

TECHNICAL SPECIFICATIONS

1. Conditions for Plantation Development Work

1.01. Plantation Development Work shall consist of two stages

- i) Plantation Development Period consisting of development works like clearing of tree pits and planting plants, etc. to a period of 180 (One Hundred Eighty) days from work start date by Contractor.

- ii) Plantation Maintenance Period consisting of all works required in order to establish the plant material including cutting / pruning, fertilizing, cleaning, weeding, applying weedicide, pesticides, watering, etc up to a period of 5 (Five) years from date of completion of Plantation Development Period.

Defects Liability Period shall be up to a period of 180 days after completion of Plantation Development Period, but concurrent with Plantation Maintenance Period. Rectification works under Defects Liability shall not in any way preclude the responsibilities of the Contractor specified under Plantation Maintenance Period.

1.02. Duration of this contract shall be for twelve months (365 days) and shall consist of development as well as defect liability periods.

1.03. 100% survival rate will be ensured during contract period; in case of any casualty of the plant the same will be replaced by contractor by his own cost completely all expensive.

1.04. Maintenance period shall be 5 (Five) years from completion of Development period as mentioned in the specification, in a specified zone or till the time the planting is established, whichever is later. This will include timely watering, manuring, weeding, pruning, staking, spraying of insecticides, weedicides, pesticides, fungicides. If the plant dies then the same must be replaced, immediately free of all charges, with plant etc. of same species and size. Soil working, plant replacement, application of manure, watering, etc. are routine operations and in event that these are not followed properly and/or on regular basis, and as observed during the periodic visits to check the quantity and quality of development, the Sabarmati Riverfront Development Corporation Limited can recommend extension of development period.

- 1.05. Contractor must keep a site diary/site record (in triplicate). This diary shall be used to give any instructions for site work, by the Sabarmati Riverfront Development Corporation Limited's designated representative In-charge. The Contractor must get all instructions in writing, at first possible opportunity, even if any instructions are given orally.
- 1.06. Contractor must submit a weekly report indicating the progress done/reasons for delay in completion of any works. The weekly report should consist of a daily log regarding number of labourers employed at site and delivery notes for all materials delivered to the site, and works completed on daily basis should be e-mailed to the Sabarmati Riverfront Development Corporation Limited.
- 1.07. All instructions written in the diary shall be presumed to have been given to the Contractor and the Contractor shall be responsible for carrying out the same.
- 1.08. The work shall be carried out according to the specifications/ and drawings irrespective of whether it is specifically mentioned in the bills of quantities or not. All works shall be done according to the drawing and instructions of the Sabarmati Riverfront Development Corporation Limited.
- 1.09. Samples of each type of materials and workmanship shall be submitted /shown by the Contractor for the approval of the Sabarmati Riverfront Development Corporation Limited; these samples shall be maintained at the site. The Contractor will be required to perform all the works of this contract in accordance with these samples.
- 1.10. Contractor shall make suitable arrangement for storage of plant material before planting.
- 1.11. Workers will not be allowed to stay in any part of the site, and Contractor will have to make arrangements for them independently during maintenance period.
- 1.12. All quoted rates will remain valid for a period of contract. Increase and revisions in rates shall be permitted only if and as required by Government Rules and Regulations.

2. Contractor's Scope of Work.

- 2.1 All cost, wages of workers equipments required for the development work will be borne by the Contractor. The Contractor shall employ experienced workers only.
- 2.2 Arrangement of water supply for site works and regular watering shall be done by the Contractor at his own cost; however river water may be used.
- 2.3 For routine plantation work, the rates quoted shall be inclusive of material supply.
- 2.4 All equipment required for development shall be made available by Contractor, and its maintenance shall be his responsibility.
- 2.5 During Development Time Period (6 Month) planted plants maintained carried out till started maintenance period by contractor's own responsibility. Sabarmati Riverfront Development Corporation Limited will be not given any extra wages or any cost for maintenance while development time period. Once Sabarmati Riverfront Development Corporation Limited certify development completion certificate then maintenance period will be started.
- 2.6 Contractor will take full care to ensure that no damage to service lines (water supply, Electrical) or civil work during the course of work. Sabarmati Riverfront Development Corporation Limited can recover cost of damaged works from Contractor if required.
- 2.7 In the event of Plantation work being disturbed during course of work due to other agencies the Contractor will make repair the damage immediately. Rate, cost and amount to be paid for repairing the damage and its impact on the completion date shall be determined by the Sabarmati Riverfront Development Corporation Limited only.
- 2.8 Contractor will attend meetings during course of work as and when scheduled without fail, in addition to carrying out regular visits as and when may be required for carrying out the work.
- 2.9 Contractor will ensure that all plants watered regularly and remain free of diseases, pests, etc during development and maintenance periods.

- 2.10 Contractor is responsible for the security of the plants during the period of contract.
- 2.11 Contractor has to must deploy 1 Technical supervisor who has knowledge of electrical and irrigation system and 1 for Horticulture Supervisor who has to well knowledge of trees and shrubs and control power of working manpower in all area.
- 2.12 The workers engaged by the contractor are in similar dress code with identity card at the time of working.
- 2.13 The workers engaged by the contractor should be required in discipline manner.
- 2.14 The list of workers with address should be given to the office of Sabarmati Riverfront Development Corporation Limited by the contractor.
- 2.15 Any accident or injury to the workers at the working time and working place is responsibility of the contractor. Sabarmati Riverfront Development Corporation Limited is not responsible for the same.
- 2.16 In case of absent of any labour or supervisor contractor has to arrange for the reliever for the same so that work can be not affected.

3. Specifications for Plantation Development Work

The work shall consist of planting of various types of trees, providing labour and skill to complete all the works in all respect, during the development period. After approval of developed areas, establishing the same for fixed period of time and handing over the developed plantation to the Sabarmati Riverfront Development Corporation Limited.

The specifications are divided into three parts:

Part A – For development of plantation

Part B – For supplying of plantation materials

Part C – For maintenance of developed plantation

4 PART A: PLANTATION DEVELOPMENT SPECIFICATIONS

4.1 Setting out the works

4.1.1 The Contractor shall supply without additional charges the requisite number of persons with the means and material necessary for the purpose of setting out works and checking, weighing and assisting in the measurement or examination at any time and from time to time, of the work or the materials. Failing this, the same may be provided by the Sabarmati Riverfront Development Corporation Limited's designated representative In-charge at the expense of the Contractor and the expenses shall be deducted from any money due to the Contractor under the contract or from his security deposit.

4.2 Digging of Proper Tree pits and filling of soil & FYM as per tender specification.

4.2.1 Verify the levels and bench-marks from the up-dated surveyed drawing made available/ instructed by the Sabarmati Riverfront Development Corporation Limited. If there are any discrepancies between the site and the survey drawing, the same are to be brought to the Sabarmati Riverfront Development Corporation Limited's notice by addressing a letter to the Sabarmati Riverfront Development Corporation Limited.

4.2.2 Leveling of lands as specified on site by Sabarmati Riverfront Development Corporation Limited. This will include spreading manually or by help of JCB & Dumper to remove unwanted soil & other wastage load, unloaded at working areas in the site so as to obtain basic datum levels and grades.

4.2.3 Cleaning the area of unwanted materials including the weeds, stones, masonry pieces, debris, unnecessary trees etc. and all such matter that may cause damage to growth of the plant materials immediately or in future.

4.2.4 Measurement for excavation and filling shall be in Cu.M.

4.3 Development of trees & Shrubs.

4.3.1 as per instruction clear and marking of specified measure pits before planting.

Dimensions of pit shall be done as under:

For trees: Ø - 600mm and depth – 600mm as specified.

For Shrubs: Ø- 450 mm and depth – 450mm as specified.

4.3.2 Treating each pit against white ants/ termites with approved insecticide.

4.3.3 Filling good quality soil and well decomposed screened farm yard manure (FYM) specified quality 1/3 quantity of pit volume.

4.3.4 Soil, manure filling in the pits to be well watered, in order to settle the soil and remove the air pockets. Levels of the pits shall be made up by adding good soil and FYM mixture.

4.3.5 Planting specified trees, supplied by the Contractor at his own cost. Watering of plant is must after planting.

4.3.6 Tree support with stacking of bamboo should be required; support should be required more than tree height.

4.3.7 Development period for trees and shrubs shall be a period of 180 (one hundred eighty) days, or till satisfactory development of sapling (whichever is later) from the date of planting. Maintenance period shall commence after all planting is completed in a particular area. The Contractor shall carry out all such operations as may be required for the proper development and maintenance of plants. This shall include timely watering, pruning, staking, weeding, mulching and spraying of weedicides, fungicides, applying of fertilizers as and when required. If the Plant does not survive or is damaged due to work of the Contractor, the same is to be replaced immediately, free of all charges with the plant of same species and approximately of same height by the Contractor.

4.3.8 Measurement shall be per number.

Rate shall be mentioned in BOQ in Rs. per Nos. with all expensive.

5. PART B: SPECIFICATIONS FOR SUPPLY OF MATERIALS

5.1 Supplying of labor for additional works

Rate shall be quoted for per labor/ per day.

5.2 Supply and apply of good quality soil

Contractor shall also quote for supply of good quality farm soil, free from stones, pebbles, lime nodules. Material shall be dumped at site as indicated by the Sabarmati Riverfront Development Corporation Limited Garden Department soil sample should be approved by Sabarmati Riverfront Development Corporation Limited staff.

Quantity will verified for measurement at site.

5.3 Supply of Farm Yard Manure

Contractor shall supply only well composted, dried, well screened good quality Farm Yard Manure in powdered form. Farm Yard Manure, shall be free from soil clods, fresh mung grass, and dry. Sample will be approved by Sabarmati Riverfront Development Corporation Limited Garden Department.

Quantity will verified for measurement at site.

5.4 Supply of plant material (General)

Plant material shall be supplied by the Contractor, as per specifications of height (should be measured from bottom of bag to top of canopy), spread, branching, etc. given and list provided by the Sabarmati Riverfront Development Corporation Limited. Plants supplied will be healthy, free of diseases. Rate is included for handling, transportation, loading and unloading of each plant.

6 PART C: MAINTENANCE

The Maintenance period shall be deemed to start after completion of Development Period. The Contractor shall maintain the plantation for a period of 5 (Five) years from completion of development Period. The same may be extended by a separate contract between the Sabarmati Riverfront Development Corporation Limited and Contractor after completion of this maintenance period, or another Contractor may be selected.

6.1 Maintenance of trees and shrubs

- 6.1.1 Tree & Shrubs maintenance shall start only after the successfully completing development period. Maintenance shall include watering, mulching/soil working, supporting and pruning and necessary plant protection i.e. insecticide, Pesticides and fungicides requirement. Trimming/pruning of trees shall be an important aspect of maintenance.
- 6.1.2 Soil digging up to depth of 100 mm for loosening of soil operation shall be done on required basis.
- 6.1.3 Regular checking against insect/pest/fungus attack shall be done. Contractor should visually check for insect / pest attacks every 15 days and take necessary actions. Contractor should apply anti-termite treatment and FYM twice in a year or when as required.
- 6.1.4 At the end of development period, plants must be well established; only then maintenance work shall start.
- 6.1.5 Each plants should supply well decomposed farm yard manure twice in a year however applying as when required instructed by Sabarmati Riverfront Development Corporation Limited supervisor.
- 6.1.6 Measurement shall be per number of surviving plant per month.