

Tender No. C-DOT/CAMPUS/2024-25/69/07

**TENDER FOR
CONSTRUCTION OF CEMENT CONCRETE ROAD
AT MAIN GATE & MISCELLANEOUS WORKS AT
C-DOT CAMPUS, NEW DELHI**



**Centre for Development of Telematics
C-DOT Campus, Mehrauli, New Delhi. PIN 110030.**

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INTRODUCTION

The Centre for Development of Telematics (C-DOT) is a premier Telecom Technology Development Center of the Government of India. It was vested with full authority and total flexibility to develop state-of-the-art telecommunication technology to meet the needs of the Indian telecommunication network.

C-DOT invites Tender for Construction of Cement Concrete Road at Main Gate & miscellaneous works at C-DoT Campus, Mehrauli, New Delhi- 110030.

You are hereby requested to bid for ‘Tender for Construction of Cement Concrete Road at Main Gate & miscellaneous works at C-DoT Campus, Mehrauli, New Delhi 110030.

Tender documents may be downloaded from C-DOT website www.cdote.in (for reference only) or Central Public Procurement (CPP) portal <https://eprocure.gov.in/eprocure/app>.

Further details are provided in the subsequent sections of this tender document. Schedule of some of the fiscal aspects is annexed herewith.

SCHEDULE OF FISCAL WORK

1.	Possession of work	Immediately upon issue of letter of acceptance of work.
2.	Commencement of work	7 th days from the date of issue of Work Order (WO).
3.	Estimated Cost:	Rs. 17,10,905/- (Seventeen Lakh Ten-Thousand Nine Hundred Five Only)
4.	Performance Bank Guarantee(PBG)	Performance Bank Guarantee for an amount equal to 3% of the Total PO value. From any nationalized/ scheduled bank, valid till 03 months after the expiry of the contract period / Defect Liabilityperiod whichever is later, in approved format.
5.	Earnest Money Deposit (EMD)	Rs.34,000/- (Rupees Thirty-Four Thousand) only by way of NEFT in INR only to the specified account mentioned section 1.7.
6.	Time allowed	03 (Three Months)
7.	Interim bills	As per clause No 1.14 of the documents
8.	Retention Money	5% (five percent) of the value of work done amount of the final bill.
9.	Release of RetentionMoney	Retention Money will be released after expiry of defect liability period of Twelve months from the completion of final work or at the time of payment of final bill, whichever is later.
10.	Validity period	06 (Six) Month commencing from the date of issue of PO/Letter of award of the work.
11.	Liquidated damages (LD)/Compensation of delay	1% (one percent) of value of contract, per week of delay, subject to maximum of 10% of the value of Contract.
12.	Defect Liability Period (DLP)	01 (One) year from the date of completion of the final work or the time of payment of final bill, whichever is later.

1 INSTRUCTIONS TO BIDDERS

Percentage rate tender are invited from eligible Contractors for Construction of Cement Concrete Road at Main Gate & miscellaneous works at C-DoT Campus, Mehrauli, New Delhi -110030.

1.1 Terms and conditions

A) Tender documents

Tender documents consisting of conditions of contract, and specifications and schedule of quantities, can be downloaded on or after publication of this tender free of cost.

B) Scope of Work

Scope of work includes required Construction of Cement Concrete Road work required at main gate road and other miscellaneous works at C-DOT Campus New Delhi.

The work in general will comprise of C.C work, R.C.C steel, brick and earth work etc. Other anticipated works required to be done are as under –

- ❖ Scarifying metalled road surface, cement concrete graded stone and providing and laying C.C pavement of mix M-25.
- ❖ Surface dressing on old surface with hot bitumen of grade VG - 10 of approved quality and providing applying tack coat using hot straight run Bitumen.
- ❖ Steel reinforcement for R.C.C work, taking out existing kerb stones of all types and laying kerb stone of all types position to the required line as directed by Engineer in Charge.
- ❖ Brick work & providing and fixing pre-molded joint filler in expansion joints of RCC roads.
- ❖ C.C Work of specified grade and Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant.
- ❖ Earth work in excavation in foundation trenches or drains, and its filling where required.
- ❖ Providing and supplying in standard lengths HDPE pipe of size 160 mm & 110 mm nominal outer diameter etc. including its Lowering laying and jointing in proper position required as per site condition.
- ❖ Crossing of roads by trench-less technology by laying of HDPE pipe, Centering and shuttering including strutting, propping etc.
- ❖ 12 mm cement plaster, filling available excavated earth work & providing and fixing in position pre-cast R.C.C manhole cover and frame of required shape of approved quality.
- ❖ Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials.
- ❖ Testing of materials as per Annexure Attached.

- ❖ Levelling work needs to be carried out before starting of CC work and after laying of concrete and measurement will be done on the basis of Levelling sheets provided and Levelling has to be carried out for drainage work (Levelling sheets submitted by the agency; all the decision taken by Engineer In charge will be final in this regard)

Contractor will submit the complete plan along with PERT or programme Chart to execute the work in the stipulated time frame within 10 days of issue of the Letter of Award. Engineer in charge may change or modify the programme if required. (For more details, please refer to Bill of quantity document shared as part of **BOQ**.)

C) Eligibility Criteria

- i. The agency should have an average annual turnover of not less than Rs.10,00,000/ (Rupees Ten lakh) during the last 3 (three) years. The bidder shall submit their audited balance sheet and CA Certificate for the last 3 fiscal years i.e., 2022-2023,2023-2024, 2024-25.
- ii. The agency should be registered with Central Public Works Department (CPWD),MES, State Public Works Department (PWD), Post and Telegraph (P&T) or Central Government undertakings or autonomous bodies in appropriate class.
- iii. The agency should have successfully completed similar work of at least 1(One) work of Rs 13,50,000/- (Rupees Thirteen Lakh Fifty Thousand) or 2 (two) works of similar nature valuing not less than Rs. 10,00,000 /- each (Rupees Ten lakh) or 3(three) similar nature works for not less than Rs. 6,80,000/- each (Rupees Six Lakh Eighty Thousand) in last 3 three years (FYs 2022-23,2023-24,2024-25) with a government department, autonomous bodies, or Registered Trusts. A copy of the experience certificate of Satisfactory completion from Client shall be enclosed with the bid.
- iv. Similar work means Building or Road work which consist of CC and RCC work.
- v. If bidder has worked with C-DOT earlier, copy of such Satisfactory completion of work from C-DOT shall be enclosed with the bid.
- vi. The agency should have an office in Delhi/NCR. The Bidder must submit details of their office and the responsible authorized officer.
- vii. The agency should have valid PAN, TIN, PF/ESI and GST number.
- viii. The Agency has to submit declaration certificate as per the GFR Rule 144, duly signed as per the format attached in **ANNEXURE -5**. (Please select one option out of three options given in clause 'C' and delete/strike off other options)
- ix. Only Class-I Local Supplier and Class-II Local Supplier as defined under

the Revised Public Procurement (Preference to Make in India) order 2017, issued vide DPIIT Order No. P-45021/2/2017-PP (BE-II) dated 16th September, 2020 and further as amended from time to time, if any, shall be eligible to bid in the tender. All rulings with respect to Local content, Class-I Local supplier/Class-II Local supplier shall be as per the cited order. The bidder shall submit the Declaration of Local Content (LC) as per **ANNEXURE -4** in the technical bid

- x. Consortium of companies/ firms are not allowed to participate in the tender.
- xi. The Bidder shall not be insolvent, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons. An undertaking in this regard has to be submitted by the bidder. The Bidder shall be liable at all times for the violation(s), if any of the aforesaid clause.
- xii. The Bidder shall not have, and their directors and officers not have, been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings. An undertaking in this regard has to be submitted by the bidder.

The bidder should not have been blacklisted in the past by any Government Agency. An undertaking to the effect that “the bidder should not have been banned/blacklisted by any Govt. Department, Central Govt. Unit/PSU/Financial Institutions/court during preceding three years till date”, is to be submitted. C-dot may in its discretion enquire/investigate regarding the same. C-DOT reserves the right to cancel the contract and take actions, in case of violations of the aforesaid clause, if any.

D) BIDDERS' ELIGIBILITY and PREFERENTIAL POLICIES:

- i. The Provisions contained in Public Procurement (Preference to Make in India) Order 2017 as amended by OM No. P-45021/2/2017-PP(BE-I1) dated 16.09.2020 further as amended from time to time if any, shall be applicable to this tender / RFQ.
The margin of purchase preference applicable is 20% or as decided by the relevant Nodal Ministry for the item from time to time.
- ii. The minimum Local Content (LC) for Class I and Class II local suppliers shall be 50% and 20% respectively or as decided by the relevant Nodal Ministry for the item.
The Bidder shall submit the Declaration of Local Content (LC) as per **Annexure-4** in the Technical Bid.
- iii. Restrictions under Rule 144 (xi) of General Financial Rules 2017 (order Public Procurement No.1) of DOE, Public Procurement Division, No.

F.No.6/18/2019- PPD) dated 23.07.2020) and amendments / clarifications issued subsequently by DOE shall be applicable to this tender. Format of certificate under Rule 144(xi) in the General Financial Rules (GFRs) 2017 as per **Annexure-5** needs to be submitted as part of Technical Bid.

- iv. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference for services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered service. If L-1 is not an MSE and MSE Service Provider (s) has/have quoted price within L-1+ 15% of margin of purchase preference / price band defined in relevant policy, then 100% order quantity will be awarded to such MSE bidder subject to acceptance of L1 bid. If bidder is MSE, **MSE registration certificate issued from approved agencies** which must be valid as on close date of the tender **to be submitted with Technical Bid** along with Undertaking as per **Annexure-8**. The successful bidder should ensure that the same is valid till the end of the contract period. The bidder must be the registered MSE for Service provider of the offered Service.

E) Duration of Contract

Time for executing the work shall be 03 (Three) Month from the 7th day from the date of issue of letter of award for the work.

1.2 Submission of Bid

A) Bid Documents

The documents to be submitted by the Bidder within the stipulated time are:

- i. Part I: Technical bid documents
- ii. Part II: Financial bid documents
- iii. Addenda/corrigenda, if any, to these documents.

B) Terms and Conditions for Bid Submission

The Bidder shall submit the bid strictly according to the terms and conditions of the tender documents and not stipulate any deviation. The Bidder shall seek clarification, if any, in the pre-bid meeting. C-DOT will submit clarifications in writing, if any, after the pre-bid meeting which will form the part of the tender document. The Bidder shall submit his bid strictly in conformity with such documents and no deviation in any manner will be acceptable in the bid to

be submitted by the Bidder.

C) Online Bid Submission

Bids shall be submitted online only on or before the end date for bid submission. Bids sent through fax, e-mail or any offline mode will not be considered.

The bidders are required to submit their bids electronically through the portal (<https://eprocure.gov.in/eprocure/app>) using valid Digital Signature Certificates (DSC). The instructions given below are meant to provide assistance in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal. More information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app?page=HelpForContractors&service=page>

Not more than one bid shall be submitted against this tender, by one Bidder. Please note that, in this document, the terms, **Financial Bid, Commercial Bid, Percentage Bid and Price Bid** are used interchangeably, and refer to the same. Similarly, **Bidder, Contractor, Supplier and Agency** are used interchangeably, and refer to the same.

Assistance to Bidders – CPP Portal

Any query relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24*7 CPP Portal Helpdesk on: - +91 120 4001 002, +91 120 4001 005, +91 120 6277 787 or send e-mail for technical support to. The prospective bidders are advised to upload the documents at least one day before the last date for uploading of documents, in order to avoid the possibilities of any last-minute surprises. C-DOT does not take any responsibility towards technical snags pertaining to CPP Portal and/or connectivity issues.

D) Bid Document Details

Details and documents to be submitted along with the bid are:

(1) Part I: Technical Bid Document

Following technical documents, to be uploaded as individual PDF files for each required document:

- i. A complete set of the tender document along with addenda/ corrigenda to technical bid documents so issued, duly filled by the Bidder as prescribed in different clauses of the tender document, signed, stamped and date affixed.
- ii. Scanned copy of proof of submission of EMD.
- iii. Power of Attorney of the signatory of the Bidder.

- iv. Valid income tax clearance certificate in the proforma prescribed by the Government of India.
- v. Copies of the audited balance sheets of bidding company/firm for the last three years i.e., 2022-23, 2023-24 and 2024-25
- vi. FY.
- vii. Copies of certificate indicating valid PAN, TIN, PF /ESI, and GST number of the Bidder.
- viii. Copy of experience certificates showing works done in last three years, i.e., 2022-23, 2023-24 and 2024-25 FY.
- ix. Certificate issued should not be by authority below an Executive Engineer/Manager level officer.
- x. An undertaking to the effect that the Bidder is not debarred or black-listed by any organization or any Government agency.
- xi. Proforma for 'Agreement' as per **Annexure- 1**
- xii. Performance Bank Guarantee (PBG) Security as per **Annexure -2**
- xiii. Percentage bid undertaking, as per format enclosed vide **Annexure-3**, duly signed and stamped.
- xiv. A declaration / Self Certification regarding compliance of Public Procurement (Preference to Make in India) Order 2017 as amended from time to time. Format is given in **Annexure-4**.
- xv. A declaration regarding Compliance of Order on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017. Format is given in **Annexure-5**.
- xvi. Brief introduction of the Bidder – Background, Experience along with **Annexure-6 'Bidder's Profile'**.
- xvii. Clearance certificates as a proof of satisfactory work from at least 2 customers, wherein the issuing authority should not be below the level of Executive- Engineer or equivalent.
- xviii. Tender Acceptance letter as per **Annexure-7**. Compliance Statement as per format in Annexure -7 including all subsections of the document.
- xix. MSE Registration certificate, if applicable, along with Undertaking as per **Annexure-8**.

Note: All Annexures to be submitted on Company's letterhead duly signed and stamped by competent authority.

(2) Part II: Financial Bid Document

The financial bid shall comprise of the following-

- i. The financial bid should be strictly as per the Percentage bid format of BoQ (Bill of Quantity) in the form of an Excel file.
- ii. Quotations should be valid for a period of at least 6 (six) months from the end date for bid submission. However, the quoted percentage bid by the successful bidder shall be valid for entire period of contract.

- iii. Lowest bid will be decided on the basis of the total cost of estimate after evaluating quoted percentage as per the financial bid. Financial bids not in line with **Percentage bid** format of BOQ will be summarily rejected.
- iv. Addenda/corrigenda, if any, issued to the financial bid documents, strictly within the stipulated timeline.
- v. Incomplete quotes without detailed BOQ will not be considered.
- vi. If there is any missing item/service, which is not covered in submitted financial offer and, is required for fulfilment of the contract, the same shall be supplied free of cost by the successful bidder.
- vii. The C-DOT may seek Bidder's consent for extension of the validity period. Such request and the response to the same shall be made in writing only. The bidder agreeing to the request for extension of validity period shall not seek to modify the previously submitted bid.

E) Signatures in the Tender Document by The Bidder

The tender document should be signed on each page by the Bidder or his duly authorized representative. Tender documents should be accompanied by a certified true copy of an absolute Power of Attorney in favour of signatory to the documents.

The tender shall contain the name, residence, and place of business of person or persons submitting the tender and shall be signed by the Bidder with his usual signature. Partnership firms shall furnish the full names of all partners in the tender. It should be signed in the partnership's name by all the partners or by duly authorized representatives followed by the name and designation of the person signing. A copy of constitution of the firm with names of all partners shall be furnished. Bid by a corporation shall be signed by an authorized representative and a Power of Attorney on that behalf shall accompany the bid.

The signature should be attested by two witnesses. The witnesses and sureties should be persons of status. Their names, occupations and addresses shall be stated below their signatures, and the bid for the work shall not be witnessed by a Contractor, or Contractors who himself/themselves has/have tendered for the same work. Failure to observe this condition will cause the bids of the Contractors bidding as well as witnessing to be summarily rejected.

1.3 Quotation in Tender Documents

The Bidder shall quote his percentage above/ below in English (both in figures as well as in words) in the schedule of quantities forming part of the financial bid documents in the indicated format.

In case discrepancies are found between the percentage quoted in figures and in words, or the amount shown in any item, the following procedure will be followed:

- i. When there is difference between the percentage in figures and words, the

percentage quoted in words shall be taken as correct.

- ii. When the percentage quoted by the Bidder in figures and words tally but the amount is incorrect, the percentage quoted by the Bidder in words shall be taken as correct.
- iii. When it is not possible to ascertain the correct percentage by either of the above methods, then the percentage quoted in words shall be taken as correct.

1.4 Corrections and Erasures

All corrections and alterations in the entries of tender papers shall be signed in full by the Bidder with date. No erasures and/or over-writings are permissible. If it is found that the tender is not submitted in proper manner or contains too many corrections, absurd percentage or amounts or any false/fake document submission, it will be open to C-DOT to reject the bid and/or remove the Contractor from the empaneled list of Contractors of C-DOT.

1.5 Visit to the Site (C-DOT Campus, Delhi)

The bidders shall mandatorily visit the site during the dates indicated in NIT, to assess the scope and extent of the work to be carried out as part of this tender. The bidders can visit the site at a maximum on two occasions. The bidders must ensure that the complete scope of work is fully understood without any ambiguity as C-DOT would not allow any further visit after the end date of site visit. Bidders should quote their percentage rate bid accordingly with the conclusion than bidder has fully understood and aware about all the items to be executed under his scope of work.

The following officials may be contacted for site visit:

1. Mr. Rajeev Kumar, Email: registrar@cdot.in, Phone: +91-11-26598272
2. Mr. Santosh Kumar Jha, Email: santoshj@cdot.in, Phone: +91-11-26598138
3. Mr. Someraj Ray, Email: someraj@cdot.in
4. Mr. Vineet Sharma, Email: vineet@cdot.in

1.6 Receipt of Bid

- i. Queries if any, should be sent in the given 'xls' format indicated below: in the form of an Excel file to C-DOT, only by e-mail at santoshj@cdot.in and rjquote@cdot.in, as per the schedule given in NIT.

Sr. No.	Name of the Bidder	Section / Page No	Clause Reference	Query

- ii. In the event of no such clarification sought, it will be deemed that the Bidders

have understood the parameters/requirements indicated/enunciated/described in the tender document completely and are complying with the same at the time of submission of the bid.

- iii. The Bidders may also note that no request for clarifications will be entertained after the above-mentioned date.
- iv. Replies to such queries will be uploaded on CPP Portal only. It will be bidder's responsibility to check the same on the portal.
- v. The completed bids, with both parts, Bids will be opened online as per the schedule given in the NIT. After online opening of the technical bid, result of their qualification as well financial bid opening schedule will be intimated later. Only technically shortlisted Bidders will be called during the opening of the financial bid.
- vi. Bids received after the above stipulated time and date and liable to be rejected.

1.7 Earnest Money Deposit

EMD of Rs. **Rs. 34,000/-** (Rupees Thirty-Four Thousand Only) be submitted to CDOT by way of NEFT in INR only to the below specified account. Bidders are required to upload a scanned copy of EMD in the technical bid on CPP portal during bid submission. EMD towards Tender Document has to be paid through NEFT as per the Bankers details below and upload the NEFT/UTR details:

CENTRE FOR DEVELOPMENT OF
TELEMATICS

CANARA BANK

C-DOT Campus, Chhatarpur, New Delhi-
110030

A/C NO. 0347101002508,
IFSC: CNRB0008657

In accordance with Government notification, EMD is exempted for Government bodies, Central / State PSUs, SSI organizations, SMEs and MSEs (who are exempted from payment of EMD), on production of relevant certificate or proof.

- i. The EMD of the Bidder may be forfeited, if
 - (a) If the Bidder withdraws his bid or modifies his offer in a manner unacceptable to C-DOT during the period of validity of tender, or
 - (b) In case of a successful Bidder, if the Bidder fails to
 - (a) Sign the contract, or
 - (b) Furnish the PBG, or

- (c) Commence of the work, in accordance with the terms of the contract.
- ii. Notwithstanding the above, C-DOT may, if required, request for an extension of the period of the bid validity & EMD validity, the same shall be done by the bidder as per instruction of C-DOT. The request and the response there to will be made in writing. The Bidder granting the request will not be permitted to modify the bid.
- iii. The EMD of the unsuccessful Bidder will be refunded by C-DOT. No interest will be paid on the EMD.
- iv. C-DOT will not be responsible for delays of any nature including due to postal and / or force majeure delays. Original instrument in respect of EMD received after end of bid submission day will not be accepted – the bid will be rejected outrightly and no communication pertaining to the same will be entertained.

1.8 Performance Bank Guarantee

- i. The successful Bidder, after placement of Purchase Order by C-DOT, shall submit Performance Bank Guarantee for an amount equal to 3% of the Total PO value.
- ii. The successful bidder shall have to submit a Performance Bank Guarantee (PBG) within 15 (Fifteen) days from the date of Award of Work Order / Purchase Order.
- iii. PBG shall remain valid for at least three months after the expiry of the period of the contract/ **Defect Liability period whichever is later, in approved format** towards faithful performance of the Bidder during the term of the contract.
- iv. The same can be deposited through a crossed DD in favour of 'Centre for Development of Telematics' or a PBG in the format provided in Annexure -2, issued by a nationalized or scheduled bank or online transfer through NEFT/RTGS. Fixed Deposits will not be considered as PBG.
- v. PBG will not be exempted for Government bodies, PSUs, SSIs or MSMEs.
- vi. PBG will be considered as submitted only when the hard-copy or e-form of PBG is received along with copy of SFMS message/ UTR details sent by the bidders' issuing bank to C-DOT official bankers.
- vii. A penal interest at the percentage of 15% per annum on PBG value shall be charged for the delay beyond 30 (thirty) days, i.e., from 31st day after the date of acceptance of Work Order / Purchase Order. Applicable penalty will be deducted from first payment, as and when due to the bidder, after fulfilling all other required payment terms and conditions.
- viii. In case, bidder fails to submit the requisite PBG even after 60 days, the C-DOT reserves the right to cancel the purchase order.
- ix. Any payment for the supply of items / services rendered shall not be made till PBG is submitted by the bidder and verified by C-DOT.
- x. In case the Work Order / Purchase Order is cancelled due to non-

submission of PBG, EMD submitted the bidder shall also be forfeited and / or further action of debarment / blacklisting may also be taken against the defaulting bidder.

- xi. All decision of C-DOT / competent authority, in this regard, shall be binding on the bidder.

1.9 INSTRUCTION TO BIDDER REGARDING EMD and PBG SUBMISSION:

PLEASE MAKE SURE THAT EMD and PBG HAVE BEEN
PREPARED/DONE ON 'CANARA BANK' as advisory Bank.
DETAILS OF CANARA BANK: -

ADDRESS: - CANARA BANK, CDOT CAMPUS, CHATTARPUR, NEW
DELHI-110030

Bank Account No. ---

0347101002508IFSC Code

----- CNRB

0008657

MICR CODE ----- 110015160

Kindly also share SFMS code/UTR no. given by your bank so that our
Banker can verify it online.

1.10 Validity of Offer

The bid shall be valid for 120 days from the date of opening of bids.

1.11 Right to Accept or Reject the Bid

- i. The right to accept or reject the bid will rest with C-DOT and C-DOT reserves its right to reject any or all the bids received without assigning any reason whatsoever. The quoted percentage should hold good for such eventualities.
- ii. If the Bidder withdraws his bid, i.e., part II (financial bid), before the said validity period, or makes any modifications in terms and conditions of the bid, then C- DOT, without prejudice to any right or remedy, will be at liberty to forfeit the whole of EMD.
- iii. Canvassing in connection with tenders is strictly prohibited and the bids submitted by the Bidders who resort to canvassing will be liable to rejection.
- iv. A bid in which any of the prescribed conditions are not fulfilled or is incomplete or is modified in any respect, shall be rejected. Any document found incorrect or insufficient will be liable to be rejected. C-DOT reserves the right to investigate all/any of such documents any time.
- v. The tender for the work shall not be witnessed by any Bidder who himself has bid or may bid for the same work. Failure to observe to this condition will render the bids of the Bidders bidding as well as witnessing the bid liable to summary rejection.

1.12 Pre-Bid Meeting

- i. A Pre-Bid Meeting would be conducted at C-DOT Delhi (for Date & Time), please refer NIT).
- ii. All queries, to be raised in the Pre-Bid Meeting, shall reach C-DOT through E-Mail only at santoshj@cdot.in and riquote@cdot.in with Subject line mentioning <Query: Tender no. C- DOT/CAMPUS/2024-25/69/07>. Queries to be submitted .xls format as per section 1.6.
- iii. No query shall be entertained after the scheduled date and time.
- iv. A maximum of 02 Authorized representatives shall be allowed to attend the Pre-Bid Meeting.
- v. In the event of no such clarification being sought, it will be deemed that the Bidders have understood the parameter / requirement indicated / enunciated / described completely and are complying with the same at the time of submission of the Tender. The Bidders may also note that no request for clarifications will be entertained after the above date.
- vi. Replies to all Queries/Corrigendum (if any) shall only be up-loaded in CPP Portal. Bidder are advised to check the portal before submitting the Tender.
- vii. The Venue for Pre-Bid Meeting, shall be at our "C-DOT Campus, Mandi Road, Mehrauli, New Delhi- 110030

1.13 Contract

- i. **Signing the contract:** The successful Bidder will be required to execute an agreement with C-DOT. A sample agreement is provided in the annexed proformato tender documents which shall be signed within 15 (Fifteen) days of issue of the letter of acceptance by C-DOT. In the event of failure on the part of the successful Bidder to submit the PBG or/and sign the agreement, the EMD will be forfeited and the acceptance of the bid may be considered as cancelled. Proforma available in Annexure-1.
- ii. The Contractor will be supplied, free of charge, one certified true copy of the contract document, except Standard Specifications and Standard Schedule of Quantity and such other printed or published documents. None of these documents shall be used for any purpose other than that of this contract.
- iii. GST, as applicable, on the materials or on the turnover shall be payable by the Contractor and will be deducted at source from each bill. C-DOT will not entertain any claim in this respect.

1.14 Certificates and Payments

A) Bills

The Contractor shall submit to the Engineer his bills for payment after the completion of the awarded work within 7 (seven) days or such dates/schedules as jointly agreed upon.

B) Fortnightly Payments

The Contractor shall, on submitting the bill, be entitled to receive payment proportionate to the part work thereof executed to the satisfaction of the Engineer whose certificate to the sum payable shall be final and conclusive against the Contractor. Running bills or all such payments due under the contract as per the C-DOT procedure only. After submission of the bill by the Contractor all efforts will be made to make payment within 15 (fifteen) days. However, no claim of interest whatever will be entertained if payment is not made within the stipulated time frame.

C) Price Escalation

The quoted percentage will be fixed for entire period of contract. No escalation in the percentage provided to the contractor during the contract period and shall be unaffected from any type of price variation in Market.

D) Final bill

The final bill shall be submitted by the Contractor in the same manner as specified for interim bills within 15 (fifteen) days of the final certificate of completion furnished by the Engineer. No further claims shall be made by the Contractor after submission of the final bill and these will be deemed to have been waived and extinguished. Payment of the bill will be made by C-DOT as far as possible within a period of 1 (one) month, the period being reckoned from the date of receipt of bill by the Engineer, complete with all details and accounts. However, no claim of interest or whatsoever will be entertained if payment is not made within the stipulated period.

1.15 Retention Money

1. 5% (five percent) of the final value of work done.
2. Retention money will be released after expiry of defect liability period of 01 (One) year from completion of the work.

1.16 Defects Liability

1.16.1 Defect Liability Period.

The Defect Liability Period shall be 01 (One) Year calculated from the date of completion of the Work certified by the Engineer in accordance with clause no. 1.23.

1.16.2 Completion of Outstanding Work and Remedying Defects.

To the intent that the Work shall, at or as soon as practicable after the

expiration of the Defects Liability Period be delivered to the C-DOT in the condition required by the Contract, expected fair wear and tear, to the satisfaction of the Engineer, the Contractor shall:

- a) Complete the Work, if any, outstanding on the date started in the Taking-Over Certificate as soon as practicable after such date and
- b) Execute all such work of amendment, reconstruction, and remedying defects, shrinkage or other faults as the Engineer may, during the Defects Liability period of within 14 days after its expiration, as a result of an inspection made by or on behalf of the Engineer prior to its expiration, instruct the Contractor to execute.

1.17 Amendments by C-DOT

C-DOT reserves the right to modify the issued tender Document, prior to submission of bids, by way of issuing written amendment and suitably extending the due date of submission of bids, if required. **All corrigendum shall be uploaded at CPP portal.**

1.18 Criteria of Evaluation of Accepted Bids

Bids will be evaluated as per the sequence given below:

- i. **Technical evaluation:** Bids to be evaluated first for technical compliance as per the specifications given.
- ii. **Financial Evaluation:**
 - a. Percentage bids of only the technically qualified bidders to be opened for financial evaluation.
 - b. Procedure for arriving at L1, the lowest quoted Bidder shall be as under: -
L1 shall be decided based on the Lowest tender value quoted by the contractor.

Clarification of Offers

To assist in the scrutiny, evaluation, and comparison of offers, C-DOT may, at its discretion, ask some or all bidders for clarification of their offer. The request for such clarifications and the response will necessarily be in writing. Response to such clarifications by bidder shall be submitted well within the due date and time, failing which the bid may not be processed. Any unsolicited clarification initiated by the bidder shall not be entertained by C-DOT.

1.19 Extent of Deviations and Variations, and Pricing

C-DOT will have full power to make alterations in, omissions from, additions to, or substitutions for the original BoQ, specifications, and instructions that

may appear to be necessary or advisable during the progress of the Work, and the Contractor shall be bound to carry out the Works in accordance with any instructions given to him in writing and signed by the Engineer and the alterations, omissions, additions or substitutions will form part of the Contract as if originally provided therein and any altered, additional or substituted work which the Contractor may be directed to do in the manner specified above shall become part of the Works, and shall be carried out by the Contractor on the same conditions in all respects including price, quoted rate on which he agreed to do the main work except as hereafter provided.

In the event of any deviations resulting in additional cost over the tendered value, the time for completion of the Works will be extended, if requested by the Contractor, in the proportion that the additional cost of the altered, additional or substituted work bears to the original tendered value.

1. For altered, additional or substituted item of work is specified in the Schedule of Quantities, the Contractor shall carry out the altered, additional or substituted items at the quoted percentage.
2. The Engineer's interpretation as to what is a similar class of work and his decision will be final and binding on the Contractor.
3. For altered, additional or substituted item of work is not specified in the Schedule of Quantities, then such items of work will be carried out at the rate entered in the respective CPWD Delhi Schedule of Rates as applicable for the respective section, plus/minus the quoted percentage by the contractor in tender.
4. If altered, additional or substituted item of work cannot be determined in the manner specified in CPWD Delhi Schedule of Rates. Then Market rate analysis is to be done with plus/minus the quoted percentage by the contractor for evaluating the rate for such item. The decision of the Engineer, in consultation with C- DOT, as to the prevailing Market percentage and quantum of materials, labour, etc., involved per unit of measurement will be final and binding on the Contractor.

1.20 Request for Extension of Time

Request for extension of time, to be eligible for consideration, shall be made by the Contractor in writing within 10 (ten) days of the happening of the event causing delay in the prescribed form, to the Engineer, under intimation to CEO, C-DOT. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

1.21 Grant of Extension of Time

In any such case, CEO, C-DOT may give a fair and reasonable extension of time for completion of the Work. Such extension will be communicated to the

Contractor by the Engineer in writing, within 15 (fifteen) days of the date of receipt of such request. Non application by the Contractor for extension of time will not be a bar for giving a fair and reasonable extension by CEO C-DOT and this will be binding on the Contractor.

1.22 No Compensation for Delay

The Contractor will not be entitled to any compensation for any loss suffered by him on account of delays in commencing or in executing or in completing the Works, whatever might be the cause of the delay. Such delays will include, but not be limited to, delays for which extension of time may be granted or delays arising out of modification to the work entrusted to the Contractor or in any Sub-Contracts connected therewith or delays in awarding Contracts for other trades of the project or in commencement or completion of such works or in procuring Government controlled or other building materials or for any other reason whatsoever. No claim in respect of compensation or otherwise, as the result of extension granted under above clause, will be admitted.

1.23 Final Completion of Works

The work shall be considered as Finally Complete at the end of the Defects Liability Period subject to the contractor having replaced and / or rectified and made good all the defective items of work and defects accordance with clause above, to the satisfaction of the Engineer-in-charge and provided that the Contractor has performed all his obligations and fulfilled all his liabilities under the Contract, and when the Engineer-in-Charge has certified in writing that the Works are Finally Complete.

If the Contractor leave the work midway then the PBG amount will be forfeited. Any other Penalty shall be imposed on contractor as decided by C-DOT in case required.

1.24 Penalty for Delay

If the Contractor fails to maintain required progress in terms of the Contract or to complete the Works and fails to clear the site on or before the stipulated or extended date of completion, he will, without prejudice to any other right or remedy of C-DOT on account of such breach, be liable to pay agreed compensation of an amount equal to 1% (one percent) of the Contract Sum or such smaller amount as C-DOT may decide, for every week or part thereof the progress remains below the agreed progress schedule, or that the work or phase remains incomplete. The decision of C-DOT in writing shall be final and binding on the Contractor.

Provided that the total amount of penalty for delay to be paid under this clause will not exceed 10% (ten percent) of the Contract Sum of the Work as shown in the letter of acceptance, for which a separate period of completion is originally given.

The amount of penalty may be adjusted or set off against any sum payable to the Contractor under this or any other contract with C-DOT.

1.25 Other Terms & Conditions

- i. C-DOT reserves the right to amend the commercial terms & conditions, scope of supply and the technical specifications and publish them before the specified last date of submission of the Bid.
- ii. C-DOT reserves the right to cancel the tender process partially or entirely before placement of Purchase Order, without assigning any reasons thereof.
- iii. C-DOT reserves the right to reject any bidder, who is found to indulge in any corrupt or fraudulent practices, while competing for this tender.
- iv. C-DOT reserves the right to declare a Bidder ineligible, either indefinitely, or, for a stated duration, for being awarded a contract, if, at any stage of the bidding process, it is found that the Bidder has engaged in corrupt or fraudulent practices, before, during or after the award/execution of contract.
- v. If, at any time, during the performance of the Purchase Order, the Bidder encounters conditions impeding timely delivery of material, then they should promptly notify C-DOT, in writing, of the fact of the delay, the cause of delay and its likely duration. C-DOT shall evaluate the situation and at its discretion, decide to extend for the Bidders, the time for performance. C-DOT's decision in this regard will be final and binding

1.26 Force Majeure:

The right of the contractor to proceed with the work shall not be terminated because of any delay, subject to the time limits set forth in this Clause, in the execution of the work due to unforeseeable causes beyond the control and without the fault or negligence of the contractor, or the Sub-contractors, defined under Force Majeure, as Acts of God, or that of the public enemy, restraints of Governing States, fire, floods, earthquake and unprecedented extreme weather. If the Contractor is wholly prevented from the performance of the contract for a period in excess of thirty (30) consecutive days because of Force Majeure, the C-DOT may terminate this contract by fifteen (15) days written notice delivered to the contractor. In the event this contract is so terminated, the contractor shall be paid for the costs of work actually executed up to the date of termination. In the event of delay lasting over one month, if arising out of cases of Force Majeure, C-DOT will still reserve the right to cancel the order/contract. C-DOT shall not be liable for any sums of compensation or liabilities of the contractor, arising out of any force majeure event.

1.27 Safety of C-DOT Property:

The contractor shall ensure that adequate precautions are exercised by his personnel working under the Contract towards safety of C-DOT property and all his personnel adhere and comply with prescribed discipline, safety, and security norms of C-DOT.

1.28 Limitation of Liability:

Except as provided in any applicable laws/rules, the aggregate liability of the supplier under this Tender shall be limited to 100% (one hundred percent) of basic value of the respective Contract (contemplated by the Tender) Price. For clarification, such limitation, shall not apply to liability arising out of (I) breach of Confidentiality or Intellectual Property related obligations under this Contract (ii) fraudulent or criminal acts or omissions or will full default of the supplier. Amount indemnified by Contractor to C-DOT under this Clause shall be liable to GST.

1.29 Settlement of Disputes

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instructions herein beforementioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the work or the execution or failure to execute the same whether arising during the progress of the Work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

- i. If the Contractor considers that he is entitled to any extra payment or compensation in respect of the works over and above the amounts admitted as payable by C-DOT or in case the Contractor wants to dispute the validity of any deduction or recoveries made or proposed to be made from the contract, the Contractor shall forthwith give notice in writing of his claim, in this behalf to the Engineer within 30 (thirty) days from the date of disallowance thereto for which the Contractor claims such additional payment or compensation or disputes the validity of any deduction or recovery. The said notice shall give full particulars of the claim, grounds on which it is based and detailed calculations of the amount claimed and the Contractor shall not be entitled to raise any claim nor shall C-DOT be in any way liable in respect of any claim by the Contractor unless notice of such claim shall have been given by the Contractor to the Engineer in the manner within the time as aforesaid. The Contractor shall be deemed to have waived and extinguished all his rights in respect of any claims not notified to the Engineer in writing in the manner and within the time aforesaid.
- ii. The Engineer shall give his decision in writing on the claims notified by the

Contractor within (thirty) 30 days of the receipt of the notice thereof. If the Contractor is not satisfied with the decision of the Engineer, the Contractor may, within 15 days of the receipt of the decision of the Engineer, submit his claims to CEO C-DOT for conciliation along with all details and copies of correspondence exchanged between him and the Engineer. CEO C-DOT will appoint the Conciliator agreed mutually by the Parties.

- iii. In the case, conflict is not resolved amicably, then courts at New Delhi shall have exclusive jurisdiction.

1.30 Jurisdiction

All matters arising out of or in any way connected with this contract will be deemed to have arisen in New Delhi and only the courts in New Delhi will have jurisdiction to determine the same.

LIST OF FIELD TESTS

- ❖ Slump test
- ❖ Compressive strength (concrete (as per IS 456) or bricks) test
- ❖ Rebound Hammer test
- ❖ Temperature measuring with thermometer with brass protected end 0-200 degree C

1.31 FIELD TESTING EQUIPMENT AND INSTRUMENTS

A. Testing Equipment at Field Laboratories

- ✓ Balances
 - 7kg to 10 kg. Capacity, Semi-self indicating type-Accuracy 10 gm
 - 500 gm. Capacity, Semi-self indicating type Accuracy 1 gm
 - Pan Balance – 5 Kg. Capacity, accuracy 10 gm.
 - Weighing scale platform type 100kg capacity.
- ✓ Sieves: as per IS 460-1962.
 - I.S. Sieves – 450 mm internal dia of sizes 100 mm, 80 mm, 63 mm, 50mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm complete with lid and pan.
 - IS Sieves – 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 600 microns, 425microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.
- ✓ Sieve shaker capable of 200 mm and 300 mm dia sieves, motorized operated with timing switch
- ✓ assembly.
- ✓ Equipment for slump test – Slump Cone, Steel Plate, tamping rod, steel scale, scoop.
- ✓ Duly calibrated 100 tonnes compression testing machine, electrical -cum manually operated.
- ✓ Graduated measuring cylinders 200 ml capacity
- ✓ Enamel trays (for efflorescence test for bricks and other tests)
 - 300 mm X 250 mm X 40 mm
 - Circular plates of 250 mm dia
 - 600 mm X 450 mm X 500 mm
 - 450 mm X 300 mm X 40 mm.
- ✓ ISI marked 150X150X150 mm concrete cube moulds as per site requirement – 18 Nos.
- ✓ Graduated cylinder 1000 ml. Capacity.
- ✓ Pumps & pressure gauges for hydraulic testing of pipes.
- ✓ Moisture meter
- ✓ Oven
- ✓ PH Meter.
- ✓ Any other equipment for site tests as outline in BIS and as directed by the Engineer -in-charge.

B. Field Testing Instruments

- ✓ Steel tapes – 3 m
- ✓ Digital Vernier Callipers

- ✓ Digital Micrometre Screw 25 mm gauge
- ✓ A good quality plumb bob
- ✓ Spirit level minimum 30 cms long with 3 bubbles for horizontal vertical
- ✓ Wire gauge (circular type) disc.
- ✓ Foot rule
- ✓ Long nylon thread
- ✓ Rebound hammer for testing concrete
- ✓ Magnifying glass
- ✓ Plastic bags for taking samples
- ✓ Digital Distance meter
- ✓ Leveling machine
- ✓ Theodolite
- ✓ Total survey station
- ✓ Ultrasonic Pulse velocity meter

Any changes or alteration in tests can be done Engineer in charge as per requirement of Site condition.

SPECIFICATIONS

- a) The Work under this Contract shall be carried out as per the specifications laid in CPWD specifications 2019 (volumes I and II) for civil works. All correction slips and amendments issued time to time and up to the date of receipt of contract shall also be applicable. All materials, fittings and fixtures shall be of approved quality and shall confirm to relevant CPWD specifications for works and shall be ISI marked as prescribed.

However, where particular specifications have been laid down for work in these documents, the same shall be followed in addition to applicable CPWD specifications. In case of any contradiction between CPWD specifications and particular specifications in these documents, the particular specifications shall be applicable and in case of any dispute, the interpretation of the Engineer shall be final and binding.

If specifications for any particular work are not available in CPWD specifications or in these documents, then requirements laid down in relevant Indian standard specifications shall be followed. In case relevant Indian standard specifications are also not available, the decision and instruction of Engineer in writing based on good engineering and construction practice shall be followed and shall be binding on the Contractor.

The description of items as given in the Schedule of Quantities appended with the Tender will prevail over specifications in case of any inconsistency between the two.

The work shall be executed and measured as per metric dimensions given in the Schedule of Quantities (FPS units wherever indicated are for guidance only).

- b) The work shall be carried out in accordance with the drawings and documents provided by the Engineer. In case of any difference noticed between BoQ and specifications, final decision of the Engineer shall be obtained in writing by the Contractor before starting the work. Nothing extra will be paid on this account.
- c) For using equivalents for various materials and the materials of approved makes, approval shall be taken from Engineer in writing before using them on the work.
- d) List of approved brands of materials:

S.No.	Material description	Approved make/brand
1	Cement	<ul style="list-style-type: none">Gujarat AmbujaUltratechZauri

		<ul style="list-style-type: none"> • Jaypee • ACC • JK
2	Steel	<ul style="list-style-type: none"> • Rungta • Jindal • Tata • SAIL
3	hardener, and construction chemicals	<ul style="list-style-type: none"> • FOSROC • CICO • Pidilite • Sika • Dr. fixit
4	Bumen	<ul style="list-style-type: none"> • Indian Oil • Hindustan Petroleum • Bharat Petroleum

A TECHNICAL SPECIFICATION OF NON –DSR ITEMS

Item No.17: Providing and Supplying in standard lengths High Density Polyethylene (H.D.P.E) Pipes,confirming to IS 4984:1995 and IS 7328:1992 (amended upto date), including all local & centraltaxes, transportation and freight charges inspection charges, loading / unloading charges,conveyance to the departmental stores / site & stacking the same in closed shade dulyprotecting from sunrays & rain, etc. complete. These rates are excluding excise duty component

- i) 160 mm nominal outer diameter (OD) HDPE pipe of material grade PE 80 / PN 6
- ii) 110 mm nominal outer diameter (OD) HDPE pipe of material grade PE 80 / PN 6

Item No.18: Lowering, laying and jointing HDPE pipe in proper position by butt fusion jointing procedure including hydraulic testing as per relevent IS Code complete with all materials for jointing procedures like butt fusion welding machine with hydraulic jack, top loading clamp etc pump and accessories for hydraulic testing and all labours as directed by engineer in charge as confirming to IS - 7634:(Part II):2012 (amended upto date).

- i) 110 mm nominal outer diameter (OD) HDPE pipe of material grade PE 80 / PN 6 (a) Lowering and laying of HDPE Pipe including testing but excluding the cost of jointing.
- ii) Providing butt fusion welding joints to HDPE Pipe as confirm to DVS 2207 part-II.
- b) 160 mm nominal outer diameter (OD) HDPE pipe of material grade PE 80 / PN 6 Providing butt fusion welding joints to HDPE Pipe as confirm to DVS 2207 part-II.

Technical Specifications (Item No. 17 & 18)

HIGH DENSITY POLYETHYLENE (HDPE) PIPE AND FITTINGS

PART 1 GENERAL

1.1 SECTION DESCRIPTION

1.1.1 This specification includes high-density polyethylene pressure pipe primarily intended for the transportation of water and sewage either buried or above grade.

1.2 REFERENCES

1.2.1 AWWA C901 Polyethylene (PE) pressure Pipe & Tubing, ½ inch through 3 inch for water

1.2.2 AWWA C906 Polyethylene (PE) pressure Pipe & Fittings, 4 inch through 63 inch for water

1.2.3 ASTM D3035 Standard Spec for PE Pipe (DR-PR) Based on Controlled Outside Diameter

1.2.4 ASTM D3261 Butt Heat Fusion PE Fittings for PE Pipe & Tubing

1.2.5 ASTM D3350 Standard Specification for PE Pipe & Fittings Materials

1.2.6 ASTM D1238 Melt Flow Index

1.2.7 ASTM D1505 Density of Plastics

1.2.8 ASTM D2837 Hydrostatic Design Basis

1.2.9 NSF Std.#14 Plastic Piping Components & Related Materials

1.2.10 TR-33/2005 Generic Butt Fusion Joining Procedure for Field Joining of PE Pipe

1.2.11 IS 4984:2016 Polyethylene Pipes for water supply-Specification

1.3 GENERAL

1.3.1 USE

1.3.1.1 High Density Polyethylene (HDPE) pipes/fittings shall be allowed for use as water, wastewater and reclaimed water pressure pipe where compatible with the specific conditions of the project. The use of material other than HDPE pipe may be required by DEPTTL AUTHORITY if it is determined that HDPE pipe is unsuitable for the particular application. All material used in the production of water main piping shall be approved by the National Sanitation Foundation (NSF).

1.4 DOCUMENTATION

1.4.1 Documentation from the resin's manufacturer showing results of the following tests for resin identification:

1.4.1.1 Melt Flow Index ASTM D1238

1.4.1.2 Density ASTM D1505

1.5 MANUFACTURER

1.5.1 All HDPE pipe and fittings shall be from a single manufacturer, who is fully experienced, reputable and qualified in the manufacture of the HDPE pipe to be furnished. The pipe shall be designed, constructed and installed in accordance with the best practices and methods and shall comply with these Specifications. Qualified manufacturers shall be: **Astral Pipes, Finolex Industries, Supreme Industries, Ashirvad Pipes, Jain Irrigation Systems, TSL-Tirupati, Utkarsh India, DukePipes, and Mahavir Pipes.**

1.6 FINISHED PRODUCT EVALUATION

1.6.1 Production staff shall check each length of pipe produced for the items listed below. The results of all measurements shall be recorded on production sheets, which become part of the manufacturer's permanent records.

1.6.1.1 Pipe in process shall be checked visually, inside and out for cosmetic defects (grooves, pits, hollows, etc.)

1.6.1.2 Pipe outside diameter shall be measured using a suitable periphery tape to ensure conformance with ASTM F714, IS 4984 or ASTM D3035 or IS 4984:2016, whichever is applicable.

1.6.1.3 Pipe wall thickness shall be measured at 12 equally spaced locations around the circumference at both ends of the pipe to ensure conformance with IS 4984:2016 or ASTM F714 or ASTM D3035, whichever is applicable.

1.6.1.4 Pipe length shall be measured.

1.6.1.5 Pipe marking shall be examined and checked for accuracy.

1.6.1.6 Pipe ends shall be checked to ensure they are cut square and clean.

1.6.1.7 Subject inside surface to a "reverse bend test" to ensure the pipe is free of oxidation (brittleness).

1.7 TESTING

1.7.1 Test as per IS 4984:2016

- a) Visual appearance and dimension**
- b) Melt Flow Rate**
- c) Density**
- d) Reversion Test**
- e) Elongation at Break**
- f) Carbon black content**

- g) Carbon black dispersion**
- h) Oxidation Induction**
- i) Internal Pressure Creep rupture Test**
- j) Internal pressure creep rupture test for joints at 80degree C for 48h**

These Acceptance test report have to be submitted by contractor from manufacturer and should satisfy the criteria given in IS 4984:2016 Table 8

1.7.2 STRESS REGRESSION Testing

The polyethylene pipe manufacturer shall provide certification that stress regression testing has been performed on the specific polyethylene resin being utilized in the manufacture of this product. This stress regression testing shall have been done in accordance with ASTM D2837 and the manufacturer shall provide a product supplying a minimum Hydrostatic Design Basis (HDB) of 1,600 psi as determined in accordance with ASTM D2837.

1.8 COMPATIBILITY

1.8.2 Contractor is responsible for compatibility between pipe materials, fittings and appurtenances.

- 1.9 **WARRANTY** The pipe MANUFACTURER shall provide a warranty against manufacturing defects of material and workmanship for a period of ten years after the final acceptance of the project by the OWNER. The MANUFACTURER shall replace at no expense to the OWNER any defective pipe/fitting material including labor within the warranty period.

PART 2 PRODUCTS

2.1 MATERIALS FOR PIPE SIZES 4-INCH DIAMETER AND LARGER

- 2.1.1 Materials used for the manufacture of polyethylene pipe and fittings shall be made from a PE 3408 high density polyethylene resin compound meeting cell classification 345434C per ASTM D3350; and meeting Type III, Class C, Category 5, Grade P34 per ASTM D1238.
- 2.1.2 High Density Polyethylene (HDPE) pipe shall comply with AWWA Specifications C906.
- 2.1.3 If rework compounds are required, only those generated in the Manufacturer's own plant from resin compounds of the same class and type from the same raw material supplier shall be used.
- 2.1.4 Dimensions and workmanship shall be as specified by IS 4984:2016 or ASTM F714. HDPE fittings and transitions shall meet ASTM

D3261. HDPE pipe shall have a minimum density of 0.955 grams per cubic centimeter. All HDPE pipe and fittings shall have a Hydrostatic Design Basis (HDB) of 1,600 psi.

2.1.5 HDPE pipe and accessories 4-inch diameter and larger, shall be meeting the requirements of Standard Dimension Ratio (SDR) as MINIMUM STRENGTH as specified in IS 4984:2016.

2.1.6 The pipe Manufacturer must certify compliance with the above requirements.

2.2 MATERIALS FOR PIPE SIZES 2-INCH DIAMETER AND LESS

2.2.1 Materials used for the manufacture of polyethylene pipe and fittings shall be made from a PE 3408 high density polyethylene resin compound meeting cell classification 345434C per ASTM D3350; and meeting Type III, Class C, Category 5, Grade P34 per ASTM D1238.

2.2.2 High Density Polyethylene (HDPE) pipes shall comply with AWWA Specifications C901.

2.2.3 If rework compounds are required, only those generated in the Manufacturer's own plant from resin compounds of the same class and type from the same raw material supplier shall be used.

2.2.4 Dimensions and workmanship shall be as specified by ASTM D3035. HDPE fittings and transitions shall meet ASTM D3261. HDPE pipe shall have a minimum density of 0.955 grams per cubic centimeter. All HDPE pipe and fittings shall have a Hydrostatic Design Basis (HDB) of 1,600 psi.

2.2.5 HDPE pipe and accessories 2" and less in diameter, shall be meeting the requirements of Standard Dimension Ratio (SDR) as MINIMUM STRENGTH as specified in IS 4984:2016.

2.2.6 The pipe Manufacturer must certify compliance with the above requirements.

2.3 FITTINGS

2.3.1 All molded fittings and fabricated fittings shall be fully pressure rated to match the pipe SDR pressure rating to which they are made. All fittings shall be molded or fabricated by the manufacturer. No Contractor fabricated fittings shall be used unless approved by the Engineer.

2.3.2 The manufacturer of the HDPE pipe shall supply all HDPE fittings and accessories as well as any adapters and/or specials required to perform the work as shown on the Drawings and specified herein.

2.3.3 All fittings shall be installed using butt-fused fittings, thermo-fused fittings/couplings, or flanged adapters and must be approved by the Engineer. **NO** size on size wet taps shall be permitted.

2.3.4 All transition from HDPE pipe to ductile iron or PVC shall be made per the approval of Depttl. Engineer and per the HDPE pipe manufacturer's recommendations and specifications. A molded flange connector adapter

within a carbon steel back-up ring assembly shall be used for pipe type transitions. Ductile iron back-up rings shall mate with cast iron flanges per ANSI B16.1. A 316 stainless steel back-up ring shall mate with a 316 stainless steel flange per ANSI B16.1.

- 2.3.4.1 Transition from HDPE to ductile iron fittings and valves shall be approved by Depttl. Engineer before installation.
- 2.3.4.2 No solid sleeves shall be allowed between such material transitions.
- 2.3.4.3 Fittings and transitions shall be as manufactured by Phillips DRISCOPIPE, Inc., 1000 Series Pressure Pipe, Chevron Chemical Company Plexco/Spiralite pipe, or equal.
- 2.3.4.4 The pipe supplier must certify compliance with the above requirements.

2.4 PIPE IDENTIFICATION

2.4.1 The following shall be continuously indent printed on the pipe or spaced at intervals not exceeding 5-feet:

- 2.4.1.1 **Name and/or trademark of the pipe manufacturer.**
- 2.4.1.2 **Nominal pipe size, Outside Diameter.**
- 2.4.1.3 **Standard Dimension ratio.**
- 2.4.1.4 **The letters PE followed by the polyethylene grade & material designation Pressure Rating.**
- 2.4.1.5 **Manufacturing standard reference, e.g., ASTM F714 or D-3035, as required.**
- 2.4.1.6 **A production code from which the date and place of manufacture can be determined.**
- 2.4.1.7 **Colour Identification, either stripped by co-extruding longitudinal identifiable colour markings or shall be solid in colour and as follows:**
 - i. BLUE – Water**
 - i. GREEN – Sanitary Sewer**

2.4.2 Tracing Wire

- 2.4.2.1 Open trench installation of HDPE shall be identifiable per Depttl. Specification Sec. 02600, Part 2, 2.01 (A).
- 2.4.2.2 Directional Drilled HDPE shall have wire conforming to Copperhead Industries Reinforced #1245 Extra-High Strength Tracer Wire and affixed to the drilling head/reamer per Detail M-17.

- 2.4.3 Marking Tape: Marking tape shall be installed per Depttl. Engineer approval.

PART 3 EXECUTION

3.1 JOINING METHOD

- 3.1.1 The pipe shall be joined with butt, heat fusion joints as outlined in ASTM D2657 and conform to the Generic Butt Fusion Joining Procedure for Field Joining of Polyethylene Pipe, Technical Report TR-33/2005, published by the Plastic Pipe Institute (PPI). All joints shall be made in strict compliance with the manufacturer's recommendations. A factory qualified joining technician as designated by pipe manufacturer or experienced, trained technician shall perform all heat fusion joints in the presence of the Depttl. Authority .
- 3.1.2 Lengths of pipe shall be assembled into suitable installation lengths by the butt- fusion process. All pipes so joined shall be made from the same class and type of raw material made by the same raw material supplier. Pipe shall be furnished in standard laying lengths not to exceed 50 feet and no shorter than 20 feet.
- 3.1.3 On days butt fusions are to be made, the first fusion shall be a trial fusion in the presence of a Depttl. Authority. The following shall apply:
- 3.1.3.1 Heating plate surfaces shall be inspected for cuts and scrapes and shall be free of dirt and residue. Heater surfaces should be between 400⁰F (minimum) to 450⁰F (maximum). Measure the temperature @ 12:00, 3:00, 6:00 and 9:00 o'clock positions using a pyrometer or infrared thermometer at locations where the heating plate will contact the pipe/fitting ends. The maximum temperature difference between any two points on a single heating surface must not exceed 24⁰F. If this temperature is exceeded, the heating plate shall be cleaned per the manufacturer's recommendations.
- 3.1.3.2 The fusion or test section shall be cut out after cooling completely for inspection.
- 3.1.3.3 The test section shall be 12" or 30 times (minimum) the wall thickness in length and 1" or 1.5 times the wall thickness in width (minimum).
- 3.1.3.4 The joint shall be visually inspected as to continuity of "beads" from the melted material, and for assurance of "cold joint" prevention (i.e. – joint shall have visible molded material between walls of pipe). Joint spacing between the walls of the two ends shall be a minimum of 1/16" to a maximum 3/16".

- 3.1.4 The polyethylene flange adapters at pipe material transitions shall be backed up by stainless steel flanges conforming to ANSI B16.1 and shaped as necessary to suit the outside dimensions of the pipe. The flange adapter assemblies shall be connected with corrosion resisting bolts and nuts of Type 316 Stainless Steel as specified in ASTM A726 and ASTM A307. All bolts shall be tightened to the manufacturer's specified torques. Bolts shall be tightened alternatively and evenly. After installation, apply a bitumastic coating to bolts and nuts.

PART 4 INSTALLATION

- 4.1 High Density Polyethylene (HDPE) Pipe shall be installed in accordance with the instruction of the manufacturer, as shown on the Drawings and as specified herein. A factory qualified joining technician as designated by the pipe manufacturer shall perform all heat fusion joints.
- 4.2 **HDPE shall be installed either by Open Trench Construction or Directional Bore Method.**
- 4.3 Care shall be taken in loading, transporting and unloading to prevent damage to the pipe. Pipe or fitting shall not be dropped. All pipe or fitting shall be examined before installation, and no piece shall be installed which is found to be defective. Any damage to the pipe shall be repaired as directed by the Engineer. If any defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner by the contractor, at his own expense.
- 4.4 Under no circumstances shall the pipe or accessories be dropped into the trench or forced through a directional bore upon "pull-back".
- 4.5 Care shall be taken during transportation of the pipe such that it will not be cut, kinked or otherwise damaged.
- 4.6 Ropes, fabric or rubber protected slings and straps shall be used when handling pipes. Chains, cables or hooks inserted into the pipe ends shall not be used. Two slings spread apart shall be used for lifting each length of pipe.
- 4.7 Pipes shall be stored on level ground, preferably turf or sand, free of sharp objects, which could damage the pipe. Stacking of the polyethylene pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature conditions. Where necessary due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.
- 4.8 Pipe shall be stored on clean level ground to prevent undue scratching or gouging. The handling of the pipe shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. The maximum allowable depth of cuts, scratches or gouges on the exterior of the pipe is 5 percent of wall thickness. The interior pipe surface shall be free of cuts, gouges or scratches.

- 4.9 Pipe shall be laid to lines and grade shown on the Drawings with bedding and backfill as shown on the Drawings.
- 4.10 When laying is not in progress, including lunchtime, the open ends of the pipe shall be closed by fabricated plugs, or by other approved means.
- 4.11 Sections of pipe with cuts, scratches or gouges exceeding 5 percent of the pipe wall thickness shall be removed completely and the ends of the pipeline rejoined.
- 4.12 The pipe shall be joined by the method of thermal butt fusion. All joints shall be made in strict compliance with the manufacturer's recommendations.
- 4.13 Mechanical connections of the polyethylene pipe to auxiliary equipment such as valves, pumps and tanks shall be through flanged connections which shall consists of the following:
 - 4.13.1 A polyethylene flange shall be thermally butt-fused to the stub end of the pipe.
 - 4.13.2 A 316 stainless steel back up ring shall mate with a 316 stainless steel flange.
 - 4.13.3 A 316 stainless steel bolts and nuts shall be used.
- 4.14 Flange connections shall be provided with a full-face neoprene gasket.
- 4.15 All HDPE pipe must be at the temperature of the surrounding soil at the time of backfilling and compaction.
- 4.16 If a defective pipe is discovered after it has been installed, it shall be removed and replaced with a sound pipe in a satisfactory manner at no additional cost to the Owner. All pipe and fittings shall be thoroughly cleaned before installation, shall be kept clean until they are used in the work and when laid, shall conform to the lines and grades required. kinked or otherwise damaged.
- 4.17 Open Trench Installation:
 - 4.17.1 Depttl. Standards and Specification, Section 02200 – Utility Excavation, Trenching, and Backfilling shall apply in its entirety. For proper laying excavation of any kind of soil and strata including shoring work (where needed and so directed by the Engineer-in-charge), dewatering of trenches by pumps, preparation of bed (having no sharp and hard materials which can cause injury to the pipes and specials), has to be done by contractor including removing of excavated earth at the safe distance, as directed by the Engineer-in-charge. The depth of excavation shall be in such a manner that a minimum clear cover of 1.00 mtr. is available from top of pipe for filling. Lowering · cleaning, laying and jointing of pipes and specials shall have to be done as per methods already described. However, other precaution and measure shall have to carry out as follows;
 - 4.17.2 The centerline of the pipe shall not deviate from a straight line drawn between the centers of the openings at the ends of the pipe by more than 1/16-in per foot of length. If a piece of pipe fails to meet this requirement check for straightness, it shall be rejected and removed from the site.

Laying instructions of the manufacturer shall be explicitly followed.

- 4.17.3 Good alignment shall be preserved during installation. Deflection of the pipe shall occur only at those places on design drawings and as approved by the Engineer. Fittings, in addition to those shown on the Drawings, shall be used only if necessary or required by the Engineer.
- 4.17.4 Each length of the pipe shall have the assembly mark aligned with the pipe previously laid and held securely until enough backfill has been placed to hold the pipe in place. Joints shall not be “pulled” or “cramped”.
- 4.17.5 Precautions shall be taken to prevent flotation of the pipe in the trench.
- 4.17.6 When moveable trench bracing such as trench boxes, moveable sheeting, shoring or plates are used to support the sides of the trench, care shall be taken in placing and moving the boxes or supporting bracing to prevent movement of the pipe, or disturbance of the pipe bedding and the backfill. Trench boxes, moveable sheeting, shoring or plates shall not be allowed to extend below top of the pipe. As trench boxes, moveable sheeting, shoring or plates are moved, pipe bedding shall be placed to fill any voids created and the backfill shall be recompact to provide uniform side support for the pipe.
- 4.17.7 Restrained joints shall be installed where shown on the Drawings or as directed by the Engineer.
- 4.18 Directional Bore Installation:
 - 4.18.1 Refer to Depttl. Specification 02320 as attached - Horizontal Directional Drilling in its entirety

PART 5 CLEANING

- 5.1 At the conclusion of the work, thoroughly clean all of the new pipe lines to remove all dirt, stones, pieces of wood or other material which may have entered during the construction period by forcing a cleaning swab through all mains 4” or greater. Flushing velocities shall be a minimum of 2.5 feet per second. All flushing shall be coordinated with Depttl. Engineer and Water Resources Department. Debris cleaned from the lines shall be removed from the job site.

PART 6 TESTING AT SITE

- 6.1 Pressure testing shall be conducted per Manufacturer’s recommendations and as approved by the Depttl. Authority.
- 6.2 All HDPE water mains shall be disinfected prior to pressure testing as per Depttl. specification.
- 6.3 All HDPE mains shall be field-tested. Contractor shall supply all labor, equipment, material, gages, pumps, meters and incidentals required for testing. Each main shall be pressure tested upon completion of the pipe laying and backfilling operations, including placement of any required temporary

roadway surfacing.

- 6.4 All mains shall be tested at 150 percent of the operating design pressure of the pipe unless otherwise approved by the Engineer.
- 6.5 Pressure testing procedure shall be per Manufacturer's recommendations or as follows:
 - 6.5.1 Fill line slowly with water. Maintain flow velocity less than 2 feet per second.
 - 6.5.2 Expel air completely from the line during filling and again before applying test pressure. Air shall be expelled by means of taps at points of highest elevation.
 - 6.5.3 Apply initial test pressure and allow to stand without makeup pressure for two to three hours, to allow for diametric expansion or pipe stretching to stabilize.
 - 6.5.4 After this equilibrium period, apply the specified test pressure and turn the pump off. The final test pressure shall be held for one to three hours.
 - 6.5.5 Upon completion of the test, the pressure shall be bled off from a location other than the point where the pressure is monitored. The pressure drop shall be witnessed by the resident project representative and Depttl. Authority representative at the point where the pressure is being monitored and shall show on the recorded pressure read-out submitted to the Engineer of Record.
- 6.6 Allowable amount of makeup water for expansion during the pressure test shall conform to Chart 6, Allowance for Expansion Under Test Pressure, Technical Report TR 31/9-79, published by the Plastic Pipe Institute (PPI). If there are no visual leaks or significant pressure drops during the final test period, the installed pipe passes the test.
- 6.7 If any test of pipe laid disclosed leakage significant pressure drop greater than the manufacturer's recommended loss, the Contractor shall, at his/her own expense, locate and repair the cause of leakage and retest the line. The amount of leakage, which will be permitted, shall be in accordance with AWWA C600 Standards.
- 6.8 All visible leaks are to be repaired regardless of the amount of leakage.
- 6.9 The Contractor must submit his plan for testing to the Engineer for review at least 10 days before starting the test and shall notify Depttl. Authority inspector a minimum of 48 hours prior to test.
- 6.10 Test results of all the reports asked in section 1.7 should be submitted before starting of work.

Item No.19: Crossing of roads by trench-less technology by laying of HDPE pipe excluding supply of pipe .Laying by HDD Machine Moling. Drilling and laying. 160 mm dia.

HORIZONTAL DIRECTIONAL DRILLING (SECTION 02320)

PART 1-GENERAL

1.01 SECTION DESCRIPTION

The work specified in this section consists of furnishing and installing underground utilities using the horizontal directional drilling (HDD) method of installation, also commonly referred to as directional boring or guided horizontal boring. This work shall include all services, equipment, materials, and labor for the complete and proper installation, testing, restoration of underground utilities and environmental protection and restoration.

1.02 REFERENCES

FPUA Specification 02620 – High Density Polyethylene (HDPE) Pipe and Fittings shall be used as a reference.

1.03 QUALITY ASSURANCE

The requirements set forth in this document specify a wide range of procedural precautions necessary to insure that the very basic, essential aspects of a proper directional bore installation are adequately controlled. Strict adherence shall be required under specifically covered conditions outlined in this specification. Adherence to the specifications contained herein, or the Engineer's approval of any aspect of any directional bore operation covered by this specification, shall in no way relieve the Contractor of their ultimate responsibility for the satisfactory completion of the work authorized under the Contract.

1.04 SUBMITTALS

A. WORK PLAN

Prior to beginning work, the Contractor must submit to the Engineer a general work plan outlining the procedure and schedule to be used to execute the project. Plan should document the thoughtful planning required to successfully complete the project.

B. EQUIPMENT

Contractor will submit specifications on directional drilling equipment to be used to ensure that the equipment will be adequate to complete the project.

C. MATERIALS

Specifications on material to be used shall be submitted to Engineer. Material shall include the pipe, fittings and any other item which is to be an installed component of the project.

PART 2 - EQUIPMENT REQUIREMENTS

2.01 EQUIPMENT

The directional drilling equipment shall consist of a directional drilling rig of sufficient capacity to perform the bore and pullback the pipe, a drilling fluid mixing & delivery system of sufficient capacity to successfully complete the crossing, a guidance system to accurately guide boring operations and trained and competent personnel to operate the system. All equipment shall be in good, safe operating condition with sufficient supplies, materials and spare parts on hand to maintain the system in good working order for the duration of this project.

2.02 DRILLING SYSTEM

A. DRILLING RIG

The directional drilling machine shall consist of a hydraulically powered system to rotate, push and pull hollow drill pipe into the ground at a variable angle while delivering a pressurized fluid mixture to a guidable drill (bore) head. The machine shall be anchored to the ground to withstand the pulling, pushing and rotating pressure required to complete the crossing. The hydraulic power system shall be self-contained with sufficient pressure and volume to power drilling operations. Hydraulic system shall be free of leaks. Rig shall have a system to monitor and record maximum pull-back pressure during pull-back operations.

B. DRILL HEAD

The drill head shall be steerable by changing its rotation and shall provide the necessary cutting surfaces and drilling fluid jets.

C. MUD MOTORS (if required)

Mud motors shall be of adequate power to turn the required drilling tools.

D. DRILL PIPE

Shall be constructed of high quality 4130 seamless tubing, grade D or better, with threaded box and pins. Tool joints should be hardened to 32-36 RC.

2.03 GUIDANCE SYSTEM

The Guidance System shall be of a proven type and shall be setup and operated by personnel trained and experienced with this system. The Operator shall be aware of any magnetic anomalies and shall consider such influences in the operation of the guidance system if using a magnetic system.

2.04 DRILLING FLUID (MUD) SYSTEM

A. MIXING SYSTEM

A self-contained, closed, drilling fluid mixing system shall be of sufficient size to mix

and deliver drilling fluid composed of bentonite clay, potable water and appropriate additives. Mixing system shall be able to molecularly shear individual bentonite particles from the dry powder to avoid clumping and ensure thorough mixing. The drilling fluid reservoir tank shall be sized for adequate storage of the mud. Mixing system shall continually agitate the drilling fluid during drilling operations.

B. DRILLING FLUIDS

Drilling fluid shall be composed of clean water and an appropriate additive. Water shall be from a clean source with a pH of 8.5 – 10 and/or as per mixing requirements of the Manufacturer. Water of a lower pH or with excessive calcium shall be treated with the appropriate amount of sodium carbonate or equal. The water and additives shall be mixed thoroughly and be absent of any clumps or clods. No hazardous additives may be used. Drilling fluid shall be maintained at a viscosity sufficient to suspend cuttings and maintain the integrity of bore wall.

C. DELIVERY SYSTEM

The mud pumping system shall have a minimum capacity to supply mud in accordance with the drilling equipment pull-back rating at a constant required pressure. The delivery system shall have filters in-line to prevent solids from being pumped into the drill pipe. Connections between the pump and drill pipe shall be relatively leak-free. Used drilling fluid and drilling fluid spilled during drilling operations shall be contained and properly disposed of. A berm, minimum of 12" high, shall be maintained around drill rigs, drilling fluid mixing system, entry and exit pits and drilling fluid recycling system (if used) to prevent spills into the surrounding environment. Pumps and or vacuum truck(s) of sufficient size shall be in place to convey excess drilling fluid from containment areas to storage facilities.

2.05 OTHER EQUIPMENT

A. PIPE ROLLERS

Pipe rollers, if required, shall be of sufficient size to fully support the weight of the pipe while being hydro-tested and during pull-back operations. Sufficient number of rollers shall be used to prevent excess sagging of pipe.

B. PIPE RAMMERS

Hydraulic or pneumatic pipe rammers may only be used if necessary and with the authorization of Engineer.

C. RESTRICTIONS

Other devices or utility placement systems for providing horizontal thrust other than those previously defined in the preceding sections shall not be used unless approved by the Engineer prior to commencement of the work. Consideration for approval will be made on an individual basis for each specified location. The proposed device or system will be evaluated prior to approval or rejection on its potential ability to complete the utility placement satisfactorily without undue stoppage and to maintain line and grade within the tolerances prescribed by the particular conditions of the project.

PART 3 - EXECUTION

3.01 GENERAL

The Engineer must be notified 48 hours in advance of starting work. The Directional Bore shall not begin until the Engineer is present at the job site and agrees that proper preparations for the operation have been made. The Engineer approval for beginning the installation shall in no way relieve the Contractor of the ultimate responsibility for the satisfactory completion of the work as authorized under the Contract. It shall be the responsibility of Engineer to provide inspection personnel at such times as appropriate without causing undue hardship by reason of delay to the Contractor.

3.02 PERSONNEL REQUIREMENTS

All personnel shall be fully trained in their respective duties as part of the directional drilling crew and in safety.

3.03 DRILLING PROCEDURE

A. SITE PREPARATION

1. Prior to any alterations to work-site, contractor shall photograph or video tape entire work area, including entry and exit points. One copy of which shall be given to Engineer and one copy to remain with contractor for a period of one year following the completion of the project.

2. Work site as indicated on drawings, within right-of-way, shall be graded or filled to provide a level working area. No alterations beyond what is required for operations are to be made. Contractor shall confine all activities to designated work areas.

B. DRILL PATH SURVEY

Entire drill path shall be accurately surveyed with entry and exit stakes placed in the appropriate locations within the areas indicated on drawings. If contractor is using a magnetic guidance system, drill path will be surveyed for any surface geo- magnetic variations or anomalies.

C. ENVIRONMENTAL PROTECTION

Contractor shall place silt fence between all drilling operations and any drainage, wetland, waterway or other area designated for such protection by contract documents, state, federal and local regulations. Additional environmental protection necessary to contain any hydraulic or drilling fluid spills shall be put in place, including berms, liners, turbidity curtains and other measures. Contractor shall adhere to all applicable environmental regulations. Fuel or oil may not be stored in bulk containers within 200' of any water-body or wetland.

D. SAFETY

Contractor shall adhere to all applicable state, federal and local safety regulations and all operations shall be conducted in a safe manner. Safety meetings shall be conducted at least weekly with a written record of attendance and topic submitted to Engineer.

E. PIPE

Pipe shall be welded/fused together in one length, if space permits. Steel pipe welds will be X-rayed prior to being placed in bore hole. Pipe will be placed on pipe rollers before pulling into bore hole with rollers spaced close enough to prevent excessive sagging of pipe.

F. PILOT HOLE

1. Pilot hole shall be drilled on bore path with no deviations greater than 5% of depth over a length of 100'. In the event that pilot does deviate from bore path more than 5% of depth in 100', Contractor will notify Engineer and Engineer may require Contractor to pull-back and re-drill from the location along bore path before the deviation.

2. In the event that a drilling fluid fracture, inadvertent returns or returns loss occurs during pilot hole drilling operations, contractor shall cease drilling, wait at least 30 minutes, inject a quantity of drilling fluid with a viscosity exceeding 120 seconds as measured by a Marsh funnel and then wait another 30 minutes. If mud fracture or returns loss continues, contractor will cease operations and notify Engineer. Engineer and contractor will discuss additional options and work will then proceed accordingly.

G. REAMING

Upon successful completion of pilot hole, contractor will ream bore hole to a minimum of 25% greater than outside diameter of pipe using the appropriate tools. Contractor will not attempt to ream at one time more than the drilling equipment and mud system are designed to safely handle.

H. PULL-BACK

1. After successfully reaming bore hole to the required diameter, contractor will pull the pipe through the bore hole. In front of the pipe will be a swivel. Once pull-back operations have commenced, operations must continue without interruption until pipe is completely pulled into bore hole. During pull-back operations contractor will not apply more than the maximum safe pipe pull pressure at any time.

2. In the event that pipe becomes stuck, contractor will cease pulling operations to allow any potential hydro-lock to subside and will commence pulling operations. If pipe remains stuck, contractor will notify Engineer. Engineer and contractor will discuss options and then work will proceed accordingly.

3.04 PIPE TESTING

A. FPUA Sections 02620 and 02715 shall be followed in its entirety following pull-back of the pipe.

1. All mains shall be swabbed.
2. All mains shall be chlorinated.

3. Pressure-test pipe using potable water for a period of 2 hours at a pressure of 150 psi. A calibrated pressure recorder or pressure gauge will be used to record the pressure during the test period.

3.05 SITE RESTORATION

Following drilling operations, contractor will de-mobilize equipment and restore the work-site to original condition. All excavations will be backfilled and compacted to 95% of original density. Landscaping will be restored to original. All mud shall be disposed of by the CONTRACTOR.

3.06 RECORD KEEPING

A. AS-BUILTS

Contractor shall maintain a daily project log of drilling operations and a guidance system log with a copy given to Engineer at completion of project. As-built drawings shall be certified as to accuracy by the Engineer.

Schedule Of Quantity

Rate has been taken from DSR-2023, Volume-I, II (Civil) & DSR-2023 for schedule items and actual market rate/ earlier executed rate available in records will be taken for non-scheduled items. Bidder has to quote their percentage rate bid as per the BOQ enclosed. Quantity taken is based on actual observation and the site condition. However, it may vary depending upon the requirement of the actual work done. Contractor will execute the work as per the percentage rate bid quoted by them for the Tender cost.

Table 3-1: Detail Percentage Rate BOQ FORMAT (For reference ONLY)

Quoted Percentage to be filled in BOQ bid in excel sheet

(Schedule of Quantity)

S. No.	Description of items	Unit	Qty	Rate	Amount
1	Scarifying metalled (water-bound) road surface including disposal of rubbish, lead upto 50 m and consolidation of the aggregate received from scarifying with power road roller of 8 to 10 tonne capacity.	Sqm	288	33.3	9590.4
2	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size) in pavements, laid to required slope and camber in panels as required including consolidation finishing and tamping complete.	Cum	28.8	7993.8	230221.44
3	Providing and laying C.C. pavement of mix M-25 with ready mixed concrete from batching plant. The ready mixed concrete shall be laid and finished with screed board vibrator, vacuum dewatering process and finally finished by floating, brooming with wire brush etc. complete as per specifications and directions of Engineer-in-charge. (The panel shuttering work shall be paid for separately). (Note:- Cement content considered in this item is @ 330 kg/cum.	Cum	43.2	9823.8	424388.16

Tender for Construction of Cement Concrete Road at Main Gate of C-DoT Campus

	Excess/less cement used as per design mix is payable/ recoverable separately)				
4	Extra for providing and mixing hardening compound of approved quality as per manufacturer's specification in cement concrete.	Litre	427.68	55.5	23736.24
5	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	3723.25	107.85	401552.47
6	Taking out existing kerb stones of all types from footpath/ central verge, including removal of mortar etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge	RM	60	39.35	2361
7	Laying at or near ground level old kerb stones of all types in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement : 3 coarse sand), including making joints with or without grooves (thickness of joints, except at sharp curve, shall not be more than 5 mm), including making drainage opening wherever required etc. complete as per direction of Engineer-in-charge. (Length of finished kerb edging shall be measured for payment). (Old kerb stones shall be supplied by the department free of cost)(Assuming 50% to be useful))	Sqm	30	109.45	3283.5

Tender for Construction of Cement Concrete Road at Main Gate of C-DoT Campus

8	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.	Cum	57.60	263.95	15203.52
9	Brick work with clay flyash F.P.S. (non modular) brick of class designation 7.5 in superstructure above plinth level up to floor five level in :Cement mortar 1:4 (1 cement : 4 coarse sand)	Cum	3.00	9333.45	28000.35
10	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5 mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured to calculate volume for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	Cum	4.73	10117.6	47805.66
11	Providing and fixing pre-moulded joint filler in expansion joints of RCC roads / CC pavements after making the joints dust free with high pressure air jet cleaners, all complete as per direction of the Engineer-in-Charge. (Pre-moulded joint fillers shall be made of bitumen hot sealing compound impregnated fibre board having impregnation more than 35%, conforming to IS:1838 for fibre board and IS: 1834 for hot sealing bitumen compound grade A.)	RM	100.00	5.3	530
12	Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc.	sqm	432.00	199.35	86119.2

	complete as per direction of Engineer-in-charge.				
13	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m width or 10 sqm on plan), including dressing of sides and ramming of bottoms, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.	Cum	26.75	260.3	6963.025
14	Providing and applying tack coat using hot straight run bitumen of grade VG - 10, including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications 16.30.1 On W.B.M. @ 0.75 Kg / sqm	Sqm	560	60.5	33880
15	Surface dressing on old surface with hot bitumen of grade VG - 10 of approved quality using 1.95 kg of bitumen per sqm with 1.50 cum of stone chippings 11.2 mm nominal size per 100 sqm of road surface, including consolidation with road roller of 6 to 8 tonne capacity, etc. complete.	Sqm	560	175.1	98056
16	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 5.1.2 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural sources : 3 graded stone aggregate 20 mm nominal size derived from natural sources)	CUM	2.77	9045.75	25034.11

17	Providing and Supplying in standard lengths High Density Polyethylene (H.D.P.E) Pipes,confirming to IS 4984:1995 and IS 7328:1992 (amended upto date), including all local & central taxes, transportation and freight charges inspection charges, loading / unloading charges,conveyance to the departmental stores / site & stacking the same in closed shade dulyprotecting from sunrays & rain, etc. complete. These rates are excluding excise duty component.				
17(i)	160 mm nominal outer diameter (OD) HDPE pipe of material grade PE 80 / PN 6	RM	100	609.7	60970
17(ii)	110 mm nominal outer diameter (OD) HDPE pipe of material grade PE 80 / PN 6	RM	100	291.3	29130
18	Lowering, laying and jointing HDPE pipe in proper position by butt fusion jointing procedure including hydraulic testing as per relevent IS Code complete with all materials for jointing procedures like butt fusion welding machine with hydraulic jack, top loading clamp etc pump and accessories for hydraulic testing and all labours as directed by engineer in charge as confirming to IS - 7634:(Part II):2012 (amended upto date).				
a(i)	110 mm nominal outer diameter (OD) HDPE pipe of material grade PE 80 / PN 6 (a) Lowering and laying of HDPE Pipe including testing but excluding the cost of jointing.	RM	100	6.5	650
a(ii)	Providing butt fusion welding joints to HDPE Pipe as confirm to DVS 2207 part-II.	NO.	10	48.5	485
b(i)	160 mm nominal outer diameter (OD) HDPE pipe of material grade PE 80 / PN 6 b)Providing butt fusion welding joints to HDPE Pipe as confirm to DVS 2207 part-II.	NO.	10	71.6	716

Tender for Construction of Cement Concrete Road at Main Gate of C-DoT Campus

19	Crossing of roads by trench-less technology by laying of HDPE pipe excluding supply of pipe .Laying by HDD Machine Moling. Drilling and laying. 160 mm dia.	RM	100	889.85	88985
20	Centering and shuttering including strutting, propping etc. and removal of form for :Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc	SQM	36	842.5	30330
21	12 mm cement plaster finished with a floating coat of neat cement of mix : 1:3 (1 cement: 3 fine sand)	SQM	36	439.25	15813
22	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20Cum in depth, consolidating each deposited layer by ramming and watering, lead up to 50 and for all lift.	Cum	20	196	3920
23	Providing and fixing factory made precast RCC perforated drain covers, having concrete of strength not less than M-25, of size 1000 x 450x50mm, reinforced with 8 mm dia four nos longitudinal & 9 nos cross sectional T.M.T. hoop bars, including providing 50 mm dia perforations @ 100 to125 mm c/c, including providing edge binding with M.S. flats of size 50 mm x 1.6 mm complete, all as per direction of Engineer-in-charge.	No.	4	1399.95	5599.8
24	Providing M.S. foot rests including fixing in manholes with 20x20x10 Cum cement concrete blocks 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) as per standard design : With 20x20 mm square bar	No.	8	544.7	4357.6
25	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1cement : 3 coarse sand), finished with a floating coat of neat cement and making necessary channels for the drain etc.	No.	8	810.45	6483.6

Tender for Construction of Cement Concrete Road at Main Gate of C-DoT Campus

	complete : For pipes 100 to 250 mm diameter				
26	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete	KG	200	133.7	26740
	Total in Rs. (Inclusive of GST)				17,10,905.00
	Rate quoted by the Contractor _____ (%) above/below the estimated cost				
	Total in Rs. (Inclusive of GST)				
	Total (in words) Rupees _____ Only				

TERMINOLOGY

Terminology used in this document are detailed below.

a. Definitions in relation to 'Make in India' order

- i. **'Local content'** means the amount of value added in India which shall, unless otherwise prescribed by the nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value in percent.
- ii. **'Local supplier'** means a supplier or service provider whose product or service offered for procurement meets the minimum local content as prescribed under this order or by the competent Ministries/Departments in pursuance of this order.
- iii. **'L1'** means the lowest Bidder or lowest bid or the lowest quotation received in a tender, bidding process or the other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.
- iv. **'Margin of purchase preference'** means maximum extent to which the percentage or price quoted by a local supplier may be above the L1 for the purpose of purchase preference.
- v. **'Nodal Ministry'** means the Ministry or Department identified pursuant to this order in respect of a particular item of goods or services.
- vi. **'Procurement entity'** means a Ministry or department or attached or subordinate office of or autonomous body controlled by the Government of India and includes Government companies as defined in the Company Act.

b. Other Definitions and Interpretations

- i. **'C-DOT'** means Centre for Development of Telematics, New Delhi, a Society Registered under the Societies Registration Act XXI of 1860 having its registered office at C-DOT Campus, Mehrauli, New Delhi 110030, and includes their legal representatives, successors and permitted assigns. C-DOT also means and includes C-DOT Board or a member of C-DOT Board duly authorized.
- ii. **'CEO C-DOT'** means the Chief Executive Officer of Centre for Development of Telematics or his successors in the office.
- iii. The **'Contractor'** means the person or firm or company whether incorporated or not whose tender has been accepted by C-DOT and includes legal representatives of such individuals or persons composing such firm or

company or successors or such firm or company as the case may be and permitted assigns of such individuals or firm or company.

- iv. The **'Sub-contractor'** means the persons, firms, companies, or agencies who after approval of the engineer, have entered into a direct contract with the Contractor in respect of any part of the works, and includes the sub-Contractors' legal representatives, successors and permitted assignee.
 - v. The **'Engineer'** means the officer so designated on behalf of C-DOT who will direct, supervise and be in-charge of the work for the purpose of the contract.
 - vi. The **'Engineer's representative'** means the person or firm appointed by C-DOT from time to time to act as representative and authorized to assist the engineer in performing his duties and functions.
 - vii. The **'Contract'** means the tender and letter of award of work thereof and formal agreement executed between C-DOT and the Contractor together with the complete tender document referred to therein including the conditions with appendices, Annexures and any special conditions, any specifications, designs, schedule of quantities with percentage rate bid and amounts and schedule of Quantity. All these documents taken together are deemed to form one contract.
 - viii. The **'Bill/Schedule of Quantities (BoQ)'** means the priced and completed schedule of quantities forming part of the tender.
 - ix. The **'Tender'** means the bid offer of the Bidder (prospective empaneled Contractor) to C-DOT for execution and completion of the works and remedy of any defects therein in accordance with the provisions of the Contract, as accepted and conveyed in the letter of acceptance by C-DOT.
 - x. The **'Contract agreement'** means the agreement which the Contractor has entered and execute the contract agreement prepared and completed at the cost of C-DOT, in the form annexed to these conditions with modifications as may be necessary.
 - xi. The **'Contract price/sum/value'** means the sum stated in the letter of acceptance as payable to the Contractor for execution and completion works and remedy of any defects there in accordance with the provisions of the Contract.
 - xii. The **'Work'** means the works to be executed in accordance with the Contract or part(s) thereof as the case may be and includes all extra or additional, altered or substituted work or temporary and urgent work as required for the performance of the Contract.
 - xiii. The **'Contractor's equipment'** means all appliances and things

of whatsoever nature required for execution and completion of the work (other than temporary works) and the remedy of any defects therein, but does not include plant, materials and things intended to form or are forming part of permanent work.

- xiv. The '**Day**' means a calendar day.
- xv. The '**Written notice**' is deemed to have been duly served if delivered in person to the individual or to a member of the firm or to an officer of C-DOT for whom it is intended, or if delivered at and a written delivery receipt obtained, or if sent by registered mail to the last known business address.
- xvi. The terms '**Bidder**' and '**Tenderer**' are synonymous in the context of this document.
- xvii. The terms '**Financial bid**', '**Price bid**', '**Percentage Bid**' and '**Commercial bid**' are synonymous in the context of this document.

c. Acronyms

Standard acronyms used in this document, with their standard interpretation, are listed below.

BG	Bank Guarantee
BoQ	Bill/Schedule of Quantities
CPWD	Central Public Works Department
DD	Demand Draft
ECS	Electronic Clearing Service
EMD	Earnest Money Deposit
ESI	Employees' State Insurance
GST	Goods and Services Tax
NCR	National Capital Region
P&T	Post and Telegraph
PAN	Permanent Account Number
PBG	Performance Bank Guarantee
PF	Provident Fund
PO	Pay Order
PWD	Public Works Department
TIN	Taxpayer Identification Number
WO	Work Order

Annexures

Annexure-1: Proforma for 'Agreement'

[on non-judicial stamp paper of appropriate value]

Agreement No. C-DOT/Campus/2024-25/69/07

dated:

This CONTRACT AGREEMENT is made on the day of..... between Centre for Development of Telematics, society registered under the Societies Act XXI, 1860 with its registered office at C-DOT Campus, Mehrauli, New Delhi 110030, hereinafter called the 'C-DOT' (which expression shall, wherever the context so demands or requires, include their successors and assigns) of the one part AND

..... hereinafter called 'the Contractor' (which expression shall, wherever the context so demands or requires, include his/their legal successor and assignee, of the other part).

WHEREAS

- A. C-DOT is desirous of, for Construction of Cement Concrete Road at Main Gate & miscellaneous works at C-DoT Campus, Mehrauli, New Delhi 110030 be executed as mentioned, enumerated, or referred to in the Tender documents including Letter of Invitation of Tender, Conditions of Contract, Special Conditions of Contract, Specifications, Drawings, Schedule of Quantities, Agreed Variations, and another document has called for in the Tender.
- B. The Contractor has inspected the site and surroundings of work specified in the Tender documents and has satisfied himself by careful examination before submitting his tender as to the nature of surface, ground, the form and nature of site and local conditions, the quantities, nature, and magnitude of the work, availability of labour and materials necessary for the execution of Work, the means of access to site, the supply of power and water thereto and the accommodation he may require and has made local and independent enquiries and obtained complete information as to the matters and things referred to, or implied in the Tender document or having any connection therewith, and has considered the nature and extent of all probable and possible situations,, delays, hindrances or interference to or with the execution and completion of work to be carried out under the Contract and has examined and considered all other matters, conditions and things and probable and possible contingencies, and generally all matters incidental thereto and auxiliary thereof affecting the execution and completion of work and which might have influenced him in making his bid.

In this Agreement words and expressions shall have the same meaning as are

respectively assigned to them in the Conditions of Contract hereinafter referred to.

- C. The following documents in conjunction with Addendum/Corrigendum to Tender documents shall be deemed to form and be read and construed as part of this Agreement, *viz*,
- a. This Contract Agreement,
 - b. The letter of acceptance of Tender No..... dated..... containing references listed therein.
 - c. The said Tender and Appendix including Schedule of Quantities,
 - d. The Specifications,
 - e. Correspondence after the receipt of the Tender,

AND WHEREAS

C-DOT has accepted the tender of M/S [Contractor] for the above works for C-DOT Campus, New Delhi, and conveyed vide letter No. dated at the percentage above/ below as stated in the Schedule of Quantities for the work and accepted by C-DOT upon the terms and subject to the conditions of the Contract.

NOW THIS AGREEMENT WITNESSETH AND IT IS HEREBY AGREED AND DECLARED AS FOLLOWS

1. In consideration of the payment to be made to the Contractor for the Work to be executed by him, the Contractor hereby covenants that the Contractor shall and will duly provide, execute and complete the said Work and shall do and perform all other acts and things in the Contract, mentioned or described or which are to be implied there from or may be reasonably necessary for the completion of the said work and at the times and in the manner and subject to the terms and conditions or stipulations mentioned in the Contract.
2. In consideration of the due provision, execution, maintenance and completion of the said Work, C-DOT does hereby agree with the Contractor that C-DOT will pay to the Contractor in respect of the amounts for the work actually done by him and approved by C-DOT at the rates given in the Schedule of Rates and other sums payable to the Contractor under provisions of the Contract, such payment to be made at such time and in such manner as provided for in the Contract.

AND

3. In consideration of the due provision, execution and completion of the said work, the Contractor does hereby agree to pay such sums as may be due to C-DOT for the services rendered by C-DOT to the Contractor and other set forth in the said Contract, and such other sums as may become payable to C-DOT towards loss, damage to C-DOT's equipment, materials, construction plant and machinery, such payments to be made at such time and in such manner as is provided in the Contract.

It shall be specified and distinctly understood and agreed between C-DOT

and Contractor that the Contractor shall have no right, title or interest in the site made available by C-DOT for the execution of the work or in the building, structure or work executive in the said site or in the goods, articles or materials etc. brought to the said site (unless the same specifically belong to the Contractor) and the Contractor shall not have or deem to have any lien whatsoever charge for unpaid bill will not be entitled to assume or retain possession or control of site or structures or materials or equipment and C-DOT shall have an absolute right to take full possession of the site and to remove the Contractor, their servants, agents, representatives, materials, etc., belonging to the Contractor and lying on the site.

IN WITNESS WHEREOF the parties have executed these presents in the day and the year first above written.

Signed and delivered
for and on behalf of C-DOT

Signed and delivered
for and on behalf of the Contractor

.....

.....

..... Date
Place

Date
Place

In presence of two witnesses

1.
2.

1.
2.

Annexure-2: Proforma for 'Performance Bank Guarantee (PBG) Security'

Tender No. C-DoT/Campus/2024-25/69/07

[on non-judicial stamp paper of appropriate value]

..... [bank]
..... [branch]

PERFORMANCE BANK

GUARANTEE NO :

AMOUNT :

GUARANTEE COVER FROM : **TO:**

LAST DATE FOR

LODGEMENT OF CLAIM :

In consideration of the Centre for Development of Telematics having its office at C-DOT Campus, Mandi Road, Mehrauli, New Delhi - 110 030, hereinafter referred to as the Purchaser having placed order(s): _____ (Order no and date) with our constituent's M/s _____ (name of your organization) hereinafter referred to as the contractor, having their office at _____ (address of your organization) for _____ (give brief detail of the order placed) and our constituents having undertaken to guarantee the faithful performance of the contract during the warranty period as mentioned in the purchase order(s) referred above, we the _____ (Banker's name and address), do hereby bind ourselves as their guarantors and undertake to be responsible to the purchasers and their successors and assigns for payment of all or any sums of money, losses, damage, costs, charges and expenses, that may become due or payable by the contractor, in the faithful performance of his said obligations and covenants under the above contract stated therein provided however that the total amount to be so recovered by the purchaser from us shall not exceed Rs. _____ (Rupees _____) amount of guarantee to be mentioned) payable under the said Purchase Order. We, _____ (name and address of the bank) do hereby unconditionally and irrevocably guarantee payment, without demur and without recourse to the C-DOT of sums up to Rs. _____ (Rupees _____) amount of guarantee in Rs. _____ and words) on the C-DOT's first demand in writing making claim for payment to the C-DOT by reason of failure on the

part of the contractor to fulfil their obligations under the contract.

We hereby agree that lodgment of claim through registered post shall be conclusive evidence of lodgment of claim.

We further undertake to settle the claim within 30 days of lodgment of claim.

This guarantee shall not be revocable by notice or otherwise and is unconditional and without recourse and our liability as surety shall not be impaired or discharged, until the contractor has fulfilled all the obligations under the contract and shall not be affected by any change in the constitution of the C-DOT, Contractor, or the bank.

Notwithstanding anything stated herein above our liability under this guarantee is

restricted to Rs. _____ (Rupees _____ amount of guarantee) and shall remain in force till (last date of guarantee) unless a demand or claim under the guarantee is made on us in writing within one month of the above-mentioned date, i.e., before (date one month from the last date of guarantee cover) all your rights under this guarantee shall be forfeited and we shall be relieved and discharged of all liability hereunder.

DATE:

For BANKERS NAME

PLACE:

SEAL, ADDRESS

The above Guarantee is accepted by the Centre for Development of Telematics.

Annexure-3: Proforma for 'Percentage Bid Undertaking'

Tender No. C-DoT/Campus/2024-25/69/07

From:
.....
.....
..... [full name and address of
the Bidder]

I certify that,

1. I have submitted the Percentage Bid for Construction of Cement Concrete Road at Main Gate & miscellaneous works at C-DoT Campus, Mehrauli, New Delhi 110030.
2. I have thoroughly examined and understood all the terms and conditions as contained in the Tender document, and agree to abide by them.
3. I offer to work at the percentage rate above/below as indicated in the Bid, inclusive of all applicable taxes/charges.

Yours faithfully,

[Name, signature, and seal of authorized representative]

Annexure -4: Self Certification regarding Local Content (LC)

(To be given on Company's Letter Head)

Format for Self-Certification regarding Local Content (LC) for Telecom Product, Services or Works

Tender No. C-DoT/Campus/2024-25/69/07

Date:

_____ **S/o, D/o, W/o** _____ resident of do
hereby solemnly affirm and declare as under:

That I agree to abide by the terms and conditions of Department of Telecommunications, Government of India issued vide Notification No. OM No. P-45021/2/2017-PP(BE-I1) dated 16.09.2020.

That the information furnished hereinafter is correct to best of my knowledge and belief and I undertake to produce relevant records before the procuring entity or any other authority so nominated by the Department of Telecommunications, Government of India for the purpose of assessing the LC.

That the LC for all inputs which constitute the said Telecom Product/Services/Works has been verified by me and I am responsible for the correctness of the claims made therein.

That in the event of the LC of the Telecom Product/Services/Works mentions herein is found to be incorrect and not meeting the prescribed LC norms, based on the assessment of an authority so nominated by the Department of Telecommunications, Government of India and I will be liable as under clause 9(f) of Public Procurement (Preference to Make in India) Order 2017.

I agree to maintain all information regarding my claim for LC in the Company's record for a period of 2 years and shall make this available for verification to any statutory authorities.

- I. Name and details of the Local supplier (Registered Office, Manufacturing unit location, nature of legal entity): _____
- II. Date on which this certificate is issued: _____
- III. Tender/Bid Description and Tender/Bid number for which the certificate is produced: **Tender No. C-DOT/CAMPUS/2024-25/69/07**

- IV. Procuring agency to whom the certificate is furnished : **CDOT**
- V. Percentage of Local Content claimed: _____
- VI. Name and contact details of the unit of the manufacturer :

- VII. Sale Price of the product: _____
- VIII. EX-Factory Price of the product: _____
- IX. Freight, Insurance and handling: _____
- X. Total Bill of Material: _____
- XI. List and total cost value of inputs used for manufacture of the Telecom Product/Services/ Works:

- XII. List and total cost inputs which are locally sourced. Please attach LC certificates from local suppliers, if the input is not in- House: ____
- XIII. List and cost of inputs which are imported, directly or indirectly:

**For and on behalf of
(Name of firm/entity) Authorized signatory (To be duly authorized by the
Board of Directors) <Insert Name, Designation and**

**Contact No.
and date>**

Annexure -5: DECLARATION LETTER FOR RULE 144

(To be given on Company's Letter Head)

Tender No. C-DoT/Campus/2024-25/69/07

DECLARATION UNDER RULE 144(XI) IN GENERAL FINANCIAL RULES (GFR). 2017

To,
Centre for Development of
Telematics Delhi /
Bangalore

FROM: Vendor/Bidder Name:

1. I, _____ the undersigned,
..... (Full name), do hereby declare, in
my capacity as
....., Authorized signatory of
M/s..... having
registered
address at
(Referred to as the Vendor/ Bidder), that:

We, the Vendor / bidder are desirous of participating in the
Tender/Enquiry process in response to your RFPs and in this connection,
we hereby declare, confirm and agree as under:

- A) We, the Vendor / Bidder have read and understood the contents of the
Office Memorandum & the order (Public Procurement No. 1) both bearing
no. F. No. 6/18/2019/PPD dated 23rd July 2020 issued by Department of
Expenditure, Ministry of Finance, Government of India on insertion of Rule
144(xi) in the General Financial Rules (GFRs) 2017 and the amendments
& clarifications thereof, regarding restrictions on availing / procurement
of goods and services, of any bidder from a country which shares a land
border with India.
- B) We, the vendor / Bidder understands that as per the Rule 144(xi) of
General Financial Rule, 2017, any vendor / bidder from a country which
shares a land border with India will be eligible to bid in any procurement
whether of goods, services (including consultancy services and non-
consultancy services) or works (including turnkey projects) only if the
vendor / bidder is registered with the competent authority i.e.,
Department for Promotion of Industry and Internal Trade (DPIIT). Hence,
Vendors or Agents of a Vendor (Indian or others) from a country sharing
border with India shall submit copy of valid registration made with
Department for Promotion of Industry and Internal Trade (DPIIT),
Government of India mandatorily, without which any offer made by such
a vendor / bidder will be treated as invalid.

C) In terms of the above and after having gone through the said amendments including in particular the words defined therein (which shall have the same meaning for the purpose of this Declaration cum Undertaking), I/we the vendor / Bidder hereby declare and confirm that:

(i) * We, the Vendor / Bidder are not from such a country which shares a land border with India, in terms of the said amendments to GFR, 2017.

OR

(ii) * We, the Vendor / bidder are from such a country and has/have been registered with the competent authority i.e. the Registration Committee constituted by the Department of Promotion of Industry and Internal Trade, as stated under Annexure I to the said Office memorandum / Order and we submit proof of registration herewith.

OR

(iii) We, the Bidder are from such a country which shares a land border with India, however our country has been extended lines of credit by Government of India or/and Government of India is engaged in development projects in our Country.

(* Delete whichever is not applicable)

D) We, the Vendor / Bidder agree and undertake that if the Purchase order is awarded to us, we will not sub-contract or outsource the order, and / or any part thereof unless such sub-contract / outsourcing is permitted by Centre for Development of Telematics (C- DOT) in writing, in which case the aforesaid OM and clarifications shall be equally applicable to such sub-contractor/vendor. Thus, subject to the aforesaid OM & clarifications thereof, we shall not sub-contract or outsource the order to a vendor from such countries, unless such vendor is registered with the Competent Authority and proof of same is obtained.

2. We the vendor/ bidder, also certify that this vendor/bidder/products/any component of the products offered by us fulfils all requirements in this regard and is eligible to be considered. We also agree and accept that if our declaration and confirmation is found to be false at any point of time including after awarding the Purchase Order, Centre for Development of Telematics (C-DOT) shall be within its right to forthwith terminate the Enquiry /Purchase Order without notice to us and initiate such action including legal action against us.

3. This declaration cum undertaking is executed by us through our Authorized signatory/ies after having read and understood the Office Memorandum and Order (Public Procurement No. 1) both bearing F. No. 6/18/2019/PPD of 23rd July 2020 of Ministry of Finance, Department of Expenditure, Public Procurement Division, Government of India and

clarification issued in pursuance to the aforesaid OM from Government of India from time to time.

Executed at _____ on this _____ day of

Authorized Signatory

M/s _____

Signature

Name _____

Seal of the Bidder

** Note: Where applicable, evidence of valid registration by the competent authority shall be attached*

Annexure -6: Bidder's Profile

Tender No. C-DoT/Campus/2024-25/69/07

(To be given on Company's Letter Head)

Bidder Particulars for <Tender NUMBER>dated <DD/MM/YYYY>

S .No.	Area of the details to be provided	Responding Firm's/Company Details to be provided
1.	Name of the Bidder	
2.	Address of the Bidder	
3.	Telephone number of the Firm/company	
4.	Website address of the Firm/company	
5.	Name of the contact person to whom all references shall be made regarding thistender	
6.	Mobile No.	
7.	Designation of the person to whom all references shall be made regarding thistender	
8.	Address of the person to whom all references shall be made regarding thistender	
9.	E-mail address of the contact person	
10.	<div> <div>Details of Registration</div> <div> 1. Registration Number of the Firm/compan y 2. Name of the place where the firm/company was registered 3. Date when the company was registered 4. Product /Service for </div> </div>	

		which registered 5. Validity Period, if applicable	
11.	Goods and Service Tax Registration No. (GST No.)		
12.	PAN No.		
13.	Average Annual Turnover for the last three (3) audited financial Years (,2022-23, 2023-24 and 2024-25)		
14.	Details of ownership of the firm (Name and Address of the Board of Directors,Partners etc.)		
15.	Name of the authorized signatory who is authorized to quote in the tender and enter into the Contract (Power of Attorney to be submitted)		
16.	Name of the Bankers along with the branch (as appearing in MICR cheque)& Account #		
17.	Status of Firm/company like Pvt. Ltd.etc.		
18.	Locations and addresses of the offices.	1. Delhi or NCR region 2. The corporate address 3. The official address of the service delivery Centre.	

19.	Name and contact details of the Project Manager	1. Name of the Project Manager assigned for 2. Contact details viz; telephone number, official address of the Project Manager assigned.	
-----	---	--	--

Signature of Bidder with Stamp

Date:

Place:

Annexure -7: TENDER ACCEPTANCE LETTER

**Tender for Construction of Cement Concrete Road at Main Gate
& Miscellaneous works at C-DOT Campus, Mehrauli, New Delhi 110030.**

Tender No. C-DoT/Campus/2024-25/69/07

Certificate from Bidder

[on Bidder's letterhead]

I/we hereby certify that I/we have studied all the Terms and Conditions of the tender document, understood the same and hereby accept the same completely and I/we are signing this document as an authorized signatory in the capacity of_____.

I / We hereby unconditionally accept the tender conditions of above-mentioned tender document(s) / corrigendum(s) in its totality / entirety.

I/we certify that our Company/Agency has not been blacklisted/ debarred from doing business by any customer organization (including Govt.) during last three financial years.

I/we certify that all the information provided against the Tender document are correct and abide by it.

I/we have no objection to C-DOT verifying any or all the information furnished in this document with the concerned authorities, if necessary. If at any stage the same is found to be incorrect, C-DOT shall be free to take appropriate legal action against us including but not limited to termination of contract and forfeiture of Security Deposit.

I/we certify that all the information furnished above are true to my knowledge. I have no objection to C-DOT verifying any or all the information furnished in this document with the concerned authorities, if necessary.

If at any stage, the information furnished is found to be incorrect, C-DOT shall be free to take appropriate legal action against us including but not limited to termination of contract and forfeiture of security deposit.

I/We hereby confirm we will provide services as per the terms and conditions of the contract awarded, failing which C-DOT will be free to make alternate arrangements at our risk and cost. We also confirm that in case of unsatisfactory services, C-DOT has the right to take any legal course of action against us.

If my/our Bid is accepted, I/we shall submit the Performance Bank Guarantee as per terms and conditions of the tender document which would be valid for duration of 39 months. The PBG shall be submitted within 30 days of the release of the Work order by C-DOT, as per given format, towards faithful performance of the Contract.

Until a formal Agreement is prepared and executed, our bid offer, together

with your written acceptance thereof and your notification of award shall constitute a binding contract between us.

Irrespective of the outcome of this Tender document, we undertake not to disclose/transfer/share/use contents of this Tender Document for any other purpose in any form.

I/we agree to provide services as per the rates quoted by us.

Place:
OWNER/DIRECTOR

SIGNATURE OF

OFFICIAL SEAL / STAMP

Date:

**Annexure -8: UNDERTAKING FOR BIDDERS WHO ARE REGISTERED AS
MSE ENTERPRISE**

Tender No. - _____

1. I /We confirm that the provisions of Micro and Small Enterprise are applicable to us and our organization falls under the definition of the following Category:

i) ☐ – Micro Enterprises

ii) ☐ – Small Enterprises

Please tick in the appropriate option box ☐

2. I /We have attached relevant documents/certificate issued by _____ as evidence to our applicability of Micro and Small Enterprises for providing _____ SERVICES.

2. I/ We also undertake to inform the change in this status as aforesaid during the currency of the Contract, if any.

Dated _____ Signature of Bidder _____

[END OF DOCUMENT]