

SECTION - 1

SCOPE, SPECIFIC TECHNICAL REQUIREMENTS &
BILL OF QUANTITIES

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SCOPE, SPECIFIC TECHNICAL REQUIREMENTS & QUANTITIES

1.1.0 SCOPE

1.1.1 The scope of work under this specification is Yard Civil Works of following Substations, being executed by BHEL on turnkey basis. The Customer/Employer is Powergrid Corporation of India Limited (PGCIL).

1. 400/220kV Substation at Aurangabad in Maharashtra.
2. 400kV Substation Extension at Wardha in Maharashtra.
3. 400kV Substation Extension at Aurangabad (MSETCL) in Maharashtra.

1.1.2 The detailed substation wise scope of work is as follows:

A. AURANGABAD

The scope of work shall include but shall not be limited to Civil Works for the following, based on Employer/BHEL supplied drawings to be provided during detailed engineering.

- (a) Civil works for 11 nos. switchyard panel room
- (b) Foundation for 2 nos 80 MVAR and 2 nos. 50 MVAR (to be shifted from 400 kV Aurangabad(MSETCL) S/S), Employer supplied shunt Reactors along with associated SAs & NGRs along with jacking pad & pylon supports, rail track and fire wall etc.
- (c) Foundation for 2 nos 315 MVA 400/220/33 kV Employer supplied Auto transformers along with jacking pad & pylon supports, rail track and fire wall etc.
- (d) Foundation for Gantries, equipments support structures, LT Transformers and DG set.
- (e) Foundation for lighting poles, Bay marshalling box, panels and control cubicles of equipments wherever required.
- (f) Cable trenches along with covers, road/rail crossings, sump pits etc.
- (g) All Roads including culverts.
- (h) Surface & underground drainage system within the substation fencing including transformer & reactor area, around control room building, fire fighting pump house and fire water tank.
- (i) Antiweed treatment, PCC and stone spreading in substation area.
- (j) Fire fighting pump house building and fire water tank.
- (k) Permanent water supply for Control Room cum Administrative building, Fire fighting pump house building and fire fighting system.
- (l) Substation fencing and gates.
- (m) Rain water harvesting

(n) Any other civil work required for completion of the project.

B. WARDHA

The scope of work shall include but shall not be limited to Civil Works for the following, based on Employer/BHEL supplied drawings to be provided during detailed engineering.

- (a) Civil works for one no. switchyard panel room
- (b) Foundation for 2 nos 80 MVAR Employer supplied shunt Reactors along with associated SAs & NGRs along with jacking pad & pylon supports, rail track and fire wall etc.
- (c) Foundation for Lattice, Pipe and equipments support structures.
- (d) Cable trenches along with covers, road / rail crossings, and sump pits etc. The existing cable trench layout drawing shall be provided during detailed engineering.
- (e) Stone has already been laid in some portion of the switchyard area under present scope. Removal, cleaning and washing of existing stone and re-spreading after doing anti-weed treatment as per Section-Civil Works is in the scope of contractor.
- (f) In the area under present scope where stone spreading does not exist, the same shall be provided after doing anti-weed treatment and PCC as per Section-Civil Works.
- (g) Foundation for Bay marshalling box, panels and control cubicles of equipments wherever required shall be as per vendor drawings.
- (h) Any other civil work required for completion of the project.

C. AURANGABAD (MSETCL)

The scope of work shall include but shall not be limited to Civil Works for the following, based on Employer/BHEL supplied drawings to be provided during detailed engineering.

- (a) Stone has already been laid in portion of the switchyard area under present scope. Removal, cleaning and washing of existing stone and re-spreading after doing anti-weed treatment as per Section-Civil Works is in the scope of contractor.
- (b) Any other civil work required for completion of the project.

1.1.3

The works to be performed in the above constructions include preparation of bar bending schedules, based on the drawings released for construction and getting the same approved by the Engineer-in-charge plus the execution of the work including providing of all labour, supervision, materials, scaffolding, power, fuel, construction equipments, tools and plants, supplies, transportation, all incidental items necessary for successful completion of the work including contractor's supervision and in strict accordance with the drawings and specifications and with inspection and testing standards. The nature of work shall generally involve excavation in all type of soil including dewatering, shoring, strutting, and filling under and around structures, backfilling with

available excavated earth around completed structures and cable trenches with covers, road crossing of trenches, disposal of surplus soil, concreting including reinforcement and formwork, providing necessary steel embedments and other inserts, roadwork, drainage work, fencing work, stone spreading (including antiweed treatment & PCC), concreting, brickwork, flooring and finishing in buildings, etc., all complete as per detailed specification, drawings and directions of Engineer-in-charge.

1.2.0 SPECIFIC TECHNICAL REQUIREMENTS

1.2.1 All technical requirements for the execution of civil works shall be as per PGCIL Technical Specification, Section: Civil Works (C/ENGG/SPEC/CIVIL/ Rev No.: 07), FQP & Tender Drawings (Refer SECTION 3).

1.3.0 BILL OF QUANTITIES

1.3.1 The Bill of Quantities shall be as per pages 1.4 to 1.8

1.3.2 The quantities indicated in the 'Bill of Quantities' are indicative and can vary to any extent. Contractor shall not be entitled for any claim for any such variation in the quantities.

1.3.3 The provision of Bill of Quantities, specifications and drawings shall be read in conjunction with each other and in case of conflict amongst them, the clarification shall be obtained from the Engineer-in-Charge whose decision shall be final and binding.

1.3.4 The mode of measurement shall be as per Clause 11 of PGCIL Technical Specification (Refer SECTION 3)