

Jamuna Knit Concern. Patriot Fashion Ltd.

Road# 1 House#34 Kutubail, Fatullah, Narayanganj 1400 ,Bangladesh.
(23.644765, 90.495215)

08th January 2017





Observations



Column to be stressed above normal design limits

Observations: Factory Building

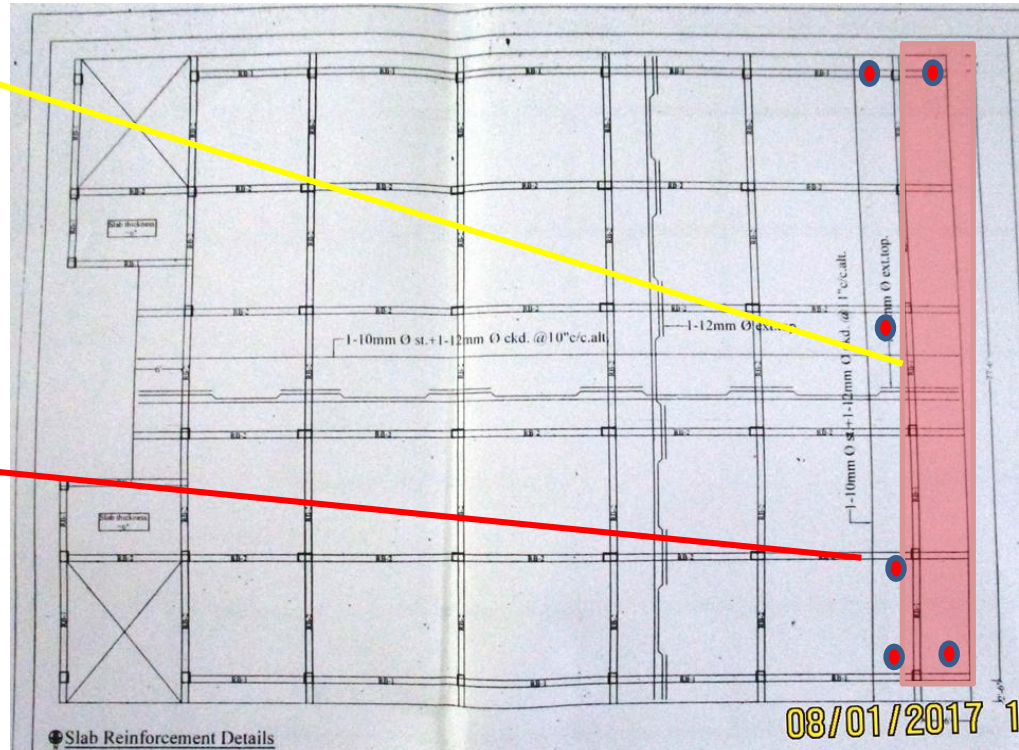


Cantilever at west with toilet area

Cursory calculations indicate that the working stress of the ground floor columns are at a level that requires immediate design review.



Plastic water tank on roof



Slab and beam details



Discrepancies between provided drawings and on site condition

Observations: Factory Building



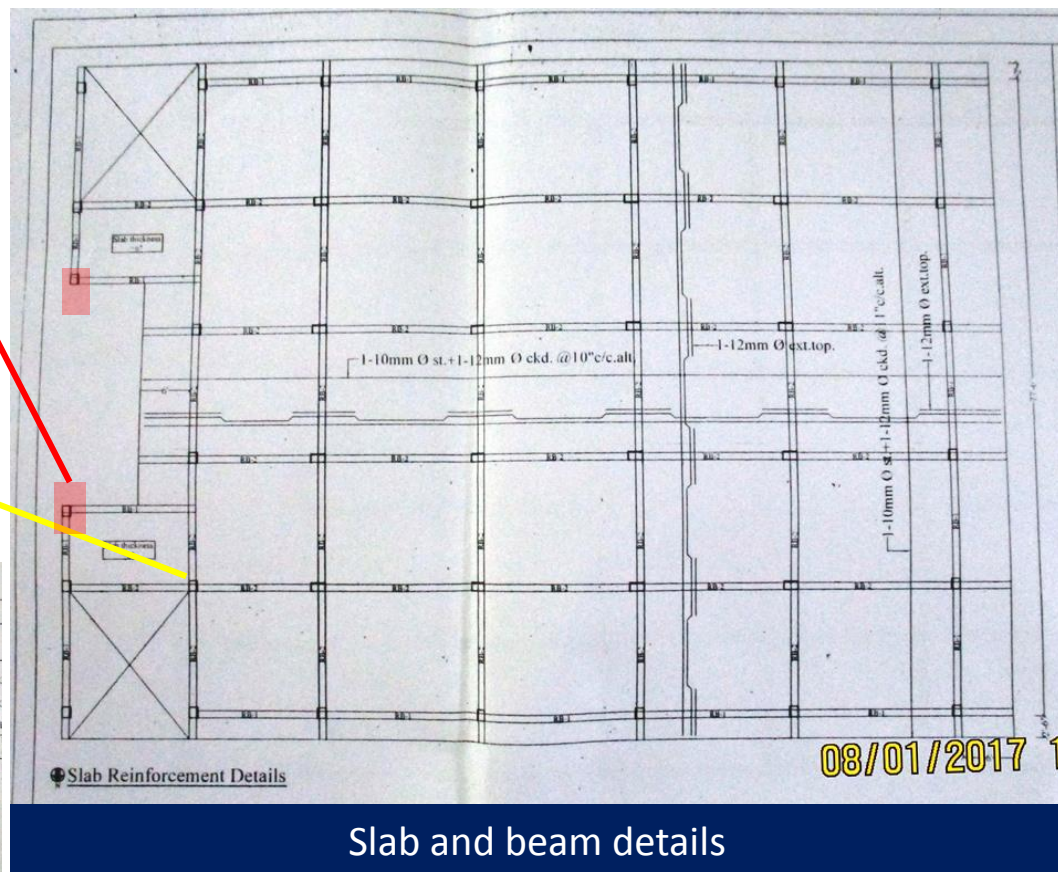
Column layout didn't fully matched with as built condition. Also (corner & stair) column size and nos. of rebar were not matched with column schedule. At east side two columns are not found and which is marked as red on drawings.



Both beam slab and flat slab were shown in provided structural drawing. But during inspection flat slab found in all floors.



Bar Schedule of column							
Sr	N of Col	Sec of Col	Size of Col (Under Ground Beam)	Size of Col (Over Ground Beam)	Nos of Col	Ground to 2nd floor	3rd-4th floor
01	C1		14"X22"	12"X20"	04	16-20mmØ	16-20mmØ
02	C2		14"X17"	12"X15"	09	14-20mmØ	14-20mmØ
03	C3		14"X17"	12"X15"	09	12-20mmØ	12-16mmØ





Corroded and exposed rebar at roof

Observations: Factory Building



Exposed & corroded rebar found in stair case

Exposed & corroded rebar found in some column at roof level of factory building. Also non-engineered steel roof found at stair core. Factory is suggested to provide rust proofing materials to exposed rebar.



Non-engineered steel roof with corrosion

Observations: Factory Building



Appearance of cracks in several location

Observations: Factory Building



Diagonal cracks found in brick wall at 3rd floor and below stair landing.



Cracks also found at south façade.

Observations: Factory Building



Lack of proper drainage system at roof & dampness in several location.

Observations: Factory Building



Proper drainage system not found at roof and due to leakage of water tank water ponding also observed at roof.



Dampness found in several places of the factory building specially toilet zone and façade wall.

Observations: Factory Building



Problems Observed

Factory Building:

Item-1: Column to be stressed above normal design limits.

Item-2: Discrepancies between provided drawings and on site condition.

Item-3: Corroded and exposed rebar at roof.

Item-4: Appearance of cracks in several location.

Item-5: Lack of proper drainage system at roof & dampness in several location.



Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Column to be stressed above normal design limits.	Verify in-situ concrete strength and aggregate type from min. 4 no. 100mm dia. core samples from columns.	6-weeks
2	Column to be stressed above normal design limits.	Factory Engineer to review design, loads and columns stresses.	6-weeks
3	Column to be stressed above normal design limits.	Produce and actively manage a loading plan for all floor plates within the factory, giving consideration to floor capacity and column capacity.	6-weeks
4	Column to be stressed above normal design limits.	Continue to implement loading plan.	6-months
5	Discrepancies between provided drawings and on site condition	Building Engineer to survey as-built structure and prepare accurate as-built survey information, including all columns, beams and slabs.	6-weeks



Item No.	Observation	Recommended Action Plan	Recommended Timeline
6	Corroded and exposed rebar at roof.	All exposed reinforcement is to be protected from corrosion which may cause degradation of the concrete.	6-weeks
7	Corroded and exposed rebar at roof.	Complete further testing on areas of deterioration and have a qualified structural engineer develop a remediation plan	6-months
8	Appearance of cracks in several location	Have a qualified structural engineer provide further analysis of the identified cracks to determine the appropriate cause of corrective action.	6-weeks
9	Appearance of cracks in several location	Carry out remedial work if required as directed by the Building Engineer.	6-months
10	Lack of proper drainage system at roof & dampness in several location.	Waterproofing on the roof slab is to be applied. In addition, the roof slab drainage system should be investigated and improved if required.	6-weeks
11	Lack of proper drainage system at roof & dampness in several location.	Factory engineer to identify the cause of dampness & suggest appropriate remedial action.	6-weeks