MEETING ROOM EXTENTION

PROJECT OWNER : INTERNATIONAL WATER MANAGEMENT INSTITUTE

LOCATION : 127, SUNIL MAWATHA, BATTARAMULLA. 10120

ISSUE DATE : 05.03.2023

TENDER DOCUMENT STAGE

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1. GENERAL NOTES
1.1 All the dimensions are in mm and levels are in meter UNO.
1.2 This drawing is to be read in conjunction with all other relevant drawings, any discrepancies to be brought to the attention of the relevant engineer.
1.3 All materials and workmanship to be in accordance with the specifications and relevant Sri Lankan, British and European standards/codes of practice.

2. CONCRETE WORK
2.1 All concrete work shall be in accordance with BS 1181, BS 5027 and specifications.
2.2 Concrete testing shall be in accordance with BS 1182, unless otherwise specified.
2.3 All concrete shall be ready mix and supplied according to the approved designs/wastes.
2.4 All concrete for reinforced concrete work shall be grade 30 as per detailed drawing and with maximum aggregate size 20mm unless noted otherwise.
2.5 Mix designs shall be prepared and submitted by the contractor for approval of the consultant.
2.6 Concrete grade at the column-beam junction to be equal to the grade of the column concrete.
2.7 Concrete shall be well compacted by mechanical means without segregation.
2.8 All concrete surfaces, except those covered by formwork, shall be cured to the satisfaction of the consultant.
2.9 All grade beams and slabs shall be formed on sides unless shown otherwise.
2.10 Concreting of slabs on grade (ground slabs) shall be placed in bays where lengths and widths do not exceed 100m.
2.11 Contractor shall submit results of trial mixes, grading curves and all other details to enable the consultant to evaluate the proposed mix designs.
2.12 Concrete shall be well compacted by mechanical means without segregation.
2.13 Concrete grade at the column-beam junction to be equal to the grade of the column concrete.
2.14 Concrete shall be ready mix and supplied according to the approved designs.
2.15 Minimum free fall of concrete should be limited to 1.5m during the placement of concrete.
2.16 In the event lift height is greater than 1.5m, tremie pipe or similar procedure is not used.
2.17 Consideration shall be given to testability and safety of steel framework during erection. The contractor shall ensure that the structure is not subjected to excessive deflection or stress during erection.
2.18 All dimensions and details to be verified on site and checked by the consultant.
2.19 All construction joints shall be approved by the consultant.
2.20 Minimum free fall of concrete should be limited to 1.5m during the placement of concrete.
2.21 Location of construction joints shall be approved by the consultant.
2.22 Proprietary non-shrink grout with a minimum compressive strength of 60N/mm² at 28 days should be used after the erection and alignment of steel frame/column.
2.23 Technical details including mill certificates of structural steel, set screws, nuts, anchor bolts, decking sheets, shear studs etc. to be forwarded to engineer by contractor prior to fabrication of structural steel works.
2.24 Contractor to prepare shop drawings and forwarded to engineer for verification and approval prior to fabrication of structural steel works.
2.25 Concrete shall be reinforced with grade 500/600. Use of reinforcement for the work will be consensured only upon submittal of relevant information to the consultant for approval. Submittals shall include mill certificates indicating the material composition, yield strength, ultimate strength, and bar bend test.
2.26 No reinforcing bars shall be welded, unless specifically noted or approved by the consultant.
2.27 Concrete cover of reinforcement to be: Crown - internal face 30mm and external face 5mm.
2.28 Lap length for reinforcement (l) = h₁(2h₁+0.25h₂), h₁=height of bar, h₂=aggregate size.

3. REINFORCEMENT STEEL
3.1 All reinforcing steel shall comply with EN 10080/2005 grade S500M deformed type B bars. Use of reinforcement for the work will be consensured only upon submittal of relevant information to the consultant for approval. Submittals shall include mill certificates indicating the material composition, yield strength, ultimate strength, and bar bend test.
3.2 No reinforcing bars shall be welded, unless specifically noted or approved by the consultant.
3.3 Concrete cover of reinforcement to be: Crown - internal face 30mm and external face 5mm.
3.4 Lap length for reinforcement (l) = h₁(2h₁+0.25h₂), h₁=height of bar, h₂=aggregate size.

4. CONCRETE COVERS
4.1 Concrete covers shall be in accordance with the relevant standards/codes of practice.
4.2 Concrete cover to be maintained for a minimum of 14 days if a special curing procedure is not used.
4.3 Concrete cover of reinforcement to be: Crown - internal face 30mm and external face 5mm.
4.4 Lap length for reinforcement (l) = h₁(2h₁+0.25h₂), h₁=height of bar, h₂=aggregate size.
4.5 No concrete is to be poured until the reinforcement has been inspected and approved by the engineer.

5. MINIMUM ANCHORING LENGTH
5.1 Minimum anchoring length should be 450mm.
5.2 All block walls shall be tied with concrete stiffener columns and beams.
5.3 All openings (door/window) shall be stiffened with stiffener columns and beams.

6. SPECIAL NOTES
6.1 The steel members should be sand blasted, wire brushed and cleaned to remove mill scale, dirt and grease.
6.2 The coating system should be confirmed with the BS EN 1294-6:2013 and the minimum thickness should not be less than 215µm.
6.3 Consideration shall be given to testability and safety of steel framework during erection. The contractor shall ensure that the structure is not subjected to excessive deflection or stress during erection.
6.4 All dimensions and details to be verified on site and checked by the consultant.
6.5 Approval by the consultant is required for any changes or modifications to the drawings.
6.6 In case of discrepancies between this general notes drawing and any notes on individual drawings, the notes on individual drawing take precedence.

7. CONSTRUCTION SEQUENCE
7.1 Foundation works shall be completed before concrete placing.
7.2 Formwork shall be removed after concrete has gained sufficient strength.
7.3 All slab/beam work shall be completed before the formation of walls.
7.4 All reinforcement work shall be completed before concrete placing.
7.5 All formwork shall be completed before concrete placing.
7.6 All slab/beam work shall be completed before the formation of walls.
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7.21 All slab/beam work shall be completed before the formation of walls.
TENDER NOTES

1. THESE DRAWINGS ARE PRELIMINARY DRAWINGS ISSUED FOR TENDERING PURPOSES ONLY AS AN INDICATION OF THE EXTENT OF WORKS. THEY ARE NOT A COMPLETE SET OF CONSTRUCTION DRAWINGS AND ARE NOT TO BE USED FOR CONSTRUCTION.

2. TO DETERMINE THE FULL EXTENT OF WORK, THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONTRACT DOCUMENTS.

3. SHOULD ANY AMBIGUITY, ERROR, OMISSION, DISCREPANCY, INCONSISTENCY OR OTHER FAULT EXIST OR SEEM TO EXIST IN THE DOCUMENT, IMMEDIATELY NOTIFY, IN WRITING TO THE SUPERINTENDENT.

4. THIS DRAWING AND DESIGN ARE PATENTED WITH INNOVATIVE STRUCTURES DESIGN GROUP (PVT) LTD. THIS DOCUMENT IS STRICTLY PRIVATE, CONFIDENTIAL AND PERSONAL TO ITS RECIPIENTS AND SHOULD NOT BE COPIED, DISTRIBUTED OR REPRODUCED IN WHOLE OR PART, NOT PASSED TO ANY THIRD PARTY.

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International Water Management Institute (IWMI)
GENERAL NOTE

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.

2. ALL THE STRUCTURAL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWINGS.

3. THE STRUCTURAL STEELWORKS SHOWN ON THE DRAWINGS HAS BEEN DESIGNED TO EN1993-1.

4. UNLESS OTHERWISE SPECIFIED, ALL STEEL MEMBERS SHALL BE OF GRADE S275 COMPLYING TO BS EN 10025-2 OR EQUIVALENT.

5. ALL SET SCREW, NUT AND WASHERS ARE COMPLYING WITH DIN933 OR EQUIVALENT.

6. ALL GRADE 8.8 BOLTS SHALL COMPLY WITH ISO 898-1 & ALL SET SCREW, NUT AND WASHERS ARE COMPLY WITH DIN 933 OR EQUIVALENT.

7. ALL WELDS SHALL COMPLY WITH BS EN 1011-1 & BS EN1011-2.

8. PROPRIETARY NON-SHRINK GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 28 DAYS SHOULD BE USED AFTER THE ERECTION AND ALIGNMENT OF STEEL FRAME/COLUMN.

9. ABBREVIATIONS
   - APS - AS PER SPECIFICATION
   - THK - THICKNESS
   - FW - FILLET WELD
   - RHS - RECTANGULAR HOLLOW SECTION
   - PL - PLATE
   - ∅ - DIAMETER

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GENERAL NOTE

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2. ALL THE STRUCTURAL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH RELLEVANT ARCHITECTURAL DRAWING.

3. UNLESS OTHERWISE SPECIFIED, ALL STEEL MEMBERS SHALL BE OF GRADE S 275 COMPLYING TO BS EN 10025-2 OR EQUIVALENT.

4. ALL SET SCREWS, NUT AND WASHERS ARE COMPLYING WITH DIN933 OR EQUIVALENT.

5. ALL GRADE 8.8 BOLTS SHALL COMPLY EN ISO 898-1 & ALL SET SCREWS, NUT AND WASHERS ARE COMPLY WITH DIN 933 OR EQUIVALENT.

6. ALL WELDS SHALL COMPLY WITH BS EN 1011-4 & BS EN1011-2.

7. PROPRIETARY NON-SHRINK GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 60N/mm² AT 28 DAYS SHOULD BE USED AFTER THE ERECTION AND ALIGNMENT OF STEEL FRAME/COLUMN.

ABBREVIATIONS

APS - AS PER SPECIFICATION
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LEVEL 2 (105.4)

DEAD LOADS
a) SERVICES - 0.5 kpa
b) FLOOR FINISHES - 1.00 kpa

LIVE LOAD
a) OFFICE USE - 5.00 kpa
b) MOVABLE PARTITIONS WITH SELF - WEIGHT > 1.00 kN/m AND <= 2.00 kN/m
ALLOWSMENTS - 0.8 kpa

A P C D E F G

1 2 3 4 5 6 7 8 9 10

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Structural Engineer
Innovative Structures Design Group (Pvt) Ltd.

Job Title
Meeting Room Extension

Drawing Title
Beam Layout
GENERAL NOTE

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
2. ALL THE STRUCTURAL DRAWING SHOULD BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWING.
3. THE STRUCTURAL STEELWORKS SHOWN ON THE DRAWINGS HAS BEEN DESIGNED TO EN1993-1-1.
4. UNLESS OTHERWISE SPECIFIED, ALL STEEL MEMBERS SHALL BE OF GRADE S 275 COMPLYING TO BS EN 10025-2 OR EQUIVALENT.
5. ALL SET SCREW, NUT AND WASHERS ARE COMPLYING WITH DIN933 OR EQUIVALENT.
6. ALL GRADE 8.8 BOLTS SHALL COMPLY EN ISO 898-1 & ALL SET SCREW, NUT AND WASHERS ARE COMPLY WITH DIN933 OR EQUIVALENT.
7. ALL WELDS SHALL COMPLY WITH BS EN 1011-4 & BS EN1011-2.
8. PROPRIETARY NON-SHRINK GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 60N/mm² AT 28 DAYS SHOULD BE USED AFTER THE ERECTION AND ALIGNMENT OF STEEL FRAME/COLUMN.

ABBREVIATIONS

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1. SECTION 1
2. SECTION 2

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**GENERAL NOTE**

1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
2. ALL THE STRUCTURAL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWING.
3. THE STRUCTURAL STEELWORKS SHOWN ON THE DRAWINGS HAS BEEN DESIGNED TO EN1993-1:1.
4. UNLESS OTHERWISE SPECIFIED, ALL STEEL MEMBERS SHALL BE OF GRADE S275 COMPLYING TO BS EN 10025-2 OR EQUIVALENT.
5. ALL SET SCREW, NUT AND WASHERS ARE COMPLYING WITH DIN933 OR EQUIVALENT.
6. ALL GRADE 8.8 BOLTS SHALL COMPLY WITH EN ISO 898-1 & ALL SET SCREW, NUT AND WASHERS ARE COMPLY WITH DIN 933 OR EQUIVALENT.
7. ALL WELDS SHALL COMPLY WITH BS EN 1011-1 & BS EN1011-2.
8. THE STRUCTURAL STEELWORKS SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED TO EN1993-1:1.
9. HIGH STRENGTH GROUT WITH A MINIMUM COMPRESSIVE STRENGTH OF 60 N/mm² AT 28 DAYS SHOULD BE USED AFTER THE ERECTION AND ALIGNMENT OF STEEL COLUMN.

**ABBREVIATIONS**

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- PL: PLATE
- ∅: DIAMETER
- DIA: DIAMETER

**DRAWING NO:**

- S2-05

**DRAWING TITLE:**

- SECTION DETAIL 01

**ARCHITECTS:**

- SHERAN HENRY ASSOCIATES

- 25/3, Lauries Road, Colombo 4

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- Web: www.isdg.lk

**JOB NO:**

- DDG/M/E-2010-01

**DRAWINGIBILITY:**

- 1:20

**DRAWING CONTENT:**

- COLUMN TO PRIMARY BEAM CONNECTIONS

**DRAWING TITLE:**

- SECTION DETAIL 01

**DRAWING STATUS:**

- INFORMATION

**NOTES:**

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GENERAL NOTE

1. All dimensions are in mm unless noted otherwise.
2. All the structural drawing should be read in conjunction with relevant architectural drawing.
3. The structural steelworks shown on the drawings has been designed to EN1993-1-1.
4. Unless otherwise specified, all steel members shall be of grade S275 complying to BS EN 10025-2 or equivalent.
5. All set screws, nuts and washers are complying with Din933 or equivalent.
6. All grade 8.8 bolts shall comply with EN ISO 898-1 and all set screw, nut and washers are comply with DIN 933 or equivalent.
7. All welds shall comply with BS EN 1011-1 & BS EN1011-2.
8. Proprietary non-shrink grout with a minimum compressive strength of 60N/mm² at 28 days should be used after the erection and alignment of steel frame/column.
9. Abbreviations

  - APS - AS PER SPECIFICATION
  - THK - THICKNESS
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  - PL - PLATE
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GENERAL NOTE
1. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
2. ALL THE STRUCTURAL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWINGS.
4. CONCRETE COVER OF REINFORCEMENT TO BE: - COVER INTERNAL FACE 35mm AND EXTERNAL FACE 50mm.
5. THE GRADE OF CONCRETE TO BE C25/30 UNLESS OTHERWISE NOTED.

FOOTING DETAIL

COLUMN REFERENCE

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1200 300

LEVEL

50 CVR

1 : 20

FOOTING REINFORCEMENT DETAIL
GENERAL NOTE

1. THE COMPOSITE BEAMS AND BONDECK SLABS SHOWN ON THE DRAWINGS HAS BEEN DESIGN TO BS EN 1994-1-1.

2. UNLESS OTHERWISE SPECIFIED ALL BARE STEEL MEMBERS SHALL BE OF GRADE S 275 COMPLYING TO BS EN 10025-2 OR EQUIVALENT.

3. CONCRETE GRADE C25/30 SHOULD BE USED FOR BONDECK SLAB.

PROFILE DECKING SHEET

1. DECKING SHEETS SHOULD BE HOT DIPPED ZINC COATED HIGH STRENGTH WITH MINIMUM 350 MPY YIELD STRENGTH AND COATING MASS OF 2.75X (MIN 275 g/m²) OR ZINC COATING ON BOTH SIDES.

2. ALL THE PROFILE DECKING SHEETS SHOULD BE COMPLIANCE TO BS EN 10147: 2000.

STUD & STUD THROUGH WELDING DECK

1. ALL STUDS SHOULD BE LOW CARBON STEEL, WITH A MINIMUM YIELD STRENGTH OF 350 N/mm² AND MINIMUM TENSILE STRENGTH OF 450 N/mm² IN ACCORDANCE WITH BS EN ISO 13918.

2. DRAWN ARC STUD WELDING PROCESS MUST BE FOLLOWING FOR THE STUD WELDING.

3. ALL THE STUD WELDING SHOULD BE COMPLIANCE TO EN ISO 14555: 247 ARC STUD WELDING OR METALIC MATERIALS.

4. Top flanges of beams must be unpainted, where the studs are to be welded.

5. The beams should be free of dirt, sand and other materials.

6. The beams should be free of heavy rust and mill scale.

A93 MESH (TOP & BOTTOM)