

SQ Celsius Limited (Unit 04)

Plot No CS 224, 225, 242 & 243 Jamirdia, Bhaluka, Mymensingh

(24.285415, 90.396956)

29 April 2026

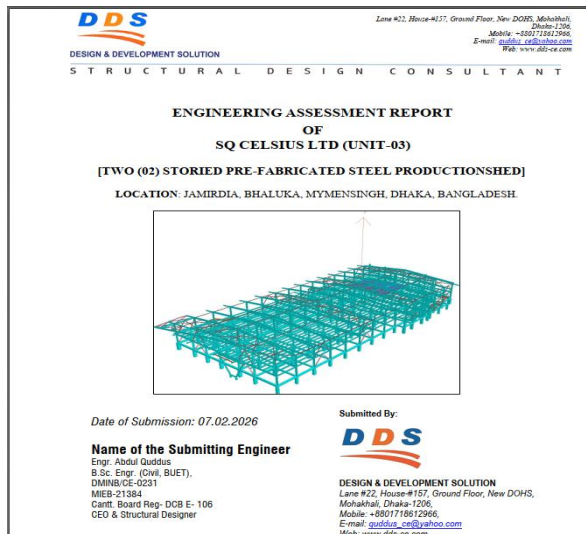


1. Building Information

- | | |
|------------------------|--|
| 1. Production Building | : Two-storied (B+G+1) steel structure with a partial basement. |
| 2. Annex Building | : Four-storied (G+3) RC structure. |
| 3. Warehouse Shed | : Single-storied steel shed. |
| 4. Security Gate 1 | : Single-storied RC structure. |
| 5. Security Gate 2 | : Single-storied RC structure. |
| 6. Canopy Shed | : Single-storied steel shed. |

2. Observation

Observation-01: Inconsistency in design report and design philosophy. [Production Building]



Description: In the design report, the calculation for the frequency of testing as per BNBC 5.12.1 is not incorporated. In addition, inconsistency between connection design philosophy and the actual connection arrangement at the north-side end grid steel connection. Column discontinued to rafter bottom flange and a visible gap was found between the steel column and the rafter connection plate/interface, which may affect the intended load transfer mechanism, connection behavior, and overall structural integrity of the connection system.

- 1) Building engineer is required to review the design report, incorporating the calculation on the requirements of frequency of testing as per BNBC section 5.12.1.
- 2) Building engineer is required to review the connection details of the north side end grid and the design philosophy of the connections.

Submit the updated design documents to RSC for detailed review.

Observation-02: Missing load plan on the floor. [Production Building]



Description: During the inspection, the load plan was not found posted on the floors. The factory is required to post the load plan and implement the floor load management system.

Observation-03: Enlarged slot holes and gap between column-rafter joints. [Production Building]



Description: During the inspection, enlarged slot holes and gaps between column-rafter joints at the north side end of the grid. The factory is required to repair the connection gaps with a suitable method.

Observation-04: Inconsistency in the design report. [Annex Building]

 DESIGN & DEVELOPMENT SOLUTION STRUCTURAL DESIGN CONSULTANT	Unit 405, 406/1, Street 10, Block 10, Phase 1, The Capital, Singapore 104553 Tel: +65 6349 0999 Fax: +65 6349 1000 Email: info@ddds.com.sg
ENGINEERING ASSESSMENT REPORT	
OF	
SO QUEL STATION 2 (UNIT 43)	
(4 STORED ANNEX BUILDING)	
LOCATION: JANDERA, BEALAKA, MYTHENDINOR, DHAKA, BANGLADESH	
	
Date of Submission: 07.02.2026	Submitted By:
Name of the Engineering Engineer	
Prof. (Civil) (B.Sc.) Email: info@ddds.com.sg	DESIGN & DEVELOPMENT SOLUTION CONSULTANT
Mobile: +91 9896 452222 WhatsApp: +91 9896 452222	100/100, Street 10, Block 10, Phase 1, The Capital, Singapore 104553 Tel: +65 6349 0999 Fax: +65 6349 1000 Email: info@ddds.com.sg
DDDS & Development Engineer	100/100, Street 10, Block 10, Phase 1, The Capital, Singapore 104553 Tel: +65 6349 0999 Fax: +65 6349 1000 Email: info@ddds.com.sg

2 STRENGTH OF MATERIALS

The principal material of construction is reinforced concrete. As per investigation and design drawings, the following material properties have been used:

A. Yield strength of steel (Rebar), f_y	= 4000 Psi
B. Compressive strength of column, dense wall & footing, f'_c	= 4300 Psi
C. Compressive strength of beams and slab concrete, f'_c	= 4000 Psi
D. Young's modulus of concrete, E_c	= 57,000 Psi

We consider the rebar strength is 40 ksi which is confirmed by rebar test report.



Centre for Advisory and Testing Services [CATS-ITS] (CI) Military Institute of Science and Technology

Comprehensive Report of Concrete Cylinders

General Information

CATS Reference
102/ENR

Project Name & Address
3 Sharda Apts. Building for 80 C-Group Limited (C/L) at Jawahar, Mumbai

Sample Identified By
Test Method
ASTM 318

Type of Sample
Concrete

Location of Sample
Middle Perimeter

Depth of Coring
100 mm

Age of Sample
7 days

Condition of Sample
Good

Date
05.11.2025

294 Days
03.11.2025

Design Strength
Type of Concrete
Grade of Concrete

Test Method
Type of Apparatus
Standard

Test Results

No.	Specimen Identification	Length	Diameter	Cracking	Crushing Load	Crushing Strength	Failure Type	Previous Tests
		mm	mm	mm	kN	MPa		
1	C7 - 1	200	100.0	20.0	266.0	26.6	29.4	Crushed
2	C7 - 2	200	100.0	22.0	268.0	26.8		Crushed

Remarks

1. The general information has been taken from the design.

Test Specimen By
As per
As per
As per

Signature
[Signature]

Design Engineer
[Signature]

Test Engineer
[Signature]

Note: The test results in this report are only for the samples shown on the specimen label. It is recommended that all samples be tested in this manner to ensure consistent and accurate representation of the concrete quality and to avoid discrepancies. The test results are for information only and should not be used for legal or contractual purposes. The test results are for information only and should not be used for legal or contractual purposes. The test results are for information only and should not be used for legal or contractual purposes.

[illegible][illegible]

Design $f_c' = 4500$ psi and 4000 psi were considered prior to any clarification

Among 43 cylinder test reports, many test cylinders for foundations, columns and shear walls were tested at ages exceeding 100, 200, and 300 days

Description: In the design report, the calculation for the frequency of testing as per BNBC 5.12.1 is not incorporated. In addition, verification of the acceptability of the cylinder test reports with testing ages exceeding 100 to 300 days is not incorporated.

- 1) Building engineer is required to review the design report, incorporating the calculation on the requirements of frequency of testing as per BNBC section 5.12.1 for the acceptable cylinder test reports. If the requirements are not met, verify in-situ concrete strength from the lower-tier column-shear wall [min 4 no's 100 mm diameter].
- 2) Update the design report incorporating all the requirements as per BNBC section 1.9 and submit to RSC for detailed review.

Observation-05: Missing load plan on the floor. [Annex Building]



Description: During the inspection, the load plan was not found posted on the floors. The factory is required to post the load plan and implement the floor load management system.

Observation-06: Falling Hazard. [Annex Building]



No fall protection at the 1F level



No fall protection at the loading-unloading zone

Description: Possible falling hazards were observed at the 1F and GF.

The factory is required to implement fall protection on the proposed operation passage with the warehouse shed. Also, provide fall protection on the loading-unloading area.

Observation-07: Stagnant water on the roof. [Annex Building]



Description: Stagnant water was observed on the roof. The factory is required to improve the drainage slope on the roof.

Observation-08: Column susceptible to vehicle impact. [Annex Building]



Description: Possible vehicle impact was observed on the loading-unloading zone. The factory is required to provide vehicle impact protection on the ground floor columns.

Observation-09: Review requirements for the lateral loading. [Warehouse Shed; Canopy Shed]



Description: A design report has been prepared for the structures. The prepared design report needs to be reviewed against lateral forces. The building engineer is required to submit the design report to the RSC for detailed review.

Observation-10: Damaged rack member. [Warehouse Shed]



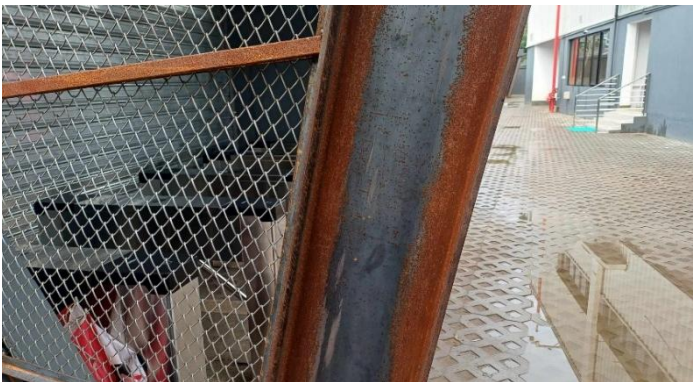
Description: During the inspection, a rack member was found damaged. The factory is required to Repair the damaged rack member with a suitable method or replace it if required.

Observation-11: Rust on the steel member. [Warehouse Shed]



Description: Rust was observed on the steel members. The factory is required to remove rust and provide anti-rust proofing.

Observation-12: Corrosion on the steel member. [Security Gate 1 and 2]



Security Gate 1



Security Gate 2

Description: During the inspection, rust was observed on the steel members. The factory is required to remove rust and provide anti-rust proofing.

3. Action Plan

Item No	Observation	Action Plan	Timeline
1.	Inconsistency in design report and design philosophy. [Production Building]	Building engineer is required to review the design report, incorporating the calculation on the requirements of frequency of testing as per BNBC section 5.12.1.	within 6 weeks
2.		Building engineer is required to review the connection details of the north side end grid and the design philosophy of the connections.	within 6 weeks
3.		Carry out remedial work if required.	within 6 months
4.	Missing load plan on the floor. [Production Building]	The factory is required to post the load plan and implement the floor load management system.	within 6 weeks
5.	Enlarged slot holes and gap between column-rafter joints. [Production Building]	The factory is required to repair the connection gaps with a suitable method.	within 6 weeks
6.	Inconsistency in the design report. [Annex Building]	Building engineer is required to review the design report, incorporating the calculation on the requirements of frequency of testing as per BNBC section 5.12.1 for the acceptable cylinder test reports. If the requirements are not met, verify in-situ concrete strength from the lower-tier column-shear wall [min 4 no's 100 mm diameter].	within 6 weeks
7.		Update the design report incorporating all the requirements as per BNBC section 1.9 and submit to RSC for detailed review.	within 6 weeks
8.		Carry out remedial work if required.	within 6 months
9.	Missing load plan on the floor. [Annex Building]	The factory is required to post the load plan and implement the floor load management system.	within 6 weeks

Item No	Observation	Action Plan	Timeline
10.	Falling Hazard. [Annex Building]	The factory is required to implement fall protection on the proposed operation passage with the warehouse shed. Also, provide fall protection on the loading-unloading area.	within 6 weeks
11.	Stagnant water on the roof. [Annex Building]	The factory is required to improve the drainage slope on the roof.	within 6 weeks
12.	Column susceptible to vehicle impact. [Annex Building]	The factory is required to provide vehicle impact protection on the ground floor columns.	within 6 weeks
13.	Review requirements for the lateral loading. [Warehouse Shed]	The building engineer is required to submit the design report to the RSC for detailed review.	within 6 weeks
14.		Carry out remedial work if required.	within 6 months
15.	Damaged rack member. [Warehouse Shed]	Repair the damaged rack member with suitable method or replace it if required.	within 6 weeks
16.	Rust on the steel member. [Warehouse Shed]	The factory is required to remove rust and provide anti-rust proofing.	within 6 weeks
17.	Review requirements for the lateral loading. [Canopy Shed]	The building engineer is required to submit the design report to the RSC for detailed review.	within 6 weeks
18.		Carry out remedial work if required.	within 6 months
19.	Rust on the steel member. [Security Gate 1]	The factory is required to remove rust and provide anti-rust proofing.	within 6 weeks
20.	Rust on the steel member. [Security Gate 2]	The factory is required to remove rust and provide anti-rust proofing.	within 6 weeks