

Cosmopolitan Industries PVT Ltd (Epic) New Shed

Khejurbagan, Baro Ashulia, Savar, Dhaka.

(23.892598, 90.323535)

9th December 2020

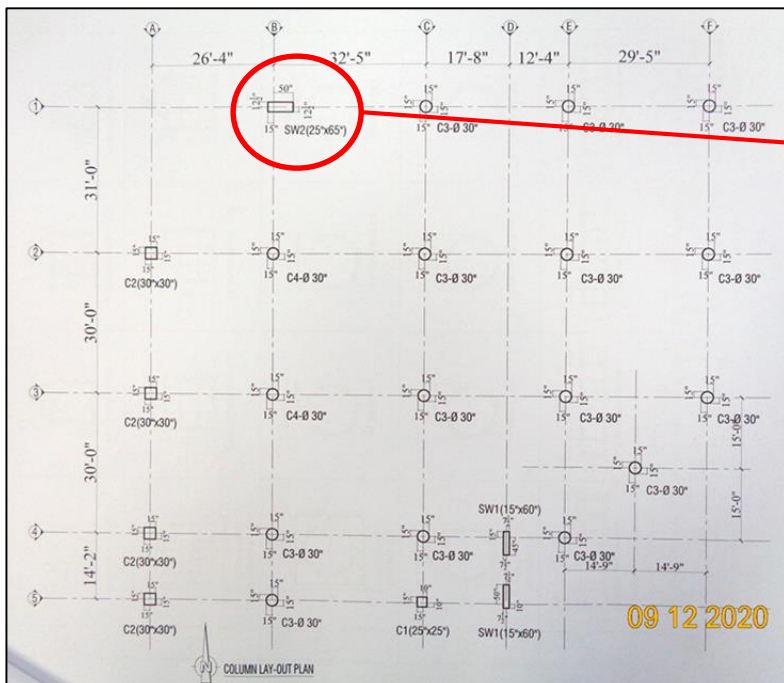


Building Information

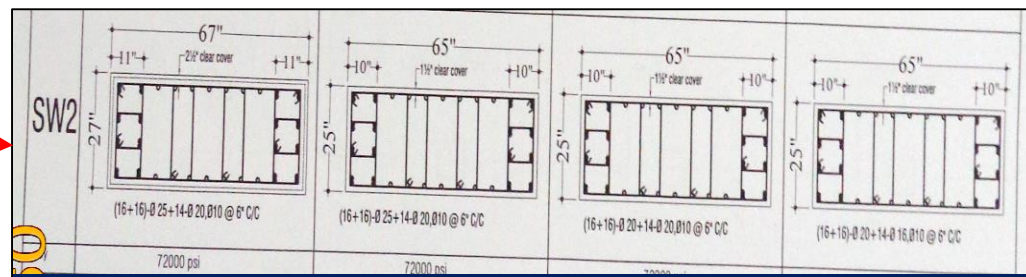
1. Warehouse Building (G +1, Mezzanine at both floors)

Observations

Design report need to be revised.



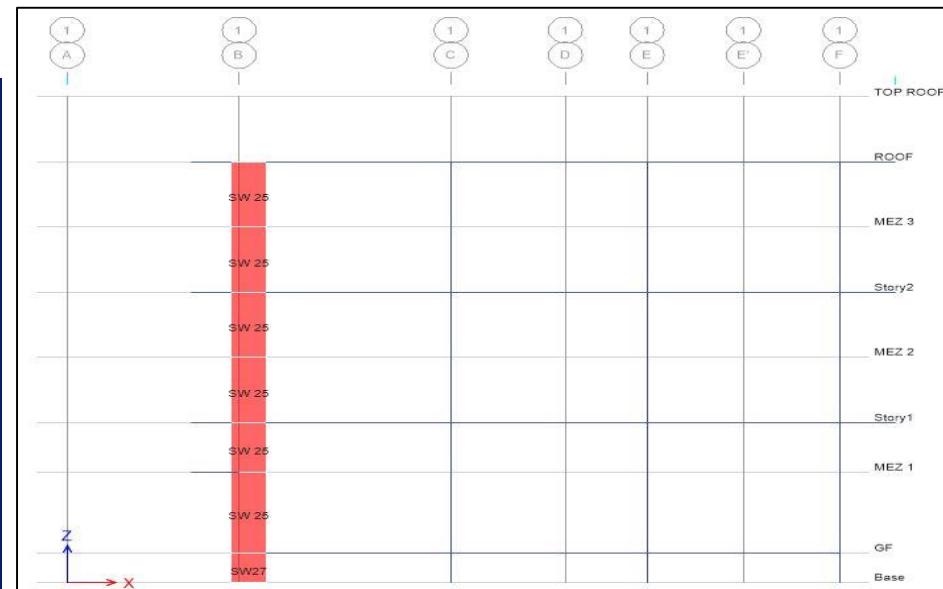
Column layout plan



Column schedule – details of SW2

Shear wall has been assigned at grid 1/B. The depth of the shear wall is 1625 mm and width is 625. So, the ratio of depth to width is 2.6. So, building engineer is required to provide the justification with proper reference for considering the member as shear wall instead of column.

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 revise the design documents and recheck the serviceability of the structure based on justification with proper reference.



SW2 has been assigned as shear wall in FEA model



Storage was found resting on multi storied steel racks at both ground and first floor. The suspended floors are designed for 7 kPa and 12 kPa. But design specification or any adequacy check was not available to justify the capacity of the racks to carry the designed storage load. Factory engineer is required to carry out the adequacy check of the steel racks considering the heavy load resting on it.



Storage load resting on multi storied steel rack

Susceptive to vehicle impact in column



Column susceptible to vehicle impact

Columns were found adjacent of driveway of 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 column

Signage of water ponding at roof



Signage of water ponding at roof

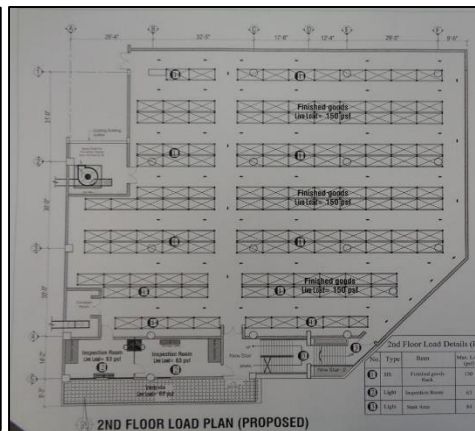


Signage of water ponding was found at roof due to construction of water proofing with improper slope. The factory engineer to improve drainage system with a proper slope on roof slab to prevent water ponding.

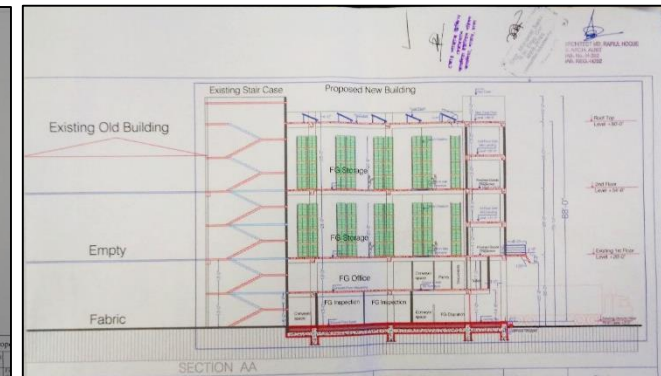
Future Vertical Extension



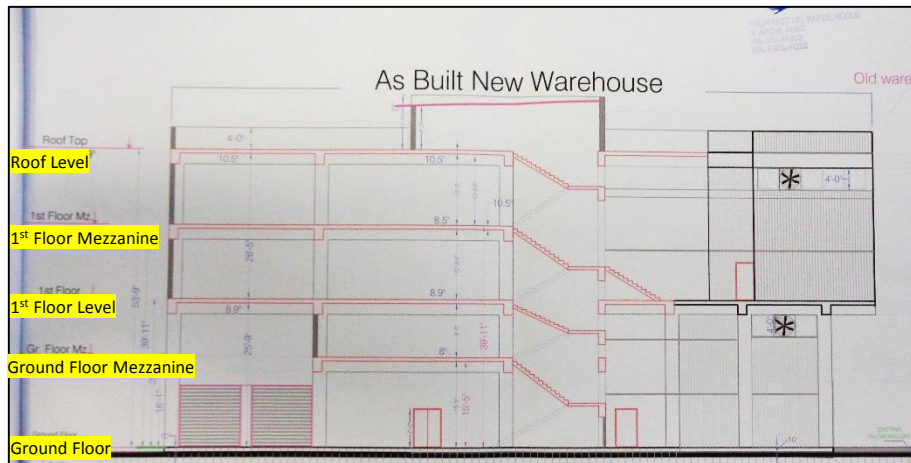
Extended column re-bar at roof/2nd floor



2nd floor load pan (7 kPa)



Permit drawing for 3 storied from Union Porishod



2 storied building has been shown in drawing



Building constructed up-to two storied

The building permission layout is for 3 storied structure. Also, the design report of the structure was prepared for 3 storied structure. Till the date of this inspection, Building was constructed up-to two storied. So, there is a possibility of future vertical extension. But no Architectural & Structural drawing was found for the 3rd storey. Factory engineer is required to prepare full set of drawing & documents for the three storied structure prior to commencement of further extension work.

Problems Observed

Warehouse Building

Item 1: Design report needs to be revised.

Item 2: Susceptive to vehicle impact in column.

Item 3: Signage of water ponding at roof.

Item 4: Future Vertical Extension.

Priority Action

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Design report needs to be revised	Factory engineer to revise the design report and prepare full set of drawings in compliance with section 1.9.1 as per BNBC	6-weeks
2	Design report needs to be revised	Factory engineer is required to carry out the adequacy check of the steel racks considering the heavy load resting on it.	6-weeks
3	Design report needs to be revised	Verify and actively manage the prepared loading plan for all floor plates including the rack floors within the factory, considering floor, column and foundation capacity.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
4	Design report needs to be revised	Continue to implement loading plan.	6-months
5	Susceptive to vehicle impact in column	The factory is required to take necessary measures to prevent the vehicle impact by providing barrier around the column.	6-months
6	Signage of water ponding at roof	The factory engineer to improve drainage system with a proper slope on roof slab to prevent water ponding.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
7	Future Vertical Extension	Prior to vertical extension, factory engineer is required to produce Detailed Engineering Assessment(DEA) of the structure according to BNBC and submit to RSC for review.	6-weeks
8	Future Vertical Extension	Carry out recommendation as outcome of the DEA.	6-months