

Nipa Fashion Wear Ind. Ltd.--Extended Building

Selina Tower - 6, Holan Road, Islam Bag, Dhaka
(23.85637, 90.43121)

8th June 2021



Building Information

1. Selina tower-6 (B+G+5)
2. Generator room (single storied)

Observations

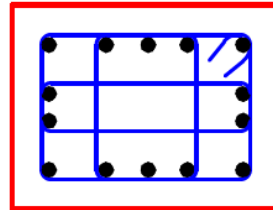
Design report need to be revised



Column at loading-unloading area.

C3

24" x 15"



8 - Ø25 MM
6 - Ø20 MM

Basement-Ground & 1st floor

Ground floor column 6.35 m in length and 600X375 mm in size. The length/width=16.9 indicate that the columns are critical for slenderness effect. So, the factory engineer is required to check and address this issue in the design report.

C3 Column

Earthquake Load (E):

The main considerations for calculation of earthquake load are given below.

- Zone co-efficient, $Z = 0.15$ (zone 2, Fig.6.2.10, BNBC, seismic zoning map of Bangladesh)
- Structure importance co-efficient, $I = 1.00$ (Standard Occupancy, Table 6.2.23, BNBC)
- Response modification co-efficient, $R = 8.0$ (OMRF, Table 6.2.24, BNBC)
- Site co-efficient, $S = 1.50$ (type 3 soil as suggested in Table 6.2.25, BNBC)

In design report the Response modification co-efficient factor $R=8$

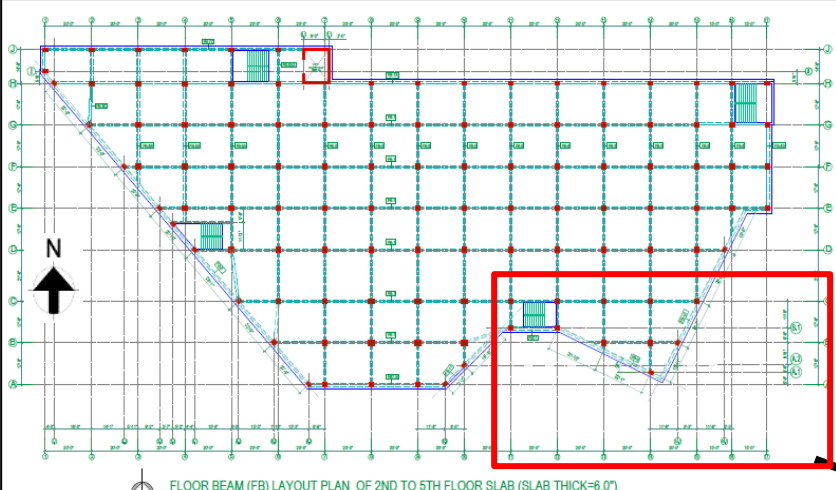
The value of Response modification co-efficient factor “R” found mismatch between the FEA model and design report. In design report The value of “R” has been considered 8 where as the value of R has been assigned 5 in FEA model. Moreover the value of $R=8$ has been written in report but mentioned as OMFR instead of IMRF.

In FEA model the Response modification co-efficient factor $R=5$

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 as per BNBC. Factory engineer is required to update the design documents and FEA model in compliance with section 1.9.1 (part-6, BNBC).

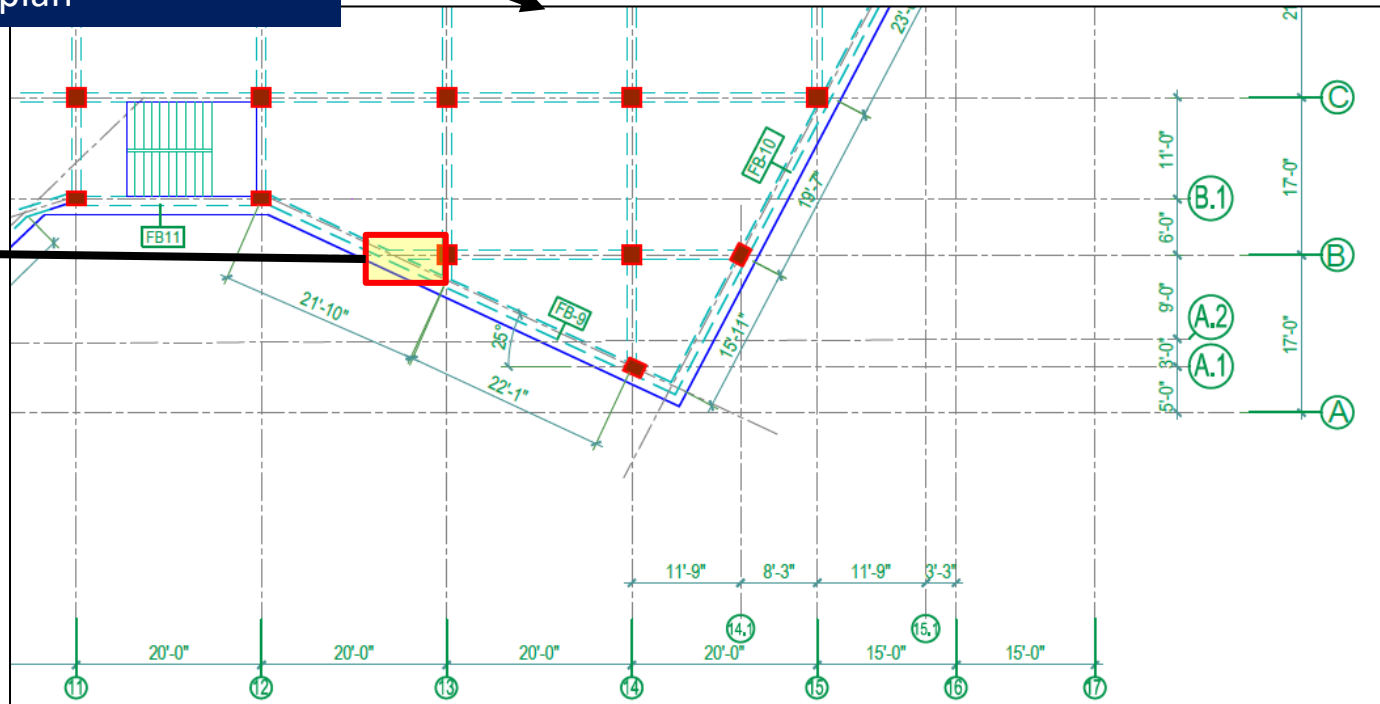
Discrepancies in as-built drawing

Observations: Selina Tower-6

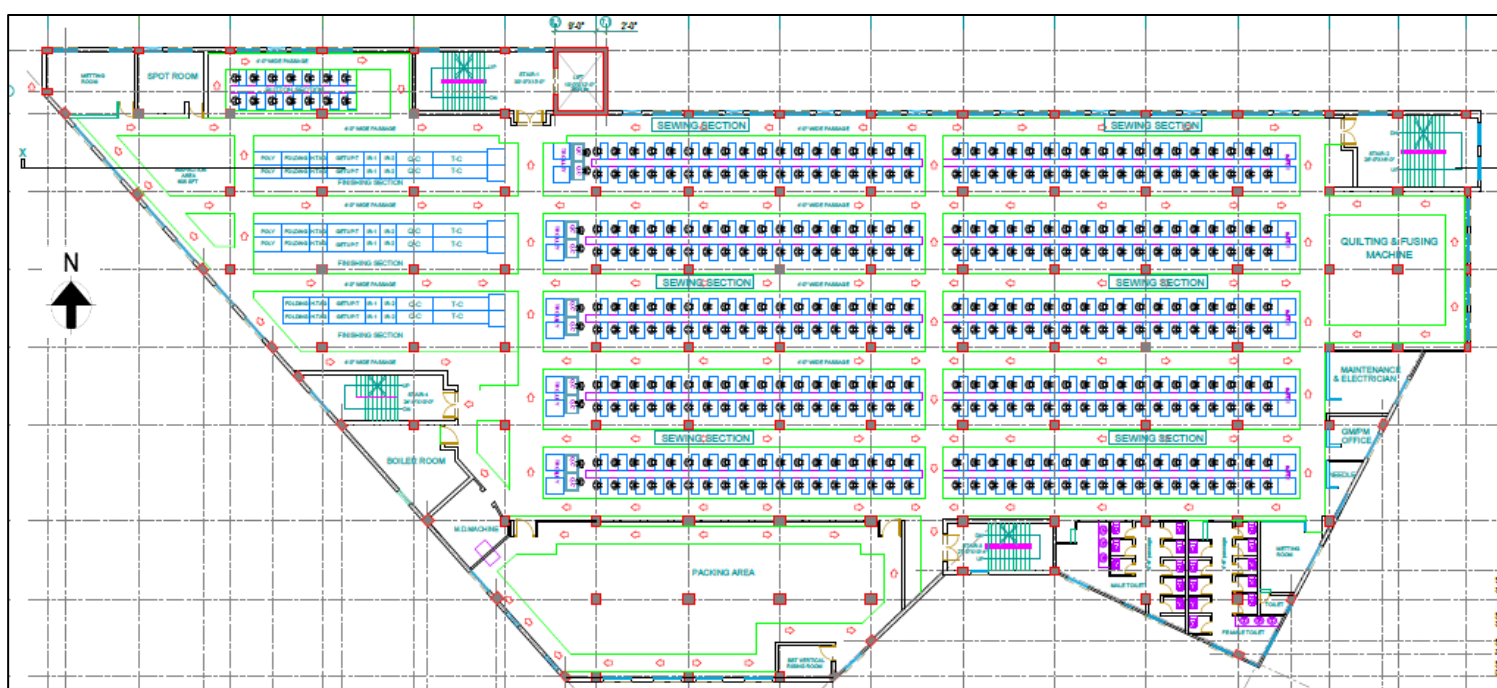


Beam Layout plan

Beam layout plan does not match with the as-built drawing. A beam marked in the layout has been shown in drawing but during inspection, the beam was not found at site condition. Factory engineer is required to survey the structures and prepare accurate as-built drawings.



Beam found missing at marked location

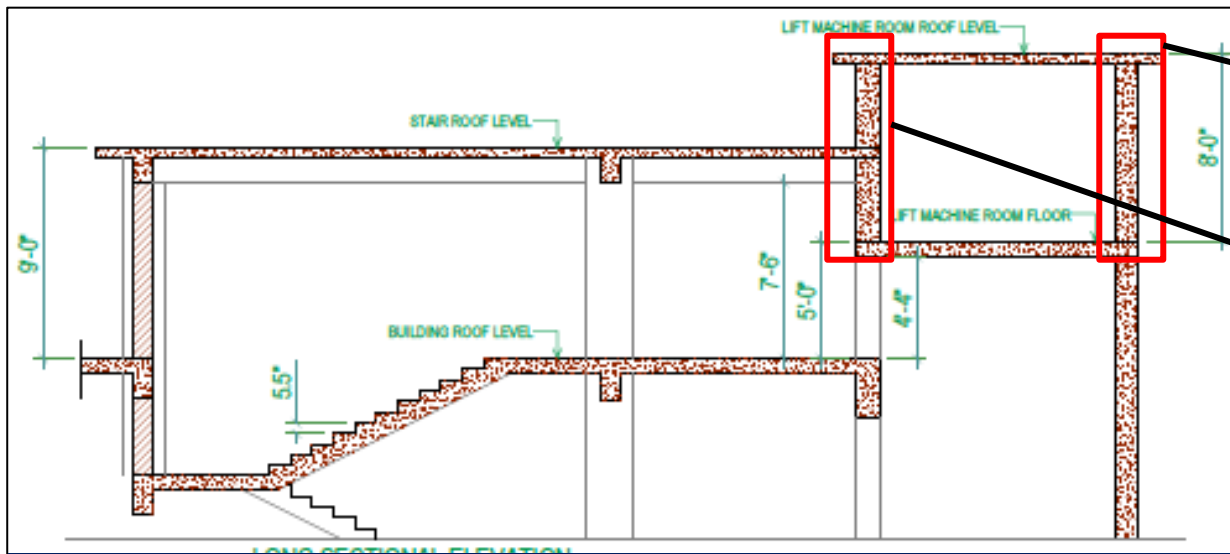


Floor Layout Plan



Toilet Build-up Found

Build up was found approximately 317 mm at all the toilet zone area. But the build up information has not been provided in architectural drawing. Factory engineer is required to survey the whole structure and update the accurate as-built architectural drawing.



Sectional Elevation of the lift-core



In as-built drawing, the lift machine room periphery wall has been shown as RC wall. At site condition the wall was found constructed by brick. Factory engineer is required to survey the structures and prepare as-built drawings that are compliance with section 1.9.1.2 as per BNBC



Lift machine room wall is constructed by brick

Observations: Selina Tower-6

Column susceptible to vehicle impact

Observation: Selina Tower-6



Columns having no barrier/protection at ground floor

Columns of the loading-unloading area 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.

Dampness on periphery wall



Dampness was found on ground floor periphery wall. Factory engineer is required to investigate the source of dampness and take necessary measures to prevent the dampness.

Design report needs to be prepared

Observations: Generator 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 as per BNBC. During the inspection, the design report was not found which is required to be prepared in compliance with section 1.9.1 (part-6, BNBC).

Priority Actions

Problems Observed

Selina Tower-6:

Item 01: Design report need to be revised.

Item 02: Discrepancies in as-built drawing.

Item 03: Column susceptible to vehicle impact.

Item 04: Dampness at periphery wall.

Generator room:

Item 05: Design report needs to be prepared.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Design report need to be revised (Selina Tower-6)	Building engineer to update the design document including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.	Within 6 weeks
2	Design report need to be revised (Selina Tower-6)	Complete any remedial works arising from design report after reviewing by RSC.	Within 6 Months
3	Discrepancy in as-built drawing (Selina Tower-6)	Building Engineer to survey the structure and prepare accurate as-built (architectural and structural) drawings in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.	Within 6 weeks
4	Column susceptible to vehicle impact (Selina Tower-6)	The factory engineer is required to take necessary measures to prevent the vehicle impact by providing barrier around the columns.	Within 6 weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
5	Dampness on periphery wall (Selina Tower-6)	Building Engineer is required to investigate the reason of dampness & apply suitable method to repair dampness.	Within 6 weeks
6	Design report needs to be prepared (Generator Room)	Building engineer to prepare the design document including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.	Within 6 weeks
7	Design report needs to be prepared (Generator Room)	Complete any remedial works arising from design report after reviewing by RSC.	Within 6 Months