

**REPORT ON GEOTECHNICAL INVESTIGATION FOR THE PROPOSED CONSTRUCTION OF: "VIRAAM" PLAN SHOWING THE PROPOSED CONSTRUCTION OF GROUP HOUSING DEVELOPMENT COMPRISING 3 BLOCKS; BLOCK A STILT FLOOR + 4 FLOORS + 5<sup>TH</sup> FLOOR (PART) (HEIGHT- 18.30M) RESIDENTIAL BUILDING WITH 40 DWELLING UNITS; BLOCK B- STILT FLOOR + 4 FLOORS + 5<sup>TH</sup> FLOOR (PART) (HEIGHT- 18.30M) RESIDENTIAL BUILDING WITH 40 DWELLING UNITS; BLOCK C- STILT FLOOR + 3 FLOORS (HEIGHT- 12.60M) AMENITIES BLOCK (GYM, PLAY AREA AND HOME THEATRE) - TOTALLY 80 DWELLING UNITS FOR AFFORDABLE HOUSING AT MANGADU, CHENNAI COMPRISED IN S.NO: 475/1A1B, OF MANGADU VILLAGE WITHIN THE LIMITS OF MANGADU MUNICIPALITY.**

**Client:**

**M/s. Aaalam Promoters Private Limited,  
Fortune Villa, No.1, Gill Nagar Extension,  
Choolaimedu, Chennai-600094.**

| REPORT ISSUE STATUS |            |              |                                                |
|---------------------|------------|--------------|------------------------------------------------|
| <2>                 | 11.01.2025 | Revision 2   | Updated with detailed project name and address |
| <1>                 | 13.12.2024 | Revision 1   | Updated with revised Pile Capacities           |
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**Project No: MSGTPL/SI-6256-R2/24-25**

**Sep-2024.**



CHENNAI METROPOLITAN DEVELOPMENT AUTHORITY  
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## PROFESSIONAL REGISTRATION CERTIFICATE

This is to certify that the Tmt VASANTHIPADMANABAN has enrolled as Registered Geo-Technical Engineer (RGTE) with Chennai Metropolitan Development Authority (CMDA) who has the qualification of M.Tech., (Soil Mechanics & Foundation Engg.) and experience in the relevant field for 6 years.

She has been given the Registration No. GTE/2019/04/016 Renewed on 03.04.2024. She shall be required to comply with the duties and responsibilities prescribed by the Government of Tamil Nadu in Part-V, "Registration of Professionals", Tamil Nadu Combined Development and Building Rules, 2019 approved vide G.O.(Ms) No.18 MAWS (MA1) Dept. dated 04.02.2019.

This Registration is valid upto 02.04.2029.



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Superintendent

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VASANTHI PADMANABAN, M.Tech.,  
Registered Geotechnical Engineer  
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To

11<sup>th</sup> January 2025

**M/s. Aaalam Promoters Private Limited,**  
Fortune Villa, No.1, Gill Nagar Extension,  
Choolaimedu, Chennai-600094.

**Reg:** Proposed Construction of: "VIRAAM" Plan showing the Proposed Construction of Group Housing Development Comprising 3 blocks; Block A Stilt Floor + 4 floors + 5<sup>th</sup> Floor (Part) (Height - 18.30m) Residential Building with 40 Dwelling Units; Block B- Stilt Floor + 4 Floors + 5<sup>th</sup> Floor (Part) (Height- 18.30m) Residential Building with 40 Dwelling Units; Block C- Stilt Floor + 3 Floors (Height - 12.60m) Amenities Block (Gym, Play Area and Home Theatre) - Totally 80 Dwelling Units for Affordable Housing at Mangadu, Chennai Comprised in S.No: 475/1A1B, of Mangadu Village within the limits of Mangadu Municipality, Tamil Nadu, INDIA.

The **Mars Synergy Geotech Pvt Ltd**, Chennai has completed the geotechnical engineering services for the above referred project.

This geotechnical engineering report presents the results of the subsurface exploration and the recommendations for your proposed structures foundation are presented here in final form together with a summary of field and laboratory data.

We appreciate the opportunity to be of service to you on this project. If you have any comments concerning this report, or if we may be of further services, please contact us/mail.

**Note:**

1. The test results enclosed are only related to the sample tested by us.
2. The Report shall not be reproduced in full or part without written permission from Mars Synergy Geotech Laboratory.
3. All the lab related tested values are as per the standard conditions followed by the lab.
4. Samples are retained for 30 days from sample received date at lab.

Sincerely,

**Mars Synergy Geotech Pvt Ltd.**

*Vasanthi P*

**VASANTHI PADMANABAN, M.Tech.,**  
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Reg. No: GTE/19/04/016

Report No: **MSGTPL/SI-6256 R2/24-25**

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**REPORT ON GEOTECHNICAL INVESTIGATION AND RECOMMENDATION FOR THE  
PROPOSED CONSTRUCTION OF "VIRAAM" RESIDENTIAL BUILDING.**

**1.0 INTRODUCTION**

**M/s. Aalam Promoters Private Limited**, Chennai is planning to construct "**VIRAAM**" Plan showing the Proposed Construction of Group Housing Development Comprising 3 blocks; Block A Stilt Floor + 4 floors + 5<sup>th</sup> Floor (Part) (Height - 18.30m) Residential Building with 40 Dwelling Units; Block B- Stilt Floor + 4 Floors + 5<sup>th</sup> Floor (Part) (Height- 18.30m) Residential Building with 40 Dwelling Units; Block C- Stilt Floor + 3 Floors (Height - 12.60m) Amenities Block (Gym, Play Area and Home Theatre) - Totally 80 Dwelling Units for Affordable Housing at Mangadu, Chennai Comprised in S.No: 475/1A1B, of Mangadu Village within the limits of Mangadu Municipality, Tamil Nadu, INDIA. **M/s. Mars Synergy Geotech Pvt Ltd**, Chennai has carried out this investigation and completed the field work on 25<sup>th</sup> Aug 2024 as per the client instructions.

**The scope of work includes the following**

- Making three (3) numbers of Standard Soil Investigation bore-holes
- Collecting soil samples at regular depth intervals
- Conducting SPTs at every 1.0m/1.50m depth intervals
- Conducting laboratory tests on samples collected
- Submitting report with laboratory test results and recommendation for foundations.

**1.1 DESCRIPTION OF STRUCTURE**

The proposed structure is a residential apartment building (stilt+5upper floors) and Club house (stilt+3 upper floors). The exact details of columns are not available at the time of preparation of this report. Assuming an approximate column spacing of 4.5x5.5m c/c considering this the central column load works about 150 tones for proposed six storied building and 125 Tonnes for four storied club house. These loads are assumed for the purpose of foundation only and for the structural design, exact loads are to be estimated based on a suitable structural analysis.

**1.2 SOIL INVESTIGATION**

The field investigation works were carried out using 1 set of Rotary mechanical drilling Rig. The following activities, carried out in chronological sequence, comprised the fieldwork for the project

- Mobilization of rotary drill rig, water pump, testing tools and accessories.

- Collection of disturbed samples of non-cohesive soils.
- Sampling and logging of the boreholes. Packing, labeling and dispatching the samples to laboratory.
- Field investigation, tests and laboratory tests conducted as per IS-1892 and IS -2720

### 1.3 FIELD SAMPLING

Three (03) numbers of standard soil investigation boreholes of 100mm diameter was made at the locations shown in the drawing, **MSGTPL/SI-6256 R2** enclosed. Investigations were conducted up to a maximum of 20.50m depth from existing ground level. SPTs were conducted at every 1.0m/1.5m depth intervals and samples were collected for identification and testing.

### 1.4 LABORATORY TESTS

The laboratory-testing scheme is so designed to obtain the design parameters for the foundations. The following parameters are evaluated:

- Type of soil and it's gradation properties
- Atterberg Limits
- Specific Gravity
- Natural Moisture Content (NMC)
- Strength Parameters such as Cohesion,
- Angle of Shearing Resistance
- Sieve analysis on the coarse-grained soil fraction

All the test results are presented in the tabular forms. Comprehensive field information along with SPT values is presented on separate sheet.

### 1.5 SOIL PROFILE

Based on visual identification of soil samples and test results (of both field and laboratory tests), the soil profile arrived. Subsoil is made-up of eight / nine distinctive layers there are

#### **BH-1**

- (i) Filled up soil up to -1.50m with **SPT's N=6**
- (ii) Soft CLAY -1.50m to -2.50m with **SPT's N=4**
- (iii) Loose SAND -2.50m to -3.50m with **SPT's N=8**

- (iv) Stiff CLAY -3.50m to -5.50m with **SPT's N=9-11**
- (v) Medium dense SAND -5.50m to -7.0m with **SPT's N=19**
- (vi) Medium stiff to stiff CLAY -7.0m to -12.0m with **SPT's N=5-9**
- (vii) Very stiff CLAY -12.0m to -16.50m with **SPT's N=19-29**
- (viii) Hard CLAY -16.50m to -20.50m with **SPT's N=>50**

#### **BH-2**

- (i) Filled up soil up to -1.50m with **SPT's N=2**
- (ii) Medium dense SAND -1.50m to -2.50m with **SPT's N=21-22**
- (iii) Medium stiff CLAY -2.50m to -7.0m with **SPT's N=5-7**
- (iv) Very loose SAND -7.0m to -8.50m with **SPT's N=2**
- (v) Medium Stiff CLAY -8.50m to -10.50m with **SPT's N=7**
- (vi) Medium dense SAND -10.50m to -12.0m with **SPT's N=16**
- (vii) Dense clayey SAND -12.0m to -13.0m with **SPT's N=38**
- (viii) Very dense clayey SAND -13.0m to -16.50m with **SPT's N=>50**
- (ix) Hard CLAY -16.50m to -20.50m with **SPT's N=>50**

#### **BH-3**

- (i) Filled up soil up to -1.50m
- (ii) Medium dense SAND -1.50m to -4.50m with **SPT's N=13-18**
- (iii) Stiff CLAY -4.50m to -12.0m with **SPT's N=10-15**
- (iv) Loose SAND -12.0m to -13.50m with **SPT's N=10**
- (v) Hard CLAY -13.50m to -15.0m with **SPT's N=69**
- (vi) Very dense SAND -15.0m to -16.50m with **SPT's N=53**
- (vii) Hard CLAY -16.50m to -20.50m with **SPT's N=>50**

The soil profile details are presented in the bore-chart.

### **1.6 GROUND WATER TABLE**

Determination of Ground water Table from Existing Ground level was done using Steel tape with weight. The depth of Ground water table was determined as per procedure laid in IS 6935-1973. At the time of Soil Investigation (17/08/2024 to 25/08/2024) at site, ground water table was **(-)1.50m** depth encountered with in the investigated depth from Existing Ground Level.

## 1.7 DISCUSSION ON FOUNDATION

At this site three boreholes were investigated up 20.5m depth, the proposed structure are six storied residential building and four storied club house, the column loads are assumed about 150 to 125 tons in the absence of structural drawings. Based on the soil strata it is ideal to adopt pile foundation for Six storied building and shallow foundation for club house.

Based on soil strata it is ideal to adopt deep foundation for apartment building (stilt+5) floors.

For Apartment Building (ref BH-1)

| Soil Design Parameters |        |               |                            |             |                                |             |          |              |     |
|------------------------|--------|---------------|----------------------------|-------------|--------------------------------|-------------|----------|--------------|-----|
| From (m)               | To (m) | Thickness (m) | Soil Type                  | Avg SPT 'N' | $\gamma'$ (kN/m <sup>3</sup> ) | C (kN/sq.m) | $\alpha$ | $\phi$ (deg) | K   |
| 0.0                    | 1.5    | 1.5           | Filled up soil             | 6           | 7.5                            | -           | -        | 18           | 1.0 |
| 1.5                    | 2.5    | 1.0           | Soft CLAY                  | 4           | 7.0                            | 20          | 1.0      | -            | -   |
| 2.5                    | 3.5    | 1.0           | Loose SAND                 | 8           | 8.0                            | -           | -        | 18           | 1.0 |
| 3.5                    | 5.5    | 2.0           | Stiff CLAY                 | 10          | 8.0                            | 60          | 0.9      | -            | -   |
| 5.5                    | 7.0    | 1.5           | Medium dense SAND          | 19          | 8.5                            | -           | -        | 32           | 1.1 |
| 7.0                    | 12.0   | 5.0           | Medium stiff to stiff CLAY | 6           | 8.0                            | 35          | 1.0      | -            | -   |
| 12.0                   | 16.5   | 4.5           | Very stiff CLAY            | 24          | 9.0                            | 120         | 0.3      | -            | -   |
| 16.5                   | 20.5   | 4.0           | Hard CLAY                  | >50         | 10.0                           | 300         | 0.28     | -            | -   |

## 1.8 RECOMMENDATIONS

### For Apartment Building (Stilt+5 floors)

- ✓ The estimated safe load carrying capacity of bored cast in situ piles as per IS 2911 (Part 1/Sec2): 2010
- ✓ The pile length shall be about **20.0m** from the finished ground level (0.6m filling). The recommended pile length is including socketing length of pile.
- ✓ The pile capacities for varying diameters are provided below for proposed structure.

| Length of<br>Pile (m) | Pile Dia<br>(mm) | Safe Vertical<br>Capacity<br>(Tones) | Safe uplift<br>capacity<br>(Tones) | Safe Lateral capacity<br>w.r.t 5mm Deflection |                       |
|-----------------------|------------------|--------------------------------------|------------------------------------|-----------------------------------------------|-----------------------|
|                       |                  |                                      |                                    | Free Head<br>(Tones)                          | Fixed Head<br>(Tones) |
| 20                    | 450              | 64                                   | 43                                 | 0.9                                           | 2.3                   |
|                       | 500              | 75                                   | 48                                 | 1.0                                           | 2.5                   |
|                       | 600              | 95                                   | 59                                 | 1.2                                           | 3.1                   |

### General Recommendation

- The proposed project site is situated in Mangadu, Chennai which falls under Seismic Zone III as per IS 1893 (Part 1) - 2002. Structure should be design against Earth quake resistance
- Pile Cut Off level is considered 1.0m below Existing Ground Level (EGL).
- Use minimum M25 Grade of concrete
- Centre to centre spacing of piles shall not be less than 3 times of the diameter of the pile shaft.
- **The above safe loads suggested are only tentative and these have to be confirmed by conducting through pile load tests conducted as per I.S-2911part –IV:2013**

### For Club House ( Stilt+3)

- ✓ The proposed structure is a Stilt+ Three upper floors club building.
- ✓ Excavate up to 2.0m, after excavation thorough compaction shall be done **bottom of excavated trench with heavy roller.**
- ✓ After thorough compaction, adopt strip raft of 1.5m minimum width at a depth of 2.0m below the E.G.L can be adopted.
- ✓ **The Safe bearing capacity is 17.0T/sq.m. at 2.0m below E.G.L.**
- ✓ **The Strip Raft Shall be designed as inverted 'T'**
- ✓ These should be inter connecting strip rafts in perpendicular direction.
- ✓ Strip raft should rest on 150mm thick 1:4:8 mat.
- ✓ The settlements are within permissible limits.
- ✓ All foundation works should be done in dry conditions only.
- ✓ Excavated soil can be re used with proper compaction.

*Vasanthi*  
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## 2.0 DETERMINATION OF BEARING CAPACITY OF SHALLOW FOUNDATIONS

[Based On IS: 6403-1981]

Strip Width: 1.5m  
Length of Strip: 22.5m (Assumed)  
Depth of Foundation: 2.0m  
Existing Ground level: 0.00M  
Ground Water Table level: -0.00M (Due to Heavy Rain Temporary)  
Bulk Density (W) of Soil above Footing Base: 1.80  
Submerged Density (W') of Soil above Footing Base: 0.80T/Cu.M.  
Bulk Density (W) of Soil below Footing Base: 1.80T/Cu.M.  
Factor of Safety: 2.5

Shape factor    Depth Factor    Inclination Factor  
Sq = 1.010    Dq = 1.22    Iq = 1.000  
Sg = 0.990    Dg = 1.22    Ig = 1.000

Water Table Correction Factor  $w' = 0.50$

Effective surcharge at base level  $q = 1.60 \text{ T/Sq.M.}$

Ultimate Net B.C. =  $Qult\_n = q \cdot (Nq-1) \cdot Sq \cdot Dq \cdot Iq + 0.5 \cdot B \cdot W \cdot Ng \cdot Sg \cdot Dg \cdot Ig \cdot W'$

Angle of Internal Friction (phai):  $28^\circ$

Bearing Capacity Factors  
 $Nq = 15.30, Ng = 17.79$

Thus  $Qult\_n = 42.74 \text{ T/Sq.M.}$   
Allowable Bearing Capacity ( $Qall$ ) =  $17.10 \text{ T/Sq.M.}$

**Say  $17 \text{ T/m}^2$**

### Settlement Calculations as per IS-8009-(Part1) 1998

$S = Sc + Si$

$Sc = 5 \text{ mm}$        $Si = pB \frac{(1 - \mu^2)}{Es} I$

$Si = \text{Medium dense SAND (2.0m to 8.50m)}$

$$Si = 17 \cdot 1.5 \cdot \frac{(1 - 0.3^2)}{1500} - 1.31 = 0.020 \text{ m} = 20 \text{ mm}$$

$S = Sc + Si = 5 + 20 = 25 \text{ mm}$

Depth Correction =  $0.90 \cdot 25 = 22.5 \text{ mm}$

**Say  $23 \text{ mm}$**

**Total settlements  $23 \text{ mm}$ , it is less than  $25 \text{ mm}$  hence it is safe as per IS 1904-1986.**

# ESTIMATION OF VERTICAL CAPACITY OF PILE

|                |                                        |
|----------------|----------------------------------------|
| Project:       | 6256-R2, "VIRAAM" Residential Building |
| Location:      | Mangadu                                |
| Reference BH's | BH-1 To BH-2 (ref BH-1)                |

|                                  |      |    |
|----------------------------------|------|----|
| Dia of Pile                      | 600  | mm |
| Elevation                        | 0    | m  |
| Pile Cut off Level               | 1.0  | m  |
| Pile termination level below G.L | 20   | m  |
| Total Length of Pile             | 19.0 | m  |
| Factor of safety                 | 2.5  |    |

$$Q_u = A_p \left( \frac{1}{2} DY N_f + P_B N_q \right) + \sum_{i=1}^n K_i P_{Di} \tan \delta_i A_{si}$$

$$Q_u = A_p N_c C_p + \sum_{i=1}^n \alpha_i C_i A_{si}$$

## Soil Design Parameters

| Sl.No | From (m) | To (m) | Thickness (m) | Soil Type                  | Avg 'N' | 'Y' (kN/m <sup>3</sup> ) | C (kPa) | $\alpha$ | $\phi$ | K   | Pdi (kN/m <sup>2</sup> ) |
|-------|----------|--------|---------------|----------------------------|---------|--------------------------|---------|----------|--------|-----|--------------------------|
| 1     | 0        | 0.6    | 0.6           | Filled up soil             | 6       | 7.5                      | -       | -        | 18     | 1   | 2.25                     |
| 2     | 0.6      | 2.5    | 1.9           | Soft CLAY                  | 4       | 7                        | 20      | 1        | -      | -   | 11.15                    |
| 3     | 2.5      | 3.5    | 1             | Loose SAND                 | 8       | 8                        | -       | -        | 18     | 1   | 21.8                     |
| 4     | 3.5      | 5.5    | 2             | Stiff CLAY                 | 10      | 8                        | 60      | 0.9      | -      | -   | 33.8                     |
| 5     | 5.5      | 7      | 1.5           | Medium dense SAND          | 19      | 8.5                      | -       | -        | 32     | 1.1 | 48.175                   |
| 6     | 7        | 12     | 5             | Medium stiff to stiff CLAY | 6       | 8                        | 35      | 1        | -      | -   | 74.55                    |
| 7     | 12       | 16.5   | 4.5           | Very stiff CLAY            | 24      | 9                        | 120     | 0.3      | -      | -   | 114.8                    |
| 8     | 16.5     | 20.5   | 4             | Hard CLAY                  | >50     | 10                       | 300     | 0.28     | -      | -   | 155.05                   |

## Pile Calculations As per IS-2911 part-1/Sec-2-2010

| Sl.No | From (m) | To (m) | Thickness (m) | Avg 'N' | 'Y' (kN/m <sup>3</sup> ) | C (kPa) | $\alpha$ | $\phi$ | K   | Asi  | Sf (kN) | Sfi (kN) |
|-------|----------|--------|---------------|---------|--------------------------|---------|----------|--------|-----|------|---------|----------|
| 2     | 1        | 2.5    | 1.5           | 4       | 7                        | 20      | 1        | -      | -   | 2.83 | 56.55   | 56.55    |
| 3     | 2.5      | 3.5    | 1             | 8       | 8                        | -       | -        | 18     | 1   | 1.88 | 13.35   | 69.90    |
| 4     | 3.5      | 5.5    | 2             | 10      | 8                        | 60      | 0.9      | -      | -   | 3.77 | 203.58  | 273.48   |
| 5     | 5.5      | 7      | 1.5           | 19      | 8.5                      | -       | -        | 32     | 1.1 | 2.83 | 93.63   | 367.10   |
| 6     | 7        | 12     | 5             | 6       | 8                        | 35      | 1        | -      | -   | 9.42 | 329.87  | 696.97   |
| 7     | 12       | 16.5   | 4.5           | 24      | 9                        | 120     | 0.3      | -      | -   | 8.48 | 305.36  | 1002.33  |
| 8     | 16.5     | 20     | 3.5           | >50     | 10                       | 300     | 0.28     | -      | -   | 6.60 | 554.18  | 1556.51  |

## End Bearing

| Bearing Strata | Dia (m) | Ap (m <sup>2</sup> ) | 'Y' (kN/m <sup>3</sup> ) | q (kN/m <sup>2</sup> ) | Nq | Ng | C (kN/m <sup>2</sup> ) | Nc | Qp (kN) | Qult (kN) | Qallow (kN) |
|----------------|---------|----------------------|--------------------------|------------------------|----|----|------------------------|----|---------|-----------|-------------|
| Hard CLAY      | 0.6     | 0.28274334           | 8                        | 72                     | -  | -  | 340                    | 9  | 865.2   | 2421.7    | 968.68      |

Safe vertical Capacity of Single Pile

97 Tones

### Lateral Pile Capacity Calculation

Project Title : 6256-R2, "VIRAAM" Residential Building  
Site : Mangadu  
BH: BH-1 to BH-2 (ref BH-1)

As Per IS-2911(Part-1/Sec-2):2010

|                                                                                                |                                                                                                  |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| $\text{Deflection, } y = \frac{H(e + Z_f)^3}{3EI} \times 10^3 \dots \text{for free head pile}$ | $\text{Deflection, } y = \frac{H(e + Z_f)^3}{12EI} \times 10^3 \dots \text{for fixed head pile}$ |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|

#### Input

| Soil                                         | Medium stiff CLAY            | For CLAY                    | Stiffness factor $R_e$ in m = $\sqrt[4]{\frac{EI}{KB}}$     |
|----------------------------------------------|------------------------------|-----------------------------|-------------------------------------------------------------|
| Diameter of Pile                             | = 600 mm                     | $k_1 = 9 \text{ MN/m}^2$    | $L_1/R = 0$                                                 |
| Length of Pile Below FGL, (L)                | = 20 m                       | $K = 3 \text{ MN/m}^3$      | $L_f/R \text{ (Free Head)} = 1.9$                           |
| Length of Pile Above FGL, (L1=e)             | = 0 m                        | $R = 3.07 \text{ m}$        | $L_f/R \text{ (Fixed Head)} = 2.2$                          |
| Grade of Concrete                            | = 25                         | For SAND                    | Stiffness factor $T_e$ in m = $\sqrt[5]{\frac{EI}{\eta_b}}$ |
| Allowable Deflection, (y)                    | = 5 mm                       | $\eta_b = 0 \text{ MN/m}^3$ |                                                             |
| Young's modulus of pile material, (E)        | = 25000.00 MN/m <sup>2</sup> | $T = \#DIV/0!$              |                                                             |
| Moment Inertia of the Pile Cross section (I) | = 0.0064 m <sup>4</sup>      | $L_1/T = \#DIV/0!$          | $L_f/T \text{ (Fixed Head)} = 2.2$                          |

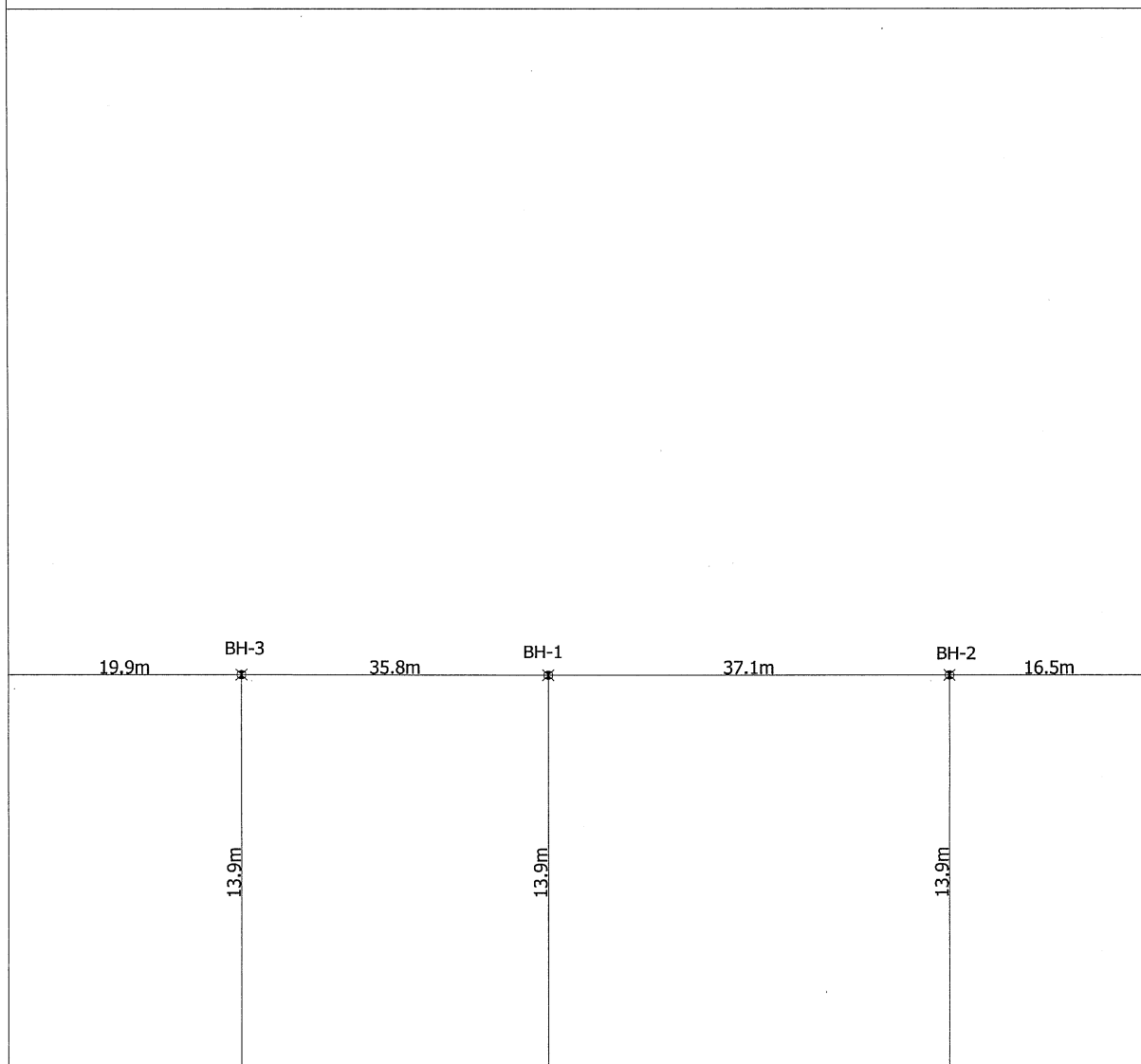
#### Output for CLAY Soil

|                                                       |        |
|-------------------------------------------------------|--------|
| $Z_f \text{ (Free Head)} / \text{Depth of Fixity} =$  | 5.83 m |
| $Z_f \text{ (Fixed Head)} / \text{Depth of Fixity} =$ | 6.75 m |

#### Result

|                           |            |
|---------------------------|------------|
| Lateral Load Free Head =  | 1.21 Tones |
| Lateral Load Fixed Head = | 3.11 Tones |

VASANTHAPURAM MAIN ROAD



**TITLE:** DRAWING SHOWING THE SOIL INVESTIGATION BORE HOLE LOCATIONS

**PROJECT:** PROPOSED CONSTRUCTION OF "VIRAAM" RESIDENTIAL BUILDING

**LEGEND:**

BH: BORE HOLE    ✕ -SOIL TEST LOCATION

ACTIVITY

EXECUTED  
BY

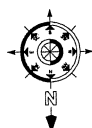
SCALE: N T S

FOREMEN

DEVARAJ

DRAFTING

AK



**MARS SYNERGY GEOTECH Pvt Ltd**

(An ISO 9001: 2015 Certified Company)

Engineering Survey & Soil Investigation

#30/25, DROWPATHY AMMAN KOIL MAIN ROAD

VELACHERY, CHENNAI - 600 042.

Mobile: 94440 51563 / 94441 22047

DRAWING NO: MSGTPL/SI-6256-R2/24-25

**BOREHOLE LOG**

**Project No: MSGTPL/SI-6256-R2/24-25**

**Project: Proposed Construction of "VIRAAM" Residential Building**

|             |        |
|-------------|--------|
| Location    |        |
| Ground R.L. | -      |
| Drilling    | Rotary |

|                       |             |
|-----------------------|-------------|
| <b>Borehole No</b>    | <b>BH-1</b> |
| G.W.T (m)             | (-)1.50     |
| Date of Start         | 17-Aug-2024 |
| Date of Complete      | 20-Aug-2024 |
| Dia of Bore (mm)      | 100         |
| Termination Depth (m) | 20.50       |

| Depth below EGL (m) | Layer Thickness | Soil Layers Description                           | Soil Symbol | IS-Classification | Type Field Test | Test Depth (m) | SPT Values Record<br>0 to 45cm |    |              |    | SPT- N- Value | Graphical Representation of SPT |
|---------------------|-----------------|---------------------------------------------------|-------------|-------------------|-----------------|----------------|--------------------------------|----|--------------|----|---------------|---------------------------------|
|                     |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 0.0                 |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 0.5                 | 1.0             | Filledup Soil                                     |             |                   |                 |                |                                |    |              |    |               |                                 |
| 0.6                 |                 |                                                   |             |                   | SPT             | 0.6            | 2                              | 3  | 3            | 6  |               |                                 |
| 1.5                 | 1.0             | Soft Brownish CLAY                                |             | CI                |                 |                |                                |    |              |    |               |                                 |
| 2.0                 |                 |                                                   |             |                   | SPT             | 2.0            | 2                              | 2  | 2            | 4  |               |                                 |
| 2.5                 | 1.0             | Loose Brownish Clayey SAND                        |             | SC                |                 |                |                                |    |              |    |               |                                 |
| 3.0                 |                 |                                                   |             |                   | SPT             | 3.0            | 5                              | 4  | 4            | 8  |               |                                 |
| 3.5                 |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 4.0                 | 2.0             | Stiff Greyish CLAY                                |             | CH                |                 |                |                                |    |              |    |               |                                 |
| 4.5                 |                 |                                                   |             |                   | SPT             | 4.0            | 3                              | 4  | 5            | 9  |               |                                 |
| 5.0                 |                 |                                                   |             |                   | SPT             | 5.0            | 4                              | 5  | 6            | 11 |               |                                 |
| 5.5                 |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 6.0                 | 1.5             | Medium Dense Greyish Silty Fine SAND              |             | SM                |                 |                |                                |    |              |    |               |                                 |
| 6.5                 |                 |                                                   |             |                   | SPT             | 6.5            | 7                              | 9  | 10           | 19 |               |                                 |
| 7.0                 |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 7.5                 |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 8.0                 | 3.5             | Medium Stiff Greyish CLAY                         |             | CH                |                 |                |                                |    |              |    |               |                                 |
| 8.5                 |                 |                                                   |             |                   | SPT             | 8.0            | 2                              | 3  | 3            | 6  |               |                                 |
| 9.0                 |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 9.5                 |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 10.0                |                 |                                                   |             |                   | SPT             | 10.0           | 3                              | 2  | 3            | 5  |               |                                 |
| 10.5                |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 11.0                | 1.5             | Stiff Greyish CLAY                                |             | CH                |                 |                |                                |    |              |    |               |                                 |
| 11.5                |                 |                                                   |             |                   | SPT             | 11.5           | 3                              | 4  | 5            | 9  |               |                                 |
| 12.0                |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 12.5                | 1.5             | Very Stiff Brownish and Light Greyish Sandy CLAY  |             | CI                |                 |                |                                |    |              |    |               |                                 |
| 13.0                |                 |                                                   |             |                   | SPT             | 13.0           | 7                              | 9  | 10           | 19 |               |                                 |
| 13.5                |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |
| 14.0                | 1.5             | Very Dense Brownish and Light Greyish Clayey SAND |             | SC                |                 |                |                                |    |              |    |               |                                 |
| 14.5                |                 |                                                   |             |                   | SPT             | 14.5           | 27                             | 40 | Blows for 10 |    |               |                                 |
| 15.0                |                 |                                                   |             |                   |                 |                |                                |    |              |    |               |                                 |

**Borehole Termination Depth (m) 20.5**

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

DS- Disturbed Sample

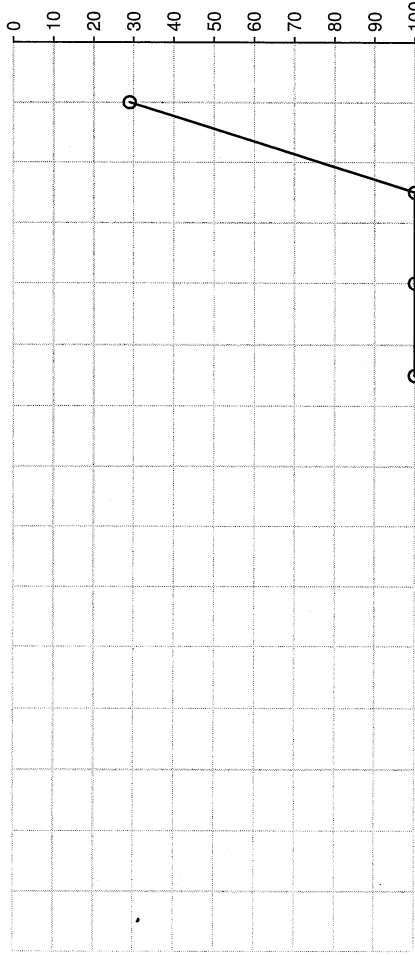
CR- Core Recovery

RQD- Rock Quality Designation

**BOREHOLE LOG****Project No: MSGTPL/SI-6256-R2/24-25****Project: Proposed Construction of "VIRAAM" Residential Building**

|             |        |
|-------------|--------|
| Location    |        |
| Ground R.L. | -      |
| Drilling    | Rotary |

|                       |             |        |
|-----------------------|-------------|--------|
| <b>Borehole No</b>    | <b>BH-1</b> |        |
| G.W.T (m)             | (-)1.50     |        |
| Date of Start         | 17-Aug-2024 |        |
| Date of Complete      | 20-Aug-2024 |        |
| Dia of Bore (mm)      | 100         | Sheet  |
| Termination Depth (m) | 20.50       | 2 of 2 |

| Depth below EGL (m) | Layer Thickness | Soil Layers Description              | Soil Symbol | IS-Classification | Type Field Test                     | Test Depth (m) | SPT Values Record<br>0 to 45cm |                  |                  | SPT- N- Value | Graphical Representation of SPT                                                     |  |  |
|---------------------|-----------------|--------------------------------------|-------------|-------------------|-------------------------------------|----------------|--------------------------------|------------------|------------------|---------------|-------------------------------------------------------------------------------------|--|--|
| 15.0                | 1.5             | Very Stiff Brownish CLAY             |             | CH                |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 15.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 16.0                |                 |                                      |             |                   | SPT                                 | 16.0           | 7                              | 9                | 20               | 29            |                                                                                     |  |  |
| 16.5                | 4.5             | Hard Brownish and Light Greyish CLAY |             | CH                |                                     |                |                                |                  |                  |               |  |  |  |
| 17.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 17.5                |                 |                                      |             |                   | SPT                                 | 17.5           | 17                             | 35               | 50 Blows for 1cm |               |                                                                                     |  |  |
| 18.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 18.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 19.0                |                 |                                      |             |                   | SPT                                 | 19.0           | 35                             | 50 Blows for 7cm |                  |               |                                                                                     |  |  |
| 19.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 20.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 20.5                |                 |                                      |             |                   | SPT                                 | 20.5           | 50 Blows for 11cm              |                  |                  |               |                                                                                     |  |  |
| 21.0                |                 |                                      |             |                   | Borehole Termination Depth (m) 20.5 |                |                                |                  |                  |               |                                                                                     |  |  |
| 21.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 22.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 22.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 23.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 23.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 24.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 24.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 25.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 25.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 26.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 26.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 27.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 27.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 28.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 28.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 29.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 29.5                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |
| 30.0                |                 |                                      |             |                   |                                     |                |                                |                  |                  |               |                                                                                     |  |  |

**Borehole Termination Depth (m) 20.5**

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

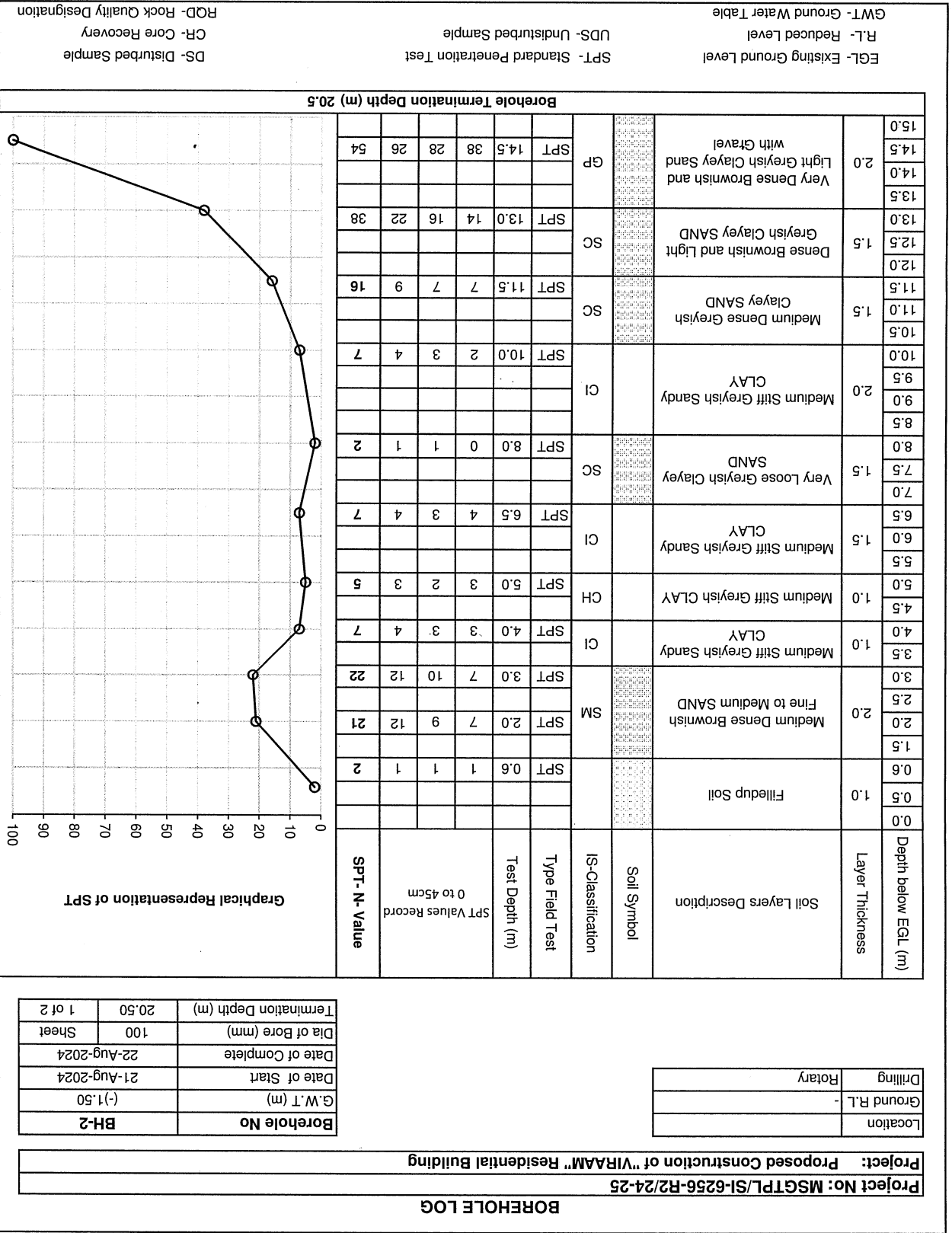
SPT- Standard Penetration Test

UDS- Undisturbed Sample

DS- Disturbed Sample

CR- Core Recovery

RQD- Rock Quality Designation



Location

Ground R.L.

Drilling

Rotary

Project No: MSGTPL/SI-6256-R2/24-25

Project: Proposed Construction of "VIRAAM" Residential Building

|                       |             |        |
|-----------------------|-------------|--------|
| Borehole No           | BH-2        |        |
| G.W.T (m)             | (-)1.50     |        |
| Date of Start         | 21-Aug-2024 |        |
| Date of Complete      | 22-Aug-2024 |        |
| Dia of Bore (mm)      | 100         | Sheet  |
| Termination Depth (m) | 20.50       | 2 of 2 |

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 19.0 | 22 | 27               | 30 | 57 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 20.5 | 23 | 27               | 32 | 59 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

Graphical Representation of SPT

Soil Layers Description

Layer Thickness

Depth below EGL (m)

|                                                               |                                      |      |               |           |      |    |
|---------------------------------------------------------------|--------------------------------------|------|---------------|-----------|------|----|
| Very Dense Brownish and Light Greyish Clayey Sand with Gravel | 1.0                                  | 15.0 |               |           |      |    |
|                                                               |                                      | 15.5 |               |           |      |    |
|                                                               |                                      | 16.0 |               |           |      |    |
|                                                               | Hard Brownish and Light Greyish CLAY | 4.5  | 16.5          |           |      |    |
|                                                               |                                      |      | 17.0          |           |      |    |
|                                                               |                                      |      | 18.0          |           |      |    |
|                                                               |                                      |      | 18.5          |           |      |    |
|                                                               |                                      |      | 19.0          |           |      |    |
|                                                               |                                      |      | 19.5          |           |      |    |
|                                                               |                                      |      | 20.0          |           |      |    |
|                                                               |                                      |      | 20.5          |           |      |    |
|                                                               |                                      |      | SPT - N-Value | 0 to 45cm | 21.0 | 59 |
|                                                               |                                      |      |               |           | 21.5 |    |
|                                                               |                                      |      |               |           | 22.0 |    |
|                                                               |                                      |      |               |           | 22.5 |    |
| 23.0                                                          |                                      |      |               |           |      |    |
| 23.5                                                          |                                      |      |               |           |      |    |
| 24.0                                                          |                                      |      |               |           |      |    |
| 24.5                                                          |                                      |      |               |           |      |    |
| 25.0                                                          |                                      |      |               |           |      |    |
| 25.5                                                          |                                      |      |               |           |      |    |

Soil Symbol

IS-Classification

Type Field Test

Test Depth (m)

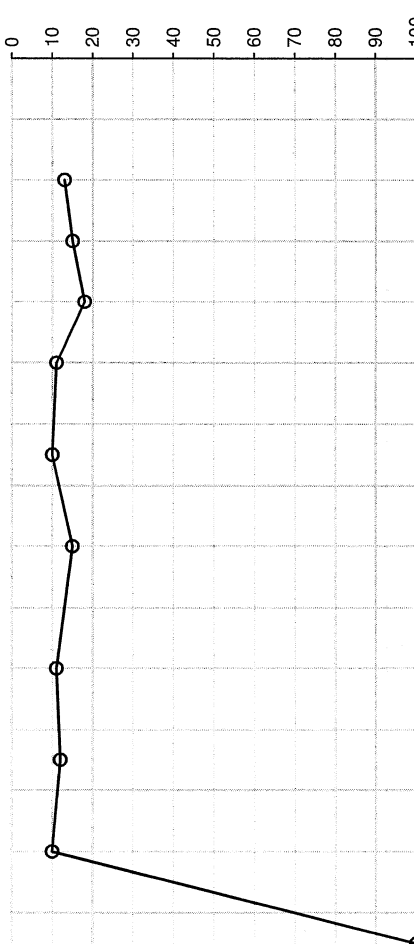
SPT Values Record

|    |    |     |      |    |                  |    |    |
|----|----|-----|------|----|------------------|----|----|
| GP | CH | SPT | 16.0 | 39 | 50 Blows for 1cm |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |
|    |    | SPT | 17.5 | 16 | 25               | 28 | 53 |
|    |    |     |      |    |                  |    |    |
|    |    |     |      |    |                  |    |    |

**BOREHOLE LOG****Project No: MSGTPL/SI-6256-R2/24-25****Project: Proposed Construction of "VIRAAM" Residential Building**

|             |        |
|-------------|--------|
| Location    |        |
| Ground R.L. | -      |
| Drilling    | Rotary |

| Borehole No           | BH-3        |        |
|-----------------------|-------------|--------|
| G.W.T (m)             | (-)1.50     |        |
| Date of Start         | 24-Aug-2024 |        |
| Date of Complete      | 25-Aug-2024 |        |
| Dia of Bore (mm)      | 100         | Sheet  |
| Termination Depth (m) | 20.50       | 1 of 2 |

| Depth below EGL (m) | Layer Thickness | Soil Layers Description                   | Soil Symbol | IS-Classification | Type Field Test | Test Depth (m) | SPT Values Record<br>0 to 45cm |    |    |    | SPT- N- Value | Graphical Representation of SPT                                                     |
|---------------------|-----------------|-------------------------------------------|-------------|-------------------|-----------------|----------------|--------------------------------|----|----|----|---------------|-------------------------------------------------------------------------------------|
|                     |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 0.0                 | 1.0             | Filledup Soil                             |             |                   |                 |                |                                |    |    |    |               |  |
| 0.5                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 0.6                 |                 |                                           |             |                   |                 | 0.6            | -                              | -  | -  | -  |               |                                                                                     |
| 1.5                 | 3.0             | Medium Dense Brownish fine to Medium SAND |             | SW                |                 |                |                                |    |    |    |               |                                                                                     |
| 2.0                 |                 |                                           |             |                   | SPT             | 2.0            | 5                              | 6  | 7  | 13 |               |                                                                                     |
| 2.5                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 3.0                 |                 |                                           |             |                   | SPT             | 3.0            | 7                              | 8  | 7  | 15 |               |                                                                                     |
| 3.5                 | 7.5             | Stiff Greyish CLAY                        |             | CH                |                 |                |                                |    |    |    |               |                                                                                     |
| 4.0                 |                 |                                           |             |                   | SPT             | 4.0            | 5                              | 8  | 10 | 18 |               |                                                                                     |
| 4.5                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 5.0                 |                 |                                           |             |                   | SPT             | 5.0            | 4                              | 5  | 6  | 11 |               |                                                                                     |
| 5.5                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 6.0                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 6.5                 |                 |                                           |             |                   | SPT             | 6.5            | 4                              | 5  | 5  | 10 |               |                                                                                     |
| 7.0                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 7.5                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 8.0                 |                 |                                           |             |                   | SPT             | 8.0            | 5                              | 7  | 8  | 15 |               |                                                                                     |
| 8.5                 | 1.5             | Loose Brownish Clayey SAND                |             | SC                |                 |                |                                |    |    |    |               |                                                                                     |
| 9.0                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 9.5                 |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 10.0                |                 |                                           |             |                   | SPT             | 10.0           | 5                              | 5  | 6  | 11 |               |                                                                                     |
| 10.5                | 1.5             | Hard Brownish CLAY                        |             | CH                |                 |                |                                |    |    |    |               |                                                                                     |
| 11.0                |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 11.5                |                 |                                           |             |                   | SPT             | 11.5           | 5                              | 6  | 6  | 12 |               |                                                                                     |
| 12.0                |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 12.5                | 1.5             | Hard Brownish CLAY                        |             | CH                |                 |                |                                |    |    |    |               |                                                                                     |
| 13.0                |                 |                                           |             |                   | SPT             | 13.0           | 4                              | 5  | 5  | 10 |               |                                                                                     |
| 13.5                |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |
| 14.0                | 1.5             | Hard Brownish CLAY                        |             | CH                |                 |                |                                |    |    |    |               |                                                                                     |
| 14.5                |                 |                                           |             |                   | SPT             | 14.5           | 20                             | 29 | 40 | 69 |               |                                                                                     |
| 15.0                |                 |                                           |             |                   |                 |                |                                |    |    |    |               |                                                                                     |

**Borehole Termination Depth (m) 20.5**

EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

DS- Disturbed Sample

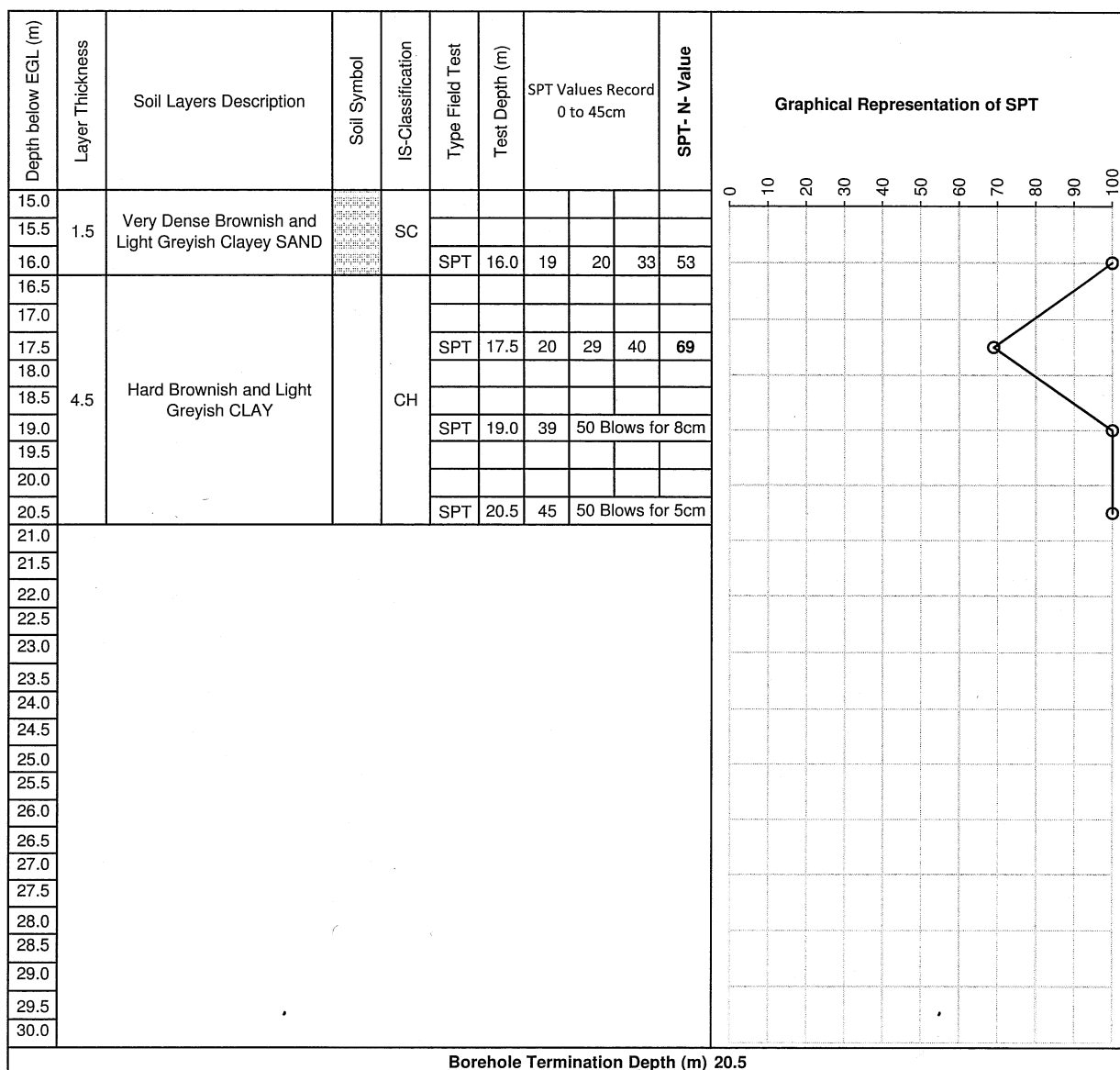
CR- Core Recovery

RQD- Rock Quality Designation

**BOREHOLE LOG****Project No: MSGTPL/SI-6256-R2/24-25****Project: Proposed Construction of "VIRAAM" Residential Building**

|            |        |
|------------|--------|
| Location   |        |
| Ground R.L | -      |
| Drilling   | Rotary |

|                       |             |        |
|-----------------------|-------------|--------|
| Borehole No           | BH-3        |        |
| G.W.T (m)             | (-)1.50     |        |
| Date of Start         | 24-Aug-2024 |        |
| Date of Complete      | 25-Aug-2024 |        |
| Dia of Bore (mm)      | 100         | Sheet  |
| Termination Depth (m) | 20.50       | 2 of 2 |



EGL- Existing Ground Level

R.L- Reduced Level

GWT- Ground Water Table

SPT- Standard Penetration Test

UDS- Undisturbed Sample

DS- Disturbed Sample

CR- Core Recovery

RQD- Rock Quality Designation

| Project No: MSGTPL/SI-6256-R2/24-25                             |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|-----------------------------------------------------------------|-----------------|-----------|---------------------------------------------------|-------------------|----------------------|--------------------------|----------------|-----------|------------------|-------------------------|-------------|-------------|-----------|-------------|--|--|--|
| Project :Proposed Construction of "VIRAAM" Residential Building |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
| BH No                                                           |                 | 1         | Ground Water Level:(-)1.50m                       |                   |                      | Termination Depth:20.50m |                |           |                  |                         |             |             |           |             |  |  |  |
| SUMMARY OF TEST RESULTS                                         |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
| N Value                                                         | Layer Thickness | Depth (m) | Soil Description                                  | IS Classification | Index Properties (%) |                          |                |           | Specific Gravity | Grain Size Analysis (%) |             |             |           |             |  |  |  |
|                                                                 |                 |           |                                                   |                   | W <sub>L</sub>       | W <sub>p</sub>           | I <sub>p</sub> | FreeSwell |                  | Gravel                  | Coarse Sand | Medium Sand | Fine Sand | Silt & Clay |  |  |  |
|                                                                 | 1.0             | 0.00      | Filledup Soil                                     |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
| 6                                                               |                 | 0.60      |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 1.0             | 2.00      | Soft Brownish CLAY                                | CI                | 30                   | 42                       | 17             | 25        | 2.61             |                         |             |             |           |             |  |  |  |
| 4                                                               |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 1.0             | 3.00      | Loose Brownish Clayey SAND                        | SC                | 20                   |                          |                |           |                  | 0                       | 1           | 19          | 40        | 40          |  |  |  |
| 8                                                               |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 2.0             | 4.00      | Stiff Greyish CLAY                                | CH                | 29                   | 52                       | 20             | 32        | 2.62             |                         |             |             |           |             |  |  |  |
|                                                                 |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
| 11                                                              |                 | 5.00      |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 1.5             | 6.50      | Medium Dense Greyish Silty Fine SAND              | SM                | 20                   |                          |                |           | 2.66             | 0                       | 0           | 13          | 74        | 13          |  |  |  |
| 19                                                              |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 3.5             | 8.00      | Medium Stiff Greyish CLAY                         | CH                | 39                   | 53                       | 14             | 38        |                  |                         |             |             |           |             |  |  |  |
| 6                                                               |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 |                 | 10.00     |                                                   |                   |                      |                          |                | 37        |                  |                         |             | 2.62        |           |             |  |  |  |
|                                                                 | 1.5             | 11.50     | Stiff Greyish CLAY                                | CH                | 33                   |                          |                |           |                  |                         |             |             |           |             |  |  |  |
| 9                                                               |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 1.5             | 13.00     | Very Stiff Brownish and Light Greyish Sandy CLAY  | CI                | 21                   |                          |                |           | 2.60             | 1                       | 1           | 20          | 25        | 53          |  |  |  |
| 19                                                              |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 1.5             | 14.50     | Very Dense Brownish and Light Greyish Clayey SAND | SC                | 18                   |                          |                |           |                  | 3                       | 12          | 24          | 18        | 43          |  |  |  |
| >100                                                            |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 1.5             | 16.00     | Very Stiff Brownish CLAY                          | CH                | 39                   | 68                       | 24             | 44        | 2.62             |                         |             |             |           |             |  |  |  |
| 29                                                              |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | 4.5             | 17.50     | Hard Brownish and Light Greyish CLAY              | CH                | 35                   | 83                       | 33             | 50        |                  |                         |             |             |           |             |  |  |  |
| >100                                                            |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 |                 | 19.00     |                                                   |                   |                      |                          |                | 30        |                  |                         |             | 2.62        |           |             |  |  |  |
| >100                                                            |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |
|                                                                 | >100            | 20.50     |                                                   |                   | 31                   | 74                       | 29             | 45        |                  |                         |             |             |           |             |  |  |  |
| >100                                                            |                 |           |                                                   |                   |                      |                          |                |           |                  |                         |             |             |           |             |  |  |  |

| Project No: MSGTPL/SI-6256-R2/24-25                             |                 |           |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
|-----------------------------------------------------------------|-----------------|-----------|---------------------------------------------------------------|-------------------|----------------------|----------------|----------------|--------------------------|----------------|------------------|-------------------------|-------------|-------------|-----------|-------------|----|----|----|
| Project :Proposed Construction of "VIRAAM" Residential Building |                 |           |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| BH No                                                           |                 | 2         | Ground Water Level:(~)1.50m                                   |                   |                      |                |                | Termination Depth:20.50m |                |                  |                         |             |             |           |             |    |    |    |
| SUMMARY OF TEST RESULTS                                         |                 |           |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| N Value                                                         | Layer Thickness | Depth (m) | Soil Description                                              | IS Classification | Index Properties (%) |                |                |                          |                | Specific Gravity | Grain Size Analysis (%) |             |             |           |             |    |    |    |
|                                                                 |                 |           |                                                               |                   | NMC                  | W <sub>L</sub> | W <sub>p</sub> | I <sub>p</sub>           | I <sub>c</sub> | FreeSwell        | Gravel                  | Coarse Sand | Medium Sand | Fine Sand | Silt & Clay |    |    |    |
|                                                                 | 1.0             | 0.00      | Filledup Soil                                                 |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
|                                                                 |                 |           |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 2                                                               |                 | 0.60      |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 21                                                              | 2.0             | 2.00      | Medium Dense Brownish Fine to Medium SAND                     | SM                | 18                   |                |                |                          |                |                  | 2.63                    | 0           | 0           | 46        | 40          | 14 |    |    |
|                                                                 |                 |           |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 22                                                              |                 | 3.00      |                                                               |                   | 20                   |                |                |                          |                |                  |                         |             | 1           | 0         | 40          | 45 | 14 |    |
|                                                                 | 1.0             |           | Medium Stiff Greyish Sandy CLAY                               | CI                |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 7                                                               |                 | 4.00      |                                                               |                   | 44                   |                |                |                          |                |                  |                         | 2.60        | 0           | 0         | 14          | 11 | 75 |    |
|                                                                 |                 |           |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 5                                                               | 1.0             | 5.00      | Medium Stiff Greyish CLAY                                     | CH                | 35                   | 57             | 20             | 37                       |                |                  |                         |             |             |           |             |    |    |    |
| 7                                                               | 1.5             | 6.50      | Medium Stiff Greyish Sandy CLAY                               | CI                | 35                   |                |                |                          |                |                  | 2.61                    | 0           | 0           | 11        | 25          | 64 |    |    |
|                                                                 | ~1.5            |           | Very Loose Greyish Clayey SAND                                | SC                |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 2                                                               |                 | 8.00      |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
|                                                                 |                 |           |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 7                                                               | 2.0             | 10.00     | Medium Stiff Greyish Sandy CLAY                               | CI                | 29                   |                |                |                          |                |                  |                         | 0           | 1           | 10        | 35          | 54 |    |    |
| 16                                                              | 1.5             | 11.50     | Medium Dense Greyish Clayey SAND                              | SC                | 21                   |                |                |                          |                |                  |                         | 0           | 2           | 11        | 40          | 47 |    |    |
| 38                                                              | 1.5             | 13.00     | Dense Brownish and Light Greyish Clayey SAND                  | SC                | 15                   |                |                |                          |                |                  |                         | 2.61        | 6           | 5         | 18          | 29 | 42 |    |
| 54                                                              | 3.0             | 14.50     | Very Dense Brownish and Light Greyish Clayey Sand with Gravel | GP                | 17                   |                |                |                          |                |                  |                         |             | 22          | 24        | 21          | 11 | 22 |    |
|                                                                 |                 |           |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| >100                                                            |                 | 16.00     |                                                               |                   | 13                   |                |                |                          |                |                  |                         |             |             | 34        | 17          | 16 | 12 | 21 |
| 53                                                              | 4.5             |           | Hard Brownish and Light Greyish CLAY                          | CH                | 32                   | 75             | 22             | 53                       |                |                  | 2.62                    |             |             |           |             |    |    |    |
|                                                                 |                 | 17.50     |                                                               |                   |                      |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 57                                                              |                 | 19.00     |                                                               |                   | 27                   |                |                |                          |                |                  |                         |             |             |           |             |    |    |    |
| 59                                                              |                 | 20.50     |                                                               |                   | 29                   | 66             | 29             | 36                       |                |                  |                         |             |             |           |             |    |    |    |

| Project No: MSGTPL/Sl-6256-R2/24-25                             |                 |           |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
|-----------------------------------------------------------------|-----------------|-----------|---------------------------------------------------|-------------------|----------------------|----------------|--------------------------|-----------|------------------|-------------------------|-------------|-------------|-----------|-------------|----|----|--|
| Project :Proposed Construction of "VIRAAM" Residential Building |                 |           |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| BH No                                                           |                 | 3         | Ground Water Level:(-)1.50m                       |                   |                      |                | Termination Depth:20.50m |           |                  |                         |             |             |           |             |    |    |  |
| SUMMARY OF TEST RESULTS                                         |                 |           |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| N Value                                                         | Layer Thickness | Depth (m) | Soil Description                                  | IS Classification | Index Properties (%) |                |                          |           | Specific Gravity | Grain Size Analysis (%) |             |             |           |             |    |    |  |
|                                                                 |                 |           |                                                   |                   | W <sub>L</sub>       | W <sub>p</sub> | I <sub>p</sub>           | FreeSwell |                  | Gravel                  | Coarse Sand | Medium Sand | Fine Sand | Silt & Clay |    |    |  |
|                                                                 | 1.0             | 0.00      | Filledup Soil                                     |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
|                                                                 |                 | 0.60      |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
|                                                                 |                 |           |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| 13                                                              | 3.0             | 2.00      | Medium Dense Brownish fine to Medium SAND         | SW                | 15                   |                |                          |           |                  | 0                       | 0           | 56          | 36        | 8           |    |    |  |
| 15                                                              |                 | 16        |                                                   |                   |                      |                |                          |           |                  | 2.64                    | 0           | 0           | 60        | 32          | 8  |    |  |
|                                                                 |                 | 16        |                                                   |                   |                      |                |                          |           |                  |                         |             | 0           | 0         | 55          | 35 | 10 |  |
| 11                                                              | 7.5             | 5.00      | Stiff Greyish CLAY                                | CH                | 35                   | 65             | 25                       | 40        |                  |                         |             |             |           |             |    |    |  |
|                                                                 |                 |           |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| 10                                                              |                 | 6.50      |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| 15                                                              |                 | 8.00      |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
|                                                                 |                 |           |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| 11                                                              |                 | 10.00     |                                                   |                   | 33                   | 63             | 28                       | 36        |                  |                         |             |             |           |             |    |    |  |
| 12                                                              |                 | 11.50     |                                                   |                   | 34                   | 55             | 21                       | 34        |                  |                         |             |             |           |             |    |    |  |
| 10                                                              | 1.5             | 13.00     | Loose Brownish Clayey SAND                        | SC                | 21                   |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| 69                                                              | 1.5             | 14.50     | Hard Brownish CLAY                                | CH                | 27                   | 70             | 27                       | 44        |                  |                         |             |             |           |             |    |    |  |
| 53                                                              | 1.5             | 16.00     | Very Dense Brownish and Light Greyish Clayey SAND | SC                | 19                   |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| 69                                                              | 4.5             | 17.50     | Hard Brownish and Light Greyish CLAY              | CH                | 27                   | 60             | 26                       | 35        |                  |                         |             |             |           |             |    |    |  |
| >100                                                            |                 | 19.00     |                                                   |                   |                      |                |                          |           |                  |                         |             |             |           |             |    |    |  |
| >100                                                            |                 | 20.50     |                                                   |                   |                      |                |                          | 33        | 75               | 34                      | 41          |             |           |             |    |    |  |

**Project No: MSGTPL/SI-6256-R2/24-25**  
**Project :Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited , # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
Client Name: M/s. Aaalam Promoters Private Limited  
Method Use: IS-2720 P-2  
Sample Received on:26.08.2024  
Test Started on:26.08.2024  
Test Completed on:27.08.2024

**Natural Moisture Content Data Sheet**

|                           |       |       |       |       |       |       |       |       |       |       |       |       |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| BH.No/ Pit no             | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       |
| Depth (m)                 | 2.0   |       | 3.0   |       | 4.0   |       | 5.0   |       | 6.5   |       | 8.0   |       |
| Tare No                   | 429   | 590   | 391   | 502   | 521   | 386   | 532   | 337   | 566   | 314   | 501   | 469   |
| Wt of Tare (gr)           | 45.27 | 45.24 | 44.92 | 45.25 | 44.81 | 45.43 | 44.62 | 45.20 | 44.90 | 46.04 | 45.18 | 45.11 |
| Tare + Soil (gr)          | 80.77 | 78.58 | 82.63 | 78.33 | 72.00 | 70.13 | 65.83 | 73.06 | 69.90 | 74.19 | 74.99 | 77.72 |
| Tare+Dry soil (gr)        | 72.65 | 70.90 | 76.27 | 72.75 | 65.84 | 64.55 | 60.21 | 65.68 | 65.72 | 69.49 | 66.58 | 68.50 |
| Wt of Water (gr)          | 8.12  | 7.68  | 6.36  | 5.58  | 6.16  | 5.58  | 5.62  | 7.38  | 4.18  | 4.70  | 8.41  | 9.22  |
| Wt Dry soil (gr)          | 27.38 | 25.66 | 31.35 | 27.50 | 21.03 | 19.12 | 15.59 | 20.48 | 20.82 | 23.45 | 21.40 | 23.39 |
| Water Content (%)         | 29.66 | 29.93 | 20.29 | 20.29 | 29.29 | 29.18 | 36.05 | 36.04 | 20.08 | 20.04 | 39.30 | 39.42 |
| Average Water Content (%) | 30    |       | 20    |       | 29    |       | 36    |       | 20    |       | 39    |       |

Tested by: K.N

Reviewed by:R.N

Authorized by:V.A

**Project No: MSGTPL/SI-6256-R2/24-25**  
**Project :Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
Client Name: M/s. Aalam Promoters Private Limited  
Method Use: IS-2720 P-2  
Sample Received on:26.08.2024  
Test Started on:26.08.2024  
Test Completed on:27.08.2024

**Natural Moisture Content Data Sheet**

| BH.No/ Pit no             | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       | 1     |       |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Depth (m)                 | 10.0  |       | 11.5  |       | 13.0  |       | 14.5  |       | 16.0  |       | 17.5  |       |
| Tare No                   | 415   | 569   | 594   | 338   | 323   | 427   | 302   | 411   | 462   | 361   | 385   | 304   |
| Wt of Tare (gr)           | 44.77 | 44.80 | 44.83 | 45.52 | 44.62 | 43.73 | 45.27 | 44.78 | 44.17 | 44.55 | 45.05 | 45.79 |
| Tare + Soil (gr)          | 80.33 | 81.71 | 78.86 | 79.13 | 78.69 | 66.99 | 76.51 | 73.45 | 77.95 | 72.80 | 79.74 | 72.60 |
| Tare+Dry soil (gr)        | 70.80 | 71.81 | 70.34 | 70.68 | 72.76 | 62.94 | 71.85 | 69.13 | 68.43 | 64.83 | 70.74 | 65.62 |
| Wt of Water (gr)          | 9.53  | 9.90  | 8.52  | 8.45  | 5.93  | 4.05  | 4.66  | 4.32  | 9.52  | 7.97  | 9.00  | 6.98  |
| Wt Dry soil (gr)          | 26.03 | 27.01 | 25.51 | 25.16 | 28.14 | 19.21 | 26.58 | 24.35 | 24.26 | 20.28 | 25.69 | 19.83 |
| Water Content (%)         | 36.61 | 36.65 | 33.40 | 33.59 | 21.07 | 21.08 | 17.53 | 17.74 | 39.24 | 39.30 | 35.03 | 35.20 |
| Average Water Content (%) | 37    |       | 33    |       | 21    |       | 18    |       | 39    |       | 35    |       |

Tested by: K.N

Reviewed by:R.N

Authorized by:V.A

**Project No: MSGTPL/SI-6256-R2/24-25**  
**Project :Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
Client Name: M/s. Aalam Promoters Private Limited  
Method Use: IS-2720 P-2  
Sample Received on:26.08.2024  
Test Started on:26.08.2024  
Test Completed on:27.08.2024

**Natural Moisture Content Data Sheet**

| BH.No/ Pit no             | 1     |       | 1     |       | 2     |       | 2     |       | 2     |       | 2     |       |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                           | 19.0  |       | 20.5  |       | 2.0   |       | 3.0   |       | 4.0   |       | 5.0   |       |
| Depth (m)                 |       |       |       |       |       |       |       |       |       |       |       |       |
| Tare No                   | 409   | 582   | 383   | 476   | 431   | 412   | 309   | 335   | 322   | 583   | 544   | 565   |
| Wt of Tare (gr)           | 45.03 | 44.62 | 44.26 | 45.00 | 44.14 | 43.89 | 44.93 | 44.71 | 45.12 | 45.23 | 43.95 | 45.02 |
| Tare + Soil (gr)          | 72.58 | 76.00 | 65.86 | 73.23 | 75.76 | 75.86 | 74.23 | 70.06 | 72.40 | 73.69 | 81.49 | 71.58 |
| Tare+Dry soil (gr)        | 66.16 | 68.73 | 60.74 | 66.54 | 71.05 | 71.08 | 69.32 | 65.82 | 64.06 | 64.97 | 71.69 | 64.64 |
| Wt of Water (gr)          | 6.42  | 7.27  | 5.12  | 6.69  | 4.71  | 4.78  | 4.91  | 4.24  | 8.34  | 8.72  | 9.80  | 6.94  |
| Wt Dry soil (gr)          | 21.13 | 24.11 | 16.48 | 21.54 | 26.91 | 27.19 | 24.39 | 21.11 | 18.94 | 19.74 | 27.74 | 19.62 |
| Water Content (%)         | 30.38 | 30.15 | 31.07 | 31.06 | 17.50 | 17.58 | 20.13 | 20.09 | 44.03 | 44.17 | 35.33 | 35.37 |
| Average Water Content (%) | 30    |       | 31    |       | 18    |       | 20    |       | 44    |       | 35    |       |

Tested by: K.N

Reviewed by:R.N

Authorized by:V.A



**Project No: MSGTPL/SI-6256-R2/24-25**  
**Project :Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited , # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
Client Name: M/s. Aalam Promoters Private Limited  
Method Use: IS-2720 P-2  
Sample Received on:26.08.2024  
Test Started on:26.08.2024  
Test Completed on:27.08.2024

**Natural Moisture Content Data Sheet**

| BH.No/ Pit no             | 2     |       | 2     |       | 2     |       | 3     |       | 3     |       | 3     |       |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Depth (m)                 | 17.5  |       | 19.0  |       | 20.5  |       | 2.0   |       | 3.0   |       | 4.0   |       |
| Tare No                   | 405   | 519   | 487   | 328   | 416   | 401   | 531   | 372   | 466   | 450   | 479   | 406   |
| Wt of Tare (gr)           | 44.83 | 45.30 | 44.77 | 45.10 | 44.88 | 44.33 | 45.11 | 45.59 | 43.86 | 44.93 | 45.85 | 45.19 |
| Tare + Soil (gr)          | 72.28 | 72.90 | 72.33 | 71.08 | 72.52 | 66.70 | 76.30 | 73.06 | 74.90 | 73.22 | 74.81 | 77.00 |
| Tare+Dry soil (gr)        | 65.57 | 66.15 | 66.45 | 65.54 | 66.24 | 61.62 | 72.14 | 69.38 | 70.59 | 69.31 | 70.74 | 72.59 |
| Wt of Water (gr)          | 6.71  | 6.75  | 5.88  | 5.54  | 6.28  | 5.08  | 4.16  | 3.68  | 4.31  | 3.91  | 4.07  | 4.41  |
| Wt Dry soil (gr)          | 20.74 | 20.85 | 21.68 | 20.44 | 21.36 | 17.29 | 27.03 | 23.79 | 26.73 | 24.38 | 24.89 | 27.40 |
| Water Content (%)         | 32.35 | 32.37 | 27.12 | 27.10 | 29.40 | 29.38 | 15.39 | 15.47 | 16.12 | 16.04 | 16.35 | 16.09 |
| Average Water Content (%) | 32    |       | 27    |       | 29    |       | 15    |       | 16    |       | 16    |       |

Tested by: K.N

Reviewed by:R.N

Authorized by:V.A

**Project No: MSGTPL/SI-6256-R2/24-25**  
**Project :Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
Client Name: M/s. Aalam Promoters Private Limited  
Method Use: IS-2720 P-2  
Sample Received on:26.08.2024  
Test Started on:26.08.2024  
Test Completed on:27.08.2024

**Natural Moisture Content Data Sheet**

| BH.No/ Pit no             | 3     |       | 3     |       | 3     |       | 3     |       | 3     |       | 3     |       | 3 |  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|--|
| Depth (m)                 | 5.0   |       | 6.5   |       | 8.0   |       | 10.0  |       | 11.5  |       | 13.0  |       |   |  |
| Tare No                   | 529   | 417   | 446   | 516   | 402   | 528   | 461   | 567   | 547   | 399   | 458   | 349   |   |  |
| Wt of Tare (gr)           | 44.40 | 44.21 | 43.50 | 43.11 | 45.43 | 45.43 | 44.67 | 44.67 | 44.81 | 44.28 | 45.23 | 45.11 |   |  |
| Tare + Soil (gr)          | 77.46 | 72.81 | 73.20 | 77.22 | 80.06 | 77.36 | 69.09 | 71.19 | 69.95 | 68.09 | 80.81 | 74.75 |   |  |
| Tare+Dry soil (gr)        | 68.93 | 65.44 | 65.16 | 67.96 | 70.99 | 69.02 | 63.01 | 64.61 | 63.63 | 62.09 | 74.54 | 69.58 |   |  |
| Wt of Water (gr)          | 8.53  | 7.37  | 8.04  | 9.26  | 9.07  | 8.34  | 6.08  | 6.58  | 6.32  | 6.00  | 6.27  | 5.17  |   |  |
| Wt Dry soil (gr)          | 24.53 | 21.23 | 21.66 | 24.85 | 25.56 | 23.59 | 18.34 | 19.94 | 18.82 | 17.81 | 29.31 | 24.47 |   |  |
| Water Content (%)         | 34.77 | 34.72 | 37.12 | 37.26 | 35.49 | 35.35 | 33.15 | 33.00 | 33.58 | 33.69 | 21.39 | 21.13 |   |  |
| Average Water Content (%) | 35    |       | 37    |       | 35    |       | 33    |       | 34    |       | 21    |       |   |  |

**Project No: MSGTPL/SI-6256-R2/24-25**  
**Project :Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
Client Name: M/s. Aalam Promoters Private Limited  
Method Use: IS-2720 P-2  
Sample Received on:26.08.2024  
Test Started on:26.08.2024  
Test Completed on:27.08.2024

**Natural Moisture Content Data Sheet**

| BH.No/ Pit no             | 3     |       | 3     |       | 3     |       | 3     |       | 3     |       | 3 |  |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|--|
| Depth (m)                 | 14.5  |       | 16.0  |       | 17.5  |       | 19.0  |       | 20.5  |       |   |  |
| Tare No                   | 598   | 490   | 599   | 390   | 499   | 580   | 556   | 310   | 517   | 484   |   |  |
| Wt of Tare (gr)           | 44.40 | 45.11 | 45.48 | 45.24 | 44.21 | 45.39 | 44.45 | 45.61 | 45.25 | 44.23 |   |  |
| Tare + Soil (gr)          | 69.59 | 76.89 | 75.06 | 79.53 | 74.80 | 68.39 | 72.18 | 76.26 | 71.87 | 71.50 |   |  |
| Tare+Dry soil (gr)        | 64.20 | 70.04 | 70.35 | 74.10 | 68.30 | 63.52 | 64.81 | 68.14 | 65.20 | 64.68 |   |  |
| Wt of Water (gr)          | 5.39  | 6.85  | 4.71  | 5.43  | 6.50  | 4.87  | 7.37  | 8.12  | 6.67  | 6.82  |   |  |
| Wt Dry soil (gr)          | 19.80 | 24.93 | 24.87 | 28.86 | 24.09 | 18.13 | 20.36 | 22.53 | 19.95 | 20.45 |   |  |
| Water Content (%)         | 27.22 | 27.48 | 18.94 | 18.81 | 26.98 | 26.86 | 36.20 | 36.04 | 33.43 | 33.35 |   |  |
| Average Water Content (%) | 27    |       | 19    |       | 27    |       | 36    |       | 33    |       |   |  |

Tested by: K.N

Reviewed by:R.N

Authorized by:V.A

## SPECIFIC GRAVITY TEST

**Project No:MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Thirupathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-3

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:27.08.2024

|                                 |     |                                       |   |          |
|---------------------------------|-----|---------------------------------------|---|----------|
| BH.No                           | 1   |                                       |   |          |
| Depth(m)                        | 2.0 |                                       |   |          |
| Pycnometer number               |     |                                       | 1 | 28       |
| Weight of bottle                |     | $w_1$                                 | g | 33.7600  |
| Weight of bottle + soil         |     | $w_2$                                 | g | 59.5190  |
| Weight of bottle + soil + water |     | $w_3$                                 | g | 101.7260 |
| Weight of bottle full of water  |     | $w_4$                                 | g | 85.8400  |
| Weight of soil                  |     | $w_2-w_1$                             | g | 25.7590  |
| Specific gravity                |     | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |   | 2.60903  |
| Average value $G_s$             |     |                                       |   | 2.61     |

|                                 |     |                                       |   |          |
|---------------------------------|-----|---------------------------------------|---|----------|
| BH.No                           | 1   |                                       |   |          |
| Depth(m)                        | 4.0 |                                       |   |          |
| Pycnometer number               |     |                                       |   | 32       |
| Weight of bottle                |     | $w_1$                                 | g | 46.3000  |
| Weight of bottle + soil         |     | $w_2$                                 | g | 61.0790  |
| Weight of bottle + soil + water |     | $w_3$                                 | g | 105.8780 |
| Weight of bottle full of water  |     | $w_4$                                 | g | 96.7500  |
| Weight of soil                  |     | $w_2-w_1$                             | g | 14.7790  |
| Specific gravity                |     | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |   | 2.61529  |
| Average value $G_s$             |     |                                       |   | 2.62     |

Tested by: D.J

Reviewed by:R.N

Authorized by:V.A

**SPECIFIC GRAVITY TEST**  
**Project No:MSGTPL/Sl-6256-R2/24-25**  
**Project : Proposed Construction of "VIRAAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
 Client Name: M/s. Aaalam Promoters Private Limited  
 Method Use: IS-2720 P-3  
 Sample Received on:26.08.2024  
 Test Started on:27.08.2024  
 Test Completed on:27.08.2024

|                                 |     |                                       |           |          |
|---------------------------------|-----|---------------------------------------|-----------|----------|
| BH.No                           | 1   |                                       |           |          |
| Depth(m)                        | 6.5 |                                       |           |          |
| Pycnometer number               |     |                                       | 52        | 77       |
| Weight of bottle                |     | w <sub>1</sub>                        | g 35.4000 | 34.2500  |
| Weight of bottle + soil         |     | w <sub>2</sub>                        | g 52.8830 | 57.5140  |
| Weight of bottle + soil + water |     | w <sub>3</sub>                        | g 97.6910 | 100.8300 |
| Weight of bottle full of water  |     | w <sub>4</sub>                        | g 86.7900 | 86.3200  |
| Weight of soil                  |     | w <sub>2</sub> -w <sub>1</sub>        | g 17.4830 | 23.2640  |
| Specific gravity                |     | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ | 2.65618   | 2.65753  |
| Average value G <sub>s</sub>    |     |                                       | 2.66      |          |

Tested by: D.J

Reviewed by:R.N

|                                 |      |                                       |           |          |
|---------------------------------|------|---------------------------------------|-----------|----------|
| BH.No                           | 1    |                                       |           |          |
| Depth(m)                        | 10.0 |                                       |           |          |
| Pycnometer number               |      |                                       | 7         | 18       |
| Weight of bottle                |      | w <sub>1</sub>                        | g 33.9900 | 35.9000  |
| Weight of bottle + soil         |      | w <sub>2</sub>                        | g 54.2300 | 57.8220  |
| Weight of bottle + soil + water |      | w <sub>3</sub>                        | g 99.7330 | 101.9300 |
| Weight of bottle full of water  |      | w <sub>4</sub>                        | g 87.2300 | 88.3900  |
| Weight of soil                  |      | w <sub>2</sub> -w <sub>1</sub>        | g 20.2400 | 21.9220  |
| Specific gravity                |      | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ | 2.61600   | 2.61537  |
| Average value G <sub>s</sub>    |      |                                       | 2.62      |          |

Authorized by:V.A

## SPECIFIC GRAVITY TEST

**Project No:MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aaalam Promoters Private Limited

Method Use: IS-2720 P-3

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:27.08.2024

|          |      |
|----------|------|
| BH.No    | 1    |
| Depth(m) | 13.0 |

|                                 |                                       |           |         |
|---------------------------------|---------------------------------------|-----------|---------|
| Pycnometer number               |                                       | 73        | 74      |
| Weight of bottle                | w <sub>1</sub>                        | g 37.1100 | 34.5900 |
| Weight of bottle + soil         | w <sub>2</sub>                        | g 53.4690 | 50.4090 |
| Weight of bottle + soil + water | w <sub>3</sub>                        | g 98.7300 | 96.7400 |
| Weight of bottle full of water  | w <sub>4</sub>                        | g 88.6600 | 87.0000 |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        | g 16.3590 | 15.8190 |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ | 2.60121   | 2.60224 |
| Average value G <sub>s</sub>    |                                       | 2.60      |         |

|          |      |
|----------|------|
| BH.No    | 1    |
| Depth(m) | 16.0 |

|                                 |                                       |           |         |
|---------------------------------|---------------------------------------|-----------|---------|
| Pycnometer number               |                                       | 59        | 3       |
| Weight of bottle                | w <sub>1</sub>                        | g 34.6100 | 32.8100 |
| Weight of bottle + soil         | w <sub>2</sub>                        | g 50.0230 | 44.9570 |
| Weight of bottle + soil + water | w <sub>3</sub>                        | g 97.3100 | 91.8700 |
| Weight of bottle full of water  | w <sub>4</sub>                        | g 87.8000 | 84.3600 |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        | g 15.4130 | 12.1470 |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ | 2.61105   | 2.61958 |
| Average value G <sub>s</sub>    |                                       | 2.62      |         |

Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

**SPECIFIC GRAVITY TEST**

**Project No:MSGTPL/SI-6256-R2/24-25**  
**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
Client Name: M/s. Aalam Promoters Private Limited  
Method Use: IS-2720 P-3  
Sample Received on:26.08.2024  
Test Started on:27.08.2024  
Test Completed on:27.08.2024

|                                 |                                       |
|---------------------------------|---------------------------------------|
| BH.No                           | 1                                     |
| Depth(m)                        | 19.0                                  |
| Pycnometer number               |                                       |
| Weight of bottle                | w <sub>1</sub>                        |
| Weight of bottle + soil         | w <sub>2</sub>                        |
| Weight of bottle + soil + water | w <sub>3</sub>                        |
| Weight of bottle full of water  | w <sub>4</sub>                        |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |
| Average value G <sub>s</sub>    | 2.62                                  |

|  |                                       |    |         |
|--|---------------------------------------|----|---------|
|  |                                       | 16 | 63      |
|  | w <sub>1</sub>                        | g  | 33.0300 |
|  | w <sub>2</sub>                        | g  | 47.2380 |
|  | w <sub>3</sub>                        | g  | 94.3300 |
|  | w <sub>4</sub>                        | g  | 85.5400 |
|  | w <sub>2</sub> -w <sub>1</sub>        | g  | 14.2080 |
|  | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |    | 2.62084 |
|  |                                       |    | 2.62237 |
|  |                                       |    | 2.62    |

|                                 |                                       |
|---------------------------------|---------------------------------------|
| BH.No                           | 2                                     |
| Depth(m)                        | 2.0                                   |
| Pycnometer number               |                                       |
| Weight of bottle                | w <sub>1</sub>                        |
| Weight of bottle + soil         | w <sub>2</sub>                        |
| Weight of bottle + soil + water | w <sub>3</sub>                        |
| Weight of bottle full of water  | w <sub>4</sub>                        |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |
| Average value G <sub>s</sub>    | 2.63                                  |

Tested by: D.J

Reviewed by:R.N

Authorized by:V.A

## SPECIFIC GRAVITY TEST

**Project No:MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-3

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:27.08.2024

|          |     |
|----------|-----|
| BH.No    | 2   |
| Depth(m) | 4.0 |

|                                 |                                       |   |         |
|---------------------------------|---------------------------------------|---|---------|
| Pycnometer number               |                                       | 7 | 71      |
| Weight of bottle                | w <sub>1</sub>                        | g | 33.9900 |
| Weight of bottle + soil         | w <sub>2</sub>                        | g | 51.6970 |
| Weight of bottle + soil + water | w <sub>3</sub>                        | g | 98.1000 |
| Weight of bottle full of water  | w <sub>4</sub>                        | g | 87.2000 |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        | g | 17.7070 |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |   | 2.60129 |
| Average value G <sub>s</sub>    |                                       |   | 2.60    |

|          |     |
|----------|-----|
| BH.No    | 2   |
| Depth(m) | 6.5 |

|                                 |                                       |   |         |         |
|---------------------------------|---------------------------------------|---|---------|---------|
| Pycnometer number               |                                       |   | 86      | 77      |
| Weight of bottle                | w <sub>1</sub>                        | g | 35.3600 | 34.2500 |
| Weight of bottle + soil         | w <sub>2</sub>                        | g | 54.0790 | 51.2610 |
| Weight of bottle + soil + water | w <sub>3</sub>                        | g | 98.0300 | 96.8200 |
| Weight of bottle full of water  | w <sub>4</sub>                        | g | 86.4800 | 86.3200 |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        | g | 18.7190 | 17.0110 |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |   | 2.61110 | 2.61266 |
| Average value G <sub>s</sub>    |                                       |   | 2.61    |         |

Tested by: D.J

Reviewed by:R.N

Authorized by:V.A

**SPECIFIC GRAVITY TEST**

**Project No:MSGTPL/SI-6256-R2/24-25**  
**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.  
Client Name: M/s. Aalam Promoters Private Limited  
Method Use: IS-2720 P-3  
Sample Received on:26.08.2024  
Test Started on:27.08.2024  
Test Completed on:27.08.2024

|                                 |      |                                       |    |         |         |
|---------------------------------|------|---------------------------------------|----|---------|---------|
| BH.No                           | 2    |                                       |    |         |         |
| Depth(m)                        | 13.0 |                                       |    |         |         |
| Pycnometer number               |      |                                       | 28 | 20      |         |
| Weight of bottle                |      | w <sub>1</sub>                        | g  | 34.3100 | 31.3100 |
| Weight of bottle + soil         |      | w <sub>2</sub>                        | g  | 55.4470 | 55.3910 |
| Weight of bottle + soil + water |      | w <sub>3</sub>                        | g  | 99.3100 | 95.7960 |
| Weight of bottle full of water  |      | w <sub>4</sub>                        | g  | 86.2600 | 80.9300 |
| Weight of soil                  |      | w <sub>2</sub> -w <sub>1</sub>        | g  | 21.1370 | 24.0810 |
| Specific gravity                |      | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |    | 2.61370 | 2.61324 |
| Average value G <sub>s</sub>    |      |                                       |    | 2.61    |         |

Tested by: D.J

Reviewed by:R.N

Authorized by:V.A

|                                 |      |                                       |   |         |         |
|---------------------------------|------|---------------------------------------|---|---------|---------|
| BH.No                           | 2    |                                       |   |         |         |
| Depth(m)                        | 17.5 |                                       |   |         |         |
| Pycnometer number               |      |                                       |   | 49      | 1       |
| Weight of bottle                |      | w <sub>1</sub>                        | g | 34.5600 | 33.7600 |
| Weight of bottle + soil         |      | w <sub>2</sub>                        | g | 49.0600 | 49.4430 |
| Weight of bottle + soil + water |      | w <sub>3</sub>                        | g | 94.7000 | 95.5500 |
| Weight of bottle full of water  |      | w <sub>4</sub>                        | g | 85.7300 | 85.8400 |
| Weight of soil                  |      | w <sub>2</sub> -w <sub>1</sub>        | g | 14.5000 | 15.6830 |
| Specific gravity                |      | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |   | 2.62206 | 2.62565 |
| Average value G <sub>s</sub>    |      |                                       |   | 2.62    |         |

## SPECIFIC GRAVITY TEST

**Project No:MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aaalam Promoters Private Limited

Method Use: IS-2720 P-3

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:27.08.2024

|          |     |
|----------|-----|
| BH.No    | 3   |
| Depth(m) | 3.0 |

|                                 |                                       |   |         |         |
|---------------------------------|---------------------------------------|---|---------|---------|
| Pycnometer number               |                                       |   | 6       | 85      |
| Weight of bottle                | w <sub>1</sub>                        | g | 34.5400 | 34.8600 |
| Weight of bottle + soil         | w <sub>2</sub>                        | g | 54.1740 | 56.1610 |
| Weight of bottle + soil + water | w <sub>3</sub>                        | g | 99.4700 | 99.7560 |
| Weight of bottle full of water  | w <sub>4</sub>                        | g | 87.2600 | 86.5100 |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        | g | 19.6340 | 21.3010 |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |   | 2.64467 | 2.64444 |
| Average value G <sub>s</sub>    | 2.64                                  |   |         |         |

|          |     |
|----------|-----|
| BH.No    | 3   |
| Depth(m) | 5.0 |

|                                 |                                       |   |         |         |
|---------------------------------|---------------------------------------|---|---------|---------|
| Pycnometer number               |                                       |   | 10      | 58      |
| Weight of bottle                | w <sub>1</sub>                        | g | 34.3600 | 34.6500 |
| Weight of bottle + soil         | w <sub>2</sub>                        | g | 51.7920 | 53.1890 |
| Weight of bottle + soil + water | w <sub>3</sub>                        | g | 97.5600 | 97.3100 |
| Weight of bottle full of water  | w <sub>4</sub>                        | g | 86.8300 | 85.8800 |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        | g | 17.4320 | 18.5390 |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |   | 2.60101 | 2.60782 |
| Average value G <sub>s</sub>    | 2.60                                  |   |         |         |

Tested by: D.J

Reviewed by:R.N

Authorized by:V.A

### SPECIFIC GRAVITY TEST

**Project No:MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-3

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:27.08.2024

|                                 |                                       |
|---------------------------------|---------------------------------------|
| BH.No                           | 3                                     |
| Depth(m)                        | 13.0                                  |
| Pycnometer number               |                                       |
| Weight of bottle                | w <sub>1</sub>                        |
| Weight of bottle + soil         | w <sub>2</sub>                        |
| Weight of bottle + soil + water | w <sub>3</sub>                        |
| Weight of bottle full of water  | w <sub>4</sub>                        |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |
| Average value G <sub>s</sub>    | 2.62                                  |

|                                 |                                       |
|---------------------------------|---------------------------------------|
| BH.No                           | 3                                     |
| Depth(m)                        | 14.5                                  |
| Pycnometer number               |                                       |
| Weight of bottle                | w <sub>1</sub>                        |
| Weight of bottle + soil         | w <sub>2</sub>                        |
| Weight of bottle + soil + water | w <sub>3</sub>                        |
| Weight of bottle full of water  | w <sub>4</sub>                        |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |
| Average value G <sub>s</sub>    | 2.61                                  |

Tested by: D.J

Reviewed by:R.N

Authorized by:V.A

## SPECIFIC GRAVITY TEST

**Project No:MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aaalam Promoters Private Limited

Method Use: IS-2720 P-3

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:27.08.2024

|                                 |                                       |
|---------------------------------|---------------------------------------|
| BH.No                           | 3                                     |
| Depth(m)                        | 16.0                                  |
| Pycnometer number               |                                       |
| Weight of bottle                | w <sub>1</sub>                        |
| Weight of bottle + soil         | w <sub>2</sub>                        |
| Weight of bottle + soil + water | w <sub>3</sub>                        |
| Weight of bottle full of water  | w <sub>4</sub>                        |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |
| Average value G <sub>s</sub>    | 2.62                                  |

|                                 |                                       |
|---------------------------------|---------------------------------------|
| BH.No                           | 3                                     |
| Depth(m)                        | 17.5                                  |
| Pycnometer number               |                                       |
| Weight of bottle                | w <sub>1</sub>                        |
| Weight of bottle + soil         | w <sub>2</sub>                        |
| Weight of bottle + soil + water | w <sub>3</sub>                        |
| Weight of bottle full of water  | w <sub>4</sub>                        |
| Weight of soil                  | w <sub>2</sub> -w <sub>1</sub>        |
| Specific gravity                | $\frac{w_2-w_1}{(w_4-w_1)-(w_3-w_2)}$ |
| Average value G <sub>s</sub>    | 2.64                                  |

Tested by: D.J

Reviewed by:R.N

Authorized by:V.A

**Project No: MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

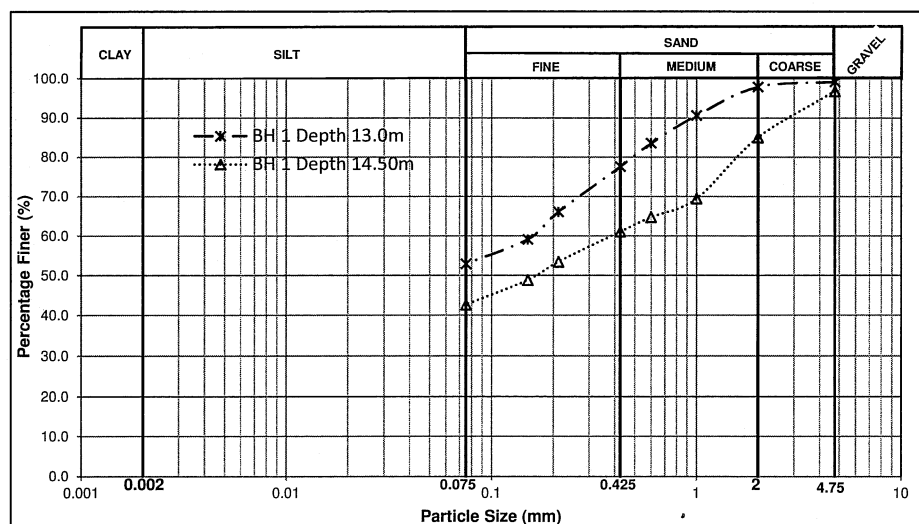
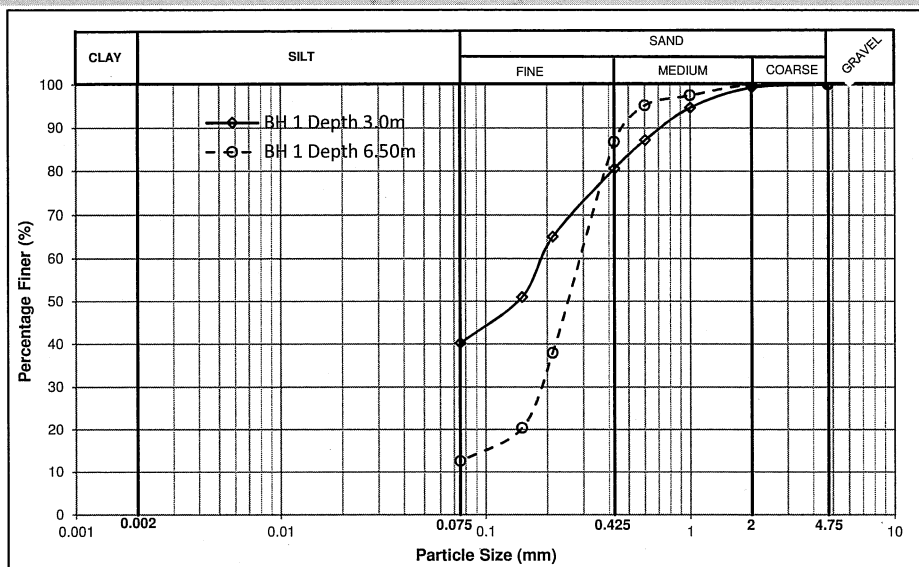
Method Use: IS-2720 P-4

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:28.08.2024

**GRAIN SIZE ANALYSIS**



| BH-No | Depth<br>(m) | Gravel<br>(%) | SAND (%) |        |      | SILT & CLAY<br>(%) | D <sub>10</sub><br>(mm) | D <sub>30</sub><br>(mm) | D <sub>60</sub><br>(mm) | Cu | Cc |
|-------|--------------|---------------|----------|--------|------|--------------------|-------------------------|-------------------------|-------------------------|----|----|
|       |              |               | Coarse   | Medium | Fine |                    |                         |                         |                         |    |    |
| 1     | 3.0m         | 0             | 1        | 19     | 40   | 40                 |                         |                         | 0.190                   |    |    |
| 1     | 6.50m        | 0             | 0        | 13     | 74   | 13                 |                         | 0.184                   | 0.308                   |    |    |
| 1     | 13.0m        | 1             | 1        | 20     | 25   | 53                 |                         |                         | 0.157                   |    |    |
| 1     | 14.50m       | 3             | 12       | 24     | 18   | 43                 |                         |                         | 0.393                   |    |    |

Tested by: A.A

Reviewed by: R.N

Authorized by: V.A

**Project No: MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil  
Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

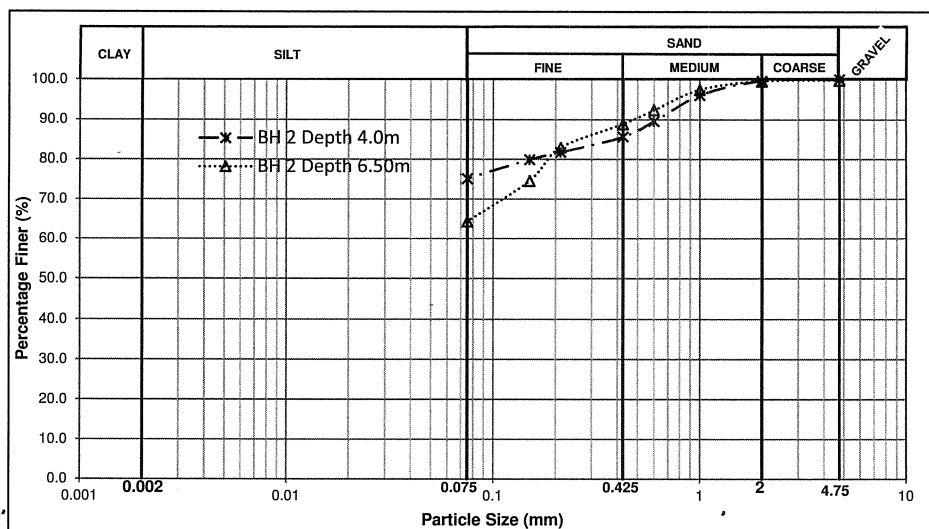
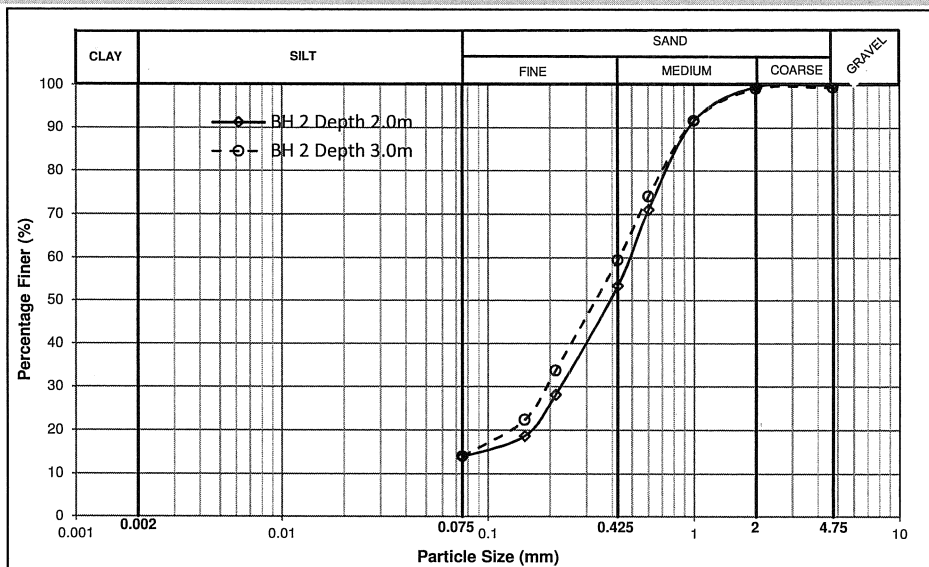
Method Use: IS-2720 P-4

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:28.08.2024

**GRAIN SIZE ANALYSIS**



| BH-No | Depth<br>(m) | Gravel<br>(%) | SAND (%) |        |      | SILT & CLAY<br>(%) | D <sub>10</sub><br>(mm) | D <sub>30</sub><br>(mm) | D <sub>60</sub><br>(mm) | Cu | Cc |
|-------|--------------|---------------|----------|--------|------|--------------------|-------------------------|-------------------------|-------------------------|----|----|
|       |              |               | Coarse   | Medium | Fine |                    |                         |                         |                         |    |    |
| 2     | 2.0m         | 0             | 0        | 46     | 40   | 14                 |                         | 0.228                   | 0.491                   |    |    |
| 2     | 3.0m         | 1             | 0        | 40     | 45   | 14                 |                         | 0.192                   | 0.432                   |    |    |
| 2     | 4.0m         | 0             | 0        | 14     | 11   | 75                 |                         |                         |                         |    |    |
| 2     | 6.50m        | 0             | 0        | 11     | 25   | 64                 |                         |                         |                         |    |    |

Tested by: A.A

Reviewed by: R.N

Authorized by: V.A

**Project No: MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

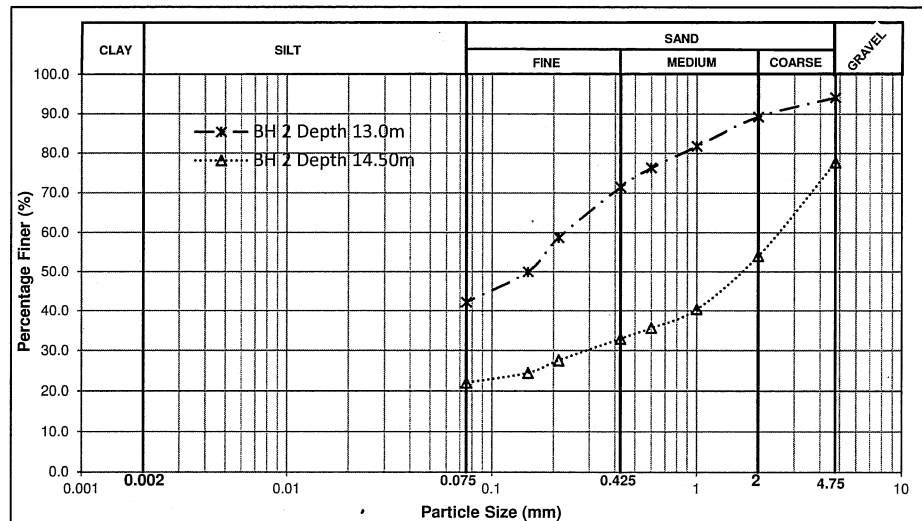
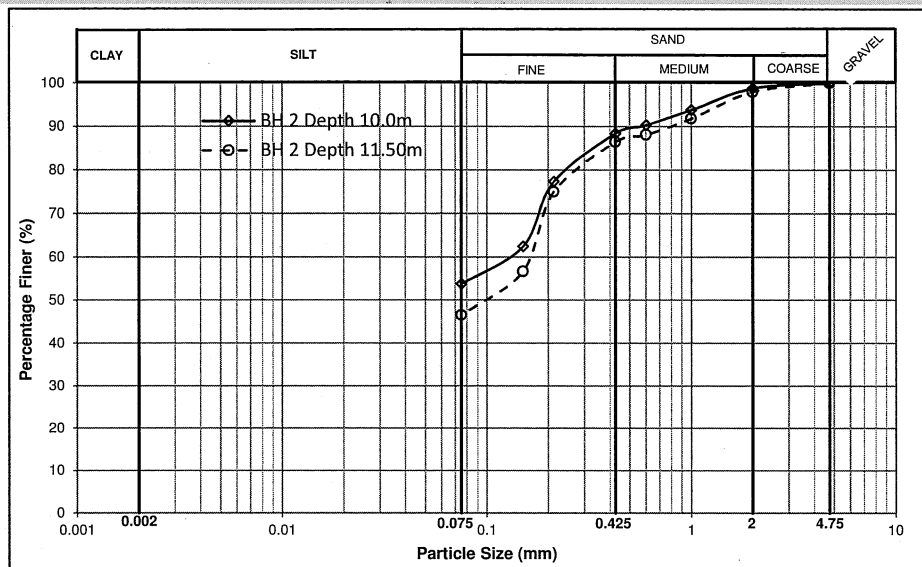
Method Use: IS-2720 P-4

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:28.08.2024

**GRAIN SIZE ANALYSIS**



| BH-No | Depth<br>(m) | Gravel<br>(%) | SAND (%) |        |      | SILT & CLAY<br>(%) | D <sub>10</sub><br>(mm) | D <sub>30</sub><br>(mm) | D <sub>60</sub><br>(mm) | Cu | Cc |
|-------|--------------|---------------|----------|--------|------|--------------------|-------------------------|-------------------------|-------------------------|----|----|
|       |              |               | Coarse   | Medium | Fine |                    |                         |                         |                         |    |    |
| 2     | 10.0m        | 0             | 1        | 10     | 35   | 54                 |                         |                         | 0.129                   |    |    |
| 2     | 11.50m       | 0             | 2        | 11     | 40   | 47                 |                         |                         | 0.161                   |    |    |
| 2     | 13.0m        | 6             | 5        | 18     | 29   | 42                 |                         |                         | 0.232                   |    |    |
| 2     | 14.50m       | 22            | 24       | 21     | 11   | 22                 |                         | 0.308                   | 2.692                   |    |    |

Tested by: A.A

Reviewed by: R.N

Authorized by: V.A

**Project No: MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

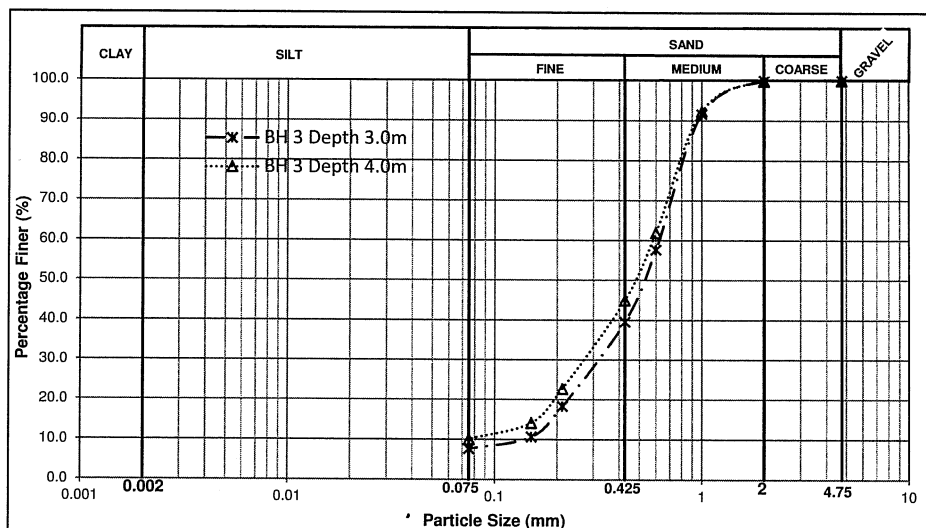
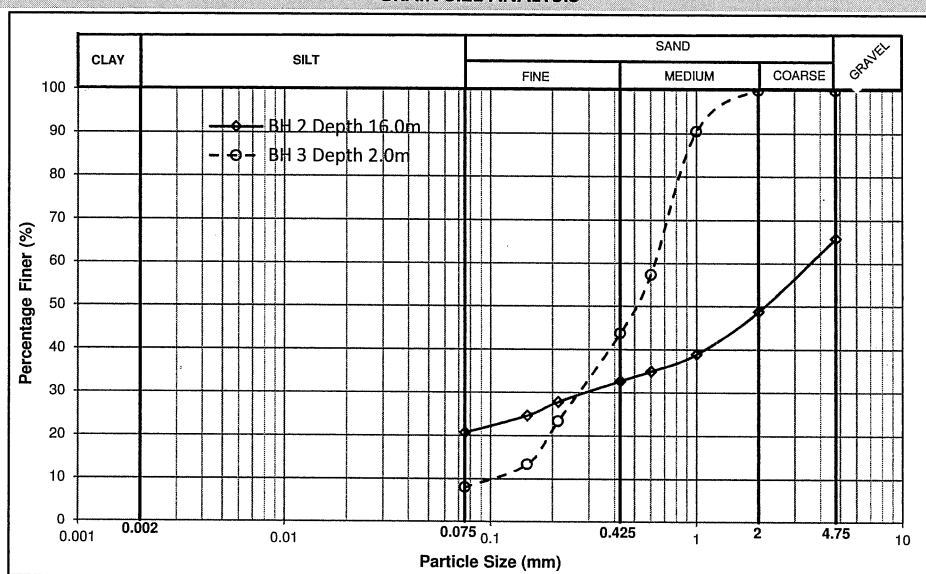
Method Use: IS-2720 P-4

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:28.08.2024

**GRAIN SIZE ANALYSIS**



| BH-No | Depth (m) | Gravel (%) | SAND (%) |        |      | SILT & CLAY (%) | D <sub>10</sub> (mm) | D <sub>30</sub> (mm) | D <sub>60</sub> (mm) | Cu   | Cc   |
|-------|-----------|------------|----------|--------|------|-----------------|----------------------|----------------------|----------------------|------|------|
|       |           |            | Coarse   | Medium | Fine |                 |                      |                      |                      |      |      |
| 2     | 16.0m     | 34         | 17       | 16     | 12   | 21              |                      | 0.309                | 3.820                |      |      |
| 3     | 2.0m      | 0          | 0        | 56     | 36   | 8               | 0.103                | 0.282                | 0.632                | 6.15 | 1.22 |
| 3     | 3.0m      | 0          | 0        | 60     | 32   | 8               | 0.135                | 0.329                | 0.628                | 4.66 | 1.28 |
| 3     | 4.0m      | 0          | 0        | 55     | 35   | 10              |                      | 0.282                | 0.580                |      |      |

Tested by: A.A

Reviewed by: R.N

Authorized by: V.A

**Project No: MSGTPL/SI-6256-R2/24-25**

**Project : Proposed Construction of "VIRAAM" Residential Building**

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil  
Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

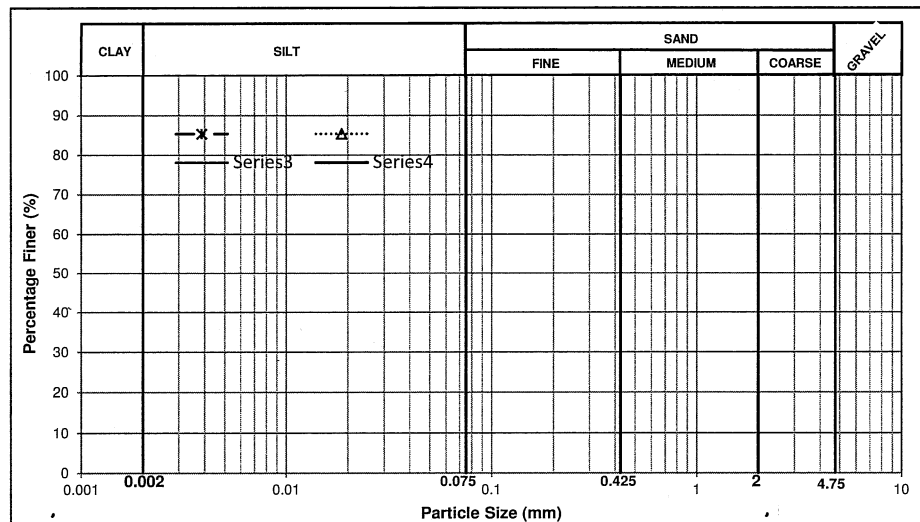
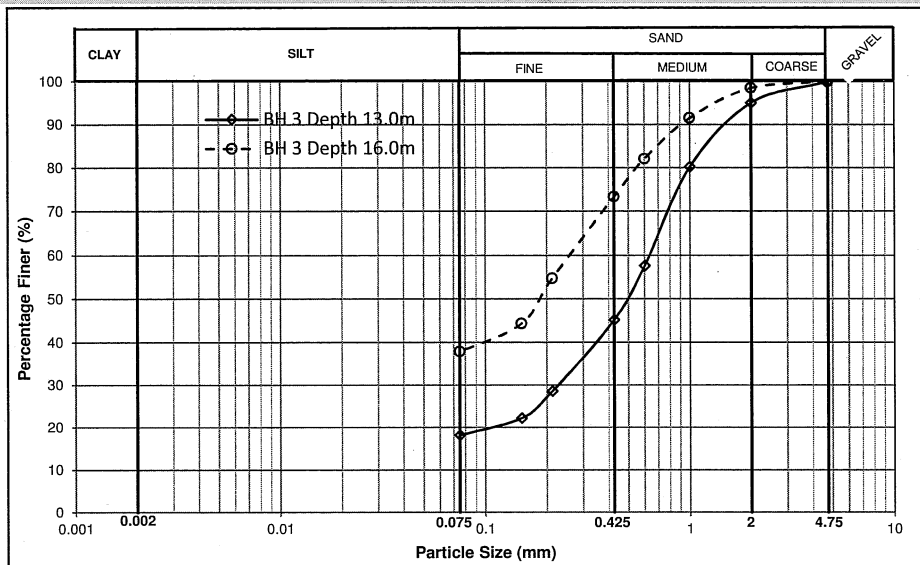
Method Use: IS-2720 P-4

Sample Received on:26.08.2024

Test Started on:27.08.2024

Test Completed on:28.08.2024

**GRAIN SIZE ANALYSIS**



| BH-No | Depth<br>(m) | Gravel<br>(%) | SAND (%) |        |      | SILT & CLAY<br>(%) | D <sub>10</sub><br>(mm) | D <sub>30</sub><br>(mm) | D <sub>60</sub><br>(mm) | Cu | Cc |
|-------|--------------|---------------|----------|--------|------|--------------------|-------------------------|-------------------------|-------------------------|----|----|
|       |              |               | Coarse   | Medium | Fine |                    |                         |                         |                         |    |    |
| 3     | 13.0m        | 0             | 5        | 50     | 27   | 18                 |                         | 0.231                   | 0.643                   |    |    |
| 3     | 16.0m        | 0             | 2        | 25     | 35   | 38                 |                         |                         | 0.273                   |    |    |

Tested by: A.A

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

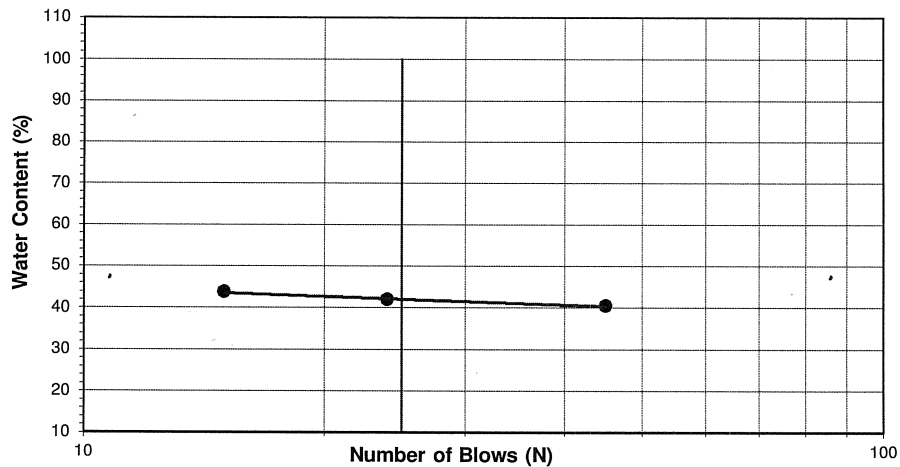
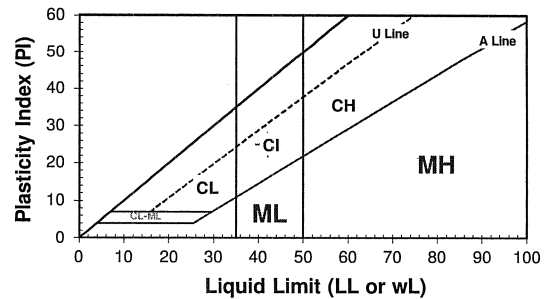
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 1                             |
| <b>Sample Depth:</b> | 2.0m                          |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 15           | 24    | 45    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 460          | 389   | 496   |  | 424           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 44.93        | 44.79 | 44.92 |  | 44.55         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 76.2         | 73.68 | 76.61 |  | 75.84         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 66.70        | 65.15 | 67.48 |  | 71.25         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 21.77        | 20.36 | 22.56 |  | 26.70         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 9.50         | 8.53  | 9.13  |  | 4.59          |   |  |  |
| Water Content           | w                | (%)   | 43.6         | 41.9  | 40.5  |  | 17.2          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>42</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>17</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>25</b> |
| <b>Soil Classification</b>                     | <b>CI</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

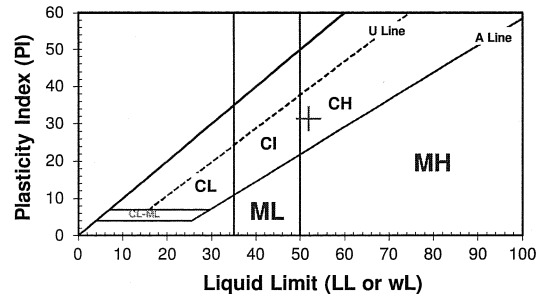
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 1                             |
| <b>Sample Depth:</b> | 4.0m                          |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 18           | 24    | 43    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 339          | 491   | 473   |  | 590           |   |  |  |
| Weight of Empty Tare    | M <sub>c</sub>   | (g)   | 45.54        | 45.73 | 44.66 |  | 45.24         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 75.04        | 70.05 | 72.19 |  | 76.6          |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 64.70        | 61.71 | 63.12 |  | 71.27         |   |  |  |
| Weight of Soil          | M <sub>s</sub>   | (g)   | 19.16        | 15.98 | 18.46 |  | 26.03         |   |  |  |
| Weight of Water         | M <sub>w</sub>   | (g)   | 10.34        | 8.34  | 9.07  |  | 5.33          |   |  |  |
| Water Content           | w                | (%)   | 54.0         | 52.2  | 49.1  |  | 20.5          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>52</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>20</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>31</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

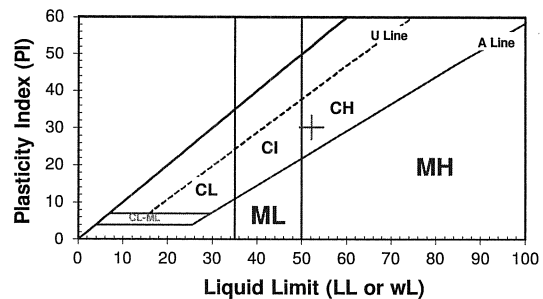
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 1                             |
| <b>Sample Depth:</b> | 5.0m                          |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 14           | 25    | 40    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 371          | 591   | 332   |  | 363           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 44.84        | 44.86 | 44.7  |  | 45.37         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 73.58        | 78.35 | 78.18 |  | 69.73         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 63.31        | 66.95 | 67.15 |  | 65.33         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 18.47        | 22.09 | 22.45 |  | 19.96         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 10.27        | 11.40 | 11.03 |  | 4.40          |   |  |  |
| Water Content           | w                | (%)   | 55.6         | 51.6  | 49.1  |  | 22.0          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>52</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>22</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>30</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aaalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

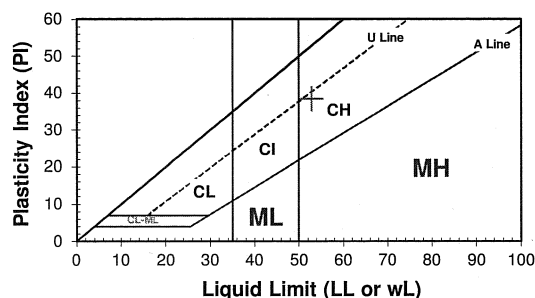
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 1                             |
| <b>Sample Depth:</b> | 8.0m                          |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 15           | 24    | 40    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 457          | 589   | 545   |  | 447           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 45.02        | 44.83 | 43.06 |  | 45.3          |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 73.84        | 71.73 | 72.59 |  | 61.76         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 63.77        | 62.46 | 62.50 |  | 59.7          |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 18.75        | 17.63 | 19.44 |  | 14.40         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 10.07        | 9.27  | 10.09 |  | 2.06          |   |  |  |
| Water Content           | w                | (%)   | 53.7         | 52.6  | 51.9  |  | 14.3          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>53</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>14</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>38</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

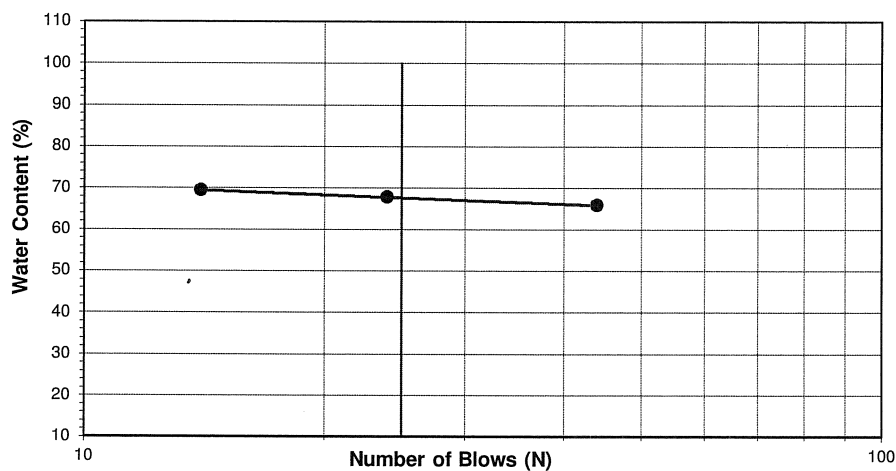
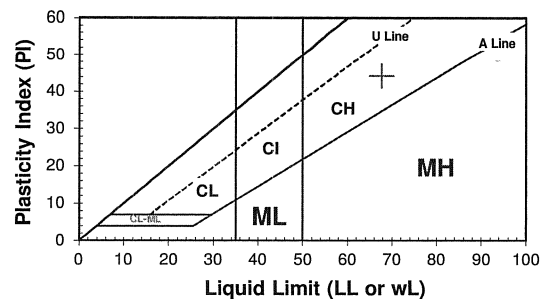
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 1                             |
| <b>Sample Depth:</b> | 16.0m                         |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 14           | 24    | 44    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 378          | 358   | 413   |  | 492           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 45.61        | 44.73 | 45.35 |  | 44.09         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 73.04        | 71.52 | 69.01 |  | 68.58         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 61.80        | 60.70 | 59.62 |  | 63.91         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 16.19        | 15.97 | 14.27 |  | 19.82         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 11.24        | 10.82 | 9.39  |  | 4.67          |   |  |  |
| Water Content           | w                | (%)   | 69.4         | 67.8  | 65.8  |  | 23.6          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>68</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>24</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>44</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

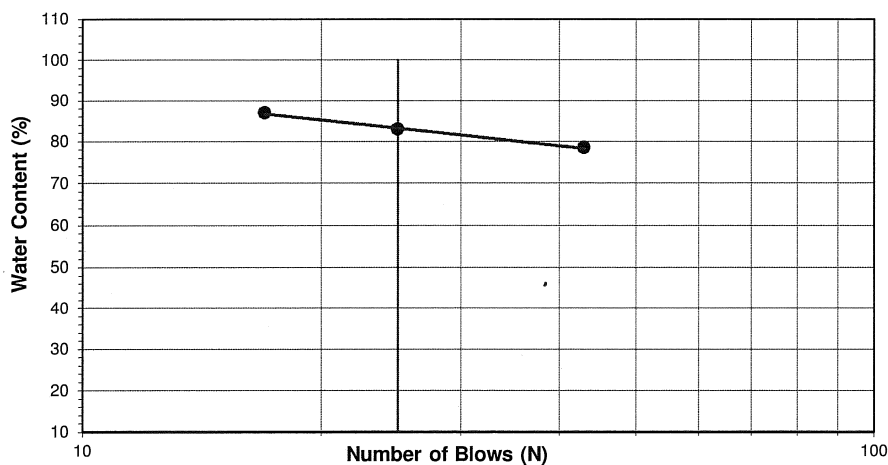
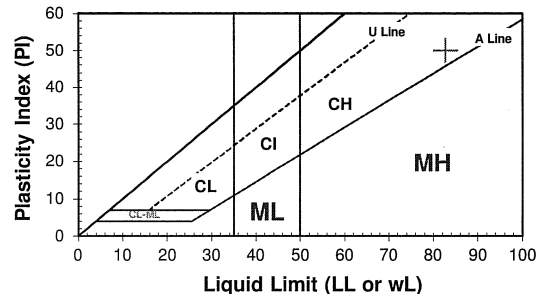
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 1                             |
| <b>Sample Depth:</b> | 17.50m                        |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 17           | 25    | 43    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 440          | 455   | 516   |  | 483           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 44.6         | 45.39 | 43.11 |  | 44.29         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 76           | 77.44 | 75.53 |  | 70.19         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 61.40        | 62.92 | 61.28 |  | 63.8          |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 16.80        | 17.53 | 18.17 |  | 19.51         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 14.60        | 14.52 | 14.25 |  | 6.39          |   |  |  |
| Water Content           | w                | (%)   | 86.9         | 82.8  | 78.4  |  | 32.8          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>83</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>33</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>50</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

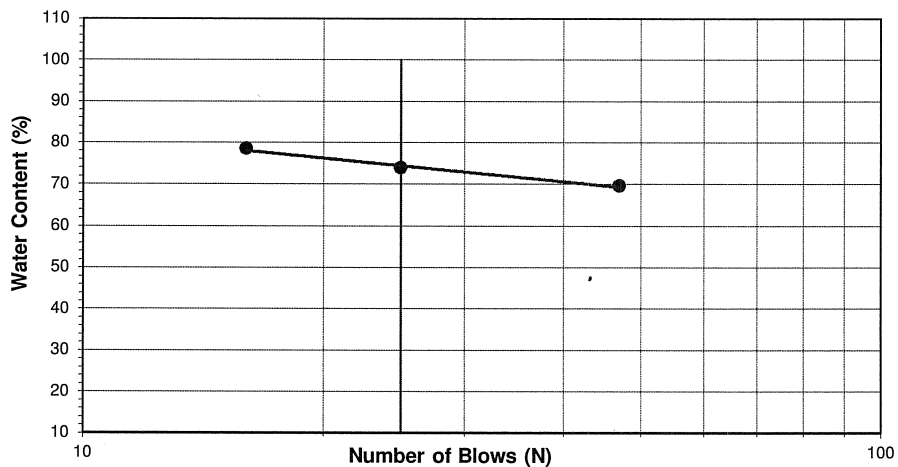
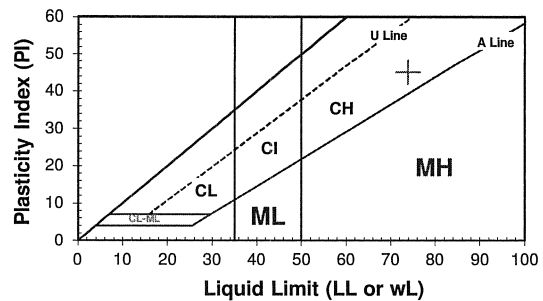
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 1                             |
| <b>Sample Depth:</b> | 20.50m                        |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 16           | 25    | 47    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 390          | 331   | 400   |  | 428           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 45.24        | 45    | 45.37 |  | 44.86         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 73.26        | 74.02 | 71.63 |  | 63.01         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 60.95        | 61.70 | 60.86 |  | 58.94         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 15.71        | 16.70 | 15.49 |  | 14.08         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 12.31        | 12.32 | 10.77 |  | 4.07          |   |  |  |
| Water Content           | w                | (%)   | 78.4         | 73.8  | 69.5  |  | 28.9          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>74</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>29</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>45</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

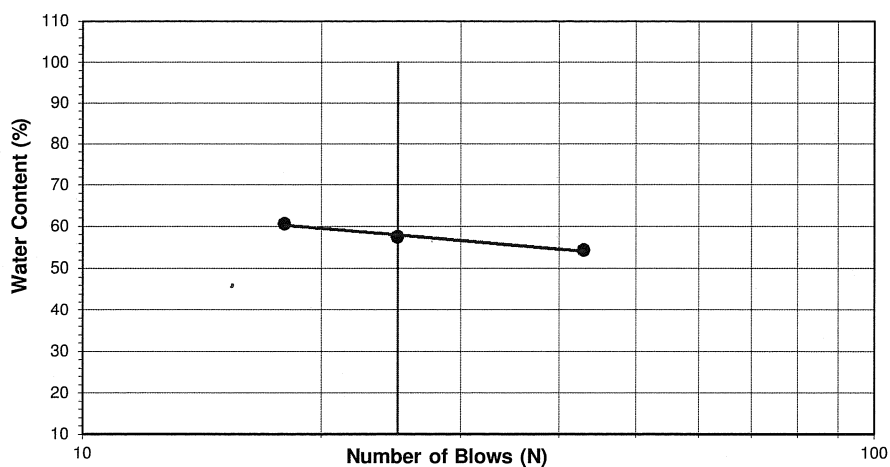
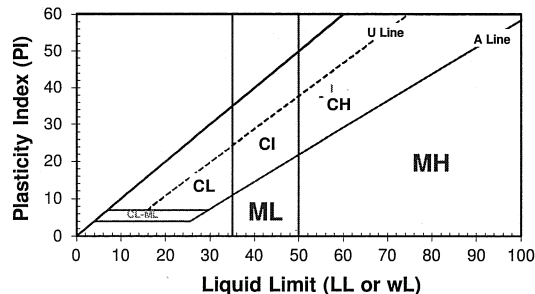
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 2                             |
| <b>Sample Depth:</b> | 5.0m                          |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 18           | 25    | 43    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 394          | 497   | 545   |  | 537           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 43.11        | 45.29 | 44.28 |  | 44.29         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 71.2         | 72.54 | 70.63 |  | 64.26         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 60.61        | 62.60 | 61.36 |  | 60.93         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 17.50        | 17.31 | 17.08 |  | 16.64         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 10.59        | 9.94  | 9.27  |  | 3.33          |   |  |  |
| Water Content           | w                | (%)   | 60.5         | 57.4  | 54.3  |  | 20.0          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>57</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>20</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>37</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

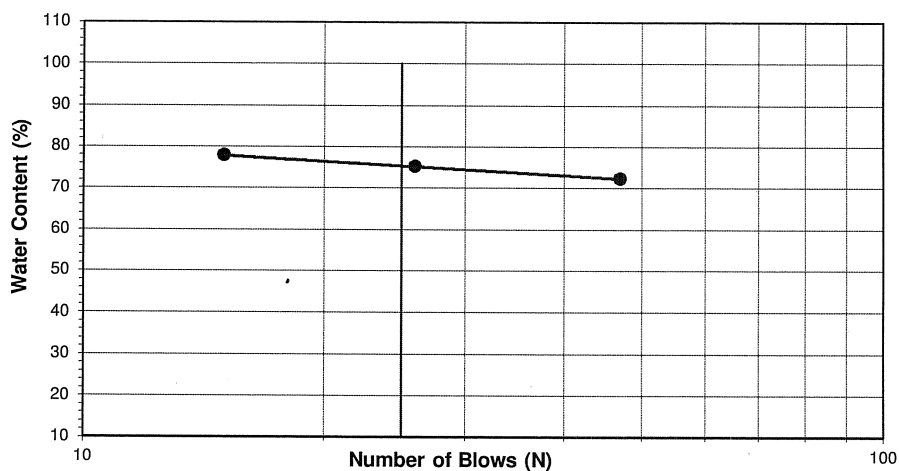
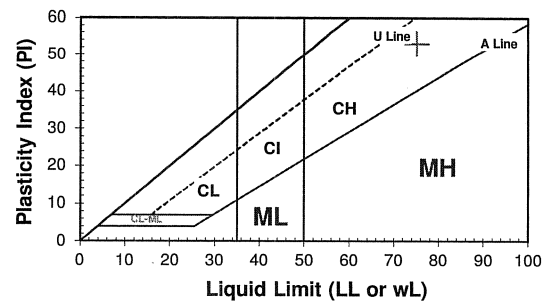
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 2                             |
| <b>Sample Depth:</b> | 17.50m                        |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 15           | 26    | 47    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 578          | 264   | 356   |  | 386           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 44.55        | 45.07 | 44.72 |  | 45.43         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 74.51        | 72.39 | 69.83 |  | 60.75         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 61.40        | 60.67 | 59.30 |  | 57.98         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 16.85        | 15.60 | 14.58 |  | 12.55         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 13.11        | 11.72 | 10.53 |  | 2.77          |   |  |  |
| Water Content           | w                | (%)   | 77.8         | 75.1  | 72.2  |  | 22.1          |   |  |  |

|                                                |    |
|------------------------------------------------|----|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | 75 |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | 22 |
| <b>Plasticity Index (PI) (%)</b>               | 53 |
| <b>Soil Classification</b>                     | CH |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aaalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

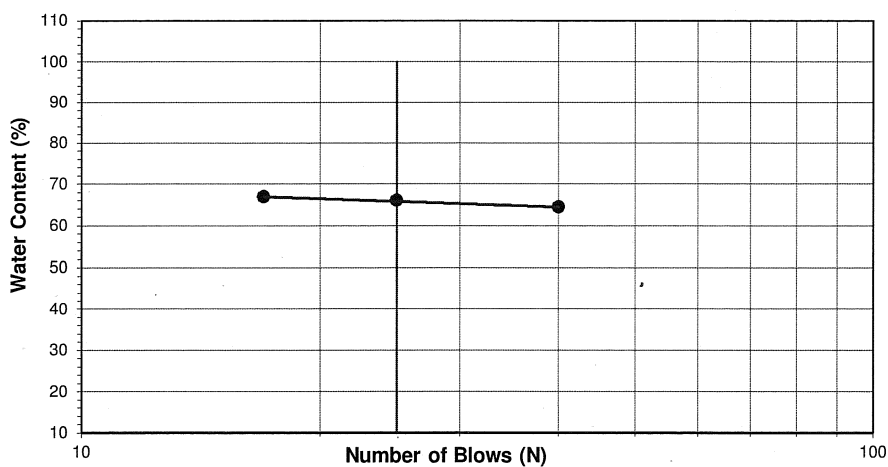
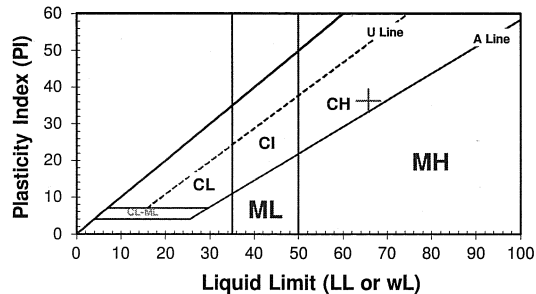
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 2                             |
| <b>Sample Depth:</b> | 20.50m                        |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 17           | 25    | 40    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 352          | 370   | 553   |  | 595           |   |  |  |
| Weight of Empty Tare    | M <sub>c</sub>   | (g)   | 45.34        | 45.18 | 44.02 |  | 44.73         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 72.64        | 69.44 | 72.26 |  | 72.39         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 61.70        | 59.80 | 61.21 |  | 66.09         |   |  |  |
| Weight of Soil          | M <sub>s</sub>   | (g)   | 16.36        | 14.62 | 17.19 |  | 21.36         |   |  |  |
| Weight of Water         | M <sub>w</sub>   | (g)   | 10.94        | 9.64  | 11.05 |  | 6.30          |   |  |  |
| Water Content           | w                | (%)   | 66.9         | 65.9  | 64.3  |  | 29.5          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>66</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>29</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>36</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

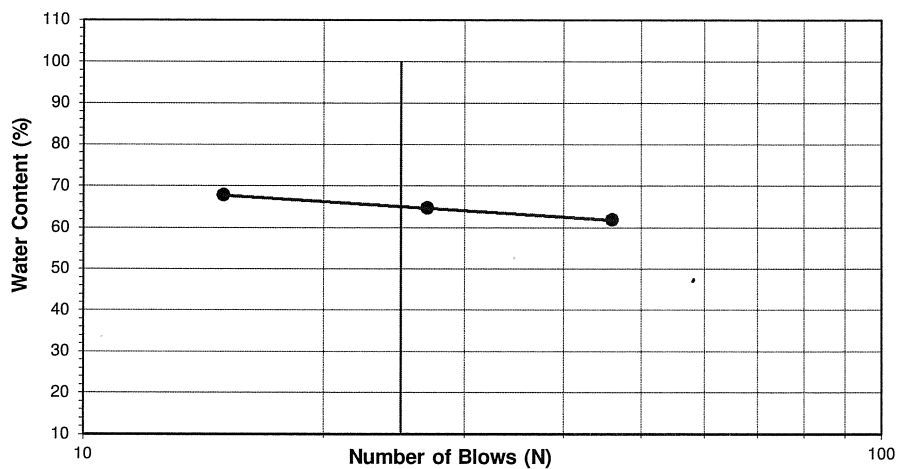
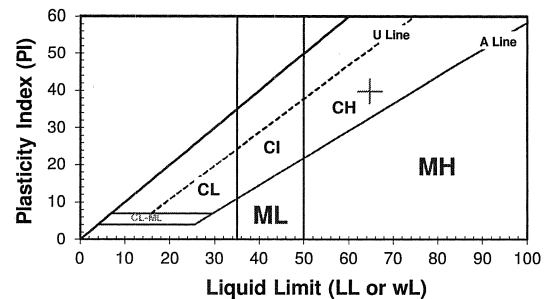
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 3                             |
| <b>Sample Depth:</b> | 5.0m                          |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 15           | 27    | 46    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 350          | 398   | 481   |  | 395           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 45.41        | 45.71 | 44.29 |  | 44.23         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 76           | 71.22 | 71.05 |  | 70.2          |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 63.65        | 61.20 | 60.83 |  | 65            |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 18.24        | 15.49 | 16.54 |  | 20.77         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 12.35        | 10.02 | 10.22 |  | 5.20          |   |  |  |
| Water Content           | w                | (%)   | 67.7         | 64.7  | 61.8  |  | 25.0          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>65</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>25</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>40</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

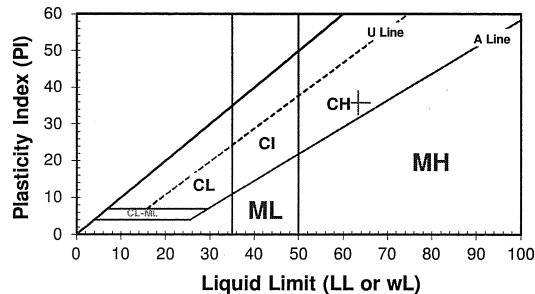
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 3                             |
| <b>Sample Depth:</b> | 10.0m                         |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 15           | 24    | 41    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 585          | 570   | 550   |  | 534           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 45.17        | 45.75 | 45.02 |  | 44.74         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 73.25        | 71.5  | 70.96 |  | 67.18         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 62.25        | 61.51 | 61.03 |  | 62.33         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 17.08        | 15.76 | 16.01 |  | 17.59         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 11.00        | 9.99  | 9.93  |  | 4.85          |   |  |  |
| Water Content           | w                | (%)   | 64.4         | 63.4  | 62.0  |  | 27.6          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>63</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>28</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>36</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

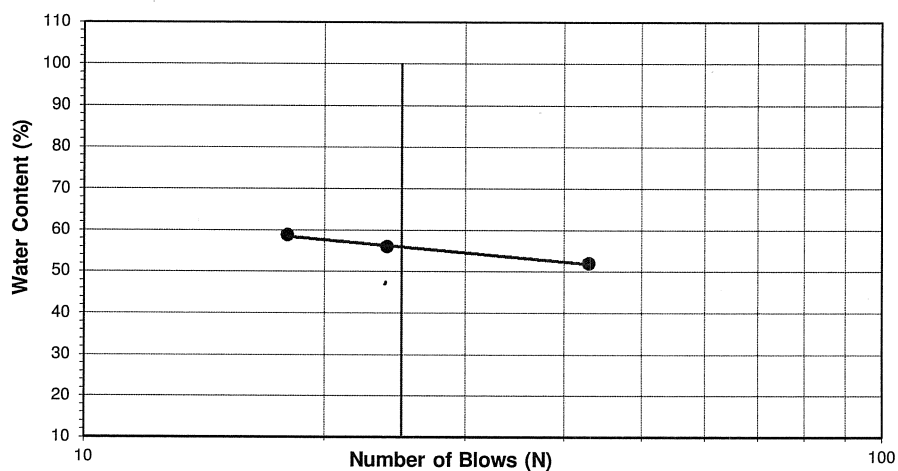
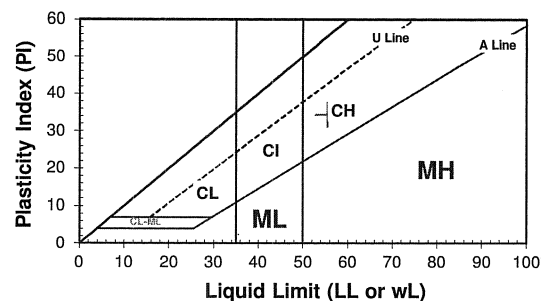
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 3                             |
| <b>Sample Depth:</b> | 11.50m                        |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 18           | 24    | 43    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 326          | 388   | 456   |  | 580           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 44.73        | 44.5  | 45.3  |  | 45.39         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 73.16        | 76.46 | 77.65 |  | 64.08         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 62.65        | 65.00 | 66.60 |  | 60.81         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 17.92        | 20.50 | 21.30 |  | 15.42         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 10.51        | 11.46 | 11.05 |  | 3.27          |   |  |  |
| Water Content           | w                | (%)   | 58.6         | 55.9  | 51.9  |  | 21.2          |   |  |  |

|                                                |    |
|------------------------------------------------|----|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | 55 |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | 21 |
| <b>Plasticity Index (PI) (%)</b>               | 34 |
| <b>Soil Classification</b>                     | CH |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

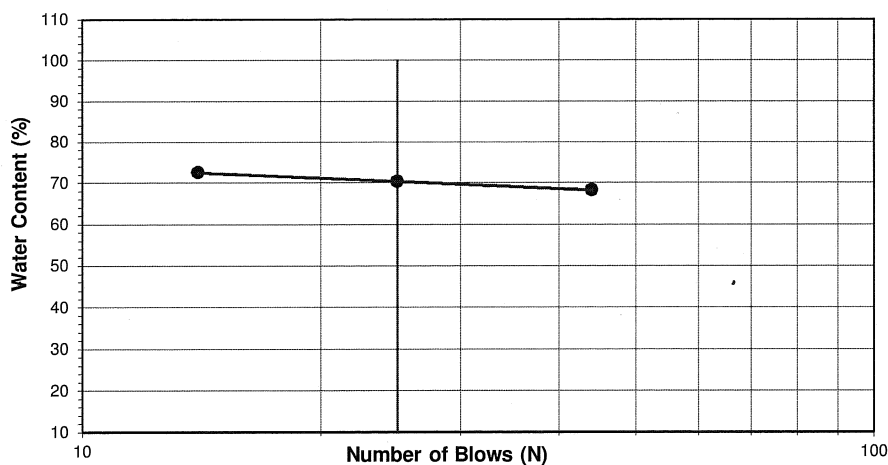
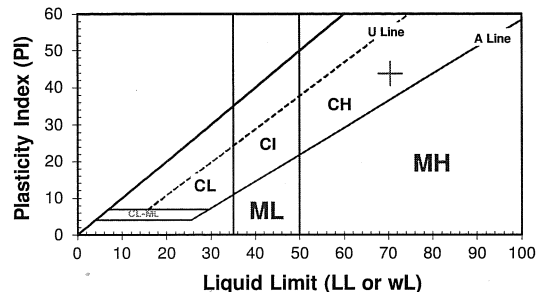
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 3                             |
| <b>Sample Depth:</b> | 14.50m                        |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 14           | 25    | 44    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 417          | 552   | 437   |  | 551           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 44.21        | 45.05 | 45.47 |  | 45.6          |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 74.09        | 74.19 | 73.06 |  | 72.6          |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 61.53        | 62.17 | 61.87 |  | 66.92         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 17.32        | 17.12 | 16.40 |  | 21.32         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 12.56        | 12.02 | 11.19 |  | 5.68          |   |  |  |
| Water Content           | w                | (%)   | 72.5         | 70.2  | 68.2  |  | 26.6          |   |  |  |

|                                                |    |
|------------------------------------------------|----|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | 70 |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | 27 |
| <b>Plasticity Index (PI) (%)</b>               | 44 |
| <b>Soil Classification</b>                     | CH |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

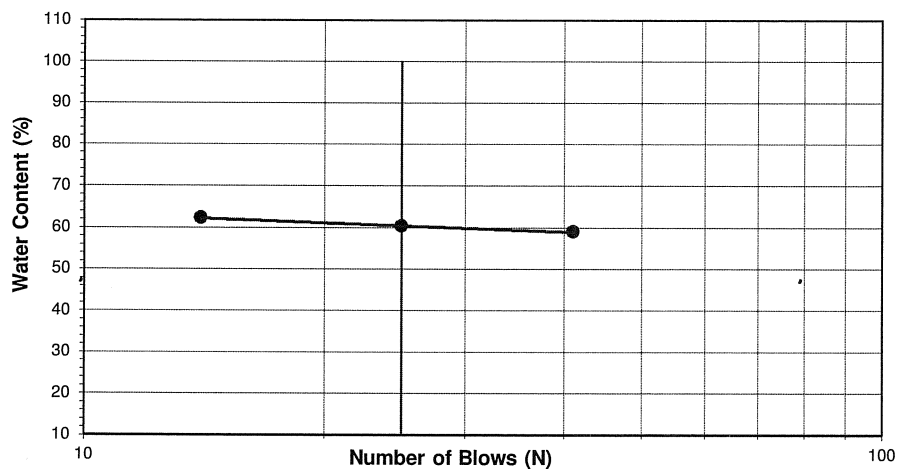
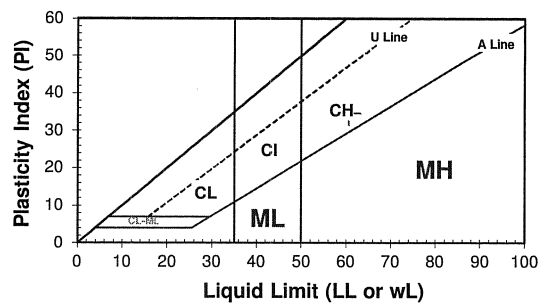
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 3                             |
| <b>Sample Depth:</b> | 17.50m                        |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 14           | 25    | 41    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 468          | 347   | 341   |  | 425           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 44.99        | 44.54 | 45.04 |  | 44.82         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 74.01        | 70.79 | 73.28 |  | 65.34         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 62.88        | 60.91 | 62.81 |  | 61.11         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 17.89        | 16.37 | 17.77 |  | 16.29         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 11.13        | 9.88  | 10.47 |  | 4.23          |   |  |  |
| Water Content           | w                | (%)   | 62.2         | 60.4  | 58.9  |  | 26.0          |   |  |  |

|                                                |           |
|------------------------------------------------|-----------|
| <b>Liquid Limit (LL or w<sub>L</sub>) (%)</b>  | <b>60</b> |
| <b>Plastic Limit (PL or w<sub>P</sub>) (%)</b> | <b>26</b> |
| <b>Plasticity Index (PI) (%)</b>               | <b>35</b> |
| <b>Soil Classification</b>                     | <b>CH</b> |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

## ATTERBERG LIMITS DATA SHEET

IS-2720-Part-5

Name & Address of Lab: M/s. Mars Synergy Geotech Private Limited ; # 30/25, Throwpathy Amman Koil Main Road, Velachery, Chennai - 600 042.

Client Name: M/s. Aaalam Promoters Private Limited

Method Use: IS-2720 P-5

Sample Received on: 26.08.2024

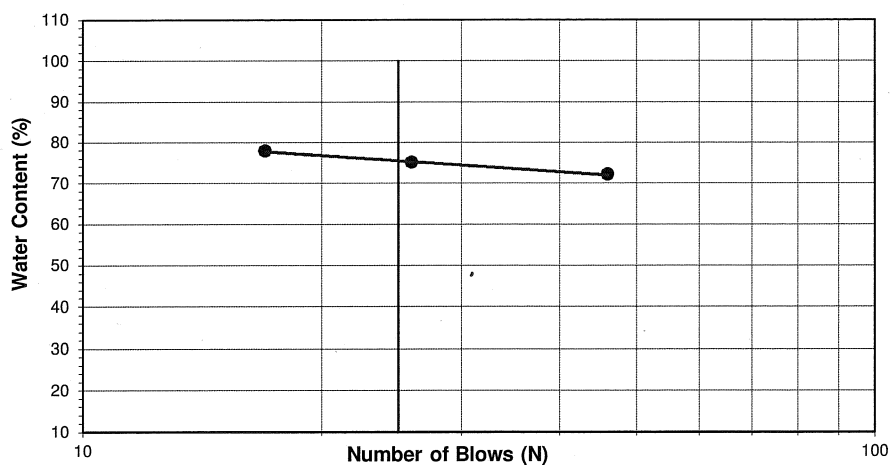
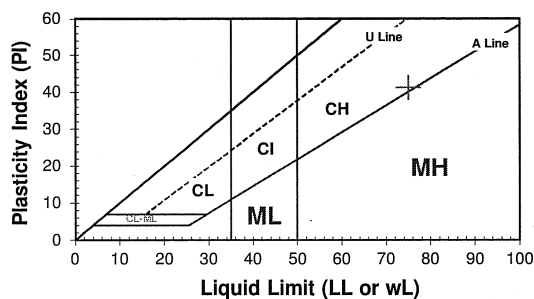
Test Started on: 27.08.2024

Test Completed on: 28.08.2024

|                      |                               |
|----------------------|-------------------------------|
| <b>Project :</b>     | "VIRAAM" Residential Building |
| <b>Location:</b>     | Mangadu                       |
| <b>Boring No:</b>    | 3                             |
| <b>Sample Depth:</b> | 20.50m                        |
| <b>Project No:</b>   | MSGTPL/SI-6256-R2/24-25       |

| TEST                    |                  |       | LIQUID LIMIT |       |       |  | PLASTIC LIMIT |   |  |  |
|-------------------------|------------------|-------|--------------|-------|-------|--|---------------|---|--|--|
| Variable                | NO               |       | 1            | 2     | 3     |  | 1             | 2 |  |  |
|                         | Var.             | Units |              |       |       |  |               |   |  |  |
| Number of Blows         | N                | blows | 17           | 26    | 46    |  |               |   |  |  |
| Tare Number             | ---              | ---   | 464          | 493   | 584   |  | 512           |   |  |  |
| Weight of Empty Tare    | M <sub>C</sub>   | (g)   | 44.82        | 44.98 | 45.15 |  | 44.52         |   |  |  |
| Wt of Tare + Soil (Wet) | M <sub>CMS</sub> | (g)   | 70.36        | 71.36 | 72.03 |  | 69.23         |   |  |  |
| Wt of Tare + Soil (Dry) | M <sub>CDS</sub> | (g)   | 59.18        | 60.05 | 60.78 |  | 62.99         |   |  |  |
| Weight of Soil          | M <sub>S</sub>   | (g)   | 14.36        | 15.07 | 15.63 |  | 18.47         |   |  |  |
| Weight of Water         | M <sub>W</sub>   | (g)   | 11.18        | 11.31 | 11.25 |  | 6.24          |   |  |  |
| Water Content           | w                | (%)   | 77.9         | 75.0  | 72.0  |  | 33.8          |   |  |  |

|                                  |    |
|----------------------------------|----|
| Liquid Limit (LL or $w_L$ ) (%)  | 75 |
| Plastic Limit (PL or $w_P$ ) (%) | 34 |
| Plasticity Index (PI) (%)        | 41 |
| Soil Classification              | CH |



Tested by: D.J

Reviewed by: R.N

Authorized by: V.A

....END OF THE REPORT.....