GEOTECHNICAL INVESTIGATION REPORT

Geotechnical Investigation Report for the Proposed Construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

Falcon Industrial Testing Laboratory Pvt Ltd
ISO/IEC 17025:2017 Accredited NABL Lab
Plot No: 181, Estate 2nd main Road, Burma Colony, Perungudi, Chennai 600 096 /
www. fitpl.in / Email: lab@fitpl.in
Cell: 8754595273/8056159517

FALCON
LAB
Building Materials & Soil Testing

09.05.2022

To
M/s.Pappas Builders Pvt. Ltd.,
Pappas Vasantha,
No.17, VV Colony,
Adambakkam,
Chennai – 600088.

Sub: REPORT ON GEOTECHNICAL INVESTIGATION CONDUCTED FOR THE PROPOSED CONSTRUCTION OF (G+3) RESIDENTIAL BUILDING AT ADAMPAKKAM, CHENNAI - 600088.

Dear Sir,

We have enclosed here with the Soil Test Report for the proposed construction of (G+3) Residential Building at Adampakkam, Chennai - 600088.

Should you have any questions, please do not hesitate to contact this office.

It has been a pleasure being of service to you on this project. We assure you of our Best Technical Service.

Thank you,
Yours Truly,
for Falcon Industrial Testing Laboratory Pvt Ltd

Dr.S.Sherlin Prem Nishold, M.E., Ph.D.,
Technical Manager

Geo-Technical Investigation Report

Project Location: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

GEOTECHNICAL INVESTIGATION REPORT

Customer Name & Address:

M/s.Pappas Builders Pvt. Ltd.,

Pappas Vasantha,

No.17, VV Colony,

Adambakkam,

Chennai – 600088.

Project Details: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

Test Report No: TR2205041

Project Location: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

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Project Location: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

Summary:

The field investigation has been started on 30.04.2022 and completed on 01.05.2022. Location of the borehole was selected based on the proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088. Boreholes were drilled up to a maximum depth of 6.00m according to the standard penetration procedure laid by IS 2131-1980 as per client requirements. Two borehole was bored and test was conducted to determine the Index and Engineering properties of the soils encountered.

The Soil boring details were furnished in the report. Encountered Soil Profile infers the presence of mostly Coarse-grained soils. Test (SPT) was conducted at each 1.00m interval of the borehole starts from 0.00m to 3.00m depth and 1.50m interval, till the termination depth of 5.50m & 6.00m for BH-1 & BH-2 respectively. More detailed information is given in Bore log report and Laboratory test results as annexure.

In rainy season, groundwater may be at higher level than the present level. Hence, foundation work has to be planned accordingly.

1. Introduction:

Purpose and Scope

It has been proposed to construct a (G+3) Residential Building at Adampakkam, Chennai-600088. For the construction of any structure a detailed soil investigation is essential for collecting the relevant data required for preparing the design. The sub surface investigation reveals the presence and the extent of soil and rock stratum in the region likely to be affected by the proposed work and determines the nature of each stratum and engineering properties of soil which may affect the design. The data collected provide reliable, specific and detailed information to facilitate a safe and economic design of the proposed structure.

The scope of this investigation is to:

a) Bore hole was drilled up to the maximum depth of 6.00m and Laboratory tests were conducted for assessing the index and engineering properties of soil at each layer.
b) Engineering Properties were analyzed to develop the foundation design for the proposed building.

Report Format

a) Bore log details were furnished with SPT "N" values and Soil profile was reported in bore log.
b) Summary of laboratory test results was given briefly for each bore hole.

2. Scope of the exploration:

For analyzing the field condition and the soil strata at the site, Soil investigation has been done by drilling two Bore holes. Bore holes were terminated at the depth where the N Value reaches more than 100 or the hammer gets rebound. It is determined that the field SPTs were conducted to assess the safe bearing capacity of the soil for resting the foundation at the proposed site.

3. Method of exploration:

(i) Borings were drilled using rotary drilling Unit of dia.150mm has been used for making bore holes duly circulating Bentonite slurry. In this method, the advancement of boring is made by the cutting action of a rotating bit that is kept in firm contact with the bottom of the hole. SPT (IS: 2131-1981) consists of driving a standard Split Spoon Sampler (IS: 9640-1980), 51 mm outside diameter and 38 mm inside diameter into soil under the blows of a drop hammer of 63.5 kg falling weight freely through 75-cm. The number of Blows required for 30 cm penetration of sampler in soil is designated as N value and it is termed as SPT blow count.

(ii) The bit is attached to the lower end of hollow drill rod, which is rotated by a suitable chuck. Drilling mud, (viz) Bentonite is continuously forced down the hollow drill rods. The mud returning upward through the annular space between the drill rods and side of the hole brings the soil particles to the surface. The soil exploration consists of three stages i.e., boring, sampling and testing which includes both field and lab tests. The Samples were collected at different depth up to final depth of bore hole. Samples were properly labeled for Lab tests. Bore log particulars and location of bore holes were annexed with this report.

4. Depth of Exploration:

Exploration was carried out to a depth at which N Value should be more than 100 as per client requirement. Based on which, Foundation Type and depth shall be determined adopted.

5. Ground water level:

Observation of location of water table and its fluctuation under different seasons is very important. The location of ground water level (GWL) is also important for deep excavation and foundation works and also on sites susceptible to be water logged. Open wells at the site or in the vicinity of the site can give a clear idea of water table and its fluctuation. Boreholes can also be used for recording water level at the site.

6. Field Tests:

Penetration and sounding tests are the generally adopted field Tests. Standard Penetration Test is performed as per IS: 2131-1981 (RA: 2007) as an in-situ test especially for cohesion less soils. The resistance is empirically correlated with some of the Engineering properties of soil such as density index, consistency, bearing capacity, etc. These tests are useful for general exploration of erratic soil profiles for finding depth to bedrock or hard stratum and to have an approximate indication of the strength and other properties of soils, particularly for cohesion less soil.

In the field test, Standard Penetration Test (SPT) was conducted using split barrel sampler at top layers to determine the "N" value of the soil layers. SPT was conducted at every 1.00m depth intervals in each borehole to determine penetration resistance. Number of blows was recorded for every 15cm penetration for a total of 45cm penetration. The number of blows required to drive the sampler for 30 cm apart from the seating drive is termed as penetration resistance "N". The SPT value at the top layers in each borehole at different depths has been recorded in the bore logs.

Project Location: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

The SPT was conducted at the bore holes as shown below in the photos

BH-1

Latitude: 12.985908
Longitude: 80.206972
Elevation: 7.28±1 m
Accuracy: 3.1 m
Time: 04-30-2022 14:34

Powered by NoteCam

BH-2

Latitude: 12.985929
Longitude: 80.206914
Elevation: 7.48±2 m
Accuracy: 2.2 m
Time: 04-30-2022 14:34

Powered by NoteCam

Project Location: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

Sample collection photo for BH-01

Latitude: 12.985505
Longitude: 80.207291
Elevation: 7.28±2 m
Accuracy: 9.8 m
Time: 04-30-2022 17:09

Sample collection photo for BH-02

Latitude: 12.98592
Longitude: 80.207013
Elevation: 7.48±1 m
Accuracy: 5.3 m
Time: 04-30-2022 17:27

Project Location: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

The fieldwork was carried out under the close supervision of our engineer in accordance with Indian Standard mentioned earlier.

Field Test

7. Laboratory Tests:

All the extracted soil samples were brought to the Falcon Industrial Testing Laboratory for further examination in accordance with IS: 1498-1970. The test results are tabulated and annexed with this report.

1. Excavation of bore holes (IS:1892-1979, RA 2002)
2. Standard Penetration Test (IS: 2131-1981, RA 2002)
3. Moisture Content (IS 2720 (Part 2): 1973, RA 2015)
4. Specific Gravity of Soil (IS 2720 (Part 3): 1980, RA 2016)
5. Grain Size Distribution In Soils (IS 2720 (Part 4) : 1985,RA 2015)
6. Determination of Shear parameters (IS 2720 (Part 13): 1986, RA 2016), IS 2720 (Part 10): 1991), RA 2015

8. Soil profile and its characteristics:

In case of BH-1,

Sl.No	Start Depth (m)	End Depth (m)	Profile	Symbol	Relative Density
1.	0.00	0.00	Natural Soil	-	-
2.	0.00	5.50	Brownish, Grey poorly graded sands, gravelly sand with fines	SP	Medium to Very Dense

Project Location: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

In case of BH-1,

Sl.No	Start Depth (m)	End Depth (m)	Profile	Symbol	Relative Density
1.	0.00	0.00	Natural Soil	-	-
2.	0.00	6.00	Brownish, Grey poorly graded sands, gravelly sand with fines	SP	Loose to Very Dense

9. Water table fluctuations:

Groundwater was not identified from below ground level during the time of field investigation. However, it may fluctuate due to the tidal variations/rainy seasons, slightly.

10. Assessment of Bearing Capacity:

The site soil encountered is suitable for shallow foundation and it contains the load capacity is enough for proposed building. A factor of safety of 2.5 has been adopted for the safe bearing capacity calculation.

11. Foundation Considerations

A PCC (Plain Cement Concrete) layer of 10cm thickness is recommended below the foundation. Any over excavation in the foundation trenches should be re-filled by plain concrete and any disturbed and loose materials found in the foundation trenches should be removed before placement of P.C.C.

12. Backfilling and Compaction

Excavated material cannot be used as general backfill material. As per general practice the backfill material should not contain more than 15% fines passing 0.075 mm sieve, retain 40% on 4.75mm size sieve while the maximum size of gravel allowed is 50mm.

Backfilling materials shall be placed in horizontal layers not exceeding 25 cm thickness and each layer shall be compacted to at least 95% of the maximum dry density.

13. Excavation

Excavation through the overburden soil can be carried out by conventional equipment such as dozers and porcelain excavators.

14. Conclusion:

For foundation suitability, the following criteria have been taken into account.
- Subsoil characteristics
- Nature of structure

To meet the above requirements the following type of foundation will be suitable.

- Shallow foundation by Spread/Isolated footing.

Spread/Isolated shall be adopted for the proposed structure.

- Removal of soft soil/filling material should be up to -2.00m from the below ground level.

- The foundation should be placed at -2.00m depth from the below ground level and the foundation width restricted to 2.00m.

- An Allowable bearing pressure of 200 kPa (20.39 t/m2) shall be taken for design purposes.

- Grade beam shall be adopted in order to minimize the differential settlements.

- Expected settlements shall be less than the permissible limits for the foundation and the differential settlement shall be considered up to 75% of the expected total settlement.

Project Location: Proposed construction of (G+3) Residential Building at Adampakkam, Chennai-600088.

Abstract Report	
Location of site:	Proposed construction of (Stilt+3) Residential Building at Adampakkam, Chennai-600088.
Details of Recommended foundation	
Shallow foundation by Isolated square footing	
Size of footing	2.00m X 2.00m
Footing Depth	2.00m
Safe Bearing Capacity	200 kN/m^2 (20.39 t/m^2)
Total Settlement	15 mm
Allowable Settlement	**50mm**

Note:

1. **The above details are provided based on the soil exploration conducted over the site.**

2. **The suggestions have been provided in this report based on the factual condition of the site. However, the structural engineer may decide on the foundation design based on the above report.**

for Falcon Industrial Testing Laboratory Pvt Ltd

Dr.S.Sherlin Prem Nishold, M.E., Ph.D.,
Technical Manager

GEOTECHNICAL INVESTIGATION REPORT FOR THE PROPOSED CONSTRUCTION OF (G+3) RESIDENTIAL BUILDING AT ADAMPAKKAM, CHENNAI-600088.

APPENDIX   A
BOREHOLE LOGS

BOREHOLE LOG

Client	: M/s.Pappas Builders Pvt. Ltd.,	Ele . Of G.L	: 0.00m
Project	: (G+3) Residential Building	Water Table	: Nil
Location	: Adampakkam	Type Of Boring	: Rotary
B.H. No	: BH-1	Dia of Boring	: 150mm
Final Depth	: 5.5m	Started on	: 30.04.2022
Address	: Pappas Vasantha, No.17, VV Colony, Adambakkam, Chennai - 600088	Ended on	: 30.04.2022

Depth (m)	G W L	SYMBOL	DESCRIPTION	SPT COUNT				Relative Density /Consistency
				0 -15 cm	15 -30 cm	30 -45 cm	N- Value	
0.0			Natural soil					
0.5 – 1.0			Brownish, Grey poorly graded sands, gravelly sand with fines(SP)	4	4	6	10	Medium Dense
1.5 – 2.0			Ditto	7	10	11	21	Medium Dense
2.5 – 3.0			Ditto	45	50/3cm		50	Very Dense
3.5 – 4.0 – 4.5			Ditto		50/7cm		50	Very Dense
5.0			Ditto	100/0cm Penetration			100	Very Dense
5.5 – 6.0			BH-1, terminated at a depth of 5.50m, in Very dense stratum					

Graphical Representation of Penetration

N-Value

BOREHOLE LOG

Client	: M/s.Pappas Builders Pvt. Ltd.,	Ele . Of G.L	: 0.00m
Project	: (G+3) Residential Building	Water Table	: Nil
Location	: Adampakkam	Type Of Boring	: Rotary
B.H. No	: BH-2	Dia of Boring	: 150mm
Final Depth	: 6.0m	Started on	: 01.05.2022
Address	: Pappas Vasantha, No.17, VV Colony, Adambakkam, Chennai - 600088	Ended on	: 01.05.2022

Depth (m)	G W L	S Y M B O L	DESCRIPTION	SPT COUNT				Relative Density /Consistency
				0 -15 cm	15 -30 cm	30 -45 cm	N- Value	
0.0			Natural soil					
0.5 – 1.0			Brownish, Grey poorly graded sands, gravelly sand with fines(SP)	3	4	5	9	Loose
1.5 – 2.0			Ditto	4	6	8	14	Medium Dense
2.5 – 3.0			Ditto	42	50/6cm		50	Very Dense
4.0 – 4.5			Ditto	50/12cm			50	Very Dense
5.5 – 6.0			Ditto	100/0cm Penetration			100	Very Dense
6.5 – 7.0			BH-1, terminated at a depth of 6.00m, in Very dense stratum	Graphical Representation of Penetration				

Graphical Representation of Penetration

N-Value

Depth axis labels: 0, 25, 50, 75, 100

Depth (m): 0, 1, 2, 3, 4, 5, 6, 7

Correlations of SPT N values with Common properties of soils

A) Granular Soil

36Standard Penetration No., SPT N	Description	Relative Density, Dr %	Approx. Angle of Internal Friction, $\Phi°$	Approx. Rang of Most. Unit Wt.,y kN/m^3
< 4	Very loose	< 20	< 29	11-16
4-10	Loose	20-40	29-30	14-18
10-30	Medium Dense	40-60	30-36	17-20
30-50	Dense	60-80	36-41	17-22
> 50	Very Dense	> 80	> 41	20-29

B) Cohesive Soil

Standard Penetration No., SPT N	Description	Unconfined Compressive Strength, kPa	Approx. Rang of Most. Unit Wt., , ykN/m^3
< 2	Very Soft	0-25	14.4-16
2-4	Soft	25-50	16-17.4
4-8	Firm (medium)	50-100	17.6-19.2
8-15	Stiff	100-200	19.2-20.8
15-30	Very Stiff	200-400	20.8-22.4
> 30	Hard	> 400	> 20

Note: These values are most appropriate values in general. However, the soil properties vary between sites to site and hence it shall be used only for guidance

GEOTECHNICAL INVESTIGATION REPORT FOR THE PROPOSED CONSTRUCTION OF (G+3) RESIDENTIAL BUILDING AT ADAMPAKKAM, CHENNAI-600088.

APPENDIX   B

LABORATORY TEST

RESULT

GEOTECHNICAL INVESTIGATION REPORT FOR THE PROPOSED CONSTRUCTION OF (G+3) RESIDENTIAL BUILDING AT ADAMPAKKAM, CHENNAI-600088.

PHYSICAL ANALYSIS OF SOIL- BH –1

DEPTH (m)	W_N %	W_L %	W_P %	I_P %	FSI %	IS	GRAVEL %	COARSE %	MEDIUM %	FINE %	SILT + CLAY %	Gs
1.00	13	NON-PLASTIC				SP	4.16	24.2	38.34	9.93	23.37	2.654
2.00	15	NON-PLASTIC				SP	6.04	20.32	44.69	10.14	18.81	2.656
3.00	10	NON-PLASTIC				SP	14.86	17.20	33.34	7.58	27.02	2.652
4.50	11	NON-PLASTIC				SP	10.12	18.24	47.86	8.02	15.76	2.664
5.50	14	NON-PLASTIC				SP	4.20	18.14	42.93	7.84	26.89	2.668

PHYSICAL ANALYSIS OF SOIL- BH –2

DEPTH (m)	W_N %	W_L %	W_P %	I_P %	FSI %	IS	GRAVEL %	COARSE %	MEDIUM %	FINE %	SILT + CLAY%	Gs
1.00	10	NON-PLASTIC				SP	-	8.14	51.4	9.68	30.78	2.664
2.00	13	NON-PLASTIC				SP	-	8.46	46.71	9.18	35.65	2.672
3.00	11	NON-PLASTIC				SP	14.20	9.42	43.92	7.20	25.26	2.656
4.50	4	NON-PLASTIC				SP	4.19	8.72	43.40	6.88	36.81	2.652
6.00	6	NON-PLASTIC				SP	18.72	14.18	46.32	5.34	15.44	2.662

Sieve Analysis

Symbol	Borehole No.	Depth, M
●	BH-1	0.00-1.00
△	BH-1	1.00-2.00
■	BH-1	2.00-3.00
◇	BH-1	3.00-4.50

Date : 05.05.2022

Drawing Title : **GRAIN SIZE ANALYSIS**

PROJECT: Geotechnical Investigation for the proposed construction of (G+3) Residential Building at Adampakkam, Chennai.

Client / Owner : M/s.Pappas Builders Pvt. Ltd.,
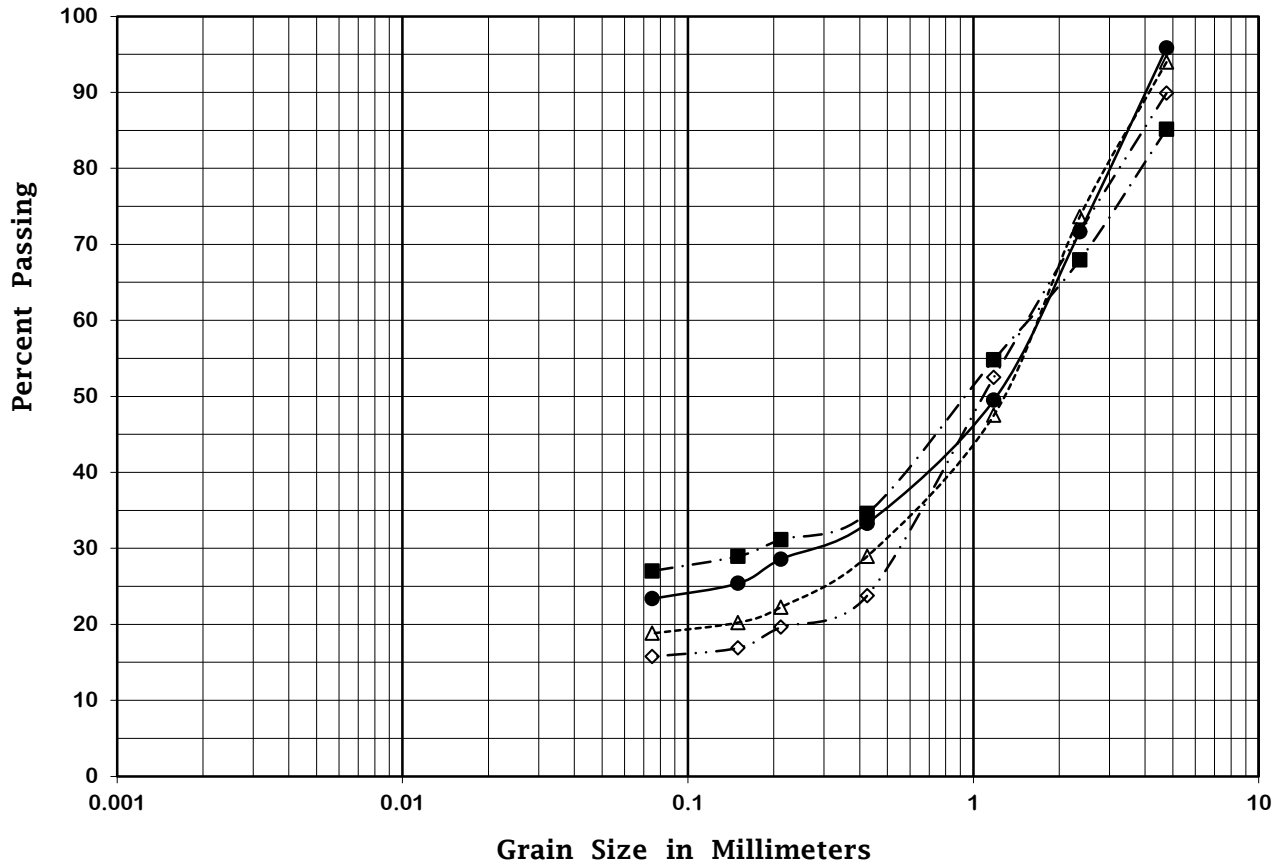
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FALCON™
LAB
Building Materials & Soil Testing

Sieve Analysis

Percent Passing vs **Grain Size in Millimeters**

Symbol	Borehole No.	Depth, M
●	BH-1	4.50-5.50

Date : 05.05.2022

Drawing Title : **GRAIN SIZE ANALYSIS**

PROJECT: Geotechnical Investigation for the proposed construction of (G+3) Residential Building at Adampakkam, Chennai.

Client / Owner : M/s.Pappas Builders Pvt. Ltd.,

FALCON INDUSTRIAL TESTING LABORATORY PVT. LTD.,

FALCON™ LAB

Building Materials & Soil Testing

Sieve Analysis

Symbol	Borehole No.	Depth, M
●	BH-2	0.00-1.00
△	BH-2	1.00-2.00
■	BH-2	2.00-3.00
◇	BH-2	3.00-4.50

Date : 05.05.2022

Drawing Title : **GRAIN SIZE ANALYSIS**

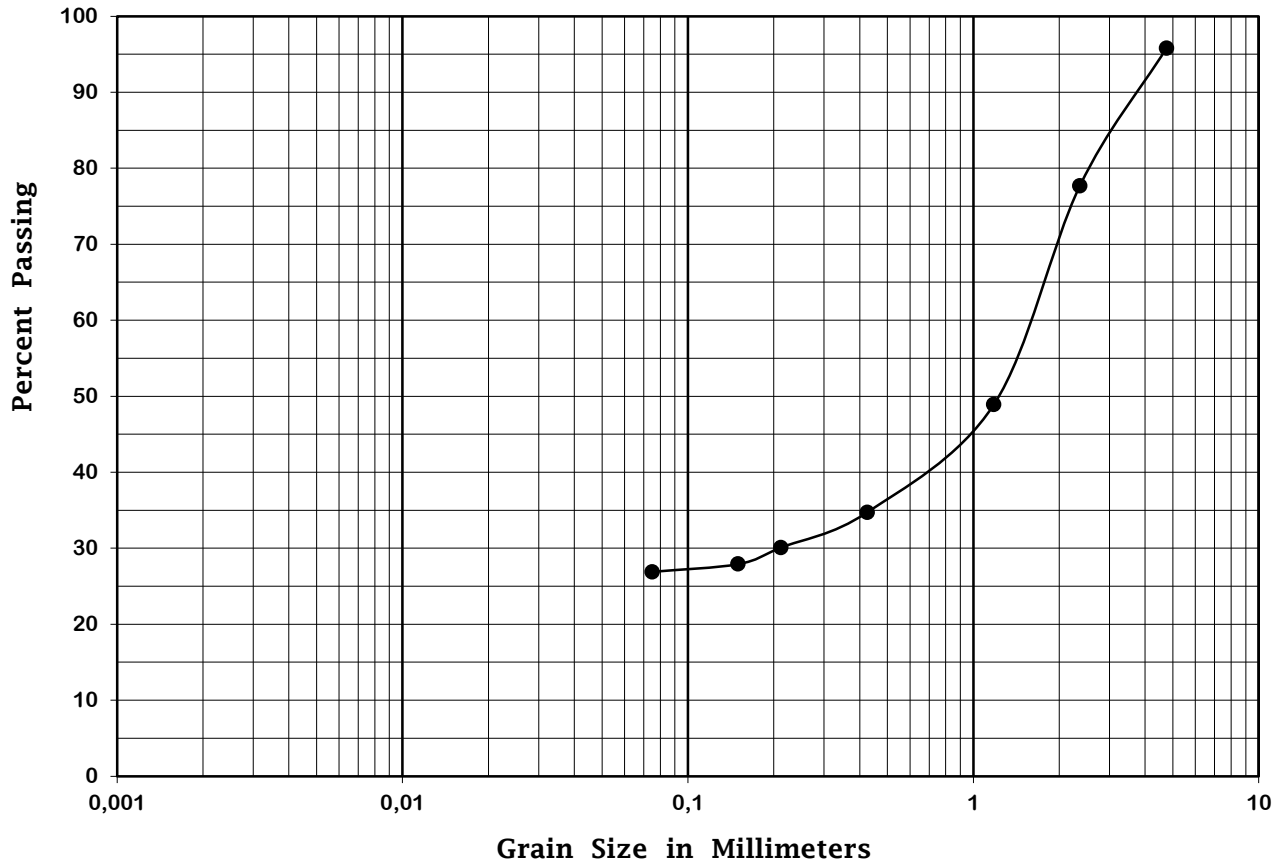**FALCON INDUSTRIAL TESTING LABORATORY PVT. LTD.,**

PROJECT: Geotechnical Investigation for the proposed construction of (G+3) Residential Building at Adampakkam, Chennai.

Client / Owner : M/s.Pappas Builders Pvt. Ltd.,

FALCON ™ LAB

Building Materials & Soil Testing

Sieve Analysis

Percent Passing (Y-axis): 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Grain Size in Millimeters (X-axis): 0.001, 0.01, 0.1, 1, 10

Symbol	Borehole No.	Depth, M
●	BH-2	4.50-5.50

Date : 05.05.2022
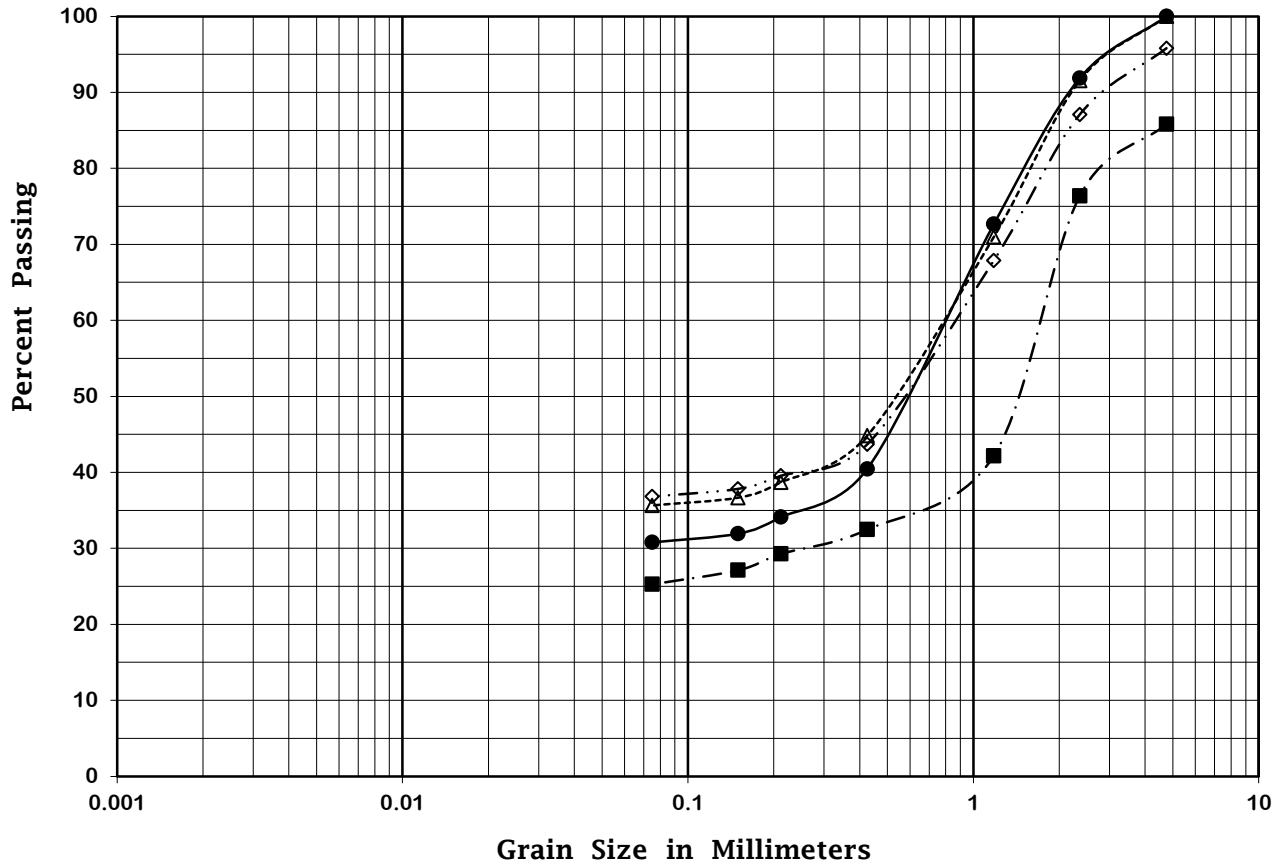
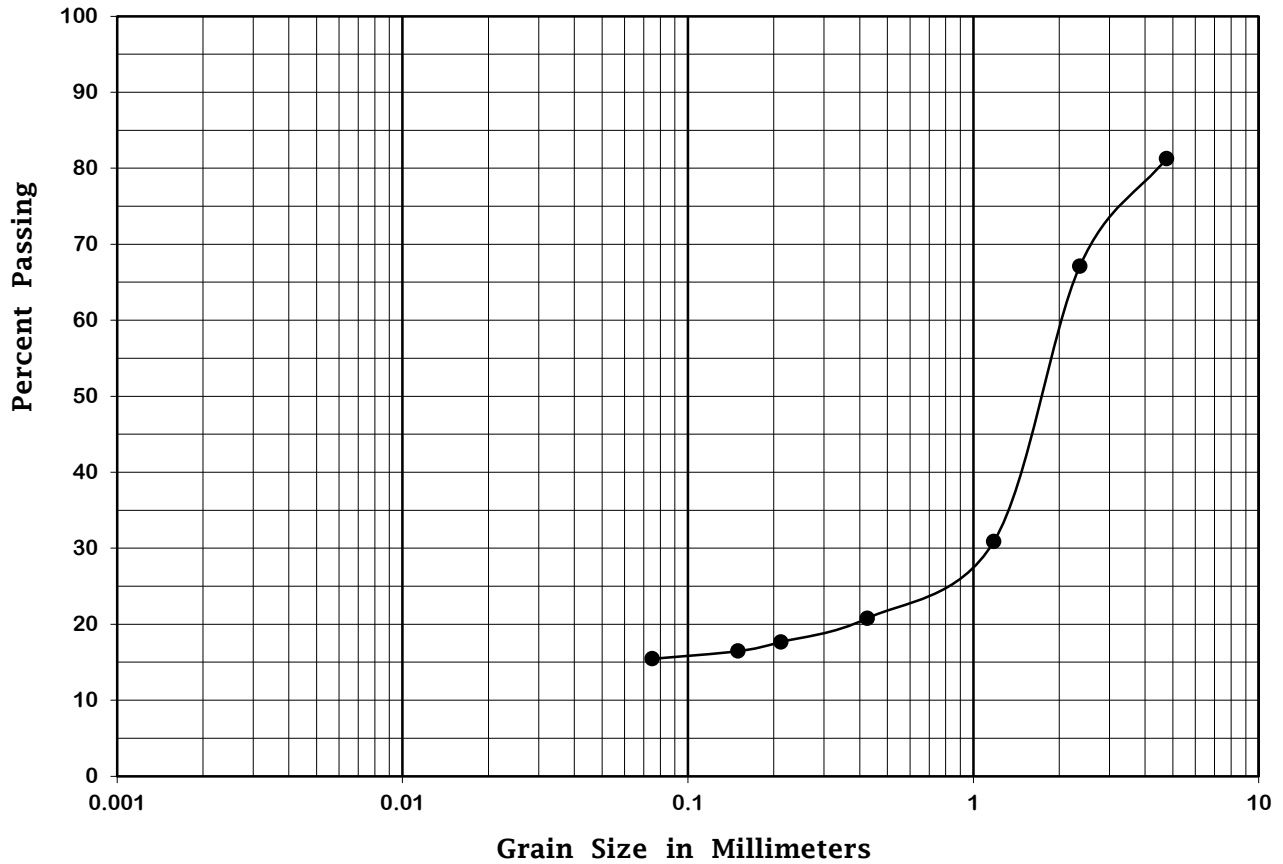Drawing Title : **GRAIN SIZE ANALYSIS**

PROJECT: *Geotechnical Investigation for the proposed construction of (G+3) Residential Building at Adampakkam, Chennai.*

Client / Owner : *M/s.Pappas Builders Pvt. Ltd.,*

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GEOTECHNICAL INVESTIGATION REPORT FOR THE PROPOSED CONSTRUCTION OF (G+3) RESIDENTIAL BUILDING AT ADAMPAKKAM, CHENNAI-600088.

ABBREVIATION:

Note

W_N	=	Natural Moisture content (%)
W_L	=	Liquid limit (%)
W_P	=	Plasticity Limit (%)
I_P	=	Plasticity Index (%)
F.S.I	=	Free Swell Index (%)
IS	=	Indian Standard Classification
CL	=	Low compressibility Clay of W_L < 35%
CI	=	Inorganic Clay of 35% < W_L <50%
CH	=	High Compressibility Clay of W_L > 50%
SP	=	Poorly graded sand
GP	=	Poorly graded gravel
SW	=	Well graded sand
SM	=	Silty sand
GW	=	Well graded gravel

GEOTECHNICAL INVESTIGATION REPORT FOR THE PROPOSED CONSTRUCTION OF (G+3) RESIDENTIAL BUILDING AT ADAMPAKKAM, CHENNAI-600088.

APPENDIX- C

ANALYSIS OF SPREAD FOOTING

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COMPUTATION OF BEARING CAPACITY AS PER IS: 6403:1981 BH-1

1 Geometrical Data :

Shape of the Foundation	Square	
Shape considered for bearing capacity design	Spread	
Size of Footing (B)	2.00	m
Breadth to Length Ratio of Foundation (B/L)	1.00	
Depth of Foundation below E.G.L. (D_f):	2.00	m
Inclination of Vertical Load with the Vertical (α)	0.00	Deg.

2 Soil Data :

Type of Bearing Strata :	Sand	
Design SPT **"N"** (average) value of the Bearing Strata:	40	
Type of Shear Failure:	General	
Angle of Shearing Resistance - Limited to a Maximum of:	32.00	Deg.

3 Design Parameters:

Saturated Density of Soil above the foundation detph (γ_{bulk})	7.69	kN/m^3
Effective Overburden pressure at foundation level (q)	15.38	kPa
Water Table Correction Factor (w')	0.50	

Bearing Capacity Factors:

N_c = 36.53
N_q = 24.36
N_γ = 32.65

Shape Factors:

S_c = 1.30
S_q = 1.20
S_γ = 0.80

Depth Factors :

D_c = 1.36
D_q = 1.18
D_γ = 1.18

Inclination Factor:

I_c = 1.00
I_q = 1.00
I_γ = 1.00

4 Ultimate Bearing Capacity (Qu) :

Qu=q*(Nq-1)*Sq*Dq*Iq + 0.5*B*g*Ng*Sg*Dg*Ig*w'	627.467	kPa

5 Safe Bearing Capacity (Qsafe) :

Factor of Safety (F.S.) :	2.50	
Qsafe :	250.99	kPa
Q$_{\text{safe limited to}}$	200	kPa

This bearing capacity(200 kpa) has been fulfill the settlement limit(50mm)

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Settlement Calculation as per IS 8009-part1 for BH-1

Immediate settlement = q x B" x (1-m2)x If / Es

q - Allowable bearing pressure 200   kPa

B - width of foundation 2   m

m - poisson's ratio of soil 0.3

If - Influence factor (Square Center) 1.12

Es-Modulus of Elasticity of Soil 26665

Immediate settlement = q x B x (1-m2)x Is x If / Es = 0.01529

Settlement 15   mm

SAFE BEARING CAPACITY BASED ON SETTLEMENT

DEPTH	WIDTH	ALL.SETTLEMENT	ALL. BEARING CAPACITY
2.00m	2.00m	50mm	200kPa

As the estimated immediate settlement of 15mm is within the allowable limit of 50mm, Hence spread/ Isolated footings shall be adopted.

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TABLE FOR CORRECTION OF SPT VALUES as per IS :2131-1981

CLIENT	:	M/s.Pappas Builders Pvt. Ltd.,		**M/s. FALCON INDUSTRIAL TESTING LABORATORY PVT. LTD.,**		
PROJECT	:	(G+3) Residential Building				
LOCATION	:	Pappas Vasantha, No.17, VV Colony, Adambakkam, Chennai - 600088.				

Depth (m)	Field "N" SPT Values BH-1	Over burden pressure (t/m^2)	Over burden correction factor (C_n)	Over burden Correction (N')	Dilatancy correction (N")	Corrected N Values
2.00	21	2	1.50	32	23	23
3.00	50	3	1.37	69	42	42
4.50	50	4.5	1.23	62	38	38
5.50	100	5.5	1.18	118	67	67
7.50	55	7.5	1.09	60	38	38
				Average of Corrected N values		41

Note: N/A = Not Applicable

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INDUSTRIAL TESTING LABORATORY PVT. LTD.

TABLE FOR CORRECTION OF SPT VALUES as per IS :2131-1981

CLIENT	:	M/s.Pappas Builders Pvt. Ltd.,	M/s. FALCON INDUSTRIAL TESTING LABORATORY PVT. LTD.,
PROJECT	:	(G+3) Residential Building	
LOCATION	:	Pappas Vasantha, No.17, VV Colony, Adambakkam, Chennai - 600088.	

Depth (m)	Field "N" SPT Values BH-2	Over burden pressure (t/m^2)	Over burden correction factor (C_n)	Over burden Correction (N')	Dilatancy correction (N'')	Corrected N Values
2.00	14	2	1.50	21	18	18
3.00	50	3	1.37	69	42	42
4.50	50	4.5	1.23	62	38	38
6.00	100	6	1.15	115	65	65
7.50	54	7.5	1.09	58	37	37
Average of Corrected N values						40

Note: N/A = Not Applicable

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SUMMARY

LOCATION NO.	TYPE OF FOOTING	DEPTH OF FOOTING (m)	SBC (t/m^2)	TOTAL SETTLEMENT (mm)
BH-1	Spread (Square)	2.00	20.39 (200 kPa)	15

for Falcon Industrial Testing Laboratory Pvt ltd.,

Dr.S.Sherlin Prem Nishold, M.E., Ph.D.,
Technical Manager