

Basic Shirt Ltd. (9909)

Basic Tower, Harvaid, Mazu Khan, Pashim para, mosjid, Gazipur sadar, Gazipur.

(+23.918752N, 90.432497E)

24.06.2014



Identified Priority 1 Concerns

None

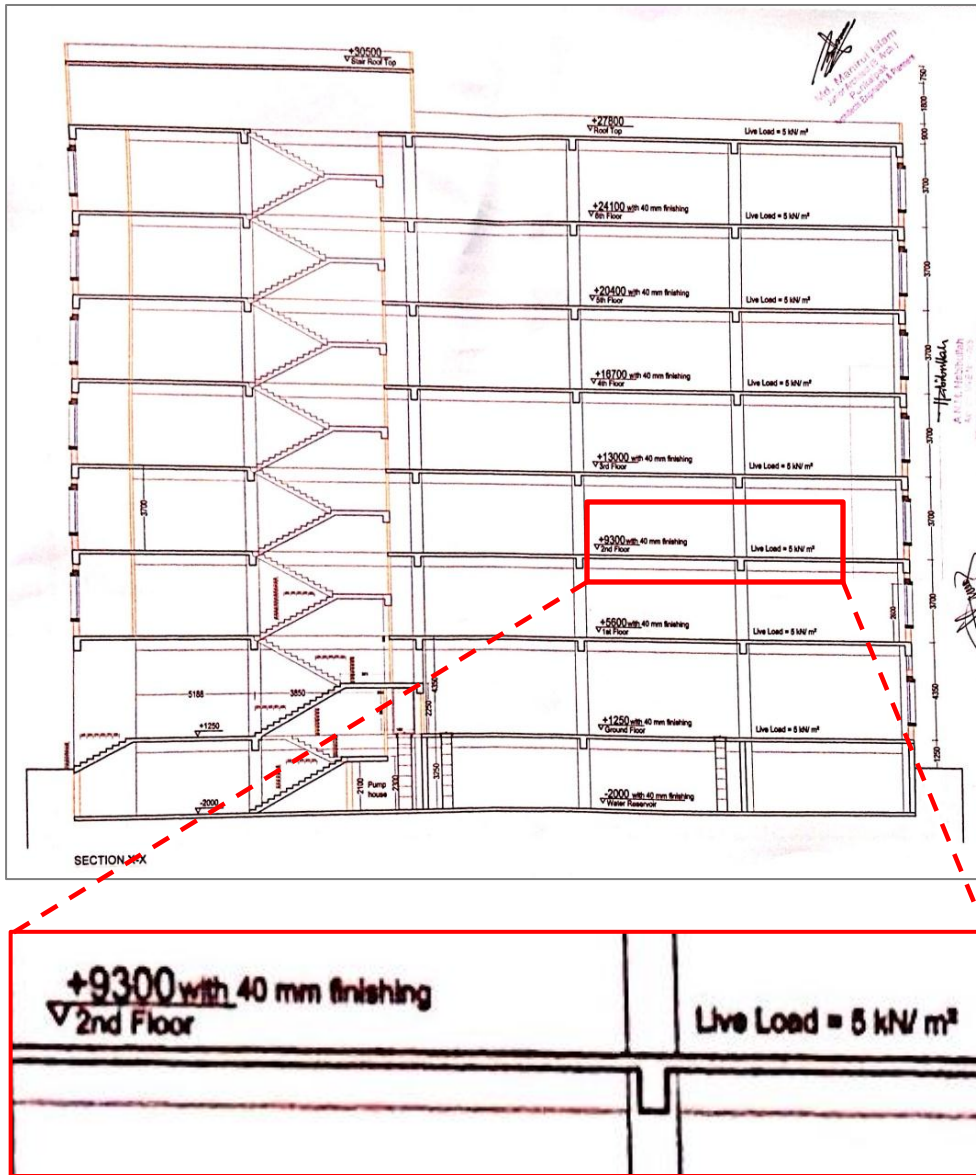
Identified Priority 2 Concerns

- Factory Buildings Loading plan has to be revised.
- Factory Building toilet block contains brick partition walls that are not over the beams and the toilets have increased floor finish.

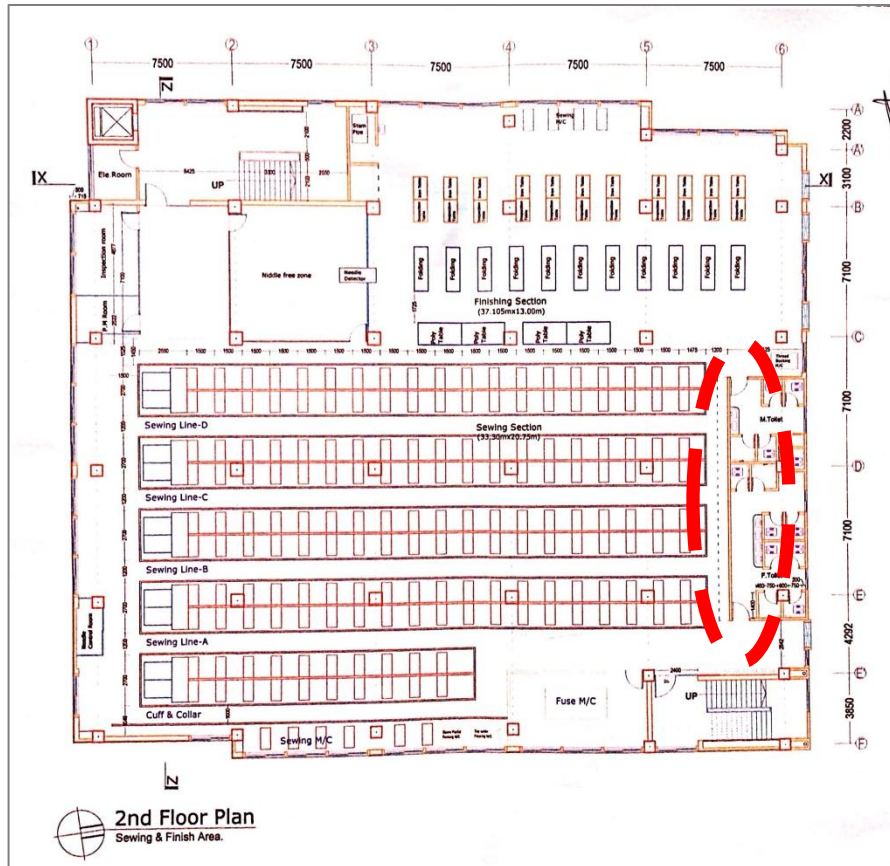
1st Priority 2 Concern

The loading document for the factory building shows that all the floors can withstand a live load of 5KN/m², but our analysis shows that the columns gets overstressed to AMBER if 5.00kN/m² load is applied on all the floors. On the other hand the columns retain a YELLOW rating if a live load of 2.00kN/m² is applied.

We haven't seen any signs of distress in the columns because most of the floors are not occupied yet.



2nd Priority 2 Concern



The Toilet block of the Factory building is has 5" thick brick partition walls that are not over the beams.



2nd Priority 2 Concern continues

The toilet has a floor finish of about 16" which could apply a local dead load of approximately 10 kN/m². Moreover the toilets partially sit on a cantilever slab. These loads in addition to live load of 2kN/m² could overstress the structure.

400mm floor finish

Toilets over cantilever slab

Identified Priority 3 Concerns

- Factory Building Guard rail at the elevator shaft is not secure.
- Generator, Sub-station, Compressor and Boiler Sheds Structural steel roofs have to be checked.
 - Compressor, Boiler and Security Sheds – No documentations were provided
 - Overall lateral stability system



1st Priority 3 Concern

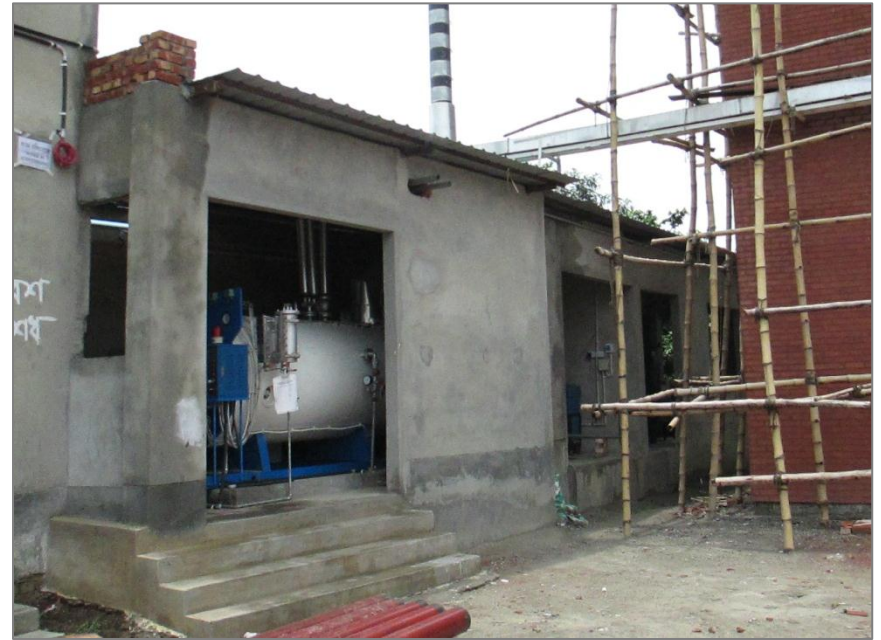
The opening of the lift core is not properly secured in all the floors. Any unsuspecting worker could tip over the unsecured closures and fall down.

2nd Priority 3 Concern



The structural steel roof of the generator and Boiler shed may not be properly tied down to resist uplift wind force and lateral loads. In case of the Boiler shed the connection between the steel roof and the RCC columns looks improvised and needs to be checked.

3rd Priority 3 Concern



As previously mentioned, no structural documents were provided for the security and the Compressor, Boiler shed.

Overall Stability System



Sway stability of the Factory Building could be expected from rigid frame system (beam and column participation) although no ductile detailing is provided in structural plans. Brick infill is unrestrained and should not be considered.

We require that the lateral support system is investigated as part of a Engineering Assessment.

Building Extents – Overall Lateral Stability System

Water Ingress at Roof Level



No waterproofing membrane was visible on the roof of the building. The construction works of the roof is not finished yet.

It is our recommendation that they put waterproofing membrane otherwise any cracks in the surface finishes on the roof will allow water to seep into the concrete slab beneath the finishes, and cause long-term deterioration of the slab.



Roof Waterproofing System at Factory Building

Priority Actions

Problems Observed Summary

ITEM 1: Priority 2– Factory Buildings Loading plan has to be revised.

ITEM 2: Priority 2– Factory Building toilet block contains brick partition walls that are not over the beams and the toilets have increased floor finish.

ITEM 3: Priority 3– Factory Building – Guard rail at the elevator shaft is not secure.

ITEM 4: Priority 3– Generator, Sub-station, Compressor and Boiler Sheds Structural steel roof has to be checked.

ITEM 5: Priority 3– Compressor, Boiler and Security Sheds – No documentations were provided.

ITEM 6: Priority 3– Overall stability system

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Priority 2 - Factory Buildings Loading plan has to be revised.	Carry out an Engineering Assessment to verify all the actual load bearing capacity for the slabs, beams and the columns.	6-weeks
2	Priority 2 - Factory Buildings Loading plan has to be revised.	Develop and maintain a proper loading plan.	6-months
3	Priority 2 - Factory Building toilet block contains brick partition walls that are not over the beams and the toilets have increased floor finish.	Carry out a Detailed Engineering Assessment to verify all the structural system of the partition walls and the increased floor finishes. No loads such as fabric or equipment should be placed in the area 3 meters around the toilets until the DEA is completed.	6-weeks
4	Priority 2 - Factory Building toilet block contains brick partition walls that are not over the beams and the toilets have increased floor finish.	Carry out any strengthening works recommended in the DEA.	6-months
5	Priority 3 - Factory Building - Guard rail at the elevator shaft is not secure.	Secure the openings with a guard rail or wall meeting BNBC requirements. Close them down properly until the lift is installed. Put caution signs in front of the openings.	6-weeks
6	Priority 3 - Generator, Sub-station, Compressor and Boiler Sheds Structural steel roof has to be checked.	Carry out an Engineering Assessment to verify all the structural system of these sheds. Develop proper structural steel documents. The factory engineer must check the steel roofs against uplift wind pressure.	6-weeks
7	Priority 3 - Generator, Sub-station, Compressor and Boiler Sheds Structural steel roof has to be checked.	Carry out any repair works if necessary suggested by the factory engineer.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
8	Priority 3 - Compressor, Boiler and Security Sheds - No documentations were provided.	Develop proper structural documents for the Compressor, Boiler shed and the Security shed. These documents have to be validated by an engineering assessment.	6-weeks
9	Priority 3 - Compressor, Boiler and Security Sheds - No documentations were provided.	Carry out any repair works if necessary suggested by the factory engineer. Edit the master plan of the whole premises and put Compressor, Boiler shed and the Security sheds location on it.	6-months
10	Priority 3 - Overall stability system	Carry out a Detailed Engineering Assessment of the building to verify that it is stable under lateral loading as per BNBC.	6-weeks
11	Priority 3 - Overall stability system	Carry out recommendations of engineering assessment.	6-months