

ARA / Apparel Export Ltd. (Extension)

2/c Darussalam Road, Mirpur, Dhaka
(23.783396, 90.352697)

25 February 2024



1. Building Information

1. Building-4 is three storied RC structure with underground water reservoir and fire pump room
2. Boiler Room Single storied RC structure.

2. Observations:

Observation-1: No document available. Detail Engineering Assessment (DEA) needs to be performed. (Building-4).



Three-storied building with underground water reservoir and fire pump room

Stone chips aggregate- Column (Left)
Brick chips aggregate- Beam (Right)

As per the verbal confirmation, the construction of the building was constructed between August 2018 and May 2019. The columns are made of stone chips and beams are made of brick chips. During inspection, as-built drawing was not available for the structure as well as the foundation details are unknown. Also, design documents as well as material test reports were not available.



Storage found on the 2nd Floor and 1st floor

During the inspection, the load plan was not available for the building. The building is being used as storage on the 2nd floor and 1st floor. Also, the prayer room and dining hall are being used on the ground floor suspended slab over the underground water reservoir.

The building engineer is required to prepare the loading plan for the building based on the capacity of the structural members and design review. Also, post the load plan at the entry and storage area. The Factory engineer is required to ensure the implementation of the load management program.

Description:

The Factory engineer is required to survey the whole structure and prepare accurate as built drawing. Also building engineer is required to perform Detail Engineering Assessment (DEA) for the structure based on in-situ material strength, floor live load and geotechnical investigation report and prepare DEA report based on the FEA model.

Observation-2: Permit drawing not available (Building-4)



Description: Factory building did not have a permit drawing from any authority. Factory is required to collect permission from the government's local authority.

Observation-3: Exposed re-bar at the roof. (Building-4)



Description: Exposed reinforcement was found on roof top for columns. The factory engineer is required to provide anti-corrosive coating in re-bar to prevent the corrosion in exposed rebar.

Observation-4: Lack of as-built drawing. (Boiler Room)



Description: No documents were available for the boiler room. Building engineer is required to survey the whole structure and prepare accurate as-built drawing for the boiler room.

3. Action Plan:

Serial No	Observation	Action Plan	Timeline
1	No document available. Detail Engineering Assessment (DEA) needs to be performed. (Building-4)	Building engineer to Survey the whole structure and prepare accurate as-built drawing including the detail foundation information.	within 6 weeks
2	No document available. Detail Engineering Assessment (DEA) needs to be performed. (Building-4)	Building engineer is required to perform a Detailed Engineering Assessment (DEA) of the structure according to BNBC and submit it to RSC for review.	within 6 weeks
3	No document available. Detail Engineering Assessment (DEA) needs to be performed. (Building-4)	Verify in-situ concrete stresses by 100mm dia. cores from minimum of 4 columns and beam & slab.	within 6 weeks
4	No document available. Detail Engineering Assessment (DEA) needs to be performed. (Building-4)	Produce and actively manage a loading plan for all floor plates considering floor and column capacity.	within 6 weeks
5	No document available. Detail Engineering Assessment (DEA) needs to be performed. (Building-4)	Carry out remedial work if required.	within 6 months
6	No document available. Detail Engineering Assessment (DEA) needs to be performed. (Building-4)	Continue to implement floor loading plan.	within 6 months
7	Permit drawing not available (Building-4)	Factory authority is required to avail the permit drawing for the structure.	within 6 months
8	Exposed re-bar at roof. (Building-4)	All exposed reinforcement is to be protected from corrosion which may cause degradation of the concrete.	within 6 months
9	Lack of as-built drawing. (Boiler Room)	Building engineer to Survey the whole structure and prepare accurate as-built drawing.	within 6 weeks