

Advanced Composite Textile Ltd

Kashor, Masterbari, Bhaluka, Mymensingh, Bangladesh
(24.302157N, 90.363604E)

24th October 2015



Observations

High stress levels in columns (BLG 1 and BLG 2)

Observation

Outline calculations indicate some columns are highly stressed under their current loading conditions particularly in the areas highlighted.

Quick Ferro scanning on column



Concrete has Stone aggregate

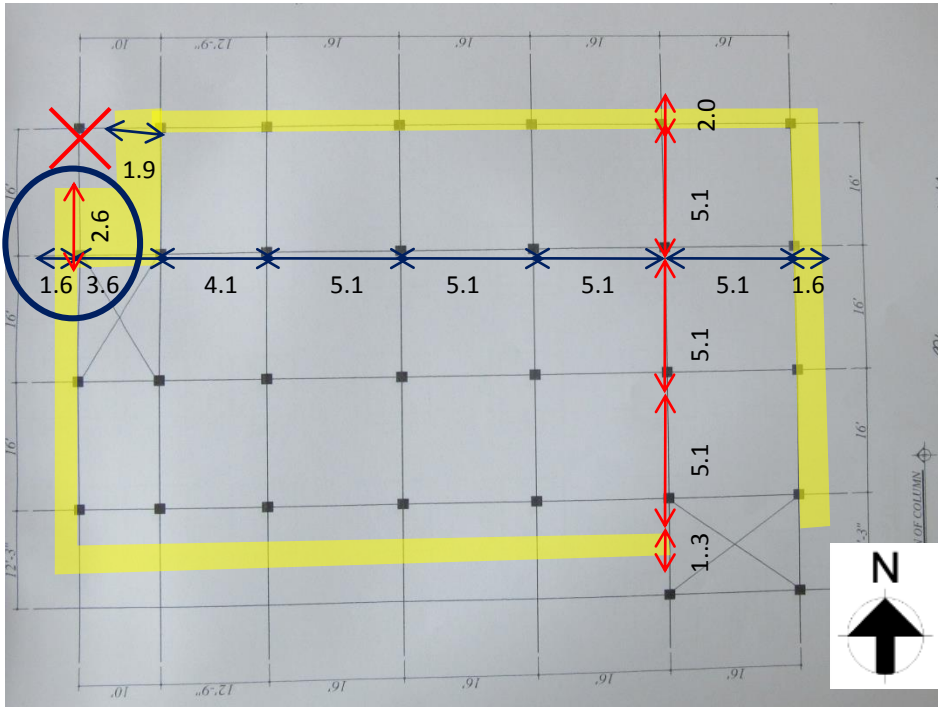
High Stress Levels in Columns

ACCORD
on Fire and Building Safety in Bangladesh

ARUP

Observation BLG 1

Outline calculations indicate some columns are highly stressed under their loading conditions particularly if all floors under construction are built up to building permit level (6th floor)



High Stress Levels in Columns

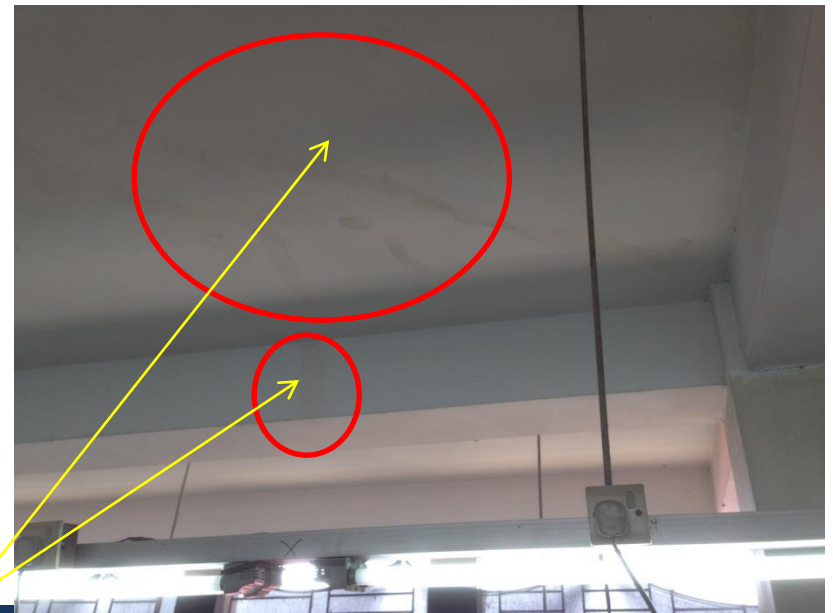
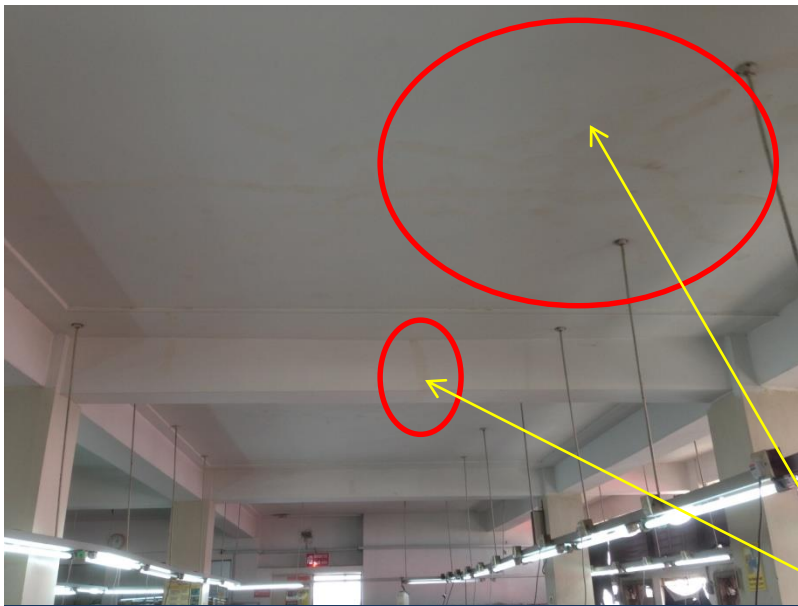
Cracking in masonry in various portions of BLG 1



Cracks on the brick masonry in building 1 was observed in many places



Cracking on some beams and slabs (BLG 1 and BLG 2)



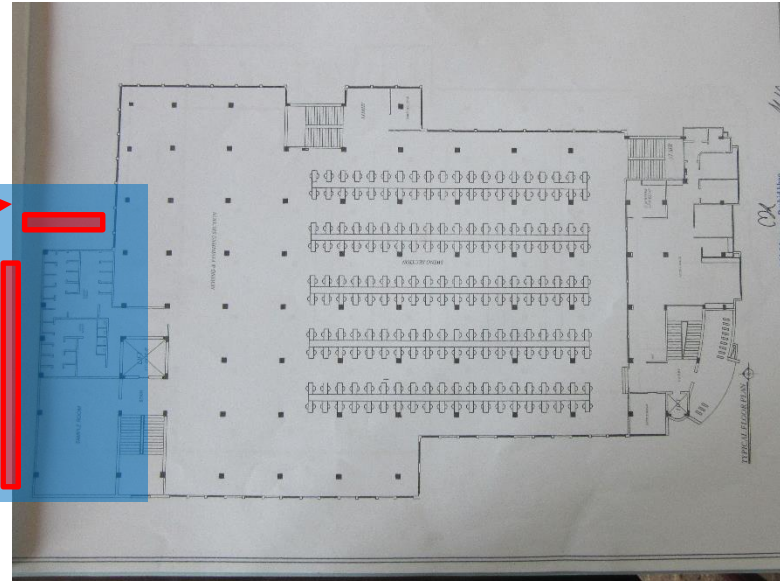
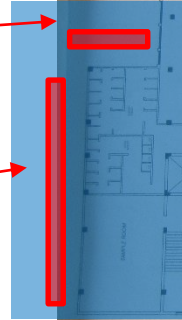
Cracks in roof slab and in beam observed in Building 1



Observed cracks in floor slabs in Building 2



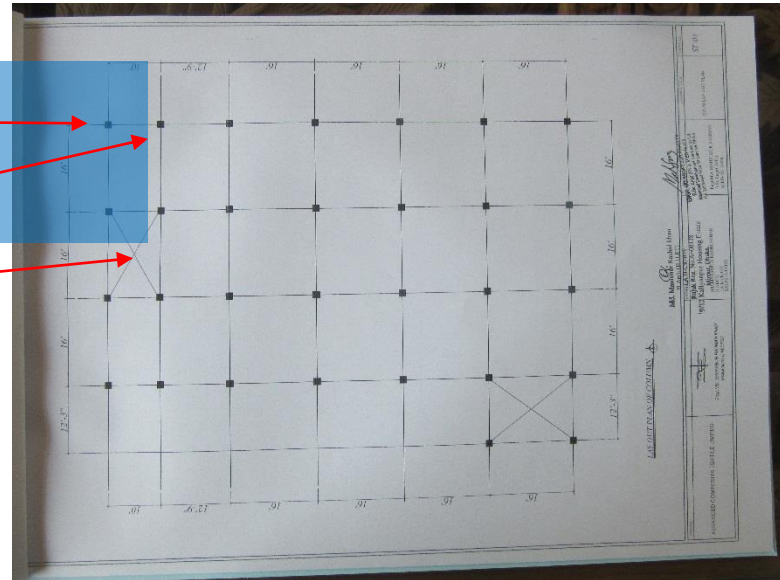
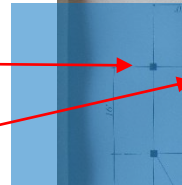
Discrepancies between site observations and information on drawings



Building 1 – cantilevers not included in the drawings (area highlighted)



Column missing



Building 2 – the area highlighted observed on site seems different from what is included in the drawings

Presence of almost 1m soil in some cantilevers of BLG2



Observed heavy accumulation of soils and rubbishes on the cantilever of the 2nd floor in Building 2

Dampness in some areas (BLG 1 and BLG 2)



Logged water on the roof created some damp areas on the roof slab of the following floor in Building 1

Priority Actions

Problems Observed

- ITEM 1:** High stress levels in columns (BLG 1 and BLG 2);
- ITEM 2:** Cracking in masonry in various portions of BLG 1;
- ITEM 3:** Cracking on some beams and slabs (BLG 1 and BLG 2);
- ITEM 4:** Discrepancies between site observations and information on drawings;
- ITEM 5:** Presence of almost 1m soil in some cantilevers of BLG2;
- ITEM 6:** Dampness in some areas (BLG 1 and 2);
- ITEM 7:** Any proposed additions to the existing building structure (BLG 1 and 2), including additional storeys, should be reviewed by the Building Engineer.
- ITEM 8:** Lack of documentation for Building 3;

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	High stress levels in columns (B1 and B2)	Factory Engineer to review design, loads and columns stresses in all columns	6-weeks
2	High stress levels in columns (B1 and B2)	Factory Engineer to verify insitu concrete strength by taking 100mm diameter cores from 4 columns . Verify grade of steel reinforcement used.	6-weeks
3	High stress levels in columns (B1 and B2)	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	High stress levels in columns (B1 and B2)	Make any structural alterations as advised by Engineer.	6-months
5	High stress levels in columns (B1 and B2)	Continue to implement load plan	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
6	Cracking in masonry in various portions of BLG 1	Factory Engineer to review design in the area of the cracked walls. Engineer to prove by calculation the adequacy of the masonry to carry the vertical loads.	6-weeks
7	Cracking in masonry in various portions of BLG 1	Engineer to make recommendations for the wall repair/replacement	6-weeks
8	Cracking in masonry in various portions of BLG 1	Carry out the remedial works following the above review	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
9	Cracking on some beams and slabs (BLG 1 and BLG 2);	Portions of floor finish to be removed to investigate if cracks penetrate the building slab structure. Building Engineer to review further if cracks are found to penetrate into building structure.	6-weeks
10	Cracking on some beams and slabs (BLG 1 and BLG 2);	Carry out repair remedial works as required.	6-weeks
11	Cracking on some beams and slabs (BLG 1 and BLG 2);	Continue to monitor for cracking on an on-going basis	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
12	Discrepancies between site observations and information on drawings	Update the drawings	6-months
13	Presence of almost 1m soil in some cantilevers of BLG2;	Remove soil from the cantilever;	6-weeks
14	Presence of almost 1m soil in some cantilevers of BLG2;	Carry out any remedial work as directed by the Factory Engineer.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
15	Dampness in some areas;	Carry out repair remedial works as required.	6-months
16	Any proposed additions to the existing building structure (BLG 1 and BLG 2), including additional storeys, should be reviewed by the Building Engineer before commencing construction	If any additions to the building structure are proposed, the Building Engineer shall provide calculations showing the structural adequacy of all columns taking into account any additions to the existing structure, the loading plans and as built structure, including insitu concrete strength testing. To be completed prior to construction	6-months
17	Lack of documentation for Building 3;	Factory Engineer to update the engineering drawings and calculations.	6-months