

Soorty Textiles (BD) Ltd. (Extension)

Plot # 12-14 & 21 Cumilla EPZ, Cumilla-3500.

(23.448643, 91.188484)

30 November 2023

Structural Inspection Report



1. Building information:

Building-1 (Production): The structure is a two (G+1) storied building.

Building-2 (RCC Building): This is a two (G+1) storied building.

Building-3 (Canteen Shed): This is a single storied shed.

Building-4 (Substation): This is a single storied building.

Building-5 (Guard Room-1): This is a single storied building.

Building-6 (Guard Room-2 & Fire Control Room): This is a single storied building.

Building-7 (Toilet Block): This is a single storied building

2. Observations

Observation-1: Detail review against lateral forces is required for the prepared design documents (design report, floor load plan, retrofitting scheme). (Building-1)



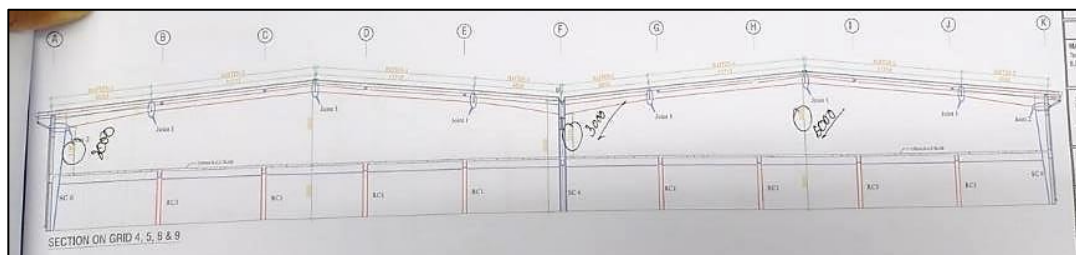
Building-1



Design report

Description: A set of design documents was available onsite which are to be submitted to RSC for detailed review against lateral forces. Revise the design documents based on in-situ & retrofitting material strength. Submit to the RSC for review.

Observation-2: Mismatch between drawing & on-site condition. (Building-1)



Description: The clear height of the 1st floor was found 3 m instead of 3.1m; dissimilarity was found in ridge height. The RC extension portion was suggested demolished in the retrofitting drawing which was found to exist onsite. Also, most of the floor area was unoccupied, after occupancy the drawing needs to be updated accordingly.

Observation-3: Lack of material strength for retrofitting members (concrete & steel). (Building-1)



Description: Retrofitting was found in progress. Retrofitting material test report was not found on-site.

Observation-4: Lack of floor load management program (posting load plan, marking area & height, and maintaining floor loading) (Building-1)



Description: The load plan was not posted on the suspended floor.

Observation-5: Crack in existing beam (Building-1)



Description: Crack was found under retrofitting in the existing beam at the North-East corner. The building engineer is required to check the crack and repair it along with retrofitting work.

Observation-6: Lack of maintenance works (including dampness & corrosion) (Building-1)



Description: Dampness was observed in the slab of the RC extension part and corrosion was observed in the steel columns. The factory is required to repair the damp and corroded areas with the proper method.

Observation-7: Construction safety practice (Building-1,2&3).



Description: Retrofitting was found in progress. A lack of PPE was found during the retrofitting/construction works. The factory must follow the proper safety practices as per BNBC.

Observation-8: Extension next to Building-1 not included in the design report.



Description: As per the prepared design report & retrofitting scheme, the RC extension needs to be demolished, which has not been done yet. The factory is required to demolish the RC extensions following proper safety measures.

Observation-9: Detail review against lateral forces is required for the prepared design documents (design report, floor load plan, retrofitting scheme). (Building-2)



Building-1

Description: A set of design documents was available onsite to be submitted to RSC for detailed review against lateral forces. Revise the design documents based on in-situ & retrofitting material strength. Submit to the RSC for review.

Observation-10: Material strength for retrofitting and newly constructed member. (Building-2)



Description: New construction was found in progress. Retrofitting and new construction material test reports were not found on-site.

Observation-11: Load management (including posting load plan, marking area & height, and maintaining floor loading) (Building-2)



Description: The load plan was not posted on the suspended floor.

Observation-12: Hairline crack in existing beam (Building-2)



Description: Hairline cracks were found roof level beam at several locations. The building engineer is required to identify the reason for the crack and prepare an investigation report with the necessary repair method. Repair the crack as per the crack investigation report.

Observation-13: Dampness on brick walls (Building-2)



Description: Dampness observed on brick walls. The factory is required to repair the damp area with proper methods.

Observation-14: Non-engineered extension next to Building-2 not included in the design report.

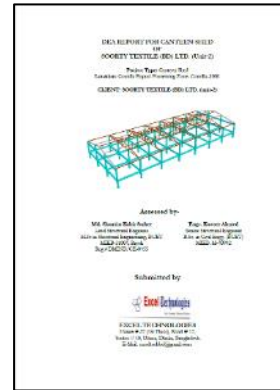


Description: Non-engineered extension next to Building 2 is not included in the design report. The building engineer is to prepare the design document & carry out necessary remedial works for the extension, otherwise demolish it.

Observation-15: Detail review against lateral forces is required for the prepared design documents (design report, & retrofitting scheme). (Building-3)



Building-1



Design report

Description: A set of design documents was available onsite which are to be submitted to RSC for detailed review against lateral forces. Revise the design documents based on in-situ & retrofitting material strength. Submit to the RSC for review.

Observation-16: Non-engineered extension next to Building-3 not included in the design report.



Description: Non-engineered extension next to Building 3 is not included in the design report. The building engineer is to prepare a design document & carry out necessary remedial works for the extension, otherwise demolish it.

Observation 17: Spalling of concrete due to rebar corrosion. (Building-5)



Description: Spalling of concrete due to rebar corrosion. The building engineer to remove the corrosion of the rebar and repair it with a suitable method.

Observation-18: Undocumented toilet block. (Toilet Block)



Description: Undocumented two-storied toilet block with steel stair observed beside Building-1.

3. Action Plan

Item No.	Observation	Action Plan	Timeline
1.	Detail review against lateral forces is required for the prepared design documents (design report, floor load plan, retrofitting scheme). (Building-1)	The building engineer is required to revise the design report based on in-situ/retrofitting material strength & software-based analysis and submit the documents to RSC for review.	within 6 weeks
2.		Carry out suggested remedial works if required.	within 6 months
3.	Mismatch between the drawing & on-site condition. (Building-1)	The building engineer is required to survey the full structure and produce accurate as-built drawings.	within 6 weeks
4.	Lack of material strength for retrofitting members (concrete & steel). (Building-1)	The building engineer is required to test the retrofitting material and check with design strength.	within 6 weeks
5.	Lack of floor load management program (posting load plan, marking area & height, and maintaining floor loading) (Building-1)	Implement floor load management program.	within 6 months
6.	Crack in existing beam (Building-1)	The building engineer is required to check the crack and repair it along with retrofitting work.	within 6 weeks
7.	Lack of maintenance works (including dampness & corrosion) (Building-1)	The building engineer is required to seal the source of water and repair the damp and corroded areas with suitable methods.	within 6 weeks
8.	Lack of construction safety practice (Building-1,2&3).	The building engineer is required to ensure standard construction safety practices as per BNBC requirements.	within 6 weeks
9.	The extension next to Building 1 is not included in the design report.	The building engineer is to prepare the design document & carry out necessary remedial works for the extension, otherwise demolish it.	within 6 weeks
10.	Detail review against lateral forces is required for the prepared design documents (design report, floor load plan, retrofitting scheme). (Building-2)	The building engineer is required to revise the design report based on in-situ/retrofitting material strength & software-based analysis and submit the documents to RSC for review.	within 6 weeks
11.		Carry out suggested remedial works if required.	within 6 months

12.	Lack of material strength for retrofitting members (concrete & steel). (Building-2)	The building engineer is required to test the retrofitting material and confirm with design strength.	within 6 weeks
13.	Lack of floor load management program (posting load plan, marking area & height, and maintaining floor loading) (Building-2)	Implement floor load management program.	within 6 months
14.	Hairline crack in existing beam (Building-2)	The building engineer is required to identify the reason for the crack and prepare an investigation report with the necessary repair method. Repair the crack as per the crack investigation report.	within 6 weeks
15.	Dampness on brick walls (Building-2)	The building engineer is required to seal the source of water and repair the damped areas with suitable methods.	within 6 weeks
16.	Non-engineered extension next to Building 2 is not included in the design report.	The building engineer is to prepare the design document & carry out necessary remedial works for the extension, otherwise demolish it.	within 6 months
17.	Detail review against lateral forces is required for the prepared design documents (design report, floor load plan, retrofitting scheme). (Building-3)	The building engineer is required to revise the design report based on in-situ/retrofitting material strength & software-based analysis and submit the documents to RSC for review.	within 6 weeks
18.		Carry out suggested remedial works if required.	within 6 months
19.	Non-engineered extension next to the Building 3 is not included in the design report.	The building engineer is to prepare the design document & carry out necessary remedial works for the extension, otherwise demolish it.	within 6 months
20.	Spalling of concrete due to rebar corrosion. (Building-5)	The building engineer to remove the corrosion of the rebar and repair it with a suitable method.	within 6 weeks
21.	Undocumented toilet block (Toilet Block).	The building engineer is to prepare a design document & carry out necessary remedial works for the undocumented toilet block & adjacent steel stair, otherwise demolish it.	within 6 months