

Aman Graphics & Designs Ltd. (Extension)

Najimnagar, Hemayetpur, Savar, Dhaka.
Geographic Coordinates: (23.793061, 90.264437)
16 July 2023



Building Information

Shed 4: This structure is a single storied steel shed with truss framing at top & supported by RC column.

Shed 5: This structure is a single storied steel shed with truss framing at top & Supported by RC column.

Shed 6: This structure is a single storied steel shed with steel portal framing at top & supported by RC column.

Sub-Station 1 (Generator, Substation): This structure is a single storied Reinforced Concrete (RC) building.

Sub-Station 2 (PFI, LT): This structure is a single storied steel shed with steel angle framing at top & supported by brick wall.

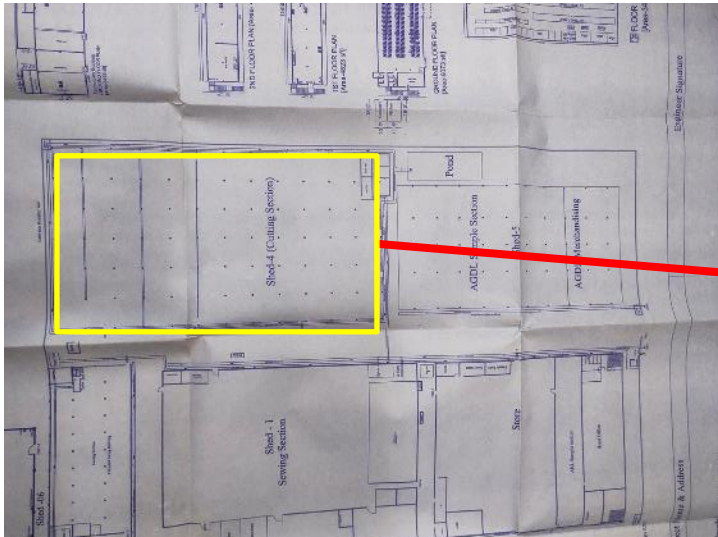
Observations

Lack of stability system



Load transfer media along the long direction and roof bracing system not observed in the shed. Building engineer is required to check the lateral stability of the shed and adequacy of connection between truss and RC column.

Absence of design Report



Shed 4

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. Design report was not found which is required to be prepared in compliance with section 1.9.1.1 (part-6, BNBC).

Discrepancies in as-built drawing



Connection



On site Tie beam found

Connection details and tie beam layout was not shown in drawing.

COLUMN SCHEDULE :

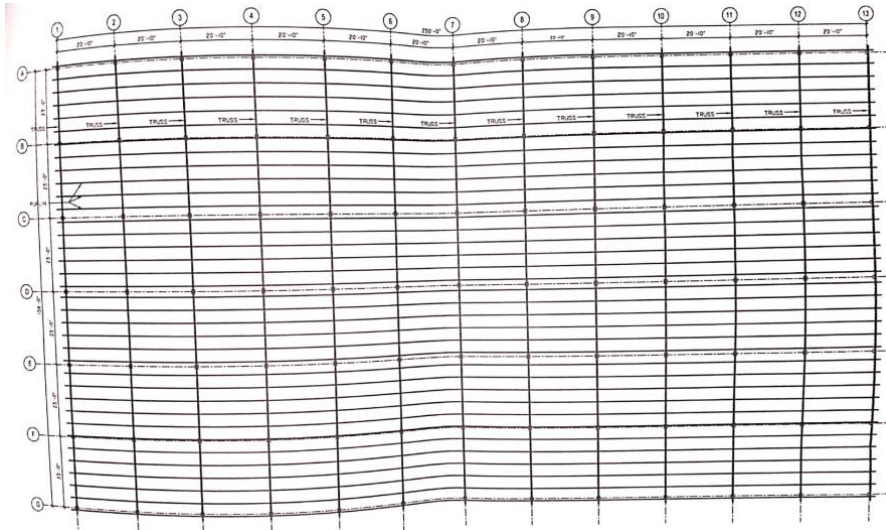
SL.	COLUMN TYP	BELOW GROUND	ABOVE GROUND
01	C-1		
02	C-2		

Column Schedule (from As-built drawing)

COLUMN SCHEDULE		
COLUMN	Below Grade Beam	Above Grade Beam
C1		
C2		

Column Schedule (from Construction drawing)

As per provided drawing some discrepancy of Column schedule between as-built drawing & construction drawing was found. As per as-built drawing 4-16mm was shown in C-1 column but as per construction drawing it was 4-20mm rebar shown in C-1 column. Building engineer is required to confirm rebar diameter.



Truss Layout plan



Onsite condition.

During inspection, mismatch found in truss layout plan. In shed 4 there were 14 number of truss found but in as built drawing only 13 number of truss shown. Building engineer is required to survey the full structure and update the as-built drawing accordingly.

Dampness on periphery wall



Dampness was found on periphery wall

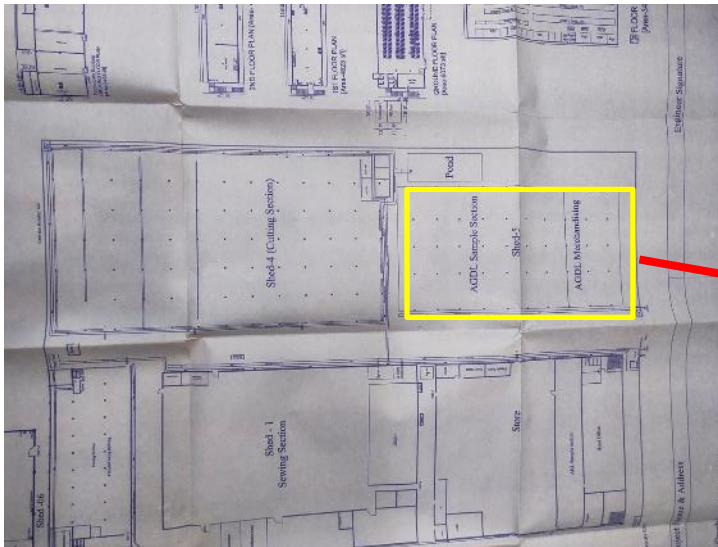
Dampness was found on periphery brick wall of shed 4.
Factory is required to repair all damp areas as per
suggestion of building engineer.

Lack of stability system



Load transfer media along the long direction and roof bracing system not observed in the shed. Building engineer is required to check the lateral stability of the shed and adequacy of connection between truss and RC column.

Absence of design Report



Shed 5

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.

Design report was not found which is required to be prepared in compliance with section 1.9.1.1 (part-6, BNBC).

Lack of anchorage of storage rack



Lack of anchorage of storage rack

During inspection Lack of anchorage of storage found on shed 5. Building engineer required to brace/anchor all the non-structural elements.

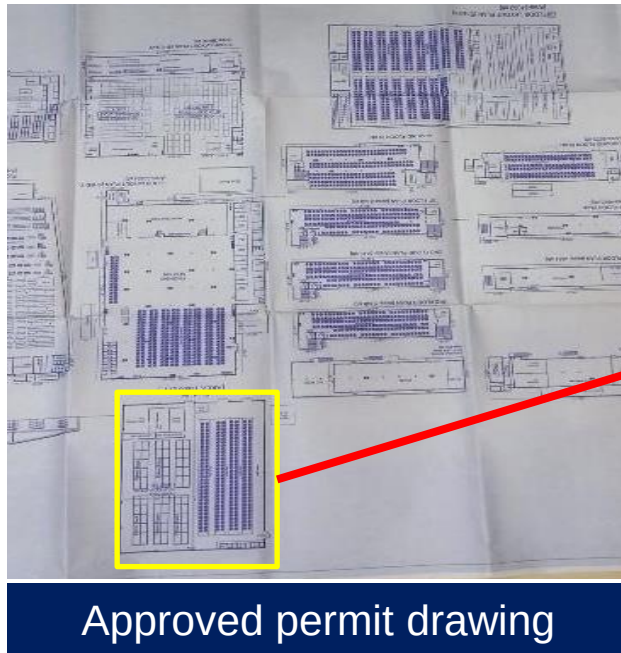
RCC Column suspectable for trolley Impact



Damage RC Column due to trolley Impact

During inspection, Damage RC Column due to trolley Impact. Building engineer required to provide barrier around the RC column to protect from possible trolley impact.

Absence of design Report



Approved permit drawing



Shed 6

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. Design report was not found which is required to be prepared in compliance with section 1.9.1.1 (part-6, BNBC).

Lack of lateral stability



Portal/Moment resisting frame is only provided along short direction. Lateral Stability.



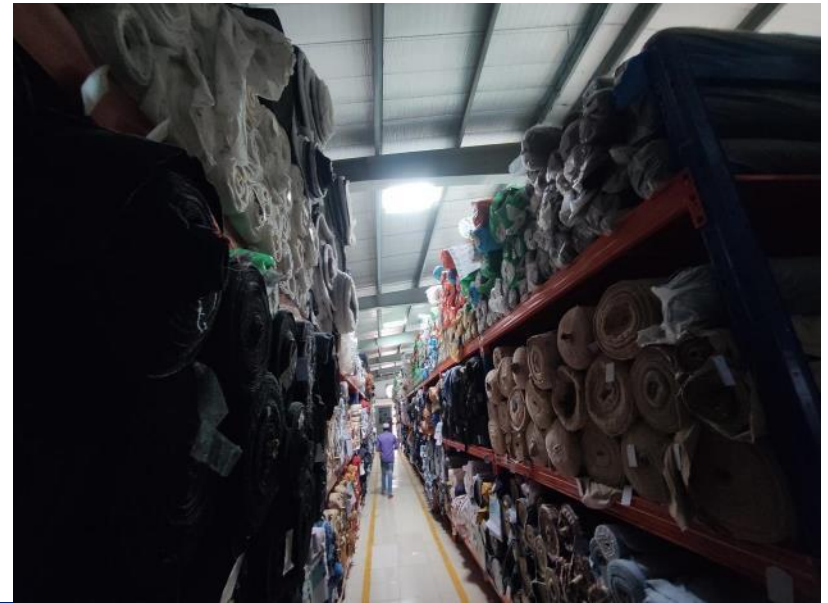
No bracing was provided along long direction.



Partial rigid connection at ridge

Portal/Moment resisting frame is only provided along short direction. No bracing was provided along long direction at roof structure. Building engineer is required to check the lateral stability of the structure.

Lack of anchorage of storage rack



Lack of anchorage of storage rack

During inspection Lack of anchorage of storage rack was found on shed 6. Building Engineer required to brace/anchor all the unbraced non-structural elements (rack/plastic water tank).

Absence of as-built drawing



Sub Station 1



Sub Station 2

During inspection, no as-built drawing was found for sub-station 1 & 2. Building engineer is required to produce as-built drawing for sub-station 1 & 2.

Absence of drawing and design report



Canopy in front of Shed 6



Canopy in front of Shed 4

Building engineer is required to prepare as-built drawings and design report as per BNBC. In design report building engineer is required to check the stability for uplift forces.

Problems Observed

Shed 4:

Item 01: Lack of stability system.

Item 02: Absence of design Report.

Item 03: Discrepancies in as-built drawing.

Item 04: Dampness on periphery wall.

Shed 5:

Item 05: Lack of stability system.

Item 06: Absence of design Report.

Item 07: Lack of anchorage of storage rack.

Item 08: RCC Column susceptible for trolley Impact.

Shed 6:

Item 09: Absence of design Report.

Item 10: Lack of Lateral Stability.

Item 11: Lack of anchorage of storage rack.

Sub Station 1 & 2:

Item 12: Absence of As-built drawing.

Canopies:

Item 13: Absence of drawing and design report.

Priority Actions

Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Lack of stability system. (Shed-4)	Building engineer is required to check the lateral stability of the shed and adequacy of connection between truss and RC column.	6-weeks
02	Lack of stability system. (Shed-4)	Complete remedial works where necessary.	6-months
03	Absence of design Report (Shed-4)	Building engineer is required to prepare design report as per BNBC.	6-weeks
04	Absence of design Report (Shed-4)	Complete implementation of any remedial works deemed necessary by design report.	6-months
05	Discrepancies in as-built drawing (Shed-4)	Apply corrosion resistance coating to the exposed rebar to protect from corrosion.	6-weeks
06	Dampness Observed. (Shed-4)	Building engineer is required to repair all damp areas with suitable method.	6-months
07	Absence of design Report. (Shed-5)	Building engineer is required to check the lateral stability of the shed and adequacy of connection between truss and RC column.	6-weeks
08	Absence of design Report. (Shed-5)	Complete remedial works where necessary.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
09	Absence of design Report. (Shed-5)	Building engineer is required to prepare design report as per BNBC.	6-weeks
10	Absence of design Report. (Shed-5)	Complete implementation of any remedial works deemed necessary by design report.	6-months
11	Lack of anchorage of storage rack (Shed-5)	Building engineer required to brace/anchor all the unbraced non-structural elements.	6-months
12	RCC Column susceptible for trolley Impact. (Shed-5)	Building engineer required to provide barrier around the RC column to protect from possible trolley impact.	6-weeks
13	Absence of design Report. (Shed-6)	Building engineer is required to prepare design report as per BNBC.	6-weeks
14	Absence of design Report. (Shed-6)	Complete implementation of any remedial works deemed necessary by design report.	6-months
15	Lack of Lateral Stability. (Shed-6)	Building engineer is required to check the lateral stability of the structure.	6-weeks
16	Lack of Lateral Stability. (Shed-6)	Complete remedial works where necessary.	6-months

Item No.	Observation	Recommended Action Plan	Recommended Timeline
17	Lack of anchorage of storage rack (Shed-6)	Building engineer required to brace/anchor all the unbraced non-structural elements.	6-months
18	Absence of As-built drawing. (Sub Station 1 & 2)	Building engineer is required to produce as-built drawing for sub-station 1 & 2.	6-weeks
19	Absence of drawing and design report. (Canopies)	Building engineer is required to prepare as-built drawings and design report as per BNBC.	6-weeks
20	Absence of drawing and design report. (Canopies)	Carry out necessary remedial works where required.	6-months