TENDER DOCUMENT

e-TENDER No: ERO/CON/809/1149

Tender for Construction, Upgradation, Widening & Strengthening of Various Roads in Lahunipara Block of Sundargarh District, Odisha under DMF Scheme (Package 2)

VOLUME – II

Additional Conditions of Contract (ACC) and Technical Specification.

ENGINEERING PROJECTS (INDIA) LIMITED

(A GOVT. OF INDIA ENTERPRISE)

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Kolkata – 700071
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ADDITIONAL CONDITIONS OF CONTRACT

1. The following Additional Conditions of Contract shall be read in conjunction with General Conditions of Contract (GCC) of EPI and other conditions of the tender documents. If there are any provisions in these Additional Conditions of Contract, which are at variance with the provisions of GCC and other conditions of the tender documents, the provisions in these Additional Conditions of Contract shall take precedence. Following shall be the order of precedence of documents.
   a. Notice Inviting Tender, Instructions to Tenderers including Addendum / Corrigendum if any.
   b. Additional Conditions of Contract (ACC)
   c. General Conditions of Contract (GCC)
   d. Specification & Drawings
   e. Price Bid / Bill of Quantity.

2. Scope of Work:

The works shall, inter-alia, include the following, as specified or as directed.

(A) Road Works

Site clearance; setting-out and layout including survey and recording of levels; widening of existing carriage way and strengthening including camber corrections; construction of new road bituminous pavements remodelling/construction of junctions, intersections, supplying and placing of drainage channels, flumes, guard posts and other related items; construction/extension of cross drainage works, bridge, approaches and other related items; road markings, road signs and kilometre/ hectometre stones; protective works for roads/bridges; planting of trees along the roads; all aspects of quality assurance of various components of the works; rectification of the Defects in the completed works during the Defects Liability Period; submission of “As-built” drawings and any other related documents; and other item of work as maybe required to be carried out for completing the works in accordance with the Drawings and provisions of the contract to ensure safety.

(B) Cross Drainage (CD) Works including bridges

Site clearance; setting out, provision of foundations, piers, abutments and bearings; pre-stressed/reinforced cement concrete superstructure; wearing coat, hand railings, expansion joints, approach slabs, drainage spouts/ down-take pipes, provision of suitably designed protective works; providing wing/ return walls; provision of road markings, road signs etc.; all aspects of quality assurance; clearing the Site and handing over the works on completion; rectification of the Defects during the Defects Liability Period and submission of “As-built” drawings and other related documents; and other item of work as may be required to be carried out for completing the works in accordance with the Drawings and the provisions of the contract to ensure safety.
(C) Routine Maintenance

Routine Maintenance of the constructed road shall be for five years after the completion date. Maintenance operations during the period of 5 years shall be based on Chapter 11 of Rural Roads Manual (IRC: SP: 20:2002) latest edition. Its specific provisions are:

(i) Clause 11.2 explains the various types of distress/defects of pavements. For example, cracks, ravelling, rutting, pot holes etc.

(ii) Clause 11.3 defines different maintenance activities. For example, fog seal, bituminous surface treatment, etc.

(iii) Clause 11.4 suggests planning of Routine Maintenance.

(iv) Clause 11.5 and Clause 11.6 (a) define preventive and corrective maintenance, and classify activities of routine maintenance and repairs.

(v) Clause 11.7 discusses in detail the assessment of defects and maintenance measures for sealed roads, roads with rigid/RCCP and Roads with special pavement.

3. Payment for Routine Maintenance

The payment to the contractor will be as follows for routine maintenance of the works:

a) The Contractor shall submit to the Engineer-in-charge a bill every month for the routine maintenance of the roads from the date the maintenance period starts i.e. from completion date as defined in the scope of the work. It will be supported with a copy of the record of contractor’s monthly inspection and other instructions received from the Engineer-in-charge.

b) The payment will be made half yearly for the monthly bills received during the previous six-months.

c) If the bill for a month is not received from the contractor by the 10th day of the succeeding month or/ and if the Engineer-in-charge has not certified that the Contractor has carried out the maintenance work for defects and deficiencies brought to his notice under clause 17.2 (d) within specified period, no payment will become due to the Contractor for that month.

d) If the Contractor has failed to carry out the maintenance within the period specified by the Engineer-in-charge in a given month, no payment of any kind will be due to the Contractor for that month.

ee) No retention money shall be deducted from the payments of routine maintenance of works.

4. Security Deposit cum Performance Guarantee

The clause 9.0 of General Conditions of Contract stands modified as hereunder.
a) Within 10 (ten) days from the date of issue of letter of intent or within such extended time as may be granted by EPI in writing, the Contractor shall submit to EPI a Security Deposit cum Performance Bank Guarantee in the form appended, from any Nationalised bank / Scheduled Bank equivalent to 5% (five percent only) of the Contract Value excluding GST for the due and proper execution of the contract.
b) This bank guarantee shall remain valid up to 90 (ninety) days after the end of routine maintenance period and the Engineer-in-charge has certified that the Contractor has satisfactorily carried out the Routine Maintenance of the works.
c) In case the Contractor fails to submit the Security Deposit cum Performance Guarantee of the requisite amount within the stipulated period or extended period, letter of intent will stand withdrawn and EMD of Contractor shall be forfeited.

5. Retention Money

The clause 10.0 of General Conditions of Contract stands modified as hereunder.
a) The Retention Money shall be deducted from each running bill of the Contractor at 5% (five percent only) of the Running Account bill excluding GST.
b) No retention money shall be deducted from the payments of routine maintenance of works.
c) The Earnest Money Deposited by the tenderer in the form of Demand Draft will be treated as part of the Retention Money.
d) Half of Retention Money shall be refunded to the Contractor at the end of 2nd year after completion of the construction work and balance the end of 3rd year after completion of the construction work subject to condition that the Engineer-in-charge has certified that all defects notified by the Engineer-in-charge to the contractor before the end of the period prescribed for repayment have been corrected.
e) If the Routine Maintenance part of the contract is not carried out by the Contractor as per this Contract, the Employer will be free to get the Routine Maintenance work carried out from another source and the amount required for this work will be recovered from the amount of Performance Security available with the Employer and/or from any amounts of the Contractor whatever is due along with additional 20 percent amount as penalty.
f) If the amount of Retention Money deduction in cash is more than Rs. 10.00 Lakhs (Rupees Ten Lakhs only), the excess amount can be refunded to Contractor against submission of Bank Guarantee of equivalent amount from a Nationalised bank / Scheduled Bank in the prescribed proforma of Performance Guarantee of EPI.

6. Taxes and Duties

The clause 13.0 of General Conditions of Contract stands modified as hereunder.
The award of the Contract shall be on ‘Work Contract’ as defined in section 2 (119) of the CGST Act, 2017. The rates/amount quoted in the Bill of Quantities shall be inclusive of all taxes, duties, cess, levies, fees, royalty, etc, except Goods and Service Tax (GST). The Goods and Services Tax (GST) applicable on all items of Works described in the Bill of Quantities, shall be quoted separately in attachment entitled “Annexure- AA - Taxes & Duties” in Vol. III.
The GST quoted by the bidder shall be as applicable in India as on seven (7) days prior to the deadline for submission of Techno-Commercial Bids. Due Input Tax credits under GST as per the relevant Govt. Policy, wherever applicable, shall be taken into account by the Bidder while quoting his price. Income Tax and other Deductions of Taxes as applicable shall be deducted from Bills / due payment of the Supplier.

EPI shall bear and pay/reimburse to the bidder Goods and Services Tax (GST) applicable on the value of Works Contract described in the Bill of Quantities. However, the taxes, duties & levies as may be applicable on the materials used for Works Contract shall be to the bidder’s account and no separate claim in this regard will be entertained by EPI. Further, in case of any variation in the rates of the GST after the date seven (7) days prior to deadline set for submission of the Techno-Commercial bids, the same shall be paid/ reimbursed to/ recovered from the bidder subject to submission of documentary evidence.

If a new tax, duty or levy is imposed under statute or law in India after the date seven (7) days prior to date of Techno-Commercial bid opening and the successful bidder becomes liable there under to pay and actually pays the said new tax, duty or levy for bona fide use on the works contracted, the same shall be reimbursed to the successful bidder against documentary evidence of proof of payment.

The Contractor shall, within a period of 30 days of the imposition of any such new tax, duty or levy give a written notice thereof to the Engineer-in-Charge of EPI that the same is given pursuant to this condition, together with all necessary information relating thereto.

The payment/reimbursement of statutory variations in the rates of tax and/or of new tax, duty or levy imposed under statute or law in India as per above, would be restricted only to direct transactions between the EPI and the successful bidder.

a. It shall be incumbent upon the successful bidder to obtain a registration certificate under the GST Law, and other law(s) relating to levy of tax, duty, cess etc. and necessary evidence & GSTIN number to this effect shall be furnished by the successful bidder to the EPI.

b. The successful bidder must submit as a compliance of GST Act, the invoices in GST compliant format failing which the GST amount shall be recovered / adjusted by EPI without any prior notice from the next invoices or available dues with EPI.

c. The successful bidder should update /upload the GST/ Taxes data periodically so as to avail ITC credit by EPI failing which it shall be recovered / adjusted by EPI without any prior notice from the next invoices or available dues with EPI.

d. The rates/amount quoted in the Schedule of Quantities shall be inclusive of all taxes, duties, cess, levies, fees, royalty, etc, except Goods and Service Tax (GST).

e. Bidder while quoting the rates in the tender must also consider the ITC Credit applicable for the works, if any.

7. Technical Staff for Work:

The following shall be read in conjunction with the clause 27.0 of General Conditions of Contract.
The minimum number of Technical Personnel, qualifications and experience will be as follows:

A. For construction site:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Technical Position</th>
<th>Qualification</th>
<th>Minimum Number</th>
<th>Experience in Road Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sr. Site Engineer</td>
<td>Degree or equivalent in Civil Engineering</td>
<td>01 No.</td>
<td>12 years or more</td>
</tr>
<tr>
<td>2</td>
<td>Site Engineer</td>
<td>Degree or Diploma in Civil Engineering</td>
<td>02 Nos.</td>
<td>5 years or more</td>
</tr>
</tbody>
</table>

B. For Field Testing Laboratory:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Technical Position</th>
<th>Qualification</th>
<th>Minimum Number</th>
<th>Experience in Road Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technician</td>
<td>Degree or equivalent in Civil Engineering</td>
<td>01 No.</td>
<td>12 years or more</td>
</tr>
</tbody>
</table>

C. For Routine Maintenance:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Technical Position</th>
<th>Qualification</th>
<th>Minimum Number</th>
<th>Experience in Road Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Site Engineer</td>
<td>Degree or equivalent in Civil Engineering</td>
<td>02 Nos.</td>
<td>2 years or more</td>
</tr>
</tbody>
</table>

8. Insurance:

The following shall be read in conjunction with the clause 17.0, 18.0 and 19.0 of General Conditions of Contract. The amount deductible for insurance are:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Item</th>
<th>Minimum Cover for Insurance</th>
<th>Maximum deductible for Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Works, Plants &amp; Materials</td>
<td>Equal to contract amount</td>
<td>0.4% of contract amount</td>
</tr>
<tr>
<td>2</td>
<td>Loss or damage to Equipment</td>
<td>10% of contract amount</td>
<td>0.4% of contract amount</td>
</tr>
<tr>
<td>3</td>
<td>Other properties</td>
<td>5% of contract amount</td>
<td>0.4% of contract amount</td>
</tr>
<tr>
<td>4</td>
<td>Personal injury or death insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. For other people</td>
<td>Rs. 15 Lacs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. For contractor's employees</td>
<td>In accordance with statutory requirement applicable to India</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Machinery & Equipment:

The contractor shall deploy the following machineries and equipments.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Equipment or Machinery</th>
<th>Minimum Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hot Mix Plant of capacity 40-60-TPH</td>
<td>01 No.</td>
</tr>
<tr>
<td>2</td>
<td>Static Roller of 8/10 Tonne weight</td>
<td>02 Nos.</td>
</tr>
</tbody>
</table>
10. **Protection of Environment**

The Contractor shall construct the works with intermediate technology, i.e. by manual means with medium input of machinery required to ensure the quality of works as per specifications. The Contractor shall deploy the equipment and machinery as given in Contract Data.

The Contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation.

During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in future by the State or Central Government or the local authority.

Salient features of some of the major laws that are applicable are given below:

**The Water (Prevention and Control of Pollution) Act, 1974**: This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. ‘Pollution’ means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water whether directly or indirectly) as may, or is likely to, create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.
The Air (Prevention and Control of Pollution) Act, 1981: This provides for prevention, control and abatement of air pollution. ‘Air Pollution’ means the presence in the atmosphere of any ‘air pollutant’, which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Protection) Act, 1986: This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. ‘Environment’ includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance Act, 1991: This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

11. The Works and Routine Maintenance to be Completed by the Intended Completion Date

The Contractor may commence execution of the Works on the Start Date and shall carry out the Works and Routine Maintenance in accordance with the Programme submitted by the Contractor, as updated with the approval of the Engineer-in-charge, and complete them by the Intended Completion Date.

12. Mobilization Advance

There shall be no mobilization advance. The clause 8.0 of General Conditions of Contract stands deleted.

13. Secured Advance against Non-perishable Materials

There shall be no secured advance. The clause 35.0 of General Conditions of Contract stands deleted.

14. Field Testing Laboratory:

The following shall be read in conjunction with the clause 17.0, 18.0 and 19.0 of General Conditions of Contract.

The key equipments for field laboratory shall be:

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Laboratory Equipment Required</th>
<th>Minimum Quantity Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Post Hole Auger with Extensions</td>
<td>One set</td>
</tr>
<tr>
<td>2</td>
<td>Digging Tools like pick axe, shovel etc.</td>
<td>One set</td>
</tr>
<tr>
<td>3</td>
<td>IS Sieves with lid and pan.</td>
<td>One set</td>
</tr>
<tr>
<td></td>
<td>(90mm, 80mm, 63mm, 53mm, 45mm, 27.5mm, 26.5mm, 19mm, 13.2mm, 11.2mm, 9.5mm, 37.5)</td>
<td></td>
</tr>
<tr>
<td>Sl. No.</td>
<td>Laboratory Equipment Required</td>
<td>Minimum Quantity Required</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>1</td>
<td>mm, 2.8mm, 5.6mm, 3.35mm, 2.36mm, 600 micron, 425 micron, 300 micron, 150 micron, 180 micron, 90 micron and 75 micron</td>
<td>One set</td>
</tr>
<tr>
<td>4</td>
<td>Standard Proctor Density Test Apparatus with rammer</td>
<td>One set</td>
</tr>
<tr>
<td>5</td>
<td>Sand Pouring Cylinder with tray complete for field density</td>
<td>One set</td>
</tr>
<tr>
<td>6</td>
<td>Core Cutter (10cm dia), 10cm/15cm height complete with dolly and hammer</td>
<td>One set</td>
</tr>
<tr>
<td>7</td>
<td>Speedy moisture meter complete with chemicals</td>
<td>One set</td>
</tr>
<tr>
<td>8</td>
<td>Straight Edges</td>
<td>Two Nos.</td>
</tr>
<tr>
<td>9</td>
<td>Digital Thermometers</td>
<td>Three Nos.</td>
</tr>
<tr>
<td>10</td>
<td>Liquid Limit and Plastic limit testing apparatus complete with One set water bottle and glass wares</td>
<td>One set</td>
</tr>
<tr>
<td>11</td>
<td>Gas burner, sand bath</td>
<td>One set</td>
</tr>
<tr>
<td>12</td>
<td>Camber Board</td>
<td>Two sets</td>
</tr>
<tr>
<td>13</td>
<td>Electronic/digital balance 1 kg with the least count of 0.01 gm</td>
<td>One no.</td>
</tr>
<tr>
<td>14</td>
<td>Electronic/digital balance 5 kg with the least count of 0.01 gm</td>
<td>One no.</td>
</tr>
<tr>
<td>15</td>
<td>Pan balance with weight box 5 kg</td>
<td>One set</td>
</tr>
<tr>
<td>16</td>
<td>Oven (ambient to 200 degree C)</td>
<td>One no.</td>
</tr>
<tr>
<td>17</td>
<td>Water Bath (ambient to 100 degree C)</td>
<td>One set</td>
</tr>
<tr>
<td>18</td>
<td>Bitumen Extraction Apparatus</td>
<td>One set</td>
</tr>
<tr>
<td>19</td>
<td>Penetration Apparatus (Bitumen)</td>
<td>One set</td>
</tr>
<tr>
<td>20</td>
<td>Enamelled Tray</td>
<td>One set</td>
</tr>
<tr>
<td>21</td>
<td>Measuring taps, spatula, glassware, porcelain dish, pestle mortar</td>
<td>One set</td>
</tr>
<tr>
<td>22</td>
<td>Trays for measurement of tack coat quantity</td>
<td>Three nos.</td>
</tr>
<tr>
<td>23</td>
<td>Slump Cone</td>
<td>Two nos.</td>
</tr>
<tr>
<td>24</td>
<td>Aggregate Impact Value Apparatus</td>
<td>One set</td>
</tr>
<tr>
<td>25</td>
<td>Cube Mould (150X150X150mm)</td>
<td>Six nos.</td>
</tr>
<tr>
<td>26</td>
<td>Water Absorption Test Apparatus</td>
<td>One set</td>
</tr>
<tr>
<td>27</td>
<td>Thickness Gauge</td>
<td>One No.</td>
</tr>
<tr>
<td>28</td>
<td>Hydraulic Cube testing Machine 1500 KN</td>
<td>One No.</td>
</tr>
</tbody>
</table>

The period for setting up a field laboratory with the prescribed equipment is 07 days from the date of issue of the LOI.

15. **Tests**

For carrying out mandatory tests as prescribed in the specifications, the Contractor shall establish field laboratory of minimum size of 20 X 15 ft. at the location decided by Engineer-in-charge. The field laboratory will have minimum of equipments as specified in the Contract Data. The contractor shall be solely responsible for:
a. Carrying out the mandatory tests prescribed in the Specifications, and

b. For the correctness of the test results, whether preformed in his laboratory or elsewhere.

If the Engineer-in-charge instructs the Contractor to carry out a test not specified in the Specification/ Quality Assurance Handbook to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples.

16. **Office**

The contractor shall also construct a suitable two (2) room office accommodation of size 12 X 10 feet at site at his cost to ensure safe and proper custody of drawings, documents, appliances, including easy access to them and relief to the staff and other personnel in case of any exigency. The office should be fully equipped with basic facilities such as telephone, internet, regular electric and water supply, toilet, computer / typing with printing facilities, storage of documents and data like almirahs or file cabinets etc.

17. **Identifying Defects**

The Engineer-in-charge shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor’s responsibilities. The Engineer-in-charge may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer-in-charge considers may have a Defect.

18. **Correction of Defects noticed during the Defects Liability Period and Routine Maintenance of Roads for five years.**

Contractor shall diligently follow his responsibilities in the Routine Maintenance Period of Five years of period after taking over the work by client as detailed in the clause no. 2 (C) of ACC.

17.1 (a) The Engineer-in-charge shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion [and defined – Contract Data] and ends after five years. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.

(b) Every time notice of Defect/ Defects is given, the Contractor shall correct the notified Defect/Defects within the duration of time specified by the notice of Engineer-in-charge.

17.2 (a) The Contractor shall do the routine maintenance of roads, including pavement, road signs, road sides and cross drains including surface drains to the required standards and in the manner as defined in the scope of the work and keep the entire road surface and structure in Defect free and traffic worthy condition during the entire maintenance period which begins at Completion and ends after five years.

(b) The routine maintenance standards shall meet the following minimum requirements: -

i) Potholes on the road surface to be repaired soon after these appear or brought to its notice either during the Contractor’s monthly inspection or by the Engineer-in-charge.
ii) Road shoulders to be maintained in proper condition to make them free from excessive edge drop offs, roughness, scouring or potholes.

iii) Cleaning of surface drains including reshaping to maintain free flow of water.

iv) Cleaning of culverts and pits for free flow of water.

v) Road signs and pavement marking to be maintained in proper condition.

vi) Any other maintenance operation required to keep the road traffic worthy at all times during the maintenance period.

(c) To fulfill the objectives laid down in sub clauses (a) and (b) above, the Contractor shall undertake detailed inspection of the roads at least once in a month. The Engineer-in-charge can adjust or vary this frequency in case of emergency or for reasons of deficiency in maintenance and the Contractor shall comply with the instructions of Engineer-in-charge. The Contractor shall forward to the Engineer-in-charge the record of inspection and rectification each month. The Contractor shall pay particular attention on those road sections which are likely to be damaged during rainy season.

(d) The Engineer-in-charge may issue notice to the Contractor to carry out removal of defects or deficiencies, if any, noticed in his inspection, or brought to his notice. The Contractor shall remove the defects and deficiencies within the period specified in the notice and submit to the Engineer-in-charge a compliance report.

19. Cement

Cement shall be procured by Contractor of **OPC 43 Grade** conforming to BIS : 8112 Specification latest edition or higher Grade or **PPC** conforming to BIS : 1489 Part I as directed by the Engineer-In-Charge. The cement shall be procured directly from the reputed manufacturers/ stockist, which will have to be got approved from EPI in advance. Relevant vouchers and test certificates will be produced as and when required. The cement shall be stored by the Contractor in such suitable covered and lockable stores, well protected from climate and atmospheric effect. The cement godown shall be constructed by the Contractor as per CPWD specifications at his own cost. The cement will remain under double lock, one from EPI and other from Contractor. The cement in bags shall be stored in godown in easy countable position. Cement bags shall be used on first in first out basis. Cement stored for beyond 90 days will be required to be tested at Contractors cost, before use in works. The approved make of cement are as follows.

   a. ACC Limited
   b. OCL India Ltd
   c. UltraTech Cement Ltd.

If PPC cement is used in the construction, there shall be a recovery of Rs. 50.00 per bag of the cement from the respective items and the rate of consumption shall be as per the CPWD specification.
20. Steel

Steel conforming to BIS specifications (latest edition) shall be procured by the Contractor directly from reputed manufacturers/producers as approved by EPI. The manufacturer has to give a certificate that the material supplied is not a re-rolled product. Relevant vouchers & test certificates will be produced by the Contractor. Re-rolled sections will not be allowed.

Reinforcement steel, structural steel shall be stored and stacked in such manner so as to facilitate easy identification, removal etc. The Contractor shall take proper care to prevent direct contact between the steel and the ground/water for which he shall provide necessary arrangement at his own cost including ensuring proper drainage of area to prevent water logging as per directions of the Engineer-In-Charge. If required, the reinforcement steel shall also be protected, by applying a coat of neat cement slurry over the bars for which no extra payment shall be made.

Test certificates for each consignment of steel shall be furnished and tests to be got carried out by the Contractor at his own cost from the authorized laboratory as per the directions of Engineer-In-Charge, before incorporating the materials in the work. The approved make of steel are as follows.

a. SAIL
b. Tata Steel
c. Jindal Steel
d. RINL

21. ARBITRATION

Before resorting to arbitration as per the clause given below, the parties if they so agree may explore the possibility of conciliation as per the provisions of Part III of the Arbitration and Conciliation Act, 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015. When such conciliation has failed, the parties shall adopt the following procedure for arbitration:

20.1 Except where otherwise provided for in the contract, any disputes and differences relating to the meaning of the Specifications, Design, Drawing and Instructions herein before mentioned and as to the quality of workmanship or materials used in the work or as to any other questions, claim, right, matter or things whatsoever in any way arising out of or relating to the Contract, Designs, Drawings Specifications, Estimates, Instructions, or these conditions or otherwise concerning the works of the execution or failure to execute the same whether arising During the progress of the work or after the completion of abandonment there shall be referred to the Sole Arbitrator appointed by the Chairman & Managing Director (CMD), Engineering Projects (India) Limited (EPI) or any other person discharging the functions of CMD of EPI. The person approached to appointment as Arbitrator shall disclose in writing, in terms of Sub-Section (1) of Section (12) of the Arbitration and Conciliation Act, 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2016 as follows:
Such as the existence either direct or indirect of any past or present relationship with or interest in any of the parties or in relation to the subject. Matter in dispute whether financial, business, professional or other kind. Which is likely to give rise to justifiable doubts as to his independence or impartiality, and which are likely to affect his ability to devote sufficient time to the arbitration and in particular his ability to complete the entire arbitration within a period of twelve months. The Arbitrator shall be appointed within 30 days of the receipt of letter of invocation of arbitration duly satisfying the requirements of this clause.

20.2 If the arbitrator so appointed resigns or is unable or unwilling to act due to any reason whatsoever, or dies, the Chairman & Managing Director aforesaid or in his absence the person discharging the duties of the CMD of EPI may appoint a new arbitrator in accordance with these terms and conditions of the contract, to act in his place and the new arbitrator so appointed may proceed from the stage at which it was left by his predecessor.

20.3 It is a term of the contract that the party invoking the arbitration shall specify the dispute / differences or questions to be referred to the Arbitrator under this clause together with the amounts claimed in respect of each dispute.

20.4 The Arbitrator may proceed with the arbitration ex-parte, if either party in spite of a notice from the arbitrator, fails to take part in the proceedings.

20.5 The work under the contract shall continue as directed by the Engineer-In Charge, during the arbitration proceedings.

20.6 Unless otherwise agreed, the venue of arbitration proceedings shall be at the venue given in the 'Memorandum' to the 'Form of Tender'.

20.7 The award of the Arbitrator shall be final, conclusive and binding on both the parties.

20.8 Subject to the aforesaid, the provisions of the Arbitration and Conciliation Act, 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015 or any statutory modifications or re-enactment thereof and the Rules made there under and for the time being in force shall apply to the arbitration proceedings and Arbitrator shall publish his Award accordingly.

Note: Not withstanding anything contained herein above, this clause shall not be applicable where the dispute is between EPI and another Public Sector Enterprise or Govt. Department for which a separate Arbitration Clause is provided vide Clause No. A given below.

A ARBITRATION BETWEEN PUBLIC SECTOR ENTERPRISES INTER SE GOVERNMENT DEPARTMENTS.

1. In the event of any dispute of difference relating to the interpretation and application of the provisions of the contracts, such dispute or differences shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated.
by the Secretary to the Government of India in charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 and the Arbitration and Conciliation Act, 2015 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law-Secretary or the Special Secretary/Additional Secretary, when so authorized by the Law-Secretary, whose decision shall bind the Parties finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

2. Subject to any amendment that may be carried out by the Government of India from time to time the procedure to be followed in arbitration shall be as is contained in F. No. 4(1/2013-DPE (PMA)/FTS-1835 Dated: 11/04/2017 of Department of Public Enterprises, Ministry of Heavy Industries & Public Enterprises or any modification issued in this regard.

22. Jurisdiction

This agreement will be deemed to have been executed at Kolkata and courts in Kolkata alone will have the jurisdiction to entertain any matter arising out of this agreement.
TECHNICAL SPECIFICATIONS


B. For items only partly or briefly covered in the Rural Roads Manual and Specifications for Rural Road (MORD), the MORTH Specifications for Road and Bridge Works (4th revision) shall be followed as supplement, as amended or revised till the date of issue of the Notice Inviting Tender.