

**Name of Work: -**      **Construction of Various Category Quarters in Ahmedabad City (Addition, Alteration, Upgradation and Modernization of Campus, Landscapping and Beautification of Gardens and other Beautification work in Campus of Govt. Bungalow No. 4 to 30 at Dafnala, Shahibaug, Ahmedabad) (3<sup>rd</sup> attempt)**

### **SPECIFICATIONS**

**Item No. 57**    **Excavation in any soil upto 30 cm. depth, bracking clods removing unwanted stuff such as brick bats , stones, grass roots ect. Refilling the same , preplanting watering , weeding , top- digging relevening and bringing the earth to fine tilth , ready for sowing or planting.**

#### **1. Materials**

1. No new materials shall ordinarily be supplied under this item except **water** required for pre-planting irrigation.
2. Existing soil at site shall be reused after proper preparation.
3. Any soil found unsuitable due to excessive debris, stones, brick bats, roots, weeds, or other deleterious matter shall be **removed as directed**.
4. Water used for irrigation shall be **clean and free from harmful salts or impurities**.

#### **2. Workmanship**

1. Excavation shall be carried out in **any type of soil** up to a depth of **300 mm (30 cm)** from existing ground level.
2. All excavated soil clods shall be **properly broken**, and unwanted materials such as **brick bats, stones, rubbish, grass roots, weeds, and other foreign matter** shall be removed and disposed of as directed.
3. The excavated earth, after cleaning, shall be **refilled back** into the excavated area.
4. The refilled soil shall be **watered adequately (pre-planting watering)** and allowed to settle.
5. After settling, the area shall be **weeded**, top-dug, loosened, and **re-levelled**.
6. The soil shall be worked thoroughly to bring it to a **fine tilth**, suitable for sowing or planting.
7. Final surface shall be **even, properly graded**, and ready to receive seeds or plants.
8. All operations shall be carried out in a **neat, workmanlike manner** to the complete satisfaction of the Engineer-in-Charge.

#### **3. Mode of Measurement and Payment**

1. Measurement shall be made in **square metre (m<sup>2</sup>)** of area prepared, unless otherwise specified in the BOQ.
2. Depth of excavation shall be deemed as **300 mm**, and no separate measurement shall be taken for individual operations.
3. The rate shall include the **cost of excavation, breaking clods, removal of unwanted materials, refilling, watering, weeding, top-digging, re-levelling, labour, tools, and all incidental charges**, complete.
4. Disposal of unwanted materials within the specified lead shall be deemed to be included in the rate.
5. Payment shall be made at the **accepted tender rate** for the quantity actually executed and approved.

**Item No. 58    Supplying and stacking of good earth at site.**

**1. Materials**

1. Good earth shall be **natural soil obtained from approved sources**, free from subsoil, rubbish, debris, roots, weeds, stones, brick bats, shale, salts, organic matter, toxic materials, and other harmful substances.
2. The earth shall be **loamy in nature**, friable, and suitable for horticultural and landscaping purposes.
3. The earth shall be free from **clods larger than 50 mm** and shall not contain gravel exceeding 5% by volume.
4. The pH value of soil shall be **between 6.5 and 7.5**, suitable for plant growth.
5. The earth shall not be taken from **unauthorized or environmentally restricted areas**.
6. Sample of good earth shall be **approved by the Engineer-in-Charge** before bulk supply. Inferior material shall be rejected.

**2. Workmanship**

1. Good earth shall be **excavated, transported, and supplied** from approved borrow areas.
2. The earth shall be **unloaded and stacked neatly** at the designated location at site, as directed by the Engineer-in-Charge.
3. Stacks shall be formed in such a manner as to **facilitate measurement**.
4. Care shall be taken to prevent **contamination** with debris, construction waste, or inferior soil.
5. All operations shall be carried out in a **workmanlike manner** and to the satisfaction of the Engineer-in-Charge.
6. Any rejected material shall be **removed from the site immediately** at the contractor's cost.

**3. Mode of Measurement and Payment**

1. Measurement shall be made in **cubic metre (m<sup>3</sup>)** of good earth supplied and stacked at site.
2. Measurement shall be taken **after stacking** at site, as approved by the Engineer-in-Charge.

3. The rate shall include **cost of excavation, royalty, loading, transportation, unloading, stacking, all leads and lifts, and incidental charges**, complete.
4. No extra payment shall be made for **loss due to shrinkage or handling**.
5. Payment shall be made at the **accepted tender rate** for the quantity actually measured and approved.

**Item No. 59 Providing farm yard manure of approved quality on site**

**1. Materials**

1. Farm Yard Manure shall be **well decomposed, rotten and matured**, obtained from approved sources.
2. The manure shall be **dark brown to black in colour**, friable, and uniform in texture.
3. It shall be **free from stones, gravel, earth clods, weeds, weed seeds, roots, plastics, glass, toxic substances and harmful insects**.
4. The manure shall not emit foul smell and shall not be excessively wet.
5. Moisture content shall **not exceed 25%**.
6. Indicative minimum nutrient content on dry weight basis shall be:
  - Nitrogen (N): **0.5%**
  - Phosphorus ( $P_2O_5$ ): **0.2%**
  - Potassium ( $K_2O$ ): **0.5%**
7. Lumps larger than **25 mm** shall be broken or sieved before application.
8. Sample of Farm Yard Manure shall be **got approved by the Engineer-in-Charge** before bulk supply. Inferior material shall be rejected.

**2. Workmanship**

1. Farm Yard Manure shall be **transported, unloaded and stacked** at site as directed by the Engineer-in-Charge.
2. It shall be **spread uniformly** over the area to the required thickness.
3. The manure shall be **thoroughly mixed with top soil** up to a depth of **150 mm** or as specified.
4. Care shall be taken to ensure **even distribution** without segregation.
5. All operations shall be carried out in a **workmanlike manner** to the satisfaction of the Engineer-in-Charge.
6. Any rejected material shall be **removed from site immediately** at the contractor's cost.

**3. Mode of Measurement and Payment**

1. Measurement shall be made in **cubic metre (m<sup>3</sup>) / metric tonne**, as specified in the Bill of Quantities.
2. Measurement shall be taken **after delivery at site** or after stacking, as directed by the Engineer-in-Charge.
3. The rate shall include the **cost of Farm Yard Manure, loading, transportation, unloading, stacking, spreading, mixing with soil, and all incidental charges**, complete.

**Item No. 60   Providing labour for spreading & mixing the manure evenly with 8 to 10 cm on prepared area @ 5 cmt / 100 smt . Area. ( for 1 cmt of manure rate )**

### **1. Materials**

1. No material shall be supplied under this item.
2. Farm Yard Manure / organic manure shall be **supplied under a separate item** and shall already be available at site.
3. Water required for light moistening during mixing, if necessary, shall be included.

### **2. Workmanship**

1. Labour shall be provided for **spreading and mixing manure evenly** over the prepared area.
2. Manure shall be spread uniformly to achieve a thickness of **8 to 10 cm**.
3. The manure shall be **thoroughly mixed with the top layer of soil** to ensure proper blending.
4. Mixing shall be carried out carefully without disturbing the finished ground levels.
5. The prepared area shall be left **level, clean, and suitable for sowing or planting**.
6. The work shall be executed in a **workmanlike manner** to the satisfaction of the Engineer-in-Charge.

### **3. Mode of Measurement and Payment**

1. Measurement shall be made in **centimetre-thickness per 100 square metre (CMT/100 sqm)** of area treated.
2. The **rate quoted shall be for 1 cm thickness of manure** spread and mixed over **100 square metres** of prepared area.
3. For a thickness of **8 to 10 cm**, payment shall be made proportionately by multiplying the approved rate.
4. The rate shall include the **cost of labour, spreading, mixing, levelling, tools, watering if required, and all incidental charges**, complete.
5. Payment shall be made at the **accepted tender rate** for the actual quantity executed and approved.

**Item No. 61** Supplying and stacking well decomposed fully dry cow dung powder manure, without weeds or impurities at site including royalty and carriage upto site and all leads and lifts including mixing with good soil for plantation. The NPK composition to be in range of 0.5-1.5% Nitrogen (N), 0.2-0.5% Phosphorus ( $P_2O_5$ ), and 0.5-0.8% Potassium ( $K_2O$ ) and organic matter to be at least 50%. It has to have moisture content of less than 10-15% and pH in range of 6.5-7.5. The contractor to supply NABL-accredited labs for each batch of 1000 kg.

## **1. Materials**

1. The manure shall consist of **well-decomposed, fully dry cow dung powder manure** of approved quality.
2. It shall be **free from weeds, weed seeds, stones, earth lumps, plastics, glass, toxic substances, insects, and other impurities.**
3. The manure shall be in **powdered / finely pulverized form**, easy to spread and mix.
4. **Nutrient composition** on dry weight basis shall be within the following range:
  - Nitrogen (N): **0.5% to 1.5%**
  - Phosphorus ( $P_2O_5$ ): **0.2% to 0.5%**
  - Potassium ( $K_2O$ ): **0.5% to 0.8%**
5. **Organic matter content** shall be **minimum 50%.**
6. **Moisture content** shall be **less than 10–15%.**
7. **pH value** shall be in the range of **6.5 to 7.5.**
8. The manure shall not emit foul smell and shall indicate **complete decomposition.**
9. The contractor shall submit **test reports from NABL-accredited laboratories** for each batch of **1000 kg** confirming compliance with the above parameters.
10. Material shall be supplied only **after approval of samples and test reports** by the Engineer-in-Charge.

## **2. Workmanship**

1. The manure shall be **procured from approved sources**, packed or transported in a manner preventing contamination.
2. It shall be **transported, unloaded, and stacked neatly** at the designated location at site, as directed by the Engineer-in-Charge.
3. The contractor shall include **royalty, carriage up to site, all leads and lifts**, and handling charges.
4. The manure shall be **mixed thoroughly with good earth / soil** for plantation work in the proportion and manner directed.
5. Mixing shall ensure **uniform distribution** without segregation.
6. Stacking and mixing areas shall be kept **clean and orderly.**
7. Any rejected material shall be **removed from site immediately** at the contractor's cost.
8. All work shall be carried out in a **neat, workmanlike manner** to the satisfaction of the Engineer-in-Charge.

### 3. Mode of Measurement and Payment

1. Measurement shall be made in **kilogram (kg)** or **metric tonne (MT)** of manure **supplied, stacked, and approved** at site.
2. Measurement shall be based on **actual quantity delivered**, supported by **NABL test reports**.
3. The rate shall include:
  - Cost of manure
  - Royalty
  - Laboratory testing charges
  - Loading, transportation, unloading
  - Stacking
  - Mixing with good soil
  - All leads, lifts, labour, tools, and incidental charges complete.
4. No separate payment shall be made for **testing, stacking, or mixing**.
5. Payment shall be made at the **accepted tender rate** for the quantity actually supplied and approved by the Engineer-in-Charge.

**Item No. 62** Providing and applying humic acid (organic soil conditioner) in granular/liquid form, derived from natural leonardite, with minimum Humic Acid content not less than 70%, containing beneficial fulvic acids and trace nutrients, for improving soil structure, microbial activity and nutrient uptake. The item includes supply, transportation, handling, dilution/mixing, application at site by manual/mechanical means, watering after application, complete as per manufacturer's specifications and directions of Engineer-in-Charge.

#### 1. Materials

1. Humic Acid shall be an **organic soil conditioner derived from natural leonardite**, of approved make and quality.
2. The product shall be supplied in **granular or liquid form**, as specified or directed by the Engineer-in-Charge.
3. **Minimum Humic Acid content** shall be **not less than 70%** on dry weight basis.
4. The material shall contain **beneficial fulvic acids and trace nutrients** essential for soil health.
5. The product shall be **free from heavy metals, toxic residues, synthetic chemicals, and harmful impurities**.
6. The material shall be suitable for **improving soil structure, enhancing microbial activity, and increasing nutrient uptake**.
7. Manufacturer's **technical data sheet, usage instructions, and quality certificate** shall be submitted for approval prior to application.

8. Product shall conform to applicable **FCO / Government horticulture standards**, wherever relevant.

## **2. Workmanship**

1. Humic Acid shall be **supplied, transported, handled, and stored** at site as per manufacturer's recommendations.
2. For liquid form, the material shall be **properly diluted with clean water** in the specified proportion before application.
3. Application shall be carried out by **manual or mechanical means** uniformly over the area, as directed.
4. For granular form, the material shall be **evenly broadcast and incorporated into the soil** at the specified depth.
5. Application rate shall be strictly as per **manufacturer's specifications** and directions of the Engineer-in-Charge.
6. **Light watering/irrigation** shall be carried out immediately after application to aid absorption and activation.
7. Care shall be taken to ensure **uniform coverage** without wastage or segregation.
8. All works shall be executed in a **neat and workmanlike manner**, ensuring safety and environmental protection.
9. Any rejected or spilled material shall be **cleaned and disposed of** at the contractor's cost.

## **3. Mode of Measurement and Payment**

1. Measurement shall be made in:
  - **Kilogram (kg)** for granular form, or
  - **Litre (L)** for liquid form,as specified in the Bill of Quantities.
2. Measurement shall be based on the **actual quantity applied and approved** by the Engineer-in-Charge.

**Item No. 63    Supplying insecticides at site well packed in bottle of 20 litre. weight including royalty and carriage with all leads and lifts (product to be brought in company sealed packing only)**

### **1. Materials**

1. The insecticide shall be of **approved make and quality**, conforming to the **Insecticides Act, 1968** and rules framed thereunder.
2. The product shall be supplied in **company-sealed, tamper-proof original packing only**.
3. Packing shall be in **20-litre capacity bottles/containers**, clearly labeled with:
  - Product name
  - Manufacturer's name
  - Batch number
  - Date of manufacture and expiry

- Active ingredient and concentration
- 4. The insecticide shall be **free from adulteration** and shall not be past its expiry date at the time of supply.
- 5. Royalty, taxes, and statutory duties, if any, shall be included in the quoted rate.
- 6. Sample and manufacturer's **quality certificate / test report** shall be submitted for approval when required by the Engineer-in-Charge.

## 2. Workmanship

1. The insecticide shall be **procured from authorized dealers** and transported to site in safe condition.
2. The material shall be **handled, loaded, unloaded, and stacked** carefully at site to prevent leakage or damage.
3. All **leads and lifts**, including carriage up to the specified site location, shall be included.
4. Storage at site shall be done as per **manufacturer's safety guidelines** and directions of the Engineer-in-Charge.
5. Any damaged, leaking, or non-conforming container shall be **rejected and replaced** at the contractor's cost.
6. All operations shall be carried out in a **safe and workmanlike manner**.

## 3. Mode of Measurement and Payment

1. Measurement shall be made in **litres (L)** or **number of 20-litre containers**, as specified in the Bill of Quantities.
2. Measurement shall be based on the **actual quantity supplied, stacked, and approved** at site.
3. The rate shall include:
  - Cost of insecticide
  - Company-sealed packing
  - Royalty and taxes
  - Loading, transportation, unloading
  - All leads and lifts
  - Handling and stacking complete.
4. No separate payment shall be made for packing, carriage, or handling.
5. Payment shall be made at the **accepted tender rate** for the quantity actually supplied and approved.

**Item No. 64**      **Providing and planting pure carpet lawn pieces and maintain the same till is well established ( about 45 days )**

### 1. Materials



1. Carpet lawn shall be **pure, healthy, fresh and true to type**, free from weeds, pests, diseases, and foreign grasses.
2. Lawn pieces shall be **uniform in thickness and size**, with well-developed roots and soil attached.
3. The variety of carpet grass shall be **approved by the Engineer-in-Charge**.
4. Any manure, fertilizer, soil conditioner, or plant protection chemicals required during maintenance shall be of **approved quality**.

## 2. Workmanship

1. The ground shall be **prepared in advance** to proper levels, slopes, and fine tilth suitable for lawn laying.
2. Carpet lawn pieces shall be **laid closely and evenly** without gaps or overlaps.
3. Lawn pieces shall be **gently pressed and lightly rolled** to ensure proper contact with soil.
4. Immediately after laying, the lawn shall be **thoroughly watered**.
5. The contractor shall **maintain the lawn for a period of about 45 days** or till it is well established, whichever is later.
6. Maintenance shall include:
  - Regular watering
  - Weeding
  - Rolling
  - Mowing/trimming
  - Replacement of dead or damaged patches
  - Application of manure/fertilizer and plant protection measures, if required
7. Any lawn area found dead, patchy, or poorly established during the maintenance period shall be **replaced free of cost**.
8. The lawn shall be handed over in a **healthy, lush green, evenly grown condition** to the satisfaction of the Engineer-in-Charge.

## 3. Mode of Measurement and Payment

1. Measurement shall be made in **square metre (m<sup>2</sup>)** of carpet lawn **actually laid and approved**.
2. Measurement shall be taken **after successful establishment** of the lawn.
3. The rate shall include:
  - Cost of carpet lawn pieces
  - Supply, transportation, loading and unloading
  - Laying, rolling and watering
  - Maintenance for about **45 days**
  - Replacement of dead patches
  - Labour, tools, materials, and all incidental charges complete.
4. No separate payment shall be made for maintenance during the establishment period.
5. Payment shall be made at the **accepted tender rate** for the quantity actually executed and approved.

**Item No. 65 Raising hedge with digging and planting : After excavating soil upto 30cm depth & removing unwanted stuff, stones etc.Preparing soil for planting by supplying and mixing**

**fertile river soil layer up to 15 cm. Excavating pits of required size and providing cutting of cleredendron (kadavi mehndi),plumbago capensis (nila chitrak) etc. having height of 1 to 1.5 ft and bag size is 6 inch x 6 inch and planting as directed & maintaining till well established etc. complete**

## **1. Materials**

1. Plants shall be **healthy, vigorous and true to type**, free from pests, diseases, and deformities.
2. Hedge plants shall consist of **Clerodendron (Kadavi Mehndi), Plumbago capensis (Nila Chitrak)** or other approved varieties, as directed by the Engineer-in-Charge.
3. Plants shall be of **height 1.0 m to 1.5 ft (≈30–45 cm)** with **well-developed root system**.
4. Plants shall be supplied in **polythene bags of size 6" × 6"** or equivalent.
5. Fertile **river soil / good earth** shall be clean, loamy, and free from stones, weeds, roots, brick bats, or other deleterious matter.
6. Water used for irrigation shall be **clean and suitable for horticultural purposes**.
7. Manure/fertilizer, if required during establishment, shall be of **approved quality**.

## **2. Workmanship**

1. The hedge area shall be **excavated up to a depth of 300 mm (30 cm)** and all unwanted materials such as **stones, brick bats, debris, roots, and weeds** shall be removed and disposed of as directed.
2. The excavated soil shall be properly **broken, cleaned, and levelled**.
3. **Fertile river soil** shall be supplied and **spread in a layer up to 150 mm (15 cm)** and mixed thoroughly with existing soil to prepare the planting bed.
4. **Pits of required size** shall be excavated along the hedge line at proper spacing, as directed by the Engineer-in-Charge.
5. Plants shall be carefully removed from bags, placed upright in the pits, and **backfilled with prepared soil**, firmly pressed around the roots.
6. **Immediate watering** shall be done after planting.
7. The contractor shall **maintain the hedge till it is well established**, including:
  - Regular watering
  - Weeding and hoeing
  - Gap filling and replacement of dead plants
  - Pruning/trimming where necessary
  - Plant protection measures, if required
8. Any plant found dead, weak, or unhealthy during the maintenance period shall be **replaced free of cost**.
9. The hedge shall be handed over in a **healthy, uniform and well-established condition** to the satisfaction of the Engineer-in-Charge.

## **3. Mode of Measurement and Payment**

1. Measurement shall be made in **running metre (RM)** or **number of plants**, as specified in the Bill of Quantities.
2. Measurement shall be taken **after successful establishment** of the hedge.

3. The rate shall include:
  - Excavation up to 30 cm depth
  - Removal and disposal of unwanted materials
  - Supply and mixing of fertile river soil up to 15 cm layer
  - Supply of plants in bags
  - Digging of pits and planting
  - Watering and maintenance till establishment
  - Replacement of dead plants
  - Labour, tools, materials, leads and lifts complete.
4. No separate payment shall be made for maintenance or replacement during the establishment period.
5. Payment shall be made at the **accepted tender rate** for the quantity actually executed and approved.

**Item No. 66** Creeper/Climbers Plant assorted with digging and planting - *Quisqualis indica*, *Petrea volubilis*, *Ipomea purpurea* (Morning glory), *Vernonia elaeagnifolia* (curtain creeper), *Tecoma grandiflora*, *Jasminum grandiflorum* (chameli), *Allamanda*, *Bignonia*, etc. in their assorted species height 30-45 cm. in earthen/ plastic pot of size 20 cm/ in bag of size 25 cm

## 1. Materials

1. Plants shall consist of **assorted creepers/climbers** including but not limited to:
  - *Quisqualis indica*
  - *Petrea volubilis*
  - *Ipomea purpurea* (Morning glory)
  - *Vernonia elaeagnifolia* (Curtain creeper)
  - *Tecoma grandiflora*
  - *Jasminum grandiflorum* (Chameli)
  - *Allamanda*
  - *Bignonia*
 or other approved species as directed by the Engineer-in-Charge.
2. Plants shall be **healthy, disease-free, vigorous**, with well-developed root systems.
3. Height of plants shall be **30–45 cm**, uniform in size and growth stage.
4. Plants shall be supplied in:
  - Earthen pots / plastic pots of **20 cm diameter**, or
  - Polythene bags of **25 cm size**, as directed.
5. Soil in the pot/bag shall be **fertile, well-drained, and free from stones, debris, and weeds**.
6. Water used for irrigation shall be **clean and suitable for horticultural purposes**.

## 2. Workmanship

1. The planting area shall be **prepared by digging, removing unwanted material** (stones, debris, weeds), and loosening soil to the required depth as directed.
2. Planting pits of appropriate size shall be **excavated** to suit the root ball or bag/pot size.
3. Plants shall be carefully removed from pots/bags, placed upright in pits, and backfilled with **prepared soil**, firming gently around roots.
4. **Immediate watering** shall be done after planting.
5. Plants shall be **maintained until well established**, including:
  - Regular watering
  - Weeding and mulching
  - Replacement of dead or weak plants
  - Pruning and training of creepers if required
  - Application of fertilizer or plant protection chemicals, if directed
6. The completed planting shall present a **uniform, healthy, and well-established appearance**.

### 3. Mode of Measurement and Payment

1. Measurement shall be made in **number of plants supplied and planted**.
2. The rate shall include:
  - Cost of plants in pots/bags
  - Excavation and preparation of planting pits
  - Backfilling and planting
  - Watering, maintenance till establishment
  - Replacement of dead/diseased plants
  - Labour, tools, materials, leads and lifts complete.
3. Payment shall be made at the **accepted tender rate** for plants actually planted and approved by the Engineer-in-Charge.
4. No separate payment shall be made for maintenance, replacement, or irrigation during the establishment period.

**Item No. 67 Shrubbery plantation: Supplying of well grown shrub plants**(*Beloperone*, *Lagerstroemia indicia*, *Malpighia coccigera*, *Nyctanthes arbor-tristis*, *Putranjiva roxburghii*, *Allamanda*, *Petrea volubilis*. *Mussanda*, *Amaranthus*, *Michelia champa* (Golden Champa), *Pterospermum acerifolium* (Kanak Champa), *Hamelia*, *Ticoma*, *Tabernaemontana coronaria*, *Nerium Olender*, *Nerium Dwarf*, *Lavendra*, *Daffodil*, *Euphorbia*, *Calliandra*, *Tecoma gaudichaudi*, *Acalypha* various, *Euphorbia*, *Lantana* various, *Excoecaria*, *Plumbago capensis*, *signonium* various, assorted lilies, *Ficus panda*, *Tabernaemontana*, *execaria bi* colourm *Vernonia elaeagnifolia*, *Thuja compacta*, *Bignonia venusta*, *Bougainvillea*, *Clerodendrum thomsoniae* etc) on and average height of 3' to 4' and planting in 2 rows at 300 mm c/c in 300 x300 x300 mm size pits by providing and mixing FYM@ 0.06 cmt / pit with soil pesticides and Insectisid . Plants should be diseases free and fungus free in 8x10 polythen bag . plastic bags or pots should be removed carefully and

soil around the roots should not be dropped or disturbed much. Soil shall be placed after completion of maintenance period but not before stabilizing the shrubs. Mortality rates to be inclusive. Work shall be done as shown in the drawing or as directed and approved by EIC. The ground coverage should be dense and uniform throughout the planting area. Work shall be done as shown in the drawing or as directed and approved by EIC.

## 1. Materials

1. Shrub plants shall consist of **well-grown, healthy, disease-free, pest-free, and fungus-free plants**, including but not limited to:  
*Beloperone*, *Lagerstroemia indica*, *Malpighia coccigera*, *Nyctanthes arbor-tristis*, *Putranjiva roxburghii*, *Allamanda*, *Petrea volubilis*, *Mussaenda*, *Amaranthus*, *Michelia champa* (Golden Champa), *Pterospermum acerifolium* (Kanak Champa), *Hamelia*, *Ticoma*, *Tabernaemontana coronaria*, *Nerium Olender*, *Nerium Dwarf*, *Lavender*, *Daffodil*, *Euphorbia*, *Calliandra*, *Tecoma gaudichaudi*, *Acalypha* (various), *Lantana* (various), *Excoecaria*, *Plumbago capensis*, *Syngonium* (various), assorted lilies, *Ficus panda*, *Thuja compacta*, *Bignonia venusta*, *Bougainvillea*, *Clerodendrum thomsoniae*, *Vernonia elaeagnifolia*, and other approved species.
2. Plants shall have an **average height of 3–4 ft**, supplied in:
  - **8" × 10" polythene bags**, plastic bags, or pots.
3. Plants shall be **carefully handled**, ensuring **root balls remain intact** and **soil around roots is not disturbed or dropped**.
4. Fertilizer / manure: **Farm Yard Manure (FYM) @ 0.06 CMT/pit** shall be supplied and mixed with soil for planting.
5. Pesticides and insecticides, if required, shall be of **approved quality**.
6. Water used shall be **clean and suitable for horticultural use**.

## 2. Workmanship

1. The ground shall be **prepared as per approved drawings or instructions of the Engineer-in-Charge (EIC)**, including removal of debris, stones, roots, and weeds.
2. Pits shall be excavated to a size of **300 mm × 300 mm × 300 mm**, in **two rows with 300 mm center-to-center spacing**, unless otherwise specified.
3. FYM and soil shall be **mixed thoroughly**, and pesticides/insecticides applied as directed.
4. Plants shall be **carefully removed from bags/pots** and planted upright in the pits, ensuring minimal disturbance to root balls.
5. After planting, the plants shall be **watered and maintained** till well-established. Maintenance shall include:
  - Regular watering
  - Weeding
  - Pruning/trimming if required
  - Replacement of dead/diseased plants
  - Fertilizer / pesticide application as directed

6. Maintenance period shall continue until the shrubs are **well stabilized**, dense, and uniform across the planting area, typically as directed by the EIC. **Mortality is to be inclusive**, and any dead plants shall be replaced **free of cost** during this period.
7. The final shrubbery shall provide **dense, uniform ground coverage**, as per drawings or as approved by the EIC.

### 3. Mode of Measurement and Payment

1. Measurement shall be made in **number of plants planted and successfully established**, after completion of the maintenance period and stabilization.
2. The rate shall include:
  - Cost of plants in pots/bags
  - Excavation of pits
  - Supply and mixing of FYM and soil
  - Supply and application of pesticides/insecticides
  - Planting, watering, and maintenance till establishment
  - Replacement of dead/mortality plants
  - Labour, tools, equipment, leads, lifts, and all incidental charges complete.
3. **Bill shall be placed only after completion of the maintenance period**, ensuring shrubs are stabilized and coverage is dense and uniform.
4. No separate payment shall be made for replacement of plants during the establishment period; this is **inclusive in the tender rate**.
5. Payment shall be made at the **accepted tender rate** for the number of shrubs approved and established as per the Engineer-in-Charge.

**Item No. 68**    **Trees Plantation: Supplying and planting of trees of specified (Alstonea scholaris, Erythna indica, Jacaranda mimosifolia, Delonix regia, Anthocephalus cadamba, Spathodea companulata, Neem (Azadirachta indica), Lagerstromia speciosa, Tabebuia argenta, Cordia sebastena, Mimosaops elegi, Bauhinia blakeana, Kigellia pinata, Cassia fistula, Banyan, Ficus religiosa, Peltophorum, Bottle brush, Silver Oak, Billi, Mahagony, Pendula, Desi Asopalav, Sevan, Badam, Ficus infectoria, Pinkesiya, Millingtonia hotensis, Rain Tree, Bakm limdi, kasid, Ashok tree, parkiya, Tabebuia Roseya, miletiya etc.) Variety Including excavation of pit 600x600x600 mm depth mixing of FYM & existing soil in ratio 1:3 trmit treatment amd planting of plants (height 8' to 10' above bags/pots. soil mounts 4" to 8" in size. Tree plantation should be carried on neatly accurately and with perfaction as per drawing and instruction given by the EIC. plastic bags or pots should be removed carefully and soil around the roots should not be dropped or disturbed much. Bill shall be placed after completon of maintenance period but not before**

stabilizing the shrubs. Mortality rates to be inclusive. Providing and mixing tripod made of wooden ball,height 1.50 mtr. Top bracker to be 300 mmx300mm leg embedded in ground up to 300 mm and to have tar coat.Work shall be done as shown in the drawing or as directed and approved by EIC.

## 1. Materials

1. Trees shall be **healthy, well-grown, true to species**, free from pests, diseases, or deformities. Species include, but are not limited to:  
*Alstonia scholaris, Erythrina indica, Jacaranda mimosifolia, Delonix regia, Anthocephalus cadamba, Spathodea companulata, Neem (Azadirachta indica), Lagerstroemia speciosa, Tabebuia argentea, Cordia sebestena, Mimosa elengi, Bauhinia blakeana, Kigelia pinnata, Cassia fistula, Banyan, Ficus religiosa, Peltophorum, Bottle brush, Silver Oak, Billi, Mahogany, Pendula, Desi Asopalav, Sevan, Badam, Ficus infectoria, Pterocarpus indicus, Millingtonia hortensis, Rain Tree, Bakm Limdi, Kasid, Ashok tree, Parkiya, Tabebuia rosea, Millettia* etc.
2. Trees shall have a **height of 8–10 ft** above the bags/pots, with **well-developed root systems**. Soil in the pots/bags shall be **fertile, well-drained, and free from stones, debris, and weeds**.
3. Trees shall be supplied in **polythene bags / pots**, and care must be taken to **remove the container without disturbing the root ball**.
4. Fertilizer / manure: **FYM shall be mixed with existing soil in 1:3 ratio** for backfilling pits.
5. Stakes / tripod supports shall be made of **wood**, 1.50 m in height, with **top bracker of 300 mm × 300 mm**, leg embedded **up to 300 mm** into the ground, and **tar-coated** for durability.
6. Water used shall be **clean and suitable for horticultural use**.

## 2. Workmanship

1. **Excavation of pits** shall be of size **600 mm × 600 mm × 600 mm**, neat, level, and free of debris or stones.
2. Backfilling shall be done with **mixture of FYM and excavated soil in 1:3 ratio**, and the soil shall be gently pressed around the roots without disturbing the root ball.
3. Trees shall be **planted upright**, aligned accurately as per drawings or directions of the Engineer-in-Charge (EIC).
4. **Staking / tripod support** shall be provided immediately after planting, ensuring the tree is upright and stable. Stakes shall be tar-coated for protection and embedded securely as specified.
5. Planting shall be done **neatly and accurately**, ensuring proper spacing and alignment as per approved drawings.
6. **Immediate watering** shall be carried out after planting.
7. Trees shall be **maintained until well established**, including:
  - Regular watering
  - Weeding
  - Mulching
  - Fertilizer/pesticide application as directed
  - Adjustment of stakes/supports if required
  - Replacement of dead or unhealthy trees

8. Maintenance shall continue until the trees are **stabilized and well-established**. **Mortality is inclusive**, and any dead trees shall be replaced free of cost.
9. The final plantation shall present a **healthy, uniform, and stable tree layout**, with trees upright and properly supported.

### 3. Mode of Measurement and Payment

1. Measurement shall be made in **number of trees supplied, planted, and successfully established**, after completion of the maintenance period.
2. The rate shall include:
  - Cost of trees in pots/bags
  - Excavation of pits
  - Supply and mixing of FYM with soil
  - Removal of bags/pots and planting
  - Watering and maintenance till establishment
  - Staking/tripod support with tar coating
  - Replacement of dead trees during maintenance period
  - Labour, tools, equipment, leads and lifts, and all incidental charges complete.
3. **Bill shall be placed only after completion of maintenance period** and stabilization of the trees.
4. No separate payment shall be made for replacement of trees during the maintenance period; it is **inclusive in the tender rate**.
5. Work shall be executed **as per drawings or directions of the Engineer-in-Charge (EIC)**.

**Item No. 69**    **Palm plantation : supplying of well grown palm plants on and average height of 5' to 6' and planting at 1000 mm c/c in 450x450 x450 mm size pits by providing and mixing FYM@ 0.06 cmt / pit with soil pesticides and Insectisid . Plants should be diseases free and fungus free in polythen bag . plastic bags or pots should be removed carefully and soil around the roots should not be dropped or disturbed much . bill shall be placed after completion of maintenance period but not before stabilizing the trees. mortality rates to be inclusive. work shall be done as shown in the drawing or as directed and approved by EIC.**

### 1. Materials

1. Palm plants shall be **healthy, well-grown, disease-free, and fungus-free**, with **average height of 5–6 ft**.
2. Plants shall be supplied in **polythene bags** of appropriate size, ensuring the **root ball is intact** and soil is fertile and free from stones, weeds, or debris.
3. Fertilizer / manure: **Farm Yard Manure (FYM) @ 0.06 CMT/pit** shall be supplied and mixed with excavated soil.
4. Approved **pesticides and insecticides** shall be provided and applied as required.



5. Water used for irrigation shall be **clean and suitable for horticultural use**.

## 2. Workmanship

1. **Excavation of pits** shall be of size **450 mm × 450 mm × 450 mm**, neatly done at the specified locations as per drawings or instructions of the Engineer-in-Charge (EIC).
2. FYM shall be **mixed with the excavated soil** and prepared for backfilling the pit.
3. Plants shall be **carefully removed from bags/pots**, ensuring the **root ball is not disturbed**, and planted upright in the pit.
4. After planting, **immediate watering** shall be carried out to ensure proper establishment.
5. Trees shall be **maintained till well stabilized**, including:
  - Regular watering
  - Weeding and mulching
  - Fertilizer/pesticide application as directed
  - Replacement of dead or unhealthy palms
  - Any other care required to stabilize the plants
6. **Mortality is inclusive**, and dead plants shall be **replaced free of cost** during the maintenance period.
7. The final plantation shall present a **healthy, uniform, and well-spaced layout**, with palms properly established and upright.
8. Work shall be executed **as per approved drawings or directions of the Engineer-in-Charge (EIC)**.

## 3. Mode of Measurement and Payment

1. Measurement shall be made in **number of palm plants supplied, planted, and successfully established** after completion of the maintenance period.
2. The rate shall include:
  - Cost of palm plants in bags/pots
  - Excavation of pits (450×450×450 mm)
  - Supply and mixing of FYM with soil
  - Application of pesticides/insecticides
  - Planting and watering
  - Maintenance till establishment
  - Replacement of dead plants during maintenance period
  - Labour, tools, equipment, leads, lifts, and all incidental charges complete.
3. **Bill shall be placed only after completion of maintenance period** and stabilization of the palms.
4. No separate payment shall be made for replacement of plants during maintenance; it is **inclusive in the tender rate**.

**Item No. 70**    **Topiary plantation : supplying of well grown topiary plants on and average height of 5' to 6' and planting in 1000x1000 x1000 mm size pits by providing and mixing FYM@ 0.06 cmt / pit with soil pesticides and Insectisid . Plants should be dieses free and fungus free in polythen bag . plastic bags or pots should be removed carefully and soil around the roots should not be dropped or distrubed much . bill shall be placed after completon of**

**maintenance period but not before stabilizing the trees. mortality rates to be inclusive. work shall be done as shown in the drawing or as directed and approved by EIC.**

### **1. Materials**

1. Topiary plants shall be **healthy, well-grown, disease-free, and fungus-free**, with an **average height of 5–6 ft.**
2. Plants shall be supplied in **polythene bags**, ensuring the **root ball is intact** and soil is fertile, well-drained, and free from stones, debris, or weeds.
3. Fertilizer / manure: **Farm Yard Manure (FYM) @ 0.06 CMT/pit** shall be supplied and mixed with excavated soil for backfilling.
4. Approved **pesticides and insecticides** shall be supplied and applied as required.
5. Water used for irrigation shall be **clean and suitable for horticultural use.**

### **2. Workmanship**

1. **Excavation of pits** shall be of size **1000 mm × 1000 mm × 1000 mm**, neatly done at the specified locations as per approved drawings or directions of the Engineer-in-Charge (EIC).
2. FYM shall be **mixed thoroughly with the excavated soil** for proper backfilling.
3. Plants shall be **carefully removed from bags/pots**, ensuring that the **root ball is not disturbed**, and planted upright in the prepared pit.
4. After planting, the plants shall be **watered immediately** to ensure proper establishment.
5. Plants shall be **maintained until fully stabilized**, including:
  - Regular watering
  - Weeding and mulching
  - Fertilizer/pesticide application as directed
  - Replacement of dead or unhealthy plants
6. **Mortality is inclusive**, and any dead plants during the maintenance period shall be **replaced free of cost.**
7. The final topiary plantation shall be **uniform, healthy, and properly established**, maintaining the intended aesthetic and design.
8. Work shall be carried out **as per approved drawings or directions of the Engineer-in-Charge (EIC).**

### **3. Mode of Measurement and Payment**

1. Measurement shall be made in **number of topiary plants supplied, planted, and successfully established** after completion of the maintenance period.
2. The rate shall include:
  - Cost of topiary plants in bags/pots
  - Excavation of pits (1000×1000×1000 mm)
  - Supply and mixing of FYM with soil
  - Application of pesticides/insecticides
  - Planting and watering
  - Maintenance till establishment

- Replacement of dead plants during maintenance
  - Labour, tools, equipment, leads, lifts, and all incidental charges complete.
3. **Bill shall be placed only after completion of maintenance period** and stabilization of the plants.
  4. No separate payment shall be made for replacement of plants during maintenance; it is **inclusive in the tender rate**.

**Item No. 71 Special topiary plantation : supplying of well grown topiary plants on and average height of 6' to 7' and planting in 1000x1000x1500 mm size pits by providing and mixing FYM@ 0.06 cmt / pit with soil pesticides and Insectisid . Plants should be diseases free and fungus free in polythen bag . plastic bags or pots should be removed carefully and soil around the roots should not be dropped or disturbed much . bill shall be placed after completion of maintenance period but not before stabilizing the trees. mortality rates to be inclusive. work shall be done as shown in the drawing or as directed and approved by EIC.**

## **1. Materials**

1. Special topiary plants shall be **healthy, well-grown, disease-free, and fungus-free**, with an **average height of 6–7 ft**.
2. Plants shall be supplied in **polythene bags**, ensuring the **root ball is intact** and soil is fertile, well-drained, and free from stones, debris, or weeds.
3. Fertilizer / manure: **Farm Yard Manure (FYM) @ 0.06 CMT/pit** shall be supplied and mixed with excavated soil for proper backfilling.
4. Approved **pesticides and insecticides** shall be supplied and applied as required.
5. Water used for irrigation shall be **clean and suitable for horticultural use**.

## **2. Workmanship**

1. **Excavation of pits** shall be of size **1000 mm × 1000 mm × 1500 mm**, neatly done at the specified locations as per approved drawings or directions of the Engineer-in-Charge (EIC).
2. FYM shall be **thoroughly mixed with the excavated soil** for proper backfilling.
3. Plants shall be **carefully removed from bags/pots**, ensuring that the **root ball is not disturbed**, and planted upright in the prepared pit.
4. After planting, the plants shall be **watered immediately** to ensure proper establishment.
5. Plants shall be **maintained until fully stabilized**, including:
  - Regular watering
  - Weeding and mulching
  - Fertilizer/pesticide application as directed
  - Replacement of dead or unhealthy plants
6. **Mortality is inclusive**, and any dead plants during the maintenance period shall be **replaced free of cost**.

7. The final special topiary plantation shall be **uniform, healthy, and properly established**, maintaining the intended aesthetic and design.
8. Work shall be carried out **as per approved drawings or directions of the Engineer-in-Charge (EIC)**.

### 3. Mode of Measurement and Payment

1. Measurement shall be made in **number of special topiary plants supplied, planted, and successfully established** after completion of the maintenance period.
2. The rate shall include:
  - Cost of special topiary plants in bags/pots
  - Excavation of pits (1000×1000×1500 mm)
  - Supply and mixing of FYM with soil
  - Application of pesticides/insecticides
  - Planting and watering
  - Maintenance till establishment
  - Replacement of dead plants during maintenance
  - Labour, tools, equipment, leads, lifts, and all incidental charges complete.
3. **Bill shall be placed only after completion of maintenance period** and stabilization of the plants.
4. No separate payment shall be made for replacement of plants during maintenance; it is **inclusive in the tender rate**.

**Item No. 72 Special Topiary plantation : supplying of well grown topiary plants on and average height of 12' to 14' and planting in 1250x1250x1500 mm size pits by providing and mixing FYM@ 0.06 cmt / pit with soil pesticides and Insectisid . Plants should be diseases free and fungus free in polythen bag . plastic bags or pots should be removed carefully and soil around the roots should not be dropped or disturbed much . bill shall be placed after completion of maintenance period but not before stabilizing the trees. mortality rates to be inclusive. work shall be done as shown in the drawing or as directed and approved by EIC.**

#### 1. Materials

1. Special topiary plants shall be **healthy, well-grown, disease-free, and fungus-free**, with an **average height of 12–14 ft**.
2. Plants shall be supplied in **polythene bags**, ensuring the **root ball is intact**. Soil shall be **fertile, well-drained, and free from stones, debris, and weeds**.
3. Fertilizer / manure: **Farm Yard Manure (FYM) @ 0.06 CMT/pit** shall be supplied and mixed with excavated soil for backfilling.
4. Approved **pesticides and insecticides** shall be supplied and applied as required.
5. Water used for irrigation shall be **clean and suitable for horticultural use**.

## 2. Workmanship

1. **Excavation of pits** shall be of size **1250 mm × 1250 mm × 1500 mm**, neatly done at specified locations as per approved drawings or instructions of the Engineer-in-Charge (EIC).
2. FYM shall be **thoroughly mixed with excavated soil** before backfilling around the roots.
3. Plants shall be **carefully removed from bags/pots**, ensuring **minimal disturbance to the root ball**, and planted upright in the prepared pit.
4. **Immediate watering** shall be done after planting to ensure proper establishment.
5. Plants shall be **maintained until fully stabilized**, including:
  - Regular watering
  - Weeding and mulching
  - Fertilizer/pesticide application as directed
  - Replacement of dead or unhealthy plants
6. **Mortality is inclusive**, and any dead plants during the maintenance period shall be **replaced free of cost**.
7. The final plantation shall be **uniform, healthy, and aesthetically correct**, as per approved design and drawings.
8. Work shall be executed **as per approved drawings or as directed by the Engineer-in-Charge (EIC)**.

## 3. Mode of Measurement and Payment

1. Measurement shall be made in **number of special topiary plants supplied, planted, and successfully established** after completion of the maintenance period.
2. The rate shall include:
  - Cost of plants in bags/pots
  - Excavation of pits (1250×1250×1500 mm)
  - Supply and mixing of FYM with soil
  - Application of pesticides/insecticides
  - Planting and watering
  - Maintenance till establishment
  - Replacement of dead plants during maintenance
  - Labour, tools, equipment, leads, lifts, and all incidental charges complete.
3. **Bill shall be placed only after completion of the maintenance period** and stabilization of the plants.
4. No separate payment shall be made for replacement of plants during maintenance; it is **inclusive in the tender rate**.

**Item No. 73**    **Supply saplings of species specifies ( Lantana, Red Fountain Grass, Green Fountain Grass, Sensiveriya, Porchuleca, Pedilenthass, ketki,etc.)with digging and planting well branched, well established & free from disease at site as per the instructions bag size is 6 inch x 8 inch,**

## 1. Materials

1. Saplings shall be of **healthy, well-branched, well-established plants**, free from **disease, pests, or fungus**.
2. Species to be supplied include, but are not limited to:
  - Lantana
  - Red Fountain Grass (*Pennisetum setaceum* 'Rubrum')
  - Green Fountain Grass (*Pennisetum setaceum* 'Viridis')
  - Sansevieria
  - Portulaca
  - Pedilanthus
  - Ketki (*Pandanus odorifer*)
  - Other approved species as directed by Engineer-in-Charge (EIC)
3. Saplings shall be supplied in **polythene bags of size 6" × 8"**, with intact root balls and fertile, well-drained soil.
4. Water used for planting shall be **clean and suitable for horticultural use**.

## 2. Workmanship

1. **Site preparation** shall include digging pits of appropriate size, removing debris, stones, and weeds, as directed by EIC.
2. Saplings shall be **carefully removed from bags**, ensuring **minimal disturbance to roots**, and planted upright in prepared pits.
3. **Backfilling** shall be done with **existing soil**, lightly compacted to avoid air pockets around roots.
4. **Watering** shall be done immediately after planting.
5. Plants shall be **maintained till establishment**, including:
  - Regular watering
  - Mulching and weeding
  - Replacement of dead/diseased saplings during maintenance period
6. **Mortality is inclusive**, and dead saplings shall be **replaced free of cost** during maintenance.
7. Plantation shall be **neat, uniform, and as per approved layout or drawing**.

## 3. Mode of Measurement and Payment

1. Measurement shall be made in **number of saplings planted and successfully established** after completion of the maintenance period.
2. The rate shall include:
  - Cost of saplings in 6" × 8" bags
  - Excavation of pits and site preparation
  - Planting and watering
  - Maintenance till establishment
  - Replacement of dead/diseased saplings
  - Labour, tools, equipment, leads, lifts, and all incidental charges complete.
3. **Bill shall be placed only after completion of maintenance period** and establishment of saplings.

4. No separate payment shall be made for replacement of plants during maintenance; it is **inclusive in the tender rate**.

**Item No. 74** Maintenance of garden after satisfactorily completion of work by 10 labours and 1 technical supervisor having qualification of B.sc. Horticulture for maintenance activities like mowing and weeding of lawn, digging, cleaning and planting shrubs, tress, palm, potted plants etc, making ring around the tree and shrubs watering the whole area (i.e lawn, shrub,s trees, seasonal flower bed, potted plants etc.) pruning and trimming of Hedge tree Shrubs in good and different Shapes Spraying of insecticides, pesticides, fertilizers Spreading of field Soil and farm yard Manure over the lawn plot Shrubbery area regularly. Planting of Trees, shrubs, potted plants, lawns, gap filling etc by their own cost. Bed Should be cleaned, digged watered, pruned & apply insecticide, Pesticides Fertilizer, Farm yard Manure, Soil by their own cost as when need to Requirement and gap filling, watering the Decorative indoor plants and replacing them as and when required. The maintenance of garden Should be done by their own equipments like Electric/Hand lawn mover machine, PVC pipe, khurpi, kodali, pavada, Hand-Cart, or Tractor-Trolley for disposing the waste materials etc. The labour Should be present on different occasions & programmes etc. when ever required even on holiday day and night etc. (ii) Disposal of Dump material at the fixed location decided by AMC office by tractor trolley.

## **1. Scope of Work**

1. The contractor shall provide **10 skilled/unskilled labourers and 1 Technical Supervisor** with **minimum qualification of B.Sc. Horticulture** for proper supervision and execution of maintenance activities.
2. The maintenance shall include, but not be limited to:
  - Mowing and weeding of **lawns** using hand or electric lawn mowers.
  - Digging, cleaning, and planting of **trees, shrubs, palms, saplings, potted plants, and seasonal flowers**.
  - Formation of **tree rings** around shrubs and trees, ensuring proper aeration and irrigation.
  - **Watering** of the entire garden, including lawn, shrubbery, trees, seasonal flower beds, and potted plants.
  - **Pruning and trimming** of hedges, shrubs, and trees into desired shapes and sizes.
  - **Spraying of insecticides, pesticides, and fertilizers** as directed.
  - **Application of FYM and soil amendments** to lawn plots, shrubbery, and planting beds regularly.
  - **Gap filling and replacement** of dead or diseased plants in lawn, shrubbery, potted plants, and flower beds.

- **Maintenance of decorative indoor plants**, including watering, cleaning, and replacement if required.
- **Preparation and cleaning of beds**, including digging, weeding, watering, and application of fertilizers, insecticides/pesticides, FYM, and soil amendments as needed.
- **Participation in events/programmes** on site, including holidays or night hours if required by AMC office.
- **Disposal of garden waste** (grass clippings, pruned material, dead plants, debris) at **pre-decided locations using tractor trolleys or hand carts**.

## 2. Materials, Tools, and Equipment

1. All **tools, equipment, and machinery** for maintenance shall be supplied and maintained by the contractor, including:
  - Electric/hand lawn mowers
  - PVC pipe, hoses, and watering cans
  - Khurpi, kodali, pavada, spades, rakes, and other hand tools
  - Hand carts or tractor-trolleys for disposal of waste
  - Sprayers for pesticides, insecticides, and fertilizers
2. All fertilizers, pesticides, insecticides, FYM, and soil for maintenance shall be **procured and supplied by the contractor** at their own cost.

## 3. Workmanship / Service Standards

1. All maintenance work shall be executed **neatly, systematically, and as per horticultural best practices**.
2. **Technical Supervisor** shall inspect and supervise all work daily to ensure healthy growth of lawns, shrubs, trees, and other plants.
3. **Replacement of dead or unhealthy plants** shall be done **at contractor's cost** as per EIC/AMC instructions.
4. All work shall be executed as per **approved drawings, specifications, and directions of EIC**.
5. Waste disposal shall be done at **pre-approved locations and regularly to maintain cleanliness**.
6. Labour and supervisor shall be **present as and when required**, including holidays and special events.

## 4. Mode of Measurement and Payment

1. Measurement shall be **lump-sum or monthly maintenance contract** for the garden area as per approved scope of work.
2. The rate shall include:
  - Cost of labour and technical supervision
  - Supply and use of all equipment, tools, and machinery
  - Supply of fertilizers, insecticides, pesticides, FYM, and soil amendments
  - Watering, mowing, pruning, trimming, bed preparation, gap filling, and plant replacement
  - Waste disposal at the designated site
  - Labour attendance on special occasions/events



3. Payment shall be made **monthly after verification by EIC/AMC**, subject to satisfactory completion of maintenance work.
4. No separate payment shall be made for replacement of plants, supply of materials, or labour during holidays; it is **inclusive in the contract rate**.
- 5.

#### **Irrigation Work - AUTOMATION SYSTEM (SPRINKLER, HYDRANT AND DRIP)**

	<b><u>MAIN AND SUB MAIN PIPING SYSTEM</u></b>
<b>75</b>	SCH-40 PIPE SCH 2 1/2"
<b>76</b>	PVC PIPE 75 MM X 6 KG/CM2
<b>77</b>	PVC PIPE 63 MM X 6 KG/CM2
<b>78</b>	PVC PIPE 50 MM X 6 KG/CM2
<b>79</b>	PVC PIPE 40 MM X 6 KG/CM2
<b>80</b>	SCH-40 PIPE 3/4"
<b>81</b>	SCH-40 PIPE 1"
<b>82</b>	POP UP SPRINKLER 5004 9 TO 14 MTR
<b>83</b>	SPRAY POP-UP SPRINKLER 4" 2.4 TO 5.4 MTR
<b>84</b>	ROTARY POP-UP SPRINKLER 4" 5.18 TO 7.30 MTR
<b>85</b>	SWING JOINT 3/4"
<b>86</b>	SWING JOINT 1/2"
<b>87</b>	P.P. CLAMP SADDLE - ALL SIZES
<b>88</b>	LOCKABLE QUICK COUPLING VALVE 1" WITH FOUR SET OF KEY & SWEIVEL ELBOW (BRASS)
<b>89</b>	10" ROUND VALVE BOX (FOR HYDRANT)
<b>90</b>	ADJUSTABLE BUBBLER, PRESSURE COMPENSATING, 1/2' THREAD
<b>91</b>	UPVC BUBBLER ASSEMBLY 1/2"
<b>92</b>	P.P. CLAMP SADDLE - ALL SIZES
<b>93</b>	PUMP WITH PANEL 7.5 LPS AT 45 MTR HEAD
<b>94</b>	PLY RELAY
<b>95</b>	SEMI AUTOMATIC DISC FILTER 2"
<b>96</b>	HEADER ASSEMBLY
<b>97</b>	PRESSURE RELIEF VALVE 2"
<b>98</b>	1" DOUBLE ACTING AIR CUM VACCUM RELEASE VALVE WITH GM VALVE
<b>99</b>	P.P. CLAMP SADDLE 75 X 1"
<b>100</b>	10" ROUND VALVE BOX (FOR AIR VALVE & ISOLATION VALVE)
<b>101</b>	PVC BALL VALVE 75 MM PN 10 - ISOLATION VALVE
<b>102</b>	PVC BALL VALVE 63 MM PN 10 THREADED
<b>103</b>	12" RECTANGULAR VALVE BOX(FOR 63MM BALL VALVE)
<b>104</b>	JAMBO RECTANGULAR VALVE BOX(BUTTER FLY VALVE)
<b>105</b>	22 STATION CONTROLLER WITH EXPANSION MODULES

<b>106</b>	DIRECT BARRIER CABLE 2.5 SQ. MM
<b>107</b>	63MM PVC CABLE CONDUIT PIPE
<b>108</b>	SOLENOID VALVE 2"
<b>109</b>	WEATHER PROOF CABLE CONNECTOR
<b>110</b>	STABILIZER
	<b><u>INSTALLATION SERVICES</u></b>
<b>111</b>	TRENCHING & BACK FILLING
<b>112</b>	AUGURING (6" DIA)
	<b><u>MISCELLANEOUS EXPENSES</u></b>
<b>113</b>	CARTAGE
<b>114</b>	PVC/GI FITTINGS,PUMP INSTALLATION & ACCESOIRES

**For Item No 75 to 114:-**

**1.1 Main & Sub-Main Piping**

- SCH-40 Pipes: 3/4", 1", 2 1/2"
- PVC Pipes: 40 mm, 50 mm, 63 mm, 75 mm, rated at 6 kg/cm<sup>2</sup>
- PVC Conduit Pipes: 63 mm for electrical cabling

**1.2 Sprinklers & Bubblers**

- Pop-up Sprinkler 5004 – Range: 9–14 m
- Spray Pop-up Sprinkler 4" – Range: 2.4–5.4 m
- Rotary Pop-up Sprinkler 4" – Range: 5.18–7.30 m
- Adjustable Pressure-Compensating Bubblers, 1/2" thread
- UPVC Bubbler Assembly, 1/2" thread
- Swing Joints: 1/2" & 3/4"
- Lockable Quick Coupling Valve 1" with 4 keys & swivel elbow (Brass)

**1.3 Valves & Valve Boxes**

- PVC Ball Valves: 63 mm PN10 (Threaded), 75 mm PN10 (Isolation)
- Air & Isolation Valves: 1" double-acting air cum vacuum release with GM valve
- Valve Boxes:
  - 10" Round for hydrants
  - 10" Round for air & isolation valves
  - 12" Rectangular for 63 mm ball valves
  - Jumbo Rectangular for butterfly valves

**1.4 Pump & Accessories**

- Pump with panel: 7.5 LPS at 45 m head
- Semi-Automatic Disc Filter: 2"
- Header Assembly

- Pressure Relief Valve: 2"
- Stabilizer, PLY Relay
- Solenoid Valves: 2"
- 22-Station Controller with expansion modules

### 1.5 Electrical & Wiring

- Direct Barrier Cable 2.5 sq. mm
- Weatherproof Cable Connectors

### 1.6 Fittings & Miscellaneous

- PP Clamp Saddles (all sizes)
- PVC/GI Fittings for connections
- Auguring tools (6" diameter)
- Cartage and miscellaneous installation accessories

## 2. Workmanship

- 1. Trenching & Backfilling**
  - Trenches dug as per approved layout and dimensions.
  - Pipes laid straight, supported, and protected from mechanical damage.
  - Trenches backfilled and compacted to avoid displacement of pipes.
- 2. Installation of Pipes, Sprinklers, and Bubblers**
  - Sprinklers, bubblers, swing joints, valves, and fittings installed at designated locations.
  - Valve boxes installed flush with ground and easily accessible.
  - Lockable valves, isolation valves, and hydrants installed as per site design.
- 3. Pump & Header Installation**
  - Pump, filter, header, and stabilizer installed as per manufacturer's instructions.
  - Testing of pump head, flow, and pressure performed before commissioning.
- 4. Electrical Works**
  - Controller, solenoid valves, and wiring installed with PVC conduit.
  - Weatherproof connectors provided at all junctions.
  - Expansion modules connected to the 22-station controller.
- 5. Testing & Commissioning**
  - System tested for **flow, pressure, coverage, and leakage**.
  - Sprinklers and bubblers adjusted for **uniform coverage**.
  - Functional tests of solenoid valves, controllers, and quick coupling valves performed.
- 6. Miscellaneous / Site Work**
  - Disposal of debris, excavation material, and waste.
  - Cartage of all materials to the site.
  - Minor civil adjustments and fittings included.

## 3. Mode of Measurement and Payment

1. Measurement shall be **lump-sum or item-wise**, based on approved BOQ.
2. The rate shall include:

- Supply of all pipes, sprinklers, bubblers, valves, pumps, controllers, wiring, and accessories.
- Trenching, auguring, backfilling, and excavation.
- Installation of main, sub-main, and lateral pipelines.
- Installation and commissioning of sprinklers, bubblers, valves, and pump system.
- Electrical wiring, conduit laying, and solenoid valve connections.
- Testing, commissioning, and adjustments for full operational functionality.
- Cartage, tools, labour, and miscellaneous items.

3. No separate payment shall be made for minor fittings, civil adjustments, or disposal of waste; it is **inclusive in the tender rate.**

**Dated**  
**Signature of**  
**Contractor**

**Technical Officer**  
**Parks & garden department**  
**Ahmedabad**

**Director**  
**Parks & garden department(G.S.)**  
**Gandhinagar**