Ayesha Clothing Company Ltd. (Printing Unit -2)

Bangobondhu Road, Tongabari, Ashulia, Savar, Dhaka
(23.896647, 90.314559)
14 August 2023

RSC RMG SUSTAINABILITY COUNCIL

Building Information:

1. **04 Storied RCC Building (Building-L):** This structure is a four storied (G+3) reinforced concrete (RC) building with a self supported (separate) steel floor at ground inside the building.
2. **Driver Rest room:** This structure is a single storied shed.
3. **Screen Washroom:** This structure is a single storied shed.
4. **Fabric Inspection Room:** This structure is a single storied shed.
5. **RMS Room:** This structure is a single storied RC building.
6. **Guard Room:** This structure is a single storied RC building.

Observations

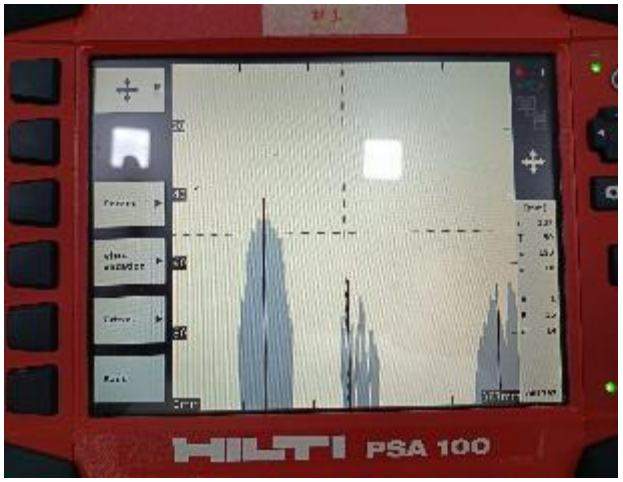
Inconsistencies in as built drawings

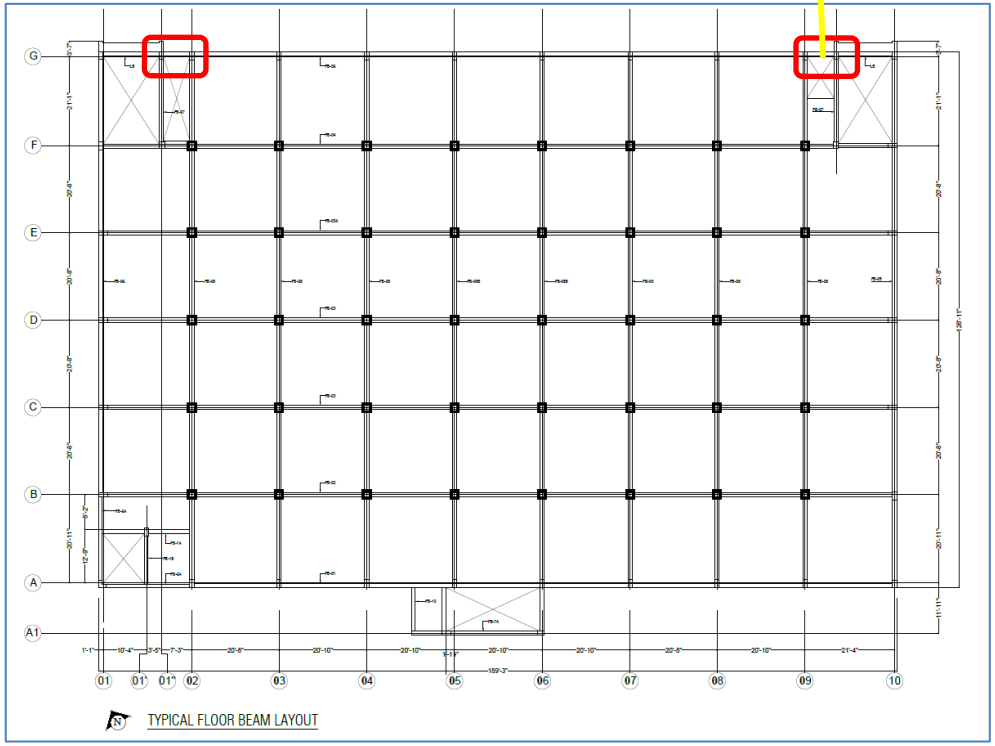
Observation: 04 Storied RCC Building

COLUMN SCHEDULE OF NEW COLUMN

SCHEDULE OF COLUMN SIZE AND REINFORCEMENT

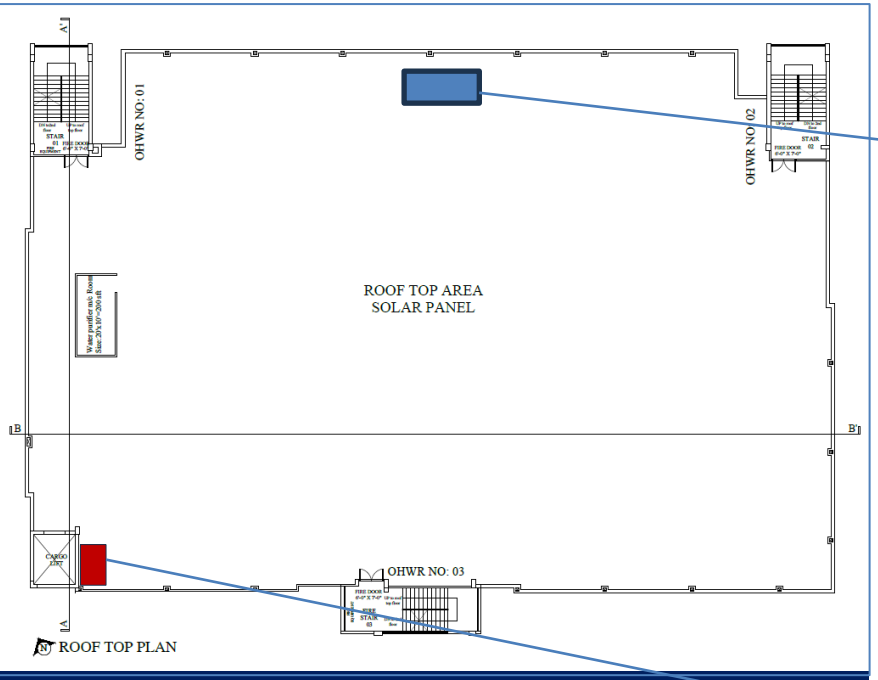
COLUMN ID	BELOW GROUND LEVEL		GROUND TO 1ST FLOOR		2ND TO ROOF FLOOR	
	NOS OF REINFORCEMENT	COLUMN SIZE	NOS OF REINFORCEMENT	COLUMN SIZE		
C-5	● 10-20mmØ	23" × 15"	● 10-20mmØ	20" × 12"	● 6-20mmØ ○ 4-16mmØ	20" × 12"
C-6	● 12-20mmØ	23" × 15"	● 12-20mmØ	20" × 12"	● 6-20mmØ ○ 6-16mmØ	20" × 12"
C-7	● 12-20mmØ	23" × 18"	● 12-20mmØ	20" × 15"	● 6-20mmØ ○ 6-16mmØ	20" × 15"
C-8	● 16-20mmØ	27" × 15"	● 16-20mmØ	24" × 12"	● 8-20mmØ ○ 8-16mmØ	24" × 12"
C-1A	● 12-20mmØ	23" × 20"	● 12-20mmØ	20" × 20"	● 8-20mmØ ○ 4-16mmØ	20" × 20"





Number of rebar at C-7 column found less than the drawings. At shorter face 3 nos of rebar was found whereas drawings shows 4 nos. Also, beam Layouts are not fully matched with site condition. Mismatches are shown in red on the beam layout.

Observation: 04 Storied RCC Building



Tie Beam Layout

AC outdoors

BTS room

BTS room and AC outdoors were not shown in the roof layout and load plan. Building engineer is required to revise the survey the as-built condition and prepare full set of as-built drawings. Also, update the design report addressing the mismatches and applying the additional load of BTS room & AC outdoors.

Observation: 04 Storied RCC Building

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Dampness at celling and water ponding at roof

Observation: 04 Storied RCC Building

Water ponding at roof

Dampness on slab soffit

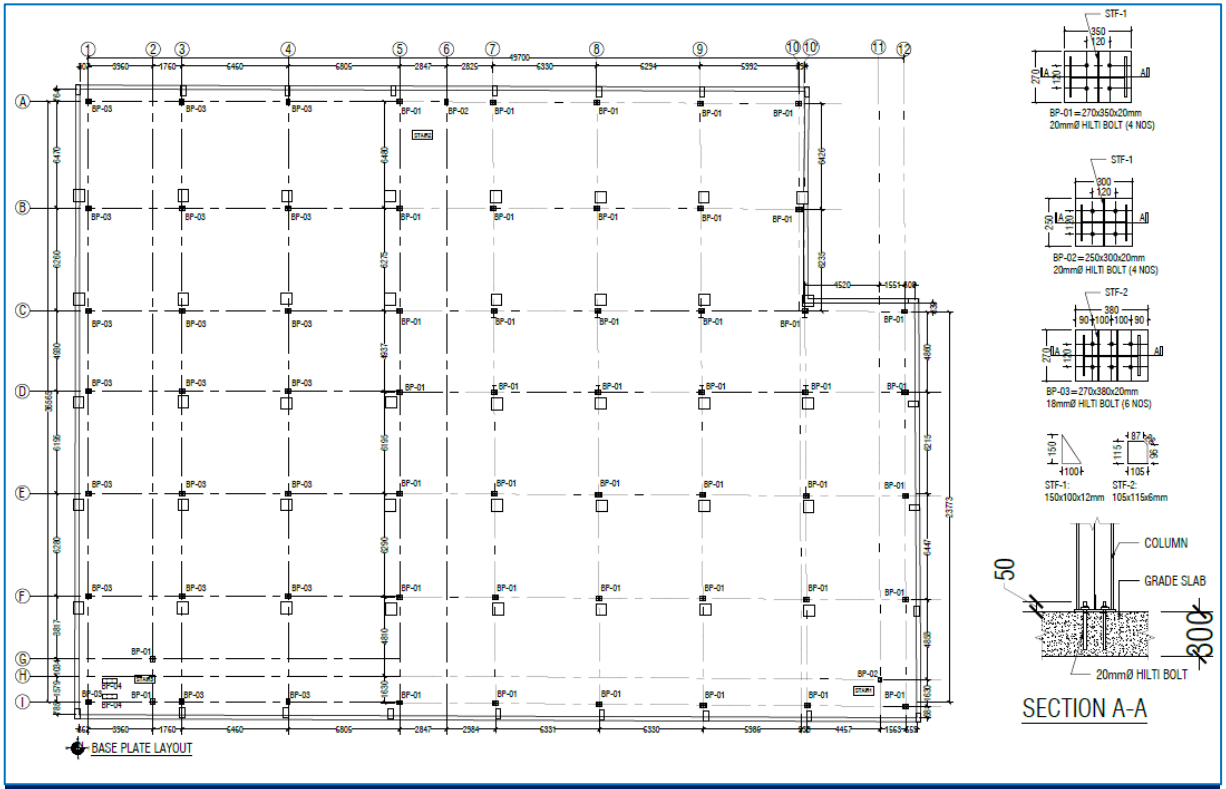
Dampness at celling and water ponding at roof was observed during inspection at Building L.

Observation: 04 Storied RCC Building

Lack of foundation details

Observation: Steel Mezzanine

Foundation details of the steel structure not mentioned in the drawings. Building engineer is required to check the foundation system and bearing/punching capacity of foundation of the steel structure.



Base plate layout

Base plate

Observation: Steel Mezzanine

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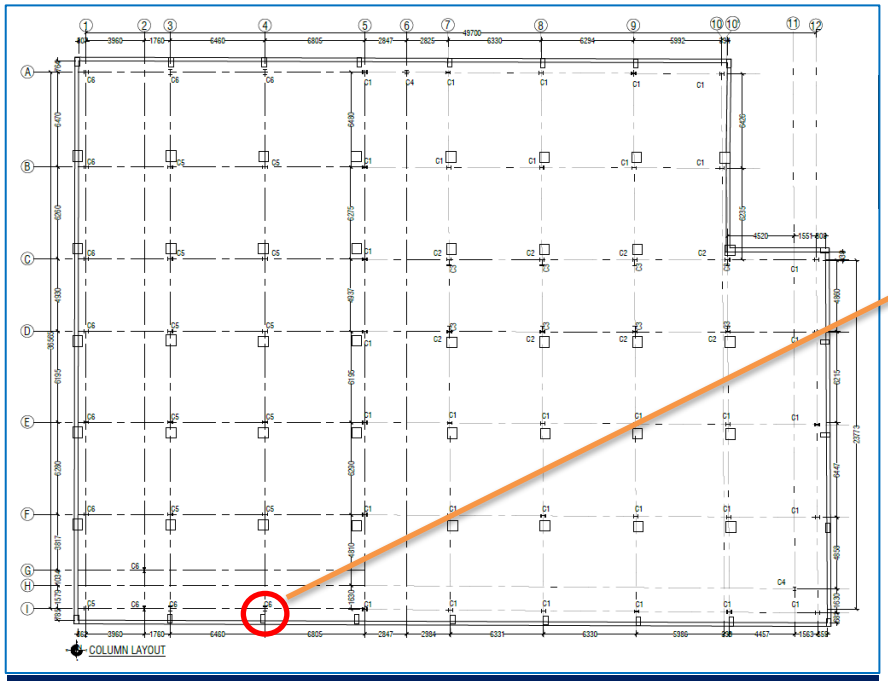
Distorted steel column

Observation: Steel Mezzanine

A distorted steel column found on ground floor at steel mezzanine. Stability for the distorted columns and related elements need to be checked. Factory Engineer to review design, loads and column stress in the area identified above.



Column Layout

Distorted steel column

Observation: Steel Mezzanine

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Nut missing and connection gap

Observation: Steel Mezzanine

Gap observed in connections

Nut missing and significant gaps observed in beam joint at several locations. Building engineer is required to carry out suitable remedial works.

Nut missing at base plate

Observation: Steel Mezzanine

Corrosion in steel member

Observation: Steel Mezzanine

Corrosion in steel column base plate were observed in the several locations. The building engineer is required to take proper remedial measure.

Corrosion

Corrosion

Observation: Steel Mezzanine

Apparently non-engineered connection

Observation: Driver Rest room, Screen Washroom, Fabric Inspection Room

Apparently inadequate connections were observed at the lightweight roof of the single storied Sheds. The building engineer to check the connection adequacy of the lightweight roof against the uplift pressure of wind.

Driver Rest Room

Fabric Inspection Room

Screen Washroom

Observation: Driver Rest room, Screen Washroom, Fabric Inspection Room

Problems Observed

04 Storied RCC Building:

Item 01: Inconsistencies in as built drawings.
Item 02: Dampness at celling and water ponding at roof.
Item 03: Lack of foundation details. (Steel mezzanine)
Item 04: Distorted steel column. (Steel mezzanine)
Item 05: Nut missing and connection gap. (Steel mezzanine)
Item 06: Corrosion in steel member. (Steel mezzanine)

Driver Rest room, Screen Washroom, Fabric Inspection Room:

Item 07: Apparently non-engineered connection.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Inconsistencies in as built drawings. (04 Storied RCC Building)	Building engineer is required to revise the as-built drawing along with design report in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.	6-weeks
02	Inconsistencies in as built drawings. (04 Storied RCC Building)	Implement the recommendations of design report if any.	6-months
03	Dampness at wall and water ponding at roof. (04 Storied RCC Building)	Building engineer is required to improve the roof drainage system with adequate slope.	6-weeks
04	Dampness at wall and water ponding at roof. (04 Storied RCC Building)	Building is required to repair the damp areas with suitable method.	6-weeks
05	Lack of foundation details. (Steel Mezzanine)	Building engineer is required to update the as-built drawing along with design report in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
06	Lack of foundation details. (Steel Mezzanine)	Building engineer is required to check the bearing and punching capacity of foundation system.	6-weeks
07	Lack of foundation details. (Steel Mezzanine)	Implement remedial works if required.	6-months
08	Distorted steel column. (Steel Mezzanine)	Building engineer to review design of distorted steel column considering the as-built condition of the column.	6-weeks
09	Distorted steel column. (Steel Mezzanine)	Carry out remedial works (if any).	6-months
10	Nut missing and connection gap. (Steel Mezzanine)	Building engineer is required to repair the gap in connections with a suitable method.	6-weeks
11	Nut missing and connection gap. (Steel Mezzanine)	Install the missing nut where necessary.	6-weeks
12	Corrosion in steel member. (Steel Mezzanine)	Building engineer to remove the corrosion and apply suitable corrosion resistance coating.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
13	Apparently non-engineered connection. (Driver Rest room, Screen Washroom, Fabric Inspection Room)	Building engineer is required to check the connection of the steel roof for the uplift pressure of wind.	6-weeks
14	Apparently non-engineered connection. (Driver Rest room, Screen Washroom, Fabric Inspection Room)	Complete implementation of remedial works if required.	6-months