

Azmeri Composite Knit Ltd (Extension Buildings)

Faydabad, Uttarpara, Uttara, Dhaka-1230

(23.8829N, 90.4133E)

25th October 2021



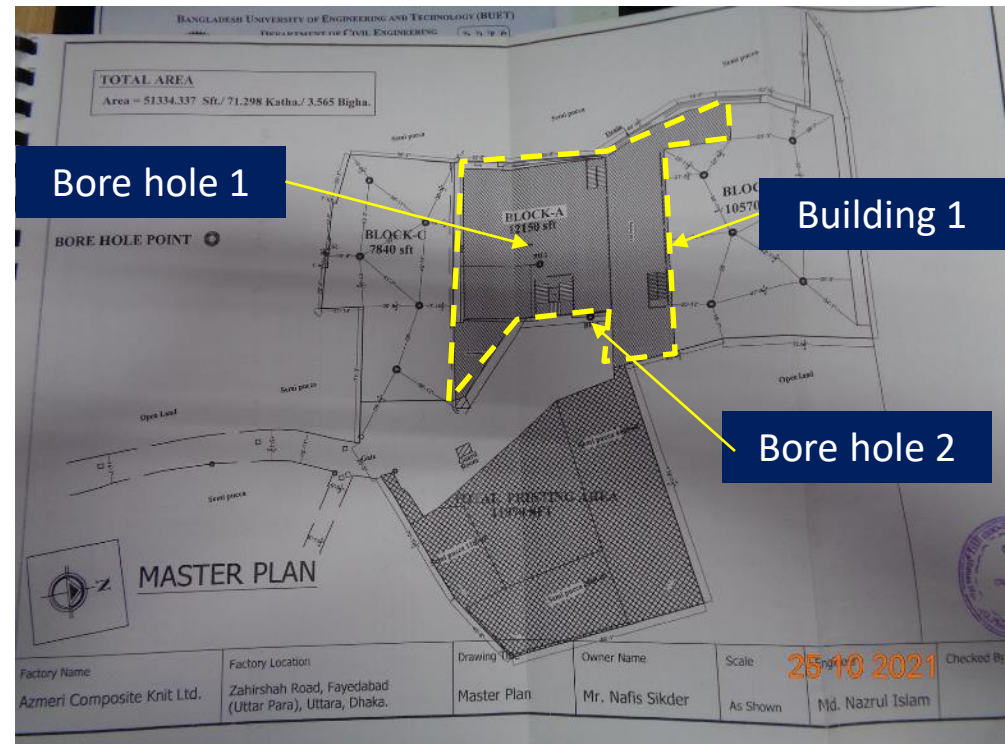
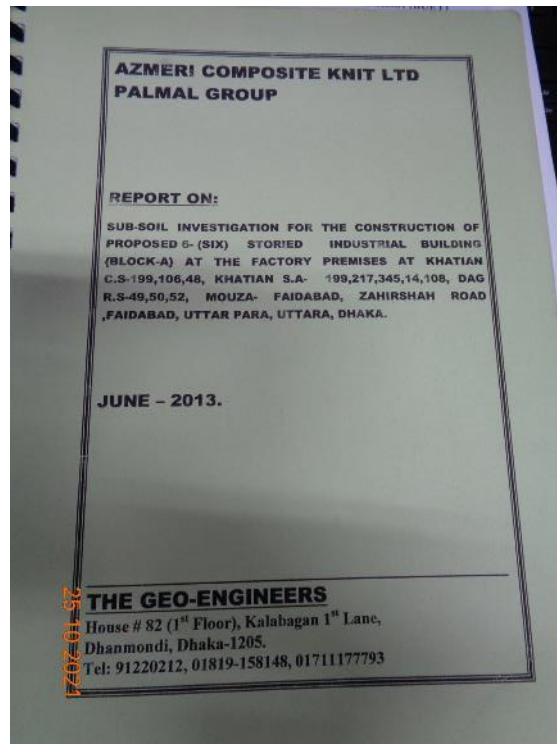
Buildings Information

1. Building 3 [G+M]
2. Building 4 (Store Shed-1) [G+M]
3. Building 5 (Store Shed-2) [B+G]

Observations

No geotechnical investigation report

Observations: Building 3, 4 & 5



Geotechnical investigation report for Building 1

No geotechnical investigation report was found for the Building-3, Building-4 and Building-5. The factory management stated that, the geotechnical evaluation was done for the mentioned buildings based on the previous geotechnical investigation report that was produced for the Building 1 under ACCORD ID: 11361. But no bore hole sample for Building-3, 4 & 5 has been taken in the previous geotechnical investigation report. Thus, new geotechnical investigation report for the mentioned buildings is required to confirm the bearing adequacy of foundation.

Observations: Building 3, 4 & 5

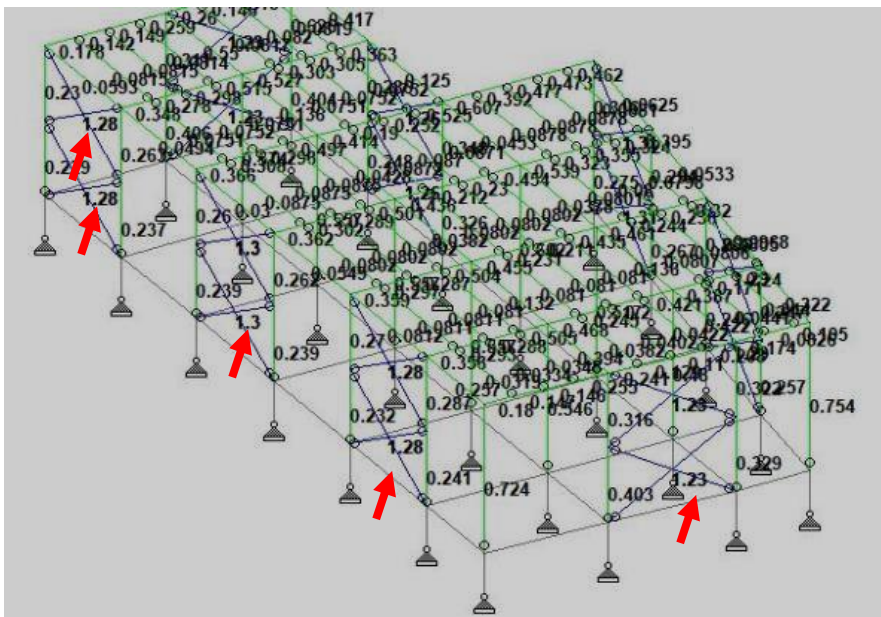
Design report need to be revised

4.4 Material (Building)

The following strength parameter is considered

Material property	Value
Compressive strength of concrete (slab)	4652 psi (Stone)
Compressive strength of concrete (footing & column)	3379 psi (Stone)
Design yield strength of structural steel Plate, fy	50,000 psi
Rebar strength	60,000 psi
Allowable bearing Capacity of Soil	2.6 Ksf

Material property in provided Design Report



Vertical pipe bracing - overstressed

In provided design report, steel plate strength, concrete compressive strength and allowable bearing capacity of soil have been considered 50 ksi, 3379 psi and 2.6 ksf respectively. No credible test report has been found regarding that values. On the other hand, vertical pipe bracing are overstressed in provided FEM. Factory is required to revise the full set of Design Report in compliance with section 1.9.1.1 and section 1.9.1.2 of BNBC and submit to RSC for further review.

Observations: Building 3

Structural design report not available



No design reports were available for Building 04 & 05

As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC. At the time of inspection, no design report was available which is required to be prepared in compliance with section 1.9.1.1 (part-6, BNBC).

Undocumented mezzanine and canopy

Observations: Building 3, 4, 5



Mezzanine supported by rack post - Building 3



Mezzanine supported by rack post - Building 4



Undocumented Canopy

Building engineer is required to produce as-built drawing, check member adequacy for both mezzanine & canopy and recommend remedial measures accordingly.

Observations: Building 3, 4, 5

Bracing misalignment



Factory engineer is required to align the bracing in proper position.

Alignment of diagonal bracing not straight

Missing bolts in structural members



Bolts were missing at several locations

Factory to check the structure and install missing bolts where required.

Significant gap between connection plates



Connection gap – Building 4



Connection gap – Building 5

Significant gap in the connections were observed at several locations. Factory engineer is required to carry out suitable remedial works.

Loose cable bracing



Loose bracings.

Factory engineer is required to tighten the loose bracings to active the lateral load resisting system.

Problems Observed

- Item 1: No geotechnical investigation report. **[Building 3, 4, & 5]**
- Item 2: Design report need to be revised. **[Building 3]**
- Item 3: Structural design report not available. **[Building 4, & 5]**
- Item 4: Undocumented mezzanine and canopy. **[Building 3, 4, & 5]**
- Item 5: Bracing misalignment. **[Building 4]**
- Item 6: Missing bolts in structural members. **[Building 4]**
- Item 7: Significant gap between connection plates. **[Building 4, & 5]**
- Item 8: Loose cable bracing. **[Building 5]**

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	No geotechnical investigation report. [Building 3, 4, & 5]	Carryout geotechnical investigation.	6-weeks
02	No geotechnical investigation report. [Building 3, 4, & 5]	Check the foundation adequacies and include in design report.	6-weeks
03	No geotechnical investigation report. [Building 3, 4, & 5]	Carry out remedial works if necessary	6-months
04	Design report need to be revised. [Building 3]	Factory is required to revise the full set of Design Report in compliance with section 1.9.1.1 and section 1.9.1.2 of BNBC and submit to RSC for further review.	6-weeks
05	Design report need to be revised. [Building 3]	Complete remedial works arising from design report.	6-months
06	Structural design report not available. [Building 4, & 5]	Factory engineer is required to prepare the design documents including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC part 6 and submit to RSC for review.	6-weeks
07	Structural design report not available. [Building 4, & 5]	Complete remedial works arise from design report.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
08	Undocumented mezzanine and canopy. [Building 3, 4, & 5]	The factory engineer to develop as-built drawing with necessary structural details.	6-weeks
09	Undocumented mezzanine and canopy. [Building 3, 4, & 5]	Carry out adequacy check for the mezzanine floor and canopy.	6-weeks
10	Undocumented mezzanine and canopy. [Building 3, 4, & 5]	Implement necessary remedial actions.	6-months
11	Bracing misalignment. [Building 4]	Factory engineer is required to align the bracing in proper position.	6-weeks
12	Missing bolts in structural members. [Building 4]	Install all missing bolts.	6-weeks
13	Significant gap between connection plates. [Building 4, & 5]	Repair the connections with a suitable method.	6-weeks
14	Loose cable bracing. [Building 5]	Tighten the loose bracings to active the lateral load resisting system.	6-weeks