

Hams Garments Ltd (extension)

South Vangnahati, Chapilapara, Sreepur
(24.194313N, 90.452568E)

11th January, 2017

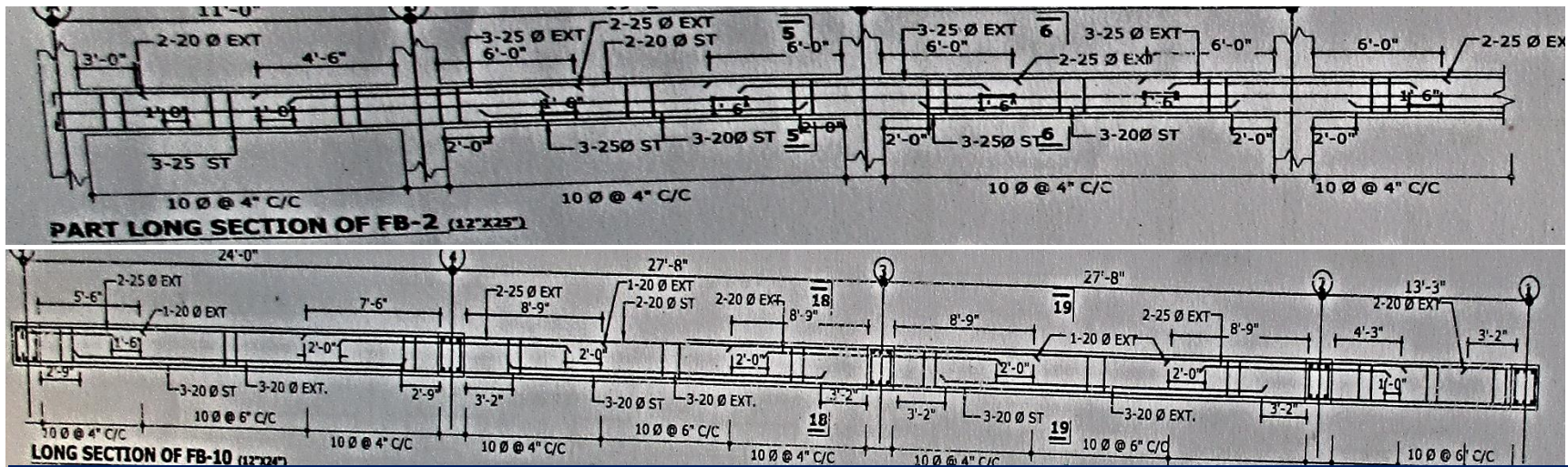




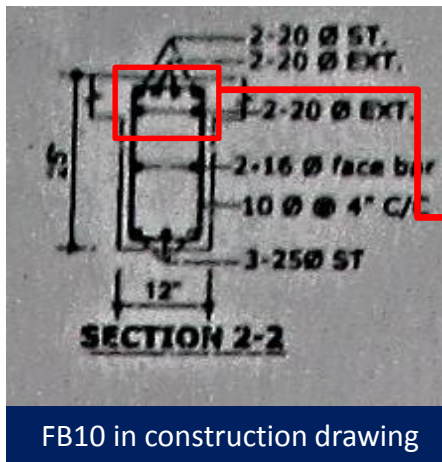
Observation



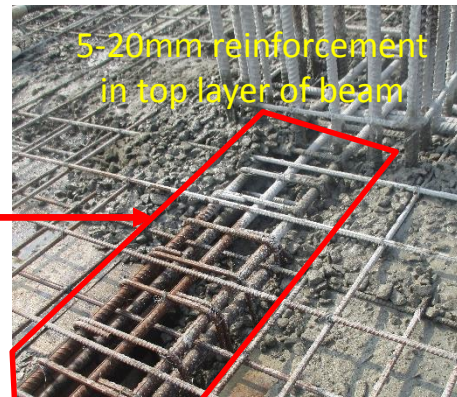
Discrepancy between drawing and as-built condition



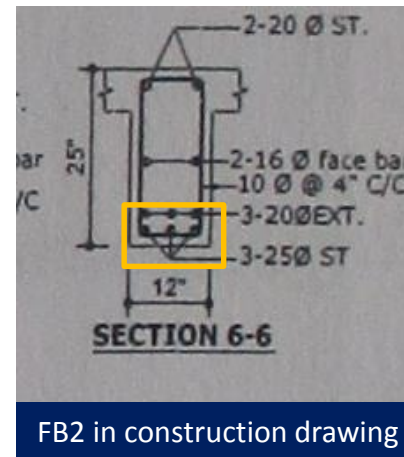
Floor beam detail from provided structural drawings



FB10 in construction drawing



FB10 before casting



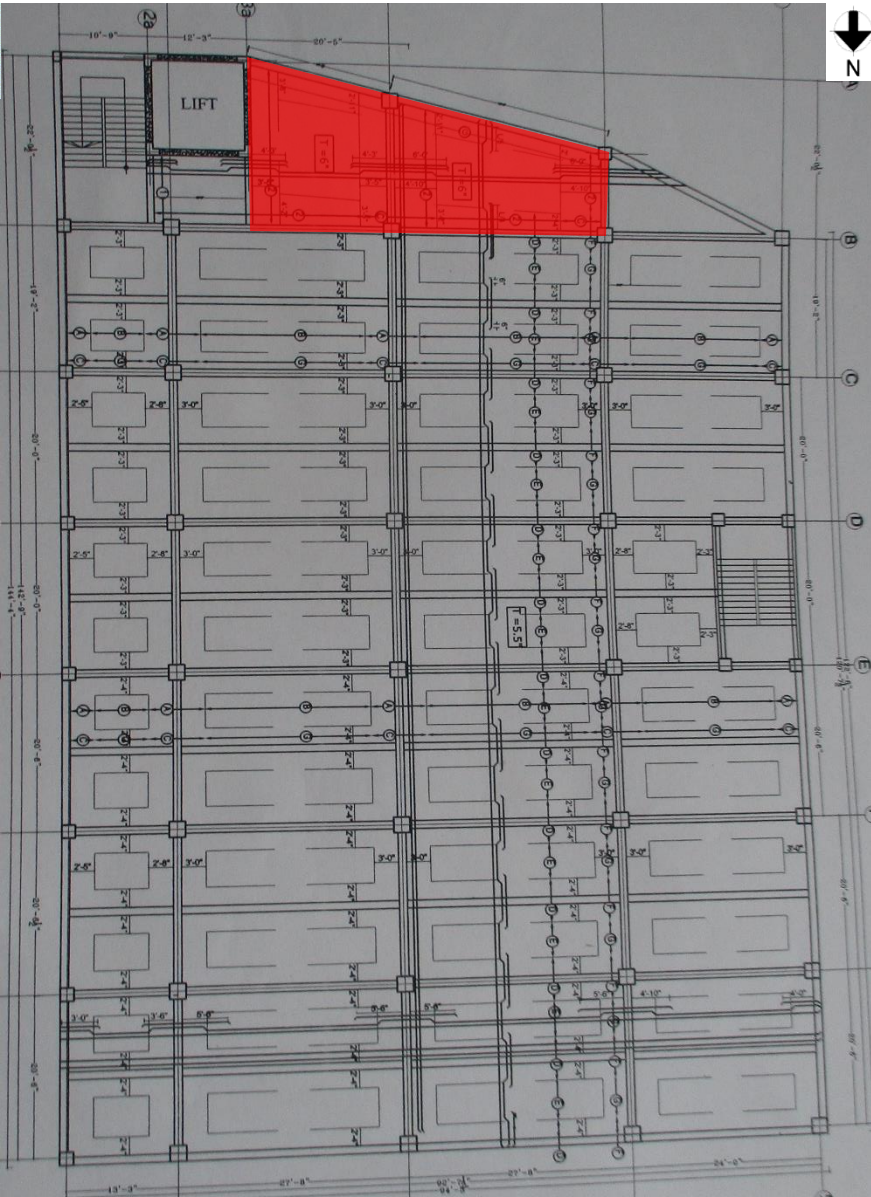
FB2 in construction drawing



FB 2 before casting

During inspection, roof floor concrete pouring was going on and all rebar's were placed. Discrepancies' was found in rebar placement of beams and construction drawings. 5-20mm dia rebar was found instead of 6-20 mm dia rebar in FB1 & FB10. More over 6-20mm dia rebar was found instead of 3-25mm & 3-20mm in bottom of Fb2 which indicate that the structural design has not been followed properly for construction.

Observation: Factory building

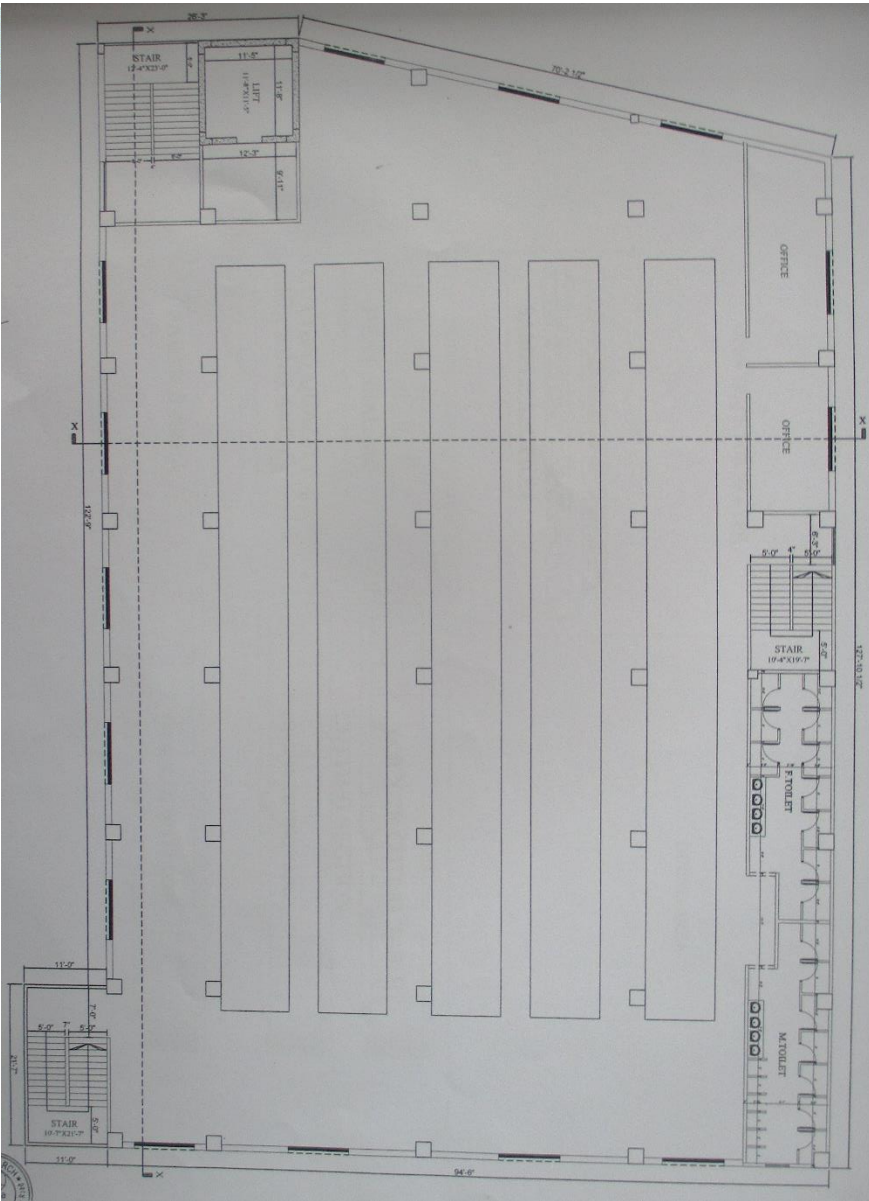


Typical slab layout

Observation: Factory building



According to the working drawings slab thickness of the highlighted area is mentioned 150mm and 140mm in other portion. Construction work was ongoing at the time of inspection. Slab thickness was found more than 150mm.

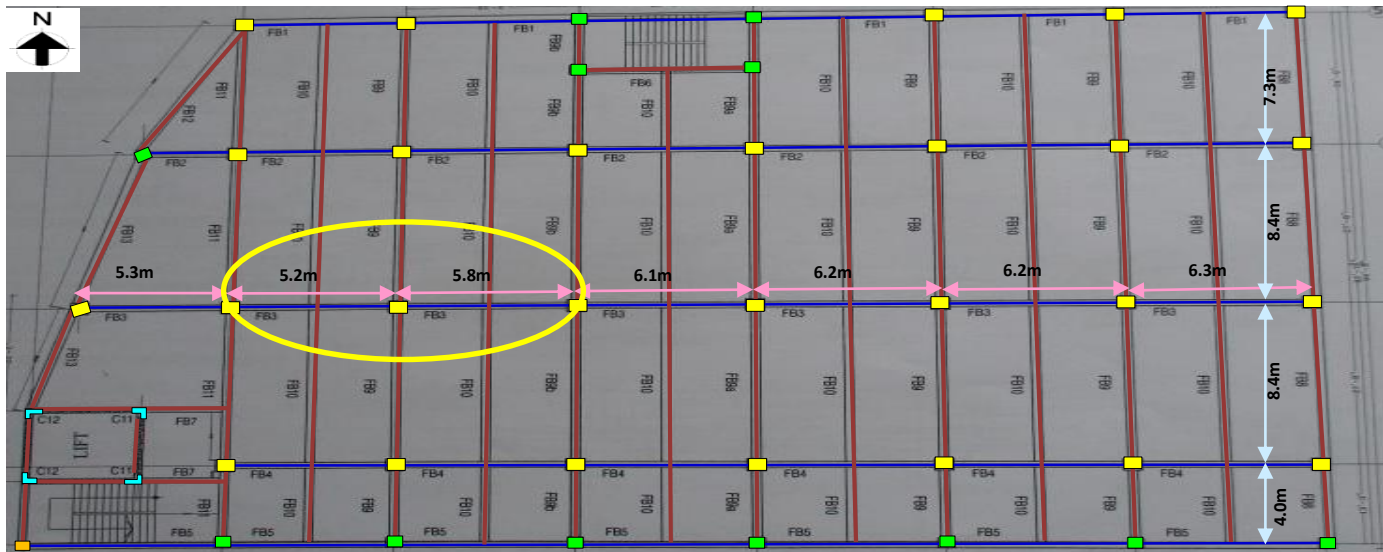


Floor layout of 3rd floor



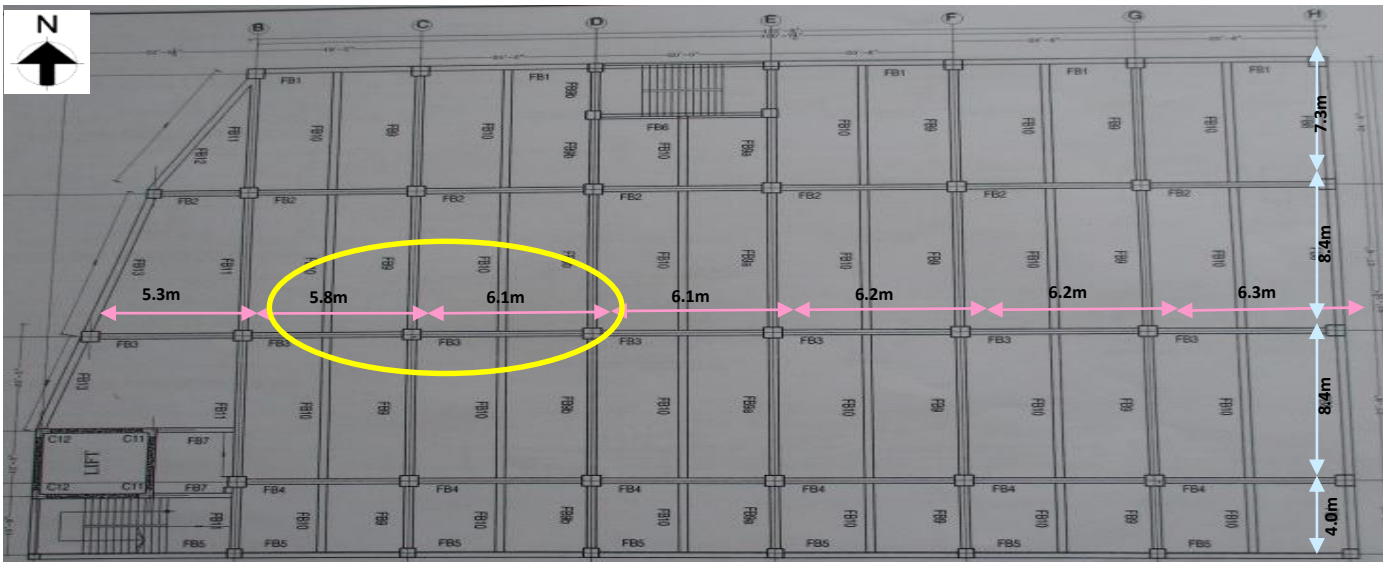
In floor plan the peripheral walls are shown as 125mm but 250mm thick wall was being constructed at the time of inspection as a result additional load should be considered for column capacity check

Observation: Factory building



Typical grid dimensions measured on site from Gr floor to top floor

During inspection, column centre to centre distance was found around 0.9m less than provided drawing along 'X' direction

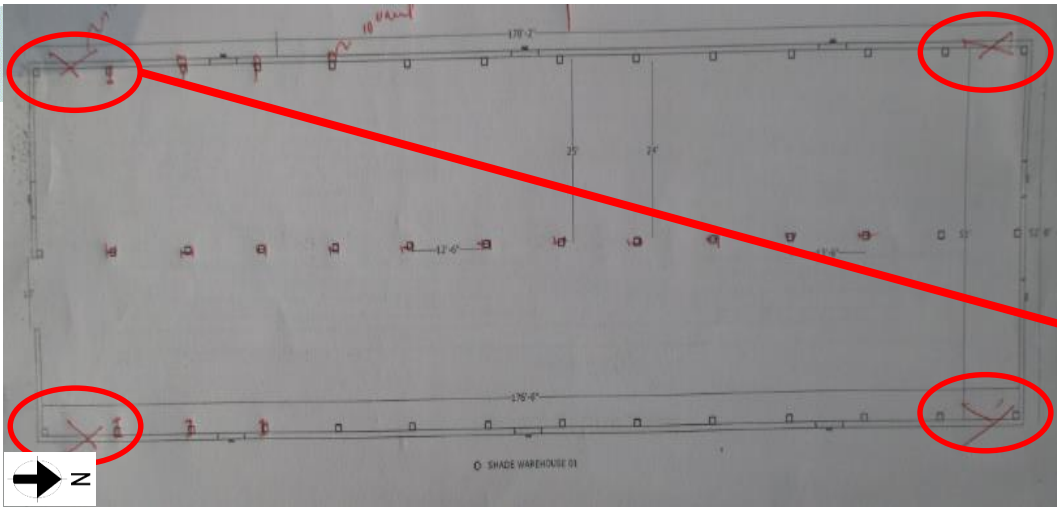


Provided Typical Column Beam Layout for Gr floor to top floor

Observation: Factory building



Sheds appeared to be non engineered



Vertical bracing point at two end bay



Vertical bracing of 20 mm diameter rebar



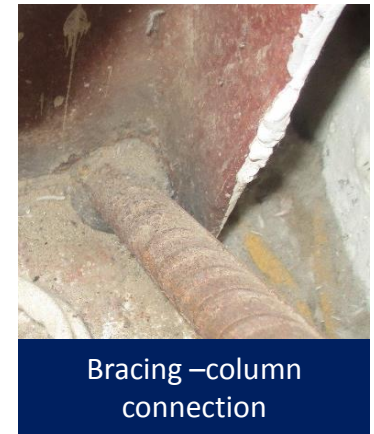
Shed-1



Typical column-rafter joint



Peripheral column-rafter joint



Bracing-column connection

Connection in column-rafter joint and bracing-column joint appeared to be inadequate. Lateral stability in the long direction is provided by vertical bracing in the two end bay (red circle in the layout) which is appeared to be inadequate. Moreover, no horizontal bracing was observed in roof. Factory engineer has to check the lateral stability and adequacy of the connections.

Observation: Shed-1&2



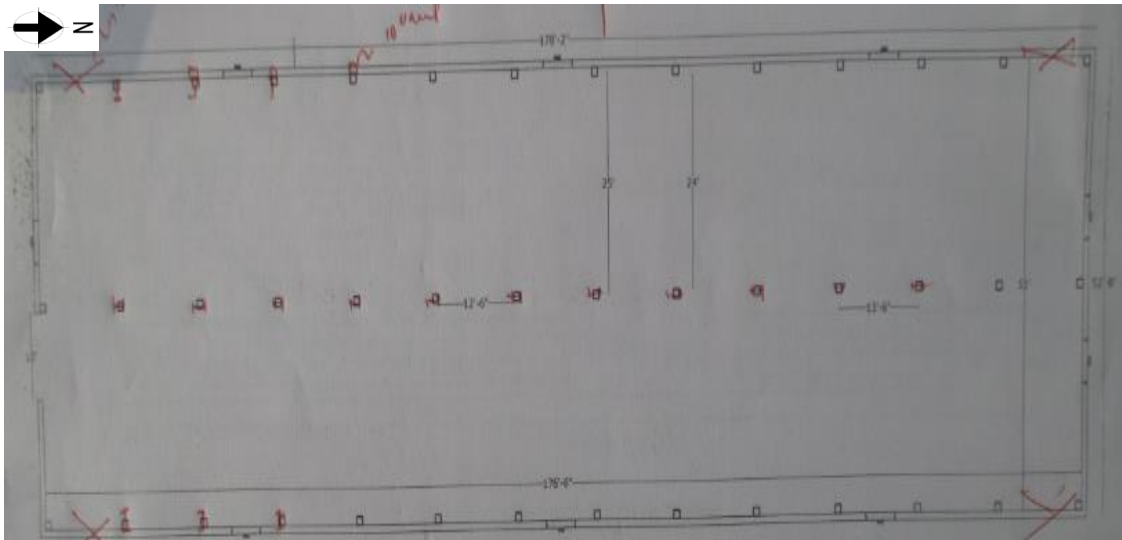
Insufficient documents of two sheds



Shed-1



Shed-2



Column layout of shed-1

At the time of inspection only typical column layout and architectural drawings were made available but no structural drawings were available for both sheds. Factory engineer has to produce as-built structural drawings for both sheds.

Observation: Shed-1&2



Problems Observed

Item1 : Discrepancy between drawings and as-built condition.

Item2 : Sheds appeared to be non engineered.

Item3 : Insufficient documents of two sheds



Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Discrepancy between drawings and as-built condition	Factory engineer to investigate the whole building and review the design for missing reinforcement of beam and all other existing condition.	6-weeks
2	Discrepancy between drawings and as-built condition	Factory engineer to investigate the whole building and review the design considering the rotated columns, missing reinforcement of beam and all other existing condition	6-weeks
3	Discrepancy between drawings and as-built condition	Produce as-built drawing reflecting the as-constructed condition as a part of DEA.	6-weeks
4	Discrepancy between drawings and as-built condition	Carry out remedial work if required.	6-months
5	Sheds appeared to be non engineered	Factory engineer to check the lateral stability of two sheds against heavy wind load.	6-weeks
6	Sheds appeared to be non engineered	Factory engineer review the connection adequacy check of the both sheds.	6-weeks
7	Sheds appeared to be non engineered	Implement remedial work if required	6-months
8	Insufficient documents of two sheds	Factory engineer to produce as built documentation (both structural and architectural drawing) of two sheds.	6-weeks