

# Pioneer Casual Wear Ltd. (Extension)

Zamgora, Earpur Union, Ashulia, Savar, Dhaka-1344, Bangladesh

(23.938955, 90.292988)

10 March 2026

## Structural Inspection Report



**1. Building Information:**

|                   |                          |
|-------------------|--------------------------|
| <b>Building-C</b> | Two storied RC building. |
|-------------------|--------------------------|

## 2. Observation

### Observation-01: Inadequate material test report, possible vertical and horizontal extension (Building C)

**BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)**  
**DEPARTMENT OF CIVIL ENGINEERING**  
 Model: 01410507944, 01410507944, 01410507944, 01410507944  
**CONCRETE LABORATORY**

BETC No: 1103-31148CE-04-25; Dt: 14/09/2024  
 Site by: Shikana House, Engineer (G.E. & L&E) Abu Ready Mix Concrete (RMC)  
 At: Ready Mix Concrete Ltd. Aradia, Dhaka  
 Ref. No.: ACHNCA/2014/SEP/0204; Dt: 14/09/2024  
 Project: Pioneer Canal Water Ltd. Damgan, Engineer Urban, Aradia  
 Sample: Concrete Cylinder (Aggregate type: Stone chips, Mix proportion (as per ready mix))  
 (Admixture added (as per ready mix))  
 Location: Ground Floor Slab Casting  
 Test: Compressive Strength Test of Concrete Cylinder (ASTM C39)  
 Date of Test: 13/09/2024

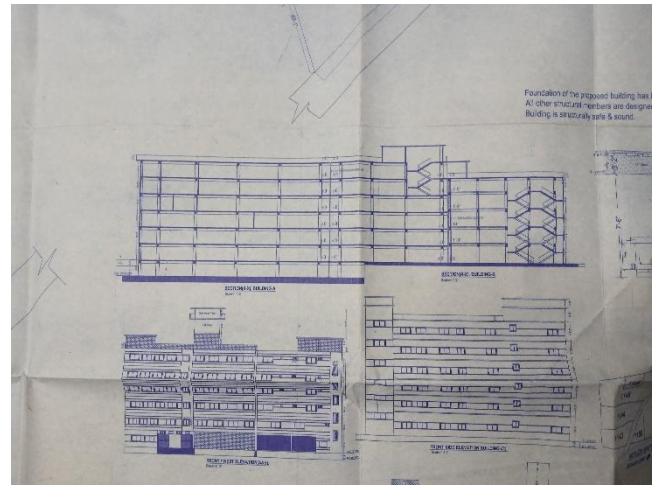
**TEST REPORT**

| Sl. No. | Date of Casting as per the letter | Specimen Designation | Specimen Area (sq. ft.) | Maximum Load (kN) | Cracking Strength (kN) | Average Cracking Strength (kN) | Mode of Failure |
|---------|-----------------------------------|----------------------|-------------------------|-------------------|------------------------|--------------------------------|-----------------|
| 1       | 14/09/2024                        | Pioneer              | 12.14                   | 62,095            | 5,341                  | —                              | Combined*       |
| 2       | 04 Aug 2024                       | Pioneer              | 11.94                   | 63,090            | 5,300                  | —                              | Combined*       |
| 3       |                                   | Pioneer              | 12.55                   | 66,943            | 4,037                  | —                              | Combined*       |

\*Note: Samples were received in untested condition. \*Combined\* - Section and Aggregate failure.

Controlled by: Prof. Dr. Masudul Karim, Assistant Professor

Test Performed by: Sultana Samreen Arshad, Assistant Professor



**Description:** During the inspection, the design report was found on-site, where concrete design strength was considered 4500 psi. 6 sets of cylinder test reports [Foundation = 3; Column = 1; Beam-Slab = 2] were available, which did not meet the frequency of testing requirements as per BNBC 2020. The building was approved for a 6-storied structure, and design documents were also prepared for 6-storied structures. The building engineer is required to address all the inconsistencies in the revised design report and submit them to RSC for detailed review.

### Observation-02: Non engineering roofing system on steel stair top with poor connection. (Building C)



**Description:** Non engineering roofing system on steel stair top with poor connection. Building engineer is required to check the connection and member adequacy as part of EA and transform it into an engineered roofing system.

**Observation-03:** Nonstructural elements found not anchored/braced (Building C).



**Description:** Nonstructural elements (PVC tanks on roof) were found not anchored/braced. The building engineer is required to anchor/brace all nonstructural elements within the factory.

**Observation-04:** Sign of water ponding on roof (Building C).



**Description:** During inspection, signage of water ponding on roof was observed. Building engineer is required to remove stagnant water and improve the drainage system.

**Observation-05:** Mismatches in as-built drawings. (Steel stair)



| Structural Member Sections Schedule |              |                      |
|-------------------------------------|--------------|----------------------|
| Member Name:                        | Section Type | Sectional Dimensions |
| SC101                               | w-section    | 250(8)x150(10) mm    |
| MB101                               | w-section    | 300(6)x145(8) mm     |
| MB102                               | w-section    | 300(6)x145(8) mm     |
| RAF201                              | w-section    | 300(6)x145(8) mm     |

**Description:** During inspection, MB01 was found W: 300x6; F: 145X8 which was shown in drawing W: 250x6; F: 145X8. Building engineer is required to prepare full set of as-built drawings as per onsite condition.

**Observation-06:** Absence material test report and design documents. (Steel stair)



Steel stair

**Description of observation:** As per BNBC, every building or structure designed shall have its design documents prepared in accordance with the provision of Section 1.9.1. The design document shall include a design report, and a set of structural drawings, material test report 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 report, material test report were not available which is required to be prepared in compliance with section 1.9.1.1 (part-6, BNBC).

**Observation-07: Steel connection gaps (steel stair)**



**Description:** During inspection, connection gaps were observed in steel stairs. Building engineer is required to fill up all the connections with shim plates.

### 3. Action Plan

| Item No | Observation                                                                              | Action Plan                                                                                                                                                       | Timeline        |
|---------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1.      | Inadequate material test report, possible vertical and horizontal extension (Building C) | The building engineer is required to verify in-situ concrete strength by taking 4 cores (minimum) from the ground floor columns and beams confirm rebar strength. | within 6 weeks  |
| 2.      |                                                                                          | The building engineer is required to revise the design report and submit it to RSC for review.                                                                    | within 6 months |
| 3.      |                                                                                          | Prepare a design report considering the proposed extension prior to any future extension work                                                                     | within 6 weeks  |
| 4.      |                                                                                          | Implement remediation work (if required) after acceptance from RSC.                                                                                               | within 6 months |
| 5.      | Non engineering roofing system on steel stair top with poor connection. (Building C)     | Building engineer is required to check the connection and member adequacy as part of EA and transform it into an engineered roofing system.                       | within 6 weeks  |
| 6.      |                                                                                          | Implement remediation work (if required) after acceptance from RSC.                                                                                               | within 6 months |
| 7.      | Non-structural elements found unbraced / unanchored. (Building C)                        | The building engineer is required to brace/anchor all non-structural elements.                                                                                    | within 6 months |
| 8.      | Sign of water ponding on the roof (Building C).                                          | Building engineer is required to remove stagnant water and improve the drainage system.                                                                           | within 6 months |
| 9.      | Mismatches in as-built drawings. (Steel stair)                                           | Building engineer is required to survey the whole structure and prepare as-built structural drawings with complete structural details.                            | within 6 weeks  |

|            |                                                                     |                                                                                                                  |                 |
|------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>10.</b> | Absence of material test report and design documents. (Steel stair) | Verify in-situ material strength and steel member strength by the plate test report to confirm tensile strength. | within 6 weeks  |
| <b>11.</b> |                                                                     | The building engineer is required to prepare the design report and submit it to RSC for review.                  | within 6 weeks  |
| <b>12.</b> |                                                                     | Implement remediation work (if required) after acceptance from RSC.                                              | within 6 months |
| <b>13.</b> | Steel connection gaps (steel stair)                                 | Building engineer is required to fill up all the connections with shim plates.                                   | within 6 weeks  |