Z & Z Intimates Ltd

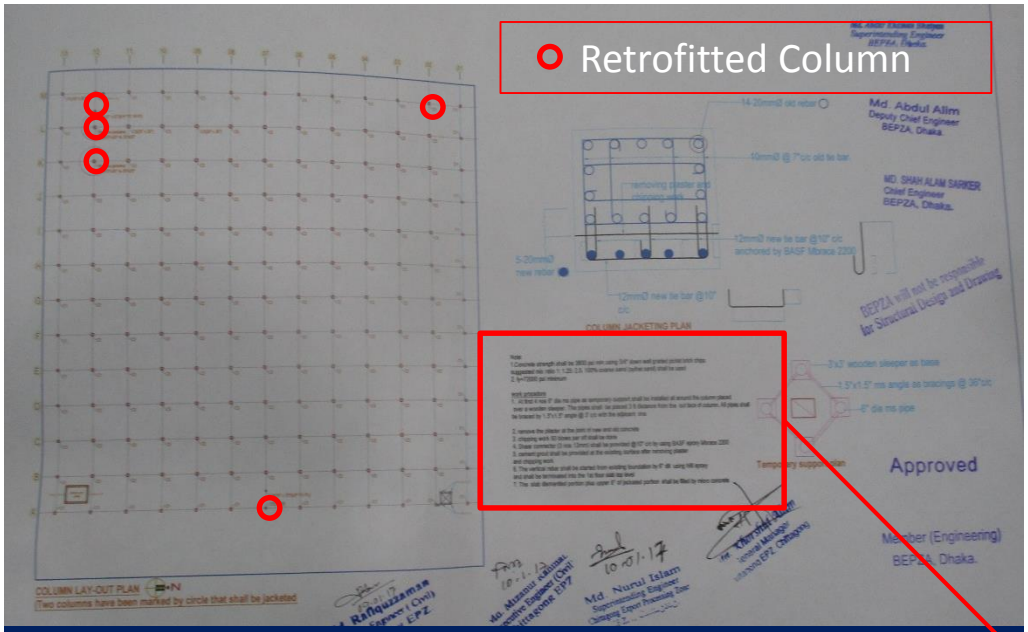
Plot # 1-3, Road # 02,CEPZ,Chittagong,Bangladesh
(22.289779, 91.777223)
07th January, 2018

ACCORD
on Fire and Building Safety in Bangladesh

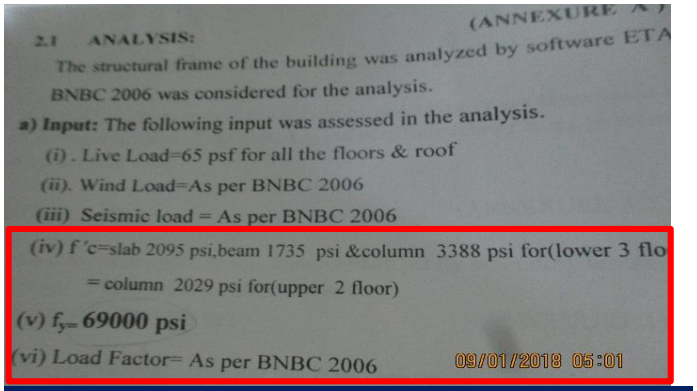
Observations

DEA report to be reviewed by ACCORD

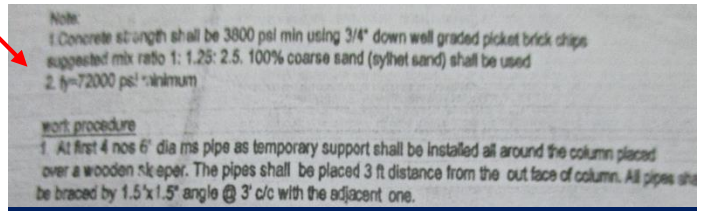
Observations



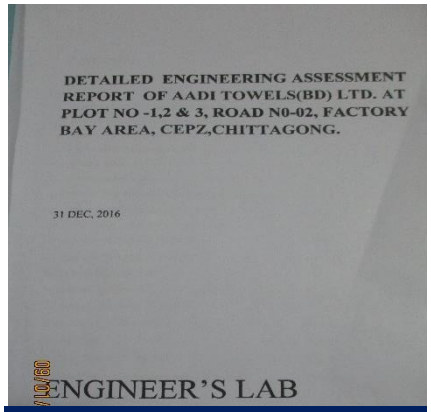
Retrofitting column Layout



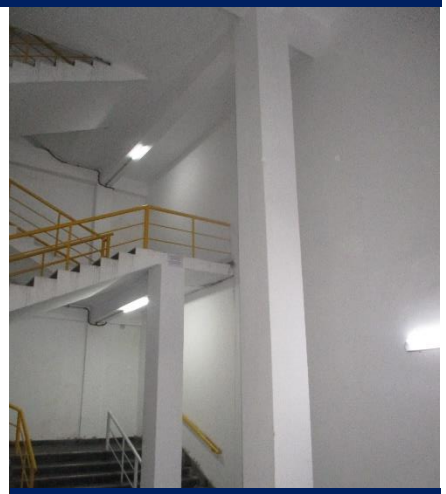
Concrete strength f'c=23.3 Mpa(Ground to 2nd floor) and 14 Mpa (3rd to 4th) from core test
Rebar strength fy= 476 Mpa Considered.



Columns were retrofitted considering concrete strength of f'c=26.2 Mpa. However no test report was available. Building engineer is required to ensure the concrete strength of retrofitted column and check with code compliance.



Detail Engineering Assessment report



Retrofitting Columns

Observations

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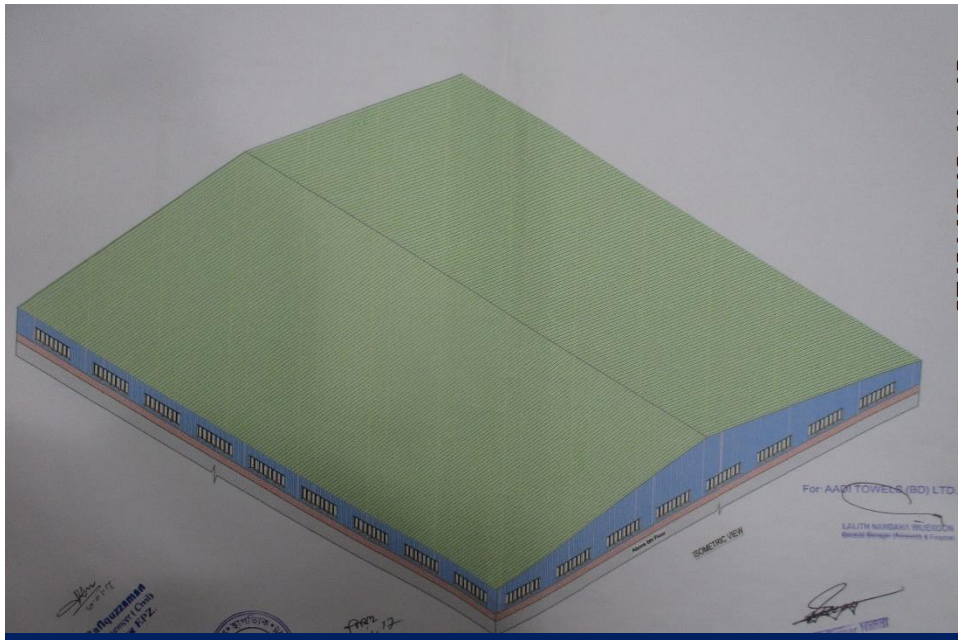
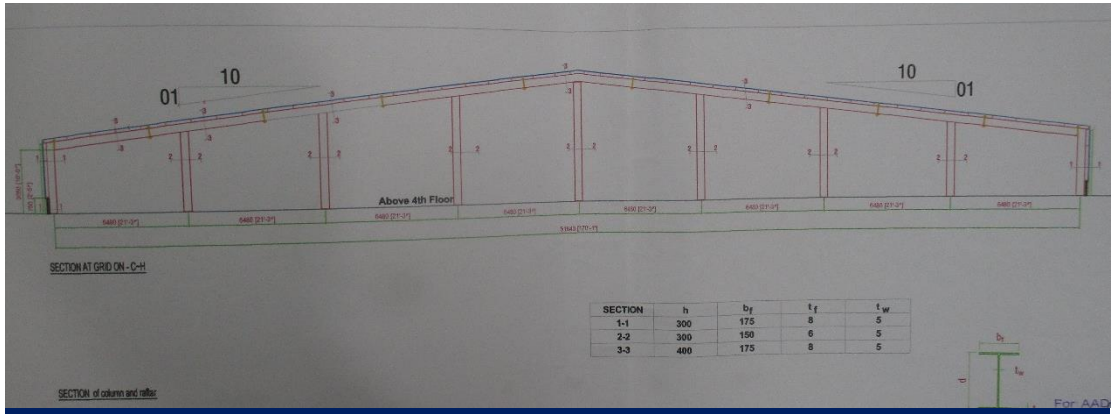


Proposed roof top shed

Insufficient detailing for proposed roof top shed. No obvious lateral load resisting system appeared in proposed drawing. Building engineer is required to check the lateral stability system by further reviewing Detail Engineering Assessment with ACCORD.



Section drawing of steel column rafter

Observations

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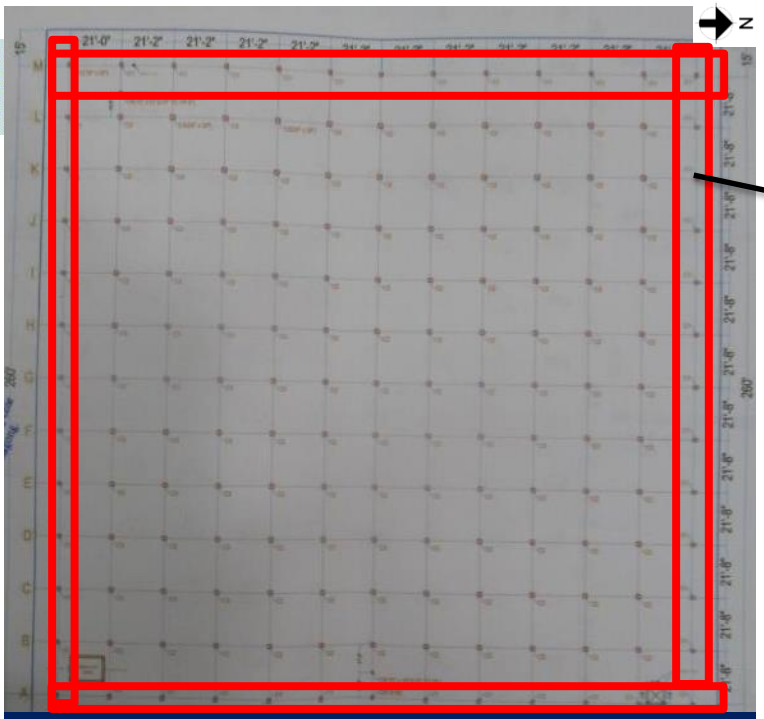
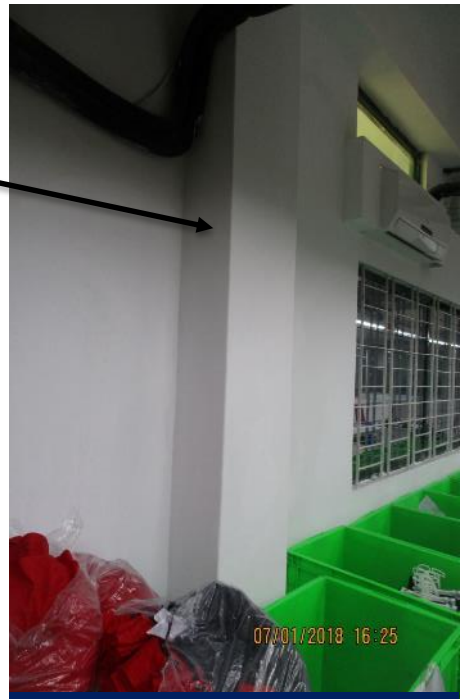
Discrepancies between provided drawing and on site condition

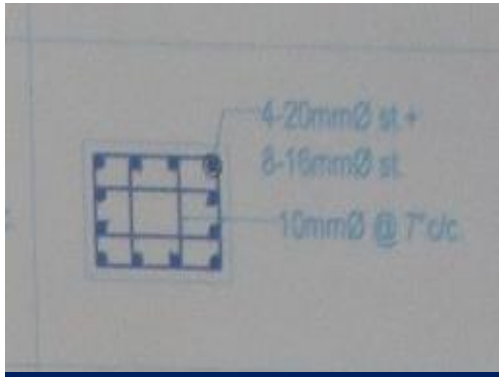
Observation



Column Layout

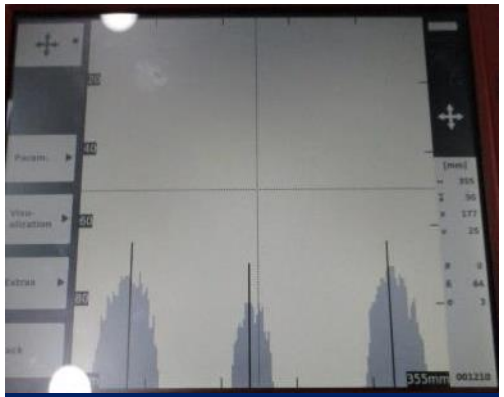


C-1 type column



Column schedule for 4th floor of C-1 type where shown 12 nos. rebar

4 nos. rebar was found on long side



3 nos. rebar was found on short side

Rebar in C-1 type column was found by ferro scanning 10nos. instead of 12nos. on 4th floor.

Observation

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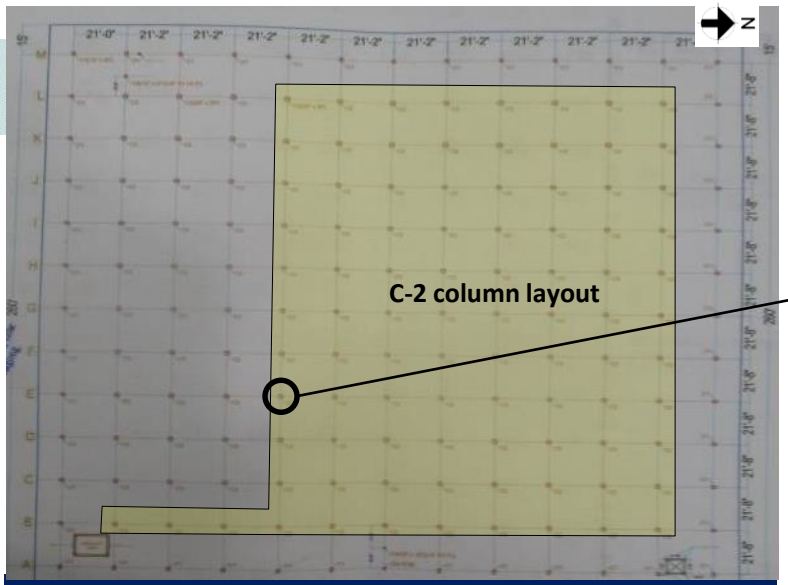
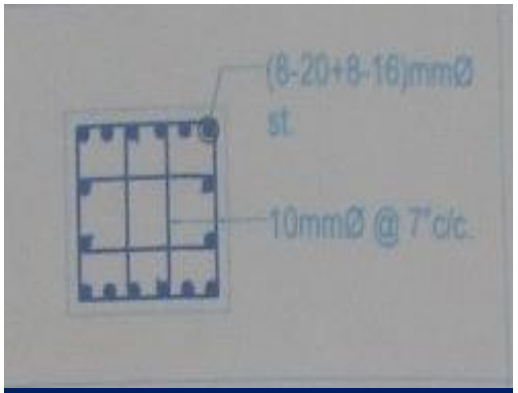
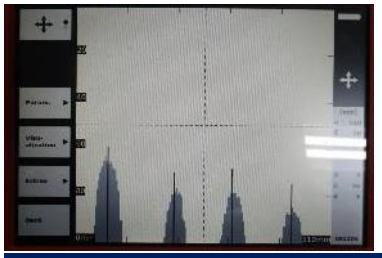
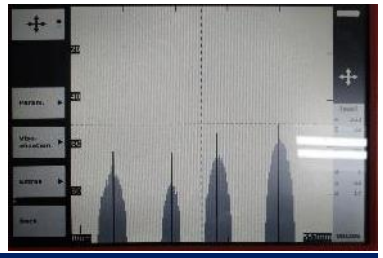


Column Layout

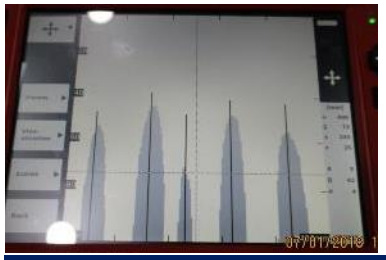
C-2 type column



Column schedule for 3rd and 4th floor of C-2 type where shown 16 nos. rebar

12 nos rebar was found on 4th floor




14 nos rebar was found on 3rd floor

Rebar in C-2 type column was found 12nos by Ferro scanning. On 4th floor and 14 nos. On 3rd floor whereas 16 nos. rebar was shown in column schedule for 3rd and 4th floor.

Observation

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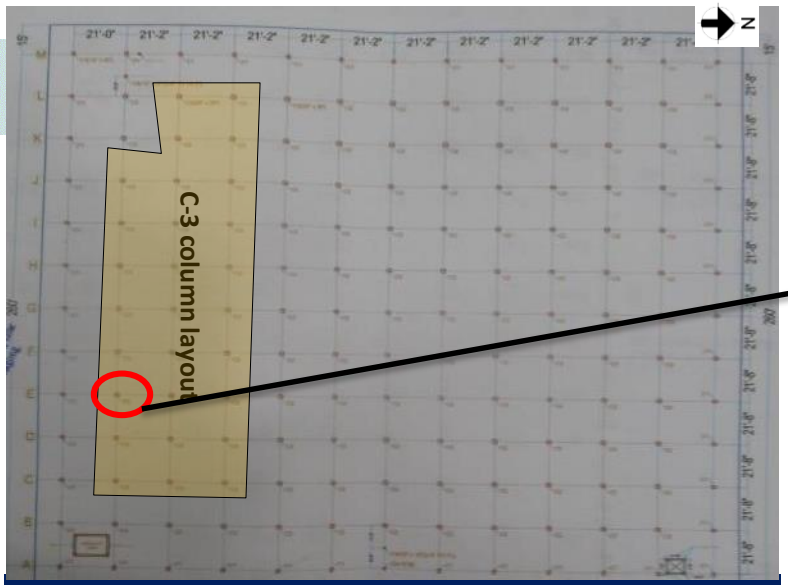
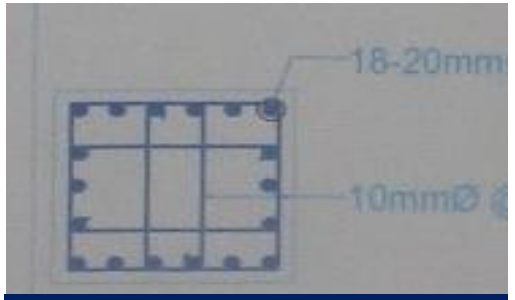
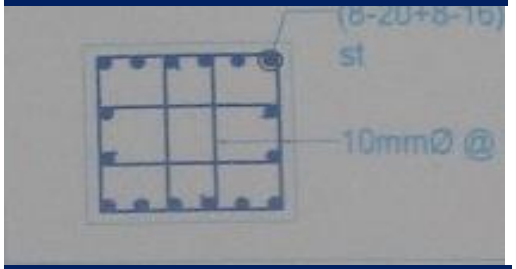


Column Layout

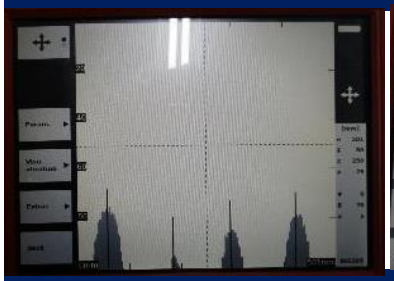
C-3 type column



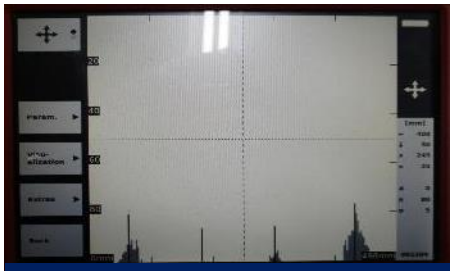
C3-Column
18 nos. rebar shown in column schedule ground to 1st floor



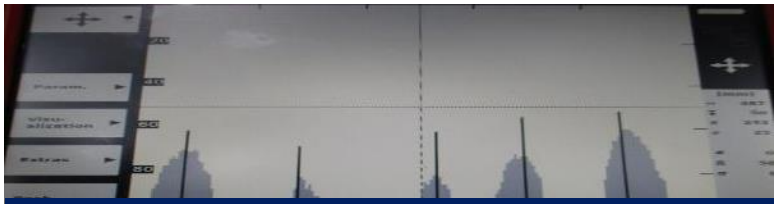
C3-Column
16 nos. rebar shown in column schedule 3rd to 4th.



14nos. rebar was found on 3rd floor



12nos.rebar was found on 4th floor



16nos. rebar was found on ground floor

The rebar was checked by ferro scanning and found non-identical with column schedule on ground, 1st, 3rd and 4th floor.

Observation

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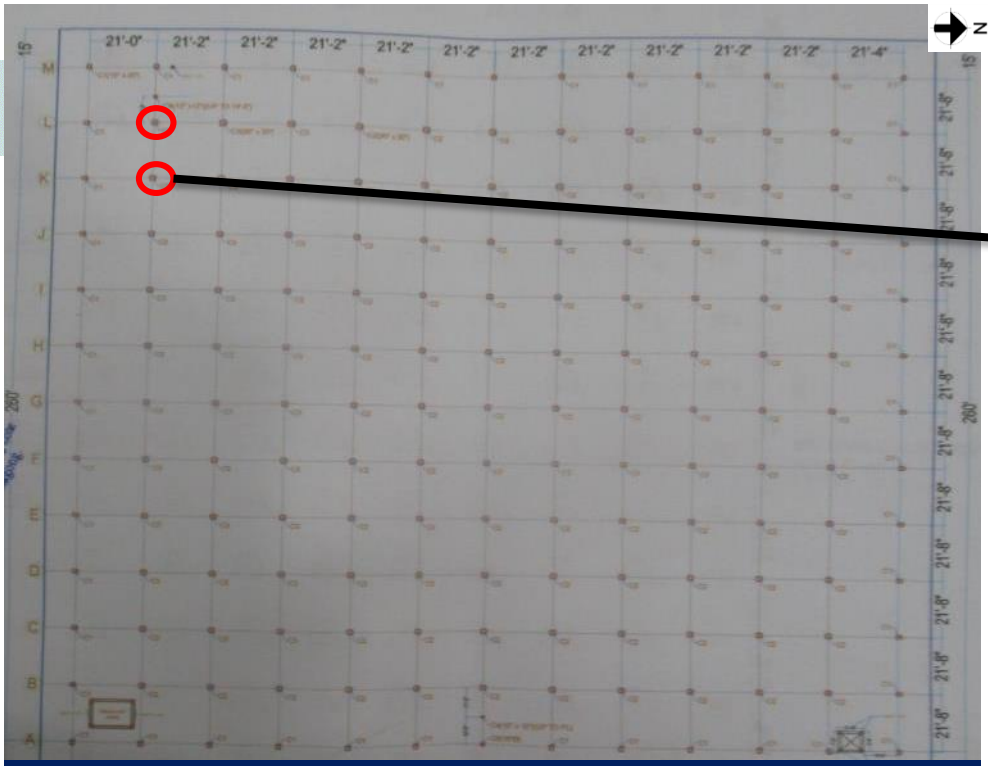
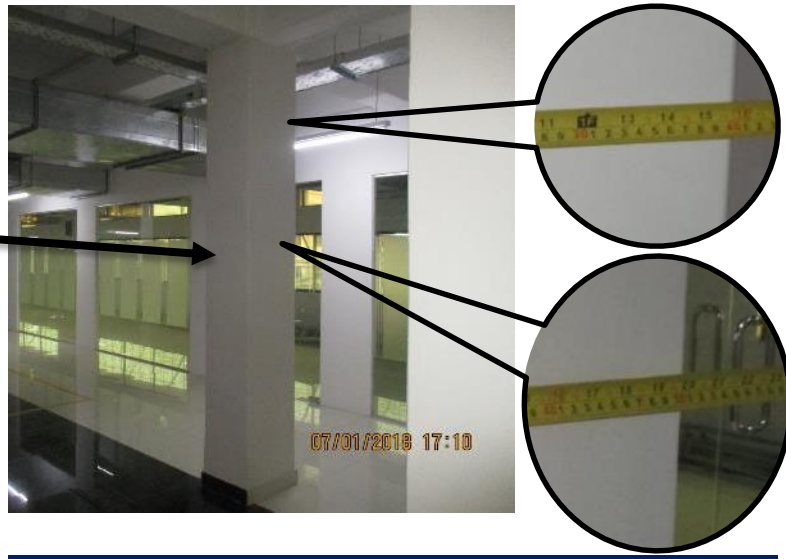
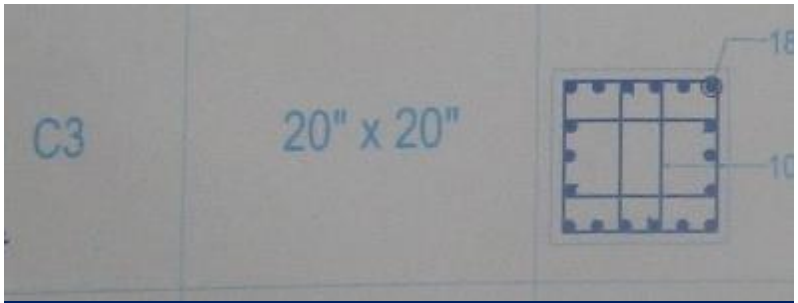


Column Layout



The dimension was measured 400mm x 500mm with plaster for the marked column



500mm x 500mm dimension was shown for C-3 type column in column schedule

The dimension was measured 400mm x 500mm with render on 3rd and 4th floor but the dimension was mention 500mm x 500mm in column schedule.

Observation

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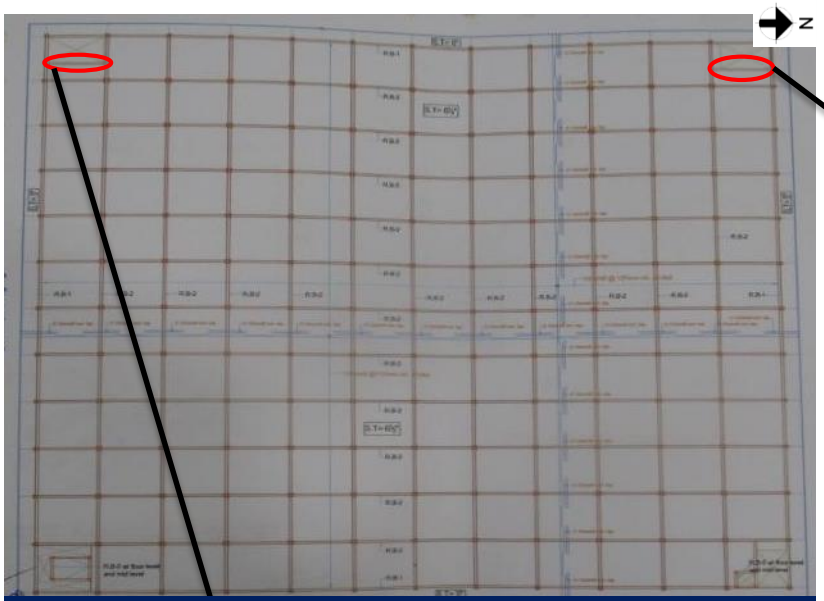


Typical beam layout

The marked beam was not found on north-west side stair case

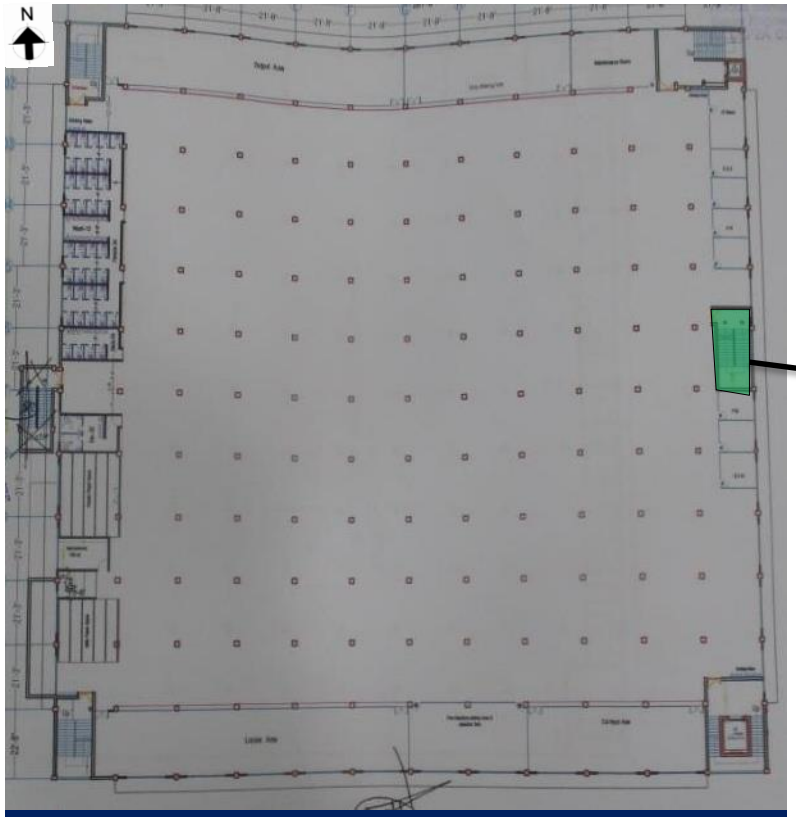
The marked beam was not found on south-west side stair case

The marked beams on south-west and north-west side stair was not found but the beams were shown in drawing. Factory is required to revise the mentioned mismatch and produce the accurate as-build drawing.

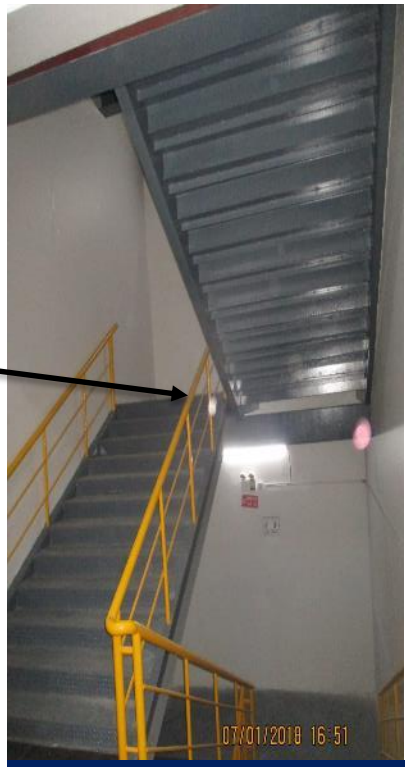
Observation

Lack of information in provided drawing

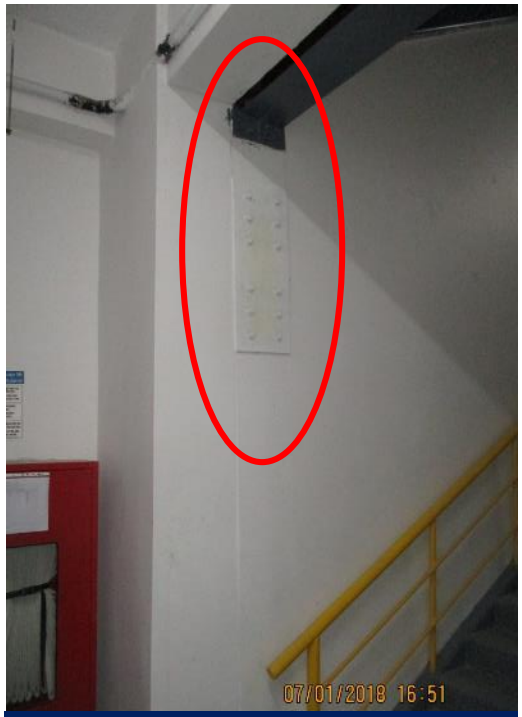
Observation



2nd floor plan in provided as-built drawing



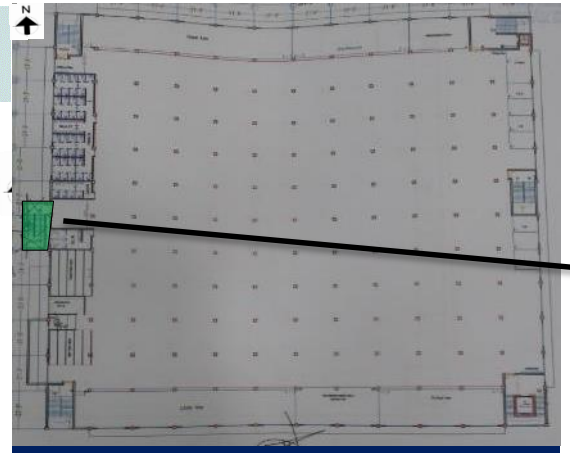
North- East side steel stair



Steel column of the stair was installed adjacent with the RC column

North-East steel stair drawings was not available. Also, the steel columns of the stair are adjacent with the reinforced columns of the building.

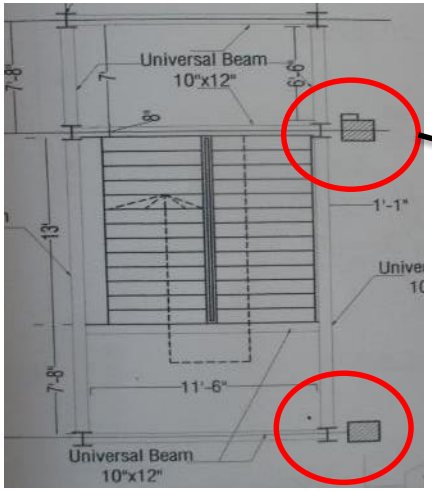
Observation



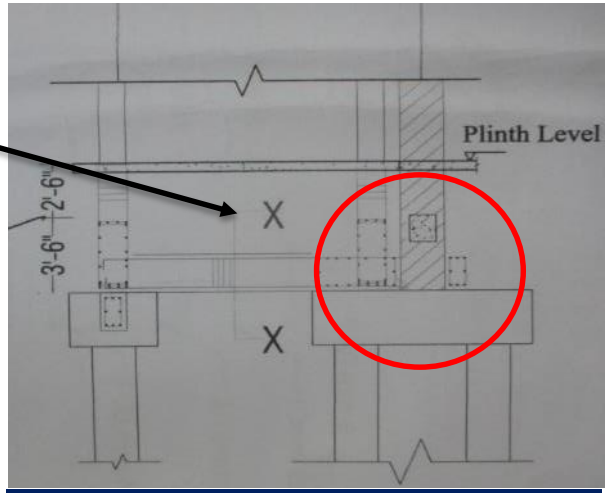
2nd floor plan

North-West side steel stair

Bolted connection between column and beams.



Steel column layout in provided drawing



Steel columns on the east side were sheared the pile cap of the factory building's column

Connection detail of the beam – column joint and steel beam layout was not include in the provided drawing. Also, the steel columns of the stair were rest the pile cap of the reinforced column. Factory engineer is required to update the drawing and assess the foundation of the stair cases.

Observation

Columns susceptible to impact loading

Observations

Columns at loading bay are susceptible to impact loading from vehicles.

Ground floor column in loading-unloading bay.

Observations

Existence of significant gaps at steel connection

Observations

Significant Gaps

Significant gaps were observed in column rafter joint at several location. Building engineer is required to carry out suitable remedial works.

Observations

Problems Observed

1: DEA report to be reviewed by ACCORD.

2: Discrepancies between provided drawing and on site condition.

3: Lack of Information in Provided Drawing.

4: Columns susceptible to impact loading.

5: Existence of significant gaps at steel connection.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	DEA report to be reviewed by ACCORD.	Building engineer is required address all the highlighted issues in DEA report and the revised documents required to be reviewed with Accord.	**6-weeks**
2	DEA report to be reviewed by ACCORD.	Carry out any remedial measures arise from Detail Engineering Assessment(DEA) where necessary.	**6-months**
3	Discrepancies between provided drawing and on site condition	Building engineer to survey the building and produce as-built documentation reflecting the as constructed condition.	**6-weeks**
4	Lack of Information in Provided Drawing	Factory engineer to survey the building and produce as-built documentation reflecting the as constructed condition.	**6-weeks**
5	Lack of Information in Provided Drawing	Factory engineer to confirm that foundation type for North- East stair case and check that foundations have sufficient capacity for the additional applied loads for the East and West steel stairs.	**6-weeks**
6	Lack of Information in Provided Drawing	Make any structural alteration as advised by Engineer.	**6-months**
7	Columns susceptible to impact loading	Construct and maintain protection to critical column and continue to assess likelihood of vehicle impact to critical elements.	**6-weeks**
8	Existence of significant gaps at steel connection	Identify all the locations and carryout suitable repair works where necessary .	**6-weeks**