

One Up Sweaters Ltd.

122-123 Choydana, National University, Bangladesh.

23960251,90.380842

21st May 2014

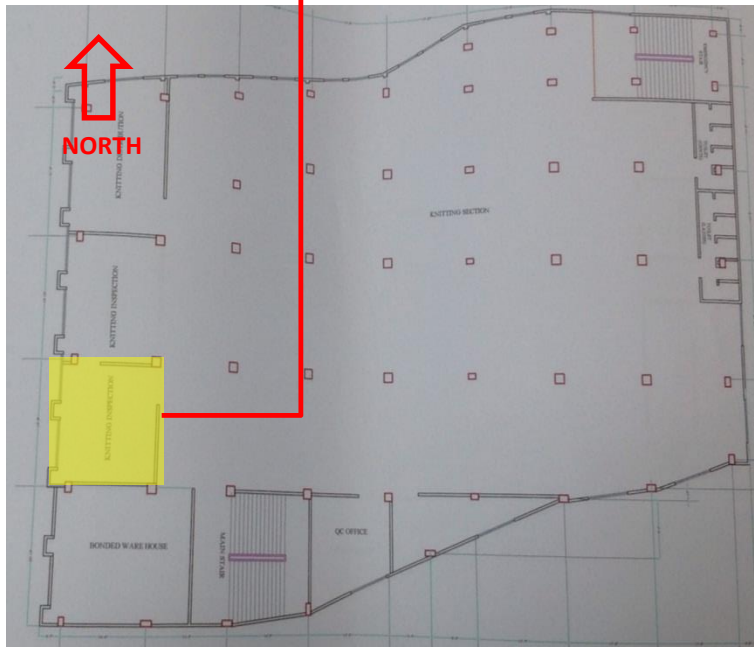


Building Observations

Local high stress levels in columns

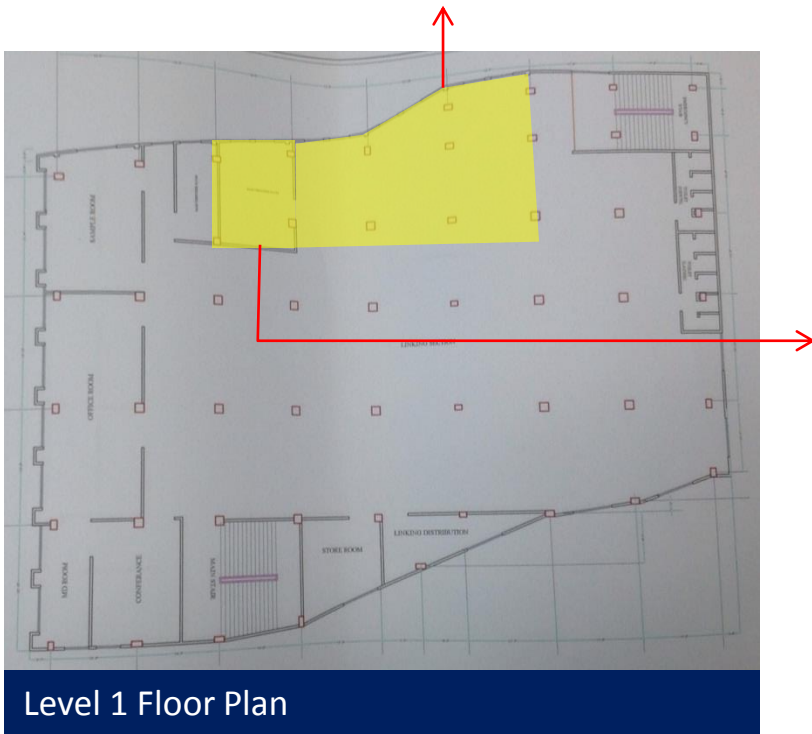


Area designated to be 'Knitting Inspection' area instead used as storage. Load was applied to building edge where concrete slab cantilevers from column line.



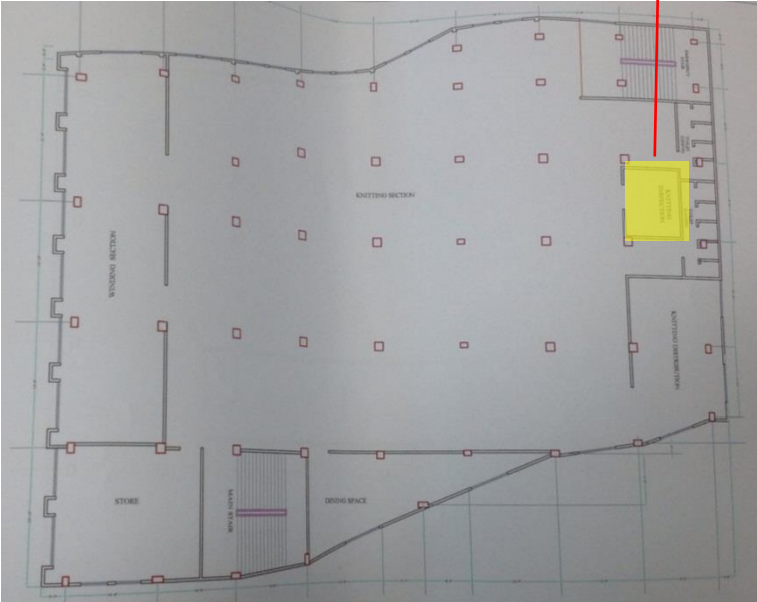
Level 2 Floor Plan

High storage loading on slabs

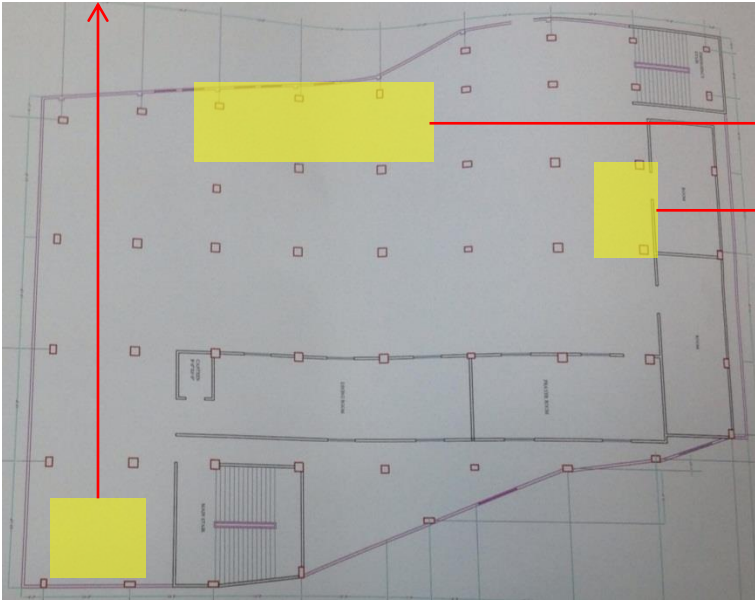




Level 2 Floor Plan

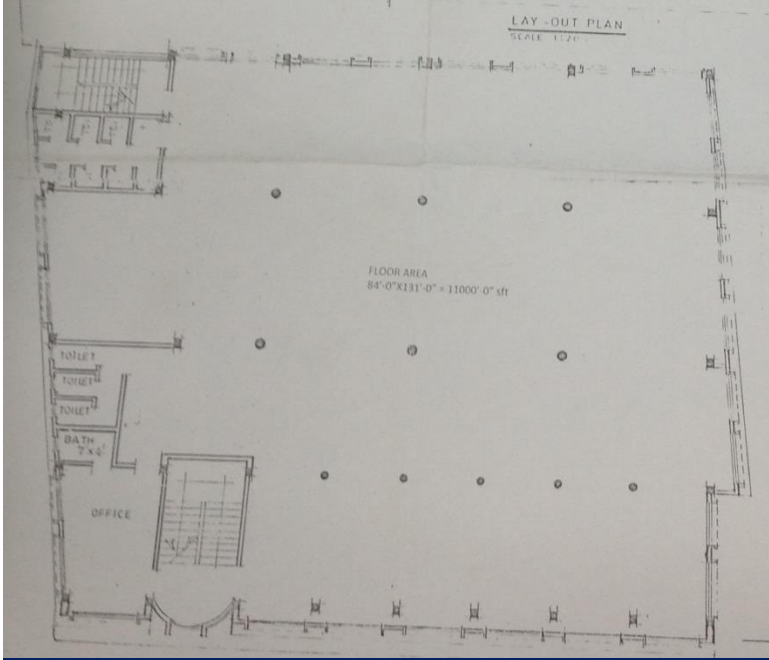


Level 3 Floor Plan



Roof Floor Plan

Discrepancies between drawings and observed structure



Permit Drawing – No Cantilevers shown.



Structural Drawing – Cantilevers shown.



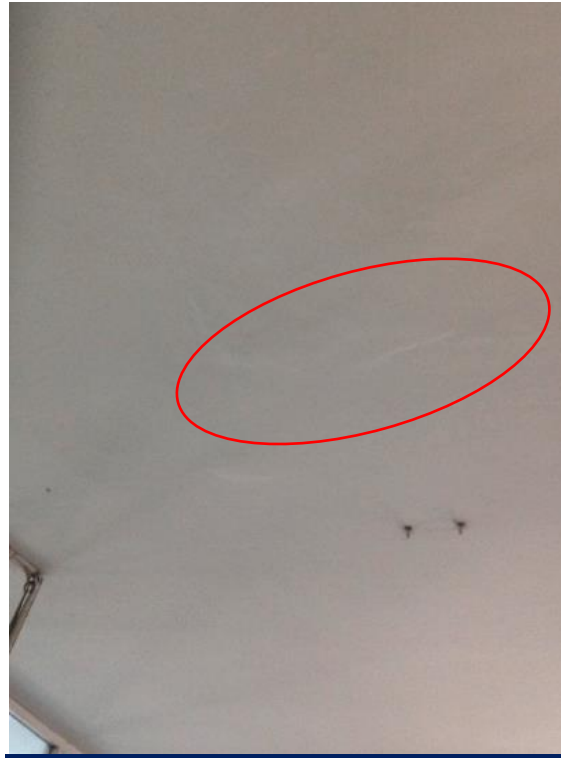
Permit Drawing – 8 Storey Building

Crack in slab soffits and stairs



1st Floor soffit

Recent patch repairs carried out on concrete slab soffit in numerous locations



2nd Floor soffit

Recent patch repairs carried out on crack in soffit in numerous locations.



3rd Floor soffit

Crack in concrete slab soffit



2nd Floor soffit
Crack on concrete slab soffit



2nd Floor soffit
Crack originating from RC column



First Floor Plan



2nd Floor soffit

Crack in concrete slab soffit running along the full length of floor plan



4th Floor soffit

Crack in concrete soffit



Localised crack along stairs descending onto Ground floor.
Crack is likely to be caused by poor construction.

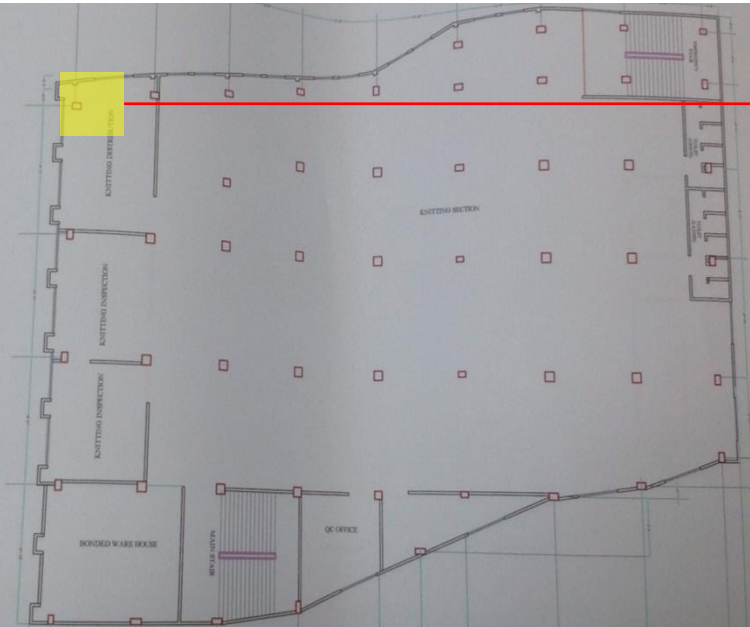
Ground Floor

Distorted external brick column

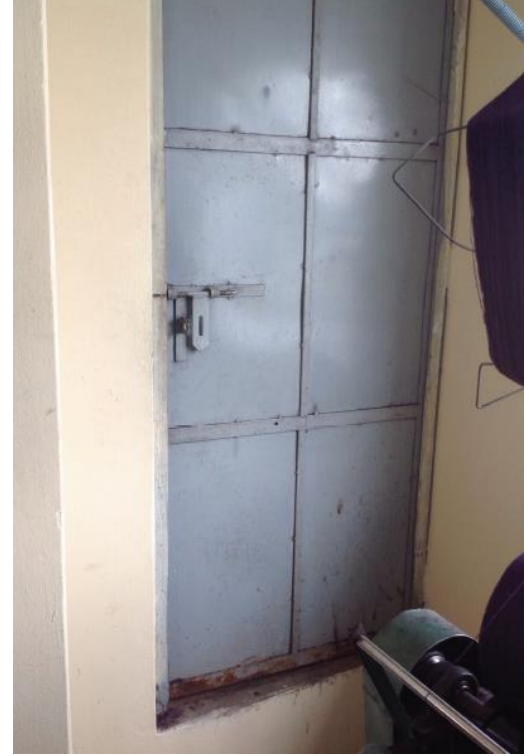


Ground Floor –
External brick column is distorted/twisting.

Additional concrete / steps build-up on slab



Level 2 and 3 Floor Plan



Level 1 Floor Plan



Non-engineered lightweight steel roofs



Problems Observed

1. Local high stress levels in columns
2. High storage loading on slabs
3. Discrepancies between drawings and observed structure
4. Additional concrete / steps build-up on slab
5. Crack in slab soffits and stairs
6. Distorted external brick column
7. Non-engineered lightweight steel roofs

Item 1 and actions

Local high stress levels in columns

Priority 1

(Immediate - Now)

- None required.

Priority 2

(within 6-weeks)

- **No additional storeys may be constructed until the verification of column stresses is complete.**
- Building Engineer to review design, loads and column stresses at ground floor level.
- Verify in-situ concrete stresses either by 100mm diameter cores or existing cylinder strength data from min. 4 columns.

Priority 3

(within 6-months)

- Produce and actively manage a loading plan for all floor plates within the factory, giving consideration to floor capacity and column capacity.

Item 2 and actions

High storage loading on slabs

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- Building Engineer to check the adequacy of structure against storage load.
- Building Engineer to review design, loads and stresses in RC slabs, including cantilevers. The slab check should include a punching shear check.
- Verify in-situ concrete stresses in the slabs either by 100mm diameter cores or existing cylinder strength data for cores from 4 locations remote from columns.

Priority 3

(within 6-months)

- Implement any strengthening / remedial works as required arising from slab checks.
- Input findings from slab checks into loading plan (see Item 1).

Item 3 and actions

Discrepancies between drawings and observed structure

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- Building Engineer to survey building.

Priority 3

(within 6-months)

- Building Engineer to update all drawings to reflect as-built construction.

Item 4 and actions

Additional concrete / steps build-up on slab

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- Building engineer to check the adequacy of structure against additional load

Priority 3

(within 6-months)

- Implement any strengthening / remedial works as required arising from load checks.

Item 5 and actions

Crack in slab soffits and stairs

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- Building Engineer to assess extent and nature of cracking.

Priority 3

(within 6-months)

- If cracking is of a structural nature, Building Engineer to specify required structural repairs / strengthening.
- Structural repairs / strengthening to be carried out.

Item 6 and actions

High stress on external brick column

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- Building engineer to check structural capacity of external brick pier.

Priority 3

(within 6-months)

- Reconstruct if required.

Item 7 and actions

Non-engineered lightweight steel roofs

Priority 1

(Immediate - Now)

- None required

Priority 2

(within 6-weeks)

- Lightweight roof structures to be analysed by Building Engineer to ensure adequacy for code vertical and wind loads by the Building Engineer.

Priority 3

(within 6-months)

- Implement any remedial / strengthening works arising from analysis.