

DK Global Fashion Wear Ltd.

H#330/1, West Souldubi, Kashimpur, Gazipur

(23.965755N, 90.305558E)

17 July 2023



Building Information

1. **Production Building:** The structure is a two storied (G+1) prefabricated steel structure.
2. **Utility Building:** The structure is a two storied (G+1) reinforced concrete building.
3. **Canteen Building:** The structure is a single storied reinforced concrete building.
4. **Security Guard Room:** The structure is a two storied (G+1) reinforced concrete building.

Observation

Lack of lateral stability system

Observation: Building-1 (Production Building)



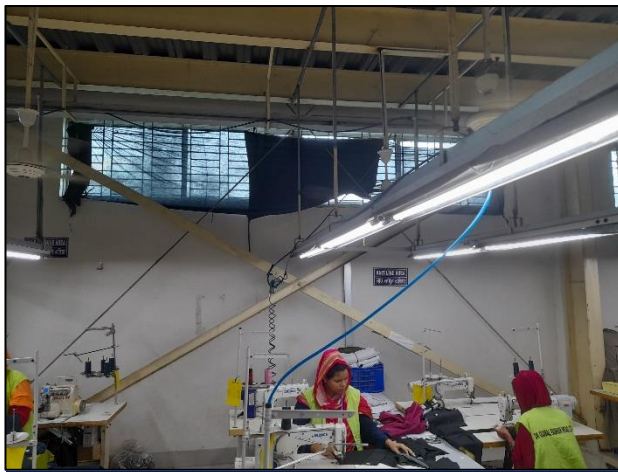
Roof & wall bracing provided



Compression strut missing in gable frame

Roof and wall bracing were provided at some location. However, compression strut was missing in gable frames to transfer the lateral load therefore lateral stability system of the shed is apparently incomplete. Building engineer is required to check the lateral stability system of the structure and suggest necessary remedial actions accordingly.

Lack of information in as-built drawing



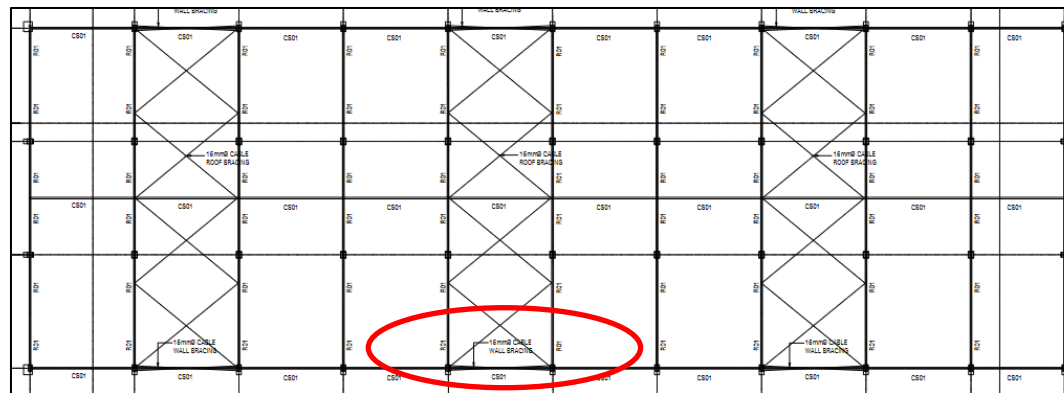
Angle bracing (Ground Floor)



Cable bracing (1st Floor)



Roof bracing



Bracing layout plan

In bracing layout plan, only horizontal and vertical cable bracing was shown. However, no information was available regarding vertical angle bracing on ground floor. In addition, elevation view and connection details of bracings were also not present in the as-built structural drawing. The building engineer is required to survey the whole structures and prepare accurate as-built drawings accordingly.

Significant gap in connection at several location

8 Observation: Building-1 (Production Building):

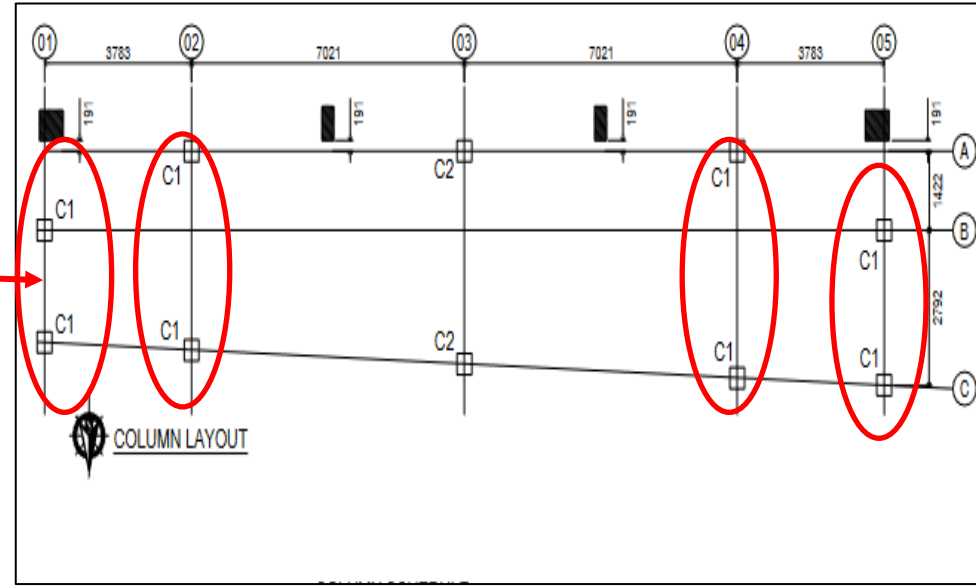


Significant gap in steel connection plates in different location



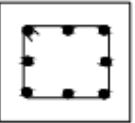
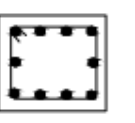
Significant gap in steel connection plates of rafter & column was found at different locations of the structure. Building engineer is required to survey the whole structure & identify the locations of the connection gaps. Factory engineer is also required to assess the reason of connection gap & provide proper remediation. Factory is required to follow recommendation of remediation suggested by the engineer.

Discrepancies in as-built drawing



C6 column was measured 450 mm instead of 500 mm

COLUMN SCHEDULE

Column Type	C1	C2
GF TO ROOF	425X425  8-16mmØ	375X375  10-16mmØ

Column schedule

In column schedule C1 column dimension was shown 425X425 mm. However, during inspection, all C1 columns were measured 375X375 mm. The building engineer is required to survey the whole structures and prepare accurate as-built drawings accordingly.

Lack of fall protection



Opening at parapet wall

There were an opening area in parapet wall on canteen building roof which may cause falling hazard. The factory is required to provide adequate barrier/railing/walls on the opening area to protect possible falling hazard.

Lack of water proofing at MCAC roof



MCAC roof of Canteen Building

Water proofing was not applied on the roof. The roof is made of brick aggregate concrete. The building engineer is required to apply the water proofing layer on the current roof with proper slope.

Absence of as-built drawings and design documents.



Inside of Security Guard Room



Security Guard Room

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, part-6 of BNBC. At the time of inspection, no as-built drawings and design documents were available which are required to be prepared in compliance with section 1.9.1.1 (part-6, BNBC).

Observation: Security Guard Room

Crack on masonry wall



Cracks on masonry walls

Building engineer is required to investigate the cause of wall cracks and repair with a suitable method.

Apparently non engineered steel stair

Observations: Security Guard Room



Non-engineered steel stair

Both Shed-1 and Shed-2 were appeared to be non engineered due to lack of apparent load path, poor connection and apparently inadequate member size. Building engineer is required to check the connection adequacy for uplift forces as part of EA otherwise replace with engineered structure.

Problems Observed

Building-1 (Production Building):

- Item 01: Lack of lateral stability system.
- Item 02: Lack of information in as-built drawing.
- Item 03: Significant gap in connection at several location.

Building-2 (Utility Building):

- Item 04: Discrepancies in as-built drawing

Canteen Building:

- Item 05: Lack of fall protection.
- Item 06: Lack of water proofing at MCAC roof.

Security Guard Room:

- Item 07: Lack of as-built drawings and design documents.
- Item 08: Cracks on masonry walls.
- Item 09: Apparently non engineered steel stair

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Lack of lateral stability system. (Production Building)	Building engineer is required to check the lateral stability of the structure and suggest necessary remedial actions accordingly.	6-weeks
02	Lack of lateral stability system. (Production Building)	Implement suggested remediation work if required.	6-months
03	Lack of information in the as-built drawings. (Production Building)	The building engineer is required to survey the structure and prepare accurate as-built drawing.	6-weeks
04	Significant gap in connection at several location. (Production Building)	Building engineer is required to repair the gap in connections with a suitable method.	6-weeks
05	Discrepancies in the as-built drawings. (Utility Building)	The building engineer is required to survey the structure and prepare accurate as-built drawing.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
06	Lack of fall protection (Canteen Building)	Building engineer is required to provide adequate barrier/walls on the opening area of the roof to protect possible falling hazard.	6-weeks
07	Lack of water proofing at MCAC roof (Canteen Building)	The building engineer is required to apply the water proofing layer on the current roof with proper slope.	6-weeks
08	Lack of as-built drawings and design documents. (Security Guard Room)	Building engineer is required to prepare the design documents including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2, part-6 of BNBC and submit it to RSC for review.	6-weeks
09	Lack of as-built drawings and design documents. (Security Guard Room)	Carry out remedial works (if any) after reviewed by the RSC.	6-months
10	Cracks on masonry wall. (Security Guard Room)	Building engineer is required to investigate the cause of wall cracks and repair with a suitable method.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
11	Cracks on masonry wall. (Security Guard Room)	Building engineer is required to investigate the cause of wall cracks and repair with a suitable method.	6-months
12	Apparently non engineered steel stair. (Security Guard Room)	Building engineer is required to check the connection adequacy for uplift forces as part of EA otherwise replace with engineered structure.	6-weeks
13	Apparently non engineered steel stair. (Security Guard Room)	Carry out remedial works (if any) after reviewed by the RSC.	6-months