



Hera Sweaters Ltd.

Pechain, Jampur, Sonargaon, Narayanganj
(23.748314N, 90.584084E)

27th January and 8th March 2020





Building Information

1. **Building-1: Admin Building:** Three-storied (G+2) (RC) reinforced concrete building
2. **Building-2: Warehouse Building:** Three-storied (G+2) (RC) reinforced concrete building
3. **Building-3: Production Building:** Three-storied (G+2) (RC) reinforced concrete building
4. **Building-4: Utility Building:** Single-storied (RC) reinforced concrete building
5. **Building-5: Boiler & Chiller Building:** Single-storied (RC) reinforced concrete building
6. **Building-6: Fire Pump House:** Single-storied (RC) reinforced concrete building with a basement
7. **Building-7: Multipurpose shed:** Single storied steel shed
8. **Building-8: ETP Shed:** Single storied steel shed



Observations

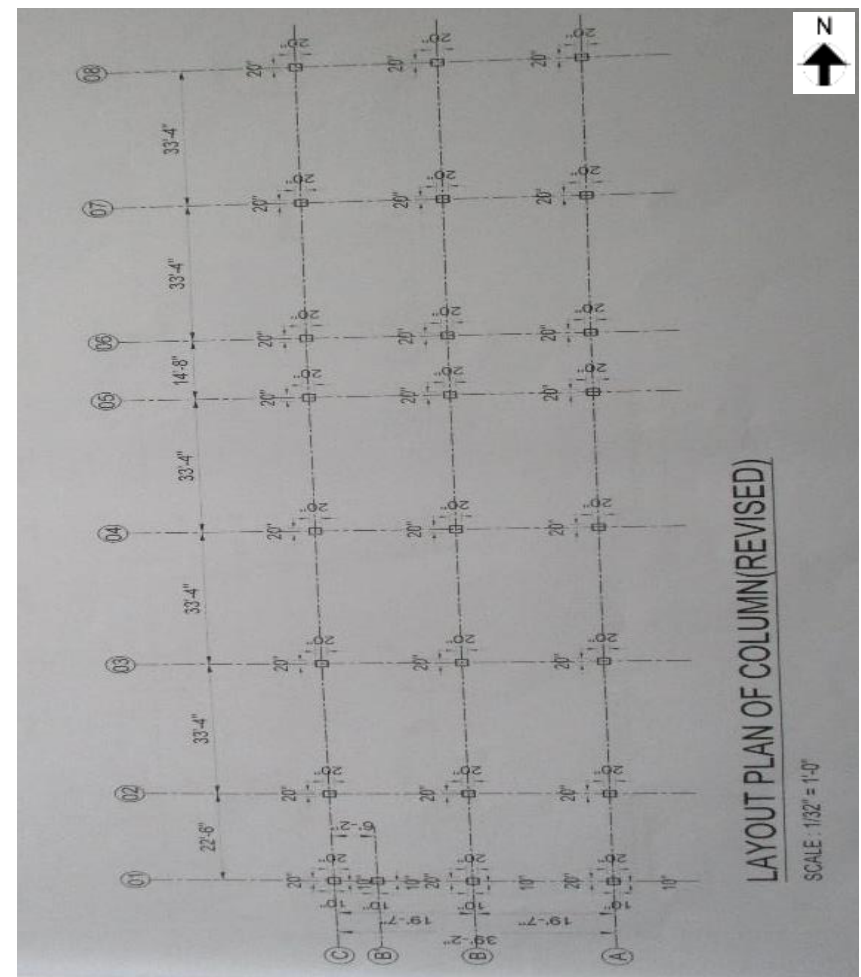


Inconsistency in as-built drawing



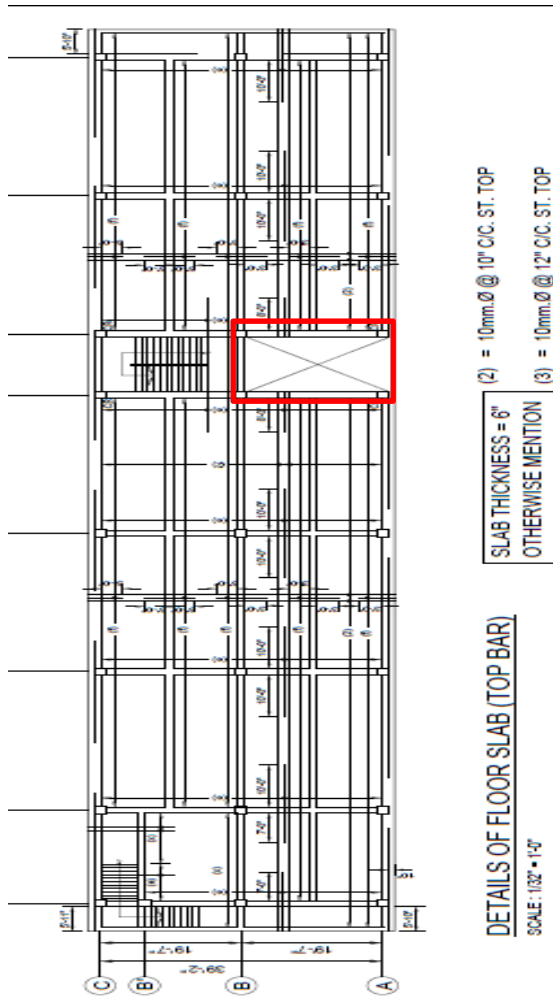
COLUMN MARK	SCHEDULE OF COLUMN SIZE & REINFORCEMENT		
	BELOW G.F.	G.F. TO 1ST FLOOR	1ST FLOOR TO ROOF
C1	 8-20 Ø + 8-16 Ø 10 Ø @ 5"-10"-5" c/c	 8-20 Ø + 8-16 Ø 10 Ø @ 5"-10"-5" c/c	 8-20 Ø + 8-16 Ø 10 Ø @ 5"-10"-5" c/c
C2	 12-20 Ø 10 Ø @ 5"-10"-5" c/c	 12-20 Ø 10 Ø @ 5"-10"-5" c/c	 8-20 Ø + 4-16 Ø 10 Ø @ 5"-10"-5" c/c
C3	 16-25 Ø 10 Ø @ 5"-10"-5" c/c	 16-25 Ø 10 Ø @ 5"-10"-5" c/c	 8-25 Ø + 4-20 Ø 10 Ø @ 5"-10"-5" c/c
C4	 8-20 Ø + 4-25 Ø 10 Ø @ 5"-10"-5" c/c	 8-20 Ø + 4-25 Ø 10 Ø @ 5"-10"-5" c/c	 12-20 Ø 10 Ø @ 5"-10"-5" c/c

In schedule column types were shown



In layout column indications were not shown

In column layout column type/indication was not mentioned therefore there was an ambiguity to indicate the actual column type in onsite condition. Factory engineer is required to update the as-built drawing showing all the column type.



Portion of slab at staircase was not shown in Slab layout

Factory engineer is required to update the as-built drawing as per onsite condition

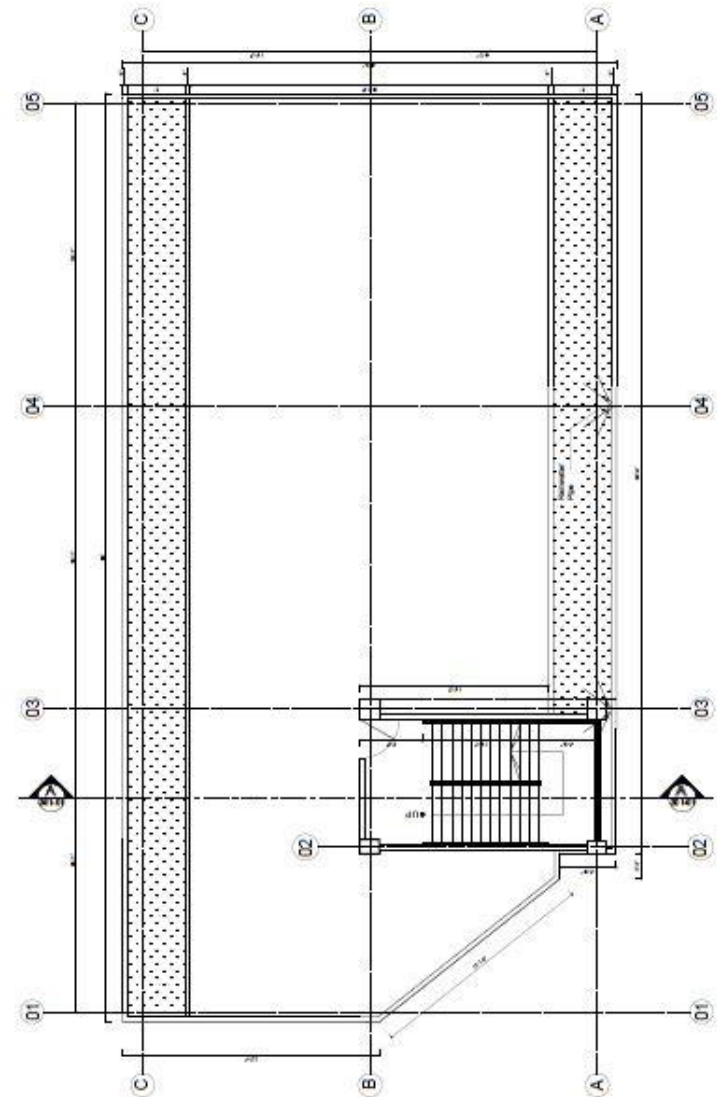


Roof plan was not incorporate in provided drawing. Three 1000-liter plastic water tanks were found on roof slab at north end which were not shown in drawing.



Two plastic water tanks and a tower (each of 1000 liter) were found on roof slab.

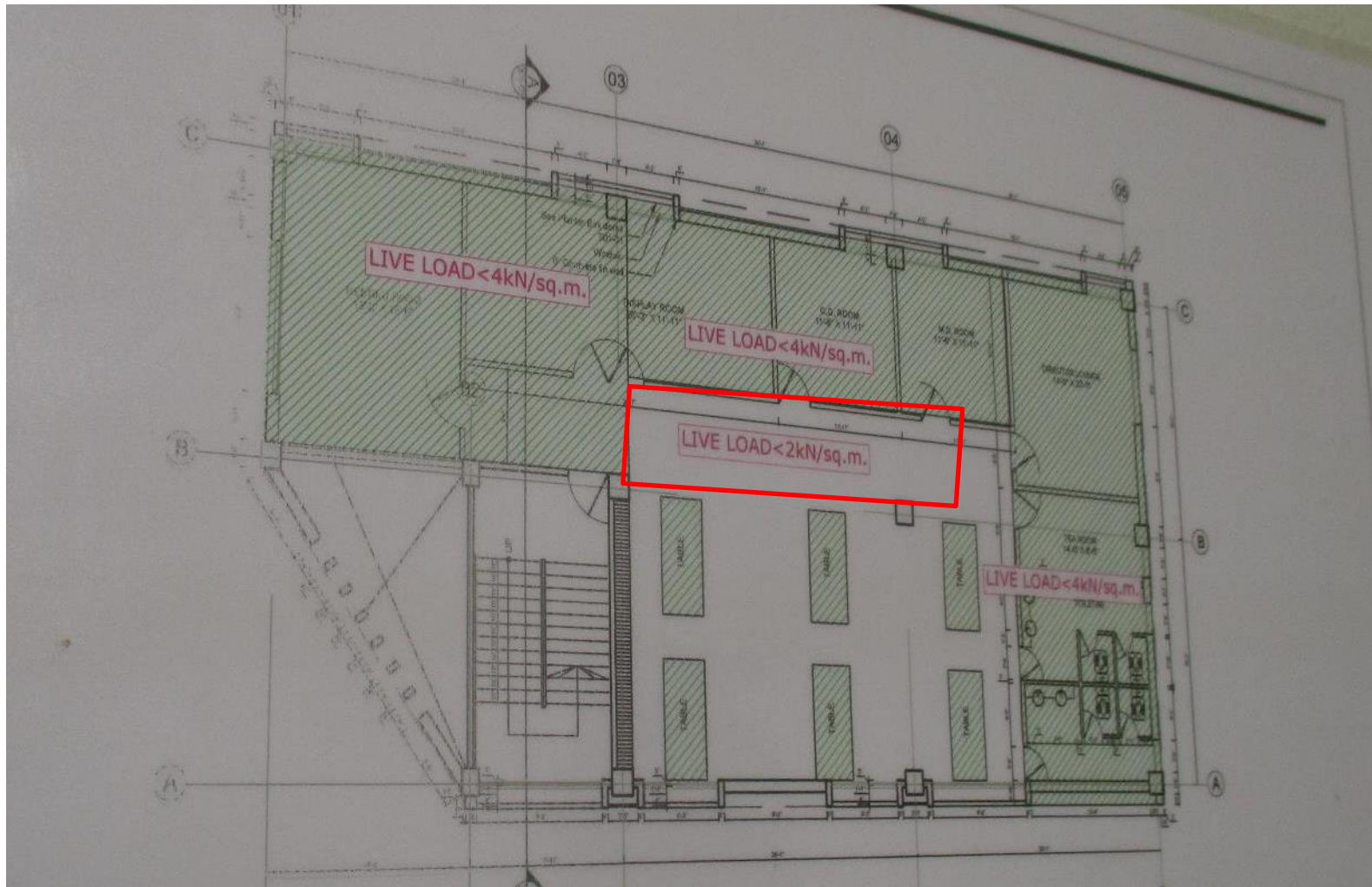
Factory engineer is required to update the as-built drawing as per onsite condition.



Water tanks and tower were not shown in drawing



Load plan doesn't comply with BNBC standard



Live load was mentioned as 2 KN/m² for some places in posted load plan

Live load was mentioned as 2 KN/m² for some places in posted load plan. which doesn't comply the BNBC standard. Factory engineer is required to Produce load plan as per BNBC standard.



Dampness on roof slab



Dampness was found on roof slab at north side

Factory is required to improve drainage system to prevent water ponding and dampness on roof slab.



Crack in brick wall



Crack was found in brick wall at ground floor cantilever area (north end)

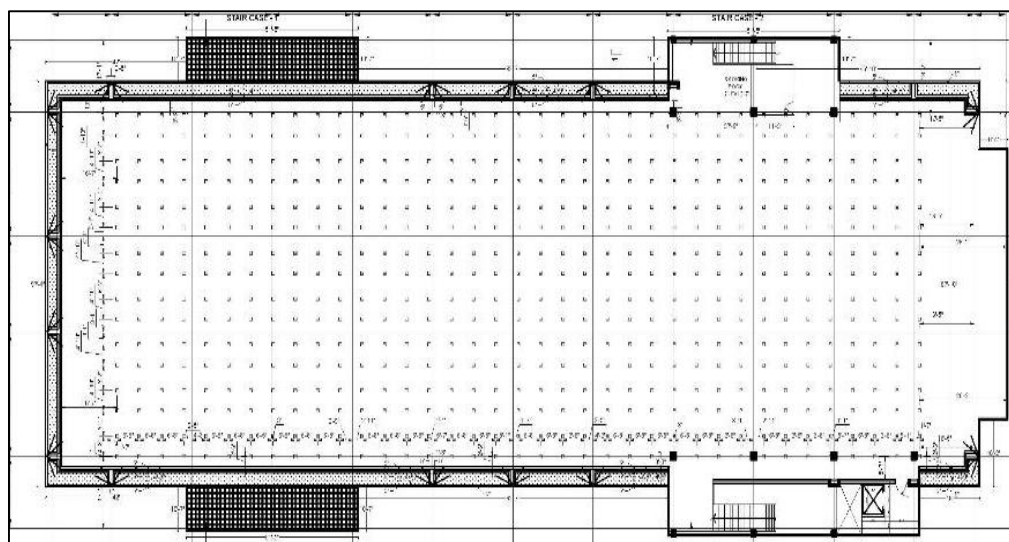
Factory engineer is required to investigate the cause of crack and repair with a suitable method.



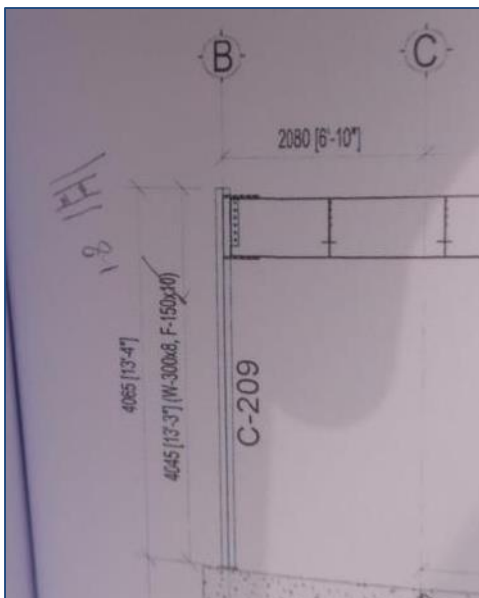
Inconsistency in as-built drawing



Water tank location in the roof



Water tank is not shown in the provided drawing



Stair 2 , Steel column dimension



Flange thickness in C-209 column found 18 mm (double plate) instead of 10 mm (single plate)



Additional plate was found in the C-209 steel column



**Improper Connection, missing bolt and Gap
between member in all steel stairs**



Significant gap found at connection plate joint and RC member. In some places, the connection was found with brick wall. Missing bolt was found in several places. Connections were not constructed as per drawing in several places.

Missing bolt

Improper connection

Gap in connection

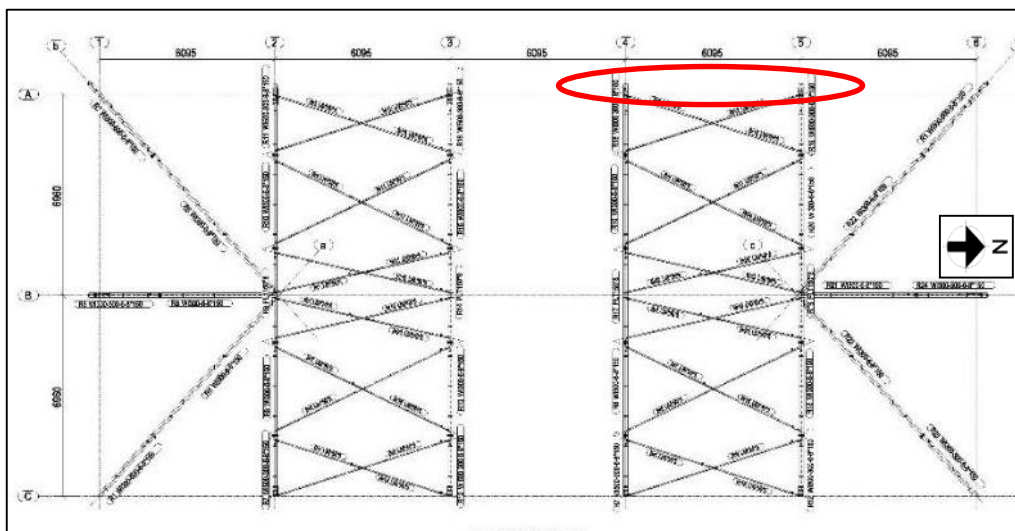
Bolt found missing, Significant gap was observed. Apparently, load bearing, and transfer capacity is reduced.



Vertical bracing missing



Bracing missing this marked location



Rafter and Bracing layout

Vertical bracing at marked location found missing. Factory engineer is required to install the missing bracing or check the lateral stability of the shed.

Building-7: (Multipurpose shed)



Problems Observed

- 1: Inconsistency in provided drawing. (Admin & Warehouse Building)
- 2: Load plan doesn't comply with BNBC standard.(Admin Building)
- 3: Dampness on roof slab.(Warehouse Building)
- 4: Crack in brick wall. (Warehouse Building)
- 5: Inconsistency in as-built drawing. (Production Building)
- 6: Improper Connection, missing bolt and Gap between member in all steel stair.
(Production Building Stairs)
- 7: Vertical bracing missing. (Multipurpose shed)



Priority Actions



Item No.	Observation	Recommended Action Plan	Recommended Timeline
01	Inconsistency in provided drawing (Admin & Warehouse Building)	Building engineer is required to update the as-built drawing as per actual site condition.	(within 6-weeks)
02	Load plan doesn't comply with BNBC standard (Admin Building)	Factory engineer is required to Produce load plan as per BNBC standard.	(within 6-weeks)
03	Dampness on roof slab (Warehouse Building)	Factory is required to improve the drainage system on roof slab to prevent water damage.	(within 6-weeks)
04	Crack in brick wall (Warehouse Building)	Factory engineer is required to investigate the cause of crack and repair with a suitable method.	(within 6-weeks)
05	Inconsistency in as-built drawing (Production Building)	Building engineer is required to update the as-built drawing as per actual site condition.	(within 6-weeks)



Item No.	Observation	Recommended Action Plan	Recommended Timeline
06	Improper Connection, missing bolt and Gap between member in all steel stairs (Production Building Stairs)	Building Engineer to investigate, verify and prepare a report on the load transfer capacity of all faulty connections.	(within 6-weeks)
07	Improper Connection, missing bolt and Gap between member in all steel stairs (Production Building Stairs)	Check all the connection adequacy.	(within 6-weeks)
08	Improper Connection, missing bolt and Gap between member in all steel stairs (Production Building Stairs)	Carry out any remedial works if required.	(within 6-months)
09	Vertical bracing missing (Multipurpose shed)	Factory engineer is required to install the missing bracing or check the lateral stability of the shed.	(within 6-weeks)
10	Vertical bracing missing (Multipurpose shed)	Carry out any remedial works if required.	(within 6-months)