

Cotton Field (BD) Ltd. (Extension)

Plot- 42/3, Rajnagar, Sataish Road, Tongi, Gazipur.

Geographic Coordinates: 23.920117, 90.362788

1st October 2023



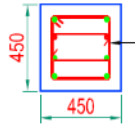
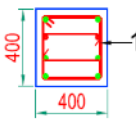
Building Information

1. **Building-3 (ETP Building):** Two-storey (G+1) reinforced concrete (RC) building. The building is proposed for five storey (G+4). This structure is consisting of two parts with an expansion joint: Part-01 and Part-02.
2. **Building-4 (Central Wastage Store):** Single storey RC building used for central wastage store.
3. **Building-7 (Main Gate & RMU):** Single storey RC building. There are two distinct parts of the building.
4. **Building-8 (RMS Room):** Single storied masonry building. The building is being used for RMS room.
5. **BBT Bridge:** Single storied steel structure is being used to support the utility lines.

Observations

Mismatch in structural drawings

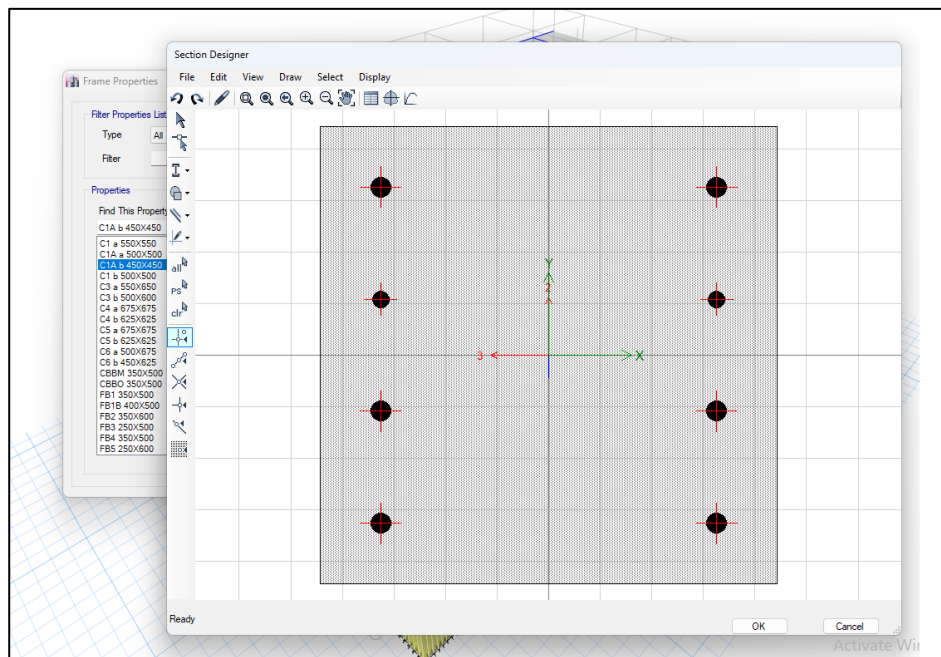
Schedule of Column

Sl.No.	Below P.L. (65 mm clear cover)	Ground floor -1st floor. (40 mm clear cover)
C1A	 10Ømm @115mm c/c 6-Ø20mm+2-Ø16mm	 10Ømm @115mm c/c 6-Ø20mm+2-Ø16mm

Column Schedule. 4 re-bar has been shown in a face



3-nos of re-bar was found by ferro-scanning instead of 4-nos of re-bar in a face.



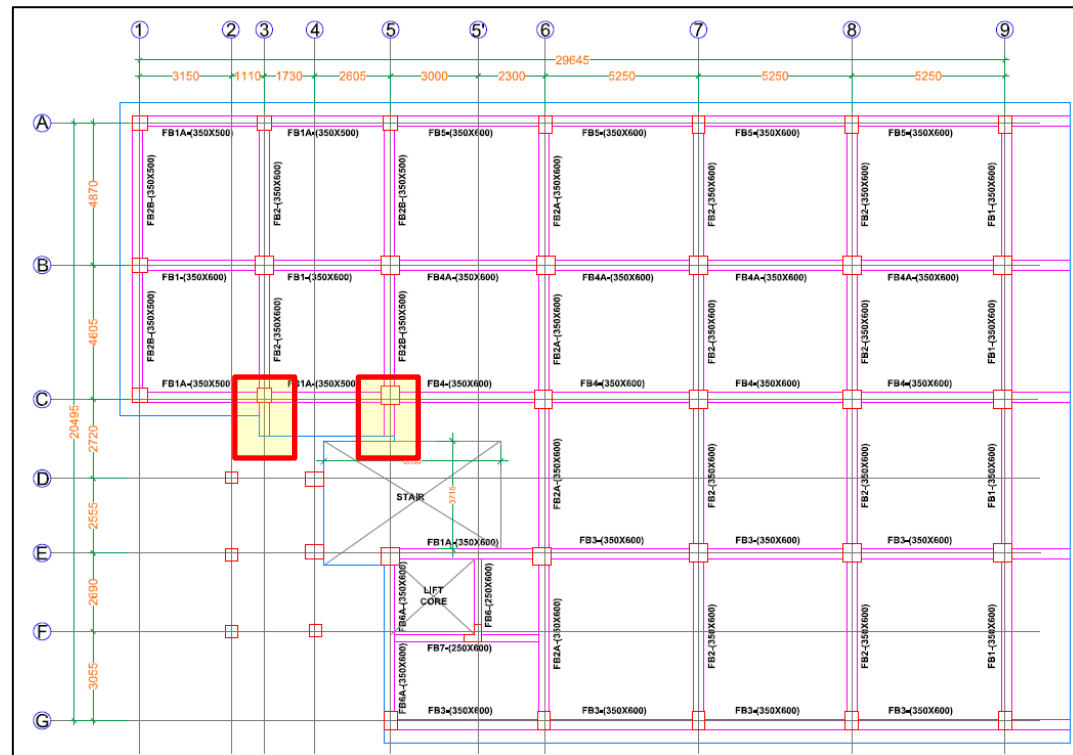
Total 8 re-bar has been assigned in FEA model

The re-bar number was found mismatched for the C1A column. In as-built drawing, total re-bar of the C1A column has been shown 8-nos. But total re-bar was revealed 6-nos for the column by ferro-scanning. Also 8-nos of the re-bar has been assigned in FEA model.

The Building engineer is required to survey the whole structure and update as built structural drawing as per onsite condition and revise the design report in compliance with BNBC.



Cantilever slab. Contriver beam was not found at that position.



The marked location of beam layout plan, the cantilever beam was not found at site condition. The slab is cantilever.

The Building engineer is required to survey the whole structure and update as built structural drawing as per existing condition and revise the design report in compliance with BNBC.

Light weight stair roof shed



The stair roof is light-weight steel shed made of C channel & angle section is supported by brick wall. Inadequate structural member, poor connection details observed. Apparently non-engineered shed.

Building engineer is required to prepare as-built drawing and perform the adequacy check for the light-weight steel roof shed.

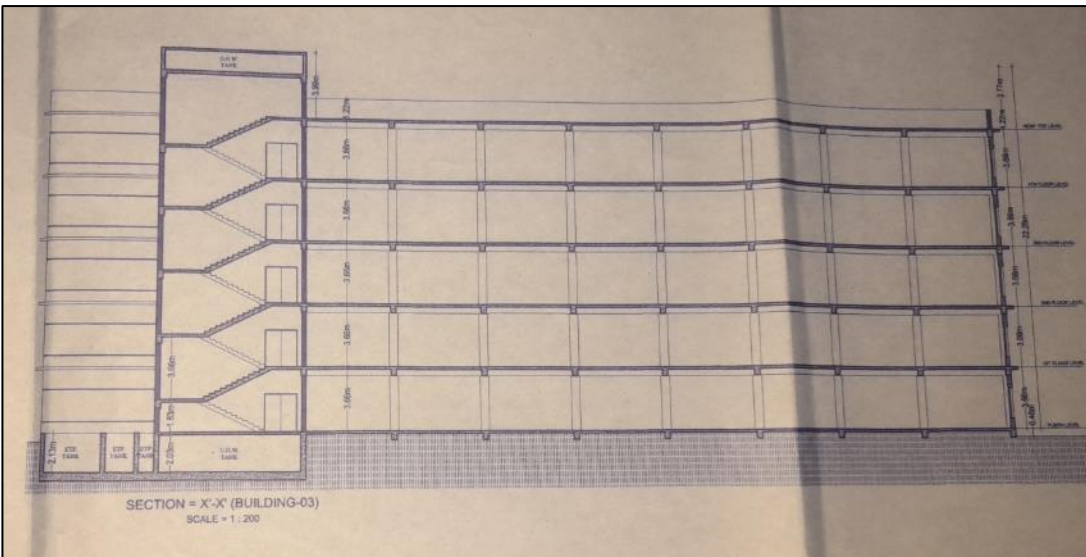
Exposed re-bar at roof



Exposed rebar of Column

Exposed reinforcement was found on rooftop columns. Building engineer is required to take necessary measures to prevent corrosion in exposed rebar.

Future Vertical Extension



Permit drawing for 5 storied from Gazipur City Corporation



Building constructed up-to two storied.
Extended column re-bar at roof/2nd floor

The building permission layout is for 5 storied structure. Also, the design report of the structure was prepared for 5 storied structure. Till the date of this inspection, Building was constructed up-to two storied and exposed rebar was found on roof. So, there is a possibility of future vertical extension. Building engineer is required to follow the construction safety measures during commencement of further extension work.

Column strip cut location to be filled up



Strip cutting has been performed to confirm the re-bar number

The C2 column, strip has been cut to verify the re-bar number in the short face of column. No probing has been provided. Factory engineer is required to fill up the gap immediately with non-shrinkage grout.

Mismatch in structural drawings



Total 6 re-bar was found by ferro-scanning instead of 8 re-bar in C2 column.

SCHEDULE OF COLUMN REINFORCEMENT

NAME OF COLUMN	UP TO PLINTH LEVEL	PLINTH LEVEL TO ABOVE
C2		

Column Schedule. 8 re-bar was shown with 3 rebar each face



2-Nos column re-bar was found in short face

The re-bar number was found mismatched for the C2 column. In as-built drawing, total re-bar of the C2 column has been shown 8-nos. But total re-bar was revealed 6-nos for the column by ferro-scanning & strip cutting. The Building engineer is required to survey the whole structure and update as built structural drawing as per existing condition and revise the design report in compliance with BNBC.

Priority Actions

Problems Observed

Building-03:

Item 01: Mismatch in structural drawings.

Item 02: Light weight stair roof shed.

Item 03: Exposed re-bar at roof.

Item 04: Future Vertical Extension.

Building-07:

Item 05: Column strip cut location to be filled up.

Item 06: Mismatch in structural drawings.

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Mismatch in structural drawings. (Building-3)	Building engineer is required to produce full set of as-built drawing reflecting the as constructed condition in compliance with BNBC.	6-weeks
02	Mismatch in structural drawings. (Building-3)	Building engineer to revise the Desing Report 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.	6-weeks
03	Mismatch in structural drawings. (Building-3)	Follow the recommendation of design report.	6-months
04	Light-weigh steel roof shed (Building-3)	Building engineer is required to prepare as-built drawing for the stair roof shed.	6-weeks
05	Light-weigh steel roof shed (Building-3)	Building Engineer is required to check the connection adequacy for the stair roof shed.	6-weeks
06	Light-weigh steel roof shed (Building-3)	Implement remediation works deemed necessary from connection adequacy report.	6-months
07	Exposed re-bar at roof (Building-3)	All exposed reinforcement is to be protected from corrosion which may cause degradation of the concrete.	6-weeks

Item No.	Observation	Recommended Action Plan	Recommended Timeline
08	Future Vertical Extension (Building-3)	Prior to vertical extension, factory engineer is required to produce follow the construction safety measures as per BNBC.	6-weeks
09	Column strip cut location to be filled up (Building-7)	Factory is required to fill up the gap immediately with non-shrinkage grout.	6-weeks
10	Mismatch in structural drawings (Building-7)	Building engineer is required to produce full set of as-built drawing reflecting the as constructed condition in compliance with BNBC.	6-weeks
11	Mismatch in structural drawings (Building-7)	Building engineer to revise the Desing Report 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.	6-weeks
12	Mismatch in structural drawings (Building-7)	Follow the recommendation of design report.	6-weeks