Newtex Knit Fashion Ltd. (Extension)

Gorai, Mirzapur, Tangail, Bangladesh.

(24.094460, 90.173175)

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RMG SUSTAINABILITY COUNCIL

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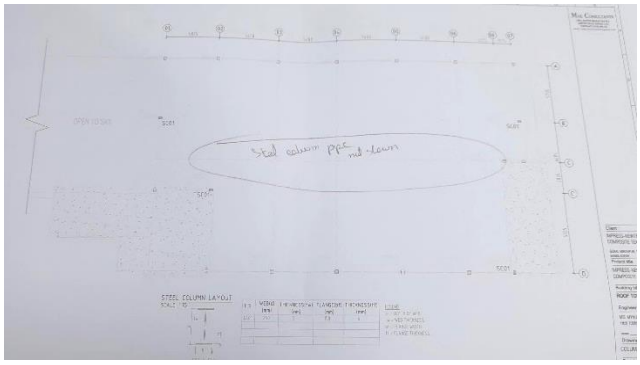
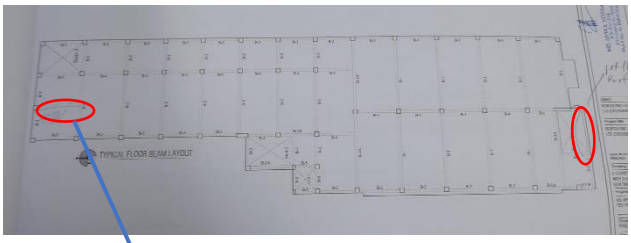
1. Building Information

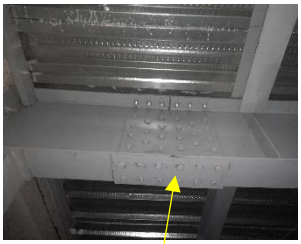
1. Building-2: 3 Storied (G+2) RC building with a rooftop steel shed.
2. Building-3: A single-storied steel shed.
3. Building-4: A single-storied steel shed.
4. Building-5: A single-storied prefabricated steel shed.
5. Building-6: A single-storied prefabricated steel shed.
6. Building-7: A single storied RC building.

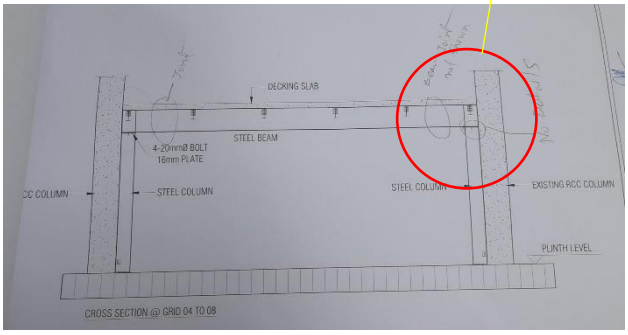
2. Observations

Observation-01: Inconsistencies in as built drawings. (Building-2).









Description: Steel pipe columns at middle were not shown in the drawings for roof shed. Also, sectional details were not found. On the other hand, the beam layout of the 1st floor did not fully match. Moreover, connection details of steel beam of 1st floor not found in the drawings.

Observation-02: Lack of lateral stability. (Building-2-roof shed).

Description: Only roof bracings are provided but Load transfer media is not provided along long direction for the roof shed. Therefore, the lateral stability system of the shed is apparently incomplete. Building engineer is required to check the lateral stability of the structure and submit the engineering assessment for whole structure for lateral loading to RSC for review.

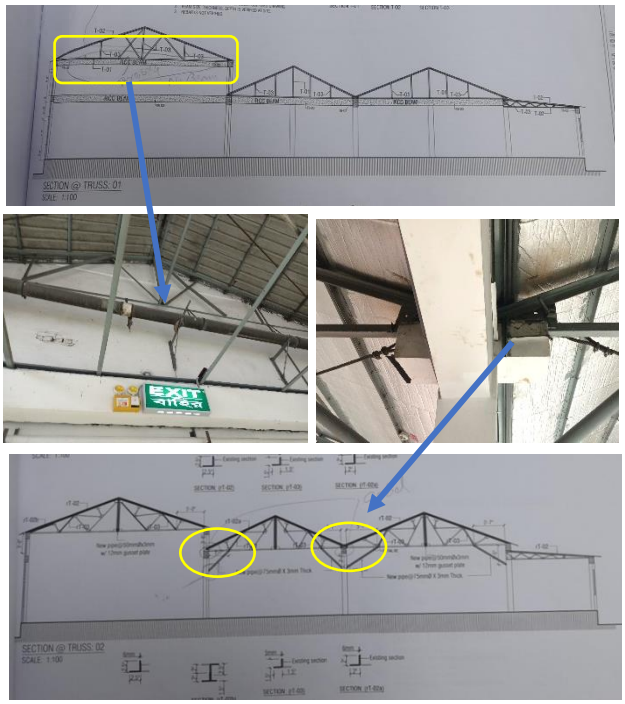
Observation-03 Improper connection and bolt missing. (Building-2).

Description: Improper connection between steel beam and RC column was found in some locations. Also, bolt missing was found. The building engineer is required to check the connection and suggest proper remedial measures accordingly. Also install the missing bolts.

Observation-04: Non-structural elements not anchored or braced. (Building-2)

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

Observation-05: Discrepancies in as-built drawings. (Building-3).

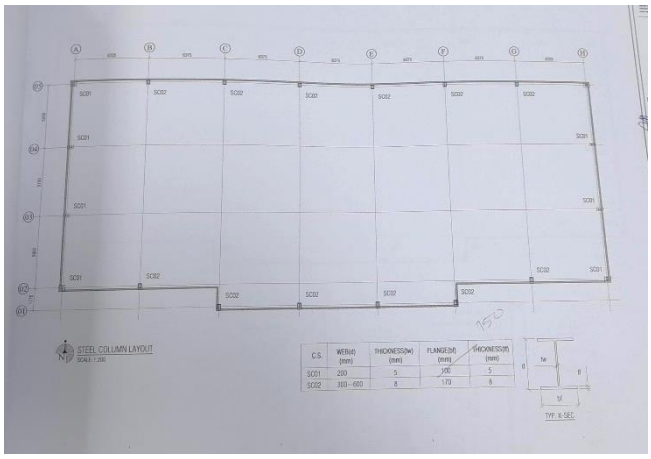


Description: All sectional details were not fully matched. Corbel beams were not shown in the sectional details. On the other hand, RC beam was shown in truss section 01 which was not found in as-built condition. Moreover, 4 nos rebar was found instead of 6 nos in RC column.

Observation-06: Prepare engineering assessment (EA) required to be revised and submitted to RSC for review. (Building-3).

Description: Factory performed the engineering assessment (EA) for the structure. During inspection, EA documents were available on site which required to be revised as per existing condition. Revised EA report needs to be reviewed against lateral loading by RSC.

Observation-07: Mismatches in as-built drawings. (Building 04).

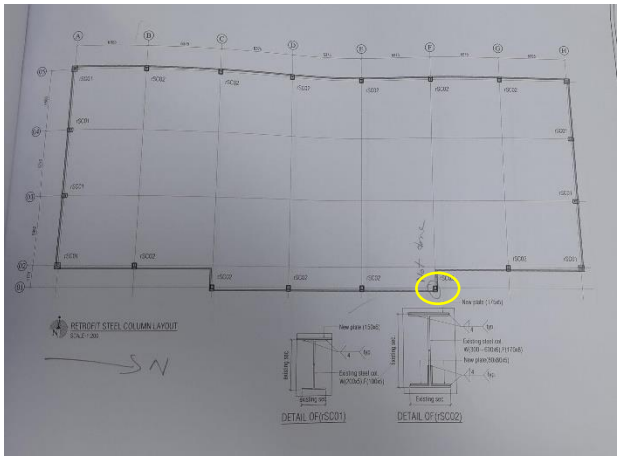


Description: Flange width of SC1 column was measured 150 mm instead of 100 mm. Also, cable bracing was found in grid-A as per drawings.

Observation-08: Incomplete lateral stability system. (Building-04).

Description: No compression strut was found along the long direction. Only cable bracings were found onsite. So lateral stability in the long direction is incomplete. The building engineer is required to check the stability system of the existing structure.

Observation-09: Incomplete retrofitting work. (Building-04).

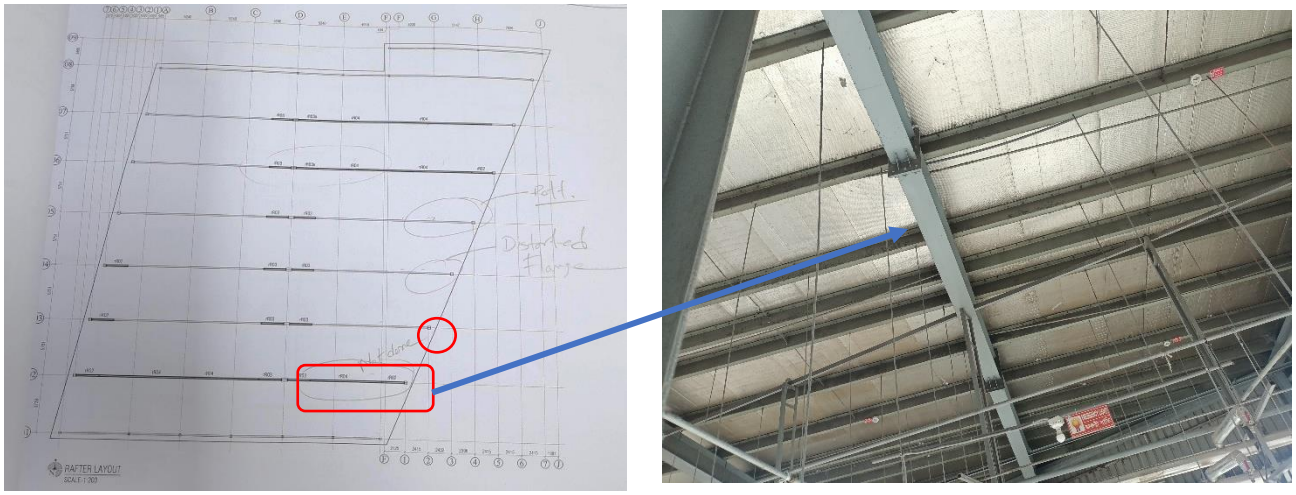


Description: Retrofitting work for rSC2 column has not been done. All required retrofitting work need to be carried out as per EA report after reviewed by RSC.

Observation-10: Non-structural elements not anchored or braced. (Building 04).

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

Observation-11: Incomplete retrofitting work. (Building-05).

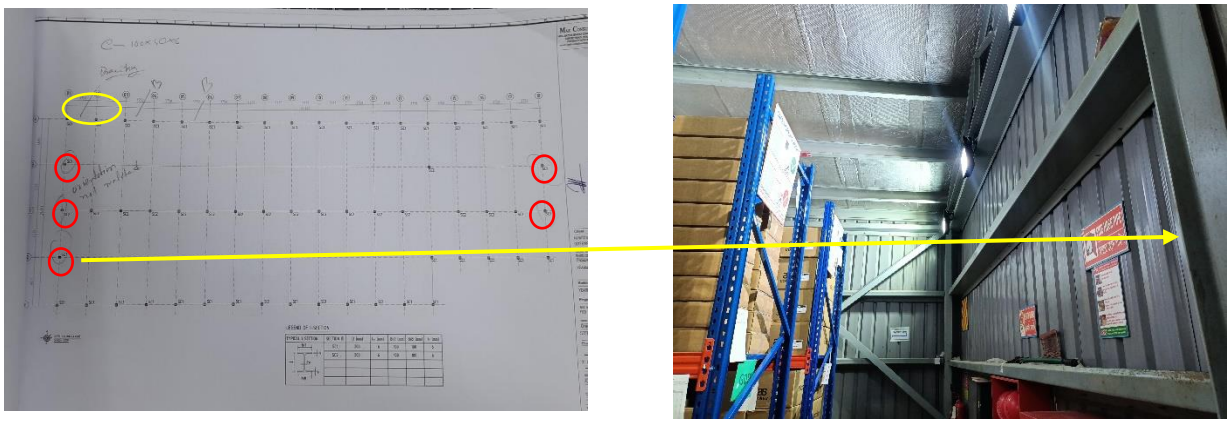


Description: Retrofitting work for rSC3a column and rafter (marked in red) have not been done. All required retrofitting work need to be carried out as per EA report after reviewed by RSC.

Observation-12: Distorted flange of rafter. (Building 05).

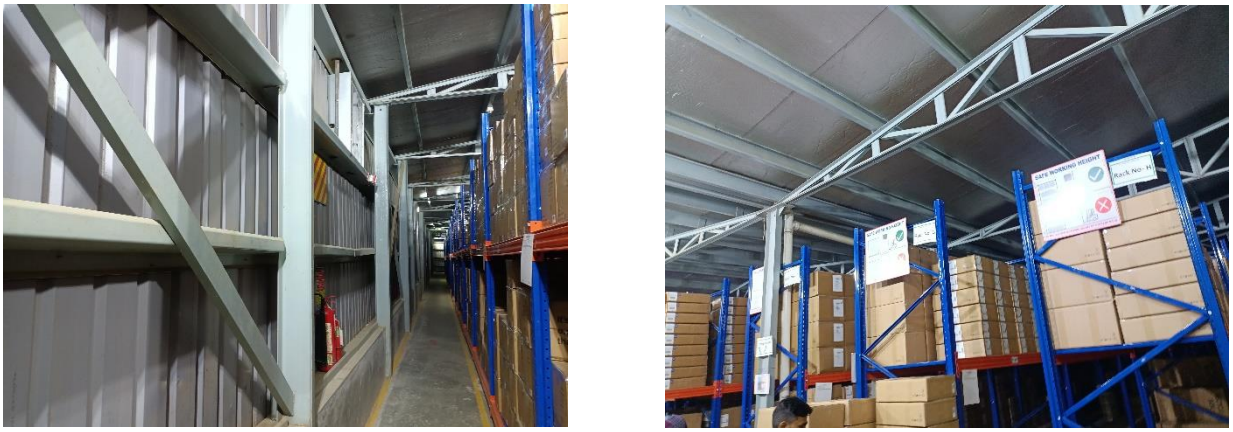
Description: A distorted steel flange was found in the rafter. Building engineer is required to check stability and serviceability of the distorted flange and suggest suitable remedial method.

Observation-13: Mismatches in as-built drawings. (Building 06).



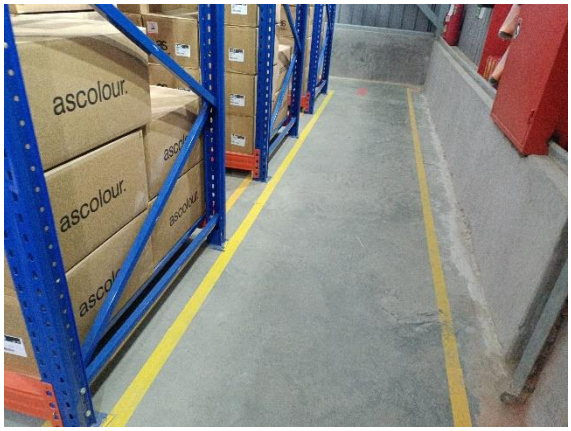
Description: Orientation of some steel column (marked at red in layout) didn't match with as-built condition. Also, box bracing in between grid 1 & 2 was found missing as per drawing.

Observation-14: Incomplete lateral stability system. (Building 06)



Description: No compression strut was found along the long direction. Only cable bracings were found onsite. So lateral stability in the long direction is incomplete. The building engineer is required to check the stability system of the existing structure.

Observation-15: Non-structural elements not anchored or braced. (Building 06)



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

3. Action Plan

Observation	Action Plan	Timeline
Inconsistencies in as built drawings. (Building-2).	The building engineer is required to survey the structure and prepare full set of as-built drawings.	within 6 weeks
Lack of lateral stability. (Building-2-roof shed).	Building engineer is required to check the lateral stability of the structure and submit the engineering assessment for whole structure for lateral loading to RSC for review.	within 6 weeks
	Implement remediation work if required.	within 6 months
Improper connection and bolt missing. (Building-2).	The building engineer is required to check the connection and suggest proper remedial measures accordingly. Also install the missing bolts.	within 6 weeks
	Carry out suggested remedial works if required.	within 6 months
Non-structural elements not anchored or braced. (Building-2)	The factory is required to anchor/brace all non-structural elements adequately to resist earthquake forces.	within 6 weeks
Discrepancies in as-built drawings. (Building-3).	The building engineer is required to survey the full structure and produce accurate as-built drawings.	within 6 weeks
Prepare engineering assessment required to be revised and submitted to RSC for review. (Building-3).	Revised EA report needs to be reviewed against lateral loading by RSC.	within 6 weeks
	Implement remediation work if required.	within 6 months
Mismatches in as-built drawings. (Building 04).	The building engineer is required to survey the full structure and produce accurate as-built drawings.	within 6 weeks
Incomplete lateral stability system. (Building-04).	The building engineer is required to check the stability system of the existing structure.	within 6 weeks
Incomplete retrofitting work. (Building-04).	All required retrofitting work need to be carried out as per EA report after reviewed by RSC.	within 6 months
Non-structural elements not anchored or braced. (Building 04).	The factory is required to anchor/brace all non-structural elements adequately to resist earthquake forces.	within 6 weeks
Incomplete retrofitting work. (Building-05).	EA report needs to be reviewed against lateral loading by RSC.	within 6 weeks
	All required retrofitting work need to be carried out as per EA report after reviewed by RSC.	within 6 months

Distorted flange of rafter. (Building 05).	Building engineer is required to check stability and serviceability of the distorted flange and suggest suitable remedial method.	within 6 weeks
	Implement remediation work.	within 6 months
Mismatches in as-built drawings. (Building 06).	The building engineer is required to survey the full structure and produce accurate as-built drawings.	within 6 weeks
Incomplete lateral stability system. (Building 06)	The building engineer is required to check the stability system of the existing structure.	within 6 weeks
	Implement remediation work if required.	within 6 months
Non-structural elements not anchored or braced. (Building 06)	The factory is required to anchor/brace all non-structural elements adequately to resist earthquake forces.	within 6 weeks