

# Newage Garments Ltd. (Extension)

Holding-6/66/1, Road-11, Block-L, Ward-6,  
Nischintapur, Purbo Norshingpur, 1341, Ashulia, Savar, Dhaka  
(23.925080, 90.307923)

4 December 2024

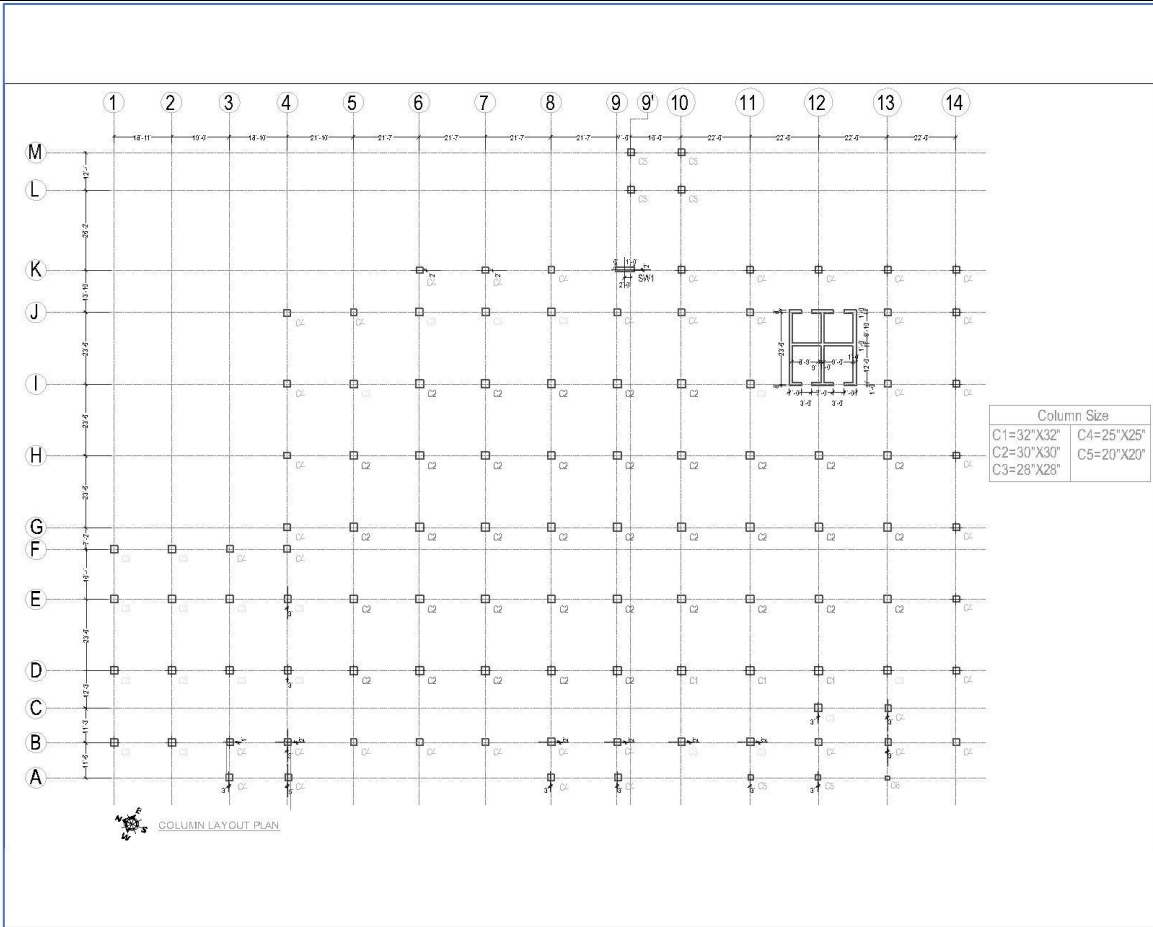


## 1. Building Information

1. Production Building-03 (10 Storied Factory Building)
2. Ancillary Building-01 (Partially 2 storied Captive Generator & EGB Building)
3. Ancillary Building-02 (2 storied Fire Control Room & Office Building)
4. Ancillary Building-03 (2 storied Diesel Generator & Compressor Building)
5. Ancillary Building-04 (Single storied Fire Pump Room & Boiler Building)
6. Compressor Room-01 (Single-storied NGL Compressor Room)
7. Compressor Room-02 (Single-storied NAL Compressor Room)
8. Ancillary Building-05 (Single-storied New Boiler Room)
9. Ancillary Building-06 (Single storied ETP)
10. ATM Booth (Single storied)
11. Ancillary Building-07 (3 Storied Boiler Building)

## 2. Observation

**Observation-1:** Stress in the column & foundation exceeds the normal design limit (Production Building-03)



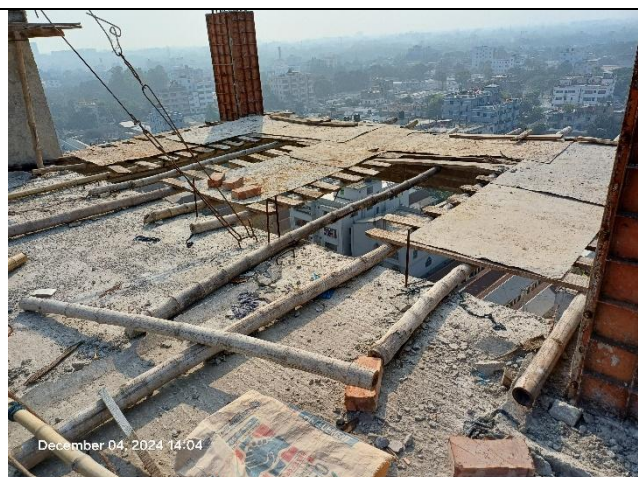
### Column layout plan

**Description:** The cursory calculation indicated that the columns are stressed above the normal design limit considering the prepared live load plan and minimum concrete strength based on aggregate type as the frequency of testing is not met in compliance with BNBC 5.12.1.

Building engineer is required to review the design load and column stress based on the insitu material strength.

Also, building engineer is required to review the design load and MAT stress based on the insitu material strength.

**Observation 2: Construction safety practice on the factory premises. (Production Building-03)**



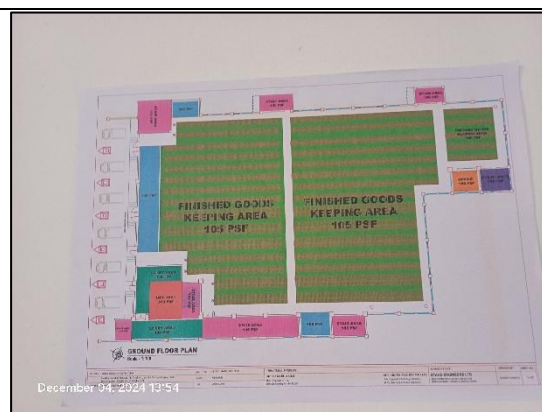
**Falling hazards**

**Description:** Lack of construction safety practices observed on the factory premises. The building engineer is required to follow all the construction safety practices according to BNBC 2020, Part 7, Chapter 3.

**Observation 3: Load plan does not comply with BNBC requirements. (Production Building-03)**

৩১১৮ বাংলাদেশ গেজেট, অতিরিক্ত, ফেব্রুয়ারি ১১, ২০২১

| Occupancy or Use                                                                             | Uniform<br>kN/m <sup>2</sup> | Concentrated<br>kN |
|----------------------------------------------------------------------------------------------|------------------------------|--------------------|
| Storage areas above ceilings                                                                 | 1.00                         | --                 |
| Storage warehouses (shall be designed for heavier loads if required for anticipated storage) |                              |                    |
| Light                                                                                        | 6.00                         | --                 |
| Heavy                                                                                        | 12.00                        | --                 |
| Stores                                                                                       |                              |                    |
| Retail                                                                                       |                              |                    |
| First floor                                                                                  | 4.80                         | 4.50               |
| Upper floors                                                                                 | 3.60                         | 4.50               |
| Wholesale, all floors                                                                        | 6.00                         | 4.50               |
| Vehicle barriers                                                                             | See Sec 2.3.11               |                    |



**Storage on the ground floor**

**Description:** The suspended ground floor of the production building-03 is allotted for storage. As per BNBC, the minimum floor live load for storage is 6 kN/m<sup>2</sup> (126 psf). However, the ground floor of the building is designed for 5 kN/m<sup>2</sup> live loads. The building engineer is required to revise the load plan and related design documents based on BNBC requirements.

**Observation 4:** Construction materials/debris on the floor and roof level. (Production Building-03)



**Description:** Construction materials/debris were found almost everywhere on the roof and some other floor levels. The building engineer is required to remove all kinds of construction materials from the floor and roof.

**Observation-5:** Unbraced storage racks on different floors (Production Building-03).



**Description:** Unbraced storage racks were observed on different floors. The building engineer is required to provide anchorage/bracing to the storage racks to protect them from falling hazards.

**Observation-6:** Exposed rebar on roof level (Production Building-03).



**Description:** Exposed re-bar 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 (Production Building-03).



**Description:** Column at the ground floor loading/unloading area was found susceptible to vehicle impact. The building engineer is required to provide separate barriers around the column to avoid vehicle impact.

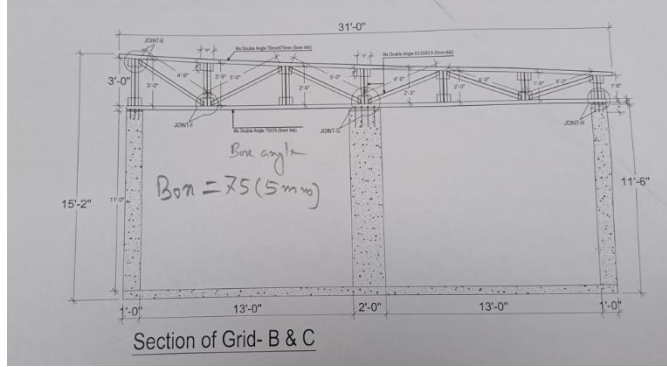
**Observation 8:** Lack of lateral stability system at roof (Ancillary Building-01 (Captive Generator & EGB Building)).



Truss in North-South direction

**Description:** Lack of lateral stability system (bracing & strut) at roof level was found along the long direction. So, lateral stability in the long direction is incomplete. The building engineer is required to check the stability system of the existing structure, prepare an assessment report and submit it to RSC for review.

**Observation 9:** Discrepancies in as-built drawing (Ancillary Building-01 (Captive Generator & EGB Building)).



Sectional drawing

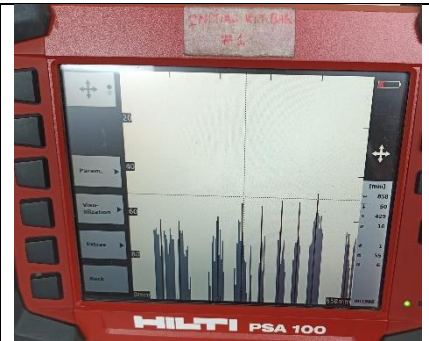


Roof Truss

**Description:** During the inspection, the roof truss was found made of steel box members. But the as-built structural drawing showed a double angle. Also, the floor height was found to be higher than the provided height. The building engineer is required to survey the structure and update the as-built drawing as per BNBC.

**Observation 10:** Mismatches in as-built drawings (Ancillary Building-02 (Fire Control Room & Office Building)).

| SCHEDULE OF COLUMN SIZE AND REINFORCEMENT |                      |                      |                      |                                                             |
|-------------------------------------------|----------------------|----------------------|----------------------|-------------------------------------------------------------|
| COLUMN MARK                               | UP TO PLINTH LEVEL   | P.L TO GROUND FLOOR  | GROUND FLOOR TO ROOF | TIES                                                        |
|                                           | COLUMN SIZE & REINF. | COLUMN SIZE & REINF. | COLUMN SIZE & REINF. |                                                             |
| C1                                        |                      |                      |                      | 10mmØ bar @ 5" c/c in L/2 section & 5.5" c/c in L/4 section |
| C2                                        |                      |                      |                      |                                                             |
| C3                                        |                      |                      |                      |                                                             |



**Description:** Rebar at C-3 type column not matched with drawings. The number of rebar found 20 instead of 24. Building engineer is required to confirm the amount of rebar in the column and update the drawing.

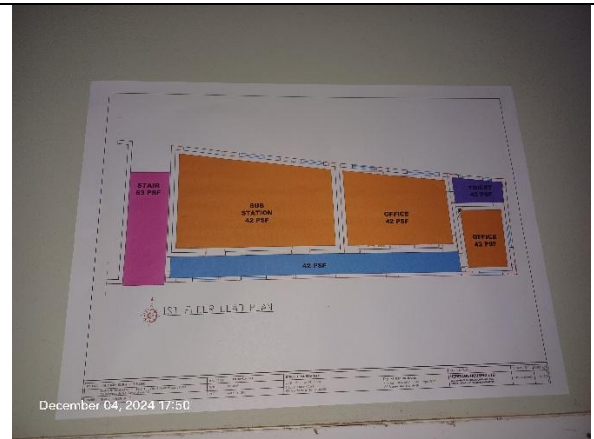
**Observation 11:** Load plan does not comply with BNBC requirements (Stair Portion) (Ancillary Building-02 (Fire Control Room & Office Building)).

|                                                               |                    |                       |
|---------------------------------------------------------------|--------------------|-----------------------|
| All roof surfaces subject to maintenance workers              | --                 | 1.33                  |
| Schools                                                       |                    |                       |
| Classrooms                                                    | 2.00               | 4.50                  |
| Corridors above first floor                                   | 3.80               | 4.50                  |
| First-floor corridors                                         | 4.80               | 4.50                  |
| Scuttles, skylight ribs, and accessible ceilings              |                    | 0.90                  |
| Sidewalks, vehicular driveways, and yards subject to trucking | 12.00 <sup>j</sup> | 35.60 <sup>k</sup>    |
| Stadiums and arenas                                           |                    |                       |
| Bleachers                                                     | 4.80 <sup>e</sup>  | --                    |
| Fixed seats (fastened to floor)                               | 2.90 <sup>e</sup>  | --                    |
| Stairs and exit ways                                          | 4.80               | See Note <sup>l</sup> |
| One- and two-family residences only                           | 2.00               | below                 |
|                                                               |                    | --                    |

BNBC 2020

Part VI

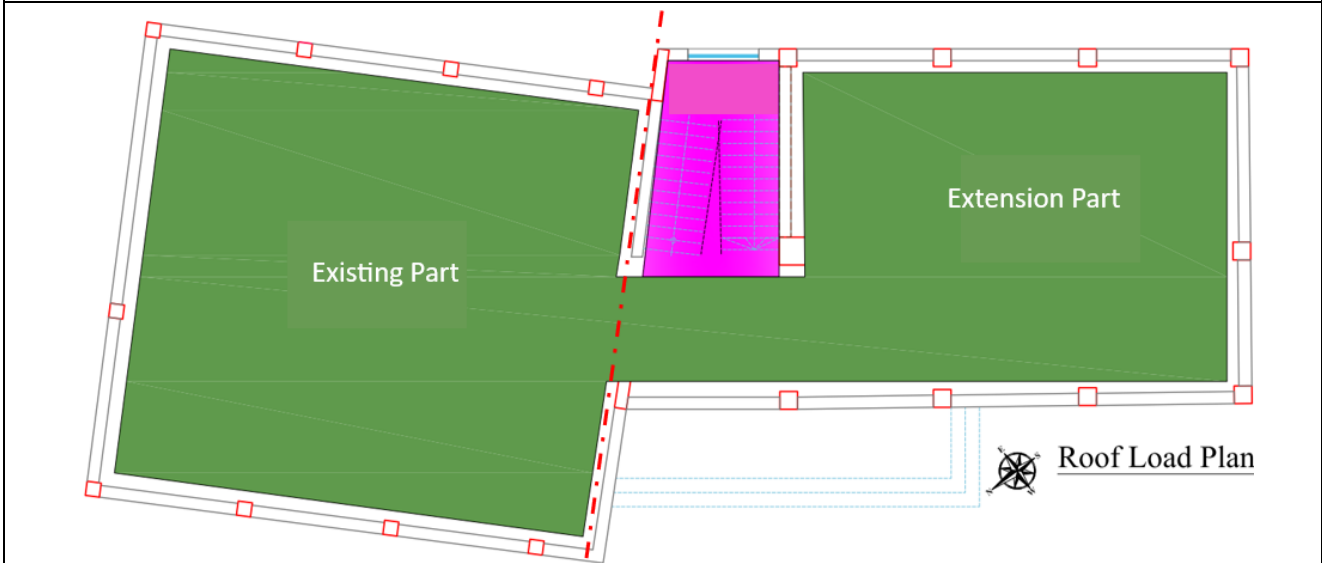
Chapter 2



**Description:** There is a steel staircase between Ancillary Building-01 and Ancillary Building-02. As per BNBC, the minimum floor live load for stairs is 4.8 kN/m<sup>2</sup> (100 psf). But the stair is designed for 3 kN/m<sup>2</sup> (63 psf) live loads.

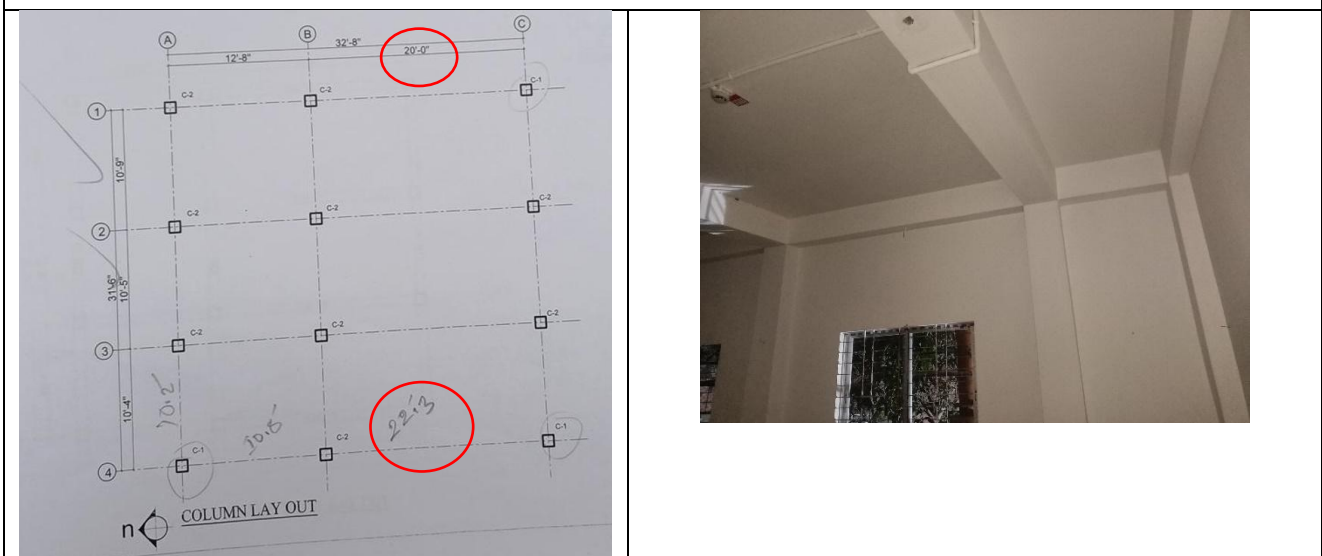
The building engineer is required to revise the load plan and related design documents based on BNBC requirements.

**Observation 12:** Concrete strength for the phase construction (Ancillary Building-03 (Diesel Generator & Compressor Building)).



**Description:** The existing part was constructed in 2014-2015 and the extension part was constructed in 2017-2018, so phase construction was conducted. Building engineer is required to confirm the in-situ concrete strength of the separate parts due to the phase of construction.

**Observation 13:** Mismatches in as-built drawings (Ancillary Building-03 (Diesel Generator & Compressor Building)).



**Description:** The C1 column was found to be 300mmx300mm (12X12 inches) instead of 350mmx350mm and the down stand of the beam was 300 mm instead of 450 mm. Also, one grid was measured at 6.7m (22 feet), whereas the drawing shows 6.1 m (20 feet). The building engineer is required to survey the structure and update the as-built drawing as per onsite conditions.

**Observation 14:** Construction debris on the roof level. (Ancillary Building-03 (Diesel Generator & Compressor Building)).



**Description:** Construction debris was found on the roof level. The building engineer is required to remove all kinds of construction debris from the roof.

**Observation 15:** Falling Hazard (Ancillary Building-03 (Diesel Generator & Compressor Building)).



**Description:** Falling hazard due to a lack of railing was observed in the stair locations. The building engineer is required to take necessary measures to avoid possible falling hazards.

**Observation 16:** Dampness on the brick wall (Ancillary Building-04 (Fire Pump Room & Boiler Building)).



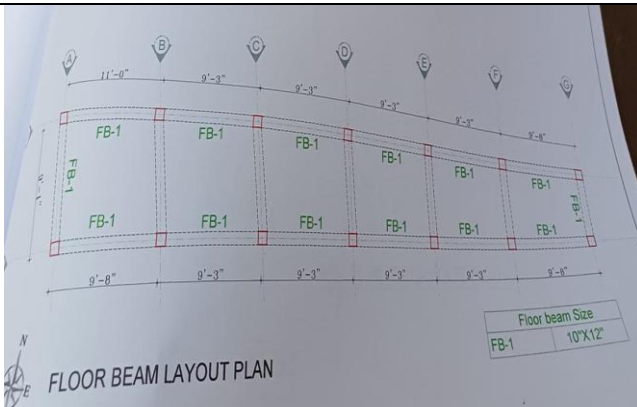
**Description:** Dampness on the brick wall was observed. The building engineer is required to seal the source of water and repair the damp areas with suitable methods.

**Observation 17:** Mismatches in as-built drawings (Compressor Room-01 (NGL Compressor Room)).



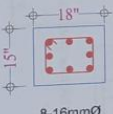
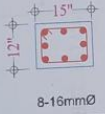
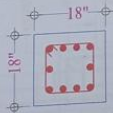
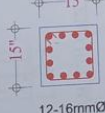
**Description:** No RC column was found in Compressor Room-01 (NGL Compressor Room). But as built drawings showed RC columns. The building engineer is required to confirm the presence of RC columns and update the drawing.

**Observation 18:** Mismatches in as-built drawings (Compressor Room-02 (NAL Compressor Room)).



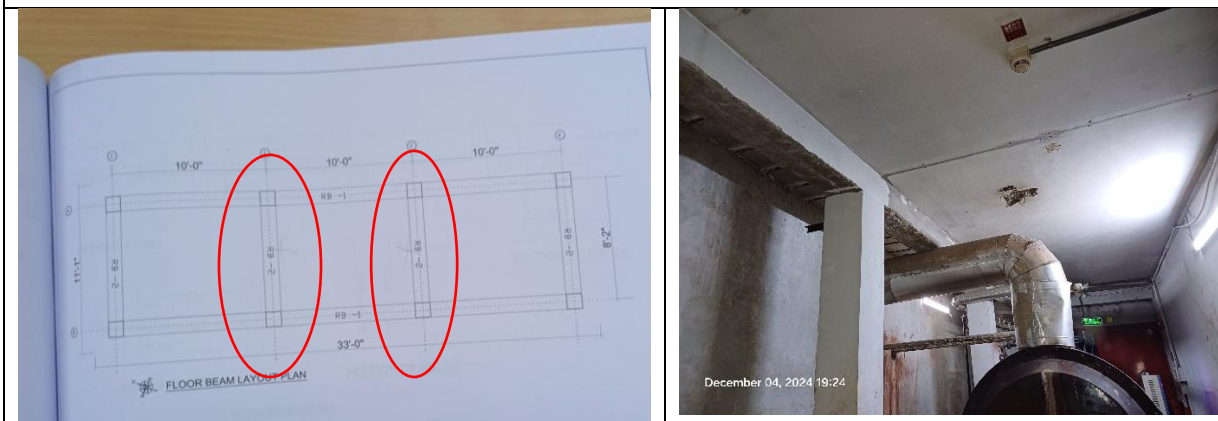
**Description:** The beam layout did not match with as built condition. In the short direction, no beam was found on site. Building engineer is required to survey the structure and update the drawing.

**Observation 19:** Mismatches in as-built drawings (ATM Booth).

| SCHEDULE OF COLUMN SIZE AND REINFORCEMENT |                                                                                               |                                                                                               |                 |
|-------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------|
| COLUMN MARK                               | FOUNDATION TO GRADE BEAM                                                                      | GRADE BEAM TO ROOF                                                                            | TIES            |
|                                           | COLUMN SIZE & REINF.                                                                          | COLUMN SIZE & REINF.                                                                          |                 |
| C1<br>12"X12"                             | <br>8-16mmØ  | <br>8-16mmØ  | SEE TIE DETAILS |
| C2<br>15"X15"                             | <br>12-16mmØ | <br>12-16mmØ |                 |

**Description:** Rebar at C-2 type column not matched with drawings. Three rebars were found at the short face and the column size was found 12" (300 mm) instead of 15"(375 mm). The building engineer is required to confirm the amount of rebar & the size of the column and update the drawing.

**Observation 20:** Mismatches in as-built drawings (Ancillary Building-05 (New Boiler Room)).



**Description:** During the inspection, the roof beam was not found onsite as shown in the as-built drawing. Building engineer is required to survey the structure and update the drawings.

**Observation 21:** Building permit from local authority not available. (Ancillary Building-07 (03 Storied Boiler Building)).



**Description:** During the inspection, a building permit from the local authority was not available for the 03 Storied Boiler Building. The factory authority is required to collect building permits from the BNBC prescribed local authority.

**Observation 22:** Lack of design documents (Ancillary Building-07 (03 Storied Boiler Building)).



**Description:** As per BNBC, every building or structure designed shall have its design documents prepared following the provision 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, load plan, and material test reports) were not available which are required to be prepared in compliance with section 1.9.1 (part-6, BNBC).

### 3. Action Plan

| Item No. | Observation                                                                                   | Action Plan                                                                                                                                                            | Timeline        |
|----------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 1.       | Stress in the column & foundation exceeds the normal design limit (Production Building-03)    | Verify in-situ concrete strength by taking a 100-diameter concrete core from the lower-tier columns.                                                                   | Immediate       |
| 2.       |                                                                                               | The building engineer is required to review the design, load and column and foundation adequacy check as per the in-situ material strength.                            | within 6 weeks  |
| 3.       |                                                                                               | Carry out necessary remediation work if required.                                                                                                                      | within 6 months |
| 4.       |                                                                                               | Implement floor loading plan (posting load plan, marking storage area & height& maintaining floor loading).                                                            | within 6 months |
| 5.       | Construction safety practices on the factory premises. (Production Building -03)              | The building engineer is required to ensure the health & safety of the workers and follow the construction safety practices according to BNBC 2020, Part 7, Chapter 3. | Immediate       |
| 6.       | The load plan does not comply with BNBC requirements. (Production Building -03)               | The building engineer is required to revise the load plan based on BNBC requirements.                                                                                  | within 6 weeks  |
| 7.       | Construction materials/debris on the floor and roof level. (Production Building -03)          | The building engineer is required to remove all kinds of construction materials from the floor and roof.                                                               | within 6 weeks  |
| 8.       | Unbraced storage racks on different floors (Production Building -03)                          | The building engineer is required to provide anchorage/bracing to the storage racks to protect them from falling hazards.                                              | within 6 months |
| 9.       | Exposed re-bar on roof level (Production Building -03).                                       | The building engineer is required to provide anti-corrosive coating on the exposed rebar.                                                                              | within 6 months |
| 10.      | Column susceptible to vehicle impact (Production Building -03).                               | The building engineer is required to provide barriers around the column to prevent vehicle impact.                                                                     | within 6 weeks  |
| 11.      | Lack of lateral stability system (Ancillary Building - 01 (Captive Generator & EGB Building)) | The building engineer is required to check the stability system of the existing structure, prepare an assessment report and submit it to RSC for review.               | within 6 weeks  |
|          |                                                                                               | Implement remediation work if required.                                                                                                                                | within 6 months |

|     |                                                                                                                                 |                                                                                                                           |                 |
|-----|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------|
| 12. | Discrepancies in as-built drawing (Ancillary Building-01 (Captive Generator & EGB The building ))                               | The building engineer is required to survey the structure and update the as-built drawing as per onsite conditions.       | within 6 weeks  |
| 13. | Mismatches in as-built drawings (Ancillary Building-02 (Fire Control Room & Office The building )).                             | The building engineer is required to confirm the amount of rebar in the column and update the drawings.                   | within 6 weeks  |
| 14. | Load plan does not comply with BNBC requirements (Stair Portion) (Ancillary Building-02 (Fire Control Room & Office Building)). | The building engineer is required to revise the load plan and related design documents based on BNBC requirements.        | within 6 weeks  |
|     |                                                                                                                                 | Implement remediation work if required.                                                                                   | within 6 months |
| 15. | Concrete strength for the phase construction (Ancillary Building-03 (Diesel Generator & Compressor The building )).             | The building engineer is required to verify in-situ concrete strength for each separate part of the building.             | within 6 weeks  |
| 16. | Mismatches in as-built drawings (Ancillary Building-03 (Diesel Generator & Compressor The building )).                          | The building engineer is required to survey the full structure and revise the as-built drawing as per on-site conditions. | within 6 weeks  |
| 17. | Construction debris on the roof level. (Ancillary Building-03 (Diesel Generator & Compressor Building))                         | The building engineer is required to remove all kinds of construction debris from the roof.                               | within 6 months |
| 18. | Falling Hazard at stair zone (Ancillary Building-03 (Diesel Generator & Compressor Building))                                   | The building engineer is required to provide a railing/barrier to the open stairs to avoid possible falling hazards.      | Immediate       |
| 19. | Dampness on the brick wall (Ancillary Building-04 (Fire Pump Room & Boiler The building ))                                      | The building engineer is required to seal the source of water and repair the damp areas with suitable methods.            | within 6 months |
| 20. | Mismatches in as-built drawings (Compressor Room-01 (NGL Compressor Room))                                                      | The building engineer is required to confirm the presence of RC columns and update the drawing.                           | within 6 weeks  |
| 21. | Mismatches in as-built drawings (Compressor Room-02 (NAL Compressor Room))                                                      | The building engineer is required to survey the structure and update the drawing.                                         | within 6 weeks  |
| 22. | Mismatches in as-built drawings (ATM Booth)                                                                                     | The building engineer is required to confirm the amount of rebar & the size of the column and update the drawing.         | within 6 weeks  |

|     |                                                                                                                     |                                                                                                                                                                                                         |                 |
|-----|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| 23. | Mismatches in as-built drawings (Ancillary Building-05 (New Boiler Room))                                           | The building engineer is required to survey the structure and update the drawings.                                                                                                                      | within 6 weeks  |
| 24. | The building permit from local authorities are not available. (Ancillary Building-07 (03 Storied Boiler Building)). | The factory authority is required to collect The building permits from the BNBC-prescribed local authority.                                                                                             | within 6 months |
| 25. | Lack of design documents (Ancillary Building-07 (03 Storied Boiler Building)).                                      | The building engineer is required to prepare design documents (including design reports, load plans, and material test reports) in compliance with section 1.9.1 (part-6, BNBC) and submit them to RSC. | within 6 weeks  |
|     |                                                                                                                     | Implement remediation work if required.                                                                                                                                                                 | within 6 months |