

BID DOCUMENT

Laying of Raw Water Rising Main from Intake to WTP with D.I.(K-9pipe), including supply of Pipes (as per BOQ)&all Specials, Valves, MS pipes with all other ancillary works, temporary road restoration including construction of Pipe Carrying Steel Bridgeup to the bank of the river with suitable RCC structure supported on column & adequate foundation/piles where necessary within Tamluk Municipality for Water Supply Scheme under AMRUT 2.0.

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NOTICE INVITING e-QUOTATION No. WBMAD/NIQ -28 /SE(S)/2024-25,2nd call

Municipal Engineering Directorate

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Laying of Raw Water Rising Main from Intake to WTP with D.I.(K-9) including all D.I. Specials, valves etc. completed in all respect for Water Supply Scheme within Tamluk Municipality under AMRUT 2.0



GOVERNMENT OF WEST BENGAL
OFFICE OF THE SUPERINTENDING ENGINEER
SOUTH CIRCLE
MUNICIPAL ENGINEERING DIRECTORATE
MUNICIPAL AFFAIRS DEPARTMENT

Kausallya, Opposite Kausallya T.O.P., Kharagpur, Dist- PaschimMedinipore,

NOTICE INVITING e-QUOTATION

Memo No.MED/SE(S)/24/W-6/06 Pt-IIIDated-23/04/2025

Notice Inviting e-quotation No.- WBMAD/NI(e)Q- 28/SE(S)/2024-25, 2nd call

The Superintending Engineer, South Circle, Municipal Engineering Directorate, on behalf of the Governor of West Bengal invites sealed competitive Bid on **Item rate Basis** (Two-part System) from reliable and resourceful Companies/Firms/Contractors having experience and acumen in Supplying & Laying works of Ductile Iron Pipes for water supply projects as noted below.

1.	Name of Work:	Laying of Raw Water Rising Main from Intake to WTP with D.I.(K-9 pipe), including supply of Pipes (as per BOQ) & all Specials, Valves, MS pipes with all other ancillary works, temporary road restoration including construction of Pipe Carrying Steel Bridge up to the bank of the river with suitable RCC structure supported on column & adequate foundation/piles where necessary within Tamluk Municipality for Water Supply Scheme under AMRUT 2.0.
2	Scope of Work	Laying of D.I. (K-9) pipes with all D.I. Specials and valves including Supply and delivery at site ISI marked Socket and Spigot jointing system centrifugally cast DI (K9) Pipes as per Note below conforming to IS 8329-2000 (Third revision) in standard length 4 m, 5 m, 5.50 m, 6 m for push-on joint (rubber gasket) with internal cement mortar lining and external protection by metallic zinc coating with finish layer of epoxy coating on

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Laying of Raw Water Rising Main from Intake to WTP with D.I.(K-9) including all D.I. Specials, valves etc. completed in all respect for Water Supply Scheme within Tamluk Municipality under AMRUT 2.0

		<p>outside as per IS: 8329-2000 specification with necessary jointing material rubber gasket (IS: 5382:1985) and M.S. Pipes including transportation, loading unloading and stacking at site including supply of polyethylene sleeves, including earth work in excavation in trenches, shoring (if necessary) of adequate width having minimum depth to keep the top surface of pipe 1.10 m below of the existing ground level in any kind of soil mixed with boulder, metal crust, concrete pavement, any road sub-grade and its flank etc., dewatering the trenches, preparing the bottom surface of the trenches for continuous bedding including sand filling (if necessary) & Over-Ground installation to cross small ditches and low land areas etc. supported with RCC pillars, and surveying, geological investigation, design, drawing, construction & commissioning of Steel Pipe Carrying Bridge, Way Leave Permission as & where necessary and fitting, fixing, jointing (all types of joints) valves, specials etc. as per requirement, in position, cutting, chamfering of pipes as required, carriage of DI (K-9) Pipe & rubber gasket from departmental store to work site, constructing sluice valve chambers including supply and fitting in position sluice valve of different dia. & supply and fitting in position D.I. Specials, Thrust Blocks as per requirement, filling of the trenches with excavated materials, consolidating the same in layers, guarding trenches with temporary bamboo railing for safety where necessary, emergency horizontal auger boring (for roads other than NH and Railway) where necessary, removing the surplus materials from the site as per Municipal rules in vogue including all labour charges, tools and plants, hydraulic pressure testing, cleaning and disinfection of pipes etc. complete in all respect as per IS 12288-1987 (latest edition) and Temporary Roads Restoration for vehicular movement as per instruction of E.I.C.</p> <p>Note:</p> <ol style="list-style-type: none"> 1) DI (K-9) Pipe & rubber gasket for 5372 m length will be supplied from departmental store and Necessary charge for carrying of DI pipe from departmental store to work site should be borne by the agency. Rest of the DI (K-9) Pipe for 1296 m length will be supplied by the agency as per relevant IS code and site requirement. Manufacturer of the DI(K9) pipe to be supplied must have valid BIS license. 2) Third Party Inspection (TPI) through RITES/MECON/PDIL for DI(K9) pipes and rubber gasket to be supplied by the agency is mandatory before delivery of pipes. TPI report should cover (I) all the parameters as per IS 8329:2000, (II) test to ensure Rubber Gasket quality as per IS code. The Inspection charge to be included in the quoted rates. 3) Necessary materials like rubber gaskets, M.S Pipe, Sluice valve, Air Release valve, Drain valve, D.I. Fittings, Mechanical Joints etc., where necessary, including all other construction materials will be supplied by the agency.
3.	3.1: Locations of Rawwater rising main Work:	As given in the annexed drawing

	3.2: Locations of Pipe carrying Bridge:	<p>a) Narayanpur Canal for Raw Water Rising Main. b) Near RamkrishnaNurshing Home (Clear Water Rising Main) c) Sankarara Canal (Clear Water Rising Main) d) Maniktala Canal (Clear Water Rising Main) e) Near bara bazar (Clear Water Rising Main)</p>
4.	Eligibility to Participate in the Bid.	<p>4.1. a) Having experience and technical acumen in similar nature of work (as defined in Note) in a completed single contract having minimum value of 2.20croreduring 5 (five) years prior to the date of issue of the tender notice in any Government Department/Board/Semi-Govt./Corporation / Statutory Authority / Undertaking etc.</p> <p style="text-align: center;">OR</p> <p>b) Having experience and technical acumen in similar nature of work (as defined in Note) in two completed single contracts having minimum value of 1.8 croreduring 5 (five) years prior to the date of issue of the tender notice in any Government Department/Board/Semi-Govt./Corporation/ / Statutory Authority Undertaking etc.</p> <p style="text-align: center;">OR</p> <p>c) Having experience and technical acumen in similar nature of work (as defined in Note) in a running single contract which has been completed to the extent of 75 % (Seventy Five percent) or more and value of which is not less than the desired value of clause 4.1.ain any Government Department/Board/Semi-Govt./Corporation/Statutory Authority / Undertaking etc.</p> <p><i>Note –i) Similar nature of work is defined as Laying of Dipipe related work or Construction of Intake Structure or Construction of Reinforced Concrete Overhead Reservoir or Construction of WTP work.</i></p> <p><i>(ii) In case of running works, only those tenderers who will submit the certificate from competent authority will be eligible to participate in the tender. In the required certificate it should be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the agency i.e the tenderer.</i></p> <p><i>(iii). Credential certificate issued by the Executive Engineer or equivalent competent authority a State / Central Government, State / Central Government undertaking, Statutory / autonomous bodies constituted under the Central / State Statue, on the executed value of completed / running work will be taken as credential.</i></p> <p><i>(iv) Completion certificate, obtained from the Engineer-in-Charge should contain a) Name of work, (b) Name and address of Client, (c) Amount put to tender mentioning estimated amount of Civil as well as electrical work if any (d) Date of commencement of work (e) Date of completion of work (f) Final bill value. (g) Tender No. with ID (h) work Order No. (i) BOQ (j) Tender Id</i></p> <p><i>v). Only works completed successfully/ running satisfactorily will be treated as credential. Joint venture, Consortiums etc. are not allowed.</i></p> <p><i>vi) Payment certificate will not treated as Credential (Vide Ref No-</i></p>

		<p style="text-align: center;"><i>04A/PW/O/10C-02/14 Dated 18.03.2015)</i></p> <p>4.2: -PAN Card, Valid Professional Tax deposit certificate, GST registration Certificate (GSTIN), EPF registration, ESI registration, Income Tax Return Receipt for the Latest Assessment year - etc. are to be accompanied with the Technical Bid document.</p> <p>Note: Producing P.F. & E.S.I Registration with bid proposal is not mandatory however successful bidder have to produce said certificates before agreement.</p> <p>4.3 -Valid Bank Solvency Certificate 2.2crore from any Nationalized Bank/Scheduled Bank (Issue date of the certificate should be within the preceding 1 (one) year from the date of publication of the tender)</p> <p>4.4 Annual Turn Over of minimum 2.2crore in any one year during last 5 years in 3CD. The Audited Report should contain the signature, name, address, contact no./email ID and membership no., UDIN no. of Chartered Accountant clearly.</p> <p>4.5 In case of Proprietorship or Partnership Firms or Company the Tax Audited Report in 3CD Form for the period upto last five years. The Audited Report should contain the signature, name, address, contact no./email ID and membership no., UDIN no. of Chartered Accountant clearly. [Non Statutory Documents]</p> <p>4.6 Registered Unemployed Engineers' Co-operative Societies/ Unemployed Labour Co.-Op. Societies are also required to furnish Certificate of Registration, Bye Laws, Tax Audit Report in 3CD Form for the period upto last five years. The Audited Report should contain the signature, name, address, contact no./email ID and membership no., UDIN no. of Chartered Accountant clearly. [Non Statutory Documents]</p> <p>4.7 Joint Ventures will not be allowed for this works.</p> <p>4.8 Register partnership deed for partnership firm is to be submitted. The company shall furnish the Article of Association and Memorandum. Where an individual person holds a digital certificate in his own name duly issued to him against the company or the firm of which he happens to be a director or partner, such individual person shall while uploading any tender for and on behalf of such company or firm, invariably upload a copy of registered power of attorney showing clear authorization in his favour, by the rest of the directors of such company or the partners or such firm to upload such tender.</p> <p>Note:</p> <p style="padding-left: 40px;">i. The bidder should have no adverse report, on any account, against their organization for any project worked during last 5 (five) years or working at present. This clause will lead for rejection of application, even after fulfillment of other eligibility criteria.</p>
5.	Documents to be produced	As mentioned in clause No.4 above (Eligibility to participate in the Bid).

	in support of eligibility	All documents in original to be produced in due course of time as & when asked by the Bid inviting authority.
6.	Earnest Money.	<p>2% of the Quoted Bid price in two parts, vise</p> <p>a. Rs.10.0 Lakh(Rupees three lakh)as an initial Earnest Money Deposit shall accompany with Bid Proposal and may be remitted by selecting from either of the following payments modes: -</p> <p>i) Net Banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment Gateway. Bank Acknowledgement Slip to be uploaded during online bid submission;</p> <p>ii) RTGS/NEFT in case of offline payment through bank account in any Bank and also to be documented through e-filling.</p> <p>(As per GO No. 3975-F(Y) dt. 28.07.2016 of Finance Deptt., Govt. of West Bengal). Every such Transfer shall be done on or after the date of publish of NieB. Any Bid without such Transfer of EM (Except exemption as per G.O.) shall be treated as informal and shall be automatically cancelled. Online transfer of Earnest Money receipt (Scanned copy) shall be uploaded as Statutory document)</p> <p>b. Earnest Money Deposit i.e. 2% of bid amount beyond the amount as mentioned in 6.a. shall have to be deposited by the L1 bidder after acceptance of Bid Proposal as demand draft in favour of the Executive Engineer,EastMidnaporeDivision,M.E.Dte Payable at Tamluk.</p> <p>Additional Performance security deposit @10% of the accepted amount is to be deposited in due course as per GoWB norms if the accepted amount is found to be @80% or less than the tentative departmental costin terms of GO No.4608 f(y) Dt.18.07.2018</p> <p>The amount of earnest money will be converted into security deposit in case of the L1 bidder.</p>
7.	Cost priceof Bid documents	<p>The intending Bidders shall not have to pay the cost of tender documents for the purpose of participating in e-tendering vide Notification No. 199-CRC/2M-10/2012 dated 21/12/2012 of the Secretary, Public Works Department, Government of West Bengal. However, the successful bidder shall have to pay the cost of contract documents as per notification no-452-A/PW/O/10C-35/10 Dated:26.07.2011 of PWD Govt of West Bengal only per set at the time of formal agreement.</p>

8.	Date and Time Schedule	Sl. No.	Particulars	Date and Time
		a)	Date of uploading of NIB (Bid Documents)(online) (Publishing date)	23.04.2025 at 6.00 PM
		b)	Document download start date (online)	23.04.2025 from 6.00 PM
		c)	Date of Pre Bid Meeting (offline) with the intending Bidders in the office of the Superintending Engineer, South Circle, Municipal Engineering Directorate.	30.04.2025 at 1.00 P.M
		d)	Both Technical and financial bid submission starting date(On line)	23.04.2025 from 6.00 PM
		e)	Last date of submission of queries (To be reached at SE (South Circle))	NA
		f)	Document download closing date (online)	16.05.2025 upto 1.00P.M
		g)	Both Technical and financial bid submission (on line) closing date	16.05.2025 upto 1.00P.M
		h)	Date & place of opening of Technical Proposals(online)	19.05.2025 at 1.00P.M
		i)	Date of uploading of list of technically qualified bidders (online)	To be notified later.
		j)	Date of opening of financial bid (online)	To be notified later.
		k)	Also if necessary for further negotiation through offline for final rate.	To be notified later.
		<p>* All bidders are requested to raise objection(s), if any, regarding the decision of TIA with respect to acceptance/non-acceptance of technical bid within these hours through official e-mail of TIA only. Failing which the objection(s) may not be considered.</p> <p>N.B.-i) Maximum 2 (two) representatives of each prospective Bidders shall be allowed to participate in Pre-Bid Meeting on production of authorization letter from the Bidder. During the Pre-Bid Meeting, the Bidders may seek clarifications and offer suggestions for consideration.</p> <p>ii)The bidders are requested to submit pre-bid queries</p>		

		<p>in writing (word/excel format), to reach the TIA not later than 48 hour before the scheduled date and time of pre-bid meeting from their official Reply will be given only to the written queries so submitted.</p> <p>iii) In the event of the specified date of Prebid meeting or opening of Technical/Financial Bids as mentioned above being declared a holiday by Govt. of West Bengal or the office of Govt. of West Bengal being closed on any account, the event of specified date will be extended to the next working day</p> <p>iv) All intending bidders are requested to remain present in the chamber of the Tender Inviting Authority during opening of the Financial Bid, to witness the tender opening procedure.</p>	
9	Time of completion	6 months from the date of issue of Work Order.	
10	Site inspection & general information	<p>Intending Bidders are required to inspect the site of the Project with particular reference to location and infrastructure facilities. They are to make a careful study with regard to availability of materials and their sources and all relevant factors as might affect their rates and prices. They are also acquainted with relevant IS specifications with latest amendments, CPHEEO manuals, Clauses & Sub Clauses of the Bid documents and to have fully acquainted with all details of workfront, communications, underground utility services, seasonal weather and its variation, labours, water supply, existing & proposed site levels, position and diversion of transportation and barricading, if required, electricity and any other general information including topological condition & existing level and level pertaining to and needed for the work to be completed in time properly.</p> <p>Note- HFL/LWL/HTL (High Tide Level) should be collected by the bidder.</p>	
11	Bid documents	<p>A full set of Bid documents consists of 2 Parts. These are - PART I :- Containing all documents in relation to the name of the firm applied for and credential possessed along with all documents as depicted in SI. No. 4 above and all corrigenda's of this NIT and forms for Declaration and Affidavits as per Chapter 1.</p>	

		And ANNEXURE -Drawing of Pipeline network & PART II :-Containing the Following Document. Bid Price / Price Schedule. (...xls format)
12	Validity of Bid	A Bid submitted shall remain valid for a period of 120 calendar days from the date set for opening of Bids. Any extension of this validity period if required will be subject to reciprocal concurrence of the Bidders & the TIA.
13	WithdrawalofBid	A Bid once submitted shall not be withdrawn within the validity period. If any Bidder/Bidders withdraw his/their Bid(s) within the validity period then Earnest Money as deposited by him/them will be forfeited.
14	AcceptanceofBid	The "The Superintending Engineer, South Circle, M.E.Dte." will accept the Bid.He /She does not bind himself/herself to accept otherwise the lowest Bid and reserves to himself/herself the right to reject any or all of the Bids received without assigning any reason thereof.
15	Intimation	The successful Bidder will be notified in writing of the acceptance of his Bid. The Bidder then becomes the "Contractor" and he shallforthwith take steps to execute Formal Contract Agreement in appropriate FORM (W.B. form-2911 withthe"The Superintending Engineer, South Circle, M.E.Dte."and fulfill all his obligations as required by the Contract.
16	Escalation of Cost	There will be no escalation in cost for materials or labour and the contract price mentioned in the contract stands valid till completion of the contract, and other obligation, if any.
17	Name &address of Engineer-In-Charge(EIC)ofthe Work	Executive Engineer, East Midnapore Division, Municipal Engineering Directorate, Department Of UD & MA, Salgechia, Nimtola More, Ward No.-17, Tamralipta Municipality, P.O.-Tamluk, Dist.-East Midnapore, Pin-721636 West Bengal . Phone: 8918928723 E-mail ID – medmideast@yahoo.com.
18	Execution of Work	The Contractor is liable to execute the whole work as per direction and instruction of the Executive Engineer, East Midnapur Division of Municipal Engineering Directorate who is the Engineer in Charge of the work after due approval of "The Superintending Engineer, South Circle, M. E. Dte."
19	Payment	Payment will be made to the successful Bidder by the "The Executive Engineer, East Midnapore Division. M. E. Dte" periodically.
20	Influence	Any attempt to exercise undue influence in the matter of acceptance of Bid is strictly prohibited and any Bidder who resorts to this will render his Bid liable to rejection.
Following clauses are to be adhering to by the concerned Bidder during the process of Bidding.		

21	In case office faces sudden closure owing to reason beyond the scope and control of " The Superintending Engineer, South Circle, M.E.Dte.", any of last date/dates as schedule in SI. No 8 maybe extended up-to/to next and following working day without issuing further and separatenotice should the "The Superintending Engineer, South Circle, M.E.Dte ",feels it to benecessary and exigent.
22	Persons having authenticated and having registered Power of Attorney may be considered lawfully becoming to be acting on and for behalf of the Bidder.
23	Sufficient care has been taken to avoid variance in between the contents of the listed Documents in the Bid document. However, if there is any variance between the contents of different documents, the provision of documents appearing earlier in the list shall prevail over the same provided in the contents coming later.
24	Imposition of any duty/tax/rule etc. owing to change /application in legislations/enactment shall be considered as a part of the contract and to be adhering to by the Bidder/Contractor strictly.
25	Bid Acceptance Authority is the "The Superintending Engineer, South Circle, M.E.Dte.
26	In case of any dispute arising from any clauses of similar nature between bid documents and Form No. 2911, the decision of the Superintending Engineer, Circle, M.E.Dte will be final and binding.
27	Rates quoted by bidder shall be inclusive of statutory taxes and levies payable under respective statutes. All usual deductions for GST, IT, and Labour welfare Cess etc. as applicable will be made from the bills from time to time which is inclusive in cl.57 of section C.
28	No conditional Bid shall be entertained.
29	In the event of e-Filing intending bidder may download the Bid document from thewebsite http://wb.tender.gov.in directly by the help of Digital Signature Certificate &necessary cost of Bid document (if any) may be remitted through online payment Gateway & same may be documented along with earnest money Deposit through e-Filling, (scanned copy to be submitted) (Details of which has been narrated in "Instruction to Bidders"). Technical Bid & Financial Bid both will be submitted concurrently duly digitally signed in the Website http://etender.wb.nic.in . Bid document may be downloaded from website & submission of Technical Bid/Financial Bid as per Bid Schedule.
30	The requisite Earnest Money, as specified in this NleB may be remitted by selecting from either of the following payments modes: - i) Net Banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment Gateway; ii) RTGS/NEFT in case of offline payment through bank account in any Bank and also to be documented through e-filling. Every such payment shall be made on or after the date of publish of NleB. Any Bid without payment of requisite Earnest Money (Except exemption as per G.O.) shall be treated as informal and shall be automatically cancelled.
31	The Bidder, at the Bidder's own responsibility and risk is encouraged to visit and examine the site of works and its Surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the work as mentioned in the Notice inviting Bid, the cost of visiting the site shall be at the Bidder's own expense. Traffic management and execution shall be the responsibility of the Agency at his/her/their risk and cost.
32	Prospective applicants are advised to note carefully the minimum qualification criteria as Mentioned in 'Instructions to Bidders' before bidding.

33	During scrutiny, if it is come to the notice to Bid inviting authority that the credential or any other papers found incorrect/manufactured/fabricated, that Bidder will not be allowed to participate in the Bid and that application will be out rightly rejected without any prejudice.
34	Before issuance of the work order, the Bid inviting authority may verify the Credential & other documents with the original of the lowest bidder, if found necessary. After verification, if it is found that such documents submitted by the lowest bidder is either manufactured or false, in that case, L.O.A./ work order will not be issued in favour of the bidder under any circumstances.
35	If any discrepancy arises between two similar clauses on different notifications, the decision of "Superintending Engineer, South. Circle, M.E.Dte" is final & binding.
36	Contractor shall have to comply with the provisions of (a) the contract labour (Regulation Abolition) Act. 1970, (b) Apprentice Act. 1961 and (c) minimum wages Act. 1948 of the notification thereof or any other laws relating thereto and the rules made and order issued there under from time to time.
37	Where an individual person holds a digital certificate in his own name duly issued to him against the company or the firm of which he happens to be a director or partner, such individual person shall, while uploading any Bid for and on behalf of such company or firm, invariably upload a copy of registered power of attorney showing clear authorization in his favour, by the rest of the directors of such company or the partners of such firm, to upload such Bid. The power of attorney shall have to be registered in accordance with the provisions of the Registration Act, 1908.
38	Any legal matter will be settled within the jurisdiction of Hon'ble District Judges Court at Tamluk , Dist.- Purba Medinipore, West Bengal.
39	Bidder would be at liberty to point out any ambiguities, contradictions, omissions etc. seeking clarifications thereof or interpretation of any of the conditions of the Bid documents before the Bid Inviting Authority in writing 48 hours prior to Pre-Bid Meeting, beyond such period no representation in that behalf will be entertained by the Bid Inviting Authority.
40	The successful Bidder will remain liable for following with West Bengal Contract Labour (Regulation & Abolition) Act 1970 and necessary certificates from appropriate authority to be submitted within 07 (seven) days from the date of issue of work order, otherwise the work order will be cancelled.
41	Successful Bidder will have to submit requirement of all materials, work programme and Working drawing for laying and sectional drawing as per IS Specification for each dia. of pipe <u>after awarding work order by competent authority.</u>
42	Deduction of tax, royalty ,Labour welfare Cess& GST As per prevailing Govt. orders/norms or as per notification during work.
43	No mobilization Advance and Secured Advance will be allowed. Agencies shall have to arrange required land for installation of Plant & Machineries, (specified for each awarded work, storing of materials, labour shed, laboratory etc. at their own cost and responsibility nearest to the work site)
44	Payment will be made phase wise against each item of work as per BOQ of the bid document. Security Deposit will be deducted from each and every running account bill @8% as per prevailing Govt. Orders/Norms.

45	<p>Defect Liability Period- Defect liability period Should be observed for 5 (Five) Years from the date of completion. (As per Notification No. 5784-PW/L&A/2M-175/2017 dt. 12.09.2017 of Principal Secretary, PWD).</p> <p>Release of Security Deposit:</p> <p>No amount shall be refunded to the contractor for first 3 (three) years from the actual date of completion of the work;</p> <p>30% (thirty percent) of the same shall be refunded to the contractor on expiry of 4 (four) years from the actual date of completion of the work;</p> <p>The balance 70% (seventy percent) of the same shall be refunded to the contractor on expiry of 5 (five) years from the actual date of completion of the work.</p>
46	<p>In case of item rate tender, the technically qualified bidder, whose total offered price considering sum of offered prices of all the items of works taken together, stands lowest, will be considered for acceptance. In no case lowest bidder of individual items of works will be considered for acceptance for the corresponding items of works.</p>
47	<p>Tender inviting Authority may ask to submit justification of rate offered by the bidder.</p>
48	<p>The employer (Tender accepting authority) reserves the right to accept or reject any quotation and to cancel the quotation process and reject all quotations at any time prior to the award of contract without thereby incurring any liability to the affected Tenderers or any obligation to inform the affected Tenderers of the ground for employer's (Tender accepting authority) action.</p>
49	<p>Technical Personnel-The prospective tenderer shall have in their full time engagement experienced technical personnel. (Authenticated documents in respect of qualification and engagement shall be furnished for Technical Evaluation)</p> <p>Civil Engineer (Minimum Diploma holders with min. 3 Yrs. of experience in construction field): 1 no.</p> <p>Note: 1) The bidder must be submitted the relevant document in proof of employment along with educational qualification & experience.</p> <p>2) Declaration as per annexed format from the end of the engineer also has to be submitted.</p>

Bid Evaluation Committee (BEC):

A Bid Evaluation Committee (BEC) has been constituted under the Superintending Engineer, South Circle, Municipal Engineering Directorate, Government of West Bengal.

The members of Bid Evaluation Committee:-

1. Superintending Engineer, South Circle, MED- Chairman
2. Executive Engineer, East Midnapore Division, MED- Member.
3. Executive Engineer, South Circle, MED - Member.
4. Divisional Accounts Officer / Divisional Accountant, East Midnapore Division, MED - Member.

The Bid Evaluation Committee will do the technical and financial evaluations and make recommendation to the tender accepting authority.

The bidders will have to meet all the minimum criteria regarding:-

Financial Capacity

Technical Capability

Experience / Credential

The eligibility of a bidder will be ascertained on the basis of his digitally signed documents in support of the minimum criteria as mentioned in (a), (b), (c) above with the help of his DSC and the declaration executed through prescribed affidavit in non-judicial stamp paper of appropriate value duly notarized. If any document submitted by a bidder is either manufactured or false, in such case the eligibility of the bidder/ tenderer will be out rightly rejected at any stage without any prejudice and further penal action may be taken against him as per rule.

In case there is any objection regarding prequalifying an agency, that should be lodged to the Chairperson & Convener of the Bid Evaluation Committee

Technical Specification	
SL.No	Description of Item
	Part - (A) :- Laying Cost for DI K-9 & M.S Pipes with Fittings & Valves.
1	Carrying CI/DI pipes with specials and valves and lowering placing in position and laying carefully inside the trenches in proper alignment and gradient etc. including earth work in excavation of adequate width as per specification having min. clear cover from top of pipe is 1.10mtr. below existing ground level in any kind of soil including mixed with boulder, road sub-grade and its flank, but excluding moorum and laterite and stone etc. without damaging the existing telephone/electric cable etc. (in case of damaged if any type of cable line during execution, necessary damaged charges as applicable by the respective authority will be borne by the agency in his own cost) preparing the bottom surface for continuous bedding of pipe line and laying pipes, fitting, fixing specials and valves with bailing out water if any including carriage of pipes, specials and valves from local deptt. store within 8KM and back filling the trenches with excavated earth in layers to original condition as per specification and direction of EIC. The surplus materials after execution of work are to be return to the deptt. store.
2	Laying over ground
	500 mm dia Pipe (DI K-9)
3	Laying of MS Pipe (500 mm dia Pipe)
2	Filling the pipe line with water, testing hydraulically as per I.S 3114-1965 (Article-6) in section of a length not exceeding 500mtr. for head of pressure as per specification including supplying installing and fixing all equipments such as diesel pump set, blank flange, pressure gauge, valve, pressure pump and all other tools and plants including drilling topping and plugging of necessary holes to pipes, blocking ends providing temporary thrust block and subsequent blocking of holes and other jointing materials and dismantling and removal of the same including disposal of water etc. all complete as per specification and direction of EIC. The rate is inclusive of cost of requisite water to be arranged by the contractor (Recovery rate of water @ Rs.10.00/m ³ , if contractor used water from deptt. source).
3	Cleaning thoroughly the inner surface of pipe line including specials and valves by flushing with water and subsequently disinfection of the same pipe line by flushing again with water containing bleaching powder resulting in residual chlorine not less than 15mg/ltrs. after 24hrs. of such filling including laboratory testing of water samples obtain from the disinfested pipe line and disposal of water from the pipe line after completion of the work. The rates including of cost of requisite water to be arranged by the contractor) (The rate of water @Rs. 10/m ³ may be recovered, if the contractor used water from deptt. source).
4	Making rubber gasket joint to CI/DI pipes maintaining proper alignment level etc. by mechanical arrangement with or without using mobile cranes where necessary and with help of all other equipments tools and tackles etc. as required providing lubricants of approved quality and direction of EIC.
5	Cutting DI pipe (all class & type) to required length with cutting device etc. and grinding the cutting portion with file as per direction and satisfaction of EIC.
	e) 500mm.dia.to 600mm.dia pipe
6	Chamfering the spigot end of all type/class of DI pipe for proper using of push joint by means of grinder set at site for proper joint etc. all complete as per direction of EIC.
7	Making flange joint to DI/CI pipes, specials and valves where necessary with supply of required rubber insertion and nut bolts, washers etc. of approved quality and type all complete as per specification and direction of EIC (Nut and bolts shall be of TATA/GKW rate).

8	All Types of D.I Ductile Iron (D.I) specials (viz. Bend, Tee, Taper, Tail piece etc), size conforming to IS specification No 9523/2000 With Cement mortar lining (inside) and metallic zinc coating with finish layer of epoxy coating (outside)
	Supplying, fitting and fixing of C.I. Mechanical Compression Long Sleeve Collar Coupling (popularly known as Cut-N-Repair Coupling) suitable for jointing C.I. Spun Pipes (as per IS: 1536) and D.I. Pipes (as per IS: 8329) with BS:1211 Class-B Pipes. The Couplings will be supplied complete with Sealing Rubber Gasket of EPDM quality (IS:5382/1985 Type-4), Cast Iron Follower Glands and Mild Steel (Zinc Coated) Nut Bolts . The whole assembly should be mechanically and hydraulically tested to the provisions as laid down in IS: 1538. Fitting and fixing should be in proper position with proper care of main pipe line for leak proofcondition.
9	Cast iron kinetic double orifice type air release valve having small orifice elastic ball resting on gun metal orifice nipple large orifice vulcanite ball seating on moduled seat ring, valve with built-in-Kinetic features, isolating sluice valve mounted in horizontal position and operated by a metre wheel gearing:inlet faced and drilled to IS 1538 Table 4 & 6. valve suitable for maximum working pressure of 10 kg/CM2
11	Cost iron double flanged manually operated sluice valves generally conforming to IS 14846 : 2000, having four faces and spindle nut of gunmetal. inside screw non- rising type quality gunmetal /AISI 410 spindle: seat tested to 10kg/CM ² and body tested to 15kg/CM ² , flanges flat faced and drilled to I.S.: 1538 : 1993. Painted black all over with asphalt base paint. Valves tested by closed end method.
13	Supplying, fitting and fixing air valve splash plate using 24 mm thick MS plate) according to necessary site measurement as per direction of EIC
14	Construction of different dia Sluice valve /Air valve /Washout chamber in different sizes for village road where light traffic run and for main road where heavy traffic run as deptt.approved drawing with 25cm thick brick work (1:6) over cement concrete (4:2:1) over a single B/F soling over150mm.thick sand filling in foundation including earth work in excavation and disposal of excess earth from work site with RCC (1:1.5:3) cover slab 100mm / 150mm thick slab on top of chamber with 1% reinforcement in RCC cover slab with necessary opening for operation of valve all complete including cost of labour& materials as per Departmental Dwg.
15	Bituminous pucca road (approx. 450mm depth) cutting by using gaiti, chisel, hammer etc. and picking up the with drawing excavated materials and remove the same within distance of 30mtr. at least all complete for fixing/crossing all dia of pipe line as per direction of EIC. (width cutting for trench as per IS 3114 : 2004 , P-1, Cl-3.2)
16	Dismantling all type of plain cement concrete works, stacking serviceable materials of site and removing rubbish as directed within a lead of 75mtr. for laying all dia pipe line in ground floor, upto 150mm thick. (width cutting for trench as per IS 7634 (Part 2) : 2012 , Table-3)
17	Removal of rubbish, earth etc. From the working site and disposal of the same beyond the compound, in conformity with the Municipal/ Corporation Rules for such disposal, loading into truck and cleaning the site in all respect as per direction of Engineer-In-Charge.
18	Submission of complete detailed drawing of distribution system, rising main etc. after execution of work showing position of different types of valves, fittings/specials sluice valve chamber with location, node to node wise in the sanctioned drawing as completion drawing of the water supply scheme as per direction and satisfaction of EIC. The list of dia wise fitting/specials, different pipes ;of valve used in the rising main should be shown in the completion drawing (not separate) with verified by SAE & AE in-charge of the scheme. The above drawing will be submitted in 5 copies.

19	Making barricading of excavation trenches of road width upto 15mtr. to avoid any accident by providing 75mm dia bamboo post placed vertically & horizontally with the help of 6"size iron rail as per direction and satisfaction of EIC. (Applicable where critical situation arise and take up the work as per direction of EIC)
20	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches,levelling, dressing and ramming the bottom, bailing out water as required complete. (a) Depth of excavation not exceeding 1,500 mm.
21	Earth work in filling in foundation trenches or plinth with good earth, in layers not exceeding 150 mm. including watering and ramming etc. layer by layer complete.(Payment to be made based on the basis of measurement of finished quantity of work. (a) With earth obtained from excavation of foundation.
22	Cement concrete with graded Stone ballast (40 mm.,Pakur variety) excluding shuttering. a) In ground floor and foundation. 6 : 3 : 1 proportion.
23	Ordinary Cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size,Pakur variety) excluding shuttering and reinforcement if any, in ground floor as per relevant IS codes.
24	Hire and labour charges for shuttering with centering and necessary staging upto 4m using approved stout props and thick hard wood planks of approved thickness and required bracing for concrete slabs, beams, column lintel curved or straight including fitting, fixing and striking out after completion of woks (upto roof of ground floor). (f) 25 mm to 30 mm shuttering without staging in foundation
	(a) 25 mm to 30 mm thick wooden shuttering as per decision & direction of Engineer-In-Charge.
25	Reinforcements for reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc. including supply of rods, initial straightening and removal of loose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with 16G black annealed wire at every inter-section, complete as per drawing and direction.(a) For works in foundation, basement and upto roof of ground floor / upto 4m. (i) Tata/Sail/RINL(Tor Steel/ HYSD)
26	Brick work with 1st class bricks in cement mortar (1:6) (a) In foundation and plinth
27	(A) Filling in foundation or plinth by silver sand in layers not exceeding 150 mm as directed and consolidating the same by thorough saturation with water, ramming complete including the cost of supply of sand.
28	Supply and delivery of 500mm dia DI (K-9) Pipe conforming to IS8329-2000.
29	Supply of 500 mm dia MS pipe& specials (minimum 8mm thick) including food grade epoxy coating of inner surface area and epoxy coating of Outer surface area including Derusting, scrapping, brushing with sand blasting

Terms of Payment : Item wise break up.		
1.0	Laying Raw water Rising Main network with D.I (K-9)/M.S. pipes including all Specials & temporary road restoration for vehicular movement excluding cost of valve and valve chamber.	
A	After completion of laying work complete in all respect diameter wise.	80% of BOQ
B	After Testing of the Pipeline in accordance with IS: 3114 – 1965	5% of BOQ
C	After cleaning and disinfection of pipe lines.	5% of BOQ
D	After Submission of complete detailed drawing of distribution system, rising main etc. after execution of work showing position of different types of valves, fittings/specials sluice valve chamber with location, node to node wise in the sanctioned drawing as completion drawing of the water supply scheme	10% of BOQ
	Total =	100%
2.0	Supplying, designing and construction of Pipe Carrying M.S. Bridge (Details are given in scope of work.)	
A	After submission of survey, design ,drawing and approval from the appropriate authority	5% of sl. No. 6 of BOQ
B	After 100% completion of fabrication work of Steel Truss on ground in all respect.	45% of sl. No. 6of BOQ
C	After completion of foundation and Sub-structure below deck level.	20% of sl.no. 6 of BOQ
D	After completion of fitting, fixing, placing in position of Steel truss with all necessary works including painting, connection etc. complete	30% of sl.no. 6 of BOQ
	Total =	100%
3.00	Supplying fitting fixing of Sluice valves/Air Release Valves and including construction of Sluice Valve Chamber as per specification and drawing in all respect as per specification & direction of EIC.	100% sl.no. 7 & 8 of BOQ
Note	<i>a) 2% of Earnest money deposited earlier will be converted into Security deposit after awarding the Contract and 8% additional security deposit as per current Govt. norms will be recovered from each running account bill.</i>	
	<i>b) The 100 % of Security deposit or Retention money will be returned as per the clause mentioned in G.O. No. 5784-PW/L&A/2M-175/2017, Dt. 12.09.2017 of Principal Secretary, Public Works Department.</i>	

	<i>c) The rate quoted diameter wise and uploaded by the bidder in .xls format of BOQ under Financial document will be as per the Annexure-I and prepared drawing after visiting the site condition.</i>
	<i>d) The final drawing in .pdf& .dwg format must be submitted along the final bill along with Hard Copies.</i>
	<i>e) Payment breakup schedule may be altered.</i>

General notes:

- (a) No joint venture in the form of M.O.U. or in any shape will be accepted at any stage of tendering.
- (b) The Bidder should also upload Place of Registration, Principal Place of Business & Power of attorney of signatory of tender.
- (c) The annual turnover shall be based on audited balance sheets of last 5 (five) consecutive financial years.
- (d) The drawing and design to be submitted by the successful bidder in connection to the work for the components stated in the Bid.
- (e) Canvassing in connection with the e-tenders is strictly prohibited and the tenders submitted by bidder who take resort to canvassing will be liable to rejection.
- (f) Partnership Firms shall furnish the registered partnership deed and Companies shall furnish the Article of Association and Memorandum. [Non Statutory Documents]
- (g) In case of Proprietorship and Partnership Firms and Company, the Tax Audited Report to be furnished along with balance sheet and profit and loss account and all schedules forming the part of Balance Sheet and Profit & Loss Account in favour of applicant. No other name along with applicant name, in such enclosure will be entertained. [Non Statutory Documents]
- (h) Submission of Income Tax Acknowledgement Receipt for Current Assessment Year is mandatory.
- (i) Any legal matter will be settled within the jurisdiction of the Hon'ble District Judges' Court at Tamluk, Distt.-PurbaMedinipore, West Bengal.
- (j) The bidder would be at liberty to point out any ambiguities, contradictions, omissions etc. seeking clarifications thereof or interpretation of any of the conditions of the Tender documents before the Tender Inviting Authority in writing within the stipulated date and time as mentioned in this e-NIQ. Beyond such period no representation in this regard will be entertained by the Tender Inviting Authority. The Pre-Bid Meeting, if any, will be held at the Office of the Superintending Engineer, South Circle, M.EDte on Stipulated date &time.
- (k) Written clarification or amendments etc. as may be issued by the Tender inviting authority in pursuance to the presentation made by the Bidder shall be final and binding on the Bidder and shall form part of the Tender documents
- (l) Before issuance of the Acceptance / Work Order, the tender inviting authority may verify the credential & other documents of the lowest bidder if found necessary. After

verification, if it is found that such documents submitted by the lowest tender is either manufactured or false in that case, work order will not be issued in favour of the lowest bidder under any circumstances.

- (m) In case of ascertaining authority at any stage of tender process or execution of work necessary registered irrevocable power of attorney is to be produced on demand.
- (n) In case of tie bid, L1 bidder will be selected following the prescribed procedure mentioned in the Memorandum No.-2320-F(Y), Dated-7.6.2022 of the Principal Secretary, Finance Department, Govt. of W.B.

Note: All addendum and corrigendum, if published through <https://wbtenders.gov.in> in relation to this tender, will have to be considered as parts and parcel of this comprehensive tender document. Bidders have to follow all publications carefully and it will be the responsibility of the bidder to finalize their quoted Rate before the date of final submission.

**Superintending Engineer
South Circle, M.E.Dte.**

CHAPTER-1
INSTRUCTION TO BIDDERS/BIDDERS
SECTION – A

1. General guidance for e-tendering

Instructions / Guidelines for Bidders for electronic submission of the tenders have been annexed for assisting them to participate in e-tendering.

2. Registration of Bidder

Any Bidder willing to take part in the process of e-tendering will have to be enrolled and registered with the Government e-procurement system, through logging on to <http://wbtenders.gov.in>. The Bidder is to click on the link for e-tendering site as given on the web portal.

3. Digital Signature certificate (DSC)

Each Bidder is required to obtain a class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders, from the service provider of the National Information's Centre (NIC) or any other bonafide service provider on payment of requisite amount. Details are available at the Web Site stated in Clause 2 of Guideline to Bidder. DSC is given as a USB e-Token.

4. The contractor can search and download NIB and Tender Documents electronically from computer once he logs on to the website mentioned in Clause 2 using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.

5.Submission of Tenders.

General process of submission, Tenders are to be submitted through online to the website stated in Cl. 2 in two folders at a time for each work, one in Technical Proposal and the other is Financial Proposal before the prescribed date and time using the Digital Signature Certificate (DSC) the documents are to be uploaded virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).

A. Technical proposal

The Technical proposal should contain scanned copies of the following further two covers (folders).

A-1. Statutory Cover Containing

1. Prequalification Document

i. Prequalification Application (Sec-B, Form – I)

ii. Scanned Copy online Transaction of earnest money

(EMD) as prescribed in the NleB against each of the serial of work.

2. NleB with Bid Documents (downloads and upload the same Digitally Signed)

3. Technical Document (To be filled, scanned & digitally signed)

i. Financial Statement (Section – B, Form – II).

ii. Affidavits((Ref:- format for general affidavit shown in "Y" Part "B".)

iii. Bank Solvency Certificate.

iv. Form III & IV Of Section B.

A-2. Non statutory Cover Containing / My Documents

i. GST Certificate (up to date).

ii. Registration Certificate under Company Act. (if any).

iii. Registered Deed of partnership Firm/ Article of Association and Memorandum, if applicable.

iv. Power of Attorney (For Partnership Firm/ Private Limited Company, if any)

- v. Tax Audit Report along with Balance Sheet and Profit and Loss A/c for the period up to last five years(year just preceding the current Financial Year will be considered as year – I)
- vi. Clearance Certificate for the Current Year issued by the Assistant Registrar of Co-Op (S) (ARCS) bye laws are to be submitted by the Registered labour Co-Op(S) Engineers’ Co.-Opt.(S), if applicable.
- vii. Credential: Scanned copy of Original Credential Certificate as stated in NleB

Intending Bidders should upload Non-Statutory documents as per following folders in My Document:

E-Bidding system of Government of West Bengal			
Bidder Document Sub Category Master			
Sl. No.	Category Name	Sub Category Name	Sub Category Description
A	CERTIFICATES	A1. CERTIFICATES	1. GST Certificate 2. E.S.I & EPF Registration Certificate.
B	COMPANY DETAILS	B1. COMPANY DETAILS	1. Proprietorship Firm (Trade License). 2. Registered Deed of partnership Firm 3. Registration Certificate under Company Act. (if any). Ltd. Company (Incorporation Certificate, Trade License) 4. Power of Attorney (For Partnership Firm / Private Limited Company, if any) 5. Society (Society Registration copy, Trade License)
C	CREDENTIAL	C1. CREDENTIAL1	Similar nature Work & Completion Certificates/certificate of running work along with work order, BOQ and payment certificate issued by competent authority (as per Sl. No. 3 of NleB)
D	EQUIPMENT	LABORTARYequipments& other MACHINERIES	1. List of Machineries and equipment necessary for field as well as laboratory test of all materials as per NleB
E	FINANCIAL INFO	E1. P/L & BALANCE SHEET 2011- 2012	P/L & BALANCE SHEET (as per NleB)
		E2. PAYMENT CERTIFICATE 1	Payment Certificate in support of valid Credential only to be submitted
		E3 PAYMENT CERTIFICATE 2	
F	MANPOWER	TECHNICAL PERSONNEL	List of technical personnel employed under the organisation (or on contact basis) in details with name, qualification, experience and, address with contact number.

G	DECLARATION	DECLARATION 1	1. Bank Solvency Certificate (As per NleB)
		DECLARATION 2	2. Valid Document in support of annual turnover as per NleB.
		DECLARATION 3	3. Corrigendum and additional document (if any).

B. Bid Evaluation

- i. Opening and evaluation of Bid :-No exemption from payment of EMD will be allowed.
- ii. Opening of Technical proposal: - Technical proposals will be opened by the Bid Inviting Authority electronically from the website using his/ her Digital Signature Certificate.
- iii. Cover (folder) of statutory documents (vide Cl. No. 5.A-1) should be opened first and if found in order, cover (Folder) for non-statutory documents (vide Cl. No.– 5.A-2) will be opened. If there is any deficiency in the statutory documents the Bid will summarily be rejected.
- iv. Decrypted (transformed in to readable formats) documents of the non-statutory cover will be downloaded and handed over to the Bid Evaluation Committee. Scrutiny of technical proposal and recommendation thereafter and processing of comparative statement for acceptance etc. will be made by the Municipal Engineering Directorate, under the department of Municipal Affairs, Govt. of West Bengal. Comparative Statement may be forwarded to appropriate authority depending on the value of the work as applicable as per existing norms and guidelines under AMRUT programme.
- v. Uploading of summary list of technically qualified bidders.
- vi. Pursuant to scrutiny and decision of the screening committee the summary list of eligible Bidder and for which their proposal will be considered and uploaded in the web portals.

C. Financial proposal

As per Sl. 9 Part II (a) , Bid Price / Price Schedule. To be uploaded digitally signed by the Bidder.

6. The audited Balance sheet for the last five years, net worth furnished in FORM-I and II (Section-B) i.e., Application (for Pre-qualification) and Financial Statement etc. are to be submitted.

7. Penalty for suppression / distortion of facts:

Submission of false document by Bidder is strictly prohibited and in case of such act by the Bidder the same may be referred to the appropriate authority for prosecution as per relevant IT Act with forfeiture of earnest money forthwith.

8. REJECTION OF BID

The Employer (tender accepting authority) reserves the right to accept or reject any Bid and to cancel the Bidding processes and reject all Bids at any time prior to the award of Contract without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the ground for Employer's (tender accepting authority) action.

The Bidder who's Bid has been accepted will be notified by the Tender Inviting and Accepting Authority through acceptance letter/ Letter of acceptance. The Letter of acceptance will constitute the formation of the Contract.

The Agreement in Printed Tender Form will incorporate all necessary documents e.g. N.I.B., all addenda-corrigendum, special terms and condition (Section –C), different filled-up forms (Section –B), Price Schedule and the same will be executed between the Tender Accepting Authority and the successful Bidder.

SECTION - B

FORM –I

PRE-QUALIFICATION APPLICATION

To

The Superintending Engineer

South Circle, M.E.Dte.

Ref: Bid

For _____

Name of work _____

23

Laying of Raw Water Rising Main from Intake to WTP with D.I.(K-9) including all D.I. Specials, valves etc. completed in all respect for Water Supply Scheme within Tamluk Municipality under AMRUT 2.0

NieB No.:.....

Dear Sir,

Having examined the Statutory, Non statutory and NieB documents, I /we hereby submit all the necessary information and relevant documents for evaluation. The application is made by me / us on behalf of _____ In the capacity _____ duly authorized to submit the order.

The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for Application and for completion of the contract documents is attached herewith.

We are interested in bidding for the work(s) given in Enclosure to this letter.

We understand that:

- (a) Bid Inviting and Accepting Authority can amend the scope and value of the contract bid under this project.
- (b) Bid Inviting and Accepting Authority reserves the right to reject any application without assigning any reason.

Enco:- e-Filling:-

- 1. Statutory Documents
- 2. Non Statutory Documents

Date: -

**Signature of applicant including title
and capacity in which application is made**

N.B :-THIS APPLICATION MUST BE MADE IN THE LETTER HEADED PAD OF THE FIRM CLEARLY MENTIONING THE ADDRESS, E-MAIL AND CONTACT NUMBER OF THE FIRM.

Form - IIB

FINANCIAL STATEMENT

B.1 Name of Applicant :

B.2 Summary of assets and liabilities on the basis of the audited financial statement of the last five financial years.

(Attach copies of the audited financial statement of the last five financial years)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
	(Rs. In In	(Rs. In	(Rs. In lakh)	(Rs. In lakh)	(Rs. In lakh)

	lakh)	lakh)			
a) Current Assets : (It should not include investment in any other firm)					
b) Current liabilities : (It should include bank over draft)					
c) Working capital : (a) – (b)					
d) Net worth : (Proprietors Capital or Partners Capital or Paid up Capital + Reserve and surplus)					
e) Bank loan/ Guarantee : (As per clause G.2. with all sub clauses)					

B.3 Annual value of construction works undertaken :						
Work in hand i.e. Work order issued	As on 31.03.2024	As on 31.03.2023	As on 31.03.2022	As on 31.03.2021	As on 31.3.2020	As on 31.03.2019

Signed by an authorized officer of the firm

Title of the officer

Name of the Firm with Seal

Date

AFFIDAVIT — "Y"

Declaration of the Bidder

(Affidavit to be affirmed on a Non Judicial Stamp Paper of Appropriate Value And Duly Notarized)

I, son of aged about years by occupation do hereby solemnly affirm and confirm as follow:

1. That, I am the of have duly authorized by and competent to affirm this affidavit on behalf of the said Bidder.

2. That, I have inspected the site of work covered under NIB (NIB No_____) circulated through Office memo bearing No -----dated ----- and have made myself fully acquainted with the site conditions existing level/proposed level and local conditions in and around the site of work. I have also carefully and meticulously gone through the Bid documents. Bid of the above named Bidder is offered and submitted upon due consideration of all factors and if the same is accepted, I on and for behalf of the aforesaid Bidder, being lawfully and duly authorized, promise to abide by all the covenants, conditions and stipulations of the Contractual documents and to carry out, complete the works to the satisfaction of the Bid accepting Authority of the Work and abide by all instructions as may given by the Engineer in Charge of the work time to time. I also hereby undertake to abide by the provisions of Law including the provisions of Contract Labour (Regulation & Abolition) Act, Apprentice Act 1961, GST Act as would be applicable to the Contractor upon entering into formal Contract / agreement with the Bid Inviting/Accepting authority.

3. That I declare that, no relevant information as required to be furnished by the Bidder has been suppressed in the Bid documents.

4. That the statement above made by me is true to my knowledge.

Deponent

Solemnly affirmed by the said

.....

Before me.

(1st class Judicial Magistrate / Notary Public) .

DECLARATION OF TECHNICAL PERSONNEL

I,..... S/o, D/o, W/o.....residing at do hereby declare that I am a Civil Engineer having qualification, DCE/BCE/MCE and working in the capacity of (Designation) in the organisation namely, address-..... since DD/MM/YYYY.

Copy of my passed certificate has been attached herewith.

Signature with date.....

Name.....

Address.....

Mobile No.....

Email.....

FORM- III

STRUCTURE AND ORGANISATION

A.1 Name of applicant :

A.2 Office Address :

Telephone No. and Cell Phone No. :

Fax No. :

E mail :

A.3 Attach an organization chart showing the structure of the company with names of Key personnel and technical staff with Bio-data. :

Note: Application covers Proprietary Firm, Partnership, Limited Company or Corporation.

**Signature of applicant including title
and capacity in which application is made**

FORM — IV

C. DEPLOYMENT OF MACHINERIES (in favour of owner / lessee): -

(Original document of own possession arranged through lease deed to be annexed)

(If engaged before Certificate from E.I.C. to be annexed in respect of anticipated dated of release of Machineries.)

Name of Machine/ Instrument	Make	Type	Capacity	Motor / Engine No	Machine No.	Possession Status		Date of release/engaged
						Idle	Engaged	

For each item of equipment the application should attach copies of

- (i) Document showing proof of full payment,
- (ii) Receipt of Delivery,
- (iii) Road Challan from Factory to delivery spot, is to be furnished.

**Signature of applicant including title
and capacity in which application is made**

Copy forwarded for information and with a request for wide publicity through the Notice Board to: -

1. The Chairperson ,Board of Administrator, TamlukMunicipality,PurbaMedinipur.
2. The State Mission Director AMRUT, Subhanna, Saltlake.
3. The Chief Engineer, South Zone, M. E. Dte. BikashBhavan, Salt Lake, Kol. – 700 091.
4. The Addl. Chief Engineer (South), M. E. Dte. BikashBhavan, Salt Lake, Kol. – 700 091.
5. The District Magistrate, PurbaMedinipur.
6. The Executive Engineer, East Midnapore Division, M.E.Dte.
7. Notice Board of this office.
8. Office File.

**Superintending Engineer,
South Circle, M.E. Directorate**

DESCRIPTION OF THE PROJECT

Laying of D.I. (K-9) pipes (supplied by department)/ MS pipes with all kinds of Specials and valves including Supply and delivery at site M.S. Pipes, specials and valves including transportation, loading and unloading of DI pipe from departmental store/yard, including earth work in excavation in trenches, shoring (if necessary) of adequate width having minimum depth to keep the top surface of pipe 1.10 m below of the existing ground level in any kind of soil mixed with boulder, metal crust, concrete pavement, any road sub-grade and its flank etc., dewatering the trenches, preparing the bottom surface of the trenches for continuous bedding including sand filling (if necessary), Over-Ground installation to cross small ditches etc. supported with RCC pillars, Steel Bridge as & where necessary and fitting, fixing, jointing (all types of joints) valves, specials etc. as per requirement, in position, cutting, chamfering of pipes as required, constructing sluice valve chambers including supply and fitting in position sluice valve of different dia. filling of the trenches with excavated materials, consolidating the same in layers, guarding trenches with temporary bamboo railing for safety where necessary, emergency horizontal auger boring (for roads other than NH and Railway) where necessary, removing the surplus materials from the site as per municipal rules in vogue including all labour charges, tools and plants, hydraulic pressure testing, cleaning and disinfection of pipes etc. complete in all respect as per IS 12288-1987 (latest edition) and Temporary Roads Restorations as per enclosed drawing or/ and the instruction of E.I.C.

2.0 LOCATION

Water Supply Scheme under AMRUT 2.0 within Tamralipta Municipality area as per departmental drawing, Dist. Purba Medinipore

3.0 DETAIL SCOPE OF WORKS -IN GENREAL

I. The participating agency has to carefully inspect the site with the attached drawing and collect all data for preparation of justified estimate and thereafter evaluation of unit rate against each item of BOQ. The participating agency also includes the cost of all such items in estimating the total cost which is required to complete the work complete in all respect.

II. The work is to be executed as per related IS Specification, WB Form No. 2911 and other specification laid down in the bid. DI (K-9) Pipe & rubber gasket for 5372 m length will be supplied from departmental store and Necessary charge for carrying of DI pipe from departmental store to work site should be borne by the agency. DI (K9) Pipes for 1296 m length, Sluice valve, Air Release valve, D.I. Fittings, Mechanical Joints etc., where necessary, will be supplied by agency and it should of have reputed make and should be approved by the EIC. Third Party Inspection (TPI) through RITES/MECON/PDIL for DI(K9) pipes and rubber gasket to be supplied by the agency is mandatory before delivery of pipes. TPI report should cover (I) all the parameters as per IS 8329:2000, (II) test to ensure Rubber Gasket quality as per IS code.

III. The contract comprises of laying of Clear Water Rising Main network (D.I. Pipes K9/MS) including all D.I./other Specials and laying, fitting, fixing, jointing and all other works incidental thereto as desired and set-forth in the specification. Bidders are advised to inspect the site before tendering, extra claims on the ground of insufficient data and absence of knowledge about conditions prevailing at site shall not be entertained.

IV. A tentative network drawing is attached with the bid document in .pdf format. The agency has to plan everything on the drawing i.e., where additional work of shoring, BFS, RCC column, sand filling, Sluice valve and chambers etc. are required. The whole planning thereof will be submitted by the successful bidder after awarding the contract. The working drawing (5 copies) prepared on the basis of the above will be approved by the Superintending Engineer, South Circle, MED, if found correct. In that case any alternation /addition etc. done by the EIC and /or Superintending Engineer concerned will be final and the contractor will be bound to execute the work as per drawing approved by the SE concern.

V. The work has to be carried out on the basis of the approved drawing.

VI. After completion of the work, a completion drawing (5 copies) in suitable scale with position of pipes (diameter wise and its length), specials/fittings, valves etc. have to be submitted along with final bill. The final bill shall not be paid unless the said stipulation is complied with.

VII. Care has been taken to make the uploaded drawing as correct as possible, nevertheless these drawings must be checked thoroughly by the tenderers' who will be held responsible for satisfactory work of the pipe connection with all its details. Any discrepancy noticed should be pointed out before the work is commenced. Under all circumstances, the contractor will be held responsible for the satisfactory completion. In case of any discrepancy between the drawing and the schedule of tender, the decision of the Superintending Engineer will be final and binding.

VIII. The works are to be carried out strictly in accordance with approved drawing and specification supplemented by other detailed working drawings as the Engineer-in-Charge may sign, if necessary, from time to time. For any change, no extra claim will be entertained.

IX. The pipes are to be laid as far as practicable along road flanks with lowest hindrances to the vehicular traffic. The contractors are to obtain the information regarding the layout and precise position of the underground Electric Main, Telephone or other Cables. No responsibilities in this respect will be taken by the Directorate. The contractor will have to cut CC road orbituminous road of any thickness where suitable Road flank is not available and its cost is included in the relevant items of the work.

X. The trenches will have to be adequately protected against accidents continuously throughout day and night. Demonstrations of danger signals, red lamps and other signs as may be required at the vintage point and imperative upon the contractors in the interest of public safety.

XI. The contractors' will further shore up and support to the satisfaction of the Engineer-in-Charge, all Building Works, Electric Mains, Telephone or Other Cables, Surface Storm Water, Drains, Ditches, Culverts, Water Sources, Water Mains and Other Pipes which may be or likely to be affected or endangered or disturbed by the works, being in the line thereof and continuous thereto.

XII. The contractors' will be liable for and make good at their own expenses within a reasonable period of time to be fixed by the Engineer-in-Charge, all damages which may be occasioned to one or combination of items in building, walls, water mains and other pipes by or in consequence of the execution of the works or accident whatsoever, in the event of default (in lapse with respect to the time limit) it shall be lawful for the undersigned to employ other agency to make good the damages at the risk at cost of the contractors' after a 24 hours written notice period has elapsed. The expenditure amount in above situation will be deducted from the bills of agency.

XIII. In case of trenches in front of any holding so as to block its passage of communication, the contractors' will have to make for temporary arrangements to remove the difficulties by provision of wooden planks or otherwise and removing the same after the trenches are filled up.

XIV. The tenderers will consider the conditions and adjust the extent of liabilities involved and quote their rate accordingly. Since no extra claims will be entertained separately on that account, inspection of sites prior to tendering, therefore, should be done by the tenderer.

XV. Decision of the Engineer-in-Charge in this respect is final. The excavation shall have to be done through any materials (e.g. — soil, premixed road surface, concrete to roads etc.) with shuttering and dewatering as may be required to protect the trenches and facilitate the works during execution. This also includes cutting and removing trunks and roots of trees.

XVI. Cutting the pipes to sizes lowering and placing them along trenches including laying, fitting and jointing with rubber gasket and / or solvent cement joint and/or D.T. joint as the case may be. Filling the trenches in layers of 15cm, each layer being adequately watered and consolidated. The filling has to be done after completion of the

joints and after affecting the hydraulic test as per specification and at location where defects will be found during hydraulic tests. However, no trenches should be left open at the end of the day (at the time of closing of work).

XVII. After removal of the surplus excavated materials (except road metal) after the trenches have been rammed to the satisfaction of the Engineer-in-charge, if any, serviceable materials such as bricks and stones, ballast and chips, stone-setting, asphalt etc. are available from roads and other road flanks along which the pipes have been laid for restoration of the same, contractor will arrange for stacking these materials properly and separately as per direction of Engineer-in-Charge for which, no extra payment will be entertained in this situation.

XVIII. The contractors' rates for laying pipes will also include the cost of all the items of works mentioned with this Clause excepting that for which, a separate item has been provided in the schedule.

XIX. In general, the pipes have to be laid with minimum cushion of 1.1 metre from the existing ground level but if 1.1 metre cushion cannot be maintained anywhere the decision of the EIC is final & binding.

XX. The contractor will provide his own arrangement for every cost, charges or expenses which may be claimed or any person public or private or Government concerned, occurred to the property of life of any such concern or person (as the case may be) by or in consequence of the execution of the said work or in respect of any labour of work, entitled upon said work for which, no extra payment will be allowed.

XVII. EXCAVATION OF FOUNDATION, FILLING UP TRENCHES:

Foundation of trenches excavated as per drawing. The depth and width of trenches properly maintained during execution. The bed of trench is to be properly levelled and rammed. Any water accumulated in the trenches due to sewage or rain water to be dewatered at the cost of contractor. The laying rate includes for excavation in whatever soil and stone, hard or soft, that may be found and breaking through any underground structure surface metalling, pegging and trimming and pumping, if necessary, for removal of water or muddy water, taking out mud keeping the top soil separately or unavailing of surplus materials, tapping and shoring excavated materials, matching temporary installment and maintenance of surface and every other expense in strict conformity with the specification.

The excavated areas around the foundation structure are to be filled up properly to the required levels with the earth obtained from excavation. The filling should be done properly consolidated with Iron Rammer and sprinkling water. The cost of filling up the trenches includes relevant items of work for which, no extra payment will be made.

XXIII. SUPPLY OF PIPES AND CARRIAGE: Only DI (K9) pipe & rubber gasket will be supplied by the department from the store or yard free of cost. Agency has to bear the cost of carriage. All unutilized pipe, after completion of the work have to be returned to departmental store or yard by the agency at his own cost.

XXIII. TECHNICAL SPECIFICATION AND GENERAL CONDITIONS: As scope given in the NleT

XXIV. RECOVERY OF MATERIALS:

For loss of damage of materials, if any supplied by the department or non-returning of surplus materials, recovery (*in which case the decision of the Engineer-in-Charge shall be final*) will be made from the contractor at the highest of the following rates:-

50 per cent in excess of the highest of the following rates;

- (i) Department stock rate or purchased rate at the time of recovery of value*
- (ii) Market rate at the time recovery of value.*

The contractors' should carefully examine the materials supplied from Govt. Store regarding its quality and suitability. No complaint in this regard will be entertained once the materials have been supplied to and received by the Contractors.

XXV. DEPARTMENTAL MATERIALS AND COST:

Only DI (K9) pipe& rubber gasket will be supplied by the department free of cost.

XXVI. TIME OF COMPLETION:

The works for pipe line shall be completed in all respect by the contractors' within the time frame.

In the event of work being not completed within this stipulated period, the contractors' will be liable to pay a penalty as Clauses of WB Form No 2911 through which the tender will be accepted.

The contractor will show satisfactory cause for delay in starting work if the works are not started within 10(ten) days from the date of issue of work order. Otherwise, the contract will be terminated. The contractor will accordingly, prepare a time bound programme of execution with regard to all the items of work set-forth in a schedule and submit the same to the undersigned within 7(seven) days' from the date of work order.

For unsatisfactory progress of work, it will be the option of the undersigned/E.I.C. to withdraw the works out of the contractors' and to get the balance works done through any other agency at the risk and cost of the contractors'.

In case of recurrence of unsatisfactory progress, the undersigned/E.I.C. shall have the power to rescind the contract and to impose such penalties as have been specified in the WB Form No. 2911. The contractor may further be debarred from tendering for works under this Directorate.

Before starting the work, the contractor shall submit a target of progress schedule showing the different portions of work, he expects to complete against stages of time.

XXVIII. SITE ORDER BOOK:

The contractor will produce Site order book at site before commencement of the work duly numbering the page herein shall be recorded the orders, instructing comments, sketches etc. as may be issued at site by the undersigned / Engineer-in-Charge or his authorized representative from time to time. The contractor also will comply with such order, instruction, sketches etc. and will maintain the site order book till the contract is fulfilled and will be required to produce the same on demand by the Engineer-in-Charge.

The site order book shall be a bound register full scape size of fifty pages in triplicate duly marked two pages in each unit of three should have perforation beside, so as to be easily detachable.

The contractors' or authorized representative (to be categorical named by the contractors') must sign any such orders, instructions, comments and sketches issued as a token acceptance in all three pages of the Site Order Book.

XXIX. ACCIDENT OR INJURY TO WORKMEN:

The Employer shall not liable for or in respect of any damages or compensation payable at law in respect or in consequence of any accident or injury to any workman or other; person in the employment of the Contractor or any sub-contractor, have and except any accident or injury resulting from any act or default of the employer, his agents, or servants. The Contractor shall indemnify and keep indemnified the Employer against all such damages and compensation, save and except as aforesaid and against all claims, proceedings, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

4.0 SPECIFICATION OF DIFFERENT ITEM OF WORKS TO BE EXECUTED

- a) Only DI(K9) pipe of 5372 mtr. shall be supplied departmentally and agency has to make his own arrangement for carriage of material from store to site. Rest of quantum of DI(K9) pipe supply and delivery at site shall have to done by the agency at his own cost. For supply of DI(K9) pipe following criteria shall
- b) Supply and delivery at site ISI Mark Socket and Spigot jointing system centrifugally cast DI (K9) Pipes conforming to IS 8329-2000 (Third revision) in standard length 4 m, 5 m, 5.50 m, 6 m for push-on joint (rubber gasket) with internal cement mortar lining and external protection by metallic zinc coating with finish layer of Synthetic resin as per IS: 8329-2000 specification with necessary jointing material rubber gasket (IS: 5382:1985) including supply of polyethylene sleeves including transportation, loading unloading and stacking at site.
- c) External coating of the pipes will be epoxy over zinc coating and inside cement mortar lining as per IS:8329:2000.
- d) Certificate from reputable Government Institution/ Universities is essential for eligibility to participate to ensure desired hydraulic smoothness of Cement Mortar Lining in the DI pipe, the minimum Hazen-William's "C" value of 140 corroborating the guideline of CPHEO Manual Water Supply and Treatment.
- e) Providing rubber gasket conforming to IS 5382:1985
- f) All types of Ductile Iron (D.I) Specials (viz. Bend. Tee. Taper. Tail piece etc), size conforming to I.S. Specification No. 9523/2000 with cement mortar lining (inside) and bituminous coating (outside).
- g) Laying of D.I. pipes (K9) with specials & supplying, fitting & fixing of M.S. Pipes including earth work in excavation in of adequate width as per relevant IS Code having minimum depth to keep the top surface of pipe 1.10 M below of the existing ground level in any kind of soil mixed with boulder, metal crust, concrete pavement, road sub-grade and its flank etc., in position and carriage of materials from departmental store if any to work site, filling of the trenches with excavated materials, consolidating the same in layers, removing the surplus materials from site including all labour, tools and plants etc. Surplus materials out of excavation are to be cleared by the Agency within 20 Km. Radius of the Municipal boundary at his own cost.
- h) Laying of D.I pipes & specials over brick or concrete pillar or wall upto height of 2m aboveground level aligning assembling etc. all complete including cost of all sal-ballah staging, bamboo scaffolding tools & plants specials for hoisting and positioning etc. all complete as per specification and direction of E.I.C.
- i) Cutting D.I. (all types) by chisel/Hacksaw including rendering the surface smooth to make it suitable for rubber gasket/ rubber ring etc. complete as per direction of EIC. (for old line only).
- d) Chamfering the spigot end of the D.I pipes for using in Tyton joints line or otherwise by means of electric grinder set at site as per direction of F.I.O
- e) Cleaning thoroughly the inner surface of pipe line including special & valves by flushing with water & subsequently disinfection of the same pipe line by flushing again with water containing bleaching powder resulting in residual chlorine not less than 15 mg / Ltr. after 24 hours of such filling including laboratory testing of water sample obtained from disinfected pipe line & disposal of water from the pipe line after completion of the work. The rate is including of cost of requisite water to be arranged by the Contractor. If the agency uses water from departmental supply, recovery will be made as per norms.
- f) Supplying & delivery at working site CIDF sluice valve conforming to IS 14846-2000 (ISI marked), with latest amendment, including stacking and inclusive of Departmental inspection, packing charges, all taxes and duties as applicable and payable, Flanged drilled as per IS 15381993 with latest amendment all complete along with installation of the same as per direction of EIC. All products must have BIS certification.

(Approved make: Kirlosker/IVC/L&T/VAG/M&P/Upadhyay)

Class PN 1.0 with cap. (Sluice Valve to be supplied by agency)

- g) Making flange joint to D.I pipes and specials and valves including dewatering of trenches, tools & plants, labour etc. as per specification and instruction of E.I.C.
- h) Hydraulically testing of different types of pipes in sections for a head of water not less than 1/2 (Half) the pressure recommended by I.S. or corresponding pipe materials whether the gauge pressure will remain static for 30 minutes by filling water including supply of necessary equipment's such as generator sets, pumps gauges etc. All complete as per specification and instruction of E.I.C. [Water have to be arranged by the bidder himself and whole testing procedure will be accordance with as per IS : 3114 -1965. If the agency uses water from departmental supply recovery will be made as per norms .]
- i) Hire and labour charges for 75 mm dia bamboo railing on Jhau / Eucalyptus or other approved timber / bamboo posts 1.4 m above GL and 0.6 m below GL including tying strongly with coir ropes and boring holes for posts in any soil/ concrete surface / Bituminous surface packing the sides etc. including cost of restoration to the damages of the ground to its original condition as per direction of EIC after removing barricade. 75 mm dia bamboo railing and 100 mm dia bamboo posts @1.4 mtr apart. railing with 3 rows.
- j) Dismantling all type of masonry including cement concrete, stacking serviceable materials at site and removing rubbish as directed within a lead of 75m in ground floor including roof.
- k) Cutting sub -grade of road (concrete bituminous carpeting & consolidated Ballast/brick soling & other sub-grade materials by means of chisels/Hammer other equipments(for trenches & laying of pipe line.)
- l) **Emergency horizontal road crossing by Auger-boring including boring charge, pipe laying and jointing, making barricades, lighting arrangement etc. all complete as per direction of E.I.C.**
- m) Construction of sluice valve chamber as per drawing supplied by concerned division.
- n) Installation of CI Bolted collar as per IS 13382-1992 with latest amendment or end cap up to date including all taxes & other incidental charges what so ever, carriage, loading unloading & stacking at working site.
- o) Hire and labour charges for shuttering with centring and necessary staging upto 4 mtr. using approved stout props for and thick hardwood planks of approved thickness with required bracing for concrete slabs , beams and columns ,lintels curved or straight including fitting , fixing and striking out after completion of works (upto roof of g.f), as per drawing, specification & direction of E.I.C.
- p) Ordinary cement concrete (mix 1:1.5:3) with graded stone chips (20 mm nominal size)excluding shuttering and reinforcement if any in ground floor as per relevant IS Codes.a) Pakur variety. In ground floor
- q) Reinforcement (As per approved brand approved by the EIC) conforming to relevant IS code for all reinforced concrete work in all sorts of structures including distribution bars, stirrups, binders etc. including supplying of rods, initial straightening and removal of rust (if necessary), cutting to requisite length, hooking & bending to correct shape (if necessary) placing in proper position & binding with 16 gauge black annealed wire at every intersection etc. complete as per drawing & specification including cost of wire.
- r) Single Brick Flat Soling of Picket Jhama bricks including ramming & dressing bed to proper level & filling joints with powder earth or local sand.
- s) Temporary Restoration works of all roads to be done and as per direction and satisfaction of E.I.C.

Pipe Carrying bridge:

It is essential to collect data regarding High Flood Level and relevant data from appropriate authority. The perspective bidder should collect these data in his own arrangement.

i) Survey and Investigation:

a) Soil test, Level survey, Hydraulic survey at the Pier & abutment location for M.S Access Bridge at different location over MM Canal should be done by agency separately. The agency should ensure all the test & survey prior to construction & during construction as deem fit.

ii) Planning, Design & Drawing:

Planning, Architectural and Structural Design & detail Drawing of different width M.S Access Bridges in conformity with relevant IRC/IS code supported on suitable RCC foundation, G.I. grating walkway and railing etc. for carrying different diameter of rising main & distribution line with M.S Pipe line and submission of 5 (Five) copies of design report and drawings both is hard and editable soft copies as well as pdf format.

NOTE:

All the design, drawing and relevant documents of all civil & Mechanical structures should be duly vetted by reputed institution like IIT/NIT/Jadavpur University/ IEST and necessary cost shall have to be borne by the contractor.

Design of all civil & Mechanical structures in all parts shall be based on surveys, soil test report and hydraulic study etc. conducted separately by the successful bidder.

ii) Execution and Construction:

- a) Construction & Erection of M.S Access & Pipe carrying Bridge shall be done at minimum vertical clearance above H.F.L. as per clause 106.8.2 of IRC :5 -2015 or Nearby existing bridge floor level (whichever is higher) with joist, angle frame etc. at different location supported on suitable RCC foundation with suitable spacing as directed by EIC, with D.I. saddle support for previously laid D.I. Pipe line, 10 mm thick Chequered Plate for walkway and G.I. pipe hand railing etc. with all ancillary allied and related works and as per instruction of EIC .
- b) Soil test report should be duly signed and approved from IIT /JU/IEST/NIT/Govt Engineering College before submission for acceptance
- c) The contractor has to design the steel structure of desired span & width as per soil investigation report, and the detailed design report and drawing has to be prepared as per relevant IS Code and shall be vetted from IIT /JU/IEST/NIT/Govt Engineering College before submission for acceptance
- d) Before execution he/she need to submitted Mix design report from Govt. approved laboratory or from IIT / NIT /Govt Engineering College.
- e) The necessary testing in appropriate frequency/quantity of MS Plate/Pipe, Structural Members &Reinforcement Steel have to be done by from National Test House or other NABL accredited laboratory as per direction of EIC at contractor's own cost.
- f) This work should be executed in all respect with supply of all labours, materials, and hire charges of Machineries, equipment's, tools & plants as per design, drawing, specification, scope of works, different sections of Tender Document and direction of EIC. Major items of works involved are given below:

- g) Cleaning site including cutting and removing jungles, bushes and shrubs with any kind of uprooting and layout of the work as per approved drawing in relation to the other works or structures as per direction of the EIC.
- h) Providing and constructing Temporary Service Road of width not less than 3.75 m over river for movement of men, equipment and construction machineries from river bank to collector well location considering necessary stability and safety aspects by providing and driving suitable piles, providing fitting, fixing suitable R.S. Joist, Channels, angles and wooden sleeper as per design requirement including dismantling and taking out the entire service road after construction.
- i) Construction of Temporary Island and or temporary diversion of river course by construction of outer annular layer with two rows of bullahs, suitable spaced, of dia. not less than 150 mm, driven at Least half of the total length, properly tied, braced and supported and filling the annular space with sand / soil filled bags, protected by drum sheet walling on both side and filling the core portion with locally available materials including the dismantling, removing and cleaning the site. Temporary Island should be maintained up to the completion of works for piers and abutment.
- j) Earth work in excavation of foundation trenches or drains up-to design depth, in all sorts of soil including mixed soil, laterite or sandstone and hard rock including controlled blasting and / or pavement breakers or any other equipment as approved by the Engineer-in-charge including removing, spreading or stacking the spoils within a lead of 75m. as directed. The item includes necessary trimming the sides of trenches, leveling, dressing and ramming the bottom, bailing out water as required complete.
- k) Bailing / pumping out of any type water from foundation trenches and / or any other sources.
- l) Hire and labor charges for shoring work including necessary close plank walling, framing, Eucalyptus/ Sal bulla piling, strutting etc. or sheet piling with necessary support and bracing where necessary, all complete as per direction of the Engineer-in-charge for foundation excavation.
- m) Preparation of bed of foundation trenches by ramming etc. as per direction of EIC.
- n) Filling in foundation or plinth by silver sand in layers not exceeding 150 mm as directed and consolidating the same by thorough saturation with water, ramming complete including the cost of supply of sand.
- o) Single Brick Flat Soling of picked jhama bricks including ramming and dressing bed to proper level and filling joints with local sand.
- p) Cement concrete with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any as per relevant IS codes including compacting and curing.
- q) Drilling holes up to 15 cm dia. and up to 1.50 m depth through rock including bailing out / pumping out water and fitting / fixing anchor bolts 20 mm to 40 mm dia. with necessary fittings with cement concrete 1:1.5:3 using anti shrinkage admixture.

- r) Providing RCC cast in situ bored piles of required dia. in position in all kinds of soil except rock of any hardness including cost of boring by any method but using drilling mud to stabilize the bore and flushing the bore of excess mud with freshly prepared drilling fluid by using pumps prior to placing concrete by tremie method in one continuous operation and including the cost of all materials and labor for placing of concrete and also including the cost of hire charges of all equipment's i.e. pile rigs and concrete thereof, welding of reinforcement cage as necessary and lowering reinforcement cage complete but excluding the cost of reinforcement and labor for bending, binding etc. work to be executed as per IS: 2011 (Part I / Sec.2).
using Pakur/Rampurhat/Panchal variety or its equivalent stone chips.
- s) Providing and laying M30 grade Controlled Cement concrete in all parts of the Access Bridge in pile cap, column, pier, abutment, wing wall etc. with well Graded stone chips (20mm size) excluding shuttering and reinforcement, with complete design of concrete as per IS:456 & relevant special publications submission of job mix formula after preliminary mix design after testing of concrete cubes including necessary vibrating, curing and cost for quality control, sampling, testing etc. as per direction of EIC. Consumption of cement will not be less than 400Kg of cement with super plasticizer per cubic meter of controlled concrete but actual consumption will be determined on the basis of preliminary test and job mix formula [using concrete mixture].
- t) Hire and labor charges for shuttering with centering and necessary staging up-to 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works. Steel or Ply wood shuttering should be used. Steel shuttering or 9 to 12 mm thick approved quality ply board shuttering in any concrete work. Staging beyond 4M with stout bamboo / M.S or G.I tubular staging with necessary support and braces with necessary coir rope, nail, nut & bolts etc.
- u) Reinforcement for reinforced concrete work in all sorts of structure including distribution bar, stirrups binders etc. including supply of rod, initial straightening and removal of loose rust (if necessary) cutting to requisite length hooking and bending to correct shape placing in proper position and binding with 16mm. gauge black annealed wire at every inter section complete as per drawing & direction of the EIC.
- v) HYSD Tor Steel/T.M.T bars Fe-500 grade (SAIL/ TATA/RINL) & Cement to be of Premium grade (as per relevant IS code).
- w) Supplying, fabricating at shop suitable M.S Truss segments with necessary welding, pipe saddle support, transporting from shop to site and hoisting in position after necessary splicing at site with bolts and nuts M.S .Latticed Girders made of R.S Joist, angles, Channels, flats etc.

conforming to IS: 2062, IS: 808 and SP – 6 including hire charges of all lifting tackles, provision for walk way and hand railing.

- x) Supplying, fitting and fixing in position true to line and levels approved Electrometric (Neoprene) Bearing as per IRC Code 83-Part I, including making of mortar / epoxy bed over sub – structure including its installation and testing.
- y) Providing and laying in position on bridge deck with minimum of 10.0 mm thick chequered plate as per IS code and all other materials and as per drawing design & instruction of EIC.
- z) Providing GI railing integrated with GI post placed @ 750mm C/C and stiffened top and centrally with GI pipe, all made of 32mm dia. GI pipe (Medium quality of TATA make) on both sides of walk way including cost of GI pipe, Tee and cross where necessary cutting pipes, welding at every junction and intersection of pipes, welding the post with the M.S girder, all complete as per drawing and finished with two coats of synthetic enamel painting to all exposed surface of GI pipes as per direction and satisfaction of EIC.
- aa) Priming one coat on steel or metal surface with synthetic oil bound primer of approved quality including smoothening surfaces by sand papering etc.
- bb) Painting two coats with best quality synthetic enamel paint of approved quality, make, brand, approved colour and shade including smoothening surface by sand papering etc. including using of approved putty etc. on the surface, if necessary on steel or other metal surface with super gloss (hi-gloss).
- cc) Back filling of foundation trenches or filling the plinth or filling behind abutment / wing wall with good earth obtained from excavation, carried earth and or silver sand in layers not exceeding 150 mm including watering and ramming etc. layer by layer all complete
- dd) Making necessary barricading, fixing of caution boards, flags, fluorescent strips, lighting arrangement for works in night, traffic diversion where necessary.
- ee) Removal of surplus excavated earth/spoils and cleaning the site in all respect. Any other allied and related works to complete construction of M.S Access Bridge in all respect.

NOTE: 1) All data given above in the scope of works are tentative in nature; bidder is responsible to take necessary survey, test and all consideration before submission of tender. The scope of Work, supply and service of plants and equipment's may not be limited to the aforesaid items.

The items though not specifically mentioned but needed to make the system complete in all respect and reliable for safe and smooth operation and guaranteed performance shall be included with related items in the price schedule

4.0 Limit of Contract

The limit of contract starts from preparation of complete drawing of respective zone showing diameter and length of pipe, Valves etc. and after approval of same by competent authority proper execution according to specification and after completion of the job preparation of final drawing and submission

of the same to competent authority. In between the above, all the works required for successful completion of the component are in the scope of the above work.

Superintending Engineer

South Circle, M.E.Dte

SECTION — B

CONDITIONS & REQUIREMENTS FOR BIDDING

1. Submission of eBid document will not be allowed beyond the schedule time indicated in the eBidding.
2. Each Bidder shall upload his offer in envelopes (A-1-Statutory & A-2- non-statutory) & .xls sheet after digitally signed superscribing the name of the work, name & address of the bidder, NIB No and date of submission of the eBid.
3. Each page of the eBid documents, drawing etc. has to be digitally signed / initiated by the authorized signatory.
4. No eBid proposal will be entertained without the earnest money being submitted as indicated in the NIB. No interest will be allowed for the said earnest money and the Bid issuing authority will hold the same till finalization of the eBid.
5. Any conditional eBid will be liable for rejection.
6. The Bid inviting Authority reserves the right to reserve or amend the eBid documents prior to the date notified for submission of the eBid or also to extend the time mentioned in the NIB under intimation to the Bidders.
7. eBid once offered cannot be withdrawn within a period of 180 calendar days from the date set for opening of eBids. Any extension of this validity period if required will be subject to concurrence of the Bidders.
8. Bidders would be at liberty to point out any ambiguities, contradictions, omissions, etc. seeking clarifications thereof or interpretation of any of the conditions of the eBid documents before the Bid Inviting Authority by uploading his/her doubt within a period of Forty eight hours before the date of Pre bid meeting as per schedule.
9. Written clarification or amendments etc. as may be issued by the Bid Inviting Authority in pursuance to the representation made by the intending Bidders under Clause 10 above shall be final and binding on the Bidders and shall form a part of the eBid documents. Bid Inviting Authority however, reserves the right to have pre Bid conference with the intending Bidders if deemed necessary. Any point or irregularities or questions could not be raised after expiry of pre bid meeting.
10. Intending Bidders are required to inspect the site of the Project with particular reference to location and infrastructure facilities. They are to make a careful study with regard to availability of materials and their sources and all relevant factors as might affect their rates and prices. The Bidders must be acquainted with existing ground level (EGL),

Highest flood level (HFL), Finished ground level (FGL)/Proposed ground level (PGL), and other required levels.

11. If expenses incurred for site inspection and all activities in the preparation and uploading of the eBid shall be borne by the Bidders.

12. Extra claim or any concession on the ground of insufficient data or information and absence of knowledge of conditions prevailing at the site or situation arising during the execution of the work shall not be entertained.

13. eBid, which have been considered valid on the result of general examination (Prequalification stage) at the time of opening, shall be subjected to subsequent detail scrutiny. Notwithstanding the general examination carried out earlier, the Bid Inviting authority reserves the right of rejection of any eBid, which may be found to be defective during the detail scrutiny.

14. Bidders before uploading the eBid documents shall have to ensure that "Declaration by the eBidder" in the pro-forma set out in the eBid documents is to be filed separately with the eBid documents in the form of Affidavit to be affirmed by the same person signing the Bid documents.

15. The Bid inviting authority reserves the right to accept or reject any or all of the eBid received or to split up the work in groups or to relax any clause without assigning any reason thereof.

16. This set of Bid documents consists of:

- a. Detail Notice inviting Bid.
- b. Declaration by the eBidder.
- c. Main Bid Documents consists of PART I & PART II (Technical) & financial (.xls format)
- d. Tender Form No. 2911.

Superintending Engineer
South Circle, M.E.Dte

SECTION — C

1.0 DEFINITIONS AND INTERPRETATION

- (1) In the Contract, as hereinafter defined, the following words and expressions shall have to be meanings hereby assigned to them, except where the context otherwise requires:
- (a) "Approved" means provisionally approved in writing, including subsequent written confirmation of previous verbal approval and "approval" means provisional approval in writing, including as aforesaid. However in spite of approval from Competent Authority contractor is solely responsible for design-cum-execution of the whole project as it is turnkey job.
 - (b) "Authority" means the TIA or his authorized representatives of Superintending Engineer, South Circle, MED
 - (c) "Bank" means the "State Bank of India" or any other Scheduled Bank.
 - (d) "Calendar day" means a period of twenty four hours extending from midnight to midnight.
 - (e) "Cash" includes cheque, bank drafts and any other payment voucher authorizing payment from any bank or treasury.
 - (f) "Contractor" means the person or persons, firm or Corporation who have entered into the contract for the performance of the work.
 - (g) "Contract price" means the sum as stated in the Bid submitted by the contractor subject to such additions thereto or deductions therefore as may be made under the provisions of; the contract documents and accepted by the Employer.
 - (h) "Constructional Plant" means all appliances or things of whatsoever nature required in or about the execution or maintenance of the works but do not include materials or other things intended to form or forming part of the permanent works.
 - (i) "District" or Tamralipta Municipal Area means the area described as such in Schedule-I of the Act;
 - (j) "Drawings" means the drawings referred to in the Bid documents and any modification of such drawings approved in writing by the undersigned from time to time or approved in writing by the Superintending Engineer, South Circle, MED.
 - (k) "Employer" means the Superintending Engineer, South Circle, MED
 - (l) "Engineer in Charge" means the Executive Engineer, East Midnapore Division of Municipal Engineering Directorate to whom the Superintending Engineer, South Circle, MED, delegate his Authority by the way of declaring him as EIC in the Bid documents.
 - (m) "Engineer's Representatives" means any Assistant Engineer or Assistant of the Engineer or any Clerk of works appointed from time to time by the Employer or the Engineer to perform the

duties set forth in Clause 2 hereof, whose authority shall be notified in writing to the Contractor by the Engineer-in Charge.

- (n) "Ground Level" means the level of the referred point of the exposed surface of the ground, road or pavement free from extraneous materials;
- (o) "Holidays" means a public holiday for the purpose of Section 25 of the Negotiable Instruments Act, 1881 or such other day on which the office of the Authority remains closed for the day;
- (p) "Local Authority" not only means a Municipal Corporation or Municipality or other authority legally entitled to the control or manage local funds but also includes the West Bengal State Electricity Board.
- (q) "Month" means English calendar month;
- (r) "Permanent Work" means the permanent works including equipment to be supplied, executed, erected and maintained in accordance with the Contract;
- (s) "Road" shall include a street, avenue, lane, by-lane or any other access routes over which a person authorized by a Local Authority has a right of way;
- (t) "Rupees" (or Rs. in abbreviation) shall mean Rupees in Indian Currency.
- (u) "Site" means the land and other placed on, under in or through which the Permanent. Works or Temporary Works are to be executed and any other lands and places provided or arranged by the employer for working space or any other purpose as may be specifically designated in the Contract as forming part of the Site,
- (v) "Specification" means the specification referred to in the Bid and any modification thereof or addition thereto as may from time to time be furnished or approved in writing by the Superintending Engineer, South Circle, MED.
- (w) "Store" means such storage areas including depot, go down, stockyard, dumping yard etc. maintained by the Authority) or where supply of any material for the construction or any work has been undertaken by any authorized agent, by such agent within the District.
- (x) "Temporary Works" means all temporary works of every kind required in or about the execution or maintenance of the Permanent Works.
- (y) "Bid Date" means the date fixed for receipt of Bids as per Notice Inviting Bids or as extended by subsequent notification(s).
- (z) "Bidder" means the person, or persons, firm or corporation submitting a Bid for the work contemplated either directly or through a duly authorized representative.
- (aa) "The Act" West Bengal Municipal Act, 1975
- (bb) "Time" expressed by hours of the clock shall be according to the Indian Standard Time.

- (cc) "Water main" means any pipe or conduit of cast iron, DI (Ductile Iron) pipe, steel or of any other material intended to convey or distribute water;
- (dd) "Works" shall include both Permanent Works and Temporary Works.
- (ee) "Work" means all of the work of the project called for or shown in the Bid documents including preparation, construction improvement and cleans up.
- (2) Singular and Plural: Works importing the singular only also include the plural and vice versa where the context demands.
- (3) Headings or Notes: The headings and marginal notes in these Conditions of Contract shall be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or of the Contract.
- (4) Cost: The work "cost" shall be deemed to include overhand costs whether on or off the Site.

2.0 DRAWINGS

- 1) Custody of drawing: All the approved Drawings shall remain in the safe custody of the Executive Engineer, East Midnapore Division, MED, one copy of original approved drawing and design to be submitted to Tamralipta Municipality but one copy thereof shall be furnished to the Contractor free of charge. The Contractor shall provide and make at his own expenses any further copies required by him. At the Completion of the Contract, the Contractor shall return to the Executive Engineer, East Midnapore Division, and M.E.Dte. All drawings as provided under the Contract.
- 2) Copy of drawing:- One copy of drawings to be kept on site. One copy of the Drawings furnished by the Contractor as aforesaid, shall be kept by the Contractor on the site and the same shall at all reasonable times be available for inspection and use by the Engineer and his/municipal Representatives and by any other persons authorized by the Engineer in writing.
- 3) Disruption of progress: The Contractor shall give written notice to Executive Engineer, East Midnapore Division, MED whenever planning or progress of the works is likely to be delayed or disrupted order, including a direction instruction or approval is issued by the Superintending Engineer, South Circle, MED on recommendation of Executive Engineer within a reasonable time. The notice shall include details of the drawing or order required, and of why and by whom it is required and of any delay or disruption likely to be suffered if it is further delayed.

3.0 FURTHER DRAWINGS

The Executive Engineer, East Midnapore Division, MED shall have full power and authority to supply to or demand from the Contractor, from time to time, during the progress of the Works, such further drawings as shall be necessary for the purpose of the proper and adequate execution and maintenance of the Works. The Contractor shall carry out and be bound by the same. Adequacy as determined by the Executive Engineer, East Midnapore Division, MED shall be final and binding on the Contractor.

4.0 CONTRACT AGREEMENT

The Contractor shall, when called upon to do so, enter into and execute a Contract Agreement, to be prepared and completed in the form no. 2911 along with all other documents mentioned earlier with such modification as may be necessary.

4.1 Security Deposit:*The entire amount of such 10% (ten percent) of Security Deposit (Initial 2% EM + additional 8%) will be refunded without any interest only after expiry of Defect Liability Period as per PWD order No. 5784-PW/L&A/2M-175/2017 Dated: 12.09.2017, wherein, Construction of new building / new bridge / new culvert, the Defect Liability Period of the work shall be five years from the date of completion of the work;*

For work with five years Defect Liability Period:

- i) No security deposit shall be refunded to the contractor for 1st 3 years from the date of completion of the work;*
- ii) 30% of the security deposit shall be refunded to the contractor on expiry of four years from the actual date of completion of the work;*
- iii) The balance 70% of the security deposit shall be refunded to the contractor on expiry of five years from the actual date of completion of the work.*

5.0 INSPECTION OF SITE

The Executive Engineer, M.E. Dte. or his authorized person shall have made available to the Bidder with the Bid documents such data like its location, distance from fixed point including the layout drawing and location of the primary grid point, level drawing data, the source of filling the reservoir and the Bid shall be deemed to have been based on such data. But the Bidder shall be responsible for his own interpretation thereof. The Bidder may also undertake investigations at his own cost on such levels or any other levels prior to submission of his offer.

The Bidder shall also be deemed to have inspected and examined the site and its surroundings and information available in connection therewith and to have satisfied himself, so far as is practicable, before submitting his Bid; as to the form and nature thereof, including the sub-surface conditions, topographical level of proposed site, the hydrological and climatic conditions, the extent and nature of work and materials necessary for the completion of the Works, the means of access to the Site and the accommodation he may require and, in general 'shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Bid.

6.0 WORK TO BE TO THE SATISFACTION OF ENGINEER IN CHARGE

Save in so far as it is not legally or physically impossible, the Contractor shall execute and maintain the Works in strict accordance with the Contract to the satisfaction of the Executive Engineer, East Midnapore Division, MED and shall comply with and adhere strictly to the

Superintending Engineer, South Circle, MED's instructions and directions on any matter whether mentioned in the Contract or not touching or concerning the Works.

7.0 WORK PROGRAM

(1) Program to be furnished: Within thirty (30) calendar days, the Contractor shall, after the acceptance of his Bid, submit to the Executive Engineer, East Midnapore Division, MED for his approval a program showing the order of procedure in which he proposes to carry out the Works. The Contractor shall, whenever required by the Executive Engineer, East Midnapore Division, MED, also provide in writing for his information, general description of the arrangements and methods, which the Contractor proposes to adopt for the execution of the Works.

(2) If at any time it should appear to the Executive Engineer, East Midnapore Division, MED that the actual progress of the Works does not conform to the approved program referred in sub-clause (1) of this Clause, the Contractor shall produce, at the request of the Executive Engineer, East Midnapore Division, MED, a revised program showing the modifications to the approved program necessary to ensure completion of the Works within the time for completion as defined in Clause 42 hereof.

(3) The submission to and approval by the Executive Engineer, East Midnapore Division, MED of such program or the furnishing of such particulars shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

8.0 CONTRACTOR'S SUPERINTENDENCE

The Contractor shall give or provide all necessary superintendence during the execution of the Works and as long thereafter as the Superintending Engineer, South Circle, MED may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. The Contractor or a competent and authorized agent or representative approved of in writing by the Superintending Engineer, South Circle, MED, which approval may at any time be withdrawn, is to be constantly on the Works and shall give his whole time to the Superintendence of the same. If such approval be withdrawn by the Superintending Engineer, South Circle, MED, the Contractor shall, as soon as is practicable, having regard to the requirement of replacing him as hereinafter mentioned after receiving written notice of such withdraw, remove the agent from the works and shall not thereafter employ him again on the Works in any capacity and shall replace him by another agent approved by the Executive Engineer, East Midnapore Division, MED.

Such authorized agent or representative shall receive, on behalf of the Contractor, direction and instruction from the Executive Engineer, East Midnapore Division, MED or, subject to the limitations of Clause 2 hereof the Engineer's Representative. The agent or representative of the Contractor must be able to speak and communicate in English / Bengali. In the absence of the Contractor's designated agent or representative for a particular operation on any site of the works the Contractor's supervisory staff or sub-agent or leading hands shall be instructed to receive and carry out any instruction or direction issued or given by the Executive Engineer, East Midnapore Division, MED or the EIC.

9.0 MATERIALS AND WORKMANSHIP

1) All materials and workmanship shall be of the respective kinds described in the Contract and in accordance with the Engineer's instructions and shall be subjected from time to time to such tests as the Engineer may direct at the place of manufacture or fabrication, or on the Site or at such other place or places as may be specified in the Contract, or at all or any of such places. The Contractor shall provide such assistance, instruments, machines, labour and materials as are normally required for examining, measuring and testing any work and the quality, weight or quantity of any material used and shall supply samples or materials before incorporation in the Works for testing as may be selected and required by the Executive Engineer, East Midnapore Division, MED, be it at site or at the manufacturer/Vendors premises or elsewhere.

2) **COST OF SAMPLES:** The Contractor at the cost and expense of him shall furnish all samples of materials as may be required by the Executive Engineer, East Midnapore Division, MED.

3) **COST OF TESTS:** The cost of making any test shall be borne by the Contractor if such test is clearly intended by or provided for in the Contract and in the cases only of a test under load or of a test to ascertain whether the design of any furnished or partially finished work in appropriate for the purpose which it was intended to fulfill, is particularized in the Contract in sufficient detail to enable the Contractor to price or allow for the same in his Bid.

4) **COST OF TESTS NOT PROVIDED FOR, ETC.:** If the Executive Engineer, East Midnapore Division, MED orders any test, which is either;

a) Not so intended by or provided for, or

b) (In the cases above mentioned) is not so particularized, or

c) Though so intended or provided for is ordered by the Engineer to be carried out by an independent person or organization at any place other than the Site or the place of manufacture or fabrication of the materials tested, then the cost of such test shall be borne by the Contractor, if the tests shows the workmanship or materials not to be in accordance with the provisions of the Contract or the Engineer's instruction.

10.0 INSPECTION OF OPERATIONS

The Engineer and any person authorized by him shall at all times have access to the Works and to all workshops stores and places where work is being prepared or from where material manufactured articles or machinery are being obtained for the Works and the Contractor shall afford every facility for and every assistance in or in obtaining the right to such access.

11.0 EXAMINATION

1) **Examination of work before covering up:** No work shall be covered up or put out of view without the approval of the Engineer or the Engineer's Representative and the Contractor shall afford

full opportunity for the Executive Engineer, EastMidnapore Division, MED or the Engineer's Representative to examine and measure any work which is about to be covered up or put out of view and to examine foundations before permanent work is placed thereon. The Contractor shall give due notice to the Engineer's Representative where any such work or foundations is or are ready or about to be ready for examinations and the Engineer's Representative shall, without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly attend for the purpose of examining and measuring such work or of examine such foundations

2) Uncovering and making openings: The Contractor shall uncover any part or parts of the Works or make opening in or through the same as the Engineer may from time to time direct and shall reinstate and make good such part or parts to the satisfaction of the Engineer If any such part or parts have been recovered up or put out of view after compliance with the requirement of sub-clause (I) of this Clause and are found to be executed in accordance with the Contract, the expenses of uncovering, making openings in or through, reinstating and making good the same shall be, borne by the Employer, but in any other case all costs shall be borne by the Contractor.

12.0 CERTIFICATION OF COMPLETION OF WORK

1) Erection: Erection of Mechanical and electrical equipment shall be construed to have been completed where equipment in question is placed in position undergoes all necessary tests such as those for alignment, verticality, leak proof mess, insulation etc. as may be specified elsewhere in the Bid documents and put to operation.

2) Completion: Completion is a stage when the equipment and the structure as a whole are certified by the Employer. The date shall only be indicative for the purpose of reckoning the period of Maintenance Period and shall not be co-related with the release of any payment provided that non-continuous or sporadic functioning shall not be deemed as commissioning and also provided that non-commissioning of minor works, the decision on determination of major or minor works resting with the employer, shall not multify the act of completion for the aforesaid purpose.

An item shall be considered as minor work where its non-completion may not in the opinion of the employer, stand in the way of commencement of plant operation.

13.0 MAINTENANCE

1) Defect Liability Period: 5(five) years.

2) Cost of Execution of work of repair, etc.: The repair work shall be carried out by the Contractor at his own expense if the necessity thereof shall, in the opinion of the Engineer, be due to the use of materials or workmanship not in accordance with the Contract, or to neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract. If, in the opinion of the Engineer, such necessity shall be due to any other cause, the value of such work shall be ascertained and paid for as if it was an additional work.

3) Remedy on contractor's failure to carry out work required: If the Contractor shall fail to do any such work as aforesaid requirement by the Engineer, the Employer shall be entitled to employ and pay other persons to carry out the same, which in the opinion of the Employer, the Contractor was liable to do at his own expense under the Contract. In the said event, all expenses consequent thereon or incidental thereto shall be recoverable from the Contractor by the Employer, or may be deducted by the Employer from any sum due or which may become due to the Contractor.

14.0 CONTRACTOR TO SEARCH

The Contractor shall, if required by the Executive Engineer, East Midnapore Division, MED in writing, search under the directions of the Engineer, for the cause of any defect, imperfection or fault appearing during the progress of the Works or in the period of Maintenance. Unless such defect, imperfection or fault shall be one for which the contractor is liable under the contract, the cost of the work carried out by the contractor in searching as aforesaid shall be borne by the Employer. If such defect, imperfection or fault shall be one for which the contractor is liable as aforesaid, the cost of the work carried out in searching as aforesaid shall be borne by the contractor and he shall in such case repair, rectify and make good such defect, imperfection or fault at his Own expense in accordance with the provisions of Clause 48 hereof to the satisfaction of the Engineer.

15.0 ALTERATIONS, ADDITIONS AND OMISSIONS

1) Variations: The Employer may make any variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be desirable, he shall have power to order the Contractor to do and the Contractor shall do any of the following:

- a) Increase or decrease the quantity of any work included in the contract.
- b) Omit any such work.
- c) Change the character or quality or kind of any such work.
- d) Change the levels, lines position and dimensions of any part of the Works and
- e) Execute additional work of any kind necessary for the satisfactory completion of the works or for deriving satisfaction of the Employer. It is expressly provided that no such variation shall, in any way vitiate or invalidate the Contract, but the value, if any, of all such variations shall be taken into account in ascertaining the amount of the Contract Price.

2) Orders for variations to be in writing: The Contractor shall make no such variations without an order in writing from the Employer. Provided that no order in writing shall be required for insignificant increase or decrease in the quantity of any work where such increase or decrease is not the result of an order given under this Clause, but is the result of the quantities exceeding or being less than those stated in the Schedule of prices. Provided also that if for any reason the Employer shall consider it desirable to give any such order verbally, the Contractor shall comply with such

order and any confirmation in writing of such verbal order given by the Employer whether before or after the carrying out of the order, shall be deemed to be an order in writing within the meaning of this Clause. Provided further that in the event of non-receipt of written confirmation from the Employer, the Contractor shall, within eleven working days, confirm the same from his end in writing to the Employer, and if such confirmation is not contradicted in writing within fourteen working days by the employer, it shall be deemed to be an order in writing by the Employer.

16.0 MEASUREMENT :For measurement, the metric system should be used.

17.0 WORKS TO BE MEASURED

The engineer shall, except as otherwise stated, ascertain and determine by measurement the value in terms of the Contract of work done in accordance with the Contract. He shall, when he requires any part or parts of the works to be measured, give notice to the Contractor's authorized agent or representative, who shall forthwith attend or send a qualified agent to assist the Engineer or the Engineer's Representative in making such measurement, and shall furnish all particulars required by either of them. Should the Contractor not attend, or neglect or omit to send his agent on two consecutive occasions, then in the third occasion the measurement shall be made unilaterally by the Engineer, which shall be taken to be the correct measurement of the work. For the purpose of measurement such permanent work as is to be measured by records and drawings at suitable intervals of such work and the Contractor, as and when called upon to do so in writing shall, within fourteen days, attend to examine and agree upon such records and drawings, with the Engineer or Engineer's Representative and shall sign the same when so agreed. If the Contractor does not so attend to examine and agree upon such records and drawings on two consecutive occasions they shall be taken to be correct. If, after examination of such records and drawings, the Contractor does not agree with the same or does not sign the same as agreed, they shall nevertheless be taken to be correct, unless the Contractor shall, within fourteen days of such examination, lodge with the for decision by the Engineer, a notice in writing giving details of the respects in which such records and drawings are claimed by him to be incorrect together with reasons thereof.

18.0 METHOD OF MEASUREMENT

The Works shall be measured but, notwithstanding any general or local custom, except where otherwise specifically described or prescribed in the Contract.

19.0 COMPLETION DRAWING

Completion drawing including detailed construction drawing shall have to be submitted in original with 5 (five) copies of prints of each. The original drawings shall be drawn on thick polyester film approved by the Engineer-in-Charge. Scale and size of drawings shall also be as specified by the Engineer-in-Charge. Soft copy of drawing copied in CD/DVD should be submitted in addition. No extra payment will be made for it. The Completion drawings are to be got approved by the Employer and shall have to be submitted before the issue of certificate of final acceptance.

Superintending Engineer, South Circle
Municipal Engineering Directorate

SECTION — D

GENERAL SPECIFICATIONS OF WORKMANSHIP AND MATERIALS FOR CIVIL WORK

1.0 GENERAL

1.1 General Materials

- 1.1.1 All materials used in the permanent works shall be of the best quality of the kind and to the approval of the Engineer-in-Charge. Any material not covered by these Specifications, shall comply with the relevant latest Indian Standard Specifications (Referred to as IS as revised or modified up-to the date one month prior to Tender date). British or American Standard Specifications shall be referred to in case any particular specification is not available in any of the aforesaid Specifications. For materials not specified in the aforesaid, direction of the Engineer-in-Charge shall be followed. All disputes shall be referred to the Employer, whose decision shall be final and binding.
- 1.1.2 Samples of materials to be supplied and used, by the Contractor in the works shall be to the prior approval of the Engineer-in-Charge. For this purpose, the Contractor shall furnish in advance representative samples in quantities and in the manner as directed by the Engineer-in-Charge for his approval. Materials brought to the Site, which in the option of the Engineer-in-Charge do not conform to the approved sample, shall, if so, directed by him, be removed by the Contractor from the Site and replaced by the materials of approved quality.
- 1.1.3 In spite of approval of the Engineer-in-Charge of any materials brought to the site, he may subsequently reject the same if in his opinion the materials have since deteriorated due to long or defective storage or for any reason whatsoever and is thereby considered unfit for use in the permanent works. Any material thus rejected shall be immediately removed from the Site at Contractor's cost and expense.
- 1.1.4 All materials brought to the Site shall be properly stored and guarded in the manner as directed by the Engineer-in-Charge and to his satisfaction.
- 1.1.5 The Engineer on written request of EIC may carry out test of materials as he may decide. The Contractor shall, at his cost and expenses, for this purpose supply requisite materials and render such assistance to the Engineer-in-Charge as he may require.

1.2 Workmanship

All works are to be carried out in proper workman like manner. Items of works not covered by these Specifications or by other tender documents shall be carried out as per best practice according to the direction of the Engineer-in-Charge and to his satisfaction. The relevant IS Specifications or in case of necessity British or American Standard Specifications shall be taken as guide for the purpose.

1.3 Works Included

The rates for all items, unless specifically stated otherwise in the Contract, must cover the cost of all materials, labours, tools, machinery, plant, pumps, explosives, scaffolding, staging strong props, bamboos, ropes, templates, pages and all appliances and operations whatsoever necessary for efficient execution of work.

1.4 Ground Conditions

The Contractor is to visit the site and ascertain local conditions, traffic restrictions and obstructions in the area and allow for extra expenses likely to be incurred due to any limitations whatsoever. The Finished ground level (FGL) have to obtained by the bidder prior to pre-bid meeting and quoting the rate by E.I.O in written.

1.5 Setting Out and Levelling

The Contractor is to set and level the works, and will be responsible for the accuracy for the same. He is to provide all instruments and proper qualified staff required for checking the Contractor's work.

1.6 Safety

The Contractor shall take, adequate precaution to provide complete safety for prevention of accidents on the site.

1.7 Keeping Works Free from Water

The Contractor shall provide and maintain at his own cost, electrically or other power-driven pumps and other plant and equipment to keep site excavated foundation pits and trenches free from surface as well as subsoil/leakage water from any other source thereof and continue to do so to the complete satisfaction of the Engineer-in-Charge till the site is handed over. Method of dewatering shall need approval of the Engineer-in-Charge but no payment whatsoever is allowed on this count.

1.8 Rubbish

1.8.1 The Contractor shall clear all rubbish, vegetation, roots, soda etc., and dump them in the area indicated to the satisfaction of Engineer-in-Charge. No separate rate shall be allowed for the above work.

1.8.2 After the work is completed, the Contractor shall clear the area surrounding the buildings, all hutments and excess stores and remnants of building materials such brick bats, metal, sand, timber, steel etc.

1.9 Bench Marks and Ground water Gauges

The Contractor shall protect surveyor's benchmarks and ground water gauges, zero-line marks and base line marks and base line marks from damage of movement during work.

1.10 Inspection

The Contractor shall inspect the Site of works and ascertain site condition and the nature of soil to be excavated.

1.11 Contractor's Staff

The Contractor must provide at all times efficient staff of trustworthy, skilful and experienced assistance capable of carrying out the work in accordance with the drawings and specification and to correct levels. The cost this establishment should be included in his rates.

1.12 Method of Measurement

Unless otherwise specified, the method of measurement for building works shall be as per IS: 1200.

2.0 EARTH WORK IN EXCAVATION & FILLINGS

2.1 General

Applicable provisions of Conditions of contract shall govern work under this section.

2.2 Excavation for Foundation, Trenches, Pit etc.

The excavation work shall be carried out in all kinds of Soil including Sand in workman link manner without endangering the safety of the nearby Structures or works without causing any hindrance to

other activities in the area. The existence of old buildings, boundary walls, hutment, sewer lines, water lines, if any very close to the area of excavation should be given careful consideration while designing carrying out the excavation work. The excavation shall be done in such method as would technically be appropriate and befitting the site conditions subject to the approval of the Engineer-in-Charge. All foundation trenches shall be excavated to the full width and depths shown on the approved drawing or to such ordered to the Contractor. The Contractor shall not undertake any earthwork without having obtained prior approval from the Engineer-in-Charge to the methods he proposes to employ in order to execute the work in the most efficient manner. He shall not modify such methods without the approval of the Engineer-in-Charge. This approval, however, shall not in any way make the Engineer-in-Charge responsible for any consequent loss or damage.

2.2.1 Should any excavation be taken down the specified levels, the Contractor shall fill in such excavation at his own cost with concrete as specified for foundations, well rammed in position until it is brought up to the specified level.

2.2.2 The Contractor shall notify when the excavation is completed and no concrete or masonry shall be laid until the soil for each individual footing, rafts etc. is approved.

2.2.3 The Contractor shall keep the site clear of water at all times. To this end he shall provide arrangements for bailing and pumping or any special arrangements as required within his quoted prices.

2.2.4 All foundation pits shall be refilled to the finished ground level (formation level) with approved materials, which shall be suitably consolidated in layers to the satisfaction of the Engineer-in-Charge.

2.2.5 Nothing extra will be paid for bailing out water collecting in excavation due to rains, ordinary springs, leakage from any other sources etc., or any other reason.

2.2.6 For the work of excavation the Tenderer shall include in his quotation the shoring, sheeting, bracing and sheet piling (if required). The quotation shall also include the cost of compaction of foundation sub-base, removal and storage of excavated materials and back filling.

2.3 Shoring

Timber shoring whenever required shall be closed boarded with minimum 50mm thick good and seasoned timber planks of sufficient length driven side-by-side to the required depth. The gaps between adjacent timber planks shall such would not allow any flow of soil particles, if necessary, the sides of the planks shall be planed smooth to ensure this.

Sufficient numbers of bracing struts, walling etc. are to be provided to make the shoring rigid and non-yielding by earth pressure. Where necessary, sheet piling shall be done to ensure safety to the adjoining structures, if it is found that it is not feasible to protect the structure by timber shoring only. The Tenderer is strongly advised to inspect the site before tendering and apprise himself of the requirement of any Sheet piling in addition to the timber shoring before submitting his Quotation accordingly.

2.4 Back Filling

The space around the foundations in trenches or sites shall be cleared of all trash and loose debris and filled with approved excavated earth, all clods being broken up to the finished G.I. Filling shall be done in 200mm layers, each layer to be properly moistened and well rammed. Excavated materials which is surplus or which is consolidated unsuitable for back filling shall have to be disposed of in spoil dumps as directed by the Engineer-in-Charge. No extra payment will be made for this.

3.0 CONCRETE

3.1 General

3.1.1 Applicable provisions of Conditions of Concrete shall govern work under this section. 3.1.2 All concrete work, plain or reinforced shall be carried out strictly in accordance with this specification and any working drawing or instructions given from time to time to the Contractor.

3.1.3 The Contractor's states shall allow for wastages in all materials as well as for all tests of materials and concrete.

3.1.4 No concrete shall be cast in the absence of the Engineer-in-Charge or any other person duly authorized by him. The Contractor's Engineer shall personally check that both the form work and reinforcement have been correctly placed and fixed, and shall satisfy himself that all work preparatory to the casting is completely ready, before informing the Engineer-in-Charge for final inspection and approval and for which purpose at least 24 hours' notice shall be given by the Contractor.

3.1.5 The Indian Standards wherever referred to herein shall be the latest addition of such standards.

3.2 CEMENT

The grade & brand of cement used for the work will be selected & approved by the E.I.C in writing before execution of work.

3.3 AGGREGATES

The fine and coarse aggregates shall conform to all provisions and test methods of IS: 383 and/or IS: 515. Samples of aggregates, proposed to be used in the work shall be submitted free of charge in sufficient quantities to the Engineer-in-Charge with sieve analysis and other physical and chemical analysis data for his approval. He will preserve approved samples for future reference. This approval will not in any way relieve the Contractor of his responsibility of producing of specified qualities.

3.3.1 Coarse Aggregates

Coarse aggregates for use in all reinforced and other plain cement concrete works shall be crushed black granite trap stone obtained from approved source and shall consist of uncoated, hard, strong dense and durable pieces of crushed stone, and be free from undesirable matters, viz. Disintegrated stones soft, friable, thin, elongated or laminated pieces, dirt, salt, alkali, vegetable matter or other deleterious substances. The aggregates shall be thoroughly washed with water and cleaned before use to the satisfaction of the Engineer-in-Charge at no extra cost of the Employer.

The maximum size of coarse aggregates shall be as follows unless specified otherwise elsewhere.

Reinforced Concrete	20 mm
Plain Concrete	20 mm
Thin R. C. C. Members	
With very narrow space	12 mm.
Mat/Lean Concrete	20/40 mm.

(The actual size to be agreed by the Engineer-in-Charge)

Grading of coarse aggregates for a particular size shall generally conform to relevant I.S Codes and shall be such as to produce a dense concrete of the specified proportions and or strength and consistency that will work readily in position without segregation.

3.3.2 Fine Aggregates

Sand shall be clear River sand brought from approved source and consist of siliceous material, having hard, strong, durable uncoated particles, free from undesirable matters viz. dust lumps, soft or flaky particles or other deleterious substances. The amount of undesirable shall not exceed the

percentage limits by weights as specified in relevant IS Codes. Washing of aggregates by approved means shall be carried out, if desired by the Engineer-in-Charge, at no extra cost to the Employer.

Coarse and fine sand shall be well graded within the limits by weight as specified in relevant IS Code. Fineness Modulus shall not vary by more than plus or minus 0.20 from that of the approved sample. Fineness Modulus for sand should not be less than 2.5.

3.4 REINFORCEMENT

3.4.1 The Contractor shall prepare and furnish to the Engineer-in-Charge, Bar Bending Schedules in considerations of the approved drawings for all R.C. C. works for review and checking by the Engineer-in-Charge well before taking up the work.

3.4.2 The High Yield strength deformed bar (HYSD) shall conform to IS: 1786-1990.

All steel for reinforcement shall be free from loose, oil, grease, paint or other harmful matters immediately before placing the concrete.

3.4.3 The Reinforcement shall be bent to the shapes shown on the approved drawings prior to placing and all bars must be bent cold. The Steel shall be placed in such a way that it is rigidly held in position while concrete is being cast. The correct clearance from the form shall be maintained by either pre-cast mortar blocks or by metal supporting chairs to be supplied by the Contractor free of charge.

The intersection of roads crossing one another shall be bound together with soft pliable with No. 16 to 18 SWG at every intersection so that reinforcement will not be displaced in the process of depositing concrete. The loops of binding wire should be tightened by pliers and welding of reinforcement for lapping & binding should be done if desired by E.I.C. No extra payment will be made for this purpose.

3.4.4 The work of reinforcement shall also be inclusive of stirrups distribution bars, binders, initial straightening and removing of loose rust, if necessary, cutting to requisite length, hooking and bending to correct shape, placing in proper position including supplying and binding with block annealed wire as stated in clause 3.4.3 above.

3.4.5 The brand of steel used for the work will be selected & approved by the E.I.C. in writing before execution of work.

3.5 WATER

The Water shall be clean and free from Alkali oil or injurious amounts of deleterious materials. As far as possible, the water is of such quality that it is potable. If any chemical analysis of water is necessary and ordered, the same shall be carried out at an approved laboratory at the Contractor's cost and expenses.

3.6 CONCRETE PROPORTIONING

3.6.1 The concrete proportions shall be as indicated on the approved drawings and shall conform to IS: 456 & IS: 3370. The quality and character of concrete shall be governed by IS: 10262. It should be sampled and analysed as per IS: 1199. The concrete should stand the test specified in IS: 516.

3.6.2 The minimum cover of main reinforcement shall be as per relevant IS: Codes. Cover to any reinforcement of R.C.C. piles shall be minimum 65 mm in case in-situ and 50 mm in case of

pre-cast piles. Suitable spacer blocks shall be provided at intervals not exceeding 1.2 m. throughout the length of the pile.

3.6.3 The workability shall be measured by slump. Slump for different grades of concrete shall not exceed following unless specifically permitted by the Engineer-in-Charge.

- i) For M 15 concrete - 3.75 cm.
- ii) For M 20 concrete - 2.50 cm.
- iii) For M 25 concrete — 2.00 cm

3.6.4 All concrete works shall be thoroughly compacted and fully worked around the reinforcement, around embedded fixtures and into corners of the form work.

The Concrete shall be thoroughly and shall be efficiently vibrated during laying. The use of mechanical vibrators shall comply with IS: 2608, IS: 2506 and IS: 456. Whenever vibration has to be applied externally, the design of formwork and deposition of vibration shall receive special consideration to ensure efficient compaction and to avoid surface blemishes.

3.7 WORKMANSHIP

3.7.1 All Concreting work shall be carried out according to the IS: 456, IS: 3370, and other related codes. It should, however, be noted that for every 15 M³ of concrete placed or for every one day's volume of concrete whichever is lower, a minimum of 3 (three) Cubes shall be kept for test purpose, and tested at the Contractor's cost and expenses at a Laboratory as approved by the Authority. The number of test cubes may, however, be altered at discretion of the Engineer-in-Charge. It is compulsory to test 3 (three) cubes in each case.

3.7.2 Structural Concrete

Design mix Concrete shall be on all concrete works except in case of Mud-mat concrete lean concrete where nominal mix concrete will be allowed.

Design mix Concrete will be used in Reinforced Concrete Structures and shall not be less than Grade of M25. The mix shall be designed to produce the grade of concrete having required workability and a Characteristic Strength not less than appropriate values given in IS: 456 - 2000. For mix design, procedure given in Indian Standard recommendation i.e., IS: 10262 with latest amendments shall be adopted. As long as the quality of materials does not change a mix design done earlier may be considered adequate for later work. Batching mixing, sampling and Strength Test of concrete shall be carried out in compliance with the relevant clause of IS: 456-2000 and all other relevant Indian Standards recommended therein. Proper admixtures of the mix design by the Contractor shall be used for works only after obtaining approval of mix design and written order thereafter of the Engineer-in-Charge. Mix design shall be entirely the responsibility of the Contractor and any approval by the Engineer-in-Charge shall not relieve him of his responsibility in respect thereof.

The Contractor shall prepare all the Calculations, Tabulations, Graphs etc. pertaining to Mix Design Test result and supply copies of such Calculations, tabulations, Graphs etc. required by the Engineer-in-Charge.

On proportioning concrete, the quantity of both cement and aggregate shall be determined by weight, where the weight of cement is determined on the basis of weight per bag a reasonable number of bags be weighed periodically to check the net weight or should be either weighed or measured by volume in calibrated tanks, all measuring equipment's shall be maintained in a clean serviceable condition and shall periodically checked for accuracy.

The grading of coarse and fine aggregates shall be checked frequently and frequency of testing shall be determined by the Engineer-in-Charge. Where weight batching is not possible or practicable, the quantities of coarse and fine aggregates may be determined by volume but

cement in any case shall be weighed by weight only. If fine aggregate and volume batching is adopted, allowance shall be made for bulking. The bulking shall be determined in accordance with IS: 2386 (Part-III).

The Water-Cement Ratio shall be maintained to its correct value. Surface moisture content of aggregate shall be determined as per IS: 2386 (Part-III) and the amount of water to be added shall be adjusted accordingly to maintain the correct Water-cement ratio.

During the progress of work in order to ensure correct strength of concrete proper control should be exercised by the Contractor as specified in Specifications mentioned in the Clause 3.7.1 above. Test strength of every sample shall be determined in accordance with the recommendations of IS: 456-2000. If one out of ten consecutive test cubes shows a deficiency in strength up-to a maximum limit of 10%, the concrete will be deemed satisfactory. If two of the test cubes out of ten shows a deficiency in strength up to a limit of 10%, the concrete shall be deemed to be less satisfactory and a reduction of 1 % will be made on the cost of such concrete. If three out of ten test cubes show deficiency in strength up to a limit of 10%, a reduction of 5% will be made on the cost of such concrete. If more than three test cubes show a deficiency in strength up-to a limit of 10% a reduction of 10% will be made on the cost of such concrete. If more than five shows a deficiency in strength up-to a limit of 10%, the concrete shall be rejected. Such rejected concrete work shall have to be dismantled and replaced to the satisfaction of the Engineer-in-Charge by the Contractor free of cost to the Employer. No payment for the dismantled concrete, the relevant formwork and reinforcement, embedded fixtures etc. wasted in the dismantled portion, shall be made. In the course of dismantling, if any, damage is done to the embedded items or adjacent structures, the same shall also be made good free of charge by the Contractor to the satisfaction of the Engineer-in-Charge.

If the deficiency in strength of one-test cubes exceeds the 10% limit, a reduction of 5%) will be made on the cost of such concrete. if the deficiency in strength to two out of ten test cubes exceeds the 10% limit, a reduction of 10% will be made on the cost of such concrete. If the deficiency in strength of three out of ten test cubes exceeds the 10% limit, a deduction of 20% on the cost of such concrete will be made.

With permission of the Engineer-in-Charge for any above-mentioned grades of concrete, if the quantity of water has to be increased in special cases, cement shall also be increased proportionally to keep the ratio of water to cement same as adopted in trial mix design for each grade of concrete. No extra payment for additional cement will be made.

3.9 FORM WORK

3.9.1 The Form Work shall conform to IS: 456. Whenever necessary, shuttering must be provided.

The work shall also include providing all necessary staging, centering, shuttering & formwork for placing concrete. Shuttering may be of approved dressed timber true to line, not less than 37 mm. thick. Surface to be in contact with concrete are to be planed smooth. Alternatively, sufficiently rigid plywood shuttering or steel shuttering may be used. In every case, joints of the shuttering are to be such as to prevent the loss of liquid from the concrete. In timber shuttering the joints shall, therefore, be either tongued or grooved or the joints must be perfectly close and lined with draft paper polythene films or other types of approved materials. In case of plywood or steel shuttering also the joints are to be similarly lined. All shuttering and framing must be adequately stayed and braced to the satisfaction of the Engineer-in-Charge for properly supporting the concrete, during concreting and the period of hardening. It shall be so constructed that it may be removed without shock or vibration to the concrete. No through bolts are allowed for holding the shuttering in water retaining structure.

3.9.2 Cleaning, Treatment and Removal of Forms

All forms shall be thoroughly cleaned of old concrete, wood shavings, saw dust, dirt and dust sticking to them before they are fixed in position. All rubbish loose concrete chippings, shavings, saw dust etc. shall be scrupulously removed from the interior of the forms before the concrete is poured. Formwork shall not be used/reused, if declared unit or unserviceable by the Engineer-in-Charge.

If directed by the Engineer-in-Charge, compressed air jet/or water jet shall be kept handy along with wire brushes, brooms etc. for the purpose of cleaning.

Before shuttering is placed in position, the form surface in contact with the concrete shall be treated with approved non-staining oil or composition. Care shall be taken that the oil or composition does not come in contact with reinforcing steel or existing concrete surface. They shall not be allowed to accumulate at the bottom of the shuttering.

Forms shall be struck in accordance with the relevant clause of IS: 456 or as directed by the Engineer-in-Charge. The Contractor shall record on the drawings or in other approved manner, the date in which the concrete is placed in each part of the work and the date on which the form work is removed there from and have this recorded checked and countersigned by the Engineer-in-Charge.

The Contractor shall be responsible for the safe removal of the formwork, but the Engineer-in-Charge may delay the time of removal if he considers it necessary. Any work showing signs of damage through premature removal of formwork or loading shall be entirely reconstructed without any extra cost to the Employer.

3.10 PROTECTION AND CURING OF CONCRETE

Newly placed concrete shall be protected by approved means; from rain, sun and wind and extreme temperature. Concrete placed below the ground level shall be protected from failing earth during and after placing. Concrete placed in ground containing deleterious substance shall be kept free from contact with such ground or, with water draining from such ground during placing of concrete and for a period of at least 3 (three) days or as otherwise directed by the Engineer-in-Charge, the ground water around newly poured concrete shall be kept to an approved level by pumping or other approved means of drainage at the cost of the Contractor. Adequate steps shall be taken to prevent flotation or flooding. Steps, as approved by the Engineer-in-Charge, shall be taken to protect immature concrete from damage by debris, excessive loading, vibration, abrasion, mixing with earth or other deleterious materials, etc. that may impair the strength and durability of the concrete. As soon as the concrete has hardened sufficiently for the surface to be marked it should be covered with Hessian, canvas, or similar materials and kept continuously wet for at least 7 (seven) days after final setting. This period may be extended at the discretion of the Engineer-in-Charge, up-to 14 (fourteen) days. Concrete slabs and floors shall be cured by flooding with water of minimum 25 mm depth for the period mentioned above.

Approved curing compounds may be used in lieu of moist curing with the permission of the Engineer-in-Charge. Such compound shall be applied to all exposed surface of the concrete as soon as possible after the concrete has set. No extra payment is allowed on such count.

3.11 CONCRETE FINISH

The Concrete surface on removal of form work shall be such that no finish is necessary, If, however, the surface is not satisfactory the Contractor shall, if so instructed, remove unwanted, projecting parts by chipping and smoothing the surface with cement rendering at his own expenses. The shutter marks shall invariably be removed by rubbing with carborandum stone. The Contractor shall therefore take all precaution for avoiding the shutter marks.

3.12 Contractor's Supervision

The Contractor shall provide constant and strict supervision of all the items of construction during progress of work, including the proportioning and mixing of the concrete and bending and placing of reinforcement. Any important operation such as concreting or stripping of form work adequate notice shall be given in advance.

The cement and sand shall be thoroughly mixed dry in specified proportions. Water shall then be added just sufficient to make a stiff and workable paste. The mortar shall be used within half an hour of mixing.

4.0 BRICK WORK

4.1 The Contractor shall build all brickwork uniformly no one portion being raised more than 1 meter above another at a time. The joints shall not exceed 12 mm. in thickness and should extend the full thickness of the brickwork. All joints shall be properly raked and the surface washed down.

4.2 All the bricks shall be kept fully immersed in water at lowest for a minimum period of six hours till they are completely soaked and only thoroughly soaked bricks shall be used in the work.

4.3 The Contractor shall keep wet all brickwork for at lowest 10 (ten) days after laying. The surface of unfinished work shall be cleaned and thoroughly wetted before joining new work to it.

Superintending Engineer
South Circle, M.E.Dte

SECTION E

ANNEXURES

i) Drawing of Pipeline network

ii) Drawing of Valve Chamber

Superintending Engineer
South Circle, M.E.Dte

Details Scope of Work:

A) For Raw Water Rising Main:

It is desired to laying of raw water rising main with DI (K9) Pipe 500 mm dia from intake to WTP.

- **For Supply and Laying work:**

- (i) Excavation should be made with maintaining minimum clear cover 1.10 meter from top of the pipe. The width of the trench should be maintain by clear cover as per norms.
- (ii) DI (K9) Pipe will be supplied from the departmental stack yard. Whereas, M.S. Pipe (500 mm dia) above 5372 meter length should supply by agency at site as per direction of the E.I.C.
- (iii) Laying should be done with DI (K9) Pipe (500 mm dia) with maintaining minimum clear cover 1.10 meter from top of the pipe with supply of all special , bend ,double flange manually operated sluice valve 500 mm dia, Cast iron kinetic double flange orifice type air release valve 150 mm dia including construction of sluice valve chamber as per departmental drawing.
- (iv) Lying should be done with cutting, chamfering, making flange joint with supplying necessary rubber insertion and nut bolt with washer as per satisfaction of EIC. Nut bolt should be TATA/GKW make.
- (v) All necessary dismantling work for bituminous road, R.C.C road, Cement concrete road and other type road should be considered.
- (vi) Removal of rubbish, earth and other wastage should be dispose beyond the compound, work site as per relevant rules of Municipal/ Corporation/ Panchayat/local body and also as per direction of the E.I.C.
- (vii) Making barricading in excavation trenches of road width up to 15 meter to avoid any accident by bamboo railing/ iron guard rail etc.
- (viii) In case any traffic block necessary permission should be obtained from the competent authority.
- (ix) Pedestal should be considered in low land/ ditch area as per department approved drawing for laying work.
- (x) Thrust block shall have to be provided at suitable position as per site requirement.
- (xi) Hydraulic test should be made as per provision of IS 3114-1965 (Article 6) including supplying, fitting & fixing all equipment.
- (xii) Cleaning the inner surface of pipe line, special, and valves and subsequently disinfection of pipe line with bleaching powder such a manner that residual chlorine should be maintain 15 mg/ltrs after 24 hours of laboratory test.
- (xiii) MS pipe should be coated with Food Gr. Epoxy resin of thickness not less than 240 micron for inner surface. & outer surface should be coated with epoxy resin of thickness not less than 160 micron.

- (xiv) Supplying and fabricating MS flange 20-32 mm thick (Finished thickness, 500 mm dia .Gas cutting of MS Pipe with necessary electric arc welding as per IS specification.
- (xv) Hydraulically testing of MS pipe lines should in section under head of water not less than 60 m (6 kg/cm²).
- (xvi) It is desired to carry out the temporary road restoration work immediately after compaction of filled up trenches for laying Work of Raw Water Rising main as per site condition for vehicular movement.
- (xvii) Submission of completed drawing of whole network including showing fitting, specials, chamber , pipe carrying bridge with location details as per direction of EIC in 5 (set).

• For Pipe carrying Bridge work:

It is desired to surveying, design, drawing, construction & commissioning of Five (5) nos pipe carrying Steel structural Bridge supported on RCC column / Pier with adequate piles foundation at suitable interval.

- i) Necessary soil test along with hydraulic investigation and study of surface water flow characteristic of Canal for the purpose of design & execution should be done by the Bidder.
- ii) During design consideration, It is to be ascertained by the bidder that the bottom of the truss bridge should be fixed at minimum vertical clearance above H.F.L. as per clause 106.8.2 of IRC :5 -2015 or Nearby existing bridge floor level (whichever is higher).
- iii) Soil test report should be duly signed and approved from IIT /JU/IIEST/NIT/Govt Engineering College before submission for acceptance
- iv) The contractor has to design the steel structure of desired span & width as per soil investigation report, and the detailed design report and drawing has to be prepared as per relevant IS Code and shall be vetted from IIT /JU/IIEST/NIT/Govt Engineering College before submission for acceptance.
- v) During design consideration, It is to be ascertained by the bidder that the bottom of the truss bridge should be fixed 0.50 Meter above the H.F.L. or nearby existing bridge floor level whichever is higher .
- vi) The width of the bridge should be fix in such a way that provision should be made for minimum 1.00 meterwidthinspection way.
- vii) Total 5 (Five) set of drawing & design report need to be submitted for approval before execution.

- viii) Before execution he/she need to submitted Mix design report from Govt. approved laboratory or from IIT / NIT /Govt Engineering College.
- ix) The contractor has to complete all the structural work in all respect including necessary finishing work i.e. plastering, coloring and etc. as per approved drawing.
- x) The necessary arrangement should be provided with MS ladder & MS railing for easy access of the maintenance team.
- xi) The necessary testing inappropriate frequency/quantity of MS Plate/Pipe, Structural Members &Reinforcement Steel have to be done by from National Test House or other NABL accredited laboratory as per direction of EIC at contractor's own cost.