Kentucky Knit Composite Ltd. (12907)

Ratondi, Baranagar, Sonargaon, Narayangonj, Bangladesh
(23.645589 N, 90.588454 E)
12 December 2017

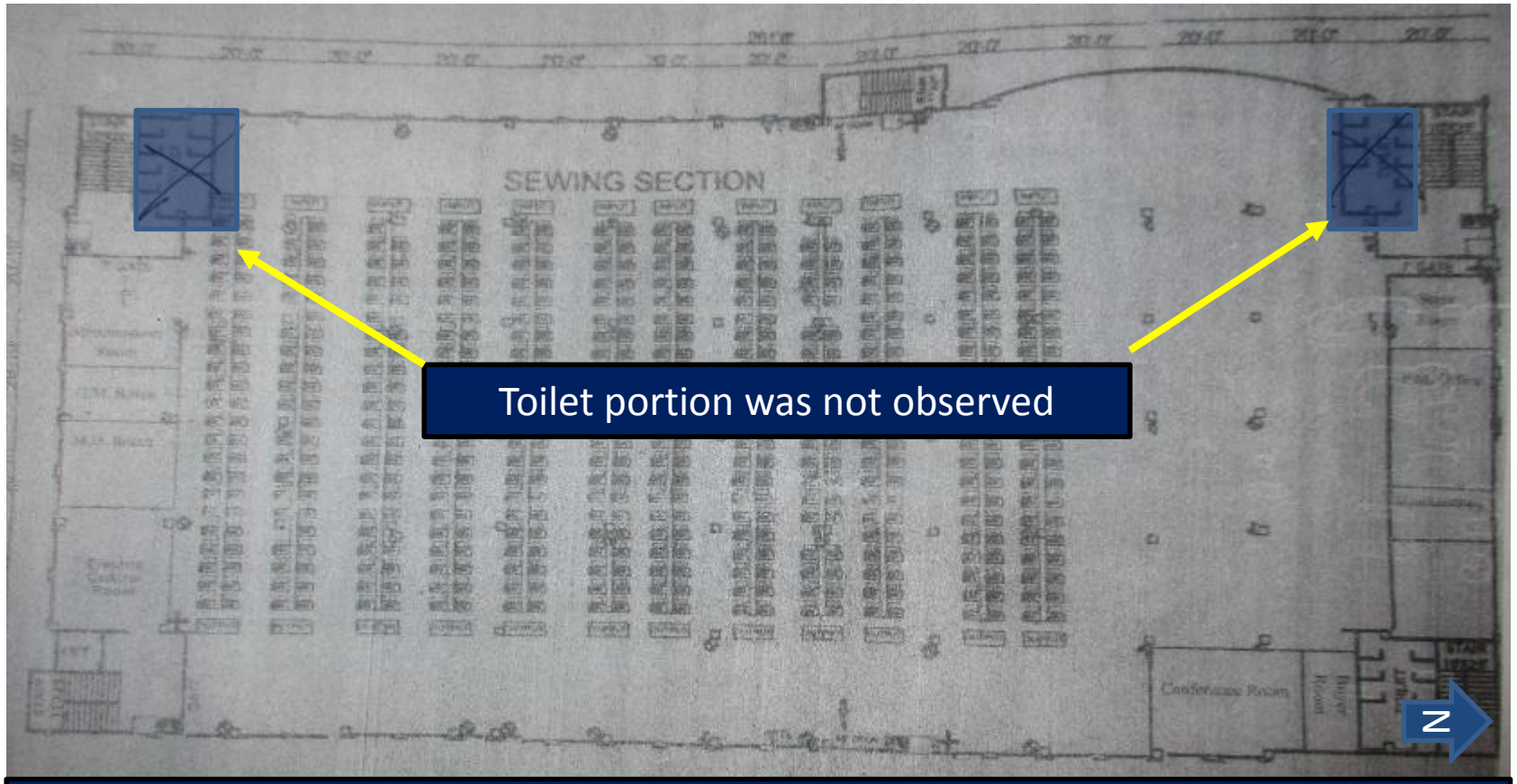
ACCORD
on Fire and Building Safety in Bangladesh

Observation

Main Building

Lack of As built documentation

Observations: Main Building



Machine Layout Plan (2nd Floor)

No Architectural drawing was observed. However, discrepancy was observed on machine layout plan. The mentioned toilet portion was not built. Factory is required to produce as built drawing accurately as per on site condition.

Observations: Main Building

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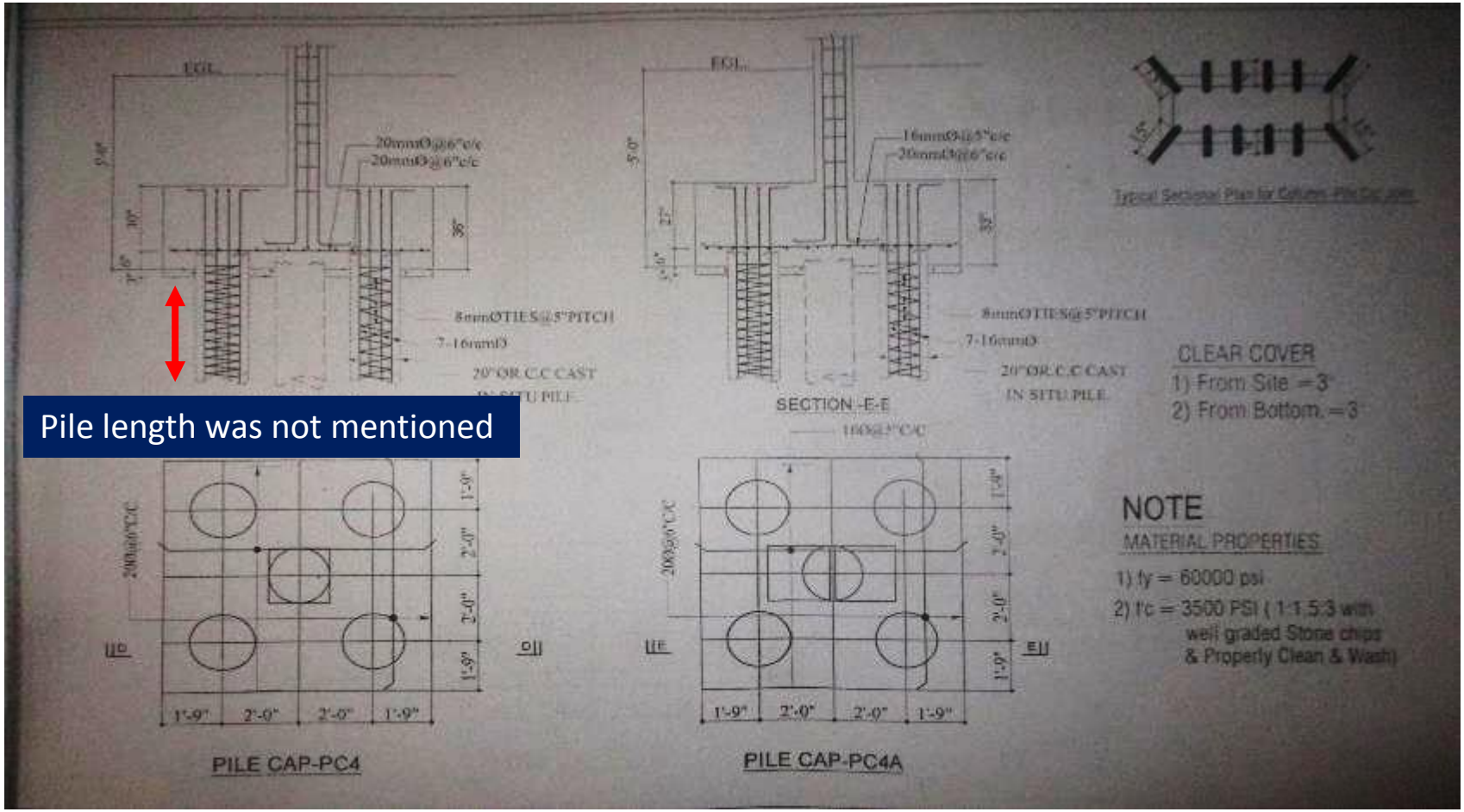

As per the provided structural drawing of the main building, footing type is pile foundation. But pile length is not mentioned on the structural drawing. Building Engineer is required to confirm the length of the pile and check the adequacy of the foundation system.

Observations: Main Building

No Load plan observed to review

Observations: Main Building

Loading at 3rd floor

Loading at 1st floor

Loading at 1st floor (Finished Goods)

During inspection, no load plan was observed for the main building. Factory is required to produce load plan with respect to floor, beam, column and footing capacity.

Observations: Main Building

Dampness was observed on inner side of façade wall

Observations: Main Building

Dampness on wall at lift core portion

Dampness on wall at inner façade wall

Dampness on wall between stair and toilet portion

Dampness was observed on different places on façade wall. Factory is required to investigate the cause of dampness and take necessary remedial action.

Observations: Main Building

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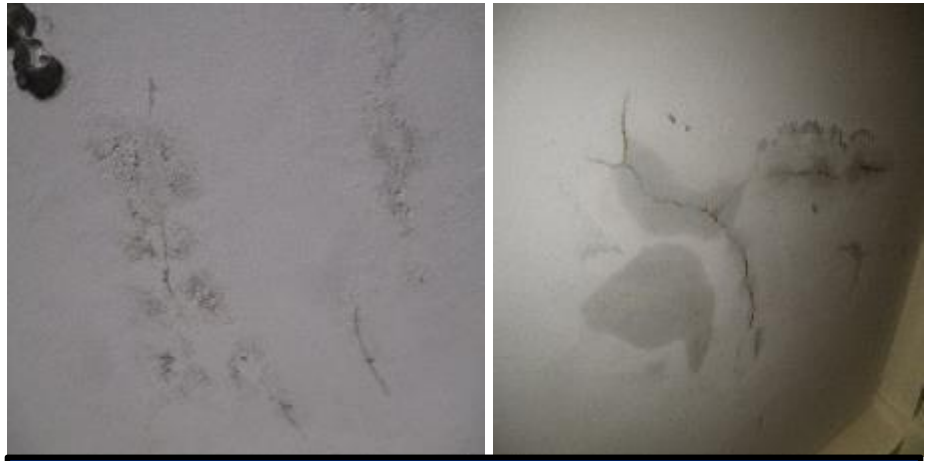
Water ingress at roof level

Observations: Main Building

Water ponding on roof

Vegetation growth due to water clogging



Dampness observed on roof slab soffit due to water ingress .

No water proofing layer was observed on roof. Besides, water clogging was observed everywhere on roof. Added with that, water found penetrated through slab. Investigation of damage due to water ingress is required . Remedial action is required based on the investigation.

Observations: Main Building

Lack of edge protection at roof

Observations: Main Building

During inspection, Edge protection (Parapet wall/Railing) was not observed on roof. Factory is required to provide edge protection to avoid falling hazard.

Observations: Main Building

Column to be stressed above normal stress limit in fully completed main building

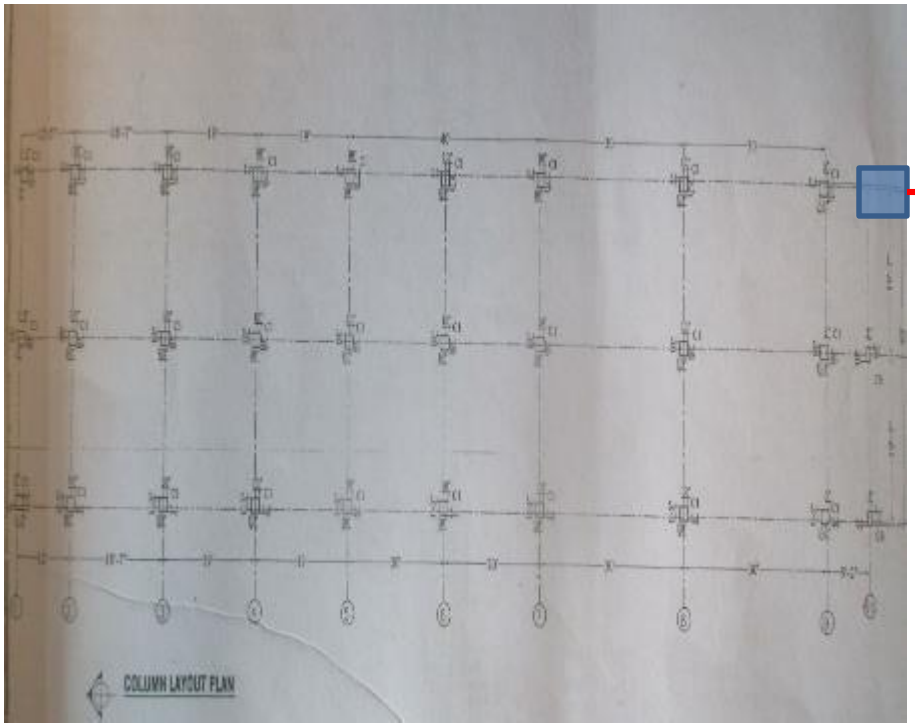
Observations: Main Building

Cursory calculation shows that the column stress exceeds normal stress limit in fully completed main building. Prior to extension, Building Engineer is required to do Detailed Engineering Assessment for the main building as per BNBC.

Observations: Main Building

Utility Building

Inconsistency in the as built drawings



During inspection, A RCC column of 475mm x 500mm was found in the marked location which was not mentioned in the as built drawing.

Observations: Utility Building

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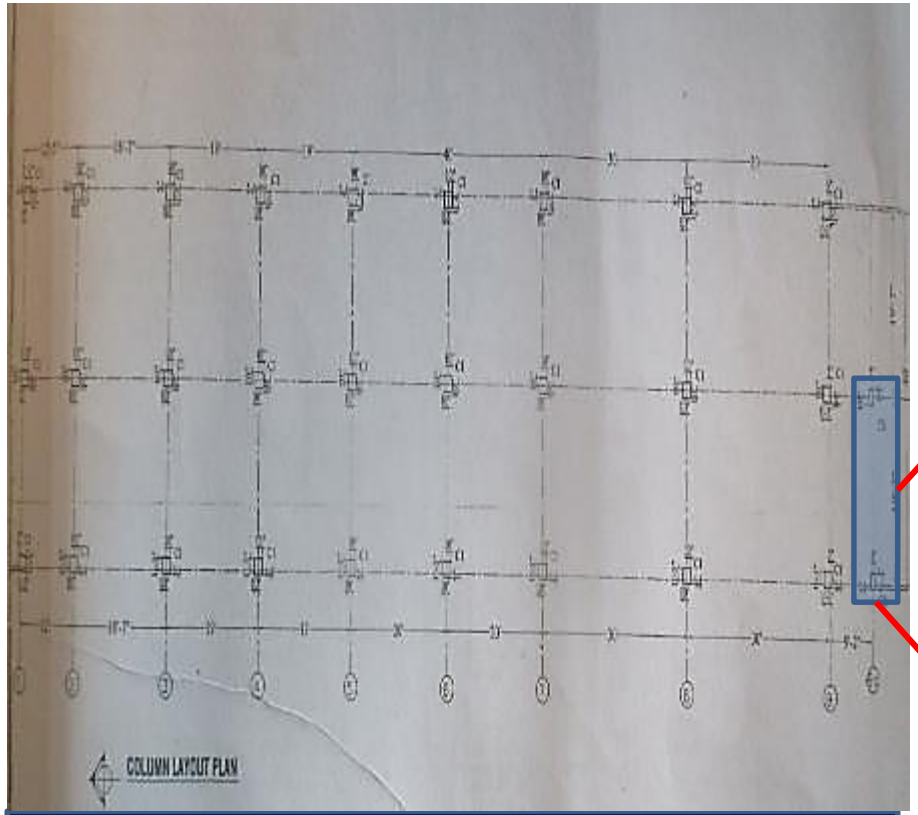

Steel columns are mentioned in the marked location. Instead of that, two 475mm x500mm RC columns are found on site. Added with that , wooden pile is mentioned in that location. Building is required to confirm the actual footing type in the Location.

Observations: Utility Building

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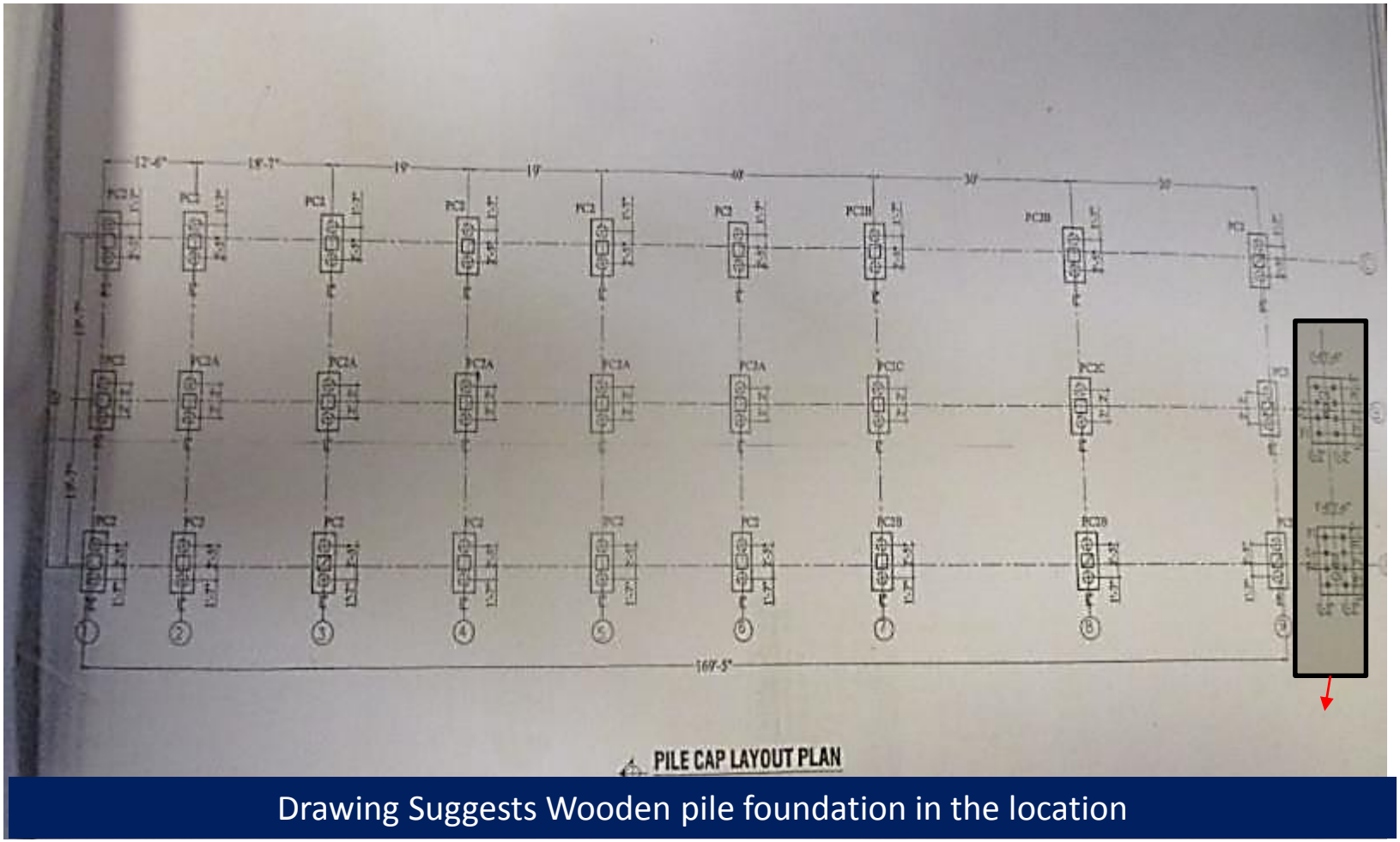


Drawing Suggests Wooden pile foundation in the location

Observations: Utility Building

No layout was found for this marked tie beam. The beam size was found 300mm x 550mm in size.

Also in the marked location, tie beam was found missing. Building Engineer is required to update the beam layout accurately.

Observations: Utility Building

No water proofing and drainage at the roof top

The roof top slab has been found exposed. No water proofing and drainage action is provided. Building Engineer is required to implement action to stop the water accumulation at the roof top.

Observations: Utility Building

No edge protection at the roof top

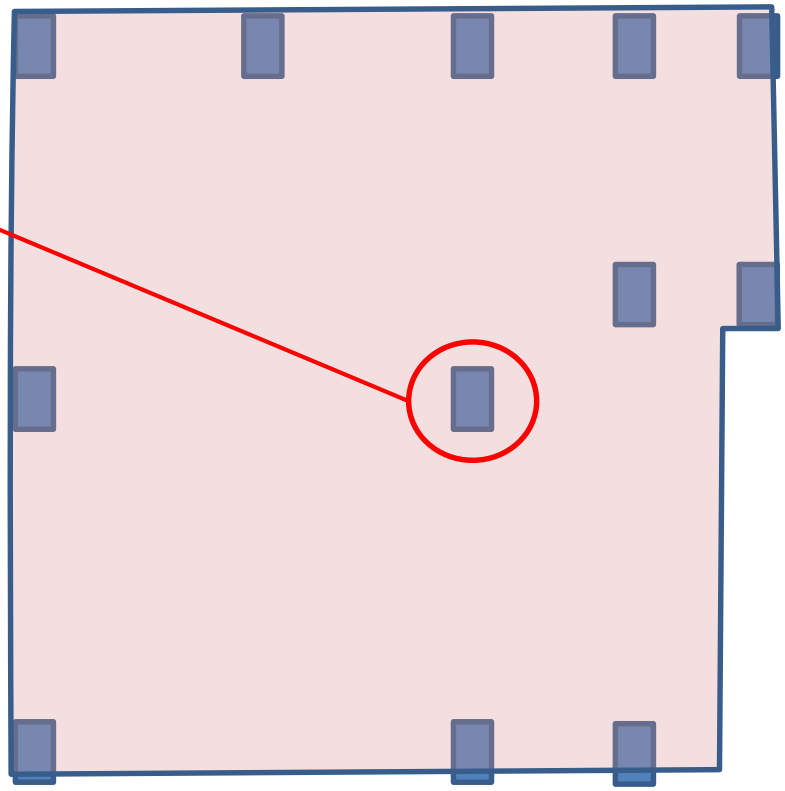
Observations: Utility Building

No railing or safety guard is provided at the roof top . Building Engineer is required to provide safety around the periphery of the roof top to ensure protection against falling.

Observations: Utility Building

Prayer & Security Building

Check the adequacy of the slab



Cursory calculation indicates that the slab is in critical zone for high punching shear in the marked column. Factory engineer is required to check the adequacy of the slab.

Observation: Prayer & Security Building

Additional Structures

No visible stability of the Additional Structures

No visible stability system is present in those brick buildings. Roof Top shed has been found resting on the brick columns. Some RCC columns are present inconsistently in the west part of one of the two Ansar dormitories. Building engineer is required to investigate the stability of the structures for the lateral load.

Observation: Ansar Dormitories

Staff Dormitory

Boiler shed

Connection is not clear for the boiler shed, storage and staff quarter. Tin shed resting on the angle is supported by masonry pier and masonry wall. Building Engineer is required to investigate the stability against lateral load.

Observations: Boiler Shed, Storage with Staff Quarter

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Truss Shed resting on the brick wall in staff canteen

Non engineered shed in Wastage Store

In the Staff canteen, truss shed is supported by masonry pier and masonry wall with non engineered connections. Building Engineer is required to investigate the stability of the canteen shed. In inclusion to this, The wastage storage also is a non engineered shed resting on the bamboo frame. Stability of the structure is required to be investigated.

Observations : Canteen Shed and Wastage Store Shed

Priority Actions

Problems Observed

Main Building:

- Lack of As built documentation
- No Load plan observed to review
- Dampness was observed on inner side of façade wall
- Water ingress at roof level
- Lack of edge protection at roof
- Column to be stressed above normal stress limit in fully completed main building

Utility Building:

- Inconsistency in as built drawings
- No water proofing and drainage at the roof top
- No edge protection at the roof top

Problems Observed

Security And Prayer Building :

- Check the adequacy of Slab

Additional Structures

- No visible stability of the Additional Structures

Item No.	Observation	Recommended Action Plan	Recommended Timeline
1	Lack of As built documentation (Main Building)	Produce accurate As Built drawings with respect to on site condition	**6-weeks**
2	Lack of As built documentation (Main Building)	Confirm the pile length and check the adequacy of foundation system.	**6-weeks**
3	No Load plan observed to review (Main Building)	Produce and actively manage a loading plan for all floor plates giving consideration to floor capacity and column capacity.	**6-weeks**
4	No Load plan observed to review (Main Building)	Implement the loading plan.	**6-months**
5	Dampness was observed on inner side of façade wall (Main Building)	Investigate the extent and cause of dampness on the façade wall and suggest necessary remedial action.	**6-weeks**
6	Dampness was observed on inner side of façade wall (Main Building)	Carry out necessary remedial action where necessary.	**6-months**
7	Water ingress at roof level (Main Building)	Provide water proofing membrane on roof and improve the drainage system to avoid water clogging.	**6-weeks**
8	Water ingress at roof level (Main Building)	Building Engineer is to investigate the extent of damaged slab due to water ingress.	**6-weeks**
9	Water ingress at roof level (Main Building)	Carry out remedial action for the damaged slab.	**6-months**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
10	Lack of edge protection at roof top (Main Building)	Provide edge protection on roof to avoid falling hazard.	**6-weeks**
11	Column to be stressed above normal stress limit in fully completed main building	In case of vertical and horizontal extension in the existing building, Factory is required to complete Detailed Engineering Assessment as per BNBC	**6-months**
12	Column to be stressed above normal stress limit in fully completed main building	Carry out remedial action if necessary.	**6-months**
13	Inconsistency in as built drawings (Utility Building)	Produce accurate As Built drawings accordingly.	**6-weeks**
14	Lack of edge protection at roof top (Utility Building)	Provide edge protection on roof to avoid falling hazard.	**6-weeks**
15	No water proofing and drainage at the roof top (Utility Building)	Apply water proofing at the roof top and improve the drainage system.	**6-weeks**

Item No.	Observation	Recommended Action Plan	Recommended Timeline
16	Check the adequacy of Slab (Prayer and security Building)	Produce accurate As Built drawings with respect to on site condition.	**6-weeks**
17	Check the adequacy of Slab (Prayer and security Building)	Check the adequacy of slab for the proposed load.	**6-weeks**
18	Check the adequacy of Slab (Prayer and security Building)	Carry out remedial action as per recommendation.	**6-months**
19	No visible stability of the additional structures	Produce accurate as built drawings as per on site condition.	**6-weeks**
20	No visible stability of the additional structures	Building Engineer is required to investigate the stability system of the structures.	**6-months**
21	No visible stability of the additional structures	Carry out remedial action as per recommendation.	**6-months**