



Muazuddin Textile Limited (New Unit)

235/236 East Chandura, Shafipur, P.S. Kaliakore, Gazipur
(24.034397N,90.271276E)
21st May 2018



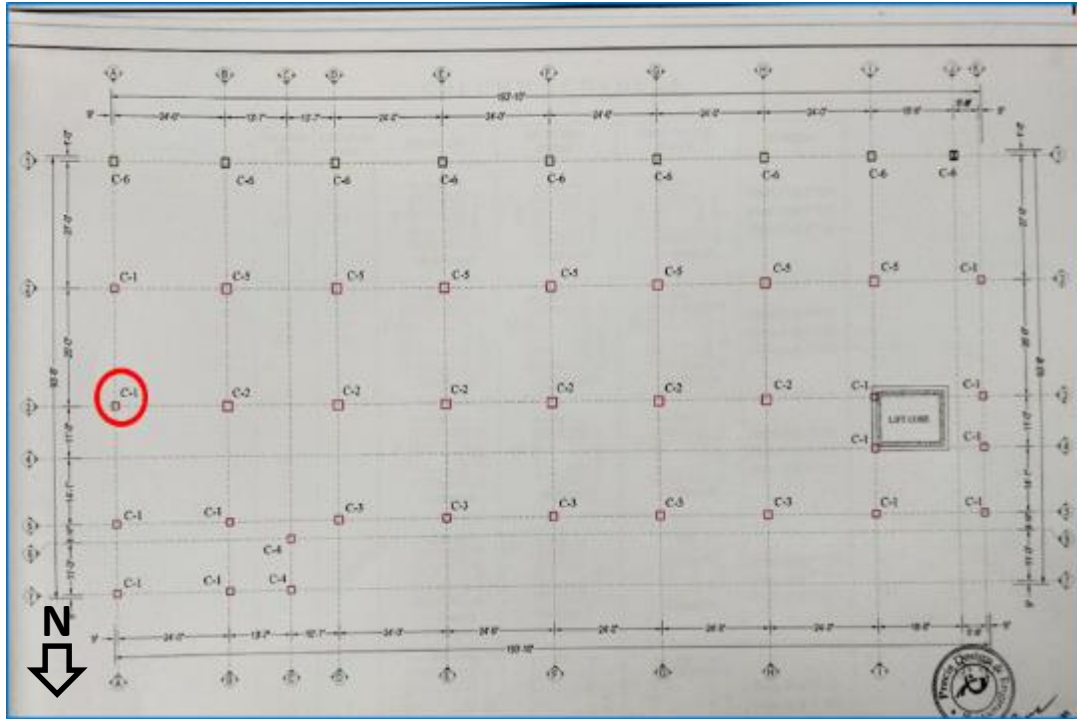


Observations



**Columns appeared to be stressed above
normal design limit**

Observations: Production Building (New Unit)



Column Layout



Toilet Zone

Cursory calculation indicates that highlighted column appear to be stressed above normal design limit due to brick wall & build-up of toilet area. Factory engineer need to check column stress and should take necessary action according to report.

Observation: Production Building (New Unit)



Connection between steel and reinforced part is required to be evaluated



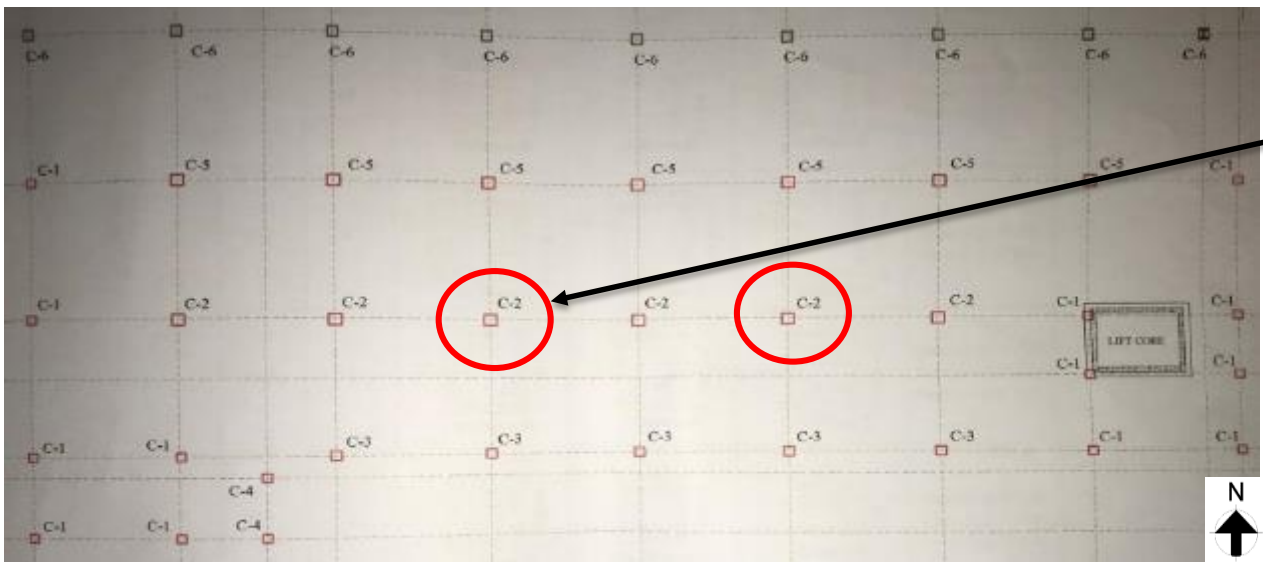
Bolted connection between RC column and steel beam



Steel part is found connected by bolt with RC part. The factory is required to engage an engineer to evaluate the connection between two part.

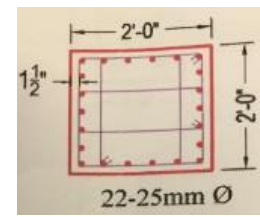
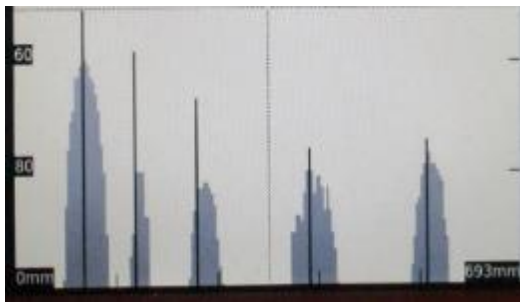


Discrepancies between drawings and on-site observation



Column Layout Plan

C-2 type column



18 number of rebars were found by ferro scanning in C-2 type column

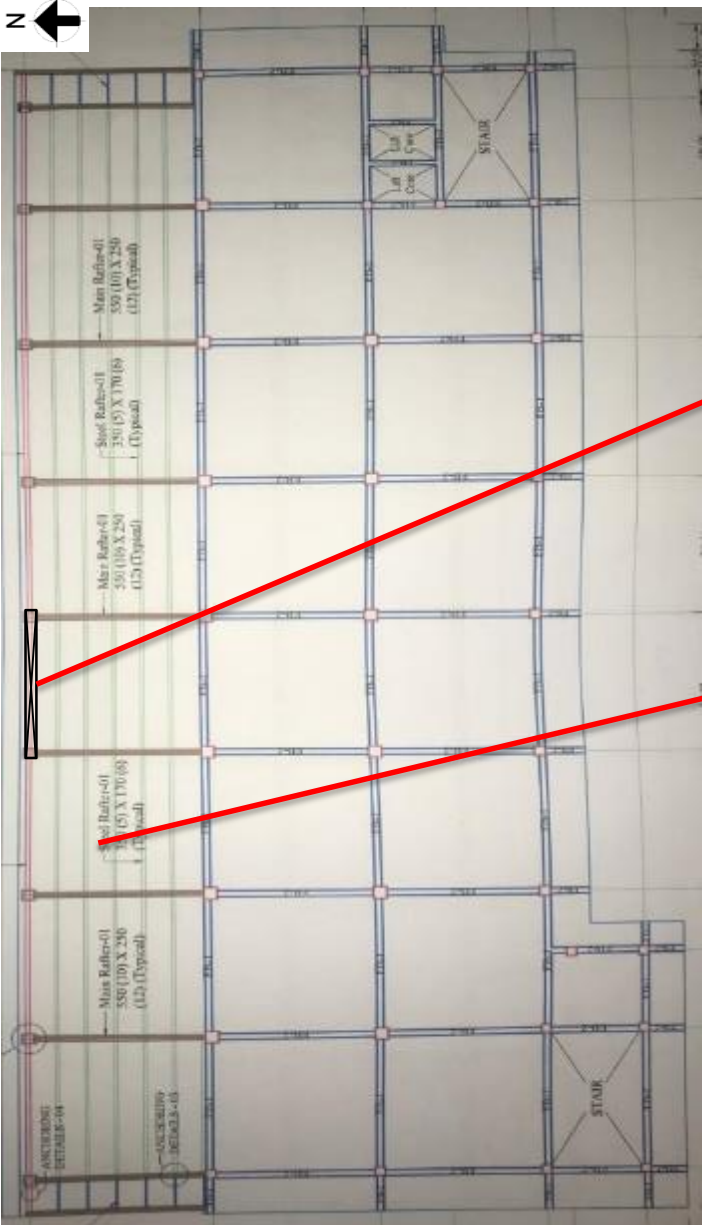
22 number of rebars were shown in column schedule for C-2 type column in 1st to top floor

22 number of rebars were shown on the drawing in C-2 type column but during inspection 18 number of rebars were found by ferro scanning in 1st floor.

8 **Observations: Production building (New Unit)**



Missing information in provided drawing



Beam layout in typical floor



Vertical bracing on north side



Deck slab system on steel part

Vertical 'I'-section bracing was observed on marked location in ground to 4th floor. But no bracing layout or detail was found in drawing. Also, deck slab was observed on the steel part but no detail drawing of the deck slab was observed in provided drawing.



Missing Bolts



Bolts were missing on sub-beam to main beam connection in several location on different floors. Factory is required to install the bolts according to the as-built drawing.

12 **Observations: Production building (New Unit)**



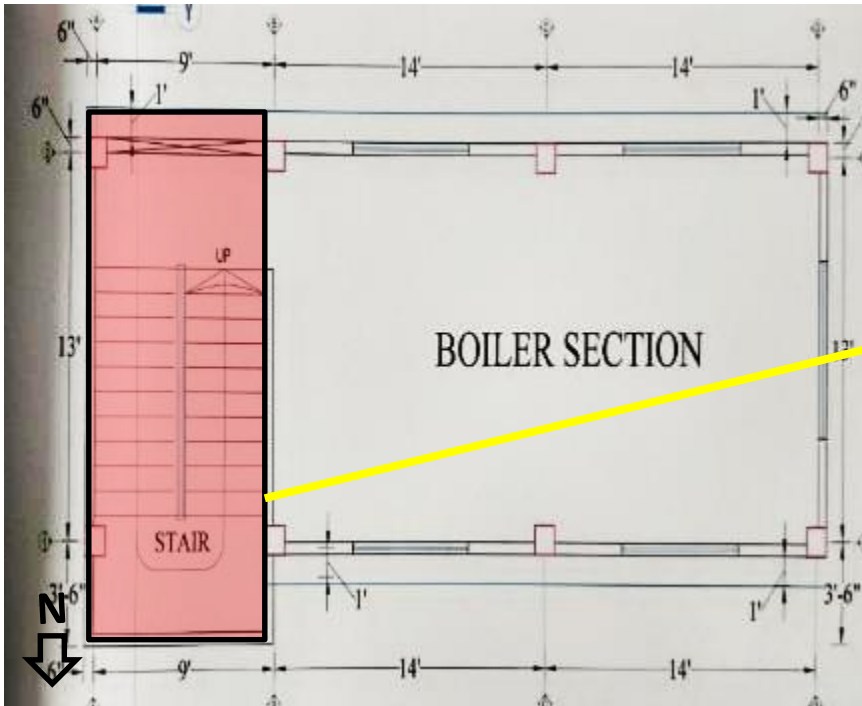
Water clogging on roof top



During inspection, water clogging was observed on roof top. Factory is required to improve the water drainage system to prevent the water clogging.



Discrepancies observed between As- Built drawing and on-site condition



Typical Layout Plan



Stair portion was not found on-site. Factory is required to update drawing as per on-site condition.



Non-engineered steel stair at the east side of the utility building



Non-engineered steel stair at the east side of Utility building.



Steel stair poorly connected with slab. Factory engineer is required to check the stability of the steel stair.



Problems Observed

Production building (New Unit)

Item 1: Columns appeared to be stressed above normal design limit

Item 2: Connection between steel part and reinforced concrete part is required to be evaluated

Item 3: Discrepancies between drawings and on-site observation

Item 4: Missing information in provided drawing

Item 5: Missing Bolts

Item 6: Water clogging on roof top

Utility building (New Unit)

Item 7: Discrepancies observed between As- Built drawing and on-site condition

Item 8: Non-engineered steel stair at the east side of the utility building



Priority Actions



Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Production building (New Unit) Columns appeared to be stressed above normal design limit	Maintain live load below 3kPa on every floor.	Immediate - Now
2	Production building (New Unit) Columns appeared to be stressed above normal design limit	Factory Engineer to review design, loads and columns stresses in all columns.	6-weeks
3	Production building (New Unit) Columns appeared to be stressed above normal design limit	Verify in-situ concrete stresses by taking 100mm diameter cores from a minimum of 4 columns. Verify grade of steel reinforcement used.	6-weeks
4	Production building (New Unit) Columns appeared to be stressed above normal design limit	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.	6-weeks
5	Production building (New Unit) Columns appeared to be stressed above normal design limit	Implement required remediations as per assessment report.	6-months
6	Production building (New Unit) Columns appeared to be stressed above normal design limit	Continue to implement load plan.	6-months



Item No.	Observation	Recommended Action Plan	Recommended Timeline
7	Production building (New Unit) Connection between steel part and reinforced concrete part is required to be evaluated	Factory engineer is required to evaluate the connection between steel part and reinforced concrete part.	6-weeks
8	Production building (New Unit) Connection between steel part and reinforced concrete part is required to be evaluated	Carry out remedial works resulting if necessary.	6-months
9	Production building (New Unit) Discrepancies between drawings and on-site observation	Factory engineer to survey the whole building and produce as-built documentation reflecting the as constructed condition.	6-weeks
10	Production building (New Unit) Missing information in provided drawing	Incorporate the missing information in revised the as-built drawings.	6-weeks



Item No.	Observation	Recommended Action Plan	Recommended Timeline
11	Production building (New Unit) Missing Bolts	Factory engineer is required to install the bolts according to the as-built drawing.	6-weeks
12	Production building (New Unit) Water clogging on roof top	Factory engineer is required to improve the water drainage system to prevent the water clogging.	6-weeks
13	Utility building (New Unit) Discrepancies observed between As- Built drawing and on-site condition	Factory engineer to survey the whole building and produce as-built documentation reflecting the as constructed condition.	6-weeks
14	Utility building (New Unit) Non-engineered steel stair at the east side of the utility building	Factory engineer is required to check the connection details between slab & stair and check the stability of the steel stair.	6-weeks
15	Utility building (New Unit) Non-engineered steel stair at the east side of the utility building	Implement required remediations as per Factory Engineer.	6-months