 | 3-Y20                                | 3-Y20               | 3-Y20 | 2L Y10 | 750c              | 2L Y10  | 750c   | 2L Y10   | 750c   |                     |  |  |         |
| F87A         | 230            | 1050                | 3-Y20 | ----                                 | 3-Y20               | ----  | 2L Y8  | 1000c             | 2L Y8   | 1000c  | 2L Y8    | 1000c  | 3-Y12<br>(FACE BAR) |  |  |         |
| F88          | 230            | 900                 | 3-Y20 | 2-Y20                                | 3-Y16               | 3-Y16 | 2L Y10 | 1000c             | 2L Y10  | 1500c  | 2L Y10   | 1000c  | 3-Y12<br>(FACE BAR) |  |  |         |
| F89          | 230            | 450                 | 3-Y16 | ----                                 | 3-Y12               | 2-Y16 | 2L Y8  | 1000c             | 2L Y8   | 1500c  | 2L Y8    | 1000c  |                     |  |  |         |
| BK11         | 230            | 450                 | 3-Y12 | ----                                 | 3-Y12               | ----  | 2L Y8  | 1000c             | 2L Y8   | 1000c  | 2L Y8    | 1000c  |                     |  |  |         |



TYP.SLAB SECTION SHOWING SLAB REINF.(FOR VARIOUS DEPTH)

**SCHEDULE OF SLAB REINF.**

| SLAB MARK | THICKNESS (mm) | BOTTOM REINF.   |                | TOP REINF.                 |                            | REMARKS. |
|-----------|----------------|-----------------|----------------|----------------------------|----------------------------|----------|
|           |                | SHORT SPAN (S1) | LONG SPAN (S2) | TOP REINF. AT SUPPORT (T1) | TOP REINF. AT SUPPORT (T2) |          |
| S1        | 175            | Y10 -100c/c     | Y10 -100c/c    | Y10 -100c/c                | Y10 -100c/c                | —        |
| S2        | 150            | Y10 -150c/c     | Y10 -200c/c    | Y8 -150c/c                 | Y8 -200c/c                 | —        |

DISST.BARS-Y8-200c/c (U.N.O.)

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**GENERAL NOTES:-**  
1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.  
2. RELEVANT ARCHITECTURAL DRAWINGS IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL DRAWINGS AND STRUCTURAL DRAWINGS, THE LATTER SHALL PREVAIL.  
3. THE BUILDING HAS BEEN DESIGNED FOR LG+G+1 STOREY.  
4. THE FOUNDATION IS TO BE PLACED ON THE VIRGIN SOIL IF FILLED WITH RECENT ALLUVIUM. IN CASE OF OLD FILL, THE FOUNDATION IS TO BE PLACED ON THE OLD FILL IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.  
5. FOR BRICKBLOCK WALL LOAD-BRICK WITH DENSITY 1800KG.  
6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS-456:2000

**CONCRETE :**  
1. DESIGN MIX CONCRETE SHALL BE AS FOLLOWS  
A. FLOOR SLAB : M20  
B. FOOTING/PILE CAP : M30  
C. BEAMS & SLABS : M30  
D. BEAMS & SLABS : M30  
E. RCC-14.8

**COVER:**  
\*THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS  
A. MINIMUM COVER : 25 mm  
B. FOOTING/PILE CAP : 75 mm  
C. RAFT BEAM : 30 mm  
D. BEAMS : 25 mm  
E. SLABS : 20 mm  
F. PILE SHAFT : 50 mm

**REINFORCEMENT:**  
1. HIGH YIELD STRENGTH DEFORMED BARS GRADE - Fe 500D  
2. BARS SHALL BE PROVIDED AS PER TO IS:1786  
3. LAP LENGTH TO BE IN ACCORDANCE OF BAR MINIMUM

**CAMBER**  
1. PROVIDE 1% CAMBER IN ALL SPANS  
2. PROVIDE IN BEAM & SLABS AS FOLLOWS  
A. SPANS - 6M TO 12M - 5MM BEAMS/SLABS  
B. SPANS - 7.5M TO 12M - 10MM BEAMS/SLABS

**ANCHORING OF REINFORCE (IN ALL) UPWARD CAMBERS SHALL BE PROVIDED IN BEAM & SLABS AS FOLLOWS**  
1. SPANS - 6M TO 12M - 5MM BEAMS/SLABS  
2. SPANS - 7.5M TO 12M - 10MM BEAMS/SLABS

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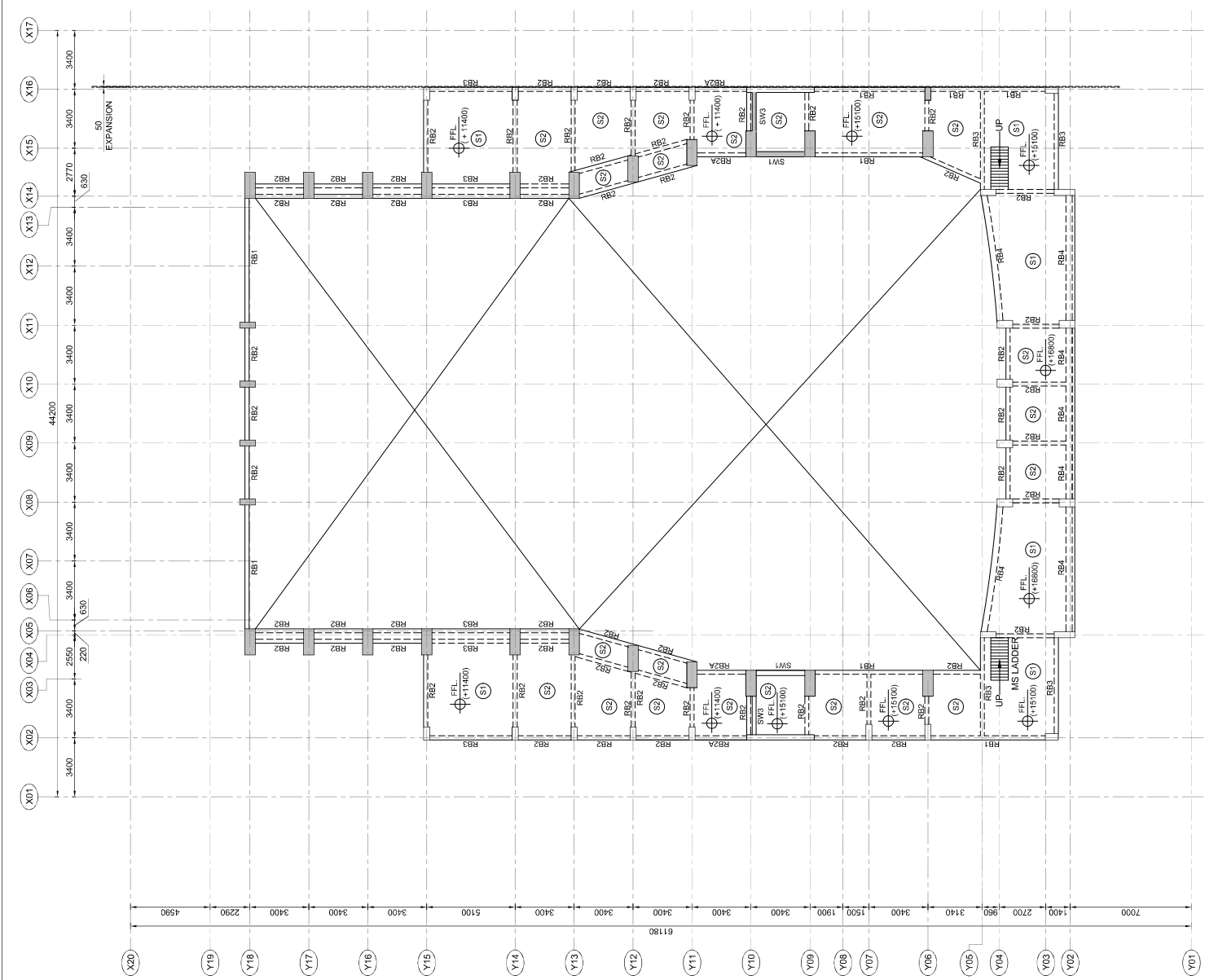
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1. SPANS - 6M TO 12M - 5MM BEAMS/SLABS  
2. SPANS - 7.5M TO 12M - 10MM BEAMS/SLABS



BEAM SIZES TABLE

| BEAM MARK | SIZE      |
|-----------|-----------|
| B         | D         |
| RB1       | 230 x 750 |
| RB2       | 230 x 450 |
| RB3       | 230 x 750 |
| RB4       | 350 x 750 |
| RB2A      | 230 x 750 |

TERRACE /ROOF LVL. FRAMING PLAN

LEGEND:

|  |                      |
|--|----------------------|
|  | RCC COLUMN           |
|  | RCC COLUMN TERMINATE |
|  | RCC RETAINING WALL   |
|  | TERMINATE            |

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GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
2. RELEVANT ARCHITECTURAL DRAWING IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL DRAWING AND STRUCTURAL DRAWING, THE ARCHITECTURAL DRAWING SHALL PREVAIL.
3. BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED DIMENSIONS ARE CORRECT AND TO BE CHECKED IMMEDIATELY TO NOTICE OF CONSULTANTS.
4. THE BUILDING HAS BEEN DESIGNED FOR LG+G+1 STOREY.
5. THE FOUNDATION IS TO BE PLACED ON THE VIRON SOIL IF FILLED WITH VIRON SOIL. CONTRACTOR TO BE CHECKED IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
6. FOR BRICKBLOCK WALL LOAD BRICK WITH DENSITY 1800KG.
7. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS-456:2000.

CONCRETE :

1. DESIGN MIX CONCRETE SHALL BE AS FOLLOWS:
  - A. FLOOR SLAB : M20
  - B. FOOTING/PILE CAP : M30
  - C. BEAMS & SLABS : M30
  - D. BEAMS & SLABS : M30
  - E. PCC : 1:4:8

COVER:

- \* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:
  - A. FLOOR SLAB : 25 mm
  - B. FOOTING/PILE CAP : 75 mm
  - C. R/TH BEAM : 30 mm
  - D. BEAMS & SLABS : 25 mm
  - E. S/SAS : 20 mm
  - F. PILE SHAFT : 50 mm

REINFORCEMENT:

1. HIGH YIELD STRENGTH DEFORMED BARS GRADE - Fe 500D
2. MINIMUM LAP LENGTH SHALL BE AS PER IS:1786
3. LAP LENGTH TO BE 1.35 TIMES OF BAR MINIMUM.

CAMBER

ALL CAMBER OVERSTRESS (U/L/D) INWARD CAMBERS SHALL BE PROVIDED IN BEAM & SLABS AS FOLLOWS

1. SPANS - 6M TO 7.5M - 5MM BEAMS&SLABS
2. SPANS - 7.5M TO 12.0M - 10MM BEAMS&SLABS

N. M. Deep Krishnan  
Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

| REVISIONS | NO. | DATE | BY | REVISIONS | NO. | DATE | BY | REVISIONS | NO. |
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|           |     |      |    |           |     |      |    |           |     |

TENDER DRAWING

CONVENTION CENTRE ( SITE - 10 )  
AUDITORIUM (1000 SEATING CAPACITY)

TERRACE ROOF LVL BEAM/ SLAB DETAILS

DRAWN: SAURAV DWG NUMBER: ACES-IND-ADT-220

DESIGN BY: PART: SCALE: VARIOUS

APPROVED BY: MIBRAV PAPER SIZE: A1(90x40)

DATE: 31-05-2024 REVISIONS: RD

PROJECT: IIM SHILLONG, UMAMAL CAMPUS, SHILLONG

ARCHITECT

AKSHAYA JAIN & ASSOCIATES  
ARCHITECTURE - PLANNING - INTERIOR DESIGN  
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CONTACT NO: 9871628888, 26162304, 41601615  
E-Mail: mail@akshayajain.com

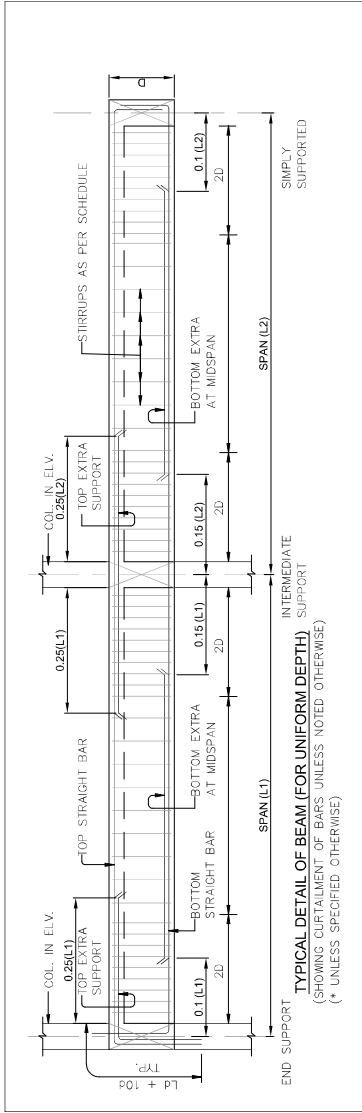
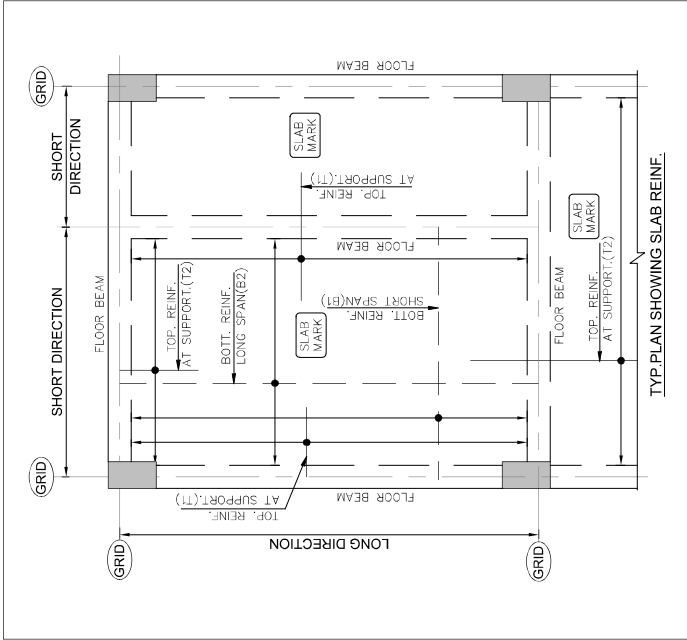
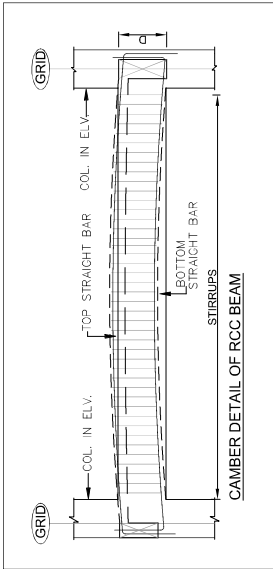
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PH NO. - 0124-4119648, 564394045

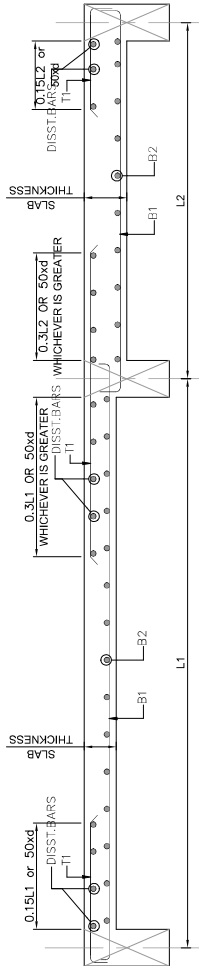
CLIENT

REFERENCE DRAWING



BEAM SIZES & REINF. TABLE

| BEAM<br>MARK | SIZE |     | TERRACE ROOF BEAM REINFORCEMENT SCHEDULE |                      |                |                     |                   |     |          |      |     |         |      |     | REMARKS |
|--------------|------|-----|--|----------------------|----------------|---------------------|-------------------|-----|----------|------|-----|---------|------|-----|---------|
|              |      |     | BOTTOM REINFORCEMENT                     |                      |                |                     | TOP REINFORCEMENT |     | STIRRUPS |      |     |         | RHS  |     |         |
|              | B    | D   | THROUGH<br>BAR                           | EXTRA AT MID<br>SPAN | THROUGH<br>BAR | EXTRA AT<br>MIDSPAN | LEGGS             | DIA | SPACING  | LEGS | DIA | SPACING | LEGS | DIA |         |
| R81          | 230  | 750 | 3-Y20                                    | 2-Y16                | 3-Y16          | 3-Y12               | 2L                | Y8  | 1000c    | 2L   | Y8  | 1500c   | 2L   | Y8  | 1000c   |
| R82          | 230  | 450 | 3-Y20                                    | ---                  | 3-Y16          | 3-Y16               | 2L                | Y8  | 1000c    | 2L   | Y8  | 1500c   | 2L   | Y8  | 1000c   |
| R83          | 230  | 750 | 3-Y20                                    | ---                  | 3-Y16          | 3-Y16               | 2L                | Y8  | 1000c    | 2L   | Y8  | 1500c   | 2L   | Y8  | 1000c   |
| R84          | 350  | 750 | 4-Y20                                    | 4-Y16                | 4-Y20          | 4-Y20               | 4L                | Y10 | 1000c    | 4L   | Y8  | 1500c   | 4L   | Y8  | 1000c   |
| R82A         | 230  | 750 | 3-Y25                                    | 3-Y20                | 3-Y16          | 3-Y25               | 2L                | Y10 | 750c     | 2L   | Y10 | 1000c   | 2L   | Y10 | 750c    |



SCHEDULE OF SLAB REINF.

| SLAB MARK | THICKNESS (mm) | BOTTOM REINF.   |                | TOP REINF.     |                | REMARKS. |
|-----------|----------------|-----------------|----------------|----------------|----------------|----------|
|           |                | SHORT SPAN (B1) | LONG SPAN (B2) | AT SUPPORT(T1) | AT SUPPORT(T2) |          |
| S1        | 175            | Y10 -100c/c     | Y10 -100c/c    | Y10 -100c/c    | Y10 -100c/c    | ---      |
| S2        | 150            | Y10 -150c/c     | Y10 -200c/c    | Y8 -150c/c     | Y8 -200c/c     | ---      |

DISST.BARS-Y8-200c/c (U.O.C)

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GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
2. RELEVANT ARCHITECTURAL DRAWING, IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL DRAWING AND STRUCTURAL DRAWING, THE ARCHITECTURAL DRAWING SHALL PREVAIL.
3. THE BUILDING HAS BEEN DESIGNED FOR LGF+0+2 STOREY.
4. THE FOUNDATION IS TO BE PLACED ON THE VIRGIN SOIL. IF FILLED OR UNDESIRABLE SOIL IS ENCOUNTERED, THE CONTRACTOR SHALL IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
5. FOR BRICKBLOCK WALL LOAD BRICK WITH DENSITY 1800KG.
6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

CONCRETE :-

1. ALL CONCRETE SHALL BE AS FOLLOWS.

- A. COLUMN: S20 M25
- B. FOOTING/PILE CAP: M20
- C. FLOOR SLAB: M25
- D. BEAMS & SLABS: M25
- E. RETAINING WALLS: M20

COVER:-

\* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS

- A. COLUMN: SHEAR WALLS = 40 mm
- B. RETAINING WALLS = 75 mm
- C. FLOOR BEAM = 25 mm
- D. FLOOR SLAB = 25 mm
- E. RETAINING WALLS = 40 mm
- F. PILE SHAFT = 50 mm
- G. RETAINING WALLS = 30 mm

REINFORCEMENT:-

1. HIGH YIELD STRENGTH DEFORMED BARS - GRADE -  $F_y$  600D
2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786
3. LAP LENGTH TO BE 1.00 DIA (UP BAR MINIMUM)

WATERPROOFING

TYPE FOR ALL STRUCTURAL WORKS

ALL JOINTS AND SEAM JOINTS SHALL BE PROTECTED BY WATER PROOFING AS PER IS 8083 OR AS PER IS 8083

N. M. Krishnan  
Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

| REV. | DATE | REVISION | CONTENTS |
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TENDER DRAWING

CONVENTION CENTRE ( SITE - 10 )  
AUDITORIUM (1000 SEATING CAPACITY)

TIE BEAM PLAN AT TRUSS BOTTOM LVL

|              |  |             |                    |
|--------------|--|-------------|--------------------|
| DRAWN BY:    | SAURAV                                 | DWG NUMBER: | ACES-IM-AUD-SF-222 |
| DESIGN BY:   | MARTY                                  | SCALE:      | VARIOUS            |
| APPROVED BY: | ABHINAV                                | PAPER SIZE: | A1(594x841)        |
| DATE:        | 27.07.2023                             | REVISIONS:  | RD                 |
| PROJECT:     | IIM SHILLONG, UMBAWAL CAMPUS, SHILLONG |             |                    |

ARCHITECT

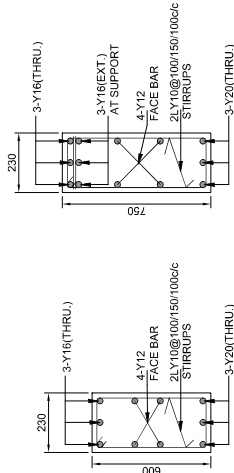
AKSHAYA JAIN & ASSOCIATES  
ARCHITECTURE, PLANNING, INTERIOR DESIGN  
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PH: 0121-4119648, 9643949145  
CLIENT

REFERENCE DRAWING



TIE BEAM PLAN AT TRUSS BOTTOM LVL.

\* TB1 = 230x600  
\* TB2 = 230x750



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1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
  2. BEFORE EXECUTION OF WORK, THE CONTRACTOR SHALL VERIFY THE RELEVANT ARCHITECTURAL DRAWINGS IN CASE OF DISCREPANCY BETWEEN THE ARCHITECTURAL DRAWINGS AND THE STRUCTURAL DRAWINGS, IMMEDIATELY BROUGHT TO NOTICE TO THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
  3. THE BUILDING HAS BEEN DESIGNED FOR LG+0+2 STOREY.
  4. THE FOUNDATION IS TO BE PLACED ON THE VIRON SOIL IF FILLED AREA. IN CASE OF VIRON SOIL IS NOT AVAILABLE, THE FOUNDATION IS TO BE PLACED ON THE VIRON SOIL. IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
  5. FOR BRICKWORK WALL LOAD BRICK WITH DENSITY 1800KG.
  6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

**CONCRETE:**

1. ALL CONCRETE SHALL BE AS FOLLOWS:

- A. COLUMN: SHEAR WALLS: M35
- B. FOOTING (PILE CAP): M30
- C. FLOOR SLAB: M25
- D. BEAMS & SLABS: M35
- E. RETAINING WALLS: M30

**COVER:**

1. THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:

- A. COLUMN: SHEAR WALLS = 40 mm
- B. FOOTING (PILE CAP) = 50 mm
- C. FLOOR SLAB = 25 mm
- D. BEAMS & SLABS = 25 mm
- E. RETAINING WALLS = 40 mm
- F. PILE SHAFT = 50 mm
- G. RETAINING WALLS = 30 mm

**REINFORCEMENT:**

1. HIGH YIELD STRENGTH DEFORMED BARS - GRADE - F<sub>y</sub> 600
2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786
3. LAP LENGTH TO BE AS PER TO IS 1786
4. LAP LENGTH TO BE AS PER TO IS 1786

**WATER PROOFING:**

1. ALL ROOFING SHALL BE AS FOLLOWS:

**TP FOR ALL STRUCTURAL WORKS**

1. ALL STRUCTURAL WORKS SHALL BE AS FOLLOWS:

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1. ALL STRUCTURAL WORKS SHALL BE AS FOLLOWS:

N. M. Top Krishnan  
Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

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**TENDER DRAWING**

CONVENTION CENTRE (SITE - 10)  
AUDITORIUM (1000 SEATING CAPACITY)

TRUSS BOTTOM CHORD PLAN

DRAWN: SAURAV DWG NUMBER: ACES-IM-AUD-ST-223

DESIGN BY: PART: SCALE: VARIOUS

APPROVED BY: MRS. A. J. PAPER SIZE: A1 (96x64)

DATE: 27.07.2023 REVISIONS: 00

PROJECT: IIM SHILLONG, UMAMALI CAMPUS, SHILLONG

**ARCHITECT**

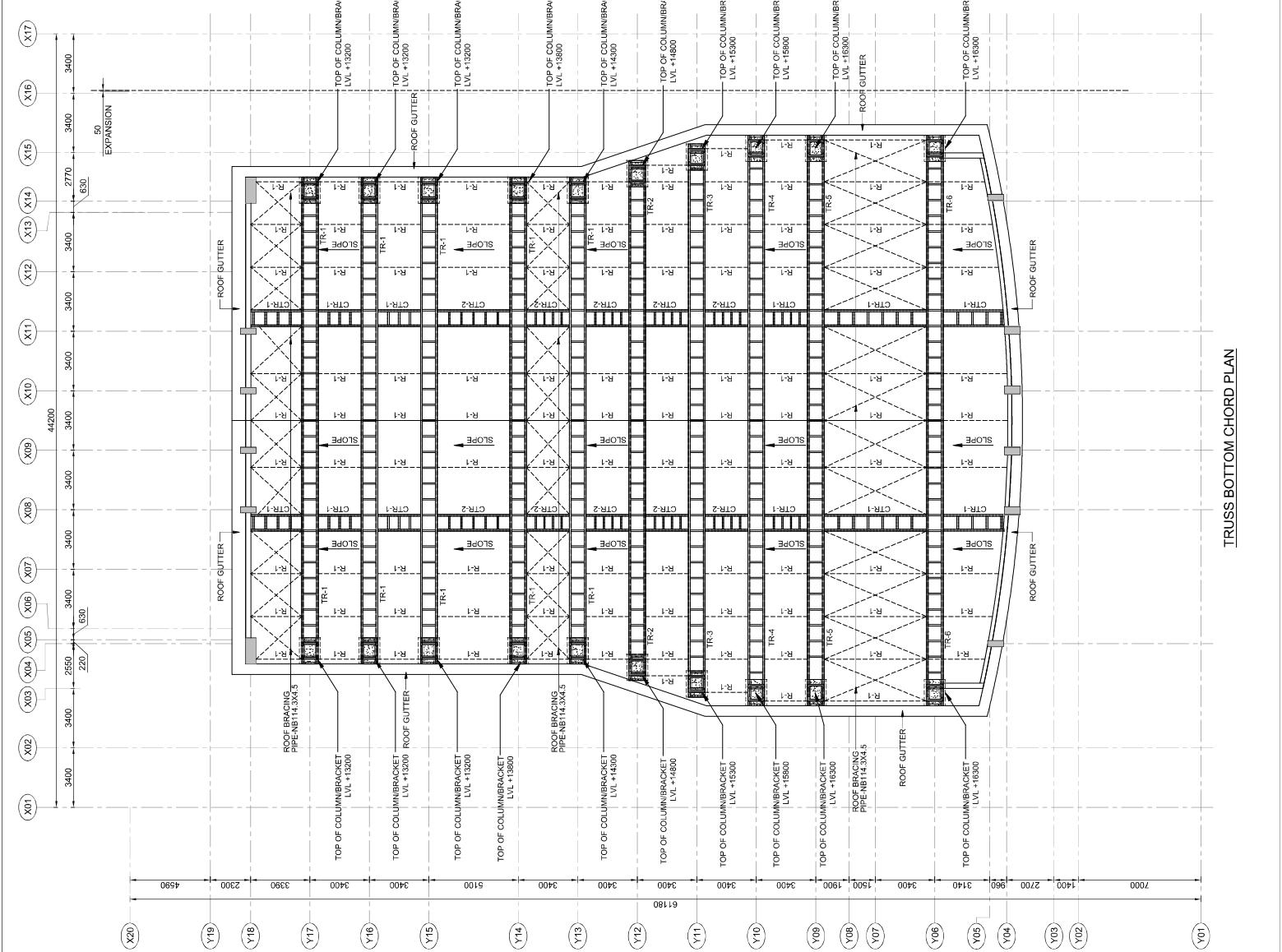
AKSHAYA JAIN & ASSOCIATES

ARCHITECTURE, PLANNING, INTERIOR DESIGN

C-8/1688, VASANT KUNJ, NEW DELHI - 110070

TEL: 011-26108888, 26102304, 41601615

E-Mail: mail@akshayajain.com



| TECHNICAL SPECIFICATION TABLE     |                         |
|-----------------------------------|-------------------------|
| RH-S/SHS MATERIAL SPECIFICATION : |                         |
| IS : 4923, GRADE : YST 345        |                         |
| MEMBER NO.                        | MATERIAL SPECIFICATION  |
| ①                                 | RH-S (200X100X6.0 THK.) |
| ②                                 | SHS (60X80X4.0 THK.)    |
| ③                                 | SHS (60X80X4.0 THK.)    |
| ④                                 | SHS (60X80X4.0 THK.)    |
| ⑤                                 | SHS (60X80X4.0 THK.)    |
| ⑥                                 | SHS (100X100X6.0 THK.)  |
| ⑦                                 | SHS (60X60X3.2 THK.)    |
| ⑧                                 | RH-S (145X82X4.8 THK.)  |
| ⑨                                 | RH-S (122X61X3.6 THK.)  |
| PURLIN (P1)                       | SHS (72X72X3.6 THK.)    |
| RUNNER-1                          | SHS (72X72X3.6 THK.)    |

**STEEL STRUCTURE NOTES:**

1. ALL DIMENSIONS ARE IN MM.
2. DO NOT SCALE, FOLLOW WRITTEN DIMENSIONS ONLY.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT ARCH. DRAWINGS.
4. MEMBER & PLATE DIMENSIONS SHALL BE VERIFIED FROM FLAT SCOP LAYOUT.
5. ALL STR. STEEL SHALL BE YST 310 CONFORMING TO IS 2062.
6. ALL WELD SHALL BE IN ACCORDANCE OF IS 800-2007 AND CLAUSE 7.0.1.1 OF IS 806.
7. PROPER LAYOUT SHALL BE MADE FOR ALL THE JUNCTION DETAILS BEFORE STARTING FABRICATION.
8. ALL WELDS SHALL BE FULL PENETRATION GROOVE WELD.
9. ALL ELECTRODES SHALL BE AS PER IS 814-1983.
10. IT SHALL BE ASCERTAINED ON SITE BEFORE COMMENCEMENT OF WORK, THAT ALL DIMENSIONS ETC. OF VARIOUS STR. COMPONENTS MATCH UP ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF CONSULTANTS BEFORE STARTING THE WORK.
11. WHEREVER LENGTH OF WELD IS NOT INDICATED ON DRG, ALL WELDS SHALL BE A FULL PENETRATION GROOVE WELD.
12. ALL TAILLET SHALL BE AS PER IS 800-2007 AND IS PROVIDED ON SIDE OF THE THICKNESS OF THE COMPONENTS. THE MINIMUM WELD SHALL BE EQUAL TO THE THICKNESS OF THE COMPONENTS.
13. FOR DIFFERENT SLOPE ROOFS, ANY ADDITIONAL MISSING PLATE/BOLT REQUIRED TO ERCT THE STABLE STRUCTURE IS IN SCOPE OF CONTRACTOR.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONNECTION TO ERCT THE STRUCTURE AS SHOWN SHALL BE CONTRACTOR RESPONSIBILITY.
15. ANY DISCREPANCY SHALL BE BROUGHT UNDER NOTICE OF CONSULTANT BEFORE EXECUTION OF WORK.

**TRUSS BOTTOM CHORD PLAN**



THIS DOCUMENT IS CONFIDENTIAL. NEITHER WHOLE OR ANY PART OF THIS DOCUMENT SHALL BE DISCLOSED TO ANY THIRD PARTY WITHOUT PRIOR WRITTEN CONSENT. OF ABSTRAUSE CONSULTING ENGINEERING SERVICES PVT. LTD.

GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
2. THE DRAWING SHALL BE IN ACCORDANCE WITH THE LATEST RELEVANT ARCHITECTURAL DRAWING IN CASE OF DISCREPANCY BETWEEN THE DRAWING AND THE FIELD WORK, THE FIELD WORK SHALL IMMEDIATELY BROUGHT TO NOTICE TO THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
3. THE BUILDING HAS BEEN DESIGNED FOR LG+0.4 STOREY.
4. THE FOUNDATION IS TO BE PLACED ON THE IRON SOIL IF FILLED WITH GRAVEL. IN CASE OF IRON SOIL, THE FOUNDATION SHALL BE IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
5. FOR BRICKWORK WALL LOAD BRICK WITH DENSITY 1800KG.
6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS-456:2000.

CONCRETE :

1. ALL CONCRETE SHALL BE AS FOLLOWS:  
A. COLUMNS: SHEAR WALLS - M35  
B. FOOTING/PILE CAP: M30  
C. BEAMS & SLABS - M25  
D. RETAINING WALLS - M30

COVER:

- \* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:  
A. COLUMN: SHEAR WALLS - 40 mm  
B. FOOTING/PILE CAP: 50 mm  
C. FLOOR BEAM - 25 mm  
D. RETAINING WALLS - 30 mm  
E. SLAB - 20 mm  
F. PILE SHAFT - 50 mm  
G. RETAINING WALLS - 30 mm

REINFORCEMENT:

1. HIGH YIELD STRENGTH DEFORMED BARS - GRADE - F<sub>y</sub> 600  
2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER IS:1786  
3. ALL END REIN. TO BE LAPPED UP BAR MINIMUM

WATER PROOFING:

TYPE FOR ALL STRUCTURAL WORKS

- A) GROUND LEVEL OR ABOVE SHALL BE PROTECTED BY WATER PROOFING AS PER IS: 800-2007 OR ASSPES

N. M. Krishnan  
Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

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TENDER DRAWING

CONVENTION CENTRE (SITE - 10)  
AUDITORIUM (1000 SEATING CAPACITY)

TRUSS TOP CHORD PLAN

|             |   |            |                     |
|-------------|---|------------|---------------------|
| DRAWN       | SA/AV                                   | DWG NUMBER | ACES-IMA-IND-ST-224 |
| DESIGN BY   | MARTK                                   | SCALE      | VARIOUS             |
| APPROVED BY | ABSTRAUSE                               | PAPER SIZE | A1/594x841          |
| DATE        | 27.07.2023                              | REVISIONS  | RD                  |
| PROJECT     | IIM SHILLONG, IIMSHAWL CAMPUS, SHILLONG |            |                     |

ARCHITECT

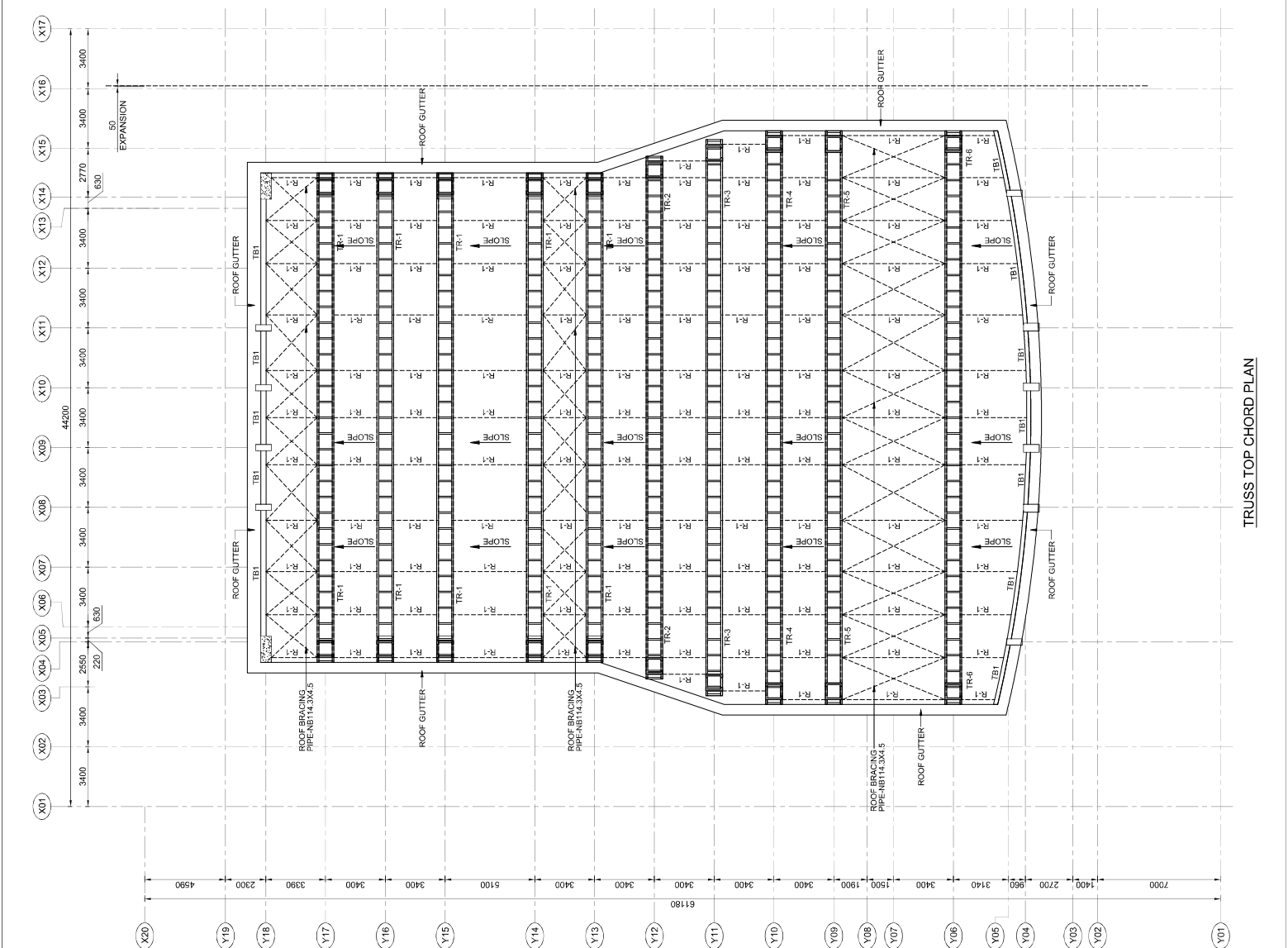
AKSHAYA JAIN & ASSOCIATES  
ARCHITECTURE - PLANNING - INTERIOR DESIGN  
C-8/1688, VASANT KUNJ, NEW DELHI - 110070  
Phone: +91-11-26118888, 26123204, 41601615  
E-Mail: mail@akshayajain.com

STRUCTURAL CONSULTANT

ABSTRAUSE CONSULTING ENGINEERING SERVICES PVT. LTD.  
Q-100, BAHADURPUR, SOUTH CITY - 1, SECTOR-40, Gurgaon, HARYANA - 122002  
Phone: +91-124-4119648, 5643940405

CLIENT

REFERENCE DRAWING



TRUSS TOP CHORD PLAN

| TECHNICAL SPECIFICATION TABLE    |                        |
|----------------------------------|------------------------|
| RHS/SHS MATERIAL SPECIFICATION : |                        |
| IS : 4923, GRADE : YST 345       |                        |
| MEMBER NO.                       | MATERIAL SPECIFICATION |
| ①                                | RHS.(200X100X6.0 THK.) |
| ②                                | SHS.(80X80X4.0 THK.)   |
| ③                                | SHS.(80X80X4.0 THK.)   |
| ④                                | SHS.(80X80X4.0 THK.)   |
| ⑤                                | SHS.(80X80X4.0 THK.)   |
| ⑥                                | SHS.(100X100X6.0 THK.) |
| ⑦                                | SHS.(60X60X3.2 THK.)   |
| ⑧                                | RHS.(145X82X4.8 THK.)  |
| ⑨                                | RHS.(122X61X3.6 THK.)  |
| PURLIN(P1)                       | SHS.(72X72X3.6 THK.)   |
| RUNNER-1                         | SHS.(72X72X3.6 THK.)   |

STEEL STRUCTURE NOTES.

1. ALL DIMENSIONS ARE IN MM.
2. DO NOT SCALE, FOLLOW WRITTEN DIMENSIONS ONLY.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT ARCH. DRAWINGS.
4. MEMBER PLATE DIMENSIONS SHALL BE VERIFIED FROM FABRICATOR SHOP LAYOUT.
5. ALL STR. STEEL SHALL BE YST 310 CONFORMING TO IS. 2002.
6. ALL WELD SHALL BE IN ACCORDANCE OF IS 800-2007 AND CLAUSE 7.0.1.1 OF IS 806.
7. PROPER LAYOUT SHALL BE MADE FOR ALL THE JUNCTION DETAILS BEFORE STARTING FABRICATION.
8. ALL WELDED JOINTS SHALL BE FULL PENETRATION GROOVE WELD.
9. ALL ELECTRODES SHALL BE AS PER IS 814-1983.
10. IT SHALL BE ASCERTAINED ON SITE BEFORE COMMENCEMENT OF WORK, THAT ALL DIMENSIONS ETC. OF VARIOUS STR. COMPONENTS MATCH UP ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF CONSULTANTS BEFORE STARTING THE WORK.
11. WHEREVER LENGTH OF WELD IS NOT INDICATED ON DRG. ALL EDGES SHALL BE FULL PENETRATION GROOVE WELDED.
12. ALL INLET SHALL BE A FULL PENETRATION GROOVE WELD PROVIDED ON SIDE OF THE THICKNESS OF THE COMPONENTS. THE MINIMUM WELD SHALL BE EQUAL TO THE THICKNESS OF THE COMPONENTS.
13. FOR DIFFERENT SLOPE ROOFS, ANY ADDITIONAL MISSING PLATE/BOLT REQUIRED TO ERCT THE STABLE STRUCTURE IS IN SCOPE OF CONTRACTOR.
14. THE CONTRACTOR SHALL BE RESPONSIBLE TO ERCT THE STRUCTURE AS SHOWN SHALL BE CONTRACTOR RESPONSIBILITY.
15. ANY DISCREPANCY SHALL BE BROUGHT UNDER NOTICE OF CONSULTANT BEFORE EXECUTION OF WORK.



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**GENERAL NOTES:-**  
1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.  
2. BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.  
3. RELEVANT ARCHITECTURAL DRAWING IN CASE OF DISCREPANCY BETWEEN ARCHITECTURAL DRAWING AND STRUCTURAL DRAWING, THE ARCHITECTURAL DRAWING SHALL PREVAIL.  
4. BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.  
5. THE BUILDING HAS BEEN DESIGNED FOR LG+0.2 STOREY.  
6. THE FOUNDATION IS TO BE PLACED ON THE VIRGIN SOIL IF FILLED.  
7. FOR BRICK/ROCK WALL LOAD BRICK WITH DENSITY 1800KG.  
8. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

**CONCRETE:**  
A. COLUMNS: SHEAR WALLS: M25  
B. FOOTING: (C/P) M30  
C. FLOOR SLAB: M25  
D. BEAMS & SLABS: M25  
E. RETAINING WALLS: M25  
F. RETAINING WALLS: M25

**COVER:**  
\* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS  
A. COLUMN: SHEAR WALLS = 40 mm  
B. FOOTING: (C/P) = 75 mm  
C. FLOOR SLAB: 25 mm  
D. BEAMS & SLABS: 25 mm  
E. RETAINING WALLS: 30 mm  
F. RETAINING WALLS: 30 mm

**REINFORCEMENT:**  
1. HIGH YIELD STRENGTH DEFORMED BARS: GRADE - F<sub>Y</sub> 460D  
2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786  
3. LAP LENGTH TO BE 48 DIA. MINIMUM  
4. LAP LENGTH TO BE 48 DIA. MINIMUM  
5. LAP LENGTH TO BE 48 DIA. MINIMUM  
6. LAP LENGTH TO BE 48 DIA. MINIMUM  
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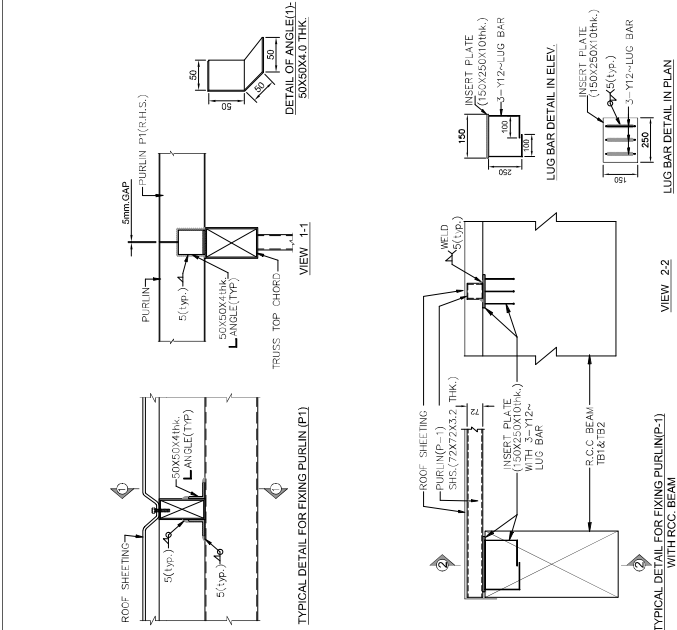
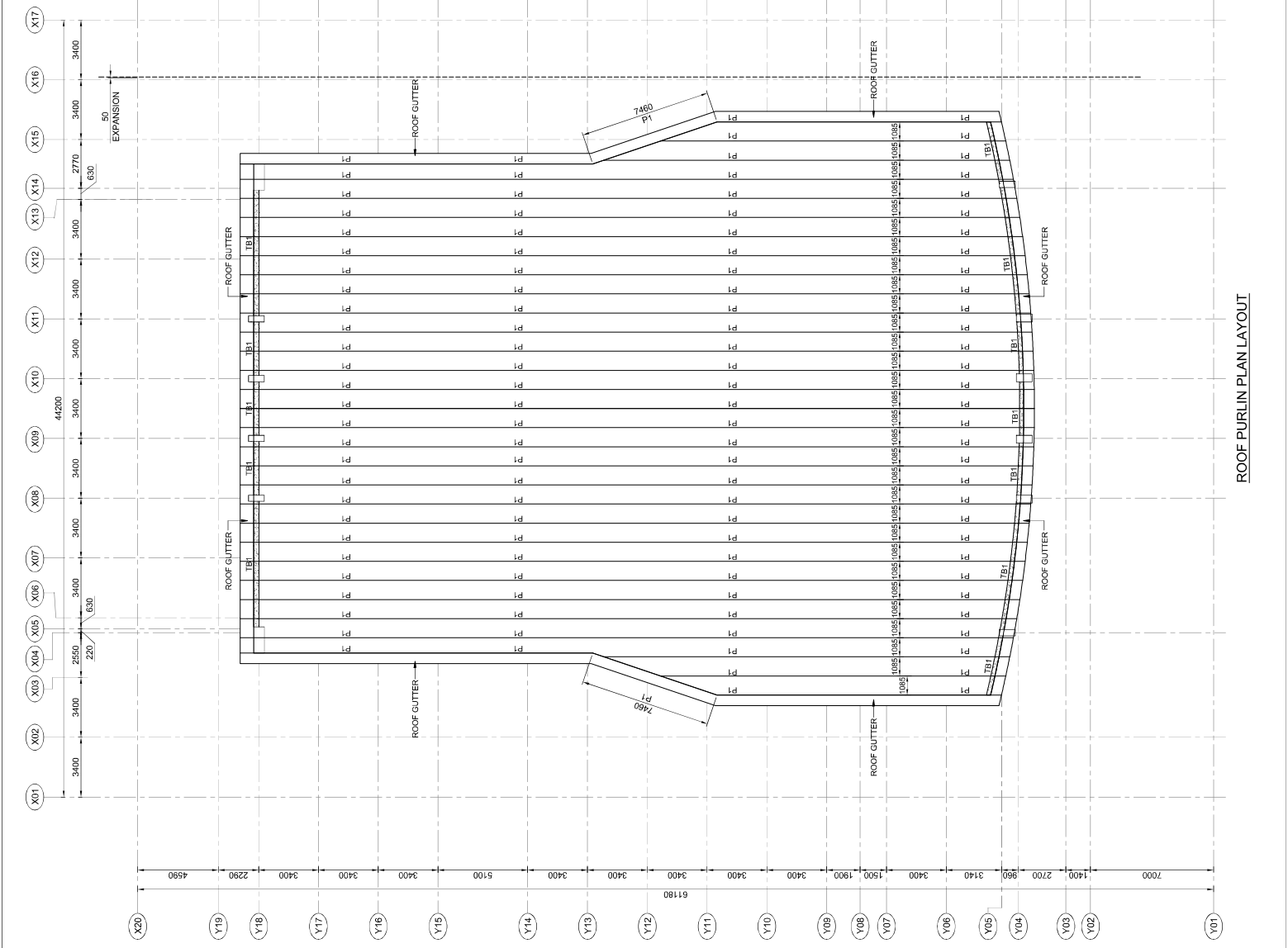
**WATER PROOFING:**  
1. ALL ROOFING WORKS SHALL BE PROTECTED BY WATER PROOFING AS PER IS 8086 OR AS PER IS 8086  
2. ALL ROOFING WORKS SHALL BE PROTECTED BY WATER PROOFING AS PER IS 8086 OR AS PER IS 8086  
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**FOR ALL STRUCTURAL WORKS**  
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10. ALL STRUCTURAL WORKS SHALL BE PROTECTED BY WATER PROOFING AS PER IS 8086 OR AS PER IS 8086

**REVISIONS**  
1. ALL DIMENSIONS ARE IN MM.  
2. DO NOT SCALE. FOLLOW WRITTEN DIMENSIONS ONLY.  
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT ARCH. DRAWINGS.  
4. MEMBER & PLATE DIMENSIONS SHALL BE VERIFIED FROM PLATE SHOP LAYOUT.  
5. ALL STR. STEEL SHALL BE YST 310 CONFORMING TO IS 2062.  
6. ALL WELD SHALL BE IN ACCORDANCE OF IS 800:2007 AND CLAUSE 7.0.1.1 OF IS 806.  
7. PROPER LAYOUT SHALL BE MADE FOR ALL THE JUNCTION DETAILS BEFORE STARTING FABRICATION.  
8. ALL WELDS SHALL BE FULL PENETRATION GROOVE WELD.  
9. ALL ELECTRODES SHALL BE AS PER IS 814:1983.  
10. IT SHALL BE ASCERTAINED ON SITE BEFORE COMMENCEMENT OF WORK, THAT ALL DIMENSIONS ETC. OF VARIOUS STR. COMPONENTS MATCH UP ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF CONSULTANTS BEFORE STARTING THE WORK.  
11. WHEREVER LENGTH OF WELD IS NOT INDICATED ON DRG. ALL WELDS SHALL BE FULL PENETRATION GROOVE WELD.  
12. ALL FILLET WELDS SHALL BE FULL PENETRATION GROOVE WELD ON SIDE OF THE THICKNESS OF THE COMPONENTS. THE MINIMUM WELD SHALL BE EQUAL TO THE THICKNESS OF THE COMPONENTS.  
13. FOR DIFFERENT SLOPE ROOFS, ANY ADDITIONAL MISSING PLATE/BOLT REQUIRED TO ERCT THE STABLE STRUCTURE IS IN SCOPE OF CONTRACTOR.  
14. SHOWING OF THE CONNECTION TO ERCT THE STRUCTURE SHALL BE IN SCOPE OF CONTRACTOR.  
15. ANY DISCREPANCY SHALL BE BROUGHT UNDER NOTICE OF CONSULTANT BEFORE EXECUTION OF WORK.

**TENDER DRAWING**  
CONVENTION CENTRE (SITE - 10)  
AUDITORIUM (1000 SEATING CAPACITY)  
ROOF PURLIN LAYOUT PLAN  
DRAWN: SAURAV / DWG NUMBER: ACES-IMA-IND-STR-225  
DESIGN BY: MATH / SCALE: VARIOUS  
APPROVED BY: MATH / PAPER SIZE: A1 (594X841)  
DATE: 27.07.2023 / REVISIONS: R0  
PROJECT: IIM SHILLONG, UMAMBAI CAMPUS, SHILLONG

**ARCHITECT**  
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E-Mail: mail@akshayajain.com  
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AICIEIS  
BUILDINGS ESE WITH US  
ABSTRUSE CONSULTING ENGINEERING SERVICES PVT. LTD.  
Q-309, BAHADUR, SOUTH CITY - 1, SECTOR-40, GURGAON, HARYANA - 122002  
Phone: +91-174-4119648, 5643949495  
CLIENT  
REFERENCE DRAWING



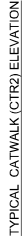
| TECHNICAL SPECIFICATION TABLE    |                        |
|----------------------------------|------------------------|
| RHS/SHS MATERIAL SPECIFICATION : |                        |
| IS : 4923, GRADE : YST 345       |                        |
| MEMBER NO.                       | MATERIAL SPECIFICATION |
| 1                                | RHS:(200X100X6.0 THK.) |
| 2                                | SHS:(80X80X4.0 THK.)   |
| 3                                | SHS:(80X80X4.0 THK.)   |
| 4                                | SHS:(80X80X4.0 THK.)   |
| 5                                | SHS:(80X80X4.0 THK.)   |
| 6                                | SHS:(100X100X6.0 THK.) |
| 7                                | SHS:(60X60X3.2 THK.)   |
| 8                                | RHS:(145X82X4.8 THK.)  |
| 9                                | RHS:(122X61X3.6 THK.)  |
| PURLIN(P1)                       | SHS:(72X72X3.6 THK.)   |
| RUNNER-1                         | SHS:(72X72X3.6 THK.)   |

**STEEL STRUCTURE NOTES.**  
1. ALL DIMENSIONS ARE IN MM.  
2. DO NOT SCALE. FOLLOW WRITTEN DIMENSIONS ONLY.  
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT ARCH. DRAWINGS.  
4. MEMBER & PLATE DIMENSIONS SHALL BE VERIFIED FROM PLATE SHOP LAYOUT.  
5. ALL STR. STEEL SHALL BE YST 310 CONFORMING TO IS 2062.  
6. ALL WELD SHALL BE IN ACCORDANCE OF IS 800:2007 AND CLAUSE 7.0.1.1 OF IS 806.  
7. PROPER LAYOUT SHALL BE MADE FOR ALL THE JUNCTION DETAILS BEFORE STARTING FABRICATION.  
8. ALL WELDS SHALL BE FULL PENETRATION GROOVE WELD.  
9. ALL ELECTRODES SHALL BE AS PER IS 814:1983.  
10. IT SHALL BE ASCERTAINED ON SITE BEFORE COMMENCEMENT OF WORK, THAT ALL DIMENSIONS ETC. OF VARIOUS STR. COMPONENTS MATCH UP ANY DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF CONSULTANTS BEFORE STARTING THE WORK.  
11. WHEREVER LENGTH OF WELD IS NOT INDICATED ON DRG. ALL WELDS SHALL BE FULL PENETRATION GROOVE WELD.  
12. ALL FILLET WELDS SHALL BE FULL PENETRATION GROOVE WELD ON SIDE OF THE THICKNESS OF THE COMPONENTS. THE MINIMUM WELD SHALL BE EQUAL TO THE THICKNESS OF THE COMPONENTS.  
13. FOR DIFFERENT SLOPE ROOFS, ANY ADDITIONAL MISSING PLATE/BOLT REQUIRED TO ERCT THE STABLE STRUCTURE IS IN SCOPE OF CONTRACTOR.  
14. SHOWING OF THE CONNECTION TO ERCT THE STRUCTURE SHALL BE IN SCOPE OF CONTRACTOR.  
15. ANY DISCREPANCY SHALL BE BROUGHT UNDER NOTICE OF CONSULTANT BEFORE EXECUTION OF WORK.





REFERENCE DRAWING



TYP. CONNECTION - 1

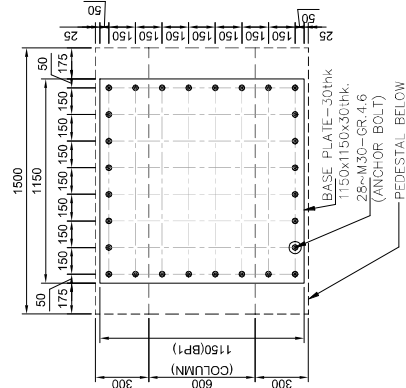
TYP.CONNECTION - 1

NOTES.  
\* CONTRACTOR TO SUBMIT FABRICATIONS DWGS. FOR  
CONSULTANT APPROVAL PRIOR TO EXECUTION OF WORK.  
\* ALL WELD SHALL BE FULL STRENGTH WELD ALL AROUND.

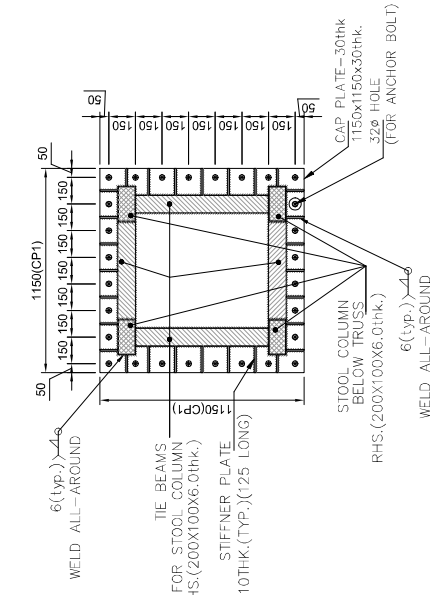
1. ALL DIMENSIONS ARE IN MM UNLESS SPECIFIED OTHERWISE.
2. DO NOT SCALE - FOLLOW WRITTEN DIMENSIONS ONLY.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH RELEVANT ARCH. DRAWINGS.
4. ALL STR. MEMBERS & SHOE LAYOUT SHALL BE VERIFIED FROM FULL SCALE SHOP LAYOUT.
5. ALL WELDS SHALL BE IN ACCORDANCE WITH IS 800: 2007 AND IS 2662.
6. ALL WELD SHALL BE IN ACCORDANCE OF IS 800:2007 AND CLAUSE 7.01.1 OF IS 800.
7. PROPER LAYOUT SHALL BE MADE FOR ALL THE JUNCTION DETAILS BEFORE STARTING FABRICATION.
8. PIPE TO PIPE JOINTS SHALL BE FULL PENETRATION GROOVE WELD.
9. ALL ELECTRODES SHALL BE AS PER IS 814-1983.
10. IT SHALL BE ASSESS/PANED ON SITE BEFORE COMMENCEMENT OF WELDING.
11. DISCREPANCY SHALL BE BROUGHT TO THE NOTICE OF CONSULTANTS BEFORE STARTING THE WORK.
12. WHEREVER LENGTH OF WELD IS NOT INDICATED ON DRG. ALL CONTACT EDGES SHALL HAVE A FULL CONTINUOUS WELD.
13. ALL FILLET WELD SHALL BE 5mm. WHERE A WELD IS PROVIDED ON SIDE OF THE THICKNESS OF THE COMPONENTS THE MINIMUM WELD SHALL BE EQUAL TO THE THICKNESS OF THE COMPONENTS.
14. PLATEBOL REQUIRED TO ERECT THE STABLE STRUCTURE IS IN SCOPE OF CONTRACTOR.
15. ANY MISSING DETAIL CONNECTION TO ERECT THE STRUCTURE AS SHOWN SHALL BE CONTRACTOR RESPONSIBILITY.
16. ANY DISCREPANCY SHALL BE BROUGHT UNDER NOTICE OF CONSULTANT BEFORE EXECUTION OF WORK.

NOTES:  
\* CONTRACTOR TO SUBMIT FABRICATIONS DWGS. FOR  
\* CONSULTANT APPROVAL PRIOR TO EXECUTION OF WORK.  
\* ALL WELD SHALL BE FULL STRENGTH WELD ALL AROUND.

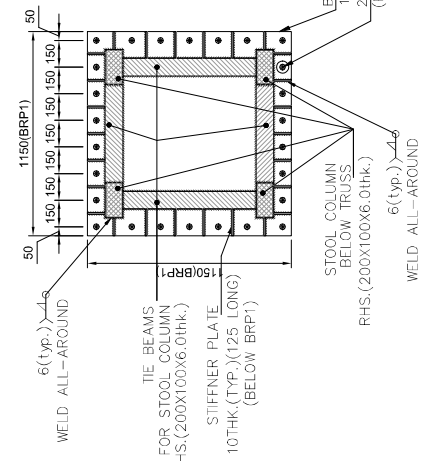
| TECHNICAL SPECIFICATION TABLE    |                        |
|----------------------------------|------------------------|
| RHS/SHS MATERIAL SPECIFICATION : |                        |
| IS : 4923, GRADE : YST 345       |                        |
| MEMBER NO.                       | MATERIAL SPECIFICATION |
| ①                                | RHS.(200X100X6.0 THK.) |
| ②                                | SHS.(80X80X4.0 THK.)   |
| ③                                | SHS.(80X80X4.0 THK.)   |
| ④                                | SHS.(80X80X4.0 THK.)   |
| ⑤                                | SHS.(80X80X4.0 THK.)   |
| ⑥                                | SHS.(100X100X6.0 THK.) |
| ⑦                                | SHS.(60X60X3.2 THK.)   |
| ⑧                                | RHS.(145X82X4.8 THK.)  |
| ⑨                                | RHS.(122X61X3.6 THK.)  |
| PURLIN(P1)                       | SHS.(72X72X3.6 THK.)   |
| RUNNER-1                         | SHS.(72X72X3.6 THK.)   |



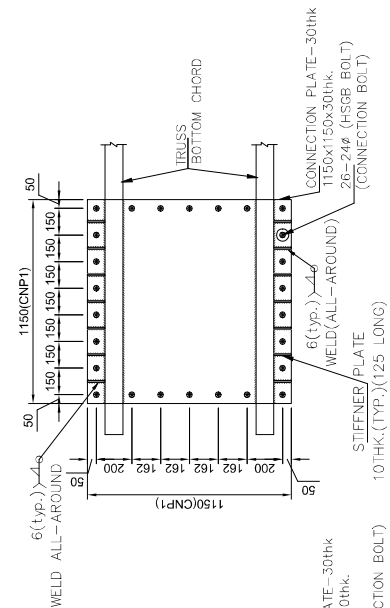
TYP. DETAIL OF 30mm THK.  
BASE PLATE (BP1) DETAIL



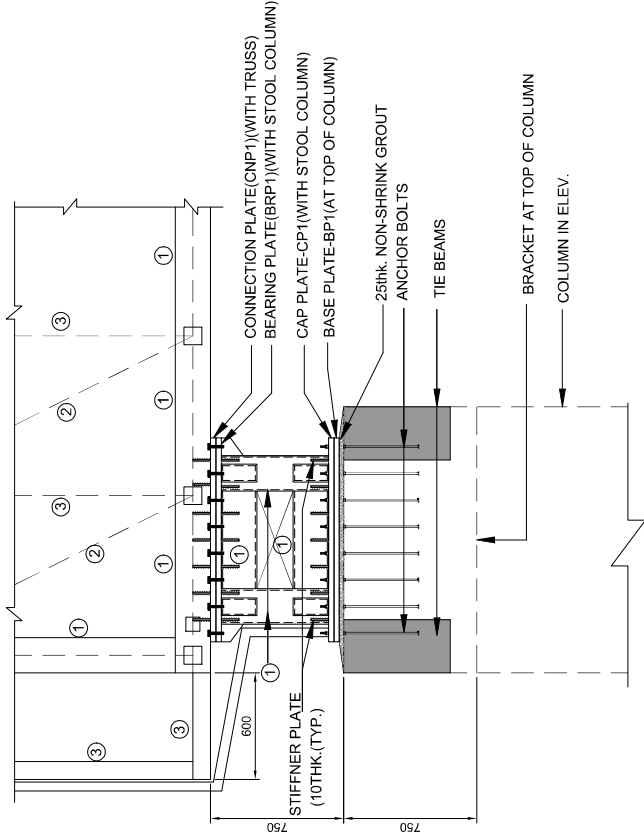
TYP. DETAIL OF 30mm THK.  
CAP PLATE (CP1) DETAIL



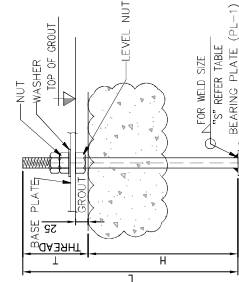
TYP. DETAIL OF 30mm THK.  
BEARING PLATE (BRP1) DETAIL



TYP. DETAIL OF 30mm THK.  
CONNECTION PLATE (CNP1) DETAIL



DETAIL - 'A'  
TYP. TRUSS FIXING DETAILS



DETAIL OF ANCHOR BOLT  
NOTE: ALL DIMENSIONS ARE IN MM.

| BOLE<br>DESCRIPTION | BOLE<br>DIA | H   | T   | L=H+1<br>Bearing Plate<br>(P1-1) | Weld<br>(P1-1) | Washer Plate<br>Height | BOLE<br>Dia |
|---------------------|-------------|-----|-----|----------------------------------|----------------|------------------------|-------------|
| AB 30x825           | 30          | 650 | 175 | 825                              | 110X10X12      | 8                      | 32          |

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GENERAL NOTES:  
1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.  
2. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER OF THE MEMBER UNLESS OTHERWISE SPECIFIED.  
3. ALL DIMENSIONS ARE TO BE TAKEN FROM THE CENTER OF THE MEMBER UNLESS OTHERWISE SPECIFIED.  
4. THE FOUNDATION IS TO BE PLACED ON THE IRON SOIL IF FILLED WITH IRON GROUT. THE FOUNDATION IS TO BE IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.  
5. FOR BRICKWORK WALL LOAD BRICK WITH DENSITY 1800KG.  
6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000.

CONCRETE :  
1. ALL DIMENSIONS SHALL BE AS FOLLOWS:  
A. COLUMN SHEAR WALLS - M25  
B. FOOTING/PILE CAP - M30  
C. BEAMS & SLABS - M25  
D. RETAINING WALLS - M30

COVER:  
\* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:  
A. COLUMN SHEAR WALLS - 40 mm  
B. FOOTING/PILE CAP - 75 mm  
C. BEAMS & SLABS - 25 mm  
D. RETAINING WALLS - 30 mm  
E. RETAINING WALLS - 30 mm  
F. RETAINING WALLS - 30 mm  
G. RETAINING WALLS - 30 mm

REINFORCEMENT:  
1. HIGH YIELD STRENGTH DEFORMED BARS - GRADE - F<sub>y</sub> 600  
2. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786  
3. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786  
4. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786  
5. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786  
6. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786  
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9. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786  
10. ALL REIN. STEEL MUST BE OF TESTED QUALITY AS PER TO IS 1786

PROOFING:  
1. ALL DIMENSIONS SHALL BE AS FOLLOWS:  
A. COLUMN SHEAR WALLS - M25  
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Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

REVISIONS  
REV. DATE DRAWN CONTENTS

TENDER DRAWING  
CONVENTION CENTRE (SITE - 10)  
AUDITORIUM (1000 SEATING CAPACITY)  
TRUSS BASE PLATE & CONNECTION DETAILS  
DRAWN: SAURAV DVG NUMBER: ACES-IMA-ALST-228  
DESIGN BY: MARTI SCALE: VARIOUS  
APPROVED BY: MIBAWI PAPER SIZE: A1(594X841)  
DATE: 27.07.2023 REVISIONS: RD  
PROJECT: IIM SHILLONG, UMAMAL CAMPUS SHILLONG

ARCHITECT  
AKSHAYA JAIN & ASSOCIATES  
ARCHITECTURE, PLANNING, INTERIOR DESIGN  
C-6/1688, VASANT KUNJ, NEW DELHI - 110070  
MOBILE: 9811000000, 9811000000, 2612304, 41601615  
E-Mail: mail@akshaya.com

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Q-100, BAKHET, SOUTH CITY - 1, SECTOR-40, Gurgaon, HARYANA - 122002  
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E-Mail: mail@abstruse.com

REFERENCE DRAWING



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GENERAL NOTES:-

1. ALL DIMENSIONS ARE IN MM. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED. DIMENSIONS SHOULD NOT BE SCALED.
2. RELEVANT ARCHITECTURAL DRAWINGS IN CASE OF DISCREPANCY SHALL BE GIVEN PRECEDENCE OVER DIMENSIONS.
3. IMMEDIATELY BROUGHT TO NOTICE TO THE CONSULTANTS BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
4. THE BUILDING HAS BEEN DESIGNED FOR LG+G+1 STOREY.
5. THE FOUNDATION IS TO BE PLACED ON THE FIRM SOIL IF FILLED WITH GRAVEL OR OTHER SUITABLE MATERIAL IMMEDIATELY TO NOTICE OF CONSULTANTS BEFORE EXECUTION.
6. FOR BRICK/LOCK WALL LOAD BRICK WITH DENSITY 1800KG.
7. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS-456:2000.

CONCRETE :-

1. DESIGN MIX CONCRETE SHALL BE AS FOLLOWS:  
A. FLOOR SLAB - M20  
B. FOOTING/PILE CAP - M30  
C. BEAMS & SLABS - M30  
D. BEAMS & SLABS - M30  
E. PCC - 1:4:8

COVER:-

- \* THE CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:  
A. FLOOR SLAB - 20 mm  
B. FOOTING/PILE CAP - 75 mm  
C. BEAMS & SLABS - 25 mm  
D. PILE SHAFT - 50 mm\*

REINFORCEMENT:-

1. HIGH YIELD STRENGTH DEFORMED BARS GRADE - Fe 500
2. BARS - 8M TO 25M - 5MM BENDS/45°
3. LAP LENGTH TO BE 1.3 TIMES OF BAR MINIMUM

CAMBER

A) UNLESS NOTED OTHERWISE (UNO) UPWARD CAMBERS SHALL BE PROVIDED IN BEAM & SLABS AS FOLLOWS:-

1. SPANS - 8M TO 12M - 5MM BENDS/45°
2. SPANS - 12M TO 15M - 10MM BENDS/45°
3. SPANS - 15M TO 20M - 15MM BENDS/45°

5. ALL UNLESS NOTED OTHERWISE (UNO) UPWARD CAMBERS SHALL BE PROVIDED IN BEAM & SLABS AS FOLLOWS:-

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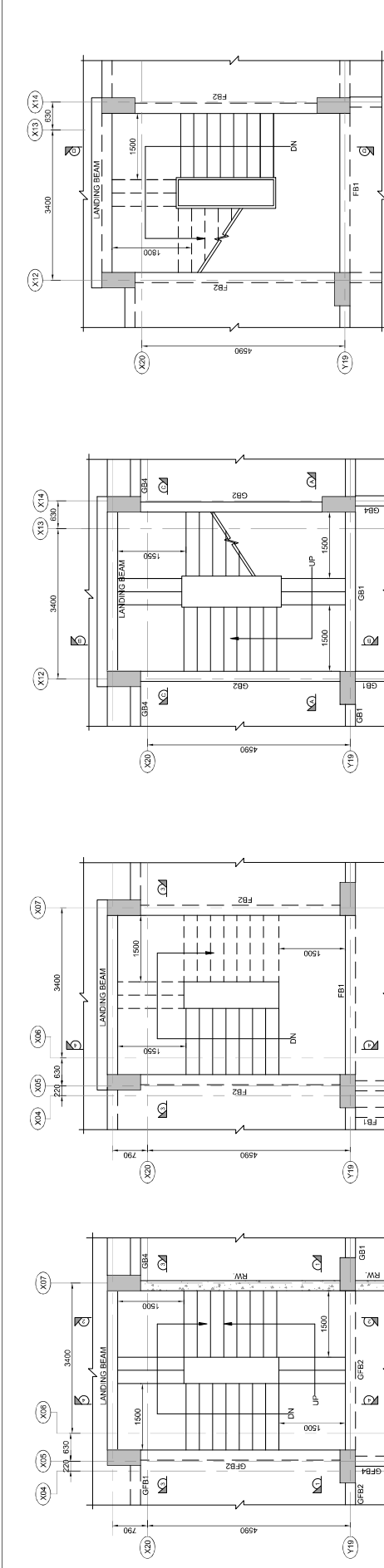
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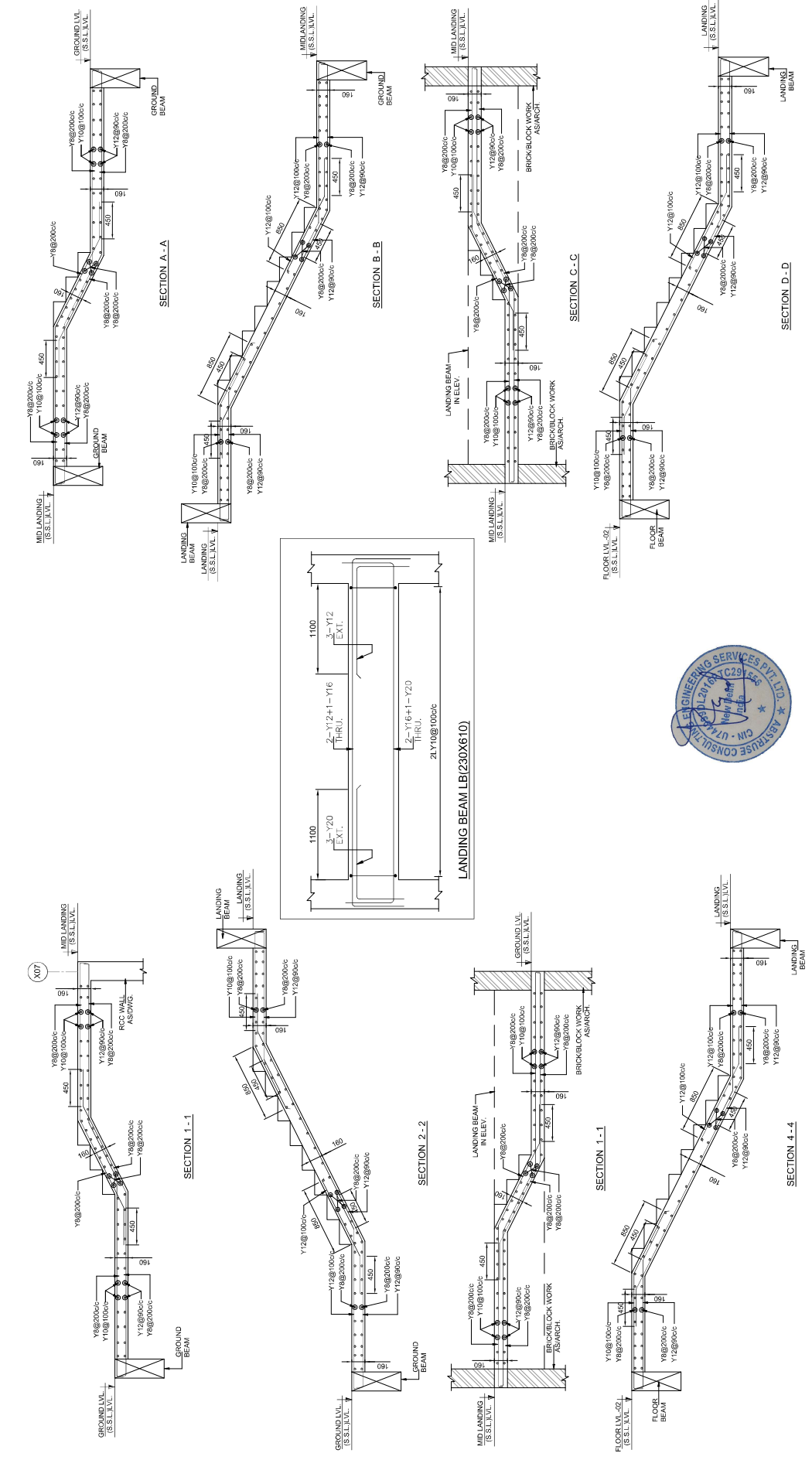
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3. SPANS - 15M TO 20M - 15MM BENDS/45°



STAIRCASE(2) PLAN AT GROUND FLOOR  
STAIRCASE(2) PLAN AT LEVEL -02  
STAIRCASE(2) PLAN AT LEVEL -01



SECTION A - A  
SECTION B - B  
SECTION C - C  
SECTION D - D

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| REVISIONS |  | REV.   | DATE  | SAIDAV     | TENDER DRAWING    | CONTENTS |
|-----------|--|--|---|------------|-------------------|----------|
|           |  | RD   | 31-07-2025                                  | SAIDAV     | DRWN              | CONTENTS |
|           |  | DWG STAGE  |   |            |                   |          |
|           |  | CONVENT  |   |            |                   |          |
|           |  | CONVENTION CENTRE (SITE - 10)  |   |            |                   |          |
|           |  | AUDITORIUM (1000 SEATING CAPACITY)                                   |   |            |                   |          |
|           |  | STAIRCASE 1&2 PLAN AND SECTION                                       |   |            |                   |          |
|           |  | DRWN   | SAIDAV                                      | DWG NUMBER | ACES-IM-AS-ST-229 |          |
|           |  | DESIGN BY  | MARTI                                       | SCALE      | VARIOUS           |          |
|           |  | APPROVED BY  | ABIRAV                                      | PAPER SIZE | A1(94x64)         |          |
|           |  | DATE   | 31-07-2025                                  | REVISIONS  | RD                |          |
|           |  | PROJECT  | IIM SHILLONG, UMAMALI CAMPUS, SHILLONG      |            |                   |          |
|           |  | ARCHITECT  | AKSHAYA JAIN & ASSOCIATES                   |            |                   |          |
|           |  | ARCHITECTURE - PLANNING - INTERIOR DESIGN                            | C-6/1688, VASANT KUNJ, NEW DELHI - 110070   |            |                   |          |
|           |  | CONTACT NO.  | 9871234567, 9871234568, 201232304, 41601615 |            |                   |          |
|           |  | E-MAIL   | mail@akshayajain.com                        |            |                   |          |
|           |  | STRUCTURAL CONSULTANT  | AICIEIS                                     |            |                   |          |
|           |  | BUILDINGS RISE WITH US   |   |            |                   |          |
|           |  | ABTRUSE CONSULTING ENGINEERING SERVICES PVT. LTD.                    |   |            |                   |          |
|           |  | Q-109, BARBERY, SOUTH CITY - 1, SECTOR-40, Gurgaon, HARYANA - 122002 |   |            |                   |          |
|           |  | PHNO - 0124-4119648, 9643994945                                      |   |            |                   |          |
|           |  | CLIENT   |   |            |                   |          |
|           |  | REFERENCE DRAWING  |   |            |                   |          |



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2. THE DRAWING SHALL BE PREPARED IN ACCORDANCE WITH THE RELEVANT ARCHITECTURAL DRAWING IN CASE OF DISCREPANCY BETWEEN ARCH. AND STRUCTURAL DRAWING IT SHOULD BE CORRECTED BY THE ARCHITECT BEFORE EXECUTION CONTRACTOR TO BE ENSURE ASSUMED.
3. THE BUILDING HAS BEEN DESIGNED FOR G+1 STOREY.
4. THE FOUNDATION IS TO BE PLACED ON THE VIRON SOIL. IF FILLED UP SOIL IS ENCOUNTERED IT SHOULD BE BROUGHT IMMEDIATELY TO THE SURFACE AND TO BE PROTECTED BY CONCRETE WORKING.
5. FOR BRICK-BLOCK WALL LONG-BRICK WITH DENSITY 800KG.
6. ALL R.C.C. WORKS SHALL BE CARRIED OUT AS PER IS 456:2000

CONCRETE:-

1. DESIGN MIX CONCRETE SHALL BE AS FOLLOWS:  
A. COLUMN/PIER/BEAM (M30)  
B. FOOTING/PILE CAP (M30)  
C. SLAB (M20)  
D. BEAMS & SLABS (M30)  
E. RCC 1:4:8  
F. PRECASTING WALLS - M30

COVER:-

1. COLUMN COVER TO REINFORCEMENT SHALL BE AS FOLLOWS  
A. COLUMN/PIER/BEAM WALLS = 40 mm  
B. FOOTING/PILE CAP = 75 mm  
C. SLAB = 25 mm  
D. FLOOR BEAM = 25 mm  
E. SLAB = 20 mm  
F. RETAINING WALL = 25 mm  
G. PRECASTING WALLS = 30 mm

REINFORCEMENT:-

1. ALL REINFORCEMENT SHALL BE IN ACCORDANCE WITH IS 1786
2. ALL REINFORCEMENT SHALL BE IN ACCORDANCE WITH IS 1786
3. LAP LENGTH TO BE LA 40D OF BAR MINIMUM

WATER PROOFING:-

- A) ALL CONCRETE FACES IN CONTACT WITH SOIL/WATER BELOW THE FINISHED FLOOR LEVEL SHALL BE PROTECTED BY WATER PROOFING AS PER IS 8755 OR AS SPECIFIED

TYP FOR ALL STRUCTURAL WORKS

N. M. Mohan Krishnan  
Department of Civil Engineering  
Indian Institute of Technology Delhi  
Hauz Khas, New Delhi, India 110016

REVISIONS

| REV. | DATE | DRAWN | CONTENTS |
|------|------|-------|----------|
|      |      |       |          |
|      |      |       |          |
|      |      |       |          |
|      |      |       |          |
|      |      |       |          |

TENDER DRAWING

CONVENTION CENTRE ( SITE - 10 )  
SEMINAR HALL 350 CAPACITY  
COLUMN LAYOUT PLAN

|              |  |             |                   |
|--------------|--|-------------|-------------------|
| DRAWN:       | SUBRAY                                 | DWG NUMBER: | ACES-IM-SH-ST-201 |
| DESIGNED BY: | KARTIK                                 | SCALE:      | VARIOUS           |
| APPROVED BY: | VABRAV                                 | PAPER SIZE: | A1(90x411)        |
| DATE:        | 25.07.2023                             | REVISIONS:  | NR                |
| PROJECT:     | IIM SHILLONG, UNSAWUL CAMPUS, SHILLONG |             |                   |

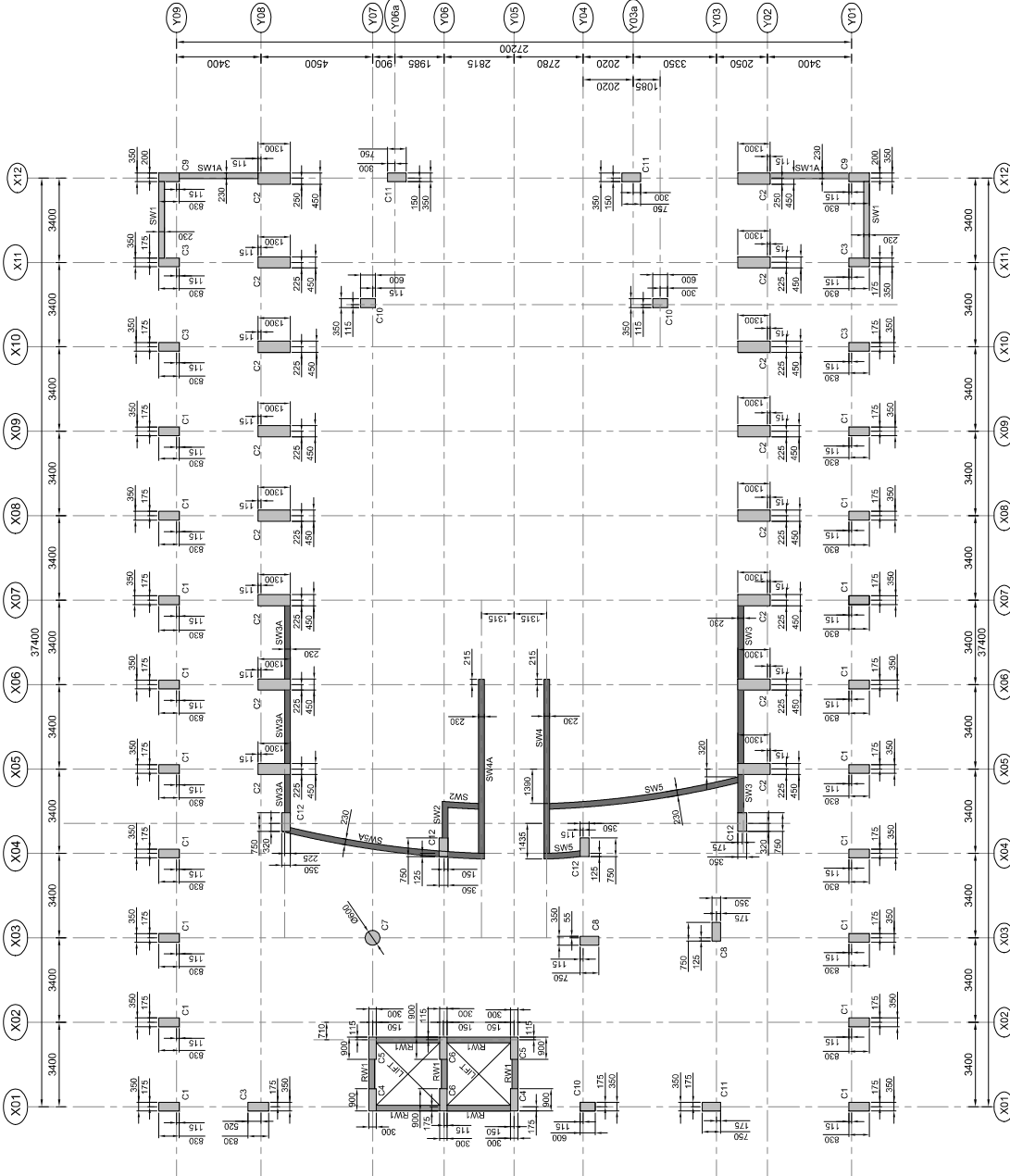
ARCHITECT

AKSHAYA JAIN & ASSOCIATES  
ARCHITECTS & INTERIORS  
C-108, 1ST FLOOR, KUNJ NAGAR, DELHI-110070  
TELEPHONES: 491-11-26136088, 26132304, 41801615  
E-Mail: mail@akshayajain.com

STRUCTURAL CONSULTANT

ABTRUSE CONSULTING ENGINEERING SERVICES PVT. LTD.  
BUILDINGS RISE WITH US  
PLOT NO. 12, INDUSTRIAL ESTATE, GURGAON, HARYANA - 125002  
PH: 0124-4118449, 9643986145  
CLIENT

REFERENCE DRAWING



COLUMN LAYOUT PLAN

| CLIENT | REFERENCE DRAWING |
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|        |                   |

