Construction of Office Building for Amaravati Local Head Office and Other Outfits at Amaravati, Andhra Pradesh in EPC Mode.

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CONTENT

1.0 INTRODUCTION

M/s STATE BANK OF INDIA. is planning to Construct of building for Amaravati Local Head Office and other outfits at Amaravati, Andhra Pradesh. **M/s STATE BANK OF INDIA**. have entrusted the work of Geotechnical Investigation to **M/s MEDINI GEO ENGINEERING SERVICES** Hyderabad. The current investigation is at Uddandrayanpallem, Amaravathi. Andhra Pradesh.

The project site size of the plot is approx. 121.40 m x 100 m which is almost a square plot surrounded by roads on three sides viz. Seed Access Road (Key Artery connecting capital City with NH -16) of 60 m width, and two other peripheral roads 17m and 25 m.

M/s. MEDINI GEO ENGINEERING SERVICES for carrying out the geotechnical Investigation at the site. The work of geotechnical investigation has been awarded to us, A layout plan showing the locations of our field investigation is illustrated on annexure 1.

This report includes the details of methodology of investigation, collections of samples, field test results, and laboratory test results including their interpretation/ analysis, recommendations for the properties essential to the design of foundations and recommendations.

1.1 PURPOSE OF STUDY

The overall purposes of this study are to investigate the stratigraphy at the site and to develop geotechnical recommendations for foundation design and construction of different structures along the alignment of the proposed stretch.

To accomplish these purposes, the study was conducted in the following phases:

a) drilling nine (09) boreholes to required depth in order to investigate the site stratigraphy and collect disturbed and undisturbed soil samples for laboratory testing.
b) Conducting four (04) Electrical Resistivity Test up to 15.00mts spreading to know the apparent resistivity of Soil.
c) four (04) CBR test conducted for CBR values to assess the strength of soil pavement and road construction.
d) testing selected soil samples in the laboratory to determine pertinent index and engineering properties of the strata; and

e) analysing all field and laboratory data in order to develop engineering recommendations for foundation design and construction.

The following table presents the details of the boreholes at structure presented in this report:

BORE HOLE NO	COORDINATES		RLs, m (Ref)	STRUCTURE	TERMINATION DEPTH, m
	NORTHING	EASTING			
1	16°53'60.27"N	80°51'20.23"E		3 Cellar+15 + 5 FUTURE FLOOR	40.00
2	16°53'61.58"N	80°51'16.21"E			40.00
3	16°53'64.19"N	80°51'14.30"E			40.00
4	16°53'63.75"N	80°51'19.36"E			40.00
5	16°53'64.31"N	80°51'17.94"E			40.00
6	16°53'65.29"N	80°51'14.58"E			40.00
7	16°53'64.89"N	80°51'20.46"E			40.00
8	16°53'64.8"N	80°51'20.51"E			40.00
9	16°53'67.42"N	80°51'15.27"E			40.00

Depth of bore hole/ locations of boreholes and RL's provided to us by clients and requirement. Layout plan attached in this report. (Plate-1)

2.0 METHODOLOGY OF INVESTIGATION

The investigation is planned to obtain the subsurface stratification in the proposed project site and collect soil samples for laboratory testing to determine the engineering properties such as shear strength along with basic engineering classification of the subsurface stratum to arrive at the foundation design parameters.

2.1 SOIL BORING

The Boreholes in soil are progressed by Rotary drilling and percussion drilling method as per IS: 1892 – 1979 and approved methodology. Boring is advanced at

selected / specified borehole locations. The following steps are adopted during boring operations.

1). Boring rig with power winch is assembled at site and was shifted and erected at the borehole location.

2). Taken out the topsoil up to approximately 500 mm.

3). The auger is joined at the end of hollow drill rod, which is rotated manually.

4). After reaching the drill rod attached with the auger attained its full depth another piece (extension rod) was attached, and the process is continued the drilling up to the level of water table.

5). Below the water table shell is used instead of auger and the casing pipe is lowered as per requirement.

6). Casing is used as per the prevailing soil conditions, to stabilize the borehole.

7). Required field tests i. e, Standard Penetration Tests are conducted, and collection of undisturbed /disturbed samples are collected as per requirements at specified depths.

8). This process is continued till the achievement of full depth of bore hole as per requirement.

2.2 STANDARD PENETRATION TESTS

Standard Penetration Tests (SPT) are conducted in the borehole at 1.50 m intervals, by connecting a split spoon sampler to 'A' rods and driving it by 45 cm using a 63.5 kg hammer falling freely from a height of 75 cm. The tests are conducted in accordance with IS: 2131- 1981.

The number of blows for each 15 cm of penetration is recorded. The blows required to penetrate the initial 15 cm of the split spoon for seating the sampler is ignored due to the possible presence of loose materials or cuttings from the drilling operation. The cumulative number of blows required to penetrate the balance 30 cm of the 45 cm sampling interval is termed the SPT value or the 'N' value. The 'N' values are presented on the profiles for each borehole. Refusal to further boring penetration was considered when the 'N' values exceed 100 blows for 30 cm penetration or when practical refusal to further penetration by shell and auger is encountered.

Disturbed samples are collected from the split spoon after conducting SPT. The samples are preserved in transparent polythene bags. Undisturbed samples are collected by attaching a 75 mm diameter thin walled 'Shelby' tubes and driving the sampler using a 63.5 kg hammer in accordance with IS: 2132-1986. The tubes are sealed with wax at both ends. All samples are transported to our laboratory for further examination and testing.

2.3 ROCK BORING

Drilling is advanced by rotary core drilling method using double tube core barrels as per the guidelines of IS: 6926-1996. A core barrel and NX sized bits are used for drilling and recovering rock cores. Recovered rock cores are numbered serially and preserved in good quality sturdy wooden core boxes as specified in IS: 4078-1980.

The percent recovery and Rock Quality Designation (RQD) are measured for each core run. The percent recovery is defined as the percent ratio of the cumulative length of core sample recovered to the total length of the core run. The Rock Quality Designation (RQD) is defined as the ratio of the cumulative length of core pieces 10 cm or longer to the total length of the core run, expressed as percentage.

Details of samples collected are presented on the rock profiles and RQD at various depths. The net effective drilling time, a qualitative assessment of the nature of the strata, is also included on the borehole logs. The colour of return water and the extent of water loss while drilling the borehole recorded on the boring logs which may be used for an assessment of the nature of rock, watertightness of joints and possible presence of interconnected channels / cavities.

2.4 UNDISTURBED SAMPLE

The undisturbed soil samples are collected in good quality thin-walled seamless tubes, of min. dia of 100mm and length of 450 mm with area ratio less than 10%. The UDS tubes are gently pushed in soil using hydraulic push rig/gently hammering action. After retrieval of UDS tube from the borehole,

ends of the tube with sample are sealed with freshly molten wax of minimum 20 mm thick, properly labelled, marked an arrow showing upward direction and

dispatched to laboratory for testing. At site, sample tubes were covered with wet gunny bags. When the UDS tubes are not penetrated the subsoil strata, it is clearly mentioned on the bore log sheet.

2.5 DISTURBED SAMPLE

In all boreholes, disturbed soil samples were taken at every 1.5 m interval and at significant change of (or as specified). Soil from cutting edge of undisturbed samplers and from split spoon sampler used for standard penetration tests was taken as disturbed samples. These samples were placed without delay in adequately sealed polythene bags.

2.6 GROUND WATER

Based on our measurements in the completed boreholes, groundwater was met at about 2.70-3.60 m depth (RL 87.0 to 88.8 m) at the time of our field investigation (August 2025-September 2025).

During the period of our investigation, dewatering was in progress at an adjoining site. The water level at the site is influenced by the dewatering at the nearby site. It is observed that whenever the dewatering pumps were stopped at the adjoining site, the water level at the site rise.

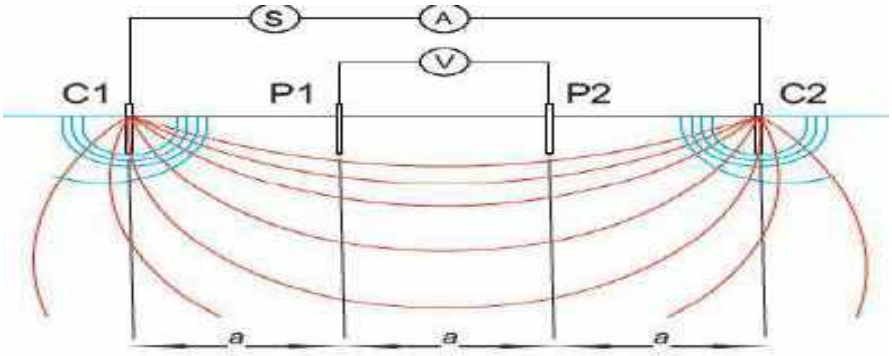
The Krishna River is about 500 m away from the project site. As per the published document of the Irrigation & Flood Control Department of the Government of Andhra Pradesh, the Highest Flood Level (HFL) recorded in 1978 at the weir of the Prakasam Barrage (approx. 5 km distance from site) is RL 203.24 m.

Fluctuations may occur in the measured depth due to seasonal variations in rainfall and surface evaporation rates. It may also be influenced by the water levels in the River Krishna. We suggest that, for design purpose, the highest water table be considered to be equal to the HFL of the Krishna River.

2.7 ELECTRICAL RESISTIVITY TEST

Electrical resistivity of the substratum at the site was determined at specified locations. The electrical resistivity test is used for shallow subsurface exploration by means of electrical measures made at the ground surface. Resistivity measurements are made by driving four electrodes / two electrodes about 10 to 15 cm into the ground at pre-selected electrode spacing. We used the Wenner electrode configuration for this study.

The schematic arrangement of electrodes is shown below:



The four electrodes were spaced at equal distance along a line. The test procedure is in accordance with IS: 3043:2006. Tests were done along two orthogonal directions up to the maximum 15.0 m electrode spacing as per specification.

Measurements are made by causing a current, 'I', to pass through the earth and distribute within a relatively large hemispherical earth mass. The portion of the current that flows along the surface produces a voltage drop, 'V'. The resistance 'R', ratio of voltage drops 'V' to current 'I' is directly measured by Digital Earth Resistance Tester.

The resistivity is determined from the following equation: -

$$\rho = \frac{2\pi sV}{\mathrm{I}}$$

Where

ρ	=	Apparent Resistivity, ohm-m
S	=	Spacing between the electrodes, m
V	=	Voltage between the two electrodes, volts
I	=	Current flow through the two electrodes.
E	=	Depth of Burial, m,
R	=	V/I Resistance, ohms.

3.0 LABORATORY TESTS

The laboratory testing has been carried out at **RAJADHANI LABS LLP** is near by the Hyderabad. Its NABL Accredited Laboratory & ISO quality procedures in our laboratory conform to ISO/IEC-17025-2005.

Laboratory tests were conducted on selected soil samples to determine their physical and engineering properties. The testing procedures were in accordance with current applicable IS specifications.

The following tests were conducted on selected soil and groundwater samples recovered from the boreholes.

ON SOIL SAMPLES :

S.NO	TEST NAME		Ref.IS CODE
01	Natural Moisture Content		IS: 2720 (Part-2)-1986
02	Grain Size Analysis		IS: 2720 (Part-4)-1985
03	Specific Gravity		IS: 2720 (Part-3)-1980
04	Liquid Limit and Plastic Limit		IS: 2720 (Part-5)-1985
05	Unconfined Compression Test		IS: 2720 (Part-10)-1995
06	Consolidated Drained Direct shear Test		IS: 2720 (Part-13)-1986
07	Triaxial test		IS:2720 (Part-12)-1981
08	Bulk & Dry Density		IS:2720(Part-14)-1983
09	Heavy compaction Test		IS:2720 (Part-8)-1980
10	Chemical Analysis of Soil	pH value	IS : 2720 (Part 26)-2007
11		Sulphates	IS : 2720 (Part-27)-2010
12		Chlorides	IS : 2720 (Part-32)-2010

ON ROCK SAMPLES :

S.NO	TEST NAME	Ref.IS CODE
01	Specific Gravity	IS: 1124-1974
02	Porosity and Void Ratio	IS : 1124-1974
03	Density of Rock	IS:13030-1991
04	Point Load test	IS: 8764 -1998
05	Unconfined Compression test	IS: 9143-1979

4.0 SUB SURFACE CONDITION

Based on the boring information, the generalized subsurface conditions at the site are as follows.

BORE HOLE NO	DEPTH, M		STRATA DESCRIPTION	'N' VALUE	CR (%)	RQD (%)
	FROM	TO				
1	0.00	2.50	Very stiff brown sandy silt, medium plastic Silty clay (CI)	13	-	-
	2.50	14.50	Very dense grey Fine Sand (SP-SM)	23-42	-	-
	14.50	23.50	Very stiff brown sandy silt, Medium plastic silty clay (CI)	32-58	-	-
	23.50	40.00	Residual Soil (or) Completely Weathered Rock (CWR)	58->100	-	-
2	0.00	1.50	Very stiff brown sandy silt, medium plastic Silty clay (CI)	13	-	-
	1.50	15.00	Very dense grey Fine Sand (SP-SM)	21-45	-	-
	15.00	27.00	Very stiff brown sandy silt, Medium plastic silty clay (CI)	15-28	-	-
	27.00	40.00	Residual Soil (or) Completely Weathered Rock (CWR)	70->100	-	-
3	0.00	7.50	Very stiff brown sandy silt, medium plastic Silty clay (CI)	12-20	-	-
	7.50	10.50	Very dense Grey fine Sand intermixed Silty Clay (SP-SM)	22	-	-
	10.50	29.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	25-44	-	-
	29.00	33.00	Highly Weathered Rock (HWR)	-	9-35	0-28
	33.00	40.00	Moderately Weathered Rock (MWR)	-	40-53	35-51
4	0.00	3.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	13-15	-	-
	3.00	15.00	Very dense grey Fine Sand (SP-SM)	13-52	-	-
	15.00	28.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	24-33	-	-
	28.00	40.00	Residual Soil (or) Completely Weathered Rock (CWR)	50->100	-	-
5	0.00	1.50	Very stiff brown sandy silt, medium plastic Silty clay (CI)	20	-	-
	1.50	12.00	Very dense grey Fine Sand (SP-SM)	22-43	-	-

BORE HOLE NO	DEPTH, M		STRATA DESCRIPTION	'N' VALUE	CR (%)	RQD (%)
	FROM	TO				
	12.00	27.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	21-34	-	-
	27.00	40.00	Residual Soil (or) Completely Weathered Rock (CWR)	53->100	-	-
6	0.00	14.50	Very stiff brown sandy silt, medium plastic Silty clay (CI)	11-38	-	-
	14.50	22.50	Very dense grey Fine Sand (SP-SM)	35-54	-	-
	22.50	27.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	32-40	-	-
	27.00	40.00	Residual Soil (or) Completely Weathered Rock (CWR)	67->100	-	-
7	0.00	7.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	12-15	-	-
	7.00	8.50	Very dense grey Fine Sand (SP-SM)	31	-	-
	8.50	27.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	14-39	-	-
	27.00	40.00	Residual Soil (or) Completely Weathered Rock (CWR)	59->100	-	-
8	0.00	7.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	15-25	-	-
	7.00	9.00	Very dense grey Fine Sand (SP-SM)	29-32	-	-
	9.00	27.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	18-28	-	-
	27.00	40.00	Residual Soil (or) Completely Weathered Rock (CWR)	51->100	-	-
9	0.00	4.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	11-15	-	-
	4.00	20.00	Very dense grey Fine Sand (SP-SM)	17-52	-	-
	20.00	27.00	Very stiff brown sandy silt, medium plastic Silty clay (CI)	16	-	-
	27.00	40.00	Residual Soil (or) Completely Weathered Rock (CWR)	60->100	-	-

*Subsurface exploration logs attached in (Annexure -I)

5.0 CONCEPTS FOR FOUNDATION ANALYSIS

5.1 LIQUEFACTION POTENTIAL

Liquefaction is defined as the transformation of a granular material from a solid to a liquefied state as a consequence of increased porewater pressure and reduced effective stress (Marcuson, 1978) (1). Increased pore pressure may be induced by the tendency of granular materials to compact when subjected to cyclic shear deformation, such as in the event of an earthquake.

As per IS: 1893-2002, liquefaction is likely to occur in Silty Clay/ Fine Sand below water table for SPT value less than 100. As per stratigraphy, Subsurface consists Cohesive soil with medium standard penetration resistance, followed by Dense sand (SP-SM).

Reviewing all the soil conditions, SPT values and soil gradation, we are of the opinion that the liquefaction at the site is likely to occur during earthquakes.

As per IS: 1893-2002, the project site is in earthquake Zone-III. The design parameters applicable for Zone-III should be used for the structural design.

5.0 CONCEPTS FOR ANALYSIS

5.2 GENERAL

A suitable foundation for any structure should have an adequate factor of safety against exceeding the bearing capacity of the supporting soils. Also, the vertical movements due to compression of the soils should be within tolerable limits for the structure. We consider that foundation designed in accordance with the recommendations given herein will satisfy these criteria.

5.3 BEARING CAPACITY ANALYSIS FOR RAFT FOUNDATIONS

Bearing capacity analysis was carried out based on the shear parameters (c-ϕ), as per IS 6403-1981 interpreted from field and laboratory tests to determine the safe net bearing capacity (shear criterion).

The bearing capacity equation used is as follows:

$$q_{net\ safe} = 1/F\ [cNc\zeta c\ dc + p(Nq - 1)\ \zeta q\ dq + 0.5\ B\Upsilon\ N\gamma\zeta\gamma\ d\gamma\ Rw]$$

where :

$q_{net\ safe}$	=	Safe net bearing capacity of soil, based on the shear failure criterion.
c	=	Cohesion intercept
ϕ	=	Angle of internal friction
Υ	=	Total unit weight of soil
p	=	overburden pressure
B	=	width of foundation
Rw	=	water table correction factor
F	=	Factor of safety, taken as equal to 3.0 in accordance with IS:1904
Nc,Nq,Nγ	=	Bearing capacity factors which are a function of ϕ.
ζc, ζq, ζγ	=	Shape factors. For Strip footings, ζc = ζq = ζγ = 1
		For Square footing = ζc = 1.3, ζq = 1.2, ζγ = 0.8
dc ,dq, dγ	=	Depth factors
For	$\phi \leq 10$, dc = 1 + 0.2 tan (45 + ϕ/2) D/B, dq = dγ = 1	
For	$\phi > 10$, dq = dγ = 1 + 0.1 tan (45 + ϕ / 2) D/B	

Appropriate values have been substituted into the bearing capacity equation given above to compute the safe net bearing capacity. The values have been checked to determine the settlement of the foundation under the safe bearing pressure. The allowable bearing pressure has been taken as the lower of the two values computed from the bearing capacity shear failure criterion as well as that computed from the tolerable settlement criterion.

5.4 SETTLEMENT ANALYSIS FOR RAFT FOUNDATIONS

Settlement analysis has been performed in accordance with IS:8009 (Part 1)-1976. The total settlement has been computed as the immediate settlement computations by elastic theory as per procedure given by Bowles[3] and consolidation settlement [Clauses 9.2.2 and 9.2.3 of IS 8009 (Part 1) 1976].

By classical theory, as sum of elastic settlement and consolidation settlement. The elastic settlement is calculated in accordance with Clause 9.2.3 of IS 8009 Part 1-1976. Since the clays encountered at site are hard in consistency with high SPT values, consolidation settlement is unlikely to occur.

The elastic settlement has been computed using the following equation [Clause 9.2.3 of IS 8009 Part 1-1976][6].

$$S_i = \frac{qB'(1-\mu^2)}{E} I d_f d_r$$

Si	=	immediate (elastic) Settlement
B	=	Foundation width, B'= B/2
μ	=	Poisson's ratio
q	=	applied bearing pressure
E	=	modulus of elasticity
Df	=	depth factor
Dr	=	rigidity factor
I	=	influence factor at corner of rectangular loaded area (B'xL')

5.5 AXIAL CAPACITY OF BORED CAST-IN-SITU PILE FOUNDATION

The axial compressive capacity for bored piles has been computed based on Static analysis using c-φ values as interpreted from the site stratigraphy, SPT values and laboratory test results.

The pile capacities given in this report are calculated values. These may be used as a guideline for initial planning. These should be confirmed by condition of static and dynamic load tests on initial test piles before adopting the values in this report for the design.

5.5.1 STATIC ANALYSIS BASED ON C-ϕ VALUES

The ultimate pile compressive capacity has been computed using the following equation as given in IS 2911 Part-I Section 2.

$$Q_{ult} = \left[\sum_{i=1}^{n} f_s A_s L_i\right] + q_u A_p$$

$$= \left[\sum_{i=1}^{n} (\alpha c_i + p_i k \tan\delta_i) A_s L_i\right] + \left[c_p N_c + q_p N_q\right] A_p$$

Q_{ult}	=	Ultimate pile capacity
Fs	=	Unit skin friction
α	=	Adhesion factor
Ci	=	Cohesion intercept in ith layer
P_i	=	Overburden pressure at centre of ith layer

k	=	Coefficient of lateral earth pressure, taken as 1.2 under compressive loading & 0.6 under uplifting loading
δi	=	Angle of friction between soil and pile (taken as equal to δi) for the ith layer
As	=	Surface area of pile per m length
Li	=	length of pile section in ith layer
Cp	=	Cohesion intercept in bearing strata
qu	=	unit end bearing
qp	=	overburden pressure in bearing strata
Nc,Nq	=	bearing capacity factors, which are a function of ϕ in the bearing strata
Ap	=	pile cross sectional area

A factor of safety of 2.5 has been used on the ultimate pile capacity as per IS 1904-1986 in order to obtain the safe pile capacities.

The overburden pressure is assumed to become constant below depth of 15 pile diameters.

5.6 LATERAL LOAD CAPACITY OF BORED CAST-IN-SITU PILE FOUNDATION

The lateral load carrying capacity of bored pile has been computed based on Appendix, Clause 5.5.2 of IS:2911 (Part 1/Sect.2)1979. The pile head is assumed to be fixed.

The depth of fixity has been computed as per Fig.2 of Appendix C, Clause 5.5.2 of IS: 2911, Part 1, Section 2. The lateral load carrying capacity of pile has been computed for a permissible horizontal deflection of 5 mm using the following equation for fixed head pile.

$$Q = \frac{12\ y\ E\ I}{(L_1 + L_f)^3}$$

Q	=	lateral load
E	=	the Young's modulus of pile material
I	=	moment of inertia of pile cross section.
Lf	=	depth of fixity
L1	=	length of pile section below cut-off-level that may not contribute significantly to lateral resistance (in loose/weak soils)
Y	=	horizontal deflection

6.0 FOUNDATION ANALYSIS RECOMMENDATIONS

A suitable foundation for any structure should have an adequate factor of safety against exceeding the bearing capacity of the supporting soils. Also the vertical movements due to compression of the soils should be within tolerable limits for the structure. We consider that foundation designed in accordance with the recommendations given herein will satisfy these criteria.

6.1 FOUNDATION TYPE AND DEPTH

We understand that three (3) basements with 15 floors and 5 future floors shall be provided for the building tower. pile foundations may be used to support the structural loads. Recommendations are given herein for 600 and 1000mm diameter for the depths of 10,15,20,25&30 mts below COL with RCC bored cast-in-situ piles.

Bore Hole No	Pile Diameter, mm	Pile Length below Cut-Off-Level, m	Recommended Safe Pile Capacity, Tonnes			
			Vertical Capacity of Piles (T).	Uplift capacity of Pile. (T)	Lateral*** (Fixed head horizontal deflection)	Lateral*** (Free head horizontal deflection)
01	600	10.00	23.88	22.37	38.91 (M35)	18.81 (M35)
		15.00	59.40	37.10		
		20.00	83.58	54.57		
		25.00	100.51	72.04		
		30.00	117.44	89.51		
02	600	10.00	34.31	31.40		
		15.00	48.98	47.20		
		20.00	85.11	64.27		
		25.00	101.94	82.19		
		30.00	118.77	100.11		
03	600	10.00	34.94	32.39		
		15.00	61.42	48.23		
		20.00	97.40	65.44		
		25.00	150.72	88.12		
		30.00	172.40	110.80		

Bore Hole No	Pile Diameter, mm	Pile Length below Cut-Off-Level, m	Recommended Safe Pile Capacity, Tonnes			
			Vertical Capacity of Piles (T).	Uplift capacity of Pile. (T)	Lateral*** (Fixed head horizontal deflection)	Lateral*** (Free head horizontal deflection)
04	600	10.00	23.42	22.24		
		15.00	35.27	35.27		
		20.00	69.50	49.85		
		25.00	85.27	66.73		
		30.00	101.05	83.62		
05	600	10.00	25.66	24.47		
		15.00	37.43	37.43		
		20.00	71.89	52.33		
		25.00	86.96	68.53		
		30.00	102.04	84.73		
06	600	10.00	26.81	25.89		
		15.00	37.63	37.91		
		20.00	76.65	53.38		
		25.00	93.08	70.91		
		30.00	109.52	88.44		
07	600	10.00	28.62	27.41	38.91 (M35)	18.81 (M35)
		15.00	40.35	40.33		
		20.00	78.98	55.92		
		25.00	95.27	73.30		
		30.00	111.55	90.69		
08	600	10.00	29.99	28.48		
		15.00	42.26	41.92		
		20.00	79.10	57.46		
		25.00	94.94	74.40		
		30.00	110.78	91.35		
09	600	10.00	23.27	22.05		
		15.00	36.08	36.03		
		20.00	48.89	50.00		
		25.00	92.02	68.37		
		30.00	109.31	86.74		

Bore Hole No	Pile Diameter, mm	Pile Length below Cut-Off-Level, m	Recommended Safe Pile Capacity, Tonnes			
			Vertical Capacity of Piles (T).	Uplift capacity of Pile. (T)	Lateral*** (Fixed head horizontal deflection)	Lateral*** (Free head horizontal deflection)
01	1000	10.00	49.92	44.24	55.51 (M35)	21.77 (M35)
		15.00	137.53	76.65		
		20.00	240.72	124.36		
		25.00	285.37	172.08		
		30.00	330.03	219.79		
02	1000	10.00	95.10	83.30		
		15.00	123.33	114.91		
		20.00	307.50	164.71		
		25.00	366.66	226.66		
		30.00	425.82	288.60		
03	1000	10.00	69.81	61.33		
		15.00	97.07	91.98		
		20.00	232.56	129.09		
		25.00	495.99	192.03		
		30.00	556.17	254.98		
04	1000	10.00	49.32	44.21		
		15.00	71.28	69.67		
		20.00	171.61	103.50		
		25.00	249.81	149.88		
		30.00	293.10	196.25		
05	1000	10.00	52.70	47.83		
		15.00	74.27	72.91		
		20.00	212.88	109.77		
		25.00	254.47	154.48		
		30.00	296.06	199.18		
06	1000	10.00	58.38	35.94		
		15.00	83.37	50.47		
		20.00	244.46	68.45		
		25.00	290.62	88.50		
		30.00	336.78	108.54		

Bore Hole No	Pile Diameter, mm	Pile Length below Cut-Off-Level, m	Recommended Safe Pile Capacity, Tonnes			
			Vertical Capacity of Piles (T).	Uplift capacity of Pile. (T)	Lateral*** (Fixed head horizontal deflection)	Lateral*** (Free head horizontal deflection)
07	1000	10.00	58.07	52.89	55.51 (M35)	21.77 (M35)
		15.00	79.97	78.28		
		20.00	237.40	117.42		
		25.00	282.64	165.70		
		30.00	327.87	213.99		
08	1000	10.00	60.64	54.65		
		15.00	83.39	80.89		
		20.00	232.94	119.63		
		25.00	276.94	166.70		
		30.00	320.93	213.77		
09	1000	10.00	98.84	48.24		
		15.00	231.17	99.26		
		20.00	279.20	150.29		
		25.00	327.23	201.31		
		30.00	375.26	252.34		

The following points are highlighted with reference to the above recommended capacities:

1. The above values are based on IS: 2911(Part-1): Section - 2 and include a factor of safety equal to 2.5.
2. Capacities for piles of intermediate lengths may be linearly interpolated between the values given above.
3. The recommended lateral capacities are for a fixed pile head deflection of 5 mm at the COL, and minimum M35 grade of concrete.
4. It should be ensured that the bottom of the pile bore is cleaned properly before casting the pile. This is important because the sand particles tend to settle down at the bottom of the pile bore, which can cause reduction in the actual pile capacities achieved on site.
5. The above-recommended pile capacities may be taken as a guideline for initial design. Final pile capacities should be confirmed by conducting sufficient number of static and / or dynamic pile load tests on the initial and routine piles installed on site. We

suggest that at least one initial load test by maintained load method be performed for each of the towers.

6. IS: 2911 (Part 4) - 1985 recommends static compressive load tests by maintained load method (preferred option) or cyclic load method. In addition, tests may also be done using Osterberg cells.
7. We suggest that static load tests be conducted on at least 2 percent of the working piles. Also, dynamic load tests (PDA) may be conducted on at least 5 percent of the working piles. Sonic cross-hole tests may also be performed on selected piles to confirm the concrete quality.
8. Initial and routine pullout test as well as lateral load test should be performed on sufficient number of piles.
9. We recommended that a quality assurance plan be developed for the site in order to ensure that a sufficient number of piles are tested so that the pile quality and safe capacities are within the acceptable parameters.

6.2 BASEMENT DESIGN

The basement should be designed to resist lateral pressure as well as hydrostatic pressure.

Groundwater was met at a depth 2.70 to 3.60 m at the time of our field investigation (August, 2025 -September, 2025). For the worst condition, we suggest that the highest groundwater level for design be considered to be equal to the HFL of the Krishna River.

The basement floor slab should be checked to ensure that it can resist the consequent hydrostatic uplift with an adequate factor of safety. The basement retaining wall should be designed to resist horizontal earth pressure as well as hydrostatic pressure.

7.0 CHEMICAL ATTACK

Chemical test results on soil and groundwater are presented on Table No. 8.

The results indicate that the soils contain 0.11-0.19 percent sulphate and 0.02-0.08 percent chloride. The groundwater contains 369-376 mg/litre of sulphate and 342-386 mg/litre of chloride. The pH value of soil is 8.10-8.20 and that of groundwater is 7.46-7.55 indicating nearly neutral condition.

- IS: 456-2000 recommends that precautions should be taken against chemical degradation of concrete if

- the sulphates content of the soils exceeds 0.2 percent, or
- if the groundwater contains more than 300 mg /litre of sulphates (SO3).

Comparing the test results with these specified limits, the sulphate content of the soils is less than the specified limit whereas sulphate content of groundwater is more than 300 mg per litre.

The strata at the site may be treated in Class 2 category as described on IS: 456-2000. In our opinion, groundwater is marginally aggressive to concrete.

We recommend the following measures to limit the potential for chemical attack:

1. Piles should contain at least 400 kg/m 3cement. The cement content in concrete for open foundations, raft foundations and pile caps should be at least 330 kg/cm3 .
2. Water cement ratio in foundation concrete should not exceed 0.50.
3. A clear concrete cover over the reinforcement steel of at least 50 mm should be provided for all foundations.

8.0 SUMMARY OF PRINCIPAL FINDING & RECOMMENDATION

M/s. Medini Geo Engineering Services. (MGES) has carried out a geotechnical investigation at the Amaravati Local head office & other outfits at Amaravati for **M/s. State Bank of India.**

This volume of our report (Volume-1) presents field and laboratory data for the Amaravati Local head office Building. The scope of work for this tower includes nine boreholes, four Electrical Resistivity tests, four CBR tests.

The following are our principal findings and recommendations:

Site Stratigraphy:

The surficial soils at the borehole location classify primarily as silty clay/ fine sand is met to about 0-15 m depth with a 15.0-30.0 m thick sandy silt /clayey silt layer from the general ground level. Below this, residual Soils is met to the final explored depth.

Groundwater:

Groundwater was met at 2.70 to 3.60 m at the time of our field investigation (August 2025 -September 2025). The measured water levels are affected by the dewatering activity at an adjoining site.

Foundations Recommendations:

Pile foundation is suitable foundation schemes. Our recommended safe pile capacities for 600 mm and 1000 mm diameter bored cast-in-situ piles are presented in Section 6.8 of this report. Final pile capacities should be confirmed by conducting sufficient number of static and / or dynamic pile load tests on actual piles installed on site.

All foundation construction considerations given in Section 7.0 of this report should be meticulously followed. It is advisable to perform a pump-out test to assess the hydraulic parameters of the aquifer for design of an effective dewatering system.

8.0 CLOSURE

We appreciate the opportunity to perform this investigation for you and have pleasure in submitting this report. Please contact us when we can be of further service to you.

For MEDINI GEO ENGINEERING SERVICES

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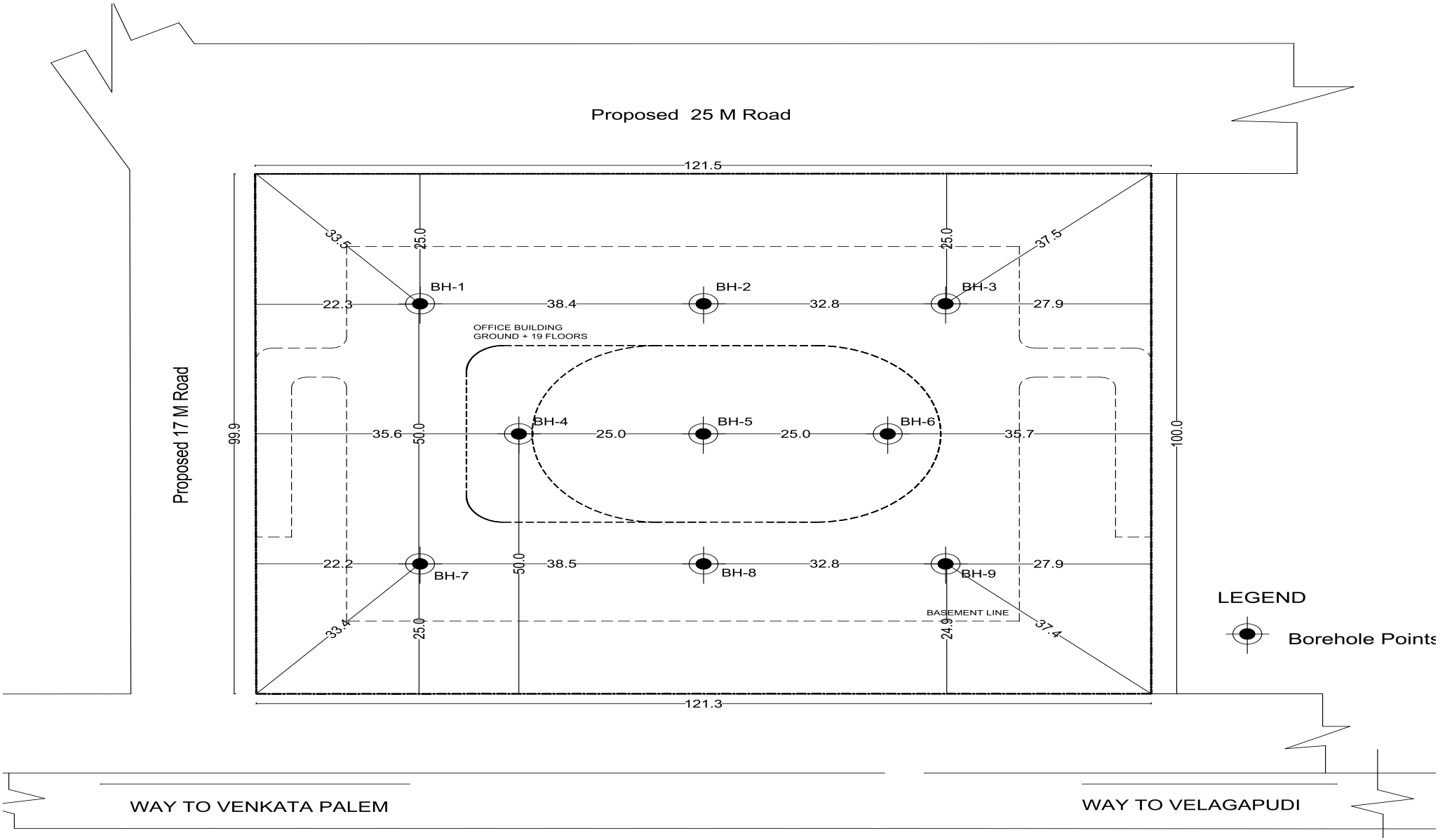
BORE HOLE LOCATION MAP



ANNEXURE - I

SUB SURFACE EXPLORATION LOG

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT : GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.

BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 25 August 2025
BORE HOLE NUMBER	: B H : 1	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 30 August 2025
COORDINATES N	: 16°53'60.27"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'20.23"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00													10 20 30 40 50 60	
25 August 2025	0.50	Cassing 3.00 mts					Very stiff brown sandy silt, medium plastic Silty clay (CI)			SPT-1	DS	3 5 8	13		
	1.00														
	1.50														
	2.00														
	2.50						2.50 m								
	3.00									SPT-2	DS	8 10 13	23		
	3.50														
	4.00														
	4.50									SPT-3		10 12 14	26		
	5.00														
30 August 2025	5.50														
	6.00									SPT-4	DS	9 13 16	29		
	6.50														
	7.00														
	7.50						Very dense grey Fine Sand (SP-SM)			SPT-5		11 16 18	34		
	8.00														
	8.50														
	9.00									SPT-6	DS	10 15 19	34		
	9.50														
	10.00														
	10.50									SPT-7		13 16 22	38		
	11.00														
	11.50														
	12.00									SPT-8	DS	12 18 22	40		
	12.50														
	13.00														
	13.50									SPT-9		14 19 23	42		
	14.00														
	14.50						14.50 m								
	15.00						Very stiff brown sandy silt,			SPT-10	DS	8 13 19	32		

REMARK : **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 31 August 2025
BORE HOLE NUMBER	: B H : 2	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 05 August 2025
COORDINATES N	: 16°53'61.58"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'16.21"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	15.00													10 20 30 40 50 60	
31 August 2025	15.50	Cassing 3.00 mts					Very stiff brown sandy silt,								
	16.00														
	16.50										UDS-1				
	17.00														
	17.50														
	18.00									SPT-11	DS	12 14 24	38		
	18.50														
	19.00														
	19.50										UDS-2				
	#####														
05 August 2025	20.50														
	21.00									SPT-12		13 16 25	41		
	21.50														
	22.00														
	22.50										UDS-3				
	23.00														
	23.50						23.50 m								
	24.00						Residual Soil (or) Completely			SPT-13		25 26 32	58		
	24.50														
	25.00														
	25.50														
	26.00														
	26.50														
	27.00									SPT-14	DS	27 32 32	64		
	27.50														
	28.00														
	28.50														
	29.00														
	29.50														
	#####									SPT-15		25 34 36	70		

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 31 August 2025
BORE HOLE NUMBER	: B H : 2	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 05 August 2025
COORDINATES N	: 16°53'61.58"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'16.21"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS (10 20 30 40 50 60)	REMARKS
	#####														
31 August 2025	#####	Cassing 3.00 mts					Residual Soil (or) Completely Weathered Rock (CWR)			SPT-16	DS	50 Blows 8cms>100			
	31.00														
	31.50														
	32.00														
	32.50														
	#####														
	33.50														
	#####														
	34.50														
	#####														
05 August 2025	35.50									SPT-17	DS	Refusal >100			
	#####														
	36.50														
	37.00														
	37.50														
	#####														
	38.50														
	#####									SPT-18	DS	Refusal >100			
	39.50														
	#####						40.00m								

REMARK:
SPT- STANDARD PENETRATION TEST
RQD- ROCK QUALITY DESIGNTEGRATED
RUB- ROAD UNDER BRIDGE
UDS - UNDISTURBED SAMPLE
CR- CORE RECOVERY
ROB- ROAD OVER BRIDGE
DS - DISTURBED SAMPLE
GWL- GROUND WATER LEVEL

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT : GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.

BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 31 August 2025
BORE HOLE NUMBER	: B H : 2	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 05 August 2025
COORDINATES N	: 16°53'61.58"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'16.21"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00													10 20 30 40 50 60	
31 August 2025	0.50	Cassing 3.00 mts					Very stiff brown sandy silt, medium plastic silty clay (CI)								
	1.00														
	1.50						2.50 m			SPT-1	DS	5 6 7	13		
	2.00														
	2.50														
	3.00									SPT-2	DS	9 10 11	21		
	3.50														
	4.00														
	4.50									SPT-3		11 12 13	25		
	5.00														
	5.50														
05 August 2025	6.00									SPT-4	DS	10 13 16	29		
	6.50														
	7.00														
	7.50									SPT-5		11 16 18	34		
	8.00						Very dense grey Fine Sand (SP-SM)								
	8.50														
	9.00									SPT-6	DS	13 16 20	36		
	9.50														
	10.00														
	10.50									SPT-7		12 17 23	40		
	11.00														
	11.50														
	12.00									SPT-8	DS	14 20 22	42		
	12.50														
	13.00														
	13.50									SPT-9		13 19 24	43		
	14.00														
	14.50														
	15.00						15.00m			SPT-10	DS	12 20 25	45		

REMARK:
SPT- STANDARD PENETRATION TEST
RQD- ROCK QUALITY DESIGNTEGRATED
RUB- ROAD UNDER BRIDGE
UDS - UNDISTURBED SAMPLE
CR- CORE RECOVERY
ROB- ROAD OVER BRIDGE
DS - DISTURBED SAMPLE
GWL- GROUND WATER LEVEL

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 31 August 2025
BORE HOLE NUMBER	: B H : 2	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 05 August 2025
COORDINATES N	: 16°53'61.58"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'16.21"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	15.00													10 20 30 40 50 60	
31 August 2025	15.50	Cassing 3.00 mts					Very stiff brown sandy silt, Medium plastic silty clay (CI)								
	16.00														
	16.50									SPT-11		10 12 13	25		
	17.00														
	17.50														
	18.00										UDS-1				
	18.50														
	19.00														
	19.50									SPT-12	DS	11 13 15	28		
	#####														
05 August 2025	20.50														
	21.00										UDS-2				
	21.50														
	22.00														
	22.50						22.50 m			SPT-13		4 6 9	15		
	23.00						Very stiff brown sandy silt, Medium plastic silty clay (CI)								
	23.50														
	24.00										UDS-3				
	24.50														
	25.00														
	25.50														
	26.00														
	26.50														
	27.00						27.00m			SPT-14		7 10 12	22		
	27.50						Residual Soil (or) Completely Weathered Rock (CWR)								
	28.00														
	28.50														
	29.00														
	29.50														
	#####									SPT-15	DS	25 34 36	70		

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 31 August 2025
BORE HOLE NUMBER	: B H : 2	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 05 August 2025
COORDINATES N	: 16°53'61.58"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'16.21"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTER	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLING	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS (10 20 30 40 50 60)	REMARKS
	#####														
	#####														
	31.00														
	31.50														
31 August 2025	32.00														
	32.50														
	#####									SPT-16	DS	Refusal >100			
	33.50														
	#####														
	34.50														
	#####														
	35.50	Cassing 3.00 mts					Residual Soil (or) Completely Weathered Rock (CWR)								
	#####									SPT-17	DS	Refusal >100			
	36.50														
	37.00														
	37.50														
05 August 2025	#####														
	38.50														
	#####									SPT-18	DS	Refusal >100			
	39.50														
	#####						40.00m								

REMARK: **SPT-** STANDARD PENETRATION TEST; **RQD-** ROCK QUALITY DESIGNTEGRATED; **RUB-** ROAD UNDER BRIDGE; **UDS -** UNDISTURBED SAMPLE; **CR-** CORE RECOVERY; **ROB-** ROAD OVER BRIDGE; **DS -** DISTURBED SAMPLE; **GWL-** GROUND WATER LEVEL

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT : GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.

BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 12 August 2025
BORE HOLE NUMBER	: B H : 3	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 20 August 2025
COORDINATES N	: 16°53'64.19"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'14.30"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00													10 20 30 40 50 60	
12 August 2025	0.50	Cassing 3.00 mts													
	1.00														
	1.50									SPT-1	DS	4 5 7	12		
	2.00														
	2.50														
	3.00									SPT-2	DS	5 7 9	16		
	3.50														
	4.00						Very stiff brown sandy silt, low plastic silty clay (CI)								
	4.50									SPT-3		7 7 10	17		
	5.00														
	5.50														
	6.00									SPT-4	DS	9 10 12	22		
	6.50														
	7.00														
20 August 2025	7.50						7.50 m			SPT-5		9 9 11	20		
	8.00														
	8.50						Very dense Grey fine Sand intermixed Silty Clay (SP-SM)								
	9.00										UDS				
	9.50														
	10.00														
	10.50						10.50 m			SPT-6		10 10 12	22		
	11.00														
	11.50														
	12.00										UDS				
	12.50														
	13.00						Very stiff brown sandy silt, Medium plastic Silty Clay (CI)								
	13.50									SPT-7		11 12 13	25		
	14.00														
	14.50														
	15.00						15.00m				UDS				

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 12 August 2025
BORE HOLE NUMBER	: B H : 3	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 20 August 2025
COORDINATES N	: 16°53'64.19"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'14.30"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTER	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLING	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	15.00													10 20 30 40 50 60	
12 August 2025	15.50	Cassing 3.00 mts													
	16.00														
	16.50									SPT-11		13 15 15	30		
	17.00														
	17.50														
	18.00									SPT-12		14 16 17	33		
	18.50														
	19.00														
	19.50														
	#####									SPT-13		16 17 19	36		
20 August 2025	20.50						Very stiff brown sandy silt, Medium plastic Silty Clay (CI)								
	21.00														
	21.50										UDS				
	22.00									SPT-14		12 15 20	35		
	22.50														
	23.00														
	23.50										UDS				
	24.00														
	24.50														
	25.00									SPT-15		15 17 20	37		
	25.50														
	26.00														
	26.50										UDS				
	27.00														
	27.50														
	28.00									SPT-16		18 21 23	44		
	28.50														
	29.00						29.00m								
	29.50						Highly Weathered Rock (HWR)	9.00							
	#####														

REMARK: **SPT-** STANDARD PENETRATION TEST; **UDS -** UNDISTURBED SAMPLE; **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED; **CR-** CORE RECOVERY; **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE; **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 12 August 2025
BORE HOLE NUMBER	: B H : 3	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 20 August 2025
COORDINATES N	: 16°53'64.19"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'14.30"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTER	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLING	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS (10 20 30 40 50 60)	REMARKS
	#####														
	#####														
	31.00							13.0							
	31.50														
12 August 2025	32.00						Highly Weathered Rock (HWR)	28.0	11.0						
	32.50														
	#####							35.0	28.0						
	33.50														
	#####							47.0	47.0						
	34.50														
	#####	Cassing 3.00 mts						42.0	35.0						
	35.50														
	#####							40.0	40.0						
	36.50						Moderately Weathered Rock (MWR)								
20 August 2025	37.00							47.0	40.0						
	37.50														
	#####							43.0	38.0						
	38.50														
	#####							53.0	47.0						
	39.50														
	#####						40.00m	51.0	51.0						

REMARK:
SPT- STANDARD PENETRATION TEST
RQD- ROCK QUALITY DESIGNTEGRATED
RUB- ROAD UNDER BRIDGE
UDS - UNDISTURBED SAMPLE
CR- CORE RECOVERY
ROB- ROAD OVER BRIDGE
DS - DISTURBED SAMPLE
GWL- GROUND WATER LEVEL

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT : GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.

BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 21 August 2025
BORE HOLE NUMBER	: B H : 4	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 24 August 2025
COORDINATES N	: 16°53'63.75"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'19.36"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00													10 20 30 40 50 60	
21 August 2025	0.50	Cassing 3.00 mts					Very stiff brown sandy silt, low plastic Silty Clay (CI)			SPT-1	DS	5 6 7	13		
	1.00														
	1.50														
	2.00														
	2.50														
	3.00						3.00 m			SPT-2	DS	5 7 8	15		
	3.50														
	4.00														
	4.50									SPT-3		5 6 7	13		
	5.00														
24 August 2025	5.50														
	6.00									SPT-4	DS	9 12 18	30		
	6.50														
	7.00														
	7.50									SPT-5		11 15 17	32		
	8.00						Very dense grey Fine Sand (SP-SM)								
	8.50														
	9.00									SPT-6	DS	13 17 20	37		
	9.50														
	10.00														
	10.50									SPT-7		10 13 25	38		
	11.00														
	11.50														
	12.00									SPT-8	DS	16 20 22	42		
	12.50														
	13.00														
	13.50									SPT-9		20 23 27	50		
	14.00														
	14.50														
	15.00						15.00m			SPT-10	DS	21 23 29	52		

REMARK : **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 21 August 2025
BORE HOLE NUMBER	: B H : 4	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 24 August 2025
COORDINATES N	: 16°53'63.75"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'19.36"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTER	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLING	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS 10 20 30 40 50 60	REMARKS
	15.00														
21 August 2025	15.50	Cassing 3.00 mts													
	16.00														
	16.50										UDS				
	17.00														
	17.50														
	18.00									SPT-11		11 14 17	31		
	18.50														
	19.00						Very stiff brown sandy silt, Medium plastic Silty Clay (CI)								
	19.50										UDS				
	#####														
24 August 2025	20.50														
	21.00									SPT-12		10 11 13	24		
	21.50														
	22.00														
	22.50						22.50 m				UDS				
	23.00														
	23.50														
	24.00									SPT-13		11 13 15	28		
	24.50														
	25.00						Very stiff brown sandy silt, Medium plastic Silty Clay (CI)								
	25.50										UDS				
	26.00														
	26.50														
	27.00									SPT-14		14 16 17	33		
	27.50														
	28.00						28.00m								
	28.50														
	29.00						Residual Soil (or) Completely Weathered Rock (CWR)								
	29.50														
	#####									SPT-15	DS	20 23 27	50		

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 21 August 2025
BORE HOLE NUMBER	: B H : 4	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 24 August 2025
COORDINATES N	: 16°53'63.75"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'19.36"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS 10 20 30 40 50 60	REMARKS
	#####														
	#####														
	31.00									SPT-16		22 28 32	60		
	31.50														
21 August 2025	32.00														
	32.50														
	#####														
	33.50														
	#####	Cassing 3.00 mts								SPT-17	DS	Refusal >100			
	34.50														
	#####														
	35.50						Residual Soil (or) Completely Weathered Rock (CWR)								
	#####														
	36.50														
24 August 2025	37.00									SPT-18	DS	Refusal >100			
	37.50														
	#####														
	38.50														
	#####														
	39.50														
	#####						40.00m			SPT-19	DS	Refusal >100			

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 25 August 2025
BORE HOLE NUMBER	: B H : 5	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: ##################
COORDINATES N	: 16°53'64.31"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'17.94"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00													10 20 30 40 50 60	
25 August 2025	0.50	Cassing 3.00 mts					Very stiff brown sandy silt, low plastic Silty Clay (CI)								
	1.00														
	1.50						1.50 m			SPT-1	DS	6 8 12	20		
	2.00														
	2.50														
	3.00									SPT-2	DS	6 9 13	22		
	3.50														
	4.00														
	4.50									SPT-3		8 11 13	24		
	5.00														
	5.50														
	6.00									SPT-4	DS	10 13 17	30		
02 September 2025	6.50														
	7.00														
	7.50									SPT-5		12 16 19	35		
	8.00						Very dense grey Fine Sand (SP-SM)								
	8.50														
	9.00									SPT-6	DS	15 17 23	40		
	9.50														
	10.00														
	10.50									SPT-7		14 20 23	43		
	11.00														
	11.50														
	12.00						12.00 m			SPT-8	DS	16 19 24	43		
	12.50														
	13.00														
	13.50						Very stiff brown sandy silt, Medium plastic Silty Clay (CI)			SPT-9		7 9 12	21		
	14.00														
	14.50														
	15.00									SPT-10	DS	9 10 12	22		

REMARK : **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 25 August 2025
BORE HOLE NUMBER	: B H : 5	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: ##################
COORDINATES N	: 16°53'64.31"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'17.94"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	15.00													10 20 30 40 50 60	
25 August 2025	15.50	Cassing 3.00 mts													
	16.00														
	16.50										UDS				
	17.00														
	17.50														
	18.00									SPT-11		12 16 20	36		
	18.50														
	19.00														
	19.50										UDS				
	#####														
02 September 2025	20.50														
	21.00						Very stiff brown sandy silt, Medium plastic silty clay (CI)			SPT-12		13 16 25	41		
	21.50														
	22.00														
	22.50										UDS				
	23.00														
	23.50														
	24.00									SPT-13		13 16 20	36		
	24.50														
	25.00														
	25.50										UDS				
	26.00														
	26.50														
	27.00									SPT-14		15 17 17	34		
	27.50						Residual Soil (or) Completely Weathered Rock (CWR)								
	28.00														
	28.50														
	29.00														
	29.50														
	#####									SPT-15	DS	22 25 28	53		

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 25 August 2025
BORE HOLE NUMBER	: B H : 5	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: ##################
COORDINATES N	: 16°53'64.31"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'17.94"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS (10 20 30 40 50 60)	REMARKS
	#####														
25 August 2025	#####	Cassing 3.00 mts													
	31.00									SPT-16		50 Blows 5cms >100			
	31.50														
	32.00														
	32.50														
	#####														
	33.50														
	#####									SPT-17	DS	Refusal >100			
	34.50														
	#####														
02 September 2025	35.50						Residual Soil (or) Completely Weathered Rock (CWR)								
	#####														
	36.50														
	37.00									SPT-18	DS	Refusal >100			
	37.50														
	#####														
	38.50														
	#####														
	39.50														
	#####						40.00m			SPT-19	DS	Refusal >100			

REMARK: **SPT-** STANDARD PENETRATION TEST; **RQD-** ROCK QUALITY DESIGNTEGRATED; **RUB-** ROAD UNDER BRIDGE; **UDS -** UNDISTURBED SAMPLE; **CR-** CORE RECOVERY; **ROB-** ROAD OVER BRIDGE; **DS -** DISTURBED SAMPLE; **GWL-** GROUND WATER LEVEL

MEDINI GEO ENGINEERING

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: ################
BORE HOLE NUMBER	: B H : 6	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: ################
COORDINATES N	: 16°53'65.29"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'14.58"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms			SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00															10 20 30 40 50 60	
04 September 2025	0.50	Cassing 3.00 mts															
	1.00																
	1.50									SPT-1	DS	3	5	6	11		
	2.00																
	2.50																
	3.00									SPT-2	DS	5	7	9	16		
	3.50																
	4.00																
	4.50										UDS						
	5.00																
	5.50																
09 September 2025	6.00						Very stiff brown sandy silt,Medium plastic silty clay (CI)			SPT-3	DS	10	13	15	28		
	6.50																
	7.00																
	7.50										UDS						
	8.00																
	8.50																
	9.00									SPT-4	DS	12	14	17	31		
	9.50																
	10.00																
	10.50										UDS						
	11.00																
	11.50																
	12.00									SPT-5	DS	13	16	22	38		
	12.50																
	13.00																
	13.50										UDS						
	14.00																
	14.50																
	15.00						Very dense grey Fine Sand			SPT-6	DS	14	17	18	35		

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: ################
BORE HOLE NUMBER	: B H : 6	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: ################
COORDINATES N	: 16°53'65.29"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'14.58"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	15.00													10 20 30 40 50 60	
04 September 2025	15.50	Cassing 3.00 mts					Very dense grey Fine Sand (SP-SM)								
	16.00														
	16.50									SPT-7		13 18 23	41		
	17.00														
	17.50														
	18.00									SPT-8	DS	14 19 24	43		
	18.50														
	19.00														
	19.50									SPT-9		17 23 23	46		
	#####														
09 September 2025	20.50														
	21.00									SPT-10	DS	20 24 25	49		
	21.50														
	22.00														
	22.50									SPT-11		19 25 29	54		
	23.00						Very stiff brown sandy silt, Medium plastic silty clay (CI)								
	23.50														
	24.00									SPT-12		8 13 19	32		
	24.50														
	25.00														
	25.50										UDS				
	26.00														
	26.50														
	27.00									SPT-13		12 16 24	40		
	27.50						Residual Soil (or) Completely Weathered Rock (CWR)								
	28.00														
	28.50														
	29.00														
	29.50														
	#####									SPT-14	DS	26 31 36	67		

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: ################
BORE HOLE NUMBER	: B H : 6	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: ################
COORDINATES N	: 16°53'65.29"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'14.58"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	#####													10 20 30 40 50 60	
04 September 2025	#####	Cassing 3.00 mts					Residual Soil (or) Completely Weathered Rock (CWR)			SPT-15		50 Blows 5cms >100			
	31.00														
	31.50														
	32.00														
	32.50														
	#####														
	33.50									SPT-16	DS	Blows 3cms >100			
	#####														
	34.50														
	#####														
09 September 2025	35.50														
	#####														
	36.50														
	37.00									SPT-17	DS	Refusal >100			
	37.50														
	#####														
	38.50														
	#####														
	39.50														
	#####						40.00m			SPT-18	DS	Refusal >100			

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 16 August 2025
BORE HOLE NUMBER	: B H : 7	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 20 August 2025
COORDINATES N	: 16°53'64.89"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'20.46"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms			SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00															10 20 30 40 50 60	
16 August 2025	0.50	Cassing 3.00 mts					Very stiff brown sandy silt, medium plastic silty clay (CI)										
	1.00																
	1.50									SPT-1	DS	3	6	9	15		
	2.00																
	2.50																
	3.00									SPT-2	DS	3	6	9	15		
	3.50																
	4.00																
	4.50									SPT-3		4	5	7	12		
	5.00																
	5.50																
20 August 2025	6.00									SPT-4	DS	6	6	8	14		
	6.50																
	7.00																
	7.50						Very dense grey Fine Sand (SP-SM)			SPT-5	DS	12	14	17	31		
	8.00																
	8.50																
	9.00									SPT-6	DS	6	8	11	19		
	9.50																
	10.00																
	10.50									SPT-7	DS	4	6	8	14		
	11.00																
	11.50																
	12.00						Very stiff brown sandy silt, Medium plastic silty clay (CI)				UDS						
	12.50																
	13.00																
	13.50									SPT-8	DS	7	9	17	26		
	14.00																
	14.50																
	15.00										UDS						

REMARK : **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 16 August 2025
BORE HOLE NUMBER	: B H : 7	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 20 August 2025
COORDINATES N	: 16°53'64.89"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'20.46"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms			SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	15.00															10 20 30 40 50 60	
16 August 2025	15.50	Cassing 3.00 mts															
	16.00																
	16.50									SPT-9		15	17	19	36		
	17.00																
	17.50																
	18.00										UDS						
	18.50																
	19.00																
	19.50									SPT-10		15	19	20	39		
	#####																
20 August 2025	20.50																
	21.00										UDS						
	21.50																
	22.00						Very stiff brown sandy silt, Medium plastic silty clay (CI)										
	22.50									SPT-11		10	13	16	29		
	23.00																
	23.50																
	24.00										UDS						
	24.50																
	25.00																
	25.50									SPT-12		9	12	16	28		
	26.00																
	26.50																
	27.00										UDS						
	27.50						Residual Soil (or) Completely Weathered Rock (CWR)										
	28.00																
	28.50									SPT-13		22	27	32	59		
	29.00																
	29.50																
	#####									SPT-14	DS	28	35	36	71		

REMARK: **SPT-** STANDARD PENETRATION TEST; **UDS -** UNDISTURBED SAMPLE; **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED; **CR-** CORE RECOVERY; **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE; **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 16 August 2025
BORE HOLE NUMBER	: B H : 7	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 20 August 2025
COORDINATES N	: 16°53'64.89"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'20.46"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	#####													10 20 30 40 50 60	
16 August 2025	#####	Cassing 3.00 mts					Residual Soil (or) Completely Weathered Rock (CWR)								
	31.00									SPT-15		50 Blows 6cms >100			
	31.50														
	32.00														
	32.50														
	#####														
	33.50														
	#####									SPT-16	DS	Blows 4cms >100			
	34.50														
	#####														
	35.50														
	#####														
	36.50														
20 August 2025	37.00									SPT-17	DS	Refusal >100			
	37.50														
	#####														
	38.50														
	#####														
	39.50														
	#####						40.00m			SPT-18	DS	Refusal >100			

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	**TYPE OF STRUCTURE**	: OFFICE BUILDING	**DATE COMMENCED**	: 16 August 2025
BORE HOLE NUMBER	: B H : 8	**NO.OF FLOORS**	: 3 Cellar+15+5 FLOOR	**DATE COMPLETED**	: 24 August 2025
COORDINATES N	: 16°53'64.8"N	**CORE DIAMETER (mm)**	: 75	**GEO-TECH ENGINEER**	: NEELAKANTAM
E	: 80°51'20.51"E	**WEIGHT OF HAMMER (Kg)**	: 63.5	**WATER TABLE**	: NOT MET
GROUND ELEVATION	: 100.00 meter	**DIST.FALLING HAMMER (cm)**	: 75	**DRILLING MASTEI**	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	**CASSING DIAMETER (MM)**	: 150	**METHOD OF SAMPLIN(**	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms			SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00															10 20 30 40 50 60	
16 August 2025	0.50	Cassing27.00 mts					Very stiff brown sandy silt, low plastic silty clay (CI)			SPT-1	DS	5	7	8	15		
	1.00																
	1.50																
	2.00									SPT-2	DS	4	6	9	15		
	2.50																
	3.00																
	3.50									SPT-3		8	9	13	22		
	4.00																
	4.50																
	5.00																
24 August 2025	5.50																
	6.00									SPT-4	DS	10	11	14	25		
	6.50																
	7.00																
	7.50						Very dense grey Fine Sand (SP-SM)			SPT-5	DS	11	13	16	29		
	8.00																
	8.50																
	9.00									SPT-6	DS	12	15	17	32		
	9.50																
	10.00																
	10.50									SPT-7	DS	8	9	9	18		
	11.00																
	11.50																
	12.00						Very stiff brown sandy silt, Medium plastic silty clay (CI)				UDS						
	12.50																
	13.00																
	13.50									SPT-8	DS	14	16	19	35		
	14.00																
	14.50																
	15.00										UDS						

REMARK : **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 16 August 2025
BORE HOLE NUMBER	: B H : 8	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 24 August 2025
COORDINATES N	: 16°53'64.8"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'20.51"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	15.00													10 20 30 40 50 60	
16 August 2025	15.50														
	16.00														
	16.50									SPT-9		15 17 19	36		
	17.00														
	17.50														
	18.00										UDS				
	18.50														
	19.00														
	19.50									SPT-10		15 19 20	39		
	#####														
24 August 2025	20.50														
	21.00										UDS				
	21.50														
	22.00	Cassing 27.00 mts					Very stiff brown sandy silt, Medium plastic silty clay (CI)								
	22.50									SPT-11		5 11 13	24		
	23.00														
	23.50														
	24.00										UDS				
	24.50														
	25.00														
	25.50									SPT-12		9 12 16	28		
	26.00														
	26.50														
	27.00										UDS				
	27.50														
	28.00														
	28.50						Residual Soil (or) Completely Weathered Rock (CWR)			SPT-13		20 21 27	48		
	29.00														
	29.50														
	#####										DS				

REMARK: **SPT-** STANDARD PENETRATION TEST; **RQD-** ROCK QUALITY DESIGNTEGRATED; **RUB-** ROAD UNDER BRIDGE; **UDS -** UNDISTURBED SAMPLE; **CR-** CORE RECOVERY; **ROB-** ROAD OVER BRIDGE; **DS -** DISTURBED SAMPLE; **GWL-** GROUND WATER LEVEL

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: A0	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 16 August 2025
BORE HOLE NUMBER	: B H : 8	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 24 August 2025
COORDINATES N	: 16°53'64.8"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'20.51"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	#####													10 20 30 40 50 60	
16 August 2025	#####	Cassing 27.00 mts					Residual Soil (or) Completely Weathered Rock (CWR)								
	31.00														
	31.50									SPT-14		17 24 27	51		
	32.00														
	32.50														
	#####														
	33.50														
	#####									SPT-15	DS	21 37 39	76		
	34.50														
	#####														
24 August 2025	35.50														
	#####														
	36.50														
	37.00									SPT-16	DS	Refusal >100			
	37.50														
	#####														
	38.50														
	#####														
	39.50														
	#####						40.00m			SPT-17	DS	Refusal >100			

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: IAD	**TYPE OF STRUCTURE**	: OFFICE BUILDING	**DATE COMMENCED**	: 16 August 2025
BORE HOLE NUMBER	: B H : 9	**NO.OF FLOORS**	: 3 Cellar+15+5 FLOOR	**DATE COMPLETED**	: 24 August 2025
COORDINATES N	: 16°53'67.42"N	**CORE DIAMETER (mm)**	: 75	**GEO-TECH ENGINEER**	: NEELAKANTAM
E	: 80°51'15.27"E	**WEIGHT OF HAMMER (Kg)**	: 63.5	**WATER TABLE**	: NOT MET
GROUND ELEVATION	: 100.00 meter	**DIST.FALLING HAMMER (cm)**	: 75	**DRILLING MASTEI**	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	**CASSING DIAMETER (MM)**	: 150	**METHOD OF SAMPLIN(**	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms			SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	0.00															10 20 30 40 50 60	
16 August 2025	0.50																
	1.00																
	1.50						Very stiff brown sandy silt, low plastic silty clay (CI)			SPT-1	DS	3	5	6	11		
	2.00																
	2.50																
	3.00									SPT-2	DS	4	7	8	15		
	3.50																
	4.00																
	4.50									SPT-3	DS	6	8	9	17		
	5.00																
	5.50																
	6.00									SPT-4	DS	9	10	12	22		
	6.50																
24 August 2025	7.00																
	7.50	Cassing 27.00 mts								SPT-5	DS	10	12	14	26		
	8.00																
	8.50																
	9.00									SPT-6	DS	10	15	15	30		
	9.50						Very dense grey Fine Sand (SP-SM)										
	10.00																
	10.50									SPT-7	DS	10	15	19	34		
	11.00																
	11.50																
	12.00									SPT-8	DS	12	19	25	44		
	12.50																
	13.00																
	13.50									SPT-9	DS	15	21	25	46		
	14.00																
	14.50																
	15.00									SPT-10	DS	15	25	27	52		

REMARK : **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: IAD	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 16 August 2025
BORE HOLE NUMBER	: B H : 9	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 24 August 2025
COORDINATES N	: 16°53'67.42"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'15.27"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms			SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	15.00															10 20 30 40 50 60	
16 August 2025	15.50	Cassing 27.00 mts															
	16.00																
	16.50									SPT-11	DS	17	20	23	43		
	17.00						Very dense grey Fine Sand (SP-SM)										
	17.50																
	18.00									SPT-12	DS	20	22	26	48		
	18.50																
	19.00																
	19.50									SPT-13	DS	20	25	27	52		
	#####																
24 August 2025	20.50																
	21.00										UDS						
	21.50																
	22.00																
	22.50									SPT-14		6	7	9	16		
	23.00						Very stiff brown sandy silt, Medium plastic silty clay (CI)										
	23.50																
	24.00										UDS						
	24.50																
	25.00																
	25.50									SPT-15		7	8	8	16		
	26.00																
	26.50																
	27.00										UDS						
	27.50																
	28.00																
	28.50						Residual Soil (or) Completely Weathered Rock (CWR)			SPT-16		24	27	33	60		
	29.00																
	29.50																
	#####										DS						

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

MEDINI GEO ENGINEERING SERVICES

SUB SURFACE EXPLORATION LOG

PROJECT	: GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.				
BORE HOLE CODE	: IAD	TYPE OF STRUCTURE	: OFFICE BUILDING	DATE COMMENCED	: 16 August 2025
BORE HOLE NUMBER	: B H : 9	NO.OF FLOORS	: 3 Cellar+15+5 FLOOR	DATE COMPLETED	: 24 August 2025
COORDINATES N	: 16°53'67.42"N	CORE DIAMETER (mm)	: 75	GEO-TECH ENGINEER	: NEELAKANTAM
E	: 80°51'15.27"E	WEIGHT OF HAMMER (Kg)	: 63.5	WATER TABLE	: NOT MET
GROUND ELEVATION	: 100.00 meter	DIST.FALLING HAMMER (cm)	: 75	DRILLING MASTEI	: MGES TEAM
TOTAL DEPTH (m)	: 40.00 meter	CASSING DIAMETER (MM)	: 150	METHOD OF SAMPLIN(	: ROTARY DRILLING

SOIL & ROCK PROFILE LOG

DATE	DEPTH (m)	Depth of Cassing	G.W.L (m)	RECYCLING WATER	HATCHING	BORE PROFILE	SAMPLE DESCRIPTIONS	CORE RECOVRY %	RQD %	SPT TEST	TYPE OF SAMPLE	SPT BLOWS 15-30-45 cms	SPT 'N'VALUE	STANDARD PENETRATION TEST NUMBER OF BLOWS	REMARKS
	#####													10 20 30 40 50 60	
16 August 2025	#####	Cassing 27.00 mts					Residual Soil (or) Completely Weathered Rock (CWR)								
	31.00														
	31.50									SPT-17	DS	18 30 34	64		
	32.00														
	32.50														
	#####														
	33.50														
	#####									SPT-18	DS	24 38 39	77		
	34.50														
	#####														
24 August 2025	35.50														
	#####														
	36.50														
	37.00									SPT-19	DS	Refusal >100			
	37.50														
	#####														
	38.50														
	#####														
	39.50														
	#####						40.00m			SPT-20	DS	Refusal >100			

REMARK: **SPT-** STANDARD PENETRATION TEST **UDS -** UNDISTURBED SAMPLE **DS -** DISTURBED SAMPLE
RQD- ROCK QUALITY DESIGNTEGRATED **CR-** CORE RECOVERY **GWL-** GROUND WATER LEVEL
RUB- ROAD UNDER BRIDGE **ROB-** ROAD OVER BRIDGE

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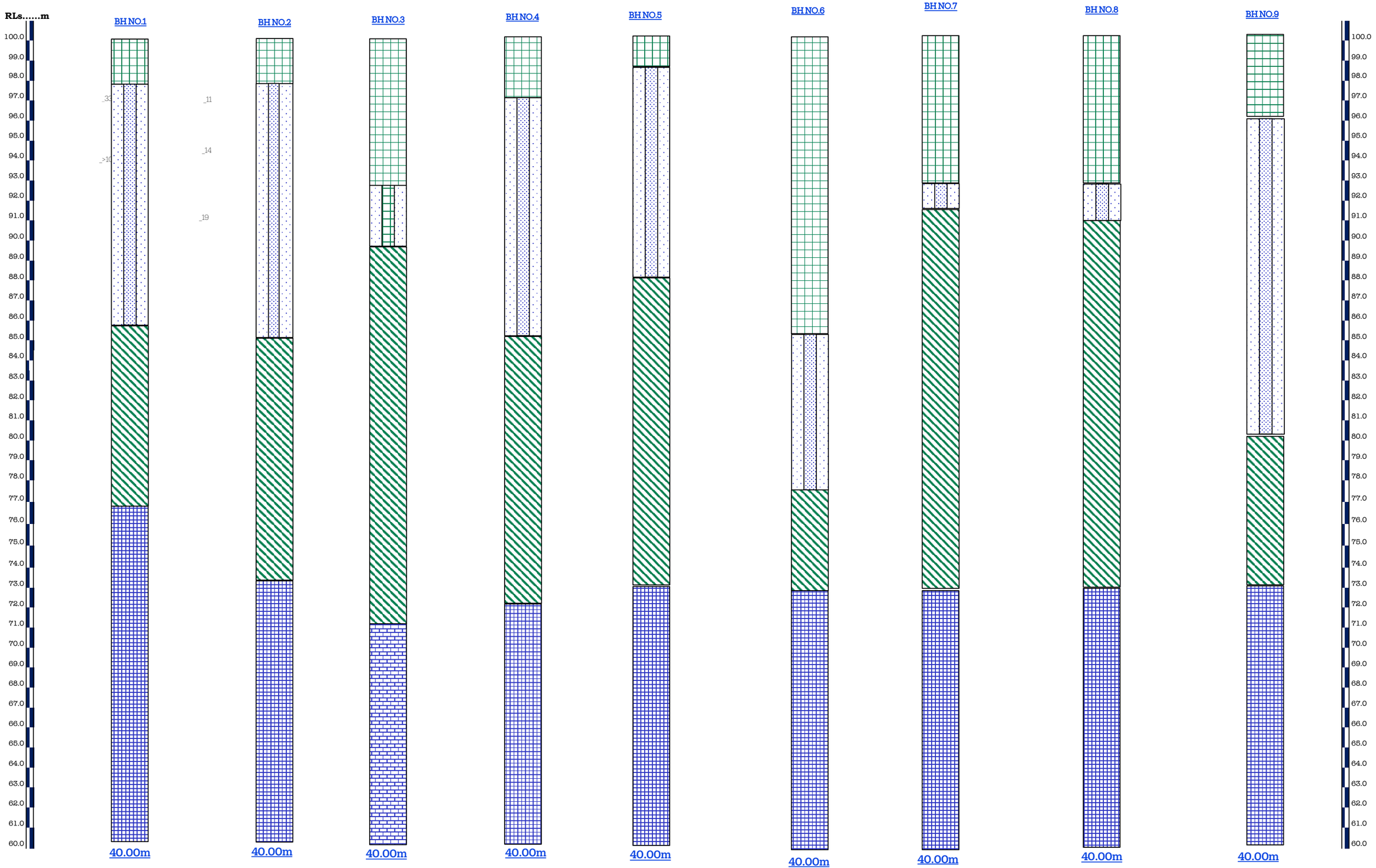
SUMMARY OF BOREHOLE PROFILE



GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRA PRADESH.

ANNEXURE-II

STANDARED PENETRATION TEST GRAPHS

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STANDARD PENETRATION TEST

BOREHOLE No. **1**
REDUCED LEVEL: **100.00** m
WATER TABLE= **2.70** m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	2.50	1.73
2.50	14.50	1.83
14.50	23.50	1.77
23.50	30.00	1.95
30.00	40.00	1.97

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.60	0.26	1.45	13	18.89	18.89	98.50
3.00	5.24	0.49	1.24	23	28.47	21.73	97.00
4.50	7.79	0.60	1.17	26	30.51	22.75	95.50
6.00	10.73	0.74	1.10	29	31.93	23.47	94.00
7.50	13.48	0.87	1.05	34	35.68	25.34	92.50
9.00	16.22	0.99	1.00	34	34.15	24.58	91.00
10.50	18.97	1.12	0.96	38	36.67	25.83	89.50
12.00	21.71	1.24	0.93	40	37.18	26.09	88.00
13.50	24.46	1.37	0.90	42	37.70	26.35	86.50
15.00	27.17	1.49	0.87	32	27.81	21.41	85.00
18.00	32.48	1.72	0.82	38	31.19	23.10	82.00
21.00	37.79	1.95	0.78	41	31.92	23.46	79.00
24.00	43.19	2.19	0.74	58	42.91	28.95	76.00
27.00	49.04	2.47	0.70	64	44.73	29.86	73.00
30.00	54.89	2.76	0.66	70	46.37	30.68	70.00
33.00	60.80	3.05	0.63	100	62.89	38.94	67.00
36.00	66.71	3.34	0.60	100	59.84	37.42	64.00

BOREHOLE No. **2**
REDUCED LEVEL: **100.00** m
WATER TABLE = **3.00** m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	1.50	1.76
1.50	15.00	1.87
15.00	27.00	1.79
27.00	40.00	1.96

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.64	0.26	1.45	13	18.81	18.81	98.50
3.00	6.41	0.64	1.15	21	24.17	19.58	97.00
4.50	9.09	0.76	1.09	25	27.35	21.18	95.50
6.00	11.78	0.88	1.05	29	30.32	22.66	94.00
7.50	14.46	1.00	1.00	34	34.11	24.55	92.50
9.00	17.15	1.11	0.97	36	34.76	24.88	91.00
10.50	19.83	1.23	0.93	40	37.27	26.14	89.50
12.00	22.52	1.35	0.90	42	37.84	26.42	88.00
13.50	25.20	1.47	0.87	43	37.54	26.27	86.50
15.00	27.89	1.59	0.85	45	38.12	26.56	85.00
16.50	30.57	1.71	0.82	25	20.57	17.79	83.50
19.50	35.94	1.94	0.78	28	21.83	18.41	80.50
22.50	41.31	2.18	0.74	15	11.12	11.12	77.50
27.00	49.37	2.54	0.69	22	15.19	15.10	73.00
30.00	74.85	4.78	0.48	70	33.48	24.24	70.00

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STANDARD PENETRATION TEST

BOREHOLE No. **3**
REDUCED LEVEL: **100.00** m
WATER TABLE = **2.90** m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	7.50	1.76
7.50	10.50	1.78
10.50	29.00	1.75

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.64	0.26	1.45	12	17.37	17.37	98.50
3.00	5.28	0.52	1.22	16	19.55	17.27	97.00
4.50	7.92	0.63	1.16	17	19.64	17.32	95.50
6.00	10.56	0.75	1.10	22	24.20	19.60	94.00
7.50	13.20	0.86	1.05	20	21.04	18.02	92.50
10.50	18.54	1.24	0.93	22	20.43	17.72	89.50
13.50	23.79	1.62	0.84	25	21.02	18.01	86.50
16.50	29.04	1.99	0.77	30	23.13	19.07	83.50
18.00	31.67	2.11	0.75	33	24.84	19.92	82.00
19.50	34.29	2.22	0.74	36	26.47	20.73	80.50
22.00	38.67	2.51	0.69	35	24.31	19.65	78.00
25.00	43.92	2.73	0.67	37	24.63	19.82	75.00
28.00	49.17	2.96	0.64	44	28.13	21.56	72.00

BOREHOLE No. **4**
REDUCED LEVEL: **100.00** m
WATER TABLE = **3.40** m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	3.00	1.71
3.00	15.00	1.82
15.00	28.00	1.76
28.00	40.00	1.95

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.57	0.26	1.46	13	18.94	18.94	98.50
3.00	5.13	0.51	1.23	15	18.38	16.69	97.00
4.50	7.86	0.68	1.13	13	14.73	14.73	95.50
6.00	10.59	0.80	1.08	30	32.30	23.65	94.00
7.50	13.32	0.92	1.03	32	32.93	23.96	92.50
9.00	16.05	1.05	0.99	37	36.52	25.76	91.00
10.50	18.78	1.17	0.95	38	36.09	25.55	89.50
12.00	21.51	1.29	0.92	42	38.49	26.74	88.00
13.50	24.24	1.41	0.89	50	44.30	29.65	86.50
15.00	26.97	1.54	0.86	52	44.62	29.81	85.00
18.00	32.25	1.77	0.81	31	25.17	20.08	82.00
21.00	37.53	1.99	0.77	24	18.51	16.75	79.00
24.00	42.81	2.22	0.73	28	20.58	17.79	76.00
27.00	48.09	2.45	0.70	33	23.17	19.09	73.00
30.00	53.75	2.72	0.67	50	33.39	24.19	70.00

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STANDARD PENETRATION TEST

BOREHOLE No. **5**
REDUCED LEVEL: **100.00** m
WATER TABLE = **3.30** m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	1.50	1.67
1.50	12.00	1.81
12.00	27.00	1.76
27.00	40.00	1.95

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.51	0.25	1.46	20	29.29	29.29	98.50
3.00	5.22	0.52	1.22	22	26.82	20.91	97.00
4.50	7.94	0.67	1.13	24	27.22	21.11	95.50
6.00	10.65	0.80	1.08	30	32.36	23.68	94.00
7.50	13.37	0.92	1.03	35	36.08	25.54	92.50
9.00	16.08	1.04	0.99	40	39.57	27.29	91.00
10.50	18.80	1.16	0.95	43	40.95	27.97	89.50
12.00	21.51	1.28	0.92	43	39.52	27.26	88.00
13.50	24.15	1.40	0.89	21	18.70	16.85	86.50
15.00	26.79	1.51	0.86	22	19.01	17.01	85.00
18.00	32.07	1.74	0.82	36	29.42	22.21	82.00
21.00	37.35	1.97	0.78	41	31.81	23.41	79.00
24.00	42.63	2.19	0.74	36	26.61	20.81	76.00
27.00	47.91	2.42	0.71	34	24.01	19.50	73.00
30.00	53.76	2.71	0.67	53	35.45	25.23	70.00

BOREHOLE No. **6**
REDUCED LEVEL: **100.00** m
WATER TABLE = **3.60** m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	14.50	1.81
14.50	22.50	1.85
22.50	27.00	1.77
27.00	40.00	1.95

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.72	0.27	1.44	11	15.82	15.82	98.50
3.00	5.43	0.54	1.21	16	19.30	17.15	97.00
6.00	10.86	0.85	1.06	28	29.62	22.31	94.00
9.00	16.29	1.09	0.97	31	30.17	22.59	91.00
12.00	21.72	1.33	0.91	38	34.43	24.71	88.00
15.00	27.17	1.58	0.85	35	29.73	22.37	85.00
16.50	29.95	1.70	0.82	41	33.76	24.38	83.50
18.00	32.72	1.83	0.80	43	34.37	24.69	82.00
19.50	35.50	1.96	0.78	46	35.73	25.37	80.50
21.00	38.27	2.09	0.76	49	37.03	26.02	79.00
22.50	41.05	2.21	0.74	54	39.74	27.37	77.50
24.00	43.70	2.33	0.72	32	23.01	19.00	76.00
27.00	49.01	2.56	0.69	40	27.49	21.25	73.00
30.00	54.86	2.85	0.65	67	43.69	29.34	70.00
31.00	56.81	2.94	0.64	100	64.11	39.55	69.00

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STANDARD PENETRATION TEST

BOREHOLE No. **7**
REDUCED LEVEL: **100.00** m
WATER TABLE= **3.20** m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	7.00	1.75
7.00	8.50	1.84
8.50	27.00	1.78
27.00	40.00	1.96

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.63	0.26	1.45	15	21.74	21.74	98.50
3.00	5.25	0.53	1.22	15	18.26	18.26	97.00
4.50	7.88	0.66	1.14	12	13.70	13.70	95.50
6.00	10.50	0.77	1.09	14	15.25	15.12	94.00
7.50	13.17	0.89	1.04	31	32.30	23.65	92.50
9.00	15.90	1.01	1.00	19	18.97	16.99	91.00
10.50	18.57	1.13	0.96	14	13.47	13.47	89.50
13.50	23.91	1.36	0.90	26	23.37	19.18	86.50
16.50	29.25	1.60	0.85	36	30.44	22.72	83.50
19.50	34.59	1.83	0.80	39	31.20	23.10	80.50
22.50	39.93	2.06	0.76	29	22.03	18.51	77.50
25.50	45.27	2.30	0.72	28	20.26	17.63	74.50
28.50	50.88	2.56	0.69	59	40.57	27.79	71.50
30.00	53.82	2.70	0.67	71	47.53	31.26	70.00
34.50	62.64	3.13	0.62	100	61.98	38.49	65.50
37.50	68.52	3.42	0.59	100	59.04	37.02	62.50
40.00	73.42	3.66	0.57	100	56.77	35.89	60.00

BOREHOLE No. **8**
REDUCED LEVEL: **100.00** m
WATER TABLE = **3.00** m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	7.00	1.76
7.00	9.00	1.83
9.00	27.00	1.79
27.00	40.00	1.97

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.64	0.26	1.45	15	21.71	21.71	98.50
3.00	5.28	0.53	1.22	15	18.23	18.23	97.00
4.50	7.92	0.64	1.15	22	25.30	20.15	95.50
6.00	10.56	0.76	1.10	25	27.38	21.19	94.00
7.50	13.30	0.88	1.04	29	30.30	22.65	92.50
9.00	15.98	1.00	1.00	32	32.08	23.54	91.00
10.50	18.67	1.12	0.96	18	17.37	16.18	89.50
13.50	24.04	1.35	0.90	35	31.52	23.26	86.50
16.50	29.41	1.59	0.85	36	30.48	22.74	83.50
19.50	34.78	1.83	0.80	39	31.21	23.10	80.50
22.50	40.15	2.06	0.76	24	18.23	16.61	77.50
25.50	45.52	2.30	0.72	28	20.25	17.62	74.50
28.50	73.81	4.83	0.48	48	22.80	18.90	71.50
31.50	73.81	4.53	0.50	51	25.32	20.16	68.50
34.50	73.81	4.23	0.52	76	39.48	27.24	65.50

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STANDARD PENETRATION TEST

BOREHOLE No. 9
REDUCED LEVEL: 100.00 m
WATER TABLE = 3.30 m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00	4.00	1.69
4.00	20.00	1.86
20.00	27.00	1.75
27.00	40.00	1.96

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	Reduced level , m
1.50	2.54	0.25	1.46	11	16.07	16.07	98.50
3.00	5.07	0.51	1.23	15	18.43	18.43	97.00
4.50	7.69	0.65	1.15	17	19.49	17.24	95.50
6.00	10.48	0.78	1.09	22	23.89	19.44	94.00
7.50	13.27	0.91	1.03	26	26.90	20.95	92.50
9.00	16.06	1.04	0.99	30	29.70	22.35	91.00
10.50	18.85	1.17	0.95	34	32.32	23.66	89.50
12.00	21.64	1.14	0.96	44	42.10	28.55	88.00
13.50	24.43	1.12	0.96	46	44.30	29.65	86.50
15.00	27.22	1.10	0.97	52	50.40	32.70	85.00
16.50	30.01	1.08	0.98	43	41.96	28.48	83.50
18.00	32.80	1.06	0.98	48	47.15	31.08	82.00
19.50	35.59	1.04	0.99	52	51.43	33.21	80.50
22.50	40.90	1.27	0.92	16	14.75	14.75	77.50
28.50	51.71	2.05	0.76	60	45.69	30.35	71.50
31.50	57.59	6.09	0.40	64	25.45	20.23	68.50
34.00	62.49	3.13	0.62	77	47.77	31.38	66.00

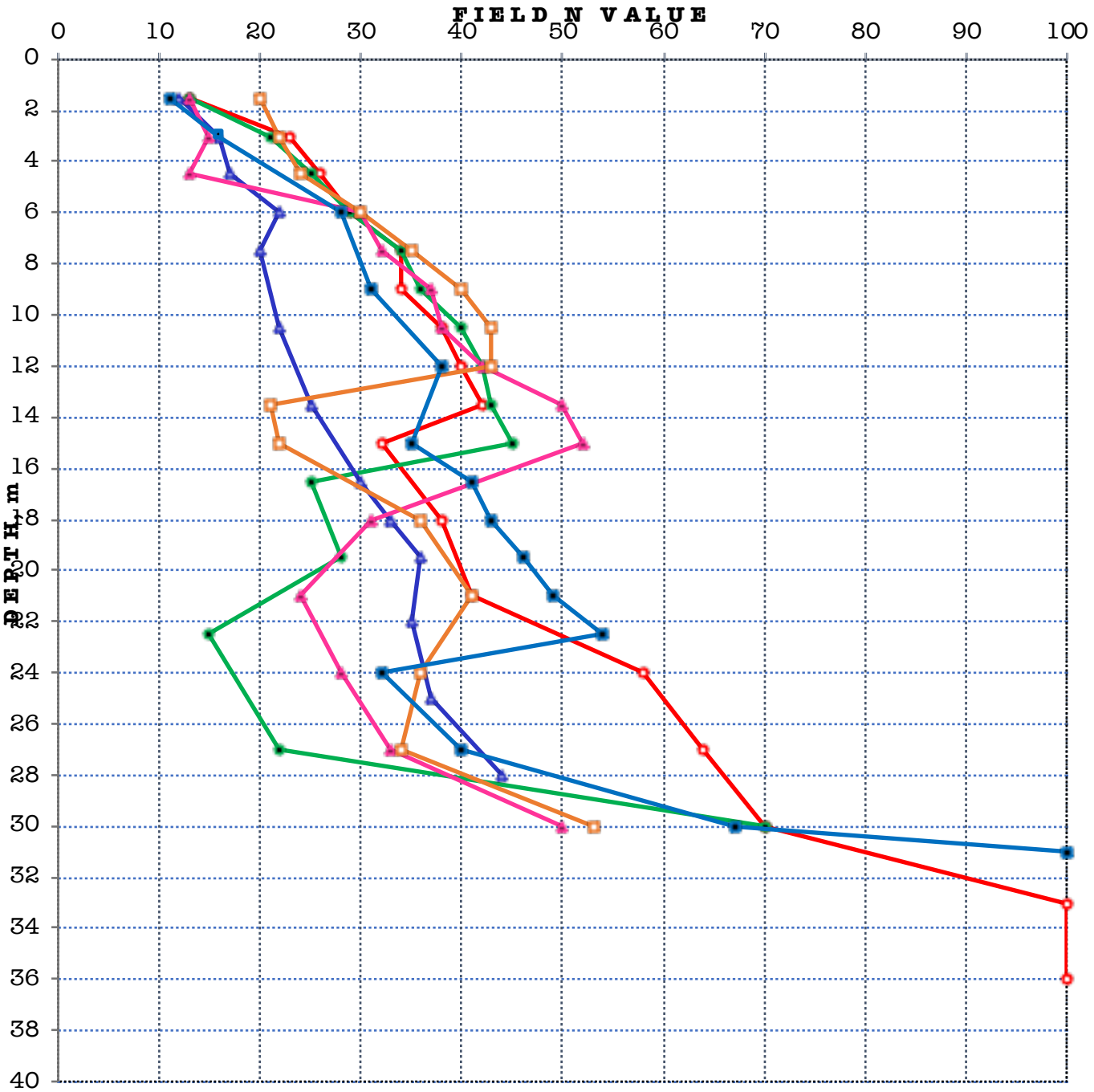
BOREHOLE No.
REDUCED LEVEL:
WATER TABLE = m

DEPTH,m		Bulk
From	To	Density,t/m^3
0.00		

Depth (m)	Overburden Pressure T/m^2	Corr. Overburden Press. kg/cm^2	C_N	Field Value N	N'	N"	

MEDINI
GEO ENGINEERING SERVICES

STANDARD PENETRATION TEST

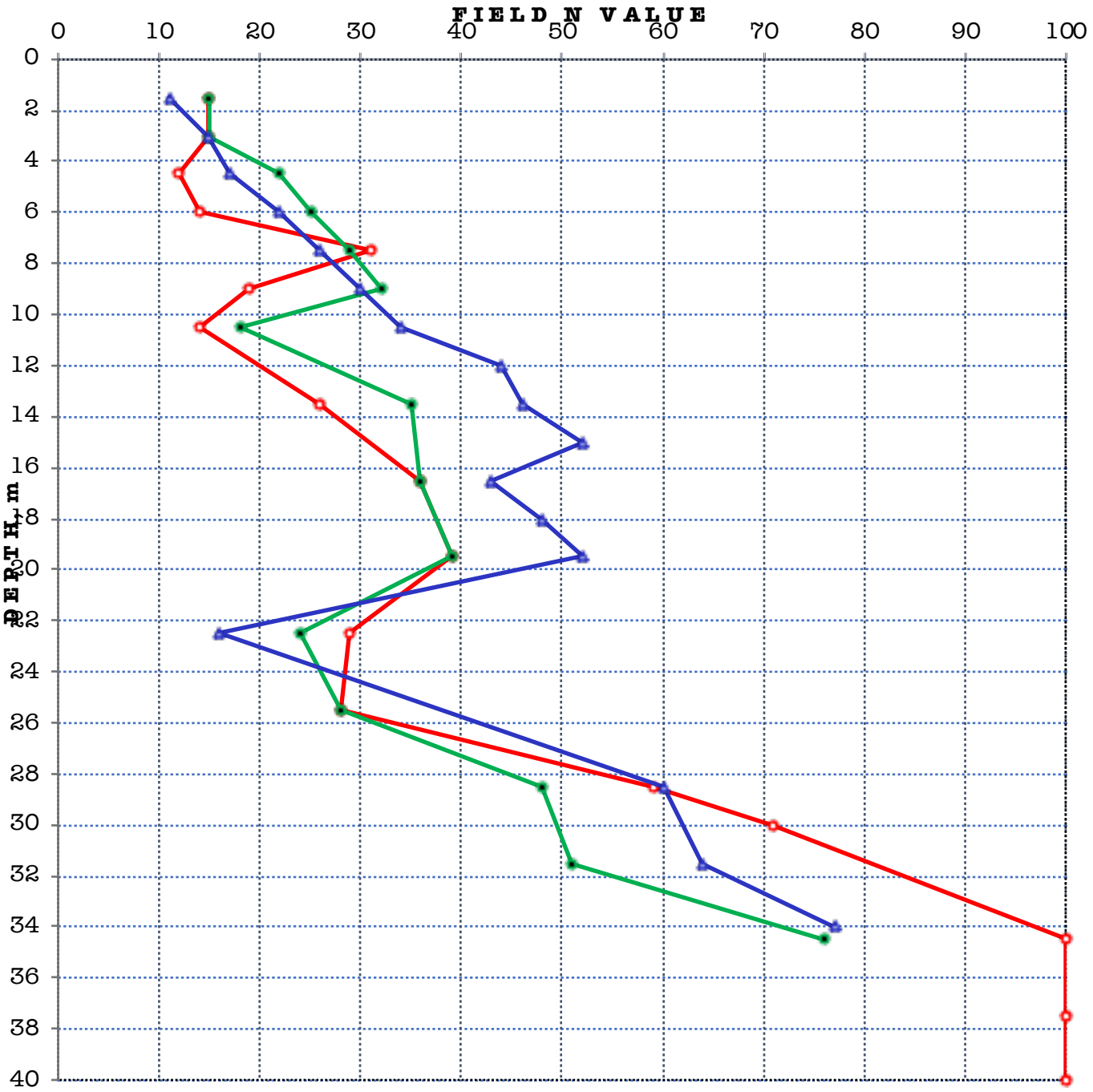


LEGEND	
Symbol	BH.No.
○—	1
●—	2
△—	3
▲—	4
□—	5
■—	6

GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

MEDINI
GEO ENGINEERING SERVICES

STANDARD PENETRATION TEST



LEGEND	
Symbol	BH.No.
	7
	8
	9

GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

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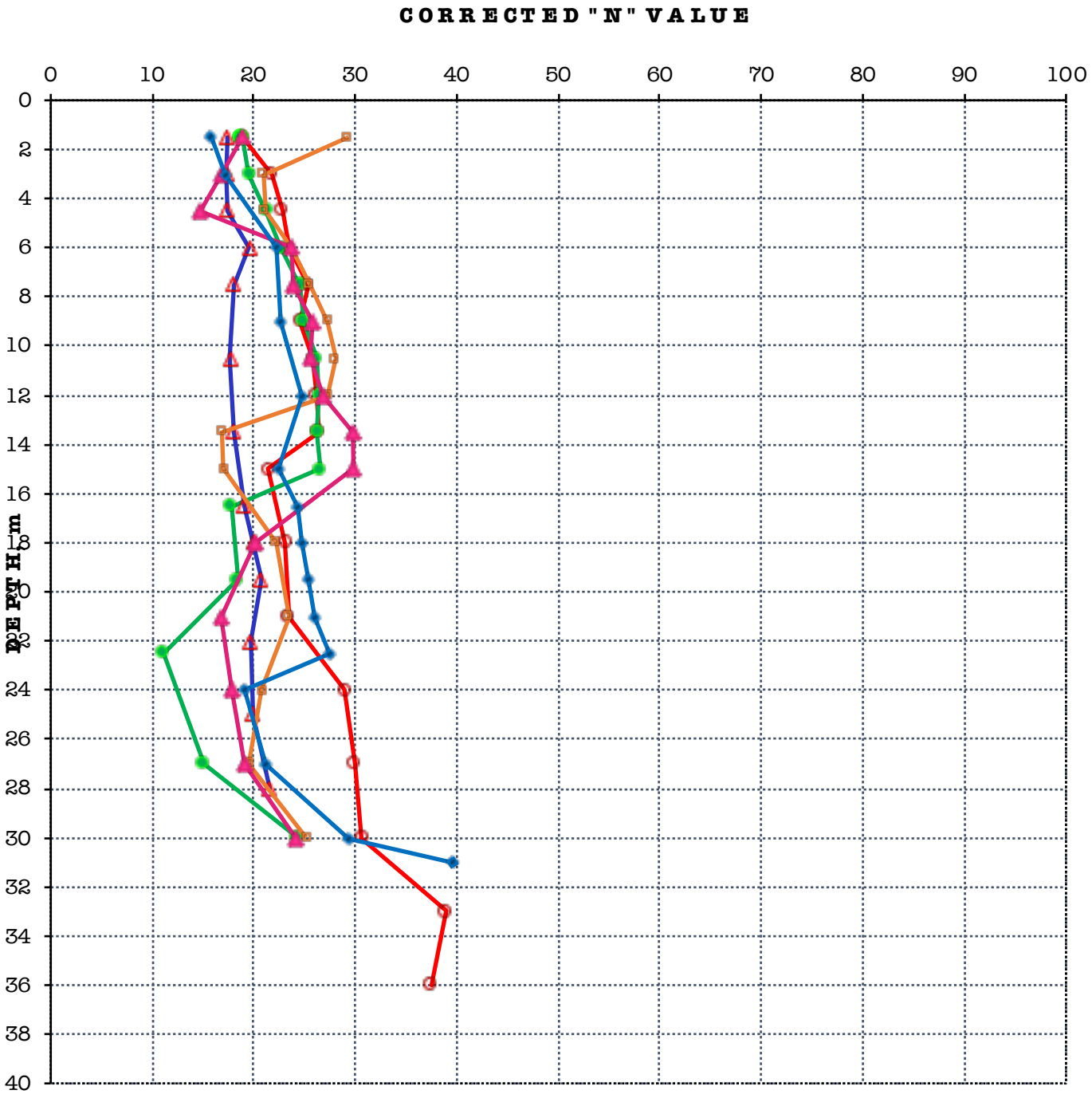
STANDARD PENETRATION TEST



LEGEND	
Symbol	BH.No.
○—	1
●—	2
△—	3
▲—	4
□—	5
■—	6

GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

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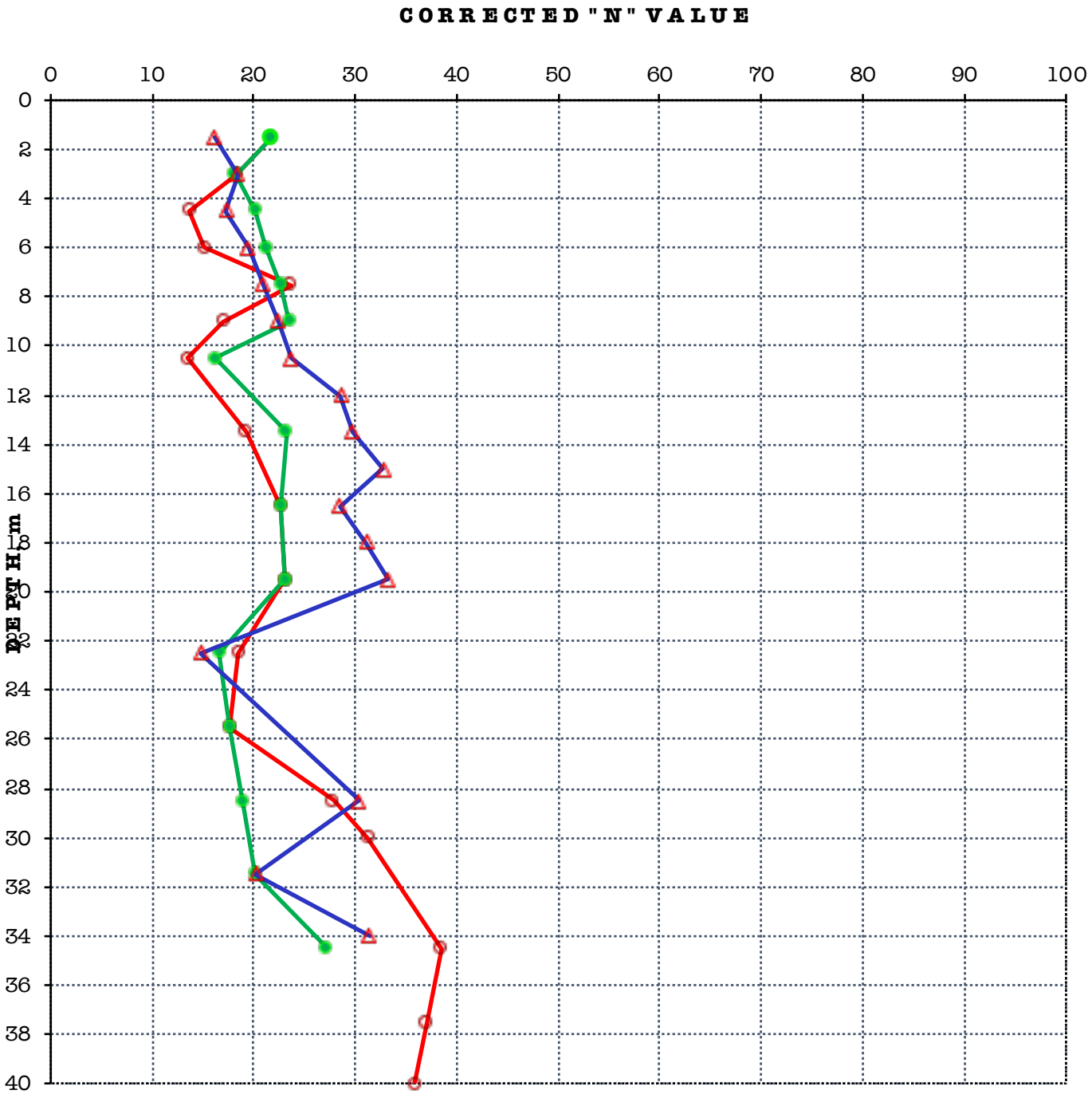
STANDARD PENETRATION TEST



LEGEND	
Symbol	BH.No.
○—	7
●—	8
△—	9
▲—	
□—	
■—	

GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

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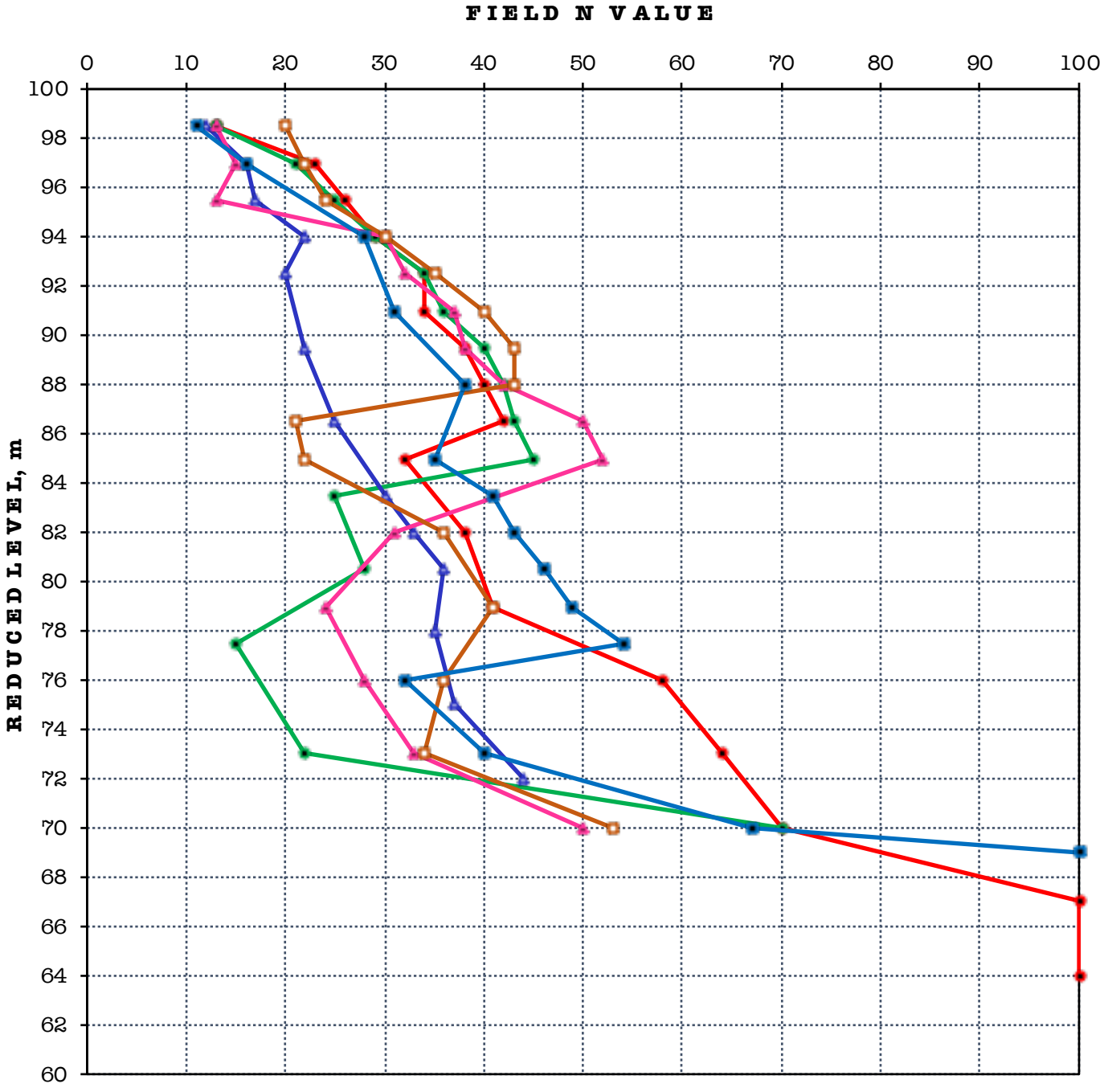
STANDARD PENETRATION TEST



LEGEND		
Symbol	BH.No.	Reduced Level,m
	1	100.00
	2	100.00
	3	100.00
	4	100.00
	5	100.00
	6	100.00

GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

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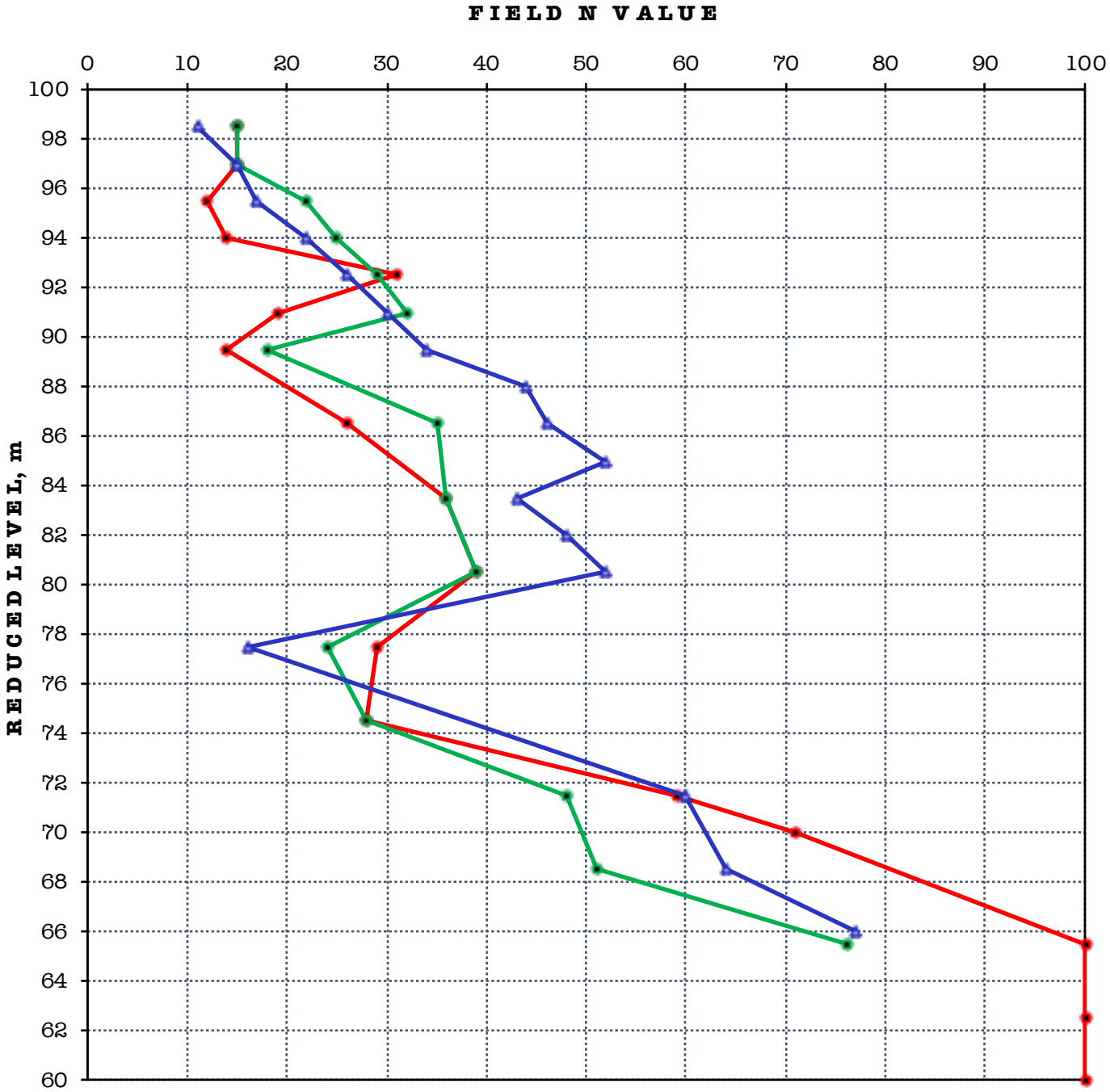
STANDARD PENETRATION TEST



LEGEND		
Symbol	BH.No.	Reduced Level,m
	7	100.00
	8	100.00
	9	100.00

GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

MEDINI
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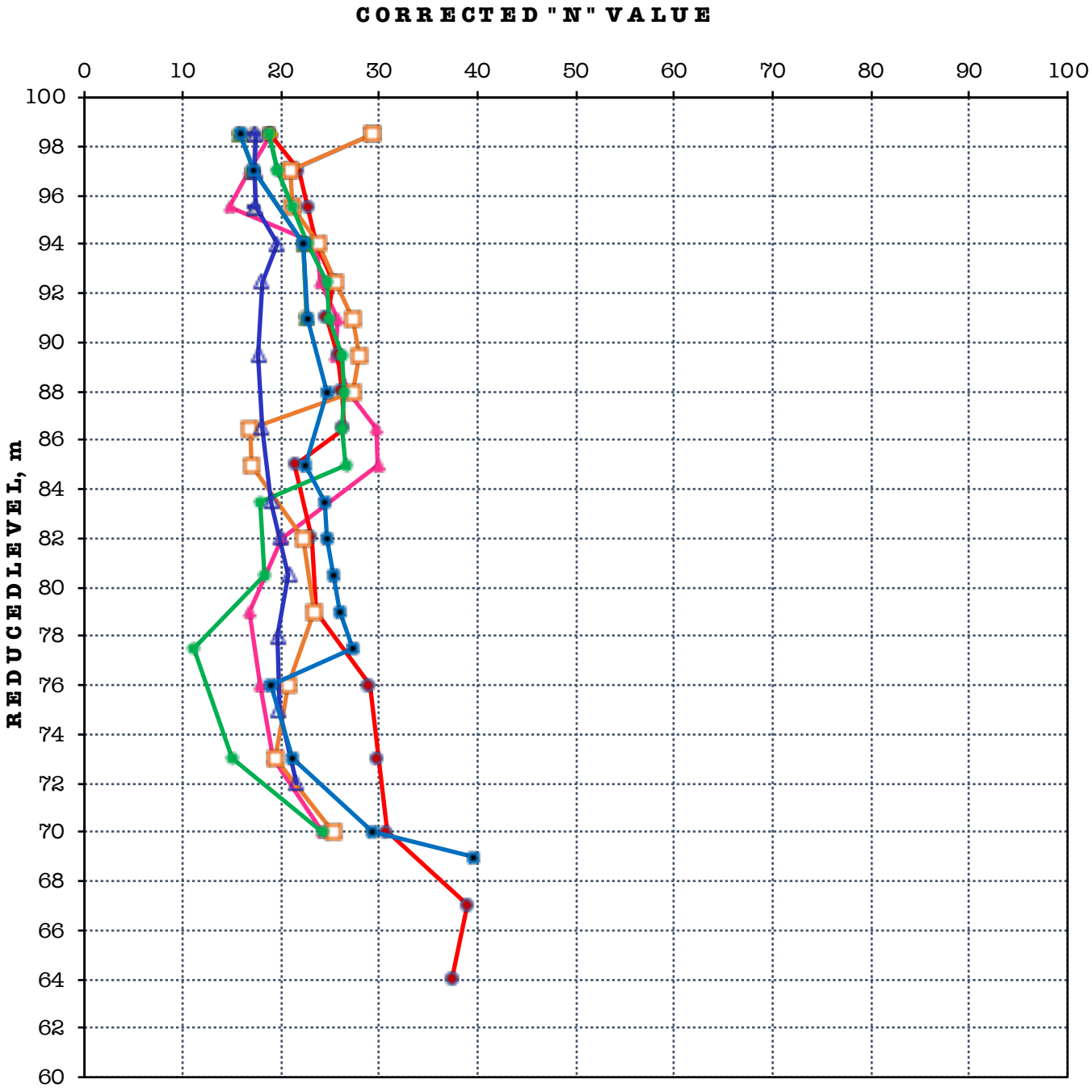
STANDARD PENETRATION TEST

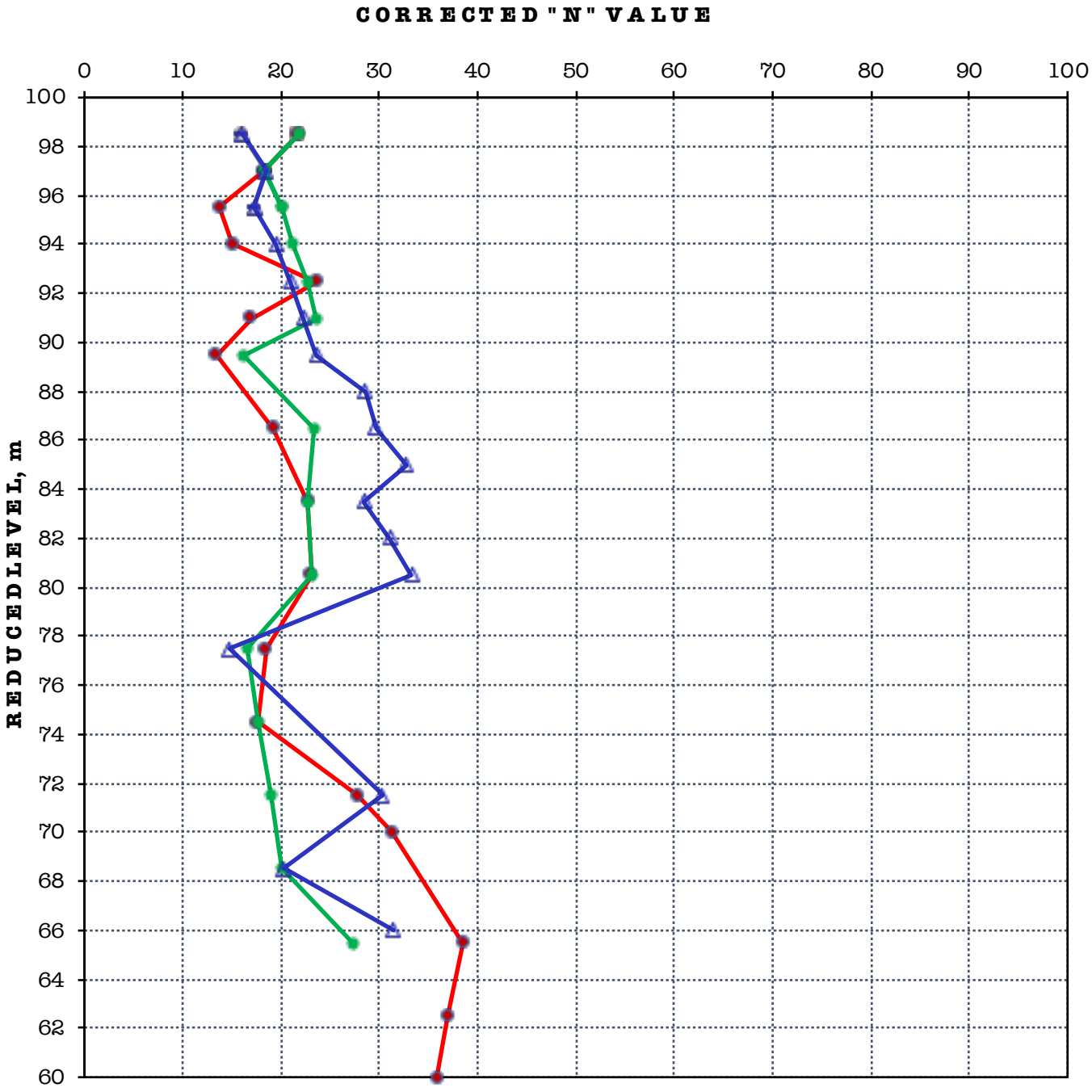


LEGEND		
Symbol	BH.No.	Reduced Level,m
	1	100.00
	2	100.00
	3	100.00
	4	100.00
	5	100.00
	6	100.00

GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

MEDINI
GEO ENGINEERING SERVICES

STANDARD PENETRATION TEST



LEGEND		
Symbol	BH.No.	Reduced Level,m
	7	100.00
	8	100.00
	9	100.00

GEOTECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

ANNEXURE -III

LABORATORY TEST RESULTS

RAJADHANI LABS

LABORATORY TEST RESULTS

PROJECT NAME : GEO-TECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

BORE HOLE NO : 1 BORE HOLE CODE : NO.OF FLOORS : 3 Cellars +15 + 5 Future F

GROUND LEVELS : 100.00 m Ref TYPE OF STRUCTURE : LH OFFICE BUILDING TERMINATION DEPTH : 40.00 m

FIELD INVESTIGATION DATA							LABORATORY TEST IN SOIL																		TESTS IN ROCK							
Elevation(m)	Nature of sampling	Depth below ref.level	SPT		Hatching	Description of Strata	Layerv Thickness (m)	IS Classification	% Gravel	% Sand	% Silt	% Clay	N.M.C. (%)	Natural Density (t/m³)	Dry Density (t/m³)	Specific Gravity	Atterberg Limits			Direct/Tri-axial Shear Test			UCS (kg/cm²)	Consolidation Test		%Core Recovery	% R Q D	Point Load Test	UCS (Mpa)	Water Absorption & Porocity(%)	Specific Gravity	Density (t/m³)	Modulus of Elasticity(Gpa)
			Depth (m)	"N"Value													Liquid Limit (%)	Plastic Limit (%)	Plasticity Index(%)	Type of test	C (Kg/cm²)	Φ (degree)		Cc	Void Ratio e_0								
100.0		0.00																													
99.5		0.50																													
99.0		1.00				Very stiff brown sandy silt, medium plastic silty clay (CI)																										
98.5	SPT/DS	1.50	1.5	13				CI	0.0	21.0	47.0	32.0	15.30	1.73	1.50	2.57	45.3	27.0	18.3	CD	0.56	4.30	1.12	-	-	-	-	-	-	-	-	-	-
98.0		2.00																													
97.5		2.50					2.50																								
97.0	SPT/DS	3.00	3	23				SP-SM	0.0	90.0	10.0	0.0	7.90	1.79	1.66	2.64	NP	NP	NP	DT	0.0	26.5	-	-	-	-	-	-	-	-	-	-
96.5		3.50																													
96.0		4.00																													
95.5	SPT	4.50	4.5	26																											
95.0		5.00																													
94.5		5.50																													
94.0	SPT/DS	6.00	6	29		Very dense grey Fine Sand (SP-SM)		SP-SM	0.00	92.0	6.00	2.00	7.40	1.80	1.68		NP	NP	NP	DT	0.0	27.7	-	-	-	-	-	-	-	-	-	-
93.5		6.50																													
93.0		7.00																													
92.5	SPT	7.50	7.5	34																											
92.0		8.00																													
91.5		8.50																													
91.0	SPT/DS	9.00	9	34				SP-SM	0.00	89.0	7.00	4.00	7.30	1.82	1.70	2.63	NP	NP	NP	DT	0.0	29.4	-	-	-	-	-	-	-	-	-	-
90.5		9.50																													
90.0		10.0																													

NOTES :

SPT : STANDARD PENETRATION TEST
DS : DISTURBED SAMPLE
UDS : UNDISTURBED SAMPLE
N.M.C : NATURAL MOISTURE CONTENT
C : CHOESION
Φ : ANGLE OF INTERNAL FRICTION
RQD : ROCK QUALITY DESIGNTEGRATED
CR : CORE RECOVERY
GROUND WATER TABLE
DT : DIRECT SHEAR TEST
CD : Consolidated-Drained Triaxial Com
NO : NOT OPERATED

RAJADHANI LABS

LABORATORY TEST RESULTS

PROJECT NAME : GEO-TECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI, ANDHRAPRADESH.

BORE HOLE NO : 1 BORE HOLE CODE : NO.OF FLOORS : 3 Cellars +15 + 5 Future F

GROUND LEVELS : 100.00 m Ref TYPE OF STRUCTURE : LH OFFICE BUILDING TERMINATION DEPTH : 40.00 m

FIELD INVESTIGATION DATA							LABORATORY TEST IN SOIL																		TESTS IN ROCK							
			SPT												Atterberg Limits			Direct/Tri-axial Shear Test				Consolidation Test									
Elevation(m)	Nature of sampling	Depth below ref.level	Depth (m)	"N"Value	Hatching	Description of Strata	Layerv Thickness (m)	IS Classification	% Gravel	% Sand	% Silt	% Clay	N.M.C. (%)	Natural Density (t/m³)	Dry Density (t/m³)	Specific Gravity	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index(%)	Type of test	C (Kg/cm²)	Φ (degree)	UCS (kg/cm²)	Cc	Void Ratio e_0	%Core Recovery	% R Q D	Point Load Test	UCS (Mpa)	Water Absorption & Porocity(%)	Specific Gravity	Density (t/m³)	Modulus of Elasticity(Gpa)
90.0		10.00																													
89.5	SPT	10.50	10.5	38																											
89.0		11.00																													
88.5		11.50																													
88.0	SPT/DS	12.00	12	40		Very dense grey Fine Sand (SP-SM)		SP-SM	0.00	85.0	15.0	0.0	7.80	1.84	1.71		NP	NP	NP	DT	0.02	28.50		-	-	-	-	-	-	-	-	-
87.5		12.50																													
87.0		13.00																													
86.5	SPT	13.50	13.5	42																											
86.0		14.00																													
85.5		14.50					14.50	SP-SM	0.00	86.0	14.0	0.0	7.40	1.85	1.72	2.59	NP	NP	NP	DT	0.0	29.2	-	-	-	-	-	-	-	-	-	-	-
85.0	SPT/DS	15.00	15	32																											
84.5		15.50																													
84.0		16.00																													
83.5	UDS	16.50						CI	0.00	23.0	43.00	34.0	14.30	1.77	1.55		45.86	####	20.17	CD	0.60	5.73	1.20	-	-	-	-	-	-	-	-	-
83.0		17.00																													
82.5		17.50																													
82.0	SPT/DS	18.00	18	38		Very stiff brown sandy silt, Medium plastic silty clay (CI)																											
81.5		18.50																													
81.0		19.00																													
80.5	UDS	19.50						CI	0.00	18.0	45.00	37.0	13.70	1.78	1.57	2.57	46.3	25.8	20.5	CD	0.53	6.23	1.06	-	-	-	-	-	-	-	-	-
80.0		20.00																													

NOTES :

SPT : STANDARD PENETRATION TEST
DS : DISTURBED SAMPLE
UDS : UNDISTURBED SAMPLE
N.M.C : NATURAL MOISTURE CONTENT
C : CHOESION
Φ : ANGLE OF INTERNAL FRICTION
RQD : ROCK QUALITY DESIGNTEGRATED
CR : CORE RECOVERY
▼ : GROUND WATER TABLE
DT : DIRECT SHEAR TEST
CD : Consolidated-Drained Triaxial Com
NO : NOT OPERATED

RAJADHANI LABS

NABL

LABORATORY TEST RESULTS

PROJECT NAME : GEO-TECHNICAL INVESTIGATION FOR PROPOSED CONSTRUCTION OF BUILDINGS FOR AMARAVATI LOCAL HEAD OFFICE AND OTHER OUTFITS AT AMARAVATI ANDHRAPRADESH.

BORE HOLE NO : 1 **BORE HOLE CODE** : **NO.OF FLOORS** : 3 Cellars +15 + 5 Future F

GROUND LEVELS : 100.00 m Ref **TYPE OF STRUCTURE** : LH OFFICE BUILDING **TERMINATION DEPTH** : 40.00 m

FIELD INVESTIGATION DATA							LABORATORY TEST IN SOIL																			TESTS IN ROCK							
Elevation(m)	Nature of sampling	Depth below ref.level	SPT		Hatching	Description of Strata	Layerv Thickness (m)	IS Classification	% Gravel	% Sand	% Silt	% Clay	N.M.C. (%)	Natural Density (t/m³)	Dry Density (t/m³)	Specific Gravity	Atterberg Limits			Direct/Tri-axial Shear Test			UCS (kg/cm²)	Consolidation Test		%Core Recovery	% R Q D	Point Load Test	UCS (Mpa)	Water Absorption & Porocity(%)	Specific Gravity	Density (t/m³)	Modulus of Elasticity(Gpa)
			Depth (m)	"N"Value													Liquid Limit (%)	Plastic Limit (%)	Plasticity Index(%)	Type of test	C (Kg/cm²)	Φ (degree)		Cc	Void Ratio e_0								
80.0		20.00																														
79.5		20.50																														
79.0	SPT	21.00	21	41		Very stiff brown sandy silt, Medium plastic silty clay (CI)																										
78.5		21.50																														
78.0		22.00																														
77.5	UDS	22.50						CI	0.00	22.0	46.0	32.0	13.60	1.78	1.57	2.56	46.3	25.4	20.9	CD	0.56	7.43	1.12	-	-	-	-	-	-	-	-	-
77.0		23.00																														
76.5		23.50					23.50																									
76.0	SPT/DS	24.00	24	58					0.00	93.0	7.0	0.0	7.90	1.93	1.79	2.64	NP	NP	NP	DT	0.0	33.6	-	-	-	-	-	-	-	-	-	-
75.5		24.50																														
75.0		25.00																														
74.5		25.50																														
74.0		26.00																														
73.5		26.50																														
73.0	SPT/DS	27.00	27	64		Residual Soil (or) Completely Weathered Rock (CWR)			0.00	95.0	5.00	0.00	7.40	1.95	1.82		NP	NP	NP	DT	0.0	34.4	-	-	-	-	-	-	-	-	-	-
72.5		27.50																														
72.0		28.00																														
71.5		28.50																														
71.0		29.00																														
70.5		29.50																														
70.0	SPT/DS	30.00	30	70					0.00	96.0	4.00	0.00	7.30	1.96	1.83	2.63	NP	NP	NP	DT	0.0	34.8	-	-	-	-	-	-	-	-	-	-

NOTES :

SPT	:	STANDARD PENETRATION TEST	**N.M.C**	:	NATURAL MOISTURE CONTENT	**RQD**	:	ROCK QUALITY DESIGNTEGRATED	**DT**	:	DIRECT SHEAR TEST
DS	:	DISTURBED SAMPLE	**C**	:	CHOESION	**CR**	:	CORE RECOVERY	**TS**	:	TRIAXIAL TEST
UDS	:	UNDISTURBED SAMPLE	**Φ**	:	ANGLE OF INTERNAL FRICTION	⏚	:	GROUND WATER TABLE	**NO**	:	NOT OPERATED