Shasha Garments Ltd. (9363)

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05.JULY.2014

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Identified Priority 1 Concerns

- Uncontrolled heavy storage loading on 4th floor and 6th floor.
- Uncontrolled heavy storage loading on 4th floor cantilevered slab.

1st Priority 1 Concern

4th Floor

6th Floor

Uncontrolled heavy storage loading was found on 4th floor and 6th floor. We believed the loading on 4th floor and 6th floor to be 4.5 kPa (50 kg per roll, 1.50 x 1.50 m footprint, 20 rolls per stack) and 6.0 kPa (50 kg per bag, 0.70 x 0.60 m footprint, 5 bags per stack) respectively. Loading in this area should be reduced to 2.0 kPa and we require that these items be investigated in the Detailed Engineering Assessment.

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2nd Priority 1 Concern

Uncontrolled heavy storage loading was found on 1st floor cantilevered slab. This loading was also leaning on the brick walls that lack in lateral load resistance.

Loading in these areas should be removed and we require that these items be investigated in the Detailed Engineering Assessment.

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Identified Priority 2 Concerns

- Cracks on 1st floor and 5th floor beams.
- Inadequacies between the drawings and the actual as-built conditions .
- Movement joint to be properly established.
- Stability and capacity check of the steel stair.
- Stability and capacity check of the roof sheds.
- Stability and capacity check of the connecting bridge.
- Capacity check of the slab supporting water tanks.
- No fireproofing material applied to structural steel elements (if required).

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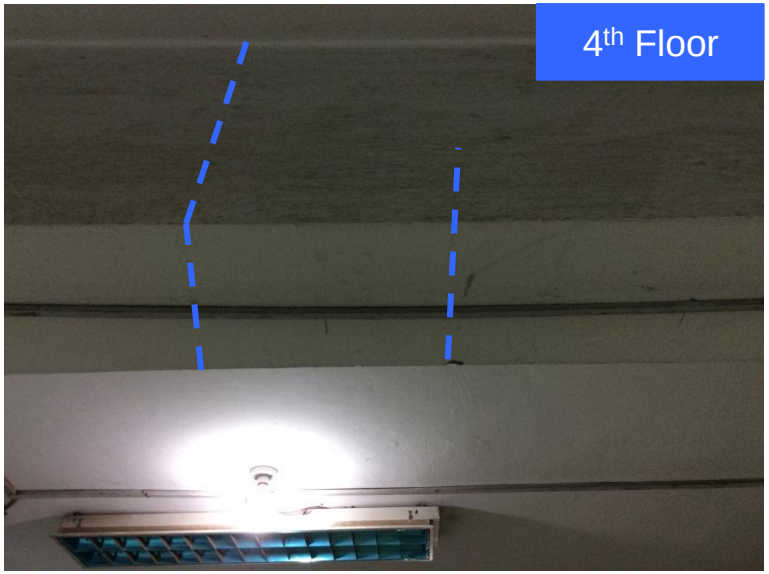
1st Priority 2 Concern



Cracks on 1st floor and 5th floor beams. The cause of cracks should be investigated by appropriate methods.

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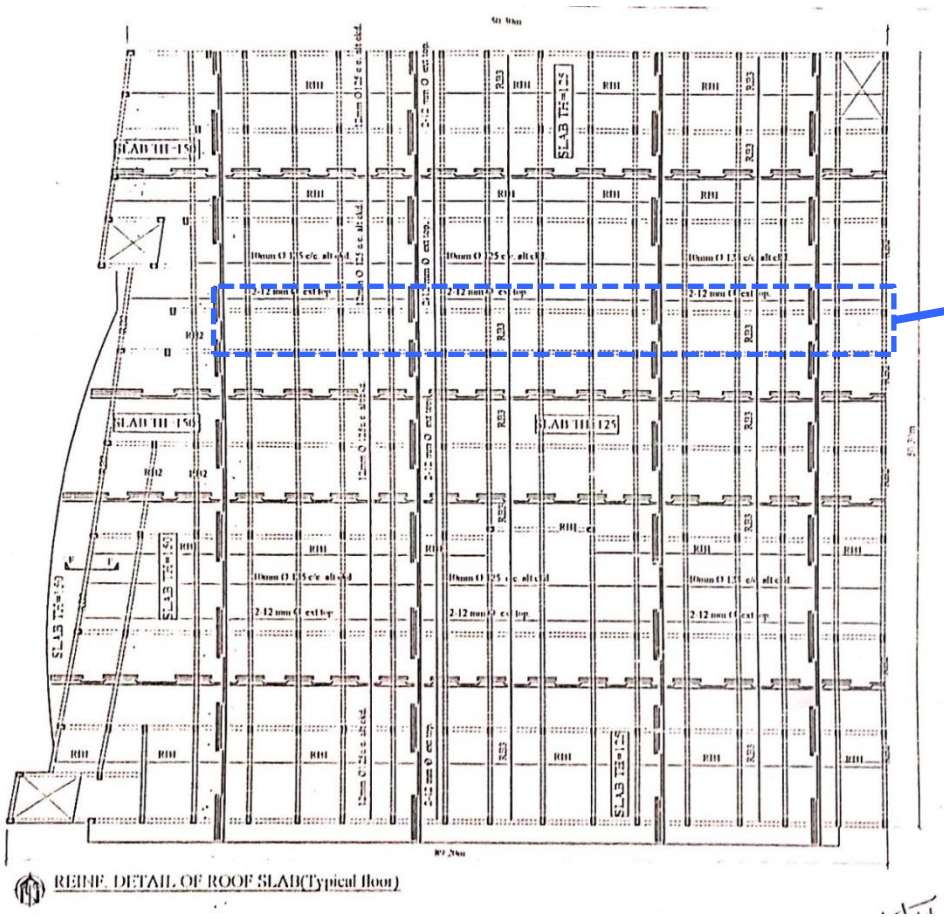
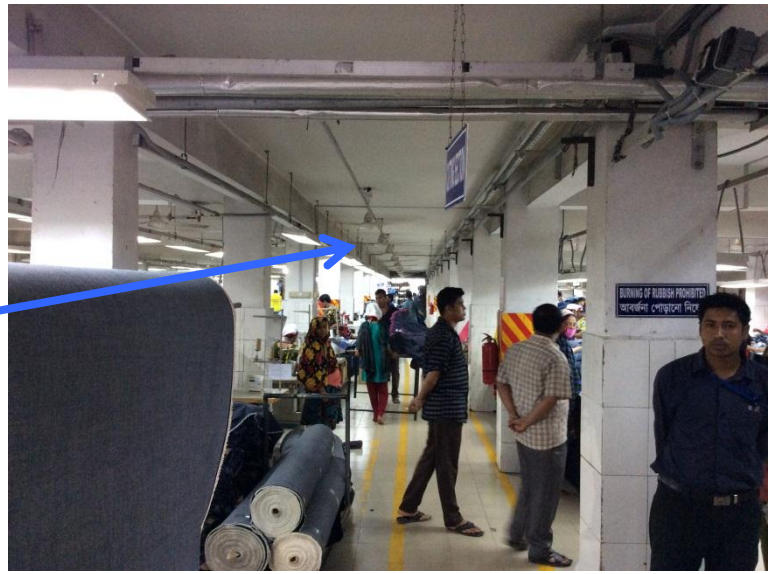
2nd Priority 2 Concern





There are no 5th floor beams in area shown above. These do not match the structural drawings.

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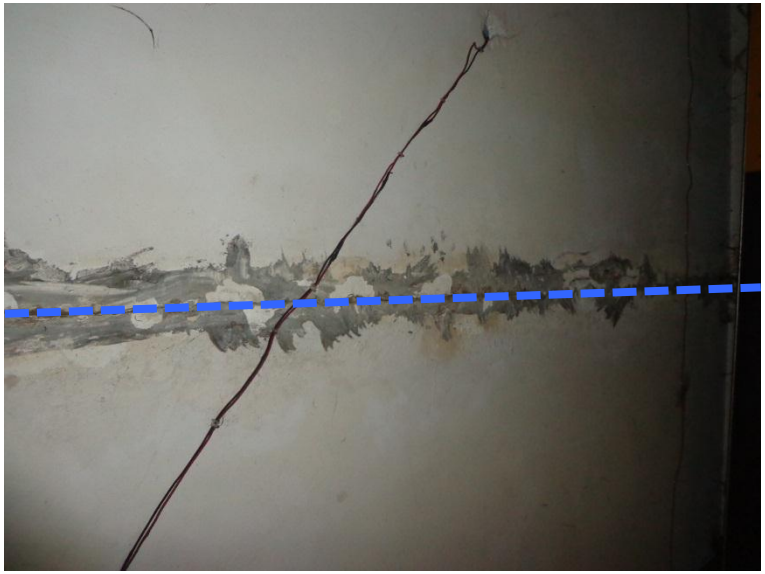
3rd Priority 2 Concern



This building was constructed into 2 phases. The movement joint should be established properly where shown. However the joint was covered with mortar and/or finishes on the floors and cracks were noted along the joint profile.

- - - - - Movement Joint

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4th Priority 2 Concern

There are no drawings provided for the steel staircase on the east side of this building. The stability and capacity of this steel stair need to be investigated.

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5th Priority 2 Concern

There are no drawings provided for the roof shed of main building. The roof sheds of main building and auxiliary building must be checked for stability and capacity especially the connections. Stability under wind uplift needs to be checked in particular.

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6th Priority 2 Concern

There is connecting bridge on the south side between this building and other building. The stability and capacity of this connecting bridge and related elements need to be verified.

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7th Priority 2 Concern

There are concerns with a section of slab that was supporting three water tanks. A capacity check of this slab and related elements need to be carried out.

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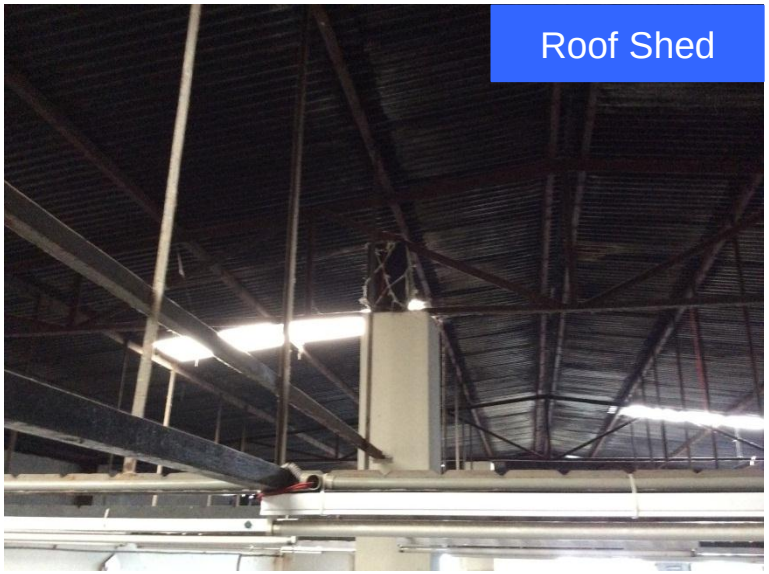
8th Priority 2 Concern

Staircase



Roof Shed

Roof Shed

No fireproofing material was noted on structural steel elements (if required).

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Identified Priority 3 Concerns

(None)

Overall Stability System

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The lateral loading resistance for this 7-storey building is provided by moment frame action without any shear wall and the façade brickwork walls lack moment capacity due to their poor connections with the surrounding columns and beams. This building also has high unbraced length columns (2 storeys) on the west side.

We require that this building be investigated in a Detailed Engineering Assessment.

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Water Ingress

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Distress due water ingress noted at slabs, beams, columns and walls. Water ponding was found at roof slab.

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Priority Actions

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Problems Observed Summary

ITEM 1:	(Priority 1)	Uncontrolled heavy storage loading on 4th floor and 6th floor.
ITEM 2:	(Priority 1)	Uncontrolled heavy storage loading on 4th floor cantilevered slab.
ITEM 3:	(Priority 2)	Cracks on 1st floor and 5th floor beams.
ITEM 4:	(Priority 2)	Inadequacies between the drawings and the actual as-built conditions.
ITEM 5:	(Priority 2)	Movement joint to be properly established.
ITEM 6:	(Priority 2)	Stability and capacity check of the steel stair.
ITEM 7:	(Priority 2)	Stability and capacity check of the roof sheds.
ITEM 8:	(Priority 2)	Stability and capacity check of the connecting bridge.
ITEM 9:	(Priority 2)	Capacity check of the slab supporting water tanks.
ITEM 10:	(Priority 2)	No fireproofing material applied to structural steel elements (if required).
ITEM 11:	(Priority 2)	Overall stability system.
ITEM 12:	(Priority 3)	Distress due to water ingress.

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Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Priority 1 - Uncontrolled heavy storage loading on 4th floor and 6th floor.	Reduce stacking height to ensure total load does not exceed 2.0 kPa. A Detailed Engineering Assessment id required to review the design and loads. Factory Engineer to state the maximum weight that is allowed per square meter. Suggest that state the value on notice boards in these areas. (Loading Plans).	Immediate – Now
2	Priority 1 - Uncontrolled heavy storage loading on 4th floor and 6th floor.	Adopt some sort of signage/staff guidance to ensure that the maximum weight of storage is not exceeded. (Loading Plans).	6-weeks
3	Priority 1 - Uncontrolled heavy storage loading on 4th floor and 6th floor.	Maintain standards of quality control to ensure that storage procedures are correctly followed so that overloading problems do not arise in the future. Maintain and implement Loading Plans.	6-months
4	Priority 1 - Uncontrolled heavy storage loading on 4th floor cantilevered slab.	Remove heavy storage loading in the area identified above. A Detailed Engineering Assessment id required to review the design and loads. Factory Engineer to state the maximum weight that is allowed per square meter. Suggest that state the value on notice boards in these areas. (Loading Plans).	Immediate – Now
5	Priority 1 - Uncontrolled heavy storage loading on 4th floor cantilevered slab.	Adopt some sort of signage/staff guidance to ensure that the maximum weight of storage is not exceeded. (Loading Plans).	6-weeks
6	Priority 1 - Uncontrolled heavy storage loading on 4th floor cantilevered slab.	Maintain standards of quality control to ensure that storage procedures are correctly followed so that overloading problems do not arise in the future. Maintain and implement Loading Plans.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
7	Priority 2 - Cracks on 1st floor and 5th floor beams.	The Factory Engineer to investigate the cause of cracks by appropriate methods. The distress found is to be suitably rectified and then repaired.	6-weeks
8	Priority 2 - Cracks on 1st floor and 5th floor beams.	Create loading plans for each floor level. Maintain standards of quality control to ensure that loading plan is correctly followed so that problems do not arise in the future. Maintain and enforce the loading plans.	6-months
9	Priority 2 - Inadequacies between the drawings and the actual as-built conditions.	Factory Engineer to survey the actual conditions and revise the drawings. Any results of the Engineering Assessment which affect the structure should be taken on board.	6-weeks
10	Priority 2 - Inadequacies between the drawings and the actual as-built conditions.	Continue to implement load plan.	6-months
11	Priority 2 - Movement joint to be properly established.	The Factory Engineer should investigate to prove the capacity of the building in its existing state, a further building approval should be gained for the building as it exists, as altered since the original approval. Alternatively, the extension building should be separated by a non-structural joint and allowed to act as a fully structurally independent structure.	6-weeks
12	Priority 2 - Movement joint to be properly established.	Do not construct any further buildings connected to the existing building without thorough structural design and full building approval.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
13	Priority 2 - Stability and capacity check of the steel stair.	Factory Engineer to review design, loads and related elements in area identified above to confirm capacity and stability for these items.	6-weeks
14	Priority 2 - Stability and capacity check of the steel stair.	Implement any corrective action found to be necessary.	6-months
15	Priority 2 - Stability and capacity check of the roof sheds.	Factory Engineer to review design, loads and related elements in area identified above to confirm capacity and stability for these items.	6-weeks
16	Priority 2 - Stability and capacity check of the roof sheds.	Implement any corrective action found to be necessary.	6-months
17	Priority 2 - Stability and capacity check of the connecting bridge.	Factory Engineer to review design, loads and related elements in area identified above to confirm capacity and stability for these items.	6-weeks
18	Priority 2 - Stability and capacity check of the connecting bridge.	Implement any corrective action found to be necessary.	6-months
19	Priority 2 - Capacity check of the slab supporting water tanks.	Factory Engineer to review design, loads and related elements in area identified above to confirm capacity for these items.	6-weeks
20	Priority 2 - Capacity check of the slab supporting water tanks.	Implement any corrective action found to be necessary.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
21	Priority 2 - No fireproofing material applied to structural steel elements (if required).	Fireproofing material for structural steel element is recommended as suggested in BNBC Codes.	6-weeks
22	Priority 2 - No fireproofing material applied to structural steel elements (if required).	Maintain standard of quality control and protection of the fire protection.	6-months
23	Priority 2 - Overall stability system.	Request that a Detailed Engineering Assessment of the overall building to be carried out and in particular, stability and foundation aspects should be investigated in detail as per BNBC specified lateral loads.	6-weeks
24	Priority 2 - Overall stability system.	Implement any corrective action found to be necessary.	6-months
25	Priority 3 - Distress due to water ingress.	Factory Engineer to inspect water damaged structures and repair with a suitable method. Waterproofing on the roof slab is to be applied. Moreover the roof slab drainage system should be investigated and improved.	6-months