Advance World Limited (New)

289 Shiachar, Lalkha, Fatullah, Narayangonj.
(23.647464, 90.483301)
2 September 2025

Structural Inspection Report

RSC RMG SUSTAINABILITY COUNCIL

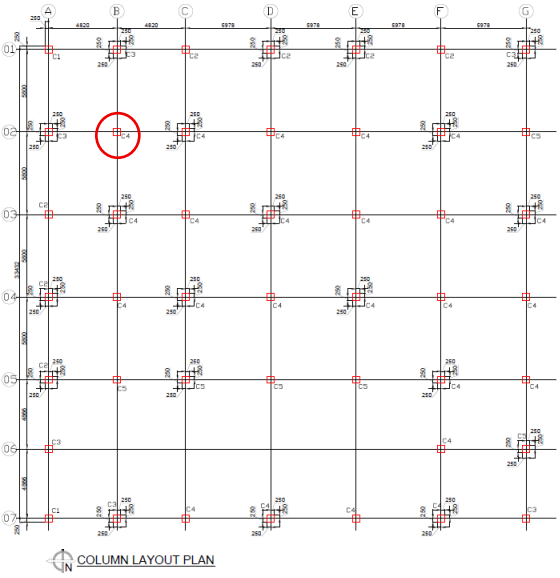
Level 5, Shanta Forum, 187, 188/B,
Bir Uttam Mir Shawkat Sarak, Tejgaon,
Dhaka- 1208, Bangladesh
PABX : +880 2 41081863-6
www.rsc-bd.org

1. Building Information

1. Production Building (G+5)
2. Utility Building (G)
3. Security Post (G+1)

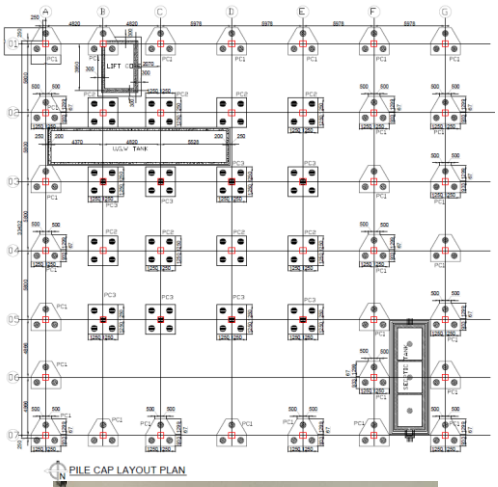
2. Observation:

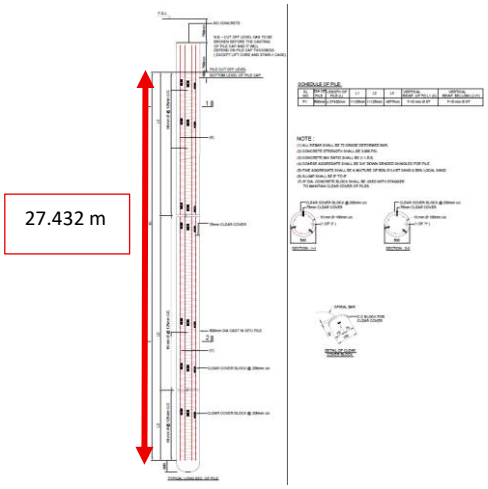
Observation-01: Stress in the column above normal design limit (Production building).

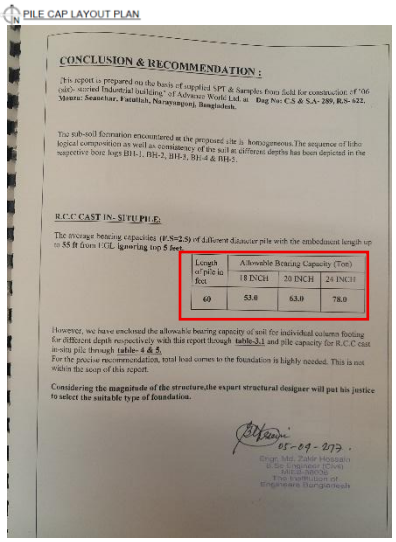


Description: The cursory calculation indicates that columns are stressed above normal design limits under gravity loading at the marked locations, considering floor live load of 3 kPa for the typical floors, 5 kPa for the stairs, 1.5 kPa for the roof, minimum concrete strength based on aggregate type (16.3 MPa), and minimum rebar strength (415 MPa). The building engineer is required to review the design, loads, and column stresses. Take a minimum 4-100mm diameter concrete core for the structural elements (column, beam/slab) to verify the in-situ concrete strength. Produce and actively manage the loading plan according to the floor capacity.

Observation-02: Absence of credible structural drawing and inadequate soil test report. (Production Building)







CONCLUSION & RECOMMENDATION :

This report is prepared on the basis of supplied SPT & Samples from field for construction of '06 (six)- storied Industrial building' of Advance World Ltd. at Dag No: C.S & S.A- 289, R.S- 622, Mouza: Seachar, Fatullah, Narayanganj, Bangladesh.

The sub-soil formation encountered at the proposed site is homogeneous. The sequence of litho logical composition as well as consistency of the soil at different depths has been depicted in the respective bore logs BH-1, BH-2, BH-3, BH-4 & BH-5.

R.C.C CAST IN- SITU PILE:

The average bearing capacities (F.S=2.5) of different diameter pile with the embedment length up to 55 ft from FGL ignoring top 5 feet.

Length of pile in feet	Allowable Bearing Capacity (Ton)		
	18 INCH	20 INCH	24 INCH
60	53.0	63.0	78.0

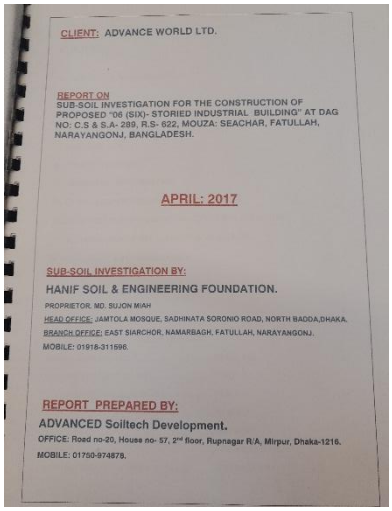
However, we have enclosed the allowable bearing capacity of unit for individual column footing for different depth respectively with this report through table-3.1 and pile capacity for R.C.C cast in-situ pile through table- 4 & 5.

For the precise recommendation, total load comes to the foundation is highly needed. This is not within the scop of this report.

Considering the magnitude of the structure,the expart structural designer will put his justice to select the suitable type of foundation.

05-09-2017.

Engr. Md. Zahir Hossain
B.Sc. Engineer (Civil)
The Institution of Engineers Bangladesh



CLIENT: ADVANCE WORLD LTD.

REPORT ON
SUB-SOIL INVESTIGATION FOR THE CONSTRUCTION OF PROPOSED "06 (SIX)- STORIED INDUSTRIAL BUILDING" AT DAG NO: C.S & S.A- 289, R.S- 622, MOUZA: SEACHAR, FATULLAH, NARAYANGONJ, BANGLADESH.

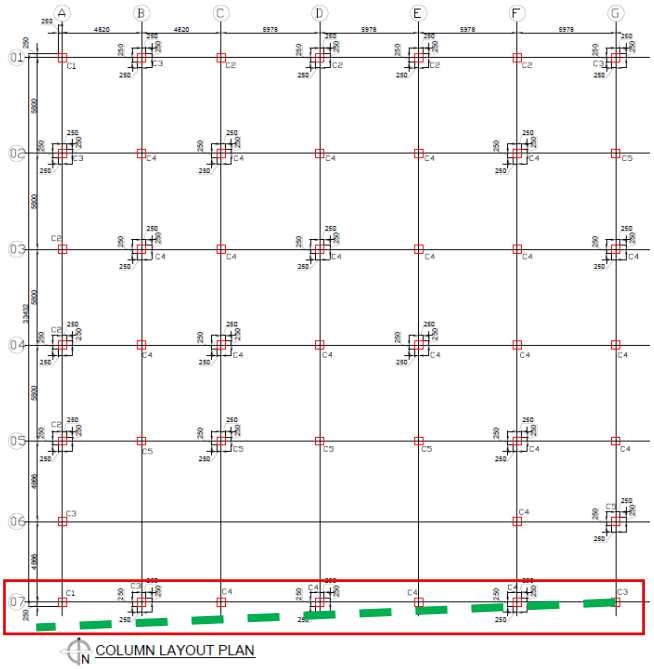
APRIL: 2017

SUB-SOIL INVESTIGATION BY:
HANIF SOIL & ENGINEERING FOUNDATION.
PROPRIETOR: MD. SUJON MIAH
HEAD OFFICE: JAMTOLA MOSQUE, SADHINATA SORONIO ROAD, NORTH BADDA,DHAKA.
BRANCH OFFICE: EAST SIARCHOR, NAMARBAGH, FATULLAH, NARAYANGONJ.
MOBILE: 01918-311596.

REPORT PREPARED BY:
ADVANCED Soiltech Development.
OFFICE: Road no-20, House no- 57, 2nd floor, Rupnagar R/A, Mirpur, Dhaka-1216.
MOBILE: 01750-974878.

Description: During the inspection, no credible structural drawing was available on-site for the Production Building. A soil investigation report was found prepared by the "Hanif Soil & Engineering Foundation" in April 2017. In the prepared as-built drawing, the pile length was shown as 27.432 m with a pile diameter of 500 mm. However, in the provided soil test report indicated data for only 18.29 m pile length. The allowable pile capacity for 18.29 m (500 mm Dia) was reported as 63.3 tons (F.S: 2.5), which appears to represent a lower factor of safety. The building engineer is required to verify the actual pile length by conducting a PIT (Pile Integrity Test), carry out a new soil investigation considering the actual pile length, and review the foundation stresses as part of a Detailed Engineering Assessment (DEA) based on the updated soil and pile information.

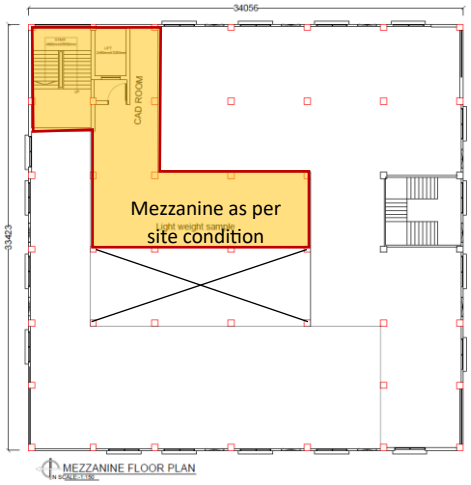
Observation-03: Mismatch in as-built drawing (Production Building).



Mismatch in grid dimension (Grid 7 marked in column layout) was found column layout. Grid 7 was found slightly tappaerd.

The toilet floor build-up was not shown in the drawing.

Undocumented 2 storied toilet zone (south side) not shown in drawing.



Mezzanine floor layout was not matched with onsite condition.

Undocumented O.H.W.T and roof shed not shown in drawing

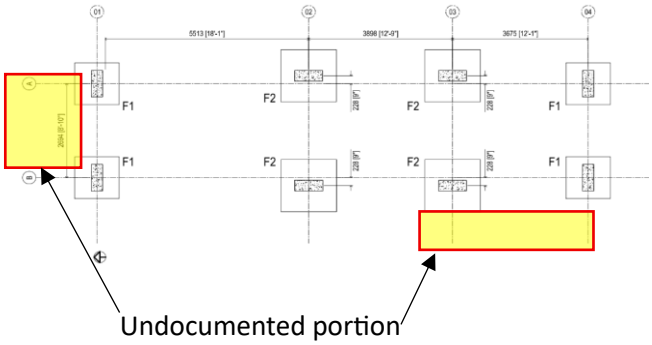
Description: During inspection, mismatches and lack of information were observed between drawings & existing condition. The building engineer is required to survey the structural components and produce accurate structural drawings.

Observation-04: Lack of design report and permit drawing. (Utility Building)

Description: As per BNBC, every building or structure designed shall have its design documents prepared in accordance with 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, part 6 of BNBC. At the time of inspection, only a set of incomplete drawings was available, also no design report & load plan (mezzanine) were available which are required to be prepared in compliance with section 1.9.1.1 (part- 6, BNBC). Also, collect permit drawings from the local authority.

Observation-05: Mismatch in as-built drawing (Utility Building).

Undocumented column and extended portion



Column and foundation layout

Marked columns are not shown in the drawing.

Description: During inspection, mismatches were observed between the provided drawings & existing condition. The building engineer is required to survey the structural components and produce accurate as-built drawings.

Observation-6: Exposed rebar. (Utility Building)

Description: Exposed reinforcement was observed on the roof of the Utility Building. All exposed reinforcement is to be protected from corrosion which may cause degradation of the concrete. Factory engineer is required to take necessary measures to prevent corrosion in exposed rebar.

Observation-07: Lack of design documents and permit drawing. (Security post)

Description: As per BNBC, every building or structure designed shall have its design documents prepared in accordance with 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, part-6 of BNBC. At the time of inspection, no drawing, design report & load plan (mezzanine) were available, which are required to be prepared in compliance with section 1.9.1.1 (part 6, BNBC). Also, collect permit drawings from the local authority.

3. Action Plan

Item No	Observation	Action Plan	Timeline
1.	Stress in the column above normal design limit (Production building).	The building engineer is required to review the design, loads, and column stresses.	within 6 weeks
2.		Verify in-situ material strength by taking a minimum 4-100mm dia. core from the lower tier of the building (column, beam/slab).	within 6 weeks
3.		Produce and actively manage the loading plan according to the floor capacity.	within 6 weeks
4.		Carry out the suggested remedial works.	within 6 months
5.		Implement floor load plan.	within 6 months
6.	Absence of credible structural drawing and inadequate soil test report. (Production Building)	The building engineer is required to verify the actual pile length by conducting a PIT (Pile Integrity Test).	within 6 weeks
7.		Carry out a new soil investigation considering the actual pile length and review the foundation stresses as part of a Detailed Engineering Assessment (DEA) based on the updated soil and pile information.	within 6 weeks
8.	Mismatch in as-built drawing (Production Building).	The building engineer is required to survey the structural components and produce accurate structural drawings.	within 6 weeks
9.	Lack of design report and permit drawing. (Utility Building)	Building engineer to prepare the design document including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.	within 6 weeks
10.		Carry out the suggested remedial works.	within 6 months
11.		Collect permit drawings from the local authority.	within 6 months

12.	Mismatch in as-built drawing (Utility Building).	The building engineer is required to survey the structural components and produce accurate as-built drawings.	within 6 weeks
13.	Exposed rebar. (Utility Building)	Factory engineer is required to take necessary measures to prevent corrosion in exposed rebar.	within 6 weeks
14.	Lack of design documents and permit drawing. (Security post)	Building engineer to prepare the design document including a design report, and a set of structural drawings in compliance with section 1.9.1.1 and section 1.9.1.2 as per BNBC.	within 6 weeks
15.		Carry out the suggested remedial works.	within 6 months
16.		Collect permit drawings from the local authority.	within 6 months