

Dewan Fashion Wears Ltd. (Relocated)

Mamun Nagor, Sarabo, Kashimpur, Gazipur.

(23.9847130, 90.2724886)

09 July 2023



Building Information

1. **Main Building:** This structure is a seven storied (G+6) reinforced concrete (RC) building.
2. **Utility Building:** This structure is a single storied reinforced concrete (RC) building.
3. **Fire Pump & Boiler Room:** This structure is a two storied (G+1) reinforced concrete (RC) building.
4. **Security Building:** This structure is a single storied reinforced concrete (RC) building.

Observations

Design report to be revised

Disclaimer:

This analysis report is prepared for 7-STORIED FACTORY BUILDING of DEWAN FASHION WEARS LTD at MAMUN NAGAR, SARABO, KASHIMPUR, GAZIPUR. Is Designed by Me. The writer only analyzed the structure, investigated member composition, and matched the design data with investigation report and provided conclusion & recommendation. It Is Structurally Analyzed and Designed According to Following Design Considerations: -

1. The design of proposed building is done considering specified Wind, earthquake loads of Bangladesh National Building Code-BNBC-2020.
2. The proposed building is designed for the following loads & load combinations.

1	Design Live Load (kN/m ²) on Floor	6 kN/m ²
2	Wind Speed (KPH)	236.7 KmPH
3	Exposure	A
4	Earthquake Zone	1
5	Zone Co-efficient	0.2
6	Load Combinations	As per BNBC'20.

Design report (wind speed 239.4 KmPH)

A set of design report was available for the Main Building following BNBC 2020. But site classification and seismic design category not determined in the design report. Also, plan & vertical irregularity check not provided in the design report.



Main Building

Observation: Main Building

Construction debris on the roof



Wastage on the roof

Wastage and construction material were found on the current roof. Building engineer is required to remove all kind of wastage from the roof.

**Expose rebar at roof top column
And incomplete water proofing on roof**



Exposed rebar at roof top column



Incomplete water proofing work

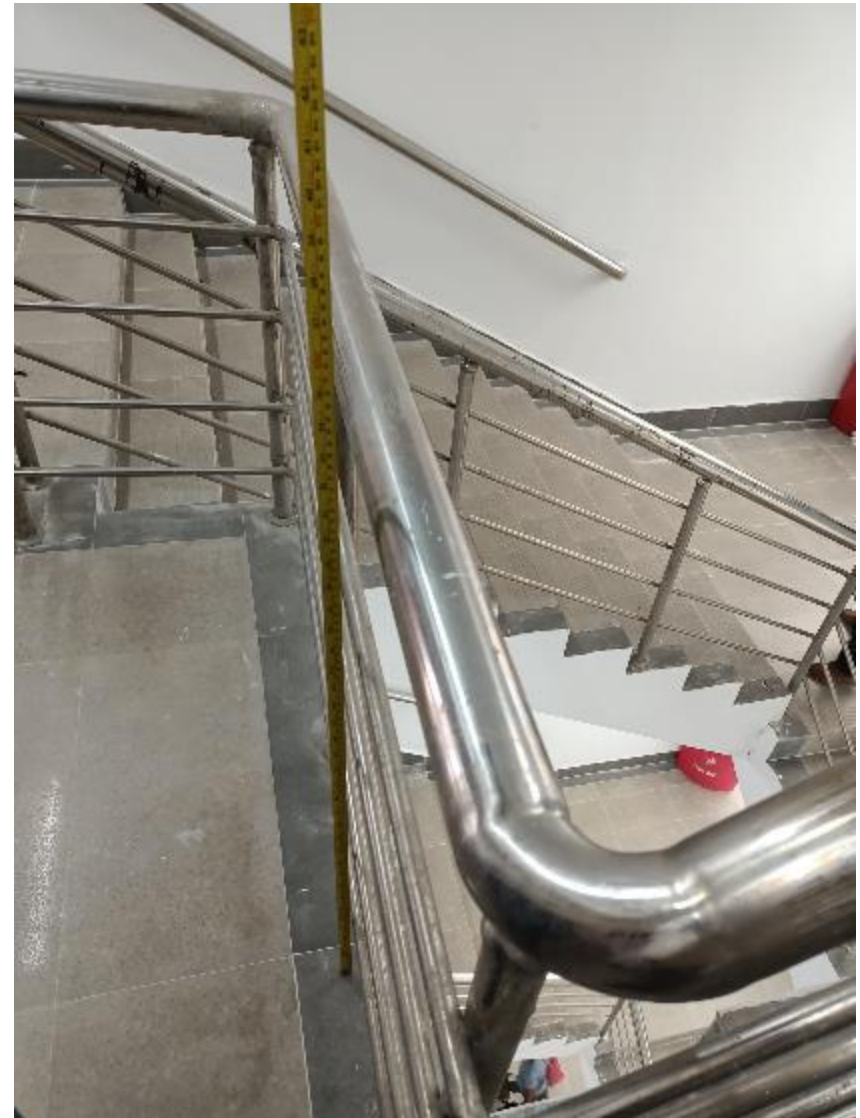
Exposed rebars were found at roof top column. Building engineer is required to take proper measure to protect the rebar. Also, complete the casting of waterproofing work.

**Falling hazard risk at east side
windows & stair railing**



Falling hazard risk at East side windows

No protection was found at East side windows and inadequate railing was found at stair. Building engineer is required to provide necessary step to mitigate the falling hazard risk. Also increase the height of the railing of stair.



Unsafe railing

Column and beam susceptible to vehicle impact



Column susceptible to vehicle impact



Beams adjacent to the driveway of loading unloading zone

Some of the columns & beams were found adjacent to the driveway of parking & loading unloading platform. These column are susceptible to vehicle impact. The factory engineer is required to take necessary measures to prevent the vehicle impact by providing the barrier around the columns.

Observation: Main Building

Lack of information in the structural drawings



Additional slab at front



Tie & floor beam

Additional slab at front was not shown in the slab details. Also, tie beam layout and details were not available in the provided structural drawings. Building engineer is required to revised the structural drawings providing all structural details.

**Additional slab portion at front not considered
in the design report**

3.4 Graphical presentation:

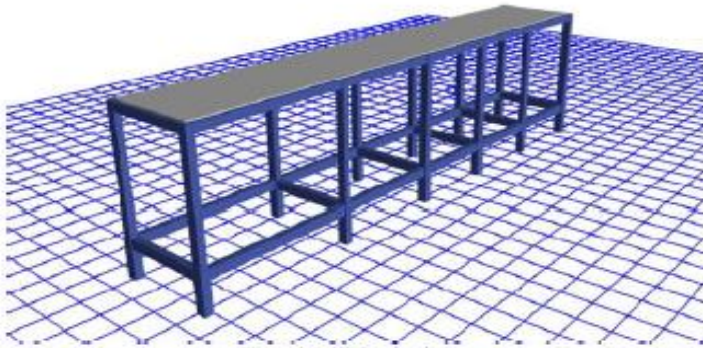


Figure 3-1: 3D Rendered view.

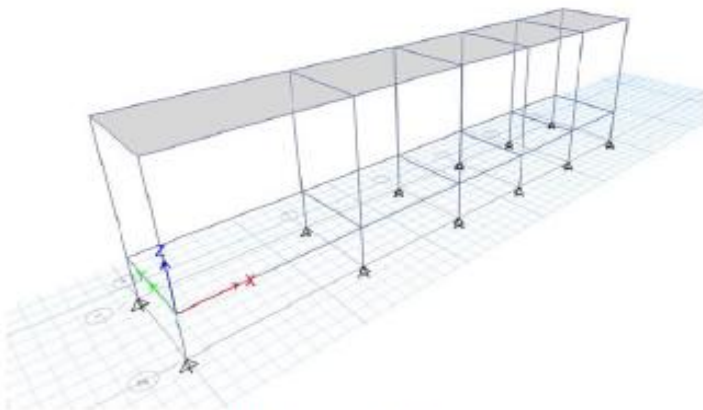


Figure 3-2: 3D Frame view.

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Design report



additional slab at front

Additional slab at front was not considered in the design report. Building engineer is required to revise the design report considering figure of the structure.

Architectural drawing and stair details not found



RC Stair



Fire Pump and Boiler Room

Architectural drawings were not found for the Fire Pump and Boiler Room. Also, the structural details were not available for the RC stair of the building.

Problems Observed

Main Building:

Item 01: Design report required to be revised.

Item 02: Construction debris on the roof.

Item 03: Expose rebar and incomplete water proofing on the roof.

Item 04: Falling hazard risk at east side windows & stair railing.

Item 05: Column and beam susceptible to vehicle impact.

Utility Building:

Item 06: Lack of information in the structural drawings.

Item 07: Additional slab portion at front not considered in the design report.

Fire Pump and Boiler Room:

Item 08: Architectural drawing and stair details not found.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Design report required to be revised. (Main Building)	Building engineer is required to update the design report & analysis model for applicable seismic design category and all other requirements as per section 1.9.1 of BNBC (part-6). Submit the design documents to the RSC for review.	6-weeks
02	Design report required to be revised. (Main Building)	Implement the recommendations of design report.	6-months
03	Design report required to be revised. (Main Building)	Continue to implement floor loading plan.	6-months
04	Construction debris on the roof. (Main Building)	Remove the Construction debris from the roof.	6-weeks
05	Expose rebar and incomplete water proofing on the roof. (Main Building)	Apply corrosion resistance coating to the exposed rebar to protect from corrosion.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
06	Expose rebar and incomplete water proofing on the roof. (Main Building)	Develop proper water drainage system on the roof with adequate slope and water outlets.	6-months
07	Falling hazard risk at east side windows & stair railing	Building engineer is required to increase the height of the handrail to avoid possible falling hazard from stair.	6-weeks
08	Falling hazard risk at east side windows & stair railing	Install railing or grills to the open windows.	6-weeks
09	Column and beam susceptible to vehicle impact	The factory is required to provide barrier around the column and take necessary measures for the beams to protect from possible vehicle impact.	6-months
10	Lack of information in the structural drawings. (Utility Building)	Building engineer is required to prepare the full set of as-built drawing in compliance with section 1.9.1.2 (part-6, BNBC).	6-weeks