

SOUTHERN CLOTHINGS LIMITED (EXTENSION-2)

Bottola, Zirabo, Ashulia, Dhaka

(23.907759, 90.321705)

9 February 2025



1. Building Information

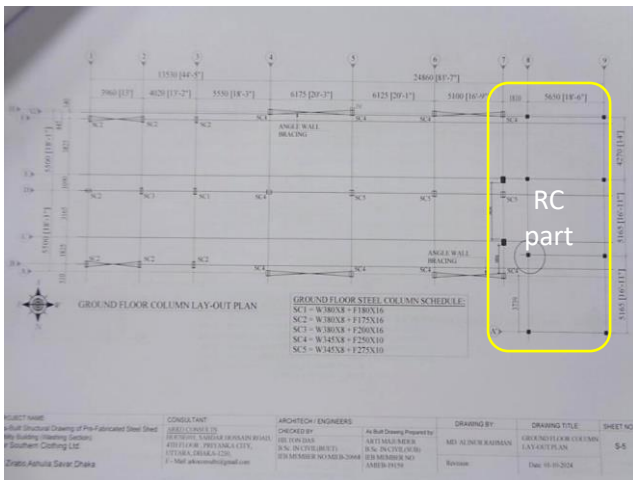
Building-2 Wash: Two storied (B+G+1) structure with a partial basement

Building-7 Dining: Single storied structure

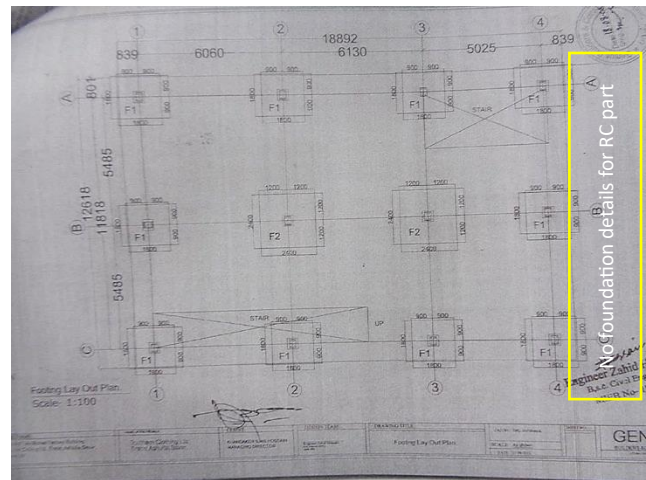
Car Parking Canopy: a single storied parking canopy

2. Observations

Observation 01: Lack of design report, material test report and foundation details. (Building-2 Wash)



As-built drawing: Column Layout

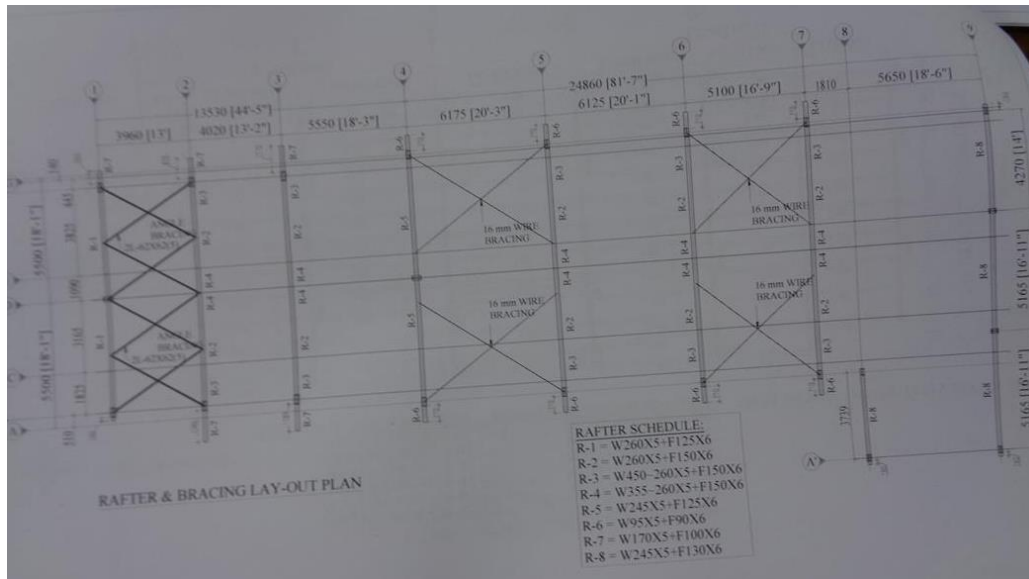


Permit drawing: Foundation Layout

Description: The building consists of steel and reinforced concrete parts. It was extended horizontally, adding seven bays instead of the three shown in the permit drawings. No design documents exist for the current structure. The provided structural drawing lacks foundation details for the RC part, and the foundation details for the steel section do not reflect the as-built condition. There is no in-situ material test report for the building. Furthermore, there is no continued lateral load transfer media (compression strut) in the lateral load resisting system in the roof.

The building engineer is required to carry out Detail Engineering Assessment (DEA) for the structure to verify the foundation details, in-situ material strength, check the design against lateral forces, stresses and serviceability's. Prepare a full set of DEA documents with detailed remedial action plan. Submit the DEA documents to the RSC for review.

Observation 02: Mismatch between drawing and as-built condition (Building-2 Wash)



Description: Foundation details of RC part were missing. Discrepancies were observed for almost all column grids (around 150 mm variations), rafter sizes (125 mm flange width instead 150), bracing layout & sizes (50 mm angle instead of 75mm), RC column sizes (250 mm instead 375 mm). Also, toilet zone with min. 300 mm floor raise was found on 1st floor which was not mentioned in the drawing.

The building engineer is required to survey the structure, prepare accurate as-built drawings with foundation and connection details.

Observation 03: Lack of floor load management program (Building-2 Wash)



Description: The 1st floor and ground floor boiler areas have suspended slabs. Neither floor load plan prepared for the suspended slabs nor posted on floor level. The building engineer is required to prepare floor load plan and implement load management program (post allowable floor load plan, mark storage area & height and maintain floor loading).

Observation 04: Loose bracing, connection gap, bolt missing and inadequate edge clearance.
(Building-2 Wash)



Loose bracing



Gap between joint plates



Bolt missing & inadequate edge clearance

Description: Loose bracing, connection gaps, bolt missing and inadequate edge clearances were observed in the building. The building engineer is required to tighten the loose bracings, repair the connection gap & inadequate clearance with suitable methods.

Observation 05: Crack on brick wall at stair landing (Building-2 Wash)



Description: Crack observed on brick wall at landing zone. The building engineer is required to check the deflection limit of landing slab, check other reasons for crack and repair with suitable method.

Observation 06: Dampness on wall for Building-2 (Wash)



Description: Dampness observed on brick facade walls due to water intrusions. The factory is required to identify all the damp locations throughout the building, seal the source of water, and repair the damp areas with suitable methods.

Observation 07: Trolley impact and surface damage (Building-2 Wash)



Trolley impact and surface damage on columns

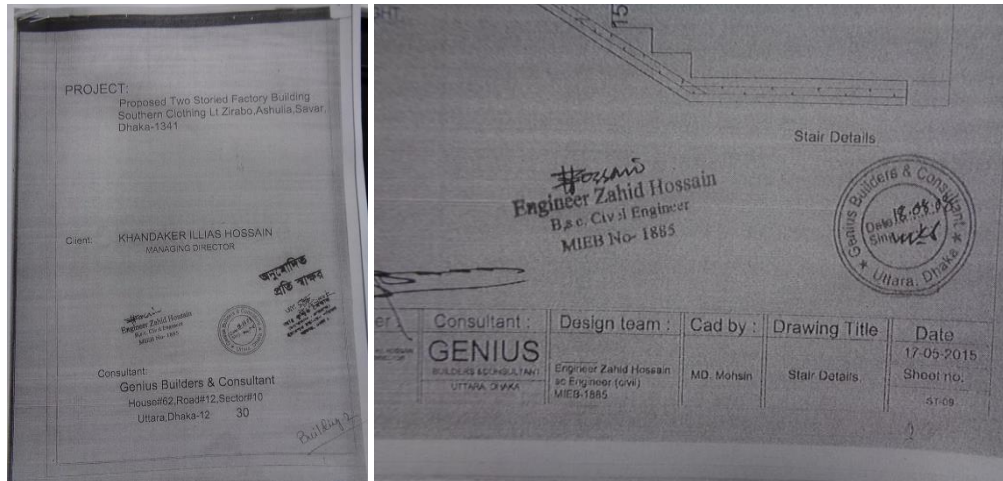
Description: Damage due to trolley impact was observed on ground floor columns. The building engineer is required to provide column guard to protect from trolley impact.

Observation 08: Lack of anchorage/braced of non-structural elements. (Building-2 Wash)

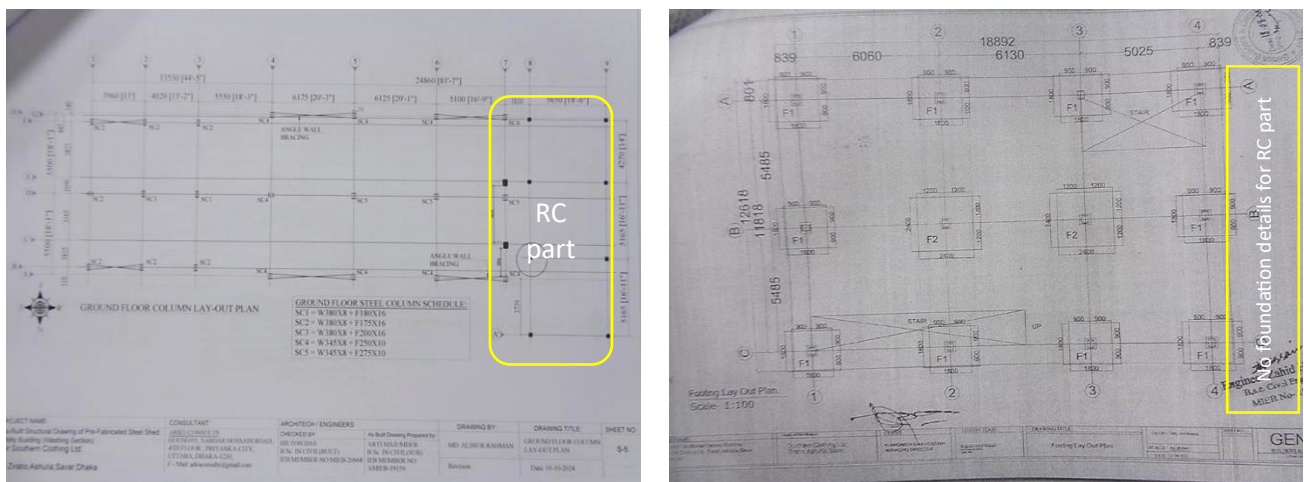


Description: Non-structural elements (storage racks) were found not anchored & unbraced. The factory is required to brace/anchor all the non-structural elements within the building.

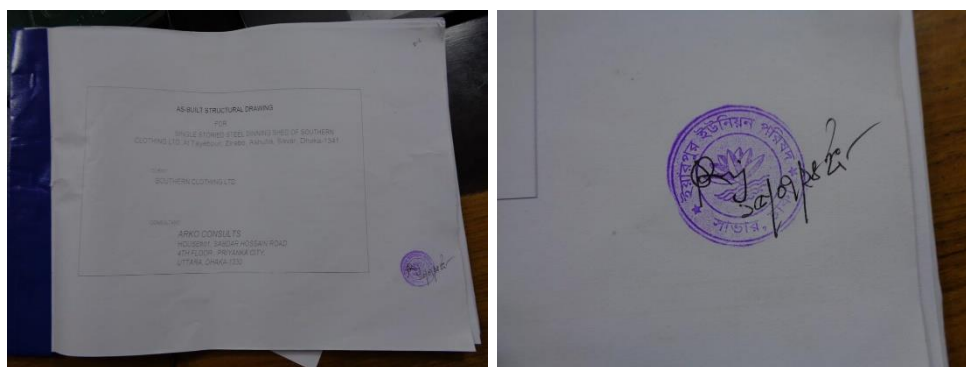
Observation 09: Inconsistency in the Building Permits (Building-2 and Building-7)



Building-2 Wash: Permit date 18 August 2008, on structural drawing prepared on 17 May 2015



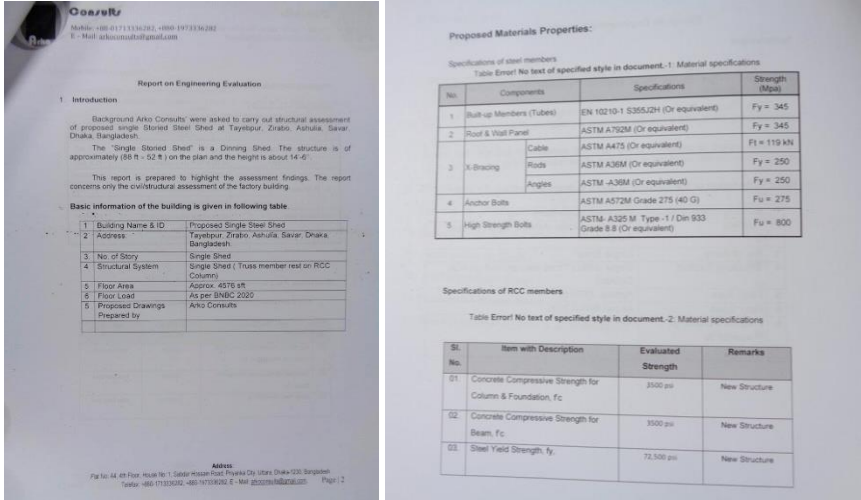
Building-2 Wash: Permit didn't reflect the as-built construction, a portion of building is missing in permit drawing



Building-7 Dining: Permit taken from local Union Parishad dated 15 July 2024

Description: The building permit for Building-2 Wash didn't reflect the actual building layout. Also, the date of drawing and date of permit create confusion regarding the authenticity of the permit. The building permit for Building-7 Dining was not taken from BNBC-2020 prescribed local authority. The factory is required to collect building permits from BNBC prescribed local authority.

Observation 10: Revision of design report based on in-situ material strength (Building-7 Dining)



Description: A set of design reports was available for the shed. Steel material strength considered 50 ksi without test report. The building engineer is required to verify in-situ material strength and revise the design documents accordingly.

Observation 11: Mismatch in as-built drawings (Building-7 Dining)



Description: The central edge columns size was found as 400 mm instead 450 mm. Also, the central compression strut was found as 50x50 mm box instead 63x63 mm box. The building engineer is required to survey the structures and prepare as-built drawings.

Observation 12: Lack of as-built drawings (Car Parking Canopy)



Description: There was no drawing for the car parking canopy. The building engineer is required to survey the structures and prepare as-built drawings.

3. Action Plan

SL	Observation	Action Plan	Timeline
1.	Lack of design report, material test report and foundation details. (Building-2 Wash)	Verify in-situ concrete material strength by taking concrete cores (minimum 4 nos and 100 mm diameter) from lower tier building columns. Also, verify steel plate strength for column and beam/rafter.	within 6 weeks
2.		Verify foundation details	within 6 weeks
3.		The building engineer is required to carry out Detail Engineering Assessment (DEA) for the structure to check the design against lateral forces, stresses and serviceability's. Prepare a full set of DEA documents with detailed remedial action plan. Submit the DEA documents to the RSC for review.	within 6 weeks
4.		Produce and actively manage a loading plan for all floor plates considering floor, column and foundation capacity.	within 6 weeks
5.		Carry out suggested remedial works if required.	within 6 months
6.	Mismatch between drawing and as-built condition (Building-2 Wash)	The building engineer is required to survey the structure and prepare as-built drawings with foundation and connection details.	within 6 weeks
7.	Lack of floor load management program (Building-2 Wash)	The building engineer is required to implement floor load management program (post allowable load plan, mark storage area & height and maintain floor loading).	within 6 weeks
8.	Loose bracing, connection gap, bolt missing and inadequate edge clearance. (Building-2 Wash)	The building engineer is required to tighten the loose bracings, repair the connection gap & inadequate clearance with suitable methods.	within 6 weeks
9.	Crack on brick wall at stair landing (Building-2 Wash)	The building engineer is required to check the deflection limit of landing slab, identify other reasons for the crack and repair with suitable method.	within 6 weeks
10.	Dampness on wall for Building-2 (Wash)	The building engineer is required to identify all the damp locations throughout the building, seal the source of water, and repair the damp areas with suitable method.	within 6 weeks
11.	Trolley impact and surface damage (Building-2 Wash)	The building engineer is required to provide column guard to protect from trolley impact.	within 6 months

12.	Lack of anchorage / bracing of non-structural elements. (Building-2 Wash)	The factory is required to brace/anchor all the non-structural elements within the building.	within 6 months
13.	Inconsistency in the Building Permits (Building-2 & Building-7)	The factory is required to collect building permits from BNBC prescribed local authority.	within 6 months
14.	Revision of design report based on in-situ material strength (Building-7 Dining)	The building engineer is required to verify in-situ material strength and revise the design documents accordingly.	within 6 weeks
15.		Carry out suggested remedial works where required.	within 6 months
16.	Mismatch in as-built drawings (Building-7 Dining)	The building engineer is required to survey the structure and prepare as-built drawings with details.	within 6 weeks
17.	Lack of as-built drawings (Car Parking Canopy)	The building engineer is required to survey the structure and prepare as-built drawings.	within 6 weeks