

ANNEXURE - III

PREAMBLE TO SCHEDULE OF ITEMS

AND

SCHEDULE OF ITEMS

FOR

**PROVISION OF CIVIL WORKS FOR INSTALLATION
AND OPERATION OF GRS-III TELEMETRY STATION
AT P1 SITE, KONARK, PURI**

**TENDER ENQUIRY NO.
CCEESTS/ENQ/CIV/GRS-III/KONARK/ 67/2026-27
DATED 03 JUN 2026**

PREAMBLE TO SCHEDULE OF ITEMS FOR INCLUSION IN RATES

1.0 CONTRACTOR'S RATES TO INCLUDE:

1.1 Contractor's rate for any item of work in the Schedule of Items shall be deemed to include the cost of all materials including all wastages, loading, transport and unloading, labour, tools and plant, power, fuel, consumables, scaffolding and other temporary works, all incidentals such as setting out, site drainage, offering samples for approval, cost of all tests, rectification of all defects, replacement of defective material and work, removal of debris etc.' after completion of particular stages of work and before handing over to other agencies for their work, interruptions to work required to accommodate the work of other agencies working on the site, site clearance on completion, micro levelling to desired level and gradient around the buildings, maintenance of completed work during the period of maintenance and any bye-work necessary to complete any particular item of work as per specifications and directions of the Engineer.

1.2 Unless specified otherwise in particular in the Schedule of Items the rate of any item shall include working at all levels and locations and all necessary leads and lift.

SITE CLEARANCE

The roots of trees and saplings shall be removed to a depth of 60 cm below ground level or 30 cm below formation level or 15 cm below sub-grade level, whichever is lower. All holes or hollows formed due to removal of roots shall be filled up with earth rammed and leveled. Trees, shrubs, poles, fences, signs, monuments, pipe lines, cable etc., within or adjacent to the area which are not required to be disturbed during jungle clearance shall be properly protected by the contractor at his own cost and nothing extra shall be payable.

2.0 EARTH WORK:

The rate of the related items shall include, but be not limited to the following:

2.1 GENERAL:

2.1.1 Taking levels and reference axes, wherever necessary from reference lines and bench mark, both for the original ground level as well as for the finished work, as directed.

2.1.2 Working in both dry and wet condition.

2.1.3 No distinction of rate between the work done manually or mechanically.

2.2 SITE LEVELLING

2.2.1 The work shall include filling, levelling and completion of the excavated earth. Payment shall be made for excavation only and no separate payment shall be made for filling.

2.2.2 Cost of all tests, necessary and/or directed for the compaction of the filling.

2.3 **EXCAVATION OF FOUNDATIONS**

2.1.1 Providing reference axes and setting out works including making reference pillars.

2.1.2 Extra excavation to provide working space beyond foundation outlines and to retain excavation sides as well as backfilling such extra excavation.

2.1.3 Shoring and strutting to retain the excavated sides and to protect the adjoining structures and services including removing the same.

2.1.4 Dewatering of accumulated water from any source till completion of all work below ground level including provision of surface drains, catch pits etc., wherever necessary.

2.1.5 Providing adequate protection for safety of labour, materials, adjoining property services, structures and equipment, installing barriers around the excavation area, foundation, trenches, pits and red lights during night time, engaging night watchman for safety against risk or accident.

2.1.6 Stacking the excavated material within the specified loads, including levelling the same as directed.

2.3.7 Dressing and trimming to required level, profile and gradient.

2.3.8 Excavation to desired gradients in case of trenches for laying pipes.

2.4 **FILLING / BACK FILLING:**

2.4.1 Back filling/ Filling with excavated earth or from spoil heaps shall include, the excavation/ re-excavation from such sources, all handling/ re-handling and removing unwanted material from the soil.

2.4.2 Compacting, levelling, trimming to levels, profiles and gradient as per drawing, specification and / or as directed.

2.4.3 Cost of all tests, as specified and / or as directed for filling/back filling works.

3.0 **ANTITERMITE TREATMENT:**

The rate shall include but shall not be limited to the following:

3.1 Treatment of excavated foundations.

3.2 Treatment of back fill.

3.3 Treatment of plinth both on excavation and on filling.

3.4 Treatment around entry/exit of pipes and services.

3.5 Treatment of wood work in ground floor.

3.6 Service guarantee for 5 years including rectification of any defects, thereof during guarantee period.

4.0 **CONCRETE (PLAIN & REINFORCED) AND RELATED WORK:**

The rate of the respective item shall include but be not limited to the following:

4.1 **CONCRETE:**

- 4.1.1 Setting out all works from reference axes and bench marks.
- 4.1.2 Cleaning, washing and screening of aggregate whenever necessary.
- 4.1.3 De-watering of all foundations and premises during construction.
- 4.1.4 Provision of building paper at bearing of slabs resting over masonry where required.
- 4.1.5 Preparation of design mix; preparatory work/surface preparation for concreting; appropriate finishes to exposed surfaces and curing by appropriate means.
- 4.1.6 Provision of construction joint (water bar excluded) and surface preparation of construction joint and cold joint, before placement of concrete.
- 4.1.7 Preparation of concrete cubes for testing.
- 4.1.8 Cleaning all anchor holes and keeping them covered.
- 4.1.9 Proper Compaction with Mechanical Vibrators.

4.2 **REINFORCEMENT:**

- 4.2.1 Cleaning and protection of reinforcement and de coiling and straightening of bars if supplied in coils.
- 4.2.2 Provision of incidental welding, spacer bar, chairs, binding wires etc.

4.3 **SHUTTERING:**

- 4.3.1 Setting out the form work as per drawing.
- 4.3.2 Preparation of design of the form work whenever necessary and providing the same for scrutiny.
- 4.3.3 Provision of necessary staging and scaffolding, including all measures necessary for easy movement and inspection.
- 4.3.4 Fitting, fixing and stripping off as specified and as directed.
- 4.3.5 Cleaning, sealing the joints, provision of chambers, cambers and form oil and preparation for concreting.

4.4 **EMBEDDED PARTS:**

- 4.4.1 Cleaning the embedded parts including fixtures before use.

4.4.2 Provision of all jigs, fixtures, templates etc., which are not integral parts of the embedded parts, but necessary for fixing them in position including all necessary welding, tying, plugging etc.

4.4.3 Providing approved anti-corrosive paint on the exposed surfaces as directed.

4.4.4 Providing grease on the exposed portion of the anchor bolts and covering them by approved means.

4.5 **PRECAST CONCRETE:**

4.5.1 Provision of casting yard and moulds and curing.

4.5.2 Providing necessary surface finishes after stripping off moulds.

4.5.3 Transportation, handling, erection, filling the joints / holes with approved grouts and provision of all necessary safety measures while handling and erection.

4.6 **GROUTING:**

4.6.1 Preparation of base surface as specified including dewatering wherever necessary.

4.6.2 Provision of necessary shuttering including necessary surface finish after stripping.

4.6.3 Curing by approved means.

4.6.4 Cleaning the pockets / holes before grouting

4.7 **DAMP PROOF COURSE CONCRETE:**

4.7.1 Preparation of base surface as specified.

4.7.2 Provision of shuttering including necessary surface finish after stripping.

4.7.3 Curing by approved means.

4.7.4 Provision of approved admixture as per manufacturer's specification.

4.8 **SIZE OF COARSE AGGREGATE:**

Size of the coarse aggregate shall correspond to 75 mm, 40mm, 20mm and 10mm respectively wherever A, B, C, and D mentioned along with grade of concrete.

5.0 **MASONARY:**

The rate of the respective item shall be for all the complete finished work and shall also include, but be not limited to the following:

5.1 Setting out the works as per drawings.

5.2 Dewatering during the works in foundations and in some particular cases, if found necessary.

5.3 Provision of scaffolding, platform, ladder etc., including all necessary safety measures and access ways and removing the same.

5.4 Necessary surface preparation for proper bonding.

5.5 Providing openings / holes for which no deduction is made in the measurement.

5.6 Extra provision necessary at bearing of beams, joints, slabs and the like, with necessary levelling.

5.7 Raking of joints as the work proceeds.

5.8 Bedding of plates, lintels, corrugated sheets and the like with necessary levelling.

5.9 Provision of projection, string course, sills, jambs, soffits of openings.

5.10 Curing by appropriate means.

5.11 Provision of metal pins, dowels, cramps, etc. for stone veneering.

5.12 Provision of necessary form work, template and centering in case of arches.

6.0 **PLASTERING AND FINISHING:**

The rate of the respective item shall be for all the complete finished work and shall also include, but be not limited to the following:

6.1 Preparation of surface to receive plaster / finish.

6.2 Provision of scaffolding wherever required and removing the same.

6.3 Extra provision necessary to provide plastering / finishing in two layers, when required.

6.4 All extra provisions necessary for plastering / surface finishing if arises, bonds, closing, chases, bends, rounded angles, drip courses, string courses, around openings / holes, and around dissimilar materials like metal /timber /asbestos.

6.5 Providing groove as required.

6.6 Curing by appropriate means.

7.0 **WHITE WASHING, COLOUR WASHING AND PAINTING:**

The rate of the respective item shall be for all the complete finished work and shall also include, but be not limited to the following:

7.1 Preparing the surface including necessary rectification.

7.2 Provision of scaffolding etc., wherever necessary.

- 7.3 Provision of prime coat wherever applicable.
- 7.4 Curing by appropriate means wherever applicable.
- 7.5 Cleaning the splashes in floors, doors, windows, glazing, equipment, pipelines etc.
- 7.6 Protection of painted surface during application and till final handing over.

8.0 **FLOORING, PAVING & FACING:**

The rate shall include but be not limited to the following:

- 8.1 Preparation of surface before laying the flooring
- 8.2 Provision of the underlay where applicable.
- 8.3 Provision of dividing stripe wherever required.
- 8.4 Provision of necessary coves, chambers edging, roundings and the like in the junction of floors with dado / skirting / other vertical surfaces, around the pipes / openings / ends and the like.
- 8.5 Provision of small channels, grooves and the like.
- 8.6 Curing by appropriate means.
- 8.7 Provision of backing in case of linoleum / rubber flooring.
- 8.8 Working in isolated areas.
- 8.9 Provision of grinding and polishing when specified.
- 8.10 Protecting the floor till final handing over.

9.0 **WOOD WORK:**

The rates shall include but be not limited to the following:

9.1 **Frames and Scantlings:**

- 9.1.1 Making necessary holes / openings in masonry / concrete for fixing and jamming the same with approved materials.
- 9.1.2 Provision of coat tar or other anti-corrosive paint coating on the surface in contact with wall or floor.
- 9.1.3 Provision of plugs, screws, nails pins, adhesives and the like necessary for joinery and fixing.

9.2 Shutters:

9.2.1 Provision of necessary wooden cleats, wooden blocks etc. with necessary screws, nails, adhesives etc.

9.2.2 Provision of mouldings, rebates, roundings and other types of curving as per drawings.

9.2.3 Provision of all necessary screws, nails, adhesives etc.

9.2.4 Protection till final handing over.

10.0 **METAL WINDOWS, VENTILATORS, ROLLING SHUTTERS:**

The rates shall include but be not limited to the following:

10.1 Making necessary holes/ openings in masonry / concrete for fixing and jamming the same with approved materials.

10.2 Shop fitting, assembly and shop coat of primer.

10.3 Windows, gates, rolling shutters, glazed doors and windows and other item which are measured in Sqm shall include all the necessary frames, angles, plates, sheets, holdfasts or lugs, locking arrangements handles, bolting devices on both sides, hinges, pivots, guide rails and guide channels (wherever applicable) roller (wherever applicable), hood (wherever applicable), rubber linings, gaskets and similar other fixtures necessary for fixing and locking arrangements (locks shall be excluded unless otherwise mentioned in Schedule of Items).

10.4 Steel rolling grills, louvers etc. which are measured in Sqm shall also include all appropriate fittings and fixtures as mentioned in 1.3 and the whole thing shall be measured as a single item for payment.

10.5 Glazed doors /windows shall also include the glazing/ glass panes, glazing beads of teak wood or aluminium glazing clips, putty, gasket and the like.

10.6 Protection up to final handing over (Protection of glass panes / glazing after final handing over shall be the responsibility of the Owner).

11.0 **GLAZING (WHERE GLAZING IS PAID SEPERATELY AS IN THE CASE OF NORTH LIGHT GLAZING)**

The rates shall include but be not limited to the following:

11.1 Glazing bends, glazing clips, putty and the like.

11.2 Protection of the work till final handing over.

12.0 **WATER SUPPLY, DRAINAGE & SANITATION:**

The rates shall include but be not limited to the following:

- 12.1 Excavation, back filling and consolidation for pipes laid underground.
- 12.2 Jointing, haunching, encasing, in concrete where required for pipes laid underground.
- 12.3 Making necessary holes / chases / openings in masonry / concrete / flooring / paving / facing for laying and installation of the pipe lines / fixtures / specials and making good the same with similar / approved materials.
- 12.4 Supporting with clips, brackets, clamps, supports, saddles and the like or concealing in the case of pipes over ground.
- 12.5 All required specials e.g., bends, tees, shoes, cowls, plugs and the like excluding valves.
- 12.6 Painting as described in the Schedule of Items.
- 12.7 Finishing to the required shape, size and gradient.
- 12.8 Setting, fitting and fixing in position, straight cutting and waste, return of packing, threading.
- 12.9 Caulking joints with appropriate material.
- 12.10 Testing of pipe lines, where called for.
- 12.11 Jamming of supports in wall in the case of wash basins, sink and the like.
- 12.12 Fixing wooden plugs etc. in wall for installing mirror, hand rail, toilet paper holder and the like.
- 12.13 Protecting till final handing over.

13.0 **SANITARY FIXTURES:**

All sanitary fixtures and fittings as mentioned in BOQ schedule of sanitary fixtures shall be applied and installed by the CONTRACTOR. The Contractor in his rates shall allow for and include cost towards:

- 13.1 Supplying and installing all materials as listed in BOQ.
- 13.2 Providing all necessary approved fittings, accessories, brackets, bolts and nuts required for complete assembly and proper installation of all fixtures. Accessories to be supplied shall match the listed fixtures. All exposed pipe inserts, fasteners, anchorings, screws shall be chromium plated.
- 13.3 Effecting proper inlet, outlet and vent connection as required.
- 13.4 Painting all unplated metal work.
- 13.5 Providing trial assembly and mock up as required by Engineer.

14.0 INTERNAL DRAINAGE:

14.1 CI Pipes and specials for wastes, vents and rain water where called for shall be medium class GI Pipes and specials manufactured by Indian Tube Company or approved equivalent.

14.2 The rates for all CI pipe work shall include cost of all pipes, fittings, threading and jointing.

14.3 All CI Pipes and fittings for soil, waste, vent and rain water pipes shall be cast on pipes and fittings of approved make, conforming to IS:3989 (Centrifugally cast iron soil, waste and vent pipes).

14.4 The rates of all GI Pipe work shall include cost towards all pipes, fittings, cutting and lead caulk jointing and providing three coats of approved bitumastic paint to all pipes.

14.5 The rates for all the following items shall include cost towards providing all supports, clamps etc.

14.6 Fittings/ specials such as bends, junctions, reducers, tees, passovers etc., will not be measured or paid for separately, unless otherwise mentioned. All pipes will be measured inclusive of all fittings/ specials.

15.0 COLD AND HOT WATER PLUMBING:

15.1 All GI pipes for water supply work shall be medium/heavy class GI Pipes manufactured by Indian Tube Company or equivalent quality as approved.

15.2 All GI Pipe fittings shall be medium / heavy class "R" brand GI fittings manufactured by Mehta Corporation Ahmedabad or equivalent as approved.

15.3 The rates for the following items shall include all cost towards pipes, fittings, cutting, threading, jointing, supports, clamps etc., and cutting chases and making good.

15.4 Fittings / specials such as sockets, unions, bends, elbows, tees, reducers, etc., shall not be measured or paid for separately, unless otherwise mentioned. All pipes will be measured inclusive of all fittings / specials.

16.0 EXTERNAL WATER SUPPLY:

16.1 Pipes for water supply shall be Medium class GI pipes by Indian Tube Company or equivalent quality as approved.

16.2 All GI Pipe fittings shall be medium class "R" brand fittings manufactured by Mehta Corporation Ahmedabad or equivalent as approved.

16.3 The rates for the following items shall include all cost towards pipes, fittings, cutting, threading, jointing and providing all supports, clamps etc.

16.4 Fittings / specials such as sockets, unions, bends, elbows, tees, reducers, etc., shall not be measured or paid separately, unless otherwise mentioned. All pipes will be measured inclusive of all fittings / specials.

16.5 All earth work will be measured and paid for separately.

17.0 EXTERNAL DRAINAGE:

17.1 All CI pipe work to be provided under this section shall consist of cast iron pipes and fittings and shall be executed as called for under relevant clauses of Section-A-Internal Drainage (soil, waste, vent and rain water pipes).

17.2 All stoneware pipe work of this section shall consist of approved make salt glazed stoneware pipes.

17.3 RCC Pipes and accessories shall be Indian Hume Pipe Company or other approved equivalent.

17.4 The rate for the following items of work shall generally include:

- a) Cutting and jointing of pipes.
- b) Cement mortar jointing to all stoneware pipe and RCC pipes.
- c) All brick masonry and concrete work.
- d) Providing three coats of bitumastic paint to all gratings, covers and frames.

17.5 All brick work shall be of first class kiln bricks in 1:6 cement mortar (1 cement : 6 coarse sand) and shall be plastered both internal and externally.

17.6 All earth work will be measured and paid for separately.

18.0 ELECTRICAL FACILITIES:

The following electrical points, shall be furnished / confirmed along with technical part of the offer:

- a) Type and make of all electrical equipment proposed to be supplied.
- b) Make, capacity, KV rating, RPM and painting details of exhaust fans shall be indicated.
- c) Detailed wiring drawings for each building shall be submitted and got approved prior to installation.
- d) General arrangement drawings for distribution board, sub-distribution board etc., shall be got approved prior to starting of fabrication.
- e) Drawing shall be submitted in four copies for approval.

- f) After completion of work, two sets of reproducible and four sets of prints shall be supplied as “as-built” drawings.
- g) Details of electrical sub-contractors, if any and details of work done by them shall be furnished.
- h) The bar chart shall be submitted within one month of placement of order shall clearly indicate the following activities separately :
 - i) Preparation and approval of lighting drawing and General Arrangement drawings.
 - ii) Procurement of lighting equipment.
 - iii) Installation.
 - iv) Testing and Commissioning.
- j) Detailed drawings showing fan hooks, inserts for supporting light fittings etc., for each building shall be submitted and got approved within one month after placement of order and the same shall be incorporated in the Civil Works.

19.0 **INTERNAL ELECTRIFICATION**

- 19.1 PVC piping in slab shall be of heavy duty and that in wall shall be medium duty.
- 19.2 All internal wiring cable shall be multi-stranded PVC insulated unsheathed.
- 19.3 All materials used shall be ISI stamped and shall be procured from manufacturers / authorized dealer only to avoid spurious materials.
- 19.4 All hardware, accessories and fixtures shall be of approved quality and the same shall be used.
- 19.5 All materials shall be good quality, samples of same shall be got approved before bulk supply.
- 19.6 Conduit layout shall be got approved before commencement of electrical works.
- 19.7 Under point wiring light points, fan points, 5 Amps switch and socket dependent and independent, exhaust fan points, call bell points only will be covered.
- 19.8 MCB DB to switch board, 28 Amps sockets direct wiring under running metre measurement.
- 19.9 For 15 Amps sockets wiring should be done directly from MCB DB with specified wire under point wiring for which separate item is provided in schedule.
- 19.10 All supplies shall be accompanied by delivery challan from manufacturers / dealers.
- 19.11 Termination of wires shall be done only by using lugs.

19.12 Earth continuity shall be provided to every point.

19.13 For jointing /extension of PVC pipes proper fittings shall be used with adhesive solution.

19.14 Samples of every item of wiring materials shall be got approved before use.

19.15 Number of wires run through conduits viz. 20/25mm shall be well within the norms.

19.16 For purpose of tendering Crompton Greaves make lighting fixtures have been considered. Tenderers may offer Philips make fixtures as alternative duly indicating difference in rates for consideration.

19.17 GI Pipes wall / ceiling shall be of heavy duty and accessories such as junction box, bends, elbows and end terminations should be of flame proof.

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(PERCENTAGE BOQ)**

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