NIT No. 09 /EE/PHED/2026-27 Sidhi, Dated 15-05-2026

Government of Madhya Pradesh
Public Health Engineering Department

Appendix 2.10

USOR - E in C PHED Bhopal 03/07/2018
NIT with up to date amendments

(Works Department Manual 1983)

(For Percentage Rates Only in Works Department and Other Department similar to Works Department)

Tender No. – 2026_PHED_ 507696_1

Balance Work of Retrofitting P.W.S.S. Village Bahmani and Semariya Block Sidhi Distt. Sidhi under Jal Jeevan Mission (JJM)

A)	**Probable Amount of Contract**	**-**	**Rs. 171.13 Lakh**
B)	**Earnest Money**	**-**	**Rs 171130/-**
C)	**Cost of Bid Document**	**-**	**Rs 12500/-**

GOVERNMENT OF MADHYA PRADESH
Public Health Engineering Department

Appendix 2.10
Tender Document

For Percentage Rate only in Works Departments and other Departments similar to Works Departments(Effective from 01/01/2014)

Office of the : Executive Engineer P.H.E Division **Sidhi**

NIT Number and Date: NIT No 9. /EE/PHED/2026-2027/ Sidhi Dated 15-05-2026

Agreement Number and Date : /2026-27

Balance Work of Retrofitting P.W.S.S. Village Bahmani and Semariya Block Sidhi Distt.Sidhi under Jal Jeevan Mission (JJM)

Name of the Contractor	:	.....
Probable Amount of Contract (Rs. in Figure)	:	**Rs :- 171.13 Lakh**
(Rs in Words)		Rs. One crore Seventy one lakh thirteen thousnad only
Contract Amount (Rs. in Figure)	:	**Rs :- ..... Lakh**
(Rs in Words)	:	(Rs. .....) only
Stipulated Period of Completion	:	06 Months including rainy season, thereafter, a minimum of 90 days of trial-run/commissioning period, after successful completion of work

Appendix 2.10

Tender Document (Table of Contents)

SECTION 1

Notice Inviting e-Tenders
Government of Madhya Pradesh
Public Health Engineering Department

NIT No. 9 /EE/PHED/2026-27 Sidhi, Dated 15-05-2026

Online percentage rate bids for the following works are invited from registered contractors and firms of repute fulfilling registration criteria:

S. No./ System Tender No.	Name of Work	District(s)	Probable Amount (Rs.)	Completion Period (months)
2026_PHED_ 507696_1	**Balance Work of Retrofitting P.W.S.S. Village Bahmani and Semariya Block Sidhi Distt. Sidhi under Jal Jeevan Mission (JJM)**	**Sidhi**	**171.13 Lakh**	06 Months including rainy season, thereafter, a minimum of 90 days of trial-run/commissioning period, after successful completion of work

1. Interested bidders can view the NIT on website http://www.mpetenders.gov.in
2. The Bid Document can be purchased only online as per the key dates mentioned in the online NIT on portal www.mpetenders.gov.in.
3. Amendments to NIT, if any, would be published on website http://www.mpetenders.gov.in only, and not in newspapers.

Executive Engineer,
Public Health Engineering Division
Sidhi (M.P.)

Notice Inviting e-Tenders

Government of Madhya Pradesh

Office of Executive Engineer

P.H.E. Division, Sidhi (M.P.)

NIT No 9 /EE/PHED/2026-27/ Sidhi, Dated 15-05-2026

Online percentage rate bids for the following works are invited from registered contractors and firms of repute fulfilling registration criteria:

S. No./System Tender No.	Name of Work	District	Probable Amount of Contract (Rs.) in Lakhs	Earnest Money Deposit (EMD) (Online) (In Rupees)	Cost of Bid Document (In Rupees)	Category of Contractor	Period of Completion (in Months)
2026_PHED_507696_1	**Balance Work of Retrofitting P.W.S.S. Village Bahmani and Semariya Block Sidhi Distt. Sidhi under Jal Jeevan Mission (JJM)**	Sidhi	171.13	171130	12500	Contractor registered under new centralized single registration system in M.P. Govt.	06 Months including rainy season, thereafter, a minimum of 90 days of trial-run/commissioning period, after successful completion of work

1. All details relating to the Bid Document(s) can be viewed and downloaded free of cost on the websitehttp://www.mpetenders.gov.in.
2. Bid Document can be purchased after making online payment of portal fees through Credit/Debit/Cash Card/internet banking.
3. At the time of submission of the Bid the eligible bidder shall be required to:
   i)pay the cost of Bid Document;
   ii)**Deposit the Earnest Money through Online mode**;
   iii)Submit a check list; and
   iv) Submit self declaration certificate.
   v) Registration number or proof of application for registration and
   vi) Organizational details in format given in the Bid Data Sheet.
   (Details can be seen in the Bid Data Sheet.)

4. ELIGIBILITY FOR BIDDERS:

(a) At the time of submission of the Bid the bidder should have valid registration with the Government of Madhya Pradesh, PWD in appropriate class. However, such bidders who are not registered with the Government of Madhya Pradesh and are eligible for registration can also submit their bids after having applied for registration with appropriate authority.

(b) The bidder would be required to have valid registration at the time of signing of the Contract.

(c) Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit.

5. Pre-qualification – Prequalification conditions, wherever applicable, are given in the Bid Data Sheet.

6. Special Eligibility – Special Eligibility Conditions, if any, are given in the Bid Data Sheet.

7. The Bid Document can be purchased only online as per key dates mentioned in online NIT. Other key dates may be seen in bid data sheet.

8. Amendments to NIT, if any, would be published on website http://www.mpetenders.gov.in only, and not in newspaper.

Executive Engineer,
P.H.E. Division, Sidhi
Sidhi (M.P.)

SECTION 2
INSTRUCTIONS TO BIDDERS (ITB)

GENERAL

1. SCOPE OF BID

The detailed description of work, hereinafter referred as 'work', is given in the Bid Data Sheet.

2.General Quality of Work:

The work shall have to be executed in accordance with the technical specifications specified in the Bid Data sheet/ Contract Data, and shall have to meet high standards of workmanship, safety and security of workmen and works.

3.PROCEDURE FOR PARTICIPATION IN E-TENDERING

The procedure for participation in e-tendering is given in the Bid Data Sheet.

4.ONE BID PER BIDDER

4.1The bidder can be an individual entity or a joint venture (if permitted as per Bid Data Sheet). In case the J.V. is permitted, the requirement of joint venture shall be as per the Bid Data Sheet.

4.2No bidder shall be entitled to submit more than one bid whether jointly or severally. If he does so, all bids wherein the bidder has participated shall stand disqualified.

5.Cost of Bidding

The bidder shall bear all costs associated with the preparation and submission of his bid, and no claim whatsoever for the same shall lie on the Government.

6.Site Visit and examination of works

The bidder is advised to visit and inspect the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the work. All costs in this respect shall have to be borne by the bidder.

B.Bid Documents

7.CONTENT OF BID DOCUMENTS

The Bid Document comprises of the following documents:

1.NIT with all amendments.
2.Instructions to Bidders,Bid Data Sheet with all Annexures
3.Conditions of Contract:
i.Part I General Conditions of Contract and the Contract Data with all Annexures; and
ii.Part II Special Conditions of Contract.
4.Specifications
5.Drawings
6.Priced Bill of Quantities
7.Technical and Financial Bid
8.Letter of Acceptance
9.Agreement, and
10.Any other document(s), as specified.

8. The bidder is expected to examine carefully all instructions, conditions of contract, the contract data, forms, terms and specifications, bill of quantities, forms and drawings in the Bid Document. Bidder shall be solely responsible for his failure to do so.

9. Pre-Bid Meeting (where applicable)Wherever the Bid Data Sheet provides for pre-bid meeting:

9.1 Details of venue, date and time would be mentioned in the Bid Data Sheet. Any change in the schedule of pre-bid meeting would be communicated on the website only, and intimation to bidders would not be given separately.

9.2 Any prospective bidder may raise his queries and/or seek clarifications in writing before or during the pre-bid meeting. The purpose of such meeting is to clarify issues and answer questions on any matter that may be raised at

that stage. The Employer may, at his option, give such clarifications as are felt necessary.

9.3 Minutes of the pre-bid meeting including the gist of the questions raised and the responses given together with any response prepared after the meeting will be hosted on the website.

9.4 Pursuant to the pre-bid meeting if the Employer deems it necessary to amend the Bid Document, it shall be done by issuing amendment to the online NIT.

10. Amendment of Bid Documents

10.1 Before the deadline for submission of bids, the Employer may amend or modify the Bid Documents by publication of the same on the website.

10.2 All amendments shall form part of the Bid Document.

10.3 The Employer may, at its discretion, extend the last date for submission of bids by publication of the same on the website.

C.Preparation of Bid

11. The bidders have to prepare their bids online, encrypt their Bid Data in the Bid Forms and submit Bid Seals (Hashes) of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of theNotice Inviting e-Tenders after signing of the same by the Digital Signature of theirauthorized representative.

12. **DOCUMENTS COMPRISING THE BID**

The bid submitted online by the bidder shall be in the following parts:

Part 1 – This shall be known as Online **Envelope A** and would apply for all bids. Online **Envelop A** shall contain the following as per details given in the Bid Data Sheet:

i) Registration number or proof of application for registration and organizational details in format given in the Bid Data Sheet.

ii) Payment of the cost of Bid Document;

iii) On line Earnest Money; and

iv) An affidavit duly notarized.

Part 2 – This shall be known as Online **Envelope B** and required to be submitted only in works where pre-qualification conditions and/or special eligibility conditions are stipulated in the Bid Data Sheet. Online **Envelop B** shall contain a self-certified sheet duly supported by documents to demonstrate fulfillment of pre-qualificationconditions.

Part 3 – This shall be known as Online Envelope C and would apply to all bids.

Envelop C shall contain financial offer in the prescribed format enclosed with the BidData Sheet.

13. Language

The bid as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be in English or Hindi. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in English.

In such case, for the purposes of interpretation of the bid, such translation shall govern.

14. TECHNICAL PROPOSAL

14.1 Only, in case of bids with pre-qualification conditions defined in the Bid Data Sheet, the Technical Proposal shall comprise of formats and requirements given in the Bid Data Sheet.

14.2 All the documents/ information enclosed with the Technical Proposal should be self- attested and certified by the bidder. The Bidder shall be liable for forfeiture of his earnest money deposit, if any document / information are found false/ fake/ untrue before acceptance of bid. If it is found after acceptance of the bid, the bidsanctioning authority may at his discretion forfeit his performance security/guarantee, security deposit, enlistment deposit and take any other suitable action.

15. FINANCIAL BID

i. The bidder shall have to quote rates in format referred in Bid Data Sheet, in overall percentage, and not item wise. If the bid is in absolute amount, overall percentage would be arrived at in relation to the probable amount of contract given in NIT. The overall percentage rate would apply for all items of work.

ii. Percentage shall be quoted in figures as well as in words. If any difference in figures and words is found, lower of the two shall be taken as valid and correct.

iii. The bidder shall have to quote rates inclusive of all duties, taxes, royalties and other levies; and the Employer shall not be liable for the same.

iv. The material along with the units and rates, which shall be issued, if any, by the department to the contractor, is mentioned in the Bid Data Sheet.

16.PERIOD OF VALIDITY OF BIDS

The bids shall remain valid for a period specified in the Bid Data Sheet after the date of "close for biding" as prescribed by the Employer. The validity of the bid can be extended by mutual consent in writing.

17.EARNEST MONEY DEPOSIT (EMD)

17.1 The Bidder shall furnish, as part of the Bid, Earnest Money Deposit (EMD) Only through On-Line mode, in the amount specified in the Bid Data Sheet.

17.2 **The EMD shall be in the ON – LINE form only** in favour of the name given in the Bid Data Sheet.

17.3 Bid not accompanied by EMD shall be liable for rejection as non-responsive.

17.4 EMD of bidders whose bids are not accepted will be returned on line as per tender portal conditions.

17.5 EMD of the successful Bidder will be discharged when the Bidder has signed the Agreement after furnishing the required Performance Security.

17.6 Failure to sign the contract by the selected bidder, within the specified period, for whatsoever reason, shall result in forfeiture of the earnest money deposit.

D.Submission of Bid

18. The bidder is required to submit online bid duly signed digitally, and Envelop 'A' in physical form also at the place prescribed in the Bid Data Sheet.

E. Opening and Evaluation of Bid

19 PROCEDURE

19.1 Envelope 'A' shall be opened first online at the time and date notified and its contents shall be checked. In cases whereEnvelop 'A' does not contain all requisite documents, such bid shall be treated asnon-responsive, and Envelop B and/or C of such bid shall not be opened.

19.2 Wherever Envelop 'B' (Technical Bid) is required to be submitted, the same shall be opened online at the time and date notified in the Bid Data Sheet. The bidder shall have freedom to witness opening of the Envelop 'B'. Envelop 'C' (Financial Bid) of bidders who are not qualified in Technical Bid (Envelop 'B') shall not be opened.

19.3 Envelope 'C' (Financial Bid) shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelop 'C'.

19.4 After opening Envelop 'C' all responsive bids shall be compared to determine the lowest evaluated bid.

19.5 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all the bids at any time prior to contract award, without incurring any liability. In all such cases reasons shall be recorded.

19.6 The Employer reserves the right of accepting the bid for the whole work or for a distinct part of it.

20. Confidentiality

20.1 Information relating to examination, evaluation, comparison and recommendation of contract award shall not be disclosed to bidders or any other person not officially concerned with such process until final decision on the bid.

20.2 Any attempt by a bidder to influence the Employer in the evaluation of the bids or contract award decisions may result in the rejection of his bid.

F. Award of Contract

21. Award of Contract

The Employer shall notify the successful bidder by issuing a 'Letter of Acceptance' (LOA) that his bid has been accepted.

22. Performance Security

22.1 Prior to signing of the Contract the bidder to whom LOA has been issued shall have to furnish performance security of the amount in the form and for the duration, etc. as specified in the Bid Data Sheet.

22.2 Additional performance security, if applicable, is mentioned in the Bid Data Sheet and shall be in the form and for the duration ,etc. similar to performance security.

23. Signing of Contract Agreement

23.1 The successful bidder shall have to furnish Performance security and Additional Performance Security, if any and sign the contract agreement within 15 days of issue of LOA.

23.2 The signing of contract agreement shall be reckoned as intimation to commencement of work. No separate work order shall be issued by the Employer to the contractor for commencement of work.

23.3 In the event of failure of the successful bidder to submit Performance Security and Additional Performance Security, if any or sign the Contract Agreement, his EMD shall stand forfeited without prejudice to the right of the employer for taking any other action against the bidder.

24. **CORRUPT PRACTICES**

The Employer requires that bidders observe the highest standard of ethics during the procurement and execution of contracts. In pursuance of this policy, the Employer:

i. may reject the bid for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and

ii. may debar the bidder declaring ineligible, either indefinitely or for a stated period of time, to participate in bids, if it at any time determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract.

For the purposes of this provision, the terms set forth above are defined as follows:

a. "corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

b. "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

c. "coercive practice" means impairing or harming, or threatening to impairor harm, directly or indirectly, any party or the property of the party toinfluence improperly the actions of a party;

d. "collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

[End of ITB]

BID DATA SHEET

For Jal Jeevan Mission PWS Schemes

GENERAL		
SR. No.	**PARTICULARS**	**DATA**
1	Office Inviting Tender	Member Secretary, District Water and Sanitation Mission and Executive Engineer PHE Division Sidhi District Sidhi (M.P.)
2	NIT No.	NIT No. 9 /2026-27
3	Date of NIT	15.05.2026
4	Bid document download available from date & time	
5	Website link	https://mptenders.gov.in

SECTION 1 - NIT			
CLAUSE REFERENCE	**PARTICULARS**	**DATA**	
2	Portal Fees	As per Website link	
3	Cost of Bid Document	Rs. 12500 As per NIT	
	Cost of Bid Document Payable at	As per Website link	
	Cost of Bid Document In favor of	As per Website link	
4	Affidavit Format	Self Attested Affidavit (Notarized not required) As per 'Annexure- B'	
5	Pre-qualifications required	As per NIT	
	If Yes, details	Annexure C	
6	Special Eligibility (if yes, prior permission of E-in-C required)	As per NIT	NO
	If Yes, details	As per 'Annexure -D'	
7	Key dates	As per 'Annexure -A'	

SECTION 2 - ITB[1]

CLAUSE REFERENCE	PARTICULARS	DATA
1	Name of the 'Work'	**Balance Work of Retrofitting P.W.S.S. Village Bahmani and Semariya Block Sidhi Distt. Sidhi under Jal Jeevan Mission (JJM)**
2	Specifications	As per 'Annexure – E'
3	Procedure for participation in e-tendering	As per 'Annexure – F'
4	Whether Joint Venture is allowed	Yes, for PAC more than Rs 1 crore
	If Yes, requirement for joint Venture	Annexure G
9	Pre bid meeting to be held	No
	If Yes, Date, Time & place	-
12	Envelopes (Cover)-A containing: i. Registration number or proof of application for registration ii. e-EMD and tender fee iii Self Attested Affidavit iv. Tender Acceptence Letter v. Organization detail	Online
14	Envelopes (Cover)-B Technical Proposal	As per Annexure - I (Format- I-1 to I-5)
15	Envelopes (Cover)-C Financial Bid	As per 'Annexure - J '/ BOQ bid Template
	Materials to be issued by the department	As per 'Annexure - K'
16	Period of Validity of Bid	120 Days from the date of submission of tender.
17	Earnest Money Deposit	Rs 171130/- As per NIT
	Forms of Earnest Money Deposit	Electronic (e-EMD) to be submitted through e-tender portal
	EMD valid for a period of	Not Applicable (Online)
	FDR must be drawn in favour of	Not Applicable (Online)
21	Letter of Acceptance (LoA)	As per 'Annexure -L'

CLAUSE REFERENCE	PARTICULARS	DATA
22	Amount of Performance Security	5% of Contract Amount
	Additional Performance Security, if any	As per SCC Clauses
	Performance Security in the format	As per 'Annexure- M'
	Performance Security in favour of	Executive Engineer PHE Division Sidhi (M.P.)
	Performance Security valid up to[2]	Performance Guarantee (Security) for works shall be valid upto 3 months beyond the completion of Defect Liability Period. Performance Guarantee (Security) shall be released after successful trial run of entire scheme.
	Additional Performance Security valid up to	Additional Performance Guarantee (Security) shall be valid upto valid Execution/ Construction period plus 03 months. Additional Performance Guarantee (Security) shall be released after Construction/Execution of work.

Annexure – A
(See clause 1,7 of Section 1 -NIT)

Key Dates

S. No.	Works Department Stage	Bidder's Stage	Start		Expiry/End		Envelopes
			Date	Time	Date	Time	
1		Publishing Date	15.05.2026	15;00	29.05.2026	17;30	
2		Document Download /Sale – Online	15.05.2026	15;00	29.05.2026	17;30	
3		Bid Submission – online	15.05.2026	15;00	29.05.2026	17;30	Mandatory Documents may only be submitted On-line at www.mptenders.gov.in
4	Pre Bid Meeting	NA	NA	11;00	NA	17;30	
5	Bid Opening		01.06.2026	11;00	-	17;30	Envelope-A

All mandatory documents and e-EMD should be submitted online as prescribed in bid data sheet on or before the above key dates.

Annexure – B
(See clause 3 of Section 1 -NIT)

|| DECLARATION ||
(To be contained in Envelope A)
(Self Signed Declaration)

I/we _____ who is/ are_____ (status in the firm/ company) and competent for submission of the affidavit on behalf of M/S _____ (contractor) do solemnly affirm an oath and state that:

I/we am/are fully satisfied for the correctness of the certificates/records submitted in support of the following information in bid documents which are being submitted in response to notice inviting e-tender No. _____ for_____ (name of work) dated _____ issued by the_____ (name of the department).

I/we am/ are fully responsible for the correctness of following self-certifiedinformation/ documents and certificates:

1 That the self-certified information given in the bid document is fully true and authentic.

2 That:

a. Term deposit receipt deposited as earnest money, demand draft for cost of bid document and other relevant documents provided by the Bank are authentic.

b. Information regarding financial qualification and annual turnover is correct.

c. Information regarding various technical qualifications is correct.

3 No close relative of the undersigned and our firm/company is working in the department.

OR

Following close relatives are working in the department:

Name _____ Post _____ Present Posting _____

4 I undestand that I will be liable to get prosecuted under relevant sections of the Law, If the information / documents / certificates submitted by me are found false or forged.

Signature with Seal of the Deponent (bidder)

I/ We, _____ above deponent do hereby certify that the facts mentioned in above paras 1 to 3 are correct to the best of my knowledge and belief.

Verified today _____ (dated) at _____ (place).

Signature with Seal of the Deponent (bidder)

Note: Self Signed Declaration in original shall reach at least one calendar day before opening of the bid.

रूपये 2 करोड़ तक की निविदाओं हेतु

Annexure – C

(See clause 5 of Section 1 -NIT)

PRE-QUALIFICATIONS CRITERIA

The bidder should have:

A. Financial

Nil (Upto 2.00 Crore)

B. Physical

No pre-qualification is required, but if the NIT has the work of construction of Intake well, Anicut, Treatment Plant and Over Head Tanks then Pre-qualification will be required. The bidder should have executed similar items of work during the **last Five financial years**, which should individually not be less than 33% of the quantity/ capacity of the items included in the BOQ.

Note:-

If interested bidder has not executed these works (Intake well, Anicut, Treatment Plant and Over Head Tanks), then he can submit an agreement (on Rs. 1000/- non judicial stamp paper duly notarized) at the time of bid submission with an experienced contractor stating that he will assist/guide the bidder to design and execute this work, if awarded. This experienced contractor should also have a valid registration in MPPWD centralised registration system at the time of agreement between the department and the qualifying bidder. This experienced contractor should have an experience certificate of execution of these works issued by an officer not below the rank of Executive Engineer.

The total value of the work to be executed by such experienced contractor(s) shall not exceed 25 percent of the Probable Amount of Contract (PAC).

If any bidder/contractor has constructed RCC Over Head Tanksin private sector in Madhya Pradesh during the last 05 years, he can also participate in the bid process. Such bidder/contractor should request the EE PHED of the concerned District where he has completed such construction works, to issue an experience certificate. The concerned E.E will verify the said works and issue a certificate stating therein the year of construction, capacity, cost and quality of work etc.

रूपये 2 करोड़ से अधिक की निविदाओं हेतु

Annexure – C

(See clause 5 of Section 1 -NIT)

PRE QUALIFICATI.ONSCRITERIA

The bidder should have:

A. Financial

l. Average annual turnover of the bidder during. the last 3 financial years should not be less than 33% of tha Probable Amount of Contract (PAC).

ii. Bid Capacity - *Bidder* shall .be allotted work up to his available Bid Capacity, which shall. be worked out as given in format I-2 of Annexure I.

B. Physical

If the NIT has the work of construction of.Intake well, Anicut Treatment Plant and Over Head Tanks then Pre- qualtification will be required. Tha bidder should have executed similar items of work during the last three financial years, which should individually not be less than 33% of the quantity/ capacity of the items included in tha BOQ.

In addition to the.above, as per the requirement of tha work, the concerned Chief Engineer may include any other pre- quaIificaton critertion in the NIT.

Note:

If Interested bidder has not executed these works {intake well, Anicut, Treatmént Plant and Over Head Tanks) then he can submit an agreement (on Rs. 1000 non judiciaI stamp *papar* duty notarized) with an experienced contractor to execute this work on his behalf at tha time of bid submission. This experienced contractor should alsohave a valid registration In MPPWD centralised registration system at the time of agreement between the department and the qualifying bidder. This Experienced contractor should have an experience certificate of execution of these works Issued by an officer not below the rank of Executive Engineer.

The total value of the work to be executed by such experienced contractor shall not exceed 25percent of the Probable Amount of Contract (PAC).

If' any. bidder/contractor has constructed. these "Items. (Intaké well, ,Anikut, Treatment Plant and Over Head Tanks) in. .private sector.in :Madhya Pradesh during the last 3 years, he can also participate in the bid process. Such bidder/contractor should request the EE, PHED of the concerned District where he has completed such construction works, to issue an experience certificate. The concerned EE will verify the said works and said works and issue a certificate stating therein the year of construction, capacity cost and quality of work etc.

:Physical qualifications for the work shall.be as below

SN	Particulars	Quantity	Period
1.	Physical qualification.required	.yes	
2	Earthwork		
3	Concrete work		
4:	Any other(specify)		

Note:- Above criteria are indicative, subject to suitable stipulations by the department and specific bid.

Annexure – D
(See clause 6 of Section 1 -NIT)

SPECIAL ELIGIBILITY CRITERIA

NIL

ANNEXURE - E

(See clause 2 of Section 2 –ITB&

Clause 10 of GCC)

Specifications

TECHENICAL SPECIFICATIONS

Construction and existing of Piped Water Supply Scheme at Village **–** Construction and existing of Piped Water Supply Scheme **Balance Work of Retrofitting P.W.S.S. Village Bamhni and Semarhiya under Jal Jeevan Mission (JJM) block sidhi** Distt. Sidhi based on Tube wells including installation of electric submersible/ centrifugal water motor pump, laying & jointing of rising main and distribution pipe line system, household tap connections, electric power connections at Tube wells including cost of all material & labour with 90 Days Trial Run trial after successful completion work work under Jal Jeevan Mission (JJM)

The work includes following items :-

I. Supply and installation of motor pumps :-

a) Submersible pump of 120 LPM discharge with 120 meter head – 5 Nos.

b) Centrifugal pump of 300 LPM discharge with 25 meter head – 2 Nos(including 1 No. standby)& 240 LPM discharge with 25 meter head – 2 Nos(including 1 No. standby)

II. Providing, laying, jointing, testing and commissioning of pumping, feeder and distribution pipe line:-

- (a) HDPE Pipe :- (Distribution System)
- 180 mm (6kg/sq cm) 1400 M
- 160 mm (6kg/sq cm) 3203 M
- 140 mm (6kg/sq cm) 6518 M
- 125 mm (6kg/sq cm) 1849 M
- 110 mm (6kg/sq cm)6320 M
- 90 mm (6kg/sq cm) 5373 M
- 50 mm dia GI pipe class medium 390 m
- DI K-7 1606 meter, 100 mm dia

III. Providing 1238 Nos. house hold connections .

IV. Electrification work .

V. Installation of readymade mini pump house – 5 Nos..

VI. Installation of auto level controller for OHT connected to motor pump.

Specifications ;-

1. Bidder should follow the specifications issued by E in C PHED Bhopal in USOR for water supply, sewerage, sewerage maintenance, drilling of tubewell etc. and other miscellaneous works in force from 03.07.2018
2. Bidder should follow the specifications in given relevant I.S codes for work and materials
3. Bidder should follow the specifications as may be given in writing by the Engineer-in-charge from time to time.

WORK WISE DETAILED SPECIFICATIONS ARE AS UNDER-

I. Supply and installation of submersible/centrifugal motor pump set :-

ISI Marked BEE 5-star rated energy efficient 3-Phase Submersible/centrifugal motor pump of required head and dischagre as per design requirement or mention in BOQ. It shall be suitable to install in tubewells/sumpwell including suitable control panel and electric cable (minimum 4 Sq.mm copper) including electric service line (ISI marked armoured cable) from electric pole to control panel with oil immersed starter. Material of construction shall be as per IS: 8034: 2002. The pump set will be tested by third party as
nominated by the department. The fee and all related cost of the testing shall be borne by the contractor. 50 mm G.I. Pipes medium class (as per IS-1239) shall also be used for lowering the pump sets.

I. Providing laying jointing testing and commissioning of following HDPE (6kg/sq cm) pipe line .

Type	Dia in mm	Length in Meter	Remark
HDPE pipe 6kg/sq cm	90 mm 110 mm 125 mm 140 mm 160 MM 180 mm		As per BOQ
DI K-7 pipe	100 mm		As per BOQ
GI Pipe	50 mm		As per BOQ

TECHNICAL SPECIFICATION FOR PIPE LINE WORK

PART (A) D.I. Pipe

1.0 (i) Centrifugally cast (spun) Dutice Iron pressure pipes shall conform pressure pipes shall conform to IS 8329-2000 duly inspected and tested and having BIS certification mark.
(ii) The Cement Mortar lining in the pipe shall be as IS – 11906 - 1986

2.0 Ductile Iron fittings for pressure pipes shall conform to IS 9523-2000 dully inspected and tested and having BIS certification mark.

3.0 Rubber sealing rings shall conform to IS 5382-2000 duly inspected and tested having BIS certificate mark.

4.0 The laying of D.I. Pipe shall conform to IS 1288-1987.

5.0 Marking on Pipes :
Each pipe shall have as cast of stamped or legibly and indelibly painted on it with the following appropriate marks.

a) Indication of the source of manufacture.
b) The nominal diameter
c) Class reference
d) The last two digit of the year of manufacture
e) The non-standard length of the pipe of specially ordered
f) Where applicable, an indication of length over which the pipe is suitable for cutting on site and
g) A short white line at the spigot end of the Pipe with push-on joint in sizes DN 700 and above, to indicate the major axis of the spigot.
h) On the socket faces of pipe centrifugally cast in metal mould, and
i) On the out side of the socket or on the barrel of pipe centrifugally cast in sand mould.

6.0 Marking on Fittings :
Each fittings shall have as cast, stamped or indelibly painted on it with the following appropriate marks.

a) Indication of the source of manufacture.
b) The nominal diameter
c) Class reference
d) PN rating of flanges when applicable, and

e) Any other mark required by the purchaser.
f) Marking may be done on the barrel of casting or on the outside of the sockets.
g) The fitting may also be marked with the Standard Mark.

7.0 Laying of DI Pipes :

Laying of pipes and fitting/specials i/c all precautions to guard against possible damage to the existing structure /pipes lines, cable etc, taking precautions to prevent dirt from entering the pipe ends, lowering and laying pipes and specials in the trenches with specials arrangement such as cranes, tripods with chain pulley block, use of slings of canvas etc. to fit the ends of pipes and fittings / specials to lift and lower the same. Inspection of pipes & fittings for defect by striking with a light hammer while suspended. Laying of pipes perfectly true in alignment and to gradient etc.

8.0 Tolerance o Length :

The Tolerance on length of pipes shall be as follows.

Type of Casting	Tolerance (mm)
Socket and spigot and plain ended pipes	± 100
(ii) Flanged pipes	± 10

9.0 Rubber gasket :

9.1 The material of rubber gasket for use with mechanical joints and push-on joints shall conform to IS : 5382, Unless otherwise agreed between the manufacturer and the purchaser.

9.2 In the case of push-on-joints for sizes “DN 600” and above the sockets may be with or without centering rings.

9.3 Marking – Each sealing ring or packing or both shall be marked indelibly with :
a) The manufactures name or trade-mark, if any
b) The month and year of manufacture and
c) The type followed by a word, “Water”.

10.0 Tyton Joints (Rubber Ring Joints) :

10.1 Tyton Joint is sturdy push on type joint. The sockets of the pipes to receive tyton joints are specially designed to contain elongated grooved gasket. The inside contour of the socket bell provides a seat for the circular rubber ring in modified bulb shaped gasket. An internal ridge in the socket fits in to the groove of the gasket. A slight taper on the plain end (chamfer) of the pipe facilitates assembly.

10.2 Flange Joints :

Flanged cast iron pipes, screwed / welded flanged cast iron pipes and flanged specials are joint by means of flanges. The jointing material used between flanges shall be rubber insertion 3 mm thick. Each bolt should be tyton a little at a time taking care to tighten diametrically opposite bolts alternatively. The practice of fully tightening the bolts one after another is highly undesirable.

PART (B) G.I. pipes

1. The G.I. pipes shall be confirming to IS - 1239:2004 (Part II)
2. The hot dip Zinc coating on M.S. tubes shall be confirming to IS - 4736: 1986
3. The Copper alloy Gate valves, Globe wheel valves, Check valves shall be confirming to IS - 778: 1984 (Reaffirmed 2005)
4. All measurement shall be of the finished work.
5. Work shall be executed in accordance with the Indian Standards

PART (C) HDPE Pipe

This specification covers the requirements for successfully designing, manufacturing, supplying, laying, jointing and testing at works and site of Hight Density Polyethelene Pipes used for water supply. Use of HDPE Pipes shall be of pressure class of minimum PN 6 or above.

Applicable Codes

The manufacturing, testing, supplying, laying, jointing and testing at work sites of HDPE pipes shall comply with IS : 4984-1995 all currently applicable statues, regulations, standards and amendments and others as follows.

Code No.	Title / Specification
IS 4984	High Density Polyethylene Pipes for Water Supply
IS 2530	Methods of test for polyethylene molding materials and polyethylene compounds GRP Pipes, Joints and Fittings for use for Potable Water Supply

IS 5382	Rubber sealing rings for gas mains, water mains and sewers.
IS 4905	Methods for random sampling
IS 7328	High density polyethylene materials for molding and extrusion
IS 7634	Laying & Jointing of Polyethylene (PE) Pipes
IS 9845	Method of analysis for the determination of specific and / or overall migration of constituents of plastics material and articles intended to come into contact with foodstuffs.
IS 10141	Positive list of constituents of Polyethylene in contact with food stuffs, pharmaceuticals and drinking water.
IS 10146	Polyethylene for its safe use in contact with foodstuff, Pharmaceuticals and drinking water.

Color

The color of the pipe shall be black.

Materials

The materials used for the manufacturer of pipes should not constitute toxicity hazard, should not support microbial growth, should not give rise to unpleasant taste or odour, cloudiness or discoloration of water. Pipe manufacturers shall obtain a certificate to this effect from the manufacturer or raw material by any internationally reputed organization as per the satisfaction of the Engineer-in-Charge.

Raw Materials

(a) Resin used to manufacturer the HDPE pipes shall be 100% virgin PE Black pre-compounded confirming to IS : 4984, IS: 7328 and ISO : 4427-2007 (Latest version). The resin proposed to be used for manufacturering of the pipes should also comply with the following norms as per ISO 9080-2003 (latest version)

(b) The resin should also have been certified by an independent laboratory of international repute like Bodycote / Slevan / Advantica for having passed 10,000 hour long term hydrostatic strength (LTHS) test extrapolated to 50 years to show that the resin has a minimum MRS of over 10 MPa. There should not be any brittle knee at $80^{o}C$ before 5000 hours. Self certificate of any resin manufacturer will not be acceptable.

(c) Certificate from reputed organization OR Raw material supplier for having passed the full scale repid crack propagation test as per ISO 13478. High density Polyethylene (HDPE) used for the manufacturer of pipes shall conform to designation PEEWA-50-T-003 of IS 7328. HDPE conforming to designation PEEWA-50-T-003 of IS: 7328 may also be used. Melt Flow Rate (MFR) of the specific base density material shall also conform to clause of IS: 7328.

(d) The resin shall be compounded with carbon black. The carbon black content in the material shall be within $2.5\pm0.5\%$ and the dispersion of carbon black shall be satisfactory when tested as per IS: 2530.

Anti-oxidant

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

Reworked Material

No addition of Reworked / Recycled Material from the manufacturer's own rework material resulting from the manufacturer of pipes is permissible and the vendor is required to use only 100% virgin resin compound.

Maximum Ovality of Pipe

The outside diameter of pipes, tolerance on the same and ovality of pipe shall be as given in table 2 of IS 4984.

Detectability

HDPE Pipes shall be detectable when buried underground, by providing an insulated copper wire having minimum diameter of 1.20 mm, firmly attached along the entire length of pipe.

To avoid theft or dislocation during handling / laying or earth refilling in trench, the insulated Copper wire shall be firmly fixed on the outer surface of HDPE pipe at Pipe manufacturer's works through external adhesion or co-extrusion or any other appropriate method.

Length of Straight Pipe

The length of straight pipe used shall be more than 6 m or as agreed by Engineer-in-Charge. Short lengths of 3 meter (minimum) up to a maximum of 10% of the total supply may be permitted.

Coiling

The pipes supplied in coils shall be coiled on drums of minimum diameter of 25 times the nominal diameter of the pipe ensuring that kinking of pipe is prevented. Pipe beyond 110 mm dia shall be supplied in straight length not less than 6.00 m.

Fittings & Specials

All HDPE fittings specials shall be of minimum PN 6 or above Pressure class, fabricated in accordance with IS: 8360 (Part I & III) PE Inexction molded fittings shall be as per IS: 8008 (Part I to IX). All fittings / specials sall be fabricated or molded at factory only. No fabrication or molding will be allowed at site, unless specially permitted by the Engineer-in-Charge. Fittings will be welded to the pipes or other fittings by use of Electro-fusion process. Recommended makes for PE / Compression fittings / specials are Kimplas, Georg-Fischer. Glynwed, GF,Trustlene, Astore, Magnum and GPS.

Bends

HDPE bends shall be plain square ended conforming to IS: 8360 Part I & III Specifications. Bends shall be molded.

Tees

HDPE Tees shall be plain square ended conforming to IS: 8360 Part I & III Specifications. Tees may be equal tees or reduced take off tees. Tees shall be molded.

Reducers

HDPE Reducers shall be plain square ended conforming to IS: 8008 Part I & VII Specifications. Reducers must be molded.

Flanged HDPE Pipe Ends

HDPE Stub ends shall be square ended conforming to IS: 8008 Part I & VI Specifications. Stub ends will be welded on the pipe. Flange will be of slip on flange type as described below.

Slip-On Flanges

Slip-on flanges shall be metallic flanges covered by epoxy coating or plastic power coating. Slip-on-flanges shall be conforming to standard maching relevant flange of valves, pipes etc. Nominal pressure rating of flanges will be PN 10.

Electro Fusion Tapping Saddle, Branch Saddle & Electro Fusion fittings :

a. All the Electro fusion fittings should be manufactured with top quality virgin pre-compounded PE 100 resin which should be compatible with the distribution mains.
b. The products shall comply with the requirements of EN 12201-3, EN 1555-3 or ISO 8085-3.
c. All the fittings shall be of SDR- II rating.
d. The fittings shall bave the approval from any there Agencies like KIWA, DVGW, WRC-NSF, U.K. CIPET etc.
e. All the products shall be manufactured by injection molding using virgin compounded PE 100 polymer having a melt flow rate between 0.2- 1.4 grams/10 minutes and shall be compatible for fusing on PE 100 distribution mains manufactured according to the relevant national or international standards. The polymer used should comply with the requirements of EN 12201-1. Process voltage of all saddles must not exceed a maximum of 40 volts.

(e)Compression Fitting.

Compression fitting used for House service connection should comply as per ISO 14236 with Threaded metal inserts - SS 304 with BSP Threads.

(f)Pressure Testing

The Pressure rating of compression fittings should be as per clause 8 of ISO 14236 which shall be PN 16

(g)Dimensions

The Dimension of compression fittings shall be as per clause 7.1 of ISO 14236 Performed.

- Leak tightness under internal pressure.
- Leak tightness under internal Vacuum.
- Long term Pressure Test for Leak tightness for assembled joint
- MRS Value as per ISO 9080

- Resistance to Internal Pressure

(h)Effects on Quality of Water

The compression fitting for intended for conveyance of potable water for Human consumption to be tested to comply with BS 6920 specifications in any of the laboratories like DVGW / KIWA / SPGN / WRC - NSF and certificate of compliance to be produced for the following parameters :

a. Odor & Flavor of Water.
b. Appearance of Water
c. Growth of Micro Organism
d. Extraction of Metals.

All fittings with threaded ends should be with BSP threads.

EXCAVATION OF TRENCHES FOR LAYING AND JOINTING OF PIPELINES:-

01 **Preliminary:-** Before laying the pipes, the detailed map of the area showing the alignment, sluice valves, scour valves, air valves. The pipeline may be laid on the side of the street where the population is dense. Pipes are laid underground with a minimum cover of 0.90m on the top of the pipe. Before starting the excavation of trenches for laying of pipeline the work of pegging out, clearing and disposal of all shrubs, grass, large and small bushes, trees, hedges, fences, gates, portions of old masonry and debris from the route shall be done.

02 **Excavation and preparation of trenches for laving underground pipeline;-** The trench shall be so dug that the pipe may be laid to the required alignment and at required depth. When the pipeline is under a roadway, a minimum cover of 1.0 m shall be provided, in other cases the minimum cover of 0.90m above the crown of the pipe shall be provided. The trench shall be shored, wherever necessary and kept dry so that the workman may work there in safely and efficiently.

03 **Dewatering;-** The contractor shall carry out dewatering, wherever necessary. The discharge of the trench dewatering pumps shall be conveyed either to drainage channels or natural drains and shall not be allowed to spread over in the vicinity of work place.

04 The excavation of trenches shall be carried out by hand or machines. The width of trench shall be kept to a minimum consistent with the working space required. At the bottom, between the faces, it shall be minimum 200 mm clearance on either side of the pipe. Additional width shall be provided at positions of sockets and flanges for jointing. Depth of pit at such places shall also be sufficient to permit finishing of joints. However this is for the safety of the trench the method of laying and jointing the pipe and the need to avoid damage to pipe coating.

05 **Preparation of bottom of trench;-** The bottom of the trench shall be properly trimmed to permit even bedding of the pipeline. The curvature of the bottom of the trench should match the curvature of the pipe as far as possible, subtending an angle of 360º at the center of the pipe. Where rock or boulders are encountered, the trench shall be trimmed to a depth of at least 100 mm below the level at which the bottom of the pipe is to be laid and filled to a like depth with non compressible material like sand or crusher dust or moorum of adequate depth to gave the curved seating. Bedding of the pipe trench should be as per IS**:** 12288- 1987 code of use and Laying of Ductile Iron Pipes.

06 **Special foundation in poor soil;-** Where the bottom of the trench at sub grade is found to consist of material, which is unstable to such a degree that in the opinion of Engineer-in-charge it cannot be removed and replaced with an approved material thoroughly compacted in place to support the pipe properly, a suitable foundation for the pipe, consisting of piling, timbers or other materials, in accordance with the direction of the Engineer-in-charge, shall be constructed.

07 **Excavation in hard rock by blasting;-** Blasting for excavation shall be done only when the contractor obtains the license for the same and only when proper precautions are taken for the protection of persons and property. The hours of blasting shall be fixed by the Engineer-in-Charge, the procedure of blasting shall conform to the requirement of licensing authority. The excess excavation blasting shall be filled up by 1**:**4**:**8 cement concrete. The contractor shall have to make his own arrangement for procurement for procurement and storing of explosives of required for blasting.

08 **Care of surface material for reuse;-** All surface material which, in the opinion of the Engineer-in-charge are suitable for reuse in restoring the surface shall be kept separate from the general excavation material as directed by Engineer-in-charge.

09 **Stacking of excavated and safety provisions:-** All excavated materials shall be stacked in such a manner that it does not endanger the work and avoids obstructing footpaths and roads, hydrants under pressure, surface boxes, fire or other utility controls shall be left unobstructed and accessible until the work is completed. Gutters shall be kept clear or other satisfactory provisions made for street drainage & natural water courses shall not be obstructed.

10 **Barricades, guards and safety provisions:-** To protect persons from injury and to avoid damage to property, adequate barricades, construction signs, torches, red lanterns and guards, as required, shall be placed and maintained during the progress of the construction work and until it is safe for traffic to use the roadway. All materials, piles, equipments and pipes, which may obstruct traffic shall be enclosed by fences or barricades and shall be protected by proper lights when visibility is poor. The rules and regulations of the local authorities regarding safety provisions shall be observed.

11 **Maintenance of traffic and closing of streets;-** The work shall be carried out in such manner that it cause the least interruption to traffic, and the road/street may be closed in such a manner that it causes the least interruption to the traffic. Where it is necessary for traffic to cross open trenches, suitable bridges shall be provided. Suitable signs indicating that a street is closed shall be placed and necessary detour/diversion signs for the proper maintenance of traffic shall be provided.

12 **Structure protection;-** Temporary support, adequate protection & maintenance of the underground & surface structures, drains, sewers & other obstructions encountered in the progress of the work shall be furnished under the direction of the Engineer-in- charge. The structures, which may have been disturbed, shall be restored upon completion of the work.

13 **Protection of property and surface structures:-** Trees, shrubbery fences, poles and all other property and surface structure shall be protected unless their removal is shown on the drawings or authorized by the Engineer-in-charge. When it is necessary to cut roots and tree branches such cutting shall be done under the supervision and direction of the Engineer-in-charge.

14 **Preparation of Formation for Sections of pipe line to be laid above Ground;-** Working survey of the pipeline alignment shall be carried out by the contractor before start of the excavation work. The contractor shall provide all the instruments such as leveling instruments, steel tape, ranging rods, strings, pegs etc for carrying out the survey. Based on the working survey, the alignment, L-section and location of specials, valves and chambers shall be finalized and got approved from the engineer in charge. The gradient and alignment shall be such that minimum horizontal and vertical bends shall be required. Formation should be prepared by cutting high grounds and filling in low areas. Care has to be taken while fixing the alignment and gradient of the pipeline, to balance the cutting and filling quantities, as far as possible, with minimum of lead. Care should also be taken to ensure that pipe rests fully either on cutting or on bank. Where so ever the line is laid on G.L.or above G.L., the pipe line should be properly protected by any suitable means.

15 **Disposal of surplus material; -** Excavated material in excess than required for backfilling the trenches, shall be disposed off as per the directions of Engineer-in-charge. Surplus excavated stuff available at one section shall be used for back filling at other reaches, wherever required.

16 **Extra material required for back filling;-** If in any case, it is required to bring the soil for back filling from outside, it should be of good quality and should not have chemicals e.g. sulphates, chlorides,conductivity etc., which may cause corrosion to pipes, specials and other structures, beyond the permissible limits.

Note:- All types of pipes shall be inspected by a third party as nominated by the department and all fee and other incidental expenses related to these inspection shall be borne by the contractor.

LAYING AND JOINTING OF PIPE LINE:-

01 Lowering of Pipes and fittings

All pipes, fittings, and valves shall be lowered into the trench, by means of derricks, ropes or other suitable tools and equipment to prevent damage to pipe materials and protective coatings and lining.

The pipe should be lowered progressively with the help of shear legs or cranes using wide belts or sling. In case of coated pipes, extra care shall be taken to preserve the coating while lowering. Slings may be removed progressively without the necessity of digging under the pipe.

Where the trench is sheeted, the pipes shall be lowered into the trench by removing at a time, one or two struts only, care being taken to see that no part of the shoring is disturbed or damaged. If necessary, additional struts may be fixed during lowering. After the pipe is lowered, it shall be laid in correct line and level by use of leveling instruments, sight rails, the theodolites etc.

02 Cleaning of pipes and fittings

All lump, blisters and excess coating material shall be removed from socket and spigot end of each pipe and outside of the spigot and inside of the socket shall be wire-brushed and wiped clean and dry and free from oil and grease before the pipe is laid.

After placing a length of pipe in the trench, the spigot end shall be centered in the socket and the pipe forced home and aligned to gradient.

The pipe shall be secured in place with approved back fill material packed on both sides except at socket.

The socket end should face the upstream while laying the pipeline on level ground, when the pipeline runs uphill, the socket ends should face the up gradient. When the pipes run beneath the heavy loads, suitable, size of casing pipes or culverts may be provided to protect the casing of the pipe. High pressure mains need anchorage at dead ends and bends as appreciable thrust occurs which tend to cause draw and even blow out joints. Where thrust is appreciable concrete blocks should be installed at all points where movement may occur. Anchorages are necessary to resist the tendency of the pipes to pull apart at bends or other joints of unbalanced pressure, or when they are laid on steep gradients and the resistance of their joints to longitudinal or shear stresses is either exceeded or inadequate. Anchor or thrust blocks shall be designed in accordance with IS: 5330 – 1984.

Backfilling:-

Backfilling should closely follow jointing of the pipe so that the protective coating will not be subsequently damaged. Material harmful to the pipeline shall not be used for backfilling. Refilling shall be done in layers not exceeding 30 cm. Each layer shall be consolidated by watering, ramming, care being taken to prevent damage to the pipeline. The filling on the two sides of the pipeline shall be carried out simultaneously. Where timbers are placed under the pipeline to aid alignment, these timbers shall be removed before backfilling. For further precautions and use of material in backfilling, reference should be made to IS**:** 3114-1994.

03 Laying of Pipe above Ground;

The procedure for handling the pipes as described in and for lowering and assembling the pipes underground as described above should be followed for lifting and laying the pipes on supports or on ground. The pipeline may be allowed as to rest on ground if the soil is non-aggressive. The ground, however, be dressed to match the curvature of the pipe.

04 Road, rail and river crossings;-

The mode of laying the pipeline, crossing road, railway or river shall be determined so as to satisfy the requirement of the authority concerned.

05 Blank Flanges:-

Blank flanges shall be used at all ends left unattended at the temporary closure of work. Blank flanges may also be necessary for commissioning a section of pipeline or for testing the pipeline laid. For temporary closures, Non-pressure blank flanges at the pipe ends may be used. for pipes subject to pressures at the blank flanges should be suitably designed.

INSPECTION OF PIPE BEFORE LAYING;-

The pipes shall be inspected visually at the site before lying of pipe in the trench and the defects noticed any shall be repaired or rectified if in the opinion of Engineer-in-charge the defect is repairable. If the defect or damage is not repairable then the contractor shall replace the entire pipe with the new pipe.

The pipes and fitting shall be inspected for defects and be rung with a light hammer preferably while suspended, to detect cracks. Smearing the outside with chalk dust helps in the location of cracks. If doubt persists further confirmation may be obtained by pouring a little kerosene on the inside of the pipe at the suspected spot. If a crack is present the kerosene seeps through and appears on the outer surface. Any pipe found unsuitable after inspection before laying shall be rejected.

CIVIL WORKS:

All the allied civil works necessary for provided, laying, jointing, testing, commissioning of pipeline are the parts of this contract, therefore contractor shall design and carry out the necessary civil works such as thrust blocks, anchor blocks, supporting pillars, supporting bridges, culverts, waterways, chambers for appurtenances and necessary earth work. All the civil works shall be designed and carried out as per the relevant Indian Standard codes of practice. All the materials used for civil works should be of quality approved by Engineer-in-charge. Rejected material shall be removed from the site immediately at the cost of contractor.

TESTING OF MAINS:

Before putting it into commission, the pipeline shall be tested for the leakage. Each valve section of the pipe shall be slowly filled with clean water and all air shall be expelled from the pipeline through hydrants, air valves and blow-offs fixed on the pipeline. The pressure in the line should then be raised @ 0.1 N/mm² per minute and maintained by means of pump to the specified test pressure based on the elevation of the lowest point on the line or section under test. The field test pressure should not be less than the greatest of the following-

1.5 times the maximum sustained operating pressure

1.5 times the maximum pipeline static pressure

Sum of the maximum sustained operating pressure and the maximum surge pressure and Sum of the maximum pipeline static pressure and maximum surge pressure, subject to a maximum equal to the work test pressure for any pipe fitting incorporated. The field test pressure should wherever possible be not less than 2/3 work test pressure approximate to the class of pipe except in the case of spun iron pipes and should be applied and maintained for at least four hours. If the visual inspection satisfies that there is no leakage, the test can be passed. Where the field test pressure is less than the two-thirds the test pressure, the period of test should be least 24 hours. In case of Gravity pipes, maximum working pressure shall be 2/3 work test pressure. The test pressure of DI pipe shall be as per IS 8329-2000 with up to date amendments. If The pressure measurements are at the lowest points of the section, an allowance should be made for the static head between the lowest points and the points of measurement to ensure that the maximum pressure is not exceeded at the point. If a drop in pressure occurs, the quantity of water added in order to re-establish the test pressure should be carefully measured. This should not exceeded 0.1 lit per mm of pipe diameter per KM of pipeline per day each 30 m head of pressure applied. Under the test pressure no leak or sweating shall be visible at all section of pipes, fittings, valves & hydrants. Any defective pipes, fittings, valves or hydrants discovered in consequence of this pressure test shall be removed and replaced by sound material and the test shall be repeated until satisfactory to the Engineer-in-charge.

DISINFECTION OF MAIN BEFORE COMMISSIONING:-

Pipe lines carrying waters for drinking purpose shall be disinfected before commissioning as per IS**:** 5822-1994.

REMOVALS, RESTORATION AND MAINTENANCE OF PAVED FOOTPATHS, ETC. AFTER LAYING OF PIPE:

01 Allowable removal of pavement:

Pavement and road surfaces may be removed as a part of the trench excavation, and the amount removed shall depend upon the width of trench specified for the installation of the pipe and the width and length of the pavement area required to be removed for the installation of gate valves, specials, man holes or other structure. The width of pavement removed along the normal trench for the installation of gate valves, specials, manholes or other structures shall not exceed the maximum linear dimensions of such structures by more than 15cm. on each side. Wherever, in the opinion of authority existing conditions make it necessary or advisable to remove additional pavement, it shall be removed as directed by the authority.

02 Replacement of pavements and structure:-

All pavements, paved footpaths, cubing, gutters, shrubbery, fences, poles, sides or other property and surfaces structure removed or, disturbed as a part of the work shall be restored to a condition similar to that before it was, furnishing all labor and materials incidental thereto.

COMMISSIONING OF PIPE LINE AND TRIAL RUN:

After completing the job of laying and jointing of pipeline including testing, the pipeline shall be commissioned and trial run of the pipe line shall be taken. During the trial run the contractor shall depute the technical staff for its maintenance. Any defect, noticed during the trial run of the pipeline, should immediately be attended and rectified by the contractor free of cost.

SPARE PIPES-

Five spare pipes of each class & diameter along with one set of each valve and specials, of specified length shall be handed over extra while handing over the project to thepanchayat.

II. Survey, Investigation, design and construction of RCC Over Head Tank (OHT) of 250KL& 75 KL capacity with **18** m staging complete (turnkey job work) .

Construction of RCC Over Head Tank:-

Design, construction, testing and commissioning of RCC over head tank of **KL** (As per schedule enclosed) capacity over staging at Village **Sidhi** district of Madhya Pradesh including providing and fixing of double flanged C.I. pipes for inlet, outlet, Scour and overflow delivering up to 2.50 meters away from R.C.C. outer columns of reservoir, C.I. double flanged heavy duty specials and duck foot bends conforming to Is 1538:1993 and C.I. double flanged I.S.I. marked sluice valves (Class–II) etc. and providing and fixing of all accessories such as lightening conductor, water level indicator, R.C.C. stairs from ground level to tank floor level, steel ladders from balcony to roof and Aluminium ladder from roof to inside floor level of tank, ventilating cowls, manhole covers with frame and G.I. pipe railing with RCC post for stairs and balcony tank floor level all complete as per detailed specifications. Survey and investigation of soil will be done by the contractor and got tested from the reputed materials testing lab. Based on the bearing capacity of the soil, contractor will submit the design and drawing and take approval by the department.After the approval of design and drawing of the OHT by the department, contractor will start the work at site. Item of Construction of OHT included in the BOQ is the Lumpsum item (Turn key job) and contractor shall be fully responsible for its design life.

Detail of OHT

1. The overhead tank shall be supported on circular columns only and the top water container should be preferably cylindrical. Shaft for support shall not be permitted. The foundation, columns, bearings etc. shall be so designed and constructed so as to have a provision for the construction of a single story building between the G.L. bracing and first bracing with R.C.C. Roof and brick walls for store accommodation. The position of the bracing shall be so fixed, that the height of floor is approximately 3.5 M. and the top of ground level bracing is 0.6 M above general ground level to provide for plinth. The construction of room on the plinth of OHT is not included in the turn-key job but the foundation and all other members shall be designed and constructed taking into consideration this room load, so that this room may be constructed in future whenever required.

Detailed specification for item of OHT :-

- A cast iron suitably designed and painted grate of 20mm×20mm with frame shall be fixed in concrete over the supply outlet and scour outlet inside the water container to cover the entire opening when dia of pipe is more than 200 mm.
- The overflow outlet shall not be connected to any other pipe of the distribution system.
- The specification issued by the E-in-C PHED vide tech. Circular no. 236 Dt. 21.5.97 from S.No. 2.0 to 5.0 (2.0 to 2.8, 3.0, 4.0 to 4.4 and 5.5) shall be followed strictly for this work. All the specifications shall be rigidly followed.
- Protection work for drainage shall be carried out as part of this turnkey work. At G.L. cement concrete pavement shall be provided for the entire GL area which shall be extended 1.50 mts. beyond the outer edge of the columns of the tank on all side. The area shall be prepared by filling and compacting hard moorum in a depth of at least 20 cms for making sub base. If BC or other soil is there it shall be removed and replaced by hard moorum. A base course of minimum 10 cms thick M-10 concrete shall be given over this moorum base in a slope of 1:60 from the center and a minimum of 75 mm thick M-15 concrete with nominal reinforcement to the outside edge all around. A drain of 30 cms×25 cms section shall be details given shall also be done and a gate shall also be fixed as per specifications.

1 GENERAL:-

1.1.1 The work of construction of R.C.C. Over Head/Ground Service Reservoir involves specialized workmanship, hence requirements of higher standard than general concrete work is essential. The height of staging will be reckoned from an assumed ground level nearest to the site, i.e. the ground level at the site or road level whichever is higher shall be treated as the base level for determination of staging height.

1.2 The bidders submitting their offer for this item onturnkey basis. They will be required to submit detailed design, drawing and calculation within 15 days of agreement for approval by the department. The responsibility for design, construction structural stability and water tightness will, however rest solely with contractor and he shall have to make good, any damage or loss to the Government due to defect if any, of the above mentioned work. The contractor shall have to make the tank chlorine resistant as heavy dose of chlorination is expected to be given in water. Any change/modification in the submitted drawing or design suggested by the deptt. shall have to be carried out by the contractor without any change in the lump sum cost.

1.3 The offer shall include provision for 1.0 meter wide R.C.C. balcony at bottom slab level and railing to balcony, lightening conductor, water level indicator, 1.0 meter wide R.C.C. stairs form ground level to tank floor with railing, ladders and all pipes and fitting (including puddle collars up to and including duck foot bends and form duck foot bend up to 2.50 meters outside the supporting structures i.e. R.C.C. column including C.I. valves etc. including their painting and architectural treatment protection and drainage work and all as mentioned in this tender document.

1.4 A tentative trial pit section taken at site of construction is attached for guidance. The tenderer should himself verify this before submitting tender for the design of foundation of R.C.C. Over-Head/ground Service Reservoir. The contractor shall be required to conduct proper investigations with full field tests for finding bearing capacity & other details at his own cost. The investigation reports shall be furnished to the engineer-in-charge for verification and record. No payment shall be made to contractor for carrying out the test or on account of any variation in the soil bearing capacity that is indicated and change in design due to strata variation.

1.5 The contractor shall have to arrange himself the entire quantity of steel required for the completion of the work under contract, no steel shall be supplied by the department. No extension of time will be granted by the department for non availability or non procurement of steel or any other material in time or late supply of steel or for any other reasons what-so-ever.

1.6 The R.C.C. stairs of a 1.0 metre width from ground level to the gallery shall be provided.

1.7 G.I. pipe railing of 20 mm dia, medium class, in three rows both side of staircase shall be provided from GL to balcony for R.C.C. stairs, all around the gallery.

1.8 The Railing shall be provided as per point No. 11 as given below .

1.9 An Aluminium ladder shall be provided from the manhole to the inside floor of the tank as per norms of the department.

1.10 M.S. ladder, 600 mm wide, from gallery to the top of roof shall comprise of two stringers of size 50×50×5 mm and foot rests of two M.S. bars of 16 mm dia each at 300 mm c/c. the railing parallel to stringers shall be of 20 mm G.I. pipe medium class, in three rows connected to stringers by 50×50×5 mm angles at 1.50 metre c/c. This ladder shall start from the end of the entry, cut out on gallery. All iron works railing shall be applied with 2 coats of approved quality and make enamel paint over a primer red oxide paint coat.

1.11 To avoid any unauthorized person climbing the over head tank, the entry at the bottom of the stair case shall be closed with suitable arrangements consisting of one gate with locking arrangement of size 0.90m×2.0 mt to overfull width of stairs made of MS angle and plates with suitable MS angle iron posts for fixing the gate. The design of the gate shall be got approved by the PHED.

1.12 R.C.C. chamber cover shall be provided.

1.13 To avoid any accident at the time of cleaning or maintenance of the tank the opening of the out let and scour pipes shall be covered with CI grate as mentioned in this NIT, when dia of pipe is more than 200 mm .

2 WORKMANSHIP:-

2.1 The depth of excavation will generally be guided by the underground strata and the safe bearing capacity of the foundation soil and as directed by the Engineer-In-Charge. Strata chart of trial pit

section is made available just for guidance for the purpose of preliminary design consideration only. Safe B.C. shall have to be verified by contractor by actual site investigation at his own cost. Test results of soils, foundation shall be submitted to the PHED for approval, before start of work along with the detailed structural design. No payment shall be made to the contractor for carrying out these tests or on account of any variation in the soil bearing capacity and design change due to strata. No dewatering shall be payable under any circumstances whether natural, artificial or manmade.

2.2 **FILLING FOUNDATION WITH BED CONCRETE :** (Levelling course): The foundation shall be laid over bed concrete (i.e. leveling course) of at least 75 mm thick or more, with at least 1:3:6 (M-10) concrete with 40 mm gauge grade or the prescribed mix as per instruction of Engineer-In-Charge and as per relevant I.S. Code.

2.3 **REINFORCED CONCRETE WORK :** It shall be strictly as per IS 456-2000 and other relevantIS codes. The concrete mix and minimum Cement specified shall be rigidly followed. Where the concrete has not fully hardened all laitance shall be removed by scrubbing the wet surface with wire or bristle brushes, care being taken to avoid dislodgement of particle of aggregate. The surface shall be thoroughly wetted and all free water removed. The surface shall then be coated with neat cement grout. The first layer of concrete to be placed on this surface shall not exceed 15 cms in thickness, and shall be rammed against old work particular attention to be paid to corners and close spots. Concrete shall be thoroughly compacted and fully worked around the reinforcement around embedded fixtures and into corner of the form work.

2.4 **MEASURING :-** (Concrete Mix Proportioning) The quantity of cement shall be determined by weight. Ordinary Portland cement conforming to IS:8112-1989 shall weigh 50 Kg/bag. The quantities of fine and course aggregates shall be determined either by volume or by weight. The proportion of fine and course aggregate shall be in accordance to IS:456-2000.

2.5 **MIXING:-** Concrete shall always be mixed in a mechanical mixer. Mixing shall be continued till there is a uniform distribution of the ingredients the mass is uniform in colour and consistency, but in no case the mixing shall be done for less than two minutes.

2.6 **TRANSPORTION:** Concrete shall be handled from the place of mixing to the place of final deposit as rapidly as practicable by methods which will prevent segregation or loss of any ingredients and maintaining the required workability.

2.7 **PLACING AND COMPACTING:** The concrete shall be placed and compacted before setting commence and should not be subsequently disturbed. Methods of placing shall be such that there is no segregation concreting shall be carried out continuously up to construction joints, the position and arrangement of which shall be determined by the designer. When the work has to be resumed on swept clean, then roughly wetted and covered with a 12 mm layer of mortar which shall be freshly mixed and placed immediately before the placing of the concrete.

2.8 **MECHANICAL VIBRATION:** mechanical vibration for compacting concrete shall always be used and reduced water content should be adopted. Over vibration is harmful, and should be avoided, when –ever vibration has to be applied externally the design of form work and the disposition of vibrators should receive special consideration to ensure efficient compaction and to avoid surface blemishing.

2.9 **CURING:** The concrete shall be covered with a layer of old gunny or canvas or similar absorbent material and kept constantly wet for at-least twenty eight days from the days of placing of concrete.

2.10 All the iron duck foot bends puddle collers, bell mouths and other specials, shall be of class medium and as per I.S.S. pipes required for inlet, outlet, overflow and scour shall be of C.I.D.F. and shall be supplied and fixed in position by the contractor from desired inside level of the tank to duck foot bend, one meter below G.L and further providing and fixing all double flanged C.I. pipes and specials from duck foot bend on-ward up to 2.50 M outside the supporting structure of the tank (i.e. R.C.C. Column) shall also be supplied and fixed to the contractor including testing of the fittings and joints with cost of the materials and joints. All the fittings shall be as per I.S. Specifications.

2.11 The arrangements for inlet, outlet, overflow and scour pipes shall be such that all these pipes are independent of each other and each of these shall have bell mouths at their ends to be supplied by the contractor. The top of bell mouths of inlet shall be 15 cm above FTL of the tank. The top of bell mouth of the outlet pipe shall be 15 cm above floor of the tank.The bell mouth of scour

pipe shall be flushed with floor level. All these vertical CI Double Flanged pipes shall terminate with flanged duck foot bends bottom fixed one meter below ground level. Further C.I D.F. pipe shall be provided up to 2.50 M away the supporting structure of the tank. All these duck foot bends shall all be fixed with heavy class ISI marked sluice valves. The contract also includes providing and fixing of sluice valves, construction of valve chambers and providing R.C.C. Chamber covers. All the pipe and specials required for above shall be fixed during concreting. Specials which are to be embedded in concrete shall have collars at the centre of concrete thickness.

2.12 Details of various pipe sizes bell mouth, sluice valve are as follows :-

PIPE SPECIALS AND VALVES										
				Bell mouth enlarge diameter				Sluice valve		
Inlet pipe	Outlet pipe	Scour pipe	Over flow pipe	Inlet pipe	Outlet pipe	Scour pipe	Over flow pipe	Inlet pipe	Outlet pipe	Scour pipe
01. UP TO 100 KL										
100	100	80	100	100	100	80	100	100	100	80
02. ABOVE 100 KL TO 150 KL										
150	150	100	150	150	150	100	150	150	150	100
03. ABOVE 150 KL TO 200 KL										
150	200	100	150	150	200	100	150	150	200	100
04. ABOVE 200 KL TO 300 KL										
150	200	150	150	150	200	150	150	150	200	150
05. ABOVE 300 KL TO 450 KL										
200	250	200	150	200	250	200	150	200	250	200
06. ABOVE 400 KL TO 650 KL										
250	300	250	200	250	300	250	200	300	250	200

Note :- The top of the inlet / outlet scour and overflow pipe shall have bell mouth.

Following valves and special are to be supplied and fixed by the tenderers.

1. C.I. bell mouth of suitable for pipe. 4 Nos
2. C.I. puddle Collar suitable size for pipes. 4 Nos.
3. C.I. Duck foot bend of suitable size for Pipes. 4 Nos.
4. C.I. double flanged sluice valve of suitable size for Intel, Outlet and scour pipe of raiting PN-1.0 with operating wheel 4 Nos.
5. C.I D.F Distance piece pipe of suitable length and size to extend the pipes upto 2.50 mt. Beyond the outlet supporting column. 3 Nos.

2.13 The tank shall will have to be tested for the water tightness as per IS: 3370 and it shall be the responsibility of the contractor to make it water tight. Any defects shrinkage or other faults which may appear within 12 months from the completion of the tank arising out of defective or improper materials of workmanship are upon the direction of the Executive Engineer to be amended and made good by the contractor (s) at his/ their own cost and in case of default, the governor of M.P may recover from the contactor (s) the cost of making good the works.

The arrangements of water for construction and testing shall be done by the contractor at his own cost. For testing purposes, the contractor shall have to give a test of water tightness of reservoir to the entire satisfaction of the department. The responsibility of structural stability shall also rest solemnly with the contractor. The refund of earnest money and security deposit contemplated in the agreement shall be refunded only after expiry of twelve months after the satisfactory completion of the work.

2.14 Aluminium/copper Lightening conductor shall be provided & Fixed with proper earthing arrangements as per relevant I.S. specifications. The earthing plate shall be of copper.

2.15 Lightening conductor should be provided as per clause No 17 of this item .

2.16 Supplying and fixing copper earth plate 600×600mm×3mm size with copper nuts and bolts complete including digging pit of required size and filling it 10 kg of salt and 15 kg of charcoal etc. (For lightening conductor)–one no. including testing. Supplying and laying earth connection for the earthing with 25×3 mm Aluminium tape, jointing materials all complete for railing where ever necessary.

2.17 Water level indicator shall comprise of copper float, guide, pulleys with a pointer on the enamel painted indicator plate which shall be calibrated to read the depth of water in the tank in meters.

2.18 Painting by exterior water proof emulsion paint like Ace, Apex etc. on the tank shall be done only after the tank is successfully tested for water tightness. After a base coat, two coats of colour paint, to be approved by the PHED, shall be applied to the entire satisfaction of the deptt.

2.19 No charges for the plastering if required for proper finishing of the surface of structures shall be paid under any circumstances. Amount shall be deducted from the L.S. cost for improper finishing.

2.20 Construction Joints: Construction joints be treated in accordance with IS:456. The surface of already laid concrete be cleaned be water jet and cement slurry be applied. Cement mortar 10 mm. thick of the same proportion as in concrete be applied and then fresh concrete of the lift be laid. The form work must overlay 100 mm on the already laid concrete.

2.21 If a Dome is provided at the top, the thickness can be limited to 100 mm after proper designing. Rectangular / Square columns are not allowed. Circular shafts are also not allowed. In respect of horizontal braces, corners shall be chamfered by 40×40 mm.

2.22 The depth of footing on the face of column shall not be less than 1/3rd of the spread of footing from the face.

Minimum steel : Design requirement as set out in relevant codes in respect of steel shall be fully satisfied. However, following minimum steel shall be provided.		
a)	Vertical steel in columns	0.8% of cross sectional area actually required and 0.3% when section than actually required is provided.
b)	Horizontal link on columns	Not less than 8 mm. dia at 200 mm c/c or 10 mm dia not more than 300 mm c/c
c)	Exposed R.C.C. surface	On both faces when thickness is 150 mm or more. 2 kg/sqm in perpendiculardirection . The above requirement is satisfied if. 8 mm bars @ 200 mm /c/ or 10 mm bars @ 300 mm c/c are provided. Even if design steel is less than above, the above minimum shall be provided.
d)	Steel in tank	As per provision steel is I.S. 3370 subject to minimum as set out in (c) above.

Maximum Spacing Of Reinforcement:-

Maximum spacing of main reinforcement in slab or walls shall not be more than 150 mm center to center. The spacing or secondary bars, such as distribution steel or vertical bars in columns.

3. **SPECIFICATION OF MATERIALS FOR CONSTRUCTION:-**The material used for construction shall be governed by the provision of Part-IV of National Building Code of India and relevant-IS Codes of specifications with upto date amendments.

3.1 **BRICKS:** The bricks should be Chimney brick crushing strength not less than 25 kg/cm2 and water absorption shall not be more than 15% Bricks shall conform to IS 1077 with up to date amendments.

3.2 **SAND :** The sand should be as per IS 383/1970 (latest edition). The preferable sand shall be Narmada river sand. The sand for plaster shall be confirming IS 1542 (Latest edition).

3.3 **METAL :** It shall be confirming to IS 383/1970.

3.4 **STEEL FOR REINFORCEMENT:** Steel for reinforcement shall be confirming to BIS specification 1786/2008 with up to date amendments and BIS 1130/1966. All the steel 8 mm dia and above shall be cold steel twisted deformed bars Fe-415 or TMT steel. The contractor shall be required to produce the test certificate from manufacturer to the department before use of steel for the work. No untested steel will be allowed to be used in any circumstances. The department however reserves the rights to get the steel tested at the cost of contractor.

3.5 **CEMENT :** The cement to be used in work shall be 43/53 grade ordinary port-land or cement PPC confirming to BIS 8112/1989, 12269/1987 or IS:1489 or relevent IS code Ordinary Portland cement, PPC shall be tested for following test at contractor's cost.

For under water concreting, rapid hardening cement shall be used.

S.No.	Type of test		Frequency
a)	Test for initial and final setting time as per I.S. 3536-1966		One test for 50 Tones or part there of and every change of make.
b)	Test for determination of Compressive strength of cement as per IS 3536/1966.		One test for 50 Tones or part there of and every change of make.

3.6 **WATER:** Water for construction shall be as per IS 456 : 2000.

3.7 **CONCRETE :** In general concrete shall be designed as per IS 456:2000 latest addition and water-retaining structures shall be designed as per IS 3370 latest editions. All the components, which are in contact with water, shall be of minimum Grade M-30,. All other components not in contact with water shall be of minimum M-25 grade except otherwise mentioned. The cement content per cubic meter of concrete shall not be less than the provisions of IS 456:2000.

In general, the clear cover to reinforcement shall be as per IS 456:2000 provisions, but additional clear cover shall be provided on all water retaining faces of the structural members, as per the provisions of IS 3370.

The concrete shall be prepared as per mix design. All ingredients of concrete shall be weighed and mixed as per the mix design. Weigh batching may be converted into corresponding volume batching, if desired. All concrete shall be mixed by concrete mixer and compacted with concrete vibrator only.

All tests shall be carried- out by contractor at his own cost. During concreting, sample test cube shall be prepared as per the frequency prescribed in IS 456:2000. To assess the strength of cube immediately, accelerated curing testing may also be conducted as required by the Engineer-in-Charge. If the results of the tests are not conforming with the required standard and if the Engineer-in-Charge considers that the structural test is necessary, the same shall be carried-out by the contractor at this own cost. If the result of this comes again un-satisfactory then the contractor will be bound to dismantle and reconstruct the particular portion of work The formwork shall be of steel or fresh ply to get the smooth finish.

4.0 **Design criteria:**

(a) Foundation shall be designed as per S.B.C. of soil as ascertained by plate load test or any other standard test and other soil parameters.
(b) The following load and forces should be considered
(i) Dead Load
(ii) Live Load – static and dynamic load due to flow and falling of water
(iii) Load due to water
(iv) Wind pressure as per IS 875-1987

(v) Pressure due to Earthquake i.e. seismic force
(vi) Any other forces as required in the relevant I.S. Code.

(c) Construction joints

It should be as per clause No. 13.4 of IS 456.2000. Previously laid concrete layer should be first cleaned by water jet and then 10mm thick layer of cement mortar of same proportion should be laid before casting of next layer of concrete. Formwork should be 100mm below the previously laid concrete layer.

(d) **Steel:-** The minimum steel for design purpose shall be as per IS 456:2000 and 3370 (Part I to IV) with up to date amendments.

(e) **Type of steel :** It is desirable to use reinforcement cold twisted steel conforming to IS 1786-2008. TMT may also be used.

5.1 **Design of concrete mix –** It shall be done by the contractor at his own cost and the mix so designed shall be approved by Engineer-in-Charge within the limitations of parameters and other stipulation. Design mix shall be done as per standard code in practice and assumptions mentioned in clause No. 9.2 of I.S.456-2000.

5.2 **Production of concrete**

5.2.1 **Batching –** Batching shall be done as per clause No. 10.2 of IS 456-2000. The cement shall be mixed by weight and other constituent shall be preferably mixed by weight.

5.2.2 **Mixing –** Concrete shall be mixed in a mechanical mixer as per clause No. 10.3 of IS 456-2000. The mixer should be comply with IS 1791 and IS 12119.

5.2.3 **Form work –** The form work should be conforming clause No. 11 of IS 456-2000. The form work shall conform to the shape, lines and dimensions as shown on the drawings and so construction to remain sufficiently rigid during the placing and compaction of concrete and shall be sufficiently tight to prevent loss of liquid from concrete. Design, detailing etc as per IS 14687 shall be referred.

5.2.3.1 The form work shall be cleaned off. All rubbish particularly chippings, shaving and saw dust shall be removed from the interior of the forms before the concrete is placed and the form work in contact with the concrete shall be cleaned and thoroughly wetted or tested with an approved compositions.

5.2.3.2 Stripping Time – In no circumstances form work should be struck off until the concrete reaches the strength of at least twice the stress to which the concrete may be subjected at the time of stripping.

5.2.3.3 In normal circumstances i.e. ambient temperature above 15ºC, form work may be struck after expiry of the following periods as per clause No. 11.3 of IS 456-2000.

Vertical form of walls beams and columns 24 hours to 48 hours as may be decided by the Engineer-in-Charge.

Bottom of slabs upto 4.5m span - 7 days
Bottom of slabs over 4.5m span – 14 days
Bottom of beam upto 6m span – 14 days
Bottom of beam over 6m span – 21 days

The formwork should be left longer, as it would assist the curing. The number of props, their sizes and position shall be such as to be able to safely carry the full dead load of the slab, beam or arch as the case may be together with any live load likely to occur during further constructions.

5.3 Assembly of Reinforcement – It shall be as per clause No. 12 of IS 456-2000.

5.3.1 Reinforcement shall be bent and fixed in accordance with procedure specified in IS 2502. The high strength deformed steel bars should not be rebent or straightened without the approval of Engineer-in-Charge. Bar bending schedule shall be prepared for all reinforcing work.

5.3.2 Placing of reinforcement shall be done as per clause No. 12.3 of IS 456-2000. Spacers, cover blocks should be of concrete of same strength.

5.3.3 Welded joints or mechanical connection in reinforcement shall be used but in all cases of important connections, tests shall be made to prove that the joints are of the full strength of the bars connected. Welding of reinforcement shall be done in accordance with the recommendations of IS 2751 and IS 9417. It shall be done as per clause No. 12.4 of IS 456-2000.

5.3.4 **Transport**

After mixing concrete shall be transported to the form work as rapidly as possible by methods which prevent segregation on loss of any ingredients and maintaining the required workability. It shall be done as per clause No. 13 of 456-2000.

5.4 **Placing and compacting**

The concrete shall be placed and compacted before initial setting of concrete commences and should not be subsequently disturbed. The method of placing should be such that there should be no segregation and concreting shall be carried out continuously upto construction joints, the position and arrangement of which shall be determined by the designer and construction joints should comply with relevant IS 11817. When the work has to be resumed on surface, which has hardened, such surface shall be roughened. It shall be taken swept clean, then roughly wetted and covered with a 10 mm layer of mortar of same proportion which shall be freshly mixed and placed immediately before the placing of the concrete.

Where the concrete has not hardened, all loose material shall be removed by scrubbing the wet surface with wire of bristle brushes, care being taken to avoid dislodgement particle of aggregate. The surface shall be thoroughly wetted and all free water removed. The surface shall then be coated with neat cement grout. The first layer of concrete to be placed on this surface shall not exceed 15cm in thickness and shall be rammed against old work, particulars attention being paid to corners and close spots. Concrete should be thoroughly compacted and fully worked around the reinforcement, around embedded fixtures and into corners of the formwork.

5.5 **Mechanical Vibration –** Concrete shall be compacted by mechanical vibrators complying with, over vibration and under vibration are harmful and should be avoided and vibration of very wet mixes should be avoided. It shall also comply the clause No. 13.3 of IS 456-2000.

5.6 **Curing –** The concrete shall be covered with a layer of old gunny bags of canvass or similar absorbent material and kept constantly wet for the atleast seven days from the date of placing of concrete in case of O.P.C. Curing should be done with the help of pump. Curing shall be completed as per the provision under clause No. 13.5 of IS 456-2000.

5.7 **TESTS : -** All tests as per specified in the IS specification code and required for the execution of the work shall be carried out by the contractor at his own cost as per instructions of Engineer-in-charge. Few number of test are given below:-

S.No.	Lab Material		Methods
1.	Coarse & fine sand	I – Gradation	IS 2386 (Part I)
		II- Deleterious Constituents	IS-2386 (Part II)
		III. Fineness modulus	IS 2386
		IV. Silt content	IS 2386
		V. Bulking	IS 2386
2.	Coarse aggregate	I - Los-Angles abrasive value	IS-2386 (Pt.IV)
		II. Aggregate Impact value	IS-2386
		III. Gradation Chemical test	IS 2386
3.	Water	Chemical test	IS 456-2000
4.	Concrete	I. Slump test	IS 1199
		II. Compressive strength	IS 456-2000, IS 516 & IS 9103
5.	Steel	I. Tensile strength	IS 1786
		II. 0.20% proof stress/yield stress	IS 1786

S.No.	Lab Material		Methods
		III. Elongation percentage	IS 1786
6.	Cement	I. Initial & final setting II. Compressive strength	IS 3536-1996

5.8 **Field Test :** The contractor shall provide all equipments and make all arrangements for field test to exercise proper quality control over works especially for tests as mentioned.

5.8.1 **Test for compressive strength of concrete :** Test specimens should be cubical in shape shall be 15x15x15cm. The mould shall be of metal, preferably steel or cast iron and strong enough to prevent distortion. The base plate shall be such dimension as to support the mould during the filling without leakage and it shall be preferably attached to the mould by springs of screws.

i. The tapping bar shall be steel bar 16mm in diameter 0.6m long and bulled pointerat the lower end.

ii. The test specimen shall be made as soon as practicable after mixing and in such a way as to produce full compaction of the concrete with neither segregation nor excess laitance. The concrete shall be filled into the mould in layers approximately 6cm deep. In placing each scoop full of concrete the scoop shall be moved around the top edge of the mould as the concrete sides from it in order to ensure symmetrical distribution of the concrete within the mould. Each layer has been compacted, the surface on the concreting shall be finished in level with a top of the mould, using trowel and covered with a glass or metal plate to prevent evaporation.

iii. The mould should be kept cured in same condition and place as that of part of structure for which test specimens have been taken.

6.0

7.0

8.0 Acceptance criteria

The concrete can be accepted if it satisfied clause No. 16.1 of compressive strength and clause No. 16.3, 16.4, 16.5 of quality of concrete of I.S. 456-2000.

9.0 Inspection & testing of concrete structure

9.1.1 In order to ensure that the construction complies with the design and all the structural requirement, clause No. 17 of IS 456-2000 shall be followed. It should also be noticed that during construction the settlement of sump due to self weight during construction should be noticed by proper procedure.

9.2 **Water Tightness Test :** After the completion of structure it shall be tested for water tightness. Initially the structure shall be filled gradually to ensure uniform settlement all over the area. The full supply should reach in a period of not less than 72 hours. At the time of testing verticality should be checked by theodolite as per IS 3370 (part I general requirement) code of practice for concrete structures for the storage of liquids specifies water tightness test at full supply level.

After seven days period for observation after filling with water the external face should not show any sign of leakage and remain apparently dry.

9.3 The water for testing and pump for lifting water shall be arranged by the contractor at his own cost.

9.4 The contractor shall give the test for water tightness to the entire satisfaction of the department. The responsibility of structural stability shall solely be rest on the contractor.

10 If under unavoidable circumstances or for reason beyond control of the department, any site of construction of different components is required to be changed/shifted the contractor shall have to take up construction at alternate site or if design change due to any reason, the contractor shall not make any claim on this accounts.

11 **Railing:-**Wherever railing is to be provided it shall consist of 1.20 M high R.C.C. post of 100 mm dia. Posts at 1.50 M c/c, embedded /welded with already casted reinforced cement concrete with 3 rows of 20 mm dia. Medium class G.I. pipes railing both side of staircase.

12 **General Construction :** If not stated, otherwise, as per the directions of Engineer-in-Charge, wherever required the general RCC work shall be carried out in M-25 grade concrete and water retaining structure shall be in R.C.C. in M- 30 grade concrete, all brickwork shall be carried out in well burnt chimney brick crushing strength not less than 25 Kg/cm2 and water absorption not more 15%, in cement mortar 1:5 and cement plaster 1:5 and the thickness of brick wall shall not be less than 20 cm in any case, the flooring shall be 30 mm thick Kota stone with dado / skirting over base of 20 mm thick cement mortar in 1:4 i/c rubbing, polishing & grinding complete laid over base concrete in M-7.5 grade,

13. **Ladder:** If not stated, otherwise, as per the directions of Engineer-in-Charge, wherever required the ladder shall be of mild steel, consisting of railing made from 50 X 50 X 5 mm angle medium class with 2- 16 mm round bar and steps minimum 600 mm wide, made of ISA 30 X 30 X 5 mm frame with 30 X 5 mm flat duly anchored with suitable holdfast arrangement and painting etc. complete.

14. **Use of excavated hard rock:-** Rubble available from excavation of hard rock, shall be the property of the contractor, for which recovery of Rs. 150/- per cum of the quantity of hard rock excavated shall be made from his running account bills.

15. **DESIGN FOR SEISMIC FORCES:** All the structures shall be designed for seismic loads that may come on the structure during its lifetime and the design of structure shall be conforming to IS 1893-2002 'Criteria for earthquake resistance design of structures'.

16. In the tender the term Owner, PHED and Department have been used synonymously. The term Contract Document, Contract Specifications, tender Specifications have been used synonymously.

17. **LIGHTENING CONDUCTOR:-**The arrangement for lightening protective system for protection of all the structures should be made as per IS:2309–1969 Code revised up to date. The earthing plate shall be copper 600X600 mm size. The Lightening protective system should be designed, installed with aluminium earthing strip of 25X3 mm and arrestor should be tested as per this code.

(IV) Survey, Investigation, design and construction of sumpwell.

R.C.C under ground sump well :- Design, construction, testing and commissioning of one no. R.C.C under ground sump well of capacity of **KL** at village distt.Sidhi of Madhya Pradesh including providing and fixing of G.I. pipes for connecting Scour and delivery pipe line and providing and fixing of all accessories such as Aluminium ladder from inspection chember to floor of the sumpwell, manhole covers.

(i) The sump well shall be designed and constructed in M-30 grade of concrete.

(ii) The bottom slab of sump well shall not be placed on BC soil, soil stabilization shall be done in such case . the minimum free board shall be 200 mm.

(iii) The sump well shall be 500 mm above GL.

(iv) The minimum thickness of RCC wall and base of sump shall be 150 mm.

(v) Two opening of 200 mm dia for suction pipe of pump and delivery pipe shall be provided and one opening of 750X750 mm with suitable MS Angle frame and MS gate of minimum 3mm thickness GI sheet for inspection shall also be provided on the floor slab.

Survey and investigation of soil will be done by the contractor and got tested from the reputed testing lab. Based on the bearing capacity of the soil, contractor will submit the design and drawing. After the approval of design and drawing of the sumpwell by the department, contractor will start the work at site. Item of Construction of sumpwell included in the BOQ is the Lumpsum item and contractor shall be fully responsible for its design life. RCC work of sump well shall be carried out as per IS 456:2000 and other releveant IS codes.

(V) TECHNICAL SPECIFICATION FOR HOUSE HOLD SERVICE CONNECTION.

Household Service Connections on HDPE Pipes:-

As per BOQ item and their specifications.

(VI) SPECIFICATION FOR ELECTRIC CONNECTION WORK :-

Specifications SOR of MPPKVVCo. Limited for electric work is to be followed.

Extension of electric power line connection at tubewells/sumpwelland other connection at sump well (If required) i/c supply and installation of transformer (if Required). The work also includes taking license, getting the drawings approved from the MPVVCo. Electrical safety department and other such agencies where ever required. The work also includes testing at the place of manufacture by a third party as approved by the Employer/MPVVCo. at contractor's cost.

(VII) TECHNICAL SPECIFICATION FOR PUMP HOUSE

(A)Supply and installation of prefabricated cement fiber readymade portable pump house size 1.8m x 1.2m x 2.1 m ht.

1. Supply and installation of prefabricated cement fiber readymade portable pump house size 1.8m x 1.2m x 2.1 m ht.(max.)
2. Foundation pedestals (4 nos. minimum) grouted in cement concrete 1:2:4 minimum 0.45 m below G.L.
3. Minimum plinth 150 mm above G.L.
4. M.S. angle iron frame work with pedestals, tie-members , trusses, purlins etc. All M.S./ steel members shall be fixed using appropriate nut-bolts and hing joints.
5. The fiber cement/foam concrete (density 600 to 1000 kg/m3) wall pannels shall be minimum 50 mm. A back light board (size 60 cm x 60 cm) shall be provided on the wall to installed starter, fuse box etc.
6. Pump house roof slope of 15cm shall be of angle iron trusses and purlins and minimum 0.5mm thick PPGI Sheet.
7. Minimum 15 mm thick flooring of standard fiber cement board shall be provided, MOC density not less than 1200kg/m3
8. Door shall be of 22 gauge M.S. Sheet minimum size 2.04x0.6m ht. and window shall be minimum 0.6m x 0.3m size (of M.S.angle frame & bar grills.
9. All exposed M.S. members shall be painted with enamel paint over a priming coat of redoxide primer.
10. All required components of pump house shall be transported to the site by the supplier making his own arrangements. Installation work shall be done by the supplier using all good practices of construction and fabrication at the site in the specified village, including transportation and all required labour work, consumables etc to complete the installation of pump house at the specified site. An appropriate size hole/duct shall be provided in the floor for electric cable access from tube well to pump house.

(B) Specifications for mini pump house near Source (As applicable):-

Supply & errection of ready made mini pump house (control pannel box) GI sheet of 18 gauge of size 90cmx90cmx60cm with 40x40x5mm angle Iron frame to fix it 200 mm below ground level with hold fasts grouted in foundation and 300mm above ground level for clearance suitable for fixing of conrol pannel, fuse unit, main switch etc. as per aproved specification. Ammendment no. 33 dt 07/02/2017Item.no.17.13

(VIII) Installation of dry-run sensor.

As mentioned in BOQ and approved by Engineer in charge

(IX) ~~Installation of auto level controller for OHT connected to motor pump.~~

~~**As mentioned in BOQ and approved by Engineer in charge**~~

(x) **Specifications for ELECTROCHLORINATOR**

ELECTROCHLORINATION PROCESS:-

- Electro chlorination is the name given to process whereby an electrical current is used to convert sodium chloride solution to sodium hypochlorite or chlorine.

- In practice a number of electrodes are normally connected together to form an electrolyser assembly.
- Brine solution passes through the Our electrolyser cells where it is electrochemically transformed into sodium hypochlorite (NaOCl).
- The overall reaction, sustained by electrical energy, is as follows:
- 2NaCl (salt) + H2O (water) + Energy = NaOCl (hypo) + NaCl (salt) + H2 (hydrogen)

Automatic EC 10000 Liter Per Hour		
1	Capacity	10000 LPH
2	Hypo Output Gm/Hr	10 gm/hr
3	Power Supply	12V 4 Amp
4	Rated DC Amp Output	4A
5	Expected Operating Amp	3.8A
6	Designed Hypo strenght Gm/Ltr	6
7	Reference Cell	1
8	Microprocessor	1
9	Dosing Pump	6 lph 5.5Kg/cm2 pressure
10	Brine Pump flow Ltr/min	5-10 lpm
11	Hypo pump flow ltr/min	9-14 lpm
12	No of cell	1
13	Volume salt tank	100 ltr
14	Hypo storage tank	25 ltr

(x) Successful Trail-Run:-

After completion of all works ,testing/commissioning of pipe water supply scheme, contractor shall complete successful trail-run of scheme for 90 days

COMPLETION OF WORK:-

The work shall be deemed to be successfully complete as per the contract agreement only after a certificate is issued to this effect by the Engineer-in-charge of the work, after successful completion of the scheme.

Annexure – F

(See clause 3 of Section 2 -ITB)

Procedure for participation in e-tendering

1. Registration of bidders on e-tendering System:

All the PWD registered bidders are to be registered themselves on the new e-procurement portal https://www.mpetenders.gov.in. For more details may contact through email id **support-eproc(at)nic(dot)in,** helpdesk phone numbers are available on website.

2. Digital Certificate:

The bids submitted online should be signed electronically with a Class II Digital Certificate to establish the identity of the bidder submitting the bid online. The bidders may obtain Class II Digital Certificate issued by an approved Certifying Authority authorized by the Controller of Certifying Authorities, Government of India. A Class II Digital Certificate is issued upon receipt of mandatory identity proofs along with an application. Only upon the receipt of the required documents, a Digital Certificate can be issued.For details please visit **cca.gov.in**

Note:

i. It may take upto 7 working days for issuance of Class II Digital Certificate; hence the bidders are advised to obtain the certificate at the earliest. Those bidders who already have valid Class II Digital Certificate need not to obtain another Digital Certificate for the same.

The bidders may obtain more information and the Application Form required to be submitted for the issuance of Digital Certificate from the **cca.gov.in.**

ii. Bids can be submitted till submission end date. Bidder will require digital signature while bid submission.

The digital certificate issued to the Authorized User of a Partnership firm / Private Limited Company / Public Limited Company and used for online biding will be considered as equivalent to a no-objection certificate / power of attorney to that user.

In case of Partnership firm, majority of the partners have to authorize a specific individual through Authority Letter signed by majority of the partners of the firm.

In case of Private Limited Company, Public Limited Company, the Managing Director has to authorize a specific individual through Authority Letter. Unless the certificate is revoked, it will be assumed to represent adequate authority of the specific individual to bid on behalf of the organization for online bids as per Information Technology Act 2000. This Authorized User will be required to obtain a Digital Certificate. The Digital Signature executed through the use of Digital Certificate of this Authorized User will be binding on the firm. It shall be the responsibility of Management / Partners of the concerned firm to

inform the Certifying Authority, if the Authorized User changes, and apply for a fresh Digital Certificate for the new Authorized User.

3. Set Up of Bidder's Computer System:

In order for a bidder to operate on the e-tendering System, the Computer System of the bidder is required to be set up for Operating System, Internet Connectivity, Utilities, Fonts, etc. The details are available at https://www.mpetenders.gov.in

4. Key Dates:

The bidders are strictly advised to follow the time schedule (Key Dates) of the bid on their side for tasks and responsibilities to participate in the bid, as all the stages of each bid are locked before the start time and date and after the end time and date for the relevant stage of the bid as set by the Department.

5. PREPARATION AND SUBMISSION OF BIDS:

The bidders have to prepare their bids online, encrypt their Bid Data in the Bid forms and submit Bid of all the envelopes and documents related to the Bid required to be uploaded (of all the envelopes) as per the time schedule mentioned in the key dates of the Notice Inviting e-Tenders after signing of the same by the Digital Signature of their authorized representative.

6. Purchase of Bid Document

The Bid Document is available free of cost for study and the interested /participating bidders shall purchase the Document online (through the e- payment gateway). For purchasing of the bid document bidders have to pay Service Charge online ONLY which is Rs. [as per Bid Data Sheet]. Cost of bid document is separately mentioned in the Detailed NIT. The Bid Document shall be available for purchase to concerned eligible bidders immediately after online release of the bids and up to scheduled time and date as set in the key dates.

The payment for the cost of bid document shall be made online through Debit/Credit Card, Net banking or NeFT Challan through the payment gateway provided on the portal.

7. Withdrawal, Substitutation and Modification of Bid

Bidder can withdraw and modify the bid till bid submission end date.

Annexure – G
(See clause 4 of Section 2 -ITB)

JOINT VENTURE (J.V.)

If J.V. is allowed following conditions and requirements must be fulfilled –

1. Bids submitted by a joint venture[1] of two or more firms as partners shall comply with the following requirements:
   a. one of the partners shall be nominated as being Lead Partner, and this authorization shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the partners;
   b. the bid and, in case of a successful bid, the Agreement, shall be signed so as to be legally binding on all partners;
   c. the partner in charge[2] shall be authorized to incur liabilities and receive instructions for and on behalf of any and all partners of the joint venture and the entire execution of the contract, including payment, shall be done exclusively with the partner in charge;
   d. all partners of the joint venture shall be liable jointly and severally for the execution of the contract in accordance with the contract terms, and a statement to this effect shall be included in the authorization mentioned under [c] above, as well as in the bid and in the Agreement [in case of a successful bid];
   e. The joint venture agreement should indicate precisely the role of all members of JV in respect of planning, design, construction equipment, key personnel, work execution, and financing of the project[3]. All members of JV[4] should have active participation in execution during the currency of the contract. This should not be varied/modified subsequently without prior approval of the employer;
   f. The joint venture agreement should be registered[5], so as to be legally valid and binding on all partners; and
   g. a copy of the Joint Venture Agreement entered into by the partners shall be submitted with the bid[6].
2. The figures for each of the partners of a joint venture shall be added together to determine the Bidder's compliance with the minimum qualifying criteria required for the bid. All the partners collectively must meet the criteria specified in full. Failure to comply with this requirement will result in rejection of the joint venture's bid.
3. The performance security[7] of a Joint Venture shall be in the name of the partner **Lead Partner/joint venture.**
4. Attach the power of attorney[8] of the partners authorizing the Bid signatory(ies) on behalf of the joint venture
5. Attach the agreement among all partners of the joint venture [and which is legally binding on all partners], which shows the requirements as indicated in the Instructions to Bidders'.
6. Furnish details of participation proposed in the joint venture as below:

DETAILS OF PARTICIPATION IN THE JOINT VENTURE

PARTICIPATION DETAILS	FIRM 'A' (Lead Partner)	FIRM 'B'	FIRM 'C'
Financial			
Name of the Bankers(s)			
Planning			
Construction Equipment			
Key Personnel			
Execution of Work (Give details on contribution of each)			

---

1. **Joint Venture is an arrangement in which two or more parties under an agreement for the purpose of executing a specific task/project and all parties shall be jointly and severally responsible to incur all the liabilities under the task/project, if awarded.**
2. **Partner in Charge – i.e. Lead partner.**
3. **This agreement shall also mention the NIT No./System I.D., Name of Work, Name of Joint Venture Firm, lead partner and other partners.**
4. **The lead partner and the other partners shall have minimum 51% and 20% stake respectively in the Joint Venture.**
5. **The joint venture agreement should be made on Rs. 1000/- Non Judicial Stamp Paper, duly Notarized/registered. Each partner of the joint venture shall be individually registered in the appropriate class required for participation in the tender or if eligible for registration, can also participate after having applied for registration in appropriate class.**
6. **The joint venture agreement entered into by the partners shall be submitted originally in envelope A and should also be uploaded online (scanned copy) with the bid.**
7. **The Earnest Money Deposit and Performance Security of the joint venture shall be drawn in favour of the concerned Executive Engineer and on Account of the partner – i.e. Lead partner/joint venture.**
8. **Power of Attorney shall be prepared separately on Rs. 500/- Non Judicial Stamp Paper, duly Notarized and should be submitted originally in Envelope A (and uploaded online scanned copy) alongwith joint venture agreement.**

Format: H
(See clause 12 of Section 2–ITB &
clause 4 of GCC)

ORGANIZATIONAL DETAILS

(To be enclosed with technical proposal)

S. No.	Particulars	Details
1.	Registration number issued by Centralized Registration System of Govt. of M.P. or proof of application for registration	(if applicable,Scanned copy of proof of application for registration to be uploaded)
2	Valid Registration of bidder in appropriate class through Centralized Registration of Govt. of MP	Registration No. ..... Date..... (Scanned copy of Registration to be uploaded)
3.	Name of Organization/ Individual/Proprietary Firm/Partnership Firm	
4.	Entity of Organization Individual/ Proprietary Firm/ Partnership Firm (Registered under Partnership Act)/ Limited Company (Registered under theCompanies Act–1956)/ Corporation/ Joint venture	
5.	Address of Communication	
6.	Telephone Number with STD Code	
7.	Fax Number with STD Code	
8.	Mobile Number	
9.	E-mail Address for all communications	
	Details of Authorized Representative	
10.	Name	
11.	Designation	
12.	Postal Address	
13.	Telephone Number with STD Code	
14.	Fax Number with STD Code	
15.	Mobile Number	
16.	E-mail Address	

Note: In case of partnership firm and limited company certified copy of partnership deed/ Articles of Association and Memorandum of Association alongwith registration certificate of the company shall have to be enclosed.

Signature of Bidder with Seal
Date: _____

Annexure – I

(See clause 14 of Section 2 -ITB)

Envelope – A

Technical Proposal shall comprise the following documents:

S No	Particulars	Details to be submitted
1	Experience – Financial &Physical	Annexure –I (Format: I-1)
~~2~~	~~Annual Turnover~~	~~Annexure –I (Format: I-2)~~
3	List of technical personnel for the key positions	Annexure –I (Format: I-3)
4	List of Key equipments/ machines for quality control labs	Annexure –I (Format: I-4)
5	List of Key equipments/ machines for construction work	Annexure –I (Format: I-5)

Note:

1.Technical Proposal should be uploaded duly page numbered and indexed.

2.Technical Proposal uploaded otherwise will not be considered.

परिशिष्ट – ब

रूपये 2 करोड़ तक की निविदाओं हेतु

Format: I-1

(See clause 14 of Section 2 -ITB)

FINANCIAL & PHYSICAL EXPERIENCE DETAILS

The bidder should have:

A. Financial

Nil

B. Physical Requirement:

No Pre-qualification is required, but if the NIT has the work of construction of Intake well, Anicut, Treatment Plant and over Head Tank Then Pre-qulification will be required. The bidder should have executed similar items of work during the **Last Five Financial Years**, Which should individually not be less than 33%of the quantity/capacity of the items included in the BOQ.

Execution of similar items of work during the **last 05 financial years** should not be less than the minimum physical requirement fixed for the work.

S o	Particulars	Actual Quantity Executed (To be filled in by the contractor)				
		Year – 1	Year – 2	Year – 3	Year – 4	Year – 5
1	Physical qualification required	Yes				
	Constructed RCC Over Head Tanks (capacity not less than 33% of propsed OHT)					

Note:

1. Certificates duly signed by the employer not below the rank of Executive Engineer shall be enclosed for the actual quantity executed during the **last 05 financial years.**
2. Similar works: The similarity shall be based on the physical size, complexity, methods technology or other characteristics of main items of work viz. earth work, cement concrete, Reinforced cement concrete, brick masonry, stone masonry etc.

परिशिष्ट – इ

रूपये 2 करोड़ से अधिक की निविदाओं हेतु

Format: I-1

(See clause 14 of Section 2 -ITB)

FINANCIAL & PHYSICAL EXPERIENCE DETAILS

A. Financial Requirement:

Average annual turnover of the bidder during the las 3 financial years should not be less than 33% of the Probable Amount of Contract (PAC)

To be filled in by the contractor:

I. Details of successfully executed similar works shall be furnished in the following format.

II. Certificate duly signed by the employer not below the rank of Executive Engineer shall also be enclosed for each executed similar work.

Agreement number & date	Name of work	Date of Work order	Date of completion		Amount of Contranct				Employear,s nmae and Address
			AS per Agreement	Actual date of complition	Year -I	Year -II	Year -III	Total	

Existing commitments-(Value of "C" for bid capacity formula)

Agreement number & date	Name of work	Date of Work order	Date of completion	Amount of Contranct	Amount of balance work	Employear,s nmae and Address

B. Physical Requirement:

Exsecution of similar items of work during the last 3 financial years should not be less than the minimum physical requirement fixed for the work.

Execution of similar items of work during the **last 03 financial years** should not be less than the minimum physical requirement fixed for the work.

S No	Particulars	Actual Quantity Executed (To be filled in by the contractor)		
		Year – 1	Year – 2	Year – 3
1	Physical qualification required	Yes		
		-	-	-

Note:

1. Certificates duly signed by the employer not below the rank of Executive Engineer shall be enclosed for the actual quantity executed during the **last 03 financial years**.

2. Similar works: The similarity shall be based on the physical size, complexity, methods technology or other characteristics of main items of work viz. earth work, cement concrete, Reinforced cement concrete, brick masonry, stone masonry etc.

रूपये 2 करोड़ तक की निविदाओं हेतु

~~Format: I -2~~
~~(See clause 14 of Section 2- ITB)~~

~~ANNUAL TURN OVER~~

~~Requirement:~~

~~Average annual construction turnover on the construction works not less than 50% of the probable amount of contract during the last 3 financial years;~~

~~To be filled in by the contractor:~~

~~Financial Year~~	~~Payments received for contracts in progress or completed~~
~~1~~	
~~2~~	~~-~~
~~3~~	~~-~~

~~Note:~~

~~i. Annual turnover of construction should be certified by the Chartered Accountant.~~
~~ii. Audited balance sheet including all related notes, and income statements for the above financial years to be enclosed.~~

~~Not Applicable~~

~~id Capacity~~

~~Applicants who meet the minimum qualifying criteria in the evaluation as stated above are to be evaluated further for bid capacity as under:~~

~~Bid Capacity = (1.5 A X B) - C~~

~~Where~~

~~A = Maximum value of civil engineering works executed in any one year during the last three year (10% weightage per year shall be given to bring the value of work executed at present price level)~~
~~B = Proposed contract period* in years.~~
~~C = Amount of work in hand at present.~~

~~* If the contract has separate construction and maintenance periods, then the contract period shall be taken as the construction period, subject to a minimum of 1 year.~~

रूपये 2 करोड़ से अधिक की निविदाओं हेतु

Format: I -2

(See clause 14 of Section 2 -ITB)

ANNUAL TURN OVER

Requirement:

Average annual turnover of the firm should not be less than 33% of the probable amount of contract during the last 3 financial years;

To be filled in by the contractor:

Financial Year	Turn Over
1	
2	
3	

Note:

Audited balance sheet including all related notes, and Income statements du Charted Accountant for the above financial years to be enclosed.

Bid Capacity

Applicants who meet the minimum qualifying criteria in the evaluation as stated above are to be evaluated further for bid capacity as under:

Bid Capacity = (2.0 A X B) - C

Where

A = Maximum turnover in any one year during the last 3 financial (10% weightage per year shall be given to bring the value of work executed at present price level)

B = Proposed contract period* in years.

C = Amount of work in hand at present.

* If the contract period is less than 1 year, then for the purpose of calculating bid capacity, the contract period shall be taken as 1 year

Format: I -3

(See clause 14 of Section 2 –ITB&

Clause 6 of GCC)

List Of Technical Personnel For The Key Positions

Minimum requirement						Available with the bidder						
Key Position	Minimum requirement	Qualification	Age	Similar work experience	Total Work experience	S. No.	Name of personnel	Key Position	Minimum requirement	Qualification	Age	Similar work experience	Total Work experience
As per provisions in works department manual / circulars													

Format: I -4

(See clause 14 of Section 2 -ITB)

List of Key Equipments/ Machines For Quality Control Labs

Minimum requirement			Available with the bidder	
S.No.	**Name of Equipment/ Machinery**	**Quantity**	**Name of Equipment/ Machinery**	**Quantity**
As per provisions in works department manual / circulars				

Format: I -5

(See clause 14 of Section 2 -ITB)

List of Key Equipments/ Machines for Construction Work

Minimum requirement			Available with the bidder	
S.No.	**Name of Equipment/ Machinery**	**Quantity**	**Name of Equipment/ Machinery**	**Quantity**
As per provisions in works department manual / circulars				

Annexure – J
(See clause 14 of Section 2 -ITB)

FINANCIAL BID
(To be Contained in Envelope-C)

NAME OF WORK :-

Construction and existing of Piped Water Supply Scheme at Village **–** Construction and existing of Piped Water Supply Scheme **Balance Work of Retrofitting P.W.S.S. Village Bamhni and Semarhiya under Jal Jeevan Mission (JJM) block sidhi** Distt. Sidhi based on Tube wells including installation of electric submersible/ centrifugal water motor pump, laying & jointing of rising main and distribution pipe line system, household tap connections, electric power connections at Tube wells including cost of all material & labour with 90 Days Trial Run trial after successful completion work work under Jal Jeevan Mission (JJM)

I/We hereby bid for the execution of the above work within the time specified at the rate (in figures) _____ (in words) _____ percent below/ above or at par based on the Bill of Quantities and item wise rates given therein in all respects and in accordance with the specifications, designs, drawings and instructions in writing in all respects in accordance 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 and plant conditions effecting accommodation and movement of labor etc. required for the satisfactory execution of contract.

Should this bid be accepted, I/We hereby agree to abide by and fulfill all the terms and provisions of the said conditions of contract annexed hereto so far as applicable, or in default thereof to forfeit and pay to the Governor of Madhya Pradesh or his successors in office the sums of money mentioned in the said conditions.

Note:

i. Only one rate of percentage above or below or at par based on the Bill of Quantities and item wise rates given therein shall be quoted.

ii. Percentage shall be quoted in figures as well as in words. If any difference in figures and words is found lower of the two shall be taken as valid and correct rate. If the bidder is not ready to accept such valid and correct rate and declines to furnish performance security and sign the agreement his earnest money deposit shall be forfeited.

iii. In case the percentage "above" or "below" is not given by a bidder, his bid shall be treated as non-responsive.

iv. All duties, taxes, and other levies payable by the bidder shall be included in the percentage quoted by the bidder but exclusive of Goods and Service Tax (G.S.T.) to be levied on works/service contracts.

Signature of Bidder
Name of Bidder

The above bid is hereby accepted by me on behalf of the Governor of Madhya Pradesh dated the _____ day of _____ 20_____

Signature of Officer by whom accepted

Annexure – K

(See clause 15 of Section 2 -ITB)

MATERIALS TO BE ISSUED BY THE DEPARTMENT

Sno	Name of material	Rate (Issue rate)	Unit	Remarks
----NIL----				

Annexure – L

(See clause 21 of Section 2 -ITB)

LETTER OF ACCEPTANCE (LOA)

No. _____ Dated: _____

To,

M/s. _____
(Name and address of the contractor)

Subject: _____
(Name of the work as appearing in the bid for the work)

Dear Sir (s),

Your bid for the work mentioned above has been accepted on behalf of the Governor of Madhya Pradesh at your bided percentage _____ below/ above or at par the Bill of Quantities and item wise rates given therein.

You are requested to submit within 15 (Fifteen) days from the date of issue of thisletter:

a. the performance security/ performance guarantee of Rs. _____ (in figures) (Rupees _____ in words only). The performance security shall be in the shape of term deposit receipt/ bank guarantee of any nationalized / schedule commercial bank valid up to three months after the expiry of defects liability period.

b. Sign the contract agreement.

Please note that the time allowed for carrying out the work as entered in the bid is_____ months including/ excluding rainy season, shall be reckoned from the date of signing the contract agreement.

Signing the contract agreement shall be reckoned as intimation to commencement of work and no separate letter for commencement of work is required. Therefore, after signing of the agreement, you are directed to contact the Engineer-in-charge for taking the possession of site and necessary instructions to start the work.

Yours Faithfully

Executive Engineer
PHE Division, Sidhi

Annexure – M
(See clause 22 of Section 2 -ITB)

PERFORMANCE SECURITY

To

_____[name of Employer]

_____[address of Employer]

_____

WHEREAS _____[name and address of Contractor]

(hereinafter called "the Contractor") has undertaken, in pursuance of Letter of Acceptance No._____ dated _____ to execute _____[name of Contract and brief description of Works] (hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligation in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____ [amount of guarantee]*_____ ___(in words), such sum being payable in the types and proportions of currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of_____[amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until 3 (three) months from the date of expiry of the Defect Liability Period.

Signature, Name and Seal of the guarantor _____
Name of Bank _____
Address _____
Phone No.,Fax No.E-mail Address,of signing Authority_____
Date _____

* An amount shall be inserted by the Guarantor, representing the percentage the Contract Price specified in the Contract including additional security for unbalanced Bids, if any and denominated in Indian Rupees.

SECTION 3

Conditions of Contract
Part – I General Conditions of Contract(GCC)

Table of Clauses of GCC

Sno	Particulars	Sno	Particulars
	A. General	21	Payments for Variations and / or Extra Quantities
1	Definitions	22	No compensation for alterations in or restriction of work to be carried out.
2	Interpretations and Documents	23	No Interest Payable
3	Language and Law	24	Recovery from Contractors
4	Communications	25	Tax
5	Subcontracting	26	Check Measurements
6	Personnel	27	Termination by Engineer in Charge
7	Force Majeure	28	Payment upon Termination
8	Contractor's Risks	29	Performance Security
9	Liability For Accidents To Person	30	Security Deposit
10	Contractor to Construct the Works	31	Price Adjustment
11	Discoveries	32	Mobilization and Construction Machinery Advance
12	Dispute Resolution System	33	Secured Advance
	B. Time Control	34	Payments Certificates
13	Programme		**E. Finishing the Contract**
14	Extension of Time	35	Completion Certificate
15	Compensation for Delay	36	Final Account
16	Contractor’s quoted percentage		**F. Other Conditions of Contract**
	C. Quality Control	37	Currencies
17	Tests	38	Labour
18	Correction of Defects noticed during the Defect Liability Period	39	Compliance with Labour Regulations
	D. Cost Control	40	Audit and Technical Examination
19	Variations - Change in original	41	Death or Permanent Invalidity of Contractor
	Specifications, Designs, Drawings etc.		
20	Extra Items	42	Jurisdiction

A. General

1. DEFINITIONS

1.1. Bill of Quantities: means the priced and completed Bill of Quantities forming part of the Bid.

1.2. Chief Engineer: means Chief Engineer of the zone/ basin concerned.

1.3. Completion: means completion of the work as certified by the Engineer-in-Charge, in accordance with provisions of agreement.

1.4. Contract: means the Contract between the Employer and the Contractor to execute, complete and/or maintain the work. Agreement is synonym of Contract and carries the same meaning wherever used.

1.5. Contract Data: means the documents and other information which comprise of the Contract.

1.6. Contractor: means a person or legal entity whose bid to carry out the work has been accepted by the Employer.

1.7. Contractor's bid: means the completed bid document submitted by the Contractor to the Employer.

1.8. Contract amount: means the amount of contract worked out on the basis of accepted bid.

1.9. Completion of work: means completion of the entire contracted work. Exhaustion of quantity of any particular item mentioned in the bid document shall not imply completion of work or any component thereof.

1.10. Day: means the calendar day.

1.11. Defect: means any part of the work not completed in accordance with the specifications included in the contract.

1.12. Department: means Department of the State Government viz. Water Resources Department, Public Works Department, Public Health Engineering Department, Rural Engineering Service and any other organisation which adopts this document.

1.13. Drawings: means drawings including calculations and other information provided or approved by the Engineer-in-Charge.

1.14. Employer: means the party as defined in the Contract Data, who employs the Contractor to carry out the work. The Employer may delegate any or all functions to a person or body nominated by him for specified functions. The word Employer / Government / Department wherever used denote the Employer.

1.15. Engineer: means the person named in the Contract Data.

1.16. Engineer in charge: means the person named in the Contract Data.

1.17. Equipment: means the Contractor's machinery and vehicles brought temporarily to the Site for execution of work.

1.18. Government: means Government of Madhya Pradesh.

1.19. In Writing: means communicated in written form and delivered against receipt.

1.20. Material: means all supplies, including consumables, used by the Contractor for incorporation in the work.

1.21. Superintending Engineer: means Superintending Engineer-in-Charge of the Circle concerned.

1.22. Stipulated period of completion: means the period in which the Contractor is required to complete the work. The stipulated period is specified in the ContractData.

1.23. Specification: means the specification of the work included in the Contract and any modification or addition made or approved by the Engineer-in-Charge.

1.24. Start Date: means the date of signing of agreement for the work.

1.25. Sub-Contractor: means a person or corporate body who has a Contract with the Contractor, duly authorised to carry out a part of the construction work under the Contract.

1.26. Temporary Work: means work designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the work.

1.27. Tender/Bid, Tenderer/Bidder: are the synonyms and carry the same meaning where ever used.

1.28. Variation: means any change in the work which is instructed or approved as variation under this contract.

1.29. Work: The expression "work" or "works" where used in these conditions shall unless there be something either in the subject or context repugnant to such construction, be construed and

taken to mean the work by virtue of contract, contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

2. INTERPRETATIONS AND DOCUMENTS

2.1 Interpretations

In the contract, except where the context requires otherwise:

a. words indicating one gender include all genders;
b. words indicating the singular also include the plural and vice versa.
c. provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
d. written” or “in writing” means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

2.2 Documents Forming Part of Contract:

1. NIT with all amendments.
2. Instructions to Bidders (ITB,Bid Data Sheet with all Annexures)
3. Conditions of Contract:

i.Part I General Conditions of Contract and the Contract Data; with all Annexures
ii. Part II Special Conditions of Contract.

4. Specifications
5. Drawings
6. Bill of Quantities
7. Technical and Financial Bid
8. Agreement, and
9. Any other document(s), as specified.

3. Language and Law

The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Communications

All certificates, notice or instruction to be given to the Contractor by Employer/Engineer shall be sent to the address or contact details given by the Contractor in [Annexure H of ITB]. The address and contact details for communication with the Employer/Engineer shall be as per the details given in the Contract Data. Communication between parties that are referred to in the conditions shall be in writing. The notice sent by facsimile (fax) or other electronic means (email) shall also be effective on confirmation of the transmission. The notice sent by registered post or speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service. In case of any change in address for communication, the same shall be immediately notified to Engineer-in-Charge.

5. Subcontracting

Subcontracting shall be permitted for contracts of value more than amount specified in the Contract Data with following conditions.

a. The Contractor may subcontract up to 25 percent of the contract price with the approval of the Employer in writing, but will not assign the Contract. Subcontracting shall not alter the Contractor's obligations.
b. Following shall not form part of subcontracting:

i. Hiring of labour through a labour contractor.
ii. The purchase of Materials to be incorporated in the works.
iii. Hiring of plant & machinery

c. The sub-contractor will have to be registered in the appropriate category in the centralised registration system for contractors of the GoMP.

6. Personnel

6.1 The Contractor shall employ for the construction work and routine maintenance the technical personnel as provided in the Annexure I-3 of Bid Data Sheet, if applicable. If the Contractor fails to deploy required number of technical staff, recovery as specified in the Contract Data will be made from the Contractor.

6.2 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within three days and has no further connection with the Works in the Contract.

7. Force Majeure

7.1 The term “Force Majeure” means an exceptional event or circumstance:

(a) which is beyond a Party’s control,

(b) which such Party could not reasonably have provided against before entering into the Contract,

(c) which, having arisen, such Party could not reasonably have avoided or overcome, and

(d) which is not substantially attributable to the other Party.

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

(i) war, hostilities (whether war be declared or not), invasion, act of foreign enemies,

(ii) rebellion, terrorism, sabotage by persons other than the Contractor’sPersonnel, revolution, insurrection, military or usurped power, or civil war,

(iii) riot, commotion, disorder, strike or lockout by persons other than theContractor’s Personnel,

(iv) munitions of war, explosive materials, ionising radiation or contamination byradio-activity, except as may be attributable to the Contractor’s use of such munitions, explosives, radiation or radio-activity, and

(v) natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity.

7.2. In the event of either party being rendered unable by force majeure to perform any duty or discharge any responsibility arising out of the contract, the relative obligation of the party affected by such force majeure shall upon notification to the other partybe suspended for the period during which force majeure event lasts. The cost and loss sustained by either party shall be borne by respective parties.

7.3 For the period of extension granted to the Contractor due to Force Majeure the price adjustment clause shall apply but the penalty clause shall not apply. It is clarified that this sub clause shall not give eligibility for price adjustment to contracts which are otherwise not subject to the benefit of price adjustment clause.

7.4 The time for performance of the relative obligation suspended by the force majeure shall stand extended by the period for which such cause lasts. Should the delay caused by force majeure exceed twelve months, the parties to the contract shall be at liberty to foreclose the contract after holding mutual discussions.

8. Contractor's Risks

8.1 All risks of loss or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract are the responsibility of the Contractor.

8.2 All risks and consequences arising from the inaccuracies or falseness of the documents, drawing, designs, other documents and/or information submitted by the contractor shall be the responsibility of the Contractor alone, notwithstanding the fact that the designs/ drawings or other documents have been approved by the department.

9. Liability for Accidents to Person

The contractor shall be deemed to have indemnified and saved harmless the Government against all action, suits, claims, demands, costs etc. arising in connection with injuries suffered by any persons employed by the contractor or his subcontractor for the works whether under the General law or under workman's compensation Act, or any other statute in force at the time of dealing with the question of the liability of employees for the injuries suffered by employees and to have taken steps properly to ensure against any claim there under.

10. Contractor to Construct the Works

10.1 The Contractor shall construct, install and maintain the Works in accordance with the Specifications and Drawings as specified in the Contract Data.

10.2 In the case of any class of work for which there is no such specification as is mentioned in Contract Data, such work shall be carried out in accordance with the instructions and requirement of the Engineer-in-charge.

10.3 The contractor shall supply and take upon himself the entire responsibility of the sufficiency of the scaffolding, timbering, machinery, tools and implements, and generally of all means used for

the fulfilment of this contract whether such means may or may not be approved or recommended by the Engineer.

11. Discoveries

Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

12. Dispute Resolution System

12.1 No dispute can be raised except before the Competent Authority as defined in Contract Data in writing giving full description and grounds of dispute. It is clarified that merely recording protest while accepting measurement and/or payment shall not be taken as raising a dispute.

12.2 No dispute can be raised after 45 days of its first occurrence. Any dispute raised after expiry of 45 days of its first occurrence shall not be entertained and the Employer shall not be liable for claims arising out of such dispute.

12.3 The Competent Authority shall decide the matter within 45 days.

12.4 Appeal against the order of the Competent Authority can be preferred within 30 days to the Appellate Authority as defined in the Contract Data. The Appellate Authority shall decide the dispute within 45 days.

12.5 Appeal against the order of the Appellate Authority can be preferred before the Madhya Pradesh Arbitration Tribunal constituted under Madhya PradeshMadhyastham Adhikaran Adhiniyam, 1983.

12.6 The Contractor shall have to continue execution of the Works with due diligence notwithstanding pendency of a dispute before any authority or forum.

B. Time Control

13. Programme

13.1 Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order and timing for all the activities for the construction of works.

13.2 The program shall be supported with all the details regarding key personnel, equipment and machinery proposed to be deployed on the works for its execution.

The contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/equipment being placed in field laboratory and the location of field laboratory along with the Programme.

13.3 An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.

13.4 The Contractor shall submit to the Engineer for approval an updated Programme at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date onwhich the overdue Programme has been submitted.

13.5 The Engineer's approval of the Programme shall not alter the Contractor's obligations.

14. Extension of Time

14.1. The Contract is for completion of works and therefore non approval of EOT shall not in any way invalidate the contract. The Contractor will have to complete the works.

14.2 In the event of delays attributable to the contractor the EOT shall not be given by the Engineer-In-Charge and the liquadated Damages shall be Levied from the Contractor in accordance with the provisions of the contract.

14.3 In the event, the delays are not attributable to the contractor the EOT may be issued by the Engineer-In-Charge without imposition of Liquated Damages either suo-motto or on a written request of the contractor. It is clarified that out of the total delays in

completion of works. the EOT shall be issued only for the part which is not attributable to the Contractor.

15. Compensation for delay

15.1 The time allowed for carrying out the work, as entered in the agreement, shall be strictly observed by the Contractor.

15.2 The time allowed for execution of the contract shall commence from the date of signing of the agreement. It is clarified that the need for issue of work order is dispensed with.

15.3 In the event milestones are laid down in the Contract Data for execution of the works, the contractor shall have to ensure strict adherence to the same.

15.4 Failure of the Contractor to adhere to the timelines and/or milestones shall attract such liquidated damages as is laid down in the Contract Data.

15.5 In the event of delay in execution of the Works as per the timelines mentioned in the Contract Data the Engineer-in-charge shall retain from the bills of the Contractor amount equal to the liquidated damages leviable until the Contractor makes such delays good. However, the Engineer-in-charge shall accept bankable security in lieu of retaining such amount.

15.6 If the Contractor is given extension of time after liquidated damages have been paid, the Engineer in Charge shall correct any over payment of liquidated damages by the Contractor in the next payment certificate.

15.7 In the event the Contractor fails to make good the delay until completion of the stipulated contract period (including extension of time) the sum so retained shall be adjusted against the liquidated damages levied.

16. Contractor's quoted percentage

The Contractor's quoted percentage rate referred to in the "Bid for works" will be deducted/ added from/to the net amount of the bill after deducting the cost of material supplied by the department.

C.Quality Control

17. Tests

17.1 The Contractor shall be responsible for:

a.Carrying out the tests prescribed in specifications, and

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

17.2 The contractor shall have to establish field laboratory within the time specified and having such equipments as are specified in the Contract Data.

17.3 Failure of the Contractor to establish laboratory shall attract such penalty as is specified in the Contract Data.

18. Correction of Defects noticed during the Defect Liability Period

18.1 The Defect Liability Period of work in the contract shall be as per the Contract Data.

18.2 The Contractor shall promptly rectify all defects pointed out by the Engineer well before the end of the Defect Liability Period. The Defect Liability Period shall automatically stand extended until the defect is rectified.

18.3 If the Contractor has not corrected a Defect pertaining to the Defect Liability Period to the satisfaction of the Engineer, within the time specified by the Engineer, the Engineer will assess the cost of having the Defect corrected, and the cost of correction of the Defect shall be recovered from the Performance Security or any amount due or that may become due to the contractor and other available securities.

D.Cost Control

19.Variations - Change in original Specifications,Designs, and Drawings etc.

19.1 The Engineer-in-charge shall have power to make any alterations, omissions or additions to or substitutions in the original specifications, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Engineer-in-charge, and such alterations, omission, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work, which the contractor may be directed to

do in the manner above specified, as part of the work, shall be carried out by the contractor on the same conditions in all respects on which he agrees to do the main work.

19.2 The time for the completion of the work shall be adjusted in the proportion that the altered, additional or substituted work bears to the original contract work and the certificate of the Engineer-in-charge shall be conclusive as to such proportion.

20. Extra items

20.1 All such items which are not included in the priced BOQ shall be treated as extra items.

21 Payments for Variations and / or Extra Quantities

21.1 The rates for such additional (Extra quantity), altered or substituted work / extra items under this clause shall be worked out in accordance with the following provisions in their respective order:-

a. The contractor is bound to carry out the additional (Extra quantity), work at the same rates as are specified in the contract for the work.

b. If the item is not in the priced BOQ and is included in the SOR of the department, the rate shall be arrived at by applying the quoted tender percentage on the SOR rate.

c. If the rates for the altered or substituted work are not provided in applicable SOR - such rates will be derived from the rates for a similar class (type) of work as is provided in the contract (priced BOQ) for the work.

d. If the rates for the altered, substituted work cannot be determined in the manner specified in the sub clause (c) above - then the rates for such composite work item shall be worked out on the basis of the concerned Schedule of Rates minus/plus the percentage quoted by the contractor.

e. If the rates for a particular part or parts of the item is not in the Schedule of Rates and the rates for the altered, or substituted work item cannot be determined in the manner specified in sub clause (b) to (d) above, the rate for such part or parts will be determined by the Competent Authority as defined in the Contract Data on the basis of the rate analysis derived out of prevailing market rates when the work was done.

f. But under no circumstances, the contractor shall suspend the work on the plea ofnon-acceptability of rates on items falling under sub clause (a) to (d). In case the contractor does not accept the rate approved by the Engineer in Charge for a particular item, the contractor shall continue to carry out the item at the rates determined by the Competent Authority. The decision on the final rates payable shall be arrived at through the dispute settlement procedure.

22. No compensation for alterations in or restriction of work to be carried out.

22.1 If at any time after the commencement of the work, the Engineer-in-charge, for any reason whatsoever, not require the whole or any part of the work as specified in the bid to be carried out; the Engineer-in-charge shall give notice in writing of the fact to the Contractor and withdraw that whole or any part of the work.

22.2 The Contractor shall have no claim to any payments or compensation whatsoever, on account of any profit or advantage which he might have derived from the execution of work in full or on account of any loss incurred for idle men and machinery due to any alteration or restriction of work for whatsoever reason.

22.3 The Engineer-in-charge may supplement the work by engaging another agency to execute such portion of the work, without prejudice to his rights.

23. No Interest Payable

No interest shall be payable to the Contractor on any payment due or awarded by any authority.

24. Recovery from Contractors

Whenever any claim against the Contractor for the payment arises under the contract, the Department may be entitled to recover such sum by:

(a) Appropriating, in part or whole of the Performance Security and Additional Performance Securiy, if any; and/or Security Deposit and/or any sums payable under the contract to the contractor.

(b) If the amount recovered in accordance with (a) above is not sufficient, the balance sum may be recovered from any payment due to the contractor under any other contract of the department, including the securities which become due for release.

(c) The department shall, further have an additional right to effect recoveries as arrears of land revenue under the M.P. Land Revenue Code.

25. Tax

25.1 The rates quoted by the Contractor shall be deemed to be inclusive of levies, duties, cess, toll, taxes of Central and State Governments, local bodies and authorities but exclusive of Goods and Service Tax (G.S.T.) to be levied on works/service contracts.

25.2 The liability, if any, on account of quarry fees, royalties, octroi and any other taxes and duties in respect of materials actually consumed on public work, shall be borne by the Contractor.

25.3 Any changes in the taxes due to change in legislation or for any other reason shall not be payable to the contractor.

26. Check Measurements

26.1 The department reserves to itself the right to prescribe a scale of check measurement of work in general or specific scale for specific works or by other special orders.

26.2 Checking of measurement by superior officer shall supersede measurements by subordinate officer(s), and the former will become the basis of the payment.

26.3 Any over/excess payments detected, as a result of such check measurement or otherwise at any stage up to the date of completion of the defect liability period specified in this contract, shall be recoverable from the Contractor, as per clause 24 above.

27. Termination by Engineer in Charge

27.1 If the Contractor fails to carry out any obligation under the Contract, the Engineer in Charge may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.

27.2 The Engineer in Charge shall be entitled to terminate the Contract if the Contractor

a) abandons the Works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the Contract,
b) the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
c) without reasonable excuse fails to comply with the notice to correct a particular defect within a reasonable period of time.
d) the Contractor does not maintain a valid instrument of financial security as prescribed;
e) the Contractor has delayed the completion of the Works by such duration for which the maximum amount of liquidated damages is recoverable;
f) If the Contractor fails to deploy machinery and equipment or personnel or set up a field laboratory as specified in the Contract Data.
g) If the contractor, in the judgment of the Engineer in charge has engaged in corrupt or fraudulent practices in competing for or in executing the contract.
h) Any other fundamental breaches as specified in the Contract Data.

27.3 In any of these events or circumstances, the Engineer in Charge may, upon giving 14 days' notice to the Contractor, terminate the Contract and expel the Contractor fromthe Site. However, in the case of sub-paragraph (b) or (g) of clause 27.2, the Engineer in Charge may terminate the Contract immediately.

27.4 Notwithstanding the above, the Engineer-in-Charge may terminate the Contract for convenience by giving notice to the Contractor.

28. Payment upon Termination

28.1 If the contract is terminated under clause 27. 3, the Engineer shall issue a certificate for value of the work accepted on final measurements, less advance payments and penalty as indicated in the Contract Data. The amount so arrived at shall be determined by the Engineer-in-Charge and shall be final and binding on both the parties.

28.2 Payment on termination under clause 27. 4 above -

If the Contract is terminated under clause 27.4 above, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate,

less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

28.3 If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered as per clause 24 above.

29. Performance Security

The Contractor shall have to submit performance security and additional performance security, if any, as specified in the Bid Data Sheet at the time of signing of the contract. The contractor shall have to ensure that such performance security and additional performance security, if any, remains valid for the period as specified in the Contract Data.

30. Security Deposit-

30.1 Security Deposit shall be deducted from each running bill at the rate as specified in the Contract Data. The total amount of Security Deposit so deducted shall not exceed the percentage of Contract Price specified in the Contract Data.

30.2 The security deposit may be replaced by equivalent amount of bank guarantee or fixed deposit receipt assigned to the Employer, with validity up to 3 (three) months beyond the completion of Defect Liability Period/ extended Defect Liability Period.

30.3 The Security Deposit shall be refunded on completion of Defect Liability Period. The Additional Performance Security shall be refunded on satisfactory completion of of the work.

31. Price Adjustment

31.1 Applicability

1. Price adjustment shall be applicable only if provided in the Contract Data.
2. The price adjustment clause shall apply only for the works executed from the date of signing of the agreement until the end of the initial intended completiondate or extensions granted for reasons attributed to the Employer by the Engineer.
3. The Contractor shall not be entitled to any benefit arising from the price adjustment clause for extension in the contract period for reasons attributed to the Contractor.
4. In the Force Majeure event the price escalation clause shall apply.

31.2 Procedure

1. Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants in accordance with following principles and procedures and as per formula given in the **contract data.**
2. The price adjustable shall be determined during each quarter from the formula given in the **contract data**.
3. Following expression and meaning are assigned to the work done during each**quarter:**

R = Total value of work during the quarter. It would include the amount of secured advance granted, if any, during the quarter, less the amount of secured advance recovered, if any during the quarter, less value of material issued by the department, if any, during the quarter.

4. Weightages of various components of the work shall be as per the **Contract Data.**

31.3 To the extent that full compensation for any rise or fall in costs to the contractor is not covered by the provisions of this or other clauses in the contract, the unit rates and prices included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

31.4 The index relevant to any quarter, for which such compensation is paid, shall be the arithmetical average of the indices relevant of the calendar month.

31.5 For the purpose of clarity it is pointed out that the price adjustment may be either positive or negative, i.e. if the price adjustment is in favour of the Employer, the same shall be recovered from the sums payable to the Contractor.

32. Mobilization and Construction Machinery Advance

32.1 Payment of advances shall be applicable if provided in the Contract Data.

32.2 If applicable, the Engineer in Charge shall make interest bearing advance payment to the contractor of the amounts stated in the Contract Data, against provision by the contractor of an unconditional Bank Guarantee in a form and by a nationalized/ scheduled banks, in the name as stated in the Contract Data, in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the contractor.

32.3 The rate of interest chargeable shall be as per Contract Data.

32.4 The construction machinery advance, if applicable, shall be limited to 80% of the cost of construction machinery and admissible only for new construction machinery.

32.5 The advance payment shall be recovered as stated in the Contract Data by deducting proportionate amounts from payment otherwise due to the Contractor. No account shall be taken of the advance payment or its recovery in assessing valuations of work done, variations, price adjustments, compensation events, or liquidated damages.

33. Secured Advance

33.1 Payment of Secured Advance shall be applicable if provided in the Contract Data.

33.2 If applicable, the Engineer shall make advance payment against materials intended for but not yet incorporated in the Works and against provision by the contractor of an unconditional Bank Guarantee in a form and by a nationalized/ scheduled bank, in the name as stated in the Contract Data, in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been adjusted, but the amount of the guarantee shall be progressively reduced by the amounts adjusted by the contractor.

33.3 The amount of secured advance and conditions to be fulfilled shall be as stipulated in the Contract Data.

33.4 The Secured Advance paid shall be recovered as stated in the Contract Data.

34. Payment Certificates

The payment to the contractor will be as follows for construction work:

(a) The Contractor shall submit to the Engineer monthly statements of the value of the work executed less the cumulative amount certified previously, supported with detailed measurement of the items of work executed.

(b) The Engineer shall check the Contractor's monthly statement and certify the amount to be paid to the Contractor.

(c) The value of work executed shall be determined, based on the measurements approved by the Engineer/ Engineer-in-charge.

(d) The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.

(e) The value of work executed shall also include the valuation of Variations and Compensation Events.

(f) All payments shall be adjusted for deductions for advance payment, security deposit, other recoveries in terms of contract and taxes at source as applicable under the law.

(g) The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.

(h) Payment of intermediate certificate shall be regarded as payments by way of advance against the final payment and not as payments for work actually done and completed.

(i) Intermediate payment shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or be considered as an admission of the due performance of the contractor any part thereof, in any respect or the occurring of any claim.

(j) The payment of final bill shall be governed by the provisions of clause 36 of GCC.

E.Finishing the Contract

35. Completion Certificate

35.1A Completion Certificate in the prescribed format in Contract Data shall be issued by the Engineer-in-Charge after physical completion of the Work.

35.2After final payment to the Contractor, a Final Completion Certificate in the prescribed format in the Contract Data shall be issued by the Engineer-in-Charge.

36. Final Account

36.1 The Contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable for works under the Contract within 21 days of issue of certificate of physical completion of works. The Engineer shall issue a Defects Liability Certificate and certify any payment that is due to the Contractor within 45 days of receiving the Contractor's account if it is correct and complete. If the account is not correct or complete, the Engineer shall issue within 45 days a schedule that states the scope of the corrections or additions that are necessary. If the Account is still unsatisfactory after it has been resubmitted, the matter shall be referred to the Competent Authority as defined in the Contract Data, who shall decide

on the amount payable to the Contractor after hearing the Contractor and the Engineer in Charge.

36.2 In case the account is not received within 21 days of issue of Certificate of Completion as provided in clause 32.1 above, the Engineer shall proceed to finalise the account and issue a payment certificate within 28 days.

F. Other Conditions of Contract

37. Currencies

All payments will be made in Indian Rupees.

38. Labour

38.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

38.2 The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employedby the Contractor on the Site and such other information as the Engineer may require.

39. COMPLIANCE WITH LABOUR REGULATIONS

39.1. During continuance of the Contract, the Contractor and his sub-Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given in the Contract Data. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made their under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non- observance of the provisions stipulated in the notifications/byelaws/Acts/Rules/ regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct from any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

40. Audit and Technical Examination

Government shall have the right to cause an audit and technical examination of the works and the final bill of the contract including all supporting vouchers, abstract etc. to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed by him to have been done under the contract and found not to, have been executed, the Contractor shall be liable to refund the amount of overpayment and it shall be lawful for Government to recover the same from him in the manner prescribed in clause 24above and if it is found that the Contractor was paid less than what 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 duly paid by Government to the Contractor.

41. Death or Permanent Invalidity of Contractor

If the Contractor is an individual or a proprietary concern, partnership concern, dies during the currency of the contract or becomes permanently incapacitated, where the surviving partners are only minors, the contract shall be closed without levying any damages/ compensation as provided for in clause 28.2 of the contract agreement. However, if the competent authority is satisfied about the competenceof the survivors, then the competent authority shall enter into a fresh agreement for the remaining work strictly on the same terms and conditions under which the contract was awarded.

42. Jurisdiction

This contract has been entered into the State of Madhya Pradesh and its validity, construction, interpretation and legal effect shall be subjected to the courts at the place where this agreement is entered into. No other jurisdiction shall be applicable.

CONTRACT DATA

For Jal Jeevan Mission PWS Schemes

GCC Clause	Particulars	Data
1.14	Employer	Government of Madhya Pradesh
1.15	Engineer	Executive Engineer/Assistant Engineer/Sub Engineer/Consultant appointed by Department
1.16	Engineer in Charge	Executive Engineer
1.22	Stipulated period of completion	(a) Construction/Execution of Work with testing and commissioning- 06 Months including rainy season. (b) Successful Trial-Run - 90 Days after completion of construction/Execution of work with successful testing and commissioning
3	Language & Law of Contract	English & Indian Contract Act 1872
4	Address & Contact details of the Contractor	As per Annexure H
	Address & contact details of the Employer/Engineer-phone, Fax, e-mail	Executive Engineer P.H.E Division Sidhi (M.P.) Email- Sidhipheee1123@rediffmail.com
5	Sub contracting permitted for the Contract Value	More than Rs. 100 Lakhs
6	Technical Personnel to be provided by the contractor-requirement, &	As per Annexure-I (Format I-3)
	Penalty, if required Technical Personnel not employed	Rs.30,000 for Degree holder & Rs.18,000 for Diploma holder Engineer or As per PWD latest orders for deduction for Diploma/Degree Holder Engineers OR as may be decided by the Draft NIT approving authority.
10	Specifications	As per Annexure E
	Drawings	As per Annexure N
12	Competent Authority for deciding dispute under Dispute Resolution System	Superintending Engineer, Public Health Engineering Department Sidhi circle Sidhi
	Appellate Authority for deciding dispute under Dispute Resolution System	Chief Engineer Public Health Engineering Department Jabalpur Zone Jabalpur
13	Period for submission of updated construction program	Initial work program shall be submitted within a week from the date of signing the agreement, thereafter, updated program on Quarterly basis in contracts where the contract period is more than 12 months.
	Amount to be withheld for not submitting construction program in the prescribed period	1% of the contract value subject to minimum Rs. 5,000/- per month.

<table>
<tr><th>GCC Clause</th><th>Particulars</th><th>Data</th></tr>
<tr><td>14</td><td>Competent Authority for granting Time Extension</td><td>Up to one month - Executive Engineer. More than one month – Superintending Engineer (Full Powers).</td></tr>
<tr><td rowspan="3">15</td><td>Milestones laid down for the contract</td><td>Yes</td></tr>
<tr><td>if yes, details of milestones</td><td>As per Annexure O</td></tr>
<tr><td>Liquidated damage</td><td>As per Annexure P</td></tr>
<tr><td rowspan="3">17</td><td>List of equipment for lab</td><td>As per Annexure Q</td></tr>
<tr><td>Time to establish lab</td><td>Within 15days from the date of agreement.</td></tr>
<tr><td>Penalty for not establishing field laboratory</td><td>1% of the contract value subject to minimum Rs. 10,000/- per month.</td></tr>
<tr><td>18</td><td>Defect Liability Period</td><td>12 Months After Successful Trial-Run Period</td></tr>
<tr><td>21</td><td>Competent Authority for determining the rate</td><td>As given below</td></tr>
<tr><td colspan="3"><table>
<tr><th>क्र</th><th>सक्षम अधिकारी</th><th>अनुबंधित मात्रा से अधिक के लिए</th><th>अतिरिक्त आयटम</th><th>सब्स्टीट्यूट आयटम</th></tr>
<tr><td>1</td><td>कार्यपालन यंत्री संबंधित खण्ड</td><td>अनुबंधित कार्य की मात्रा से 10% तक बढ़ी मात्रायें।</td><td>–</td><td>–</td></tr>
<tr><td>2</td><td>अधीक्षण यंत्री संबंधित मण्डल</td><td>अनुबंधित कार्य की मात्रा से 20% तक बढ़ी मात्रायें अधिकतम रू. 20.00 लाख तक किन्तु कुल लागत प्रशासकीय स्वीकृति की राशि से 10% अधिक न हो।</td><td>रू. 20.00 लाख तक किन्तु कुल लागत प्रशासकीय स्वीकृति की राशि से 10% अधिक न हो।</td><td>रू. 20.00 लाख तक किन्तु कुल लागत प्रशासकीय स्वीकृति की राशि से 10% अधिक न हो।</td></tr>
<tr><td>3</td><td>मुख्य अभियंता संबंधित परिक्षेत्र</td><td>संपूर्ण अधिकार (प्रशासकीय स्वीकृति की राशि से 10% अधिक राशि की सीमा में)</td><td>संपूर्ण अधिकार (प्रशासकीय स्वीकृति की राशि से 10 % अधिक राशि की सीमा में)</td><td>संपूर्ण अधिकार (प्रशासकीय स्वीकृति की राशि से 10% अधिक राशि की सीमा में)</td></tr>
</table></td></tr>
<tr><td>27</td><td colspan="2">Any other condition for breach of contract</td><td>Less than 25% progress achieved during the half of the contract period. (Reason for delay attributed to the contractor.)</td></tr>
<tr><td>28</td><td colspan="2">Penalty</td><td>Penalty shall include
(a) Security deposit as per clause 30 of General Conditions of Contract and
(b) Liquidated Damages imposed as per clause 15 or Performance Security (Guarantee) including additional performance security (guarantee), if any, as per clase 29 of General Conditions of contract, whichever is higher.</td></tr>
<tr><td>29</td><td colspan="2">Performance Guarantee (Security) shall be valid up to</td><td>Performance Guarantee (Security) for works shall be valid upto 3 months beyond the completion of Defect Liability Period. Performance Guarantee (Security) shall be released after successful trial run of entire scheme.
Additional Performance Guarantee (Security) shall be valid upto valid construction/execution period plus 03 months. Additional Performance Guarantee (Security) shall be released after</td></tr>
</table>

GCC Clause	Particulars	Data
		Construction/Execution of work.
30	Security Deposit (SD) to be deducted from each running bill	At the rate of 5%. SD deducted during excution of works shall be refunded on completion of Defect Liability Period.
	Maximum limit of deduction of Security Deposit	Up to 5% of Final Contract Amount.
31	Price Adjustment formula and procedure to calculate	As per Annexure R
31.1(1)	Price adjustment shall be applicable	As per Annexure-R and will be applied as below :- (a) For Tenders upto Rs 5.00 crores–not payable in any case. (b) For Tenders costing more than Rs 5.00 crores- payable only in cases governed by Force Majeure. Price adjustment shall only be applicable on Probable Amount of Contract (PAC) of NIT. This clause shall not have any relation to the contract amount. The price adjustment shall apply only in respect of cement, steel and POL components.
32	32.1 Mobilization and Construction Machinery Advance Applicable	No Mobilization and Construction Machinery Advance Payable.
	32.2 If yes, Unconditional Bank Guarantee.	~~In the format prescribed in Annexure-S.~~ (NOT APPLICABLE)
	32.3 If yes, Rate of interest chargeable on advances.	~~10% annual simple interest.~~ (NOT APPLICABLE)
	32.4 If yes, Type & Amount of advance payment that can be paid.	~~1. Mobilization advance- Not more than ---% of contract amount.~~ ~~2. Construction Machinery advance- Not more than ---% of contract amount.~~ (NOT-APPLICABLE)
	32.5 If yes, Recovery of advance payment.	~~Recovery of Mobilization and/or Construction Machinery advance shall commence when 10% of the Contract Amount is executed and recovery of total advance shall be done on pro-rata basis and shall be completed by the time work equivalent to 80% of the Contract Amount is executed.~~ ~~In addition to the recovery of principal amount, recovery of interest shall be carried out as calculated on the outstanding amount of principal at the close of each month. The interest shall be accrue from the day of~~

GCC Clause	Particulars	Data
		~~payment of advance and the recovery of interest shall commence when 10% of the Contract Amount is executed and shall be completed by the time work equivalent to 80% of the Contract Amount is executed.~~ (NOT APPLICABLE)
	33.1 Secured Advance Applicable	No Secured Advance Payable.
	33.2 If yes, Unconditional Bank Guarantee.	~~In the format prescribed in Annexure-T~~ (NOT APPLICABLE)
	33.2 If yes, Amount of Secured advances.	~~75% of value of material as determined by the Engineer in Charge.~~ (NOT APPLICABLE)
	32.3 If yes, Conditions for secured Advance.	~~a) The materials are in accordance with the specification for Works;~~ ~~b) Such materials have been delivered to site, and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer. The contractor shall store the bulk material in measurable stacks;~~ ~~c) The Contractor's records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer;~~ ~~d) The contractor has submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof;~~ ~~e) Ownership of such materials shall be deemed to vest in the Employer for which the contractor has submitted and Indemnity Bond in an acceptable format; and~~ ~~f) The quantity of materials are not excessive and shall be used within a reasonable time as determined by the engineer. (Not applicable)~~ (NOT APPLICABLE)
	33.4 If yes, Recovery of Secured advance	~~The advance shall be repaid from each succeeding monthly payments to the extent materials [for which advance was previously paid] have been incorporated into the works.~~ (NOT APPLICABLE)
35	Completion Certificate- after physical completion of the Work	As per Annexure-U
	Final Completion Certificate- after final payment on completion of the work.	As per Annexure-V
36	Competent Authority	Superintending Engineer, PHED Sidhi Circle Sidhi

GCC Clause	Particulars	Data
39	Salient features of some of the major labour laws that are applicable	As per Annexure-W
41	Competent Authority	Chief Engineer, Jabalpur Zone Jabalpur PHED

ANNEXURE – N

(See clause 10 of Section 3 – GCC)

Drawings

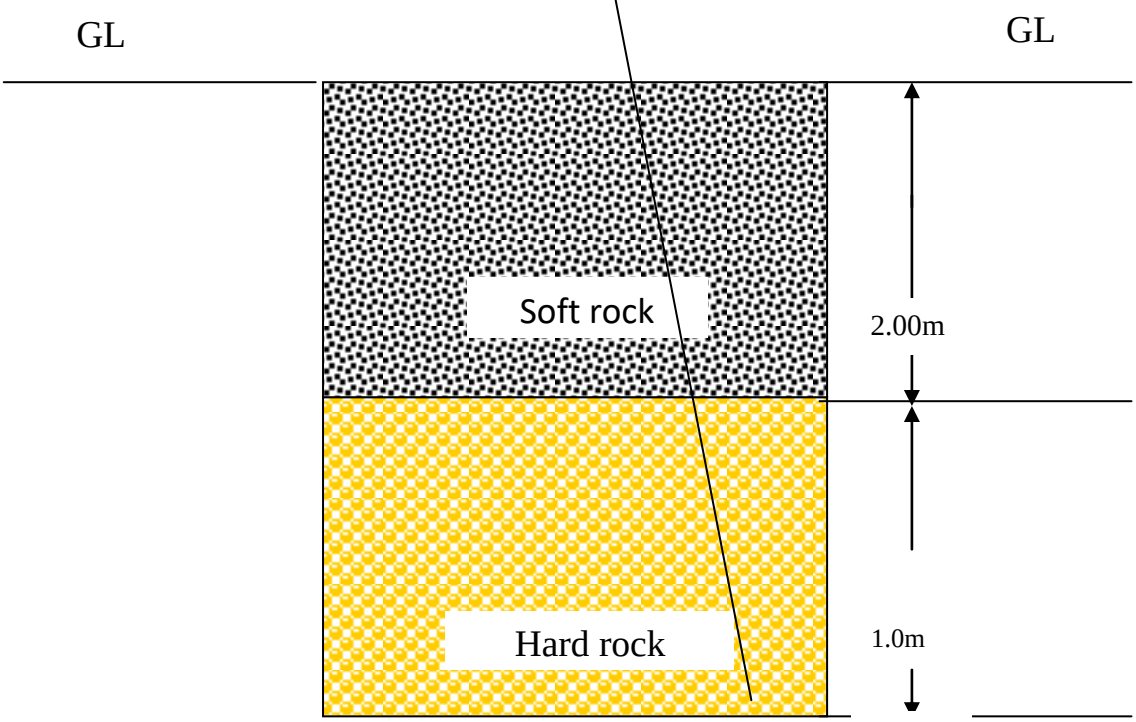
List of drawings

Strata Chart

FOR CONSTRUCTION OF 250KL& 75KL CAPACITY 18M STAGING R.C.C. OVER HEAD TANK

AT

Village…….Block …….. Distt Sidhi



ANNEXURE – O

(See clause 15 of Section 3 -GCC)

Details of Milestones

S. No.	Activity	From the date of Agreement, or from the date of issue of the letter regarding commencement of work on scheme
1	Value of the work completed should be atleast 20% of the contract value (excluding provisions for repair and operation and maintenance).	Within 33% days of completion period of Construction/ Execution of work as prescribed in contract data sheet clause 1.22
2	Value of the work completed should be atleast 60% of the contract value (excluding provisions for repair and operation and maintenance).	Within 67% days of completion period of Construction/ Execution of work as prescribed in contract data sheet clause 1.22
3	Value of the work completed should be 100% of the contract value (excluding provisions for repair and operation and maintenance).	Within 100% days of completion period of Construction/ Execution of work as prescribed in contract data sheet clause 1.22

Note : - In case the NIT has more than one scheme, the milestones would be considered seperately on a per scheme basis.

ANNEXURE – P

(See clause 15 of Section 3 -GCC)

Compensation for Delay

If the contractor fails to achieve the milestones, and the delay in execution of work is attributable to the contractor, the Employer shall retain an amount from the sums payable and due to the contractor as per following scale -

i. Slippage up to 25% in financial target during the milestone under consideration
—2.5% of the work remained unexecuted in the related time span.
ii. Slippage exceeding 25% but Up to 50% in financial target during the milestone under consideration
-5% of the work remained unexecuted in the related time span..
iii. Slippage exceeding 50% but Up to 75% in financial target during the milestone under consideration
-7.5% of the work remained unexecuted in the related time span..
iv. Slippage exceeding 75% in financial target during the milestone under consideration
-10% of the work remained unexecuted in the related time span.

Note: For arriving at the dates of completion of time span related to different milestones, delays which are not attributable to the Contractor shall be considered. The slippage on any milestone is if made good in subsequent milestones or at the time of stipulated period of completion, the amount retained as above shall be refunded. In case the work is not completed within the stipulated period of completion along with all such extensions which are granted to the Contractor for either Employer's default or Force Majeure, the compensation shall be levied on the contractor at the rate of 0.05% per day of delay limited to a maximum of 10% of contract price.

The decision of Superintending Engineer shall be final and binding upon both the parties.

ANNEXURE – Q
(See clause 17 of Section 3 -GCC)

List of Equipment for Quality Control Lab

Nil

ANNEXURE - R

(See clause 31 of Section 3 -GCC)

Price Adjustment

sel has been chosen to represent fuel and lubricants group.

The formulas for adjustment of price are as follow:

R = Value of work as defined in Clause 31.2(3) of General Conditions of Contract

Weightages* of component in the work

S No.	Component	Percentage of component in the work
1	Cement - Pc	
2	Steel - Ps	
3	Bitumen - Pb	
4	POL - Pf	

* Weightages of various components of the work shall be as determined by the competent technical sanction authority.

Adjustment for cement component

(ii) Price adjustment for increase or decrease in the cost of cement procured by the contractor shall be paid in accordance with the following formula:

VC= 0.85 x PC/100 x R x (C1-C0)/C0

Vc= increase or decrease in the cost of work during the month under consideration due to changes in rates for cement.

Co= The all India wholesale price index for Grey cement on the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi. (www.eaindustry.nic.in)

C1= The all India average wholesale price index for Grey cement for the month under consideration as published by Ministry of Industrial Development, Government of India, New Delhi.(www.eaindustry.nic.in)

Pc= Percentage of cement component of the work

Note : For the application of this clause, index of Grey Cement has been chosen to represent Cement group.

Adjustment of steel component

(iii) Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula:

Vs= 0.85 x PS x /100 x R x (S1-S0)/S0

Vs= Increase or decrease in the cost of work during the month under consideration due to changes in the rates for steel.

S0= The all India wholesale price index for steel (Bars and Rods) on the date of opening of Bids as published by the Ministry of Industrial Development, Government of India, New Delhi. (www.eaindustry.nic.in)

Si = The all India average wholesale price index for steel (Bars and Rods) for the month under consideration as published by Ministry of Industrial Development, New Delhi. (www.eaindustry.nic.in)

Ps= Percentage of steel component of the work.

Note : For the application of this clause, index of Bars and Rods has been chosen to represent steel group.

Adjustment of bitumen component

(iv) Price adjustment for increase or decrease is the cost of bitumen shall be paid in ccordance with the following formula:

Vb= 0.85x Pb / 100xRx(Bi – Bo) / Bo

Vb= Increase or decrease in the cost of work during the month under

consideration due to changes in rates for bitumen.

Bo = The official retail price of bitumen at the IOC depot at nearest center on the date of opening of Bids.

Bi = The official retail price of bitumen of IOC depot at nearest center for the 15th day of the month under consideration.

Pb = Percentage of bitumen component of the work.

Adjustment of POL (fuel and lubricant) component

(V) Price adjustment for increase or decrease in cost of POL (fuel and lubricant) shall be paid in accordance with the following formula:

Vf= 0.85 x Pf / 100 x R x (Fi – Fo) / Fo

Vf = Increase or decrease in the cost of work during the month under consideration due to changes in rates for fuel and lubricants.

Fo = The official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC at nearest center on the date of opening of Bids.

Fi = The official retail price of HSD at the existing consumer pumps of IOC at nearest center for the 15th day of month of the under consideration.

Pf = Percentage of fuel and lubricants component of the work.

Note : For the application of this clause, the price of High Speed Die

Annexure – S

(See clause 32 of Section 3 -GCC)

Bank Guarantee Form for Mobilization and Construction Machinery Advance

To

_____[name of Employer]

_____[address of Employer]

_____[name of Contractor]

In accordance with the provisions of the General Conditions of Contract, clause 31 ("Mobilization and Construction Machinery Advance") of the above-mentioned Contract_____[name and address of Contractor] (hereinafter called "the Contractor") shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____[amount of Guarantee]* _____[in words].

We, the _____[bank of financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the payment to _____[name of Employer] on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor, in the amount not exceeding _____[amount of guarantee]*_____[in words].

We further agree that no change or addition to or other modification of the terms of the Contractor or Works to be performed thereunder or of any of the Contract documents which may be made between _____[name of Employer] and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and Seal : _____

Name of Bank/Financial Institution: _____

Address : _____

Date : _____

_____

* An amount shall be inserted by the Bank or Financial Institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

Annexure – T

(See clause 33 of Section 3 -GCC)

Bank Guarantee Form for Secured Advance
INDENTURE FOR SECURED ADVANCES

This indenture made the _____ day of _____ 20___ BETWEEN_____ (hereinafter called the contractor which expression shall where the context so admits or implies be deemed to include his executors, administrators and assigns) or the one part and the Employer of the other part.

Whereas by an agreement dated _____ (hereinafter called the said agreement) the contractor has agreed.

AND WHEREAS the contractor has applied to the Employer that he may be allowed advanced on the security of materials absolutely belonging to him and brought by him to the site of the works the subject of the said agreement for use in the construction of such of the works as he has undertaken to executive at rates fixed for the finished work (inclusive of the cost of materials and labour and other charges)

AND WHEREAS the Employer has agreed to advance to the Contractor the sum of Rupees _____ on the security of materials the quantities and other particulars of which are detailed in Accounts of Secured Advance attached to the Running Account Bill for the said works signed by the Contractor on _____ and the Employer has reserved to himself the option of making any further advance or advances on the security of other materials brought by the Contractor to the site of the said works.

Now THIS INDENTURE WITNESSETH that in pursuance of the said agreement and in consideration of the sum of Rupees _____ on or before the execution of these presents paid to the Contractor by the Employer (the receipt where of the Contractor doth hereby acknowledge) and of such further advances (if any) as may be made to him as a for said the Contractor doth hereby covenant and agree with the President and declare as follows:

That the said sum of Rupees _____ so advanced by the Employer to

(1) the Contractor as aforesaid and all or any further sum of sums advanced as aforesaid shall be employed by the Contractor in or towards expending the execution of the said works and for no other purpose whatsoever.

(2) That the materials details in the said Account of Secured Advances which have been offered to and accepted by the Employer as security are absolutely the Contractor's own propriety and free from encumbrances of any kind and the contractor will notmake any application for or receive a further advance on the security of materials which are not absolutely his own property and free from encumbrances of any kind and the Contractor indemnified the Employer against all claims to any materials in respect of which an advance has be made to him as aforesaid.

(3) That the materials detailed in the said account of Secured Advances and all other materials on the security of which any further advance or advances may hereafter be made as aforesaid (hereafter called the said materials) shall be used by the Contractor solely in the execution of the said works in accordance with the directions of the Engineer.

(4) That the Contractor shall make at his own cost all necessary and adequate arrangements for the proper watch, safe custody and protection against all risks of the said materials and that until used in construction as aforesaid the said materials shall remain at the site of the said works in the Contractor's custody and on his own responsibility and shall at all times be open to inspection by the Engineer or any officer authorized by him. In the event of the said materials or any part thereof being stolen, destroyed or damaged or becoming deteriorated in a greater degree than is due to reasonable use and wear thereof the Contractor will forthwith replace the same with other materials of like quality or repair and make good the same required by the Engineer.

(5) That the said materials shall not be removed from the site of the said works except with the written permission of the Engineer or an officer authorized by him on that behalf.

(6 That the advances shall be repayable in full when or before the Contract receives payment from the Employer of the price payable to him for the said works under the terms and provisions of the said agreement. Provided that if any intermediate payments are made to the Contractor on account of work done than on the occasion of each such payment the Employer

will be at liberty to make a recovery from the Contractor's bill for such payment by deducting there from the value of the said materials than actually used in the construction and in respect of which recovery has not been made previously, the value for this purpose being determined in respect of each description of materials at the rates at which the amounts of the advances made under these presents were calculated.

(7) That if the Contractor shall at any time make any default in the performance or observance in any respect of any of the terms and provisions of the said agreement or of these presents the total amount of the advance or advances that may still be owing of the Employer shall immediately on the happening of such default be re- payable by the Contractor to be the Employer together with interest thereon at twelve percent per annum from the date or respective dates of such advance or advances to the date of repayment and with all costs, charges, damages and expenses incurred by the Employer in or for the recovery thereof or the enforcement of this security or otherwise by reason of the default of the Contractor and theContractor hereby covenants and agrees with the Employer to reply and pay thesame respectively to him accordingly.

(8) That the Contractor hereby charges all the said materials with the repayment to the Employer of the said sum of Rupees_____ and any further sum of sums advanced as aforesaid and all costs, charges, damages and expenses payable under these presents PROVIDED ALWAYS and it is hereby agreed and declared that notwithstanding anything in the said agreement and without prejudice to the power contained therein if and whenever the covenant for payment and repayment here-in-before contained shall become enforceable and the money owing shall not be paid in accordance there with the Employer may at any time thereafter adopt all or any of the following courses as he may deem best:

(a) Seize and utilise the said materials or any part thereof in the completion of the said works on behalf of the contractor in accordance with the provision in that behalf contained in the said agreement debiting the contractor with the actual cost of effecting such completion and the amount due to the contractor with the value of work done as if he had carried it out in accordance with the said agreement and at the rates thereby provided. If the balance is against the contractor, he is to pay same to the Employer on demand.

(b) Remove and sell by public auction the seized materials or any part thereof and out of the moneys arising from the sale retain all the sums aforesaidrepayable or payable to the Employer under these presents and pay over thesurplus (if any) to the Contractor.

(C) Deduct all or any part of the moneys owing out of the security deposit or any sum due to the Contractor under the said agreement.

(9) That except in the event of such default on the part of the contractor as aforesaid interest on the said advance shall not be payable.

(10) That in the event of any conflict between the provisions of these presents and the said agreement the provisions of these presents shall prevail and in the event of any dispute or difference arising over the construction or effect of these presents the settlement of which has not been here-in-before expressly provided for the same shall be referred to the Employer whose decision shall be final and the provision of the Indian Arbitration Act for the time being in force shall apply to any such reference.

Annexure – U

(See clause 35 of Section 3 -GCC)

Physical Completion Certificate

Name of Work:

.....

.....

.....

Agreement no. ……..…… Date ……..

Amount of Contract Rs ……

Name of Agency : ……..……

UsedMB no. .....

Last measurement recorded

a. Page No. & MB No. .....

b. Date .....

Certified that the above mentioned work was physically completed on ……. (date) and taken over on …….. (date) and that I have satisfied myself to best of my ability that the work has been done properly.

Date of issue

Executive Engineer

P.H.E.Division,Sidhi

Annexure – V

(See clause 35 of Section 3 -GCC)

Final Completion Certificate

Name of Work:

.....

.....

.....

Agreement no. ……..……. Date ……..

Name of Agency : ……

UsedMB no. .....

Last measurement recorded

a.Page No.& M B No.----------

b. Date----------

Certified that the above mentioned work was physically completed on ……. (date) and taken over on …….. (date).

Agreemented amount Rs. ……..

Final Amount paid to contractor Rs. ----------

Incumbency of officers for the work

I have satisfied myself to best of my ability that the work has been done properly.

Date of issue

Executive Engineer

P.H.E.Division, Sidhi

Annexure – W

(See clause 39 of Section 3 -GCC)

Salient Features of Some Major Labour Laws Applicable

a) **Workmen Compensation Act 1923: -** The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

b) **Payment of Gratuity Act 1972: -** Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed the prescribed minimum years (say, five years) of service or more or on death the rate of prescribed minimum days'(say, 15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.

c) **Employees P.F. and Miscellaneous Provision Act 1952:** The Act Provides for monthly contributions by the Employer plus workers at the rate prescribed (say, 10% or 8.33%). The benefits payable under the Act are:

i. Pension or family pension on retirement or death as the case may be.
ii. Deposit linked insurance on the death in harness of the worker.
iii. Payment of P.F. accumulation on retirement/death etc.

d) **Maternity Benefit Act 1951: -** The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

e) **Contract Labour (Regulation & Abolition) Act 1970: -** The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ prescribed minimum (say 20) or more contract labour.

f) **Minimum Wages Act 1948: -** The Employer is to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of buildings, roads, runways is scheduled employment.

g) **Payment of Wages Act 1936: -** It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

h) **Equal Remuneration Act 1979: -** The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.

i) **Payment of Bonus Act 1965: -** The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments. The newly set-up establishmentsare exempted for five years in certain circumstances. States may have different number of employment size.

j) **Industrial Disputes Act 1947: -** The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

k) **Industrial Employment (Standing Orders) Act 1946: -** It is applicable to all establishments employing prescribed minimum (say, 100, or 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and gets these certified by the designated Authority.

l) **Trade Unions Act 1926: -** The Act lays down the procedure for registration of trade unions of workmen and Employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.

m) **Child Labour (Prohibition & Regulation) Act 1986: -** The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.

n) **Inter-State Migrant Workmen's (Regulation of Employment & Conditions ofService) Act 1979: -** The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrant workmen through an intermediary (who has recruited workmen in one

state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Travelling expenses from home up to the establishment and back etc.

o) **The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: -** All the establishments who carry on any building or other construction work and employs the prescribed minimum (say, 10) or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

p) **Factories Act 1948: -** The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing the prescribed minimum (say, 10) persons or more with aid of power or another prescribed minimum (say, 20) or more persons without the aid of power engaged in manufacturing process.

Annexure – X

चेक लिस्ट

(निविदाकार द्वारा प्रस्तुत दस्तावेजों हेतु चेक लिस्ट। यह चेक लिस्ट लिफाफा–अ में भौतिकरूप से तथा ऑनलाईन प्रस्तुत की जावेगी)

1. सिस्टम निविदा क्रमांक – .....
2. कार्य का नाम – .....
3. निविदाकार का नाम – .....
4. उपरोक्त निविदा के अंतर्गत उल्लेखित कार्य के लिये निम्नानुसार दस्तावेज निविदा के साथ निर्धारित लिफाफों में ऑनलाईन संलग्न (**Online Attach**) किये गये है :–

क्र.	**दस्तावेज**	**संलग्न (है/नहीं) Online Attached (Yes/No)**
1-	ऑन लाइन ई.एम.डी. जमा/भुगतान करने की रसीद	
2-	बिड के साथ जमा किये गये दस्तावेजों की सत्यता बावत निविदाकार का स्वप्रमाणित/स्वहस्ताक्षरितधोषणा पत्र मूल प्रति में (As per Annexure B)	
3-	निविदाकार के पंजीयन (Registration)/ पंजीयन हेतु आवेदन का साक्ष्य (दस्तावेज) की स्व–प्रमाणित छायाप्रति	
4.	अपेंडिक्स 2.10 की निविदाओं के लिये निर्धारित प्रारूप में (Annexure–H) अपनी संस्थागत जानकारी (Organisational Details)	
5.	निविदा प्रपत्र क्रय करने की रसीद	
6.	Annexure I-1OR As per Annexure C-*If interested bidder has not executed these works (Intake well, Anicut, Treatment Plant and Over Head Tanks), then submit* 1. *an agreement (on Rs. 1000/- non judicial stamp paper duly notarized) at the time of bid submission with an experienced contractor stating that he will assist/guide the bidder to design and execute this work, if awarded**with*** 2. Registration proof of experienced contractor in MPPWD. 3. Experience Certificate of experienced contractor	
7.	Envelope-C	

निविदाकार के सील सहित हस्ताक्षर

Annexure – Y

List of Preferred (Empanelled) Makes/Brands As On 30.07.2020

S. No.	Item/Component	Make /Brand
1	VT and Centrifugal Pumps	Kirloskar /Jyoti / Mather+Platt/ WPIL / Becon Weir / Flowmore Ltd. Gudgaon / Crompton Grieves / Falcon/ CRI/ Texmo or equivalent
2	Electric Motors	Kirloskar /Jyoti / Crompton Grieves / ABB / Marathon / BHEL / Siemens / Bharat Bijlee or equivalent
3	Power Transformers	ABB/Crompton Grieves/ Emco/ Siemens / Shriram Switchgears / Vardhman Electro-Mech Pvt. Limited / Star Delta Transformers Limited / MPPVVCL approved make or equivalent
4	DI Pipes	Electrosteel / Jindal / Tata / Electrotherm/ Jai Balaji Industries/ Rashmi Metaliks / Srikalahasthi Pipes / Electrosteel Steel Limited or Equivalent
5	HDPE Pipes & specials	Reliance/Duraline/ Jain Irrigation / Sangir/Kisan Irrigations and Infastructure / Time Technoplast/ Signet Industries / Ori Plast/ Kataria Plastics / Kriti Industries / The Supreme Industries / Makknow Industries / Texmo Pipes &Products / Apollo Pipes / Vishal pipes/ Vectus Industries/ Parixit Irrigation / Sagar Polytecnic / Nimbus Pipes /Tufropes Pvt. Ltd./ Godavari Polymers/ Shree TNB Polymers Ltd./ VEEKAY PLAST/ Miraj Pipes and Fittings Pvt. Ltd./ Delight Enterprises Pvt .Ltd./ Kothari Agritech Pvt. Ltd./ Tijaria Polypipes Ltd./ Kisan Mouldings Ltd./Tirupati Structurals Ltd. Or Equivalent
6	Sluice Valves/Scour Valves/ Butterfly Valves / Non Return Valves / Kinetic Air valves	Kirloskar/IVC/VAG/IVI/Fouress /Sachdeva Metal Works/ Jupiter Engineering Co/ G.M. Engineering Pvt. Ltd./G.M.DALUI & Sons Pvt Ltd/ R&D Multiples (Metal cast) Pvt Ltd/ Kartar Valves Pvt Ltd/ Shiva Industries/ R S Valves and Products/ Durga Valves Pvt Ltd/ AVK Valves India Pvt Ltd/ McWane India Pvt Ltd/ Sigma Flow Control India Ltd or equivalent
7	Valve Actuators	Auma/ Rotork/ Limitork or Equivqlent
8	Hydraulically Operated Flow Cum Pressure Control Valves	VAG/ Darling Muesco/ Singer Or Equivalent
9	Zero Velocity Valve	Vardhman Electromech/ Flownix Valves or equivalent
10	Single Faced Sluice Gates	JASH/VAG/Kirloskar or equivalent
11	Water Hammer control Devices	Sureseal or equivalent

12	Electromaganatic Flow Meter	Emerson/ Krohne Marshall/ Yokogawa/ Siemens /Endress+Hauser(India)/ITRON India/Nivo Controls or equivalent
13	Electromaganatic Flow Meter, Water Meter, Items For Instrumentation / Automation	Endress+Hauser(India)/ITRON India/Nivo Controls or equivalent
14	Woltman type Bulk water meters	Zenner/Itron/Elster/Minol or equivalent
15	DI/CI Fitting & specials	Kiswok/Electrosteel/Kejriwal / M/s R.G.Industries/ Kartar Valves Pvt Ltd/ Jindal saw Ltd/ Chandranchal Enterprises pvt Ltd/ Truform Techo Products Ltd or equivalent
16	Dismantling/Expansion Joints	Anup Engg./ Lone Star/ Vedanta/ Precise Or Equivalent
17	HDPE Fittings (Compression fittings, tapping Saddles, Electrofusion Couplers)	Kimplas/ George ficher/ Glynwed/ Frialen/ Trustlene/ GPS/ Durafuse/ Al-Aziz Plastics/ AIVA Engineering Pvt Ltd/ Lesso Buildtech pvt Ltd/ Bentlay Fittings Pvt Ltd/ TEGA MUHENDISLIK SANAYI VE TICARET A.S.Turkey Or Equivalent
18	Float valves to control the overflow from ESR/GSR	Shiva Industries Or Equivalent
19	D.I.Double Flanged Pipe	Sachdeva Metal Works/ SRIKALAHASTHI PIPES/ Delight Enterprises Pvt Ltd Or Equivalent
20	Steel for Reinforcement	TATA,RINL,SAIL/shri Bajrang Power and Ispat Ltd Or Equivalent make of approved as prime manufacturer by ministry of steel authority of India as annual report Or Equivalent

Note :-

1. **Equivalent or Superior make/brand will be approved by the Superintending Engineer of the concerning Circle after evaluation of proposed make/brand. Superintending Engineer shall document that substitution is inevitable in the interest of the project and the alternate make/brand proposed by the contractor is substantially equivalent or superior to the one recommended in the above table.**
2. **The E-in-C Public Health Engineering Department can issue a revised list from time to time. The Contractor shall follow the latest list issued by the E-in-C.**

SECTION 3
Conditions of Contract
Part – II Special Conditions of Contract (SCC)

1. सशर्त निविदाए मान्य नहीं की जावेगी।
2. बिना कारण बताए निविदा स्वीकृत/अस्वीकृत करने का पूर्ण अधिकार निविदा आमंत्रण कर्ता को होगा।
3. निविदाकारों का आयकर विभाग में स्थायी लेखा नम्बर (PAN) तथा माल एवं सेवाकर (GST)में पंजीकृत होना भी अनिवार्य हैं। जिसका प्रमाण–पत्र आवेदन पत्र के साथ देना होगा।
4. निविदाकार का नियमानुसार संबंधित कर विभाग में पंजीयन होना आवश्यक है। देयक से आयकर, जी एस टी एवं कर्मचारी कल्याण उपकर सहित अन्य कर तथा वैधानिक कटोत्रा नियमानुसार किया जायेगा।
5. निविदा से संबंधित अर्हता संबंधी समस्त दस्तावेज ऑनलाईन ही प्रस्तुत (Online)किये जायेंगे। विभाग द्वारा चाहे जाने पर ऑनलाईन प्रस्तुत दस्तावेजों के मूल दस्तावेज प्रस्तुत करने हेतु निविदाकार बाध्य रहेगा। मूल दस्तावेज प्रस्तुत न कर पाने की स्थिति में निविदाकार की निविदा निरस्त की जा सकेगी तथा नियमानुसार वैधानिक कार्यवाही भी की जा सकेगी।
6. प्रमुख अभियन्ता, लोक स्वास्थ्य यॉत्रिकी विभाग, ''जल भवन'' बाणगंगा, भोपाल के पत्र क्र0 6330/बजट/प्र0अ0/लो0स्वा0यॉ0/2022, भोपाल, दिनांक 03.08.2022 के तहत राज्य स्तरीय सी.ए. के परामर्श/राय तथा दिनांक 18.07.2022 के नोटीफिकेशन के अनुसार निर्माण विभाग में सभी प्रकार के कार्यों पर 18% का जी.एस.टी. देय होगा। जी.एस.टी. को छोड़कर (Exclusive of GST) शेष समस्त कर, उपकर, लेवी, फी, टोल इत्यादि के भुगतान का दायित्व निविदाकार का होगा तथा यह माना जायेगा कि निविदाकार द्वारा प्रस्तुत वित्तीय प्रस्ताव (Financial Offer) में उक्त राशि का भुगतान सम्मिलित है।
7. उपयोग की गई सामग्री से संबंधित रायल्टी की रसीदें देयक के साथ प्रस्तुत करना होगी अन्यथा देयक से रायल्टी काटकर राजस्व मद में जमा कर ली जावेगी, जिसे विभाग संबंधित निविदाकार को वापिस करने हेतु बाध्य नहीं होगा।
8. धरोहर राशि (EMD) इलेक्ट्रॉनिक (e-EMD) रूप में ही ली जायेगी।
9. निविदाओं में भाग लेने वाले निविदाकार अपने बैंक अकाउंट की जानकारी एम.पी. ई–प्रोक्योरमेंट पोर्टल (https://mptenders.gov.in) पर अपने लॉग–इन आई.डी. से लॉग–इन कर बैंक अकाउंट डिटेल्स फार्म में दर्ज करेंगे।
10. निविदाकार RTGS/NEFT/Debit Card/Credit Card/Net Banking के माध्यम से ई. एम. डी. (e-EMD)की राशि पोर्टल पर जमा कर सकेंगे उसके बाद वे निविदा में भाग लेने की कार्यवाही पूर्ववत करेंगे।
11. वित्तीय आफर खुलने के उपरांत न्यूनतम निविदाकार की ई.–ई.एम.डी. (e-EMD) की राशि को छोड़कर शेष सभी निविदाकारों द्वारा जमा ई.–ई.एम.डी. (e-EMD) की राशि पोर्टल के माध्यम से वापस की जाएगी, जो कि निविदाकार के पोर्टल पर रजिस्टर्ड बैंक खाते में ही वापस होगी। यहाँ यह स्पष्ट किया जाता है कि ई.–ई.एम.डी. (e-EMD) जमा करने वाले निविदाकार किसी भी खाते से ई.–ई.एम.डी. (e-EMD) की राशि जमा कर सकेंगे परन्तु वापसी निविदाकार के रजिस्टर्ड बैंक खाते में ही होगी। सफल निविदाकार की ई.–ई.एम.डी. (e-EMD) की राशि अनुबंध करने तक रोक कर रखी जाएगी तथा अनुबंध निष्पादित किये जाने के उपरांत वापस की जाएगी।
12. ई.एम.डी. (EMD)राजसात किये जाने की स्थिति में निविदाकार द्वारा जमा ई.–ई.एम.डी. (e-EMD)की राशि पोर्टल पर राजसात की जाएगी तथा राजसात की गयी राशि सर्विस प्रोवाईडर द्वारा तुरंत लोक स्वास्थ्य यॉत्रिकी विभाग के 8443 सिविल जमा खाते में जमा की जाएगी जिसे निक्षेप खाते के धारक द्वारा चालान के माध्यम से राजस्व प्राप्तियाँ **0215** शीर्ष में जमा कराई जाएगी।
13. निविदाकार को निविदा प्रपत्र में संलग्न एनेक्सर–बी अनुसार सेल्फ डिक्लेरेशन प्रस्तुत करना होगा।
14. प्राप्त न्यूनतम निविदा दर (एल–1) 10 प्रतिशत से अधिक नीचे (More Than Ten Percent Below) होने पर निविदा दर को अव्यवहारिक दर (Unworkable Rates) माना जावेगा। अव्यवहारिक दरें (Unworkable Rate) प्राप्त होने पर सफलतम निविदाकार (एल–1) द्वारा निम्नानुसार अतिरिक्त परफारमेंस ग्यारंटी केवल एफ.डी.आर. के रूप में (Additional Performance Guarantee) ली जायेगी, Additional Performance Guarantee प्राप्त होने के उपरांत ही अनुबंध निष्पादित किया जायेगा।

1. निविदा में 10 प्रतिशत कम दर प्राप्त होने पर कोई अतिरिक्त परफॉरमेंस गारंटी की राशि नहीं लिया जाना है।

2. निविदा में 10 से 20 प्रतिशत तक कम दर आने पर निविदा दर 10 प्रतिशत से बढ़कर जितने प्रतिशत कम होगी PAC राशि का उतना प्रतिशत अतिरिक्त परफॉरमेंस गारंटी के रूप मे लिया जाना है।

उदाहरण – यदि निविदा की अनुमानित लागत **(PAC) Rs 100.00** लाख है तथा सफलतम निविदाकार की दर **14** प्रतिशत Below SOR हो तो अतिरिक्त परफॉरमेंस गारंटी की गणना निम्नानुसार होगीः–

एफ.डी.आर. के रूप में प्रस्तुत की जाने वाली अतिरिक्त परफॉरमेंस गारंटी की राशिः–

Probable Amount of Contract (PAC) x Rate Below SOR Beyond 10% = 100 (14%-10%)= Rs 4.00 Lakh

3. निविदा में 20 प्रतिशत से अधिक कम दर (RATES BELOW SOR BEYOND 20%) निविदा दर आने पर गणना निम्नानुसार होगीः–

उदाहरण – यदि निविदा की अनुमानित लागत **(PAC) Rs 100.00** लाख है तथा सफलतम निविदाकार की दर **24** प्रतिशत Below SOR हो तो अतिरिक्त परफॉरमेंस गारंटी की गणना निम्नानुसार होगीः–

एफ.डी.आर. के रूप में प्रस्तुत की जाने वाली अतिरिक्त परफॉरमेंस गारंटी की राशि = (A+B)

A) Probable Amount of Contract x 1 x (Rates Below SOR Beyond 10% upto 20%) = 100 x 1 x (10%) = Rs 10.00 लाख
B) Probable Amount of Contract x 2 x (Rates Below SOR Beyond 20%) = 100 x 2 x (4%) = Rs 8.00 लाख

अर्थात कुल अतिरिक्त परफॉरमेंस गारंटी की राशि (A+B) = Rs 18.00 लाख

15. अतिरिक्त परफोरमेंस गारंटी केवल एफ.डी.आर. के रूप में ली जावेगी।

16. Additional Performance Guarantee भौतिक रूप से कार्य पूर्णता प्रमाण–पत्र (Physical Completion Certificate) जारी होने के पश्चात ही वापस की जाएगी।

17. निविदा स्वीकृति के उपरांत निविदाकार को अनुबंध हेतु विभाग द्वारा पत्र जारी किया जावेगा, जिसकी सूचना निविदाकार को एस.एम.एस. /व्हाटसएप्प/ई–मेल से दी जावेगी, निविदाकार को पत्र जारी होने के दिनांक के 15 दिवस के अंदर अनुबंध निष्पादित कर कार्य प्रारंभ करना होगा अन्यथा बिना किसी अन्य सूचना के उनकी अमानत राशि राजसात कर ली जावेगी तथा निविदाकार फर्म एवं उसके भागीदार (यदि कोई हो तो) को आगामी एक वर्ष के लिये संपूर्ण प्रदेश में विभागीय कार्यों की निविदा प्रक्रिया में भाग लेने हेतु प्रतिबंधित किया जा सकेगा। निविदा अनुबंध ही कार्यादेश होगा, पृथक से कोई कार्यादेश जारी नही किया जावेगा।

18. म0प्र0 राजपत्र (असाधारण) प्राधिकार से प्रकाशित, विधि और विधायी कार्य विभाग, भोपाल, दिनांक 09 नवम्बर 2025 अनुसार यदि संविदा मूल्य रू. 50.00 लाख तक है तो रू0 1000/– एवं यदि संविदा मूल्य रू0 50.00 लाख से अधिक है तो रू. 10.00 लाख रू0 की अधिकतम सीमा के अध्यधीन रहते हुए संविदा मूल्य का 0.2 प्रतिशत स्टाम्प शुल्क प्रभारित होगा या जी0एस0टी0 लागू होने पर जो भी निविदा अनुबन्ध के दस्तावेज पर दरें लागू होंगी, उसे निविदाकार द्वारा वहन करना होगा।

19. कार्यादेश एवं भुगतान आवंटन की उपलब्धता पर निर्भर करेगा विलंब से होने वाले भुगतान पर कोई क्लेम निविदाकार द्वारा नहीं किया जा सकेगा।

20. निविदा में निहित कार्यों के क्रियान्वयन में निर्माणकर्ता संस्था/ठेकेदार द्वारा जल जीवन मिशन के परिचालन दिशा–निर्देश के अनुसार कार्यो का क्रियान्वयन किया जायेगा। जल जीवन मिशन के परिचालन दिशा–निर्देश विभागीय वेबसाईट (www:mpphed.gov.in) पर उपलब्ध है।

21. अनुबंध का संपादन सदस्य सचिव, जिला जल एवं स्वच्छता मिशन (कार्यपालन यंत्री लोक स्वास्थ्य यांत्रिकी विभाग संबंधित खण्ड) द्वारा निविदाकार के साथ किया जायेगा। ग्राम जल एवं स्वच्छता समिति (व्हीडब्ल्यूएससी)/ग्राम पंचायत का सचिव भी अनुबंधकर्ता के रूप में शामिल होगा। इस प्रकार यह अनुबंध त्रिपक्षीय (Triparty Agreement) होगा।

22. यदि अनुबंध में एक से अधिक ग्रामों की योजना के कार्य सम्मिलित हैं तो अनुबंध में सम्मिलित सभी ग्राम की व्हीडब्ल्यूएससी/ग्राम पंचायत के सचिव अनुबंध कर्ता के रूप में सम्मिलित होंगे। प्रत्येक व्हीडब्ल्यूएससी/ग्राम पंचायत के सचिव का इस अनुबंध के तहत् दायित्व उसके ग्राम तक सीमित होगा।

23. स्थापित नलजल योजना की रेट्रोफिटिंग संबंधी कार्य की निविदा में योजना के स्थापित अवयवों में आवश्यक सुधार निविदाकार द्वारा किये जाकर योजना को पूर्ण रूप से चालू किया जायेगा। इस प्रकार किये गये सुधार कार्य हेतु निविदाकार को भुगतान अनुबंध में निहित प्रावधानों के अनुसार किया जायेगा। यदि कोई आयटम जो कि बीओक्यू में शामिल नहीं है किन्तु योजना को पूर्ण रूप से चालू करने हेतु उसका क्रियान्वयन आवश्यक है तो ऐसे अतिरिक्त आयटम का अनुमोदन सक्षम स्तर से प्राप्त कर उसका क्रियान्वयन किया जायेगा।

24. स्थापित योजना की रेट्रोफिटिंग/आवर्धन की निविदा के प्रकरण में निविदाकार को अनुबंध संपादन के दिनांक से 07 दिवस में योजनाओं के समस्त स्थापित अवयवों को, भौतिक सत्यापन उपरान्त अपने अधिपत्य में लेना होगा। अनुबंध संपादन के 07 दिवस में सत्यापन न किये

जाने की दशा में यह माना जायेगा कि विभाग द्वारा उल्लेखित तथ्य निविदाकार को मान्य/स्वीकार्य है, उसके उपरान्त कोई आपत्ति मान्य नहीं की जायेगी।

25. ठेकेदार से देयक के भुगतान (Running Payment) हेतु अनुरोध प्राप्त होने पर राज्य जल एवं स्वच्छता मिशन (एसडब्ल्यूएसएम) द्वारा सूचीबद्ध थर्ड पार्टी निरीक्षण एजेंसी (टीपीआई) में से डीडब्ल्यूएसएम द्वारा चयनित/अनुबंधित टीपीआईद्वारा निरीक्षण हेतु निर्धारित मापदण्ड के अनुसार कार्यस्थल पर कार्य का व्हीडब्ल्यूएससी/ग्राम पंचायत, लोक स्वास्थ्य यांत्रिकी विभाग के साथ निम्नानुसार पहलुओं को सम्मिलित करते हुये नलजल योजना के तहत निष्पादित सिविल, मैकेनिकल और इलेक्ट्रिकल घटकों से संबंधित सभी इंजीनियरिंग कार्यो का पर संयुक्त निरीक्षण किया जायेगा :–

25.1) निम्नलिखित की नमूना जाँच की जायेगी :–

25.1.1 निर्माण के लिये प्रयुक्त सामग्री की परीक्षण रिपोर्ट;
25.1.2 कार्यस्थल पर निर्माण के समय पर अपनाये गये गुणवत्ता नियंत्रण के उपाय;
25.1.3 कार्यस्थल पर निर्माण के समय पर अपनाये गये सुरक्षा उपाय;
25.1.4 ठेकेदार द्वारा उपलब्ध कराये गये श्रमिकों का भुगतान।

25.2) भुगतान के लिये प्रस्तुत बिल के अनुसार निष्पादित कार्यों की मात्रा और गुणवत्ता;

25.3) ट्रायल रन के दौरान नलजल योजना का परफॉरमेन्स;

26. संयुक्त निरीक्षण से संबंधित समस्त बिन्दुओं को ग्राम पंचायत/उपसमिति/ व्हीडब्ल्यूएससी द्वारा इस कार्य हेतु तैयार वर्क रजिस्टर में नोट किया जायेगा और उस पर समस्त पक्षों द्वारा हस्ताक्षर किये जायेंगे। इसके आधार पर विभाग माप पुस्तिका (एम.बी.) में माप को रिकार्ड करेगा तथा संयुक्त निरीक्षण उपरांत भुगतान हेतु अनुशंसा प्राप्त होने पर विभाग निष्पादित कार्य के लिये भुगतान हेतु प्रक्रिया शुरू करेगा।

27. व्हीडब्ल्यूएससी के सहयोग हेतु ग्राम में क्रियान्वयन सहायता संस्था (आईएसए) उपलब्ध होगी, जिसके दायित्व जल जीवन मिशन के परिचालन दिशा–निर्देश में उल्लेखित है। योजनान्तर्गत आईएसए द्वारा ग्राम के घरों का सर्वेक्षण कर उन घरों में दिये जाने वाले नल कनेक्शन हेतु गृह स्वामी का नाम, आधार नम्बर एवं आधार कार्ड की छायाप्रति प्राप्त करेगी। यह जानकारी आईएसए द्वारा एक रजिस्टर में संधारित की जायेगी। आवश्यकता अनुसार इस जानकारी का वेरिफिकेशन विभाग/व्हीडब्ल्यूएससी द्वारा किया जायेगा। यदि ग्राम में आईएसए उपलब्ध नहीं है तो ऐसी स्थिति में उपरोक्त दायित्व का निर्वहन ठेकेदार द्वारा किया जायेगा। ठेकेदार द्वारा योजनान्तर्गत ग्राम में नल कनेक्शन देने के उपरांत इसी रजिस्टर पर गृह स्वामी के हस्ताक्षर/अंगूठा प्राप्त किया जायेगा तथा कार्यवाही पूर्ण होने पर रजिस्टर विभाग को सौंपना होगा। इस रजिस्टर में दर्ज घरों की संख्या एवं दिये गये नल कनेक्शन के वेरिफिकेशन के उपरांत ही घरेलू नल कनेक्शन हेतु निर्धारित राशि का भुगतान किया जायेगा।

28. योजना में प्रस्तावित पाईप का व्यास, पंप की क्षमता आदि विभाग के द्वारा योजना के रूपांकन (Design)पर आधारित है। निविदाकार योजना हेतु अपनी Design दे सकता है। इस Design के कारण यदि पाईप लाईन के व्यास/लम्बाई तथा पंप की क्षमता में परिवर्तन होता है तो उसका भुगतान अनुबंध के GCC Section-3की कंडिका 21 के अनुसार किया जायेगा। निविदाकार द्वारा योजना की नवीन Designप्रस्तुत करने पर उच्चस्तरीय टंकी की क्षमता में कोई भी परिवर्तन नहीं किया जा सकेगा। निविदाकार द्वारा इस प्रकार योजना की नवीन Designप्रस्तुत करने पर उक्त नवीन डिजाईन–ड्राइंग का अनुमोदन अधीक्षण यंत्री संबंधित मण्डल द्वारा किया जायेगा।

29. यदि उच्च स्तरीय टंकी की डिजाईन–ड्राइंग ठेकेदार द्वारा प्रस्तुत की जाती है तो उक्त डिजाईन–ड्राइंग का अनुमोदन इंजीनियिरिंग/पॉलीटेक्निक कॉलेज से कराकर विभाग को प्रस्तुत करना होगा।

30. आरसीसी उच्च स्तरीय टंकी के डिजाईन में बॉटम स्लैब का रूपांकन फ्लैट स्लैब के रूप में किया जावेगा।

31. आरसीउच्च स्तरीय टंकी/जीएसआर/सम्पवेल के निर्माण के पूर्व प्रस्तावित स्थल की Soil Bearing Capacity का परीक्षण ठेकेदार द्वारा स्वयं के व्यय पर कराकर परीक्षण रिपोर्ट विभाग को प्रस्तुत करना होगी।

32. निविदाकार द्वारा विभाग में उपलब्ध (यदि कोई हो तो) आर.सी.सी. उच्च स्तरीय टंकी/सम्पवेल/आर.सी.सी. कम ब्रिक मेसनरी पंप हाउस की डिजाइन–ड्राइंग उपयोग में लाई जा सकेंगी, इस हेतु संबंधित आयटम हेतु देयक कुल राशि में से आर.सी.सी. उच्च स्तरीय टंकी हेतु रूपये 25000/– जीएसआर/सम्पवेल/सम्पवेल कम पंप हाउस हेतु रूपये 7500/– एवं आर.सी.सी. कम ब्रिक मेसनरी पंप हाउस (सम्पवेल के ऊपर न बनाते हुये पृथक से बनाये जाने वाले पंप हाउस हेतु) हेतु रूपये 5000/– की कटौती संबंधित आयटम के प्रथम देयक से की जायेगी।

33. विद्युत कनेक्शन कार्य निविदाकार द्वारा निविदा में स्वीकृत दरों के अनुरूप संबंधित म0प्र0 विद्युत वितरण कंपनियों द्वारा प्रदत्त प्राक्कलन/MPVVCL केSORमे निर्धारित मापदंड अनुसार किया जावेगा। इस स्थिति में निविदा आमंत्रण की दिनांक को लागू MPVVCL के SOR की दरे मान्य की जायेंगी।

34. कार्य हेतु किसी भी प्रकार का परिवहन से संबंधित व्यय, तथा निविदाकार द्वारा प्रयुक्त किसी भी सामग्री अथवा उपकरण के खराब होने पर अथवा मानकों के अनुरूप न होने पर उसको बदलने/सुधार करने में हुये व्यय का विभाग द्वारा कोई भुगतान नहीं किया जावेगा।

35. योजना के हस्तांतरण के समय निविदाकार के द्वारा Engineer-in-Charge द्वारा अनुमोदित As Built Drawingsतीन प्रतियों में विभाग/व्हीडब्ल्यूएससी/पंचायत को प्रस्तुत करना अनिवार्य होगा।

36. ठेकेदार द्वारा निर्मित अवयवों यथा टंकी, सम्पवेल, जल वितरण प्रणाली का आवश्यकतानुसार डिसइनफेक्शन (Disinfection) का दायित्व होगा। इस हेतु पृथक से कोई भुगतान निविदाकार को नहीं किया जायेगा।

37. निविदाकार यह सुनिश्चित करेगा कि जल वितरण के दौरान पेयजल पाईप लाईन में टूट–फूट, वाल्व लीकेज इत्यादि से प्रदूषित न हो।

38. निविदाकार द्वारा जल प्रदाय के संबंध में एक पंजी संधारित की जायेगी। इसका सत्यापन विभागीय उपयंत्री द्वारा कम से कम 15 दिवस में एक बार किया जायेगा। भुगतान हेतु देयक प्रस्तुत करते समय उक्त पंजी की छायाप्रति निविदाकार द्वारा संलग्न किया जाना अनिवार्य होगा। पंजी की छायाप्रति संलग्न न होने की स्थिति में भुगतान नहीं किया जायेगा।

39. नल कनेक्शन घर के ओटले पर/बाड़े/फैसिंग/बाउण्ड्रीवाल के अंदर देना है। इसके लिए जितना भी एमडीपीई/जीआई (बी.ओ.क्यू. में निर्धारित पाईप मटेरियल अनुसार) पाईप लगेगा, उक्त पाईप निविदाकार या फर्म को लगाना होगा। इस पाईप का भुगतान अलग से नहीं किया जावेगा। सडक के पास किए गए नल कनेक्शन मान्य नही होगें।

40. निविदाकार द्वारा विभाग में सूचीबद्ध Make/Brandकी सामग्री का ही उपयोग किया जायेगा। सूचीबद्ध मेक/ब्रांड की सामग्री उपलब्ध न होने की स्थिति में निविदाकार Engineer-in-Chargeको अवगत करायेगा। Engineer-in-Chargeयदि आवश्यक हो तो ऐसी स्थिति में प्रस्ताव अधीक्षण यंत्री को प्रेषित करेंगे। विभाग द्वारा समय–समय पर सामग्री के मेक/ब्रांड की सूची निविदा अनुबंध के बाद भी जारी की जायेगी जिसमें शामिल सामग्री के मेक/ब्रांड का उपयोग भी इस अनुबंध के तहत किया जा सकेगा। निविदाकार द्वारा सामग्री की गुणवत्ता का परीक्षण सामग्री के फैक्टरी से डिस्पेच के पूर्व विभाग द्वारा निर्धारित थर्ड पार्टी निरीक्षण एजेंसी (टीपीआई) से कराना आवश्यक होगा जिसके उपरांत ही सामग्री का प्रदाय स्थल पर किया जायेगा। थर्ड पार्टी इन्सपेक्शन हेतु देय राशि का पृथक से भुगतान नहीं किया जायेगा, यह राशि सामग्री की लागत में शामिल है। थर्ड पार्टी निरीक्षण एजेंसी द्वारा निरीक्षित सामग्री के प्रमाण पत्र के साथ प्रदायकर्ता/निर्माणकर्ता कंपनी के बिल की सत्यापित प्रति भी देयक के साथ प्रस्तुत करना अनिवार्य होगा। थर्ड पार्टी निरीक्षण एजेंसी द्वारा जारी निरीक्षण प्रमाण पत्र में उल्लेखित सामग्री की मात्रा का मिलान कंपनी के बिल में उल्लेखित मात्रा से होने पर ही संबंधित सामग्री का भुगतान किया जायेगा। निविदाकार द्वारा सूचीबद्ध Make/Brand की कंपनी से सामग्री क्रय करने के संबंध में सामग्रीवार पत्र कार्यपालन यंत्री लोक स्वास्थ्य यांत्रिकी खण्ड से लिया जायेगा जिसमें अनुबंध में उल्लेखित/अनुबंध के अनुसार कार्य को पूर्ण करने हेतु आवश्यक सामग्री की मात्रा का उल्लेख होगा तथा इस प्रमाण–पत्र को निविदाकार द्वारा सूचीबद्ध Make/Brand की कंपनी को दिये जाने वाले क्रय आदेश के साथ संलग्न किया जायेगा। सूचीबद्ध Make/Brand की कंपनी द्वारा सामग्री तैयार होने पर थर्ड पार्टी परीक्षण एजेंसी को निरीक्षण हेतु आमंत्रित किये जाने पर कार्यपालन यंत्री के उक्त पत्र को अपने आमंत्रण के साथ थर्ड पार्टी निरीक्षण एजेंसी को प्रेषित करना होगा।

41. कंडिका 40 में उल्लेखित टीपीआई कंडिका 25 में उल्लेखित टीपीआई से भिन्न होगी। कंडिका 25 में उल्लेखित टीपीआई निविदाकार द्वारा किये जाने वाले कार्य की मात्रा एवं गुणवत्ता का निरीक्षण करेगी, जबकि कंडिका 40 में उल्लेखित टीपीआई सामग्री की फैक्ट्री में गुणवत्ता परीक्षण करेगी।

42. सामग्री के फैक्ट्री से रवाना होने के पूर्व निरीक्षण/परीक्षण हेतु निम्नानुसार टीपीआई निर्धारित है :–

क्र.	सामग्री का विवरण	टीपीआई एजेंसी
1.	प्लास्टिक पाईप– एच.डी.पी.ई, एम.डी.पी.ई., सी.पी.व्ही.सी, ओ.पी.व्ही.सी. पाईप सहित अन्य समस्त प्रकार के प्लास्टिक पाईप, फिटिंग एवं अन्य प्लास्टिक मटेरियल।	सेन्ट्रल इंस्टीट्यूट ऑफ प्लास्टिक इंजीनियरिंग एण्ड टेक्नोलॉजी (सिपेट)
2.	डी.आई./जी.आई पाईप।	राईट्स, आई.आर.एस., ई.आई.एल.**एस.जी.एस**
3.	मोटर पंप, वाल्व–स्पेशल्स एवं अन्य सामग्री जो इस तालिका के सरल क्रमांक 1 व 2 में शामिल नहीं है।	राईट्स, आई.आर.एस.,ई.आई.एल.**एस.जी.एस**

43. निविदाकार द्वारा कार्य के क्रियान्वयन के दौरान यदि किसी विभाग से अनुमति की आवश्यकता होती है तो ऐसी अनुमतियॉ निविदाकार द्वारा ली जावेगी तथा विभाग द्वारा इन अनुमतियों को प्राप्त करने में यथासंभव मदद की जावेगी। अन्य विभागों से अनुमति प्राप्त करने में यदि इन विभागों द्वारा किसी भी प्रकार की फीस या राशि की मांग की जाती है, तो यह फीस/राशि निविदाकार द्वारा संबंधित विभाग को दी जावेगी जिसकी प्रतिपूर्ति विभाग द्वारा निविदाकार को की जावेगी।

44. निविदाकार को योजना में प्रयुक्त होनी वाली सामग्री जैसे पाईप, वाल्व, स्पेशल्स सरिये, सीमेंट, रेत गिटटी, आदि आई.एस.आई. स्पेशिफिकेशन के अनुसार लगानी होगी।

45. चलित देयक से पाईप लाईन की टेस्टिंग हेतु राशि इस सेक्शन की कंडिका 63में उल्लेखित प्रतिशत के अनुसार रोकी जायेगी। पाईप लाईन का निर्धारित मापदण्ड अनुसार पानी के दबाव पर टेस्टिंग संतोषप्रद होने पर चलित देयक से टेस्टिंग हेतु रोकी गई राशि का भुगतान किया जावेगा। टेस्टिंग के समय लीकेज व अन्य दोष निविदाकार को स्वयं के व्यय पर ठीक करना होगा।

46. पाईप लाईन की खुदाई करते समय व पूर्व में दूरभाष विभाग से टेलीफोन केबल लाईन की जानकारी अनुसार ही खुदाई का कार्य करेगें, यदि टेलीफोन केबल इत्यादि एवं अन्य कोई क्षति होती है तो निविदाकार की सम्पूर्ण जवाबदारी होगी ।

47. पाईप लाईन हेतु पाईप व स्पेशल निविदाकार द्वारा प्रदाय किया जावेगा। परिवहन निविदाकार द्वारा किया जावेगा, टूट फूट की सम्पूर्ण जवाबदारी निविदाकार की होगी।

48. यदि ब्लास्टिंग की आवश्यकता होती है तो निविदाकार द्वारा नियमानुसार अनुमति प्राप्त कर किसी लायसेन्सिंग होल्डर से ब्लास्टिंग कार्य किये जावेगें। यदि किसी प्रकार की दुर्घटना व अनियमितता होती है तो निविदाकार स्वयं जिम्मेदार रहेगा।

49. आवश्यकतानुसार रोड को काट कर पाईप लाईन बिछानी होगी तथा पाईप लाईन की टेंस्टिंग उपरांत कांक्रीट कर रोड को कांक्रीट ग्रेड एम–20 अथवा तोड़ी गई कांक्रीट रोड के कांक्रीट ग्रेड के अनुसार (जो बेहतर हो) निर्मित करना होगा। किये गये कार्य की वास्तविक मात्रा के अनुसार निविदाकार को भुगतान किया जायेगा।

50. सभी सिविल कार्य लोक निर्माण विभाग के मेन्युअल तथा लोक स्वास्थ्य यांत्रिकी विभाग द्वारा निर्धारित मापदण्डों के अनुसार मान्य होगा।

51. विद्युत कार्य हेतु आवश्यक सामग्री म.प्र.वि.वि.कंपनी के संबंधित अधिकारी (कार्यपालन यंत्री/सहायक यंत्री/अभियंता) से निरीक्षण के उपरांत उचित गुणवत्ता की पाई जाने पर ही उपयोग की जावेगी तथा ट्रांसफार्मर की गारंटी 2 वर्ष की अवधि तक होगी। 2 वर्षकी अवधि में ट्रांसफार्मर खराब होने पर निविदाकार को स्वयं के व्यय पर ट्रांसफार्मर तत्काल ठीक कराना होगा।

52. विद्युत कार्य पूर्ण होने के उपरांत निविदाकार को संपादित कार्य म.प्र.वि.वि.कंपनी को हस्तांतरित कर हस्तांतरण पत्रक प्रस्तुत करने पर ही अंतिम देयक का भुगतान किया जावेगा

53. विद्युत कार्य विद्युत कंपनी के नियमानुसार कंपनी में ''अ'' श्रेणी में पंजीवद्व निविदाकार के माध्यम से ही कराना होगा ।

54. नलजल योजना के सिविल/पाईप लाईन एवं विद्युत संबंधी कार्य में किसी भी कार्य का कटोत्रा अथवा अतिरिक्त मात्रा का मूल्यांकन लोक स्वास्थ्य यांत्रिकीय विभाग तथा विद्युत कंपनी के निविदा आमंत्रण दिनांक को प्रचलित एस.ओ.आर. के अनुरूप निविदा में प्रदत्त दरों के आधार पर किया जावेगा। विद्युत कंपनी के द्वारा दिये गये प्राक्कलन में Centageतथा Transpotation Charge यदि कोई हो तो उनका भुगतान ठेकेदार को नहीं किया जायेगा।

55. नलजल प्रदाय योजना के निर्माण एवं ट्रायल–रन् की अवधि के दौरान निविदाकार द्वारा नियोजित कर्मियों की सुरक्षा हेतु आवश्यक उपकरणों की व्यवस्था निविदाकार द्वारा स्वयं के व्यय पर की जायेगी। कार्य संपादन के दौरान होने वाली किसी भी घटना/दुर्घटना एवं उसके वैधानिक परिणामों के लिये निविदाकार पूर्णतः उत्तरदायी होगा।

56. सम्पूर्ण नलजल योजना का ट्रायल–रन निविदाकार को ट्रायल–रन की निर्धारित अवधि 90 दिवस तक करना होगा। योजना के ट्रायल–रन की अवधि में अनुबंध अनुसार योजना के समस्त अवयवों के कार्य संतुष्टि के साथ पूर्ण किये जाने के संबंध में कार्यपालन यंत्री द्वारा निविदाकार को पत्र जारी किया जायेगा। इस प्रकार कार्यपालन यंत्री द्वारा जारी किये गये पत्र की दिनांक से ट्रायल–रन की अवधि प्रारंभ होगी। ट्रायल–रन की अवधि के दौरान ग्राम के शत्प्रतिशत परिवारों को घरेलू नल कनेक्शन से निर्धारित मात्रा एवं गुणवत्ता का पेयजल 90 दिवस तक सतत् रूप से उपलब्ध होने पर तथा योजना समस्त अवयवों के कार्य से विभाग/ग्राम पंचायत/व्हीडब्ल्यूएससी के संतुष्ट होने पर ट्रायल–रन की अवधि पूर्ण होगी। योजना के ट्रायल–रन अवधि के दौरान निविदाकार द्वारा ग्राम पंचायत/व्हीडब्ल्यूएससी के सदस्यों एवं उनके द्वारा चयनित ऑपरेटर आदि को योजना के संचालन–संधारण हेतु निःशुल्क प्रशिक्षण दिया जायेगा। ट्रायल–रन पूर्ण होने के उपरांत योजना संचालन–संधारण हेतु ग्राम पंचायत/व्हीडब्ल्यूएससी को हस्तांतरित की जायेगी।

57. निविदाकार द्वारा योजना के विभिन्न अवयवों यथा पंप हाउस, उच्च स्तरीय टंकी, जल शोधन संयंत्र, पाईप लाईन एवं वाल्व्स आदि का सी. पी.एच.ई.ई.ओ. मैनुअल के प्रावधानों एवं विभागीय निर्देशों के अनुसार ट्रायल–रन किया जायेगा।

58. यदि ट्रायल–रन अवधि में किसी नलजल योजना का स्त्रोत असफल हो जाता है, अथवा स्त्रोत में जल आवक क्षमता अपर्याप्त हो जाती है तो Engineer in Charge विभागीय रूप से वैकल्पिक व्यवस्था कर सकता है, अथवा इस हेतु आवश्यक कार्य का प्राक्कलन तैयार कर, ऐसे कार्य की सक्षम स्वीकृति प्राप्त कर, ऐसे कार्य को इसी अनुबंध के अंतर्गत निविदाकार के माध्यम से क्रियान्वित करा सकेगा। निविदाकार के लिये यह आवश्यक होगा कि वह ऐसा कार्य नियत समयावधि में स्वीकृत निविदा दर पर पूर्ण करेगा एवं विभाग द्वारा इस कार्य का भुगतान किया जायेगा एवं आवश्यकता होने पर आवश्यकता होने पर इस कार्य हेतु अनुबंध के प्रावधान अनुसार समयावृद्धि दी जा सकेगी। इस प्रकार अतिरिक्त रूप से किये गये कार्य के पूर्ण होने की दिनांक से ट्रायल–रन की 90 दिवस की अवधि इस अतिरिक्त कार्य के लिये प्रभावी होगी।

59. योजना के ट्रायल–रन के दौरान होने वाला समस्त व्यय निविदा दर में सम्मिलित है, अर्थात् ट्रायल–रन के दौरान निविदाकार को पृथक से कोई राशि देय नहीं होगी किन्तु योजना के संचालन के दौरान प्राप्त होने वाले विद्युत देयक की राशि का भुगतान सामान्यतः पंचायत/पेयजल उपसमिति/व्हीडब्ल्यूएससी द्वारा किया जायेगा।

60. योजना का सफलता पूर्वक ट्रायल–रन पूर्ण किये जाने का प्रमाण–पत्र कार्यपालन यंत्री द्वारा जारी किये जाने पर बीओक्यू के विभिन्न आयटमों में प्रावधानित ट्रायल–रन (Successful Trial Run of Entire Scheme) की राशि का भुगतान निविदाकार को किया जा सकेगा।

61. ट्रायल रन की अवधि प्रारंभ होने की दिनांक से निविदाकार को योजना के प्रत्येक स्त्रोत के जल के नमूने स्वयं के व्यय पर परीक्षण हेतु कम से कम 15 दिवस में एक बार विभाग की जिला/उपखण्ड स्तरीय प्रयोगशाला में परीक्षण हेतु प्रेषित करने होंगे। नमूनों का परीक्षण विभाग द्वारा निःशुल्क किया जायेगा। जल परीक्षण हेतु भेजे जाने वाले नमूनों की आवृत्ति विभिन्न ऋतुओं में विभाग के निर्देशानुसार कम या अधिक हो सकती है। परन्तु आवृत्ति अधिक होने पर भी निविदाकार को अलग से कोई भुगतान नहीं किया जायेगा।

62. योजना के ट्रायल–रन की अवधि में किसी आवेदक द्वारा नल कनेक्शन की मांग किये जाने पर ग्राम पंचायत/पेयजल उपसमिति/व्हीडब्ल्यूएससी की अनुशंसा पर निविदाकार द्वारा संबंधित आवेदक को नल कनेक्शन उपलब्ध कराया जायेगा। इस हेतु निविदाकार को निविदा के प्रावधानों के अनुसार भुगतान किया जायेगा।

63. यदि मुख्य ग्राम के किसी बसाहट/मोहल्ले/भाग में नलजल योजना स्थापित है तथा मुख्य ग्राम में इस अनुबंध के तहत योजना क्रियान्वित की जा रही है तथा ऐसी बसाहट/मोहल्ले/ग्राम में स्थापित नलजल योजना को मुख्य ग्राम की योजना से जोड़ा जा रहा है तो निविदाकार द्वारा दोनों क्षेत्र (मुख्य ग्राम एवं बसाहट/मोहल्ला/ग्राम) की योजनाओं का समग्र रूप से ट्रायल–रन किया जायेगा।

64. निविदाकार यह सुनिश्चित करेगा कि जल स्त्रोत की गुणवत्ता स्थानीय कारणों से (जैसे–स्त्रोत में प्रदूषित पानी मिलना, स्त्रोत के पास कूड़े–कचरे, गोबर होना आदि) प्रभावित न हो।

65. निविदा की बी.ओ.क्यू.(Bill of Quantities)के ऐसे आयटम जिसमें"Providing laying /jointing/ installation and testing/ commissioning"का कार्य सम्मिलित है, उन आयटमों का भुगतान निम्नानुसार ब्रेकअप में किया जायेगा :–

1.	**सामग्री का स्थल साइट/स्टोर पर प्रदाय होने के उपरांत (Providing/ Procurment)**	**आयटम दर का 60 प्रतिशत**
2.	**सामग्री को निर्धारित स्थल पर लगाने के उपरांत (Laying/ Jointing/ Installation) :-**	
(a)	पावर पंप/ट्रांसफार्मर स्थापना संबंधी कार्य :– पंप स्थापना एवं नियमित विद्युत संयोजन कार्य पूर्ण करने पर।	आयटम दर का 20 प्रतिशत
(b)	पाईप लाईन कार्य जहाँ Road Cuttingकी स्थिति हो :– Laying / Jointing तक का कार्य पूर्ण करने पर।	आयटम दर का 20 प्रतिशत
(c)	पाईप लाईन कार्य जहाँ Road Cuttingकी स्थिति न हो:– Laying/Jointing तक का कार्य पूर्ण करने पर।	आयटम दर का 30 प्रतिशत
3.	**After Testing & Commissioning :-**	
(a)	पावर पंप/ट्रांसफार्मर स्थापना संबंधी कार्य :– Testing & Commissioningपूर्ण करने पर।	आयटम दर का 15 प्रतिशत
(b)	पाईप लाईन कार्य जहाँ Road Cuttingकी स्थिति हो :– Testing & CommissioningएवंRoad Restoration (Making good the same) का कार्य पूर्ण करने पर।	आयटम दर का 15 प्रतिशत
(c)	पाईप लाईन कार्य जहाँ Road Cuttingकी स्थिति न हो:– Testing & Commissioningएवं पाईप लाईन ट्रैंच कीBackfillका कार्य पूर्ण करने पर।	आयटम दर का 5 प्रतिशत
4.	**After Successful Trial-Run of Entire Scheme :-**	
(a)	पावर पंप/ट्रांसफार्मर स्थापना संबंधी कार्य :– Testing & Commissioningपूर्ण करने पर।	आयटम दर का 5 प्रतिशत
(b)	पाईप लाईन कार्य जहाँ Road Cuttingकी स्थिति हो :– Testing & CommissioningएवंRoad Restoration (Making good the same) का कार्य पूर्ण करने पर।	आयटम दर का 5 प्रतिशत
(c)	पाईप लाईन कार्य जहाँ Road Cuttingकी स्थिति न हो:– Testing & Commissioningएवं पाईप लाईन ट्रैंच कीBackfillका कार्य पूर्ण करने पर।	आयटम दर का 5 प्रतिशत

उपरोक्त ब्रेकअप पाईप, पंप, स्पेशल्स, ट्रांसफार्मर, Electric Conductor And Pole के प्रदाय संबंधी आयटमों पर ही लागू होगा। अन्य आयटमों के भुगतान पर उक्त ब्रेकअप लागू नहीं होगा तथा उनका भुगतान बी.ओ.क्यू. की दर के अनुरूप संबंधित आयटम के पूर्ण रूप से क्रियान्वित होने पर ही होगा।

66. उपरोक्त प्रावधान निविदाकार के Cash Flowको बनाये रखने के उददेश्य से किया गया है। अतः निविदाकार की जिम्मेदारी होगी कि वह सामग्री के प्रदाय के साथ–साथ laying/jointing/installationका 07 दिवस में प्रारंभ करे यदि निविदाकार द्वारा मात्र सामग्री का प्रदाय किया जाता है और उसका laying/jointing/installationका 07 दिवस में कार्य प्रारंभ नहीं किया जाता है तो कार्य के अन्य देयक की राशि से उक्त राशि का कटौत्रा किया जायेगा।

67. आरसीसी उच्च स्तरीय टंकियों के BOQ Itemका Payment Schedule (Breakup) निम्नानुसार होगा :–

S. No.	Stage of payment	% of amount of Item to be paid	Cumulative Percentage
1.	After casting of Leveling Course	3%	3%
2.	After foundation including columns to 1st brace level.	5%	8%
3.	After casting 50% R.C.C. Staging	10%	18%
4.	After full Staging	15%	33%

5.	After Ring Beam bottom Slab Casting	15%	48%
6.	After Casting Vertical wall of tank	15%	63%
7.	After Casting Stair-Case Including railing Work and Top Dome Slab	10%	73%
8.	Supply of all Pipes, Specials and fixing complete	12%	85%
9.	After G.L Protection Work Gate work Complete	5%	90%
10.	After Finishing work, Testing, Commissioning and completion of work of this item in all respect.	5%	95%
11.	After Successful Trial-Run of Entire Scheme	5%	100%

68- आरसीसी संपवेल/जीएसआर के BOQ Item काPayment Schedule (Breakup) निम्नानुसार होगा :–

S.No.	Stage of payment	% of amount of BOQ Item	Cumulative Percentage
1	After casting of Leveling Course	3%	3%
2	After construction of foundation slab	25%	28%
3	After construction of vertical walls	32%	60%
4	After casting of top slabs & installation of all fittings	25%	85%
5.	After Finishing work, Testing, Commissioning and completion of work of this item in all respect.	10%	95%
6.	After Successful Trial-Run of Entire Scheme	5%	100%

69. आरसीसी कम ब्रिक मेसनरी पंप हाउस के BOQ Item का Payment Schedule (Breakup) निम्नानुसार होगा :–

S.No.	Stage of payment	% of amount of BOQ Item	Cumulative Percentage
1	After construction upto cloumn and top slabs	40 %	40 %
2	After brick work and plaster	35 %	75 %
3	After electric work, painting and completion of work of this item in all respect.	25 %	100%

70. विभाग द्वारा विकसित स्त्रोत उपलब्ध कराया जावेगा। आवश्यक होने पर स्त्रोत निर्माण निविदा द्वारा कराया जावेगा एवं उसके उपरान्त जल क्षमता का परीक्षण कम से कम 24 घन्टे किया जायेगा। जल की उपलब्धता 55 लीटर प्रतिव्यक्ति प्रतिदिन के मान से होने पर ही कार्य प्रारम्भ कर सकेगा।यदि किसी योजना में सफल स्त्रोत (55 लीटर प्रतिव्यक्ति प्रतिदिन के मान से रूपांकित जनसंख्या हेतु जल की उपलब्धता प्राप्त नही होती है) तो मात्रा स्त्रोत का भुगतान कर उसी स्थिति में योजना का अन्तिम देयक तैयार किया जावेगा।

71. निविदाकार को कार्य प्रारंम्भ करने से पूर्व पूरे ग्राम का सर्वेक्षण कर डिस्ट्रीब्यूशन पाईप लाइन की डिजाइन प्रस्तुत करनी होगी तदुपरान्त ही कार्य प्रारम्भ किया जा सकेगा।

72. निविदाकार द्वारा निविदा डालने के पूर्व उक्त कार्य हेतु कार्य स्थल का निरीक्षण कर लिया जावे तथा पूर्व में किये गये कार्य में सुधार का आकलन करने के पश्चात ही निविदा दर प्रस्तुत की जावे एवं आवश्यकता पड़ने पर इस कार्यालय से कार्य के संबंध में जानकारी प्राप्त कर ली जावे एवं निविदा की शर्तों का भलीभांति अध्ययन कर लिया जावे।

73. चूकि निविदा शेष एवं अतिरिक्त कार्य हेतु आमंत्रित की जा रही है। अतः निविदाकार की यह जिम्मेदारी होगी कि वह पूर्व मे किये गये कार्य का परीक्षण करें एवं बंद होने की स्थिति में उसका सुधार कार्य भी करें ताकि योजना का समेकित रूप से क्रियान्वयन हो सके।

74. प्रमुख अभियंता लोक स्वास्थ्य यांत्रिकी विभाग म0प्र0 भोपाल के आदेश क्रमांक 198/राज(स्था.)/प्र0अ0/लो0स्वा0यां0वि0/2021 दिनांक 02.09.2021 एवं पत्र क्रमांक 204/राज(स्था.)/प्र0अ0/लो0स्वा0यां0वि0/2021 दिनांक 03.09.2021 द्वारा जारी निर्देशों के अध्यायी निर्माण सामग्री`

परीक्षण/टेसट्रिग तथा कांक्रीट क्यूब टेस्ट का कार्य शासकीय संस्था/प्रयोगशाला के साथ साथ मुख्य अभियंता लोक स्वास्थ्य यांत्रिकी विभाग जबलपुर परिक्षेत्र जबलपुर सूचीबद्व निजी क्षेत्र की एन.ए.बी.एल प्रमाणित प्रयोगशाला से भी कराया जा सकेगा। ठेकेदार द्वारा आर.सी.सी. उच्चस्तरीय टंकी, सम्पवेल, भवन आदि के देयकों के साथ संलग्न किए जाने वाले क्यूब टेस्ट की न्यूनतम एक रिपोर्ट शासकीय संस्थान की होना आवश्यक होगा।

75. पाइप लाइन बिछाने हेतु खुदाई करने के पूर्व अन्य शर्तों के साथ call before you Dig (CBuD) एप्प का उपयोग किया जाना आवश्यक होगा। बिना एप्प में सूचना दर्ज किये खुदाई किये जाने पर यदि किसी विभाग के asset क्षतिग्रस्त होते है तो समस्त जिम्मेदारी संबंधित ठेकेदार/एजेंसी की होगी।

76. निविदाकार को As built drawing (पाइप लाइन एवं अन्य अवयव की निर्धारित फाईल) पी.एम.गति शक्ति पोर्टल पर Upload कराने के उपरान्त ही अतिम देयक का भुगतान किया जायेगा ।

Section 4

Bill of Quantities (BOQ)

Name of work- Balance Work of Retrofitting P.W.S.S. Village Bahmani and Semariya Block Sidhi Distt. Sidhi under Jal Jeevan Mission (JJM)

.

SOR ENC PHED BHOPAL W.E.F. 03.07.2018 (With all amendments up to date**)**

Probable Amount of Contract	**171.13 lakh**				

VILLAGE-BAMHANI

B.O.Q. OF VILLAGE- BAMHANI

Block Sidhi					
S. No	Items of Work	Qty	Rate	Unit	Amount (Rs.)
1	2	3	4	5	6
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50m and left up to 1.5m,disposed earth to be leveled and neatly dressed. Item 16.4 pg.213				
	All kind of soil	1407.84	140.00	cum	197097.60

	In ordinary Soft rock with or without blasting or bituminous pavement / cement concrete road 16.6 (a)	603.36	255.00	cum	153856.80
2	Demolishing cement concrete manually / by mechanical means including disposal of material within 50 m lead as per direction of engineer-in-charge.				
	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	74	745.00	cum	55130.00
3	Providing & laying mechanically mixed cement concrete 20mm nominal size graded crushed stone excluding cost of centering & shuttering.				
	iii 1:3:6 (M-10)	37	3965.00	cum	146705.00
	iv 1:2:4 (M-15)	37	4661.00	cum	172457.00
4	Providing, Laying, Jointing & field testing of HDPE pipes (High Density Polyethylene Pipes) confirming to IS 4984/14151/12786/13488 with necessary jointing material like mechanical connector of jointing pipes by heating to the ends of pipes with the help of Teflon coated electric mirror/ heater to the required temperature and then pressing the ends together against each other, to form a monolithic & leak proof joint by thermosetting process. It may be required to be done with Jack/ Hydraulic Jacks/ Butt fusion machine. (50 mm & above fusion jointed & below 50mm mechanical jointed)				
	110 mm dia HDPE 10kg/sqcm	0	515.00	R mtr	0.00
	90 mm dia HDPE 6kg/sqcm	2354	228.00	R mtr	536712.00
	110 mm dia HDPE 6kg/sqcm	548	366.00	R mtr	200568.00
	125 mm dia HDPE 6kg/sqcm	250	441.00	R mtr	110250.00
	140 mm dia HDPE 6kg/sqcm	200	554.00	R mtr	110800.00
	160 mm dia HDPE 6kg/sqcm	0	724.00	R mtr	0.00
	180 mm dia HDPE 6kg/sqcm	0	910.00	R mtr	0.00
	Total	3352			
5	Filling available excavated earth in trenches, lead up to 50m and lift up to 1.5m in all kind of soil excluding watering and ramming.	2011.2	37.00	cum	74414.40
6	Providing butt fusion welded joint/joining byheating to the ends with the help of Tefloncoated electric mirror/heater ends togetheretc. by thermosetting processes to HDPE Pipeand specials. (6 kg. 8 kg. 10 kg.) (50 mm &above fusion jointed & below 50 mmmechanical jointed)				
	90 mm dia. Of HDPE Pipe	40	146	each	5840.00

	110 mm dia. Of HDPE Pipe	20	161	each	3220.00
	125 mm dia. Of HDPE Pipe	15	194	each	2910.00
	140 mm dia. Of HDPE Pipe	10	206	each	2060.00
7	Providing and laying including testing Bend 90̊ confirming to IS specifications.				
	110 mm dia HDPE 10kg/sqcm	5	345.00	EACH	1725.00
	90 mm dia HDPE 6kg/sqcm	20	199.00	each	3980.00
	110 mm dia HDPE 6kg/sqcm	12	264.00	each	3168.00
	125 mm dia HDPE 6kg/sqcm	5	379.00	each	1895.00
	140 mm dia HDPE 6kg/sqcm	2	514.00	each	1028.00
	160 mm dia HDPE 6kg/sqcm	0			
	160 mm dia HDPE 6kg/sqcm	0			
8	Providing and laying including testing Bend 45̊ confirming to IS specification. Pressure				
	110 mm dia HDPE 10kg/sqcm	5	452.00	each	2260.00
	90 mm dia HDPE 6kg/sqcm	4	210.00	each	840.00
	110 mm dia HDPE 6kg/sqcm	3	312.00	each	936.00
	125 mm dia HDPE 6kg/sqcm	2	434.00	each	868.00
	140 mm dia HDPE 6kg/sqcm	1	633.00	each	633.00
9	Providing and laying including testing Reducer: confirming to IS specifications.				
	110 mm dia HDPE 6kg/sqcm	20	127.00	each	2540.00
	125 mm dia HDPE 6kg/sqcm	10	133.00	each	1330.00
	140 mm dia HDPE 6kg/sqcm	5	158.00	each	790.00
	110 mm dia HDPE 10kg/sqcm	0	530.00	each	0.00
	90 mm dia HDPE 6kg/sqcm	0	300.00	each	0.00
	110 mm dia HDPE 6kg/sqcm	0	439.00	each	0.00
	125 mm dia HDPE 6kg/sqcm	0	485.00	each	0.00
10	Providing and laying OF EQAUL Tee confirminng to IS specificaton.				
	110 mm dia HDPE 6kg/sqcm	12	439.00	each	5268.00
	90 mm dia HDPE 6kg/sqcm	25	300.00	each	7500.00
	125 mm dia HDPE 6kg/sqcm	6	485.00	each	2910.00
	140 mm dia HDPE 6kg/sqcm	2	663.00	each	1326.00
	110 mm dia HDPE 10kg/sqcm	5	530.00	each	2650.00
11	Providing and laying including testing End Cap confirming to IS specifications.				
	90 mm dia HDPE 6kg/sqcm	25	105.00	each	2625.00
	110 mm dia HDPE 6kg/sqcm	15	110.00	each	1650.00

12	Providing & fixing of following Cast iron double flanged sluice valves as per I.S.:14846-2000 fitted with cast iron cap including jointing & testing with cost of jointing material such as bolts, nuts, rubber insertions etc. all complete				
	80 mm dia PN 1.0	16	3397.00	each	54352.00
	100 mm dia PN 1.0	10	4671.00	each	46710.00
	125 mm dia PN 1.0	5	5678.00	each	28390.00
	150 mm dia PN 1.0	2	6933.00	each	13866.00
13	Providing & fixing following cast iron double flanged single door reflux (non return) valves including jointing & testing with cost of jointing material such as bolts,nuts and rubber insertion all complete as per IS :5312 (Part I)				
	Non- Return Valve (Check Valve) -Class PN 1.0				
	100	4	2923	each	11692
14	Providing & fixing following cast iron single air valves, small orifice with screwed end as per IS: 14845-2000 including jointing & testing with cost of jointing material and rubber insertion all complete as per IS :13095-1991				
	25mm dia PN 1.0	2	2864.00	Job	5728.00
	40mm dia PN 1.0	2	3036.00	Job	6072.00
15	Providing detachable joints to following asbestos cement pressure pipes and fittings including C.I. detachable joints confirming to IS/8794/1988 with bolts, nuts and rubber rings confirming to IS-5382/85 & IS- 10292/88 manufactured by mazza process including testing.				
	Detachable joint	0			
	80	32	294	each	9408.00
	100	20	360	each	7200.00
	125	10	475	each	4750.00
	150	4	552	each	2208.00
16	Providing & laying in position including testing following cast iron plain ended standard specials confirming to IS/5531/1988 (Reaffirmed 2002) manufactured by mazza process				
	Cast Iron Adopter (Flange spigot) T.P.(Tail Piece) - class-15				
	80	32	531	each	16992.00
	100	20	652	each	13040.00
	125	10	839	each	8390.00
	140	4	1097	each	4388.00

17	Construction of Brick masonry valve chamber 20 CM thick wall in 1:6 C.M. with 12mm thick l:4 Cement plasterand base course 10 cm. thick in M-15. Inside Dimensions110x80xl00cm with -M-20 RCC chamber cover size 150cm x 120cm x 12Cm including cost of materials, labour etc. complete.	37	6219.00	each	230103.00
18	Supplying & Installation of Energy efficiant five star BEE rating ISI Marked required capacity of Three Phase, 50 Hz, 415V, deep well submersible pump Steel body, suitable for 6"tube well with Control Panel Starter suitable for Submersible pump with dry run protection, single phase preventer, connections, including clamps, bore cap etc. as required as per specifications but excluding pipe and connection cable.				
	5 H.P. with 10 to 11 stages, Head Mt. 101-40 Discharge LPM 60-270	4	45020.00	each	180080.00
19	Providing laying and jointing of following galvanised Iron (MS) Pipes with specials (such as bends, elbows, tees etc) class light, medium & heavy including testing of joints, cost of pipes,Specials and jointing materials all Complete. Pipes and sockets conforming to IS-1239/2011 Part-II.				
	50mm Diameter (For Tube Well)	200	285.00	mtr	57000.00
20	Supplying and laying of submersible flat cable ISI marked 3core copper wire of suitable size with prper clamping of approved make.				
	4 Sq mm multi strand	0	167.00	mtr	0.00
21	Provision for Jointing of tubewell to rising maine with cost of material, specials such as GI Union, CI Flange, Reducer, 50mm Including cost of labour charge ect. Complete.	4	2700.00	Job	10800.00
22	Supplying & Installation of approved Make required capacity 3 phase, 50 Hz, 415V, Centrifugal Monoblock pump, with Starter,i/c single phase preventor, connections, base channel foundation etc. as required as per specifications but excluding Pipe and connection cable.				
	5.0 H.P. Head Mt.6-33, Discharge LPM 1380-450	4	23917.00	Job	95668.00
23	11 KV line ON 140 KG.,8.0 MTRS.LONG PCC POLES with rabbit coductor average span of 70 mtr	2	229489.00	km	458978.00

24	11 KV D.P.STRUCTURES ON 140 KG.,8.0 MTRS.LONG PCC POLES FOR TAPPING DP	8	22868.00	No	182944.00
25	L.T.LINES 3 PHASE 5 WIRE ON PCC SUPPORT USING AERIAL BUNCHED XLPE CABLE WITH MAXIMUM SPAN OF 50 METERS (II) 3 X 50 SQ.MM	2.5	226708.00	km	566770.00
26	(II) 25 KVA USING NEW DTR ON 140 KG., 8.0 MTRS.LONG PCC POLE SUPPORTS	4	143682.00	no	574728.00
27	Provision for Construction of R.C.C. framed Brick massonary 1.75 mtr Hight Boundry Wall based on pile fotting foundation Schedule of rates for building works in force from august' 1" 2014 issued by project director, public works department (P.I.U.) , M.P. Bhopal (rate of USOR Items reduced by 10 % as per Einc PHED Orders) detales estimate include	114	4550.00	mtr	518700.00
28	Provision for construction of M.S. Gate with RCC Column of size 3.0 mtr*1.50 mtr Schedule of rates for building works in force from august' 1" 2014 issued by project director, public works department (P.I.U.) M.P. Bhopal (rate of USOR Items reduced by 10 % as per Einc PHED Orders) detales estimate include	2	23200.00	each	46400.00
29	Supply & erection of readymade mini pump house (control panel box) GI sheet of 18 gauge of size 90cmx90cmx60cm with 40x40x5mm angle Iron frame to fix it 200mm below ground level with hold fasts grouted in foundation and 300mm above ground level for clearance suitable for fixing of control panel, fuse unit, main switch etc. as per approved specification	4	13500.00	27000.00	54000.00
30	Design,drawing, construction, testing and commissioning of underground RCC sumpwell of 20 KL (Specifications of Sumpwell are mentioned in Annexure-E) payment of this item shall be made according to the payment schedule given in SCC.	2	289000.00	Job	578000.00
31	Design& constructionRCC framed brick masonry pump house over the sump with all necessary fittings as per guidelines.	2	85000.00	Job	170000.00
32	Design,drawing, construction, testing and commissioning of underground RCC Over Head Tank of capacity 125 KL stagging 12 mtr	1.52	1620000.00	Job	2462400.00
33	Providing argentium oligodynamic based water purifier capicity 10000 LPH. Electronically regulated doser type chlorinator using sodium hypo chloride (naocl) and installation including all cost and necessary fittings and connections as required and carriage cost etc. complete.	2	119000.00	Job	238000.00

34	Providing and making Consumer Service Connection {Functional House Hold Taps Connecrion) from HDpE pipewith the help ofeleclro fusion machine inctuding all labouR and material such as Eleclro fusion Saddle. brass firrule (Nor less than 100 gm in weight MDpE ferrule.flow control valve,double compression elbow. male/female threaded adopter with metal insert, sockets, MDPE union 20mm dia,/Gl union 15 mmdia (medium class;. brass/SS rap etc all complete and all] items/fittings shall be complying with the relevant BIS Codes.lRates also include excavation. cutting of road if required,l refilling the trenches and restoration of road wirh minimum M:20 (1:1.5:3) grade CC or equivalenr grade of existing CCIcutling for providing tap connection lwhichever is richer),1 construction of Platform and grouting of circular post neatlyfinished as per the drawing attached, testing all complite items.				
	For connection with 20 mm dia. MDPE pipe upto 5 meter & concrete road crossing is necessary.	50	2830	Job	141500.00
	For connection with 20 mm dia. MDPE pipe more than 5 meter & upto 10 meter & concrete road crossing is necessary.	50	3020	Job	151000.00
	For connection with 20 mm dia. MDPE pipe upto 5 meter & road crossing is not required.(distribution pipe line is on the same side of house)	634	2030	Job	1287020.00
	For connection with 20 mm dia. MDPE pipe upto 5 meter & road. (other than concrete road) crossing is necessary.	100	2120	Job	212000.00
	For connection with 20 mm dia. MDPE pipe upto 5 meter & upto 10 meter & road. (other than concrete road) crossing is necessary.	100	2230	Job	223000.00
37	Providing & Supply of Electro Fusion Fittings in accordance with BS EN 12201 : Part-3 suitable for drinking water with in black/blue color manufactured from compounded PE80/PE100 virgin polymer and compatible with PE80/PE100 pipes, in pressure rated SDR 11 with min PN 12.5 rated for water application and shall be inclusive of all cost such as testing, inspection charges, transportation up to site, transit insurance, loading, unloading, stacking etc. complete.				
	Spigot Long Neck Pipe End (Stub End) for Electro Fusion Joint				
	90 mm dia. Of HDPE Pipe 6 kg/cm2	25	505	Job	12625.00
	110 mm dia. Of HDPE Pipe 6 kg/cm2	25	770	Job	19250.00

35	Fabricarion. providing und fixing of typical information board of size 2.40 m x 1.80 m made out as detailed below. 1. Three venical support made out from IOO mm x 50 mm , 6.0 mm thick channel. This shall be minimum 1.0 m below GL and 3.00 m above GL. The Channel shall be erected on 600 mm x 600 mm x 1000 mm foundation blocks at appropriate depth made of cemenl concrere I:2:4. 2.The board shall be fabricated lrom 1.6 mm thick MS sheet of size 2.40 mtrX1.80 mtr. The frame of board shall be fabricated with 50mmX50mmX5 mm thick angle with one horizontal additional support in center withsame angle. 3. Whole structure shall be painted by standard colour with lettering border,heading and logo Etc using synthetic enamel paint of superior quality i/c welding,painting and other required details etc complete as directed by engineer in charge	2	9000.00	each	18000.00
36	Supply of Woltman Turbine Bulk meter class b, multijet, magnetically coupled as per specifications conforming to IS 770/1994, ISO 4064/1 and EEC approved, including transportation to site, storage, safety, installation, testing commissioning, making connection with existing pipeline having total measuring capacity of 10,000 Kilolitre with least cound of one Kilolitre including excavation at site, dewetering and reinstating the same after completion and as per specifications including all taxes.	2	13500	each	27000.00
41	Supply & Filling moorum for pipe bedding or over the pipe (including supply of moorum)	105	643	cum	67515.00
39	Supply & Filling crusher stone dust for pipe bedding or over the pipe (including supply of crusher stone dust.)	100	842.00	cum	84200.00
37	Construction of Shoulders with approved material/selected soil i/c excavation all lifts & leads i/c grading to required slope & camber of 4% and compacting using vibratory roller of 80 to 100 kN static weight to meet requirement as per relevant clause of 400.PWD sor for road work and bridge w.e.f. 29/08/2017 item no. 4.13 page no. 25				
	B. Hard Shoulders (CBR value >12)	445	181.00	cum	80545.00
38	Provision for Repairing of Starter/ control panel i/c cost of material, labour, transportation etc. complete as per approved specification and as directed by Engineer in charge	1	1080.00	each	1080.00

39	Repairing of existing Brick masonary Pump house i/c all fitting with finising & testing Door , Window complete.	1	30000.00	each	30000.00
40	Provision for Rewindidng of submerssible Motor of any diameter i/c cost of material, labour, transportation etc. complete in case of breakdown maintenance as per approved specification and as directed by Engineer in charge.	1	4500.00	each	4500.00
41	Labour only for taking out of three phase submersible pumping set from the tube well with pipe line assembly, electrical cable, testing etc. complete including disconnecting the electrical cable from pump & starter .	1	2004.00	each	2004.00
42	Provision for inter connection of old to new pipe line with excavation of trench as per requirement/ repairing of leakage of pipe line of any diameter & type of pipe line in muddy area i/c searching of leakage point, dewetering the trench, repairing the leakage laying & jointing of pipe and specials, back filling the trench i/c testing of joints cost of labour & specials such as Djoints couplers, solvent cement etc. complete Job work as per approved specification and as directed by Engineer in charge.				
	90 mm dia	51	1801.00	each	91851.00
	110 mm dia	46	2250.00	each	103500.00
43	Provision for jointing of Rising main to supmp well/OHT and OHT to Distribution pipe line with cost of material/specials such as Bends, MTA as per rerquirement of site i/c cost of labour with excavation, labour as per requirement complete as per approved specification and as directed by Engineer in charge.	4	4500	EACH	18000.00
	Total rs.				11050289.80
				Say Rs.	110.50 Lakh

VILLAGE-SEMARIYA

B.O.Q. OF VILLAGE- SEMARIYA

Block Sidhi					
S. No	Items of Work	Qty	Rate	Unit	Amount (Rs.)
1	2	3	4	5	6

1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) including disposal of excavated earth, lead up to 50m and left up to 1.5m,disposed earth to be leveled and neatly dressed. Item 16.4 pg.213				
	All kind of soil	525.00	140.00	cum	73500.00
	In ordinary Soft rock with or without blasting or bituminous pavement / cement concrete road 16.6 (a)	225.00	255.00	cum	57375.00
2	Demolishing cement concrete manually / by mechanical means including disposal of material within 50 m lead as per direction of engineer-in-charge.				
	Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)	50.00	745.00	cum	37250.00
3	Providing & laying mechanically mixed cement concrete 20mm nominal size graded crushed stone excluding cost of centering & shuttering.				
	iii 1:3:6 (M-10)	25.00	3965.00	cum	99125.00
	iv 1:2:4 (M-15)	25.00	4661.00	cum	116525.00
4	Providing, Laying, Jointing & field testing of HDPE pipes (High Density Polyethylene Pipes) confirming to IS 4984/14151/12786/13488 with necessary jointing material like mechanical connector of jointing pipes by heating to the ends of pipes with the help of Teflon coated electric mirror/ heater to the required temperature and then pressing the ends together against each other, to form a monolithic & leak proof joint by thermosetting process. It may be required to be done with Jack/ Hydraulic Jacks/ Butt fusion machine. (50 mm & above fusion jointed & below 50mm mechanical jointed)				
	110 mm dia HDPE 10kg/sqcm	0.00	515.00	R mtr	0.00
	90 mm dia HDPE 6kg/sqcm	850.00	228.00	R mtr	193800.00
	110 mm dia HDPE 6kg/sqcm	200.00	366.00	R mtr	73200.00
	125 mm dia HDPE 6kg/sqcm	200.00	441.00	R mtr	88200.00
	140 mm dia HDPE 6kg/sqcm	0.00	554.00	R mtr	0.00
	160 mm dia HDPE 6kg/sqcm	0.00	724.00	R mtr	0.00
	180 mm dia HDPE 6kg/sqcm	0.00	910.00	R mtr	0.00
	Total	1250.00			

5	Filling available excavated earth in trenches, lead up to 50m and lift up to 1.5m in all kind of soil excluding watering and ramming.	750.00	37.00	cum	27750.00
	Providing butt fusion welded joint/joining byheating to the ends with the help of Tefloncoated electric mirror/heater ends togetheretc. by thermosetting processes to HDPE Pipeand specials. (6 kg. 8 kg. 10 kg.) (50 mm &above fusion jointed & below 50 mmmechanical jointed)				
	90 mm dia. Of HDPE Pipe	41	146	each	5986.00
	110 mm dia. Of HDPE Pipe	10	161	each	1610.00
	125 mm dia. Of HDPE Pipe	9	194	each	1746.00
	140 mm dia. Of HDPE Pipe	0	206	each	0.00
6	Providing and laying including testing Bend 90̊ confirming to IS specifications.				
	110 mm dia HDPE 10kg/sqcm	5.00	345.00	EACH	1725.00
	90 mm dia HDPE 6kg/sqcm	20.00	199.00	each	3980.00
	110 mm dia HDPE 6kg/sqcm	12.00	264.00	each	3168.00
	125 mm dia HDPE 6kg/sqcm	5.00	379.00	each	1895.00
	140 mm dia HDPE 6kg/sqcm	0.00	514.00	each	0.00
	160 mm dia HDPE 6kg/sqcm	0.00			
7	Providing and laying including testing Bend 45̊ confirming to IS specification. Pressure				
	110 mm dia HDPE 10kg/sqcm	5.00	452.00	each	2260.00
	90 mm dia HDPE 6kg/sqcm	4.00	210.00	each	840.00
	110 mm dia HDPE 6kg/sqcm	3.00	312.00	each	936.00
	125 mm dia HDPE 6kg/sqcm	2.00	434.00	each	868.00
	140 mm dia HDPE 6kg/sqcm	0.00	633.00	each	0.00
8	Providing and laying including testing Reducer: confirming to IS specifications.	0.00			
	110 mm dia HDPE 6kg/sqcm	20.00	127.00	each	2540.00
	125 mm dia HDPE 6kg/sqcm	10.00	133.00	each	1330.00
	140 mm dia HDPE 6kg/sqcm	0.00	158.00	each	0.00
	110 mm dia HDPE 10kg/sqcm	0.00	530.00	each	0.00
	90 mm dia HDPE 6kg/sqcm	0.00	300.00	each	0.00
	110 mm dia HDPE 6kg/sqcm	0.00	439.00	each	0.00
	125 mm dia HDPE 6kg/sqcm	0.00	485.00	each	0.00
9	Providing and laying OF EQAUL Tee confirminng to IS specificaton.				
	110 mm dia HDPE 6kg/sqcm	12.00	439.00	each	5268.00
	90 mm dia HDPE 6kg/sqcm	25.00	300.00	each	7500.00
	125 mm dia HDPE 6kg/sqcm	6.00	485.00	each	2910.00
	140 mm dia HDPE 6kg/sqcm	0.00	663.00	each	0.00

	110 mm dia HDPE 10kg/sqcm	5.00	530.00	each	2650.00
10	Providing and laying including testing End Cap confirming to IS specifications.				
	90 mm dia HDPE 6kg/sqcm	18.00	105.00	each	1890.00
	110 mm dia HDPE 6kg/sqcm	5.00	110.00	each	550.00
11	Providing & fixing of following Cast iron double flanged sluice valves as per I.S.:14846-2000 fitted with cast iron cap including jointing & testing with cost of jointing material such as bolts, nuts, rubber insertions etc. all complete				
	80 mm dia PN 1.0	8.00	3397.00	each	27176.00
	100 mm dia PN 1.0	5.00	4671.00	each	23355.00
	125 mm dia PN 1.0	3.00	5678.00	each	17034.00
	150 mm dia PN 1.0	0.00	6933.00	each	0.00
12	Providing & fixing following cast iron double flanged single door reflux (non return) valves including jointing & testing with cost of jointing material such as bolts,nuts and rubber insertion all complete as per IS :5312 (Part I)				
	Non- Return Valve (Check Valve) -Class PN 1.0				
	80	2	2923	each	5846
13	Providing & fixing following cast iron single air valves, small orifice with screwed end as per IS: 14845-2000 including jointing & testing with cost of jointing material and rubber insertion all complete as per IS :13095-1991				
	25mm dia PN 1.0	2	2864.00	Job	5728.00
	40mm dia PN 1.0	2	3036.00	Job	6072.00
14	Providing detachable joints to following asbestos cement pressure pipes and fittings including C.I. detachable joints confirming to IS/8794/1988 with bolts, nuts and rubber rings confirming to IS-5382/85 & IS- 10292/88 manufactured by mazza process including testing.				
	Detachable joint				
	80	16	294	each	4704.00
	100	10	360	each	3600.00
	125	6	475	each	2850.00
	150	0	552	each	0.00

15	Providing & laying in position including testing following cast iron plain ended standard specials confirming to IS/5531/1988 (Reaffirmed 2002) manufactured by mazza process				
	Cast Iron Adopter (Flange spigot) T.P.(Tail Piece) - class-15				
	80	16	531	each	8496.00
	100	10	652	each	6520.00
	125	6	839	each	5034.00
	140	0	1097	each	0.00
16	Provision for jointing of Rising main to supmp well/OHT and OHT to Distribution pipe line with cost of material/specials such as Bends, MTA as per rerquirement of site i/c cost of labour with excavation, labour as per requirement complete as per approved specification and as directed by Engineer in charge.	2	4500	EACH	9000.00
17	Construction of Brick masonry valve chamber 20 CM thick wall in 1:6 C.M. with 12mm thick l:4 Cement plasterand base course 10 cm. thick in M-15. Inside Dimensions110x80xl00cm with -M-20 RCC chamber cover size 150cm x 120cm x 12Cm including cost of materials, labour etc. complete.	20.00	6219.00	each	124380.00
18	Supplying & Installation of Energy efficiant five star BEE rating ISI Marked required capacity of Three Phase, 50 Hz, 415V, deep well submersible pump Steel body, suitable for 6"tube well with Control Panel Starter suitable for Submersible pump with dry run protection, single phase preventer, connections, including clamps, bore cap etc. as required as per specifications but excluding pipe and connection cable.				
	5 H.P. with 10 to 11 stages, Head Mt. 101-40 Discharge LPM 60-270	2.00	45020.00	each	90040.00
19	Providing laying and jointing of following galvanised Iron (MS) Pipes with specials (such as bends, elbows, tees etc) class light, medium & heavy including testing of joints, cost of pipes,Specials and jointing materials all Complete. Pipes and sockets conforming to IS-1239/2011 Part-II.				
	50mm Diameter (For Tube Well)	200	285.00	mtr	57000.00

20	Supplying and laying of submersible flat cable ISI marked 3core copper wire of suitable size with prper clamping of approved make.				
	4 Sq mm multi strand	0	167.00	mtr	0.00
21	Provision for Jointing of tubewell to rising maine with cost of material, specials such as GI Union, CI Flange, Reducer, 50mm Including cost of labour charge ect. Complete.	2	2700.00	Job	5400.00
22	Supplying & Installation of Five star BEE rating ISI Marked required capacity of Three phase, 50 Hz, 415V, Open well Submersible pump, with Control Panel Starter with Dry Run Protection, single phase preventer, connections, etc. as required as per specifications but excluding pipe and connection cable.				
	3.0 H.P. Head Mt.15-24, Discharge LPM 615-195	2	22252.00	Job	44504.00
23	11 KV line ON 140 KG.,8.0 MTRS.LONG PCC POLES with rabbit coductor average span of 70 mtr	1.00	229489.00	km	229489.00
24	11 KV D.P.STRUCTURES ON 140 KG.,8.0 MTRS.LONG PCC POLES FOR TAPPING DP	1.00	22868.00	No	22868.00
25	L.T.LINES 3 PHASE 5 WIRE ON PCC SUPPORT USING AERIAL BUNCHED XLPE CABLE WITH MAXIMUM SPAN OF 50 METERS (II) 3 X 50 SQ.MM	1.00	226708.00	km	226708.00
26	(II) 25 KVA USING NEW DTR ON 140 KG., 8.0 MTRS.LONG PCC POLE SUPPORTS	1.00	143682.00	no	143682.00
27	Provision for Construction of R.C.C. framed Brick massonary 1.75 mtr Hight Boundry Wall based on pile fotting foundation Schedule of rates for building works in force from august' 1" 2014 issued by project director, public works department (P.I.U.) , M.P. Bhopal (rate of USOR Items reduced by 10 % as per Einc PHED Orders) detales estimate include	57	4550.00	mtr	259350.00
28	Provision for construction of M.S. Gate with RCC Column of size 3.0 mtr*1.50 mtr Schedule of rates for building works in force from august' 1" 2014 issued by project director, public works department (P.I.U.) M.P. Bhopal (rate of USOR Items reduced by 10 % as per Einc PHED Orders) detales estimate include	1	23200.00	each	23200.00

29	Supply & erection of readymade mini pump house (control panel box) GI sheet of 18 gauge of size 90cmx90cmx60cm with 40x40x5mm angle Iron frame to fix it 200mm below ground level with hold fasts grouted in foundation and 300mm above ground level for clearance suitable for fixing of control panel, fuse unit, main switch etc. as per approved specification	2.00	13500.00	27000.00	27000.00
30	Design,drawing, construction, testing and commissioning of underground RCC sumpwell of 20 KL (Specifications of Sumpwell are mentioned in Annexure-E) payment of this item shall be made according to the payment schedule given in SCC.	1	289000.00	Job	289000.00
31	Design& constructionRCC framed brick masonry pump house over the sump with all necessary fittings as per guidelines.	1	85000.00	Job	85000.00
32	Design,drawing, construction, testing and commissioning of underground RCC Over Head Tank of capacity 125 KL stagging 12 mtr	0	1620000.00	Job	0.00
33	Providing argentium oligodynamic based water purifier capicity 15000 LPH. Electronically regulated doser type chlorinator using sodium hypo chloride (naocl) and installation including all cost and necessary fittings and connections as required and carriage cost etc. complete.	1	119000.00	Job	119000.00
34	Providing and making Consumer Service Connection {Functional House Hold Taps Connecrion) from HDpE pipewith the help ofeleclro fusion machine inctuding all labouR and material such as Eleclro fusion Saddle. brass firrule (Nor less than 100 gm in weight MDpE ferrule.flow control valve,double compression elbow. male/female threaded adopter with metal insert, sockets, MDPE union 20mm dia,/GI union 15 mmdia (medium class;. brass/SS rap etc all complete and all] items/fittings shall be complying with the relevant BIS Codes.lRates also include excavation. cutting of road if required,l refilling the trenches and restoration of road wirh minimum M:20 (1:1.5:3) grade CC or equivalenr grade of existing CCIcutling for providing tap connection lwhichever is richer),1 construction of Platform and grouting of circular post neatly finished as per the drawing attached, testing all complite items.				
	House hold Connection from GI Pipe For connection with 20 mm dia. MDPE pipe upto 5 meter & concrete road crossing is Not required.(distribution pipe line is on the same side of house)	195.00	1730	Job	337350.00

	For connection with 20 mm dia. MDPE pipe more than 5 meter & upto 10 meter & concrete road crossing is necessary.	0.00	3020	Job	0.00
	For connection with 20 mm dia. MDPE pipe upto 5 meter & road crossing is not required.(distribution pipe line is on the same side of house)	245.00	2030	Job	497350.00
	For connection with 20 mm dia. MDPE pipe upto 5 meter & road. (other than concrete road) crossing is necessary.	0.00	2120	Job	0.00
	For connection with 20 mm dia. MDPE pipe upto 5 meter & upto 10 meter & road. (other than concrete road) crossing is necessary.	55.00	2230	Job	122650.00
35	Providing & Supply of Electro Fusion Fittings in accordance with BS EN 12201 : Part-3 suitable for drinking water with in black/blue color manufactured from compounded PE80/PE100 virgin polymer and compatible with PE80/PE100 pipes, in pressure rated SDR 11 with min PN 12.5 rated for water application and shall be inclusive of all cost such as testing, inspection charges, transportation up to site, transit insurance, loading, unloading, stacking etc. complete.				
	Spigot Long Neck Pipe End (Stub End) for Electro Fusion Joint				
	90 mm dia. Of HDPE Pipe 6 kg/cm2	0.00	505	Job	0.00
	110 mm dia. Of HDPE Pipe 6 kg/cm2	0.00	770	Job	0.00
36	Fabricarion. providing und fixing of typical information board of size 1.5 m x 0.9 m made out as detailed below. 1. Three venical support made out from IOO mm x 50 mm , 6.0 mm thick channel. This shall be minimum 1.0 m below GL and 3.00 m above GL. The Channel shall be erected on 600 mm x 600 mm x 1000 mm foundation blocks at appropriate depth made of cemenl concrere I:2:4. 2.The board shall be fabricated lrom 1.6 mm thick MS sheet of size 2.40 mtrX1.80 mtr. The frame of board shall be fabricated with 50mmX50mmX5 mm thick angle with one horizontal additional support in center withsame angle. 3. Whole structure shall be painted by standard colour with lettering border,heading and logo Etc using synthetic enamel paint of superior quality i/c welding,painting and other required details etc complete as directed by engineer in charge	0	9000.00	each	0.00

36	Supply of Woltman Turbine Bulk meter class b, multijet, magnetically coupled as per specifications conforming to IS 770/1994, ISO 4064/1 and EEC approved, including transportation to site, storage, safety, installation, testing commissioning, making connection with existing pipeline having total measuring capacity of 10,000 Kilolitre with least cound of one Kilolitre including excavation at site, dewetering and reinstating the same after completion and as per specifications including all taxes.	0	13500	each	0.00
37	Supply & Filling moorum for pipe bedding or over the pipe (including supply of moorum)	50	643	cum	32150.00
38	Supply & Filling crusher stone dust for pipe bedding or over the pipe (including supply of crusher stone dust.)	50	842.00	cum	42100.00
39	Construction of Shoulders with approved material/selected soil i/c excavation all lifts & leads i/c grading to required slope & camber of 4% and compacting using vibratory roller of 80 to 100 kN static weight to meet requirement as per relevant clause of 400.PWD sor for road work and bridge w.e.f. 29/08/2017 item no. 4.13 page no. 25				
	B. Hard Shoulders (CBR value >12)	365	181.00	cum	66065.00
40	Providing laying and jointing of following galvanized Iron (MS) Pipes with specials (such as bends, elbows, tees etc) class light, medium & heavy including testing of joints, cost of pipes, specials and jointing materials all complete. Pipes and sockets conforming to IS-1239/2011 PartII				
	80 mm dia	1900	665.00	cum	1263500.00
	100 mm dia	800	982.00	cum	785600.00
	125 mm dia	0	1283.00	cum	0.00
	150 mm dia	0	1433.00	cum	0.00
41	Provision for Repairing of Starter/ control panel i/c cost of material, labour, transportation etc. complete as per approved specification and as directed by Engineer in charge	1	1080.00	each	1080.00

42	Repairing of existing Brick masonary Pump house i/c all fitting with finising & testing Door , Window complete.	1	30000.00	each	30000.00
43	Provision for Rewindidng of submerssible Motor of any diameter i/c cost of material, labour, transportation etc. complete in case of breakdown maintenance as per approved specification and as directed by Engineer in charge.	1	4500.00	each	4500.00
44	Labour only for taking out of three phase submersible pumping set from the tube well with pipe line assembly, electrical cable, testing etc. complete including disconnecting the electrical cable from pump & starter .	1	2004.00	each	2004.00
45	Providing and laying in position following cast iron double flanged 90° Duck Foot Bend (Heavy Classs) USOR. Item.no.3.14 -P.no 48				
	100mm Dia	1	1867	EACH	1867.00
	150mm Dia	0	3375	EACH	0.00
46	Providing for Lightening conductor	1	10000	EACH	10000.00
47	Providing water level indicator	1	5000	EACH	5000.00
48	Aluminium Ladder	1	10000	EACH	10000.00
49	Finishing walls with Acrylic Smooth exterior paint of required shade: New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm). USOR. Item.no.16.42(I) -P.no 171	100	91	PER SQM	9100.00

50	Water proofing treatment over roof.wall.chajjas balcony with diamond shield and sealer coat or equivelent at leakage/seepage area consisting of(i) surface preparation roughening of surface,opening of cracks in 'V' groove in size of 5mmx100mm (WxD),filling of cracks with putty of Diamond shield with laying fiver glass mesh,Cleaning of surface by scrubbing with steel wier/ Nylon brush.Removing all dust particles and washing with adequate water to clean completly.(ii) Providing and applying 1st coat of diamond shield or equivelent (mini. thickness 70-80 micron) (a two component flexible waterproof and protective modified mortar,dry powder 80% chemical 20% acrylic resign having 30% solid contents) with mix proportion of part1 and 2 with proper mixing with laying of fiber glass mesh (of weaving size of 10x10 yarn/inch duly coated with alkaline resistant polymer). Allow the coating to air cure for minimum 2 Hrs.(Diamond Shield or equivelent.After two hours minimum of 1st coat applying 2nd coat (minimum thickness 100 micron) of diamond shield or equivelent with mix proportion of part 1 and part 2 with proper mixing.Allow the coating to air cure for minimun 2 Hrs.Consumption				0.00

	of the diamond shield or equivelent should be @ 17.90 kg for 10sqm area.(After two coats of diamond shield,surface is to be cured properly minimum for 4 Hrs,before application of third coat).(iii) Providing and applying 1st coat of sealer coat 50-60 micron (single component High Buildelastometric,flexible,pure acrylic waterproofing membrans having solid content of 65% and allow it to air cure for 4 Hrs minimum.After two hours minimum of 1st coat applying 2nd and final coat 120-140 micron of sealer coat and allow it to air cure for 4 Hrs minimum.Consumption of sealer coat should be @5.40 kg per 10 sqm area.(iv) The treated area should ne cure with water for 48 Hrs by flooding the surface.(v) The final appearance of the coating will be milky white.All above operations to be done in order. PWD SOR ITEM NO.22.22 PAGE NO.376	100	418.5	PER SQM	41850.00
51	Provision for inter connection of old to new pipe line with excavation of trench as per requirement/ repairing of leakage of pipe line of any diameter & type of pipe line in muddy area i/c searching of leakage point, dewetering the trench, repairing the leakage laying & jointing of pipe and specials, back filling the trench i/c testing of joints cost of labour & specials such as Djoints couplers, solvent cement etc. complete Job work as per approved specification and as directed by Engineer in charge.				
	90 mm dia	31	1801.00	each	55831.00
	110 mm dia	25	2250.00	each	56250.00
				Total Rs.	6062660.00
				Say Rs.	60.63 Lakh

SECTION 5

AGREEMENT FORM

Agreement

This agreement, made the _____ day of _____

between _____ (name and address of Employer) (hereinafter called " the Employer) and_____ (name and address of contractor) hereinafter called "the Contractor" of the other part.

Whereas the Employer is desirous that the Contractor execute _____ _____ (name and identification number of Contract) (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a cost of Rs._____

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred to and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.
   i. Letter of Acceptance
   ii. Contractor's Bid
   iii. Condition of Contract: General and Special
   iv. Contract Data
   v. Bid Data
   vi. Drawings
   vii. Bill of Quantities and
   viii. Any other documents listed in the Contract Data as forming part of the Contract.

In witnessed whereof the parties there to have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____ was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____ _____ in the presence of :

Binding Signature of Employer _____

Binding Signature of Contractor _____