Pioneer Casual Wear Ltd. (9869)

Zamgora, Earpur Union, Savar.

(+23.93848N, 90.29228E)

14.MAY.2014

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Identified Priority 1 Concerns

1st Priority 1 Concern

The storage of boxes in level 4 is higher than the design loading 2.5 kPa. Each box of fabric is estimated to be approximately 10.5kg with the dimension 0.55x0.38m and 6 layers, so the live load for this area is 3.01 kPa which is higher than the design loading 2.5 kPa.

Although the live load is only marginally higher than the imposed load, the stacking of the boxes should be carefully monitored to ensure that there is no possibility of overloading should loading conditions change in future.

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Identified Priority 2 Concerns

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1st Priority 2 Concern

Based on the load rundown analysis of the building, the current building operates well within structural limits. However, the column stress checking analysis turns out to be YELLOW status, which means that all floor loadings must be carefully monitored.

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Identified Priority 3 Concerns

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1st Priority 3 Concern

There are a lot of cracks appearing on the Ground Floor beams and slabs in Block A. The cracks occur at the mid-span of beam and slab. The cracks need to be investigated to determine the width and depth to find the appropriate remedial solution for the crack.

In the meantime, the loading on the Ground Floor slab should be carefully monitored to ensure no overloading occurs

We require that these items be investigated in a Detailed Engineering Assessment

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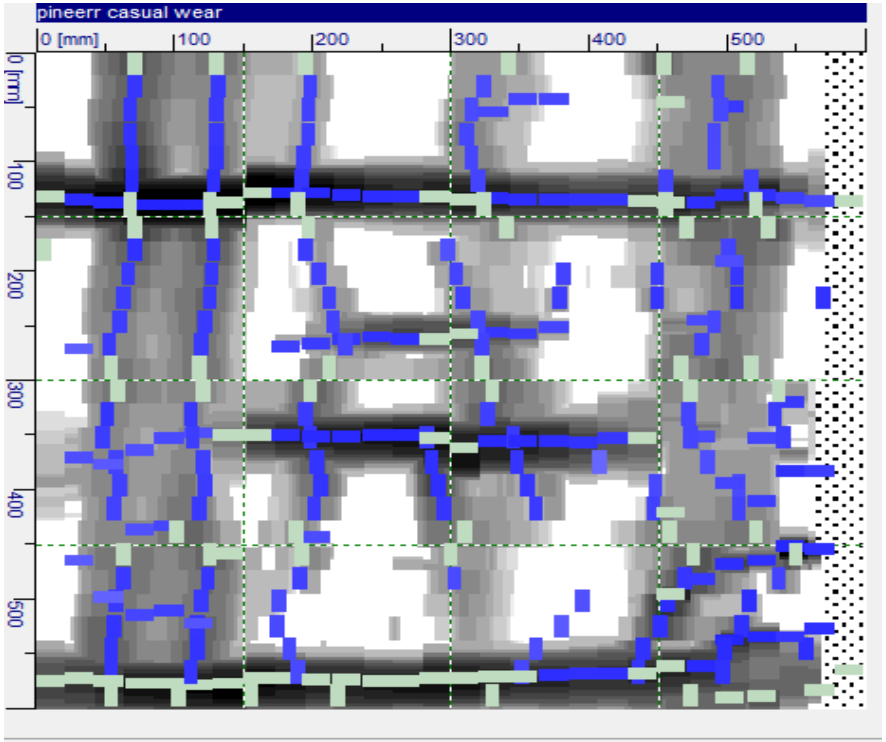
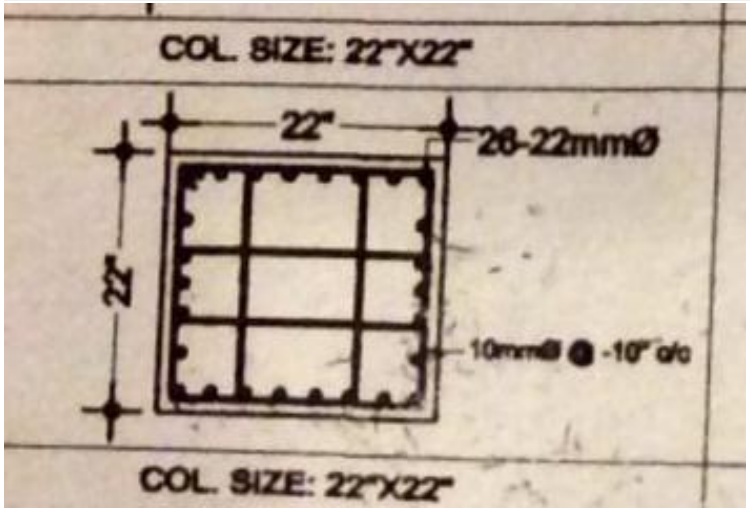
2nd Priority 3 Concern





The ferroscan shows that the number of rebars in column C3 does not match with the structural drawings. It appears that the number of bars is less.

A Detailed Engineering Assessment should be carried out to find out the actual as-built condition of the columns and the structural calculations checked for sufficient structural capacity

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Overall Stability System

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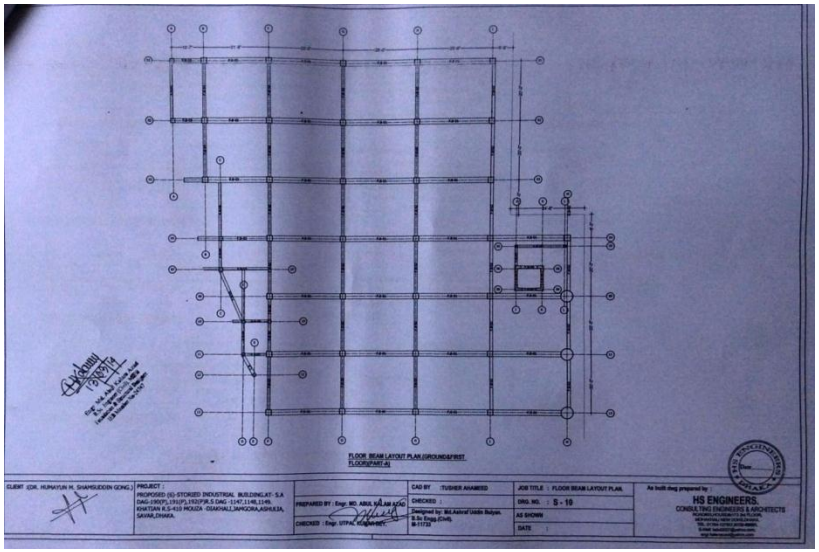

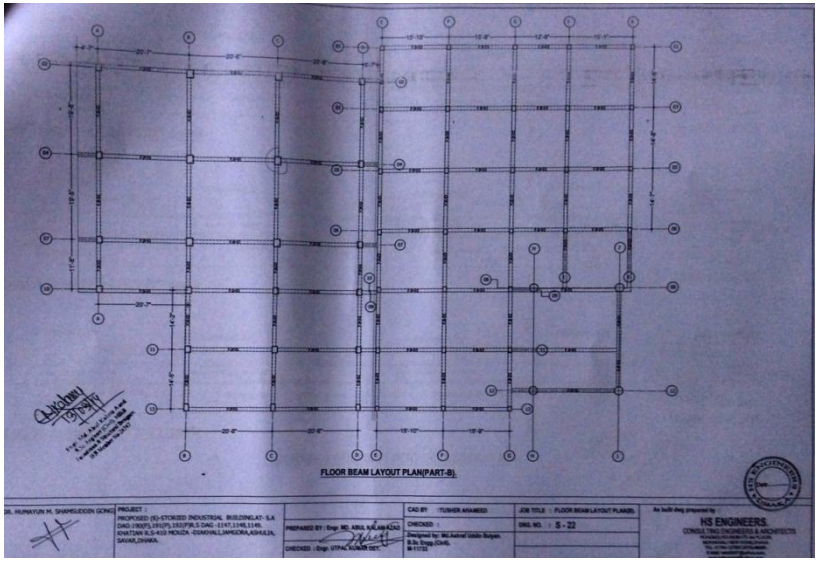

R.C Beam and column frame with a 2-way solid slab
Stability provided by moment frame system

Slab Thickness 152mm
Column Size 558x558mm (typ.)
Beam Size 558x660mm(typ.)

Grid 6.1m x 7.62m.

This type of structural framing is appropriate for the building lower than 10 storeys with the large plan area. However, it is required that the engineer reviews and checks the loading cases for the horizontal deflection and storey drift under wind and seismic load.

We require that these items be investigated in a Detailed Engineering Assessment

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Priority Actions

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Problems Observed Summary

ITEM 1: (1st Priority 1) Loading intensity appears to be greater than what was designed for on level 4.

ITEM 2: (1st Priority 2) The column stress checking analysis turns out to be YELLOW rating

ITEM 3: (1st Priority 3) Cracking appear on the Ground floor beams and slabs in Block A

ITEM 4: (2nd Priority 3) The ferroscanner shows the number of bars in column C3 to be less than what was provided in the structural drawings

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Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Loading intensity appears to be greater than what was designed for on level 4.	Immediately reduce stacking height of fabric bag to ensure total load does not exceed 2.5kPa.	Immediate – Now
2	Loading intensity appears to be greater than what was designed for on level 4.	Mark the maximum allowable height of fabric stacking to ensure full compliance.	6-weeks
3	The column stress checking analysis turns out to be YELLOW rating	Factory Engineer to review design, loads and columns stresses in area identified above. Verify insitu concrete stresses either by 100mm dia. cores or existing cylinder strength data.	6-weeks
4	The column stress checking analysis turns out to be YELLOW rating	Produce and actively manage a loading plan for all floor plates within the factory giving consideration to floor capacity and column capacity.	6-months
5	Cracking appear on the Ground floor beams and slabs in Block A.	The cracks need to be investigated to see the width and depth of crack, available reinforcement, and determine remedial measures if any.	6-months
6	The ferroscanner shows the number of bars in column C3 to be less than what was provided in the structural drawings	The detail survey for the rebar of the column need to be carry out to confirm the exactly the number of bars in the column.	6-months