Prudent Fashions Ltd

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RSC RMG SUSTAINABILITY COUNCIL

Buildings Information:

Building-1 (Main Factory Building): 5 storey (G+M+4)

Building-2 (Fire Pump Room): Single storey

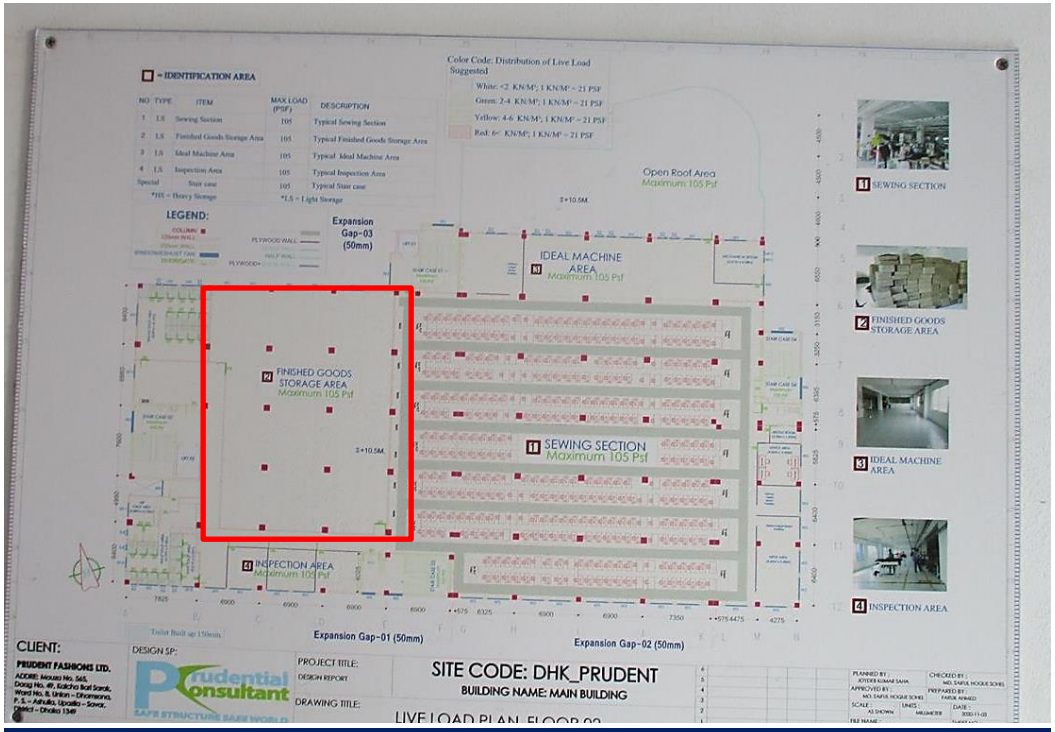
Building-3 (Security Guard Room): Single storey

Building-4 (Fire Control Room): Single storey

Observations

Floor live load plan do not comply with BNBC

Observation: Building-1 (Main Factory Building)



Floor live load plan with 105 psf (5 kN/m2) loading limit

As per BNBC, the minimum floor live load for light storage is 6 kN/m2 (125 psf). The storage in this building is designed for 5 kN/m2 live loads.
The building engineer is required to revise the storage live load limit based on BNBC requirement and update the load plan and design report accordingly.

Live Load Standard:

A. BNBC2006: Table 6.2.3: BNBC 2006 (Occupancy-G,H & J)

Load		Use of floor
5.0KN/sqm	:	For Factory Building
7.5KN/sqm	:	For Boiler Room
4.0KN/sqm	:	For Stair
2.0KN/sqm	:	For Toilet
5.0KN/sqm	:	For Prayer Room
1.5KN/sqm		For Roof (Table 6.2.4)

B. Alliance/Accord Building Standard 2013: Section 8.15.1 & Guidelines for Assessment of St Integrity of Existing RMG Factory Buildings in Bangladesh(Version 01E-2013)

Load		Use of floor
2.0KN/sqm	:	For Sewing floors
4.0KN/sqm to 9.0KN/sqm	:	For Fabric Storage Area based on type

C. ST 5 Guideline of Primark : As per BNBC 2006 guideline.

D. Actual Load : As per live load plan (Appendix III)

Storage and Bonded ware house area load on floor = 5.0 $\frac{KN}{m^2}$

Office, Gym Area,Open area and others load on floor = 5.0 $\frac{KN}{m^2}$

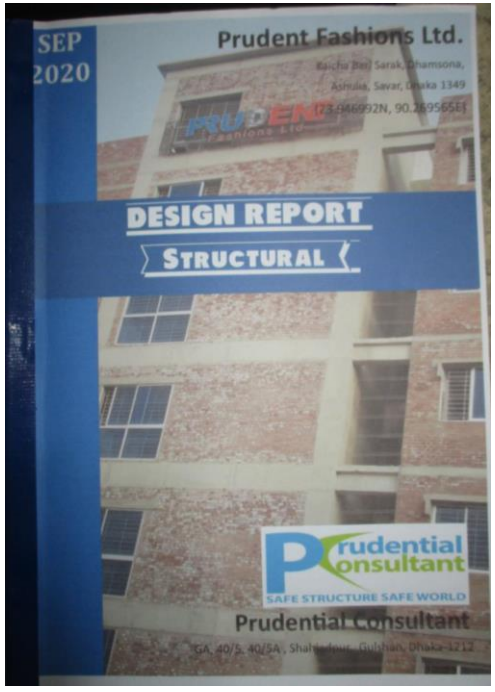
5 kN/m2 live load in design report

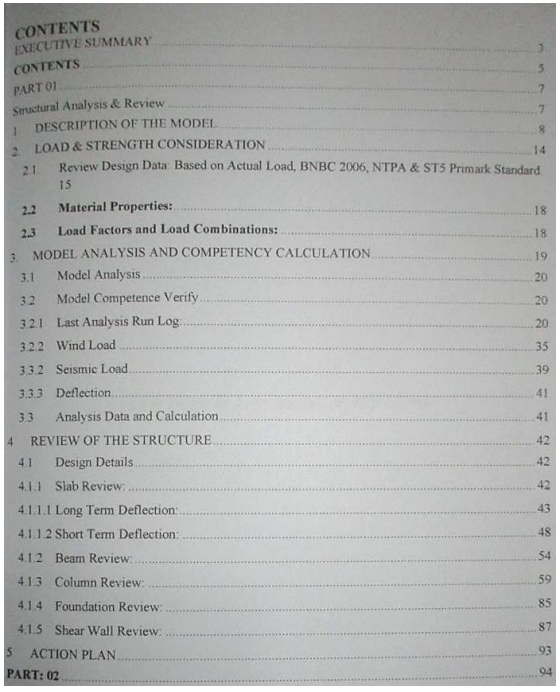
Storage on 1st and 2nd floor

Observation: Building-1 (Main Factory Building)

Design Report needs to be reviewed

Observation: Building-1 (Main Factory Building)

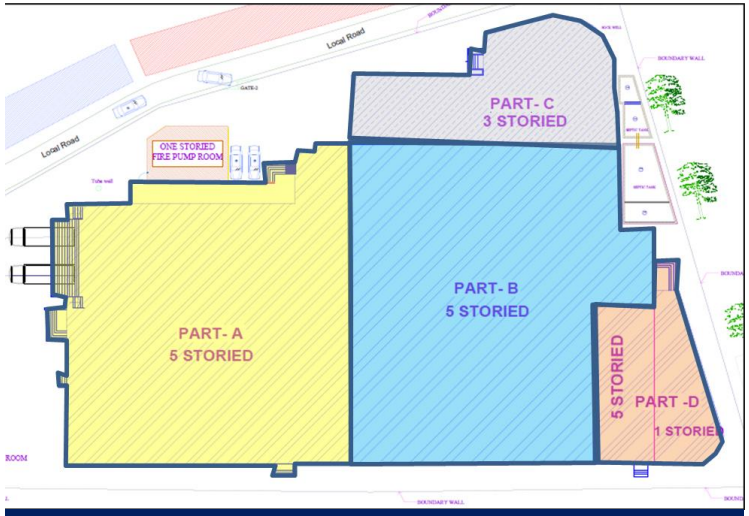




CONTENTS

Design report

The building engineer to incorporate irregularities check in the design report and suggest required recommendations.



Irregular building plan

The shape of building-1 is irregular. There are four building parts and three expansion joints. During seismic event, movement of building parts may be different. The part-D has no shear wall and partially 5 storey. The position of shear walls are not symmetric.

Observation: Building-1 (Main Factory Building)

The ground floor column of part C & D

The ground floor height is 6.0 m. The diameter of column of part C is 375 mm and width of column of part D is 375 mm. The building engineer to check the slenderness effect for those columns and incorporate the design in the report.

Observation: Building-1 (Main Factory Building)

Column susceptible to vehicle impact

Observation: Building-1 (Main Factory Building)

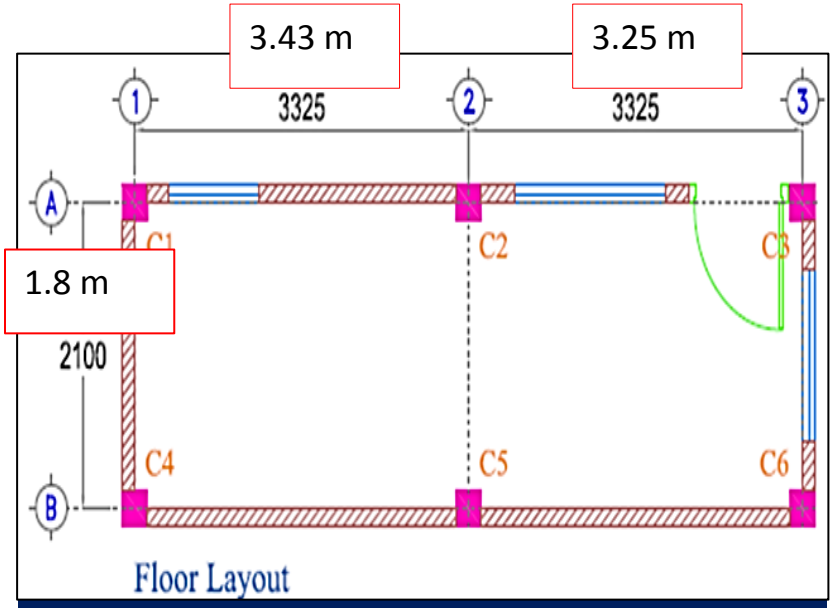
Column in loading/unloading areas have no safety barrier.

Column in loading/unloading areas have no safety barrier which are susceptible to possible vehicle impact. Factory is required to provide barrier around all the exposed columns to protect the columns from possible vehicle impact.

Observation: Building-1 (Main Factory Building)

Mismatch in drawings

Observation: Building-2 & 3



Column spacing was observed 5.25m, 3.43m instead of 3.35m and 1.8m instead of 2.1m for Building-3

Roof slab thickness measured 125 mm instead of 150 mm for Building-2

The building engineer to survey the structures and update drawings to the as-constructed status.

Observation: Building-2 & 3

Problems Observed

Building-1 (Main Factory Building):

Item 01: Floor live load plan do not comply with BNBC.

Item 02: Design Report needs to be reviewed.

Item 03: Column susceptible to vehicle impact.

Building-2 & 3 (Fire pump room & Security guard room):

Item 04: Mismatch in drawings.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Floor live load plan do not comply with BNBC. Building-1	The building engineer to check the occupancies and update the floor live loading plan for the building based on BNBC loading requirements and capacity of building floor, column & foundations.	6-weeks
02	Floor live load plan do not comply with BNBC. Building-1	Implement the floor loading plan (posting load plan, providing signage and maintaining loadings)	6-months
03	Design Report needs to be reviewed. Building-1	As part of Engineering Assessment (EA), building engineer to incorporate irregularities check in the design report and suggest required recommendations.	6-weeks
04	Design Report needs to be reviewed. Building-1	Consider and check the slenderness effect of column.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
05	Design Report needs to be reviewed. Building-1	• Implement the recommendation of EA.	6-months
06	Column susceptible to vehicle impact. Building-1	Factory is required to provide barrier around all the exposed columns to protect the columns from possible vehicle impact.	6-weeks
07	Mismatch in drawings. Building- 2 & 3	The building engineer to survey the structures and update drawings to the as-constructed status.	6-weeks