

(FIRST-CALL)

GOVERNMENT OF CHHATTISGARH
WATER RESOURCES DEPARTMENT



VOLUME-II

TENDER DOCUMENT FOR TURNKEY CONTRACT

TENDER ID: 192409

**CONSTRUCTION OF SOLAR POWERED LIFT IRRIGATION SCHEME FOR
IRRIGATION FROM KHAIRI ANICUT CONSTRUCTED ON AAGAR RIVER
DIST. MUNGELI (C.G.)**

TENDER DOCUMENT FOR TURNKEY CONTRACT WITH PRICE PROPOSAL
STANDARD BIDDING DOCUMENT FOR TURNKEY CONTRACTS

Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block -Patharia, Dist. -Mungeli in **160 Ha.** in **kharif (Right side of KHAIRI Anicut** as indicated in Index Map), out of total gross command area **270 hectare** fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of **KHAIRI** Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for **Solar pumps with solar panel of 100 KWp.** It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system, SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.

EXECUTIVE ENGINEER
E/M H.E.M. DIVISION WRD
SAKRI BILASPUR (C.G.)

SUPERINTENDING ENGINEER
E/M WATER RESOURCES CIRCLE
SAKRI BILASPUR (C.G.)

CHIEF ENGINEER
HASDEO BASIN W.R. DEPARTMENT
BILASPUR (C.G.)

**CHIEF ENGINEER
HASDEO BASINWATER RESOURCES DEPARTMENT
BILASPUR (C.G.)**

**N.I.T. No. 01/SAC/2026-27
TENDER ID 192409**

Bilaspur, Dated 05.06.2026

Name of Work	Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block -Patharia ,Dist. -Mungeli in 160 Ha. in kharif (Right side of KHAIRI Anicut as indicated in Index Map), out of total gross command area 270 hectare fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of KHAIRI Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for Solar pumps with solar panel of 100 KWp. It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system , SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work
Value of Work put to tender	: Rs 342.00 Lakhs
Amount of Earnest Money	Rs.1.71 Lakhs
Time Allowed	11 Months including rainy season
To whom issued	
(a)Cost of Tender Document	Rs. 10000/- (Non refundable)
(b)Reference to money receipt	
(c) Date of issue of tender	

(Issued by) Note: The information is to be filled by the officer issuing the tender document to the tenderers.

TENDER DOCUMENT CONTAINS FOLLOWING VOLUMES

- | | | | |
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WATER RESOURCES DEPARTMENT
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**GOVERNMENT OF CHHATTISGARH, WATER RESOURCES DEPARTMENT
OFFICE OF THE EXECUTIVE ENGINEER,
E/M HEM DIVISION WRDSAKRI BILASPUR
e-Procurement Tender Notice
e-Procurement Portal:<https://eproc.cgstate.gov.in>
(FIRST-CALL)**

SYSTEM TENDER NO. 192409/ NOTICE INVITING TENDER NO. 01/SAC/2026-27 Dated: 05.06.2026

Online Tenders are invited for the following works up to **30.06.2026(17.30 hours IST)**.

Name of Work	Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block - Patharia ,Dist. -Mungeli in 160 Ha. in kharif (Right side of KHAIRI Anicut as indicated in Index Map), out of total gross command area 270 hectare fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of KHAIRI Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for Solar pumps with solar panel of 100 KWp.It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system , SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.
PROBABLE AMOUNT OF CONTRACT	Rs. 342.00 Lakhs(Excluding GST)

The details can be viewed & downloaded online directly from the Govt. of Chhattisgarh Integrated e-Procurement portal (<https://eproc.cgstate.gov.in>) from dated **12.06.2026 at 17.31 hours (IST)** onwards.

Note:1- All eligible/interested contractors /bidders are mandated to get enrolled on the integrated e-Procurement portal (<https://eproc.cgstate.gov.in>) and get approval on specific vendor class from PWD under centralized contractor/ supplier registration in order to download the tender documents and participate in the subsequent bidding process.

(Probable Amount of Contract based on SOR 01.05.2025 with amendment 08.08.2025)

2. It is mandatory for the tenderer to use the certificate issued for Pre Bid Qualification (Valid up to 30.09.2026) in the year **2026** in this tender.

-sd-
**EXECUTIVE ENGINEER
E/M H.E.M. DIVISION WRD SAKRI
BILASPUR (C.G.)**

Endt. NO- /SAC/2026-27

BILASPUR, Dated: 05.06.2026

Copy is forwarded to: -

1. Secretary, Water Resources Department, Mahanadi Bhawan, Naya Raipur (C.G.)
2. Engineer-in-Chief, Water Resources Department, Shivnath Bhawan, Naya Raipur (C.G.)
3. Director Publicity branch, DPR Raipur for information and publication of tender notice as per rule in newspaper.
4. Chief Engineer, Hasdeo Basin Water Resources Department, Bilaspur (C.G.)
5. Superintending Engineer, E/M WATER RESOURCES CIRCLE, Bilaspur (C.G.)
6. Officer on Special Duty, Residence Office of Minister, Water Resources Department, Raipur, Chhattisgarh.
7. Collector, District -Bilaspur/Mungeli, Chhattisgarh.
8. All Executive Engineer under Chief Engineer, Hasdeo Basin Water Resources Department, Bilaspur (C.G.)
9. All Sub Divisional Officers under this Division.
10. Notice Board.

-sd-
**EXECUTIVE ENGINEER
E/M H.E.M. DIVISION WRD SAKRI
BILASPUR (C.G.)**

**OFFICE OF THE ENGINEER IN CHIEF
WATER RESOURCES DEPARTMENT
SHIVNATH BHAWAN,
NAVA RAIPUR ATAL NAGAR
E-Mail- enc@cgwrd.in**

Tel: -----, Fax: -----

NOTICE INVITING TENDER

N.I.T. No-01/SAC/2026-27

Bilaspur,

Dated 05.06.2026

TENDER ID: 192409

- (a) Online tenders in Lump sum for Turnkey contract with pre-qualification documents based on SOR 01.05.2025 with amendment 08.08.2025 of Water Resources Department for following work (s) are invited from registered contractors in C.G.. Public Works Department Raipur under centralized registration system. However, such bidders who are not registered with the Government of Chhattisgarh and are eligible for registration can also submit their bids after having applied for registration with appropriate authority. The detailed conditions of the tender and Pre-Qualification have been given in the website: <https://eproc.cgstate.gov.in>. *(The bidder would be required to have valid registration at the time of signing of the Contract. Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit)

(b)

Tender ID	Name of Work	Estimated amount of contract	Amount of Earnest Money (Rs. in lacs.)		Cost of Tender (Rs.)	Period of completion
192409	Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block - Patharia ,Dist. -Mungeli in 160 Ha. in kharif (Right side of KHAIRI Anicut as indicated in Index Map), out of total gross command area 270 hectare fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of KHAIRI Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for Solar pumps with solar panel of 100 KWp. It includes all activities starting from	Rs 342.00 Lakhs (Excluding of 18% G.S.T.)as per SOR 01.05.2025 with amendment 08.08.2025	1.71Lakh/- (One Lakhseventy OneThousand Only)		10,000/- (Ten Thousand only) (Non - Refundable)	11 Months including rainy seasons

	survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system, SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.					
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The details of PQ may be seen in the Prequalification Document.

1. Tender Documents can be purchased/downloaded **online from 12.06.2026, 17.31Hrs.to 30.06.2026,17.30 Hrs** from website **<https://eproc.cgstate.gov.in>**.
The Bid data should be filled and the Bid Submission of all the envelopes and the documents which are to be uploaded by the bidders should be submitted online between **12.06.2026, 17.31 Hrs. to 30.06.2026, 17.30 Hrs**. The Bidders shall submit the Pre-Qualification information for bid in the prescribed proforma for assessment of eligibility in online Envelope - 'B' with price bids in a separate online Envelope - 'C'.
2. The bids for the tender are required to be digitally signed using Class III digital certificate of the authorized representative of the firm; Bidders are advised to obtain the same at the earliest.
3. Cost of bid document of Rs. 10000.00 (Ten Thousand Rupees Only) in the shape of D.D./ issued by Nationalized / Scheduled Bank located in India in favour of **"Executive Engineer, E/M H.E.M. DIVISION WRD Sakri Bilaspur (C.G.)"** & submit its original copy physically before due date of bid submission.
4. Earnest Money Deposit of **Rs. 1.71 Lakhs (Rupees One Lakhs Seventy One Thousand Only)** *the Earnest money shall be deposited electronically by NEFT/RTGS. Internet Banking. Debit/Credit Cards on any other online process of payment. in favour of account of "Executive Engineer, E/M H.E.M. DIVISION SAKRI BILASPUR (C.G.).* The details may be seen in the clause no. 11.0 (Earnest Money). E-payment shall be as per details given on online portal of **<https://eproc.cgstate.gov.in>** only.

5. The e-Earnest Money Deposit, Registration Certificate, Affidavit, additional affidavit, Power of attorney, Documents related to JV if any and Check list (Envelope - 'A'), Pre-Qualification Document (Envelope - 'B') and Envelope-C (price bid Envelope –C) for bid **will be opened after 01.07.2026, 17.30Hrs**, in the presence of any intending Bidders or their representatives, if they choose to be present. The Start date and time and the End date & time of opening of price bid envelope mentioned in the tender schedule is tentative and subject to change.
6. The following documents are required to be scanned and uploaded in Envelope 'A' while submitting the online bid:
 - (a) Receipt of cost of bid document
 - (b) **Valid bid security (e-Earnest Money) in one of the approved forms, laid down in clause 11.0 of (tender document) detailed N.I.T.**
 - (c) Copy of CG PWD Registration Certificate
 - (d) Original affidavit as prescribed in Annexure-4 and a separate additional affidavit as per Annexure-5 in original on Rs. 50/- non judicial stamp paper duly notarized.
 - (e) Written power of attorney authorizing the signatory to sign and submit the bid on behalf of bidder (POA)*
 - (f) JV agreement (if Participated in JV)

*In case of JV refer Annexure-G, Volume-I (Prequalification document) and clause 16 of NIT.

In addition, the above mentioned documents (Envelope-A) are also to be physically submitted by the bidder **upto 30.06.2026 17:30 Hrs at Office of Chief Engineer, Hasdeo Basin, WRD, Bilaspur.**
or to concerned E/M H.E.M. DIVISION WRD office. If bidder fails to submit above mentioned (a) to (d) documents / certificates in Envelope 'A' in the manner described herewith, such bid shall be disqualified and the registration of such bidder shall be eligible for suspension.
7. **Online Envelope "B" (Prequalification Envelope) should contain the following:**
 Pre-qualification document (Volume-I) containing details regarding eligibility for pre-qualification, enumerated in "Instructions to Bidder" Section –I in the prescribed proforma as Technical Schedule i.e. Form 1A, 1B, 2A, 2B, 3A, 3B, 3C, 3D, 3E, 3F, 4A, 4B, 5, 6, 7 and Form-8 and these Format should be supported by certificates wherever necessary signed by the officer not below the rank of Executive Engineer. The certificate should be translated in English and attested, if issued in some other Indian language). Applicant shall attach all necessary documents like audited Balance sheets, CA Certificates, Experience certificates, Technical Design as described in Pre-qualification document (Volume-I) Section-II Clause 1.3 Technical and information of work in hand etc. with prequalification document. (See prequalification document Volume-I for details)
 All above prequalification documents are required to be scanned and uploaded in online Envelope –B (Technical proposal) while submitting the online bid.
8. The Contractors have to produce the original Certificates/ Documents for their verification if required. The bidder shall submit the following information with each certificate: -
 - (1) Postal address of the office issuing the certificate.
 - (2) Name of the officer holding that office on the date of bidding.
 - (3) Landline no. and STD code of that office.
 - (4) Mobile no. of the officer holding the office on the date of bidding.
 - (5) Email address of the office.

The above information should be complete so as to facilitate the department to verify each and every certificate
9. **Online Envelope "C" should contain the following:**
 The bidder shall quote his price in Indian Rupees online in prescribed format given in Part-B, volume II, section III, price proposal. Format should be duly filled in with amount in price Bid form in words and figures both. Bidders shall quote for entire work on a firm lump sum price and on a single source responsibility basis.
10. **Pre-bid meeting** will be held in the **Office of Chief Engineer, Hasdeo Basin, WRD, Bilaspur. On 19.06.2026 at 10.30 AM. TO 05.30 PM.** All prospective bidders may participate in the meeting for clarification on technical points.
11. Bids shall remain valid for a period of not less than **120 (One Hundred Twenty) days** after the last date of submission of bid.

12. Conditional tender will not be accepted and liable to be rejected.
13. Water Resources Department reserves the right to accept or reject any or all tender without assigning any reasons thereof.
14. NIT and Prequalification document can be viewed online on **<https://eproc.cgstate.gov.in>**.
15. The bid shall be submitted in the same name and style as purchased online. In case of JV purchase, download and submission shall be made in the name of JV. For JV refer Volume –I (Pre Qualification document), Annexure-G.
16. The Bid is a “National competitive bidding”.
17. Bidders should fill in the forms given in Section – III of PQ document. An additional affidavit should be submitted by the bidder stating that all the documents submitted by them in support of their qualification are true (refer Volume-I Section-II Clause-2), and further stating that they have not made any untrue or false representation or hidden any material information related to any provision of the bid documents. In case of submission of false affidavit, suitable action will be taken against the bidder as per law (s), without prejudice to the rights of the Government / WRD regarding taking action as per clause 2.0 Disqualification, of Volume I, Section II and Clause 10.0 Disqualification, of Volume II, Section II of this document.

CRITICAL/KEY DATES**(Tender ID-192409)**

Seq No	WRD Stage	Bidder Stage	Start Date & Time	Expiry Date & Time	Envelopes/Covers
1	Publishing Date	-	As per online	-	Envelope C/Finance, Envelope B/Technical Envelope A/Fee,
2		Document Download / Sale Date	As per online	12.06.206	Envelope C/Finance, Envelope B/Technical Envelope A/Fee,
3		Pre-Bid Meeting	19.03.2026 10.30 AM	19.03.2026 05.30 PM	Office of Chief Engineer Hasdeo Basin WRD Bilaspur
4	-	Bid Submission Start/Closing Date	12.06.2026	30.06.2026	Envelope C/Finance, Envelope B/Technical Envelope A/Fee,
5		(Tender Document Cost) DD submission Date	12.06.2026 17:31 Hrs	30.06.2026 17: 30 Hrs	original copy of valid (tender document cost) DD Instruments as uploaded online within limit as scheduled to CE Hasdeo Basin WRD Bilaspur.
6	Bid Opening Date	-	01.07.2026	-	Envelope A/Fee

Note-

1. The date and time for opening envelope B and C will be declared online after evaluation of the documents of envelope A/B (as the case may be).
2. The last date and time for submitting hard copy of Envelope A will be same as that of online Bid submission.
3. The critical dates mentioned online shall be considered as the final dates.

SECTION-II
DETAILED NOTICE INVITING TENDER

**CONSTRUCTION OF SOLAR POWERED LIFT IRRIGATION SCHEME FOR
IRRIGATION FROM KHAIRI ANICUT CONSTRUCTED ON AAGAR RIVER
DIST. MUNGELI (C.G.)**

**GOVERNMENT OF CHHATTISGARH
WATER RESOURCES DEPARTMENT BILASPUR**

**CONSTRUCTION OF SOLAR POWERED LIFT IRRIGATION SCHEME FOR
IRRIGATION FROM KHAIRI ANICUT CONSTRUCTED ON AAGAR RIVER
DIST. MUNGELI (C.G.)**

1.0 Detailed Scope of work

This is an EPC (Engineering Procurement Contract) where Bidders are required to Design and Implement Khairi Lift Irrigation scheme in Right side of Khairi Anicut with all components, with survey, detailed investigations and preparation & submission of detailed estimate of each and every component with DPR, Land acquisition. Bidders shall therefore submit details of technical design proposal with drawing and work method, construction schedule backed with their planning and deployment of construction equipment etc. in sufficient detail to demonstrate the adequacy of bidder's capacity to design and complete the work in accordance with the specifications and time of completion. Bidder should submit his best techno-economic design proposal using Departmental guideline. This shall be evaluated as to technical feasible and feasibility for completion in the given time period. Only technically feasible proposal which can be completed within the time period specified in the tender and which meets the technical standards and specified conditions mentioned in this tender shall be considered as responsive. However, it may be noted that certain design criteria are fixed in this tender and the bidder has to design within the ambit of this criteria only.

1.1 PRESSURISED PIPE IRRIGATION NETWORK -

Proposed works under the Contract: - Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block -Patharia, Dist. -Mungeli in **160 Ha.** in **kharif (Right side of KHAIRI Anicut** as indicated in Index Map), out of total gross command area **270 hectare** fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of **KHAIRI** Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for **Solar pumps with solar panel of 100 KWp.** It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system, SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.

- 1.1.1 Survey and Investigation:** Survey and investigation requirement i/c construction and shifting of bench mark at every village of command, considered necessary for design, execution and commissioning and operation of the piped canal system. Preparing combined village map on tracing cloth for each piped canal system separately, survey of whole command area, plotting the same on combined village map, contouring the village map at 0.5m to 1m interval, marking ridges by red dotted lines and valleys by blue arrow lines, survey for fixing alignment, taking trial pits, drilling along the alignments, borrow area survey and investigation. Marking the approved alignments, chak boundaries, in position “outlets” and other structures on the village maps, preparing chak statements, valves register, cut-off/design statement, design-drawing of the pressurized pipes as per approved design criteria or of Water Resources Department, relevant I.S. code and IRC publication, design parameters and circulars issued by the department time to time, preparing detailed estimate as per U.C.S.R. (SOR 01.05.2025 with amendment 08.08.2025) of the department on the basis of approved design-drawing, clubbing of items for recording measurement and basis of payment, getting approval from competent authorities.
- 1.1.2 Survey for structures having catchment area survey less than 2.50 sq. km. and grid survey, levelling along the nalla/river to determine the bed slope of the nalla/river, cross section of nalla/river for cross drainage works. grid survey for all structures, taking trial pits/drilling for foundation investigation of structures, preparing combined village map on tracing cloth for each piped canal system separately, survey of whole command area, plotting the same on combined village map, contouring the village map (scale 1:5000), marking ridges by red dotted lines and valleys by blue arrow lines, survey for fixing alignment, taking trial pits, drilling along the alignments wherever necessary, and investigation. marking the approved alignments, chak boundaries (up to one hectares), in position “outlets” and other structures on the village maps, preparing chak statements, outlet register, cut-off/design statement, design-drawing of the piped canal system as per design criteria of water resources department, relevant IS code and IRC publication issued from time to time, preparing detailed estimate as per U.C.S.R (SOR 01.05.2025 with amendment 08.08.2025) of the department on the basis of approved design-drawing, clubbing of items for record measurement and basis of payment, getting approval from competent authorities.
- 1.1.3 Land Acquisition:**
- (a) After approval of GAD, the detail alignment and locations of the various work components of the project shall be submitted for finalization by the competent authority. After due approval of location and alignments, the turnkey agency shall start the preparation of cases of land acquisition for underground pipelines such as, main branches and disnet up to 1 hectares, the L. A. cases shall be prepared as per Underground pipe line, cables and duct act However, state government will bear the cost of land and shall reimburse, for a strip equal to two times the diameter of pipe laid. Cost of additional land, if any acquired for the execution of work, shall be borne by the contractor. For pump houses, distribution chambers, other permanent arrangements/accessories and residential & non-residential buildings, permanent land acquisition cases shall be prepared. The work components requiring permanent land acquisition should preferably be constructed on govt. land available to minimize acquisition of private land. In case the

permanent acquisition of private land is unavoidable, then the proposal of private Land acquisitions is to be prepared by the contractor. Necessary proposals\letters to concern department will be issued by the Engineer in charge; further follow-up for timely acquisition is to be done by the contractor. The department shall make payments for acquiring permanent land and property as per LA act/LA package. Such land shall be handed over to the State Govt. under provisions of C.G. LRC after completion of the work along with other assets. Pursuing the land and property acquisition cases, assistance in the award\approval from competent authority is the responsibility of the contractor.

- (b) The Department shall pay cost of land acquisition for a strip equal to two times the diameter of pipe laid and the Contractor shall pay for the entire crop compensation or any other compensation i/c temporary land acquisition to complete the project as per Underground pipe line, cables and duct act.

1.1.4 Design, Drawing and Estimation:- Design and drawing of jack well, pump house, gravity main, rising main, pipe canal etc i/c disnet system, SCADA system and all structures, residential and non-residential buildings etc. will be as per design criteria of water resources department, relevant IS. Codes, CPHEEO manual, IRC publications, canal parameters and circulars issued by the water resources department from time to time and getting its approval from competent authorities. Preparing detailed estimate on the basis of approved design-drawing and getting approval from competent authorities as per UCSR of WRD (SOR 01.05.2025 with amendment 08.08.2025), other department CSR or market rates for items not covered in above CSR.

1.1.5 Pump House: Pump house/Pump Houses for lifting of water from Khairi Anicut at suitable locations is to be constructed as approved by competent authority. Further to supply water @ 0.70lit/sec/ha for irrigation by pressurized system up to 4 ha chak shall be maintained and discharge at 1 ha chak shall be at least 3 times the specified duty. Asphalt approach road of approx. length 0.5km has to be constructed separately for pump houses under system. as directed by the Engineer-in-Charge. 25% stand by of installed capacity should be provided in the pump house. Power requirement for Solar pump with solar panel shall not exceed 100 KW to irrigate 160 ha CCA. However, proportional increase (to be calculated on per hectare basis) in power requirement would be permitted for increase in CCA.

Necessary electrical component including procurement and installation of pumps and its allied work and all electrical facilities and equipment cable fitting, cable tray, exhaust fan etc as per directions of the Engineer in-Charge shall be provided.

Necessary safety measures, firefighting arrangements and light arrester shall be established in the pump houses. Necessary safety sign boards shall be displayed at work site on suitable location as per directions of the Engineer in-Charge.

1.1.6 Electrical / Solar Facility:

- i. The contractor shall tap 11 KV connection from nearest facility at all proposed pump house/Training Hall. Electrical design and layout will be approved by competent authority and cost of providing electrical facility upto pump house and any other site specific electrical requirement will be reimbursed by the department afterwards as per actual expenditure done by contractor as certified by CSEB/CSPDCL/relevant camp authority.
- ii. The contractor shall install the solar panel and all its arrangement for all proposed pump houses. Design and layout will be approved by competent authority and cost of providing facility upto pump house and any other site, specific requirement will be borne by the contractor as certified by the CREDA/relevant competent authority.

- 1.1.7 Rising Main and Gravity Main:** The main pipe line (Gravity Main and Rising Main) systems will be designed for providing water for irrigation and delivering specified discharge. Rising Main shall be designed from pump house to Distribution Chamber/BPT. The rising main pipes of any diameter shall be invariably MS/DI and should be designed as per BIS 5822/AWWA and BIS 8329. The gravity main pipes of any diameter shall be of MS/DI and should be designed as per BIS 5822/AWWA M11 and BIS 8329. The contractor is free to tap the existing Rising Main provided that there is no change to energy gradient of Rising Main. Contractor will have to provide suitable off-taking valves and provide additional surge protection devices if required.
- 1.1.8 Distribution System:** The proposed system envisages creation of pressure irrigation networks of Khairi Lift Irrigation Scheme Irrigation for 160 Ha. In Kharif in right side of Khairi Anicut in distt Mungeli as indicated in index map. For this purpose water is to be lifted from MDDL Khairi Anicut to their respective distribution chambers with minimum detention time of 3 minutes. The pipe sprinkler irrigation shall have to be designed with duty of 0.70lit/sec/ha upto 4 ha with 20 m exit head at highest point of 1 ha field/chak. Construction of telescopic piped canal system network beyond gravity main up to 1 ha, including earthwork/laying and all in line concrete structures of piped canal system to irrigate CCA not less than **160Ha**. The CCA (arable area) shall be entirely compact and 500 m beyond the FTL of Khairi Anicut CCA of 160 Ha. shall be counted from a distance of 500 m from submergence line (FTL line). The minimum pressure of 20 m has to be maintained at 1 ha with discharge of ten times the specified duty. These systems are marked in index map attached with tender document. All Pipes of dia above 300 mm shall be MS/DI, and pipes less than 300 mm dia shall be HDPE of category PE 100 PN 6. Thickness and all other parameters shall be as per IS/5822/8329/4984. All pipes more than 750 mm shall be provided with opening at every two km length for flushing of pipes. disposal of surplus excavated material after refilling of pipe trenches shall be spread on nearby low-lying govt. land after due permission from competent authority. Outer dia of HDPE pipe at 1 ha chak shall not be less than 63 mm.
- 1.1.9 Crossings:**
- i. Rising Main and Gravity Main Crossings:-**Wherever the Pipe line for gravity main crosses national/state highways, the contractor has to prepare, necessary proposals for seeking all statutory permissions of concerned authorities at his own cost. The Engineer-in-Charge will process such proposals to the Concerned National/ state Highway and other authorities. Pursuing these Authorities for their approval etc., complying conditions imposed by them etc. shall be the responsibility of the Contractor. In case of the contractor constructing such crossing, the cost will be reimbursed. *In cases where the crossings are constructed by the concerned departments themselves, the cost will be directly borne by the water resources department.* However the cost of all other in line structures such as village road crossing, PMGSY road, district road crossing, river crossing, Nalla crossing etc. shall be borne by the contractor. The contractor shall include such cost in his BID price.
- ii. Distribution Pipeline Crossing:-**Wherever the Pipe line for distribution network (except gravity main) crosses national/state highways, the contractor has to prepare, necessary proposals for seeking all statutory permissions of concerned authorities at his own cost. Such letter will be issue to the respective authorities by the Engineer -in-Charge. The contractors will have to keep the follow up and obtain timely clearance from the concerned authorities. The cost of these works including the construction cost will be borne by the contractor. Cost of the all other in line structures such as village road crossing, PMGSY road, district road crossing, river crossing, Nalla crossing etc. shall be borne by the contractor. The contractor shall include such cost in his BID price.
- 1.1.10 Other Facilities:** The Contractor has to construct and maintain BT road from nearest road to each control room (approx. 2.5 km each), Junction point and other necessary haul roads as per PMGSY Specification.

- 1.1.11 Quality Control:** Ensuring quality control measures during constructions contractor shall establish a fully furnished quality control lab with good quality required equipment's and operating staff.
- 1.1.12 Trial Run, Commissioning, MOM:** Commissioning and trial run of the constructed systems has to be carried out by the contractor for 24x7 hours in rabi season complying with provisions as given in the specification. Rectifying the systems defects for 60 months during management operation and maintenance (MOM) period of 60 months as directed by the Engineer- in -Charge will be the responsibility of the contractor. Management, operation and maintenance and defect liability period will be borne by the contractor within his bid amount. If the agency fails to achieve the specified efficiency and parameters during trial run, the work shall not be accepted and it has to be rectified immediately by replacing the machineries/ equipment's. During period of delay till the end of next successful trial run, the cost of rectification and replacement of system and energy charges required for next trial run shall also be fully borne by the contractor.
- 1.1.13 Water Users Association:** For establishing water users associations for total CCA developed under this contract, all works up to preparation of voter list of cultivators based on revenue records with due marking for the area of water users association and territorial constituencies is to be prepared on village map. WUA for system shall be prepared individually.
- After commissioning the project in part or full contractor has to train the FPO and Departmental staff or appointed agency by the department for further maintenance and he has to submit the MOM manual to the Department at least six months prior to commissioning.
- 1.1.14 Concept Design Submission:** Bidders shall submit with the PQ documents, a conceptual design, specifications for the laying of M.S./DI/HDPE piped canal and disnet up to 1 ha chak to irrigate 160 Ha. In Kharif in Right side of Khairi Anicut . The scope of work requires that the pressure at each 1 ha outlet shall not be less than 20 m. The detail design should include the parameters specified in the volume I and also as above, details of pipe, length and diameter of pipeline static and dynamic head calculation in details used for design of entire system, work methodology, construction schedule backed with details of planning and deployment of construction equipment with sufficient details to demonstrate the adequacy of bidder's capacity to design and complete the project work in accordance with the specifications and within the stipulated time period. The extract concept of the departmental proposal for sample area is appended for the guidance of the bidder. However the details of work as conceived by department stated above and appended is for general guidelines and reference to bidder and the bidder is free to adopt any new concept/ design/methodology which serves the purpose indicated in scope of work subject to approval of the department and shall satisfy the basic parameters.
- 1.1.15 Aim of the Project:** The ultimate aim of the scheme is to irrigate 160 ha of land(CCA) within 270 ha GCA, as shown in index map attached in the tender document.
- 1.1.16 Special Requirement of work:** For fulfilling the PQ requirement of Technical proposal, the bidder is required to submit his concept design keeping in mind the design criteria & methodology mentioned in 1.1.1 to 1.1.15 above and which should also include following design parameters, in absence of which the bid will be treated as non-responsive.—
- 1) Coordinates of Junction point, length and static heads and discharge in each stage and irrigated command in Kharif shall be established for 160 Ha ,as depicted in detailed in index map. Lifetime of the pipeline shall not be less than 50 years.

- 2) Layout of the main pipelines and a Sample layout for 4 ha supplied from main pipeline. The sample layout of the disnet for 4 ha down to 2 ha sub chak including Sample layouts for Micro irrigation system supplied by the 1 ha outlets.
- 3) The bidder shall provide for Micro irrigation system such that Sprinkler/ drip connections at the 1 ha chak can be used in such a manner as to allow the farmers in this area to use their sprinklers and drip directly by connecting a flexible pipe to the last pipe of the micro irrigation system provided under this bid. This means that the bidder shall be required to provide sufficient connection outlets for sprinkler pipe on the 1 ha. outlet to allow the farmer to connect his sprinkler directly at different places.
- 4) The residual head at the sprinkler connection at 1 ha should not be more than 20m for 160Ha. In Kharif. Residual head at the outlet of 4 ha chak point should suitably maintain to provide the required exit gradient as designed.
- 5) The Pressure main/Gravity main (called as mainline herein after) shall be described, irrespective of the diameter even if its below 300 mm. Prima-facie the main line from the pump to the tail- end, irrespective of decreasing diameter due to decreasing water shall be termed as mainline and branch lines shall be termed as distributaries. Which part of the line is Rising main or Gravity main or distributary shall be decided by Chief Engineer and his decision shall be final. In such portion as may be decided to be mainline, only MS/DI pipe shall be provided. The Pipe thickness will be calculated as follows. –
- 6) “For M.S. pipes in Rising Mains, Gravity Mains and Distribution Network, pipe thicknesses shall not be less than as specified in the table below:

S.NO	MS pipe dia (mm)	Minimum Thickness required (mm)
1	300 to 450	4
2	500 to 600	5
3	700 to 1000	6
4	1100	7
5	1200	8
6	1300	8
7	1500	8
8	1500	9
9	1600	10
10	1700	10
11	1800	10
12	1900	12
13	2000	12
14	2100	12
15	2200	12
16	2300	14

17	2500	14
18	2500	14
19	2600	14
20	2700	16
21	2800	16
22	2900	16
23	3000	16
24	3100	17
25	3200	17
26	3300	18
27	3500	18
28	3500	19
29	3600	19
30	3700	20
31	3800	20
32	3900	21
33	5000	21
34	4100	22
35	4200	23
36	4300	23
37	4500	24
38	4500	24
39	4600	25
50	4700	25
41	4800	26
42	4900	26
43	5000	27

MS pipes in Rising Mains, Gravity Mains and Distribution Network, the thickness of pipe shall be calculated as per the design requirements and allowances stated in AWWA (American Water Works Association) Manual M11- For steel pipes and IS 5822. In no case the final thickness arrived can be less than as mentioned in above table”.

Note-

1. The thickness of Intermediate diameter pipe not provided in above shall be interpolated between the immediately lower & higher category subject to such other restrictions as the E-IN C, (BODHI) may decide.
2. The thickness provided shall also be subject to upward revision in surge analysis. No downward revision is permissible.

3. For DI pipe the minimum acceptable category shall be K-7 confirming to IS-8329 for all diameters. In addition to this K-9 category pipes may be used if required cement mortar lining for inner surface and zinc coating on outer surface.
4. For HDPE pipes of category PE 100 PN 6 for diameter of pipe below 300 mm, they shall confirm to relevant BIS standard and as per testing requirements of CIPET, Raipur. All the pipes and accessories to be tested at CIPET, Raipur.
5. For MS pipes 500 micron food grade epoxy/ 500 micron polyurethane for inner surface and shot create lining/ 3 LPE / 1000 micron polyurethane outside lining is to be done. Factory made and stamped IS mark pipes shall only be used. In case of MS pipes above 2000 mm dia, manufacturing at site can be permitted by factory with IS marking approval from IS organization.
6. Value of C_R in Modified Hazen-William equation shall be 1 (one) for all pipes.
7. Contractor shall provide complete stage wise calculations for power requirement at motor input terminals. This should include Static head, dynamic head loss calculations, length and diameter of the carrier main pipelines, loss in pumping station and bends, Total Head loss, make and efficiency of pumps, make and efficiency of motors, Stage wise power required, total power required, size and discharge of pumps at each stage, number of pumps, efficiency and discharge curves with operating point clearly marked.
8. Bidder shall submit with technical proposal a unique design of his own as mentioned above which should be supported with pump data sheet and performance curve for one or more pump manufacturers. In case of more than one pump manufacturer's data is used in this design, the Bidder must clearly state which pump manufacturer data is used in his design. The purpose of asking datasheet and performance curve of pump manufacturers is to ensure that the Bidder does not submit an imaginary experimental design or data for which no prudent verification is possible and all design data should confirm to a practical standard which are considered achievable under normal conditions by practical user groups. Moreover, the purpose of submission of design and pump data with technical proposal is limited only to demonstrate the adequacy of bidder's capacity to design. After acceptance of bid, the bidder have to get approval of his design, which may or may not differ from his design in technical proposal, from the concerned Chief Engineer along-with other system requirements.
9. Contractor must provide a schematic diagram of the **SCADA** system with operational details. He shall be required to show in concept as to how will he achieve required residual head at each of the 4 ha chak and 20 meter head at 1 ha chak. Detailed residual head calculations may not be required at conceptual stage.
10. Contractor shall submit detailed plans with concept design and drawings for approval of GAD of whole system.

1.1.17 Detail alignment and locations:

- (a) After approval of GAD, the detail alignment and locations of the various work components of the project shall be submitted for finalization by the competent authority. After due approval of location and alignments, the turnkey agency shall start the preparation of cases of land acquisition for underground pipelines such as, main branches and disnet up to 1 hectares, the L. A. cases shall be prepared as per Underground pipe line, cables and duct act. However, state government will bear the cost of land and shall reimburse, for a strip equal to two times the diameter of pipe laid. Cost of additional land, if any acquired for the execution of work, shall be borne by the contractor. For pump houses, distribution chambers, other permanent arrangements/accessories and residential & non-residential buildings, permanent land acquisition cases shall be prepared. The work components requiring permanent land acquisition should preferably be constructed on govt. land available to minimize acquisition of private land. In case the

permanent acquisition of private land is unavoidable, then the proposal of private Land acquisitions is to be prepared by the contractor. Necessary proposals\letters to concern department will be issued by the Engineer in charge; further follow-up for timely acquisition is to be done by the contractor. The department shall make payments for acquiring permanent land and property as per LA act/LA package. Such land shall be handed over to the State Govt. under provisions of CGLRC after completion of the work along with other assets. Pursuing the land and property acquisition cases, assistance in the award\approval from competent authority is the responsibility of the contractor.

- (b) **Monitoring:** The monitoring up to outlet (4 ha approximately) from gravity main shall be done by Supervisory Control and Data Acquisition (SCADA) through single control room at suitable location and equipped the same shall be established by contractor. The Contractor will obtain necessary permissions from GOI for use of required frequency for Operation of SCADA and the cost on this account shall be borne by the contractor. The complete system of outlet control shall be protected against sabotage by suitable protective enclosure of RCC.

1.1.18 Documents and Maps: The contractor shall prepare all documents, maps and forms required as per Chhattisgarhkrishakonkibhagedariadhiniyam1999 and its rules amended up to date, for formation of water users associations (WUAs) under the Culture able command area for each system. (NOT less than 160ha irrigation area in Kharif of the gross command area of 270hectares) served by the pressurized irrigation system to be constructed under contract.

1.1.19 Disposal of Material: Disposal of surplus excavated material after refilling of pipe trenches shall be spread on nearby low-lying Govt. land after due permission from competent authority.

1.1.20 Campus, Road: The Contractor has to construct and maintain approach road from nearest road to each control room, Junction point and other necessary haul roads as per PMGSY Specification. The Contractor shall also construct a control room of 500 Sqft. for which Government land shall be provided by the department. The facility shall include sanitation, water supply, electrification, approach and internal roads etc.

1.1.21 Basic Amenities: Necessary firefighting arrangements, canteen, washrooms, retiring room shall be established in the Pump Houses.

1.1.22 Sign Board: Necessary safety sign boards will be displayed at work site on suitable location as per directions of the Engineer- in-Charge.

1.1.23 Vetting of Design, Drawing: The contractor shall get vetted design of typical structures, surge analysis and protection, SCADA and any other component as desired by department from IIT Delhi/IIT Kanpur/ IIT Mumbai/IIT Madras/IIT Roorkee/ IIT Kharagpur/ IISc Bangalore/NIT. The cost of such vetting shall be borne by the contractor.

1.1.24 Manhole Arrangement: For cleaning purpose all the pipe lines should be provided with manhole arrangement for flushing-off at suitable locations preferably at every 2 km.

1.1.25 Capacity Building of Farmers: Contractor shall provide support to building farmer capacities with a view to increase irrigation efficiencies and water productivity at farm level through

- (i) a comprehensive participatory training program,
 - (ii) development and effective use of farm demonstration sites,
- Training initiatives conducted in the farmers' fields organized by a community mobilize where farmers share their experiences with each other and are guided in learn-by-doing activities by specialists in agronomy, irrigation or post-harvest technologies. Sessions with the same group of farmers on a regular basis to exchange views and reach consensus on incremental lessons learned through their own shared experiences. Demonstrations and field trials (e.g.,

irrigation scheduling, new seed varieties, disease control methods, etc.) are arranged in coordination with the FFS groups and their WUAs (Water Users Associations).

1.1.26 The scopes of work for Contractor during the Design Build period are as follows:

- Establishment of a minimum Farmer Services Canters (FSCs) through buildings, facilities and equipment as may be on land made available by the Project's farmers or CG WRD within two years of the commencement of the Turnkey Contract. All supplies and equipment necessary for the continuous functioning of the FSCs shall be furnished by the Contractor from suppliers from suppliers who are fully experienced, reputable, and qualified in the manufacture of the items to be furnished. .
- Development of detailed specifications for each type of recommended micro irrigation system, appropriate for the typical field size(s) that farmers may use for their procurement of high performance and cost effective farm irrigation systems.
- Develop a participatory approach for the formulation and implementation of an agricultural development plan in each village in coordination with the CG WRD and WUAs.
- Assist with the preparation of strategic communications and promotional material for wider adoption of developed working practices.
- Conduct pertinent study tours for CG WRD and farmers at FSCs.
- Support farmers in obtaining grants/loans from financing institutions/programs for financing micro-irrigation equipment..

1.1.27 In case the contractor is not willing to take the electricity connection during construction he shall obtain LT connection for the department 30 days prior commencement of O & M cost of which shall be reimbursed by the department.

1.1.28 Commissioning, test and trial of system.

1.1.29 Staircase arrangement/ road from pump house to distribution chamber.

1.1.30 Final clean-up of excavated material to the dumping zone as directed by Engineer in Charge.

2.0 Definition and Interpretations: - In the "Prequalification and Tender Documents" the following terms shall have the meanings hereby assigned to them except where the context otherwise requires.

- (a) **Government** shall mean the government of Chhattisgarh.
- (b) The **employer** is these cutting agency, water resources department, and government of Chhattisgarh.
- (c) **Employer representative**—Employers representative is the Chief Engineer of the concerned basin
- (d) **Engineer** shall mean **Chief Engineer of the concerned basin.**
- (e) **Engineer representative**—engineers representative can be Superintending Engineer /Executive Engineer of concerned project.
- (f) **"Engineer-in-Charge"** is the **Executive Engineer, E/M H.E.M. Division WRD Sakri Bilaspur (C.G.)**
- (g) **"Engineer-in-Charge's representative"** shall mean the assistant engineer/ sub divisional officer who is in direct charge of the works.
- (h) **Contractor** shall mean the person, firm, company, joint venture who enters into contract, with the department and shall include their executors, administrators, successors and assignees.

- (i) **Contract** shall mean and include agreement having three volumes as below:
- Volume I - Pre-qualification document
- volume II - Tender documents for turnkey contract.
- volume III, - Specification
- (j) **Work** shall mean the work to be executed in accordance with contract.
- (k) **Specifications** shall mean the specifications for material and works as specified in volume III of the contract. In case of disagreement between the specifications of the department, and standard practices being followed that decided by the Engineer-in-charge, shall be binding on the contractor.
- Specifications not provided specifically then relevant specification under IRC/IS code shall prevail.
- (l) **Site** is that area which is required for proper completion of the works, as illustrated on the drawings. The contractor will be responsible for making his own arrangements for providing any other space for site offices, materials testing laboratory, storage of materials and equipment etc., as may be required for proper execution of the works.
- (m) **Defect(s) liability, running and maintenance period shall mean period of 60(Sixty) months from the date of issue of completion certificate by the engineer-in-charge over and above stipulated time 11 Months period of completion for constructions. Defect liability period and MOM period run simultaneously.**

3.0 location of works :-

Relevant toposheet for proposed site is 64 -F44/J16.

4.1 Probable amount of work

4.2 The “probable amount of work”- cost shown in the tender document are not guaranteed for contract but merely given as rough guidance. The contractor should derive his own cost estimate after visiting the site prior to bidding.

4.3 Each bidder should carefully examine the specifications, special conditions and other particulars etc. And visit the site of work and fully satisfy and acquaint himself about the nature and location of the work, exact length and static heads, the surface and geological conditions, quality, quantity and distance of construction materials available, the character of equipment and ancillaries needed during the execution of the work and local socio-economic conditions which may affect the cost of the completion of the work.

4.4 Time for completion:

The time for completion for the project including time required for creation of construction facilities and infrastructure work, necessary preconstruction survey, investigation, soil exploration, design and engineering construction work etc. Shall not exceed 11 Months including rainy season from the date of agreement. Stipulated period of completion is the main essence of the contract and shall be strictly adhered to.

5.0 Language of Tender:

Tender shall be submitted in prescribed form in English. All literature and correspondence in connection with the contract shall be in English.

6.0 Contract documents and matters to be treated as confidential:

All documents, correspondence, decisions and other matters concerning the contract shall be considered as of confidential and restricted nature by the contractor and he shall not divulge or allow access there to any unauthorized person.

7.0 Availability of “Prequalification and Tender Documents” with relevant details:-

The Tender documents for e-Tendering will be sold ONLY online and shall be available for purchase to concerned eligible Contractors/ Bidders immediately after online release of Notice Inviting Tender and up-to the scheduled date and time as set in the key dates.

The Tender documents in the e-Tendering system can be purchased ONLY online on payment of Rs.10000 (Rs. Ten Thousands only). The Tender shall be available for purchase to concerned eligible contractors immediately after online release of the Notice Inviting Tender and up to the scheduled date and time as set in the key dates. Those bidders who need support in purchasing bid documents online will be assisted by e- Tendering Cells at Office of the E-in-C, Water Resources Department, concerned Chief Engineer Office, Circle office and concerned Division Office; such purchase of bid documents will be registered at e-Tendering Portal as assisted purchase and details of assisting office will be maintained on the portal.

No application will be required for online purchase of tender documents. For purchase of online tender documents the Contractors/ Bidders will be required to make online payments through various modes admissible as notified at e-Tendering Portal of The Water Resources Department. Online payment for purchase of tender document will be acceptable only through Gateway Service integrated into the e-Tendering System. Contractors / Bidders will be required to print a system generated receipt of payment made through secure payment gateway as an evidence of payment.

Receipt of online payment for purchase of tender documents and any other payment mode permitted herein will be considered equivalent to money receipt issued as per relevant provisions in clause 2.03.56(1)(a) and 2.03.56(1)(b) of Works Department Manual.

Online purchase of tender documents will have same effect as an entry made in the register of bids sold as per relevant provisions in clause 2.03.56(4) of Works Department Manual. Digital signatures for online purchase of bid documents will have same effect as signature in register of bids sold as per relevant provisions in clause 2.03.56(4) of Works Department Manual.

8.0 Submission of Tender:

8.1 The bidder shall submit his tender online in three separate electronic envelopes i.e.e-EMD, affidavit, additional affidavit & copy of registration in Envelope - A, Pre – Qualification Document in online Envelope B and main tender indicating his financial offer i.e. the Price Bid in online Envelope - ‘C’. The tenderer should also ensure that his tendered amount quoted in the price bid is not mentioned in any other document submitted online directly or indirectly, if any such mention is made it will not be given any importance for whatsoever purpose.

8.2 The bidder are advised to go through the pre -qualification documents carefully and furnish the required details duly supported by documentary evidence as per instructions issued in the Volume, as their eligibility for this

contract. Prequalification shall be decided on the basis of the information/documents submitted by them in Online Envelope “B”.

8.3 The Bidders shall have to submit their Bids online (decrypt the bids and re-encrypt the bids) and upload the relevant documents required.

8.4 Since, the bids for the tender are required to be digitally signed using Class III digital certificate of the authorized representative of the firm, Contractors are advised to obtain the same at the earliest. Further information on the same may be obtained from e-Tendering Cell, Room No. 9, Office of the E-in-C SHIVNATH BHAVAN NAVARAIPUR

8.5 Envelope “A” should contain the following:

Valid Bid Security (e-Earnest Money) in approved forms, laid down in clause 11.0 of tender document Volume –II Section -II, **Valid Registration, affidavit as in Annexure-1 and a separate additional affidavit as per Annexure-2 in original on Rs. 50/- non judicial stamp paper duly notarized, Joint Venture agreement, if any, Power of Attorney (POA), Copy of Receipt of EMD** along with affidavit, Check list, copy of Registration and JV agreement (in case of JV) shall be submitted to Office of Chief Engineer, Hasdeo Basin, WRD, Bilaspur.or in concerned divisional office of the Deptt. The copy of receipt with EMD, P.O.A.affidavit& copy of registration must be uploaded in Envelope “A”. In absence of above document bidder shall be treated as technically disqualified and bidder shall be debarred to participate in financial bid.

8.6 Online Envelope “B” should contain the following:

Pre-qualification document (Volume-I) containing details regarding eligibility for pre-qualification, enumerated in "Instructions to Bidder" Section –III in the prescribed proforma as Technical Schedule i.e. Form 1A, 1B, 2A, 2B, 2C, 2D, 3A, 3B, 3C, 3D, 3E, 3F, 4A, 4B, 5, 6,7 and Form-8 and these Format should be supported by certificates wherever necessary signed by the officer not below the rank of Executive Engineer. The certificate should be translated in English and attested, if issued in some other Indian language). Applicant shall attach all necessary documents like audited Balance sheets, CA Certificates, Experience certificates, Technical Design as described in Pre-qualification document (Volume-I) Section-II Clause 1.3 Technical and information of work in hand etc. with prequalification document. (See prequalification document Volume-I for details).

All above prequalification documents are required to be scanned and uploaded in online Envelope –B (Technical proposal) while submitting the online bid.

8.7 Envelope “C” should contain the following:

The bidder shall quote his lump sum price in Indian Rupees in **online** in prescribed format given in volume II, section III, price proposal. Format should be duly filled with amount in Rupees in price Bid form in words and figure both.

Bidders shall quote for entire work on a firm lump sum price and on a single source responsibility basis.

The rates quoted by the contractor shall deemed to be exclusive of the goods and services Tax (GST) but including labour cess, other levies, duties, royalties, cess, toll, taxes of local bodies and authorities that the contractor will have to pay for the performance of this contract. The employer will perform such duties in regard to the deduction of such taxes including GST at source, require deduction in this reference will be made as per applicable law. GST as per prevailing rate at the time of payment/bill submission shall be made applicable presently @18% and shall be paid on the whole work carried out as accepted by the engineer, while making the payment..

However, if any other NEW TAX or levy or cess is imposed by statute or any deviation in existing royalty/tax/levy/cess/GST after the last stipulated date for the receipt of the tender including extensions, if any, shall be treated as NEW TAX and the contractor there upon necessarily and properly pay such new taxes/levies/cess/GST /royalties. The Engineer in charge shall reimburse the amount of such 'New Tax' on submission of proof of such payments of tax by the contractor (deducted in case of decrease in existing taxes/reimbursement of increase in existing taxes).

- 8.8** If there is any difference between the amount in words and figures written in the tender forms by the contractor the lesser amount will be treated as valid. If the Contractor is not ready to accept the amount so fixed in the above manner and declines to do the work, e-Earnest Money deposit of the Contractor shall be forfeited.

9.0 Opening of Tender:

- 9.1 Envelope A:** At the time fixed for Opening of EMD & Technical / PQ Bid first envelope 'A' shall be opened. After opening of envelope 'A', submitted documents shall be checked for correctness and validity of registration, EMD, affidavit, additional affidavit, POA and JV conditions if any.

- 9.2 Envelope B:** Envelope "B" shall be opened only for those bidders whose documents in Envelope "A" are found in order. After opening of envelope 'B', based on the information given by the tenderer, evaluation of pre-qualification will be carried out as per norms/criteria given in section-II "Qualifying Criteria" of prequalification document (Volume-I) Annexure-I. Pre-Qualification of the tenderer (bidder) will be decided by the officer who is competent to accept the tender.

- 9.3** The Tenderer (bidder) who does not pre-qualify as per the prescribed norms, his tender (price bid) will not be opened. Online opening of Envelope "C" will be done in the presence of prequalified Tenderers (Bidders) or their authorized representative who choose to be present. Immediately after opening of Envelope "C", all tenderers who have purchased online tender will be able to view online the opened data including price bids.

10. Disqualification

Even though the bidder satisfies the above requirements they are subject to be disqualified –

- (a) If the design submitted by the bidder does not fulfil the criteria in general, his offer is liable for disqualification.
- (b) If they have made untrue and false representation in the forms, statements and attachments submitted in proof of the qualification requirement and/or record and poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion, or financial failure, litigation, history etc.
- (c) If any government department of Chhattisgarh including but not limited to PWD, WRD, PHED and Rural Development Department or any other department or undertaking or any Municipal Corporation or any other Corporation/ Board / Society under the administrative control of these departments or state of Chhattisgarh has, in consequences of some penal action, during the last five years: -
 - (i) Cancelled or suspended the registration of the firm.
 - (ii) Registration was cancelled or suspended before five years and not revoked up to the date of bid submission.
 - (iii) Black listed the Contractor.
 - (iv) Debarred the Contractor for participating in future tendering.

- (v) Termination of contract due to default of contractor.
- (vi) Forfeiting of full or partial SD for poor performance. (including cases where the forfeiting has been done in last 5 years) though the contract period/case may be older than 5 years.
- (d) If a proceeding for suspension or cancellation of registration or for blacklisting or for Termination of a contract due to poor performance by the contractor has been started by the Department of Government of CG before the issue date of this tender and the same is subsisting on the date of submission of the bid.
- (e) 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.
- **Provided the above said penal actions were in force on the last date of submission of the bid.**
- **In case of JV all the partners shall be required to submit an affidavit giving full information of above facts.**
- (f) .
 - i. Made misleading, incorrect, incomplete or false representation in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements.
 - ii. If the tenderer produces misleading, incorrect, incomplete or false information regarding qualification requirement, then the EMD for the tender shall be forfeited and his pre-qualification (PQ) certificate issued by the Department shall be cancelled for one year. In case the tenderer enters into an agreement and it is found that he was awarded the contract based on misleading, incorrect, incomplete or false information, his EMD for the tender shall be forfeited and is Pre- Qualification (PQ) certificate issued by the Department shall be cancelled for one year but the agreement shall not be revoked.
 - iii. Tenderer not produce all original certificates for verification of the certificates submitted for pre- qualification requirements as and when demanded by the department.
 - iv. Participated in the previous bidding for the same work and not executed the agreement.
 - v. Record of poor performance such as abandoning the work, not properly completing the contract, unsatisfactory quality of work, inordinate delays in completion, claim and litigation history, or financial failures etc. in any department of Govt. of Chhattisgarh or the State Govt. organization / services / corporations / local body etc. (by whatever names these are called).
 - vi. One person involving in two or more registration in the same tender.
 - vii. If the tenderer whose bid is found lowest does not submit the required documents of Envelope - A within time limit, the tender process stands vitiated. Such tenderer is responsible for causing wilful disruption of tender process. Action of de-registration shall be recommended for a period of minimum two years for such tenderer in conformance with the provision made in order vide Govt of CG., PWD order no F 5-8/19/2013/f/ nivida Dt 29.10.2014.
 - viii. The tender has to be re-invited. The amount of EMD shall be recovered from the defaulted tenderer of the FIRST CALL from his ongoing works within the WRD and amount deposited during unified registration in PWD or from revenue recovery.
 - ix. . If the tenderer Not submit original copy of valid (tender document cost) DD Instruments as uploaded online within limit as scheduled.

Note :

1. Information in form 1A, 1B, 2A, 2B, 3A, 3B, 3C, 3D, 3E, 3F, 4A, 4B, 5, 6, 7 and Form-8 has to be filled completely in the Pre-Qualification document itself.
2. Supporting documents as required must be supplied separately and kept in the envelopes "A", "B" and "C" respectively and produce all original certificates for verification of the documents submitted for pre-qualification requirements as and when demanded by the department..

11.00 Earnest Money:**1.1 (1) The Tenderer shall submit the e-earnest money in Envelope “A” in prescribed forms:****I. The rate of earnest money to be submitted by the intending Contractor will be as follows:**

- | | | | |
|-------|---|---|---|
| (i) | For tenders up to Rs. 1 Lakh | - | 2 percent |
| (ii) | For tenders more than Rs. 1 Lakh and up to Rs. 5.00 Lakh | - | 1 percent subject to a minimum of Rs. 2000/- |
| (iii) | For tenders more than Rs. 5 Lakhs and up to Rs. 2.00 Crores | - | 0.75 percent subject to a minimum of Rs. 5000/- |
| (iv) | For tenders above Rs. 2.00 Crores | - | 0.5 percent subject to a minimum of Rs. 1.5 Lakhs and maximum of Rs. 5 Lakhs. |

11.1.1 For online tenders, the Earnest money shall be deposited electronically by NEFT/RTGS. Internet Banking. Debit/Credit Cards on any other online process of payment. Contractor is required to generate a challan through e-Procurement system for specific tender before transfer of fund and system generated challan may be submitted to bank physically for RTGS/NEFT or contractor may use other online option for making payment in account number shown in the online generated challan.

It is clarified that every contractor's challan number will be different for each challan generated from system of different or same tender. The cost of money transfer (including Payment Gateways Commission etc.) has to be borne by the contractor. It is advised that the contractor should consider the time taken to process the payment electronically (i.e. NEFT/RTGS, Net banking, Credit/Debit cards). No interest shall be payable to contractors on amount deposited as earnest money.

*** Note :- (Amendment As per Order of Government of Chhattisgarh, Water Resources Department Mantralaya, Naya Raipur Letter No.RULE/472/2025/WRD/1940 Naya Raipur Dtd. 27/04/2026)**

11.1.2 The e-receipt of Earnest Money in prescribed forms above should be submitted separately in **Envelope – A** and not kept in the covers containing the Prequalification or Price tenders and if the Earnest Money is not in accordance with the prescribed mode and the amount, the tender (Envelope __B' and Envelope __C') will be returned unopened to the Tenderer.

11.1.3 Remittance of Earnest Money in favour of **Executive Engineer, E/M HEM Division Sakri, Bilaspur (C.G.)** Any tender not accompanied by an acceptable EMD or not being valid as described in Clause 11.1 (1) of Tender Document Volume-II, Section-II, will be treated as non-responsive and rejected by the Department. The EMD of the unsuccessful Tenderers will be discharged/ returned after an agreement is entered into with the successful bidder whose tender has been accepted or after expiry of bid validity period whichever is earlier

11.1.4 The EMD of successful tenderers shall be discharged when the Tenderers has signed the Agreement and furnished the required performance security.

11.2 The EMD shall be forfeited-

- a) If a tenderer modifies or withdraws his tender during the period of tender/bid validity.
- b) In case of a successful tender, if, he fails to furnish the required performance security and sign the contract agreement within the specified time limit.
- c) If, the tenderer does not accept the correction of his bid price pursuant to clause 8.8 of detailed NIT of Volume II.

III. Bank Guarantee - DELETED

11.3 In the event of tenderer withdrawing his/ her offer before the expiry of the period of the validity of offer or failing to execute Contract Agreement as required by Condition of NIT, he/she will not be entitled to tender for this work in case of recall in addition to forfeiture of his / her Earnest Money.

11.4 Earnest money deposit paid by the Tenderer other than interest bearing securities shall not earn any interest.

Earnest money which has been deposited for a particular work will not ordinarily be adjusted towards the earnest money for another work.

11.5 The Security Deposit shall be 5 percent of the amount of contract.

11.5.1 Additional Performance Security (APS) shall be deposited by the successful bidder at the time of signing of agreement when the bid amount is seriously unbalanced i.e. less than the PAC by **more than 5%**. In such an event the successful bidder shall be deposit the Additional Performance Security (APS) as below:-

S.N.	%Of Bid Amount below PAC	Amount of APS
1	Upto 5% below	Nil
2	More than 5% below upto 10% below	Difference of 95% of the PAC and bid amount
3	More than 10% below upto 20% below	5% of Bid Amount plus 1.50 times of difference of 90% of the PAC and bid Amount.
4	More than 20% & Below	20% of PAC Plus 2.00 times difference of 80% of the PAC and bid amount.

The APS shall be deposited in the shape of FDR, in favour of the Executive Engineer before signing the agreement. The same shall be refunded after issue of completion certificate. If the contractor fails to complete the work or leaves the work incomplete, the amount deposited as Additional Performance Security (APS), shall be forfeited by the department and the agreement shall be terminated and action shall be taken in accordance with clause 4.3.3 of the agreement. In case the tenderer/contractor refuses to deposit Additional Performance Security (APS) then his bid will be rejected by the sanctioning authority and earnest money shall be forfeited."

(11.5.1-Vide Govt. of C.G., W.R.D., Raipur letter no. 4515/F-7-7/31/S-2/2001 Raipur Dtd. 25/11/2024).

12 PERFORMANCE SECURITY DEPOSIT/SECURITY DEPOSIT:

- 12.1 Within 15 days from the date of receipt of the letter accepting the tender, the tenderers shall furnish Performance Security Deposit equal to 1% of the contract value or Rs. 10.00 Lakh whichever is more in any one of the following form and shall be valid up to 90 days beyond the period for completion of construction:-
- In addition to the above initial security deposit, the executive engineer shall deduct from the running account bills, an amount @5% of the total value of each bill as additional security deposit subject to the condition that the total amount of such deductions together with the amount of performance security deposit shall not exceed 6% of the contract value.
- 12.2 If the contractor expressly request in writing he will be permitted by Engineer-in-Charge to convert the security deposit recovered from his bills into interest bearing govt. securities or bank guarantees or interest bearing deposits pledged to the **Executive Engineer, E/M H.E.M. DIVISION WRD Sakri Bilaspur (C.G.)**
- 12.3 With any scheduled Indian Bank (other than a Co-operative Bank) located in India (Refer Annexure E). This bank guarantee shall remain valid for 90 days beyond the MOM period.

- 12.4 The interest bearing Govt. securities, Bank Guarantees and the interest bearing deposits shall remain valid up to 90 days beyond the stipulated date of MOM. In case date of completion and MOM extends beyond stipulated date validity of deposit shall be extended accordingly.
- 12.5 Recovery of amount due to Government from Contractor: Any amount due to Government from the contractor on any account may be recovered from contractors deposit available with the department and in addition as arrears of land revenue.
- 12.6 The security deposit less any amount due shall be returned to the contractor after the MOM period is over and subject to the Executive engineer/ S.D.O. certifying that no liability attached to the contractor.

13 Contract Agreement Execution:

- 13.1 Tenderer whose tender has been accepted (hereinafter referred to as the contractor) will execute the agreement with the **Executive Engineer, E/M H.E.M. DIVISION WRD Sakri Bilaspur (C.G.)** in the prescribed form within fifteen days from the date of communication of acceptance or any such date extended by competent authority in writing. Failure to do so will result in the earnest money being forfeited to Government and tender being cancelled. 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.
- 13.2 Although the agreement shall be drawn between the contractor and the **Executive Engineer, E/M H.E.M. DIVISION WRD Sakri Bilaspur (C.G.)** but to facilitate the execution of different portions of the complete work may be distributed in the different divisions by an order of Chief Engineer. Executive Engineer- in-Charge shall be hereafter called as Representatives of Engineer-in-charge.
- 13.3 The submission of a tender online by a contractor implies that he has read the notice and conditions of the contract and has made himself aware of the scope and specifications of the work to be done and has seen the quarries with their approaches, sites of works etc. and satisfied himself regarding the suitability of the materials at the quarries. The responsibility of opening of new quarries and construction and maintenance of approaches too shall lie wholly with the contractor.
- 13.4 Conditional tenders are liable to be rejected:
- 13.5 The WRD also reserve the right to reject all or any of the tenders without assigning any reason there of No correspondence or claim shall be entertained on this account.
- The successful bidder has to make arrangement at site to establish the camp, deployment of manpower, equipment and machineries, survey & investigations and basic preparation to mobilize the work within 15 days after agreement.

14 Taxes and Duties:

- 14.1 *The rates quoted by the contractor shall deemed to be exclusive of the goods and services Tax (GST) but including labour cess, other levies, duties, royalties, cess, toll, taxes of local bodies and authorities that the contractor will have to pay for the performance of this contract. The employer will perform such duties in regard to the deduction of such taxes including GST at source, require deduction in this reference will be made as per applicable law. GST as per prevailing rate at the time of payment/bill submission shall be made applicable presently @18% and shall be paid on the whole work carried out as accepted by the engineer, while making the payment..*

However, if any other NEW TAX or levy or cess is imposed by statute or any deviation in existing royalty/tax/levy/cess/GST after the last stipulated date for the receipt of the tender including extensions, if any, shall be treated as NEW TAX and the contractor there upon necessarily and properly pay such new taxes/levies/cess/GST /royalties. The Engineer in charge shall reimburse the amount of such 'New Tax' on submission of proof of such payments of tax by the contractor (deducted in case of decrease in existing taxes/reimbursement of increase in existing taxes).

- 14.1.1 The liability if any on account of increase in all type of taxes i/c GST, income tax. Labour cess,royalties all type of fees of central and state government, local bodies and authorities whatsoever on all work and contract services, labour, material and the equipment that the contractor will procure for the performance of this contract. duties, levies, cess, toll, royalties, GST and other taxes on work contracts.
- 14.1.2 If during the implementation of the contract the rate of GST on works contract services is reduced from prevailing rate (on the last date of submission of bid) then the difference of GST on works contract services rates will be recovered from the date on which the reduction in GST shall be effective.
- 14.2 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.
- 14.3 *Royalty Charges (Amount of Minerals/ Minor minerals); Amount for Royalty, DMF, Environment and infrastructure development Cess and penalty of 100% of royalty, that is 2.525 times basic royalty rates will be deducted from the bills of the contractor for the minerals/ minor minerals used in construction and will be kept as additional deposit. The Contractor has to obtain royalty clearance certificate from collector of the concerned district before final bill payment. If the contractor does not submit royalty clearance certificate within 6 months of completion of work, the amount kept as deposit shall be remitted in relevant royalty head. If the contractor submits royalty clearance within specified time, the amount kept in deposit shall be released to the contractor.*
- Any change in the royalty rates of minor minerals notified by the state government after the date of submission of financial offer by the bidder/contractor then the change in the rates shall be reimbursed/deducted on actual basis.*

- 14.4 *Income Tax at the rate of 2.32% (or as per prevailing rules) from any sum payable to the contractor shall at the time of credit of such sum or at the time of payment to the contractor by cash / cheque or draft or any other mode be deducted at the sources from its running / final or any type of payment for this contract as per rules.*

GST@ 2% (or as per prevailing rules) from any sum payable to the contractor shall at the time of credit of such sum or at the time of payment to the contractor by cash / cheque or draft or any other mode be deducted at the sources from its running/final or any type of payment for this contract as per rules

- 14.5 In the contract work for Construction, the workers well fairness @ 1% (One percent) shall be deducted at source while making payment by the Executive Engineer /Project Administrator and shall be deposited to Workers Welfare Fund as per the provision of Building and other Construction Workers Welfare Act, 1996.
- 14.6 It is open to the contractor to make an application to the Income Tax Officer and Vanijyakar Officer concerned and obtain from him a certificate authorizing the payer to deduct tax at such lower rate or deduct no tax as may be appropriate for this Contract. Such certificate will be valid for the period specified therein unless it is cancelled by the Income Tax / Commercial Tax officers earlier.
- 14.7 All other taxes as applicable shall be deducted from contractor and taxes due from any amendment as applicable during the currency of contract including O&M period shall be deducted from contractor.
- 14.8 If any 'New Tax' (not increase or decrease in existing taxes, duties, royalties, cess and surcharge etc.) is levied on the contractor, the Engineer in charge shall reimburse the amount of such 'New Tax' on submission of proof of such payments of tax by the contractor.

15. Model Rules for Water Supply, Sanitation in labour Camps:

The contractor will be bound to follow the Model Rules relating to layout of water supply and sanitation in labour camps (vide Annexure-A).

16. Fair Wages to Labourers :

The Contractor shall not pay less than fair wages to labourers engaged by him on the work (Copy of rules enclosed vide Annexure B) including any revision in the fair wage from time to time.

17. Execution of Work:

- a. The contractor shall execute the work as per specifications of water resource Department detailed approved design-drawing, relevant I.S. Code and circulars issued by the Department from time to time and in accordance with the special conditions incorporated in the tender documents.
- b. Execution of work according to Time Schedule: The Bidder shall include in his bid, a detailed Construction programme of executing the project, describing broadly the technology and Construction methodology major components of the project including survey, investigation, soil exploration, design and engineering estimates, land acquisition proposals, commissioning of total project, storage of requisite quantity of water. The employer reserves the right to request for change in the design after discussions with the successful bidder. Mutually agreed design shall form part of the Contract.

18. Canvassing or support for acceptance of Tender:

Canvassing or support in any form for the acceptance of any tender is strictly prohibited. Any tenderers doing so will render himself liable to penalties, which may include removal of his name from the register of, approved contractors, and in case of unregistered contractor debarring him for registration for a period of 5(five) years.

19. Removal of unsuitable or undesirable Employees of Contractor:

The contractor shall on receipt of the requisition from the Engineer-in-Charge remove any person at once employed by him on the work if in the opinion of Executive Engineer/Project Manager such person is unsuitable or undesirable.

20. List of Persons Employed by Contractor:

The Tenderer shall not be permitted to tender for works in **Executive Engineer, E/M H.E.M. DIVISION WRD Sakri Bilaspur (C.G.)** (responsible for award and execution of Contracts) in which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Assistant Engineer (both inclusive). A list showing the names of the persons who are working with the Tenderer and are near relatives to any Gazetted Officer in the W.R Department including Secretariat should also be appended to the tender. He should also intimate to the E.E. the names of subsequently employed persons who are near relatives to any Gazetted Officer in W.R. Department or Divisional Accountant **Executive Engineer, E/M H.E.M. DIVISION WRD Sakri Bilaspur (C.G.)** Any breach of this condition by the Contractor would render him liable to be removed from the approved list of Tenderer of this Department.

Note: By the term near relative is meant son, grand-son, father, Mother, Spouse, Brother, Sister, Brother-in-law, Father-in-law and Mother-in-law.

21. Validity of Offer

The offer of the tenderers shall remain valid for **120 days** with effect from the prescribed deadline for submission of tender.

22. Bank Commission Charges

Bank commission charges shall be borne by the Contractor.

23. Force Majeure

Should failure in performance of any part of this contract arise from war, insurrection, restraint imposed by Government, act of Legislature or act of God or any inevitable or unforeseen event beyond human control directly or indirectly interfering with the execution of work or from any cause which may be reasonable ground for an extension of time, the competent authority will allow such additional time as he considers to be justified in the circumstances of the case, No compensation will be payable to the contractor for any loss incurred by him due to these reasons.

24. Address of the Tenderer

Each tenderer shall supply the name, residence and place of business of the person or persons giving the tender and shall be signed by the tenderers with his usual signature. When tender is given by firm having partnerships, the full names of all partners shall be furnished. An attested copy of the constitution of the firm and the registration number of the firm shall be furnished. In such a case tender must be signed separately by each partner thereof or in the event of the absence of any partner it must be signed on his behalf by a person holding a power of attorney authorizing him to do so. Tenders by corporation shall be signed with the legal name of the corporation followed by the name of the State of Incorporation and by signature and by designation of the president, secretary or other persons authorized to sign it in the matter.

25. Valid License

The contractor shall obtain a Valid license under the contract (Regulation and Abolition) Act MP Rules 1973 shall apply and rules made there under by competent authority from time to time before commencement of work and continue to have valid license until the completion of the work.

26. Quarry Material

If in a quarry material of more than one quality is found, the material of the best quality as approved by the Executive Engineer shall be used by the contractor.

27. Transport of Materials is Contractor's responsibility:

- a. The contractor shall make his own arrangement for transport of all materials. The Government is not bound to arrange for priorities for getting wagon or any other materials though all possible assistance by way of recommendation will be given, if it is found necessary in the opinion of Engineer-in-Charge. If it proves ineffective, the contractor shall have no claim for any compensation on this account.

28. Arrangement of Tools and Plants:

- a. The contractor shall arrange at his own cost tools and plant and machine required for proper execution of work.
- b. Government plant and machinery may be supplied on hire basis by the Government under the orders of Engineer, of the work, if available and considered necessary in the interest of work on the conditions, terms and rates as applicable at the time of supply but department does not undertake any responsibility towards their supply (Annexure C). The contractor will have to execute the agreement for hiring the machine, with the Executive Engineer in the prescribed form (Annexure - D) for supply of plant & machine on hire.

29. Execution of work according to time schedule:-

The work shall be done by the contractor according to the time schedule fixed by competent authority.

30. Site Visit

For obtaining details of works and visit to site **Executive Engineer, E/M H.E.M. DIVISION WRD Sakri Bilaspur (C.G.)** shall be contacted.

31. Any Claim/Claims on account of court cases (proceedings/awards) decisions affecting the work directly or indirectly shall not entertained.

32. **Issue of Materials by the Department** - The following materials can be used by the contractor at the following rates-

S.NO	Name of Material	Unit	Rate	Place of delivery
01	Hard rock (received from excavation)	Cum.	Rs. /cum (The Hard Rock received from excavation and remains unutilized by the department shall be at the disposal of the contractor. All the taxes, Royalty and other charges if any shall be borne by the contractor.)	As & where Required

ANNEXURE – 01

|| AFFIDAVIT ||

(On Non Judicial Stamp paper of Rs. 50)

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-certified information/ 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 _____

Signature with Seal of the Deponent (bidder)

I/ We, _____ above deponent do hereby certify that the facts mentioned in above Para 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: Affidavit duly notarized.

Annexure-02

|| ADDITIONAL AFFIDAVIT ||
(On Non Judicial Stamp paper of Rs. 50/-)

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:-

- (a) 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).
- (b) The design submitted fulfil the criteria in general.
- (c) We have not made any untrue or false representations nor hidden the material information in the forms, statements and attachments required in the pre-qualification documents.
- (d) **Any Government department of Chhattisgarh including but not limited to PWD, WRD, /, PHED and Rural Development Department or any other department or any undertaking or any Municipal Corporation or any other Corporation/ Board / Society under the administrative control of these departments or state of Chhattisgarh has, in consequences of some penal action, during the last five years:-**
- (i) Not Cancelled or suspended the registration of the firm.
 - (ii) Cancelled or suspended the Registration before five years and has revoked Registration up to the date of bid submission.
 - (iii) Not Black listed us
 - (iv) Not Debarred us from participating in future tendering.
 - (v) Not terminated any contract due to default of contractor.
 - (vi) Not Forfeited full or partial SD for poor performance. (Including cases where the forfeiting has been done in last 5 years) though the contract period/case may be older than 5 years.
- (e) Any details related to above mentioned disclosures (a) to (d) _____

Signature with Seal of the Deponent (bidder)

Note: 1. In case of JV all the partners shall be required to submit an affidavit giving full information of above facts.

ANNEXURE-A

Model Rules Relating to Labour, water supply and Sanitation in Labour Camps

ANNEXURE – A
MODEL RULES RELATING TO LABOUR, WATER SUPPLY
AND SANITATION IN LABOUR CAMPS

Note: These model rules are intended primarily for Labour camps which are not of a permanent nature. They lay down the minimum desirable standard, which should be adhered to. Standard in permanent, or semi permanent labour camps should not obviously be lower than those for temporary camps.

1. **Location:** The camp should be located in elevated and well drained ground in the locality.
2. **Layout:** Labour huts to be constructed for one family of 5 persons each. The layout to be shown in the prescribed sketch.
3. **Hutting:** The huts to be built of local materials. Each hut should provide at least 20 sq. meter of living space.
4. **Sanitary facilities:** These shall be provided, latrines and urinals at least 16 meter away from the nearest quarter separately for men and women, specially so marked on the following scale.
5. **Latrines:** Pit privies at the rate of 10 users or two families per seat, Separate urinals are not required as the privy can be used for this purpose.
6. **Drinking Water:** Adequate arrangements shall be made for the supply of drinking water. If practicable, filtered and chlorinated supply shall be arranged. Where supply is from intermittent sources, a covered storage tank shall be provided with a capacity of five liters per person per day. Where the supply is to be made from a well, it shall conform to the sanitary standards laid down in the report of the Rural Sanitation, Committee. The well should be at least 30 meter away from any latrine or other sources of pollution. If possible, a hand pump should be installed for drawing the water from well. The well should be effectively disinfected once every month and quality of water should be got tested at Public Health Institution between each work of disinfections.
Washing and bathing should be strictly prohibited at places where water supply is from a river. The daily supply must be disinfected in the storage reservoir and given at least 3 minutes contact with the disinfectant before it is drawn for use.
- 3.5. **Bathing and Washing:** Separate bathing and washing places shall be provided for men and women for every 25 persons in the camp. There shall be gap and space of 2 sqm. of washing and bathing. Proper drainage for the water should be provided.
8. **Waste Disposal:** Dustbins shall be provided at suitable places in camp and the residents shall be directed to throw all rubbish into these dustbins shall be provided with covers. The contents shall be removed every day and disposed of by trenching.
9. **Medical Facilities:**

- (a) Every camp where 1,000 or more persons reside be provided with whole time Doctor and Dispensary. If there are women in the camp, a whole time Nurse shall be employed.
- (b) Every camp where less than 1000 or more than 250 persons reside shall be provided with a Dispensary and a part time Nurse/Midwife shall also is employed.
- (c) If there are less than 250 persons in any camp, a standard first aid kit shall be maintained in charge of whole time person, trained in first aid.

All the medical facilities mentioned above should be for all residents in the camp, including the dependents of workers, if any, free of cost.

10. **Sanitary Staff:** For each labour camp there should be qualified Sanitary Inspector and Sweepers. Sweepers should be provided on following scale:-

1)	For camps with strength over 200 but not exceeding 500 persons.	One sweeper for every 355 persons above the first 200 for which two sweepers be provided.
2)	For camps with strength over 500 persons	One sweeper for every 100 persons above the first 500 for which six sweepers should be provided.

11. **Fuel Wood :** Contractor shall install a fuel wood depot for labourer and maintain the record thereof as per rules.

ANNEXURE – B

FAIR WAGES TO LABOUR

ANNEXURE – B
FAIR WAGES TO LABOUR

The Contractor shall pay not less than FAIR WAGE to labour engaged by him on the work.

EXPLANATION:-

- (a) **“FAIR WAGE”** means wage whether or any time or piece work as notified at the time of inviting tenders for the work and where such wages have not been so notified, the wages prescribed by the Water Resources Department for the Division in which the work is done.
- (b) **The contractor** shall, notwithstanding the provisions of the contract, to the contrary, cause to be paid a fair wage to labourers indirectly engaged on the work, including any labour engaged by his SubContractors in connection with the said work, as if the labourers had been immediately employed by him.
- (c) **In respect of labour** directly or indirectly employed on the work for the performance of the Contractor’s part of this Agreement, the Contractor shall comply with or cause to be complied with the Labour Act enforce.
- (d) **The Executive Engineer / Engineer-in-Charge**, shall have the right to deduct from the moneys due to the Contractor any sum required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages, which are not justified by their terms of the contract or non-observance of the regulations.
- (e) **The Contractor** shall be primarily liable for all payments to be made under and for the observance of the regulations aforesaid without prejudice to his right to claim indemnity from his Sub-Contractors.
- (f) **The regulations** aforesaid shall be deemed to be part of this contract and any breach thereof shall be deemed to be a breach of contract.
- (g) **The Contractor** shall obtain a valid license under the Contract Labour (Regulation and Abolition) Act, enforce and rules made there under by the Competent Authority from time to time before commencement of the work and continue to have a valid license until the completion of the work. Any failure to full-fill this requirement shall attract the penal provisions of this contract arising out of this as resulted in non-execution of the work assigned to the Contractor.

Annexure – C

Details of Government Plant and Machines to be supplied on Hire.

S.No.	Description of Plant and Machines	Number	Basic Hourly rate for the purpose of determining ultimate hire charges to be recovered from the contractor
1	2	3	4
<div> <div> <div></div> <div></div> <div></div> <div></div> </div> <div>NIL</div> <div> <div></div> <div></div> <div></div> <div></div> </div> </div>			

Date :

Executive Engineer

Note:

1. Add extra to Rate in column No. 4 for Departmental Charges%.
2. Add extra to rate in Column No. 4 for interest Charges to Capital%.
3. So far as recovery of above charges from contractor are concerned, the decision of Superintending Engineer, E/M Circle Shall be final, conclusive and binding on both parties.

ANNEXURE – D

AGREEMENT FOR USING GOVERNMENT PLANT AND MACHINERY BY CONTRACTOR

ANNEXURE – D**Agreement for using Government Plant and Machinery by**

Contractor 1. An agreement made this Day of 20 Between the Governor of Chhattisgarh acting through the Executive Engineer (Hereinafter called the Governor which expression shall where the context so admits, include his successors in office) on the one part, and *M/s

..... a company incorporated under the Act
 Shri S/o Shri
 Having its registered office at/Resident of Village/Town of
 Tehsil of District of (Hereinafter called the contractor which expression shall, where the context so admits include his successors in office) of the other part.

2. Where the contractor has applied to the State Government for the hire of the described in Annexure – E appended herewith for period of months from to in the first instance subject to its being extended on the same terms and conditions up to the end of working season of

1. Now it is agreed between the parties hereto that :-

- (i) **Executive Engineer**.....
shall provide and operate and let to the contractor the said machinery for a period of months from to at the project site. The machinery shall be deemed to remain always under the overall and direct control of the S.D.O. E/M for the purpose of arrangement and supply of P.O.L. all field operations and maintenance etc. The contractor shall not be allowed at any time to operate, maintain, run or work the machines with his materials / men of his staff directly.
- (ii) The contractor shall deposit in advance a sum of Rs.with the Executive Engineer The contractor shall pay all hire charges of the said unit of machinery as specified in clause. (iii) Below by the 15th of the month succeeding that for which it becomes payable. Any sums not paid shall be recoverable from any other payment which may be due to the hirer or failing which as an arrears of Land Revenue.
- (iii) The monthly use charges inclusive of departmental charges and other charges for the unit of machinery recoverable from the hirer as worked out on the basis of rates shown in Annexure-E shall be final and payable by the contractor to the department. No remission of hire charges shall be permissible except under the order of the competent authority of department.

- (iv) The contractor shall during the period, the machines are employed by the department and working on his works, be responsible to make good to the department any loss or damage caused to the said unit of machinery and men working on the machine due to circumstance caused on account of any of contractors lapses, like preventing the officers to attend to regular maintenance and timely repairs and his failure in respect of non-maintenance of haul roads, both in respect of grade and proper watering, lighting, or any other cause etc. as may be provided in the contract.

The Engineer-in-Charge shall be final authority to determine the extent of damages, and amount recoverable under such condition.

- (v) A sum due from the contractor under this agreement shall be recoverable as arrears of Land Revenue.

- (vi) (a) Basic hourly rate for the purpose of determining ultimate charges to be recovered from the contractor for the issue of the every said unit of machine for the work shall be as given in the Annexure – E to this contract. On the amount so worked out for any period, departmental charges at the rate of % will be added in addition. The contractor shall also pay interest charges on capital on the following bases for each day of this contract period and for the extra period of the duration of the contract if extended on the basis as under :-

1..... per day. 2. per day

3. per day strike out which is not applicable.

(b) No rebate on account of the hours of machines will be given excepting when the machines are not required on the items of work in progress or the machines break down and cannot actually do any work, even under such circumstances specific order in writing by the Superintending Engineer

E/M or Superintending Engineer (Civil)

..... Or circle for rebate due if any shall have to be obtained.

- (vii) (a) The total hours that will be reckoned for the purposes of charging the contractor on hourly basis under (iii) and (iv) above shall be according to clock hours and these shall be reckoned from the actual time, the said unit of the machinery is brought to the work site and used on contractors work including the time required for adjustment in the machinery but excluding period involved in the machinery on break downs and stoppage of work due to any reasons under order of Engineer-in-Charge.

(b) The said unit of machinery shall work daily on

..... Shifts

..... As prescribed by the Engineer-in-Charge and

S.D.O. E/M according to suitability from time to time and intimated to the Contractor in advance by him or his authorized representative. The actual time of operation of machinery by the department on contractor's work on each day shall be entered in the log book of respective machinery by the S.D.O. E/M or his Sectional Officer on each occasion of the day, and these entries in the log books shall be signed by the S.D.O. E/M or his Sectional Officer and the contractor or his authorized representative.

- (viii) The contract shall report to the Engineer-in-Charge and S.D.O. E/M any defect in the working of the said machinery during working hours and the Engineer-in-Charge or the S.D.O. E/M shall get the defect remedied on the field itself or at department workshop.
- (ix) The Executive Engineer may at any time by giving seven days' notice in writing to the contractor terminate the agreement. The contractor shall not claim any compensation for such action.
- (x) In case of non-observation and or non-performance by the contractor of any of the provisions herein before contained, the Executive Engineer shall be at liberty forthwith to terminate this agreement without prejudice to the right of the Government to recover damages from contractor for the breach of any clause of this agreement to the extent of the fully security deposit or part thereof.
- (xi) In the event of any dispute between the parties hereto as regards interpretation or any other cause due to any of the conditions of this agreement, the decision of the Superintending Engineer E/M Or Superintending Engineer (Civil) of Circle, as the case may be, shall be final, conclusive and binding on both.
- (xii) It is hereby agreed that the expression, the Governor and the contractor, herein before used

shall

respectively include formers successors in office and the letter's heirs, executors, administrators and representatives.

In witness whereof the said parties have set their hands hereto this day of 20

Signature of the Contractors

Signature of Executive Engineer

ANNEXURE – E**For Conversion of Security Deposit into Interest Bearing Securities**

To,

Dear Sir,

We enclose our **Fixed Deposit Receipt / Cash Certificate / Other Similar Instrument No. for Rs.....in favour of (Designation of the officer concerned) in lieu of Security deposits required from for the dues fulfilment by him/them of the terms of contract No. of dated For during the period Commencing from and ending on or the extension thereof if any.

Date :-

Yours Faithfully
For and on behalf

(Contractor)

**Please specify the nature of the instrument or instrument similar to fixed deposit receipts as are tendered and delete item not applicable.

ANNEXURE - F**UNDERTAKING FROM TENDERER FURNISHING THE BANK**

If the Bank guarantee as produced by us herewith are accepted by the WRD. We undertake to renew the same at least one month before the date of expiry; of the Bank Guarantee. In case the contract is not performed to the satisfaction of the Engineer-in-Charge, (here name of the competent authority) within the stipulated period and if we fail to do so we agree that the WRD will recover the entire amount in cash or from our bills or any other payment due to us without any notice. This procedure will remain in force till we received in writing from the WRD that the guarantee no longer required to be extended.

Date :

Signature of Tenderers

Name of Tenderer :

Address of Tenderer :

Signature of Witness

Date:

Name of Witness : 1.

Address of Witness :

Name of Witness : 2.

Address of Witness :

ANNEXURE – G

Bank Guarantee Form to be used for Performance/Security Deposit

(To be used by Nationalized/Approved Scheduled Banks)

This deed of Guarantee is made on the by
 having his head office at

(Hereinafter called the “Said Contractor(s)”) from the demand under the terms and conditions of agreement dated Made between and
 for

(Hereinafter called “The Agreement”) of Security Deposit as Security for Performance for due fulfilment by the said contractor(s) of the terms and conditions contained in the said Agreement on production of a Bank Guarantee for Rs..... (Rs..... only)

We,

..... (Hereinafter referred to as “the Bank”) at the request of
 (contractor) do hereby undertake to pay to **Executive Engineer, E/M H.E.M. DIVISION WRD Sakri Bilaspur (C.G.)** an amount not exceeding Rs.
 Against any loss or damage caused or suffered by the Government by reasons of any breach by the said contractor of any of the terms of conditions contained in the said Agreement.

1. We (indicate the name of bank) do hereby undertake to pay the amount due and payable under the guarantee without any demur, merely on a demand from the Government stating that the amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the department by reason of breach by the said contractor(s) of any of the terms and conditions contained in the said Agreement or any reason of the contractors failure to perform the said agreement. Any such demand made on the bank shall be conclusive as regards the amount due and payable under this guarantee shall be restricted to an amount not exceeding Rs.

2. We undertake to pay to the department any money so demanded not withstanding any dispute or dispute raised by the Contractor(s) in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the and the contractor(s) shall have no claim against us for making such payment.

3. We, (indicate the name of Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be forcible till all the dues of the department under or by virtue of the said Agreement have been fully paid and its claim satisfied or discharged or till the **EXECUTIVE ENGINEER, E/M H.E.M. DIVISION WRD SAKRI BILASPUR (C.G.)** certifies that terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the we shall be discharged from all liability under this guarantee thereafter.
4. We, (indicate the name of Bank) further agree with the department that the department shall have the fullest liberty without our consent and without affecting in any manner our obligations here under to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time any of the power exercisable by the department against the said Contractor(s), and to forth or enforce any of the terms and conditions relating to the said agreement, and, and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor(s) or any forbearance, act or omission on the part of the department or any indulgence by the department to the said contractor or by any such matter or thing whatsoever which under the law relating to surety would, but for this provision, have effect of so relieving us.
5. We(Name of Bank) hereby also undertake to have the signature of Branch Manager issuing the Bank Guarantee verified from the local branch of the bank in CG.
6. This guarantee will not be discharged due to the change in the constitution of the Bank or the change in the constitution of the Contractor(s).
7. We (Indicate the name of Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Government in writing.

Date the day of 20 For

(Indicate the name of Bank)

Volume II
SECTION –III
PART A-CONDITIONS OF CONTRACT

A. General

1 DEFINITIONS

1.1 In the Contract (as defined below) the words and expressions defined below shall have the meanings assigned to them, except where the context requires otherwise:

Contract shall mean and include agreement having five volumes as below:

VOLUME I	-	PRE-QUALIFICATION DOCUMENT
VOLUME II	-	TENDER DOCUMENTS FOR TURNKEY CONTRACT.
VOLUME III	-	SPECIFICATIONS

Tender means the Contractor's priced offer to the Employer for the Works, as accepted by the Letter of Acceptance

Contractor's Proposal means the proposal submitted with the Tender, as included in the Contract.

Schedules means the information and data submitted with the Tender, as included in the Contract.

Letter of Acceptance means the formal acceptance by the Employer of the tender

Government shall mean the Government of Chhattisgarh

Employer- The Employer is the Water Resources Department of Government of Chhattisgarh

Employer representative –CHIEF ENGINEER OF THE CONCERNED BASIN

Engineer – Engineer is the **CHIEF ENGINEER OF THE CONCERNED BASIN**

Engineer Representative –ENGINEERS REPRESENTATIVE CAN BE SUPERINTENDING ENGINEER /EXECUTIVE ENGINEER OF CONCERNED PROJECT.

“Engineer-in-Charge’s” – Engineer in Charge is the person named in the contract data who is responsible for execution of the work and administering the contract i.e. Executive Engineer.

“Engineer-in-charge’s representative” – Engineer-in-charge representative is the person authorized by the Engineer-in-Charge and can be, Sub Divisional Officer/ Assistant Engineer, Sub Engineer/Sectional officer in charge of the works.

Contractor means the person whose Tender has been accepted by the Employer.

Contractor's Representative means the person (if any) named as such in the Technical Schedule or other person appointed from time to time by the Contractor.

Subcontractor means any person named in the Contract as a subcontractor, manufacturer or supplier for a part of the Works or any person to whom a part of the Works has been subcontracted and the legal successors in title to such person, but not any assignee of such person.

Date of start of work shall be the date of signing of agreement, no separate work order or letter to start work will be issued.

Site is that area which is required for proper completion of the Works, as illustrated on the Drawings. Unless otherwise indicated on the Drawings, the Contractor will be responsible for making his own arrangements for providing any other space for site offices, materials testing laboratory, storage of materials and equipment, disposal of excess spoil and waste, etc., as may be required for proper execution of the Works.

Site Possession Date is the date upon which the Engineer in charge shall give possession of all parts of the Site to the Contractor, or of such parts of the Site sufficient for the Contractor to commence and undertake the Works in accordance with the agreed Work Program.

Work Program is the program submitted by the Contractor and approved by the Engineer in charge which shows the general methods, arrangements, order and timing for all the activities in the Works and according to which the Contractor shall perform and complete the Works by the Intended Completion Date. In case the whole of the Site is not available upon the Start Date, the Contractor and Employer shall mutually agree on a Work Program that takes into consideration the date of availability of the different parts of the Site and enables the Contractor to complete the Works within the intended Completion Date.

Effective Date means the date on which the Contract entered into legal force and effect.

Intended Completion Date is the date upon which the Works are to be completed in its entirety. The Intended Completion Date will be stipulated by the Engineer-in-Charge in the Agreement.

Intended Construction period:- Intended construction period means time required for creation of construction facilities and infrastructure work, necessary pre-construction survey, investigation, soil exploration, design and engineering construction work, testing and commissioning etc. till the completion certificate issued from Executive Engineer for completion of construction of project. (Mentioned as period for completion of construction in NIT)

Defect Liability Period including running and maintenance of the system for 60 months from the date of issuance of the certificate of Completion of construction.

Defects Correction Period is 14 (Fourteen) Days from the date of receipt by the Contractor of the Engineer-in-Charge notice to correct any Defects in the Works.

Contractor's Bid is the completed bidding document submitted by the Contractor to the Employer.

Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Retention Money means the accumulated retention money retained by the Engineer-in-Charge.

Days are calendar days; **Weeks** are calendar weeks; **Months** are calendar months. **Defect** is any part of the Works not completed in accordance with the Contract.

Defect Notice Period is the period stated in the Contract Clause within which the Employer's Representative may notify the Contractor of a Defect.

Equipment means the Contractor's machinery, equipment and vehicle owned by him, hired, lease or otherwise brought to site

Sub-contractor is a person or corporate body who has a contract with the Contractor to carry out a part of the work in the Contract.

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for Construction or installation of the Works.

WRD means Water Resources Department of the Government of Chhattisgarh .

2 INTERPRETATION

2.1 **In interpreting** Conditions of Contract, singular also means plural, male also means female, and vice versa. Headings and cross-references between clauses have no significance. Words have their normal meaning under the language of the Contract unless specifically defined.

3. CONTRACT AGREEMENT

3.1 A Contract Agreement in the form annexed shall be executed.

4 PRIORITY OF DOCUMENTS

4.1 The documents forming the Contract are to be taken as mutually explanatory of one another. If there is an ambiguity or discrepancy in the documents, the Employer's Representative shall issue any necessary clarification or instruction to the Contractor, and the priority of the documents shall be as follows:-

- (a) Form of Contract Agreement.
- (b) Amendments, if any
- (c) Design Parameters
- (d) Detailed Scope of work including detailed notice inviting tender (Vol. II)
- (e) Other Special Conditions (Vol. II)
- (f) The Special condition of Contract (Vol. II)
- (g) The condition of Contract

- (h) Specification
- (i) The Drawings (Vol. III)
- (j) Quality control manual

5 DOCUMENTS ON SITE

- 5.1** The Contractor shall keep on the Site one complete set of the documents forming the Contract, the Construction Documents, other communications given or issued and the documents mentioned in Sub-Clause (Technical Standards and Regulations). The Employer, the Engineer, Engineer in Charge, their Representatives and assistants shall have the right to use such documents at all reasonable times.

6 COMMUNICATIONS

- 6.1** Wherever provision is made for the giving or issue of any notice, instruction, consent, approval, certificate or determination by any person, unless otherwise specified such communication shall be in writing and shall not be unreasonably withheld or delayed.
- 6.2** Wherever provision is made for a communication to be "written" or "in writing", this means any handwritten, type-written or printed communication, including the agreed systems of electronic transmission.
- 6.3** All certificates, notices or written orders to be given to the Contractor by the Employer or Employer's representative and all notices to be given to the Employer or to the Employer's representative by the Contractor, shall either be delivered by hand against written acknowledgement of receipt, or be sent by registered post or one of the agreed systems of Electronic Transmission to the Engineer-in-Charge.

7 PROVISION OF CONSTRUCTION DOCUMENTS

The Construction Documents shall be in the custody and care of the Contractor. The Contractor shall provide six copies of the Construction document for the use of the Employer's Representative and assistants (as referred to in Clause 20).

8 CONTRACTOR'S USE OF EMPLOYER'S DOCUMENTS

- 8.1** The documents issued by the Employer or the Employer's Representative to the Contractor shall (as between the parties) remain the property of the Employer. The Contractor may, at his cost, copy, use and communicate any such documents for the purposes of the Contract. They shall not, without the Employer's consent, be used, copied or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

9 COMPLIANCE WITH STATUTES, REGULATIONS AND LAW

- 9.1 The Contractor shall, in all matters arising in the performance of the Contract, comply with, give all notices under, and pay all fees required by, the provisions of any national or state statute, ordinance or other law, or any regulation of any legally constituted public authority having jurisdiction over the Works. The Contractor shall obtain all permits, licenses or approvals required for any part of the Works, in reasonable time taking account of the times for delivery of the Plant and Materials required for completion of the Works. The Employer and the Contractor shall comply with the laws of MP Government where activities are performed.

10 JOINT AND SEVERAL LIABILITY

- 10.1 If the Contractor is a joint venture (or consortium) of two or more persons, all such persons shall be jointly and severally liable to the Employer for the fulfilment of the terms of the Contract. Such persons shall designate one of them to act as leader with authority to bind the joint venture (or consortium) and each of its members. The composition or the constitution of the joint venture (or consortium) shall not be altered.

11 LANGUAGE AND LAW

- 11.1 The language of the Contract is English and the law governing the Contract is Law of India.

12 GENERAL OBLIGATIONS OF THE EMPLOYER

- 12.1 The Employer shall assist in the land acquisition and pay for the permanent land acquisition and solarium charges and shall pay the Contractor in accordance with schedule of payment.

13 ENGINEER'S DECISIONS

- 13.1 Except where otherwise specifically stated, the Engineer will decide the contractual matters between the employer and the Contractor.

14 DELEGATION

- 14.1 The Engineer shall designate in writing to the Contractor the Engineer's Representatives appointed under the Project to assist the Engineer in supervision of the Works. The Engineer's Representatives shall include authorized representatives of:

- i. **The Superintending Engineer E/M Water Resources Circle, Sakri Bilaspur (C.G.)**
- ii. **The Executive Engineer, E/M H.E.M. Division WRD Sakri Bilaspur (C.G.)"**
- iii. Consultants for Supervision appointed by the Water Resource Department to assist in quality control, scrutiny of the design and drawing, checking of survey and in contract administration of works.

Any communications given by the Engineer's Representatives shall have the same effect as though it had been given by the Engineer.

15 PERMITS, LICENSES OR APPROVALS

The Employer/Employer's Representative shall, at the request and cost of the Contractor, assist him in applying for permits (including permits and licenses necessary under the Indian Explosive Act 1988 and Indian Explosive Rules 1983), licenses or approvals, which are required for any part of the Works, for delivery (including clearance through customs) of Plant, Materials and Contractor's Equipment, and for the completion of the Works. Such requests may also include requests for the Employer's assistance in applying for any necessary government consent to the export of Contractor's Equipment when it is removed from the Site.

16 EMPLOYER'S REPRESENTATIVE'S DUTIES AND AUTHORITY

- 16.1 The Employer's Representative shall have no authority to amend the Contract.
- 16.2 The Employer's Representative may exercise the authority specified in or necessarily to be implied from the Contract.
- 16.3 Except as expressly stated in the Conditions of Contract, the Employer's Representative shall have no authority to relieve the Contractor of any of his duties, obligations or responsibilities under the Contract. Any proposal, inspection, examination, testing, consent, approval or similar act by the Employer's Representative (including absence of disapproval) shall not relieve the Contractor from any responsibility, including responsibility for his errors, omissions, discrepancies, and noncompliance.

17 EMPLOYER'S REPRESENTATIVE'S AUTHORITY TO DELEGATE

- 17.1 The Employer's Representative may from time to time delegate any of his duties to assistants, and may at any time revoke any such delegation.
- 17.2 Any determination, instruction, inspection, examination, testing, consent, approval or similar act by any such assistant of the Employer's Representative, in accordance with the delegation, shall have the same effect as though it had been an act of the Employer's Representative. However any failure to disapprove any Plant, Materials, design or workmanship shall not prejudice the right of the Employer's Representative to reject such Plant, Materials, design or workmanship.

18 EMPLOYER'S REPRESENTATIVE'S INSTRUCTIONS

- 18.1 Unless it is legally or physically impossible, the Contractor shall comply with instructions given by the Employer's Representative in accordance with the Contract.

19 GENERAL OBLIGATIONS OF THE CONTRACTOR

- 19.1 The Works as completed by the Contractor shall be wholly in accordance with the Contract and fit for the purposes for which they are intended, as defined in the Contract. The Works shall include any work which is necessary to satisfy the Contract, Contractor's Proposal and Schedules, or is implied by the Contract, or arises from any obligation of the Contractor, and all works not mentioned in the Contract but which may be inferred to be necessary for stability or completion or the safe, reliable and efficient operation of the Works.

- 19.2 The Contractor shall design (to the extent as per scope of work), execute and complete the Works, providing Construction Documents, within the Time for Completion, and shall remedy any defects within the Contract and Defect Liability Period. The Contractor shall provide all superintendence, labour, Materials, Contractor's Equipment, Temporary Works and all other things, whether of a temporary or permanent nature, required in and for such design, execution, completion and remedying of defects.
- 19.3 Before commencing design, the Contractor shall satisfy himself regarding the design criteria and Parameters. The Contractor shall bring to notice of the Employer's Representative of any error, fault or other defect in the design criteria and Parameter.
- 19.4 The Contractor shall carry out, and be responsible for, the design of the Works. Design shall be prepared by qualified designers who are engineers or other professionals who comply with the criteria (if any) stated in the technical schedules.
- 19.5 The contractor holds himself, his designers and design Subcontractors as having the experience and capability necessary for the design. The Contractor undertakes that the designers shall be available to attend discussions with the Employer's Representative at all reasonable times during the Contract Period.
- 19.6 The Contractor shall take full responsibility for the adequacy, stability and safety of all Site operations, of all methods of Construction and of all the Works, irrespective of any approval or consent by the Employer's Representative.

20 CONSTRUCTION DOCUMENTS

- 20.1 Construction Documents means all designs, drawings, calculations, methodology and any other related data provided by the Contractor to the Engineer's Representative under the Contract including all samples, patterns, models, operation and maintenance manuals and other technical information of alike nature submitted by the Contractor and approved by the Engineer's Representative. However such approval will not relieve the Contractor of any of his obligations, responsibilities under the Contract.
- 20.2 The Contractor shall prepare Construction Documents in sufficient detail to satisfy all regulatory approvals, to provide suppliers and Construction personnel sufficient instruction to execute the Works, and to describe the operation of the completed Works. The Employer's Representative shall have the right to review and inspect the Construction Documents.

20.3 Each of the Construction Documents shall be submitted to the Employer's Representative for review. If the Employer's Representative, notifies the Contractor that such Construction Document fails (to the extent stated) to comply with the Employer's Requirements, it shall be rectified, resubmitted and reviewed in accordance with this Sub-Clause, at the Contractor's cost.

20.4 For each part of the Works, and except to the extent that the prior consent of the Employer's Representative shall have been obtained:

- (a) Construction shall not commence prior to the approval of Construction Document which are relevant to the design and Construction of such part;
- (b) Construction shall be in accordance with such Construction Documents; and
- (c) If the Contractor wishes to modify any design or document which has previously been submitted, the Contractor shall immediately notify the Employer's Representative, and shall subsequently submit revised documents to the Employer's Representative for approval.

If the Employer's Representative instructs that further Construction Documents are necessary for carrying out the Works, the Contractor shall prepare such Construction Documents.

Errors, omissions, ambiguities, inconsistencies, inadequacies and other defects shall be rectified by the Contractor at his cost.

21 CONTRACTOR'S UNDERTAKING

21.1 The Contractor undertakes that, if legally and physically possible, the design, the Construction Documents, the execution and the completed Works will be in accordance with the following, in order of priority:

- a. The law in the Country, and
- b. The documents forming the Contract, or as altered or modified.

22 TECHNICAL STANDARDS AND REGULATIONS

22.1 The design, the Construction Documents, the execution and the completed Works shall comply with the Indian Standard specifications, technical standards, Construction and environmental regulations, and the standards specified, I.R.C. Publications, and circulars issued by the Department time to time.

23 SUBCONTRACTING

23.1 The contractor may sub contract different components/parts of the whole project to sub-contractors. However, total amount of such sub contracts shall not exceed 50% of the contract amount. The subcontractors shall be selected by an evaluation process that evaluate potential candidates based upon experience, reputation and demonstrated success in relevant construction projects. The evaluation of candidates for sub contract shall be carried out in the direction of Engineer-In-charge. Before subletting any component/part, the contractor shall take the approval of the Engineer.

- 23.2 A written contract agreement shall be signed between the contractor and sub-contractor providing conditions such as payments, inspections, safety measures, financial statements, pay role records and other relevant information related to invoices and correspondence. Engineer-In-Charge shall be allowed to inspect and call all such records any time if required.
- 23.3 Any such sub-contracting shall not relieve the contractor from any liability or obligation under the contract and he shall be responsible for the acts, defaults and neglects of all sub-contractors.
- 23.4 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

The sub-contractor will have to be registered in the appropriate category in the centralized registration system for contractors of the Go MP.

24 PERFORMANCE SECURITY

- 24.1 The Contractor shall submit a performance security, in the amount and currencies specified in the Detailed NIT Clause 12, and deliver it to the Engineer-in-Charge within 15 days after the receipt of Letter of Acceptance. The performance security shall be in any one of the form prescribed under relevant clause of Detailed NIT.
- 24.2 The performance security shall be valid up to 90 days beyond the stipulated date of completion of construction period.

25 CO-ORDINATION OF THE WORKS

- 25.1 The Contractor shall be responsible for the co-ordination and proper execution of the Works. The Contractor shall, as specified in the Section IV, afford all reasonable opportunities for carrying out their work to:
- i The workmen and Employer's Representatives, and
 - ii The workmen of any legally constituted public authorities who may be employed in the execution on or near the Site of any work not included in the Contract, which the Employer may require. The Contractor shall obtain, co-ordinate and submit to the Employer's Representative for his information all details (including details of work to be carried out off the Site) from Subcontractors. The Contractor shall ensure that there is no conflict with the work of other Subcontractors, the Contractor or other contractors.

26 PERSONNEL

- 26.1 The Contractor shall employ the required Key Personnel stated in the Schedule of Key Personnel to carry out the functions stated in the Schedule or other personnel as required and/or intimated by the Engineer-in-Charge.
- 26.2 The technical personnel including quality assurance personnel should be on full time basis and should be available at site whenever required by Engineer- in- Charge to take instructions.
- 26.3 The names of the technical personnel including quality assurance personnel to be employed by the contractor should be furnished in the statement enclosed with pre-qualification document as per form 5A of volume -I
- 26.4 If the Contractor fails to employ such technical and quality assurance personnel as stated in the schedule, Contractor has to replace with other personnel of similar qualification and experience within one month
- 26.5 The Contractor shall not recruit, or attempt to recruit, his staff and labour from amongst persons in the service of the Employer or the Employer's Representative.
- 26.6 If the Engineer-in-charge asks the Contractor to remove a person who is a member of Contractor's staff or his work force which in the opinion of Engineer-in-Charge misconduct himself, or is incompetent or negligent in the performance of his duties or whose presence on site is otherwise considered to be undesirable, the Contractor shall ensure that the person leaves the site forthwith and has no further connection with the work in the contract.

27 SETTING OUT

- 27.1 The Contractor(s) shall set out the whole of the work in conjunction with an officer to be deputed by the Engineer/Engineer-in-Charge and during the progress of the work to amend on the requisition of the Engineer/Engineer-in-Charge any errors, which may arise therein and provide all the necessary labour materials and equipment for so doing. The contractor is to provide all tools, machinery, labour and materials, which may be necessary and required for the work. All materials and workmanship shall confirm to the relevant specifications mentioned in the tender documents.
- 27.2 The contractor shall carry out the detailed survey as described in the scope of work and elsewhere in the document and prepare the pre-commencement survey map for approval of the Engineer's representatives. Based on the approved Pre-commencement survey map, the contractor will prepare the necessary working drawings for the purpose of execution.

28 EMPLOYER'S RISKS

28.1 Employer's risk shall be for the events stated in Clause 31.

29 CONTRACTOR'S RISKS

29.1 Except as provided in Clause 28, the Contractor shall be responsible for all risks of loss or damage to physical property and of personal injury and death which arise during and in consequence of its performance of the Contract.

30 INSURANCE

30.1 Without limiting the Contractors liability pursuant to Clause 29, the Contractor is to comply with the Insurance act including workmen's Compensation Act and Third Party Insurance and other relevant provisions particularly with reference to the requirements of taking Insurance for storage, civil, structural and architectural work, erection, testing and commissioning and maintenance till project is handed over to the department.

31 FORCE MAJEURE**31.1 Definition of Force Majeure**

In this Clause, "force majeure" means an event beyond the control of the Employer and the Contractor, which makes it impossible or illegal for a party to perform, including but not limited to: act of God;

- b. War, hostilities (whether war be declared or not), invasion, act of foreign enemies.
- c. Rebellion, revolution, insurrection, or military usurped power, or civil war;
- d. Contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such assembly;
- e. Riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Subcontractors.

31.2 Effect of Force Majeure Event

Neither the Employer nor the Contractor shall be considered in default or in contractual breach to the extent that performance of obligations is prevented by a force majeure event.

31.3 Contractor's Responsibility

Upon occurrence of an event considered by the Contractor to constitute force majeure and which may affect performance of his obligations, he shall promptly notify the Engineer and Engineer-in-Charge, and shall endeavour to continue to perform his obligations as far as reasonably practicable. The Contractor shall also notify the Engineer and Engineer-in-Charge of any proposals, including any reasonable alternative means for performance, but shall not effect such proposals without the consent of the Engineer and Engineer-in-Charge.

31.4 Employer's Responsibility

Upon occurrence of an event considered by the Employer to constitute force majeure and which may affect performance of his obligations, he shall promptly notify the Contractor and the Employer's Representative, and shall endeavor to continue to perform his obligations as far as reasonably practicable. The Employer shall also notify the Employer's Representative and the Contractor of any proposals, with the objectives of completing the Works and mitigating any increased costs to the Employer and the Contractor.

31.5 Payment to Contractor**31.6 Optional Termination, Payment and Release**

Irrespective of any extension to time, if a force majeure event occurs and its effect continues for a period of 180 days, either the Employer or the Contractor may give to the other a notice of termination, which shall take effect 30 days after the giving of the notice. If, at the end of the 30 day period, the effect of the force majeure continues, the Contract shall terminate. If the Contract is terminated, the employer shall determine the value of the work done and:

- a. The amount payable for any work carried out shall be regulated with reference to the stage of work in consistent with the stage of payment against the Lump Sum price stated in the Contract.
- b. The cost of Materials ordered for the Works which have been delivered to the site: such Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer, and the Contractor shall place the same at the Employer's disposal;
- c. Any other Cost or liability which in the circumstances was reasonably incurred by the Contractor in the expectation of completing the Works;
- d. The reasonable Cost of removal of Temporary Works; and
- e. The reasonable Cost of repatriation of the Contractor's staff and labour employed wholly in connection with the Works at the date of such termination;
- f. Interim Payment Certificate is issued to the work is done.

31.7 Release from Performance under the Law

If under the law of the Contract the Employer and the Contractor are released from further performance, the sum payable by the Employer to the Contractor shall be the same as would have been payable under Sub-Clause 31.6 if the Contract had been terminated under that Sub-Clause.

32 Fore closure of works by the Government

- 32.1 If at any time after the execution of the Contract the Engineer-in-Charge shall for any reason whatsoever require the whole or any part of the work as specified in the tender to be stopped for

any period or shall not require the whole or part of the work to be carried out at all or to be carried out by the Contractor, he shall give notice in writing of the fact to the Contractor who shall thereupon suspend or stop the work totally or partially as the case may be. In any such case except as provided hereunder the Contractor shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not so derive in consequence of the full amount of work not having been carried out or on account of any loss that he may be put to on account of materials purchased or agreed to be purchased, or for unemployment of labor recruited by him. He shall not also have any claim for compensation by reason of any alterations having been made in the original specifications, drawings, design and instructions which may involve any curtailment of the work as originally contemplated. Where, however, materials have already been purchased or agreed to be purchased by the Contractor before receipt by him of the said notice the Contractor shall be paid for such materials at the rates determined by the employer, provided they are not in excess of requirements and are of approved quality and/or shall be compensated for the loss if any, that if he may put to in respect of materials agreed to be purchased by him, the amount of such compensation to be determined by the employer whose decision shall be final. If the Contractor suffers any loss on account of his having to pay labor charges during the period of stoppage of work ordered under this clause, the Contractor shall, on application be entitled to the such compensation on account of labor charges as the employer whose decision shall be final may consider reasonable, provided that the Contractor shall not be entitled to any compensation on account of labor charges, if in the opinion of the employer, the labor could have been employed by the Contractor elsewhere for the whole or part of the period during which the stoppage of the work has been ordered as aforesaid.

33 SITE INSPECTIONS:

- 33.1 The contractor should inspect the site and also proposed quarries of choice for materials source of water and quote his bid price including quarrying, conveyance, royalty and all other charges etc.
- 33.2 The responsibility for arranging the land for borrow area rests with the Contractor and no separate payment will be made for procurement or otherwise. The contractor's quoted bid price will be inclusive of cost of land for Borrow Area.

34 CONTRACTOR TO CONSTRUCT THE WORKS:

- 34.1 The Contractor shall conduct Surveys, detailed investigation, Design; prepare estimates and Payment Schedules for Construction, construct and Commissioning the Work in accordance with the approved specifications and Drawings.

35 DIVERSION OF STREAMS / NALLA / DRAINS

- 35.1 The contractor shall at all-time carry out Construction of cross drainage works in a manner creating least interference to the natural flow of water while consistent with the satisfactory execution of work. A temporary diversion and training shall be formed by the contractor at his cost where necessary. No extra payment shall be made for this work.
- 35.2 No separate payment for bailing out sub-soils, water drainage or locked up rain water for diversion, shoring, foundations, bailing of pumping water either from excavation of soils from foundations or such other incidental will be paid. The bid price to be quoted by the contractor are for the finished item of work in situ and including all the incidental charges. The borrow pits are also to be de-watered by the contractor himself at his expense.
- 35.3 The work of diversion arrangements should be carefully planned and prepared by the contractor and forwarded to the Engineer-in-Charge. The proposal should be technically viable and approval shall be obtained for execution.
- 35.4 The contractor has to arrange for bailing out water, protection to the work in progress and the portion of works already completed and safety measures for men and materials and all necessary arrangements to complete the work.
- 35.5 All the arrangements so required should be carried out and maintained at the cost of the contractor and no separate or an additional payment is admissible.

35.6 Cofferdams.

Necessary coffer dams and ring bunds have to be constructed at the cost of contractor and same are to be removed after the completion of the work. The contractor has to quote his bid price keeping the above in view.

36 ELECTRICITY, POWER AND WATER

- 36.1 The Contractor shall be fully responsible to arrange such electricity, power, water and fuel as may be necessary to complete the works and fulfil his obligation under the Contract. The prices quoted by the Contractor shall include the cost of all electricity, power, water and fuel as may be required.

37 TEMPORARY DIVERSIONS FOR ROADS

- 37.1 The contractor shall at all-time carryout work on the road in a manner creating least interference to the flow of traffic while consistent with the satisfactory execution of the same. For all works involving improvements to the existing road, the contractor shall in accordance with the due consent of concerned authority like National Highway, State PWD etc. and directions of the

Engineer-in-charge provide and maintain during the execution of the work a passage for traffic, either along a part of the existing carriage way under improvement or along a temporary diversion constructed close to the road.

- 37.2 If in the opinion of the Engineer-in-Charge, it is not possible to pass the traffic on part width of the carriage-way for any reason, a temporary diversion close to the road shall be constructed as directed. It shall be paved with the materials such as hard moorum, gravel and stone, metal, asphalt etc. to the specified thickness as specified by concerned authority and as directed by the Engineer-in-Charge. In all cases, the alignment, gradients and surface type of the diversion including its junctions, shall be approved by the Engineer-in-charge before the road is closed to traffic.
- 37.3 The contractor shall take all necessary measures for the safety of traffic during Construction and provide erect and maintain such barricades, including signs, markings, flags lights and information and protection of traffic approaching or passing through the section of the road under improvement. Before taking up any Construction, an agreed phased programme for the diversion of traffic on the road shall be drawn up in consultation with the Engineer-in-charge and concerned authorities.
- 37.4 The barricades erected on either side of the carriage way portion of the carriage way closed to traffic, shall be of strong design to resist violation and painted with alternative black and white stripe. Red lanterns or warnings lights of similar type shall be mounted on the barricades at night and kept lit throughout from sunset to sunrise.

38 RAMPS:

Ramps (Not steeper than 1:30) required during execution may be formed wherever necessary and same are to be removed after completion of the work. No separate payment will be made for this purpose.

39 MONSOON DAMAGES:

Damages due to rain or flood either in cutting or in banks shall have to be made good by the contractor till the work is handed over to the Department. The responsibility of de-silting and making good the damages due to rain or flood rests with the contractor. No extra payment is payable for such operations and the contractor shall therefore, has to take all necessary precautions to protect the work done during the Construction and defect liability period.

40 THE WORKS TO BE COMPLETED BY THE INTENDED COMPLETION DATE:

The Contractor may commence execution of the Works immediately after signing of agreement and shall carry out the Works in accordance with the programme submitted by the Contractor, as updated with the approval of the Engineer-in-Charge, and complete the work by the Intended Completion Date.

41 SAFETY

- 41.1 The Contractor is responsible for the safety of all its activities on the Site.

42 DISCOVERIES

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

43 LAND:

- 43.1 Preparing temporary land acquisition cases for borrow area required if any, Permanent land acquisition cases (Private land, Government land, Forest land), property cases, such as wells, trees, houses, land in Abadi etc., if any and submitting to L.A.O/Government. Pursuing the same, assist officers of department for getting awards approved by competent authority. Cost of temporary land acquisition if any, shall be paid by the Contractor. Cost of permanent land and property compensation, solarium charges shall be borne by the Department and crop compensation if any, shall be borne by the Contractor.

43.2 **Land for Contractor's use:**

The contractor may be permitted to use Government land after due permission of competent authority for execution of work. The contractor shall have to make his own arrangements for acquiring and clearing the site, leveling, providing drainage and other facilities for labour staff colonies, site office, work-shop or stores and for related activities. The Contractor shall apply to the Department within a reasonable time after the award of the contract and at least 30 days in advance of its use, the details of land required by him for the work at site and the land required for his camp and should any private land which has not been acquired, be required by the contractor for his use.

The Engineer-in-Charge reserves the right to refuse permission for use of any government land for which no claim or compensation shall be admissible to the contractor. The contractor shall, however, not be required to pay cost or any rent for the Government land given to him.

43.3 Surrender of Occupied Land:

- a. The Government land as here in before mentioned shall be surrendered to the Engineer-in-Charge within seven days, after issue of completion certificate. Also no land shall be held by the contractor longer than the Engineer-in-Charge shall deem necessary and the contractor shall on the receipt of due notice from the Engineer-in-Charge, vacate and surrender the land which the Engineer-in-Charge may certify as no longer required by the Contractor for the purpose of the work.
- b. The contractor shall make good to the satisfaction of the Engineer-in-Charge any damage to areas, which he has to return or to other property or land handed over to him for purpose of this work. Temporary structures may be erected by the contractor for storage sheds, offices, residences etc., for non-commercial use, with the permission of the Engineer-in-Charge on the land handed over to him at his own cost. At the completion of the work these structures shall be dismantled site cleared and handed over to the Engineer in-Charge.

43.4 Contractor not to dispose off Spoil etc.:

The contractor shall not dispose off or remove except for the purpose of fulfilment of this contract, sand, stone, clay ballast, earth, trees and shrubs or other materials obtained in the excavation made or lying on the site of the work, and all such materials and produce shall remain property of the Government.

44 POSSESSION OF THE SITE

- 44.1 The Engineer's Representative shall give possession of the whole Site or such parts of the Site as are sufficient to enable the Contractor to commence and proceed with the execution of the Works in accordance with the approved Work Program. The Engineer's Representative shall, from time to time, as the work proceeds, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due diligence in accordance with the agreed programme or proposals, as the case may be.
- 44.2 If the Engineer's Representative fails to give possession of the whole or part of the Site to work, the Contractor in accordance with the proposal of work program the Engineer shall consider extension of time, due to delayed start of relevant activities.

45 ACCESS TO THE SITE

- 45.1 The Contractor shall allow the Engineer/Engineer-in-Charge and his representative and any person authorized by the Employer access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

46 APPROACH ROADS AND ROADS IN WORK AREA:

- 46.1 In addition to existing public roads and roads Constructed by Government, if any, in work area all additional approach roads inside work area and camp required by the Contractor shall be

constructed and maintained by him at his own cost. The layout design, Construction and maintenance etc. of the roads shall be subject to the approval of the Engineer-in-Charge. The contractor shall permit the use of these roads by the Government free of charge.

- 46.2 It is possible that work at, or in the vicinity of the work site will be performed by the Government or by other contractors engaged in work for the Government during the contract period. The contractor shall without charge permit the government and such other contractor and other workmen to use the access facilities including roads and other facilities, constructed and acquired by the contractor for use in the performance of the works.
- 46.3 The contractor's heavy Construction traffic or tracked equipment shall not traverse any public roads or bridges unless the contractor has made arrangement with the authority concerned. In case contractor's heavy Construction traffic or tracked equipment is not allowed to traverse any public roads or bridges and the contractor is required to make some alternative arrangements, no claim on this account shall be entertained.
- 46.4 The contractor is cautioned to take necessary precautions in transportation of Construction materials to avoid accidents.

47 SITE DATA

- 47.1 The Contractor shall be deemed to have inspected and examined the Site, its surroundings, the data and other available information, and to have satisfied himself before submitting the Tender, as to:
- a. The form and nature of the Site, including the sub-surface conditions,
 - b. The hydrological and climatic conditions,
 - c. The extent and nature of the work and Materials necessary for the execution and completion of the Works, and the remedying of any defects, and
 - d. Access Route the means of access to the Site and the accommodation he may require.
- The Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and all other circumstances which may influence or affect the Tender.

48 ACCESS ROUTES

- 48.1 The Contractor shall be deemed to have satisfied himself as to the suitability and availability of the access routes he chooses to use. The Contractor shall be responsible for the maintenance of access routes. The Contractor shall provide any signs or directions which he may consider necessary for the guidance of his staff, labour and others. The Contractor shall obtain any permission that may be required from the relevant authorities for the use of such routes, signs and directions. 48.2 The Employer will not be responsible for any claims which may arise from the use or otherwise of any access route. The Employer does not guarantee the suitability or availability of any particular access route, and will not entertain any claim for any non-suitability or non-availability for continuous use during Construction of any such route.

49 RIGHTS OF WAY AND FACILITIES

- 49.1 The Contractor shall bear all costs and charges for special or temporary rights-of-way required by him for access to the Site. The Contractor shall also provide, at his own cost, any additional facilities outside the Site required by him for the purposes of the Works.

50 CONTRACTOR'S EQUIPMENT

- 50.1 The Contractor shall provide all Contractor's Equipment necessary to complete the Works. All Contractor's Equipment shall, when brought on to the Site, be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any such Contractor's Equipment without the consent of the Engineer-in-Charge.

51 SAFETY PRECAUTIONS

- 51.1 The Contractor shall comply with all applicable safety regulations in his design, access arrangements and operations on Site. The Contractor shall, from the commencement of work on Site until taking-over by the Employer, provide:
- a. Fencing, lighting, guarding and watching of the Works; and
 - b. Temporary roadways, footways, guards and fences which may be necessary for the accommodation and protection of owners and occupiers of adjacent land, the public and others.

52 PROTECTION OF THE ENVIRONMENT

- 52.1 The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations. The Contractor shall ensure that air emissions, surface discharges and effluent from the Site during the Contract Period shall not exceed the values prescribed by law.

53 CLEARANCE OF SITE

- 53.1 During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction. The Contractor shall clear away and remove from the Site any wreckage, rubbish or Temporary Works no longer required.
- 53.2 Upon the issue of any Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which such Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave such part of the Site and the Works in a clean and safe condition to the satisfaction of the Engineer-in-Charge. Except that, the Contractor shall be entitled to retain on Site, until the expiry of the Contract Period, such Contractor's Equipment, Materials and Temporary Works as required by him for the purpose of fulfilling his obligations under the Contract.

- 53.3 If the Contractor fails to remove, by 30 days after the issue of the Performance Certificate, any remaining Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works, the Employer may sell or otherwise dispose of such items at Contractor's risk and cost.

54 SECURITY OF THE SITE

- 54.1 The Contractor shall be responsible for keeping unauthorized persons off the Site, and
- 54.2 Authorized persons shall be limited to the employees of the Contractor, employees of his subcontractors and persons authorized by the Employer's Representative /Engineer-in-Charge.

55 CONTRACTOR'S OPERATIONS ON SITE

- 55.1 The Contractor shall confine his operations to the Site, and to any additional areas which may be provided by the Contractor and agreed by the Employer's Representative as working areas. The Contractor shall take all necessary precautions to keep his personnel and equipment within the Site and such additional areas, and to keep and prohibit them from encroaching on adjacent land.

56 FOSSILS

- 56.1 All fossils, coins, articles of value or antiquity, and structures and other remains or things of geological or archaeological interest discovered on the Site shall be the property of the Employer. The Contractor shall take reasonable precautions to prevent his staff, labour or other persons from removing or damaging any such article or thing. The Contractor shall, immediately upon discovery of such article or thing, advise the Employer's Representative and Engineer-in-Charge, who may issue instructions for dealing with it.

57 ENGAGEMENT OF STAFF AND LABOUR

- 57.1 The Contractor shall make his own arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, housing, feeding and transport.

58 RATES OF WAGES AND CONDITIONS OF LABOUR

- 58.1 The Contractor shall pay not less than the fair wages to labour engaged by him on the works.

59 LABOUR LAWS

- 59.1 The Contractor shall comply with all the relevant labour laws applying to his employees, and shall duly pay and afford to them all their legal rights. The Contractor shall require all such employees to obey all applicable laws and regulations concerning safety at work.

60 WORKING HOURS

- 60.1 No work shall be carried out on the Site outside the normal working hours, or on the locally recognized days of rest, unless:
- a. The work is unavoidable, or necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer-in-Charge, or
 - b. The Engineer-in-Charge gives his consent.

61 WORK DURING NIGHT OR ON SUNDAYS AND HOLIDAYS:

- 61.1 The works can be allowed to be carried out during night, Sundays or authorized holidays in order to enable him to meet the schedule targets and the work shall require almost round the clock working keeping in view:

The provisions of relevant labour laws being adhered to:

- i. Adequate lighting, supervision and safety measures are established to the satisfaction of the Engineer-in-Charge and
- ii. The Construction programme given by the Contractor and agreed upon by the Engineer-in-Charge envisages such night working or working during Sundays or authorized holidays.

62 FACILITIES FOR STAFF AND LABOUR

- 62.1 The Contractor shall provide and maintain all necessary accommodation and welfare facilities for his (and his Subcontractor's) staff and labour. The Contractor shall not permit any of his employees to maintain any temporary or permanent living quarters within the structures forming part of the Works.

63 PAYMENT FOR CAMP CONSTRUCTION:

- 63.1 No payment will be made to the contractor for Construction, operation and maintenance of camp and other camp facilities and the entire cost of such work shall be deemed to have been included in the Bided Price.

64 TRANSPORTATION OF LABOUR:

- 64.1 The contractor shall make his own arrangement for the daily transportation of the labour and staff from labour camps colonies to the work spot. No extra payment will be made to the contractor for the transportation of the labour.
- 64.2 The contractor will at all times duly observe the provisions of employment of children Act XXVI of 1938 and any enactment or modification of the same and will not employ or permit any person to do any work for the purpose under the provisions of this agreement in contravention of said Act. The contractor here by agrees to indemnify the department from and against all claims, penalties which may be suffered by the department or any person employed by the department by any default on the part of the contractor in the observance and performance of the provisions of the employment of children Act. XXVI of 1938 or any enactment or modification of the same.
- 64.3 The contractor shall obtain the insurance at his own cost to cover the risk on the works to labour engaged by him during period of execution against fire and other usual risks.

Contractor shall follow the provisions contained in model rules relating to labour, water supply and sanitation in labour camps as applicable under statutory rules and regulations.

65 HEALTH AND SAFETY

- 65.1 Precautions shall be taken by the Contractor to ensure the health and safety of his staff and labour. The Contractor shall, in collaboration with and to the requirements of the local health authorities, ensure that medical staff, first aid facilities, sick bay and ambulance service are available at the accommodation and on the Site at all times, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Employer's Representative may reasonably require.
- 65.2 The Contractor shall appoint a member of his staff at the Site to be responsible for maintaining the safety, and protection against accidents, of personnel on the Site. This person shall be qualified for his work and shall have the authority to issue instructions and take protective measures to prevent accidents. The Contractor shall send, to the Employer's Representative, details of any accident as soon as possible after its occurrence.

66 MEASURES AGAINST INSECT & PEST NUISANCE

- 66.1 The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the Site from insect and pest nuisance, and to reduce the dangers to health and the general nuisance occasioned by the same.

The Contractor shall provide its staff and labour with suitable prophylactics for the prevention of malaria and take steps to prevent the formation of stagnant pools of water. The Contractor shall comply with all the regulations of the local health authorities and shall arrange to spray thoroughly with approved insecticide all buildings erected on the Site. Such treatment shall be carried out at least once a year or as instructed by such authorities.

67 CONTRACTOR'S SUPERINTENDENCE

- 67.1 The Contractor shall provide all necessary superintendence during the design and execution of the Works, and as long thereafter as the Employer's Representative may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. Such superintendence shall be given by sufficient persons having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) for the satisfactory and safe execution of the Works.

68 CONTRACTOR'S PERSONNEL

- 68.1 The Contractor shall employ (or cause to be employed) only persons who are careful and appropriately qualified, skilled and experienced in their respective trades or occupations. The Employer's Representative may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative, who in the opinion of the Employer's Representative:

- a. Persists in any misconduct,
 - b. Is incompetent or negligent in the performance of his duties,
 - c. Fails to conform with any provisions of the Contract, or
 - d. Persists in any conduct which is prejudicial to safety, health, or the protection of the environment.
- If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

69 DISORDERLY CONDUCT

- 69.1 The Contractor shall at all-time take reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his employees and for the preservation of peace and protection of persons and property in the neighbour hood of the Works against the same. "Disorderly conduct" shall include but not be limited to harvesting of natural resources such as firewood or fish by the Contractor's labour when this is done to the detriment of preexisting local interests.

70 Sett be amount of Cleions &Disputes.

70.1 Except where other wise specified in the contract, for claims valued less than Rs.50,000/- the decision of the Superintending Engineer of the circle for the time being in respect of all questions & disputes relating to the meaning of the specifications, designs, drawings and instructions herein before mentioned and as to the quality of workmanship of material used on the work or as to any other question, claim, right matter of thing whatsoever, in any way arising out of or relating to the contractor, designs, drawings, specifications, estimates, instructions, orders or those conditions or otherwise concerning the work of execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment there of shall be final, provided that the Superintending Engineer before giving his decision in writing In the matter gives an opportunity of being heard to the parties to contract.

If any party of the contract is dissatisfied with the final decision of the Superintending Engineer in respect of any matter he may within 28 days after receiving notice of such decision, give notice in writing to the Superintending Engineer requiring that the matter may be referred to Arbitration and Furnishing details particulars of the dispute or difference and specifying clearly the points at issue. If any party fails to give such notice within the period of 28 days as stipulated above, the decision of the Superintending Engineer already given shall be conclusive final and binding on all the parties.

In case arbitration is to be held, it shall be effected by the Chief Engineer Whose decision shall be conclusive, final and binding on all the parties.

If the work under the contract has not been completed when a dispute is referred to arbitration, work shall continue during the arbitration proceedings if it is reasonably possible and no payment due to contractor should be withheld on account of Arbitration Proceedings unless it is required by the Arbitrator.

70.2 Except where otherwise specified in the contractor, for the claim valued at Rs. 50000/- or more the decision of the Chief Engineer for the time being in respect of all questions and disputes relating to the meaning of the specifications, designs, drawings, and instructions here to before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter of thing whatsoever, in any way arising out of relating to the contract, designs, drawings, specifications, estimates, instructions,

orders of those conditions or otherwise concerning the work of execution of failure to execute the same whether arising during the progress of the work of execution of failure to execute the same whether arising during the progress of the work or after the completion or abandonment there fo shall be final, provided that the Chief Engineer shall be before giving his decisions in writing in the matter gives and opportunity of being heard to the parties to the contract.

If any party to the contract is dissatisfied with the final decision of the Chief Engineer in respect of any matter he may within 28 days after receiving notice of such decision may refer such dispute to the Arbitration Tribunal Constituted under the Chhattisgarh Madhyastham Abhikaran Adhiniyam 1982 (N0. 2 of 1983)

- 70.3 The contractor shall have to continue execution of works with due diligence not withstanding pendency of a dispute before any authority or forum.

B Time Control

71 PROGRAM

- 71.1 The Contractor shall submit the Work Program within 15 (fifteen) Days of signing of the agreement. Modification, if any, to work programme format shall be made in consultation with Engineer and Employer's Consultant which shall be binding on the Contractor. The contractor shall submit an assessed monthly cash flow statement along with this program.

The Contractor shall submit a programme to the Employer's Representative, for information, within the time stated in the Tender. The programme shall include the following:

- (a) The order in which the Contractor proposes to carry out the Works (including each stage of design, procurement, manufacture, delivery to Site, Construction, erection, testing and commissioning),
- (b) All major events and activities in the production of Construction Documents,
- (c) The periods for the pre-Construction reviews and for any other submissions, approvals and consents, and
- (d) The sequence of all tests specified in the Contract.

Unless otherwise stated in the Contract, the programme shall be developed using precedence networking techniques, showing early start, late start, early finish and late finish dates.

The Contractor shall, whenever required by the Employer's Representative, provide in writing, for information, a general description of the arrangements and methods which the Contractor proposes to adopt for the execution of the Works. No significant alteration to the programme, or to such arrangements and methods, shall be made without informing the Employer's Representative. If the progress of the Works does not confirm to the programme, the Employer's Representative may instruct the Contractor to revise the programme, showing the modifications necessary to achieve completion within the Time for Completion.

- 71.2 The Contractor shall provide an updated Work Program by the last day of each Month, which shall clearly demonstrate the actual progress achieved on each activity, the effect of the progress achieved on the timing of the remaining work, and the proposed changes in activities that will enable the Contractor to complete the Works within the Intended Completion Date. In case the Contractor fails to submit an updated Work Program within this time limit, the Engineer-in-Charge will be entitled to withhold an amount of Rs. 100,000/- (Rupees one lacs only) from the next payment, and continue to withhold this amount until the next payment after the date on which the overdue program has been submitted.
- 71.3 In addition to the Updated Program, Monthly progress reports shall be prepared by the Contractor and submitted to the Engineer in two copies and one copy each to Engineer's Representatives. The first report shall cover the period up to the end of the calendar month after that in which the Commencement Date occurred; reports shall be submitted monthly thereafter, each within 10 days of the last day of the period to which it relates. Reporting shall continue until the Contractor has completed all work which is known to be outstanding at the completion date stated in the Taking over Certificate for the Works. Each report shall include but not limited to:
- a. Photographs and detailed descriptions of progress, including each stage of design, procurement, manufacture, delivery to Site, Construction, erection, testing and commissioning;
 - b. Charts showing the status of Construction documents, purchase orders, manufacture and Construction;
 - c. For the manufacture of Gates, the name of manufacturer, manufacture location, percentage progress and the actual or expected dates of commencement of manufacture, Contractor's inspections, tests and delivery;
 - d. Records of personnel and Contractor's Equipment on Site;
 - e. Copies of quality assurance documents, test results and certificates of Materials duly certified by the Consultant;
 - f. Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations; and
 - g. comparisons of actual and planned progress, with details of any aspects which may jeopardize the completion in accordance with the Contract, and the measures being (or to be) adopted to overcome such aspects.
- 71.4 The Engineer's approval of the program or an updated program does not alter the Contractor's obligations under the Contract.

72 COMMENCEMENT OF WORKS

- 72.1 The Contractor shall commence the design and execution of the Works after the signing of the agreement. The Contractor then proceed with the Works with due expedition and without delay, until completion.

73 TIME FOR COMPLETION

- 73.1 The whole of the Works, and each Section (if any), shall be completed and shall have passed the Tests on Completion within the Time for Completion for the Works or such Section (as the case may be).

74 EXTENSION OF TIME FOR COMPLETION

- 74.1 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.
- 74.2 In the event of delays attributable to the contractor, the EOT shall not be given by the Engineer in Charge and Liquidated Damages shall be levied from the contractor in accordance with the provisions of the contract.
- 74.3 In the event, the delays are not attributable to the contractor the EOT may be issued by the Engineer in Charge without imposition of Liquidated 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.

74B Compensation for delay

- 74B.1 The time allowed for carrying out the work, as entered in the agreement, shall be strictly observed by the contractor.
- 74B.2 The time allowed for the 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.
- 74B.3 In the event milestones are laid down in the conditions of contract for execution of the works, the contractor shall have to ensure strict adherence to the same.
- 74B.4 Failure of the contractor to adhere to the timelines and/or milestones shall attract such liquidated damages as is laid down in conditions of contract under clause 114.
- 74B.5 In the event of delay in execution of the works as per the timelines mentioned in the conditions of the contract under clause 114, Engineer-in-Charge shall retain from the bills of the contractor amount equal to the liquidated damages leviable until the contractor make such delays good. However, the Engineer-in-charge shall accept bankable security in lieu of retaining such amount.
- 74B.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.
- 74B.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.

75 DELAYS CAUSED BY AUTHORITIES

75.1 If the following conditions apply, namely:

- a. The Contractor has diligently followed the procedures laid down by Government,
- b. If authorities delay, impede or prevent the Contractor, then such delay will be considered as a cause of delay giving an entitlement to extension of time under Sub-Clause 74.

76 RATE OF PROGRESS

76.1 If, at any time, the Contractor's actual progress falls behind the programme referred to in Clause 71, or it becomes apparent that it will so fall behind, the Contractor shall submit to the Employer's Representative and Engineer a revised programme taking into account the prevailing circumstances. The Contractor shall, at the same time, notify the Engineer and his representative of the steps being taken to expedite progress, so as to achieve completion within the Time for Completion.

76.2 If any steps taken by the Contractor in meeting his obligations under this Sub-Clause cause the Employer to incur additional costs, such costs shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any money due, or to become due, to the Contractor.

77 SUSPENSION OF WORK

The Engineer-in-Charge may at any time instruct the Contractor to suspend progress of part or all of the Works. During suspension, the Contractor shall protect, store and secure such part or the Works against any deterioration, loss or damage.

78 CONSEQUENCES OF SUSPENSION

78.1 If the Contractor suffers delay in following the Engineer-in-Charge's instructions under Clause 77, the Contractor shall give notice to the Engineer-in-Charge, with a copy to the Engineer. After receipt of such notice the Engineer shall proceed in accordance with the relevant provisions of the Contract:

78.2 The Contractor shall not be entitled to extension of time for, or payment of the costs incurred in, making good any deterioration, defect or loss caused by faulty design, workmanship or materials, or by the Contractor's failure to take the measures specified in Clause 29.

79 PROLONGED SUSPENSION

79.1 If suspension under Clause 77 has continued for more than 90 days, and the suspension of part or whole of the work is not due to a cause attributable to the Contractor, the Contractor may by notice to the Engineer require permission to proceed within 30 days after the period of prolonged suspension. If permission is not granted within that time, the Contractor may treat the suspension as cause for extension under Clause 74 for the affected part of the Works.

80 RESUMPTION OF WORK

After receipt of permission or of an instruction to proceed, the Contractor shall, after notice to the Engineer-in-Charge, and together with the Engineer's Representative, examine the Works and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Materials, which has occurred during the suspension.

81 EXTENSION OF THE INTENDED COMPLETION DATE ON RESUMPTION OF WORK AFTER PROLONG SUSPENSION

In case of resumption of work after prolonged suspension of work, the Engineer may consider to extend the intended completion date on merits of reasons for prolong suspension.

82 SUSPENSION OF WORK BY THE ENGINEER

Engineer-in-Charge may at any time by written notice to the Contractor suspend further performance of the Works, whereupon the Contractor shall suspend further performance of the Works to the extent specified and shall properly ensure and protect all Works in progress. Such suspension shall not exceed more than thirty (30) consecutive days each or aggregate more than ninety (90) days. The Engineer-in-Charge may at any time give notice of resumption of the suspended Works, in whole or in part, whereupon the Contractor shall resume its performance of that portion of the Works.

83 SUSPENSION OF WORKS BY THE CONTRACTOR:

If the Contractor suspends the works, or in the opinion of the Engineer-in-Charge shall neglect or fail to proceed with due diligence in the performance of his part of the Contract as laid down in the Schedule rate of progress, or if he shall continue to default or repeat such default. Engineer shall take action in accordance with Clause 92.

84 MANAGEMENT MEETINGS

- 84.1 Employer's Representative may require the Contractor to attend a management meeting. The business of a management meeting is to review the plans for remaining work and to sort out the bottle necks, hindrances in execution of work under Contract.
- 84.2 The responsibility of the parties for actions to be taken is to be decided by the Employer, either at the management meeting, or after the management meeting and stated in writing to all who attended the meeting.

85 EARLY WARNING

- 85.1 The Contractor is to warn the Engineer-in-Charge at the earliest opportunity of specific likely future events or circumstances, which may adversely affect the execution of the Works.
- 85.2 The Contractor shall cooperate with the Engineer-in-Charge in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the Works and in carrying out any resulting instruction of the Engineer-in-Charge.

C. Quality Control**86 IDENTIFYING DEFECTS**

The Engineer's Representative shall check the Contractor's work and notify the Contractor of any Defects which are found. Such checking does not affect the Contractor's responsibilities. The Engineer-in-Charge may instruct the Contractor to search for a Defect and to uncover and test any part of the Works, which the Engineer-in-Charge considers may have a Defect.

87 QUALITY ASSURANCE

- 87.1 Unless otherwise indicated elsewhere in the Contract, the Quality Assurance and Quality Control (QA/QC) document, as issued by the department, shall be followed. The QA/QC document of department shall form the part of the Contract and a copy of the same shall be made available at the site.
- 87.2 Within 15 (fifteen days) from the date of commencement of work, the contractor shall arrange to provide at his own cost a fully furnished an adequately equipped field laboratories at the required locations of site as per specifications and directions of the Engineer-in-Charge, including maintenance of the same. This shall be removed at the completion of the work. All dismantled items of field laboratory and all equipment shall be property of the contractor at the completion of the work.
- 87.3 The calibration of the laboratory equipment and instrument shall at the initial stages be certified by agencies approved by the Chief Engineer, Hasdeo Basin Bilaspur (C.G.) Laboratory equipment shall be property maintained and calibrated throughout the period of the Contract by the Contractor at his own expense. The Contractor shall notify the Engineer-in-Charge in sufficient advance prior to conducting any tests for materials and work. The Engineer-in-Charge will also inspect the laboratory and the Contractor shall provide adequate facilities to the Engineer-in-Charge for his independent verification of the accuracy and adequacy of the facilities, equipments required at site are as included in the QA/QC document.
- 87.4 The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. Such system shall be in accordance with the details stated in the Contract. Compliance with the quality assurance system shall not relieve the Contractor of his duties, obligations or responsibilities.

- 87.5 Details of all procedures and compliance documents shall be submitted to the Engineer's Representative for his information before each design and execution stage is commenced. When any document is issued to the Engineer's Representative, it shall be accompanied by the signed quality statements for such document, in accordance with the details stated in the Contract. The Engineer's Representative shall be entitled to audit any aspect of the system and require corrective action to be taken.
- 87.6 Contractor shall allow any authorized persons by Employer or Engineer to inspect and check the test and quality control for the Work.

88 TESTS

If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any part of the Works has a Defect, and the Contractor shall pay for the test and any samples.

89 CORRECTION OF DEFECTS

- 89.1 The Engineer or Engineer-in-Charge shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion.
- 89.2 Every time notice of a Defect is given, a Defects Correction Period for the notified Defect begins. The Contractor shall correct the notified Defect within the Defects Correction Period at no cost to the Employer. The length of the Defects Correction Period is the length specified by the Engineer-in-Charge's notice.
- 89.3 The Contractor shall correct Defects which he notices himself before the end of the Defects Liability Period.

90 UNCORRECTED DEFECTS

- 90.1 The Engineer may arrange for a third party to correct a Defect if the Contractor has not corrected it within the Defects Correction Period.
- 90.2 The Engineer shall give the Contractor at least 15 days' notice of his intention to use a third party to correct a Defect. If the Contractor does not correct the Defect himself within this period, the Engineer may have the Defect corrected by the third party. The cost of the correction will be deducted from the Contract Price.
- 90.3 The Engineer shall introduce O.K. cards and prescribe the formats thereof. O.K. cards shall relate to all major components of the work. The contractor/ his authorized representative shall be required to initiate and fill in and present the O.K. card to the Construction staff who would check the respective items. Any defects pointed out by the Engineer's Representative and supervision staff of department shall promptly be attended to by the Contractor's and the fact of doing so be duly recorded on the back of O.K. card.
- 90.4 The Engineer-in-Charge may also introduce checklists, which shall be kept in Bound registers by the Construction supervision staff. The contractor may be required to fill up these lists in the first instance and shall be subsequently checked by the Construction/ Quality Control engineers/Engineer's Representative.

91 NOTICE TO CORRECT

If the Contractor fails to carry out any of his obligations, or if the Contractor is not executing the Works in accordance with the Contract, the Engineer-in-Charge may give notice to the Contractor requiring him to make good such failure and remedy the same within a specified reasonable time.

92 TERMINATION BY DEPARTMENT

92.1 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.

92.2 The Engineer-in-charge shall be entitled to terminate the contract if the contractor

- a. Abandons the works or otherwise plainly demonstrates the intentions not to continue performance of its 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 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 per list of key equipments/ machines for the construction work in the pre-qualification document and conditions of contract,
- g. If the contractor, in the judgment of the Engineer-in-Charge has engaged in corrupt or fraudulent practices in competing for or in the executing the contract.
- h. Any other fundamental breaches as specified in the clause 92.2B

92.2 Breaches of contract include, but are not limited to

- a. The contractor stops work for 30 days when stoppage of work is shown on the current program and the stoppage has not been authorized by the Engineer-in-Charge.
- b. The Engineer-in-charge gives notice that failure to correct a particular defect is a fundamental breach of contract and the contractor fails to correct it within a reasonable period of time determined by the Engineer-in-Charge.
- c. abandons or repudiates a contract.

92.3 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 from the site. However, in the case of sub-paragraph (b) or (g) of clause 92.2, the Engineer-in-charge may terminate the contract immediately.

- 92.4 Notwithstanding the above, the Engineer-in-Charge may terminate the contract for convenience by giving notice to the contractor.

93 VALUATION AT DATE OF TERMINATION

The Employer's Representative shall, as soon as possible after termination under Clause 92, determine and advise the Contractor of the value of the Construction Documents and Works and all sums then due to the Contractor as at the date of termination.

94 PAYMENT AFTER TERMINATION

After termination under Clause 92, the Employer shall not be liable to make any further payments to the Contractor until the cost of design, execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Employer, have been established.

95 BRIBES

If the Contractor, or any of his Subcontractors, agents or servants gives or offers to give to any person any bribe, gift, gratuity or commission as an inducement or reward:

- a. For doing or forbearing to do any action in relation to the Contract or any other contract with the Employer, or
- b. For showing or forbearing to show favour or disfavour to any person in relation to the Contract or to any other contract with the Employer, then the Employer's Representative may, after having given 14 days' notice to the Contractor, terminate the Contractor's employment under the Contract and expel him from the Site, and the provisions of this Clause shall apply as if such termination and expulsion had been made under Clause 92.

96 CONTRACTOR'S ENTITLEMENT TO SUSPEND WORK

- 96.1 If the Employer fails to pay the Contractor the amount due under any certificate of the Employer's Representative, and fails to explain why the Contractor is not entitled to such amount, within 60 days after the expiry of the time stated in Clause 107 within which payment is to be made, except for any deduction that the Employer is entitled to make under the Contract, the Contractor may suspend work or reduce the rate of work after giving not less than 7 days' prior notice to the Engineer-in-Charge. Such action shall not prejudice the Contractor's entitlements to payment under Clause 107.
- 96.2 If the Contractor suspends work or reduces the rate of work, and the Employer subsequently pays the amount due (including payment in accordance with Sub-Clause 107), the Contractor shall resume normal working as soon as is reasonably possible.

- 96.3 If the Contractor suffers delay as a result of suspending work or reducing the rate of work in accordance with this Sub-Clause, the Contractor shall give notice to the Employer's representative. After receipt of such notice, the Employer's Representative shall proceed to agree or determine any extension of time to which the Contractor is entitled under Clause 74.

97 TERMINATION BY CONTRACTOR

The Contractor shall not be entitled to terminate the Contract for any reasons whatsoever.

98 CESSATION OF WORK AND REMOVAL OF CONTRACTOR'S EQUIPMENT

After termination under Clause 92, the Contractor shall:

- a. Cease all further work, except for such work as may be necessary and instructed by the Employer's Representative for the purpose of making safe or protecting those parts of the Works already executed, and any work required to leave the Site in a clean and safe condition,
- b. Hand over all Construction Documents,
- c. Hand over those other parts of the Works executed by the Contractor up to the date of termination, and
- d. Remove all his staff and labour from the Site.

Any such termination shall be without prejudice to any other right of the Employer under the Contract.

99 ACTION AND COMPENSATION PAYABLE IN CASE OF BAD WORK

If at any time before Security deposit is refunded to the Contractor it shall appear to the Engineer-in-Charge or his Subordinate-in-Charge of the work that any work has been executed with unsound, imperfect or unskilled workmanship or with materials of inferior quality or, that any materials or articles provided by him for the execution of work are unsound or of a quality inferior to that contracted for, or otherwise not in accordance with contract, it shall be lawful for the Engineer-in-Charge to intimate this fact in writing to the Contractor, and then notwithstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for, the contractor shall be bound forthwith to rectify or remove and reconstruct the works specified in whole or in part as the case may require, or if so required shall remove the materials or articles so specified and provide other proper & suitable materials or articles at his own proper charge and cost and in the event of his failing to do so within a period to be specified by the Engineer-in-Charge in the written intimation aforesaid, the Contractor shall be liable to

pay compensation at the rate of One percent on the amount of the estimate for every day not exceeding ten days during which the failure so continues and in the case of any such failure, the Engineer-in-Charge may rectify or remove and re-execute the work or remove and replace the materials or articles complained or as the case may be at the risk and expense in all respects of the Contractor should the Engineer-in-Charge consider that any such inferior work or materials as described above may be accepted or made use of, it shall be within his discretion to accept the same at such reduced rates as he may fix therefore.

D. Cost Control

100 CONTRACT PRICE – SCHEDULE OF PAYMENT.

- 100.1 The Contract price shall be the total value of work for the Turnkey contract as per contract agreement including, maintenance and the defect liability period of 60 months.
- 100.2 The contractor will be paid a firm contract price for completion of all works as specified under the scope of the work under the contract agreement.
- 100.3 Notwithstanding anything that is stated, the contract price once accepted by the employer shall be final and shall not be subject to any claims on any ground what so ever of the Contractor.
- 100.4 The contract price of the total work is divided among different component of works as per the percentages specified in 'Payment Schedule' and payments will be regulated accordingly.
- 100.5 The contractor shall give "Bill of Quantities" based on the detailed estimates prepared on the basis of approved design; drawings and the items of the estimate shall be suitably clubbed or grouped for assessment of value of work done.

101 CHANGES IN THE QUANTITIES

- 101.1 Being a Turnkey contract, the contractor is bound to complete the entire work under the contract on a firm lump sum price quoted and on a single source responsibility basis. The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the contract price. Therefore the contractor is bound to execute all supplemental works that are found essential, incidental and inevitable during execution of main work at no extra cost to the employer.
- 101.2 The cost due to such supplemental items of work shall be borne by the contractor.

102 EXTRA ITEMS:- DELETED

103 CASH FLOW FORECASTS

When the program is updated the Contractor is to provide the Employer with an updated cash flow forecast.

104 CONTRACT PRICE, SCHEDULE OF PAYMENTS, PAYMENT CERTIFICATES (REFER CLAUSE 105, 106, 107 and 108 RESPECTIVELY)

105 CONTRACT PRICE:

The Contract price shall be the total value of work for the Turnkey contract as per contract agreement including construction of all works proposed under scope of work, maintenance during the defect liability period of 60 months.

- a. The employer will pay the contractor a firm contract price for completion of all works as specified under the scope of the work/employers requirement which shall include of the work detail scope of work/employees requirement which has been stated earlier.
- b. The contractor shall pay all duties and taxes whatsoever in consequence of his obligations under the contract and the contract price shall not be adjusted for such costs.
- c. Contract price will be paid to the Contractor in Indians Rupees only.

106 PAYMENT SCHEDULE:

- 106.1 The bill shall be submitted by the contractor by 10th day of each month, payment of this bill shall be effected as per provision of payment schedule vide Appendix F. Non submission of the bills on the schedule dates will absolve the Department of the liability to make payment.
- 106.2 However, no claim on account of delay in payments, which might occur due to reasons beyond the control of the department, shall be entertained.
- 106.3 Contractor's price bid as approved shall be divided among components of work as Appendix F of schedule of payment to their respective percentage as stipulated in schedule of payment Appendix F and same shall be considered for payment.
- 106.4 The schedule of Payment Appendix F shall supersede all mode of payment(s) / payments schedule (if) stipulated anywhere in tender document.
- 106.5 The proportion of different component of work as compared to overall cost of project is as per stipulation in Appendix F of schedule of payment.
- 106.6 Contractor whose price bid has been accepted shall be required to submit component wise detailed schedule of payment, based on and limited to the provisions shown in schedule of Payment Appendix F. This detailed schedule of payment shall be got approved from CONCERNED CHIEF ENGINEER and any payment due before the approval of payment schedule will be paid 80% of that component's percentage in total Bid amount which will be subsequently adjusted in slice payment with the prior approval of the CONCERNED CHIEF ENGINEER.

- 106.7 The components shown in schedule of payment Appendix F shall be further divided into appropriate subcomponents and their stages for the purpose of payment. The stages should have relation to the programme of Construction taking due cognizance of interdependency of various activities. Each stage shall be expressed as percentage of total cost of approved bid. Sum of all such stages of particular component shall be equal to the percentage of that component shown in the schedule of payment Appendix F.
- 106.8 This detailed schedule of payment approved by the concerned Chief Engineer shall form part of the agreement.
- 106.9 The payment shall be released only as per work done and respective component of work has been completed and/or levels are achieved.
- 106.10 Contractor shall record the joint measurements for work carried out as per procedure laid down by department for purpose of keeping record and same shall be got checked from competent authority before payment. All hidden measurement shall be got 100% checked from the competent authority before payment. The contractor shall produce results of quality control tests carried out by Quality Control Organization of Department and Quality Certificate from Employer's Representative. If the test result do not fulfil the stipulated criteria laid down in specifications the payment will be limited as per the provisions in the specification(s) and if number of results fail beyond the limit of acceptance, then the contractor shall not be paid unless he rectifies all such imperfect work(s). The decision of the Chief Engineer, in respect of the matters pertaining to the quality control shall be final and binding on the Contractor.
- 106.11 Probable amount of contract (PAC) is Excluding GST (Based on SOR 01.05.2025 with amendment 08.08.2025)

107 PAYMENTS:

- 107.1 The contractor shall execute the various components of work as per approved drawings and specifications. The contractor shall arrange to take and record all measurements of work done of various components of work in the Measurement Books/Level 1 ha chak books and plotted in the cross section sheets and quantities arrived as per actual execution as and when required.
- 107.2 Measurements will be recorded by the contractor for the finished designed section of work only for which all tests are conducted and work done in accordance with specifications and contract conditions by using the materials specified in the contract
- 107.3 The Contractor shall on submitting the bill thereof be entitled to receive a monthly payment proportionate to the part thereof then approved and passed by the Engineer-in-Charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the Contractor. But all such intermediate payments shall be regarded as payment by way of advance against the final payment and not as payments for work actually done and completed

and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed, or any part thereof, in any respect of the occurring of any claim, nor shall it conclude, determine or affect in any way, the powers of the Engineer-in-Charge under these conditions or any other way vary or affect the Contract.

- 107.4 A bill shall be submitted by the Contractor each month on or before the date fixed by the Engineer-in-Charge for all work executed in the previous month and the Engineer-in-Charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim, as far as admissible, adjusted if possible, before the expiry of ten days from the presentation of the bill. If the Contractor does not submit the bill within the time fixed, as aforesaid, the Engineer-in-Charge may depute a subordinate to measure up the said work in the presence of the Contractor whose counter signature to the measurements list will be sufficient warrant, and the Engineer-in-Charge may prepare a bill from such list
- 107.5 Which shall be binding on the Contractor in all respects. Only constructed portions of the works shall be eligible for payment.
- 107.6 The Contractor shall submit all his bills on the format approved by Engineer-in-Charge and the charges in the bill shall always be entered at the rates specified in the payment schedule specified and approved by Engineer-in-Charge.

108 PAYMENTS AND CERTIFICATES:

- 108.1 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.
- 108.2 Payments shall be adjusted for recovery of penalty in terms of Bid conditions and security deposit for the due fulfilment of the contract. Recoveries will be affected towards seignior age (Royalty) and cess charges on the materials used and sales tax and other statutory taxes as per the State and Central Government Rules. Payment will be made to the Contractor under the certificate to be issued at reasonably frequent intervals by the Engineer-in-Charge, and intermediate payment will be the sum equal to 95% of the value of work done as so certified and balance of 5% will be withheld and retained as security for the due fulfilment of the contract under the certificate to be issued by the Engineer-in-Charge. On issuance of completion certificate for construction of works under the contract, the performance deposit will be released and security deposit deducted from the intermediate payments shall be converted to FDR and shall be released after successful completion of contract and expiry of MOM period and expiry of defect liability period.

- 108.3 In case of over payments or wrong payment if any made to the contractor due to wrong interpretation of the provisions of the contract, Condition of Contract etc., such unauthorized payment will be deducted in the subsequent bills or final bill for the work or from the bills under any other contracts with the Government or at any time thereafter from the deposits available with the Government.
- 108.4 Any recovery or recoveries advised by the Government Department either state or central, due to non-fulfilment of any contract entered into with them by the contractor shall be recovered from any bill or deposits of the contractor.
- 108.5 The contractor is not eligible for any compensation for inevitable delay in handing over the site or for any other reason. In such case, suitable extensions of time will be granted after considering the merits of the case by the Chief Engineer, Mahanadi Godavari Basin Raipur (C.G)
- 108.6** The Engineer-in-Charge shall within 30 days after receiving a Statement and Supporting documents, give to the Contractor notice of any items in the Statement with which the Engineer in Charge disagrees, with supporting particulars. Payments due shall not be withheld, except that;
- If anything supplied or work done by the Contractor is not in accordance with the Contract, the cost of rectification or replacement may be withheld until rectification or replacement has been completed; and / or
 - If the Contractor was or is failing to perform any work or obligation in accordance with the contract and had been as notified by the Engineer in Charge, the value of this work or obligation may be withheld until the work or obligation has been performed.

The Employer may, by any payment, make any correction or modification that should properly be made to any amount previously considered due. Payment shall not be deemed to indicate Engineer in Charge acceptance, approval, consent or satisfaction.

- 108.7 All progressive payments made to the Contractor shall be reviewed on quarterly basis and reconciled with the break-up of the schedule. Over payments/under payments made, if any, shall be adjusted in the next interim/final payments.

109 APPLICATION FOR INTERMEDIATE PAYMENT CERTIFICATE:

The Contractor shall submit a statement/bill in six copies to the Engineer-in-Charge after the end of each month, in a form approved by the Engineer-in-Charge, showing the amounts to which the Contractor considers himself to be entitled, together with supporting documents which shall include the detailed report on the progress during the month for each section of the Work. The statement shall include the following items, as applicable, which shall be expressed in Indian

Rupees and also shall include the following items, as applicable, which shall be expressed in the sequence listed below:

- a. The estimated contract value of the Construction Documents produced and the Works executed up to the end of the month;
- b. Amount to be deducted for retention, shall be @5% (Security Deposit) from each interim bills.
- c. Any amount to be deducted against recovery of advance amount in accordance with rate specified in Agreement.
- d. Delay damages in respect of non-achievement of milestone as per Agreement
- e. Any other additions or deductions which may have become due in accordance with the Contract
- f. Deduction of Income tax, works contract tax and other taxes and seignior age and cess charges on materials used and other statutory obligations etc. as applicable.
- g. The total amounts certified on all previous Interim Payment Certificates.

110 INTEREST ON MONEY DUE TO THE CONTRACTOR:

No omission by the Engineer-in-charge to pay the amount due upon certificates shall vitiate or make void the contract, nor shall the contractor be entitled to interest upon any guarantee fund or payments in arrears, nor upon any balance which may, on the final settlement of his accounts, found to be due to him.

111. CERTIFICATE OF COMPLETION OF WORKS:

When the whole or sections of the work has been completed and has satisfactory passed any final test that may be prescribed under the Contract, the Contractor may give a notice to that effect to the Employer's Representative accompanied by an undertaking to carry out any rectification work during the period of Mom period, such notice and undertaking shall be in writing and shall be deemed to be request by the Contractor for the Employer's Representative to issue a Certificate of completion in respect of the Works or sections, as the case may be.

The Engineer-in-Charge shall, within sixty days of the date of delivery of such notice either issue to the Contractor, a certificate of completion stating the date on which, in his opinion, the works were completed in accordance with the Contract or give instructions in writing to the Contractor specifying all the Works which, in the Engineer-in-Charge's opinion, required to be done by the Contractor before the issue of such Certificate. The Engineer-in-Charge shall also notify the Contractor of any defects in the Works affecting completion that may appear after such instructions and before completion of the Works specified there in. The Contractor shall be

entitled to receive such Certificate of the Completion within Sixty days of completion to the satisfaction of the Engineer-in-Charge of the Works so specified and making good of any defects so notified.

112 TAXES INCLUDED IN THE BID:

The rates quoted by the contractor shall be deemed to be exclusive of the goods and services Tax (GST) but including labour cess, other levies, duties, royalties, cess, toll, taxes of local bodies and authorities that the contractor will have to pay for the performance of this contract. The employer will perform such duties in regard to the deduction of such taxes including GST at source, require deduction in this reference will be made as per applicable law. GST as per prevailing rate at the time of payment/bill submission shall be made applicable presently @18% and shall be paid on the whole work carried out as accepted by the engineer, while making the payment..

However, if any other NEW TAX or levy or cess is imposed by statute or any deviation in existing royalty/tax/levy/cess/GST after the last stipulated date for the receipt of the tender including extensions, if any, shall be treated as NEW TAX and the contractor there upon necessarily and properly pay such new taxes/levies/cess/GST /royalties. The Engineer in charge shall reimburse the amount of such 'New Tax' on submission of proof of such payments of tax by the contractor (deducted in case of decrease in existing taxes/reimbursement of increase in existing taxes).

113 RETENTION:

In addition to the performance security, 5% amount shall be retained from each running payment as security deposit on the value of each payment, subjected to the condition that total amount of such deduction together with the amount of performance security shall not exceed 6% of the Contract value. When value of work exceeds the Contract amount security deposit of 6% shall be deducted from the subsequent running bill paid to the Contractor.

114. Compensation for Delay

- 114.1 The program of work submitted by Contractor in terms of Clause 71.1 of Conditions of Contract, in lines with the indicative Milestones, agreed by the Department and as per agreed program of work milestones shall be fixed and monitored every six months. 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% of balance work per day of delay limited to a maximum of 10% of contract price. The decision of Chief Engineer shall be final and binding upon both the parties.

114.2 Waiver of penalty:

With a view to enable the contractor to make good any delay occurred in achieving one or more milestones for what so ever reason, it is agreed that the penalty would stand waived in the only event of the contractor completing the whole work within the overall time period as mentioned in this Agreement.

- 114.3 Total delays in excess of one and half year (reasons attributable to the Contractor) may, at the discretion of the Department, be considered as sufficient cause for termination of the Contract and forfeiture of all security deposits and performance securities. Delay will be calculated on the non-achievement of physical milestones fixed as per clause 115.1, on the basis of proportionate shortfall in progress of each item of work, added together. Provided that the in calculating the delay of one and half year, delay on the part of the contractor shall only be attributable to him.

- 115. Disincentive:** In case the CCA covered by irrigation network happens to be less than agreement CCA in Ha, deduction for shortfall in area will be made @ 1.5 times of the derived per hectare rate, as above.

116 COST OF REPAIRS

Loss or damage to the Works or materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods is to be mended by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions until completion of the Contract.

117 COMPLETION

- 117.1 The Engineer-in-charge shall issue the completion certificate for works or sections, as the case may be, when he decides that the contractor completed all such obligations in accordance with the Contract.
- 117.2 The running maintenance and Mom period will be reckoned from the date of issue of completion certificate.
- 117.3 The Engineer-in-charge shall issue the Final completion certificate, when he decides that the contractor completes all the liabilities under the contract.

118 TAKING OVER

The Engineer-in-Charge shall take over the Site and the Works within Ten (10) days of the issuance of the certificate of Completion.

119 FINAL ACCOUNT**119.1 Application for Final Payment Certificate**

Not later than 60 days after the issue of the Performance Certificate, the Contractor shall submit to the Employer's Representative two copies and one copy each for Engineer's Representative of a draft final statement with supporting documents showing in detail, in a form approved by the Engineer:

- a. The value of all work done in accordance with the Contract, and
- b. Any further sums which the Contractor considers to be due to him under the Contract.

- 119.2 If the Engineer disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Engineer may reasonably require and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Engineer-in-Charge the final statement as agreed (for the purposes of these Conditions referred to as the "Final Statement").

120 PROPERTY

All materials on the Site, Temporary Works and Works are deemed to be the property of the Employer and are at the Employer's disposal if the Contract is terminated due to breach of Contract by the Contractor.

121 RELEASE FROM PERFORMANCE:

If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Department or the Contractor the Engineer-in-Charge shall certify that the

contract has been frustrated. The Contractor shall make the site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all works carried out before receiving it and for any work carried out afterwards to which commitment are made by Engineer-in-Charge.

122 INSPECTIONS AND AUDIT BY THE WRD

The Contractor shall permit inspection of works by senior authorities of WRD Consultant officials and persons authorized by WRD or Engineer for monitoring, quality and any other point related to work, and relating to the performance of the Contract.

123 JOINT AND SEVERAL LIABILITY OF JOINT VENTURE PARTNERS

If the Contractor is a joint venture of two or more persons / firms, all such persons / firms shall be jointly and severally bound to the Employer for the fulfilment of the terms of the Contract and shall designate one of such persons/firms to act as a leader with authority to bind the joint venture. The composition or the constitution of the joint venture shall not be altered.

124 As-Built Drawings

- 124.1 The Contractor shall prepare, and keep up-to-date, a complete set of “as-built” records of the execution of the works, showing the exact “as-built” locations, sizes and details of the works as executed with cross references to relevant specifications and data sheets. These records shall be kept on the site and shall be used exclusively for the purposes of this Sub-clause. Two copies shall be submitted to the Engineer-in-Charge prior to the commencement of the test on completion.
- 124.2 In addition, the Contractor shall prepare and submit to the “As-built Drawings” of the works, showing all works as executed. The drawings shall be prepared as the works proceed, and shall be submitted to the Engineer-in-Charge for his inspection. The Contractor shall obtain the consent of the Engineer-in-Charge as to their size, the referencing system, and other pertinent details.
- 123.3 Prior to the issue of any taking over certificate, the Contractor shall submit the Engineer-in-Charge six sets of CDs and six printed copies of the relevant “As-built Drawings”, and any further Construction Documents specified in the Contract. The Works shall not be considered to be completed for the purposes of taking-over until such documents have been submitted to the Engineer-in-Charge.

F. Other General Conditions**125 SITE ENVIRONMENTAL PLAN (SEP)**

The Contractor shall prepare a detailed Site Environmental Plan (SEP) for the work site, base camp, etc., showing arrangements for disposal / dumping of excavated earth etc. and other waste, location of fuel, oil and lubricant depots, sheds for equipment, labour and housing facilities, etc., prior to the Construction for approval of the Engineer-in-Charge.

126 SAFETY, SECURITY AND PROTECTION OF THE ENVIRONMENT

The Contractor shall take all necessary precautions against pollution or interference with the supply, or obstruction of the flow of surface or underground water. These precautions shall include but not be limited to physical measures such as earth bunds of adequate capacity around fuel, oil and solvent storage tanks and stores, oil and grease traps in drainage systems from workshops, vehicle and plant washing facilities and service and fuelling areas and kitchens, the establishment of sanitary solid and liquid waste disposal systems, the maintenance in effective condition of these measures, the establishment of emergency response procedures for pollution events, and dust suppression, all in accordance with normal good practice and to the satisfaction of the Engineer-in-Charge. Should any pollution arise from the Contractor's activities he shall clean up the affected area immediately at his own cost and to the satisfaction of the Engineer-in-Charge, and shall pay full compensation to any affected parties.

127 PROTECTION OF TREES AND VEGETATION

The Contractor shall ensure that no trees or shrubs or waterside vegetation are felled or harmed except for those required to be cleared for execution of the Works. The Contractor shall protect trees and vegetation from damage to the satisfaction of the Engineer-in-Charge. No tree shall be removed without the prior approval of the Engineer-in-Charge and any competent authorities. Should the Contractor become aware during the period of the Contract that any tree or trees designated for clearance have cultural or religious significance he shall immediately inform the Engineer-in-Charge and await his instructions before proceeding with clearance. In the event that trees or other vegetation not designated for clearance are damaged or destroyed, the suitable penalty may be imposed by the Engineer-in-Charge.

128 USE OF WOOD AS FUEL

- 128.1 The Contractor shall not use wood as a fuel for the execution of any part of the Works, including but not limited to the heating of bitumen and bitumen mixtures and the manufacture of bricks for use in the Works, and to the extent practicable shall ensure that fuels other than wood are used for cooking, and water heating in all his camps and living accommodations.
- 128.2 In case of fuel wood is required for cooking, water heating or any other purpose, Contractor shall have a fuel wood depot with permission and as per rules and regulation of forest department at site and maintain records as directed by officials of forest department

129 HOT MIX PLANTS

The Contractor shall not locate any hot-mix or similar potentially polluting plant closer than 500 m to any settlement. Any such plant shall be fitted with dust suppression equipment and shall be operated and maintained at all times in conformity with the manufacturer's specifications, instructions and manuals.

130 RELATIONS WITH LOCAL COMMUNITIES AND AUTHORITIES

In sitting and operating his plant and facilities and in executing the Works the Contractor shall at all-time bear in mind and to the extent practicable minimize the impact of his activities on existing communities. Where communities are likely to be affected by MEDIUM activities such as road widening or the establishment of a camp, large borrow pit or haul road, he shall liaison closely with the concerned communities and their representatives.

131 FIRE PREVENTION

The Contractor shall take all precautions necessary to ensure that no vegetation along the line of the road outside the area of the permanent works is affected by fires arising from the execution of the Works. The Contractor shall obtain and follow any instructions of the competent authorities with respect to fire hazard. Should a fire occur in the natural vegetation or plantations adjacent to the road for any reason the Contractor shall immediately suppress it. In the event of any other fire emergency in the vicinity of the Works the Contractor shall render assistance to the civil authorities to the best of his ability. Areas of forest, scrub or plantation damaged by fire considered by the Engineer-in-Charge to have been initiated by the Contractor's staff or labour shall be replanted and otherwise restored to the satisfaction of the Engineer-in-Charge at the Contractor's expense.

132 TRANSPORT OF CONTRACTOR'S EQUIPMENT FOR TEMPORARY WORKS

Where the Contractor intends to use a particular route for the haulage of large quantities of materials he shall consult well in advance with any affected communities. The Engineer-in-Charge reserves the right to disallow certain haul routes should these in his opinion cause or be likely to cause unreasonable nuisance or hazards to the public. The Engineer-in-Charge's approval will not remove the Contractor's obligations under this Sub-Clause to prevent and repair damage to roads or his liability for compensation for any accidents caused by his vehicles. The contractor has to make the temporary roads at his own cost for execution for work as required.

133 CLEARANCE OF CONTRACTOR'S FACILITIES

On or before expiry of the Defects Liability, running and maintenance Period the Contractor shall clear away all his temporary facilities including but not limited to offices, camps, storage and holding yards, workshops, crushing and mixing plant, diversion and haul roads so that the land is returned to at least its previous condition and, in the case of agricultural land, potential productivity. Clearance shall include but not be limited to tasks such as the removal of unwanted structures, removal of metallic and concrete debris, removal and disposal of any soil contaminated by diesel, bitumen or other polluting material, ripping to relieve compaction, grading, replacement of topsoil, and turfing and grassing, as appropriate. Where improvements have been made such as land filling or installation of boreholes or Construction of boat landings these may be retained subject to the agreement of the landowner. The Engineer-in-Charge or his representative reserves the right to inspect the site of any facilities established or used by the Contractor in connection with the Works and to undertake any corrective measures necessary to restore the land, and to recover the cost from money due or to become due to the Contractor.

134 FAIR WAGES

- 134.1 The Contractor shall pay not less than fair wage/minimum wages to Labourers engaged by him on the work as revised from time to time by the Government of Madhya Pradesh, but the Government shall not be liable to pay anything extra for it except as stipulated in price adjustment clause of the Contract.
- 134.2 The Contractor shall, notwithstanding the provisions of any Contract to the contrary, cause to be paid fair wages to Labourers indirectly engaged on the work, including any labour engaged by his sub-Contractors in connection with the said work, as if the Labourers have been immediately or directly employed by him.
- 134.3 The Engineer shall have the right to deduct, from the money due to the Contractor, any sum required or estimated to be required for making good the loss suffered by a worker or workers by reasons of non-fulfillment of the conditions of the Contract for the benefit of the worker or workers, non-payment of wages or of deductions made there from, which are not justified by the terms of the Contract or as a result of non-observance of the aforesaid regulations.
- 134.4 The regulations, aforesaid, shall be deemed to be part of this Contract and any breach thereof, shall be deemed to be breach of the Contract.

135 INDEMNITY BOND:

Name of work:.....

I _____ contractor S/o. _____ aged _____ Resident of _____ do hereby bind myself to pay all the claims may come (a) under Workmen's Compensation Act. 1933 with any statutory modification thereof and rules there under or otherwise for or in respect of any damage or compensation payable in connection with any accident or injury sustained (b) under Minimum

wages Act 1948 (c) under payment of wages Act.1924 (d) under the Contractor labour (Regulation and Abolition) Act. 193.50 by workmen engaged for the performance of the business relating to the above contract i.e., failing such payment of claims of workmen engaged in the above work, I abide in accepting for the recovery of such claims, effected from any of my assets with the departments.

136 SALIENT FEATURES OF SOME MEDIUM LABOUR LAWS APPLICABLE TO ESTABLISHMENT ENGAGED IN BUILDINGS AND OTHER CONSTRUCTION WORK

- (a) Workmen compensation Act 1923: The Act provides for compensation in case if injury by accident arising out of and during the course of employment.
- (b) Payment of Gratuity Act 193.52: Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if any employee has completed 5 years' service or more, or on death, the rate of 15 days wages for every completed year of service. The Act is applicable to all establishments, employing 10 or more employees.
- (c) Employees P.F. and Miscellaneous provision Act 1952: The Act provides for monthly contributions by the Contractor plus workers @ 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 confinements or miscarriage etc.
- (e) Contract Labour (Regulation & Abolition) Act 193.50: 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 Contractor by Law. The Principal Contractor 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 Contractor if they employ 20 or more contract labour.
- (f) Minimum wages Act 1948: The Contractor is supposed 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 are scheduled employments.

- (g) Payment of wages Act 1924: 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 193.59: The Act provides for payment of equal wages for work of equal nature to Male or Female workers and for not making discrimination against Female employee in the matters of transfers, training and promotions etc.
- (i) Payment of Bonus Act 1965: The Act is applicable to all establishments employing 20 or more employees. The Act provides for payment of annual bonus subject to a minimum of 8.33% of wages and maximum of 20% of wages to employees drawing Rs. 3500/- per month or less. The bonus to be paid to employees getting Rs.2500/- per months or above and up to Rs.3500/- per month shall be worked out by taking wages as Rs.2500/- per monthly only. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
- (j) Industrial Disputes Act 1943.5: 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 100 or more workmen (employment size reduced by some of the State and Central Government to 50). The Act provides for laying down rules governing the conditions of employment by the Contractor on matters provided in the Act and get the same certified by the designated Authority.
- (l) Trade Unions Act 1926: The Act lays down the procedure for registration of trade unions of workmen and Contractor. 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 regulation of employment of children in all other occupations and processes; Employment Child Labour is prohibited in Building and Construction Industry.
- (n) Inter-State Migrant workmen's (Regulation of Employment & Conditions of service) Act 193.59: The Act applicable to an establishment, which employs 5 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 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 Contractor 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 Contractor 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 10 person or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

137. SAFETY AND ACCIDENT PREVENTION OFFICER

Due precautions shall be taken by the Contractor, at his own cost, to ensure the safety and protection against accidents of all staff and labour engaged on the Works, local residents in the vicinity of the Works, and the public travelling through the Works. The Contractor shall have on his staff on Site a designated officer qualified to promote and maintain safe working practices. This officer shall have authority to issue instructions and shall take protective measures to prevent accidents, including but not limited to the establishment of safe working practices and the training of staff and labour in their implementation.

138 PROTECTIVE CLOTHING AND FOOTWEAR

The Contractor shall, at his own expense, provide protective clothing and equipment to all staff and labour engaged on the Works to the satisfaction of the Engineer-in-Charge.

139 FIRST-AID SERVICES

The Contractor shall, at his own expense, provide first aid equipment at all camps and work sites to the satisfaction of the Engineer-in-Charge, and shall ensure that at all work sites where 50 or more persons are engaged on the Works there shall at all times be a person qualified in first-aid with access to appropriate first-aid equipment. A firstaid post shall be established at each base camp comprising a suitable room, appropriate medical supplies, and staff on a full-time basis.

150 HEALTH AND PESTS

The Contractor shall at his own expense and throughout the period of the Contract ensure that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements for his staff and labour, and shall comply with all the regulations and requirements of the local health authorities with respect to disease prevention and control. He shall warn his staff and labour of the dangers of communicable diseases including those transmitted by insects, water, fecal/oral contact and sexual activity. The Contractor shall take the precautions necessary to protect all staff and labour employed on the Site from insect nuisance, rats and other pests and minimize the dangers to health and the general nuisance caused by the same. Should malaria or other insect-borne diseases be prevalent in the area, he shall provide his staff and labour with suitable prophylactics, equip living accommodation with screens and bed-nets, and carry out spraying with approved insecticides, as appropriate.

141 SUPPLY OF DRINKING WATER, SANITATION

The Contractor shall so far as is reasonable, having regard to local conditions, provide on the Site and at his expense an adequate supply of drinking water for the use of Contractor's staff and work people, together with sanitary facilities.

142 FESTIVALS AND RELIGIOUS CUSTOMS

The Contractor shall in all dealings with labour in his employment have due regard to all recognized festivals, days of rest and religious or other customs.

143 EPIDEMICS

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities, for the purpose of dealing and overcoming the same.

144 ALCOHOLIC LIQUORS OR DRUGS

The Contractor shall not, otherwise than in accordance with the statutes, ordinances and government regulations orders for the time being in force, import, sell, give barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his Subcontractors, agents, staff or labour.

145 RECORDS OF LABOUR AND ACCIDENTS

The Contractor shall maintain full records of numbers, working hours and wages of labour, safety, health and welfare of persons, accidents, and damage to property such record has to be produced to Engineer-in-Charge on his demand.

146 SITE OFFICE FOR ENGINEER REPRESENTATIVES AND OTHER SUPERVISORY STAFF

The Contractor shall provide site office facilities for the Engineer-in-Charge and Supervisory Staff including Employer's Representative.

147 SITE ORDER BOOK

The Contractor shall maintain standard Site Order Books at the Site at all times during the execution of the Works for the use of the Engineer-in-Charge and the Contractor. All instructions issued by the Engineer-in-Charge to the Contractor shall be recorded in duplicate in the Site Order Book and shall be signed by the issuer and countersigned by the Contractor. After compliance with the instruction the Contractor shall record the same in the Site Order Book duly signed and countersigned by the Engineer-in-Charge. Acceptance of any part of the Works executed by the Contractor shall be subject to verification with respect to compliance of respective instructions of the Engineer-in-Charge through the Site Order Book. The Engineer-in-Charge shall retain the original copy of the site orders, while the Contractor shall retain the duplicate ones.

148 DISPLAY PANELS IN THE SITE OFFICE

The Contractor shall provide such charts and drawings as deemed appropriate to contract and index map, vicinity map, L-sections for all channels, drawings for the structures, important levels and BMs and facilities provided under the Contract. Such charts and drawings shall be mounted on a panel, protected with a glass cover, and affixed on to the wall(s) of the site office.

149 SUPPLY OF COLORED RECORD PHOTOGRAPHS

The contractor shall, at his own cost, arrange to take digital colour photographs of 13 mega pixel & above at various stages minimum one per week from four different locations / facets of the work including interesting and novel features of the work as directed by the engineer's representative and supply two copies of colour record photographs mounted in the albums including 2 sets of CD's with specification and these shall be kept by engineer-in-charge.

150 SUPPLY OF VIDEO CASSETTES

The Contractor shall, at his own cost, arrange for video recording of site before commencement and taking video film of important activities of the work as directed by the Engineer-in-Charge

during the execution of the project and editing them to a video film of playing time not less than 30 minutes and up to 60 minutes as directed by the Engineer-in-Charge and these shall be kept by the Engineer-in-Charge.

151 PUBLIC AWARENESS / INFORMATION DISPLAY

The Contractor shall, at his own cost, arrange and provide, erect and maintain necessary display boards / banners etc. at selected points of project site giving such information as considered necessary for public awareness / information / safety as directed by the Engineer-in-Charge.

152 REQUIREMENT OF LAND

Land for establishment of site office, field laboratory etc. shall be arranged by the Contractor..

153 SERVICES

- 153.1 Underground and overhead services met with during Construction are to be protected against damage by the Contractor at his own cost.
- 153.2 The contractor shall be required to carry out removal / shifting of existing utilities at his own cost. The contractor work program shall include any such activity. The work shall be carried out under supervision of concerned department. The contractor shall pay the supervision charges of the line agencies.

154 EXPLOSIVE AND FUEL STORAGE TANKS

No explosive shall be stored within ½ (half) KM of the limit of the camp sites. The storage of gasoline and other fuel oils or of Butane, Propane and other liquefied petroleum gases, shall conform to the regulations of Chhattisgarh State Government and Government of India. The tanks, above ground and having capacity in excess of 2000 liters, shall not be located within the camp area, nor within 200m, of any building.

- 155 LAYOUT OF MATERIALS STACKS:** 156.1 The contractor shall deposit materials for the purpose of the work on such parts only of the ground as may be approved by the Engineer-in-Charge before starting work. A detailed survey, clearly indicating position and areas where materials shall be stacked and sheds built is to be conducted by the contractor at his own cost and only after obtaining necessary approval of the plan for use of sites by the Engineer-in-Charge, the Contractor can use the sites accordingly.

156 USE OF BLASTING MATERIALS:

Procurement of blasting materials and its storage is the responsibility of the contractor. The contractor shall engage licensed blaster for blasting operation. The contractor is to act in accordance with Indian Explosive Act and other rules prevailing, during the execution of work. It

is the responsibility of the contractor to see, that works by other agencies in the vicinity are not hampered, in such cases if any claim is made by other agencies that should be borne by the contractor. Carriage of blasting materials, from the magazine to the work site, is the responsibility of the contractor.

157 PLANTS AND EQUIPMENT:

- 157.1 The contractor shall have sufficient plant, equipment and labour and shall work such hours and shifts as may be necessary to maintain the progress on the work as per the approved progress schedule.
- 157.2 It is to expressly and clearly understood that contractor shall make his own arrangements to equip himself with all machinery and special tools and plant for the speedy and proper execution of the work and the department does not undertake responsibility towards their supply.
- 157.3 The department shall supply such of the machinery that may be available on hire basis but their supply cannot be demanded as matter of right and no delay in progress can be attributed to such non-supply of the plant by the department and the department cannot be made liable for any damage to the contractor. The Contractor shall be responsible for safe custody of the departmental machinery supplied to him (which will be delivered to contractor at the machinery yard at site of work) and he has to make good all damages and losses if any and bring it to the conditions that existed at the time of issue to the contractor before handing over the same to the department. The hire charges for the machinery handed over to the contractor will be recovered.
- 157.4 The acceptance of departmental machinery on hire is optional to the contractor.

158 STEEL FORMS:

Steel forms should be used for all items involving use of centering and shuttering. They shall be such that the concrete surface obtained after removal of centering and shuttering shall be single plane without any dents and undulations and honeycombing

159 INCONVENIENCE TO PUBLIC:

The contractor shall not deposit materials at any site, which will cause inconvenience to public. The Engineer-in-Charge may direct the contractor to remove such materials or may undertake the job at the cost of the contractor.

160 ECOLOGICAL BALANCE:

- a. The contractor shall maintain ecological balance by preventing de-forestation, water pollution and defacing of natural landscape. The contractor shall so conduct his Construction operation as to prevent any unnecessary destruction, scarring, or defacing of the natural surroundings in the vicinity of the work. In respect of the ecological balance, Contractor shall observe the following instructions.
- (i) Where unnecessary destruction, scarring, damage or defacing may occur, as result of the operation, the same shall be repaired replanted or otherwise corrected at the contractor's expense. The contractor shall adopt precautions when using explosives, which will prevent scattering of rocks or other debris outside the work area. All work area including borrow areas shall be smoothened and graded in a manner to confirm to the natural appearances of the landscape as directed by the Engineer-in-Charge.
 - (ii) All trees and shrubbery which are not specifically required to be cleared or removed for Construction purposes shall be preserved and shall be protected from any damage that may be caused by the contractor's Construction operation and equipment. The removal of trees and shrubs will be permitted only after prior approval by the Engineer-in-Charge. Special care shall be exercised where trees or shrubs are exposed to injuries by Construction equipment, blasting, excavating, dumping, chemical damage or other operation and the contractor shall adequately protect such trees by use of protective barriers or other methods approval by the Engineer-in-Charge. Trees shall not be used for anchorages. The contractor shall be responsible for injuries to trees and shrubs caused by his operations.
 - (iii) The contractor's Construction activities shall be performed by methods that will present entrance or accidental spillage of solid matter contaminants, debris and other objectionable pollutants and wastage into river. Such pollutant and waste include earth and earth products, garbage, cement concrete, sewage effluent, industrial wastes, radioactive substances, mercury, oil and other petroleum products, aggregate processing, mineral salts and thermal pollution. Pollutants and wastes shall be disposed of in a manner and at sites approved by the Engineer-in-Charge.
 - (iv) In conduct of Construction activities and operation of equipment the contractor shall utilize such practicable methods and devices as are reasonably available to control, prevent and otherwise minimize the air pollution. The excessive omission of dust in to the atmosphere will not be permitted during the manufacture, handling and storage of concrete aggregates and the contractor shall use such methods and Equipment as a

necessary for collection and disposal or prevention of dust during this operation. The contractor's methods of storing and handling cement shall also include means of eliminating atmospheric discharges of dust, equipment and vehicles that give objectionable omission of exhaust gases shall not be operated. Burning of materials resulting from clearing of trees, bushes, combustible Construction materials and rubbish may be permitted only when atmospheric conditions for burning are considered favourable.

- b. Separate payment will not be made for complying with the provisions of this clause and all cost shall be deemed to have been included in the bid price. If any provision is not complied with, the Contractor will be responsible for payment of penalties and/or any action taken by the concerned competent authority.

161 PRESERVATION OF EXISTING VEGETATION

- 161.1 The contractor will preserve and protect all existing vegetation such as trees, on or adjacent to the site which do not unreasonably interfere with the Construction as may be determined by the Engineer-in-Charge. The contractor will be held responsible for all unauthorized cutting or damage of trees, including damage due to careless operation of equipment, stockpiling of materials or tracking of grass areas by equipment. Care shall be taken by the Contractor in felling trees authorized for removal to avoid any unnecessary damages to vegetation and tress that are to remain in place and to structures under Construction or in existence and to workmen.
- 161.2 All the produce from such cutting of trees by the contractor shall remain the property of Government and shall be properly stacked at site, approved by the Engineer-in-Charge. No payment whatsoever shall be made for such cutting and its stacking by the Contractor.
- 161.3 The contractor shall also make arrangements of fuel deposits for supply of required fuel for the labourer to be employed for cooking purpose at his own cost in order to prevent destruction of vegetation growth in the surrounding area of the work site.

162 POSSESSION PRIOR TO COMPLETION

The Engineer-in-charge shall have the right to take possession of or use any completed part of work or works or any part thereof under Construction either temporarily or permanently. Such possession or use shall not be deemed as an acceptance of any work either completed or not completed.

163 DRAWING TO BE KEPT AT SITE

One copy of the drawings furnished shall be kept by the contractor on the site and the same shall at all reasonable time be available for inspection and use by the Engineer-in-Charge and the Engineer-in-Charge's representative and by any other persons authorized by the Engineer-in-Charge.

164 B.I.S. [I.S.I.] BOOKS AND QAQC MANUAL TO BE KEPT AT SITE

A complete set of Indian Standard Codes and IRC codes referred to in "Technical Specifications" and QAQC manuals shall be kept at site for reference. In addition to the foregoing any other IS Codes, IRC codes, Technical Books, Technical Manuals, Technical Literatures, Codes of foreign countries requested by the Engineer – in – Charge shall be procured by the Contractor and kept at site office for reference. All the foregoing shall also be supplied in 3 sets to the Engineer-in-Charge.

165 CARE AND DIVERSION OF RIVER/STREAM:

The contractor shall submit details regarding the diversion and care of river or stream during Construction of the work along with a separate print-out of the time table showing earliest and latest start and finish dates of various activities. He should submit a detailed layout plan with drawings for the diversion and care of river during Construction of work. The above arrangements shall be at contractor's cost.

166. DRINKING WATER

Water of good quality fit for drinking purpose shall be provided for the working people.

Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage tank where such drinking water shall be stored.

Every water supply storage shall be at a distance of not less than 15 m from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking.

Washing and bathing places: Adequate washing and bathing place shall be provided separately for men and women such places shall be kept in clean and drained conditions, bathing and washing should not be allowed in or near any drinking water well.

167 LATRINES AND URINALS

167.1 1 Latrines and Urinals shall be provided within the premises of every work place, latrines and urinal in an accessible place and the accommodation separately for each of them shall be on the following scale.

Seats

- | | | |
|----|---|---|
| 1. | Where the number of persons employed does not exceed 50 | 2 |
| 2. | Where the numbers of persons employed exceed 50 but less than 100 | 3 |
| 3. | For every additional 100 | 3 |

167.2 If women are employed, separate latrines and urinals, screened from those for men shall be provided on the same scale. Except in work places provided with water flushed latrines connected with a water borne sewage system, all latrines shall be cleaned at least four times daily. The excreta from the latrines shall be disposed of at the contractor's expenses in out of way pits approved by the local public health authority. The contractor shall also employ adequate number of scavengers and conserve staff to keep the latrines and urinal in a clean condition which shall be cleaned at least four times daily.

167.3 Rest Shelters: At the work site rest shelter shall be provided free of cost. Two suitable sheds one for meals and the other for use of labour shall be provided.

167.4 Crèches: At every work place at which 50 or more women workers are ordinarily employed there shall be provided two huts of suitable size for the use of children under the age of 6 years belonging to such women one hut shall be used for important games and play and other as their bed rooms. The hut shall not be constructed on lower standards than the following.

1. Thatched roof.
2. Mud floors and walls.
3. Planks spread over the mud floor and covered with matting. The use of the huts shall be restricted to children, their attendants and mothers of the Children.

168 CANTEENS

A cooked food canteen on a moderate scale shall be provided for the benefit of workers, if it is considered essential.

169 SHEDS FOR WORKMEN

169.1 The contractor shall provide at his own expense sheds for housing the workmen. The shed shall be on a standard not less than cheap shelter type to live in which the work people in the locality are accustomed to a floor area of about 2m x 1.5m per two persons shall be provided. The sheds are to be in rows with 12.5m clear space between sheds and 19m clear space between rows if conditions permit. The work people's camp shall be laid in units of 500 persons each unit to have a clear space of 12m all round.

169.2 Land should be acquired temporarily for storing contractor's materials or for his staff. The contractor should make his own arrangements for temporary acquisition of land required for storing his materials and for housing of this staff at his expenses.

169.3 SUPPLY OF CONSTRUCTION MATERIALS

- i) The contractor has to make his own arrangements for procurements, supply and use of Construction materials.
- ii) All materials so procured should confirm to the relevant specifications indicated in the bidding documents.
- iii) The contractor shall make his own arrangements for adequate storage of the materials.

VOLUME-II**SECTION III****PART –B PRICE PROPOSAL, AGREEMENT FORM TENDER FOR A TURNKEY CONTRACT,
(PRICE TO QUOTE ONLINE ONLY IN PRESCRIBED FORMAT)**

Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block -Patharia ,Dist. -Mungeli in **160 Ha.** in **kharif (Right side of KHAIRI Anicut** as indicated in Index Map), out of total gross command area **270 hectare** fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of **KHAIRI** Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for **Solar pumps with solar panel** of **100 KWp**.It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system , SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.

According to the specifications and terms and conditions of the contract for the sum **as quoted in Online following format.**

HTML Schedule-B

Department: Water Resources Department

Tender Number: WRD/ TENDER ID -----

Line Number:

Vendor:

Description	Amount for proposed works in Rs. (In Figures)	Amount for proposed works in Rs. (In words)
Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block -Patharia ,Dist. -Mungeli in 160 Ha. in kharif (Right side of KHAIRI Anicut as indicated in Index Map), out of total gross command area 270 hectare fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of KHAIRI Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for Solar pumps with solar panel of 100 KWp. It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system, SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.		

Tenderer Signature

Address

The above tender is hereby accepted by me on behalf of the Governor of Chhattisgarh for
Rs..... and Rs.(in word) The
..... 201

Signature of Authority
By whom tender is accepted

SECURITIES

Name	Address	Occupation or Profession	Remarks

FORM OF CONTRACT AGREEMENT

This Agreement made this day of 20 between

_____ (C.G.), of
_____ (hereinafter called "the Engineer-in-Charge being an Employer's Representative") of the
one part and _____ of _____ (hereinafter called "the Contractor") of the other part.

Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block -Patharia ,Dist. -Mungeli in **160 Ha. in kharif (Right side of KHAIRI Anicut** as indicated in Index Map), out of total gross command area **270 hectare** fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of **KHAIRI** Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for **Solar pumps with solar panel of 100 KWp**. It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system , SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.

. Should be designed and executed by the Contractor, and has accepted a Bid of the Contractor for the Engineering Procurement and construction of Works and the remedying of any defects therein.

1. The Employer and the Contractor agree as follows: 1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement:

- a. The Letter of Acceptance dated _____
- b. The Addenda nos. _____
- c. Tender document for Turnkey contract with Price proposal (Volume II)
- d. Drawing's and Design Parameter's, Specifications, Quality Control,

3. In consideration of the payments to be made by the Employer to the Contractor as here in after mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works trial run and commissioning of the system and remedying any defects therein in conformity in all respects with the provisions of the Contract.
4. The Employer hereby covenants to pay the Contractor, in consideration of the execution and completion of the Works and the remedying of defects therein, the 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.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first before written in accordance with their respective laws.

Authorized signature of Contractor

Authorized signature of Employer

SEAL

(if any)

(if any)

in the presence of:	in the presence of:
Name _____	Name _____
Signature _____	Signature _____
Address _____	Address _____

Volume - II**Section IV- Special Conditions of Contract****GENERAL**

- 1.1 The data and information given in the Contract Document are based on the investigations, planning and designs carried out so far. The data considered for the project planning have been included in the bid documents. The Contractor shall, therefore, satisfy himself about the adequacy and accuracy of the said data/information and interpretation thereof and collect fresh data/additional data/information and carry out/conduct further investigations and studies. The Employer shall not be responsible for the accuracy/adequacy of the data/information and interpretation thereof by the Contractor.

2 SUFFICIENCY OF BID

- 2.1 The Contractor shall be deemed to have visited and carefully examined the Project Site and its surrounding to have satisfied himself to the nature and conditions of the means of transport and communications, whether by land or air, as available at present and as to possible interruptions thereto including the access and regress conditions for the Site. The Contractor is also deemed to have made enquiries, examined and satisfied himself as to the sites source for obtaining sand, stones, moorum and other materials, the sites for disposal of surplus materials and accommodation for depots, colonies, workshops and other infrastructure facilities as may be necessary for executing and completing the Works, as also the sub-soil water and variations thereof, storms, prevailing winds, climatic conditions and all other similar matters affecting the works including law & order.
- 2.2 Any neglect or omission or failure on the part of the Contractor in obtaining necessary and reliable information upon the foregoing or any other matter affecting the Contract shall not relieve him from any risks or liabilities or the entire responsibility for the completion of the Works in accordance with the Contract.
- 2.3 No verbal agreement or inference from conversation with any officer or employee of the Employer either before or after the signing of the Contract shall in any way affect or modify any of the terms or obligations herein contained. The Contractor shall also be deemed to have inspected and examined the Site and to have satisfied himself, before submitting his Bid, as to the form and nature thereof including the sub-surface conditions and other local conditions, the hydrological, geological and climatic conditions, the extent and nature of work and materials necessary for the completion of the Works, the means of access to the Site and the land for accommodation etc. he may require and, in general, shall be deemed to have obtained all necessary information, as to risks, contingencies and all other circumstances which may influence or affect his Bid.

3 MAJOR COMPONENTS AND BASIC PARAMETERS

- 3.1 Major component: The major components under this Turn Key Tender as proposed, along with the basic project design parameter fixed by the Employer are indicated below:-

Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block -Patharia ,Dist. - Mungeli in 160 Ha. in kharif (Right side of KHAIRI Anicut as indicated in Index Map), out of total gross command area 270 hectare fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of KHAIRI Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for Solar pumps with solar panel of 100 KWp. It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system , SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.	Proposed as per investigation and designs
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- 3.2 Basic pipe network Parameters

For Basic Parameters pertaining to the Contract refer Volume-1,2 and 3.

4 SCOPE OF WORK

4.1 General

1. The detailed scope of work as defined in section II detailed NIT is part of this section.
2. The major components of works to be executed by the contractor under this contract shall be as described section - wise as 3.1 above. Execution of all these works shall include all Construction plant / equipment and materials indigenous or imported, survey, investigation, survey equipment, studies and all services and facilities required for completion of the work.
3. Any requirements of work whether requested by the Employer or otherwise and whether specifically described in the Contract or not but are necessary or required for the proper completion and

functioning of the Works in accordance with the Contract including remedying of any gaps and deficiencies in the Works shall not be deemed to be considered as any change in the Scope of Work and shall not entitle the contractor for any extra payment.

4.2 Obligations prior to commencement of Works

4.2.1 Within 10(ten) days of the Agreement Date, the Contractor shall:

- (a) Appoint its representative, duly authorized to deal with the Engineer in respect of all matters under or arising out of or relating to this Agreement;
- (b) Appoint a "Design Consultant" who will head the Contractor's design unit and shall be responsible for surveys, investigations, collection of data, and preparation of preliminary and detailed designs;
- (c) Undertake and perform all such acts, deeds and things as may be necessary or required before commencement of Works under and in accordance with this Agreement, the Applicable Laws and Applicable Permits; and
- (d) Make its own arrangements for quarrying of materials needed for the construction works under and in accordance with the Applicable Laws and Applicable Permits..

4.2.2 Within 30 (thirty) days of the Agreement Date, the Contractor shall submit to the Engineer a programme (the "Programme") for the Works, developed using networking techniques giving the following details:

Part I Contractor's organization for the Project, the general methods and arrangements for design and construction, environmental management plan, Quality Assurance Plan including design quality plan and safety plan covering safety of users and workers during construction, Contractor's key personnel and equipment.

Part II Any Revision in sequence of Programme for completion of all stages of procurement and construction and Project Milestones of the Works as specified under contract. This Programme shall include:

- (a) The order in which the Contractor intends to carry out the Works, including the anticipated timing of design and stages of Works;
- (b) The periods for reviews under Clause 8.5.1;
- (c) The detail testing procedure for all electrical, mechanical & electronic equipments and machine such as pumps, motors, transformers, panels as per concerned IS codes, manufacturers recommendation etc with timing of inspections and tests for different items of works /components under the contract Part III Monthly cash flow forecast.

4.2.3 In respect of the Contractor's obligations with respect to the design and Drawings of the Pressurized Irrigation System the following shall apply:

- (a) The Contractor shall prepare and submit, with reasonable promptness and in such sequence as is consistent with the Project Completion Schedule, three copies each of the design and drawings, duly certified by the "Design Consultant", to the Engineer.
- (b) by submitting the Design Drawings for approval, the Contractor shall be deemed to have represented that it has determined and verified that the design and engineering, including field

construction criteria related thereto, are in conformity with the Scope of the Project, the Specifications and Standards and the Applicable Laws;

- (c) within 30 (thirty) days of the receipt of the Design & Drawings, the Engineer or his authorized Design Organization shall review the same and convey its observations to the Contractor with particular reference to their conformity or otherwise with the Scope of the Project and the Specifications and Standards.
- (d) if the aforesaid observations of the Engineer indicate that the Design & Drawings are not in conformity with the Scope of the Project or the Specifications and Standards, such Drawings shall be promptly revised by the Contractor in conformity with the provisions of this Agreement and resubmitted to the Engineer or his authorized Design Organization, for review. Design Consultant or his representative shall regularly attend Engineer's office or the design organization authorized by him and seeks approval within 10 days.
- (e) In the event the Contractor fails to revise and resubmit such Design & Drawings to the Engineer, for review as aforesaid, then he may direct Engineer-In-Charge to withhold the payment for the affected works, till observations are compiled and design and drawing are found acceptable.
- (e) However, no review and/or observation of the Engineer, and/or its failure to review and/or convey its observations on any Drawings shall relieve the Contractor of its obligations and liabilities under this Agreement in any manner nor shall the CG WRD be liable for the same in any manner; and if errors, omissions, ambiguities, inconsistencies, inadequacies or other Defects are found in the Design & Drawings, they and the construction works shall be corrected at the Contractor's cost.
- (f) The Contractor shall be responsible for delays in submitting the Design & Drawing as set forth, caused by reason of delays in surveys and field investigations, and shall not be entitled to seek any relief in that regard under this agreement.

4.2.4 Any cost or delay in construction arising from review by the Engineer or his authorized design organization shall be borne by the Contractor.

4.2.5 **Works shall be executed in accordance with the Drawings approved by the Engineer, Such Drawings shall not be amended or altered without prior written notice to the Engineer.**

4.3 Section (I) – Survey and Detailed Investigation

1. The Contractor shall carry out surveys and detailed investigation required for the submergence area under this Contract as per the I.S. Codes, CWC manuals, Standards, Guidelines, Circulars of the Department issued from time to time. This shall not entitle the

contractor to additional cost whatsoever other than the contract price. The total scope of services shall be as per Appendix SI, submergence area and all surveys is to be carried as far as possible by the Total Station and the values shall be connected to GTS and shall be with GIS referencing.

4.4 Design and Drawing

4.4.1 The total scope of services under this section shall be as per Appendix P-1. The number of copies of the Reports and other Documents to be submitted to the Engineer-in-Charge by the contractor is also specified in Contract Document.

4.4.2 Data and information related to the Project have been furnished in the bid documents. All additional survey, investigation and testing data and any other data relevant to design shall be collected by the Contractor without any financial burden to the Employer.

4.5 Civil Works

The scope of work under this section covers provision of all labor, plant and materials for and execution of all civil works, complete in all respect, as described in conditions of contract and Technical Specifications of Bid Documents including incidentals and all necessary protective works not shown or specified but reasonably implied or necessary for the proper completion and functioning of the Works in accordance with the contract including any amendments thereof.

4.6 Transformers, control panels, Pumps, valves and other electro - mechanical parts

The scope of work under this section covers provision of all labour, plant and materials for fixing and execution of all Electro-mechanical works i.e., Gates, including electro-mechanical, embedded Parts and hoisting arrangements complete in all respect, as per Technical Specifications of Bid Documents including incidentals and all necessary works not shown or specified but reasonably implied or necessary for the proper completion and functioning of the Works in accordance with the contract including any amendments thereof. Supply of gates i/c hoisting arrangement and E&M parts are also included in the scope of work. These shall be executed under supervision of CMU of department.

4.3.5 Completion Drawings

Within 90 (ninety) days of the Completion Date of major components as shown in appendix F the Contractor shall furnish to the Engineer-In-Charge a complete set of as-built Drawings, in 2 (two) hardcopies and in AUTO-CAD format or in such other medium as directed by Engineer-In-Charge, reflecting the works as actually designed, engineered and constructed, including an as built survey illustrating the layout of the completed system.

4.8 Operation & Maintenance Manual

No later than 90 (Ninety) days prior to the Completion Date of Construction Works under contract or in case of partial completion and start of operation of system within contract period, the Contractor shall, in consultation with the Engineer, evolve a operation and maintenance manual (the “Operation & Maintenance Manual”) conforming to operation & maintenance requirements for pressurized micro irrigation system (PMIS) as appended in vol. III for the regular and preventive maintenance of the Pressurized Irrigation System in conformity with the Specifications and Standards, safety requirements and Good Industry Practice, and shall provide 5 (five) copies thereof to the Engineer. The Engineer, shall review the Operation & Maintenance Manual within 15 (fifteen) days and communicate its comments to the Contractor for necessary modifications, if any.

4.9 Maintenance during Construction

During the Construction Period, the Contractor shall maintain, at its cost, all the constructed structure, installed equipments& machinery and shall undertake the all necessary repair and maintenance works.

4.10 Trial run and Commissioning

The scope of work under this section shall be as per the terms and conditions provided in Appendix – O&M.

5 TESTS AND QUALITY CONTROL

The Contractor shall be required to carry out all tests in accordance with relevant Clauses of the Conditions of contracts and the Technical Specifications & as per I.S. codes. Employer’s authorized representative shall have at all reasonable times access to the site and shall have the power to inspect and examine the materials and workmanship of the works during execution.

5.1 Employer’s authorized representative and/or an outside inspection agency acting on behalf of the Employer shall have access to the site and shall have the power to inspect and examine all works, the materials and workmanship of the project works, during execution. The Contractor shall provide necessary labours tools, scaffolding or any other assistance as desired by the Employer’s authorized representative without any extra payment.

5.2 Where the field quality assurance plan provided for witnessing tests/inspection on behalf of the Engineer, the Contractor shall give the Engineer-in-Charge adequate written notice of any inspections/tests.

5.2.1 Where the Engineer or his Representative attends the tests as provided in clause 5.2 above, and has any objection to any works or workmanship which in his opinion is not in accordance with the Contract he shall advise the Contractor of his objection during tests/inspections. The Contractor shall give due consideration to such objections and shall make modifications that may be necessary to meet the said objective.

- 5.2.2 The inspection/tests by Engineer/ Engineer's Representative/Agency and/or his countersigning inspection/test certificate(s) thereon shall in no way limit the liabilities and responsibilities, of the Contractor as stipulated in the Contract.
- 5.2.3 The Contractor shall maintain and record all measurements and test results and submit the same to the Employer after completion of such inspection/tests.

6 MEASUREMENTS AND PAYMENTS

- 6.1 The Contractor is entitled for interim payment under various sections of the work in accordance with Clause 107 of the General Conditions of Contract. Measurement / verification for interim payment certificate of various items, under various sections of the works, shall be made jointly by the Engineer-in Charge or his Subordinate Staff and the Contractor or his authorized representative for verifying the claims of the Contractor's interim payment/running bills.
- 6.2 All items having a financial value shall be measured in the manner as prescribed in specification by the contractor and verified by the Engineer-in-Charge so that a complete record is maintained of all work performed under the Contract.
- 6.3 Measurement shall be signed and dated by both parties on the Site. If there is any dispute in any of the measurements a note to the effect shall be made in the measurement record against the disputed items and such note shall be signed and dated by both parties engaged in taking the measurements and the Parties shall discuss and resolve the same in accordance with relevant clauses of the contract.

7. Supplementary Requirements

7.1 General

The following parts of this Section shall be read in conjunction with the Section III: Conditions of Contract, and Section IV: Special Condition of Contract. The following Clauses shall supplement the provisions of the corresponding clauses of Section III and IV and whenever there is a conflict, the provisions herein shall prevail over those in Section III.

7.2 Drawings and Designs:

The Contractor shall formulate submission of proposals for alignment approval, design and drawings and estimates for earthwork, inline structures according to the powers vested with various departmental officers for approval. Contractor shall supply to the Engineer-in-Charge 6 (six) copies and each of the design calculations and drawings for approval. The Contractor shall incorporate all necessary comments of the Engineer's Representative in the above design and drawings, if any, and shall re-submit further 6 (six) copies each of the revised design and drawings within 10 (ten) days for final approval. The Contractor shall thereafter submit 10 (Ten)

copies each of the approved design and 10 (Ten) copies each of the approved drawings together with one copy each of the reproducible tracings to Engineer-in-Charge. Further design calculations and drawings shall be submitted in sequence as per a schedule to be drawn and agreed upon mutually.

The documents and drawings shall be in sufficient detail for review. The scale of the drawing has to be chosen in coordination with the Engineer-in-Charge. The drawings shall be of standardized sizes and as instructed by the Engineer-in-Charge. The drawings shall contain the following basic information in the nameplate:

- a) Project name
- b) Name and number of the Contract
- c) Contractor's name
- d) Number and title of the drawing
- e) Date and scale
- f) Draftsman's name and signature h. Name of the designer responsible and signature
- i. Revision Number (R0 for drawing submitted initially and R1, R2, etc., for drawings submitted subsequently).
- j. Name and designation of checking official and space for signature.
- k. Approving authorities name and designation as specified by the Engineer-in-Charge and space for the signature.

A blank space 90 x 50 mm shall be provided immediately above the title block for the approval stamp. If required, the detailed design and the execution drawings shall be submitted only after verification by the Consultant(s) approved by the Engineer

The Contractor shall be responsible for preparation of working drawings and the Construction documents for works, as specified in the Contract. The procedure for submission and approval of drawings shall be as stated in volume II, Section III, and the Contractor's work program shall include such submission and approval procedure.

Drawings given, listed and indexed are indicative, but will form part of the contract.

The contractor shall carry out alignment studies including cost economics by examining all possible alternatives to prepare detailed layout, designs and drawings of all components of the work stated in scope of work.

The contractor shall use guidelines in the relevant IS codes, IRC publications and circulars issued by the department from time to time for various components of the works.

All the studies, layout drawings and modifications if required to be prepared for taking up execution of the work, shall be prepared by the contractor and shall be got approved from the competent authority.

The contractor will have to submit detailed drawings of each component with appropriate scales, measurements, RL's, full dimensions, index map locations of components such as godown, dumping area, internal roads, etc.,

The contractor is expected to organize his work to the best of his knowledge so that final draft of various types of designs and layouts will be submitted to competent authority within stipulated time period.

All the studies layouts, drawings, design notes, which have been submitted to the department, shall become the absolute property of department under the copy right act and the contractor shall not use the same in whole or part thereof elsewhere for any purpose without explicit written permission from the department.

In all difference of opinion on technical matters between the contractor and the Engineer-in-Charge, the decision given by the Engineer shall be final and binding on the contractor.

7.3 CONTRACTOR'S WORK PROGRAMME

- 7.3.1 Within 30 (Thirty) days from the Date of Commencement, the Contractor shall submit to the Employer a work programme showing the sequence in which he proposes to carry out various components for completing the Works as per the Master Control Network within the TIME FOR Completion. The Master Control Network shall indicate the sequence of various activities and highlight the critical activities including delivery of equipment. Such work programme shall be subject to review and revision by the Employer/Engineer in consultation with the Contractor from time to time in order to achieve completion of the Works within the TIME FOR Completion. The contractor shall also make it in computer aided project management software to generate Bar Chart based on network technique.
- 7.3.2 The contractor shall also submit to the Employer/Engineer the information on detailed methodology of carrying out investigation surveys, design engineering, detailed Construction methodology along with schedule for deployment of plant & machineries, which shall successively be adjusted in order to meet the actual requirement to complete the works within the Time for Completion along with the work programme.
- 7.3.3 Work of pipe network shall be taken up at least Four separate locations / section simultaneously; so that the work can be completed within time for completion.
- 7.3.4 Effort should be made to complete the whole work along the alignment of the pipe network.
- 7.4 Action when the progress of any crucial item of work is unsatisfactory
If the progress of a crucial item of work, which is important for timely completion of work is unsatisfactory, the Engineer-in-Charge, shall notwithstanding, that the general progress of work is satisfactory, in accordance with relevant clause be entitled to take action under this clause after giving the contractor 7days notice in writing and the contractor will have no claim for compensation for any loss sustained by owing to such action.

7.5 PROGRAMME – SCHEDULING / RE-SCHEDULING

7.5.1 The Works shall be executed and performed in accordance with the Master Control Network (Work Programme) which shall clearly indicate the interlinking / interdependencies of all the works of the Contract including relative activities of Civil Works and Hydro-Mechanical Works. The Programme shall be reviewed jointly by the Employer/ Engineer and the Contractor, at least once in a month where-in the hold ups/delays, if any, in the progress of Works, with reference to the agreed Schedule shall be given

Special Attention. Necessary modifications (updating / Revisions) of the Programme, within the overall Time for Completion, shall be carried out by mutual agreement between the Employer/ Engineer and the Contractor.

7.5.2 If for any reason, any parts of the Works of the Project are delayed, then the total programme may be rescheduled by mutual agreement between the Employer/ Engineer and the Contractor, if necessary, keeping the overall completion schedule of the project unaltered. No extra cost whatsoever, on account of such re-scheduling shall be payable to the contractor.

7.5.3 Progress Report

The Contractor shall submit to the Engineer, Engineer's Representative and Engineer-in-Charge monthly progress report by 5th day of following months in such form and details as prescribed.

7.6 Inspection and tests:

Except as otherwise provided all materials and workmanship. If not otherwise designated by the specifications shall be subject to inspection, examination and test by the Engineer-in-Charge at any and all times during manufacture and/or Construction and at any/all places where such manufacture or Construction are carried on. The Engineer-in-Charge shall have the right to reject defective material and workmanship or require its corrections. Rejected workmanship shall be satisfactorily replaced with proper material without charge thereof and the contractor shall properly segregate and remove the rejected material from the premises, if the contractor fails to proceed at once with the replacement of the rejected material and / or the Construction of defective workmanship, the Engineer-in-Charge may replace such material and / or correct such workmanship and charge the cost thereof to the contractor.

The Contractor shall be liable for replacement of defective work up to the time in accordance with the conditions of contract of all work to be done under the contract.

The contractor shall furnish promptly without additional charge all facilities, labour and material necessary for the safe and convenient inspection and tests that may be required by the Engineer-in-Charge.

All inspections and tests by the department shall be performed in such a manner as not to unnecessarily delay the work. Special full size and performance test shall be charged with any additional cost of inspection when the contractor does not make materials and workmanship ready at the time of inspection.

7.7 Damage to Works

The works whether fully completed or incomplete, all the works materials, machinery, plants, tools, temporary buildings and other things connected there with shall remain at the risk and in the sole charge of the contractor until whole of the completed work under the Contract has been delivered to the Engineer-in-Charge. Until such delivery of the entire completed work the contractor shall at his own cost take all precautions reasonably to keep all the aforesaid works, materials, machinery, plants, temporary buildings and other things connected there with free from any loss or damage and in the event of the same or any part thereof being lost or damaged, he shall forth with reinstate and make good such loss or damage at his own cost.

7.8 Examination and tests on Completion:-

On the completion of the work the Engineer-in-Charge shall make such examination and tests of the work as may then seem to him possible, necessary or desirable, and the contractor shall furnish free of cost any materials and labour which may be necessary thereof, and shall facilitate in every way all operations required by the Engineer-in-Charge, in making examination and tests.

7.9 Haul Roads

The Contractor will have to make the work sites accessible to the departmental officers for inspection by way of constructing/maintaining all weather roads /approaches and haul roads the cost of which shall be borne by the Contractor.

7.10 Layout of Construction of road

The Contractor shall have to submit detailed plan to the Engineer-in-Charge showing the layout of the work site, roads and approach roads proposed by him, before he starts the actual work. Such a road layout road plan will be scrutinized by the Engineer-in-Charge and any modifications suggested by him shall be binding on the contractor. If it is decided by the Engineer-in-Charge to have some of the roads proposed by the Contractor as common road for common use of department and other contractors or convenient and for compact and planned layout of work site, the Contractor will be bound to construct them and allow them to be used simultaneously by other Contractors and departments. In case of disputes, the decision of the Engineer-in-Charge shall be final and the binding on the Contractor.

8.0 REGULATIONS AND BYE-LAWS:

The contractor shall conform to the regulation, bye-laws, any other statutory rules made by any local Authorities or by the Government and shall protect and indemnify Government against any claim or liability arising from or based on the violation of any such laws, ordinance,, regulations, orders, decrees, etc.,

9 PASSING OF FOUNDATION, CENTERING, REINFORCEMENT ETC.,

After the completion of the work of excavation, the same will be checked and passed by the competent authority. No masonry or concrete or back filling shall be laid unless the foundations are so passed. No concreting shall commence, unless the centering and the reinforcement is checked and passed by the Engineer-in-charge.

10 SIGNING FIELD BOOKS, LONGITUDINAL SECTIONS, CROSS- SECTIONS AND MEASUREMENT BOOKS

Before starting the work, and at the end before the work is covered, levels for plotting the longitudinal sections (along the axis as decided by Engineer-in- Charge or his authorized representative) and cross section of the portion of the work shall be taken by authorized Engineer of the contractor in the presence of the Engineer-in-Charge or his authorized representative and the same shall have to be got attested from the Engineer-in-Charge or his authorized representative in token of acceptance.

If the contractor fails to take measurements and sign them, then the measurements recorded by the Engineer-in-charge, or his authorized representative in the authorized books shall be final and binding on the contractor. For this purpose, suitable date or dates shall be fixed by the Engineer-in-Charge and intimated to the contractor. If the contractor, or his duly – authorized agent fails to attend on the appointed date or dates, the levels and measurements shall be taken in his absence and such levels and measurements and longitudinal sections and cross sections based there on shall be final and binding on the Contractor. The levels will be taken on such alignments and cross sections as will be useful for reference permanently. The point of the locations for the levels will depend upon the roughness of the area and will also be at least in conformity with the requirement of specifications for “Excavation” as far as possible.

The similar procedure for record measurements shall hold good for all other items and activities involved in execution of the work. All the levels/measurements shall be recorded by the Engineer-in-Charge or his authorized representatives in the authorized level / measurement books.

11 QUALITY CONTROL

The contractor shall produce results of quality control tests carried out on the works by his staff and the quality audit conducted by the department or by Engineer’s Representative on these works. If the test result do not fulfil the stipulated criteria laid down in specifications the payment will be limited as per the provisions in the specification(s) and if number of results fail beyond

the limit of acceptance, then the contractor shall not be paid unless he rectified all such imperfect work(s). The decision of the Engineer-in-Charge in respect of the matters pertaining to the quality control shall be final and binding on the Contractor.

12 CLEANING UP:

- a. The Contractor shall at all-time keep the Construction areas and his colony and storage free from accumulation of waste or rejected materials.
- b. Prior to the completion of the work, the Contractor shall remove all rubbish from and around the premises and all tools, scaffolding equipment and material which are not part of permanent structures executed or otherwise asked for or as provided under any other Clauses of this contract, the premises will be left in a manner fully satisfactory to the Engineer-in-Charge.

13 COMMUNICATIONS AND NOTICES BY CONTRACTORS:

All communication and or notices pertaining to works and concerning matters, such as passing and approving of foundation, reinforcement, and form work, measurements, mark outs, etc. shall not be addressed by the Contractor to an officer not below the rank of Executive Engineer. All such notices communications, etc. shall be addressed in good time so as not to hold up the work.

14 COMPENSATION FOR DELAY BY DEPARTMENT IN APPROVAL OF DESIGN DRAWING

The contractor shall not be entitled to claim any compensation from department for the loss suffered by him on account of delay by department in approval of design drawing, approval to foundation approval of alignment etc. However this may be considered for grant of time extension.

15 WORKS TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, ORDERS ETC.,

The Contractor shall execute the whole and every part of the work in the most substantial and workmen like manner and both as regards materials and otherwise in every respect in strict accordance with specifications. The Contractor shall also confirm exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer or Engineer-in-Charge and lodged in his office, and to which the contractor shall be entitled to have access at such office or on the site of the work for the purpose of inspection during office hours, and the contractor shall if he so requires, be entitled at his own expense to make or cause to be made copies of specifications and of all such designs, drawings and instructions as aforesaid.

16 ALTERATIONS IN SPECIFICATIONS AND DESIGNS

Only competent authority for approval shall have power to make any alterations in, or omissions from, addition to, or substitutions for the original specifications and approved drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the

work and the contractor shall be bound to carry out the work in accordance with any instruction which may be given to him in writing signed by the Engineer or The Engineer-in-Charge and such alterations omissions, 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 agreed to do the main work and at the same Bided cost.

17 TIME LIMIT FOR UNFORESEEN CLAIMS

Under no circumstances whatsoever, shall the Contractor be entitled to any compensation from Government on any account unless the Contractor shall have submitted claim in writing to the Engineer-in-Charge within forty five days of cause of such claim occurring.

18 RECOVERY OF DUES FROM THE CONTRACTOR

Whenever any claim, against the Contractor for the payment of a sum of money arises out of or under the Contract. Government shall be entitled to recover such sum by appropriating, in part or whole, the Security deposit and performance security deposit of the Contractor and to sell any Government promissory notes etc., forming the whole or part of such security. In the event of the security being insufficient or if no security has been taken from the Contractor, then the balance or the total sum recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other contract with Government. Should this sum be not sufficient to cover the full amount recoverable from the Contractor then it shall be recovered from him as arrears of land revenue.

19 WORKS TO BE OPEN FOR INSPECTION

All works, under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer-in-Charge and his subordinates and the contractor shall at all times during the usual working hours and at all other times at which reasonable notice of the intention of Engineer-in-Charge or Executive Engineer-in-Charge or his subordinate to visit the work shall have been given to the contractor either he himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

20 NOTICE TO BE GIVEN BEFORE WORK IS COVERED UP

The contractor shall give not less than fifteen days' notice in writing to the Engineer-in-Charge or Executive Engineer-in-Charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be verified/checked and correct dimensions thereof be taken before the same is so covered up or placed beyond the reach of

verification/checking of any work without the consent in writing of the Engineer-in-Charge or Executive Engineer-in-Charge of the work, and if any work shall be covered up or placed beyond the reach of verification/checking without such notice having been given or consent obtained, the same shall be uncovered at the contractor's expense or in default thereof, no payment or allowance shall be made for such work or materials with which the same was executed.

21 CONTRACTOR TO SUPPLY PLANT, LADDERS, SCAFFOLDING ETC.,

The contractor shall supply at his own cost materials, plant, tools appliances, implements, tackle, scaffolding and temporary works requisite for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting, weighing & assisting in the checking measurement or examinations at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-Charge or Executive Engineer-in-Charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract, or from his security deposit or the proceeds of sale thereof, or of a sufficient portion thereof Contractor is liable for damages arising from non-provisions of lights, fencing etc., The contractor shall also provide at his own cost, except when the contract specifically provided other wise and except, for payment due under clause 107 all necessary fencing and lights required to protect the public from accidents, and shall be bound to bear the expenses or defense of every suit, action or other proceedings of law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings, to any such persons or which may be paid to compromise any claim by any such person.

22 AUDIT AND TECHNICAL EXAMINATIONS:

Government shall have the right to cause any audit and technical examination of the works and the final bills of the Contractor including all supporting vouchers, abstracts etc to be made after

payment of the final bill and if as a result of such audit and technical examinations 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 by him 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 19 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.

Provided that Govt. shall not be entitled to recover any sum overpaid, nor the Contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the Engineer-in-Charge on one hand and the Contractor on the other hand under any terms of the Contract permitting payment for work after assessment by the Engineer-in-Charge.

23 Permission for Crossing RLY./NH/SH/Roads:

Wherever the Pipe line for Distribution network (except rising and gravity main) crosses railway line, gas pipe line and national/state highways the contractor has to prepare, necessary proposals for seeking all statutory permissions of concerned authorities at his own cost. Such letter will be issued to the respective authorities by the Engineer-in- Charge. The contractors will have to keep the follow-up and obtain timely clearance from the concerned authorities. The cost of these works including the construction cost will borne by contractor. Cost of the all other in line structures such as village road crossing, PMGSY road crossing, district road crossing, river crossing, nalla crossing etc shall also be borne by the contractor. The contractor shall include all such cost in his bid price.

24. LAND ACQUISITIONS

- a) Position of land acquisition – After the alignments are finalized, the contractor with the help of Engineer-in-Charge of the work shall start the preparation of land acquisition cases. As such the Engineer-in-Charge will submit necessary proposals to the respective authority. However, preparing proposals and future follow up for finalization of awards from Revenue authority for timely acquisition is to be done by the contractor.
- b) Any private, Govt. and Forestland, property, required for this work, the preparation of cases of Land and property acquisitions is to be carried out by the contractor with the help of department. Necessary proposals\letters to concern department will be issued by the

Engineer in charge; further follow-up for timely acquisition is to be done by the contractor. The contractor shall pay cost of temporary land acquisition and crop compensation or any other compensation to complete the project if any. Except for the cost of temporary land acquisition and crop compensation, the department shall make payments for acquiring land and property including solarium charges. Pursuing the land and property acquisition cases, getting the award\approval from competent authority, within the time shall be the whole responsibility of the contractor, the land required for Construction before award will be arranged by the contractor to ensure timely completion of the scheme for which no claim shall be entertained from the contractor.

25. Use of site

- (a) All land required for use of Contractor facility shall be arranged by the Contractor from private land owner/revenue department at his own cost and no claim on this account shall be entertained. In case of forestland Engineer-in-charge will process the proposal prepared by the Contractor and all further follow up for clearance is to be done by the contractor.
- (b) All areas of operation including those of his staff and labour colonies in case handed over to the contractor shall be cleared and handed over back in good condition to the Engineer-in-Charge except the areas under works constructed from the Engineer-in-Charge The Contractor shall make good to the satisfaction of the Engineer-in-Charge any damage or alterations made to areas which he has to hand over back or to other property or land handed over to him for the purpose of this work.
- (c) The lands shall as herein before mentioned be handed over back to the Engineer-in-charge immediately after completion of the work under this contract or the termination of the contract whichever is earlier. Also no land shall be held by the Contractor longer than the Engineer-in- Charge shall deem necessary and the Contractor shall on due notice by the Engineer-in-Charge vacate and returned the land which the Engineer- in-Charge may certify as no longer required by the Contractor for the purpose of the works. In case the lands are not handed over back to the department within the time limit; specified above penal rent as may be decided by the Engineer-in-Charge will be recovered from the contractor.

- (d) The vegetation and forest is noticeable in project area. The Contractor should take utmost care for the preservation of this vegetation and forest. Any damage in this vegetation and forest will have to be compensated by the Contractor and decision of Engineer-in-Charge will be final and binding on Contractor.

26. The designed command area may be developed in different stages as per clause 3.1 of SCC and completed stage will be accepted by the department.
27. Electrical energy charges required during operation and maintenance period of five years after completion of the works shall be borne by the department.
28. In case of any ambiguity in scope of work, the scope of work mentioned in section II, Detailed NIT shall be final.

29. Energy Charges:-

I. Providing and laying of Transmission lines shall be the responsibility of the contractor.

- II. The cost of security deposit, supply affording charges if required by CSEB / CSPDCL/transmission Company shall be reimbursed by the department afterwards as per actual expenditure done by contractor as certified by the concerned authority.
- III. Accessories and system up to the point of hydrant shall be supplied and fixed by the contractor. Beyond hydrant, pipes, sprinklers etc. will be purchased by individual cultivator (Last mile connectivity, including pipes, sprinklers, and nozzles up to the farm, to be purchased by the farmers)

30. Completion of sections of the Works

The employer's Representative may, at the request of the Contractor, issues a Section Completion Certificate for any part of the Permanent Works.

If a Section Completion Certificate has been issued for a part of the Works, thereafter, the defect liability period for that section shall also be commenced from the date of issue of Section Completion Certificate. Similarly, the Performance of the Contractor's Maintenance obligations, including care of the Works, shall be considered to have started from the date of issue of Section Completion Certificate on which the Contractor, in the opinion of the Employer's Representative, completed all such obligations in accordance with the Contract.

Appendix-OS

OTHER SPECIAL CONDITIONS:

SPECIAL CONDITIONS OF CONTRACT

1. The contractor shall review all the information / data available with the department and assess the scope of additional surveys, investigation etc., that are to be carried out to fulfil the obligations under the contract.
2. The contractors shall take this into consideration while quoting for the bid. No claims whatsoever on this issue will be entertained during execution.
3. The Contractor shall quote the bid price keeping the above aspects into consideration and no claims whatsoever on this issue will be entertained.
4. Hard rock received from excavation and remains unutilized by the department shall be at the disposal of the contractor. The contractor may use it at site or may sale it to any other person or contractor. All the taxes, royalty and other charges if any shall be borne by the contractor. Necessary permits, pass, permissions required by the mining act or any other act of the State Government or Central Government shall be obtained by the contractor. The contractor may use the excavated useful soils, stone, and other construction material from this scheme free of cost for construction purpose on this project only and rates quoted shall include such utilization. **On utilization of above material by the contractor on works under this contract, royalty charges shall be levied/deducted to the contractor as per Mining / Revenue Department Rules. The contractor shall dispose off or remove unused hard rock, soil and stone obtained in excavation from the site within 18 months after excavation.**
5. Wherever the Distributary system and all ancillary works require shifting of H.T./L.T. power lines, towers, Electrical poles etc., either permanently or temporarily the contractor shall arrange for such shifting of power lines, towers, electrical poles etc., through concerned authorities of CSEB. The Engineer-in-Charge will process the proposals submitted by the contractor to the authorities concerned of CSEB.
6. In order to check the accuracy of the investigation work the equipment, labour required transport and other materials etc., at site of work have to be supplied to the Engineer's Representative without extra cost.
7. Contractor shall provide Cultivator wise register for outlets with hydraulic particulars.
8. No extra payment will be made to the bidder if there is any change in type of structure, specifications, variation in quantities as per actual site conditions.

9. Display Boards should be displayed of size 2.00m x 1.50 on main pipe line at change of reaches, off-take structures, road crossing or where ever necessary or by engraving on the structure with enamel painting. Boards / direction boards should also be displayed to facilitate for inspection both at investigation and execution stages.
10. During soil exploration by drilling boreholes for foundations, the contractor shall take required no. of Undisturbed Samples and normal samples and obtain soil classification soil properties and bearing capacity by getting them tested in the soil testing laboratories of Government Labs/Engineering Colleges or other reputed institutes. The contractor shall provide certain U.D. Samples and normal samples to the Engineer-in-Charge also so as to get them tested parallel at any other lab to be selected by the Engineer in-Charge, if required. The cost of such testing shall be borne by the Contractor.
11. The Contractor shall furnish draft reports on design Engineering, drawings, in six copies and soft copy in CD for obtaining the approval of the competent authority. After approval the contractor shall furnish 11 copies of booklets and 1 soft copy in C.D. for record of the department at his cost and no separate payment will be made towards this.
12. The contractor shall furnish 10 (ten) copies of Land plan schedules and Land acquisition proposals for obtaining approval of competent authorities.
13. The contractor will provide necessary gauge to check the pressure in the pipe at appropriate places & include all the cost in quoted contract price.
14. In respect of Main pipe line and all big structures like aqueducts, siphons etc., measuring structure shall be provided with gauges/ devices fixed in the structure by the contractor and the cost there of is deemed to be included in the quoted contract price. Wherever the pipe network irrigation system is passing through or by the side of Villages, Towns and other habitations suitable cattle ramps in each village shall be provided by the contractor duly getting the design drawing / proposals approved by the Engineer-in-Charge and cost of these structures are deemed to be included in the contract price quoted.
15. CR Masonry / Brick Masonry Structures shall not be permitted.
16. The concrete mixes to be adopted for all the structures shall be design mixes only and these design mixes shall be conducted in the reputed laboratories and got approved by the Engineer-in-Charge before adoption.
17. Operation Schedule for the Off-takes and regulators to be furnished for operation of the sluice and appropriate valves.
18. Decision regarding design and drawing will be taken only by EE and Higher Competent Officer.
19. Statutory clearance will be taken by the Department. To prepare the proper case is contractor's responsibility, to obtain approval department will provide all possible Assistance.
20. If any damage occurs, it should be paid to the person suffered, by the Department and recovered from contractor.
21. All drawing will be submitted to EE.
22. Hard copy of design and drawing will be submitted to EE/SE/CE by the contractor.
23. Deleted
24. After completion of the project, the project will be run and maintained by the contractor for 05 years satisfactorily with rectification of any defects. The MOM period of 60 months includes Fiverabi seasons and this also includes MOM of existing system which may further be extended upto 5 years at the discretion of Engineer. The payments for each year of the additional Operations & Maintenance

period shall be based on the agreement/ contractual payment provided for the last year of O&M in the original contract and incremented by 10% annually. The mode and periodicity of payments shall be as per original contract.

25. Management Operation and Maintenance period will be 60 months which includes Five rabi seasons and this also includes MOM of existing system.
26. **MODERN TECHNOLOGY-**
 - a The contractor shall adopt the latest/modern methodology and state of art Techniques in the investigation, design of pipe network irrigation system, structures, etc. and Construction measuring devices, operation and maintenance, monitoring mechanism using computers.
27. The CCA includes entire arable land falling within the given Gross Command Area irrespective of ownership of land and includes command area of minor irrigation schemes.
28. The contractor shall ensure that all the components are functional and compatible with the existing SCADA, Communication and Instrumentation of the existing system.
29. The contractor has freedom to design the associated Irrigation pipeline systems. However, the required Model Studies and Geotechnical reports have to be submitted by Contractor for approval to BODHI. Detailed Survey and all required investigations have to be conducted by the Contractor.
30. The Minimum Pressure of 20M has to be maintained at 1 ha with discharge of ten times the specified duty.
31. The contractor shall have no liberty to change system of irrigation as proposed, from pipeline to any other system of irrigation.
32. **Disincentive:** In case the CCA covered by irrigation network happens to be less than Agreed CCA in Ha, deduction for shortfall in area will be made @ 1.5 times of the derived per hectare rate, as above.
33. In case of water availability for irrigation being reduced by allocation of water for drinking or industrial purposes leading to shortfall in rabi irrigation area, the proportionate reduction will be @80% of the derived rates, as above.
34. O&M for 05 years. Partial completion and handing over of completed sub system, which could be separated for independent operation, would be accepted.
35. Defect Liability Period including running and maintenance of the system for 60 months from the date of issuance of the certificate of Completion of construction.
36. The employer's Representative may, at the request of the Contractor, issues a Section Completion Certificate for any part of the Permanent Works.
37. If a Section Completion Certificate has been issued for a part of the Works, thereafter, the defect liability period for that section shall also be commenced from the date of issue of Section Completion Certificate. Similarly, the Performance of the Contractor's Maintenance obligations, including care of the Works, shall be considered to have started from the date of issue of Section Completion Certificate on which the Contractor, in the opinion of the Employer's Representative, completed all such obligations in accordance with the Contract.

38. **Payment schedule:** The contractor shall be required to carry out detailed survey, investigation and submit, preferably within 3 months of signing of the agreement, his cost estimates along with proposed payment schedule through Engineer in charge and Superintending Engineer to Chief Engineer which shall be duly vetted and approved by the Chief Engineer. The payment schedule may be revised not more than 4 times during the currency of contract after taking critical cognizance of the activities, financial implications and the inter dependability by Chief Engineer.
39. In case of change in design or drawing or proposal from the concept/proposal as envisaged by the department, the new components of work and their billing breakup shall be approved by Chief Engineer keeping the overall cost same as quoted by the contractor. No extra payment will be made to the contractor if there is any change in type of structures, specifications, and variation in quantities as per actual site conditions.
50. The Contractor shall provide full O&M services of all plant and Works constructed to satisfy the performance standards and also in accordance with legal and statutory requirements in Chhattisgarh, meet Employer's Requirements, and adhere to prudent industry standards. The Contractor shall adhere to the requirements in the "Operation and Maintenance Requirements for Pressurized Micro Irrigation Systems", CG WRD, December 2016. The Contractor shall follow the appropriate Standard Operating Procedures (SOPs) in the "Operation and Maintenance Manual for Rural Water Supplies," Government of India, Ministry of Drinking Water and Sanitation, May 2013.
41. The contractor shall fix enamel-coated metallic measuring gauges both on U/s and D/s side of all the structures and at suitable locations as suggested by the Engineer-in-Charge.
42. Catch drains are to be provided wherever necessary to facilitate drainage all along the piped network within the scope of the contract at no extra cost.
43. If the proposed network irrigation system is crossing any existing irrigation canals or channels, supply channels or Sources / Streams to Minor Irrigation tanks, river and local nalla suitable structures are to be provided within the quoted contract price by the contractor.
44. Nomenclature of distribution system should be clearly mentioned.
45. Technical Circulars 70/1 to 70/9 should be followed in case of canal works if required.
46. In the unforeseen event, if available CCA is found to be less than 45 ha. the Chief Engineer shall allow to finalize the contract below the specified area after due certification of Executive Engineer and Superintending Engineer stating that there is no CCA left within the GCA boundary. The cost per ha. will be deducted as per clause 33.2 of appendix-OS.
47. The piped sprinkler/drip irrigation shall have to be designed with duty of 0.84lit/sec/ha upto4ha with 20 m exit head at highest point of 1ha field/chak.
48. Verified CCA shall be checked by the department and decision of Department in this regard shall be final and binding to the contractor.

Appendix – P1

DESIGN AND ENGINEERING

SCOPE OF SERVICES

The Contractor's Scope of Services shall include the following activities:

1.0 Review and Assessment of Data Requirement

- 1.1 Identification of survey and investigation requirement considered necessary for design, execution, commissioning and operation of the project.
- 1.2 Preparation and submission of Reports on the above for the information to the Engineer-in-Charge.
- 1.3 Preparation of work programme for carrying out additional investigations and studies for the information of the Engineer-in-Charge.
- 1.4 The contractor shall submit a review report after carrying out the above activities for acceptance of the Engineer-in-Charge.

2.0 Additional/fresh investigations, Observations and Studies

- 2.1 Carrying out additional surveys, geo-technical investigations and laboratory tests, analysis and studies including collection of other relevant data as necessary.
- 2.2 Evaluation of results of additional investigations, carrying out studies and analysis for the design of the Project components.
- 2.3 Preparation and submission of Reports on point 2.1, 2.2 and 2.3 above for reference, acceptance and record of the Engineer-in-Charge.

3.0 Detailed Design

- 3.1 Detailed design of gates, hoisting arrangement and E&M Parts including drawings required for the execution of the Works and all calculations performed and the construction drawings issued shall be submitted to Engineer-in-Charge for his approval.
- 3.2 Details of control arrangement including drawings required for the execution of the Work shall be submitted to Engineer-in-Charge for his approval.
- 3.3 Additional designs and modifications, as needed, during construction.
- 3.4 Preparation of operation and maintenance Manuals.

4 Project Completion Report

- 4.1 Preparation of as-built drawings for pipe line, its structures, Gates and E&M Parts of structures and a Detailed Project Completion Report.

5 Design liaison

- 1.1 Design liaison with Engineer and his representative, Consultant(s) of the Employer, etc.
- 1.2 Preparation of Monthly Reports on the progress of the project work as a whole for information of the Engineer-in-Charge, in respect of:
 - Investigation & Surveys.
 - Design and engineering.
 - Civil Construction.
 - Gates & Electro-Mechanical Parts Control arrangement.

- Technical status (Present status and future programme)
 - Project status (Time Schedule, achievement of mile-stone, slippage in time schedule with specific reference to activities and acceleration measures proposed)
 - Financial status (Present status and future projection)
 - Deployment of Manpower, Labour, Expatriates staff and Construction Equipment
- Furthermore the Report shall include necessary photographs and sketches showing the previous month's progress.*

6. Supply of Drawings, Reports etc

- 6.1 The Contractor shall furnish to the Engineer-in-Charge the following number of copies of drawings, reports and other technical documents:

SL. NO.	PARTICULARS	HARD COPIES	SOFT COPIES	REMARKS
1.	Drawings for information	6 (six) sets	1 (One)	
2.	Drawings for approval	6 (six) sets	1 (One)	One hard copy shall be returned to the Contractor with approval or comments.
3.	Approved drawings	1+ 10 sets	1 (One) copy in soft copy	
4.	As-built document			Shall be submitted in accordance with Clause 125 of Conditions of Contract.
5.	Review Report/ Design Briefs/Design Memo/ Design Reports (Draft)	3 (Two) sets		One hard copy shall be returned to the Contractor with approval or comments.
6.	Review Report/ Design Briefs/Design Memo/ Design Reports (Final)	1 + 10 sets	1 (One) copy in soft copy	
7.	Progress Reports (monthly)	6 (Six) sets	Hard Copy	Also through e-mail to respective authority
8.	Final design computations	6 (six) sets	1 (One) copy in soft copy	
9.	Detailed Project Completion Report	10 (Ten) sets	1 (One) copy in soft copy	

- 6.2 All Software used shall also be loaded in Engineer and his Representative's computers for design verification and subsequent use at no additional cost.

No separate payment shall be made for any of the design and engineering works indicated above and needed for the completion of the project and shall deemed to be included in the quoted price.

*Appendix - CW***CIVIL WORKS****SCOPE OF SERVICES****Civil Works**

Construction of Pressurized Pipe Distribution Network Lift Irrigation Scheme to supply water for irrigation to deliver at farmers field up to 1 ha with a duty of 0.70 lit/sec/ha and maintained up to 4 ha chak, keeping the discharge of minimum 3 times the duty at one hectare and at least 20 Meter Residual Head at 1 Ha for Pressurized Irrigation by rotation in village Kapua, Block -Patharia ,Dist. -Mungeli in **160 Ha.** in **kharif (Right side of KHAIRI Anicut** as indicated in Index Map), out of total gross command area **270 hectare** fully covering the entire compact, contiguous possible arable area beyond 500m from submergence line (FTL line) of **KHAIRI** Anicut as indicated in the index map for Irrigation System without exceeding total power requirement for **Solar pumps with solar panel** of **100 KWp**.It includes all activities starting from survey, investigation, designing, estimating costing, procurement, construction, laying, installing, energizing, etc. of pumping system, rising and gravity mains, main line, branch lines, distribution network, controlling and regulation system , SCADA work with automation etc. for supply of filtered water for irrigation under pressure. The work also includes construction of chowkidar quarter, pump house, installation of Solar power plant and sub station with transformer of required capacity by liasoning with CSEB, Management, Operation and Maintenance (MOM) and defect liability (DL) for the period of 05 years after completion and MOM and DL period run simultaneously and work also including foundation stone laying ceremony and inauguration ceremony and as directed by Engineer-in-Charge as per details given in scope of work.

- All weather approach road connecting pump house to tar road
- Computer aided monitoring of programme and progress.
- Construction of control room and generator room.
- Necessary plantation should be done at near above buildings.

Appendix - HW

GATES and E&M PARTS**SCOPE OF SERVICES**

The scope of work in this section includes, but not limited to the following:

1. Detailing, supply and manufacture, inspection, shop assembly, testing, painting etc.
 2. Delivery, transit insurance, collection of equipment and custom clearance (if any), inland transportation to site.
 3. Site storage, including insurance, transportation and handling. Site erection, painting, testing and commissioning including provision of labour, plant material etc. for the above.
 4. Handing over to Employer. Supply and installation of all incidentals not specified but are necessary for proper completion and satisfactory functioning of the system.
 5. The Contractor shall supply the following equipment, which will meet in all respects, the requirements of Employer in regard to performance, durability and satisfactory operation. All the equipment supplied shall conform to the relevant Indian Standards. Wherever, Indian Standards are non-existent or silent, relevant International Standards (as agreed between the Engineer and the Contractor) shall be followed. The sizes and numbers of units are based upon Employer's preliminary design and may vary to suit site conditions and design requirements.
- I) Pumps, Gates with E/M components,
 - II) Installation of Embedded Metal Parts.
6. The water is to be pumped for irrigation in Culturable Command Area (CCA) not less than 160 Ha. In Kharif irrigation area of Gross Command Area (GCA) of 270 ha by Lift Irrigation system. In any case the total power required should not exceed 100.00 KW.
 7. In case there is any increase of power in the specified year (two years of O & M) the contractor shall be required to replace pump and motor with high efficiency without any additional cost to department. In case of failure to do so, the Bank Guarantee shall be forfeited.

Following parameters are fixed which should be adhered at :-

- Design, construction and O & M stage.
 - The discharge to be pumped & delivered
8. The maximum width of trench excavation for laying of rising main should not be more than 600 mm on either side on pipe line.

Appendix– OM

MAINTENANCE DURING DEFECT LIABILITY PERIOD TERMS AND CONDITIONS**1. GENERAL**

- 1.1 The commissioning shall mean the release of water in entire pipe line Distribution systems up to tail for 1 ha Chak.
- 1.2 After completion of the entire work or part thereof stipulated in the Contract work Contractor shall commission and provide trial run for 24 hours for 7 days in rabi season for pipe line Distribution system under the Contract.
- 1.3 After completion and successful trial –run of the work, the Contractor shall take care of the maintenance of the system for 60 months from the date of completion certificate of part thereof or total work. The Contractor shall be responsible for the maintenance of all components of the project including associated works in accordance with prudent utility practice.
- 1.4 The obligations of the Contractor hereunder shall include:
- (a) Undertaking routine maintenance including prompt repairs as per approved "Operation and Maintenance Manual".
 - (b) Informing the Authority of any encroachments on the Project Area and of any unauthorized use of the Pressurized Irrigation System by cultivators or any other person/entity and taking immediate prevention measures.
 - (c) Permitting safe, smooth and uninterrupted design flow in Pressurized Irrigation System at each specified location.
 - (d) Operation and maintenance of Pipe network and all communication, patrolling, and administrative systems necessary for the efficient maintenance of the System.

2. DETAIL SCOPE OF SERVICES

The scope of services would include the following but not limited to that the contractor has to follow Operation and Maintenance requirements for micro irrigation system given in volume III and clause 41 of Appendix-OS Other Special Conditions: Special Conditions of Contract.

- i) To maintain whole pipeline system including its electromechanical component.
- ii) To provide all services necessary to maintain the project efficiently, maximize the availability of the project; optimize the useful life of the project etc.
- iii) To provide requisite numbers of qualified (and if required licensed) personnel to perform the services.
- iv) To carry out maintenance of total pipelines system and carry out repair and preventive maintenance in accordance with the recommendations of Engineer-in-Charge.

- v) To carry out any maintenance or repairs or rectification work in case of any problem or emergency that may arise while the system is in-operation during the running and maintenance period of 60 months together with the defect liability period.
- vi) To provide technical and other assistance to the Engineer-in-Charge, in solving operational and maintenance problems.
- vii) Maintain all roads, yards, walkways, visitors' room, control room, housekeeping and security of the project.
- viii) Suggest improvements in the operation and maintenance schedule for better performance.
- ix) To prepare Annual Operation Plan and submit to the Engineer-in-Charge for approval.
- x) Necessary fire extinguisher arrangement should be made in the control room.
- xi) Necessary safety sign boards should be installed at work site.
- xii) After completion of entire work or part thereof stipulated in the contract, the defect liability and MOM period will run simultaneously.

Operation and Maintenance requirement for Pressurized Micro Irrigation System shall be follow as below:-

1. *Objectives of Operation and Maintenance*

The objective of an efficient operation and maintenance of pressurized irrigation system is to provide irrigation water as per designed quality and quantity, with adequate pressure at designated location and time at competitive cost on a sustainable basis. Operation refers to timely and daily operation of the components of pressurized irrigation system such as Pumping system (pumps/motors /VFD), Rising mains/ gravity mains, distribution system and balancing reservoirs/distribution chamber. Maintenance is defined as the act of keeping the structures, plants, machinery, equipment, other facilities and ancillary requirements like access roads, buildings etc. in an optimum working order. Maintenance includes replacements, correction of defects, preventive /routine maintenance and also breakdown maintenance.

1. *Preparation of O&M Plan*

A plan has to be prepared for operation and maintenance by the contractor based on make and type of equipment installed in the project and as per manufacturers recommendations and submitted to the Engineer in charge for approval at least six months prior to intended date of completion of the contract and the part thereof as mentioned in tender document. The start of services for operation and maintenance will commence from the date of entire completion of the contract. In case of DBO contracts, the partial completion /commissioning and O&M will be the part of construction contract

except for electricity charges. The O&M Manual shall be approved by the Department at least three months prior to the commencement of services.

2. *Scope of services*

The scope of work for construction includes trial run and rectification of defects of the scheme as a whole and its individual component as well. Under this trial run period of 7 days continuously for 24 hours after the completion of works in all respects, the contractor has to run the scheme as a whole or part thereof as mentioned in the tender document and will have to prove performance of each component individually as well as severally and that of whole scheme as per the standards laid down in contract. After completion of 7 days trial run the completion certificate shall be issued by the Engineer in charge. After which the scheme shall be deemed to be under MOM period. After operation and maintenance for 05 years the same shall be handed over to the Department.

During this period (05 years) the contractor shall have to appoint necessary staff for running and maintenance of scheme. The candidature of the staff being engaged by the contractor shall have to be as per O&M Manual. During this period, the staff engaged for running and maintenance of scheme will be paid by the contractor as per the wages rules. All the responsibilities of employees regarding safety/ insurance etc. shall be of the contractor.

The contractor can outsource/sublet the part or whole O&M work with the approval of Department but with his liability to the Contract intact with the Department.

During the last year i.e. 120 Days approx. of O&M, the Engineer-in-Charge will appoint staff or another O&M Contractor to get hands on training to run and maintain the scheme. Contractor and his staff will arrange training for the staff to the satisfaction of the Engineer In charge. On satisfactory completion of MOM period, the MOM contract can be extended to further 5 years with same condition of the contract with mutual consent of both parties.

The contractor will bring into the notice of the Engineer in charge all repairs and maintenance works done and will generate and submit monthly reports on each important parameter being monitored and an alarm enunciated during the days. The contractor shall arrange for the training of departmental staff as nominated by the Engineer in charge to monitor during the O&M period up to the satisfaction of Engineer in charge.

The contractor shall have to arrange and provide for watch and ward, security against theft, sabotage and upkeep of premises of the plant and pipe network during trial run period and O&M period. He will maintain/replace the furniture/ equipment etc. if damaged during this period.

1. Approach Channel/Sluice: The contractor will provide the staff to run, maintain and keep records. The Contractor will remove any slide of slope or rock fall obstructing the flow in the approach channel to jack well, he shall keep the designed section always clear at the end of dry season i.e. May and June.

2. Pump House: The contractor will provide necessary staff to run and maintain the pumps and motors and other ancillary devices installed in the pump house. The electricity charges will be borne by the Department.
3. Distribution Reservoirs and Overhead Tanks: The contractor will provide necessary staff for watch and ward and maintenance of break pressure tanks/Distribution Chamber(DC) and all over head tanks under this project and will upkeep the premises of the tanks to the satisfaction of the Engineer in Charge. The contractor's staff will maintain the digital record of water level in tanks and stock of inventory if any at these tanks and communication to Control Room and department portal.
4. Rising/ Gravity Mains: The contractor will have to arrange and provide for regular surveillance of rising/gravity feeder mains from Break Pressure Tanks/Distribution Chamber to the distribution network and will have to arrange for any repairs and maintenance during O&M period. All necessary T&P, consumables, pipes etc. will be provided by the contractor at his own cost and expenses.
5. Distribution Network: All the pipes, valves, nozzles and OMS (outlet management system) should be run and maintained by the contractor. List of inventory is to be prepared by the contractor for record. The Contractor shall provide complete data base of end user farmers along with AADHAR and mobile numbers for informing the status of services and creating a data base matrix for the cycle of project. Contractor shall be responsible for creating a project wise Mobile Application for the users and service providers and linking it to the department portal.
Contractor will also provide sufficient staff upto water outlet at farmers field for smooth running of the project.
6. Electrical Substations and Electric Supply Line: The contractor will provide necessary staff and arrange for the maintenance/repairs/replacement of electrical substations and systems developed/constructed under this contract. All expenses to operate and maintain shall be borne by the contractor, except the electricity charges.
7. SCADA, Communication and Instrumentation: The contractor shall ensure that all the components are functional and their availability is 100% for which he will provide necessary experts, Engineers and staff and arrange for the maintenance/ repairs/replacement of systems developed as per the vendors' recommendations. All expenses to operate and maintain shall be borne by the contractor.
8. Ancillary Works: All ancillary works constructed or provided under the work Contract like availability of access road and bridge round the year in good condition, all buildings, parking areas, fencing, land shaping, gardens, vehicles shall be kept in good shape to provide support to Department as well as to the staff of contractor engaged in O&M work.
9. Insurance: All the work as per condition (Above ground/underground) shall be insured against theft, fire and other eventualities. All the service staff shall be insured including third party insurance.

10. The Grievance Redressal System: This will be in place and a call centre will be established in the Control Room for the purpose. The record of break down/complaints and their red resale/compliance will be electronically logged and will be made available to CG WRD portal. Aggrieved party can make an appeal to Engineer in Charge.

Handing-over after O&M period: Before handing over the components to the department all the structures and the Electrical & Mechanical equipment and distribution network must be in good running condition. It will be the responsibility of the contractor to show that all stipulated Service Level Standards have been fulfilled and are up to the mark on the date of handing over the works to the Department. The Department will not take any responsibility of the employees engaged by the contractor to run the scheme during trial run and O&M period. The scheme and all its components individually, shall be handed over to the Department in a very good maintained condition after MOM period also. If the contract is expiring before March 31st, then it can be extended up to 31st March by the department on same terms and conditions to facilitate smooth Rabi irrigation. The final evaluation of the project should be carried out by an independent engineer appointed by the department. The fee of independent engineer will be borne by the contractor and the department equally.

3. SERVICE LEVEL BENCHMARKS DURING OPERATION & MAINTENANCE

1. General: The contractor shall be responsible to maintain service level standards during the 05 years of operation and maintenance period and these standards shall be effective on the date of handing over the project to the Department.

2. Service Level Standards: The following standards shall be maintained by the contractor:-
a. Duty and pressure at field: Water for irrigation should be ensured at the outlet of 1 ha chak with exit head of 20m and with specified duty during demand. This is the key deliverable and prime service level benchmark required in the contract and through the O & M period.

4. GOVERNMENT RULES

The Contractor shall perform the work in accordance with Indian and other applicable laws (including environmental protection, sanitary, employment, industrial safety and labour laws) regulations, codes, permits, licenses, court orders and standards binding and enforceable on the Employer. The Contractor shall pay income tax and/or other taxes resulting from the performance and payment made to him in this connection.

5. MAINTENANCE PERSONNEL

The Contractor shall deploy experienced personnel for maintenance of the project. The deployment schedule indicating the name of the persons, responsibility assigned to each of them and their bio-data shall be provided in the Bid.

1. RIGHT TO PERFORM UPON CONTRACTOR'S DEFAULT

If anytime, the Contractor fails to perform and such failure is likely to cause injury to any person or damage to the project, the Engineer-in-Charge may, but shall have no obligation to, perform any such

obligation. The cost to the Employer of affecting such performance would be deducted from the payment due to the Contractor.

2. No separate payment shall be made for above and needed any of the maintenance services during the maintenance period of Sixty months and shall be deemed to be included in the quoted contract price.

3. **INSURANCE**

The Contractor shall obtain and maintain in force throughout during period of construction and maintenance, Contractor's All Risk Insurance for the project providing full coverage on replacement value basis. Covered peril shall include fire, flood and allied perils. Insurance for workers against injury and death as per Workman Compensation Act shall also be obtained by the Contractor. If agency fails to insure the above works then department will procure the related insurance policy from any insurance company and the cost so paid by department to the insurance company will be deducted from next running bill of contractor.

4. **ACCEPTANCE ON COMPLETION OF DEFECT LIABILITY PERIOD:**

On completion of defect liability period, there shall be joint inspection by contractor and Engineer-in-Charge.

5. **SETTLEMENT OF DISPUTES**

The settlement of disputes if any shall be handled in accordance with Clause 70 of the Conditions of Contract.

Annexure I - General Guidelines**Management, Operation and Maintenance (MOM)****1. General Responsibilities**

Management, Operation and Maintenance (MOM) of the Project will be done on a joint basis, with clear roles for management, as well as defined financial and staffing responsibilities, for each respective entity. Joint management of Project involves a newly constituted tripartite institution comprising the CGWRD, federated WUAs and the DBO Contractor.

The CGWRD means officer designated by CGWRD or any person or agency nominated by the Chief Engineer Hasdeo Basin CGWRD to work on behalf of the department.

The proposed structure for the MOM of the Project is as under:-

- (i) The overall project would be under Chief Engineer, who would have a small support staff comprising of project management unit. The dam and reservoir, would remain under the authority of Chhattisgarh Government.
- (ii) The scope for the contractor will consider not only design and construction costs, but also performance requirements, so that it as a single entity, will be responsible and accountable for MOM. The service portion of their contract will establish the contractor's specific responsibilities to meet all present and future requirements for delivering appropriate water quantities at flows and pressures determined by the CG WRD-approved detailed design. Coordination between the contractor and the WUAs for developing the planned irrigation schedule, based on the availability of surface water supplies, shall be monitored by the Engineer in Charge every year .
- (iii) The day-to-day management of the distribution and delivery of irrigation water, comprising mainly the operation of the pump stations and pipeline distribution network, is assigned to the Contractor. He shall provide for over all irrigation management services and maintenance of physical assets covering the whole scheme.
- (iv) Each WUA will be responsible for monitoring the pipelines and hydrants in their respective area, including record-keeping and water planning.
- (v) A stakeholder committee (ICC) will be established by the Chief Engineer to liaise and coordinate between the different stakeholders, the committee would be chaired by the Superintending Engineer CGWRD. The committee will meet at least once in a quarter. The members of committee headed by SE will include 5-7 members from WUA, two from contractor and two officers from water resources supervising distribution system. The above approach will ensure that all facilities (built to the CGWRD's specifications) will be compatible, coordinated and cost-effectively maintained to assure long-term reliability, optimized energy use and meet future agricultural goals.

2. Approach to the Seasonal Water Planning Process

In general, the key to sustainable MOM of the Project – meaning efficient, cost-effective, and meeting the needs of agricultural and non-agricultural water users – is developing the proper combination of physical infrastructure, communications, information management, and cost recovery. To achieve this principal objective, the management institutions at all levels of the system must: (i) implement an Annual Operation Plan – CGWRD and DBO Contractor for the main pump stations and the WUA for the irrigation systems; (ii) ensure equitable and timely irrigation supplies insufficient quantities and in accordance with water user's requirement and schedule; and (iii) manage the distribution of irrigated water to farmers in accordance with hydrological and climatic conditions like rainfall and water shortage. A critical feature of future operations in the Project will be a comprehensive water planning process that occurs at the beginning of every irrigation season. This planning process will result in a water management plan that governs all aspects of water deliveries, scheduled maintenance, and cost recovery (payment amounts and fee collection).

At a suitable time prior to the start of the main pump station, the irrespective WUA's, will submit a cropping and irrigation plan for the upcoming season. At the same time, the CG WRD will prepare a plan of forecasted water availability and tentative delivery schedule, taking into account required maintenance periods and water use during previous years. It will be the role of the contractor, to reconcile the cropping and irrigation plans with the projected operation of the irrigation system. It is anticipated that there may be several iterations in the planning process involving extensive dialogue between WUAs/farmers throughout the entire command area and the CG WRD, facilitated and led by the contractor.

This joint water management plan will also be updated and adjusted as necessary during year to account for current conditions. The plan will serve as the basis for charging farmers/WUAs for irrigation water service. However, the crucial point in terms of the MOM of the Project is that there will be robust planning process put in place that provides an administrative framework for day-to-day and hour-to-hour distribution and delivery of water.

It is envisioned that the assigned staff in the control center at the main pump station(s) will control the distribution of irrigation water in the pipeline distribution system on the basis of an arranged demand schedule. On a daily basis, the contractor will arrange for delivery of water to each primary control at 120 ha where it will be measured and recorded on a real-time basis. The pipelines themselves are operated automatically, supplied by gravity flow from the DCs. Below the primary control water will be distributed through secondary control at 4 ha (Hydrants). The distribution at 3 ha tertiary points will be the responsibility of the WUGs in each WUA acting on behalf of its member-farmers. The essential point is that the irrigation system must function in terms of *each level* whose primary responsibility is to provide an agreed-upon service to its next lower level.

The service portion of the agreement will require the contractor to achieve water delivery performance standards at field level.

3. Daily Operations Procedures

The fundamental requirements of an effective daily operations procedure of the Project are as follows:

- (i) Planned water delivery orders are processed daily at a central location (i.e., at the control room of each main pump station, where flow rates in the pipeline are monitored in near real-time)
- (ii) Required flow rates are summed for each sub-command area system, to make certain that the capacities will not be exceeded.
- (iii) Generally, field operators should be mobile and be able to quickly travel throughout their zone of responsibility
- (iv) Daily, operators within the main pump stations are told what flow rates must be delivered at all delivery points within their zone of responsibility. On a weekly or 10-day basis, they check the delivered volume against the planned volume.
- (v) The delivery schedule carried out by the staff at the pump stations properly reflects the downstream needs and requests (i.e., it is based on feedback from WUAs).
- (vi) The official seasonal planning schedule of deliveries for each main pump station is regularly adjusted, based on observations of actual conditions and forecasts of irrigation demand.
- (vii) Major changes in the flow rate in the main pipelines supplying the administrative levels of the system are made several times per day.
- (viii) Changes in flow rate at village block level may occur multiple times per day, based on downstream water orders.

4. Water User Associations

WUAs must enjoy the trust of farmers in order to effectively carry out normal MOM of the water delivery facilities under their responsibility, as well as helping CGWRD in recording of irrigated areas and collecting irrigation revenue and energy charges. For this purpose each WUA will monitor water deliveries throughout the season according to the planned irrigation schedule. WUA shall be governed by Participatory Irrigation Management Act

The WUAs in the Project will be responsible for: (i) monitoring the status of the farm irrigation and drainage infrastructure; (ii) planning maintenance activities in their area of responsibility; (iii) determining the area to be cropped each season for determination of water requirements; (iv) monitoring water use according to the agreed-upon delivery schedule; and, (v) ensuring equitable water delivery service among farmers.

5. Role and responsibility of Contractor

A written manual will be prepared by the contractor during project implementation for each electrical and mechanical component (or electrical and mechanical sub-system, as appropriate) and that of the constructed distribution network that contains the following sections:

- (i) functional description

- (ii) Maintenance inspections to be carried out
- (iii) Maintenance intervals
- (iv) Diagnostic and trouble-shooting procedures
- (v) Technical specifications

Generally this information will be provided by the manufacturer or supplier of the equipment; however, the contractor will prepare these MOM manuals to the requirements of the CGWRD.

Appropriate steps will be taken to transfer knowledge and technical skills to CGWRD staff in the project and avoid the potential pitfalls associated with steep learning curves of such a complex technology. This will require substantial and sustained efforts in terms of training and capacity building. This will help ensure the MOM of the pump stations, to the norms of international standards. In addition, improvement of scheme-level MOM practices will contribute to reduced running costs and better service for water users.

In the interest of proper and efficient maintenance, it is imperative for the contractor to arrange training program and refresher courses. Because of the constant changing maintenance techniques, group discussions and lectures will also be required to improve the efficiency of maintenance staff and widen their knowledge.

a. General Maintenance

The operation service contract will contain specifications addressing maintenance, repair and replacement of project facilities. In addition to ordinary maintenance and upkeep of the pump stations and pipelines, the contractor will also be responsible for major maintenance and repairs.

The MPWRD will conduct unscheduled inspections, periodic maintenance inspections and full scale annual inspections as outlined in the following sections. The contract agreement will require that the facilities be returned to the CG WRD in good condition at the end of the defined operating period (i.e., 05 years). The method for determining the condition level of the structures and equipment, as well as the expected condition of the facilities at the end of the contract term, will be described in the contract. The final evaluation of the project should be carried out by an independent engineer appointed by the department.

It is of utmost importance to follow the manufacturer's recommendations for operation and maintenance procedures. On the basis of the recommendations of the manufacturer of the various equipment, a schedule of preventive maintenance should be drawn in a simple language to be easily understood by the maintenance staff. It should be ensured that the schedule of maintenance is strictly followed. Only the recommended lubricants should be used. Sufficient space should be available for carrying out repairs and for keeping oil, grease, spare parts and tools, etc. It is necessary to have a good workshop for this purpose, particularly in case of large installations like the main pump stations. The repair of heavy equipment, depending upon the scope of repair involved, may require a truck, electric generator, flood lights with extension cords, a small crane for handling the materials safely during repairs. The workshop should have the facility of welding set, grinder, drilling machine, small lathe and any other equipment depending upon the scope of repair involved.

b. Preventive Maintenance

The main reason for setting up a preventive maintenance program is to prevent unscheduled outages from failure of pump station equipment. Depending on the circumstances, an unscheduled outage will be, at least, very inconvenient and can be extremely expensive. A successful program of preventive and routine maintenance will reduce equipment failures, extend the life of the equipment, and reduce the overall operating costs.

The maintenance program should be set up initially by each of the major equipment manufacturers.

The manufacturers should be the foremost authority on what is required to keep the equipment operating properly. The manufacturers' maintenance and operating manuals will provide recommendations on lubricants, spare parts, maintenance procedures, and intervals between maintenance.

The contractor's engineer-in-charge of maintenance should have readily available with him the following information:

- (i) Manufacturer's guideline and catalogues for repair and maintenance of all equipment
- (ii) Name and addresses of firms dealing in related spare parts

For the pump station maintenance program, it is important to utilize personal experience and the equipment's history in preparing a maintenance schedule. An effective maintenance program requires tailoring the schedule to the equipment and the conditions under which it operates. Maintenance performed more frequently than required can cause undue wear and tear to the equipment being serviced as well as being a waste of time, while insufficient maintenance will cause premature equipment failure and a reduced service life. It should be noted that some equipment, e.g., most lifting equipment, must be maintained on a regular basis to meet safety regulations.

An equipment maintenance record system is essential in establishing a successful preventive maintenance program. The record system should contain a description of the equipment and its location; manufacturer's data such as size, model, type, and serial number; pertinent electrical and mechanical data; schedule for preventive maintenance and periodic inspections, and data on repairs or maintenance performed including actual work accomplished, material used, number of hours required to accomplish the work, and the cost of labour and materials.

The most important point for the operator to understand is to know when to call for skilled assistance, for instance where there is trouble because of worn out bearing requiring proper alignment, etc. The operator should however be able to maintain logbooks properly and regularly indicating the fuel consumption, hours worked and quantity of water pumped, etc. The logbook of the equipment should also indicate the record of break downs and repairs, date wise and cost of repairs and consumption of fuel etc. This record would provide a fairly good idea and timely indication about the particular equipment being worn out, requiring major over-haul or replacement. It is extremely essential to provide communication and transport facilities at the plants. In case of emergency situations requiring some unexpected spare part or materials, adequate communication and transport facility can only help to arrange the required material promptly.

In addition to the records for routine maintenance, a comprehensive report should be written after major overhauls or extraordinary maintenance describing the work done and how it was accomplished. Pertinent photographs should be included in the report. These reports, along with

manufacturer's drawings and operation and maintenance manuals, should be kept in a history file where they are readily accessible to maintenance personnel.

Well-kept maintenance records are invaluable in any maintenance program. They provide the necessary information for establishing a preventive maintenance and inspection schedule and a spare parts inventory. The records can also provide some consistency in the program even when personnel turnover is high.

c. Predictive Maintenance

For predictive maintenance the maintenance program is scheduled based on the analysis of data collected on the condition of the machine or equipment, not necessarily on any set schedule. To be effective, the machine being monitored has to be instrumented sufficiently to obtain meaningful data. An automated means of collecting, storing, and analyzing the data is helpful as well. The most difficult part of a predictive maintenance program is setting the limits or alarms that indicate when failure is near and maintenance is required. More information and guidelines are becoming available, but there will always be some fine-tuning required for each individual application. Not all equipment lends itself to predictive maintenance, i.e., it will be more cost effective to continue with periodic maintenance rather than analyze data to determine the best time for action. A combination of predictive and preventive maintenance would provide the best maintenance program.

Suggested Staffing Pattern for MOM of Irrigation System**(per single main pump station and distribution network)**

Category	Entity	Location			Delivery of irrigation water to farm hydrants	Overall
		For control room	For pump room	For pipe distribution network		
Project manager	DBO					1
Pump station manager	DBO					1
Maintenance supervisor	DBO		2			2
Operator (mechanical)	DBO	4	3 per pump house	4		11
Operator (electrical)	DBO	4	3 per pump house			7
Attendant (mechanical)	DBO	2	3 per P.H.	4		9
Attendant (electrical)	DBO	2	3 per P.H.			5
Agricultural specialist	DBO			1 per each project		2
Irrigation engineer	DBO			2		2
Irrigation planner	DBO			2		2
Field operator (valve operator)	DBO			One per 1000 ha.	As required	
SCADA technician	DBO	2	2	2		6
Database administrator	DBO	2				2
Driver	DBO					4
Watchman/Security	DBO		6	As required	As required	
Laborers	DBO		6	6	6	18

The performance damages due by the Contractor to the Employer, shall be as follows.

Item	Amount of Performance Damage	Evaluation Methodology	Allowable Exclusions
Design Build Period			
Discharge of specified duty in l/s/ha for the net CCA at 20m exit gradient at each 1 ha.	If discharge and head is less than 95% of requirement at outlet: Rs200/ha/day	Daily	Till rectified. With written instruction from CGWRD
Operation Services Period			
Interruption of operation	Damage: Rs 200 day/ha	A day is deemed non-compliant if the operation is interrupted (discharge or pressure not compliant with the requirement) 12 hours or more in the day.	With written instruction from CGWRD
C Conveyance efficiency of system	If the difference between water pumped and water delivered at field is more than 0.5% the penalty @ three times the prevailing rate of kW-hr for extra water pumped.	Volumetric	With written instruction from CGWRD

SECTION V

Payment Schedule, Milestone Schedule

Annexure – F
SECTION-V (Payment Schedule)

Construction Of Solar Powered Lift Irrigation Scheme at Khairi Anicut constructed on Aagar River			
S . No.	Components of activity	Estimated Amount in Lakhs	Percentage OF "BID Amount"
1	Planning, design, drawing, estimation work and its approval up to distribution network of 1 Ha chak as per scope of work including processing of land acquisition cases (Govt., Private if any) including, fixing of sign boards, photography, collection of revenue records required for project, Inaugural ceremony and foundation stone ,Provision of electricity and lighting in the scheme etc. as per scope of work including cost of transportation, lead & lift of material as per specification and as directed by engineer in charge, with prior approval from competent authority before execution of work.	15.24	4.46 %
2	Design ,drawing & Construction of pump house, jack well, intake well, approach channel,EOT Crane, and construction of "I" Type watchman quarter at pumping station, and fencing of pump house ,quarter and solar plant area and construction of all types of buildings ,structures as per scope of work including cost of transportation, lead & lift of material as per specification and as directed by Engineer -in-Charge ,with prior approval from competent authority before execution of work.	46.26	13.53 %
3	Design, drawing & Manufacturing/Supply, erection and testing -commissioning of all sorts of suitable pumps and motors which is suitable for AC supply with all electrical components, installation of solar power plant to meet out yearly energy charges with 20 % reserve capacity and also make sure that the above mentioned work is executed through/ under the supervision of an agency certified /authorized by MNRE/CREDA. communication at all stages of pumping and warning system, surge protection devices (SCADA with automation), installation of sub-station and 11 KV transmission line (lisationing with CSEB for documentation and completion of all other formalities)as per scope of work including cost of transportation, lead & lift of material as per specification and as directed by Engineer -in-Charge, with prior approval from competent authority before execution of work.	141.63	41.41 %
4	Design, Drawing and Construction of underground distribution network for PDN irrigation system down to 1 ha chak in 8 ha consisting of proper outlet arrangement protection chamber, Providing, laying & fixing of all types of pressurized pipe lines (Rising main Pipeline should be of MS or equivalent , branch pipeline of HDPE/OPVC with dia not less than 100 mm) with all necessary valves to serve as Main line, branch line, distributaries, minors and sub-minors of Pressurized Irrigation System of Khairi Anicut Solar operated Lift Irrigation scheme (To serve Total CCA not less than 160 ha in Kharif) Including providing control at 4 ha and 2 ha with fixing multiple outlets with duty of 0.70 lit/sec/ha upto 4 Ha and distribution network consisting of Chak ~20 ha and OMS ~ 5 ha , to serves the area as shown in Index Map with discharge of 3 times the specified duty at 1 Ha chak maintaining 20 meter pressure head at outlet including SCADA with IoT ,Automation system for field instruments PDN, Substations and Delivery Chambers/outlets , warning sensor etc. & successful trial run and commissioning including cost of transportation, lead & lift of material as per specification and as per scope work and as directed by Engineer-in-Charge, with prior approval from competent authority before execution of work.	123.59	36.14 %
5	Management, Operation and maintenance (MOM) including Defect liability (DL) and replacement of required fittings and joints etc. of complete pressurized irrigation system of 160 Ha for Kharif for 60 months –on successful completion of work and after commissioning of the System as per scope of work as directed by Engineer -in-Charge.	15.28	4.47 %
	Note:- SD amount will be released subsequently @ 1% every year after successfully operation maintenance of scheme.		
	Rates Excluding GST	Total Rs.	342.00 100 %

Note-

1. The contractor shall be required to carry out detailed survey, investigation and submit, preferably within 3 months of signing of the agreement, his cost estimates along with proposed payment schedule through Engineer in charge and Superintending Engineer to Chief Engineer which shall be duly vetted and approved by the Chief Engineer. The payment schedule may be revised not more than 4 times during the currency of contract after taking critical cognizance of the activities, financial implications and the interdependence by Chief Engineer.
2. In case of change in design or drawing or proposal from the concept/proposal as envisaged by the department, the new components of work and their billing breakup shall be approved by Chief Engineer keeping the overall cost same as quoted by the contractor. No extra payment will be made to the contractor if there is any change in type of structures, specifications, and variation in quantities as per actual site conditions.

Annexure – F-1

Construction Of Solar Powered Lift Irrigation Scheme at Khairi Anicut constructed on Aagar River			
S . No .	Components of activity	Estimated Amount in Lakhs	Percenta ge of “BID Amount”
1	Planning, design, drawing, estimation work and its approval up to distribution network of 1 Ha chak as per scope of work including processing of land acquisition cases (Govt., Private if any) including, fixing of sign boards, photography, collection of revenue records required for project, Inaugural ceremony and foundation stone ,Provision of electricity and lighting in the scheme etc. as per scope of work including cost of transportation, lead & lift of material as per specification and as directed by engineer in charge, with prior approval from competent authority before execution of work.	15.24	4.46 %

Annexure – F-2

Construction Of Solar Powered Lift Irrigation Scheme at Khairi Anicut constructed on Aagar River			
S . No .	Components of activity	Estimated Amount in Lakhs	Percenta ge OF “BID Amount”
1	Design ,drawing & Construction of pump house, jack well, intake well, approach channel ,EOT Crane, and construction of "I" Type watchman quarter at pumping station, and fencing of pump house ,quarter and solar plant area and construction of all types of buildings ,structures as per scope of work including cost of transportation, lead & lift of material as per specification and as directed by Engineer -in-Charge ,with prior approval from competent authority before execution of work.	46.26	13.53 %
2	Design, drawing & Manufacturing/Supply, erection and testing - commissioning of all sorts of suitable pumps and motors which is suitable for AC supply with all electrical components, installation of solar power plant to meet out yearly energy charges with 20 % reserve capacity and also make sure that the above mentioned work is executed through/ under the supervision of an agency certified /authorized by MNRE/CREDA. communication at all stages of pumping and warning system, surge protection devices (SCADA with automation), installation of sub-station and 11 KV transmission line (liaisoning with CSEB for documentation and completion of all other formalities)as per scope of work including cost of transportation, lead & lift of material as per specification and as directed by Engineer -in- Charge, with prior approval from competent authority before execution of work.	141.63	41.41 %

Annexure – F-3

Construction Of Solar Powered Lift Irrigation Scheme at Khairi Anicut constructed on Aagar River			
S . No .	Components of activity	Estimated Amount in Lakhs	Percenta ge OF “BID Amount”
1	Design, Drawing and Construction of underground distribution network for PDN irrigation system down to 1 ha chak in 8 ha consisting of proper outlet arrangement protection chamber, Providing, laying & fixing of all types of pressurized pipe lines (Rising main Pipeline should be of MS or equivalent , branch pipeline of HDPE/OPVC with dia not less than 100 mm) with all necessary valves to serve as Main line, branch line, distributaries, minors and sub-minors of Pressurized Irrigation System of Khairi Anicut Solar operated Lift Irrigation scheme (To serve Total CCA not less than 160 ha in Kharif) Including providing control at 4 ha and 2 ha with fixing multiple outlets with duty of 0.70 lit/sec/ha upto 4 Ha and distribution network consisting of Chak ~20 ha and OMS ~ 5 ha , to serves the area as shown in Index Map with discharge of 3 times the specified duty at 1 Ha chak maintaining 20 meter pressure head at outlet including SCADA with IoT ,Automation system for field instruments PDN, Substations and Delivery Chambers/outlets , warning sensor etc. & successful trial run and commissioning including cost of transportation, lead & lift of material as per specification and as per scope work and as directed by Engineer-in-Charge, with prior approval from competent authority before execution of work.	123.59	36.14 %

Annexure – F-4

Construction Of Solar Powered Lift Irrigation Scheme at Khairi Anicut constructed on Aagar River			
S . No .	Components of activity	Estimated Amount in Lakhs	Percenta ge OF “BID Amount”
1	Management, Operation and maintenance (MOM) including Defect liability (DL) and replacement of required fittings and joints etc. of complete pressurized irrigation system of 160 Ha for Kharif for 60 months –on successful completion of work and after commissioning of the System as per scope of work as directed by Engineer -in-Charge.	15.28	4.47 %
	Note:- SD amount will be released subsequently @ 1% every year after successfully operation maintenance of scheme.		

छत्तीसगढ़ शासन
जल संसाधन विभाग
"मंत्रालय"

महानदी भवन, नवा रायपुर-अटल नगर

नवा रायपुर, दिनांक 30/09/2022

क्र. 4837/एफ-1-19-31/एस-2/2006/(नि.) : राज्य शासन एतद् द्वारा छत्तीसगढ़ कॉन्ट्रेक्टर एशोसिएशन की समस्याओं के समाधान के दृष्टिगत प्रमुख अभियंता की अनुशंसा पर पूर्व में जारी आदेश क्र. 4683/एफ-1-19-31/एस-2/2006/(नि.) नवा रायपुर, दिनांक 21/09/2022 को निरस्त करते हुए, निविदा प्रपत्र "फार्म-बी" की कंडिका 2.40.1, 2.40.3, 4.3.17.1, 4.3.17.2, 4.3.2(A), 4.3.3.3, 4.17.1 में निम्नानुसार संशोधन करता है :-

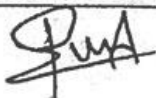
कंडिका	वर्तमान प्रावधान	संशोधित प्रावधान
Appendix 2.10 Clause 2.40.1 (Price Adjustment)	<p>2.40.1 Price Adjustment :-</p> <p>No claim for price adjustment on account of any reason whatsoever shall be entertained if construction period as per notice inviting tenders is not more than 12 MONTHS. If construction period is more than 12 MONTHS the amount paid to the contractor for work shall be adjusted quarterly for increase or decrease in the rate of labour. Material and P.O.L. excepting those materials supplied by the Government from the date of issue of work order for this purpose, quarters would be January to march, April to June, July to September and October to December. End the month, date of opening tenders means the month / date prescribed in N.I.T. for opening the tender.</p> <p>(A) Labour : increase or decrease in the cost due to labour shall be calculated quarterly in accordance with following formula.</p> $VL = 0.75 \times \frac{PL}{100} \times R \times \frac{(L - Lo)}{Lo}$ <p>Where VL = Increase or decrease in the cost of work due to labour during the quarter.</p> <p>R = The value of work done in Rupees during the quarter.</p> <p>Lo = The average consumer price index for Industrial workers. (Wholesale prices) as applicable at Bhilai C.G. (nearest place for which indices are published) for the month in which work order is issued.</p> <p>L = The average consumer price index for industrial works. (wholesale prices for the quarter) as applicable at Bhilai for the quarter under consideration, nearest place for which indices are published) or the quarter under consideration.)</p> <p>PL = Percentage of labour component shall be 30% (Thirty) only.</p>	<p>2.40.1 Price Adjustment:-</p> <p>The contractor for work shall be adjusted for increase or decrease in the rate of labour. Material and P.O.L. except those materials supplied by the Government from the date of closing of bids. Note:- Price adjustment shall be applicable from date of closing of bids and up to stipulated period and validly extended period under clause 2.40.2.</p> <p>(A) Labour: Increase or decrease in the cost due to labour shall be calculated monthly in accordance with following formula.</p> $VL = 0.75 \times \frac{PL}{100} \times R \times \frac{(L - Lo)}{Lo}$ <p>Where VL = Increase or decrease in the cost of work due to labour during the period under consideration.</p> <p>R = The value of work done in Rupees during the period under consideration.</p> <p>Lo = The average consumer price index for Industrial workers. (Wholesale prices) as applicable at Bhilai C.G. (nearest place for which indices are published) for the month in which bid is closed.</p> <p>L = The consumer price index for industrial works. (Wholesale prices for the period under consideration) as applicable at Bhilai for the period under consideration (nearest place for which indices are published or the period under consideration).</p> <p>PL = Percentage of labour component shall be 25% (Twenty five) only.</p>

[Signature]

क्र.सं.	वर्तमान प्रावधान	संशोधित प्रावधान
	<p>(B) Materials : (other than P.O.L.) - The increase or decrease in cost materials other than those supplied by the Government at fixed rate shall be calculated quarterly accordance with following formula :-</p> $Vm = 0.75 \times \frac{P_m}{100} \times R \times \frac{(M-M_o)}{M_o}$ <p>Where Vm = Increase or, decrease in the cost of work due to such materials during the quarter.</p> <p>R = The value of work done in Rupees during the quarter.</p> <p>M_o = The index number of whole sale price in India (all commodities) for the month in which work order is issued.</p> <p>M = The average index number of whole sale price in India (all commodities) for the quarter Under consideration.</p> <p>P_m = Percentage of such material component which shall be 58% (Fifty eight) only.</p> <p>Note :- The index numbers of wholesale price in India (all commodities) shall be published by the Government of India, Ministry of Industry, Office of the Economic Adviser.</p> <p>(C) P.O.L. : the increase decrease in cost POL shall be calculate quarterly in accordance with following formula :-</p> $Vp = 0.75 \times \frac{P_p}{100} \times R \times \frac{(P-P_o)}{P_o}$ <p>Where Vp = Increase or decrease in the cost of work due POL during the quarter.</p> <p>R = The value of work done in Rupees during the quarter.</p> <p>P_o = The price of index number of H.S.D. off. at Raipur on the date on which work order issued.</p> <p>P = The average index number of whole sale price in India (all commodities) for the quarter Under consideration.</p> <p>P_p = Percentage of P.O.L. component which shall be 12% (Twelve) only.</p>	<p>(B) Materials : (other than P.O.L.) - The increase or decrease in cost of materials other than those supplied by the Government at fixed rate shall be calculated monthly accordance with following formula :-</p> $Vm = 0.75 \times \frac{P_m}{100} \times R \times \frac{(M-M_o)}{M_o}$ <p>Where Vm = Increase or decrease in the cost of work due to such materials during the period under consideration.</p> <p>R = The value of work done in Rupees during the period under consideration.</p> <p>M_o = The index number of whole sale price in India (all commodities) for the month in which bid is closed.</p> <p>M = The average index number of whole sale price in India (all commodities) for the period under consideration.</p> <p>P_m = Percentage of such material component which shall be 58% (Fifty eight) only.</p> <p>Note: - The index numbers of wholesale price in India (all commodities) shall be published by the Government of India, Ministry of Industry, Office of the Economic Adviser.</p> <p>(C) P.O.L. : the increase or decrease in cost of P.O.L. shall be calculated monthly in accordance with following formula</p> $Vp = 0.75 \times \frac{P_p}{100} \times R \times \frac{(P-P_o)}{P_o}$ <p>Where Vp = Increase or decrease in the cost of work due POL during the period under consideration.</p> <p>R = The value of work done in Rupees during the period under consideration.</p> <p>P_o = The price of index number of H.S.D. at Raipur on the date of closing of bids.</p> <p>P = The average index number of whole sale price in India (all commodities) for the period under consideration.</p> <p>P_p = Percentage of P.O.L. component which shall be 17% (Seventeen) only.</p>
Appendix 2.10 Clause 2.40.3	<p>2.40.3.</p> <p>For the purpose of price adjustment amount of work done (R in above formula's during each quarter) would mean value at work at completed items done plus value of the materials on which secured advance has been granted, less the value of the materials on which secured advance has recovered during the quarter.</p>	<p>2.40.3.</p> <p>For the purpose of price adjustment amount of work done (R in above formula's during each month) would mean value of work of completed items done plus value of the materials on which secured advance has been granted, less the value of the materials on which secured advance has recovered during the month under consideration.</p>

कड़िका	वर्तमान प्रावधान	संशोधित प्रावधान
Appendix 2.14 A Clause 4.3.17.1 (Contractor liable for damage done and for general maintenance)	<p>4.3.17.1 Contractor liable for damage done and for general maintenance –</p> <p>If the contractor or his work people or servants shall break, deface, injure or destroy any part of a building in which they may be working or any building road, road kerbs, fences, enclosure, water pipe, cables, drains, electric or telephone posts or wires, trees, grass or grass land or cultivated ground contiguous to the premises on which the work or any parts of is being executed, or any damage shall happen to the work while in progress or completed from any cause whatever, or any Imperfections become apparent in it after a certificate, final or otherwise of its completion shall have been given by the Engineer-in-Charge as aforesaid, the Contractor shall make the same good at his own expense or in default the Engineer-in-charge may cause the same to be made good by other workmen and deduct the expenses (of which the certificate of the Engineer-in-Charge shall be final) from any sum that may be then or at any time thereafter may become due to the Contractor. The defect liability of the contractor shall remain valid upto a period of ten years from the date of completion.</p> <p>The contractor is liable for the general maintenance of the construction for which the certificate of its completion has been issued by the Engineer-in-Charge for a period of 10 (ten) years. The period of maintenance shall commence from the next date after the issue of completion certificate by the Engineer-in-charge.</p> <p>The purview of maintenance shall include general repair and upkeep of the structure/asset created under the agreement, maintaining the earthen embankments and canals to its required profiles, keeping those free from grass weed growth and vegetation incurring maintenance work in pitching, concrete, masonry, pipeline etc. or any creation under the agreement as directed by the Engineer-in-charge.</p>	<p>4.3.17.1 Contractor liable for damage done and for general maintenance –</p> <p>If the contractor or his work people or servants shall break, deface, injure or destroy any part of a building in which they may be working or any building, road, road kerbs, Irrigation works, structures, fences, enclosure, water pipe, cables, drains, electric or telephone posts or wires, trees, grass or grass land or cultivated ground contiguous to the premises on which the work or any parts of is being executed, or any damage shall happen to such work while in progress or completed from any cause whatsoever, or any Imperfections become apparent in it after any certificate, final or otherwise of its completion shall have been given by the Engineer-in-Charge as aforesaid, the Contractor shall make the same good at his own expense or in default the Engineer-in-Charge may cause the same to be made good by other workmen and deduct the expenses (of which the certificate of the Engineer-in-Charge shall be final) from any sum that may be then or at any time thereafter may become due to the Contractor. The defect liability of the contractor shall be valid upto a period of 12 months for annual repair works and period of 60 months for works other than annual repair from the date of issue of completion certificate. The security deposit withheld shall be released in two installments at the end of 36 months as described in clause 4.3.17.2 after issue of completion certificate. Further, the contractor is also responsible to make good, the defect described above for which he will indemnify the department by executing a bond of Sixty Months from the date of issue of completion certificate in the format as prescribed in Annexure V.</p> <p>The purview of maintenance shall include general/special repair and upkeep of the structure/asset created under the agreement, maintaining to its required profiles etc. Failing of contractor to make good such defects in defect liability period as pointed out shall make him liable to pay the Indemnity amount as prescribed in bond.</p> <p>Contractor's failure to repair or to pay the bond amount will make him liable of recovery of the amount from other running works or arrears of land revenue. Further, such contractor shall also be debarred for participating in any other tenders in the department, for one year in his individual/ partnership/ company/ LLP firm's capacity, no matter may be in his existing or new name and style.</p>

क्र.सं.	वर्तमान प्रावधान	संशोधित प्रावधान
<p>Appendix 2.14 A Clause 4.3.17.2 (Release of Security Deposit)</p>	<p>4.3.17.2 Release of Security Deposit – The Security deposit of the contractor shall be refunded periodically in a block of two years in such a manner that after the completion of two years of maintenance period, 10% (ten percent) amount deducted under security deposit shall be released, likewise 25% (twenty five percent) in four years, 45% (forty five percent) in six years, 70% (Seventy percent) of the amount deducted shall be released by the Engineer-in-charge. The amount shall only be released after the Engineer-in-charge is fully satisfied with the extent and the quality of the work performed during the period of maintenance. The Engineer-in-charge may not release the amount that would be liable for release in due course of the contractor in any manner regarding repair, upkeep and general maintenance work or not discharged the direction of the Engineer-in-charge to its satisfaction. During ten (10) year maintenance period, if contractor fails to proceed with the maintenance work or does not make good the work balance amount of security deposit shall be forfeited and action for suspension/ demotion/non-renewal/de-registration of the contractors/firms shall be taken in accordance with the provisions contained in the Chhattisgarh PWD's order No. F-5-8/19/2013/tender, Dtd. 29.10.14. Further, the contractor shall also be debarred from participating in the tenders of the department for the period equivalent to the remaining period of maintenance.</p>	<p>4.3.17.2 Release of Security Deposit – For works being tendered as new work (whose administrative approval is given under new work), the Security deposit of the contractor shall be refunded in such a manner that 50% of Security deposit shall be released by the Engineer-in-charge after 18 months from issue of completion certificate and balance 50 % of Security deposit shall be released after completion of 36 months from issue of completion certificate. The Security deposit of the contractor for annual repair (those work which are executed under the head annual repair) works shall be refunded after completion of 12 months. The amount shall only be released by the Engineer-in-charge after he is fully satisfied with the structural soundness of the works executed under the agreement at the end of defect liability period.</p>
<p>Appendix 2.14 A Clause 4.3.2(A) (Compensation for delay)</p>	<p>4.3.2 (A) Compensation for delay - The time allowed for carrying out work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence the work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with all due diligence (time being deemed to be the essence of the contract on the part of the contractor) and the contractor shall pay as compensation an amount equal to one percent or such smaller amount as the Executive Engineer/ SuperIntending Engineer/ Chief Engineer may decide, on the amount of estimated cost of the whole work as shown in the tender for every day that the work remains uncommenced or unfinished after the proper dates. And further, to ensure good progress</p>	<p>4.3.2 (A) Compensation for delay - The time allowed for carrying out work as entered in the tender shall be strictly adhered to the contractor and shall be reckoned from the date on which the order to commence the work is given to the contractor. The work shall throughout the stipulated period of the contract be preceded with all due diligence. Time is deemed to be the essence of the contract. To ensure good progress during the execution of the work the contractor shall be bound in all cases in which the time allowed for any work exceeds one month to complete. One sixth of the whole work before one fourth of the whole time allowed under the contract has elapsed, two fifth of the work before one half of such time has elapsed and three fourth of the work before three fourth of such time has elapsed. In the event of the contractor failing to comply with this condition, he</p>



कंडिका	वर्तमान प्रावधान	संशोधित प्रावधान
	<p>during the execution of the work the contractor shall be bound in all cases in which the time allowed for any work exceeds one month to complete one sixth of the whole of the work before one fourth of the whole time allowed under the contractor has elapsed two fifth of the work before one half of such time has elapsed and three fourth of the work before three fourth of such time has elapsed. In the event of the contractor failing to comply with this condition he shall be liable to pay as compensation an amount equal to one percent or such smaller amount as the Executive Engineer/ Superintending Engineer/Chief Engineer may decide on the said estimated cost of the work whole work for every day that the due quantity of the work remains incomplete provided always that the entire amount of compensation to be paid under the provisions of this clause shall not exceed eight percent of the estimated cost of the work as shown in the tender.</p>	<p>shall be liable to pay as compensation an amount equal to one percent or such smaller amount as the Executive Engineer/ Superintending Engineer/Chief Engineer may decide on the said estimated cost of the work whole work for every day that the due quantity of the work remains incomplete provided always that the entire amount of compensation to be paid under the provisions of this clause shall not exceed 8% (eight percent) of the estimated cost of the work as shown in the tender.</p> <p>Provided further that if the contractor fails to achieve 30% (thirty percent) progress in 1/2 (half) of original or validly extended period of time the contract shall stand terminated after due notice to the contractor and his contract finalized, with earnest money and security deposit forfeited and levy of further compensation at the rate of 10% of the balance amount of contract left incomplete, either from the bill, from other contract agreements in the department and from available security or shall be recovered as "Arrears of land revenue". The decision of the competent authority in the matter of grant of extension of time only shall be final, binding and conclusive. But he has no right to change either the rate of compensation or reduce and or condone the period of delay- once such an order is passed by him (on each extension application of the contractor) it shall not be open for a revision. Where the Engineer-in-Charge decides that the contractor is liable to pay compensation for not giving proportionate progress under this clause and the compensation is recommended during the intermediate period, such compensation shall be kept in deposit and shall be refunded, if the contractor subsequently makes up the progress for the lost time, within the period of contract including extension granted, if any failing which the compensation amount shall be forfeited in favour of the Government.</p>
Appendix 2.14 A Clause 4.3.3.3	<p>4.3.3.3. To measure up the work of the contractor and to take such part thereof as shall be unexecuted out of his hands and to give it to another Contractor to complete. In which case any expenses which may be incurred in excess of the sum which would have been paid to the original Contractor, if the whole work had been executed by him (for the amount of which excess, the certificate in writing of the Divisional Officer shall be final and</p>	<p>4.3.3.3. :- Deleted</p>

कडिका	वर्तमान प्रावधान	संशोधित प्रावधान
	<p>conclusive) shall be borne and paid by the original Contractor and may be deducted from any money due to him by Government under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or a sufficient part thereof. If the work is carried out at lower rates, the contractor shall not be entitled for any refund on this account. Savings, if any, shall go to the Government.</p> <p>In the event of any of the above courses being adopted by the Divisional Officer, the Contractor shall have no claim to compensation, for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagement or made any advances on account of, or with a view to the execution of the work or the performance of the contract. And in case the contract shall be rescinded under the provisions aforesaid, the Contractor shall not be entitled to recover or be paid any sum for any work thereof actually performed under this contract, unless and until the Sub-Divisional/ Divisional Officer will have certified in writing the performance of such work and the value payable in respect thereof, and he shall only be entitled to be paid the value so certified.</p>	
Appendix 2.10 A Clause 2.17.1	<p>2.17.1.</p> <p>The financial bid offered by the contractor shall be inclusive of royalties, all direct and indirect taxes of central and state governments i.e. GST (Goods and Services Tax), Income tax and cess and local taxes as applicable. The contractor shall have to pay all applicable taxes and cess for the performance of his contract. The government shall deduct such taxes at source as per applicable law. If any "New Tax" (not increase or decrease in existing taxes, duties, royalties, cess and surcharge etc.) is levied on the contractor, the Engineer in charge shall reimburse the amount of such 'New Tax' on submission of proof of such payments of tax by the contractor.</p>	<p>2.17.1. Taxes:</p> <p>The financial bid offered by the Contractor shall be deemed to be inclusive of all Central and State Governments' taxes, other levies, duties, royalties, cess, tolls, taxes of Local Bodies and Authorities, including GST (Goods and Services Tax), that the Contractor shall have to pay for the performance of his Contract. The Governments will perform such duties in regard to the deduction of such taxes at source as per applicable law. The contractor there upon necessarily and properly pay all the taxes/levies/cess/ royalties/GST, as per law of the land.</p> <p>However, if any other NEW TAX or levy or cess is imposed by statute or any deviation in existing royalty/tax/levy/ cess/GST after the last</p>

Signature

कडिका	वर्तमान प्रावधान	संशोधित प्रावधान
		stipulated date for the receipt of the tender including extensions, if any, shall be treated as NEW TAX and the contractor there upon necessarily and properly pay such new taxes/levies/cess/GST/royalties. The Engineer in charge shall reimburse the amount of such 'New Tax' on submission of proof of such payments of tax by the contractor (deducted in case of decrease in existing taxes).

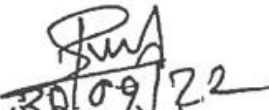
2. यह आदेश जारी होने की तिथि से तत्काल प्रभाव से लागू होगा।


(प्रेमसिंह घरेन्द्र)

अवर सचिव
छत्तीसगढ़ शासन
जल संसाधन विभाग

पृ.क्र. 4838/एफ-1-19-31/एस-2/2006 (नि.) नवा रायपुर, दिनांक 30/09/2022

- विशेष सहायक, माननीय मंत्रीजी, छ.ग. शासन, जल संसाधन विभाग, मंत्रालय, नवा रायपुर अटल नगर।
- निज सचिव, सचिव, छ.ग. शासन, जल संसाधन विभाग, मंत्रालय महानदी भवन नवा रायपुर अटल नगर।
- सचिव, छ.ग. शासन, वित्त विभाग, मंत्रालय, महानदी भवन, नवा रायपुर अटल नगर।
- महालेखाकार, छत्तीसगढ़, जीरो प्वाइंट, बलौदाबाजार रोड, रायपुर।
- प्रमुख अभियंता, जल संसाधन विभाग, शिवनाथ भवन, सेक्टर-19, नवा रायपुर अटल नगर।
- मुख्य अभियंता, कछार/परियोजना, रायपुर/बिलासपुर/अंबिकापुर को सूचनार्थ एवं आवश्यक कार्यवाही हेतु अग्रेषित।


(प्रेमसिंह घरेन्द्र)

अवर सचिव
छत्तीसगढ़ शासन
जल संसाधन विभाग

**छत्तीसगढ़ शासन
जल संसाधन विभाग
मंत्रालय,**

महानदी भवन, नवा रायपुर-अटल नगर

क्र. 4515/एफ-7-7/एस-2/31/2001,
प्रति,

नवा रायपुर, दिनांक 25/11/2024

प्रमुख अभियंता,
जल संसाधन विभाग,
शिवनाथ भवन, सेक्टर-19,
नवा रायपुर-अटल नगर (छ.ग.)

विषय :- आयटम दर निविदा प्रपत्र की कडिका 2.8.1 में संशोधन बाबत।

संदर्भ:- (1) छ0ग0 शासन, जल संसाधन विभाग, मंत्रालय का पत्र क्रमांक-4502/एफ-7-7/एस-2/31/2001 (vi), दिनांक 22.11.2024.
(2) आपका पत्र क्रमांक-4211220/निविदा/सर्कू/19/भाग-6/10462, दि. 25.11.2024

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उपरोक्त विषयांतर्गत राज्य शासन एतद् द्वारा आपके संदर्भित पत्र क्र.-2 द्वारा की गई अनुशंसा अनुसार आयटम दर निविदा प्रपत्र-फॉर्म 'बी' लिफाफा-सी की कडिका 2.8.1 Addittional Performance security (APS) में निम्नानुसार संशोधन करता है :-

स.क्र.	वर्तमान प्रावधान	अनुमोदित प्रस्ताव																														
1	2	3																														
2.8.1	<p>Additional Performance Security (APS) shall be deposited by the successful bidder at the time of signing of agreement when the bid amount is seriously unbalanced i.e- less than the PAC by more than 5%. In such an event the successful bidder shall be deposited the Additional Performance Security (APS) as below:-</p> <table border="1"> <thead> <tr> <th>S.N</th><th>% of Bid Amount below PAC</th><th>Amount of APS</th></tr> </thead> <tbody> <tr> <td>1</td><td>Up to 5%</td><td>Nil</td></tr> <tr> <td>2</td><td>5% to 10%</td><td>difference of 95% of the PAC and bid amount</td></tr> <tr> <td>3</td><td>10% to 20%</td><td>5% of Bid Amount plus 1.50 times difference of 90% of the PAC and bid amount</td></tr> <tr> <td>4</td><td>20% & Below</td><td>20% of Bid Amount plus 2.00 times difference of 80% of the PAC and bid amount</td></tr> </tbody> </table> <p>In the shape of FDR, in favour of the Executive Engineer before signing the agreement. The same shall be refunded after issue of completion certificate. If the contractor fails to complete the work or leaves the work incomplete, the amount deposited as Additional Performance Security (APS), shall be forfeited by the department and the agreement shall be terminated and action shall be taken in accordance with clause 4.3.3 of the agreement. In case the tenderer/ contractor refuses to deposit Additional Performance Security(APS) then his bid will be rejected by the sanctioning authority and earnest money shall be forfeited".</p>	S.N	% of Bid Amount below PAC	Amount of APS	1	Up to 5%	Nil	2	5% to 10%	difference of 95% of the PAC and bid amount	3	10% to 20%	5% of Bid Amount plus 1.50 times difference of 90% of the PAC and bid amount	4	20% & Below	20% of Bid Amount plus 2.00 times difference of 80% of the PAC and bid amount	<p>Additional Performance Security (APS) shall be deposited by the successful bidder at the time of signing of agreement when the bid amount is seriously unbalanced i.e. less than the PAC by more than 5%. In such an event the successful bidder shall be deposited the Additional Performance Security (APS) as below:-</p> <table border="1"> <thead> <tr> <th>S. No.</th><th>% of Bid Amount below PAC</th><th>Amount of APS</th></tr> </thead> <tbody> <tr> <td>1</td><td>Up to 5% below</td><td>Nil</td></tr> <tr> <td>2</td><td>More than 5% below upto 10% below</td><td>difference of 95% of the PAC and bid amount</td></tr> <tr> <td>3</td><td>More than 10% below upto 20% below</td><td>5% of PAC plus 1.50 times of difference of 90% of the PAC and bid amount</td></tr> <tr> <td>4</td><td>More than 20% Below</td><td>20% of PAC plus 2.00 times of difference of 80% of the PAC and bid amount</td></tr> </tbody> </table> <p>The APS shall be deposited in the shape of FDR, in favour of the Executive Engineer before signing the agreement. The same shall be refunded after issue of completion certificate. If the contractor fails to complete the work or leaves the work incomplete, the amount deposited as Additional Performance Security (APS), shall be forfeited by the department and the agreement shall be terminated and action shall be taken in accordance with clause 4.3.3 of the agreement. In case the tenderer/ contractor refuses to deposit Additional Performance Security(APS) then his bid will be rejected by the sanctioning authority and earnest money shall be forfeited.</p>	S. No.	% of Bid Amount below PAC	Amount of APS	1	Up to 5% below	Nil	2	More than 5% below upto 10% below	difference of 95% of the PAC and bid amount	3	More than 10% below upto 20% below	5% of PAC plus 1.50 times of difference of 90% of the PAC and bid amount	4	More than 20% Below	20% of PAC plus 2.00 times of difference of 80% of the PAC and bid amount
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2/ यह आदेश जारी होने की तिथि से तत्काल प्रभाव से लागू होगा।

(प्रेमसिंह घरेन्द्र)

अवर सचिव

छत्तीसगढ़ शासन

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172/2025-WATER RESOURCES DEPARTMENT SECTION

1/397132/2025

**छत्तीसगढ़ शासन
जल संसाधन विभाग
मंत्रालय,**

महानदी भवन, नवा रायपुर-अटल नगर

क्र-RULE/472/2025/WRD/11940
प्रति,

नवा रायपुर, दिनांक 27/04/2026

प्रमुख अभियंता,
जल संसाधन विभाग,
शिवनाथ भवन, सेक्टर-19,
नवा रायपुर-अटल नगर (छ.ग.)

विषय :- जल संसाधन विभाग की निविदाओं हेतु निविदा प्रपत्र फार्म-बी की कड़िकाओं में संशोधन बाबत।

संदर्भ:- आपका पत्र क्रमांक-4211220/नि./सर्कू./23-24/3036, दिनांक 08.04.2026

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उपरोक्त विषयांतर्गत राज्य शासन एतद् द्वारा संदर्भित पत्र के माध्यम से की गई अनुशंसा अनुसार सभी निर्माण विभागों में जीएसटी कटौती एवं सॉयल्टी क्लियरेंस सर्टिफिकेट जारी करने में एकरूपता सुनिश्चित करने हेतु विभाग में प्रचलित निविदा प्रपत्र फार्म-बी की कड़िकाओं में निम्नानुसार संशोधन निम्नानुसार संशोधन करता है :-

प्रचलित प्रावधान	अनुमोदित संशोधन
<p>2.5.1.</p> <p>Where the amount of earnest money to be deposited is more than Rs. 500/- and the tenderer proposes to pay it in cash, he shall pay the earnest money to the credit of revenue deposit on behalf of theinto a branch of state bank of India or Government Treasury or Sub-Treasury within the jurisdiction of the Executive Engineer mentioned above and send/produce the challan to the Executive Engineer separately and it should not be kept in the cover containing tenders. If however, the tenderer wishes to deposit the earnest money in any one of the following forms, he may do so and produce/send the same duly hypothecated to the</p> <p>(i) Treasury Receipt (ii) National Saving Certificates. (iii) Treasury Bonds. (iv) Approved interest Bearing Security (This includes Chhattisgarh State Development Loans) (v) Government Promissory Notes/National Plan Loans. (vi) Post Office Cash Certificates. (vii) 10 years Treasury Saving Deposit Certificates. (viii) 12 years National Plan Savings Certificates. (ix) 10 years Defense Deposit Certificates (x) National Saving Certificates duly hypothecated in the name of Government of Chhattisgarh (xi) All Small Saving Securities and Post Office Saving Bank Accounts duly pledged to Government. (xii) Debentures of C.G. Housing Board as approved by the M.P.F.D. No. 1319/2306/IV-R-V-5/75 dt. 17/10/75 (xiii) Bank Drafts of the State Bank of India or scheduled Banks in case of Tenderers of other states. (xiv) Units of Unit Trust of India. (xv) Banks Draft issued by big Urban Banks whose working capital exceeds Rs. 5 Crores and by A, B and C Class Central Co-operative banks/Non-Schedule State Cooperative Banks subject to the condition that the drafts are encashed by the accepting authority as soon as they are received and the contracts are allotted only after the encashment of Drafts as per M.P. F.D. No. F/3/18/77/8/5/(iv) date 13-2-1973.</p>	<p>2.5.1</p> <p>For online tenders, the Earnest money shall be deposited electronically by NEFT/RTGS. Internet Banking. Debit/Credit Cards on any other online process of payment. Contractor is required to generate a challan through e-Procurement system for specific tender before transfer of fund and system generated challan may be submitted to bank physically for RTGS/NEFT or contractor may use other online option for making payment in account number shown in the online generated challan.</p> <p>It is clarified that every contractor's challan number will be different for each challan generated from system of different or same tender. The cost of money transfer (including Payment Gateways Commission etc.) has to be borne by the contractor. It is advised that the contractor should consider the time taken to process the payment electronically (i.e. NEFT/RTGS, Net banking, Credit/Debit cards). No interest shall be payable to contractors on amount deposited as earnest money.</p>

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<p>2.17.1. Taxes:</p> <p>The financial bid offered by the Contractor shall be deemed to be inclusive of all Central and State Governments' taxes, other levies, duties, royalties, cess, tolls, taxes of Local Bodies and Authorities, including GST (Goods and Services Tax), that the Contractor Shall have to pay for the performance of his Contract. The Governments will perform such duties in regard to the deduction of such taxes at source as per applicable law. The contractor there upon necessarily and properly pay all the taxes/levies/cess/royalties/GST, as per law of the land.</p> <p>However, if any other NEW TAX or levy or cess is imposed by statute or any deviation in existing royalty/tax/levy/ cess/GST after the last stipulated date for the receipt of the tender including extensions, if any, shall be treated as NEW TAX and the contractor there upon necessarily and properly pay such new taxes/levies/cess/GST /royalties. The Engineer in charge shall reimburse the amount of such 'New Tax' on submission of proof of such payments of tax by the contractor (deducted in case of decrease in existing taxes).</p>	<p>2.17.1. Taxes:</p> <p>The rates quoted by the contractor shall deemed to be exclusive of the goods and services Tax (GST) but including labour cess, other levies, duties, royalties, cess, toll, taxes of local bodies and authorities that the contractor will have to pay for the performance of this contract. The employer will perform such duties in regard to the deduction of such taxes including GST at source, require deduction in this reference will be made as per applicable law. GST as per prevailing rate at the time of payment/bill submission shall be made applicable presently @18% and shall be paid on the whole work carried out as accepted by the engineer, while making the payment.</p> <p>However, if any other NEW TAX or levy or cess is imposed by statute or any deviation in existing royalty/tax/levy/ cess/GST after the last stipulated date for the receipt of the tender including extensions, if any, shall be treated as NEW TAX and the contractor there upon necessarily and properly pay such new taxes/levies/ cess/GST /royalties. The Engineer in charge shall reimburse the amount of such 'New Tax' on submission of proof of such payments of tax by the contractor (deducted in case of decrease in existing taxes/reimbursement of increase in existing taxes).</p>
<p>2.17.3 (a)</p> <p>Income Tax at the rate of 2.32% (as per prevailing rules) from any sum payable to the contractor shall at the time of credit of such sum or at the time of payment to the contractor by cash / cheque or draft or any other mode be deducted at the sources from its running / final or any type of payment for this contract as per section 194 of Income Tax Act 1961.</p>	<p>2.17.3 (a)</p> <p>Income Tax at the rate of 2.32% (or as per prevailing rules) from any sum payable to the contractor shall at the time of credit of such sum or at the time of payment to the contractor by cash / cheque or draft or any other mode be deducted at the sources from its running / final or any type of payment for this contract as per rules.</p> <p>2.17.3 (a.1)</p> <p>GST@ 2% (or as per prevailing rules) from any sum payable to the contractor shall at the time of credit of such sum or at the time of payment to the contractor by cash / cheque or draft or any other mode be deducted at the sources from its running / final or any type of payment for this contract as per rules.</p>
<p>4.3.36</p> <p>The contractor shall pay all quarry, Royalty charges etc. If the contractor fails to produce the royalty clearance certificate from concerned department then the Executive Engineer shall deduct the royalty charges from his bills and keep in deposit head, which shall be refunded to the contractor on production of royalty clearance certificate from the concerned department. If he fails to produce the royalty clearance certificate with in 30 days of submission of final bill, then royalty charges which was keep under deposit head by the Executive Engineer shall be deposited to the concerned department and his final bill payment shall be released.</p>	<p>4.3.36 Royalty Charges (Amount of Minerals/ Minor minerals):</p> <p>Amount for Royalty, DMF, Environment and infrastructure development Cess and penalty of 100% of royalty, that is 2.525 times basic royalty rates will be deducted from the bills of the contractor for the minerals/ minor minerals used in construction and will be kept as additional deposit. The Contractor has to obtain royalty clearance certificate from collector of the concerned district before final bill payment. If the contractor does not submit royalty clearance certificate within 6 months of completion of work, the amount kept as deposit shall be remitted in relevant royalty head. If the contractor submits royalty clearance within specified time, the amount kept in deposit shall be released to the contractor.</p> <p>Any change in the royalty rates of minor minerals notified by the state government after the date of submission of financial offer by the bidder/contractor then the change in the rates shall be reimbursed/deducted on actual basis.</p>

Digitally signed by
Vidya Bharti
Date: 27-04-2026
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(विद्या भारती)
अवर सचिव
छत्तीसगढ़ शासन
मंत्रालय, नवा रायपुर