

Arrival Fashion Limited (Extension)

Colomesshor, Board Bazar, P.O: National University, P.S: Gazipur, Bangladesh

(23.947894, 90.385571)

28 April 2024



1. Building Information

Production Building 2: This is a six-storied (B+G+5) reinforced concrete (RC) building with a basement.

2. Observation

Observation-1: Inconsistencies in design documents. (Production Building 2)

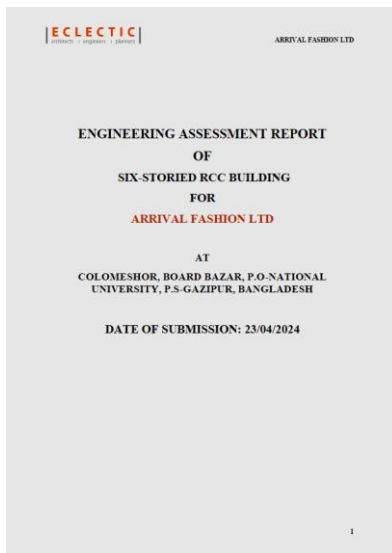


Adjacent external steel stair



Connection with the main building

Description: The adequacy of the Mat foundation and slabs was not incorporated in the provided engineering assessment (EA) report. Also, an adjacent external steel stair connects with the main building. However, no evaluation of steel stair was provided in the engineering assessment.



3.2 EARTHQUAKE CHARACTERISTICS

Earth load calculation of the building has been performed based on the Part 6, Chapter 2 Titled "Loads" of the Bangladesh National Building Code (BNBC).
The Factors considered for Earthquake load

Seismic zone co-efficient, Z	Table 6.2.22	Zone-2
Structural importance co-efficient, I	Table 6.2.23	Standard Occupancy Structures 1.00
Ct	2.5.6.2 a. Method A	0.073 (MKS unit)
Response modification co-efficient, R	Table 6.2.24	IMRF(R=8)
Site co-efficient, S	Table 6.2.25	S3 = 1.5

Description: In the assessment report, intermediate moment resisting frame (IMRF, R=8) was considered without proper justification. The building engineer is required to recheck the design parameters and update the design documents accordingly. Also, the building engineer is required to incorporate all types of adequacies checks in the EA report and submit it to the RSC for review.

Observation-2: Non-structural elements found unbraced/not anchored. (Production Building 2)



Unbraced water tanks on roof



Unbraced racks on the floor

Description: Non-structural elements suspended from, attached to, or resting atop the structure shall be adequately anchored and braced to resist earthquake forces. The factory is required to brace/anchor all non-structural elements (PVC water tanks, storage racks etc.).

3. Action Plan:

Observation	Action Plan	Timeline
Inconsistencies in design documents. (Production Building 2)	The building engineer is required to address the inconsistencies in the EA report and submit revised design documents to RSC to complete the review. Incorporate all types of adequacies checks in the EA report.	within 6 weeks
	Carry out suggested remedial works if required.	within 6 months
Non-structural elements found unbraced/not anchored. (Production Building 2)	The factory is required to brace/anchor all non-structural elements.	within 6 weeks