

JAIPUR DEVELOPMENT AUTHORITY



Bid Document

For

**Sewerage and water supply work for rehabilitation scheme at Niwaru
road Jhotwara**

Cost: Rs. 41.16 Lacs

NIT No. 03/2021-22

Due On: 17.05.2021

**Executive Engineer (PHE-II)
Jaipur Development Authority
Jaipur**

जयपुर विकास प्राधिकरण, जयपुर

इन्दिरा सर्किल, जवाहर लाल नेहरू मार्ग, जयपुर-302004

क्रमांक: जविप्रा/अधि.अभि. (पीएचई-11)/2021/डी-

दिनांक:-

बिड आमंत्रण सूचना

बिड संख्या : जविप्रा/अधि. अभि. पीएचई-11/03/2021-22

जयपुर विकास प्राधिकरण द्वारा "पुनर्वास योजना निवारु रोड़ झोटवाड़ा में सीवरेज एवं पेयजल सम्बन्धित कार्य", जिसकी अनुमानित लागत रुपये 41.16 लाख के लिए ऑनलाईन निविदा दिनांक 17.05.2021 सांय 6:00 बजे तक आमंत्रित की जाती है। निविदा बोली का ऑनलाईन आवेदन व भुगतान जविप्रा पोर्टल पर करने की अन्तिम तिथि दिनांक 17.05.2021 को सांय 6:00 बजे तक है। निविदा बोली के दस्तावेजों का विस्तृत विवरण www.sppp.raj.nic.in व www.eproc.rajasthan.gov.in एवं www.jda.urban.rajasthan.gov.in पर देखा जा सकता है।

(UBN No.).

निविदा में भाग लेने वालों को निम्न शर्तों की पूर्ति करनी होगी :-

1. निविदा दाता जयपुर विकास प्राधिकरण की वेबसाइट www.jda.urban.rajasthan.gov.in पर पंजीकृत हो एवं निविदा में भाग लेने के लिए बोलीदाता को आवेदन करने के लिए दस्तावेज शुल्क, अमानता राशि, आर.आई.एस.एल. प्रोसेसिंग शुल्क ऑनलाईन जमा करनी होगी।
2. ऑनलाईन निविदा प्रस्तुत करने के लिए निविदा दाताओं का राजस्थान सरकार के ई-प्रॉक्योरमेंट पोर्टल www.eproc.rajasthan.gov.in पर पंजीकृत हो।

(एम.एल. जांगिड़)

अधिशायी अभियन्ता(पीएचई-11)

जयपुर विकास प्राधिकरण,

जयपुर

प्रतिलिपि:-

1. जन सम्पर्क अधिकारी, जविप्रा को तकनीकी सहायक (निदेशक अभियान्त्रिकी-प्रथम) के मार्फत समाचार पत्र में प्रकाशन हेतु।

Job No. JDA/EE ROB RUB I /A & F/2016-2017/Sep/173 dt. 27.09.2016 Rs. 1,66,72,78,352.00

(एम.एल. जांगिड़)

अधिशायी अभियन्ता(पीएचई-11)

जयपुर विकास प्राधिकरण,

जयपुर

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

Room No. 302, Citizen Care center Building, Ram Kishore Vyas Bhavan, Indira Circle, Jawaharlal Nehru Marg,
Jaipur – 302 004

Telephone: +91-141-2569696 email: eephe2@gmail.com

No: - JDA/EE/PHE-II/2021/D-

Dated:-

NOTICE INVITING BID

NIB No. : JDA/EE (PHE-II)/03/2021-22

Online Bids are invited upto 6.00 PM of 17.05.2021 for **“Sewerage and water supply work for rehabilitation scheme at Niwaru road Jhotwara”**. The Last date of for applying bid and making online payment on JDA portal is up-to 6.00 PM of 17.05.2021. Details may be seen in the Bidding Document at our office or the State Public Procurement Portal website www.sppp.rajasthan.gov.in, www.eproc.rajasthan.gov.in and www.jda.urban.rajasthan.gov.in

(UBN No.)

To participate in the bid, bidder has to be:

1. Registered on JDA website www.jda.urban.rajasthan.gov.in
For participating in the Bid, the Bidder has to apply for the Bid and pay the Bidding Document Fee, RISL Processing Fee and Bid Security Deposit, online only.
2. Registered on e-Procurement Portal of Government of Rajasthan www.eproc.rajasthan.gov.in for online e-Bid submission.

(M.L. Jangid)
Executive Engineer (PHE-II)
JDA, Jaipur

Copy to :-

1. PRO Cell, JDA, Jaipur through TA to DE (I) for publication in News paper.

Job No. JDA/EE ROB RUB I /A & F/2016-2017/Sep/173 dt. 27.09.2016 Rs. 1,66,72,78,352.00

(M.L. Jangid)
Executive Engineer (PHE-II)
JDA, Jaipur

JAIPUR DEVELOPMENT AUTHORITY

Room No. 302, Citizen care center Building, Ram Kishore Vyas Bhavan, Indira Circle, Jawaharlal Nehru Marg,
Jaipur - 302 004

Telephone: +91-141-2569696 email: eephe2@gmail.com

Bid No: - JDA/EE(PHE-II)/2021/D-

Dated:-

NOTICE INVITING BID

NIB No. : JDA/EE(PHE-II)/03/2021-22

Name & Address of the Procuring Entity	➤ Name: Executive Engineer (PHE-II), Jaipur Development Authority ➤ Address: 302, Citizen care center Building, Ram Kishore Vyas Bhavan, Indira Circle, Jawaharlal Nehru Marg, Jaipur - 302 004 (Rajasthan) ➤ Email: eephe2@gmail.com
Subject Matter of Procurement	➤ Sewerage and water supply work for rehabilitation scheme at Niwaru road Jhotwara ➤ Job No. : JDA/EE ROB RUB I /A & F/2016-2017/Sep/173 dt. 27.09.2016 Rs. 1,66,72,78,352.00
Bid Procedure	➤ Single-Stage tender (eg. Single-envelope) open competitive eBid procedure at http://eproc.rajasthan.gov.in
Bid Evaluation Criteria (Selection Method)	➤ L1 (eg. Least Cost Based Selection (LCBS)-L1)
Websites for downloading Bidding Document, Corrigendum's, Addendums, etc.	➤ Websites: www.sppp.rajasthan.gov.in, www.eproc.rajasthan.gov.in, www.jda.urban.rajasthan.gov.in
Website for online Bid application participation and payment *	➤ Website: www.jda.urban.rajasthan.gov.in ➤ For participating in the Bid, the Bidder has to apply for this Bid and pay the Bidding Document Fee, RISL Processing Fee and Bid Security Deposit, online only. - o Bidding document fee: Rs. 1000/- Rupees (One Thousand only) - o RISL Processing Fee: Rs. 1000/- Rupees (One Thousand only) ➤ Requisite Bid Security Deposit
Estimated Procurement Cost	➤ INR Rs. 41.16 Lakh (Rupees Forty One Lakh Sixteen Thousand Only)
Bid Security Deposit	➤ All the eligible contractors should be submit bid security declaration on non-judicial stamp of Rs. 50/- as per order issued by Rajasthan Government of Finance Department (GF&AR) Gor. Dated 23.12.2020 (Declaration form attached with tender document. It is mandatory to submitted bid security declaration in prescribed format along with bid. ➤ Bidder who is A and AA Class contractor registered in other Govt. Department and Bidder registered as contractor in AA, A, B, C & D in JDA. ➤ In case of Department's of the State Government and undertakings] Corporations, Autonomous bodies, Registered Societies, Cooperative Societies which are owned or controlled or managed by the State Government and Government undertakings of the Central Government shall submit a bid securing declaration in lieu of bid security.
Date/Time/Place of Pre-Bid	➤ N.A.
Applying Bid and making Online Payment on JDA portal (www.jda.urban.rajasthan.gov.in)	➤ Start Date: 03.05.2021 at 10.00 AM ➤ End Date: 17.05.2021 at 06.00 PM

Bid Submission on e-Procurement Portal of GOR	➤ Start Date: 03.05.2021 at 10.00 AM ➤ End Date: 17.05.2021 at 06.00 PM
Date/Time/Place of Technical Bid Opening	➤ N.A.
Date/ Time/ Place of Financial Bid Opening	➤ 19.05.2021 at 11.00 AM ➤ First Floor, Room No. 135 Main Building, Ram Kishore Vyas Bhavan, Indira Circle, Jawaharlal Nehru Marg, Jaipur-302 004 (Rajasthan).
Bid Validity	➤ 120 days from the bid submission deadline
Completion Period	➤ 6 Months.
* Jaipur Development Authority has decided to receive Earnest Money Deposit (EMD) (Bid Security), Tender Fee and RISL processing fee online through JDA Portal. The bid security options available in tender for participants are a Mentioned Below:-	
A. Payment Options: Option-1: Bank Guarantee (BG) against EMD / Bid Security Bidder may opt Bank Guarantee (BG) against EMD (Bid Security), for which bidder requires to prepare BG before applying in the tender. The details of B.G. requires to be fed on JDA portal before paying balance amount (Tender Fee + RISL Processing Fee). This amount will be paid through Payment Gateway only, option to make balance payment through EFT (RTGS/NEFT) will not be available. If bidder does not opt for BG against EMD, options of making complete payment through Payment Gateway or through EFT (NEFT / RTGS) will be available. Option-2: Electronic Fund Transfer (EFT: NEFT/RTGS) If the bidder selects payment mode as EFT (NEFT/RTGS), "Paying Slip for EFT (NEFT/RTGS)" will be generated by the system for the complete amount. The payment can be made from any Bank any Branch using this Paying Slip through NEFT/RTGS (Claim against payment made through EFT in any other JDA bank account will not be acceptable and bidder stands disqualified from participation in the bid applied for). After successful transaction through NEFT/RTGS, as per the standard procedures it may take 4 to 24 hours in process of confirmation of EFT through Auto-Process depending on the time of EFT done. Therefore, option to make payment through EFT (NEFT/RTGS) will be available till 48 hours prior to closing date of bid participation. Option-3: Payment Gateway (Aggregator) The facility to make payment through Debit Card, Credit Card, Net banking etc., will be available. User can use this facility from anywhere any time till the closing date & time of bid participation.	
B. Bid Participation Receipt After confirming payment, the bidder will get Bid Participation Receipt on the basis of which user will get the payment details along with other details for bidding on e-Procurement portal of GOR. • In case of BG as the remaining payment will be done through Payment Gateway, on successful transaction the "Bid Participation Receipt" will be generated on real time basis. • In case complete payment is done through Payment Gateway, on successful transaction the "Bid Participation Receipt" will be generated on real time basis. • In case complete payment is done through EFT (NEFT/RTGS), on confirmation of payment from ICICI Bank (Auto Process) "Bid Participation Receipt" will be available on Login of Bidder on JDA portal.	

Note:-

1. Bidder (authorized signatory) shall submit their offer on-line in Electronic formats both for technical and financial proposal.
2. In case, any of the bidders fails to pay the Tender Fee, BSD, and RISL Processing Fee, online (subject to confirmation), its Bid shall not be accepted.
3. To participate in online bidding process, Bidders must procure a Digital Signature Certificate (Type III) as per Information Technology Act-2000 using which they can digitally sign their electronic bids. Bidders can procure the same from any CCA approved certifying agency, i.e. TCS, Safecrypt, Ncode etc. Bidders who already have a valid Digital Signature Certificate (DSC) need not procure a new DSC. Also, bidders must register on <http://eproc.rajasthan.gov.in> (bidders already registered on <http://eproc.rajasthan.gov.in> before 30-09-2011 must register again).
4. JDA will not be responsible for delay in online submission due to any reason. For this, bidders are requested to upload the complete bid well advance in time so as to avoid 11th hour issues like slow speed; choking of web site due to heavy load or any other unforeseen problems.
5. Bidders are also advised to refer "Bidders Manual Kit" available at eProc website for further details about the e-Tendering process.
6. Training for the bidders on the usage of e-Tendering System (e-Procurement) is also being arranged by DoIT&C, GoR on a regular basis. Bidders interested for training may contact e-Procurement Cell, DoIT&C for booking the training slot.
Contact No: 0141-4022688 (Help desk 10 am to 6 pm on all working days) e-mail: eproc@rajasthan.gov.in Address : e-Procurement Cell, JDA, Yojana Bhawan, Tilak Marg, C-Scheme, Jaipur
7. The procuring entity reserves the complete right to cancel the bid process and reject any or all of the Bids.
8. No contractual obligation whatsoever shall arise from the bidding document/ bidding process unless and until a formal contract is signed and executed between the procuring entity and the successful bidder.
9. Procurement entity disclaims any factual/ or other errors in the bidding document (the onus is purely on the individual bidders to verify such information) and the information provided therein are intended only to help the bidders to prepare a logical bid-proposal.
10. The provisions of RTPPA Act 2012 and Rules 2013 thereto shall be applicable for this procurement. Furthermore, in case of any inconsistency in any of the provisions of this bidding document with the RTPPA Act 2012 and Rules thereto, the later shall prevail.

(M.L. Jangid)
Executive Engineer (PHE-II)
JDA, Jaipur

JAIPUR DEVELOPMENT AUTHORITY, has decided to receive Bidding document fee, RISL Processing Fee and Bid Security Deposit (BSD) through online mode only for which the bidder has to get registered himself on JDA portal www.jda.urban.rajasthan.gov.in.

To participate in the bid, bidder has to be:

1. Registered on JDA website www.jda.urban.rajasthan.gov.in (by depositing Rs. 500.00 online, the validity of which remains 3 (Three) years).
For participating in the Bid, the Bidder has to apply for this Bid and pay the Bid Document Fee, RISL Processing Fee and Bid Security Deposit, online only.
2. Registered on e-Procurement Portal of Government of Rajasthan www.eproc.rajasthan.gov.in for online e-Bid submission.

Methods for depositing on line amount

Option-1: Bank Guarantee (BG) against EMD / Bid Security

Bidder may opt Bank Guarantee (BG) against EMD (Bid Security), for which bidder requires to prepare BG before applying in the tender. The details of BG require to be fed on JDA portal before paying balance amount (Tender Fee + RISL Processing Fee). This amount will be paid through Payment Gateway only, option to make balance payment through EFT (RTGS/NEFT) will not be available.

If bidder does not opt for BG against EMD, options of making complete payment through Payment Gateway or through EFT (NEFT / RTGS) will be available.

Option-2: Electronic Fund Transfer (EFT: NEFT/RTGS)

If the bidder selects payment mode as EFT (NEFT/RTGS), “Paying Slip for EFT (NEFT/RTGS)” will be generated by the system for the complete amount. The payment can be made from any Bank any Branch using this Paying Slip through NEFT/RTGS (Claim against payment made through EFT in any other JDA bank account will not be acceptable and bidder stands disqualified from participation in the bid applied for). After successful transaction through NEFT/RTGS, as per the standard procedures it may take 4 to 24 hours in process of confirmation of EFT through Auto-Process depending on the time of EFT done. Therefore, option to make payment through EFT (NEFT/RTGS) will be available till 48 hours prior to closing date of bid participation.

Option-3: Payment Gateway (Aggregator)

The facility to make payment through Debit Card, Credit Card, Net banking etc., will be available. User can use this facility from anywhere any time till the closing date & time of bid participation.

C. Bid Participation Receipt

After confirming payment, the bidder will get Bid Participation Receipt on the basis of which user will get the payment details along with other details for bidding on e-Procurement portal of GOR.

- In case of BG as the remaining payment will be done through Payment Gateway, on successful transaction the “Bid Participation Receipt” will be generated on real time basis.
- In case complete payment is done through Payment Gateway, on successful transaction the “Bid Participation Receipt” will be generated on real time basis.

In case complete payment is done through EFT (NEFT/RTGS), on confirmation of payment from ICICI Bank (Auto Process) “Bid Participation Receipt” will be available on Login of Bidder on JDA portal.

While participation in the bid, a receipt will be generated through the system showing the submission details as per Bid Participation Receipt (Sample Enclosed). The bidder is required to fill the instrument numbers for various heads on e-Procurement portal www.eproc.rajasthan.gov.in as mentioned in the receipt.

Jaipur Development Authority, Jaipur. Bid Participation Receipt	
	Date & Time:-
Bid Detail	
Bid ID:	Procurement Entity:-
Bid Title:	
Bid Value:	Bid Opening Place:
Bidder Detail	
Name of Entity:	Mobile No.:
Registration Type:	Instrument Amount:
Payment Mode:	Payment Channel:
Instrument No.:	Instrument Date:

Dates Detail		
Sr. No.	Event Name	Event Date
1	Publishing Date	
2	Bid Opening Date	

Specific Instrument for eProc Rajasthan			
Instrument Type			
Instrument Number	Head Name	Amount	Date
	Tender Fee		
	RISL Processing Fee		
	Bid Security Deposit		
Issuer Detail: Jaipur Development Authority		Challan Number:	

More details about Registration Process, Terms and Conditions and FAQ along with contact detail is available on JDA website www.jda.urban.rajasthan.gov.in.

Process for Participation & Depositing Payment Online

Jaipur Development Authority, Jaipur

Office Order

No. : JDA/IT(1074501)/E-Services/2015-16/D-399

Dated: 4-10-2016

Subject: Payment mechanism for participating in tender.

Jaipur Development Authority has decided to receive Earnest Money Deposit (EMD) (Bid Security), Tender Fee and RISL processing fee online through JDA Portal. The bid security options available in tender for participants are as mentioned below:

A. Payment Options:

Option-1: Bank Guarantee (BG) against EMD / Bid Security

Bidder may opt Bank Guarantee (BG) against EMD (Bid Security), for which bidder requires to prepare BG before applying in the tender. The details of BG requires to be fed on JDA portal before paying balance amount (Tender Fee + RISL Processing Fee). This amount will be paid through **Payment Gateway only**, option to make balance payment through EFT (RTGS/NEFT) will not be available.

If bidder does not opt for BG against EMD, options of making complete payment through Payment Gateway or through EFT (NEFT / RTGS) will be available.

Option-2: Electronic Fund Transfer (EFT: NEFT/RTGS)

If the bidder selects payment mode as EFT (NEFT/RTGS), "Paying Slip for EFT (NEFT/RTGS)" will be generated by the system for the complete amount. The payment can be made from **any Bank any Branch** using this Paying Slip through NEFT/RTGS (Claim against payment made through EFT in any other JDA bank account will not be acceptable and bidder stands disqualified from participation in the bid applied for). After successful transaction through NEFT/RTGS, as per the standard procedures it may take 4 to 24 hours in process of confirmation of EFT through Auto-Process depending on the time of EFT done. Therefore, option to make payment through EFT (NEFT/RTGS) will be available till 2 days prior to closing date of bid participation.

Option-3: Payment Gateway (Aggregator)

The facility to make payment through Debit Card, Credit Card, Net banking etc., will be available. User can use this facility from **anywhere any time** till the closing date & time of bid participation.

B. Bid Participation Receipt

After confirming payment, the bidder will get Bid Participation Receipt on the basis of which user will get the payment details along with other details for bidding on e-Procurement portal of GOR.

- In case of BG as the remaining payment will be done through Payment Gateway, on successful transaction the "Bid Participation Receipt" will be generated on real time basis.

- In case complete payment is done through Payment Gateway, on successful transaction the **"Bid Participation Receipt"** will be generated on real time basis.
- In case complete payment is done through EFT (NEFT/RTGS), on confirmation of payment from ICICI Bank (Auto Process) **"Bid Participation Receipt"** will be available on Login of Bidder on JDA portal.

This payment mechanism will come into force w.e.f 15/10/2016. Thereafter, old payment mechanism related to NEFT/ RTGS in which the bidder makes direct payment without **"Paying Slip for EFT (NEFT/RTGS)"** in JDA's bank account will be discontinued.

All procuring entities are hereby directed to clearly mention this procedure in NIB document.


(Pawan Arora)
Secretary

Copy for information and further necessary action to:

1. P.S. to JDC, JDA, Jaipur.
2. P.S. to Secretary, Secretary, JDA, Jaipur.
3. Director (Law / Finance / Town Planning / Engineering-I / Engineering-II), JDA, Jaipur.
4. All Additional Chief Engineer _____, JDA, Jaipur
5. DC (Administration)/DC(Store)/DC (Vehicle), JDA, Jaipur
6. System Analyst, JDA, Jaipur
7. Analyst-cum-Programmer, JDA to ensure integration of software w.e.f 01/10/2016.
8. All Xen_____, JDA, Jaipur.
9. Officer-in-charge, SPPP Portal, Jaipur.
10. OSD (Public Relation) / PRO, JDA, Jaipur.


(Brijesh Kishore Sharma)
OSD (RM)

Section A-1

Instructions to Bidders

JAIPUR DEVELOPMENT AUTHORITY JAIPUR

SCHEDULE AND SPECIFICATIONS

Name of work: Sewerage and water supply work for rehabilitation scheme at Niwaru road Jhotwara.

1	NIB No.	:-	E.E.(PHE-II)/03/2021-22
2	Approximate cost	:-	Rs. 41.16 Lakh
3	Cost of the tender documents	:-	Rs 1,000.00
4	Earnest Money	:-	All the eligible contractors should be submit bid security declaration on non-judicial stamp of Rs. 50/- as par order issued by Rajasthan Government of Finance Department (GF&AR) Gor. Dated 23.12.2020 (Declaration form attached with tender document. It is mandatory to submitted bid security declaration in prescribed format along with bid.
5	Bid Submission start date & Time	:-	03.05.2021 (10:00 AM)
6	Bid Submission end date & Time	:-	17.05.2021 (upto 6:00 P.M.)
7	Bid opening date & Time	:-	19.05.2021 at 11.00 A.M.
8	Completion period of work	:-	06 Months.

SCHEDULE 'A' : INFORMATION USEFUL FOR THE CONTRACTORS :

The tenderer should see the site and fully understand the condition of the site before tendering and include all lead, lifts etc. **Percentage above/Below or equal to be quoted on the rates as given in the 'G'-Schedule.** The work shall be carried out in accordance with the Rajasthan PWD, PHED and JDA detailed specification and to the entire satisfaction of the Engineer-In charge of the work.

The bid will be opened only of those bidders deposit proper bid security, processing fee, tender fee, GST registration, clearance certificate and copy of registration of contractor in required category are found to be in order. The Bid security, tender fee will be accepted through online payment only.

SCHEDULE 'B' : LIST OF THE DRAWING TO BE SUPPLIED BY THE DEPARTMENT:

The drawings may also be seen in the office of undersigned.

SCHEDULE 'C' : LIST OF THE DRAWING TO BE SUPPLIED BY THE CONTRACTOR:

List of the drawing to be supplied by the contractor NIL. But the contractor shall have to arrange at his own cost drawings required for the work after depositing necessary cost within JDA.

SCHEDULE 'D' : TEST OF THE MATERIALS :

The test of the material and workmanship shall be conducted by the JDA staff as necessary, The result of such tests should confirm to the standard laid down in the Indian standards and or the standards laid down in the detailed specification of the Public Works Deptt., Proper quality control is required to be maintained by the contractor. Qualified personnel as required under the contractor enlistments rules duly approved by the Deptt. shall have to be engaged at site by the contractor. The deptt. reserves the right to engage such staff and recover the expenses from the contractor on such account in case of his failure to do so.

SCHEDULE 'E' : SAMPLES OF THE MATERIALS :

The samples of the material to be used by the contractor shall be deposited 15 days in advance with the Engineer In charge and be got approved by him before use.

SCHEDULE 'F' : TIME OF COMPLETION :

The work should start within Ten days of issue of work order and complete within **06 months**.

SCHEDULE 'G' : ATTACHED SEPARATELY BASED ON 2016 JDA BSR (Electrical Works)-2015-2016, 2016 JDA BSR (Sanitary Works)-2015-2016 & JDA PHE BSR (Sewerage & Water Supply)-2014-2015, JAIPUR.

SCHEDULE 'H' : SPECIAL CONDITION.

Annexure A : Compliance with the code of Integrity and No Conflict of Interest

Annexure B : Declaration by the Bidder regarding Qualifications

Annexure C : Grievance Redressal during Procurement Process

Annexure D : Additional Conditions of Contract

Annexure E : DLP period for various type of works. Office order D-29 dated 11.03.2016

Annexure F : Payment mechanism for participating in tender: Office order D-399 dated 04.10.16.

Annexure G : GST Circular for participating in tender: Office order D-172 dated 12.07.17.

Annexure H : Rajasthan Government of Finance department : Office order F-2(1)Fin./G&T-SPFC/2017 dated 23.12.2020.

SIGNATURE OF CONTRACTOR

EXECUTIVE ENGINEER (PHE-II)
Jaipur Development Authority,
Jaipur

With full address & Mobile No. :

TENDER FOR WORKS

I/We hereby tender for the execution for the Jaipur Development Authority, Jaipur of the work specified in the underwritten memorandum within the time specified in such memorandum at the rates, (in figure)% (as well as in words) Percent below/above the amount, entered in the schedule G in all respects in accordance with the specifications, designs, drawings and instructions in writing referred to in Rule I in all respects in accordance conditions with such conditions so far as applicable. I/We have visited the site of work and am/are fully aware of all the difficulties and conditions likely to affect carrying out the work, I/We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/kilns nature and the extent of ground, working conditions including stacking, of materials, installation of tools & plant, conditions effecting accommodation and movement of labour etc. required for the satisfactory execution of contract.

Memorandum

(a)	General description of work:	
(b)	Estimated cost	Rs. 41.16 Lakh
(c)	Earnest money	All the eligible contractors should be submit bid security declaration on non-judicial stamp of Rs. 50/- as par order issued by Rajasthan Government of Finance Department (GF&AR) Gor. Dated 23.12.2020 (Declaration form attached with tender document. It is mandatory to submitted bid security declaration in prescribed format along with bid.

(d) Security Deposit:

(i) "The security deposit @ 10% of the gross amount of the running bill shall be deducted from each running bill and shall be refunded as per rules on completion of the contract as per terms and conditions. However, the amount of security deposit deducted from running bills shall not be converted into any mode of securities like bank guarantee. FDR etc. The earned money deposited shall however be adjusted while deducting security deposit from first running bill of the contractor. There will be no maximum limit of security deposit.

However, a contractor may elect to deposit of full amount of 10% security deposit in the shape of bank guarantee or any acceptable form of security before or at the time of executing agreement. In that case earnest money may be refunded only after deposition of full 10% as above. However, in case during execution cost of works exceeds as shown at the time of depositing 10% as above, balance security deposit shall be deducted from the Running Account Bills."

(ii) Bank Guarantee shall in all cases be payable at the headquarter of the Division or the nearest District Headquarters.

(e) Time allowed for the completion of work (to be reckoned from the 10th day after the date of written order to commence the work) is **06 month** Should this tender be accepted in whole or in Part, I/We hereby agree to abide by and fulfill all the terms and provisions of the conditions of contract annexed here to and of the Notice Inviting Tender, or in default thereof, to forfeit and pay to the Governor of Rajasthan or his successors in office, the sum of money mentioned in the said conditions.

Validity of rates 120 days.

A sum of Rs. is forwarded herewith in the form of Cash, Bank Draft, Bankers Cheque as Earnest Money. This amount of earnest money shall absolutely be forfeited to the Governor of Rajasthan or his successor in office without prejudice to any other right or remedies of Governor of Rajasthan or his successor in his office, should I/We fail to commence the work specified in the above memorandum.

Signature of Witness

Signature of Contractor

Witness's address & Occupation

Address of Contractor

Date:

The above tender is hereby accepted by me on behalf of the Governor of Rajasthan

Date:

Executive Engineer (PHE-II)

Section A-2

General Conditions of Contract

(Appendix XI of PWF & AR. Govt. of Rajasthan effective
up to date shall be applicable)

Section A3
Scope of Work &
Special Conditions of Contract

Name of work:- Sewerage and water supply work for rehabilitation scheme at Niwaru road Jhotwara

Scope of work:- Sewerage and water supply work for rehabilitation scheme at Niwaru road Jhotwara

SPECIAL CONDITIONS OF THE CONTRACT

1. Contractor shall get the DI/UPVC pipes inspected from the third party (CEIL, SGS, RITES) before bringing the material at site. The inspection charges shall be borne by the contractor. No payment of this item shall be made before the third party inspection.
2. In case of pipe line, testing shall be done as per the relevant Code and the leakage level shall not be more than as per IS 8329. Only 80% of the payment shall be released after providing, laying and jointing of pipes and special in trenches. 20% of the payment shall be released after testing as above.
3. According to the alignment of pipe line thrust blocks shall be constructed as per IS code for which no extra payment shall be payable. The cost of thrust blocks shall be deemed to be considered in the rates quoted by bidder.
4. **Cement concrete roads required to be dismantled** for laying of pipe line shall be done by mechanical means / breaker in the manner such that pavement in required width is only dismantled. No extra payment for cutting of payment shall be made and it shall be deemed to be considered in the rates quoted by bidder.
5. The JDA shall be free to carry out the work from any participating agency on the rate of lowest bidder during the concurrency of rate contract.
6. The quantity of work can be increased or decreased. However, no guarantee is given about the actual quantity of work.
7. No extra payment shall be made to the contractor on account of excavation in collapsible strata or in hard or rocky strata. The bidders shall have to make their own arrangement for completing the work and no claim in this respect will entertained.
8. On collection of complete material for each section the same shall be got checked by Engineer-in-Charge or his authorized representative. Such approval shall in no way release the contractor of his responsibility regarding completion of work, as per required specification until the contract is complete.
9. The electric connection, if required, for construction and testing purpose shall be arranged by the contractor at his own cost.
10. The contractor shall make his own arrangement regarding water required for the execution and testing of the work and shall also arrange for the supply of drinking water to his own employees. He shall defray all charges in this connection and should include in his rates a sufficient amount to cover such charges. All such facilities as are required now to be provided for the labour, made under labour welfare rules in force, shall also be provided by the contractor at his own cost.
11. The contractor will be required to see that the usual hours of work are adhered too. No work shall be done after the sun set without the permission of the engineer-in-charge.
12. The contractor/firm or company while executing the work will adopt all safety measures at his cost to safeguard from any loss of life and damage of public and private property. If any loss and damage is occurred, they will pay the full compensation from their own pocket to the concern. All the consequence (legal and or financial) will be borne by the contractor only and JDA will not be responsible in any way.
13. Water for construction / testing purpose shall have to arrange by contractor at his own cost. If water is supplied by the department, the same shall be recovered from the contractor from each running bill at the rate of 1% of total value of pipe line laying work, In case of metered connection the charges shall be recovered on the actual consumption basis on the commercial rates.
14. The contractor shall be fully responsible for structural safety and water tightness of pipeline when tested.
15. No secured advance against material procured at site will be allowed.
16. Pipe line laying should be done in the presence an Engineer not below the rank of Junior Engineer of the JDA, and trench shall be refilled after checking of Assistant engineer. After taking layout, the contractor shall submit day to day schedule of work to the Engineer-in-charge in advance.
17. The contractor/firm or company will take utmost care to safeguard the water mains, Electric and Telephone cable existing surface drains water connections etc., while executing the work. Any damages/rectification shall be borne by the contractor only
18. The contractor shall, at his own cost, arrange to provide, erect and maintain necessary display boards/ flags/banners etc. at selection points of project site giving such information as considered necessary for public awareness/ information/ safety as directed by the Engineer-in-charge.

19. Contractor shall provide sufficient number of boards at site of work indicating "JDA AT WORK" at his own cost as required by Engineer-in-charge.
20. The surplus earth and damaged materials will be immediately removed from the site of work and dumped as per instruction of Engineer-in-charge
21. The material collected at site and paid provisionally shall remain under the watch and ward of the contractor till it is consumed fully on the work.
22. Any material not conforming to the specifications collected at site shall have to be removed by the contractor within a period of 3 days of the instructions, issued by the Engineer-in-charge, failing which, such material shall be removed by the Engineer-in-charge at risk and the contractor after expiry of 3 days period.
23. The contractor/firm/company is bound to get the workmen insured against accident from the Insurance Company at his own cost.
24. Contractor shall be the sole custodian of the men and material at work and will be fully responsible for any loss of life or otherwise occurred during the execution of the works.
25. The contractor shall be solely responsible for all kind of liaison before starting the work with PHED/Other JDA zone/JVVNL & BSNL etc. which is required to avoid any damage of already laid pipe lines, Electric, BSNL cables. The contractor shall also liaison for the inter connection work with existing PHED system.
26. Before start of work contractor has to inform concerned JDA zone officers to avoid/minimize road damage
27. The follow up / liaison for release of Electric Power connection of TWs from JVVNL Jaipur shall be in the scope of contractor and shall be deposited the required fess for issue the demand note, which shall be reimbursed by JDA on submission of original receipt.
28. As per office order no. JDA/DD (E&B)/2018/D-352 dated 29.08.2018, Clause of agreement no. 45 for Price Escalation variation is not applicable.

As Built Drawings.

1. The submission of the as-built drawings of the proposed work with old pipe line work is the precondition for the final payment. The final drawings shall be submitted in one reproducible set and 3 copies on linen bound in an album of an approved size. The contractor shall submit all the completion drawings on CD ROM / DVD in two copies with proper directory structure. The scale of drawing and the size of drawing shall be as per the direction of the Engineer in Charge
2. If there is any typographical error or otherwise in the 'G' Schedule. The nomenclature and the rates as given in the relevant BSR and JDA approved items/rates on which schedule 'G' is based, shall prevail.

3. Defects liability period

The defect liability period shall be of 3 years, from the date of the completion. The Contractor shall be responsible for satisfactory performance of the work under all design and operation conditions for the duration of the defects liability period, except for damages due to unprecedented natural calamities.

4. Refund of Performance Guarantee & Security Deposit

The Security Deposit (SD) and Performance Guaranty (PG) shall be refunded after successfully completion of defect liability period of 3 years. The 20 % amount of SD shall be released after completion of 1st year of DLP, other 20 % amount of SD shall be released after completion of 2nd year of DLP and remaining 60 % amount of SD shall be released after completion of 3rd year of DLP. (As per JDA Office order no. JDA/EE(TA to Dir.-Engg-I)/2016/D-29 dated 11.03.2016)

5. The contractor/firm or company while executing the above work will adopt all safety measures on his cost to safeguard from any loss of life & damage of public & private property. If any loss & damage occurred then they will pay the full compensation from their own pocket. All the consequence will be borne by them & JDA will not be responsible in any way.
6. The contractor/firm or company will display necessary signboards & lights from safety point of view during nights at site of work on his own cost as directed by the authorized Engineer in Charge.
7. The contractor shall not work after the sunset & before sunrise without specific permission of the Engineer In Charge in-charge
8. Contractor shall provide sufficient number of boards at site of work indicating 'JDA AT WORK" at his own cost as required by Engineer in Charge-In Charge.

9. The contractor will pay compensation to the house owner or to the owner of any adjoining property or any other works for the damaged sustained on account of this work while in progress or complete from his own pocket.

Special conditions for Tube well work

1. The tenderers are advised to study geographical, geological, hydrological and geo-physical condition prevailing in the jurisdiction of JDA for which they are tendering for the work of drilling of 200 mm tube well for power pump with development etc. complete. The rates shall be quoted based on their own assessment of the above features including the nature of the strata to be encountered and approachability of the site etc.
2. No extra charges for higher size drilling in collapsible strata will be paid by the JDA. The tenderers shall have to make their own arrangement for completing the work and no claim in this respect will be entertained.
3. Payment will be made on completion of individual tube well in all respect including development.
4. The boring shall be accepted only when its Yield is 9000 LPH or more for 200 mm diameter TUBE WELL at a draw down not exceeding 7 meters. Only payment of Drilling shall be made for the tube wells having discharge less than above. It is responsibility of contractor to fill up bore holes of such unsuccessful tube wells up to the ground level immediately.
5. **Inspection and Checking of work**
As material are collected and the construction of each section of work is completed it will be checked by Engineer-in-Charge or his authorized representative and the representative of the contractor will assert from the engineer from time to time that what part and portion he wishes to check over and pass out. Such approval shall in no way release the contractor of his responsibility regarding completion of work, as per required specification until the contract being completed.
6. **Water Supply for Work and Drilling Purposes**
The contractor shall make his own arrangement regarding water required for the execution and testing of the work and shall also arrange for the supply of drinking water to his own employees. He shall defray all charges in this connection and should include in his rates a sufficient amount to cover such charges. All such facilities as are required now to be provided for the labour, made under labour welfare rules enforce, shall also be provided by the contractor at his own cost.
7. **Time of Working**
The contractor will be required to see that the usual hours of work are adhered too. No work shall be done in the night without prior permission of Engineer – in – Charge except when it is absolutely necessary in the public interest. In this case contractor shall immediately inform the Engineer-in-Charge and get it approved.
8. **Release of Electric connection from JVVNL**
The contractor shall be responsible for getting electric connection released from JVVNL on behalf of JDA. For this JDA shall provide duly signed application form which shall be produced by contractor in JVVNL office. In normal case the final payment shall not be passed till electric connection is released and testing as per norms is done, however in case of non-feasibility of electric connection area the decision of EIC shall be final. The amount required for release of electric connection shall be deposited by contractor to JVVNL office at first stage which shall be reimbursed to him on producing of original receipt of JVVNL.
9. Electric and water connections for construction and testing purpose if needed, shall be arranged by the contractor himself at his own cost.
10. The following information's shall be furnished on completion by the contractor in accordance with clause No. of 12.2 of IS 2800 (Part I) : 1991, while handing over the tube well
 - a) Total depth of tube well drilled.
 - b) Strata chart of tube well indicating different type of soil formation met with at different depths and indicating the depths of each type of soil formation from hydrologist.
 - c) Samples of strata collected, neatly packed and correctly marked in sample bags.
 - d) Position of every joint in well assembly.
 - e) Method used for development.
 - f) Total hours of development done.
 - g) Developed discharge in L.P.S.
 - h) Discharge is totally sand free or presence of sand particles is there.
 - i) PPM and turbidity after development.
 - j) Pumping water level at developed discharge, and
 - k) Static water level
11. The format as per IS: 2800 (Part I): 1991 for furnishing the details is given as below-

- a) Agency drilling the tube well.....
 - b) Location of tube well.....
 - c) Method of drilling adopted.....
 - d) Date of starting
 - e) Date of completion
 - f) Pilot hole and test hole Bit Size.....
 Bit typeHours.....fromto
 - g) Coring doneBit size..... Bit type
 Hoursrecovery.....from.....to.....
 - h) ReamingBit Size.....Bit Type
 Hours.....from.....to.....
 - i) Lithological data

From	To	Formation
.....		
.....		
.....		
 - j) Total length of tube well drilled.....
 - k) Assembly of production well Size.....
 Lengthtype
 Perforation per meter
 Housing pipe
 Blind pipe
 Strainer pipe.....
 Bail plug.....
 - l) Top of tube well above/below ground level.....
 - m) Size of gravel.....
 - n) Quantity used before
 - o) Development.....Quantity used during development.....
 - p) Method used for development.....
 Total hours of testing.....
 - q) Development discharge.....
 - r) Turbidity.....
 - s) Further details appended
 - i) Sample of strata, neatly packed in sample bags
 - ii) Chart of pipe assembly lowered
 Results of mechanical analysis of samples of unconsolidated strata.
12. No running payment shall be made for incomplete tube well. Payment shall be made after completion of development, testing of tube well.

Safety aspects associated with the work.

1. Safety And Accident Prevention Officer: Due precautions shall be taken by the Contractor, at his own cost, to ensure the safety and protection against accidents of all staff and Labour engaged on the works, local residents in the vicinity of the works, and the public traveling through the works. The contractor shall deploy at least one officer from his staff, qualified to promote and maintain safe working practices. This/these officer(s) shall has/have authority to issue instructions and shall take protective measures to prevent accidents, including but not limited to the establishment of safe working practices and the training of staff and labor in their implementation. The contractor shall furnish to the department the name(s) of such officer(s) before the start of the work.
2. The contractor/firm or company while executing the work will adopt all safety measures at his cost to safeguard from any loss of life and damage of public and private property. If any loss and damage is occurred, they will pay the full compensation from their own pocket to the concern. All the consequence (legal and or financial) will be borne by the contractor only and JDA will not be responsible in any way.
3. The contractor shall not work before sunrise and after the sunset.
4. The contractor/firm or company will take utmost care to safeguard the water mains, Electric and Telephone cable existing surface drains water connections etc., while executing the work. Any damages/rectification shall be borne by the contractor only.
5. The contractor/firm/company is bound to get the workmen insured against accident from the Insurance Company at his own cost.

6. The contractor will pay compensation to the house owner or to the owner of any adjoining property or any other works for the damaged sustained on account of this work while in progress or complete from his own pocket.
7. Electric and water connections, if needed, shall be arranged by the contractor himself at his own cost.
8. Contractor shall be the sole custodian of the men and material at work and will be fully responsible for any loss of life or otherwise occurred during the execution of the works JDA and its representatives will not be responsible in anyway.
9. Demolishing of concrete road work will be done by mechanical means in the proper way.

The above conditions may be read very carefully and adhered strictly.

I/we confirm above

Signature of contractor

**Executive Engineer (PHE-II)
JDA, Jaipur**

Section A-4

Specifications of Work

Name of work:- Sewerage and water supply work for rehabilitation scheme at Niwaru road Jhotwara.

SPECIFICATION FOR SEWER LINE WORK

1 PROVISION FOR NOMINAL REINFORCEMENT IN PRE-CAST RINGS

The Contractor shall provide steel reinforcement as per design requirement in each Pre-Cast M-40 Grade Circular Rings, along with nominal **reinforcement @ 0.12%** of gross cross sectional area in both the direction i.e. vertical bar & circular rings) subject to a minimum of nominal reinforcement as per Code of "*Practice of Plain and Reinforced Concrete*" IS:456 2000. **No extra payment shall be made to him /firm on this part. The Contractor should therefore take provisions accordingly.**

Inspection of work/ Materials.

2. The testing of work /samples shall be carried out by Engineer-in-charge/authorized representative or by Third party inspection as selected and directed by the Engineer-in-charge. The test shall be carried out as per relevant I.S. Specification at manufacture's site before transportation to site. Inspection cost/testing charges if any, shall be born by the contractor only. Inspection shall be carried out for various items for HDPE DWC pipes/RCC pipes, PVC (SWR) pipes, Cast iron ring and frame, manhole cover Ferro-cement footsteps and Pre-cast manhole elements/components etc.

Sewer laying work and construction of manholes.

3. The JDA Site Engineer shall provide the reduced level value of Bench Marks and invert levels in reference to the Bench Marks while starting the work. The contractor/ Firm or company's technical staff will transfer levels in the trench to lay the sewer line at required gradient with standard level instruments and , boning rods, side rails. The Contractor/Firm or company will be fully responsible for any error while transferring levels from Bench Marks to the trench. While doing so, if any, line is laid wrongly and/or is not as per desired gradient it shall be the responsibility of contractor to get the line re-laid at his own cost
4. The contractor shall provide at the site all material he shall be required to use for timbering/stuttering shoring excavation of trenches and which he shall bring to the site, prior to start of excavation for approval of the Engineer-in-charge.
5. Pre-cast manhole chambers shall be constructed/assembled simultaneously with the laying of sewers as per drawing and detailed specification of **JDA BSR**.
6. Concreting work should be done in the presence of an Engineer-in-charge not below the rank of Site Engineer of the JDA after checking of reinforcement by the Sector Engineer. After taking layout, the contractor shall submit daily Schedule of work to the Engineer-in-charge 15 days in advance.
7. Only design mix concrete of grade M-40 shall be used for the precast manhole elements.
8. The contractor shall keep the trenches open between two consecutive manholes while laying the sewer line. Pipes shall be lowered in the trenches and cured minimum for three days, trench shall be refilled with excavated earth as per specification after the inspection of Sector / Site Engineer.
9. No extra payment will be made to the contractor on account of clearance of soakage well/septic falling in the alignment of the sewer line. The sewer line shall be tested at contractor's cost as per I.S. code no. 783-1985 and departmental specifications for water tightness, straightness and gradient by the Engineer In charge. If any leakage is found during testing the same will be replaced by the contractor at his own cost.
10. Two percent amount of each running bill shall be with held on account of testing of sewer system, which will be released only after successful testing. The contractor will be fully responsible for structural safety stability and water tightness of the sewer line and associated work.

Materials

11. Cement and steel shall not be supplied by the department.
12. Steel, when arranged by the contractor shall produce a test certificate for the whole lot as per the IS Code provisions from an authorized laboratory approved by the Engineer-in-charge.
13. Water for construction and testing purpose shall have to be arranged by the contractor at his own cost. In case it is supplied by the JDA, charges @ 1% of total value of item of construction work shall be taken and recovered from each running bill.

The above conditions may be read very carefully and adhered strictly.

1. The site is located at various locations under Jurisdiction of Executive Engineer (PHE-II), JDA Jaipur.

- a) Setting out of works and carrying out confirmatory survey.
- b) Submission of working design and drawings and approval of same by the department.
- c) Providing, laying and jointing of 200 mm diameter HDPE DWC, 200 mm Dia RCC NP-4 & 250 mm dia RCC NP-2 pipe line.
- d) Construction of new manholes with RCC Pre Cast Conical piece and RCC Pre Cast Rings as per enclosed drawings and specifications.
- e) Utility shifting.
- f) Restoration of Roads.
- g) Inspection of material at works.
- h) Removal of defects in laying and jointing of all sewers, fittings and manholes after testing and during defect notice periods.
- i) The drawings enclosed in **Section-A6**, appended herewith contains a plan of the area, The Schedule 'G' in volume II contains item wise classification of underground strata likely to be excavated but the same is not guaranteed and excavation work may have to be carried out in different strata other than given in schedule 'G'.
- j) Submission of as built drawings.
- k) Any other associated work as required by Engineer-in-charge.
- l) Prior to vacating the site, the contractor shall be responsible for and bear any costs of reinstating the site to a condition at least equal to that in which it was handed over to the contractor.

The contractor is advised to visit site of work before quoting his rate and frame his own opinion about the live conditions prevailing at site.

2. DESCRIPTION OF WORK.

- a) The complete work will be consisting of the following main items as specified in detailed schedule and drawings as per the tender document enclosed herewith.
- b) Excavation of trenches, refilling and removal or surplus earth for laying pipes and construction of appurtenances like manhole and vent shaft along with requisite safety measures.
- c) Providing, laying and Jointing **200 mm dia HDPE DWC, 200 mm dia RCC NP-4 & 250 mm dia RCC NP-2 pipes** at required gradient and testing of joints and associated works.
- d) Providing and laying suitable bedding of cement concrete for pipes.
- e) Construction of required size RCC Pre Cast Manholes along with providing and fixing Ferro cement Manhole covers, C.I. frames and Ferro cement footsteps of required size, duty and weight as per drawing.
- f) Making connection to existing Sewers by dismantling wall and concrete channel and its related repairs.
- g) The drawings enclosed in section A-5 appended herewith contains a plan of the area, The Schedule -G in volume II contains item wise classification of underground strata likely to be excavated but the same is not guaranteed and excavation work may have to be carried out in different strata other than given in schedule-G.
- h) The contractor is advised to visit site of work before quoting his rate and frame his own opinion about the live conditions prevailing at site.
- i) Any other associated work as required by Engineer-in-charge.

2.1 DRAWING TO BE SUPPLIED BY CONTRACTOR

The following drawings are required to be supplied by the tenderer when required by the Engineer-in-charge and work should commensurate only after obtaining his approval in writing.

- a) Drawing of measuring boxes for cement, sand and other construction material supplied at site.
- b) Drawing of Ferro-cement manhole covers with cast iron ring, frame and Ferro-cement steps supplied at site.
- c) **AS-BUILT DRAWINGS:-**The submission of the as-built drawings for the equipment is the precondition for the final payment. The final drawings shall be submitted in one reproducible set and 3 copies on linen bound in an album of an approved size. The contractor shall submit all the **completion drawings, including L- section man hole to man hole with point file and approved design calculations on CD ROM / DVD in two copies with proper directory structure.** The scale of drawing and the size of

drawing shall be as per the direction of the Engineer in Charge. Any other drawings related to works included in the contract.

2.2 DRAWINGS TO BE SUPPLIED BY THE DEPARTMENT.

The drawings of the various manhole elements (Ferro-cement manhole cover, Ferro cement footsteps, Cast iron rim and frame), drawings showing the trench width for various invert depth of the corresponding diameters and the map/plan of the area showing the proposed lateral sewer network is enclosed in the section A-5 of the tender document shall be supplied by the department.

2.3 WORKING DRAWING:

The working drawings showing plan and positions of proposed sewers are available for inspection at the office of the undersigned. The interested may inspect these drawings during office Hrs. on any working day.

2.4 GENERAL DESIGN OBLIGATIONS

- a) The Contractor shall be deemed to have scrutinized, prior to submission of bid, design criteria, calculations, and drawing as per the JDA requirements.
- b) JDA shall not be responsible for any error, in accuracy or permission of any kind in JDA's requirements as originally included in the contract. Any data or information received by the Contractor, from JDA or otherwise, shall not relieve the Contractor from his responsibility for the design and execution of the works.

2.5 SUBMISSION PROCEDURE FOR DETAILED DESIGN AND EXECUTION DRAWINGS:

- a). The contractor shall carry out the preparatory works such as to prepare the plans, L-Section, designs, working drawings etc.
- b). The drawings shall be sufficient in details and the scale has to be chosen accordingly in coordination with the Engineer in charge.
- c). If required, the detailed design and the execution drawings shall be submitted only after verification by an institute or agency approved by the Engineer In charge or any authorized representative of the JDA.

3. SAMPLES OF MATERIAL

- 3.1** The Contractor shall submit samples of the following items, to the Engineer In charge for carrying out tests as specified under Schedule 'D' in specified quantities as mentioned against each item before the commencement of work or within 15 days of issue of order, whichever ever accrues earlier ' and shall obtain his approval before using any such material at site free of cost by the contractor.

- | | |
|---------------------------------------|-----------|
| a) Rubble stone / Brick (First Class) | 10 Nos. |
| b) Fine Aggregate (Bajari) | 0.05 Cum. |
| c) Coarse Aggregate: | |
| Size 20mm and below | 0.05 Cum |
| d) Steel (for each size of bar) | 0.05 Kg. |
| e) Spun Yarn | 0.05 Kg. |
| f) Cement | One bag. |
| g) Bitumen Paint. | 0.05 kg. |

The following samples shall be submitted from each lot of supply as per I.S.S. for approval of Engineer In charge as to the quality of material. These samples shall be returned to the Contractor after completion of work.

- | | |
|---|-------|
| a) HDPE/DWC Pipes ISI marked. | 5 Nos |
| b) RCC NP-4 & RCC NP-2 Pipes ISI marked | 5 Nos |
| c) Ferro cement steps for manholes | 1 No |
| d) Ferro cement manhole cover | 1 No |
| e) Pre-cast RCC manhole element | 1 No. |

- 3.3** Any other sample of material that may be required by the Engineer In charge from time to time.

- 3.4** All the above samples are to be delivered in suitable packing at the office of the Executive-Engineer-In – charge or as desired by the engineer-in-charge

4. TESTS OF MATERIALS

The Engineer In charge or his authorized representative will carry out tests as and when considered necessary for the quantity and quality of work done and for the material used at the work. The contractor, unless otherwise specifically mention to do so, shall provide all facilities and arrangements to undertake those tests.

- 4.1** The contractor shall provide all necessary facilities to undertake tests for a lot of material supplied at site. All the testing charges for the test being conducted on construction material such as HDPE/DWC pipes, RCC NP-4 & RCC NP-2 pipes, concrete, manhole cover, cement, fine aggregate, coarse aggregate etc at other/departmental Testing laboratories shall be borne by the contractor
- 4.2** The testing of all the building material shall be conducted as per relevant Indian Standard specification. If relevant Indian standard specifications are not available for a particular item, the testing for quality of material shall be done in accordance with detailed specification of PWD (B.S.R.) Rajasthan, however it is not possible for the contractor to take suitable arrangements for testing of sample the same shall be taken to the laboratory authorized by the Executive Engineer-in-charge. The contractor shall get the quality of material obtained from each source approved from the Engineer In charge. In case the source of supply of building material is changed at subsequent date sample as required above shall be got approved before using the material.
- 4.3** The samples submitted by the contractor required under schedule –G, Volume -II shall invariably be supplemented with the manufacturer's test certificate for approval of the Executive Engineer In charge. The Executive Engineer, in charge may ask for further testing of material before, approval and subsequent use at site. The contractor in such case shall supply required quantity of samples as desired by Executive Engineer, in charge. The samples as obtained shall be sent to authorized laboratory for testing. In case the material is not found to be as per specification the whole lot of supply shall be rejected.

The relevant standards for complying testing and specification for each material are as given below:

1. HDPE/DWC pipe : IS 16098 part-2 (As amended upto date)
2. RCC pipes: IS 458 As amended upto date)
3. Ferro cement circular manhole cover and frames as per (Departmental specifications and drawing).
4. Ferro cement foot steps for manholes.
5. Precast manhole elements (Departmental specifications and drawing).

5. LIST OF MATERIAL TO BE SUPPLIED BY THE DEPARTMENT

Nil.

6. DETAILED SPECIFICATIONS

The detailed specifications of the work to be executed shall be as per the provision of detailed specification JDA PHE BSR 2014-2015 (Sewerage & Water Supply), **JDA BSR-2016** and the relevant Indian standard specifications unless otherwise mentioned above in the specification for work explained under scope of work. Wherever a reference to the I.S. code mentioned herein appears, it shall be taken as reference to the latest edition of the standard. The complete scope and detailed specification of work is as detailed herein after, item wise given in Schedule 'G' and drawings given in, volume-II and section A-5 of bid document respectively.

6.1 TRANSFER OF LEVELS AND ESTABLISHMENT OF GRADIENTS:

- a) The contractor should furnish his work program, construction methodology within 15 days after the letter of Notice to proceed for work and prior to start of the construction activities at site.
- b) To carry out the leveling survey of whole area or part of the area as a confirmatory survey as per Engineer-in-charges instructions and confirm the ground levels, chain age, road network, etc. with the data available in design reports and got it approved from the Engineer-in-charge prior to commencement of the work.
- c) The transfer of level at ground from the specific bench mark (to be given with in 100 meter from the starting point of line) shall be done by contractor. The grade line shall be done with the help of sight rail and boning rods. The necessary equipment and manpower required shall be arranged by contractor for transfer of levels.

6.2 EXCAVATION AND REFILLING WORKS

- a) The excavation and refilling work shall be done in accordance with the detailed specification PWD (B.S.R.) Rajasthan and as per drawing appended in section A-5.
- b) The provision of IS 3764/1966 safety code for excavation work and is 4091-1967 safety code for blasting and related drilling operation shall be strictly met with at each site of work. The work shall be stopped in case these requirements are not met with.
- c) Excavation work for different size of sewers, manholes, as per working drawings in different soils / described item wise in schedule 'G' shall be carried out in the manner specified here in drawing No.1.
- d) Before excavating the trench the alignment of sewer line shall be approved by the Engineer.
- e) Before carrying out the excavation work the trial pits shall be taken along the proposed sewer line alignment by the contractor after mutual agreement and approval of the Engineer in advance of the excavations for the purpose of satisfying himself as to the location of underground obstructions or conditions. The contractor shall proceed with caution, in any excavation and shall use every means to determine the exact location of underground structures, pipelines, conduits etc, and prior to excavation in the immediate vicinity thereof. The contractor shall be solely responsible for the cost of protections or repair or replacement of any structure, pipeline, conduit etc, above or below ground which may be broken or otherwise damaged by his operations.

- f) The trench shall be shored and timbered wherever necessary and specified. The blasting and dewatering work shall be carried out in the manner specified and all material and T & P shall be arranged by the contractor at his own cost. All hard and soft patches shall be treated in the manner specified after obtaining approval from Engineer-In-charge. Unless the description of items for excavation specified so, separate measurement shall not be taken for these time.
- g) The lighting, barricading, guarding of the trenches and the provision of watchman shall be done by the contractor at his cost.
- h) The barricading shall in no case be removed until the trench is excavated, the pipes are laid and Engineer-in-charge gives permission to proceed with the backfilling
- i) Contractor shall not be paid any additional compensation for excess excavation over what is specified as well as for any remedial measures that are specified.
- j) The excess excavated material shall be carried away from the site of works as specified, failing which in view of public safety and traffic convenience, Engineer-in-charge may carry out the work by any other agency at Contractors risk and cost.

6.3 UNDER BED AND BEDDING WORK BELOW PIPES.

- a) The type of bedding as per specification of G schedule, working drawing along with under bed, where ever, required shall be provided in stages and manners specified in drawings and as per directions of engineer-in-charge. The complete material placement in specified dimensions and specified levels, connection etc. is included in scope of work.
- b) The bedding shall preferably be provided continuously between consecutive manholes. In case, it is not possible to do so, the vertical joints in bedding material shall be provided at outer edge of socket. No horizontal joints shall be permitted in concrete cradle.

6.4 SUPPLYING, LAYING, JOINTING AND TESTING OF PIPES:

- a) Full round HDPE DWC (double wall corrugated) pipes of SNB grade as per IS 16098 specification for "HDPE DWC pipe and fitting". HDPE DWC pipes with spigot and socket ends of size and class as per working drawings, specifications given herein after and in standard length specified therein shall be supplied at site of work. No extra measurements will be taken for increase in number of joints on account of shorter lengths of pipe use and also for cutting of pipes wherever required as per site conditions. Any balance pipe lengths from a cut or rejected pipe lengths including their cost of transportation to and from the site will not be measured separately.
- b) The RCC S&S NP-4 & NP-2 pipes ISI Marked shall be supplied conforming to IS:458:1988 (Amended up to date) with anticorrosive bitumenastic paint of approved brand two or more coats (make Shalimar or equivalent) with ISI marked rubber ring/gasket lubricant etc.
- c) The laying and jointing of pipes shall be done in accordance with I.S. 4127-1967 "Code of practice of laying glazed stone ware pipes".
- d) The laying and jointing of RCC S&S NP-4 & NP-2 pipes shall be done in accordance with IS: 783: 1995 (Amended up to date) with hydraulic testing of sewer line.
- e) All pipes supplied shall be free from cracks, chipped ends and irregular angular space between pipes and socket /spigot end and should have smooth interior finish. All pipes shall be subjected to sound test by a suitable wooden hammer and ensured against invisible cracks. Any defective pipe, even after lowering into the trench shall be rejected and shall be immediately removed from site. The storage of pipes at site shall be in accordance with the provisions of ISS 4032-1977.
- f) The pipe shall be lifted towards alignment of sewer line covered and laid in the trenches, in the manner specified with equipments like chain-pulley etc. all arrange by the contractor. Any pipe damaged during above operation shall be removed and replaced by the contractor at his cost. Any material falling into the trench while lowering or otherwise shall be removed and trenches shall be kept clear all the time.
- g) The pipes fittings and other construction material shall be placed along the alignment in advance with utmost care during transit so that they are not damaged. Any damage due to these reasons shall be Contractor's liability.
- h) Laying of the pipe prior to install the pipe bedding in the pipe trench, the Trench Bottom Level (TBL) shall be checked to confirm the slope and relative depth with respect to design level and got it approved from the Engineer. At first stage bedding shall be done up to pipe bottom level and same shall be checked before laying the pipe. At second stage the remaining bedding shall be done with proper careful compaction and finally the pipe top level shall be checked to confirm the proper slope.
- i) All the sewer lines are to be laid perfectly true both in alignment and to gradient specified. In case of spigot and socket pipe, the socket end of the pipe shall face upstream.
- j) The sewer lines shall be laid such that the making on pipes appears at the top of the pipes.
- k) Properly fitted temporary wooden stoppers shall be provided to close the ends of all incomplete sewer line. The stoppers are only to be removed when pipes are being laid and jointed. Opening of sewer at end of day's work shall be capped and sealed.
- l) Sewer pipe laying and jointing shall be started and completed only section wise as per the instruction of the Engineer-in-charge. The sections shall be chosen manholes to manhole. However in unavoidable circumstances the section of sewer line shall be changed as per site condition and as directed by Engineer.

The work of sewer line laying, manhole construction and vent shaft shall be done simultaneously so that all the necessary testing can be done efficiently. The construction of the works should progress from downstream end (i.e. the discharge point) and proceed towards upstream. Also, as the work to facilitate the house sewer connection shall be done simultaneously, it will help in the commissioning of the works. As far as possible the testing of pipeline shall be done from manhole to manhole.

- m) The bedding for sewer lines shall be provided as specified in the drawings and as per direction of the Engineer.
- n) After 24 Hrs. of PCC bedding and laying of pipe line the trench shall be filled up to top of pipe with moist soil. The trench can be filled up to the top of the pipe level with moist soil to ensure curing of concrete and then after testing of sewer line, trench should be filled. In the duration before filling the trench, soil should be kept moist to ensure adequate curing.
- o) All the testing of sewer lines and other appurtenances, at both factory and site shall be carried out in presence of the Engineer or his representative.
- p) Special arrangements such as cranes, tripods with chain pulley block for lowering the pipes and fittings shall be made by contractor at his own cost. In no case pipes and fittings shall be dropped.
- q) The payment for the sewer lines and manholes shall be made only after satisfactory testing of the works, as directed by the Engineer.
- r) The reinstatement of road/footpath shall be done as specified and as per the requirements of the local authorities, on completion of all the works.

6.5 CONSTRUCTION OF MANHOLE CHAMBER AND TESTING FOR WATER TIGHTNESS.

- a) The manholes shall be circular and constructed as RCC insitu for varying invert depths as per design and specification. The manholes shall generally conform to relevant I.S. and departmental specifications. The location of manhole shall be as per the drawing or layout given by the Engineer-in-charge or as directed by the Engineer-in-charge. The Manhole dimensions and other details shall be as per the enclosed drawing. The location of manholes shall be as per drawing or layout given by the Engineer-in-charge.
- b) The inspection and testing of manhole chambers frames and covers shall be done at factory in presence of Engineer or his representative or shall be got done through third party inspection. The load test for covers shall be done in accordance with Table 1 of IS 12592 (Part -I).
- c) The entire height of the manhole shall be tested for water tightness as per CPHEEO Manual or relevant IS code. The required water for testing and any other requirements shall be arranged by the Contractor at his own cost. .
- d) The testing shall be preferably be done between manhole to manhole lengths. In case of steep slopping sewers, the test pressure at lower end of pipe, length tested should not exceed the allowable static pressure, the pipe length should be subdivided, and plug at end shall be effectively fixed. The pipe length under test shall be charged gradually. The pipe length under test should remain filled with water at least 24 hrs. Before testing.
- e) Any defect noticed during the testing shall be immediately repaired removed and replaced. The testing should again be repeated if it satisfies above requirements. The test water should be left in pipe during bedding and back filling operations.

6.6 MAKING CONNECTION WITH EXISTING SEWER.

- a) The connections in the existing sewer where required as per working drawings shall be made by cutting precast manhole walls preferably by using core cutting machine or other suitable means as specified by Engineer-in-charge. .

6.7 WORK TO FACILITATE HOUSE SEWER CONNECTION:

The work involves the laying of 110mm dia PVC (SWR) Grade 'B' pipes from the street manholes to property boundaries / roadside chambers to the as per drawings, site layout and as directed by the Engineer-in-charge to facilitate house sewer connections. UPVC pipes are to be plugged with end cap and concrete post near the property boundaries as shown in the Drawing and / or as directed by the Engineer.

No work shall be carried out inside the property boundaries.

6.8 OTHER SERVICES

Contractor shall take the necessary precautions to avoid the damage to other services such as water supply lines, telephone cables, electrical cables, storm water drains etc. In case of any damages to any of the services, Contractor shall be responsible for restoring the facilities in bare minimum time at his own cost.

6.9 PRECAST REINFORCED CONCRETE

PRECAST REINFORCED CONCRETE

6.9.1 GENERAL REQUIREMENTS

- a) Concrete used for pre-casting the units should be well proportioned, mixed, placed and thoroughly compacted by vibrations or tamping to give dense concrete free voids and honey combing.

- b) Pre-cast articles shall have a dense surface finish showing no coarse aggregate and shall have no cracks or crevices likely to assist in disintegration of concrete or rusting of steel or other defects that would interfere with the proper placing of the units. All angles of the precast units with the exception of the angles resulting from the splayed or chamfered faces shall be true right angles. The arises shall be clean and sharp except those specified or shown to be rounded. The wearing surface shall be true to the lines. On being fractured, the interior of the units should present a clean homogeneous appearance.

6.9.2 CURING

- a) After having been cast in the mould or form the concrete shall be adequately protected during set-ting in the first stages of hardening from shocks and from harmful effects of frost, sunshine, drying winds and cold. The concrete shall be cured at least for 14 days from the date of casting.
- b) The precast articles shall be matured for 28 days before erection or being built in so that the concrete shall have sufficient strength to prevent damage to units when first handled.

6.9.3 MARKING

Precast units shall be clearly marked to indicate the top of member and its location and orientation in the structure.

6.9.4 MIX DESIGN PROPORTIONING

- a) Mix proportions shall be designed to ensure that the workability of fresh concrete is suitable for conditions of handling and placing, so that after compaction it surrounds all reinforcements and completely fills the formwork. When concrete is hardened, it shall have the formwork. When concrete is hardened, it shall have the stipulated strength, durability and impermeability.
- b) Determination of the proportions by weight of cement, aggregates and water shall be based on design of the mix.
- c) As a trial the manufacturer of concrete may prepare a preliminary mix according to provisions of SP: 23-1982. Reference may also be made to ACI 211.1-77 for guidance.
- d) Mix design shall be tried and the mix proportions checked on the basis of tests conducted at a recognized laboratory approved by the Engineer-in-charge.
- e) All concrete proportions for various grades of concrete shall be designed separately and the mix proportions established keeping in view the workability for various structural elements, methods of placing and compacting.

6.9.5 STANDARD DEVIATION

Standard deviation calculations of test results based on tests conducted on the same mix design for a particular grade designation shall be done in accordance with clause 9.2.4 of IS 456:2000

6.9.6 ACCEPTANCE CRITERIA

The acceptance criteria for compressive strength and flexural strength designation shall be done in accordance with the relevant clauses of the IS codes.

6.9.7 DESTRUCTIVE TESTS

- a) Load Test: Contractor shall make necessary arrangement for load test of precast units at manufacturer's site. The load test shall be carried out by Engineer-in-Charge or by Third Party after approval of Engineer-in-Charge.
- b) Core test : Core test, if ordered by the Engineer-in-charge, shall be done in accordance with IS 516. Samples for such test shall be taken from locations to be identified by the Engineer-in charge and such samples shall be collected in compliance with IS 1199.

6.9.8 NON DESTRUCTIVE TESTS

In case of doubtful structural strength non-destructive testing of the pre-cast manhole elements shall be done as per the instructions of Engineer-in- charge. Such tests may be any one or a combination of the following:-

1. REBOUND HAMMER TEST
2. WINDSOR PENETRATION PROBE TEST
3. PULSE VELOCITY (SONIC OR ULTRASONIC) TEST

Interpretation of Rebound Hammer, Windsor Probe and Pulse-velocity test results shall rest with the Engineer- in -charge.

6.9.9 SPECIFICATION FOR RCC ECCENTRIC CONICAL PIECE IN M40 GRADE.

The work involves construction of Pre-cast RCC M-40 grade circular manhole chamber of designated diameter 1000/1200/1500 for various invert depths including required excavation of earth in all types of soils such as murrum, sand, sandy silt, black cotton soil, hard soil, kankar etc. disposing of surplus excavated material within a lead of 50 meter. The work includes laying of 150

mm thick plain cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 20 mm nominal size) 1600/1800/2100 mm diameter bedding in foundation, providing and laying of plain cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate) in channel & circular starter base wall up to 50 mm above outer dia. of sewer pipe and P&F in position of 125 mm thick 150/225 mm high Pre-Cast M-40 grade cement concrete ring at bottom and consecutive standard size 300 mm high rings. The work includes P&F pre-cast reinforced cement concrete eccentric conical piece of M40 grade, 125 mm thick having 560 mm and 1000/1200/1500 mm internal diameter at top & bottom respectively, fitted with Ferro-cement cover of 33 kg cast iron double seal ring & frame (heavy-duty) etc to withstand for class AA loading including supply and fixing of Ferro-cement foot steps and sealing of all joints with cement mortar 1:1 complete job as per detailed specifications, drawings and directions of Engineer-In charge.

The height of the M-40 grade cement concrete circular rings of manhole can be increased only after the approval of Engineer-in-Charge subject to a maximum height of 1.20 m for which no extra payment shall be made to the contractor.

6.9.8.1 TOP ECCENTRIC CONICAL PIECE.

- a) Providing and fixing of Pre-cast RCC M-40 grade concrete eccentric conical piece for manhole manufactured using Weight Batching Plant.
- b) Only Design Mix Concrete of Grade M-40 shall be used.
- c) Shape:- Eccentric frustum of cone of designated diameter and thickness as per the enclosed drawings and specifications
- d) Testing: Apart from the usual strength test on of the concrete mix non-destructive test for strength of the concrete is to be carried out on sample piece of pre-cast manhole elements as per the instruction of engineer-in-charge.

6.9.8.2 CIRCULAR RINGS.

- a) Providing and fixing of Pre-cast M-40 grade cement concrete circular rings for manhole chambers manufactured by using Weight Batching Plant.
- b) Only Design Mix Concrete of Grade M-40 shall be used.
- c) Shape:- Circular in shape with end keys at top and bottom of designated diameter, height and thickness as per the enclosed drawings and specifications. The height of rings can be increased in the multiples of 30cms after inspection and approval of Engineer-in-Charge.
- d) Testing: Apart from the usual strength test on of the concrete mix non-destructive test for strength of the concrete is to be carried out on sample piece of pre-cast manhole elements lot as per the instruction of engineer-in –charge

6.9.8.3 The contractor shall be responsible for the quality of the works during the executions of works with good Engineering practices. He shall, therefore, have his own independent and adequate setup for ensuring the same.

7.0 CONTRACTOR'S STAFF AND EQUIPMENT

- a) The contractor shall employ for the execution of the work only such persons as are skilled and experience in all activities required for the completion of the work, from reconnaissance surveys to detailed design, manufacturing, and execution and testing to commissioning.
- b) The contractor shall provide either one graduate or one diploma Engineer to supervise the construction of the work and to act as the contractor's Representative. The Engineer shall be B.E. Civil Eng. with minimum 1-year experience or a diploma in Civil Eng. with minimum 3 years experience in the field of sewer line work. The contractor shall also provide sufficient skilled, semi-skilled and un-skilled labor as are necessary to ensure completion of the various sections of the work in the time required the contractor shall not deploy/remove any supervisory staff or Labour from the site without approval of the Engineer in charge.
- c) The Engineer in charge shall be at liberty to object and direct the contractor to remove from the work any person who in the opinion, of the engineer in charge misconduct himself or is incompetent or negligent in the proper performance of his duties such person shall not be again employed without permission of the engineer in charge.
- d) The contractor shall at all times during progress of the work take all requisite precautions and use his best endeavors to prevent any notorious or unlawful behavior by or amongst the workers and other persons employed on the works and for the preservation of peace and protection of the inhabitants and the security of property in the neighborhood of the work.
- e) The contractor shall, if required by the Engineer in charge deliver to him a return in detail in such form and at such intervals as the Engineer in charge may prescribe, showing the supervisors and Labour employed by the contractor on the site The contractor shall make his own suitable arrangements for lodging and boarding of his, Labour supervisors and engineers

8.0 PROGRESS OF WORK

All components of works shall ensure a logical sequence of supply, installation, testing, and commissioning. If any supply of a material is made, not in conformity to the logical sequencing of the work component, no payments will be entitled against such supplies and installations.

Specifications of Tube well Works

The work consists of Construction of 3 no Tube Well's and allied works as per BOQ.

SPECIFICATIONS FOR TUBE WELL WORK

Specification and scope of tube well work

The work of construction of tube wells is to be done in JDA jurisdiction and accordingly G schedule has been prepared. The work of drilling of bores is suitable for 200mm & 150mm diameter casing pipes and strainer pipes in all type of soils and rocks including fixing of casing and strainer pipes, Gravel Packing, Wrapping coir rope and development by compressor. The boring will be done as per relevant IS : 2800-1979, 4097-1970, 4270-1967, IS : 8110 amended up to date and any other relevant code applicable along with notifications.

The work consists of 200mm , 4 nos of tube wells & 150 mm , 2 nos of tube well as per BOQ:

Definition of Strata

Rocky area shall mean, area where the strata essentially comprises of the rock formation with over burden of less than 30 M and the aquifer is to be tapped in rock. The rock may be with or without fissures and faults, joints and bedding, Planes may have fractured and weathered zones, Rocks may be soft, medium or hard and may comprise of shales, sand stone, lime stone, dolomite, quartzite, basalts, granite, sciests, fillities slates, cheisses etc. and their intercalation, intrusive and conglomerates of these hut shall exclude clays, sand silts, pebbles cables, murrum and silt stones. The depth of drilling can be increased or decreased as per site conditions.

All alluvium area shall mean, areas where the strata comprises of loose, unconsolidated material like clay, silts, sands, gravel's, pebbles, cobbles 10 cms. Diameter and 2 M thickness and boulders (Upto beds of 1.0 meter thickness and less than 15 cms. Diameter).

Installation of well assembly

Aquifer study is to be done by the tenderer and accordingly he has to design the gravel pack, blind pipe, housing pipe and slotted pipe to be used shall be made of mild steel conforming to IS : 4270/1967 and approved class. The pipes may be seamless or electric resistance welded (ERW) with specified threads.

The slotted pipe to be used shall be lined slots (Vertical or Horizontal) with an opening area equal to as arrived at is design. The slots size should not exceed the thickness of slotted pipe. This slots size shall be specific depending on the result by actual mechanical analysis of the aquifer samples, which shall have to be done by the tenderer. The length of the slotted pipe/strainer shall normally be not less than 3 M. It shall actually be arrive at from the thickness of the aquifer encountered. It is not necessary to screen the whole part of the aquifer and such depth should be drilled so as to give at least 9000 LPH discharge for 200 mm diameter tube well.

The slotted pipe shall be attached to the housing pipe/blind pipe by means of strong M.S. Coupling/reducers as the case may be of quality ad design approved by Engineer-in- charge. The bottom plow shall be such as to suit the design of pipe assembly.

The design of well assembly should be got approved from the Engineer-in-Charges before lowering is started.

Painting

Before lowering, coat of approved corrosion resistance paint shall be given to all the mild steel parts of the well assembly.

Gravel Packing

Gravel to be used shall be confirming with IS : 2800 (Part-II) 1979(latest). These shall be hard, well rounded and of reasonable size free from dust and foreign material as well as flaky particles. The uniformity coefficient should not be more than 2 (uniformity coefficient = D_{60}/D_{10}).

The size of gravel shall finally depend on the mechanical analysis of the aquifer. The Gravel will have to be cleaned and washed before use. A tolerance of 10% shall be allotted in respect of grading of Gravel.

The Gravel filling of the annular space between the pipe assembly and the bore holes shall start from the bottom of bore holes and shall be done upto ground level. The gravel packing will have to be done as per IS : 2800.

Development of the tube well

The tube well may be developed as per clause 9.3 of IS : 2800 (Part I)-1991 (latest). The water coming out should be silt/sand free after completion of development. The tube shall be developed by using a compressor of minimum capacity 600 cfm and pressure 7.0 kg/cm². Final discharge should be totally sand free as per IS: 2800 (Part –I) 1991 (amended upto date). The payment shall be made for actual working hours for development subject to ceiling of maximum 24 hours for each tube well. The contractor has to bear the cost of development work needed beyond 24hrs, at his own cost.

Lowering of Riser pipe in Tube Well

Providing & lowering of G.I. Pipes, flange pipe including rubber washer and nuts of 8 mm dia complete in all respect I.S.1239 Marked. B Class 50/65 mm diameter shall be lowered in required length. The flange shall have required suitable size of holes and slot for cable.

Specifications for HDPE PE 80 Grade pipes

HDPE Pipes

The HDPE (High density polyethylene) pipes (for water supply) confirming to IS 4984-1995 and duly marked with certification of BIS shall only be supplied. The pipe shall confirm to the test requirements prescribed in IS 4984-1995. The minimum factory test pressure for hydraulic test shall be 2 times the rated pressure of pipe for 60 seconds. No defect/ leakage/ cracks should be visible after hydraulic test.

Colour

The colour of pipe shall be black. Each pipe shall contain minimum three equispaced longitudinal stripes of width 3mm in blue colour. These strips shall be co-extruded during pipe manufacturing and shall not be more than 0.2mm depth. The material of the stripes shall be same type of resin, as used in the base compound for the pipe.

Material

The raw material used for the manufacture of pipes should not constitute toxic hazard, should not support microbial growth and should not give rise to unpleasant taste or odor, clouding or discoloration of water. The pipes shall be manufactured from 100% virgin PE-80 High density polyethylene (HDPE) food grade raw material with minimum required strength of 8MPa (PE-80). The raw material should be of food grade quality. The nominal pressure of pipes required shall be as specified in the scope of work. The pipe material shall be suitable for conveyance of drinking water for which the certificate of recognized institute shall be provided. High density polyethylene (HDPE) used for the manufacture of pipes shall confirm the designation PEEWA-45-T-003 or PEEWA-45-T-006 or PEEWA-50-T-003 or PEEWA-50-T-006 or PEEWA-57-T-003 or PEEWA-57-T-006 of IS: 7238/1992. In addition the material shall also confirm to 5.6.2 of IS 7328-1992. The specific base density shall be between 940.0 Kg/Cum and 958.4 Kg/Cum (both inclusive) when determined at 27 C according to procedure prescribed in Annexure "A" of IS: 7328/1992. The value of the density shall not differ from the nominal value by more than 3 kg/cum as per 5.2.1.1 of IS 7328-1992.

The MFR (Melt Flow Rate) of the material shall be between 0.20g/10min and 1.10g/10min (both inclusive) when tested at 190 degree C with nominal load of 5 Kgf when determined by the method prescribed in 7 of IS: 2530-1963. The MFR of the material shall be within +/- 20% of the value declared by the manufacturer.

The resin shall be compounded with Carbon black. The Carbon Black content in the material shall be within 2.5 + 0.5% and dispersion of Carbon black shall be satisfactory when tested according to the procedure prescribed in IS: 2530-1963.

With the advancement in technology natural (unpigmented) resin designation PEEWA-45-T-003 or PEEWA-45-T-006 or PEEWA-50-T-003 or PEEWA-50-T-006 or PEEWA-57-T-003 or PEEWA-57-T-006 of IS: 7238/1992 duly stabilized with anti-oxidants may be compounded with suitable black master batch or

processed directly after physical mixing with suitable black master batch in the pipe extruder for production of pipes, which shall conform to the performance requirements of the pipe as specified in IS 4984. The material of pipe thus produced shall conform to the requirements of § 5.2 of IS 4984-1995.

The percentage of anti-oxidant used shall not be more than 0.3 percent by mass of finished resin. The anti-oxidant used shall be physiologically harmless and shall be selected from the list given in IS: 10141-1982.

The work consists of Providing, Laying & Jointing of 160mm ,110 mm & 90 mm HDPE pipe line in approximately 4250.00 mtr length as per BOQ:

No reworked or recycled material shall be used.

Dimensions

The outside diameter of pipes, tolerance on the same and ovality of pipes, and minimum and maximum wall thickness shall be conforming to IS 4984-1995. The length of straight pipe shall be 5 to 20m. However wherever specifically required under the conditions of contract, the pipes shall be supplied in coils.

Visual appearance

The internal and external surfaces of pipes shall be smooth, clean and free from grooving and other defects. The ends of the pipes shall be cleanly cut square with the axis to within the tolerances given in IS 4984 and free from deformity. Slight shallow longitudinal grooves or irregularities in the wall thickness shall be permissible provided that the wall thickness remains within the permissible limits.

Inspection and Testing of HDPE Pipes

The HDPE pipes supplied by the contractor shall be subjected to following tests as per IS 4984 for acceptance:

- Visual and dimensional check as per IS 4984
- Hydraulic characteristics/ Internal pressure creep rupture test as per IS 4984
- Longitudinal reversion test as per IS 4984
- Overall Migration test
- Density test
- Melt flow rate test
- Carbon black content and Dispersion test
- Any other test required as per provisions to which supplied pipes conform i.e. (IS 8329)
- Hydraulic test at manufacturer premises before dispatch.

In addition the following are required for review by inspection authority:

- The test reports of raw material.
- The type test report of pipe. This shall not be more than two years old from the date of inspection of pipes.
- Notch Impact test as per ASTM-1474. HDPE pipes when tested as per ASTM-1474 (Notch Impact Test) should pass the Hydraulic test as per IS:4984:1995 for a minimum 165 Hrs. This test can be carried out at factory or at some private laboratory. Such report should not be more than 3 month old from date of inspection.

The sampling method for testing shall be as per the provisions of the standards to which they are manufactured.

The pipes shall also be got tested from CIPET and amount for testing shall be borne by contractor. Department shall demand for manufacturers' test report for pipes along with pre dispatch inspection by EIC or his authorized representative.

Marking

All pipes shall be marked as per the provisions of IS 4984 and subjected to following minimum requirements:

- Manufacturer name/ Trade mark,

- Designation of pipe,
- Lot number/ Batch number,
- Manufacturing standard to which the pipe confirms (IS 4984) and BIS certification mark,
- Mark of pre-dispatch Inspecting authority.

Specials for HDPE Pipes

Unless otherwise specified, the specials and the jointing material for HDPE pipes shall be Fusion fittings confirming to GBE/PL2:PART 4. Fusion fittings with integral heating element shall be used in general. All fittings shall be of Class B. Fittings shall be produced from material class PE 80 or PE 100. The fittings shall be free from cracks, voids, blisters, holes, distortion, dents, injurious incisions, inclusions or any other likely to impair their performance. For each fitting the fusion time shall be the same.

SPECIFICATIONS FOR L/J AND SECTIONAL TESTING OF PIPELINES

General

The contractor will inspect the route along which the pipe line is proposed to be laid. Efforts shall be made by the contractor to make minor deviations from the marked alignment so as to keep the pipe alignment as straight as possible and to avoid damage of public and private properties along the alignment. The alignment of pipe line and location of specials & chambers may be changed at site in co-ordination and with prior approval of the Engineer In Charge. The final alignment on which the pipeline shall be laid shall be marked in field and got approved from the Engineer in Charge or his representative. Where ever there is need for deviation, it should be done with the use of necessary specials or by deflection in pipe joints (limited to 75% of permissible deflection as per relevant standards). The alignment as proposed should be marked on ground with a line of white chalk and got approved from Engineer In-Charge. The position of fittings, valves, shall be as per directions of engineer-in-charge.

The quality of pipes, inner mortar lining and the quality of laying shall ensure that the considered co-efficient of friction of value (Cr=1) is obtained during the designed period, so that the design is validated and the designed quantities of flow can be delivered. Thus the contractor shall ensure that the conditions of pipes its lining and the laying are perfect in all respect.

Standards

Except otherwise specified in this technical specification, the Indian Standards and Codes of Practice in their latest version, National Building code, PWD specification of the state of Rajasthan and Manual of water supply of GOI shall be adhered to for the supply, handling, laying, installation, and site testing of all material and works. The laying of pipeline shall be done in confirmations to the following standards:

Alignment and the L-Sections

The slopes provided shall be such that in existing ground level conditions, the maximum cover over the laid pipe is neither more than 1.5 m nor less than 0.9 m, if the pipe is to be laid above ground. The average cover generally should not be less than 0.9 meters. In case of HDPE pipes, the pipes shall have a minimum cover of 900 mm when laid under roads with light traffic or under cultivated soils and 1.25 m when laid under roads with heavy traffic. When the soil has poor bearing capacity and is subject to heavy traffic, the pipes shall be laid on a concrete cradle.

Earth Work

General

The Contractor shall furnish all tools, plant, instruments, qualified supervisory personnel, labour, materials, any temporary works, consumables, any and everything necessary, whether or not such items are specifically stated herein for completion of the work in accordance with the Departments Requirements.

The excavation shall be carried out to correct lines and levels. This shall also include, where required, proper shoring to maintain excavations and also the furnishing, erecting and maintaining of substantial barricades around excavated areas and warning lamps at night.

Excavated material shall be dumped in regular heaps, bunds, riprap with regular slopes within the lead specified and leveling the same so as to provide natural drainage. Rock/soil excavated shall be stacked properly as approved by the Engineer in Charge. As a rule, all softer material shall be laid along the center of heaps, the harder and more weather resisting materials forming the casing on the sides and the top. Rock shall be stacked separately.

Topsoil shall be stock piled separately for later re-use. Clearing The area to be excavated/filled shall be cleared of fences, trees, plants, logs, stumps, bush, vegetation, rubbish, slush, etc. and other objectionable matter. If any roots or stumps of trees are encountered during excavation, they shall also be removed. The material so removed shall be disposed off as approved by the Engineer in Charge. Where earth fill is intended, the area shall be stripped of all loose/ soft patches, top soil containing objectionable matter/ materials before fill commences.

Pipe Laying below Ground

Trench Excavation General

The earth work shall be carried out as specified above.

Before excavating the trench the alignment of pipeline and L-section shall be approved by Engineer-in-Charge. The work of trench excavation should be commensurate with laying and jointing of the pipeline. It should not be dug in advance for a length greater than 3 days ahead of work of laying and jointing of pipeline unless otherwise directed by the Engineer-in-Charge. It is proposed to ensure the following:

Safety precautions have to be incorporated in the work process Hindrances to the public have to be minimized

The trench shall not be allowed to erode The trench must not be filled with water The trench must not be refilled before laying of the pipes. The bed for the laying of the pipes has to be prepared according to the L-Section immediately before laying of the pipes.

Trench Excavation For Laying Pipeline below ground

The trench excavation of pipe line shall be in accordance with IS 6530-1972 for AC pipes and IS 7634 for HDPE pipes /or as per the general provisions given above. Pipe trenches shall be excavated to the lines and levels approved by the Engineer in Charge. The width of the trench at bottom between the faces of sheeting shall be such as to provide minimum 200 mm clearance on both sides of the pipe. No pipe shall be laid in a trench until the section of trench in which the pipe is to be laid has been approved by the Engineer in Charge. The walls of the trench shall be cut to stable side slopes preferably to a slope of $\frac{1}{4} : 1$ or $\frac{1}{2} : 1$ depending on the nature of soil.

The bottom of the trench shall be trimmed and leveled to permit even bedding of the pipes. It should be free from all extraneous matter which may damage the pipe or the pipe coating. Additional excavation shall be made at the joints of the pipes, so that the pipe is supported along its entire length. For trench bottom with boulders or rock, sand bedding as per details detailed herein after shall be provided.

All excavated material shall be stacked in such a distance from the trench edge that it will not endanger the work or workmen and it will avoid obstructing footpaths, roads and drive ways.

Trees, shrubbery fences, poles, and all other property and surface structures shall be protected. Tree roots shall be cut within a distance of 50 cm from pipe joints in order to prevent roots from entering them. Temporary support, adequate protection and maintenance of all under ground and surface structures, drains, sewers and other obstructions encountered in the progress of the work shall be provided. The structures, which will be disturbed, shall be restored after completion of the work.

Where water accumulates in any trench the Contractor shall maintain the trench free of water during pipe laying.

Wherever necessary to prevent caving, trench excavations in soils such as sand, gravel and sandy soil shall be adequately sheeted and braced. Where sheeting and bracing are used, the net trench width after sheeting shall not be less than that specified above. The sides of the excavation shall be adequately supported at all times and, except where described as permitted under the Contract, shall be not battered.

The Engineer in Charge in co-operation with the Contractor shall decide about the sheeting/ bracing of the trench according to the soil conditions in a particular stretch and taking into account the safety requirements of the Contractor's and Engineer- In- Charge's staff. Generally, safety measures against caving have to be provided for trenches with vertical walls if they are deeper than 2.0 m in sandy or loose formations.

Trench excavation to commensurate with the laying progress

The work of trench excavation should be commensurate with laying and jointing of the pipe line. It should not be dug in advance for a length greater than 500 m ahead of work of laying and jointing of pipeline unless otherwise permitted by the Engineer in Charge. The Contractor has to ensure the following:

safety protections as mentioned above have to be incorporated in the work process hindrances to the public have to be minimized the trench must not be eroded before the pipes are laid the trench must not be filled with water when the pipes are laid the trench must not be refilled before laying of the pipes The bed for the laying of the pipes has to be prepared to the pipe grades so that uniform support is assured for the full length of the pipe.

Bedding of the pipes

The trench bottom shall be even compact and smooth so as to provide a proper support for the pipe over its entire length, and shall be free from stones, lumps, roots and other hard objects that may injure the pipe or coating. Holes shall be dug in the trench bottom to accommodate sockets so as to ensure continuous contact between the trench and the entire pipe barrel between socket holes.

Adequate soil cushion of minimum 15 cm depth shall be provided under the pipes if the strata, on which the pipes are laid, are rocky. The soil used for cushion should be free from stones, lumps and other hard objects that may injure the pipes or their coating.

Laying and jointing of pipes Below Ground

General

Before commencing the work the bidder shall submit the proposed L-Section and plan for approval of Engineer in Charge. No work shall be taken until such approval is received. The pipe laying shall be as per the approved L-Section. The pipes will be cleaned in the whole length with special care of the spigot and sockets/other ends on the inside/ outside to ensure that they are free from dirt and unwarranted projections. The whole of the pipes shall be placed in position singly and shall be laid true to profile and direction of slope indicated on longitudinal sections. The pipes shall be laid without deflection / or with permissible deflection as prescribed in the respective pipe material code between bends and/or between high and low points.

The pipes shall rest continuously on the bottom of the trench. The pipes should not rest on lumps of earth or on the joints.

Before pipes are jointed they shall be thoroughly cleaned of all earth lumps, stones, or any other objects that may have entered the interior of the pipes, particularly the spigot end and the socket including the groove for the rubber ring.

Pipes and the related specials shall be laid according to the instructions of the manufacturers and using the tools recommended by them.

Cutting of pipes shall be reduced to a minimum required to conform with the drawings. Cutting has to be made with suitable tools and according to the recommendations of the manufacturer. The spigot end has to be chamfered again at the same angle as the original chamfered end. Cutting shall be perpendicular to the center line of the pipe. In case of ductile iron pipes the cut and chamfered end shall be painted with two

coats of epoxy paint. If there is no mark for the insertion depth on the spigot end of the (cut) pipe it shall be marked again according to the instructions of the manufacturer.

Where the gradient of the bed slopes is more than 15 degrees, it may be necessary to anchor pipes against their sliding downwards, by providing suitable gradient blocks and straps. Suitable cut off walls shall also be provided in these sections to protect the trench soil to be washed out during rains.

Before pipes are jointed they shall be thoroughly cleaned of all earth lumps, stones, or any other objects that may have entered the interior of the pipes, particularly the spigot end and the socket including the groove for the rubber ring. End caps are removed only just before laying and jointing

All specials like bends, tees etc. and appurtenances like sluice or butterfly valves etc. shall be laid in synchronization with the pipes. The Contractor has to ensure that the specials and accessories are ready in time to be installed together with the pipes. At the end of each working day and whenever work is interrupted for any period of time, the free ends of laid pipes shall be protected against the entry of dirt or other foreign matter by means of approved plugs or end caps.

When pipe laying is not in progress, the open ends of installed pipe shall be closed by approved means to prevent entrance of trench water and dirt into the line.

No pipe shall be laid in wet trench conditions that preclude proper bedding, or when, in the opinion of the Engineer in Charge, the trench conditions or the weather are unsuitable for proper installation.

The pipe line laid should be absolutely straight unless planned otherwise. The accuracy of alignment should be tested before starting refilling with the help of stretching a string between two ends of the straight stretch of pipes to rectify possible small kinks in laying.

Laying and jointing of pipes

The laying of HDPE pipes as . However the specific references given herein shall prevail on the provisions of the standards. Pipes should be lowered into the trench with tackle suitable for the weight of pipes. For smaller sizes, up to 200 mm nominal bore, the pipe may be lowered by the use of ropes but for heavier pipes suitable mechanical equipment have to be used. Material for the HDPE pipe shall be as per standards IS :4984-1995.

Back filling and tamping of the pipe trench

Back-filling of trenches shall be done as specified below with watering and compacting in layers under "Optimum Moisture Content" conditions to achieve required density of refilling and strength after compaction. For the purpose of back-filling, the depth of the trench shall be considered as divided into the following three zones from the bottom of the trench to its top:

Zone A: From the bottom of the trench to the level of the centre line of the pipe

Back-filling by hand with sand, fine gravel or other approved material placed in layers of 150 mm and compacted by tamping. The back-filling material shall be deposited in the trench for its full width of each side of the pipe, specials and appurtenances simultaneously. Special care shall be taken to avoid damage of the pipe and the coating or moving of the pipe.

Zone B: From the level of the centre line of the pipe to a level 300 mm above the top of the pipe

Back-filling and compaction shall be done by hand or approved mechanical methods in layers of 150 mm, special care shall be taken to avoid damage of the pipe and the coating or moving of the pipe.

Zone C: From a level 300 mm above the top of the pipe to the top of the trench.

Back-filling shall be done by hand or approved mechanical methods in 15 cm layers after compacting and carried to the level necessary to allow for the temporary restoration of road and path surfaces, and also for hard-core (if and where ordered) on roads or to such level as will leave the requisite space for the top soil, road surface etc. to be reinstated as directed by the Engineer-in-Charge

Where the excavation is made through permanent pavements, curbs, paved footpaths, or where such structures are undercut by the excavation, the entire back-fill to the sub grade of the structures shall be made with sand in accordance with IS: 7634 for HDPE pipes. The excavated material may be used for back-fill in the following cases, provided it complies with clause 10 of IS 7634 for HDPE pipes.

a)

In Zone C: In cases where settlement is unimportant the back-fill shall be neatly rounded over the trench to a sufficient height to allow for settlement to the required level.

b)

In any zone, when the type of back-fill material is not indicated or specified, provided that such material consists of loam, clay, sand, fine gravel or other materials which are suitable for back-filling in the opinion of the Engineer In Charge.

All excavations shall be backfilled to the level of the original ground surfaces unless otherwise ordered by the Engineer in Charge, and in accordance with the requirements of the specification. The material used for backfill, the amount thereof, and the manner of depositing and compacting shall be subject to the approval of the Engineer in Charge, but the Contractor will be held responsible for any displacement of pipe or other structures, any damage to their surfaces, or any instability of pipes and structures caused by improper depositing of backfill materials.

Trenches shall be backfilled with selected material placed in layers not exceeding 15 cm in thickness after compacting, wetted and compacted to a density of not less than 90 percent of the maximum dry density at optimum moisture content for zone A, Zone B and Zone C of the surrounding material. Any deficiency in the quantity of material for backfilling the trenches shall be supplied by the Contractor at his expense. Water for compaction shall be arranged by the contractor at his cost.

The Contractor shall at his own expense make good any settlement of the trench backfill occurring after backfilling and until the expiry of the defects liability period.

On completion of pressure and leakage tests exposed joints shall be covered with approved selected backfill placed above the top of the pipe and joints in accordance with the requirements of the above specifications. The Contractor shall not use backfilling for disposal of refuse or unsuitable soil.

The soil under the pipe and coupling shall be tamped in order to provide a firm and continuous support for the pipeline. Tamping shall be done either by tamping bars or by using water to consolidate the back fill material.

The initial back fill shall be placed evenly in a layer of about 100 mm thick. This shall be properly consolidated and this shall be continued till there is a cushion of at least 300 mm of cover over the pipe. If it is desired to observe the joint or coupling during the testing of mains they shall be left exposed. Sufficient back fill shall be placed on the pipe to resist the movement due to pressure while testing. Balance of the back fill need not be so carefully selected as the initial material. However, care shall be taken to avoid back filling with large stones which might damage the pipe when spaded into the trench.

Pipes in trenches on a slope shall have extra attention to make certain that the newly placed back fill will not become a blind drain in effect because until back fill becomes completely consolidated, there is a tendency for ground or surface water to move along this looser soil resulting in a loss of support to the pipe. In such cases, the back fill should be tamped with extra care and the tamping continued in 100 mm layers right up to the ground level.

Sand Bedding

The pipeline shall generally be laid in ordinary sandy soil for which no extra bedding shall be provided. In such case, while doing the excavation, the bottom of the trench shall be prepared in a manner so as to match the curvature of the pipe as far as possible subtending an angle of about 120° at the center of pipe. Wherever the bottom of the trench is of such a nature (i.e.

decomposed rock/ hard soil/ boulder) which is likely in the opinion of the Engineer-in-Charge to cause damage to the pipe or coating or an unsuitable material is encountered which cannot support the pipe, the contractor shall excavate the trench to an additional depth below the required depth and shall refill to required level with suitable material such as loose soil/ sand, to be approved by the Engineer-in-Charge. The bedding thickness shall be not less than 15 cm under the barrel of the pipes. The complete pipe has to be covered and surrounded by the same material as used for bedding so that a total cover of 30cm above the barrel can be achieved as shown in the drawing in volume III. The excavated hard/dense soil can be refilled after bedding and covering of the pipe with the loose soil/sand.

The bedding shall be compacted with a light hand rammer. Any reduction in thickness due to compaction shall be made up by adding sand during ramming. For the purpose of the bedding under this item only screened fine sand of grain size not larger than 2mm shall be used. The sand shall be clean, uncoated and free from clay lumps, injurious amounts of dust, soft particles, organic matter, loam or other deleterious substances.

Anchoring of the pipeline

Thrust blocks shall be provided at each bend, tee, taper, end piece to prevent undue movements of the pipeline under pressure. They shall be constructed as per actual design and approval of Engineer in Charge according to the highest pressure during operation or testing of the pipes, the safe bearing pressure of the surrounding soil and the friction coefficient of the soil. Nominal steel shall be provided as per the provisions of CPHEEO manual and the construction of block shall be done in M15 grade of concrete.

Testing of the pipelines

Sectional tests

After laying and jointing, the pipeline shall be tested for tightness of barrels and joints, and stability of thrust blocks in sections approved by the Engineer in Charge. The length of the sections depends on the topographical conditions. Preferably the pipeline stretches to be tested shall be between two chambers (air valve, scour valve, bifurcation, and other chamber).

The water required for testing shall be arranged by the contractor himself. The Contractor shall fill the pipe and compensate the leakage during testing. The Contractor shall provide and maintain all requisite facilities, instruments, etc. for the field testing of the pipelines. The testing of the pipelines generally consists in three phases: preparation, pre-test/saturation and test, immediately following the pre-test. Generally, the following steps are required which shall be monitored and recorded in a test protocol if required:

- i. Complete setting of the thrust blocks.
- ii. Partial backfilling and compaction to hold the pipes in position while leaving the joints exposed for leakage control.
- iii. Opening of all intermediate valves (if any).
- iv. fixing the end pieces for tests and after temporarily anchoring them against the soil (not against the preceding pipe stretch)
- v. at the lower end with a precision pressure gauge and the connection to the pump for establishing the test pressure
- vi. at the higher end with a valve for air outlet
- vii. If the pressure gauge cannot be installed at the lowest point of the pipeline, an allowance in the test pressure to be read at the position of the gauge has to be made accordingly
- viii. Slowly filling the pipe from the lowest point(s).
- ix. the water for this purpose shall be reasonably clear and free of solids and suspended matter
- x. Complete removal of air through air valves along the line.
- xi. Closing all air valves and scour valves.
- xii. Slowly raising the pressure to the test pressure while inspecting the thrust blocks and the temporary anchoring.
- xiii. Keeping the pipeline under pressure for the duration of the pre-test / saturation of

the lining by adding make-up water to maintain the pressure at the desired test level. Make up water to be arranged by Contractor himself at his own cost.

- xiv. Start the test by maintaining the test pressure at the desired level by adding more make-up water; record the water added and the pressure in intervals of 15 minutes at the beginning and 30 minutes at the end of the test period.
- xv. Water used for testing should not be carelessly disposed off on land which would ultimately find its way to trenches.
- xvi. The field testing pressures for pipelines & duration of test shall be follows:

S.No	PIPE MATERIAL	ALLOWABLE OPERATING PRESSURE	TEST PRESSURE	TEST DURATION
1.	HDPE PIPES	6.0 Kg / Sqcm	1.5 TIMES THE WORKING PRESSURE	30 SEC for 24 hours (Pipe to be filled before testing)

The acceptance criteria for HDPE pipes shall be that the pressure test pressure should be maintained for test duration.

The sectional tests shall be accepted if the quantity of water required to be added to maintain test pressure during test duration of

No section of the pipe work shall be accepted by the Engineer in Charge until all requirements of the test have been obtained.

For HDPE pipes, the test pressure shall be kept as 1.5 times the actual operating pressure. Maximum field test pressures shall be as per table 3, clause 11.2 of IS 6530 and IS 7634. After the line is filled, it should be allowed to stand for 24 hours, before pressure testing and the line shall again be filled. The test pressure shall gradually be raised at the rate of one kg sq. cm/min when the field test pressure is less than 2/3 the works test pressures the period of test should be at least 24 hours. The test pressure shall be gradually raised at a rate of 0.1 N/mm² per minute.

If a drop in pressure occurs, the quantity of water added in order to reestablish the test pressure should be carefully measured. This should not exceed 0.1 liter/ mm of pipe diameter per km of pipeline per day for each 30 m head of pressure applied.

On completion of a satisfactory test any temporary anchor blocks shall be broken out and stop ends removed. Backfilling of the pipeline trench shall be completed.

Failure to pass the test

All pipes or joints which are proved to be in any way defective shall be replaced or remade and re-tested as often as may be necessary until a satisfactory test shall have been obtained. Any work which fails or is proved by test to be unsatisfactory in any way shall be redone by the Contractor.

Pre-Commissioning & Commissioning Tests

After successful sectional testing & leakage test, Pre-Commissioning & commissioning tests shall be performed when the work in the section is completed in all respect and the gaps / interconnections are made.

Sequence of works for ensuring good pipe laying

The required fittings, valves and jointing material should be carefully worked out in beginning. This material should be received in full first of all on site and stored as per directions of manufacturer or as directions given elsewhere in this manual on Standards.

The pipes should be received on site only after the above fittings, valves and material for joints has been received and all necessary preparation for laying has been made.

The material received should be checked for inspection certification as per contract and damage during transportation. All damaged material should be separated and not used.

The pipes received should be stored strictly as per directions of the manufacturer or as mentioned elsewhere in this manual or standards.

The pipes and other material should be again inspected for any damage before use in the trench.

The fittings and valves should be installed in sequence with the laying of pipes without leaving any gaps. It is desirable to lay the pipe lines from the end from where it can be connected to the water source to enable regular flushing of laid pipes.

The entry of dirt or any foreign material in the pipe should be religiously prevented. Each joint should be carefully checked for its completeness before covering up.

There should be a commensurate progress in trench excavation, laying and jointing of pipes, fittings, valves etc. and testing of laid pipes in sections so as to complete testing of all pipes laid in quick follow up of completing laying and jointing.

Disinfection of pipe lines should be carried out before commissioning.

Damage to Public Utilities

All precautions shall be taken during excavation and laying operations to guard against possible damage to any existing structure/pipeline of water, gas, sewage etc. After excavation of trenches, pipe shall not be lowered unless the dimensions of trenches and bedding for work for pipes at the bottom of the trenches are approved by Engineer-in-Charge. Pipes and fittings/specials shall be carefully lowered in the trenches. Special arrangements such as cranes, tripods with chain pulley block for lowering the pipes and fittings/specials shall be made by contractor. In no case pipes and fittings/specials shall be dropped.

Reinstatement of Road/ Footpath

Wherever the road is required to be cut, the Deptt. Shall obtain prior permission from the concerned authorities. The Contractor has to prepare a negotiable diversion, at his cost, before taking up road cutting. After the line has been laid and the trench refilled to the original level, the traffic may be allowed to pass through. After the pipe is laid the road must be properly re-graded and the damaged portion of road as well as the re-graded portions must be made good.

Clearing the site

All surplus materials, and all tools and temporary structures shall be removed from the site as directed by Engineer-in-Charge and the construction site left clean to the satisfaction of Engineer-in-Charge.

Valves

General

The sluice valve will conform to IS: 780/ IS: 2906.

The material to be supplied under this sub-section shall include but not be limited to the following:

All necessary fittings including bolts, nuts, gaskets, backing rings, counter flanges, jointing material, strainers etc. as required.

Sluice Valves

Scope

This section covers the requirements for non rising stem type sluice valve from 80 mm to 200 mm size. The valves will be used for water supply on line installations in upright positions, up to 450 C working temperature, with double flange and cap or hand wheel, for manual operation.

Nominal pressure and dimensions

The working pressure of the valves shall be 10 kg/cm² (1 MPa)

The dimension and mass of the sluice valves shall be in accordance with IS: 780 for sizes from 80 to 200 mm.

The flanges and their dimensions of drilling shall be in accordance with IS: 1538 (part-I to XXII).

Material

The material for different component parts of sluice valve shall conform to requirements given below:

S No.	Component	Material	Ref. to IS	Grade / designation
1	Body, bonnet, wedge, stuffing box, gland, thrust plate, hand wheel cap. etc.	Grey cast iron	210	FG 200
2	Stem	Stainless steel	6603	AISI 431, AISI 410
3	Wedge nut	Leaded tin bronze	318	LTB 2
4	Body seat ring, wedge facing ring	Leaded tin bronze	318	LTB 2
5	Bolt	Carbon steel	1363	Class 4.6
6	Nut	Carbon steel	1363	Class 4
7	Bonnet gasket	Compressed fiber board	2712	C
8	Gland packing	Asbestos	4687	Nil

Coating

All sluice valves shall be coated by dipping in a bath of tar base composition as given in Clause 7 of IS: 780 for sizes from 80 mm to 200 mm

All components susceptible to corrosion attack shall be coated internally and externally. Protective coating shall always be applied to the individual components before they are assembled, following shot blasting to give good adhesion.

Marking, testing and inspection

The standard marking and packing of the valves shall be done as per Clause 10 and 11 of IS: 780. The direction of rotation for OPEN, CLOSE position shall be marked on the hand wheel and on the bonnet of the valve.

Testing of sluice valve shall be done for close end in accordance with IS: 780 for sizes from 80 mm to 200 mm.

All the valves shall be inspected for flaw detection test in accordance with IS: 780. for sizes from 80 mm to 200 mm.

The design, construction material, manufacture, inspection, performance and testing shall comply with all applicable Indian Standards and Codes. Nothing in the specification will be construed to relieve the supplier of this responsibility.

Air valves

Scope and general design feature

This section covers the requirements of automatic double ball air valves to be used for evacuation of accumulation of air in water mains under pressure, for the exhaust of air when such mains are being charged with water and for inlet of air when they are emptied of water.

The Air Valves shall conform to IS14845. The design shall be such that higher the rate of flow the greater the resultant down thrust keeping the ball 'glued' to its seat until the last drop of air is expelled from the pipe system.

The valves shall have an integrated sluice valve. If required, they shall be installed on a flange welded on the MS pipe / special. The possible air velocity (inflow and outflow) must be at least 10 m/s. The working pressure of the air valves shall be 10 kg / cm² (1Mpa).

Construction feature

The flow of air should be as unobstructed as possible. The low-pressure orifice shall be in the same axis as the main discharge/incoming airflow and must have a diameter sufficiently large.

The cone angle in the low-pressure (large orifice) chamber should be carefully calculated and there should be adequate height to allow for free movement of the vulcanite ball in the low chamber. The annulus around the low-pressure vulcanite covered ball is to be generously proportioned for discharge of air under various differential pressures.

The orifice shall be carefully profiled to allow the requisite flow of air under varying differential pressure. It shall be in molded synthetic rubber such that even after extended contact the vulcanite covered ball does not stick to it when the line pressure becomes zero.

In the high-pressure chamber the orifice shall be in profiled in such a manner that the rubber-covered ball is not damaged even after extended contact. There should be machined guide in the chamber, which ensures that the ball travels vertically and makes contact with the nipple and seals off the orifice without fail.

Material

The material for different component parts of the air valve shall conform to requirements given below:

S No.	Component	Specifications
1	Body	Cast Iron conforming to IS: 210 GR FG 200
2	High Pressure Cover	Cast Iron confirming to IS 210 GR FG 200
3	Low Pressure Cover	Cast Iron confirming to IS 210 GR FG 200
4	Cowl	Cast iron confirming to IS 210 GR FG
5	High Pressure Orifice Plug	Stain less steel conforming to AISI 410
6	Low pressure ball	Vulcanite covered seasoned timber
7	High pressure ball	Rubber covered seasoned timber
8	Lower pressure seat ring	Dexine (Nitrile rubber)
9	Isolating sluice valve	Conforming to IS: 780 – 1984
10	Spindle for sluice valve	Stainless steel conforming to AISI 410
11	Bolts and nuts	Mild steel

The body and seat of the valve shall withstand a working pressure of 10 kg/cm² for at least 15 minutes.

Inspection

Third Party Inspection:

The following items of supply will be got inspected from approved inspecting agency (CEIL, SGS. RITES) at manufacturers premises before dispatch at his own cost.

- 1. HDPE pipe PE 80 Grade**
- 2. Special Cast Iron fittings and Accessories**

Normally when pipeline is laid, a certain number of cast iron fittings such as tees, bends, reducers, etc, and special fittings such as air or sluice valves are required.

Laying of Fittings – All cast iron fittings shall be plain ended to suit the outside diameter of Asbestos cement pressure pipes and to the class and diameter of pipe manufactured. When using such cast iron fittings, they are joined by cast iron detachable joints only. For cast iron specials having flanges, they are jointed in the pipeline with cast iron flange adaptors having one end flanged and the other plain ended.

Anchorages - It should particularly be noted that the cast iron joints do not hold pipe ends within it firmly. During working or test pressure, there will be tendency for the pipe ends or special ends to slip out of the joint, more so with the case of blank end cap used for closure of pipeline and all degree bends and tees.

In order to keep them firmly in the pipeline, anchoring of these specials are necessary against the direction of thrust.

The anchorage shall consist of either concrete cast-in-situ or masonry built in cement mortar. The anchors shall be extended to the firm soil of the trench side. The shape of the anchors will depend on the kind of specials used. They shall be spread full width of trench and carried vertically by the side and over the special to about 15 cm. The bearing area on sides of the trench will be proportional to the thrust and to bearing capacity of the sides of the trench.

Back filling and tamping

The soil under the pipe and coupling shall be tamped in order to provide a firm and continuous support or the pipeline. Tamping shall be done either by tamping bars or by using water to consolidate the back fill material.

The initial back fill material used shall be free of large stones and dry lumps. In stony areas the material for initial back fill can be shave from the sides of the trenches. In bogs and marshes, the excavated material is usually little more than vegetable matter and this should not be used for bedding purposes. In such cases, gravel or crushed stone shall be hauled in.

The initial back fill shall be placed evenly in a layer of about 100 mm thick. This shall be properly consolidated and this shall be continued till there is a cushion of at least 300 mm of cover over the pipe. If it is desired to observe the joint or coupling during the testing of mains they shall be left exposed.

Sufficient back fill shall be placed on the pipe to resist the movement due to pressure while testing.

Balance of the back fill need not be so carefully selected as the initial material. However, care shall be taken to avoid back filling with large stones, which might damage the pipe when spaded into the trench.

Pipes in trenches on a slope shall have extra attention to make certain that the newly placed back fill will not become a blind drain in effect because until back fill becomes completely consolidated, there is a tendency for ground or surface water to move along this looser soil resulting in a loss of support to the pipe. In such cases, the back fill should be stamped with extra care and the tamping continued in 100 mm layers right up to the ground level.

Anchoring of the pipeline

Thrust blocks shall be provided at each bend, tee, taper, end piece to prevent undue movements of the pipeline under pressure. They shall be constructed as per actual design and approval of Engineer in Charge according to the highest pressure during operation or testing of the pipes, the safe bearing pressure of the surrounding soil and the friction coefficient of the soil.

Sectional tests:- After laying and jointing the pipeline shall be tested for tightness of barrels and joints, and stability of thrust blocks in sections approved by the Engineer in Charge as per IS Code.

G. Submissions

The following submissions are required for approval:-

- Submission of acceptance of structural designs and working drawings to Engineer-in-charge. The foundation shall only be laid on firm ground or hard soil bed after removing all loose material, if any.
- Submission of test reports of construction material to be used in the structure
- Submission of samples of material equipment(s) for approval.
- Submission of data sheet for equipment's for approval.
- No separate payments shall be made for the reconnaissance, preliminary investigations, surveys, inspections, plinth protection, site clearance etc. They shall be included in the lump sum rates.

The Contractor shall be fully responsible for Technical suitability of design, soundness of the construction, structural safety & water tightness of the structure based on the specifications, sound engineering practices, and latest IS Provisions.

Section A-5

Annexure

Compliance with the code of Integrity and No Conflict of Interest

Any person participating in a procurement process shall –

- (a) Not offer any bribe, reward or gift or any material benefit either directly or indirectly in exchange for an unfair advantage in procurement process or to otherwise influence the procurement process;
- (b) Not misrepresent or omit the misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;
- (c) Not indulge in any collusion, Bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process;
- (d) Not misuse any information shared between the procuring Entity and the Bidders with an intent to gain unfair advantage in the procurement process;
- (e) Not indulge in any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process;
- (f) Not obstruct any investigation or audit of a procurement process;
- (g) Disclose conflict of interest, if any; and
- (h) Disclose any previous transgressions with any Entity in India or any other country during the last three years or any debarment by any other procuring entity.

Conflict of Interest :-

The Bidder participating in a bidding process must not have a Conflict of interest.

A conflict of interest is considered to be a situation in which a party has interests that could improperly influence that party's performance of official duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.

i. A Bidder may be considered to be in Conflict of Interest with one or more parties in a bidding process if, including but not limited to:

- a. Have controlling partners/shareholders in common ; or
- b. Receive or have received any direct or indirect subsidy from any of them; or
- c. Have the same legal representative for purposes of the Bid; or
- d. Have a relationship with each other; directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Procuring Entity regarding the bidding process; or
- e. The Bidder participates in more than one Bid in a bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the Bidder is involved. However, this does not limit the inclusion of the same subcontractor, not otherwise participating as a Bidder, in more than one Bid; or
- f. The Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Goods, Works or Services that are the subject of the Bid; or
- g. Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Procuring Entity as engineer-in-charge/ consultant for the contract.

Declaration by the Bidder regarding Qualifications

Declaration by the Bidder

In relation to my/our Bid submitted to for procurement of in response to their Notice inviting Bids No.Dated I/We hereby declare under Section 7 of Rajasthan Transparency in Public Procurement Act, 2012, that :

1. I/We possess the necessary professional, technical, financial and managerial resources and competence required by the Bidding Document issued by the Procuring Entity;
2. I/We have fulfilled my/our obligation to pay such of the taxes payable to the Union and the State Government or any local authority as specified in the Bidding Document;
3. I/We are not insolvent, in receivership, bankrupt or being wound up, not have my/our affairs administered by a court or a judicial officer, not have my/our business activities suspended and not the subject of legal proceeding for any of the foregoing reasons;
4. I/We do not have, and our directors and officers not have, been convicted of any criminal offence related to my/our professional conduct or the making of false statements or misrepresentations as to my/our qualifications to enter into a procurement Contract within a period of three years preceding the commencement of this procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
5. I/We do not have a conflict of interest as specified in the Act, Rules and the Bidding Document, which materially affects fair competition;

Date :

Signature of bidder

Place :

Name :

Designation :

Address :

Grievance Redressal during Procurement Process

The designation and address of the **First Appellate Authority is Commissioner, JDA Jaipur.**

The designation and address of the **Second Appellate Authority Executive Committee (E.C.), JDA Jaipur.**

(1) Filing an appeal

If any Bidder or prospective bidder is aggrieved that any decision, action or omission of the Procuring Entity is in contravention to the provisions of the Act or the Rules or the Guidelines issued there under, he may file an appeal to First Appellate Authority, as specified in the Bidding Document within a period of ten days from the date of such decision or action, omission, as the case may be, clearly giving the specific ground or grounds on which he feels aggrieved:

Provided that after the declaration of a Bidder as successful the appeal may be filed only by a Bidder who has participated in procurement proceedings:

Provided further that in case a Procuring Entity evaluates the Technical Bids before the opening of the Financial Bids, an appeal related to the matter of Financial Bids may be filed only by a Bidder whose Technical Bid is found to be acceptable.

(2) The officer to whom an appeal is filed under para (1) shall deal with the appeal as expeditiously as possible and shall Endeavour to dispose it of within thirty days from the date of the appeal.

(3) If the officer designated under para (1) fails to dispose of the appeal filed within the period specified in para (2), or if the Bidder or prospective bidder or the Procuring Entity is aggrieved by the order passed by the First Appellate Authority, the Bidder or prospective bidder or the Procuring Entity, as the case may be, may file a second appeal to Second Appellate Authority specified in the Bidding Document in this behalf within fifteen days from the expiry of the period specified in para (2) or of the date of receipt of the order passed by the First Appellate Authority, as the case may be.

(4) Appeal not to lie in certain cases

No appeal shall lie against any decision of the Procuring Entity relating to the following matters, namely:-

- (a) Determination of need of procurement;
- (b) Provisions limiting participation of Bidders in the Bid process;
- (c) The decision of whether or not to enter into negotiations;
- (d) Cancellation of a procurement process;
- (e) Applicability of the provisions of confidentiality.

(5) Form of Appeal

(a) An appeal under para (1) or (3) above shall be in the annexed form along with as many copies as there are respondents in the appeal.

(b) Every appeal shall be accompanied by an order appealed against, if any, affidavit verifying the facts stated in the appeal and proof of payment of fee.

(c) Every appeal may be presented to First Appellate Authority or Second Appellate Authority, as the case may be, in person or through registered post or authorized representative.

(6) Fee for filing appeal

(a) Fee for first appeal shall be rupees two thousand five hundred and for second appeal shall be rupees ten thousand, which shall be non-refundable.

(b) The fee shall be paid in the form of bank demand draft or banker's cheque of a Scheduled Bank in India payable in the name of Appellate Authority concerned.

(7) Procedure for disposal of appeal

(a) The First Appellate Authority or Second Appellate Authority, as the case may be, upon filing of appeal, shall issue notice accompanied by copy of appeal, affidavit and documents, if any, to the respondents and fix date of hearing.

(b) On the date fixed for hearing, the First Appellate Authority or Second Appellate Authority, as the case may be, shall,-

- (i) Hear all the parties to appeal present before him; and
- (ii) Peruse or inspect documents, relevant records or copies thereof relating to the matter.

(c) After hearing the parties, perusal or inspection of documents and relevant records or copies thereof relating to the matter, the Appellate Authority concerned shall pass an order in writing and provide the copy of order to the parties to appeal free of cost.

(d) The order passed under sub-clause (c) above shall also be placed on the State Public Procurement Portal.

FORM No. 1
[See Rule 83]
Memorandum of Appeal under the Rajasthan
Transparency in Public Procurement Act, 2012

Appeal No. of Before the
..... (First/Second Appellate Authority)

1. Particulars of appellant :

(i) Name of the appellant :

(ii) Official address, if any :

(iii) Residential address :

2. Name and address of the respondent (s) :

(i)

(ii)

(iii)

3. Number and date of the order appealed against and name and designation of the officer/authority who passed the order (enclose copy), or a statement of a decision, action or omission of the Procuring Entity in contravention to the provisions of the Act by which the appellant is aggrieved:

4. If the Appellant proposes to be represented by a representative, the name and postal address of the representative:

5. Number of affidavits and documents enclosed with the appeal :

6. Grounds of appeal :
(Supported by an affidavit)

7. Prayer :

Place

Date

Appellant's Signature

Additional Conditions of Contract**1. Correction of arithmetical errors**

Provided that a Financial Bid is substantially responsive, the Procuring Entity will correct arithmetical errors during evaluation of Financial Bids on the following basis:

- (i) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Procuring Entity there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;
- (ii) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected ; and
- (iii) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (i) and (ii) above.

If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its Bid Security shall be forfeited or its Bid Securing Declaration shall be executed.

2. Procuring Entity's Right to Vary Quantities

- (i) At the time of award of contract, the quantity of Goods, works or services originally specified in the Bidding Document may be increased or decreased by a specified percentage, but such increase or decrease shall not exceed twenty percent, of the quantity specified in the Bidding Document. It shall be without any change in the unit prices or other terms and conditions of the Bid and the conditions of contract.
- (ii) If the Procuring Entity does not procure any subject matter of procurement or procures less than the quantity specified in the Bidding Document due to change in circumstances, the Bidder shall not be entitled for any claim or compensation except otherwise provided in the Conditions of Contract.
- (iii) In case of procurement of Goods or services, additional quantity may be procured by placing a repeat order on the rates and conditions of the original order. However, the additional quantity shall not be more than 25% of the value of Goods of the original contract and shall be within one month from the date of expiry of last supply. If the supplier fails to do so, the Procuring Entity shall be free to arrange for the balance supply by limited Bidding or otherwise and the extra cost incurred shall be recovered from the supplier.

3. Dividing quantities among more than one Bidder at the time of award (In case of procurement of Goods)

As a general rule all the quantities of the subject matter of procurement shall be procured from the Bidder, whose Bid is accepted. However, when it is considered that the quantity of the subject matter of procurement to be procured is very large and it may not be in the capacity of the Bidder, whose Bid is accepted, to deliver the entire quantity or when it is considered that the subject matter of procurement to be procured is of critical and vital nature, in such cases, the quantity may be divided between the Bidder, whose Bid is accepted and the second lowest Bidder or even more Bidders in that order, in a fair, transparent and equitable manner at the rates of the Bidder, whose Bid is accepted.

Signature of Contractor
with full address & Mobile No.

Executive Engineer (PHE-II)
JDA, Jaipur

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

No. JDA/Ex.En. (TA to Dir. Engg.-I)/2016/D-29

Dated: 11/3/2016

Office Order

Subject: - DLP period for various type of works.

As per the decision taken in the 201st meeting of Executive Committee held on 23.02.2016 w.r.t. agenda no. 201:22, DLP period of various natures of works amounting more than Rs. 25 lakhs has been revised as per following time periods based on nature of works.

This order will supersede the earlier orders issued in this regard i.e. order No. JDA/TA to D(E)/2010-11/D-317 dated 28.04.2011 including Special Condition No. 2.2.2 & 2.2.3 of Annexure-I related to SD refund & forfeiture (other Special Condition of annexure-I of this order will remain valid) and order No. JDA/Ex.En.(Pr.-5 & TA)/2013/D-43 dated 27.02.2013 and also all pertaining orders, in contract agreements or in PWF&AR having DLP period different than what is being enforced through this present order for concerned type of work.

Table-I

S.No.	Type of Work	Existing DLP Period	As per approved in E.C. held on 23.02.2016
1.	Bridge Work	3 years	5 Years
2.	CD Work	3 years	5 Years
3.	CC Road, PQC Work	3 years	5 Years
4.	CC tiles/Kerbs/medians	3 years	5 years
5.	Drains	6 months	3 years
6.	Roads		
	(i) Two layer WBM/CSB	3 years	6 Months or one full rainy season which ever is later
	(ii) For Renewal/ Strengthening		
	(a) BT upto 30 mm thickness	3 years	1 year
	(b) BT above 30 mm to upto 40 mm	3 years	2 years
	(c) BT above 40 mm to upto 90 mm	3 years	3 years
	(d) FT Above 90 mm	3 years	5 years
	(iii) New Roads		
	(a) BT upto 90 mm	3 years	3 years
	(b) BT more than 90 mm	3 years	5 years
7.	Compound wall	6 months	3 years
8.	Buildings work		
	(i) Work pertaining to Sanitary works electrical works, Joinery works and painting works.	6 months	2 years
	(ii) Work pertaining to Building structure and other civil works.	6 months	5 years
9.	Electric work except maintenance	6 months	3 years
10.	Sewer/Water supply all including STP and water supply related work except maintenance works.	6 months	3 years <i>4</i>

The release of SD amount shall be as per following table:-

Table-II

S. No.	Released SD DLP period	1 st year	2 nd year	3 rd year	5 th year
1.	Upto 1 year	100%	40%	20% ✓	10%
2.	Upto 2 year		60%	20% ✓	10%
3.	Upto 3 year			60% ✓	10%
4.	Upto 4 year				20%
5.	Upto 5 year				50%

Various conditions for managing DLP are as under:-

- (i) At the time of completion of work, final component shall be worked out for each individual item like BT/CC/tiles/drains etc (as per different categories in Table I), DLP shall be operative based upon type of individual item ex:- CC-5 years, BT- 1/2/3/5 years, Drain- 3 years etc.
- (ii) Similarly for all new works, these components should be calculated at the time of TS itself, which should be made part of BID document.
- (iii) If any work, amount is less than Rs. 25 lakhs but later on due to extra/excess work, if amount of final work crosses more than Rs. 25 lakhs, DLP shall be operative as per rule for each individual item.
- (iv) Similarly if any work is more than Rs. 25 lakhs but after finalization amount of work is less than Rs. 25 lakhs, DLP should be operative for six months or rainy season whichever is late.
- (v) During DLP period if contractor fails to repair any work even after issue of 7 days written notice, same work shall be got executed by respective Executive Engineer at the contractor's risk and cost. This process shall be applicable throughout the DLP period. After completion of DLP period in such works contractor should be debarred and blacklisted from JDA for three years as per RTPP Rule 2012 and 2013 where he defaults twice in a single agreement or in two different works.
- (vi) Quarterly Inspection as per rules shall be carried out and DLP registers shall be maintained by respective Executive Engineers to monitor the DLP repairs.
- (vii) Special and regular inspection shall also be carried out as per order no. JDA/Ex.En & TA to DE-I/2014-15/D-223 dated 12.03.2015 and order no. SE (PMGSY) CIRCULAR 2006/D-115 dated 04.05.2006 Point no. 3.
- (viii) In case JDA feels to take up work on any existing DLP road due to any reason, following procedure should be adopted:
 - (a) At the time of withdrawal total liability of repairs as per DLP conditions to be carried out and contractor shall be asked to complete the same. After completion of assessed repairs DLP period shall be released after deduction amt. as per table III.

Table-III

% Recovery on Withdrawal of DLP, of work order DLP period	1 year	2 year	3 year	4 year	5 year
1 year	1.12	-	-	-	-
2 year	2.55	1.43	-	-	-
3 year	4.38	3.26	1.83	-	-
5 year	9	7.88	6.45	4.62	2.47

Note:- Calculation is to be done on quarterly basis.

- (b) In case Contractor fails to carry out these repairs, same shall be carried out at his risk and cost. If the total amt. of such repairs works out to be more than total retained amt. of SD, same shall be recovered from other works and as per PDR rules. The amount as per Table III is also to be deducted in addition to this amount.
- (ix) Based upon type of work, DLP conditions for works to be carried out during DLP period with their frequency of respective type of work shall be prepared by respective SE's after approval of these periods.

This order shall come in force with immediate effect and will be applicable on all new works whose NIB is to be called.

Sd/-
Director (Engineering-I)
JDA, Jaipur

Copy to following for information and necessary action:-

1. PS to IDC, JDA, Jaipur.
2. PS to Secretary, JDA, Jaipur.
3. Director Engineer I/II, JDA, Jaipur.
4. Director (Fin.), JDA, Jaipur.
5. C.F., JDA, Jaipur.
6. All Add. Chief Engineers, JDA, Jaipur.
7. All Superintendent Engineers, JDA, Jaipur.
8. OSD (RM), JDA, Jaipur.
9. Additional Director (REV.&DF.)
10. CAO (P&A) JDA, Jaipur.
11. Sr. Horticulturist, JDA, Jaipur.
12. All Executive Engineer, JDA, Jaipur.
13. DD (E&B) JDA, Jaipur.
14. All AOs, JDA, Jaipur.
15. All AAOs, JDA, Jaipur.
16. System Analyst
17. All Contractors' Association, JDA, Jaipur.
18. Guard file

Sd/-
S.E. & TA to Dir. (Engg-I)
JDA, Jaipur

Jaipur Development Authority, Jaipur

Office Order

No. : JDA/IT(1074501)/E-Services/2015-16/D-399

Dated: 4-10-2016

Subject: Payment mechanism for participating in tender.

Jaipur Development Authority has decided to receive Earnest Money Deposit (EMD) (Bid Security), Tender Fee and RISL processing fee online through JDA Portal. The bid security options available in tender for participants are as mentioned below:

A. Payment Options:**Option-1: Bank Guarantee (BG) against EMD / Bid Security**

Bidder may opt Bank Guarantee (BG) against EMD (Bid Security), for which bidder requires to prepare BG before applying in the tender. The details of BG requires to be fed on JDA portal before paying balance amount (Tender Fee + RISL Processing Fee). This amount will be paid through **Payment Gateway only**, option to make balance payment through EFT (RTGS/NEFT) will not be available.

If bidder does not opt for BG against EMD, options of making complete payment through Payment Gateway or through EFT (NEFT / RTGS) will be available.

Option-2: Electronic Fund Transfer (EFT: NEFT/RTGS)

If the bidder selects payment mode as EFT (NEFT/RTGS), "Paying Slip for EFT (NEFT/RTGS)" will be generated by the system for the complete amount. The payment can be made from **any Bank any Branch** using this Paying Slip through NEFT/RTGS (Claim against payment made through EFT in any other JDA bank account will not be acceptable and bidder stands disqualified from participation in the bid applied for). After successful transaction through NEFT/RTGS, as per the standard procedures it may take 4 to 24 hours in process of confirmation of EFT through Auto-Process depending on the time of EFT done. Therefore, option to make payment through EFT (NEFT/RTGS) will be available till 2 days prior to closing date of bid participation.

Option-3: Payment Gateway (Aggregator)

The facility to make payment through Debit Card, Credit Card, Net banking etc., will be available. User can use this facility from **anywhere any time** till the closing date & time of bid participation.

B. Bid Participation Receipt

After confirming payment, the bidder will get Bid Participation Receipt on the basis of which user will get the payment details along with other details for bidding on e-Procurement portal of GOR.

- In case of BG as the remaining payment will be done through Payment Gateway, on successful transaction the "Bid Participation Receipt" will be generated on real time basis.

- In case complete payment is done through Payment Gateway, on successful transaction the **"Bid Participation Receipt"** will be generated on real time basis.
- In case complete payment is done through EFT (NEFT/RTGS), on confirmation of payment from ICICI Bank (Auto Process) **"Bid Participation Receipt"** will be available on Login of Bidder on JDA portal.

This payment mechanism will come into force w.e.f 15/10/2016. Thereafter, old payment mechanism related to NEFT/ RTGS in which the bidder makes direct payment without **"Paying Slip for EFT (NEFT/RTGS)"** in JDA's bank account will be discontinued.

All procuring entities are hereby directed to clearly mention this procedure in NIB document.


(Pawan Arora)
Secretary

Copy for information and further necessary action to:

1. P.S. to JDC, JDA, Jaipur.
2. P.S. to Secretary, Secretary, JDA, Jaipur.
3. Director (Law / Finance / Town Planning / Engineering-I / Engineering-II), JDA, Jaipur.
4. All Additional Chief Engineer _____, JDA, Jaipur
5. DC (Administration)/DC(Store)/DC (Vehicle), JDA, Jaipur
6. System Analyst, JDA, Jaipur
7. Analyst-cum-Programmer, JDA to ensure integration of software w.e.f 01/10/2016.
8. All Xen _____, JDA, Jaipur.
9. Officer-in-charge, SPPP Portal, Jaipur.
10. OSD (Public Relation) / PRO, JDA, Jaipur.


(Brijesh Kishore Sharma)
OSD (RM)

जयपुर विकास प्राधिकरण, जयपुर

क्रमांक :- F-()JDA/Sr.Ao.works-II/2017/D- 172

दिनांक :- 12.7.17

आदेश

1 जुलाई 2017 से भारत सरकार के नोटिफिकेशन द्वारा GST लागू होने के कारण व्यक्तियों/फर्म/कम्पनी/संस्था/टेकेदार के निर्माण/सिविल आपूर्ति/सेवाओं इत्यादि के कार्यों के प्राधिकरण द्वारा बिल भुगतान किये जाने के लिये प्राधिकरण कर सलाहकार चार्टर्ड एकाउन्टेन्ट से प्राप्त हुई राय के क्रम में निम्नांकित प्रमाण पत्र/शपथ पत्र/Invoice बिलों के साथ प्रस्तुत किया जाना सुनिश्चित करावे :-

1. व्यक्ति/फर्म/कम्पनी/संस्था/टेकेदार का GST के अन्तर्गत रजिस्ट्रेशन प्रमाण पत्र की स्व:प्रमाणित फोटो प्रति।
2. व्यक्ति/फर्म/कम्पनी/संस्था/टेकेदार का GST के रजिस्ट्रेशन नहीं होने के स्थिति में स्व:प्रमाणित शपथ पत्र।
3. अप्रजिकृत व्यक्ति/फर्म/कम्पनी/संस्था/टेकेदार के बिलों के भुगतान की स्थिति में मासिक टैक्स Invoice भुगतान-अधिकारी द्वारा मासिक आधार पर उसी माह के अंत में तैयार करवाया जाना सुनिश्चित किया जावेगा।
4. आपूर्ति एवं सेवा के विरुद्ध भुगतान बिलों में Vat/Service Tax चार्ज होने (Vat/Service Tax होने) पर (दिनांक 30.06.17 तक आपूर्ति एवं Invoice जारी करने पर) Taxable Invoice नहीं बनाया जावेगा एवं इनका भुगतान पूर्वानुसार (01.07.2017 से पूर्व निहित प्रक्रिया अनुसार) किया जाना सुनिश्चित करावे।

स्पष्टीकरण :- दिनांक 30.06.17 तक सामान की आपूर्ति के बिलों में Vat Invoice होने पर या अन्यथा होने पर इनका भुगतान पूर्वानुसार 01.07.2017 से पूर्व निहित प्रक्रिया अनुसार किया जावेगा।

संलग्न :- GST रेट तथा HSN/SAC CODE की फोटो प्रति

(बृजेश किशोर शर्मा)
निदेशक(वित्त)

प्रतिलिपि निम्न को सूचनार्थ एवं आवश्यक कार्यवाही हेतु :-

1. वरिष्ठ निजी सचिव, आयुक्त, जयपुर।
2. वरिष्ठ निजी सचिव, संचय, जयपुर।
3. निदेशक (वित्त/विधि/अधियांत्रिकी-प्रथम व द्वितीय/आयोजना/परियोजना, जयपुर।
4. अतिरिक्त आयुक्त(प्रशासन/पूर्व/पश्चिम/एल.पी.सी./भूमि), जयपुर।
5. संयुक्त आयुक्त(सिस्टम मैनेजमेन्ट/संसाधन एवं समन्वय), जयपुर।
6. विशेषाधिकारी(संसाधन विकास), जयपुर।
7. अतिरिक्त निदेशक(राजस्व एवं संपत्ति निस्तारण), जयपुर।
8. समस्त जोन उपायुक्तगण , जयपुर।
9. मुख्य लेखाधिकारी(पी. एण्ड ए.), जयपुर।
10. उपनिदेशक(व्यय एवं बजट), जयपुर।
11. वरिष्ठ लेखाधिकारी(निर्माण-प्रथम/द्वितीय/आर.सी.आर./पेंशन/नीलामी), जयपुर।
12. सिस्टम एनालिस्ट, जयपुर को प्रेषित कर लेख है कि सिस्टम में GST नम्बर सम्मिलित करने एवं Tax Invoice बनाने की प्रक्रिया तैयार करावे।
13. उप रजिस्ट्रार(सहकारिता), जयपुर।
14. अधिशाषी अभियन्ता जोन , जयपुर।
15. वरिष्ठ उद्यानविज्ञ, जयपुर।
16. लेखाधिकारी (भुगतान/योजना/निर्माण)/सहायक लेखाधिकारी, जयपुर।
17. प्रभारी अधिकारी, नागरिक सेवाकेन्द्र, जयपुर।
18. सलाहकार(जनसम्पर्क), जयपुर।
19. रोकडियों(निर्माण/सिविल/भूमि आवर्षित), जयपुर।
20. रक्षित पत्रावली

अति.निदेशक(रा.एवं स.नि.)



राजस्थान सरकार
वित्त (सामान्य वित्तीय एवं लेखा नियम) विभाग



क्रमांक : एफ.2(1)वित्त/जीएण्डटी-एसपीएफसी/2017 जयपुर, दिनांक : 23.12.2020

परिपत्र

वित्त विभाग की अधिसूचना क्रमांक एफ. 2(1)वित्त/जीएण्डटी - एसपीएफसी/2017 दिनांक 18.12.2020 द्वारा आरटीपीपी नियम, 2013 के नियम 42(2) में संशोधन करते हुए आमंत्रित की जाने वाली आगामी बोलियों के संदर्भ में दिनांक 31.12.2021 तक बिड सिक्यूरिटी राशि प्राप्त नहीं करने एवं इसके स्थान पर बिड सिक्यूरिटी के संबंध में घोषणा पत्र (Declaration) प्राप्त करने का प्रावधान किया गया है।

चूंकि उक्त नियमों में बिड सिक्यूरिटी राशि के स्थान पर बिड सिक्यूरिटी के संबंध में घोषणा पत्र (Declaration) प्राप्त करने का नवीन प्रावधान किया गया है। अतः समस्त उपापन संस्थाओं के उपयोगार्थ बिड सिक्यूरिटी के संबंध में लिए जाने वाले घोषणा पत्र (Declaration) का मानक प्रारूप संलग्न प्रेषित है। राजस्थान स्टाम्प अधिनियम, 1998 की धारा 3 सपठित अनुसूची के अनुच्छेद 4 के अनुसार घोषणा पत्र (Declaration) पर 50/- रुपये स्टाम्प ड्यूटी देय है तथा इस स्टाम्प ड्यूटी की राशि पर नियमानुसार 30 प्रतिशत सरचार्ज देय है। अतः समस्त उपापन संस्थाओं को निर्देशित किया जाता है कि बिड सिक्यूरिटी के संबंध में प्रस्तुत किए जाने वाले घोषणा पत्र (Declaration) पर उक्तानुसार राजस्थान राज्य में स्टाम्प ड्यूटी एवं सरचार्ज का भुगतान सुनिश्चित करावें।

संलग्न- उपरोक्तानुसार

(विमल कुमारी गुप्ता)
संयुक्त शासन सचिव

प्रतिलिपि निम्नांकित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है:-

1. सचिव, राज्यपाल/प्रमुख सचिव, मुख्यमंत्री/विशिष्ट सहायक समस्त मंत्रीगण/राज्य मंत्रीगण ।
2. उप सचिव, मुख्य सचिव/निजी सचिव, समस्त अति. मुख्य सचिव/प्रमुख शासन सचिव/ शासन सचिव/विशिष्ट शासन सचिव ।
3. सचिव, राजस्थान विधानसभा, राजस्थान, जयपुर ।
4. सचिव, लोकायुक्त सचिवालय, राजस्थान, जयपुर ।
5. सचिव, राजस्थान लोक सेवा आयोग, अजमेर ।
6. रजिस्ट्रार, राजस्थान उच्च न्यायालय जोधपुर/जयपुर ।
7. प्रधान महालेखाकार ए एण्ड ई राजस्थान जयपुर ।
8. प्रधान महालेखाकार ऑडिट राजस्थान जयपुर ।
9. समस्त संयुक्त शासन सचिव/उप शासन सचिव/सचिवालय के समस्त अनुभाग/विभाग ।
10. समस्त विभागाध्यक्ष/जिला कलक्टर/संभागीय आयुक्त ।
11. रजिस्ट्रार, राजस्थान सिविल सेवा अपील अधिकरण, जयपुर ।
12. समस्त वित्तीय सलाहकार/मुख्य लेखाधिकारी ।
13. समस्त कोषाधिकारी ।
14. समस्त उपापन संस्थाएं ।
15. तकनीकी निदेशक वित्त विभाग को भेजकर लेख है परिपत्र को वित्त विभाग की वेबसाइट पर प्रकाशित करवाने की व्यवस्था करावें ।
16. रक्षित पत्रावली ।

23/12/2020
संयुक्त शासन सचिव

Form of Bid-Securing Declaration

Date :
Bid No. :
Alternative No. :

To :

We, the undersigned, declare that:

We understand that, according to your conditions, bids must be supported by a Bid-Securing Declaration. We accept that we are required to pay the bid security amount specified in the Term and Condition of Bid, in the following cases, namely :-

- (a) when we withdraw or modify our bid after opening of bids;
- (b) when we do not execute the agreement, if any, after placement of supply/work order within the specified period;
- (c) when we fail to commence the supply of the goods or service or execute work as per supply/work order within the time specified;
- (d) when we do not deposit the performance security within specified period after the supply/work order is placed; and
- (e) if we breach any provision of code of integrity prescribed for bidding specified in the Act and Chapter VI of these rules.

In addition to above, the State Government shall debar us from participating in any procurement process undertaken for a period not exceeding three years in case where the entire bid security or any part thereof is required to be forfeited by procuring entity.

We understand this Bid Securing Declaration shall expire if :-

- (i) we are not the successful Bidder;
- (ii) the execution of agreement for procurement and performance security is furnished by us in case we are successful bidder;
- (iii) thirty days after the expiration of our Bid.
- (iv) the cancellation of the procurement process; or
- (v) the withdrawal of bid prior to the deadline for presenting bids, unless the bidding documents stipulate that no such withdrawal is permitted.

Signed :-----

Name :-----

In the capacity of :-----

Duly authorized to sign the bid for and on behalf of :

Dated on day of

Corporate Seal -----

[Note: In case of a Joint Venture, the Bid Securing Declaration must be signed in name of all partners of the Joint Venture that is submitting the bid.]



SPECIAL CONDITIONS

1. If there is any typographical error or otherwise in the 'G' Schedule the rates given in the relevant BSR on which schedule 'G' has been prepared, shall prevail.
2. The contractor shall follow the contractor labour regulation and abolition Act 1970 & Rule 1971.
3. The JDA shall have right to cause on audit and technical examination of the work and the final bills of the contractor including all supporting vouchers, abstract etc. to be made within two years after payment of the final bills and if as a result such audit any amount is found to have been over paid/excess in respect of any work done by the contractor under the contract or any work claimed by him to have been done under this contract and found not to have been executed the contractor shall be liable to refund such amount and it shall be lawful for the JDA to recover such sum from him in the manner prescribed in special condition no. 8 or any other manner legally permissible and if it is found that the contractor was paid less than that was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be paid by the JDA to the contractor.
4. The contractor shall not work after the sunset and before sunrise without specific permission of the authority Engineer.
5. Whenever any claim against the contractor for the payment of a sum of money arises out of or under the contracts, the JDA shall be entered to recover the sum by appropriating in part or whole of the security deposit of the contractor. In the event of the security being insufficient or if no security has been taken from the contractor then the balance of the total sum recoverable as the case may be deducted from any sum then due or which at any time there contract with the JDA should this sum be sufficient to recover the full amount recoverable, the contractor shall pay to JDA on demand the balance remaining due. The JDA shall further have the right to effect such recoveries under P.D.R. Act.
6. The rate quoted by the contractor shall remain valid for a period of 120 days from the date of opening of the tenders.
7. By submission of this tender the contractor agree to abide with all printed conditions provided in the PWD manual from 64 (Chapter 3-para 36) and subsequent modification.
8. No conditions are to be added by the contractor and conditional tender is liable to be rejected.
9. All transaction in the execution of this work and this tender will be liable to sale-tax vide section 2(B) read with sub clause (4) Sale-tax Rule, 1954.
10. If any Bid withdraws his Bid prior to expiry of said validity period given at S.No. 6 or mutually extended prior or makes modifications in the rates, terms and conditions of the tender within the said period which are not acceptable to the department or fails to commence the work in the specified period, fails to execute the agreement and fails to furnish performance guarantee the department shall without prejudice to any, other right or remedy, be at liberty to forfeit the amount of earnest money given in any form absolutely. If any contractor, who having submitted a Bid does not execute the agreement or start the work or does not complete the work and the work has to be put to re-bidding, he shall stand debarred from participating in bidding in JDA for Six Months in addition to forfeiture of Earnest Money / Security Deposit /Performance Guarantee and other action under agreement
11. Rules regarding enlistment of contractors provide that work upto five times limit for which they are qualified for tendering can be allotted to them. Therefore, before tender the contractors will keep this in mind, and submit the details of work. Bids with incomplete or incorrect information are liable to be rejected.
12. Any material not conforming to the specifications collected at site shall have to be removed by the contractor within a period of 3 days of the instructions, issued by the Engineer-Incharge in writing. Failing which, such material shall be removed by the Engineer-Incharge at risk and the contractor after expiry of 3 days period.
13. The material collected at site and paid provisionally shall remain under the watch and ward of the contractor till it is consumed, fully on the work.
14. The rates provided in Bid documents are inclusive of all Taxes, royalty & GST etc.
15. No extra lead of earth/material shall be paid over and above as specified in 'G' schedule. Source/borrow pit area for earth shall have to be arranged by the Contractor at his own cost.
16. Undersigned has full right to reject any or all Bids without given any reasons.
17. Mortar of Masonry work and lean concrete will be permitted mixer with hopper.
18. As per Supreme Court decision "All contracts with Governments shall require registration of workers under the building and other construction workers (Regulation of Employment and Conditions of Service) Act, 1996 and extension of benefits to such workers under the act."
19. The Bidder are required to submit copy of their enlistment as contractor.
20. Conditions of RPWA-100 will be mandatory & acceptable to the contractor.
21. Any Bid received with unattested cutting/overwriting in rates shall be rejected and such bidder will be debarred from Bidding for three months in JDA.
22. All the provisions of THE RAJASTHAN TRANSPARENCY IN PUBLIC PROCUREMENT ACT, 2012 and Rules, 2013 will be applicable. If there is any contradictions in existing special conditions and provisions of THE RAJASTHAN TRANSPARENCY IN PUBLIC PROCUREMENT ACT, 2012 and RULES, 2013 shall be applicable.

Signature of Contractor
with full address & Mobile No.

Executive Engineer (PHE-II)
JDA, Jaipur

Section A-6

Bill of Quantities

JAIPUR DEVELOPMENT AUTHORITY, JAIPUR

**Name of work:- Sewerage and water supply work for rehabilitation scheme at Niwaru road
Jhotwara**

G-Schedule

S. No.	Particulars	Qty.	Unit	Rate	Amount (In Rs.)
1.00	Construction of Pre-cast RCC M-40 grade circular manhole chamber up to invert depth 1.79 meter having 1000 mm internal diameter including required excavation of earth in all types of soils such as murrum, sand, sandy silt, black cotton soil, hard soil, kankar etc. disposing of surplus excavated material within a lead of 50 meter. The work includes laying of 150mm thick plain cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 20 mm nominal size) 1600 mm dia bedding in foundation, providing and laying of plain cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate) in channel & circular starter base wall up to 50 mm above outer dia. of sewer pipe and P&F in position of 125 mm thick 150/225 mm high pre-cast M40 grade cement concrete ring at bottom and consecutive standard size 300 mm high rings.he work includes P&F pre-cast reinforced cement concrete eccentric conical piece of M40 grade, 125 mm thick having 560 mm and 1000 mm internal diameter at top & bottom respectively, fitted with Ferro-cement cover of 33 kg cast iron double seal ring & frame (heavy-duty) etc to withstand for class AA loading including supply and fixing of Ferro-cement foot steps and sealing of all joints with cement mortar 1:1 complete job as per detailed specifications, drawings and directions of Engineer-In charge, for following average Invert depths: For 200 mm dia Sewer line				
1.10	At av. Depth 0.9 meter [From 0.9 m to 1.19 m]	39.00	Each	6612.00	257868.00
1.20	At av. Depth 1.2 meter [From 1.20 m to 1.49 m]	62.00	Each	7239.00	448818.00
1.30	At av. Depth 1.5 meter [From 1.50 m to 1.79 m]	24.00	Each	8292.00	199008.00

S. No.	Particulars	Qty.	Unit	Rate	Amount (In Rs.)
2.00	Construction of Pre-cast RCC M-40 grade circular manhole chamber for invert depth from 1.800 meter to 2.990 meter having 1200 mm internal diameter including required excavation of earth in all types of soils such as murrum, sand, sandy silt, black cotton soil, hard soil, kankar etc., disposing of surplus excavated material within a lead of 50 meters. The work includes laying of 150 mm thick plain cement concrete 1:4:8 (1 cement : 4 coarse sand : 8 graded stone aggregate 20 mm nominal size) 1800 mm dia bedding in foundation, providing and laying of plain cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate) in channel & circular starter base wall up to 50 mm above outer diameter of sewer pipe and P&F in position of 125 mm thick 150/225 mm high precast M-40 grade cement concrete ring at bottom and consecutive standard size 300 mm high rings. The work includes P&F pre-cast reinforced cement concrete eccentric conical piece of M40 grade, 125 mm thick having 560 mm and 1200 mm internal diameter at top & bottom respectively, fitted with Ferro-cement cover of 33 kg Cast Iron double seal ring & frame (heavy-duty) etc., to withstand for Class-AA loading including supply and fixing of Ferro-cement foot steps and sealing of all joints with cement mortar 1:1 complete job as per detailed specifications, drawings and directions of Engineer- In-charge, for following average invert depths: For 200 mm dia Sewer line				
2.10	At av. Depth 1.8 meter [From 1.80 m to 2.09 m]	17.00	Each	10451.00	177667.00

S. No.	Particulars	Qty.	Unit	Rate	Amount (In Rs.)
3.00	Providing, laying and jointing of 200 mm diameter full round HDPE DWC (double wall corrugated) pipes of SN8 grade as per IS 16098 (Part 2) amended upto date in trenches with providing & laying 10 cm thick and 63 cm wide granular bedding with graded hard crusher broken stone aggregate 20 mm (nominal size) bedding in complete including all material, labour, hydraulic testing of sewer line including cost of water and equipment required for testing & commissioning as per Technical Specifications, drawings and as per direction of Engineer. The work includes earth work in all type of soil such as murrum, sand, sandy silt, black cotton soil, hard soil, kankar etc. including disposing off surplus excavated material within a lead of 50 meter including cost of close timbering beyond 1.50 meter average invert depth, shoring and strutting and refilling of trenches with excavated material, watering and ramming in layers as per PWD specifications complete in all respect and as per direction of Engineer-in-charge for following average invert depths:				
3.10	At av. Depth 0.9 meter [From 0.90 m to 1.19 m]	350.00	Mtr.	564.00	197400.00
3.20	At av. Depth 1.2 meter [From 1.20 m to 1.49 m]	550.00	Mtr.	589.00	323950.00
3.30	At av. Depth 1.5 meter [From 1.50 m to 1.79 m]	350.00	Mtr.	613.00	214550.00
3.40	At av. Depth 1.8 meter [From 1.80 m to 2.09 m]	250.00	Mtr.	818.00	204500.00
4.00	Excavating trenches of required width for pipe cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 Mtr. including taking out the excavated soil, and then returning the soil as required in layers not exceeding 20 CM in depth including consolidating each deposited layer by ramming, watering etc. and disposal of surplus excavated soil as directed within a lead of 50 Mtr. All kinds of soils. Pipes cables, etc. exceeding 80 mm dia but not exceeding 300 mm dia.	1956.00	Mtr.	117.00	228852.00
5.00	Labour charges for making connection of sewer line through manhole.	416.00	Each	340.20	141523.20
6.00	Providing and fixing unplasticized Poly-Vinyl-Chloride uPVC SWR Pipes Type "B" for Sciland waste discharge system (IS:13592:1992 marked) of approved quality/make size	2080.00	Mtr.	198.00	411840.00

S. No.	Particulars	Qty.	Unit	Rate	Amount (In Rs.)
	110 mm diameter.				
7.00	Providing and fixing unplasticized Poly-Vinyl-Chloride uPVC SWR Pipes fittings Type "B" for Sciland waste discharge system (IS:13592:1992 marked) of approved quality/make size 110 mm diameter (socket plug).	416.00	Each	43.20	17971.20
8.00	Barricading with sal ballies as per design including tying with vertical posts by coconut strings complete in all respect with two row horizontal members height 1.2 meter upto 1.5 meter above G.L. and vertical support upto 2.5 meter above C/C and for 3 days period including removal and cleaning the site complete in all respects & including dressing of sides in all types of soil. (Hire charges subsequent days (per day).	4420.00	Mt. Per Day	14.85	65637.00
9.00	Providing, fabricating and installing MS specials including rolling, cutting, welding in different shape and size.	125.00	Kg.	80.00	10000.00
10.00	Supply of cast iron detachable joints class-10 as per ISI specification (IS 8794-1988) along with rubber ring (ISI marked) and nut bolts complete as per PHED specifications.				
10.10	100 mm	5.00	Each	274.00	1370.00
11.00	Supply of cast iron detachable joints class-10 as per ISI specification (IS 8794-1988) along with rubber ring (ISI marked) and nut bolts complete as per PHED specifications.				
11.10	100 mm	4.00	Each	5541.00	22164.00
12.00	S&F tube well cover (for 200 mm dia pipe) of MS sheet 8 mm thick at top & 5 mm thick 100 mm wide shroud around the edge so as to form a cap on the top end of casing pipe with GI Nipple 45 cm long & two GI flanger at both end in 80 mm sizes passing through a hole in the centre of MS shet A 25 mm socket with end plug shall also be weld over top plate (as per drawing enclosed), A GI nipple having outside thread of size 1/2" (for installation pressure gauge) shall be provide & welded with GI 80 mm nipple near top plate nipple shall be provided with end plug.)	1.00	Each	908.00	908.00
13.00	Providing fixing and installation of 80 mm dia Woltman type water meter with material (Flanges, Insertion sheet, Nut bolt etc.) & fabrication supply and fixing of meter box made of 10 SWG MS sheet suitable for 80 mm water	1.00	Each	22997.00	22997.00

S. No.	Particulars	Qty.	Unit	Rate	Amount (In Rs.)
	meter (As per drawing including all accessories.) 50 mm to 80 mm dia.				
14.00	Providing and installing of approved make spring loaded dual plate check valve of following dia. Including all taxes , inspection charges, loading and unloading, stacking etc., including cost of all labour, jointing material with nut bolts, rubber mats etc., and giving satisfactory hydraulic field testing, complete as per specifications.				
14.10	50 mm	1.00	Each	1571.00	1571.00
15.00	Supply and fixing & testing of feeder type penal board suitable for upto 15 HP electric motor having star delta/ DOL starter (L&T /BCH), MCB 32 amp.(havals /L&T), capacitor 3 KVR (L&T/Havals), Single phase priventor (L&T/havals), indicating lamp RYB , Amp. Meter (0 to 30Amp) , Volt Meter with selector switch (0 to 500 V) size 100 mm, kit kat fuse unit 100 amp,backlite sheet for fixing of 3 phase electric meter of JVVNL electric feeder penal approved as per design and specification mounted on angle iron fram and fixed plain on plain cement concrete platform, size of feeder penal box 900X 450X1200mm.				
15.10	Star Delta above 5 HP to 15 HP	1.00	Each	24915.00	24915.00
16.00	Construction of Tube-well upto 100 Meter depth and above in all type of rocks by DTH system and over burden, to accommodate casing pipe of following sizes in all types of soils and over burden including lowering of casing pipes, but excluding cost of casing pipes as per IS : 2800 (Part I & II) 1979 specifications. The work would be completed after obtaining sand free water. The tube well should have a throughout bore as per nominal dia of casing pipe:				
16.10	200 mm dia Nominal bore.	100.00	R. Mtr.	742.50	74250.00

S. No.	Particulars	Qty.	Unit	Rate	Amount (In Rs.)
17.00	Construction of tube-well from ground levels and upto 100 Meter depth and above to accommodate housing and assembly pipe of following sizes in all types of alluvium strata by percussion/ rotary drilling method and with gravel as per IS:4097-1967 and packing as per IS:2800 (Part I -& II) 1979 as amended upto date (the work includes the cost of gravel & its primary packing and packing during development, lowering of housing & strainer assembly pipes, with supply and wrapping of coir-rope, wherever necessary, for arresting fine sand particles. The work will not include cost of housing pipe and strainer pipe assembly and development work, but work would be completed after obtaining sand free water).				
17.10	200 mm Nominal Bore.	100.00	R. Mtr.	1089.00	108900.00
18.00	Development of tube well as per IS specification using suitable compressor to give sand free water for required yield of the gravel packed tube well.	6.00	Hours	445.50	2673.00
19.00	Supply of ERW M.S. black casing pipe ISI marked (IS:4270/1992) of grade Fe410 of following sizes at site of work. Nominal bore of pipe (mm)				
19.10	200 Nominal bore of pipe (mm)	84.00	Mtr.	1413.00	118692.00
20.00	Supply of strainer pipes made of ERW M.S. black pipe ISI mark of following sizes at the site of work including required size of slotting as per IS:8110-1985.				
20.10	200 mm Nominal Bore.	18.00	Mtr.	1638.00	29484.00
21.00	Providing & lowering of G.I. Pipes, flange pipe including rubber washer and nuts of 8 mm dia complete in all respect I.S.1239 Marked.				
21.10	B Class 80 mm dia	200.00	R. Mtr.	479.70	95940.00
22.00	P/Laying ISI marked P.V.C. insulated submersible cable conforming to IS:694 with flexible copper conductor including making connection etc. as required.				
22.10	4.0 Sq.mm 3 core flat / Round Complete Rate Group 1	215.00	Mtr.	102.40	22016.00

S. No.	Particulars	Qty.	Unit	Rate	Amount (In Rs.)
23.00	SITC of radial / mixed flow submersible motor pump sets ISI marked (IS:8034-1989) of approved make with required accessories including making connection suitable for T.W./ D.C.B./ Open well. The job includes lowering of riser pipe, G.I./ H.D.P.E. pipe with rope, cables, installation of complete fitting and accessories, jointing of electrical cables up to switch board. All labour for testing of submersible pumps set and supply of water to water mains, complete in all respect.				
23.10	150 mm diameter Submersible pump shall have following HP Rating, phase, Head, minimum Discharge respectively.7.5 HP, 3-Ø, (65-135)Mtr, (240-115)LPM Complete Rate Group-I	1.00	Each	23184.00	23184.00
24.00	P/Laying P.V.C. / XLPE insulated & P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor of IS:1554 P-I / IS :7098 P - I of Group 1 of approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.				
24.10	10.0 Sq.mm 3 core, Complete Rate Armoured	50.00	Mtr.	120.80	6040.00
25.00	Providing, Laying & Jointing in standard lengths HDPE PE-80 PN-6 pipes conforming to IS-4984:1995 (UP TO DATE) with necessary jointing material like mechanical connection i.e. thread/insert/quick release coupler joint/compression fitting joint of flanged joint and specials jointing pipe by butt fusion welding method, including all taxes (central and local), transportation and freight charges inspection charges loading/unloading charges, stacking the same in closed shade duly protecting from sunray and rain including cost of labour and material, specials (Tees, bend etc.) and also including the excavation of trench up to 1.5 Meter depth in all type of soil cutting of road surface pavement where required lift up to 1.5- Mt. stacking the soil clear from the edge of excavation and refilling of soil after laying and jointing of pipe line with proper compaction and disposing of all surplus soil as directed with in lead of 50 Meter with satisfactory, hydraulic testing etc. complete as per technical				

S. No.	Particulars	Qty.	Unit	Rate	Amount (In Rs.)
	specifications and direction of Engineer-in-charge. (supply up to 90 mm dia. Coil & above 90 mm dia straight length in 6.0 M).				
25.10	110 MM Dia	1500.00	R. Mtr.	441.00	661500.00
Total Rs.					4116188.40

Executive Engineer (PHE-II)
JDA, Jaipur

I/We Quote as % above/ below the schedule "G"

(In Words.....)

Signature of Contractor