



भारतीय प्रौद्योगिकी संस्थान रूड़की  
INDIAN INSTITUTE OF TECHNOLOGY ROORKEE

सिविल अभियांत्रिकी विभाग  
DEPARTMENT OF CIVIL ENGINEERING

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No: - IITR/CED/SM/KUNIKA

Dated: 01.05.2023

**To Whom-so-ever it may Concern**

**Subject: - Testing of 11 Nos. piles for Unitech Burgundy project, Tower - 5 & 6, Sector-96, 97 & 98, NOIDA (UP)**

The status of Work Order and Tests is as under (Within the scope of IIT Roorkee):

The details of piles, which have been tested are as follows:

**(A) Lateral Load Tests :-**

- (i) Pile location : A", 9-10 Tower – 5
- (ii) Pile location : B-6-7(1) Tower - 5
- (iii) Pile location : A", 19-20 Tower - 5

(Total 3 Nos).

**(B) Pull Out Load Tests :-**

- (i) Pile location : P-8, J"/4-5, Tower-5
- (ii) Pile location : P-8, A/2-3, Tower-5
- (iii) Pile location : P-8, A"/12, Tower - 6
- (iv) Pile location : P-8, A"/16-17, Tower-6

(Total 4 Nos).

**(C) Compression Load Tests :-**

- (i) Pile location : P-1, A'/17-18, Tower-5
- (ii) Pile location : P-1, A'/11-12, Tower-5
- (iii) Pile location : P-8, A"/7-8, Tower-6
- (iv) Pile location : P-8, A" 27, Tower - 6

(Total 4 Nos).

Grand Total of No. of Piles tested = 11

All the tests had been conducted as per IS : 2911 (Part-4) latest edition.

**1. Routine tests.**

W.O. No. to IITR : Mail, dt. 06 Jan 2023

Agency: Kunika Geotechnical Services Pvt. Ltd. (Under supervision of IIT Roorkee)

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**Routine tests** are carried out for 11 nos. piles. Three types of tests were conducted i.e., compression load test, Lateral load test & Pull out load test.



Accordingly work order was issued for 11 No. tests on different piles.

Conclusions as per Report:

- The safe compression load (Total 4 nos. conducted) capacity i.e., 280MT (as reported by clients) is found OK in 2 nos. piles. (Barring 2 nos. pile with pile no. P-1, A'/17-18, Tower-5 & P-1, A'/11-12, Tower-5 whose compression load was found less corresponding to permissible settlement as per IS: 2911 (Part 4), with clause, applicable to larger than 600mm dia. piles.

The results of field tests are as follows:

Sl. No.	Pile no.	Safe Load (MT)	Load achieved in field test (MT)	Remarks
1.	Pile location : P-1, A'/17-18, Tower-5	280 MT	328.08	1. All tests conducted as per IS : 2911 (Part-4) Latest edition for permissible settlement clause applicable to larger than 600mm dia. piles.
2.	Pile location : P-1, A'/11-12, Tower-5	280 MT	273.40	
3.	Pile location : P-8, A"/7-8, Tower-6	280 MT	423.77	2. In Tower-5, pile compression safe load carrying capacity is reduced to 182 MT.
4.	Pile location : P-8, A" 27, Tower – 6	280 MT	423.77	3. In Tower-6, pile compression safe load carrying capacity is 280 MT.

- The safe lateral load (Total 3 nos. conducted) capacity i.e., 28 MT (as reported by clients) is found OK in one pile only. (Barring Two no. piles no. B-6-7(1) & A", 19-20 whose capacity was found less).

Sl. No.	Pile no.	Safe Load (MT)	Load achieved in field test (MT)	Remarks
1.	Pile location : A", 9-10, Tower – 5	28 MT	33.83	1. All tests conducted as per IS : 2911 (Part-4) Latest edition for permissible settlement clause applicable to larger than 600mm dia. piles.
2.	Pile location : B – 6 - 7(1), Tower - 5	28 MT	26.85	
3.	Pile location : A", 19-20, Tower – 5	28 MT	26.85	2. Pile's lateral load carrying capacity reduced to 26.85 MT

- The safe pullout load (Total 4 nos. conducted) capacity i.e., 105 MT (as reported by clients) is found OK in all 4 piles.

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