Techno Fiber Ltd.(11518)
Network Clothing Ltd.(10863)

Afiz complex, Chowdhybari, Vora, Gazipur, Bangladesh

(+23.98101N, 90.38053E)

28.MAY.2014

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Identified Priority 1 Concerns

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1st Priority 1 Concern

In the boiler room on the 5th Floor, there doesn't seem to be any information regarding the operating weight of the boiler. Nevertheless, it appears to be heavy, and there is significant vibration. It is suggested to check to see if the boiler and water tank weight falls within the design live load of the building in this area.

Boiler room on the 5th floor

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Identified Priority 2 Concerns

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1st Priority 2 Concern

The dining area on the roof is covered by an additional lightweight steel roof. This does not appear on any structural or planning drawing. There are also no calculations for this roof structure.

Steel roof truss added over roof to form dining area

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Identified Priority 3 Concerns

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The overall structural arrangement in buildings does not appear to have any rational form of lateral stability system to resist the wind or earthquake loads. It is essential to design for lateral loads
We require that these items be investigated as part of a Detailed Engineering Assessment

Lateral load resisting system appears to be lacking from the structural design

1st Priority 3 Concern

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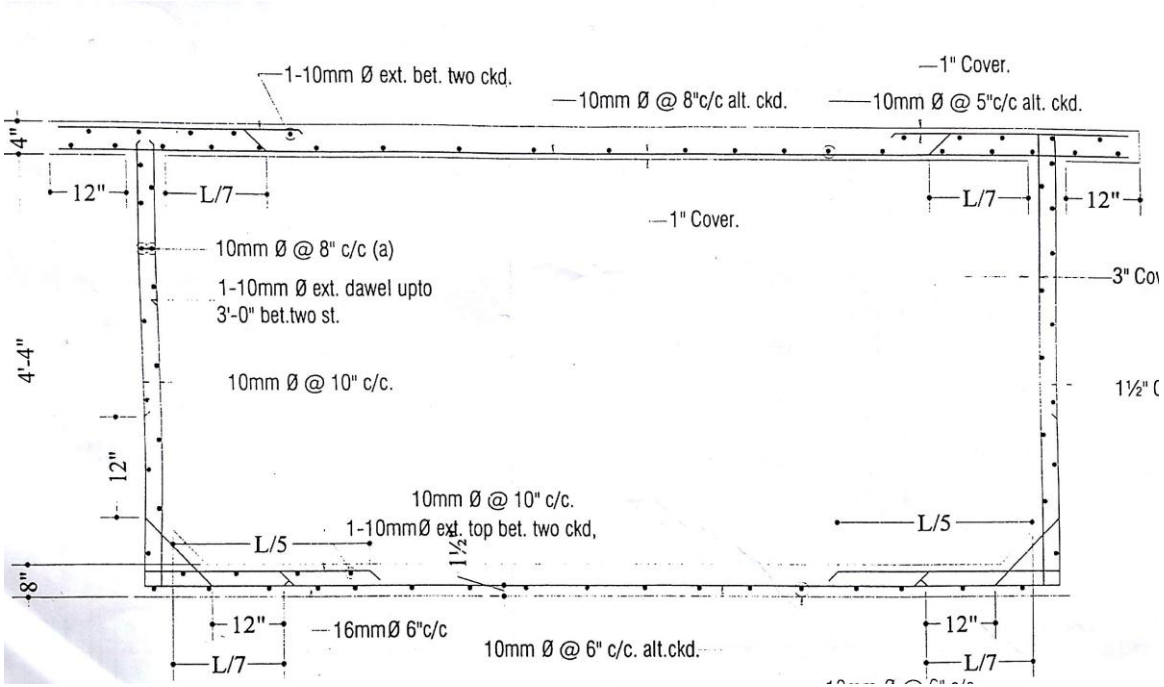
2nd Priority 3 Concern



Although the water tank RC detail is provided, there are no location plans or overall framing plans in the drawings.

The supporting structure (above the staircase shaft) is also missing.

Due to the size of the water tank, the structure of the supporting elements should be evaluated and documented in the drawings.

Drawings do not show the framing plans or supporting structure for the water tank

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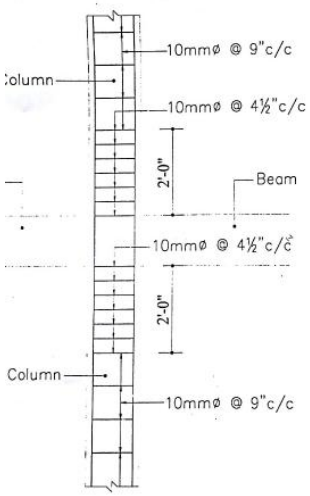
3rd Priority 3 Concern

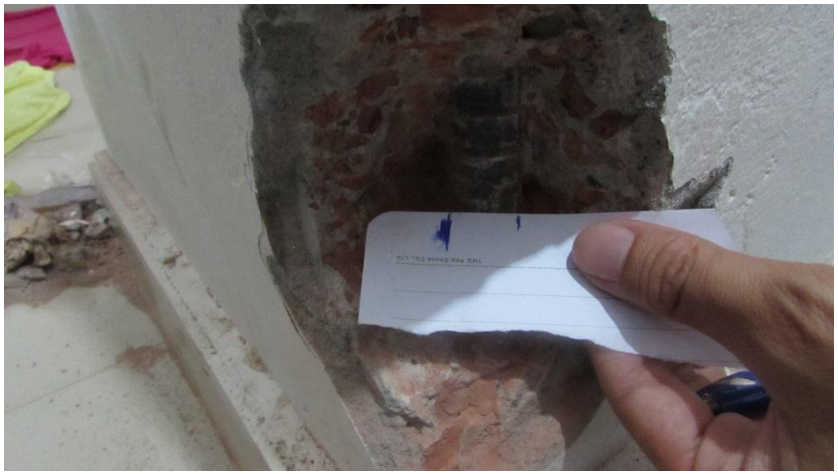


Section for col. strirrup

Foundation Notes:

01. Foundation for 6 - storied Building.
02. Concrete mix ratio:
    a) For colmun :- 1:1½:3 with ¾" down graded crushed sotne chips and 75 % Sylhet sand + 25 % local sand
    (f'c = 3500 psi, 28 days cylinder strength.
    b) For cemet concrete (C.C) :- 1:3:6 with brick chips or shingles & local sand
    c) For footing & others :- 1:2:4 with ¾" down graded brick chips or stone chips
    & 50% Sylhet sand, 50% local sand. (3000 psi. minimum).
03. Concrete should never be dumped from more then five feet height in any case.
04. Reinforceing bars shall be deformed bars of yield strength, fy = 40 ksi. (minimum).
05. Clear cover :-
    a) Footing : Bottom cover = 2"
    : End cover = 3"
    b) Wall : Earth & water side = 2"
    : Open site = 1"
    c) Column : Against earth or water = 3"
    : Above GL. = 1½"
    d) Grade beam : All cover = 2"

02. Concrete mix ratio:
a) For colmun :- 1:1½:3 with ¾" down graded crushed sotne chips and 75 % Sylhet sand + 25 % local sand
(f'c = 3500 psi, 28 days cylinder strength.



Column material in drawing inconsistent with out side

As-built concrete does not match with the drawing specifications

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Priority Actions

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Problems Observed Summary

ITEM 1: (1st Priority 1) Boiler room on the 5th floor

ITEM 2: (1st Priority 2) Steel roof truss added over roof to form dining area

ITEM 3: (1st Priority 3) Lateral load resisting system appears to be lacking from the structural design

ITEM 4: (2nd Priority 3) Drawings do not show the framing plans or supporting structure for the water tank

ITEM 5: (3rd Priority 3) As-built concrete does not match with the drawing specifications

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Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	1st Priority 1 - Boiler room on the 5th floor	Building Engineer to check that the weight of the boiler and water tank does not exceed the permissible live load of the floor system	Immediate - Now
2	1st Priority 1 - Boiler room on the 5th floor	If the loading from the boiler and water tank exceeds the permissible imposed load of the floor, strengthening works to be designed to alleviate the loading on the existing floor.	6-weeks
3	1st Priority 1 - Boiler room on the 5th floor	If required, construct the strengthening works as per the approved strengthening works details.	6-months
4	1st Priority 2 - Steel roof truss added over roof to form dining area	Check with the appropriate authorities as to whether the roof area can be used for the dining hall purpose Building Engineer to properly assess the roof structure or perform as part of a Detailed Engineering Assessment, to ensure full compatibility with the design codes.	6-weeks
5	1st Priority 2 - Steel roof truss added over roof to form dining area	If found deficient, appropriate modifications to the roof truss to be made to ensure safety of the structure. Drawings to be updated accordingly with full structural details	6-months
6	1st Priority 3 - Lateral load resisting system appears to be lacking from the structural design.	Building Engineer to carry out structural analysis to justify the building performance with regard to the lateral load resisting system. Alternatively, this can be carried out as part of a Detailed Engineering Assessment.	6-weeks
7	1st Priority 3 - Lateral load resisting system appears to be lacking from the structural design.	If the building is found not to comply with the performance conditions, remedial works to be designed and implemented to ensure satisfactory lateral stability.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
8	2nd Priority 3 - Drawings do not show the framing plans or supporting structure for the water tank.	Building Engineer to check the record drawings/as built drawings for consistency with the as-built structural condition, and make modifications to the drawings where necessary	6-weeks
9	2nd Priority 3 - Drawings do not show the framing plans or supporting structure for the water tank.	Detailed Engineering Assessment to be carried out to determine unknown areas of the structure in order to complete the compilation of the as-built structural drawing records.	6-months
10	3rd Priority 3 - As-built concrete does not match with the drawing specifications	Building Engineer to check the record drawings/as built drawings for consistency with the as-built structural condition, and make modifications to the drawings where necessary	6-weeks
11	3rd Priority 3 - As-built concrete does not match with the drawing specifications	Detailed Engineering Assessment to be carried out to determine unknown areas of the structure in order to complete the compilation of the as-built structural drawing records.	6-months