

Ratool Apparels Ltd. (Extension 2)

Anser Road, Vagnahati, Sreepur, Gazipur

(24.198417, 90.461912)

6 November 2023



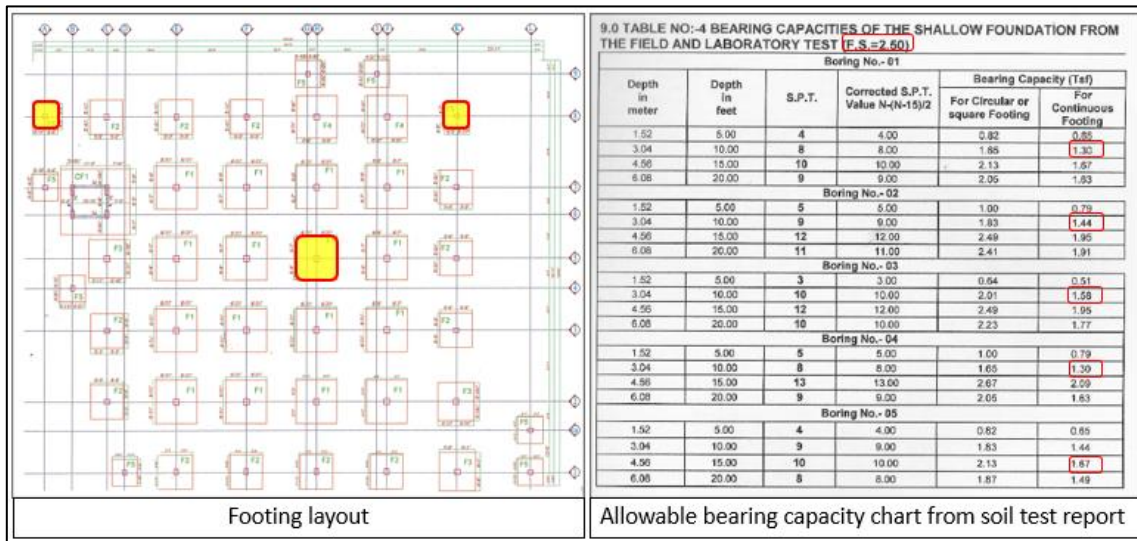
1. Building Information

Building-05 (Main Production Building): Five storied RC building.

Building-04 (Compressor Room): Single storied RC building.

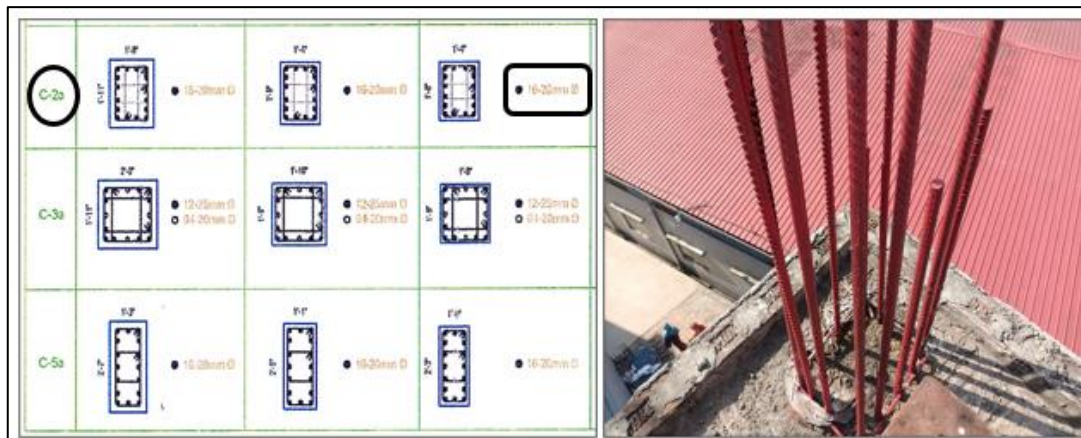
2. Observations

Observation-1: Foundation found to be stressed considering 5 storied building.



Description: Cursory calculation indicates the highlighted foundations are inadequate for both bearing & punching considering minimum concrete strength. Also, the loading is considered 4 kPa as per prepared floor load plan and allowable bearing capacity of soil is **3 tsf (FS: 2.5)** at 2.13 m depth. Building engineer is required to verify in-situ material strength as frequency of material strength test does not meet the minimum requirement and review the design load and foundation stresses.

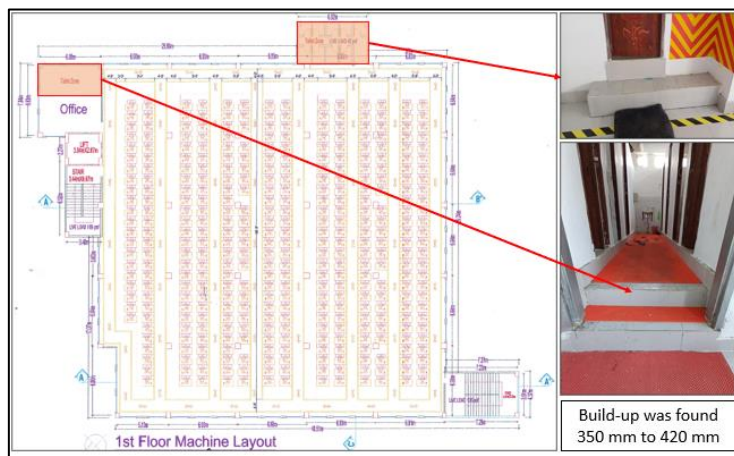
Observation-2: Discrepancy in as-built drawing (Building-05; Main Production Building).



Description: During inspection, 14 rebar were found in column-2a whereas 16 rebar were mentioned in as-built drawing.



Description: A 2000-liter capacity plastic water tank was found on the existing roof (proposed 3rd floor) but in as-built drawing it was not mentioned.



Description: 1st floor toilet zone build-up was found 350 mm to 420 mm but in as built it was not mentioned. Building engineer is required to revise the as-built drawing as per actual site condition.

Observation-3: Corrosion on exposed rebar (Building-05; Main Production Building).



Description: During inspection, some rebar was found corroded. Building engineer is required to take proper measures to protect the rebar from corrosion.

Observation-4: Column susceptible to vehicle impact (Building-05; Main Production Building).



Description: Some columns on the ground floor had the sign of vehicle impact. Building engineer is required to provide barriers around the column to avoid vehicle impact.

Observation-5: Racks and plastic water tanks are not anchored or braced (Building-05; Main Production Building).



Description: Some racks on floors are not anchored or braced to resist lateral (earthquake) forces. The building is required to adequately anchor/brace all non-structural elements to resist earthquake forces to comply with the BNBC.

3. Action Plan

Observation	Action Plan	Timeline
Foundation found to be stressed considering 5 storied building (Building-05; Main Production Building).	Verify in-situ material strength.	within 6 weeks
	Building engineer is required to review the design load and foundations stresses.	within 6 weeks
	Produce and actively manage a loading plan for all floor plates within the factory, considering floor, column and foundation capacity.	within 6 weeks
	Prior to commencement of further extension work above 3 stories, the factory is required to carry out the suggested remedial works if required.	within 6 months
Discrepancy in as-built drawing (Building-05; Main Production Building).	Building engineer is required to update the as-built drawing as per actual site condition.	within 6 weeks
Corrosion on exposed rebar (Building-05; Main Production Building).	Building engineer is required to take proper measures to protect the rebar from corrosion.	within 6 months
Column susceptible to vehicle impact (Building-05; Main Production Building).	Building engineer is required to provide barriers around the column to avoid vehicle impact.	within 6 months
Racks and plastic water tanks are not anchored or braced (Building-05; Main Production Building).	The building is required to adequately anchor/brace all non-structural elements to resist earthquake forces to comply with the BNBC.	within 6 months