

Manvill Styles Limited

728 South Shyampur, Hemayetpur, Savar, Dhaka

(23.777464, 90.260887)

23 March 2025

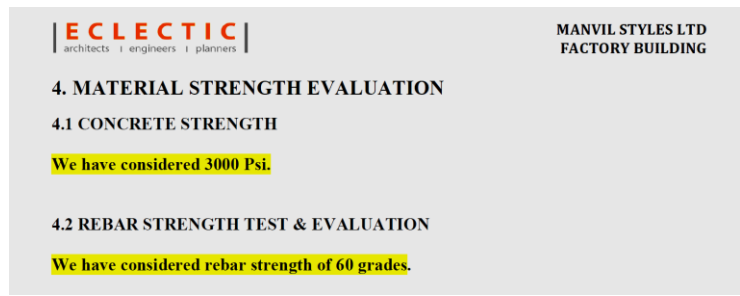
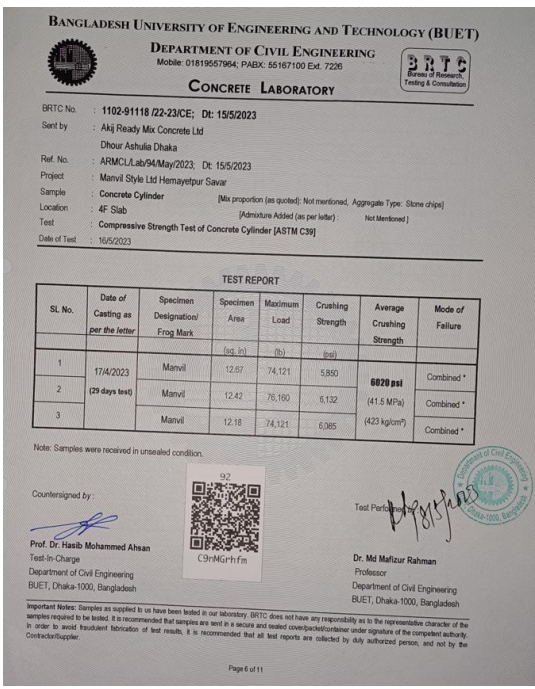
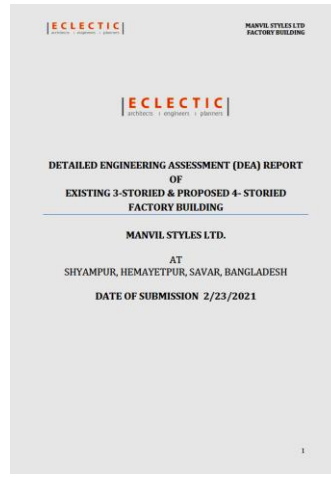


1. Building Information

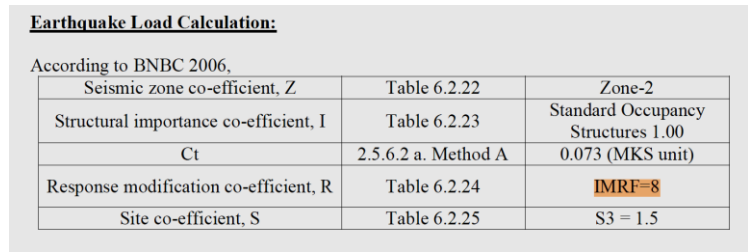
1. **Building-1:** The building is a five-storied (G+4) reinforced concrete (RC) structure including a roof shed.
2. **Building-2:** The building is a two-storied (G+1) reinforced concrete (RC) structure
3. **Shed Building:** The structure is a single-storied steel shed

2. Observations:

Observation 1: Inconsistencies in the assessment report. (Building-1)



An inadequate number of concrete cylinder test reports were found on site to confirm the design strength of 3000 psi.



Response modification coefficient, R value considered as 8 for IMRF, but no calculation/justification is provided for the

Description: During the inspection, a detailed engineering assessment report was available onsite for the four-storied factory building. Where the building is currently five-storied, including the roof shed. Moreover, no live load plan was found prepared.

Observation 2: Incomplete as-built drawings. (Building-1)



Roof shed



Built up in the toilet zone

Description: A set of as-built drawings was available for the RC part, where the floor layout did not match the existing condition. Extra concrete built up was found in the toilet zones. Moreover, no drawing was available for the roof shed. The building engineer is required to survey structures and prepare a full set of as-built drawings in compliance with section 1.9, part 6 of BNBC.

Observation 3: Non-structural elements not anchored or braced. (Building-1)



Description: PVC water tanks on the roof and steel racks on the 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-4: Exposed rebar on the roof level. (Building-1)



Description: Exposed rebar was observed on the roof, which is prone to corrosion. The building engineer is required to provide anti-corrosive coating on the exposed rebar.

Observation-5: Lack of design documents. (Building-2)



Description: As per BNBC, every building or structure designed shall have its design documents prepared following the provisions of Section 1.9.1. The design document shall include a design report and a set of structural drawings, which shall be prepared in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.

At the time of inspection, design documents (design report, as-built drawings, and material test reports) were not available, which are required to be prepared in compliance with section 1.9.1 (part 6, BNBC).

Observation-6: Exposed rebar on the roof level. (Building-2)



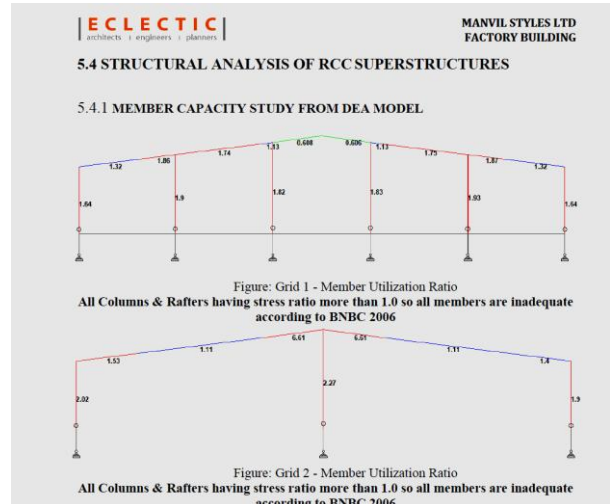
Description: Exposed rebar was observed on the roof, which is prone to corrosion. The building engineer is required to provide anti-corrosive coating on the exposed rebar.

Observation-7: Column susceptible to vehicle impact. (Building-2)



Description: The ground floor of this building is part of an internal road. So, columns in the ground floor area are susceptible to vehicle impact. The building engineer is required to provide separate barriers around the column to prevent vehicle impact.

Observation 8: Lack of lateral stability and overstressed steel members in the assessment report. (Shed Building)



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6. CONCLUDING REMARKS

**MANVIL STYLES LTD
FACTORY BUILDING**

Based on actual drawing as per site inspection, analysis and design of superstructure are performed. Separate hand calculations are also conducted for verification where necessary. Using the model and hand calculation, the key findings may be illustrated as follows:

Superstructure & Substructure)

- All Steel Columns are inadequate according to BNBC 2006 load combination.
- All Steel Rafters are inadequate according to BNBC 2006 load combination.
- Structure is inadequate in Displacement.

Description: The shed building has no obvious lateral stability system (compression strut). A DEA report was available on site. As per the recommendation of the report, retrofitting was suggested, but no remediation work was found on-site.

Building engineer is required to update the design documents following BNBC for lateral stability and adequacy of structural members and submit to RSC.

Observation 9: Loose cable bracings on the wall and roof. (Shed Building)



Description: During the inspection, the bracings were found loose. Building engineer is required to tighten all the loose bracings.

3. Action Plan:

Item No	Observation	Action Plan	Timeline
1.	Inconsistencies in the assessment report. (Building-1)	Building engineer is required to address the inconsistencies in the design report and submit revised design documents to RSC to complete the review.	within 6 weeks
2.		Produce and actively manage load management plans.	within 6 weeks
3.		Implement remediation work if required.	within 6 months
4.		Implement a load management plan.	within 6 months
5.	Incomplete as-built drawings. (Building-1)	The building engineer is required to survey structures and prepare a full set of as-built drawings in compliance with section 1.9, part 6 of BNBC.	within 6 weeks
6.	Non-structural elements not anchored or braced. (Building-1)	The factory is required to anchor/brace all non-structural elements adequately to resist earthquake forces.	within 6 weeks
7.	Exposed rebar on the roof level. (Building-1)	The building engineer is required to provide anti-corrosive coating on the exposed rebar.	within 6 weeks
8.	Lack of design documents. (Building-2)	The building engineer is required to prepare design documents (including design reports, material test reports, live load plan and as-built drawings) in compliance with section 1.9.1 (part 6, BNBC).	within 6 weeks
9.		Produce accurate as-built drawings.	within 6 weeks
10.		Carry out the suggested remedial works (if any).	within 6 months
11.	Exposed rebar on the roof level. (Building-2)	The building engineer is required to provide anti-corrosive coating on the exposed rebar.	within 6 weeks
12.	Column susceptible to vehicle impact. (Building-2)	The building engineer is required to provide separate barriers around the column to prevent vehicle impact.	within 6 weeks

13.	Lack of lateral stability and overstressed steel members in the assessment report. (Shed Building)	Building engineer is required to update the design documents following BNBC for lateral stability and adequacy of structural members and submit to RSC.	within 6 weeks
14.		Carry out remedial work if required.	within 6 months
15.	Loose cable bracings on the wall and roof. (Shed Building)	Building engineer is required to tighten all the loose bracings.	within 6 weeks