Impress Newtex Composite Textiles Ltd. (Extension)

Category Green

Gorai Industrial Area, Mirzapur, Tangail
(24.089497, 90.171619)

7 November 2021

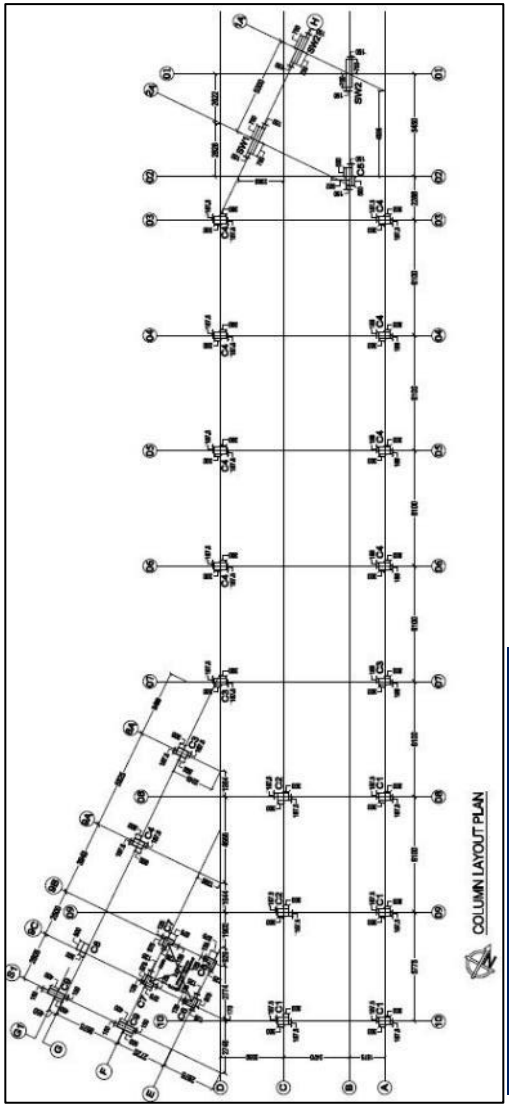
RSC RMG SUSTAINABILITY COUNCIL

Buildings Information

1. Multipurpose Office Building (G+3)
2. Utility Building (G+1)
3. RMS Room (single storied)
4. WTP shed (single storied)
5. ETP shed (single storied)
6. Kitchen Room (single storied)
7. Security Post (single storied)
8. Guard Room (single storied)

Observations

Inconsistency in the design report



Column layout

Ground floor Column:

RCC Column Capacity Check

INCTL Multipurpose Building

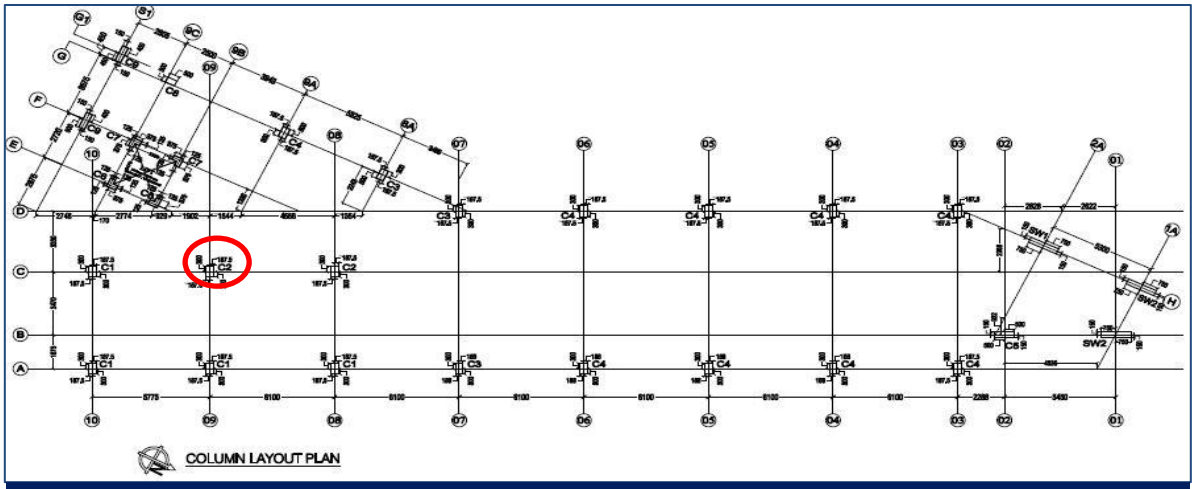
Sl.	Grid no	Column ID (As Built Drawing)	Column Size (mm)		Provided rebar From As Built drawing (sq.inch)	Required Rebar from AS-BUILT MODEL	Remarks (As Built)
1	S1/G	C9	300	900	10.64	4.32	OK
2	S1/F	C9	300	900	10.64	4.32	OK
3	9C/G	C8	300	500	9.12	3.476	OK
4	9C/F	C7	500	500	8.04	3.24	OK
5	9C/E	C6	500	500	5.16	3.24	OK
6	9B/F	C7	500	500	8.04	3.24	OK
7	9B/E	C6	500	500	5.16	3.24	OK
8	9A/G	C4	375	600	12.16	8.302	OK
9	8A/G	C3	375	600	9.12	3.6	OK
10	10/C	C1	375	600	5.16	3.6	OK
11	10/A	C1	375	600	5.16	3.6	OK
12	09/C	C2	375	600	8.04	4.651	OK
13	09/A	C1	375	600	5.16	3.6	OK
14	08/C	C2	375	600	8.04	4.932	OK
15	08/A	C1	375	600	5.16	4.09	OK
16	07/D	C3	375	600	9.12	7.456	OK
17	07/A	C3	375	600	9.12	8.302	OK
18	06/D	C4	375	600	12.16	8.863	OK
19	06/A	C4	375	600	12.16	8.302	OK
20	05/D	C4	375	600	12.16	8.582	OK
21	05/A	C4	375	600	12.16	8.863	OK
22	04/D	C4	375	600	12.16	8.582	OK
23	04/A	C4	375	600	12.16	9.425	OK
24	03/D	C4	375	600	12.16	8.021	OK
25	03/A	C4	375	600	12.16	6.055	OK
26	02/B	C5	300	1000	5.88	4.81	OK

Column rebar check

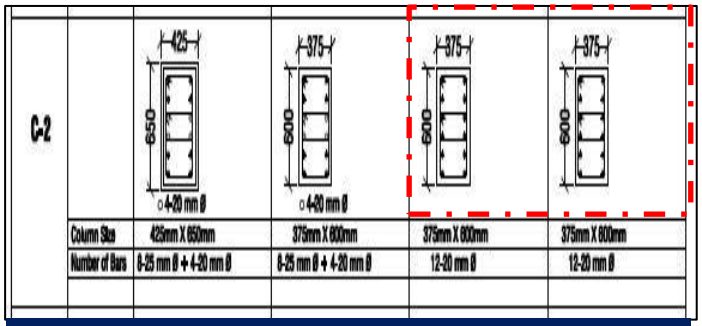
Building is irregular in shape which having one side shear wall which may occur torsional irregularity. In column capacity check there was not shown PMM ratio. No adequacy check of shear wall also found. Building engineer is required to revise design report showing all criteria.

Observations: Multipurpose office Building

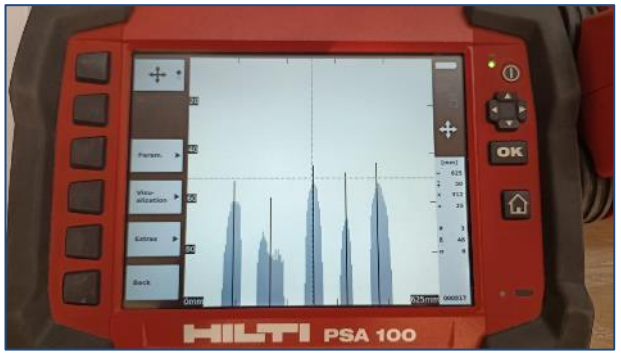
Discrepancies in as-built drawing



Column layout plan



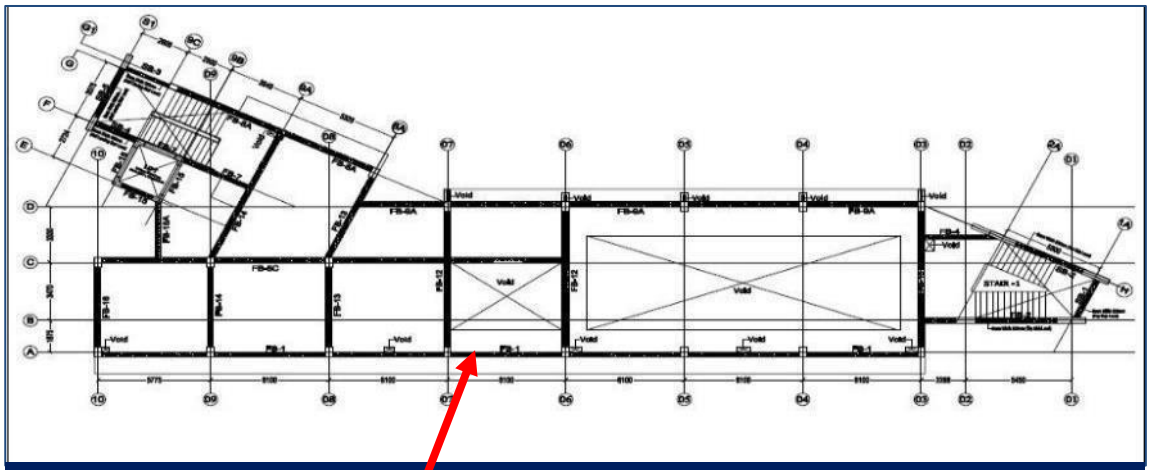
Schedule of C2



Rebar Found in ferro scan

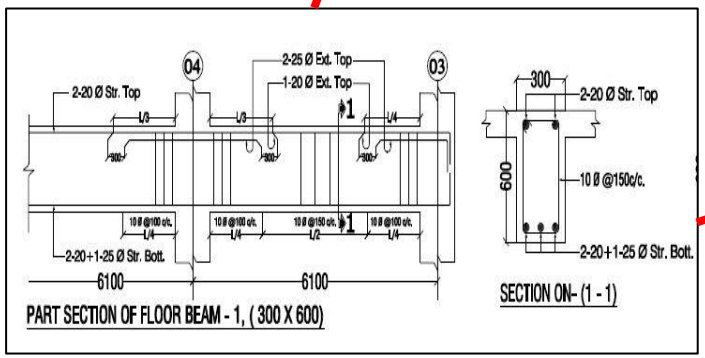
At 2nd floor to roof rebar of C2 column shown in long side is 6 in which was found 5 Building engineer is required to update the as-built drawing.

Observations: Multipurpose office Building

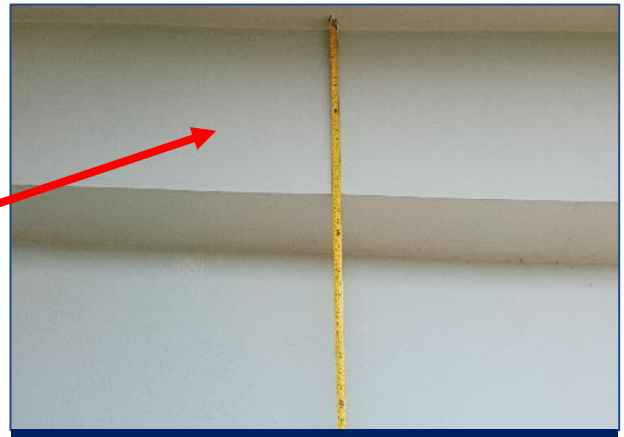


3rd floor roof beam layout

Slab thickness



Section 0f FB1

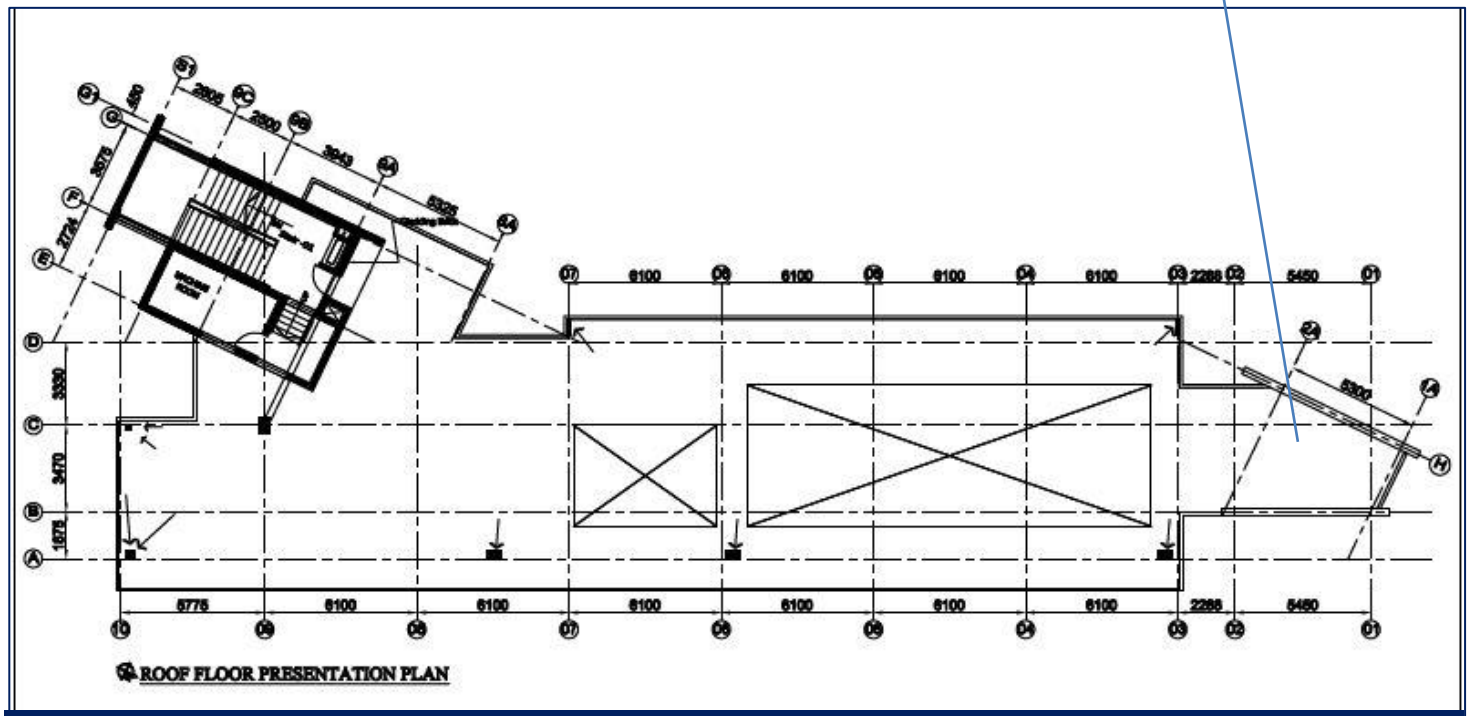


Beam d/s size

At 3rd floor roof FB1 size in drawing was 300mm X 600mm, which depth is found 675mm including slab . Building engineer is required to update the as-built drawing.

Observations: Multipurpose office Building

At roof there were two plastic water tank of 2000 litre capacity each which is not shown in drawing. Building engineer is required to update the as-built drawing showing those in roof layout plan.



Roof Layout

Observations: Multipurpose office Building

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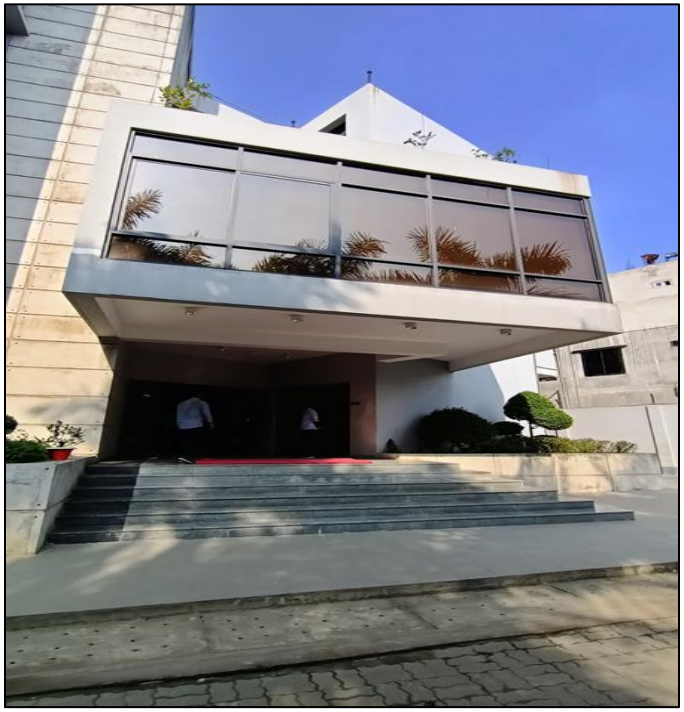
Deflection check of 3.2 m cantilever beam and slab



At first floor 3.2 m cantilever slab is observed. The building engineer is required to check adequacy & deflection of the cantilever slab and beam.

Observation: Multipurpose office Building

Lack of Design report

Observations: Utility Building

As per BNBC every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC. During the inspection, the design report has not been found which is required to be prepared in compliance with section 1.9.1 (part-6, BNBC).

Two storied Utility Building

Observations: Utility Building

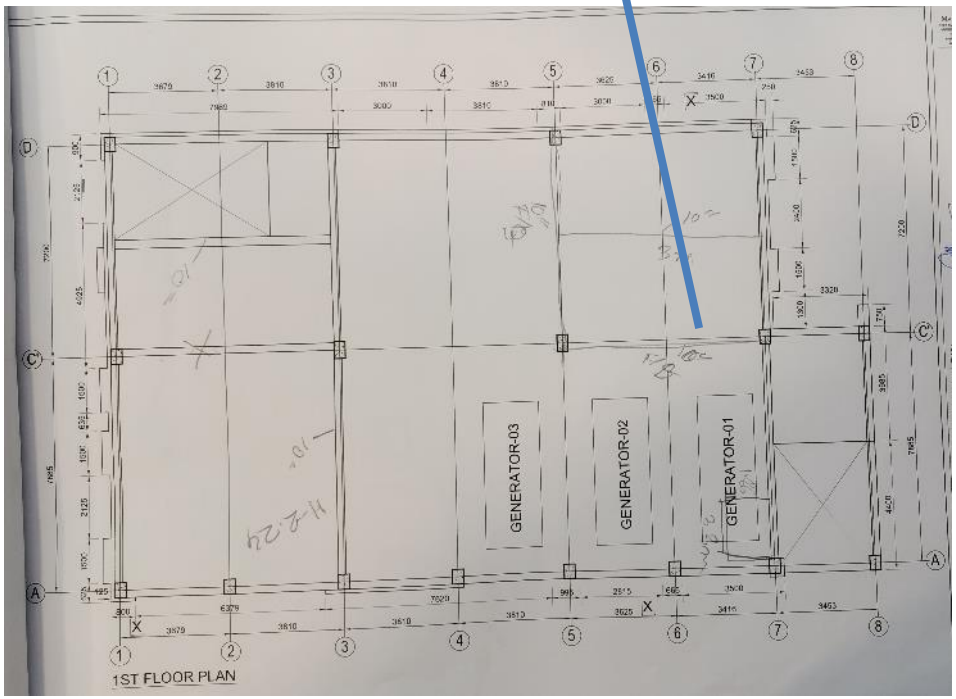
Lack of documents & discrepancy in as-built drawing

Observations: Utility Building

Toilet Built up (300mm)

Brick wall found

Toilet Built up at 2nd floor stair and 250mm brick wall at first floor were found on site which are not mentioned in provided as-built drawing. Building engineer is required to update the as-built drawing.



Observations: Utility Building

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Lack of lateral stability

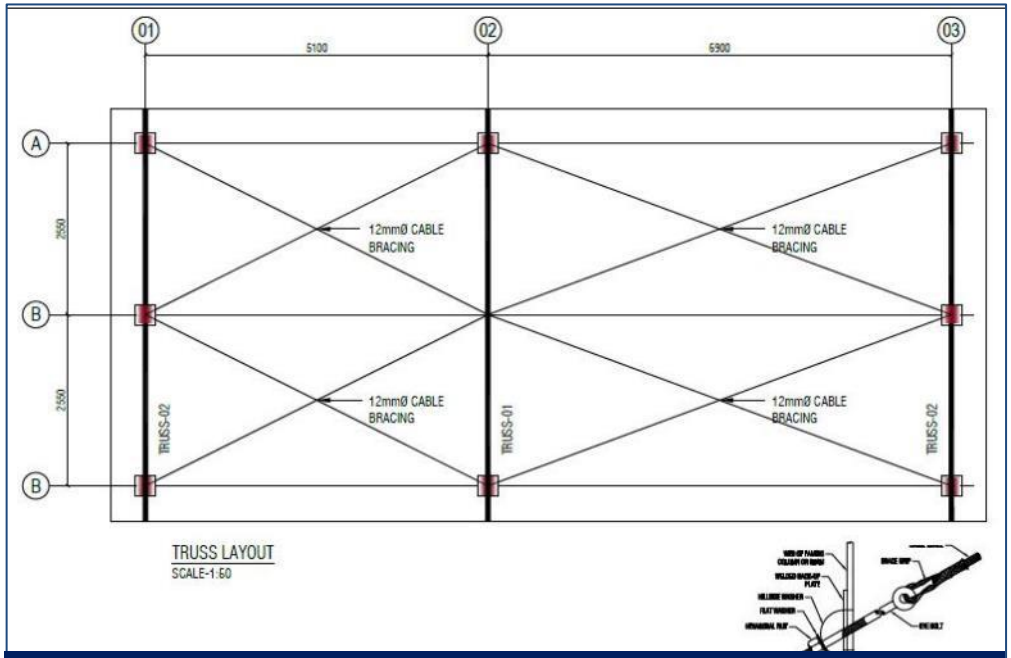
Observation: Kitchen Room

No bracings were found in as-built condition. Apparently non-engineered connection were found.

Building engineer is required to check the lateral stability and connection adequacy of the structure for uplift forces.

No bracings

Truss welded with rebar of column



Bracings on as-built drawing

Observation: Kitchen Room

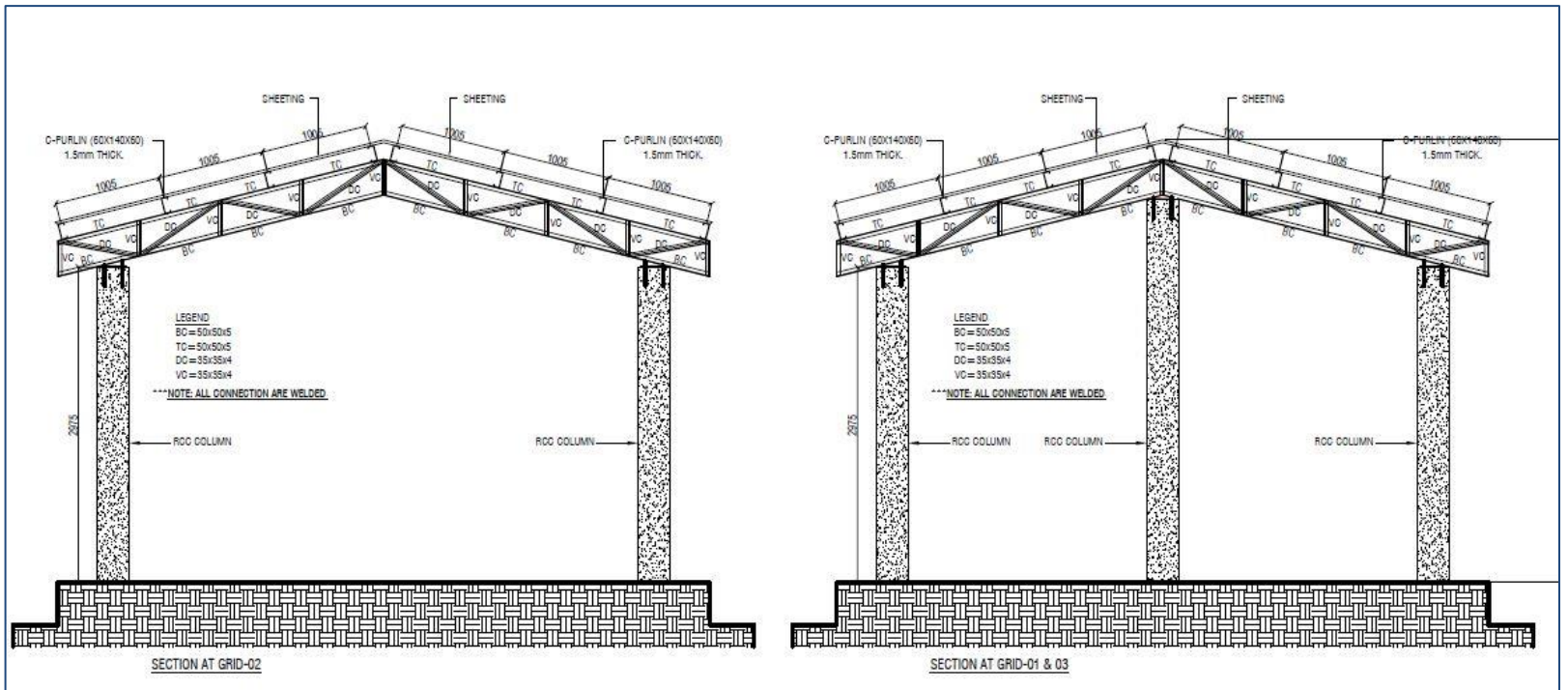
Inconsistencies in as-built drawing

Observation: Kitchen Room

Truss sections and sizes are not matched with provided as-built drawings.

Building engineer is required to survey the whole structure and prepare as-constructed drawing.

Truss section in as-built condition



Truss section in drawings

Observation: Kitchen Room

Problems Observed

Multipurpose Office Building:

Item 01: Inconsistency in the design report.
Item 02: Discrepancy in as-built drawing.
Item 03: Deflection check of 3.2 m cantilever beam and slab.

Utility Building:

Item 04: Lack of Design report.
Item 05: Lack of documents and Discrepancy in as-built drawing.

Kitchen Room:

Item 06: Lack of lateral stability.
Item 07: Inconsistencies in as-built drawing.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Inconsistency in the design report. (Multipurpose office building)	Factory is required to check the adequacy of shear wall and incorporate all kinds of irregularity (Torsional, mass, diaphragm discontinuity, stiffness, etc.) check in design report according to BNBC.	6-weeks
02	Inconsistency in the design report. (Multipurpose office building)	Revise the prepared load plan if required.	6-weeks
03	Inconsistency in the design report. (Multipurpose office building)	Implement any remediation work if required.	6-months
04	Inconsistency in the design report. (Multipurpose office building)	Implement floor load plan.	6-months
05	Discrepancy in as-built drawing. (Multipurpose office building)	Building engineer is required to survey the structure & prepare as-built drawings.	6-weeks
06	Deflection check of 3.2 m cantilever beam and slab. (Multipurpose office building)	Building engineer is required to check the adequacy & deflection of the cantilever slab and beam.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
07	Deflection check of 3.2 m cantilever beam and slab. (Multipurpose office building)	Implement any remediation work if required.	6-months
08	Lack of Design report. (Utility Building)	Building engineer to prepare the design document including a design report, in compliance with section 1.9.1.1 as per BNBC.	6-weeks
09	Lack of Design report. (Utility Building)	Complete implementation of any remedial works deemed necessary by the Design Report.	6-months
10	Lack of documents and discrepancy in as-built drawing. (Utility Building)	Building engineer is required to survey the structure & prepare complete as-built drawings.	6-weeks
11	Lack of lateral stability. (Kitchen Room)	Building engineer is required to check the lateral stability and connection adequacy of the structure for uplift forces.	6-weeks
12	Lack of lateral stability. (Kitchen Room)	Implement remedial actions where necessary.	6-months
13	Inconsistencies in as-built drawing. (Kitchen Room)	• The building engineer to survey the structure and prepare as-built structural drawings with clear connection details.	6-weeks