

e-Procurement Notice No. FEDB-01/2026-27

BID IDENTIFICATION NO: FED -04/ 2026-27



**GOVERNMENT OF ODISHA
FISHERIES & ARD DEPARTMENT
(COVER-I)**

DETAIL TENDER CALL NOTICE

FOR THE WORK

**CLIMATE RESILIENT COASTAL FISHERMEN VILLAGE (CRCFV) AT
JAMBOO IN KENDRAPADA DISTRICT ODISHA UNDER PMMSY 2024-25.
(CIVIL, ELECTRICAL & PLUMBING WORK)**

ESTIMATED COST PUT TO TENDER: **Rs.99,78,836.00**

**Office of the Executive Engineer,
Fishery Engineering Division,
Bhubaneswar-6**

 **IMPORTANT NOTICE TO INTENDING BIDDERS**

**MANDATORY TECHNICAL REVIEW & PREVENTION OF ABNORMALLY
LOW BIDS (ALBs)**

All intending bidders participating in this tender are required to complete a comprehensive site visit, evaluate local field conditions, logistical constraints and inspect structural drawings and technical specifications before submitting their bid price.

Bidders must ensure their final financial quotes strictly account for realistic resource mobilisation, material costs, labor rates and essential safety contingencies. Quoting an **unworkable, predatory, or abnormally low bid price** with the intent to secure the contract at any cost compromises construction quality, structural safety, material quality, and execution deadlines.



ନିର୍ବାହୀ ଯନ୍ତ୍ରୀଙ୍କ କାର୍ଯ୍ୟାଳୟ, ମତ୍ସ୍ୟ ଯାନ୍ତ୍ରିକ ବିଭାଗ,

ମତ୍ସ୍ୟ ସଦନ, ଲକ୍ଷ୍ମୀସାଗର, ଭୁବନେଶ୍ୱର – ୭୫୧୦୦୬

Office of the Executive Engineer, Fishery Engineering Division,

Matsya Sadan, Laxmisagar, Bhubaneswar-751006

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NOTICE INVITING TENDER (NIT)

e-Procurement No. FEDB-01/2026-27

1. The Executive Engineer, Fishery Engineering Division, Bhubaneswar on behalf of the Governor of Odisha invites **Percentage Rate Bid** for the work as detailed in the table given below in **Double Cover System** ON LINE bidding, from 'B' Class contractors registered with the State Government and contractors of equivalent Grade / Class registered with Central Government /MES / Railways for execution of Civil works, on production of definite proof from the appropriate authority. The scanned copy of proof of registration from the appropriate authority should be uploaded along with the bid. If successful, the bidder who has not registered under the state government has to register under the state PWD in appropriate class of eligibility before signing of the agreement.
2. The Bidders may submit bids for the following work;

Sl No	Name of Work	Approximate Value of Work (In Rs)	Name of the Concerned Division	EMD/Bid Security (In Rs.) (Online)	Cost of Document (In Rs.) (Online)	Period of Completion
1	2	3	4	5	6	7
01.	Climate Resilient Coastal Fishermen Village (CRCFV) at Jamboo in Kendrapada District Odisha Under PMMSY 2024-25. (Civil, Electrical & Plumbing Work) (Bid Identification No. FED-04/2026-27)	Rs.99,78,836.00	Executive Engineer Fishery Engineering Division, Bhubaneswar	Rs.99,788.00	10,000/-	8 (Eight) Calendar months)

3. Bid document consisting of plans, specifications, Schedule of quantities and the set of terms and conditions of contract and other necessary documents can be seen in the website <http://tendersodisha.gov.in>.
4. The bidder shall transfer the required amount of E.M.D / Bid Security and cost of Bid document as mentioned for the specified work in Column- 5 & 6 respectively of above Table by online through a process as mentioned DTCN failing which the bid shall be rejected.
5. The Bid documents will be available in the <http://tendersorissa.gov.in> from 15.05.2026 to 30.05.2026 up to 03.00 PM.
6. Bid Clarification Date from 15.05.2026 to 26.05.2026 up to 05.00 PM. In case of any clarification the bidders may contact in the mobile number 7894841611 during official hour.
7. The Bidder must possess Compatible Digital Signature Certificate (DSC) of Class II or Class-III.
8. Bids shall be received only in “online” on or before 03.00 PM of 30.05.2026.
9. Bids received on “on line” shall be opened (Cover-I) at 03.30 PM on 30.05.2026 in the office of the Executive Engineer, Fishery Engineering Division, Bhubaneswar in presence of bidders who wish to attend. Bidders who participated in the bid can witness the opening of bids after logging on to the site through their DSC. If the office happens to be closed on the date of opening of Bids as specified, the bids will be opened on the next working day.

10. If any of the intending Bidders wish to withdraw from participation in the Bid. The Bidder can freely withdraw from the participation before scheduled date and time of closure, failing which action as deemed fit as per relevant Codal practice will be taken against them.
11. The bidders exempted from payment of EMD will be able to participate in the tender directly by uploading EMD Declaration towards their eligibility for such exemption. Engineer Contractors, Physically Handicapped Contractors, Schedule Caste/Schedule Tribe Contractors desiring to avail price preference as per relevant Govt. Circulars are required to submit an Affidavit to that effect. Non submission of Affidavit shall be liable for rejection of the Tender. The bidders must upload all the documents in PDF format.
12. The authority will not be held responsible for any technical problem/ failure of network, Server during the schedule dates of online bidding.
13. Any corrigendum / Addendum will be displayed in the website <http://tendersorissa.gov.in>
14. Other details can be seen in the bidding documents.
15. The authority reserves right to cancel any or all bids without assigning any reason.

Sd:-
Executive Engineer
Fishery Engineering Division,
Bhubaneswar

CHECK LIST TO BE FILLED UP BY THE BIDDER

Sl. No	Particulars	Reference to Clause no.	Whether furnished		Reference to Page no.
			Yes	No	
01.	Cost of tender paper Rs.10,000.00 (Online)	D.T.C.N Clause No.04			
02.	E.M.D for Rs.99,788.00 (Scanned copy of financial instrument shall be furnished)	D.T.C.N Clause No.06 & Clause No.13(iv)			
03.	Additional Performance Security in case the bid price/rate is less than the estimated cost put to tender	D.T.C.N Clause No.29(iii)			
04.	Copy of valid Registration Certificate	D.T.C.N Clause No.07			
05.	Copy of GST Registration Certificate and GSTIN	D.T.C.N Clause No.07			
06.	Copy of PAN Card	D.T.C.N Clause No.07			
07.	Audited Annual Financial Turnover Certificate from C. A	D.T.C.N Clause No.107-f(i)			
08.	No Relationship Certificate in Schedule – A	D.T.C.N Clause No.15			
09.	Works Experience –	D.T.C.N Clause No.11			
(A).	List of projects executed that are similar in nature to the work(Schedule-D)	D.T.C.N Clause No.107-f(ii)			
(B).	Works in hand-List of projects in progress that are similar in nature to the work (Schedule-B)				
10	Information regarding current litigation, debarment / expelling of the tender or abandonment of the work by the tenderer (Schedule-E)	D.T.C.N Clause No.14			
(B)	Affidavit (Schedule-F)	D.T.C.N Clause No.14			
11.	Tools & Plants and machineries as per the requirement in Schedule C (Minimum 80% marks to be obtained). (Proof of ownership of Tools & Plants and machineries are to be furnished in shape of copy of invoices / required sale deed in case of 2 nd purchase / required lease deed with ownership documents of the leaser duly attested/affidavit showing the possession. In case of centering & shuttering materials an affidavit regarding possession of materials should be submitted.	D.T.C.N Clause No.13			
	List of plants and equipments	Requirement			
(i)	Complete Set of Piling Equipment	1 Nos			
(ii)	Truck/Tipper	2 Nos			
(iii)	Tractor with Trolley	2 No			
(iv)	Water Tanker (4000 Litres)	1 Nos			
(v)	Needle Vibrator	2 Nos			
(vi)	Plate Vibrator	2 Nos			
(vii)	Generator (10 KVA)	1 Nos			
(viii)	Concrete Mixer	1 Nos			
(ix)	Centering Shuttering Material	100 Sqm			
12	MOU (Memorandum of Understanding duly Notarized) with eligible registered Electrical Contractor having valid H.T / L.T./ M.V License	D.T.C.N Clause No.10			

CONTRACT DATA

A. GENERAL INFORMATIONS

SINo	Particulars	Details
1	Bid Identification No	FED -04/2026-27
2	Name of the Work	Climate Resilient Coastal Fishermen Village (CRCFV) at Jamboo in Kendrapada District Odisha Under PMMSY 2024-25. (Civil, Electrical & Plumbing Work)
3	Officer inviting tender	Executive Engineer, Fishery Engineering Division. Bhubaneswar
4	Executive Engineer concerned with head quarters authorized as Engineer-in-charge of this work	Executive Engineer, Fishery Engineering Division. Bhubaneswar.
5	Accepting Authority	Executive Engineer, Fishery Engineering Division. Bhubaneswar.
6	Estimated Cost	Rs.99,78,836.00 (Rupees Ninety-Nine Lakh Seventy-Eight Thousand Eight Hundred Thirty Six) only

B. BID INFORMATION

7	Intended completion period/Time period assigned for Completion as per clause 8 of DTCN	8(Eight) calendar months
8	Last Date & time of submission of Bid (Clause No. 2 of DTCN.)	30.05.2026 up to 3.00 PM
9	Last Date & Time of Clarification of the	26.05.2026 up to 5.00 PM
10	Cost of Bid Document (Clause No.4 of DTCN.) To be remitted online	Rs.10,000/-
11	Bid Security (Clause No. 6 of DTCN.) to be submitted online	EMD an amount of 99,788.00
12	Bid validity period (Clause No. 9 of DTCN.)	90 days
13	Currency of Contract	Indian Rupees
14	Language of Contract	English

PROCEDURE TO PARTICIPATE IN ONLINE BIDDING E-PROCUREMENT

10 PARTICIPATING IN THE BID IN THE E-PROCUREMENT PORTAL: The Contractor/Bidder intending to participate in the bid is required to register in the Portal using his /her active personal/ official email ID as his Login ID and attach his/her valid Digital Signature Certificate (DSC) to his/her unique Login ID. The DSC used must be of appropriate class (Class II or Class III) issued from a registered Certifying Authority such as n-Code, Sify, TCS, MTNL etc. He/ She has to submit the relevant information as asked for about the firm/ contractor. The portal registration of the bidder/ firm is to be authenticated by the State Procurement Cell after verification of original valid certificates/ documents such as (i) PAN and

(II) Registration Certificate (RC)/ GST Registration Certificate and GSTIN (for procurement of goods) of the concerned bidder. The time period of validity in the portal is at par with validity of RC/ GST Registration Certificate and GSTIN. Any change of information by the bidder is to be re-authenticated by the State Procurement Cell. After successful authentication bidder can participated in the online bidding process.

Contractor not regisertered with Government of Odisha can participate in the e-procurement after necessary enrolement in the portal but have to subsequently register themselves with the appropriate registering authority of the Sate Government before award of the work as per prevalent registration norms of the State.

a. To log on to the portal the Contractor/Bidder is required to type his/her *username* and password. *The system will again ask to select the DSC and confirm it with the password of DSC.* For each login, a user's DSC will be validated against its date of validity and also against the Certificate Revocation List (CRL) of respective Cas stored in system database. The system checks the unique ID, password and DSC combination and authenticates the login process for use of portal.

b. The tender documents uploaded by the Tender Inviting Officer in the website <https://tendersodisha.gov.in> will appear in the section of "Upcoming Tender" before the due date of tender sale. Once the due date has arrived, the tender will move to "Active Tender" Section of the *homepage*. Only a small notification will be published in the newspaper specifying the work details along with *mention* of the specific website for details. The publication of the tender will be for specific period of time till the last date of submission of bids as mentioned in the 'Invitation for Bid' after which the same will be removed from the list of Active tenders. Any bidder can view or down load the bid documents from the web site.

c. Contractor exempted from payment of EMD will be able to participate in the tender directly by uploading documentary evidences towards his eligibility for such exemption.

d. The softwareapplication has the provision of payment of cost of tender document through payment gateways of *authorized* bankers by directly debiting the account of the bidders.

Furnishing scanned copy of such documents is mandatory along with the tender documents otherwise his/her bid shall be declared as non-responsive and thus liable for rejection. Bidders participating through Joint Venture shall declare the authorized signatory through Memorandum of Understanding duly registered and enroll in the portal in the name and style of the joint venture company. It is mandatory that the DSC issued in the name of the authorized signatory is used in the portal.

In the case of any failure, malfunction, or breakdown of the electronic system used during the e- procurement process, the tender inviting officer shall not accept any responsibility for failures or breakdowns other than in those systems strictly within their own control. Any third party/company/person under a service contract for

operation of e-procurement system in the State or his/their subsidiaries or their parent companies shall be ineligible to participate in the procurement processes that are undertaken through the e-procurement system irrespective of who operates the system.

For submission of Bids through the E-Procurement Portal, the bidder shall upload the scanned copy/copies of document in prescribed format wherever warranted in support of eligibility criteria and qualification information. The on line bidder shall have to produce the original documents in support of the scanned copies and statements uploaded in the portal before the specified date as per DTCN.

Each bidder shall submit only one bid for one package. A bid is said to be complete if accompanied by cost of bid document and appropriate. The system shall consider only the last bid submitted through the E-Procurement portal.

The bidder may ask question related to tender online in the e-procurement portal using his/her DSC, provided the questions are raised within the period of seeking clarification as mentioned in tender call notice/Bid. The Officer inviting the Bid/ Procurement Officer-Publisher will clarify queries related to the tender.

The details of drawings and documents pertaining to the works available with the officer inviting the Bid as well as in the office of the **Executive Engineer, Fishery Engineering Division, Bhubaneswar** as mentioned in the Contract Data will be open for inspection by the bidders. The bidder is required to download all the documents for preparation of his bid. It is not necessary for the part of the Bidder to upload other Bid documents (after signing) while uploading his bid. He is required to upload documents related to his eligibility criteria and qualification information and Bill of Quantities duly filled in. It is assumed that while participating in the bid, the bidder has referred all the drawings and documents. Seeking any revision of rates or backing out of the bid claiming for not having referred to any or all documents provided in the Bid by the Officer Inviting the Bid will be construed as plea to disrupt the bidding process and in such cases the bidder shall be debarred from tendering for a period of 180 days. Any addendum / corrigendum/ cancellation of tender shall be published in the website <https://tendersodisha.gov.in>, notice board and through paper publication and such notice shall form part of the bidding documents.

The system generates a mail to those bidders who have already uploaded their tenders and those bidders if they wish can modify their tenders. The bidders are required to which the website till last date and time of bid submission for any addendum/ corrigendum/ cancellation thereof. Tender inviting authority is not responsible for communication failure of system generated mail. All the volumes/documents shall be uploaded / provided in the portal by the Officer inviting the bid. The bidder shall carefully go through the document and prepare the required documents and upload the scanned documents in Portable Document Format to the portal in the designated locations of Technical Bid. He will fill up the rates of items or percentage in the BOQ downloaded for the work in designated Cell and uploads the same in designated locations of Financial Bid. Bidders are to submit only the original BoQ uploaded by publisher after entering the relevant fields without any alteration/deletion/modification. Multiple BoQ submission shall lead to cancellation of bid. In case of item rate tender, bidders shall fill in their rates other than zero value in the specified cells. In the percentage rate tender, the bidder quoting Zero value is valid and will be taken as Schedule of Rates. Submission of document shall be effected by using DSC of appropriate class.

2. PAYMENT OF EMD/ BID SECURITY AND COST OF BID DOCUMENTS:

The Bidder shall furnish, as part of his Bid in shape of as mentioned in the Contract Data. Non submission of within the designated period shall debar the bidder from participating in the on-line bidding system and his portal registration shall be cancelled. His name shall also be informed to the registering authority for cancellation of his registration.

The EMD or Bid Security payable along with the bid is 1% of the estimated contract value (ECV) or as mentioned in the bid document.

The tender accepting authority will verify the originals of all the scanned documents of the successful lowest bidder only within 5 days of opening of the tender (price bid). In the eventuality of failure on the part of the lowest successful bidder to produce the original documents, he will be debarred in future from participating in tender for 3 years and will be black listed by the competent authority. In such a situation, successful L-2 bidder will be required to produce his original documents for consideration of his tender at the negotiated rate equal to L1 bidder. Contractor exempted from payment of EMD will be able to participate in the tender directly by uploading documentary evidences towards his eligibility for such exemption.

Government of Odisha has introduced e-payment gateway in to the portal for payment of cost of Bid and Bid Security/ Earnest Money Deposit. The process of using e-payment gateway is mentioned in the “Procedure for Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids”

3. FORMAT AND SIGNING OF BID: (Logging to the Portal)-The Contractor/ Bidder is required to type his/her Login ID and Password. The system will again ask to select the DSC and confirm it with the password of DSC as a second stage authentication. For each login, a user’s DSC will be validated against its date of validity and also against the Certificate Revocation List (CRL) of respective Cas stored in system database. The system checks the unique Login ID, Password and DSC combination and authenticates the login process for use of portal.

The bidder can download the tender of his choice and save it in his system and undertake the necessary preparatory work off-line and upload the completed tender at his convenience within the final date and time of submission. The bidder shall only submit single copy of the required documents and Price Bid in the portal. In the Financial bid, the bidder cannot leave any figure blank. He has to only write the figures; the words will be self generated. The Bidders are advised to up load the completed Bid document well ahead of the last date & time of receipt to avoid any last moment problem of power failures etc.

The Bidder shall go through the Bid carefully and list the documents those are asked for submission. He shall prepare all documents including Declaration form, price bid etc and store in the system. The bidder shall log on to the portal with his DSC and move to the desired tender for up loading the documents in appropriate place one by one simultaneously checking the documents. Once the Bidder makes sure that all the documents have been up-loaded in appropriate place, he clicks the submit button to submit the bid to the portal.

The bids once submitted can not be retrieved or corrected. Tender cannot be pre-opened and cannot be submitted after due date and time. Therefore, only after satisfying that all the documents have been uploaded, the Bidder should activate submit button. In the e-procurement process each process are time stamped. The system can identify each individual who has entered in to the portal for any bid and the time of entering in to the portal. The Bidder should ensure clarity of the document up loaded by him to the portal especially the scanned documents by taking out sample printing. Non-submission of legible documents may render the bid non-responsive. However, the Officer inviting the Bid if so desires can ask for legible copies or original copies for verification with in a stipulated period provided such document in no way alters the Bidder’s price bid. If the Bidder fails to submit the original documents with in the stipulated date, he will be debarred from tendering for a period of 180 days.

SUBMISSION OF BIDS: -

The bidder shall carefully go through the tender and prepare the required documents. The bid shall have a Technical Bid and a Financial Bid. The Technical bid generally consists of GSTIN, PAN, Registration.Certificate, Affidavits, Profit Loss statement, Joint venture agreement, List of similar nature of works, work in hand, list of machineries and any other information required by OIT. The Financial Bid shall consist of the Bill of Quantities (BOQ) and any other price related information/ undertaking including rebates.

Bidders are to submit only the original BOQ (in .xls format) uploaded by Procurement Officer Publisher (Officer Inviting Tender) after entering the relevant fields without any alteration/ deletion/ modification. Multiple BOQ submission by bidder shall lead to cancellation of bid. In case of items rate tender, bidders shall fill in their rates other than zero value in the specified cells without keeping it blank. In the percentage

rate tender the bidder quoting zero percentage is valid and will be taken at par with the estimated rate of the work put to tender.

The bidder shall upload the scanned copy/ copies of document in support of eligibility criteria and qualification information in prescribed format in Portable Document Format (PDF) to the portal in the designated locations of Technical Bid.

The bidder shall write his name in the space provided in the specified location in the Protected Bill of Quantities (BOQ) published by the Officer Inviting Tender. The bidder shall type rates in figure only in the rate column of respective items(s) without any blank cell in the rate column in case of item rate tender and type percentage excess or less up to two decimal place only in case of percentage rate tender. The bidder shall log to the portal with his/ her DSC and move to the desired tender for up loading the documents in appropriate place one by one simultaneously checking the documents. Bids cannot be submitted after due date and time. The bids once submitted can not be viewed, retrieved or corrected. The Bidder should ensure correctness of the Bid prior to uploading and take print out of the system generated summary of submission to confirm successful uploading of bid. The bids can not be opened even by the OIT or the Procurement Officer Publisher/ opener before the due date and time of opening.

Each process in the e-procurement is time stamped and the system can defect the time of log in of each user including the Bidder. The Bidder should ensure clarity/ legibility of the document uploaded by him to the portal.

The system shall require all the mandatory forms and fields filled up by the contractor during the process of submission of the bid/ tender.

The bidder should check the system generated confirmation statement on the status of the submission. The bidder should upload sufficiently ahead of the bid closure time to avoid traffic rush and failure in the network.

The Tender Inviting Officer is not responsible for any failure, malfunction or breakdown of the

electronic system used during the e-procurement process. The Bidder is required to upload documents related to his eligibility criteria and qualification information and Bill of Quantity duly filled in. It is not necessary for the part of the bidder to upload the drawing and the other Bid documents (after signing) while uploading his bid. It is assumed that the bidder has referred all the drawings and documents uploaded by the Officer Inviting the Bid. The Bidder will not be able to submit his bid after expiry of the date and time of submission of bid (server time). The date and time of bid submission shall remain unaltered even if the specified date for the submission of bids declared as a holiday for the Officer Inviting the Bid.

The 'Online bidder' shall digitally sign on all statements documents, certificates uploaded by him, owning responsibility for their correctness/ authenticity as per IT ACT 2000. If any of the information furnished by the bidder is found to be false/ fabricated/ bogus, he will be debarred from tendering for a period of 180 days and his registration in the portal shall be blocked and the bidder is liable to be blacklisted.

4. SECURITY OF BID SUBMISSION:

All bid data uploaded by the Bidder to the portal will be encrypted by the DSC of the opener(s). The system shall require all the mandatory forms and fields filled up by the contractor during the process of submission of the bid/tender.

The Bid shall be received in encrypted format by the system which can only be decrypted / opened by the authorized openers only on or after the due date and time.

5. DEADLINE FOR SUBMISSION OF THE BIDS :

The online bidding will remain active till the last date and time of the bid submission. Once the date and time (Server date and time) is over, the bidder will not be able to submit the bid. The date & time of bid

submission shall remain unaltered even if the specified date for the submission of bids declared as a holiday for the Officer inviting the Bid.

RESUBMISSION AND WITHDRAWAL OF BIDS:

Resubmission of bid by the Bidders for any number of times before the final date and time of submission is allowed. Resubmission of bid shall require uploading of all documents including price bid afresh. If the bidder fails to submit his modified bids within the pre-defined time of receipt, the system shall consider only the last bid submitted.

6. LATE BIDS :

6.1. The system shall reject submission of any bid through portal after closure of the receipt time. For all purpose the server time displayed in the e-procurement portal shall be the time to be followed by the bidder and concerned officers.

7. MODIFICATION AND WITHDRAWAL OF BIDS :

In the E-Procurement Portal, it is allowed to modify the bid any number of times before the final date and time of submission. The bidder shall have to log on to the system and resubmit the documents as asked for by the system including the price bid. In doing so, the bids already submitted by the bidder will be removed automatically from the system and the latest bid only will be admitted. But the bidder should avoid modification of bid at the last moment to avoid system failure or malfunction of internet or traffic jam or power failure. If the bidder fails to submit his modified bids within the designated time of receipt, the bid already in the system shall be taken for evaluation. In the E-Procurement Portal, withdrawal of bid is allowed. But in such case he has to write a letter with appropriate reasons for his withdrawal addressed to the Officer inviting the bid and upload the scanned document to portal in the respective bid before the closure date and time of receipt of the bid. The system shall not allow any withdrawal after expiry of the closure time of the bid.

10 OPENING OF THE BID:

Bid opening date is specified during tender creation or can be extended with corrigendum. This date is available in IFB, tender document as well as the home page of portal. Bid opening can be done by the authorized users which are defined during the tender publication / approval stage. The bids are encrypted using their public keys and can be decrypted only on or after the Bid Opening due date and time. The bid opener's private key will be required to open the bids and all the openers have to log on to the portal during that time.

The bidders who participated in the on line bidding can witness opening of the bid from any system logging on to the portal with the DSC away from opening place. Contractors are not required to be present during the bid opening at the opening location if they so desire. Each activity is date and time stamped with user details. For time stamping, server time is taken as the reference. In the event of the specified date of bid opening being declared a holiday for the Officer inviting the Bid/Engineer-in-Charge, the bids will be opened at the appointed time on the next working day. In case bids are invited for more than one package, the order for opening of the "Bid" shall be that in which they appear in the "Invitation for Bid".

The Bid openers; who have been pre-defined shall log on to the portal with their respective DSC. Unless all the Officers who have been declared as Opening officers, log on to the portal with their DSC the Tender cannot be opened.

In case of non-responsive tender the officer Inviting tender should complete the e-Procurement process by uploading the official letter for cancellation/ re-tender.

EVALUATION OF BIDS:-

All the opened bids shall be downloaded and printed for taking up evaluation. The officer authorized to open the tender shall sign and number on each page of the documents downloaded and furnish a certificate that "the documents as available in the portal containing nos. of pages".

After opening of technical bid, the bidder may be asked in writing / online (in their registered e-mail ID) to clarify on the uploaded documents provided in the Technical Bid, if necessary, with respect to any doubts or illegible documents required for Technical Evaluation. The Officer Inviting Tender may ask for any other document of historical nature during Technical Evaluation of the tender. Provided in all such cases, furnishing

of any document in no way alters the bidders price bid. Non submission of legible documents may render the bid non-responsive. The authority inviting bid may reserve the right to accept any additional document.

The bidders will respond in not more than 7 days of issue of the clarification letter, failing which the bid of the bidder will be evaluated on its own merit.Immediately, on receipt of these clarifications, the Evaluating Officers; predefined in the system

for the bid, will finalize the list of responsive bidders. They will log on to the site with their DSC and record their comments on the Technical evaluation page in the system. The Officer Inviting the Bid if also the accepting authority, shall log on to the system with his digital signature and check the technical evaluation. He can either accept or pass on to the evaluating officers for re-evaluation. Upon acceptance of technical evaluation by the Accepting authority in the system, the system shall automatically generate letter to all the responsive bidders and the system shall forward the letter to all the responsive bidder that their technical bid has been evaluated responsive with respect to the data/information furnished by him and the letter shall also intimate him the date & time of opening of financial bid. The system shall also inform the non-responsive bidders in their e-mail ID that their bid has been found non-responsive.

The Technical evaluation of all the bids shall be carried out up as per the information furnished by the Bidders. But evaluation of the bid does not exonerate the bidders from checking their original documents and if at a later date the bidder is found to have misled the evaluation through wrong information, action as per relevant clause of DTCN shall be taken against the bidder/contractor.The Procurement Officer-Evaluators will evaluate bid and finalized list of responsive bidders.Opening of price bid and evaluation of lowest bidder is subject to satisfaction of other qualification information.

The financial bids of the technically responsive bidders shall be opened on the due date of opening. The Procurement Officer-Openers shall log on to the system in sequence and open the financial bids.

The Financial Bid will be opened on the notified date & time in the presence of bidders or their 12authorized representative who wish to be present.At the time of opening of “Financial Bid”, the names of the bidders whose technical bids were found responsive will be announced and the bids of only those bidders will be opened. The remaining bids will be rejected.

The responsive bidders’ name, the bid prices, the item wise rates, the total amount of each item in case the item rate tender and percentage above or less in case of percentage rate tenders will be announced. Any discounts and withdrawals, and such other details as the officer inviting the tender may consider appropriate, will be announced by him or his authorized representatives at the time of opening.Rebate/discount offer if any uploaded to the system shall be declared and recorded first.Thefinancial bid of the bidders shall be opened one by one by the designated officers. The system shall auto-generate the Comparative statement.

The Bidder can witness the principal activities and view the documents/summary reports for that particular work by logging on to the portal with his DSC from anywhere.Procurement Officer-Openers shall sign on each page of the download BOQ and the Comparative Statement and furnish a certificate to that respect.System provides an option to Procurement Officer Publisher for reconsidering the rejected bid with the approval of concern Executive Engineer/ Head of Department.

9. CLARIFICATION AND NEGOTIATION OF BIDS:

For examination, evaluation, and comparison of bids, the officer inviting the bid may, at his discretion, ask the lowest bidder for clarification of his rates including reduction of rate on negotiation and breakdowns of unit rates.

On opening of the price bid the system shall arrange the financial bids in order of their value (L1 first, followed by L2, L3) for subsequent evaluation. The evaluation status (Sheet) will be visible to all the participating bidders after opening on their respective logins. Each activity is recorded in the system with date and time stamping.

10. NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT:

In the E-Procurement Portal, the system shall generate the template of award letter and the Officer Inviting the Bid shall mention the amount of Performance Security and additional security required to be furnished in the letter and intimate the bidders in his e-mail ID.

The Employer/ Engineer-in-Charge shall notify acceptance of the work prior to expiry of the validity period by cable, telex or facsimile or e-mail confirmed by registered letter. This letter of Acceptance will state the sum that the Engineer-in-Charge will pay the contractor in consideration of execution and completion of the works by the contractor as prescribed by the contract and the amount of performance security and Additional Performance Security required to be furnished. The issue of the letter of Acceptance shall be treated as closure of the Bid process and commencement of the contract.

The Contractor after furnishing the required acceptable Performance Security and Additional Performance Security, "Letter of Proceed" or "Work Order" shall be issued by the Engineer-in-Charge with copy thereof to the Procurement Officer-Publisher. The Procurement Officer-Publisher shall upload the summary and declare the process as complete.

If the L1 bidder does not turn up for agreement after 13 authorized 13r of the tender then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. Besides the consortium/ JV/firm where such an agency/ firm already happens to be or is going to be a partner/ member/ proprietor, he/ they shall neither be allowed for participation in bidding for three years nor his/ their application will be considered for registration and action will be initiated to blacklist him/ them. In that case, the L2 bidder, if fulfils other required criteria would be called for drawing agreement for execution of work subject to condition that the L2 bidder negotiates at par with the quoted by the L1 bidder, otherwise the tender will be cancelled.

10 BLOCKING OF PORTAL REGISTRATION

- a. If the registration Certificate of the contractor is cancelled/ suspended by the registering authority/ blacklisted by the competent authority his portal registration shall be blocked automatically on receipt of information to that effect.
- b. The portal registration blocked in the ground mentioned in the above Para- 11.1 shall be unblocked automatically in receipt of revocation order of cancellation/ suspension/ blacklisting from the concerned authority.
- c. The Officer Inviting Tender shall make due inquiry and issue show cause notice to the concerned contractor who in turn shall furnish his reply, if any, within a fortnight from the date of issue of show cause notice. Thereafter the Officer Inviting Tender is required to issue an intimation to the defaulting bidder about his unsatisfactory reply and recommend to the Chief Manager (Tech) for blocking of portal registration within 10 days of intimation to the defaulting bidder regarding his unsatisfactory reply with intimation to the Registering Authority and concerned Executive Engineer/ Heads of Office if any of the following provisions are violated.
 - i. Fails to furnish original Technical Documents before the designated officer within the stipulated date and time.
 - ii. Backs out from the bid on any day after the last date of receipt of tender till expiry of the bid validity period (including till the extended bid validity period)
 - iii. Fails to execute the agreement within the stipulated date.
 - iv. If any of the information furnished by the bidder is found to be false/ fabricated/ bogus. Accordingly, the officer Inviting Tender shall recommended to the Chief Manager (Tech) State Procurement Cell, Odisha for blocking of portal registration of bidder and simultaneously action shall also be

initiated by OFFICER INVITING TENDER for blacklisting as per AppendixXXXIV of OPWD code Volume-II. The minimum period of blocking of Portal Registration shall in no case be less than 180 days.

Procedure for Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids

1. The State Government have formulated rules and procedures for Electronic receipt, accounting and reporting of the receipt- of Cost of Tender Paper and Earnest Money Deposit on submission of bids through the e-procurement portal of Government of Odisha i.e. "<https://tendersodisha.gov.in>".

2. **Electronic receipt of cost of tender paper has been successfully tested through SBI payment gateway.** Now it has been decided to introduce electronic receipt of **Cost of Tender Paper and Earnest Money Deposit on submission of bids through payment gateway of designated banks such as SBI/ICICI Bank/HDFC Bank for all Government Departments, State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc.** in phases (ANNEXURE-I). The process outlines as well as accounting and reporting structure are indicated below:

a) It will be carried out through a single banking transaction by the bidder for multiple payments like **Cost of Tender Paper and Earnest Money Deposit on submission of bids.**

b) *Various payment modes like Internet banking/NEFT/RTGS of Designated Banks and their Aggregator Banks as well can be accessed by the intending bidders.*

c) Reporting and accounting of the e-receipts will be made from a single source.

d) Credit of receipts into the Government accounts and to the designated Bank account of the participating entities indicated in Para 2 above would be faster.

3. Only those bidders who successfully remit their **Cost of Tender Paper and Earnest Money Deposit on submission of bids would be eligible to** participate in the tender/bid process. The bidders with pending or failure payment status shall not be able to submit their bid. Tender inviting authority, State Procurement Cell, NIC, the designated Banks shall not be held responsible for such pendency or failure.

4. **Banking arrangement:**

a) Designated Banks (SBI/ICICI Bank/HDFC Bank) payment gateway are being integrated with e-Procurement portal of Government of Odisha (<https://tendersodisha.gov.in>)

b) The Designated Banks participating in **electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids** will nominate a Focal Point Branch called e-FPB, who is authorized to collect and collate all e-Receipts. Each such branch will act as the Receiving branch and Focal Point Branch notwithstanding the fact that the bidder might have debited his account in any of the bank's branches while making payment.

5. **Procedures of bid submission using electronic payment of tender paper cost and EMD by bidder:**

a) **Log on to e-Procurement Portal:** The bidders have to log onto the Odisha e-Procurement portal (<https://tendersodisha.gov.in>) using his/her digital signature certificate and then search and then select the required active tender from the "Search Active Tender" option. Now. Submit button can be clicked against the selected tender so that it comes to the "My Tenders" section.

b) **Uploading of Prequalification/Technical/Financial bid:** The bidders have to upload the required Prequalification /Technical/Financial bid, as mentioned in the bidding document and in line with Works Department office memorandum no.7885, dt.23.07.2013.

c) **Electronic payment of tender paper cost and EMD:** Then the bidders have to select and submit the bank name as available in the payment options.

i. A bidder shall make electronic payment using his/her internet banking enabled account with designated Banks or their aggregator banks.

ii. A bidder having account in other Banks can make payment using NEFT/RTGS facility of designated Banks.

Online NEFT / RTGS payment using internet banking of the bank in which the bidder holds his account, by adding the account number as mentioned in the challan as an interbank beneficiary.

d) Bid submission: Only after receipt of intimation at the e-Procurement portal regarding successful transaction by bidder the system will activate the 'Freeze Bid Submission' button to conclude the bid submission process.

e) System generated acknowledgement receipt for successful bid submission: System will generate an acknowledgement receipt for successful bid submission. The bidder should make a note of 'Bid ID' generated in the acknowledgement receipt for tracking their bid status.

6. Settlement of Cost of Tender Paper;

a) Cost of Tender Paper: *In respect of Government receipts on account of Cost of Tender Paper, the e-Procurement portal shall generate a MIS for the State Procurement Cell (SPC). The MIS will contain an abstract of the cost of tender paper collected with reference to Bid Identification Number. The State Procurement Cell shall generate Bank-wise-head-wise challans separately for Cost of Tender Paper and instruct the designated Banks to remit the money to the State Government account under different heads. In respect of the cost of tender paper received through the e-procurement portal, the remittance to the Cyber Treasury account will be made to the Head of Account 0075-Misc, General Services-800 Other Receipts -0097-Misc. Receipts-02237-Cost of Tender Paper.*

b) For the time being, the State Procurement Cell (SPC) will use over the counter payment facility of the Odisha Treasury portal. Thereafter, remittance through NEFT & RTGS will be facilitated through the Odisha Treasury portal.

c) Similarly, in case of State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc., **Cost of Tender Paper**, the e-Procurement portal shall generate a MIS for the State Procurement Cell (SPC). The MIS will contain an abstract of the cost of tender paper collected with reference to **Bid Identification Number**. The State Procurement Cell shall generate Bank-wise list of challans and instruct the designated Banks to remit the money through the Odisha Treasury portal. The cost of tender papers will be credited to the registered Bank account of the concerned State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc.

d) Bank will refund (in case the Tender Inviting Authority (TIA) issues such instructions) the tender fee, EMD to the bidder, in case the tender is cancelled before opening of Bid as per direction received from TIA through e-procurement system.

e) Back-end Transaction Matrix of Electronic receipt of Cost of Tender Paper and Earnest Money Deposit on submission of bids is enclosed in the Annexure.

7. Settlement of Earnest Money Deposit on submission of bids:

a) The Bank will remit the **Earnest Money Deposit on submission/cancellation of bids** to respective bidders accounts as per direction received from TIA through e-procurement system.

8. Forfeiture of EMD :

Forfeiture of **Earnest Money Deposit on submission of bid** of defaulting bidder is occasioned for various reasons.

a) In case the Earnest Money Deposit on submission of bid is forfeited, the e-Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority.

b) The Tender inviting authorities of the Government Departments will deposit the forfeited **Earnest Money Deposit on submission of bid**, in the State Government Treasury under the appropriate head (8782-Cash Remittances and Adjustments between the officers rendering accounts to the same Accounts Officer-102-P.W.Remittances-1683-Remittances-91028-Remittances into Treasury) after taking the amount as a

revenue receipt in their Cash Book under the head 0075-Misc. General Services-00-101 Unclaimed Deposits-0097-Misc, Receipts-02080-Misc. Deposits and submit the detail account to DAG (Puri) as a deposit of the Division.

c) By clicking submit button, system will initiate the forfeiture of EMD. System will not allow the evaluator to edit the initiation after clicking the submit button. Forfeiture option can be carried out in phased manner like one bidder at a time.

9. Role of the Banks:

a) Make necessary provision / customizations at their end to enable the provision for online payments / refunds as per this document.

b) Provide necessary real-time message to bidders regarding successful or unsuccessful transactions during online payment processes and redirect them to e-Procurement website with necessary transaction reference details enabling them to submit their bids.

c) The bank shall ensure transfer of funds from the pooling account to the Government Head/current account of PSUs/ULBs within the next bank working day as per the directions generated from e- Procurement portal.

d) Bank should provide timely reports and reference details to NIC enabling them to carry out their role as stated below.

e) e) Refund of amount to bidders as per the XML file provided by e-Procurement system on the next bank working day from the date of generation of the XML file and also provide a confirmation to NIC on the same.

10. Role of State Procurement Cell:

a) Communicate requirements of Government departments/ State PSUs/ Autonomous Bodies/ ULBs online payment requirements to National Informatics Centre / the 16 authorized Banks for mapping/ customization.

b) In every working day, the State Procurement Cell shall generate MIS from the e-Procurement portal to ascertain the tender paper cost received in the e-Tendering process separately bank-wise for the Government Department and the PSUs/ULBs. The SPC shall generate bank-wise separate online challans from the Odisha Treasury portal and make the remittance through over the counter facility or NEFT/RTGS (as and when this functionality is available in Treasury portal) and issue instruction to the bank for remittance of the receipt to the State Government account.

c) The State Procurement Cell shall be responsible for providing challan details and MIS in respect of the remittance towards tender paper cost to the Tender inviting authorities for their record.

d) State Procurement Cell shall monitor the progress of e-Tendering by different Government departments / State PSUs/ Autonomous Bodies / ULBs through an MIS. State Procurement Cell shall monitor and send monthly progress reports to the Government.

e) The e-Procurement system will generate a consolidated refund & settlement XML file as an end of the day activity.

f) e-procurement system will provide a web service for payment gateway (PG) provider to pull the encrypted refund and settlement details in XML file against a day.

g) Similarly, payment gateway (PG) provider will provide a web service to pull the refund and settlement status against a day

h) e-procurement system will update the status accordingly for reconciliation report.

11. Role of National Informatics Centre :

- a) Customize e-Procurement software and web-pages of Government of Odisha

(<https://tendersodisha.gov.in>) to enable the provision for electronic payment.

- b) The NIC, Odisha will modify / rectify the errors in electronic data relating to the Chart of Account.
- c) NIC will provide an interface to authorized banks to download the electronic receipt data.
- d) Enable automatic generation of daily XML files from e-Procurement system and ensure delivery of the same to the authorized Banks for enabling automatic refund/settlement of funds.
- e) NIC shall enable the e-Procurement portal to generate MIS as required for the State Procurement Cell in order to make remittance of the tender paper cost to the State Government account using the Odisha Treasury portal.

12. Role of Cyber Treasury :

- a) The cost of the tender paper deposited by the SPC using the Odisha Treasury Portal which will be accounted for by the Cyber Treasury and it shall submit the accounts to A.G (O) as per the established process.
- b) The Cyber Treasury will provide MIS as required to the SPC for the purpose of accounting and reconciliation of the electronic remittances made to the State Government account.

13. Redressal of Public grievances :

- 10 The State Procurement Cell, Odisha, National Informatics Centre, Odisha and the e-FPB will have an effective procedure for dealing with, public complaint for e-Receipt related matters. In case, any mistake is detected by any of the stakeholders in reporting of receipt of tender paper cost and EMD, either suo-moto or on being brought to its notice, the State Procurement Cell, Odisha, National Informatics Centre, Odisha unit, Cyber Treasury and the bank will promptly take steps for rectification. The e-Focal Point Branch of the participating Banks, National Informatics Centre, Odisha and the State Procurement Cell, Odisha will notify the contact number and address of the Help Desk for resolution of any dispute regarding e-Receipt.

14. Applicability and modification of existing rules / orders:

The modalities prescribed in this Office Memorandum for downloading of tender paper, submission and rejection of bid, acceptance of Bids as well as refund and forfeiture of earnest deposit will be applicable for electronic submission of bids through e-procurement portal. Existing provisions regulating cost of tender paper, earnest money deposit in OPWD Code and OGFR would stand modified to the extent prescribed.

15. These arrangements would be made effective after signing of MoU between the designated Banks and the State Procurement Cell, firming up of Banking arrangements and technical integration between designated Bank and e-Procurement Portal.

Back-end Transaction Matrix of Electronic receipt and remittance of Cost of Tender Paper and Earnest Money Deposit on submission of bids.

	Cost of Tender Paper on submission of bids	Earnest Money Deposit on submission of bids
Government Departments	<p>I. The payment towards the cost of Tender Paper, in case Government Departments shall be collected in separate Pooling accounts opened in Focal Point Branch called e-FPB of respective designated banks [as stated in Para 2] at Bhubaneswar on T+1_day.</p> <p>II. With reference to the Notice Inviting Tender/ Bid Identification Number, the amount so realized is to be remitted to Government Account under the Head of Account 0075- Misc. General Services-800-Other Receipts-0097-Misc. Receipts-02237- Cost of Tender Paper through Odisha Treasury Portal after opening of the bid.</p>	<p>I. In case of tenders of Government Departments, amount towards Earnest Money Deposit on submission of bids shall be collected in a pooling account opened for this purpose at Focal Point Branch called e-FPB of respective designated banks at Bhubaneswar and the banks will remit the amount to respective bidder's account within two working days on receipt of instruction from TIA through refund and settlement of e-procurement system.</p> <p>II. In case of forfeiture of Earnest Money Deposit on submission of bids, the e- Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority within two working days of receipt of instruction from TIA.</p>

	Cost of Tender Paper on submission of bids	Earnest Money Deposit on submission of bids
State PSUs Statutory Corporations, Autonomous Bodies and Local Bodies.	<p>I. In case of State PSUs, Statutory corporations, Autonomous Bodies and Local Bodies etc. the amount towards Cost of Tender Paper, on submission of bids shall be collected in separated pooling accounts opened in Focal Point Branch called e-FPB of respective designated Banks at Bhubaneswar on T+1 days.</p> <p>II. The Paper cost will be transferred to the respective current accounts of concerned State PSUs, Statutory Corporation, Autonomous Bodies and Local Bodies etc. after opening of bid.</p>	<p>I. Amount towards EMD on submission of bids shall be collected in a separate pooling account of Focal Point Branch called e-FPB of respective designated banks at Bhubaneswar and the banks will remit the amount to respective bidder's account on receipt of instruction from TIA through refund and settlement of e-procurement system within two working days from receipt of such instruction.</p> <p>II. In case of forfeiture of Earnest Money deposit on submission of bids, the e- Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority within two working days of receipt of instruction from TIA.</p>

DETAILED TENDER CALL NOTICE

1. Sealed percentage rate bids are invited on ONLINE in double cover system from **B Class** registered contractor only with the State Governments and contractors of equivalent Grade / class registered with Central Government / MES / Railways for execution of civil works on production of definite proof from the appropriate authority in prescribed form to be eventually drawn in P.W.D. FORM P-1 for the work “**Climate Resilient Coastal Fishermen Village (CRCFV) at Jamboo in Kendrapada District Odisha Under PMMSY 2024-25. (Civil, Electrical & Plumbing Work)**” at an estimated cost of **Rs.99,78,836.00 (Rupees Ninety Nine Lakh Seventy Eight Thousand Eight Hundred Thirty Six) only**. The adopted format for percentage rate is same as that of the form adopted for item rate tenders but the word “Item rate” shall be replaced by “Percentage rate” and the contract will be named as P-1. **Bids from Joint Venture are not allowed.**
2. The Bid documents are available from official website of Government: <https://tendersodisha.gov.in> from **15.05.2026 up to 3.00 PM of 30.05.2026**. **The last date and time of submission of Bid is as per contract data.**
3. The Technical Bid documents (Cover-I) will be opened by the assigned officer in the office of the The Executive Engineer, Fishery Engineering Division, Bhubaneswar Odisha at **03.30 PM on 30.05.2026** in the presence of the bidders or their authorized representatives who wish to attend.
4. The cost of Bid documents is to be remitted online for **Rs.10,000.00** towards cost of each bid respectively.
5. The bid is to be submitted in two covers.
 - (i) Cover-I is to contain scanned copy of GST Registration Certificate and GSTIN, Registration certificate, PAN card, proof of machineries, undertaking/certificates duly filled, all affidavits, work experience certificate and documents required as per the relevant clauses of this DTCN.
 - (ii) Cover-II is to contain the price bid duly filled in and signed by the bidder.
6. The bidder shall submit the EMD as part of bid of the amount as specified in the **Contract Data**.
7. All the bidders are required to produce documents viz Original Registration, GST Registration Certificate, GSTIN, PAN card along with the original documents relating to ownership and hiring of plants and machineries mentioned at Annexure-I of Schedule-C for verification purpose within five days from the date of opening of the tender (technical bid). Furnishing scanned copy of such documents along with the Technical Bid is mandatory otherwise his/ her bid shall be declared as non responsive and thus liable for rejection.
8. The work is to be completed in all respects within the time period as specified in the Contract Data. Bidders whose bid is accepted must submit a work programme at the time of execution of Agreement.
9. All bids received will remain valid for a period as specified in the Contract Data after the deadline date for submission of bids and validity of bids can also be extended if agreed to by the bidder and the Department.
10. The Civil contractor in order to take part in the composite tender should enter into an M.O.U. (Memorandum of Understanding duly notarized) with eligible registered electrical contractor having valid H.T. / L.T./M.V license for execution of electrical installation and other electrical works and a copy of such M.O.U. should be attached with the tender as per the proforma at Schedule-I which shall form a part of tender. A copy of electrical license should also be enclosed with the tender papers. The original of which need to be furnished during verification. The above M.O.U. is not required in case of the Civil contractor having valid registration in HT/LT electrical license with the same name and style. Non submission of M.O.U. with due Notarisation will render the bid for rejection.
11. The tenderer should furnish along with their tender a list of works executed during the last three years duly certified by the concerned Engineer-in-Charge indicating the satisfactory completion for Civil, P.H. & Electrical works as per the proforma enclosed in a separate sheet of schedule-D1 and D2 on online.
12. **Bid Capacity (For work value put to tender costing more than Rs.3.00 Crore)**
Applicants who meet the minimum qualification criteria will be qualified only if their available bid capacity at the expected time of bidding is more than the total estimated cost of the works. The available bid capacity will be calculated as under.

Assessed Available Bid Capacity = $(A * N * 2 - B)$, where

A = Maximum value of works executed in any one year during the last five years (updated to the current price level) rate of inflation may be taken as 10 per cent per year (escalation factor) which will take into account the completed as well as works in progress,

B = Value at current price level of the existing commitments and ongoing works to be completed during the next eleven months (period of completion of works for which bids are invited); and N = Number of years prescribed for completion of the works for which the bids are invited.

~~(for work completion period less than one year the value may be taken as one year)~~

~~Note: In case of a Joint Venture the available bid capacity will be applied for each partner to the extent of his proposed participation in the execution of the works.~~

~~The statement showing the value of existing commitments and ongoing works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer in Charge not below the rank of an Executive Engineer. **Escalation factor**~~

~~Following enhancement factors will be used for the costs of works executed and the financial figures to a common base value for works completed in India.~~

Year before	Multiplying factor
One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

~~(Applicant should indicate actual figures of costs and amounts for the work executed by them without accounting for the above mentioned factors)~~

~~In case the financial figures and value of completed works are in foreign currency the above enhanced multiplying factors will not be applied. Instead, current market exchange rate (State Bank of India B.C. selling rate as on the last date of submission of the bid) will be applied for the purpose of conversion of amount in foreign currency into Indian rupees.~~

~~The information on Bid Capacity as on the date of this bid is to be furnished as per the format in **Schedule G**.~~

~~Total value of Civil Engineering construction work performed in the last five years are to be furnished for which certificate from Chartered Accountant is to be furnished.~~

~~2017-2018~~

~~2018-2019~~

~~2019-2020~~

~~2020-2021~~

~~2021-2022~~ **Base year shall be taken as 2022-2023.**

13. (i) The Contractors are required to furnish evidence of ownership of principal machineries/equipments in **Schedule-C** as per **Annexure –I** for which contractor shall have to secure minimum 80% of marks failing which the tender shall be liable for rejection.

(ii) In case the contractor executing several works, he is required to furnish a time schedule for movement of equipment/machinery from one site to work site of the tendered work in **Annexure-IV of Schedule-C**.

(iii) The contractor shall furnish ownership documents for those machineries which he is planning to deploy for the tendered work if these are not engaged and produce certificate from the **Executive Engineer/Superintending Engineer** as per **Annexure – III of Schedule-C** under whom these are deployed at the time of tendering as to the period by which these machines are likely to be released from the present contract. Certificate from the **Executive Engineer/Superintending Engineer** of Government of Odisha or Engineer-in-Charge of the project (in case of non-Government projects) under whose jurisdiction the work is going on, shall not be more than 90 days old on the last date of receipt of tender

(iv) ~~In case the contractor proposes to engage machineries and equipments as asked for in the tender document, owned or hired but deployed outside the State, he/she is required to furnish additional 1% EMD /Bid Security. The entire bid security including the additional bid security shall stand forfeited in case the contractor fails to mobilize the machineries within a period as to be able to execute an item of work as per original programme which will be part of the agreement.~~

(v) The contractor intending to hire/lease equipments/machineries are required to furnish proof of ownership from the authorized person of the company / individual person providing equipments/machineries on hire/lease along with contracts/ agreements/lease deed and duration of such contract. The contracts/agreements/lease deed should be on long term basis for a minimum period as **mentioned in contract data** from the last date of receipt of Bid documents, otherwise the bid shall be **summarily rejected**.

14 An applicant or any of its constituent partners of whose contract for any work has been rescinded or who has abandoned any work in the last five years, prior to the date of the bid, shall be debarred from qualification. The bidder is to furnish scanned copy an **affidavit** at the time of submission of bid about the authentication of bid documents including Bank guarantee. An **affidavit** to this effect is to be furnished in **Schedule-F**. **Non furnishing** of the scanned copy of information in **Schedule – E** and required affidavit in **Schedule – F**, the bid document will be **summarily rejected**.

15. No Relation certificate.

The contractor shall furnish a certificate along with the tender to the effect that he is not related to any officer in the rank of an Assistant Engineer & above in the state F&ARD Department or Assistant/Under Secretary & above in the F&ARD Department. If the fact subsequently proved to be false, the contract is liable to be rescinded. The earnest money & the total security will be forfeited & he shall be liable to make good the loss or damages resulting for such cancellations. The proforma for no relationship certificate is contained in a separate sheet vide Schedule-A.

16. If an individual makes the application, the individual should sign above his full type written name and current address.

17. If the application is made by proprietary firm, it shall be signed (with DSC) by the proprietor & furnish full type written name and the full name of his firm with its current address in a forwarding letter.

18. If the application is made by a firm in partnership, it shall be signed (with DSC) by a partner holding power of attorney for the firm in which case a certified copy of the power of attorney shall accompany the application. A certified copy of the partnership deed and current address of all partners of the firm shall also accompany the application.

19. If the application is made by a limited company or a corporation, it shall be signed (with DSC) by a duly authorized person holding power of attorney for signing the application in which case a certified copy of the power of attorney shall accompany the application. Such limited company or corporation will be required to furnish satisfactory evidence of its existence along with the technical bid.

20. The tender should be strictly in accordance with the provisions as mentioned in the tender schedule. Any change in the wordings will not be accepted.

21. No bidder will be permitted to furnish their bid in their own manuscript papers. All information should be submitted online in English.

22. Submission of more than one tender by a bidder for a particular work will liable for rejection of all such tender papers.

23. A. Percentage rate contract (vide Works Department letter No.8310 dt.17.05.2006) In case of Percentage Rate tender: -

(i) The contractor has to quote percentage excess or less over the estimated cost in the Price Bid appended to the tender document. The estimated cost is excluding GST. The rates of item basing on which estimated cost has been derived are excluding GST on different components to arrive at such rates.

(ii) The Contractors participated in the tender for more than one work may offer conditional rebate. Rebate offer submitted in a separate letter duly scanned shall be opened, declared and recorded first. The rebate so offered shall be considered after opening of all packages called in the same Tender Notice. The Contractors who wish to tender for two or more works shall submit separate tender for each. Each tender shall have the **Bid Identification No, Name & Sl. No. of the work (as per IFB)** to which they refer.

(iii) The Contractor will quote percentage excess/less up to two decimal point only. If he writes the percentage excess/less up to three or more decimal points, the **second** decimal point shall only be considered without rounding off (vide Works Department O.M No- 7885 dtd. 23.07.2013.).

(iv) In the contract P-1 time is the essence. The contractor is required to maintain a certain rate of progress specified in the contract.

(v) The quantity mentioned can be increased or reduced to the extent of 10% for individual items subject to a maximum of 5% over the estimated cost. If it exceeds the limit stated above prior approval of competent authority is mandatory before making any payment.

(vi) The period of completion is fixed and cannot be altered except in case of exceptional circumstances with due approval of next higher authority.

(vii) Bills for percentage rate tenders shall be prepared at the estimated rates for individual items only and the percentage excess or less shall be added or subtracted from the gross amount of the bill.

10 GST as applicable on works contract shall be paid over the bill amount at the time of payment of bill.

24. The bidder shall carefully study the tentative drawings and specifications applicable to the contract and all the documents which will form a part of the agreement to be entered in to by the accepted bidder and detailed specifications for Orissa and other relevant specifications and drawings. Complain at a future date that plans and specifications have not been seen by the bidders cannot be entertained.

25. The drawings if any furnished with the bid are tentative and subject to revision or modification as tendered during the execution as per actual necessity and detail test conducted. But the tendered rate quoted by the bidder will hold good in case of such modification of drawings during the time of execution and shall in no way invalidate the contract and no extra monetary compensation will be entertained. The work shall however be executed as per final approved drawing to be issued by the Engineer-in-Charge as and when required.

26. (i) Every bidder is expected before quoting his rate to inspect the site of the proposed work. The bidder should also inspect the quarries and approach roads to quarries and satisfy himself/themselves about the quality and availability of materials. In every case the materials must comply with the relevant specifications. Complaints at future date that the availability of materials at quarries has been misjudged cannot be entertained.

(ii) Amendment to Para 3.4.16 (a) (vii) of OPWD Code Vol.-I by substitution.

For the purpose of estimate, the approved quarry lead is to be provided judiciously. Engineers in charge would be responsible for ensuring the quality of the materials supplied. The contractors would, however, be responsible for procurement of materials from authorized sources and voluntarily disclose the source of procurement for the purpose of billing. Besides, the bidder would be required to submit the details of quarry for procurement while submitting the bids.

27. The offer of bidder shall be inclusive of cost of construction and maintenance of island, ferry service, authorized road, service road, foot bridge, pylon base, winchstand and derrick stand etc. as required for the work.

28. It must be definitely understood that the Government does not accept any responsibility for the correctness and completeness of the trial borings shown in the Cross Section.

29. **Performance Security / Additional Performance Security:**

29.1 The selected bidder shall deposit Additional Performance Security on an incremental basis for low bid prices, in accordance with Office Memorandum No. 173 dated 03.01.2026 and Office Memorandum No. 632 dated 09.01.2026 issued by the Works Department as under.

29.2 Where the bid price is below 0% but not below 10% of the project cost put to bid, no additional performance guarantee/security percentage is required.

29.3 - Where the bid price is below 10% but not below 20% of the project cost put to bid, the additional performance guarantee/security percentage shall be incremented by 0.1 % for every percentage of bid price below 10% of the project cost put to bid starting at 11 % with the additional bid performance guarantee being 0.1 % and this additional performance guarantee percentage shall be applied on the bid price;

29.4 - Where the bid price is 20% or more below of the project cost put to bid, the additional performance guarantee percentage shall be incremented by 0.2% for every percentage of bid price below 20% of the project cost put to bid in addition to 1% of the bid price and this additional performance guarantee percentage shall be applied on the bid price

29.5 - The additional performance guarantee percentage shall be rounded off to the next lower percentage based on whether the decimal point of the percentage of bid price is below 0.5% or next higher percentage based on whether the decimal point of the percentage of bid price is 0.5% or more.

29.6 The additional performance security shall be treated as part of the performance security.

Additional Performance Security (APS) is being obtained from the Successful Bidder when the Bid amount is less than estimated cost put to tender to the extent as given in the table below, in shape of Term Deposit Receipt pledged

in favour of Divisional Officer/Bank Guarantee in favour of the Divisional Officer from any Nationalized /Scheduled Bank in India counter guaranteed by its local branch at Bhubaneswar within seven days of issue of Letter of Acceptance (LoA) by the Divisional Officer (by e-Mail) to the successful bidder otherwise the bid of the successful bidder shall be cancelled and the he will be debarred from tendering for a period of 180 days. Further, proceeding for Blacklisting shall be initiated against the bidder as per amendment to Para 3.5.5 (v) of OPWD Code Volume-I v ide Works Department Office Memorandum No. 14459/W dated 20.09.2018.

30. If more than one bid is quoted (decimal up to two numbers will be taken for all practical purposes), either at the estimated cost put to tender or less than the estimated cost put to tender, the tender accepting authority will finalize the tender through a transparent lottery system, where all the concerned bidders/their authorized representatives, the concerned SE/EE of the concerned Division and Divisional Accounts Officer (DAO) will remain present.

31. If the rate quoted by the SC ST Category contractors comes to the rate quoted by the L1 bidder (decimal up to two numbers will be taken for all practical purposes) after availing 10% price preference as per Para 2 of Works Department Resolution No.27748, dated 11.10.1977, the tender shall be finalized by the tender accepting authority through a transparent lottery system along with other categories of contractors.

32. Justification for abnormally low bids shall be scrutinized by the Departmental Technical Committee and recommended to the competent authority of the Administrative Department for the approval of the Additional Performance Security (APS). An abnormally low bid is one in which the Bid price, in combination with other elements of the Bid, appears so low that it raises material concerns as to the capability of the Bidder to perform the contract at the offered price. Procuring Entity may, in such cases, seek written clarifications from the bidder, including detailed price analyses of the Bid price in relation to scope, schedule, resource mobilization, allocation of risks and responsibilities, and any other requirements of the bid document. If, after evaluating the price analyses, the procuring entity determines that the Bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Procuring Entity may reject the Bid/Proposal. However, it would not be advisable to fix a normative percentage below the estimated cost, which would automatically be considered as abnormally low bid.

33. In case of any discrepancy in printing or omissions of statutory specifications or any other part or portion of the approved document during download of the bid document, the decision of the officer inviting the bid will be binding on the bidder.

34. The tender containing extraneous conditions not covered by the tender notice are liable for rejection and quotations should be strictly in accordance with the tender call notice. Any change in the wording will not be accepted.

35. i) Schedule of quantities are accompanied in Cover-II (Price Bid). It shall be definitely understood that the Government does not accept any responsibility for the correctness or completeness of this schedule and that this schedule is liable for alternation or omissions, deductions or alternations set forth in the conditions of the Contract and such omissions, deductions, additions or alternations shall no way invalidate the contract and no extra monetary compensation, will be entertained.

ii)The quantity mentioned can be increased or decreased to the extent of 10% for individual items subject to a maximum of 5% over the estimated cost. If it exceeds the limit stated above, prior approval of competent authority is mandatory before making any payment.

36. The authority reserves the right to reject any or all the tenders received without assigning any reasons there-of what so ever. The bid security (earnest money) will be retained and dealt with as per the terms and conditions of the OPWD Code.

i) The bidder/tenderer whose bid has been accepted will be notified of the award by the Engineer-in- charge prior to expiration of the validity period by cable, telex or facsimile confirmed by registered letter. This letter (hereinafter and in the conditions of Contract called the “Letter of Acceptance”) will state the sum that the Engineer-in-charge will pay the contractor in consideration of the execution, completion and maintenance of the Works by the contractor as prescribed by the contract (Hereinafter and in the contract called the “Contract Price”).

ii) **Initial SecurityDeposit 2%** over value of the tender will be deposited by the successful bidder in form of **N.S.C / Post Office Savings Bank Account/ Post Office Time Deposit Account/ Kishan Vikas Patra/ Bank Guarantee in**

favour of the Divisional Officer from any Nationalized Bank in India counter guaranteed by its local branch at Bhubaneswar/ e-Bank Guarantee executed on the National e-Governance Services Limited (NeSL) Digital Document Execution portal/ Insurance Surety Bond issued by an Insurance Company authorized by the Insurance Regulatory and Development Authority of India (IRDAI). Initial Security Deposit/ any other security deposit from the contractor or supplier duly pledged in favour of the Executive Engineer, Fishery Engineering Division, Bhubaneswar & Payable at Bhubaneswar and in no other form, during signing the agreement in the P.W.D. form No. P-1 (Schedule XLV No.61) for the fulfilment of the contract in the office of the Executive Engineer, Fishery Engineering Division, Bhubaneswar or as directed. In addition to 2% ISD, the Executive Engineer, Fishery Engineering Division, Bhubaneswar will deduct from the running bill an amount at the rate of 3% of the total gross value of each bill, as an additional security deposit. The initial security deposit amount withheld according to the provision of P-1 agreement shall be retained as security for the due fulfillment of this contract and additional performance security in accordance with the provisions of the agreement.

iii) The agreement will incorporate all correspondence between the officer inviting the bid/Engineer-in-Charge and the successful bidder. Within 15 days following the notification of award along with the Letter of Acceptance, the successful bidder will sign the agreement and deliver it to the Engineer-in-Charge. Following documents shall form part of the agreement.

a) The notice inviting bid, all the documents including additional conditions, specifications and drawings, if any, forming the bid as issued at the time of invitation of bid and acceptance thereof together with any correspondence leading thereto & required amount of performance security including additional performance security.

b) Standard P.W.D. Form P-1 with latest amendments.

iv) Failure to enter in to the required agreement and to make the security deposit as above shall entail forfeiture of the **Bid Security (earnest money)**. No **contract (tender)** shall be finally accepted until the required amount of initial security deposit and additional performance security deposit are received by the Engineer-in-Charge. The security will be refunded after **three years** of completion of the work and payment of the final bill and will not carry any interest.

v) As concurred by Law Department & Finance Department In their U.O.R. No 848 dtd.21.05.97 J.O.R.No.202 W.F.D. dtd.06.03.98 respectively the E.M.D. will be forfeited in case, where bidders/tenderers back out from the offer before acceptance of tender by the competent authority.

vi) **Amendment to Para 3.5.18 Note – viii of OPWD Code Vol.-I**

Before acceptance of tender, the successful bidder will be required to submit a work programme and mile stone basing on the financial achievement so as to complete the work within the stipulated time and in case of failure on the part of the agency to achieve the mile stone liquidated damage will be imposed)

vii) **Amendment to Para 3.5.14 Note – I of OPWD Code Vol.-I**

If L-1 bidder does not turn up for agreement after finalization of the tender then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. In that case, the L2 bidder. If fulfils, other required criteria would be called for drawing agreement for execution of work subject to the condition that L2 bidder negotiates at par with the rate quoted by the L1 bidder otherwise the tender will be cancelled. In case a contractor is black listed it will be widely published and intimated to all departments of Government and also to Govt. of India agencies working in the State.

33. The agreement in composite manner shall be drawn by the **Executive Engineer, Fishery Engineering Division, Bhubaneswar**

35. (i) The agreement will be drawn in P.W.D. P1 contract form. The contract shall be drawn and signed by **Executive Engineer, Fishery Engineering Division, Bhubaneswar**, on behalf of the Governor of Odisha.

~~(ii) The Civil items of works as per PART I of Schedule of quantities, Electrical items of works (both internal and external) as per Part II of Schedule of quantities and P.H. items of work (both internal and external) as per Part III of the Schedule of quantities of the agreement shall be supervised measured and check measured by the **Executive Engineer, Fishery Engineering Division, Bhubaneswar**. In the interest of expeditious execution of work, payment of interim bills (Running A/c bills) shall be made by the **Executive Engineer, Fishery Engineering Division, Bhubaneswar**. The contractor shall be bound to receive and act as well according to the direction of the Engineer in-Charge and Authority concerned.~~

36. Any deviation in execution of Civil, P.H. and E.I. items of the agreement will mean deviation to the composite work as a whole will be approved by Executive Engineer Fishery Engineering Division Bhubaneswar.
37. Similarly, extension of time to be applied by the contractor to the Executive Engineer Civil as per relevant clause of P1 agreement & DTCN / Code.
38. In case of necessity felt by any of the Executive Engineer Fishery Engineering Division regarding slow progress of work, a joint crash management meeting may be convened suitably asking the contractor for a revised work programme and to remove the bottlenecks of any sort on the way to completion of the composite work.
39. The Civil contractor who has put the tender for the work in DTCN, will alone be responsible and answerable to the PWD authority or any other competent authorities as regards to defects in the work, slow progress in the work or any other recessional parameters that may crop up during execution of the work as a whole comprising of Civil and E.I parts. When any part of the work may be Civil, P.H. or E.I., is considered by the Engineer-in-Charge or departmental authority not to be in coherence with the agreement condition or their specifications as in the DTCN, then the contract for the total work in TCN will lead to its revision by the department if felt necessary.
40. That for the purpose of jurisdiction in the event of disputes if any of the contract would be deemed to have been entered in to within the State of Orissa and it is agreed that neither party to the contract will be competent to bring a suit in regard to the matter by this contract at any place outside the State of Orissa.
41. The contractor should be liable to fully indemnify the department for payment of compensation under workman Compensation Act. VIII of 1923 on any account of the workmen employed by the contractor and full amount of compensation paid will be recovered from the contractor.
42. Bidders are required to abide by the fair wages clause as introduced by Govt. of Orissa, Works Department Letter No.-VIII-R 8/5225 Dtd. 26.02.55 and No.IIM- 56/628842(5) Dtd.27.09.61 as amended from time to time.
43. In case of any complaint by the labour working about the non payment or less payment of his wages as per latest minimum Wages Act, the Executive Engineer Fishery Engineering Division will have the right to investigate and if the contractor is found to be in default, he may recover such amount due from the contractor and pay such amount to the labour directly under intimation to the local labour office of the Govt. The contractor shall not employ child labour. The decision of the Executive Engineer Fishery Engineering Division is final and binding on the contractor. The contractor shall bear cost of various incidentals, sundries and contingencies necessitated by work in full within the following or similar category.
- a. Rent, royalties and other charges of materials, octroi duty, all other taxes including sales tax, ferry, tolls conveyance charge and other cost on account of land and building including temporary building and temporary electric connection to work site as well as construction of service road and diversion road and its maintenance till completion of work as required by the bidders for Collection of materials, storage, housing of staff or other purpose of the work. No bidder will however be liable to pay Govt. for temporary occupation of land owned by Govt. at the site of the work.
 - b. Labour camps or huts necessary to a suitable scale including conservancy and sanitary arrangements therein to the satisfaction of the local health authorities.
 - c. Suitable water supply including pipe water supply wherever available for the staff and labour as well as for the work.
 - d. Fees and duties levied by the municipal, canal or water supply authorities.
 - e. Suitable equipments and wearing apparatus for the labour engaged in risky operations.
 - f. Suitable fencing barriers, signals including paraffin and electric signal where necessary at works and approaches in order to protect the public and employees from accidents.
 - g. Compensation including the cost of any suit for injury to persons or property due to neglect of any major precaution also become payable due to operation of the workmen compensation act.
 - h. The contractor has to arrange adequate lighting arrangement for the work where ever necessary at his own cost.
45. After the work is finalized, all surplus materials should be removed from the site of work. Preliminary work such as vats, mixing platforms etc. should be dismantled and all materials removed from the site and premises left neat and clean, this should be inclusive of the rate.
46. No payment will be made for bench marks, level pillars profiles and benching and leveling the ground where required. The percentage rate to be quoted should be inclusive of carriage of all materials and incidental item of works.
47. It should be understood clearly that no claim what-so-ever will be entertained to extra items of works, extra quantity of any item besides agreement quantity unless written order is obtained from the Engineer-in-charge and rate settled before the extra items of work or extra quantity of any items of work is taken up.

48. The bidder shall have to abide by the C.P.W.D. safety code rules introduced by the Government of India, Ministry of work Housing and Supply in their standing order No-44150 dtd.25.11.57.

49. Bid documents consisting of plans, specifications, the schedule of quantities and the set of terms and conditions of contract and other necessary documents can be seen in all the offices issuing the documents and office of the Engineer-in-Chief (Civil) during office hours everyday except on Sundays and Public Holidays till last date of sale and receipt of bid documents. Interested bidders may obtain further information at the same address. But it must be clearly understood that the bids must be received in order and according to the instructions.

50. Bidders are required to go through each clause of P.W.D. Form **P-1** carefully in addition to the clause mentioned herein before tendering. In case of ambiguity, the clauses of P.W.D Form **P-1** with latest amendments shall **supercede** the condition of **D.T.C.N.**

51. Steel shuttering & centering shall be used which shall be lined with suitable sheeting and made leak proof and water tight.

52. The Department will have the right to inspect the scaffolding, centering and shuttering made for the work and can reject partly or fully such structures if found defective in their opinion.

53. Concrete should be machine mixed unless otherwise ordered in writing by the Executive Engineer. The contractor should arrange his own concrete mixer, vibrator, and pumps etc, for this purpose at his own cost.

54. Cement shall be used by bags and weight of one bag of cement being taken as fifty (50) Kg.

55. The bidder should arrange the materials like Steel, Cement, paint and bitumen etc. of approved quality and specification at his own cost for completion of the work with the time schedule. No extension of time will be granted on the application of the bidder due to delay in procurement of materials.

56. The bidder will be responsible for the loss or damage of any departmental materials during transit and in the execution of the work due to reasons what – so-ever and the cost of such materials will be recovered from the bills at stock issue rates or market rates whichever is higher.

If the bidder removes Government materials supplied to him from the site of work with a view to dispose of the same dishonestly, he shall be in addition to any other liability civil or criminal arising out of his contract be liable to pay a penalty equivalent to five times of the price of the materials according to the stock issue rate or market rate whichever is higher. The penalty so imposed shall be recovered at any time from any sum that may then or at any time thereafter become due to the bidder or from his security deposit or from the proceeds of sale thereof.

57. The selected bidder may take delivery of departmental supply according to his need for the work issued by the Sub-Divisional office in-charge subject to the availability of the materials. The bidder shall make all arrangement for proper storages of materials but no cost for raising shed for storage, pay of watchman etc. will be borne by the Department. The Department is not responsible for considering the theft of materials at site. It is the contractor's risk. Under any such plea if the bidder stops the work, he shall have to pay the full penalty as per clause of **P-1** agreement.

58. The Department will have the right to supply at any time in the interest of work any departmental materials to be used in the work and the contractor shall use such materials without any controversy or dispute on that account. The rate of issue of such materials will be at the stock issue rates inclusive of storage charges or rates fixed by the Department or current market rate whichever is higher.

59. All the materials which are to be supplied from P. W. D. store will be as per availability of stock and the contractor will have to bear the charges of straightening, cutting, jointing, welding etc. to required sizes in case of M. S. Rods or Tor steel/M.S Angles, Tees and Joists etc. After issue from the P. W. D. store the materials may be under the custody of the contractor and the contractor will be responsible for its safety and storage.

60. Though Departmental issue of cement and steel has indicated, it may not be taken as binding. The contractor must have to arrange by themselves cement, steel, bitumen and every sort of materials from approved manufacturer, get it tested in the Departmental Laboratory and approved by the Department before use.

61. TOR rods, plates and structural members will be supplied in quantity, length and size available in the stock. For payment of reinforcement, the steel including plates etc. shall be measured in length of different diameter, size and specification as actually used (including hooks and cranks) in the work correct to an inch or cm. and their weight calculated as per sectional weight prescribed by the Indian Standard Specification or as directed by the Engineer-in-Charge.

62. The contractor should at his own cost arrange necessary tools and plants required for the efficient execution of work and the rates quoted should be inclusive of the running charges of each plant and cost of conveyance.

63. After completion of the work the contractor shall arrange at his own cost all requisite equipments for testing one unplugged well and specified span free of cost as directed by the Engineer-in-Charge and bear the entire cost of the test.

64. No extra payment will be made for the jungle clearance for taking earth from the borrow areas. Earth work from cutting shall be economically utilized in filling.
65. Concrete of strength below of the required strength (as determined by actual tests) shall not be accepted.
66. After completion of the work, the contractor shall arrange at his own cost all requisite equipments for testing of electrical installations in the building, if felt necessary and the entire cost of such test, including the inspection by the Electrical Inspectorate group will be borne by the contractor.
67. The safety certificate of the EI work will be furnished by the agencies after getting necessary verification from the electrical inspector/equally competent authority responsible for the work prior to Energisation of the building.
68. The depth of foundation indicated on the drawing are provisional but these may be altered if necessary in the light of the nature of strata encountered during soil test at field which must be taken in advance of actual execution of the foundation.
69. Wherever dewatering is imperatively necessary, the term dewatering shall mean the execution or operation of the items due to standing water as well as due to percolation of water. The contractor has to do dewatering by bailing out water from the foundation, pipe line trenches, septic tank / soak pits / sumps / manhole etc. either rain water or sub soil water if necessary within his quoted percentage rate.
70. No claim for carriage of water what-so-ever will be entertained.
71. The contractor shall employ one or more Engineering Graduate or Diploma holders as apprentice at his cost if the work as shown in the tender exceeds Rs.2,50,000/-. The apprentices will be selected by the Executive Engineer. The period of employment will commence within one month after the date of work order and would last till the date, when 90% of the work is completed. The fair wage to be paid to the apprentices should not be less than the emolument of personnel of equivalent qualification employed under Government. The number of apprentices to be employed should be fixed by the Executive Engineer in the manner so that the total expenditure does not exceed one percent of the tendered cost of the work.
72. Super class contractor shall employ under himself two Graduate Engineer and two Diploma holders belonging to the State of Odisha. Special class contractor shall employ under him one graduate Engineer and two Diploma Holder belonging to the state of Orissa. Like wise 'A' class contractor shall employ under him one Graduate Engineer or two Diploma Holders belonging to state of Orissa. The contractor shall pay to the Engineering personnel monthly emoluments which shall not be less than the emoluments of the personnel of equivalent qualification employed under the State Govt. of Orissa. The Executive Engineer, Fishery Engineering Division, Bhubaneswar may however assist the contractor with names of such unemployed Graduate engineers and Diploma Holders if such help is sought for by the contractor. The names of such Engineering personnel appointed by the Contractors should be intimated to the tender receiving authority along with the tender as to who would be supervising the work. Each bill of the Super Class, Special Class or 'A' Class Contractor shall be accompanied by an employment Roll of the Engineering personnel together with a Certificate of the Graduate Engineer or Diploma Holder so employed by the contractor to the effect that the work executed as per the bill has been supervised by him. (Vide Works Department No. Codes M-22/91-15384 dated 9.7.91). The required certificate is to be furnished in the proforma contained in a separate sheet vide **Schedule-B**.
73. It is the responsibility of the contractor to procure and store explosive required for blasting operation. Department may render necessary possible help for procuring license.
74. Orissa Construction Corporation Ltd. Will be allowed price preference up to 3% over the lowest quotation or tender as laid down in works and Transport Department Resolution No-285 date-17.04.1974 .The Orissa Bridge and Construction Corporation will also be allowed a price preference to the extent of up to 3% over the lowest tender amount (Where their tender is not the lowest) provided they express willingness to execute the work after reduction of rates by negotiation.
75. Amendment of existing Clauses :- By admission of a tender for the work, a tenderer will be deemed to have satisfied himself by actual inspection of the site and locality of the work, about the quality and availability of the required quantity of material including the wheat/ rice referred to above, medical aid, labour and food stuff etc., and that rates quoted by him in the tender will be adequate to complete the work according to the specifications attached there to and that he had taken in to account all conditions and difficulties that may be encountered during its progress and to have quoted rates including labour and materials with taxes , octroi ,other duties, lead, lifts, loading and unloading, freight for all materials and all other charges necessary for the completion of the work, to the entire satisfaction of the Engineer-in – Charge of the work and his authorized subordinates. After acceptance of the contract rate Government will not pay any extra charges for any reason in case the contractor claims later on to have misjudged as regard availability of materials, labour and other factors.

76. The prevailing percentage of I. T. Department of the gross amount of the bill towards income tax will be deducted from the contractor's bill.
77. Prevailing rate of GST as applicable under Act on the gross amount of the bill will be deducted from the contractor's bill as tax deduction at source (TDS) as per rules.
78. The contractor is required to pay royalty to Govt. towards use of minor minerals and produce such documents in support of their payment to the concerned **Executive Engineer** with their bills, falling which the amount towards royalties of different materials as utilized by them in the work will be recovered from their bills and deposited in the Government revenue. This is as per the Gazette Notification No.2280 dtd.15.12.2016 of Steel & Mines Department, Government of Odisha.
79. CESS @ 1 (one)% of the amount of the estimated cost as per Tender notification read with latest corrigendum if any will be proportionately deducted from the Contractor's bill at the time of making payment of each bill.
80. Under no circumstances interest is chargeable for the dues or additional dues if any payable for the work.
81. Under section 12 of contractors labour (Regulation and Abolition) Act. 1970 the contractor who undertakes execution of work through labour should produce valid license from licensing authorities of labour Department.
82. **Sample of all material** –The contractor shall supply sample of all materials fully before procurement for the work for testing and acceptance as may be requiring by the concerned Executive Engineer.
83. Any defects, shrinkage or other faults which may be noticed within **12 (twelve) months** from the completion of the work arising out of defective or improper materials or workmanship timing are upon the direction of the Engineer-in-Charge to be amended and made good by the contractor at his own cost unless the Engineer for reasons to be recorded in writing shall be decided that they ought to be paid for and in case of default Department may recover from the contractor the cost of making good the works. The defect liability period for the work is **12 (TWELVE) calendar months** from the date of successful completion of the work.
84. From the commencement of the works to the completion of the same, they are to be under the contractors charge. The contractor is to be held responsible to make good all injuries, damages and repairs occasioned or rendered necessary to the same by fire or other causes and they hold the Govt. of Orissa harmless for any claims for injuries to person or structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or any one in his employment during the execution of the work. Also no claim shall be entertained for loss due to earthquake, flood, cyclone, epidemic, riot or any other calamity whether natural or incidental damages so caused will have to be made good by the contractor at his own cost.
85. **Payment for variation in price (Clause-31 of F2/P1 Contract)/ Escalation – Amendment of Codal / Contractual Provisions regarding Price Variation / Escalation Clause (Works Department Office Memorandum No.15847 dt 19.11.2019).**

Clause 31: Price Adjustment

Contract price shall be adjusted for increase or decrease in rates and price of labour, materials fuels and lubricants in accordance with the following principles and procedures and as per formula given in following Paras.

- (a) The price adjustment shall apply for the work done from the start date given in the contract data up to end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.
- (b) The price adjustment shall be determined during each month from the formula given in the following Paras.
- (c) Following expressions and meanings are assigned to the work done during each months:

R= Total value of work done during the month. It would include the amount of secured advance granted, if any during the month, less the amount of secured advance recovered, if any during the month. It will exclude value for works executed for extra items under variations.

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

The formula (e) for adjustment of prices are:

31(a)(i) Adjustment of Other materials Component

Price adjustment for increase or decrease in cost of local materials other than cement, steel, bitumen, pipe and POL procured by the contractor shall be paid in accordance with the following formula:

VM	$0.85 \times Pm/100 \times R \times (M1 - Mo)/Mo$
VM	Increase or decrease in the cost of work during the month under consideration due to changes in rates for local materials other than cement, steel, bitumen and POL.
Mo	The all India wholesale price index (all commodities) on 28 days preceding the date of opening of Bids, as published by the Ministry of Commerce and Industry, Government of India, New Delhi.
M1	The all India wholesale price index (all commodities) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.
Pm	Percentage of local material component (other than cement, steel, Bitumen and POL) of the work.

31(a)(ii) Adjustment for Cement Component

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

$$Vc = 0.85 \times Pc/100 \times R \times (C1 - Co)/Co$$

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

Co The all India wholesale price index for Ordinary Portland Cement (OPC) on 28 days preceding the date of opening of Bids, as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

C1 The all India wholesale price index for Ordinary Portland Cement (OPC) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi. Pc Percentage of Cement Component of the work.

31(a)(iii) Adjustment for Steel Component

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

$$Vs = 0.85 \times Ps/100 \times R \times (S1 - So)/So$$

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

So The all India wholesale price index for steel (Mild steel long products) on 28 days preceding the date of opening of Bids, as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

S1 The all India wholesale price index for steel (Mild Steel long products) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

Ps Percentage of Steel Component of the work.

Note: For the application of this clause, index of (Mild Steel long products) has been chosen to represent steel group

31(a)(iv) Adjustment for Bitumen Component

Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula:

Vb	$0.85 \times Pb/100 \times R \times (B1 - Bo)/Bo$
Vb	Increase or decrease in the cost of work during the month under consideration due to changes in the rate for Bitumen.
Bo	The official retail price of bulk bitumen at the IOC/BPCL depot at nearest center on the day 28 days prior to date of opening of Bids,
B1	The official retail price of bulk bitumen at the IOC/BPCL depot at nearest center for the 15 th day of the month under consideration
Pb	Percentage of Bitumen Component of the work.

31(a)(v) Adjustment towards differential cost of pipes

Price adjustment for increase or decrease in the cost of pipe shall be paid in accordance with the following formula:

$$V_{pi} = 0.85 \times P_{pi}/100 \times R \times (P_{i1} - P_{io})/P_{io}$$

V_{pi} Differential cost of pipe i.e. amount of increase or decrease in rupees to be paid or recovered during the month under consideration.

P_{pi} Percentage of Pipe Component of the work,

P_{i1} All India Whole sale price index of pipe for the period under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi

P_{io} All India wholesale price index of pipe on 28 days preceding the date of opening of the bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

31(b) Adjustment for Labour Component

Price adjustment for increase or decrease in the cost due to labour shall be paid in accordance with the following formula:

$$V_L = 0.85 \times P_L/100 \times R \times (L_1 - L_o)/L_o$$

V_L Increase or decrease in the cost of work during the month under consideration due to changes in rates for local labour.

L_o The minimum wages for unskilled labour as Notified by Government of Odisha as prevailed on the last stipulated date of receipt of tender including extension, if any.

L_1 The minimum wages for unskilled labour as notified by Government of Odisha as prevailed on the last date of the month previous to the one under consideration

P_L Percentage of labour Component of the work.

31I Adjustment of POL (fuel and lubricant) Component

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

$$V_f = 0.85 \times P_l/100 \times R \times (F_1 - F_o)/F_o$$

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

F_o The official retail price of High Speed Diesel (HSD) at the existing consumer pumps of IOC/BPCL/HPCL at nearest center on the day 28 days prior to the date of opening of Bids,

F_1 The official retail price of HSD at the existing consumer pumps of IOC/BPCL/HPCL at nearest centre for the 15th day of the month under consideration

P_f Percentage of fuel and lubricants Component of the work.

Note: For the application of this clause, the price of High Speed Diesel oil has been chosen to represent fuel and lubricants group.

31(d) Adjustment for Plant and Machinery Spares Component

10 Price adjustment for increase or decrease in the cost of plant and machinery spares procured by the contractor shall be paid in accordance with the following formula:

$$V_p = 0.85 \times P_p/100 \times R \times (P_1 - P_o)/P_o$$

V_p Increase or decrease in the cost of work during the month under consideration due to changes in the rates for plant and machinery spares.

P_o The All India Whole sale price index for manufacture of machinery for mining, quarrying and construction on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi,

P1 The All India Whole sale price index for manufacture of machinery for mining, quarrying and construction for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi, Pp Percentage of plant and machinery spares Component of the work. **Note:** For the application of this clause, index of manufacturing of machinery for mining, quarrying and construction has been chosen to represent Plant and machinery Spares group. Regarding wholesale price Index (WPI) for appropriate commodity for payment of price adjustment due to change of base year of WPI from 1993-94 to 2004-05 & 2011-12, it is observed that, the commodity 'Bars and Rod', 'Cement', 'Heavy machinery and parts' included in the list of WPI 1993-94 series are not mentioned as such in the WPI 2004-05 & 2011-12 series. Therefore, the following items in the WPI 2004-05 & 2011-12 series shall be considered corresponding to items in WPI 1993-94 series.

Sl No.	Item in WPI 1993-94 series	Item in WPI 2004-05 series	Item in WPI 2011-12 series
1	Cement	Grey Cement	Ordinary Portland cement
2	Bars & rods	Rebars	Mild steel long products.
3	Heavy Machinery & parts	Construction Machinery	Manufacture of machinery for mining, quarrying & construction

31(e) APPLICATION OF ESCALATION CLAUSE:

The contractor shall for the purpose of availing reimbursement/refund of differential cost of steel, bitumen, cement, pipe, POL and wages, keep such books of account and other documents as are necessary to show that the amount of increase claimed or reduction available and shall allow inspection of the same by a duly authorized representative of Government and further, shall at the request of the Engineer-in-Charge, furnish document to be verified in such a manner as the Engineer-in-Charge may require any document and information kept. The contractor shall within a reasonable time of 15 days of his becoming aware of any alteration in the price of such material, wages of labour and /or price of POL give notice thereof to the Engineer-in-Charge stating that the same is given pursuant to this condition along with information relating to there to which he may be in a position to supply.

Percentage Table

SINo..	Category of works		% Component (cost wise)		
			Labour (PL)	POL (Pf)	Steel (Ps)+Cement (Pc) + Bitumen (Pb)+Pipes (Ppi)+
1	R&B works (% of component)	Road Works	5	5	90
		Bridge works	5	5	90
		Building works	5	5	90
2	Irrigation work (% of Component)	Structural work	5	5	90
		Earth, canal & Embankment work	5	5	90
3	P.H. work	Structural work	5	5	90
		Pipeline work	5	5	Pipe – 70% Machinery + Other material -20%
		Sewer Line	5	5	Pipe – 70% Machinery + Other material -20%

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***Note:** -Further break up may be worked out considering the consumption of Cement, Steel, Bitumen, Pipe and Plant & Machinery Spare Component in the concerned works and shall be provided in the bid document in shape of "Schedule of Adjustment Data" as on "Appendix to Bid" (enclosed herewith).

Appendix to Bid Schedule of Adjustment Data

[For all works, adjustment factor for Labour and POL shall be considered @ 5% each. Steel, cement, pipes, other Materials and Machinery shall contribute to 90% of price adjustment and shall be calculated for each work separately during preparation of estimate shall be approved by the authority during technical sanction as a “Schedule of Adjustment Data” and shall form part of the Bid Document]

Cl.No.31 of F2/P1 Contracts Sl No.	Index Description	Source of Index	Base Value *	Base Date*	Weightage of Item**
31(a)(i)	Other materials	All India Whole sale price index (all commodities)as published by the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry,			
31(a)(ii)	Cement	Whole sale price index for Cement (Ordinary Portland Cement)as published by the office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry,			
31(a)(iii)	Steel	Whole sale price index for Steel (Mild Steel-Long Products) as published by the office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry,			
31(a)(iv)	Bitumen (VG-30)	Official retail price of bulk bitumen at the nearest IOC/HPCL depot.			0
31(a)(v)	Pipes	Whole sale price index for the type of Pipe under consideration, as published by the office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry,			0
31(b)	Labour	Minimum Wage notified by the Labour and Employee’s State Insurance Department of Government of Odisha, India			5%
31I	POL	Official retail price of HSD at the nearest IOCL/HPCL/BPCL depot.			5%
31(d)	Plant and Machinery	Whole sale price index for Manufacture of Machinery for Mining, Quarrying and Construction as published by the office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry,			
			Total		100%

* Values to be filled up at the time of drawl of contract

** Values to be filled up in the bid document

87. Where it will be found necessary by the Department, the Officer-in-Charge of the work shall issue an Site Order book to the contractor to be kept at the site of the work with pages serially numbered. Orders regarding the work whenever necessary are to be entered in this book by the P.W.D. Officer-in-Charge with their dated signatures and duly noted by the contractor or his authorized agents with their dated signature. Orders entered in this book and noted by the contractor’s agent shall be considered to have been duly given to the contractor for following the instructions of the Department. The Site Order Book shall be the property of the P.W.D. and shall not be removed from the site of

- work without written permission of the Engineer (**Executive Engineer**) and to be submitted to the Engineer-in-charge every month.
88. The details of foundation, sub-structure and floor protection for execution shall be done in accordance with the test results thus obtained.
89. The contractor shall have no claim whatsoever for the extra quantity of work to be executed in view of above possible changes and payments is to be made as per Clause 10 of the **P-1** Contract.
90. Over and above these conditions, the terms and conditions and rules and regulations and specifications as laid down in Orissa P.W.D. Code, Bridge code and MoRT&H Specifications with latest revision / amendment are also binding on the part of the contractor.
91. No part of the contract shall be sublet without written permission of the concerned **Executive Engineer** or transfer be made by power of Attorney authorizing others to receive payment on the contractor's behalf.
92. The contractor should attach the certificate in token of payment deposit with the registration authority as per recent circular of the Government relating to his registration.
93. Any damages caused by natural calamities should be done by the contractor at his own cost. The Department will not be in any way responsible for the same and will not pay any cost towards the repair done by the contractor.
94. The rate quoted by the contractor should be without GST and shall cover the latest approved rates of labours, materials, P.O.L. and Royalties. Arrangement of borrow areas; land, approach road to the bridge site etc. are the responsibility of the contractor.
95. The concrete items wherever dewatering is imperatively necessary the term dewatering shall mean the execution or operation of the items due to standing water as well as due to percolation of water. The quoted rate will be inclusive of this.
96. The materials, borrow areas and hutments at site should be arranged by the contractor at his own cost. No future complaint on this account shall be entertained.
97. The contractor shall make requisition of claim book from the date of commencement of the work from the Department and shall maintain in proper P.W.D. form with pages serially numbered in order to record items of works are not covered by his contract and claimable as extra. Claims shall be entered regularly in this book under the dated signature of the contractor or his duly authorized agents at the end of each month. A certificate should be furnished along with the claim to the effect that he has no other claim beyond this claim up-to-date. If in any month there are no claims to record, a certificate to that effect should be furnished by the contractor in the claim book. Each claim must be defined and should be given as far as possible regarding the quantities as well as the total amount claimed. The claim book must be submitted by the contractor regularly by 10th and 16th days of each month for orders of the Engineer-in-charge or competent authority. Claims not made in this manner or the claim books not maintained from the commencement of the work are liable to be summarily rejected. The claim books are the property of the P.W.D. and shall be surrendered by the contractor to the Engineer-in-charge after completion of the work or before recession of the contract by the Department whichever is earlier for record.
98. Number of tests as specified in I.R.C./MoRT&H/ISI specification required for the construction of roads /bridges / buildings or any other structural works will be conducted in any Govt. Test House / Departmental laboratories/reputed material testing laboratory as to be decided by the Engineer-in-charge. Testing charges including expenditure for collection / transportation of samples /specimens etc. will be borne by the contractor. The collection of samples and testing are to be conducted for both prior to execution and during execution as may be directed by the Engineer-in-charge and on both the accounts the cost shall be borne by the contractor.
99. i) Besides, the firm / contractor shall install full fledged field laboratory at work site for conducting required tests as per IRC/MoRT&H/ISI requirements at his own cost for providing sufficient opportunity for checking from time to time. ii) An Engineering personnel of the executing agency should be present at work site at the time of visit of high level inspecting officers in the rank of Executive Engineer and above.
- iii) After completion of the road in all respects the road furniture's should be affixed by the executing agency indicating locations like school, hospital, No-horn etc.

100. **Condition for issue of plant & machinery to contractor on hire:-** Tools & plants will be issued to the contractor only if it is desirable in the interest of Govt. works and if these can be spared without inconvenience to the Department. The Sanction of the Executive Engineer shall be necessary in each case. The contractor shall arrange his programme of work according to the availability of the plant & machinery & no claim will be entertained for any delay in supply by the Department. An agreement shall be entered into by the contractor to the effect that these hire charges are recoverable from the bills of the contractor regularly and the final payment for the work including refund of security deposit will not be made until the total amount due to the Government on account of hire of machinery etc. is recoverable in full. Full amount of hire charges due from the contractor at any contract at any time shall be recovered from his next subsequent bill. All transit and incidental charges in connection with the dispatch of tools and plants and machineries from workshop shed/ deposit return there to, will be borne by the contractor. The hire charge shall be recovered at the prescribed rates from and inclusive of the date, the plant and machinery is made over up to and inclusive of the date of its return, even though the same day it may not have been utilized for any reason except for a major break down which may take more than 72 hours for repairs. The contractor shall immediately intimate in writing to the Engineer – in-charge when any plant or machinery goes out of order requiring major repairs. The hire charges are for clock hours. In case of tar boilers, hot mix plant and any other machinery requiring similar preparation the working hour will include the time required to make up the boiler temperature and bring plant to the operating conditions before the actual start of work. The machine will work in shifts of 8 hours each. Extra charges towards overtime wages of any of the operating and maintenance staff will be leviable. These charges will be fixed by the Engineer-in-charge from time to time. In no case the tools and plants shall be operated beyond 8 hours in any shift without prior written permission of the Engineer-in-charge.

The contractor shall release the plant and machinery as and when required for periodical servicing and maintenance. He shall also provide for any labour and water source for washing the plants. In the case of Concrete mixtures, pavers and similar such type of equipments, the contractor shall arrange to get the hopper cleaned and the drums etc. washed at the close of work each day. The plant and machinery once issued to a contractor shall not be returned by him on account of lack of arrangement of labour and material etc. on his part. The same will be returned only when they do not require or when in the option of Engineer-in-charge the work or a portion of work for which issued is completed. The tools and plants shall while in transit and in the custody of contractor be at his sole risk and responsibility for damages and / or loss except fair wear and tear. The damage or loss as assessed by Engineer-in-charge shall be made good by the contractor. In the event of a disagreement as to the extent of damage or the value of article lost, the decision of Executive Engineer, Fishery Engineering Division shall be final. The contractor shall on or before the supply of plant and machinery sign an agreement in indemnifying the Govt. against loss or damage to the machine. The Contractor shall also be responsible for any claim for compensation for loss of life, injury or damages to property etc. arising from any cause what-so-ever. The contractor shall provide full time choukidar for guarding the plant and machinery at site. If the articles are not returned within the date originally specified or extended by the Engineer-in-charge, in addition to the normal hire charge, a surcharge equal to 10% of the hire charges will be levied for the period that the machinery is not returned. Such period will be treated as working time. In the event of the non-return of the machinery, the full value of the articles at the current market price will be recovered from the contractor's outstanding bills or any bills that may become due in respect of his other work under the state public works Department. The decision of the Executive Engineer, Fishery Engineering Division shall be final in case of dispute.

FORM OF AGREEMENT – The contractor shall, before taking the possession of the machinery, enter into an agreement with the Engineer-in-charge or his nominees in the form attached. Log Books for recording the hours of daily works for each of the plant and machinery supplied to the contractor will be maintained by the Department will be attested by the contractor or his authorized agent daily. In case of contractor contests the correctness of the entries and / or fails to sign the log book, the decision of the Engineer-in-charge shall be final and binding on him. Hire charges will be calculated according to the entries in the logbook and will be binding on the contractor.

AGREEMENT FOR LOANS OF GOVERNMENT TOOLS & PLANTS.

This agreement made the _____ Two Thousand _____
_____ between (here-in-after referred to as “the hirer” which expression shall unless excluded by or repugnant to the context include his heirs, executors, administrators and assigns) of the one part and the Govt. of Orissa (here in after referred to as the Governor which expression shall unless excluded by or repugnant to the context include his successors in office as assigns) of the other part. Where as the hirer desirous of hiring the tools and plants of the P. W. Department of the Orissa Govt. and more particularly specified in the schedule here under between here in after referred to as “the tools and plants”. And where as Government has agreed to let in hire the tools and plants to the hirer on the terms and conditions here in after mentioned. Now it is here by and between the parties here to as follows: -

- (a) In consideration of agreement that hire charges be recovered from their bill for work executed on which this machinery will be used or any other than standing in the names of contractors in the book of the Department or any other Government Department. The Govt. agrees to let the hirer tools and plants for the period to be computed from the date of delivery of the tools and plant to the hirer at **theat headquarters of concerned Executive Engineer as per Contract Data.**
- (b) The rate of higher charges will be as mentioned in the schedule attached.
- (c) The hirer shall not transfer, assign or sublet or in any way part with the tools and plants or any part thereof without the previous written approval of the Engineer-in-charge
- (d) On the expiry of the period of the hire, the hirer shall return the tools and plants to the Public Works Department. & workshop / store at **headquarters of concerned Executive Engineer as per Contract Data** in the same good condition in which they were received by him.
- (e) In the event of the tools and plants not being returned on the expiry of the above-mentioned period, the hirer shall without prejudice and any other liability pay to the Government on account equivalent to the rate of hire specified for the working period and an increase of ten percent.
- (f) The tools and plants shall be open for inspection at all times to the officers of the Government.
- (g) The hirer shall not operate the tools and plants so hired for more than one shift / two shifts of 8 hours each per day without the prior sanction of the Engineer-in-charge. If the hirer operates the tools and plants beyond the aforesaid limit without the prior sanction of the Assistant Engineer, he shall pay to Government additional hire charges as well as over time charges for staff for such excess operation at the rate approved by the Engineer-in-charge from time to time.
- (h) In case of breakdown, repairable at the site within a period of three days hire charges as specified in the schedule will be levied except in case of major repairs.
- (i) Normally the tools and plants will be supplied with operating staff.
- (j) The hirer shall be responsible for any claims for compensation for loss of life, injury or damage to property etc. arising due to any causes what-so-ever during the period of the machinery is in his charge.
- (k) All municipal or other dues and taxes payable on account of the use or operation of the tools and plants for the period of hire shall be defrayed by the hirer.
- (l) The hirer shall make good any loss or damages arising out of causes other than fair wear and tear to the tools and plants during the period of hire. The cost recoverable from the hirer shall be the full replacement value as determined by the Engineer-in-charge .In the event of any loss or damage not being made good by the hirer to the satisfaction of the said Engineer-in-charge the office shall be at liberty to make good himself such loss or damage and recover the cost thereof from the hirer. The hirer shall pay to the Engineer-in-charge such an amount as shall be necessary to make good the loss or damage failing which the same will be recovered from his dues as in case of hire charges.
- (m) On the breach of any terms or conditions of this agreement by the hirer the Engineer-in-charge shall be entitled to demand the return of tools and plants and the hirer shall return the tools and plants within 72 hours from the date of receipt of such order in writing .In case of failure on the part of the hirer to comply with such order he shall be liable to pay such penalty as may be imposed by the Engineer-in-charge for the period the tools and plant are detained provided that the maximum penalty shall not exceed the cost replacement of the tools and plants .
- (n) In case of any disputes between the hirer and the Government, the decision of the Executive Engineer, Fishery Engineering Division, Bhubaneswar shall be final.

- (o) This agreement shall be operated by the Engineer-in-charge on behalf of the Government and the term Engineer-in-charge shall include all officers duly authorized by him to exercise powers on his behalf.

THE SCHEDULE

Serial No.	Description and Name of the articles	No.	Amount of hour .	of per hire	Remarks.

In witness where of the hirer and the Engineer-in-Charge has for and on behalf of the Governor of the State has set their respective hand, the day and the year here in above written. Signed by:

1. _____ 2. Signed sealed and delivered in the presence of

1. _____ 2. _____

101. The agency will be responsible for traffic management and maintenance of the stretch of the road (for which the tender has been invited) at his own cost during the period of execution.

102. Even qualified criteria are met, the bidders can be disqualified for the following reasons, if enquired by the Department

- (a) Making a false statement or declaration.
- (b) Past record of poor performance.
- (c) Past record of abandoning the work half way/ recession of contract.
- (d) Past record of in-ordinate delay in completion of the work.

10 Past history of litigation.

103. The information furnished must be sufficient to show that the applicant is capable in all respects to successfully complete the envisaged work.

104. In case the 1st lowest tenderer or even the next lowest tenderers withdraw in series one by one, thereby facilitating a particular tender for award, then they shall be penalized with adequate disincentives with forfeiture of EMD unless adequate justification for such back out is furnished. Appropriate action for black listing the tenderers shall also be taken apart from disincentivising the tenderer.

105. ADDENDUM TO THE CONDITION OF P1 CONTRACT

Clause-2 (a) of P-1 Contract: -TIME CONTROL (Vide Works Department Office Memorandum

No.24716 dt.24.12.2005 and No.8310 dt.17.05.2006): -

2.1. Progress of work and Re-scheduling programme.

2.1.1. The **Executive Engineer** / Engineer- in- Charge shall issue the letter of acceptance to the successful contractor. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.

2.1.2. With in 15 days of issue of the letter of acceptance, the contractor shall submit to the Engineer-in- Charge for approval a Programme commensurate to **Clause No. 2.1.3 of P-1 Contract** showing the general methods, arrangements, and timing for all the activities in the Works along with monthly cash flow forecast.

2.1.3. To ensure good progress during the execution of the work the contractors shall be bound in all cases in which the time allowed for any work exceeds one month to complete, 1/4th of the whole time allowed under the contract has elapsed, 1/2 of the whole of the work before

1/2 of the whole time allowed under the contract has elapsed, 3/4th of the whole of the work before 3/4th of the whole time allowed under the contract has elapsed.

2.1.4. If at any time it should appear to the Engineer-in-Charge that the actual process of the work does not conform to the programme to which consent has been given the Contractor shall produce, at the request of the Engineer-in-Charge, a revised programme showing the modifications to such programme necessary to ensure completion of the works within the time for completion. If the contractor does not submit an updated Programme within this period, the Engineer-in-Charge may withhold the amount of 1% of the contract value

from the next payment certificate and continue to withhold this amount until the next payment after the date on which the over due Programme has been submitted.

- 2.1.5. An update of the Programme shall be a programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.
- 2.1.6. The Engineer-in-Charge's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the Programme and submit it to the Engineer-in-Charge again at any time. A revised Programme is to show the effect of Variations and Compensation Events.

2.2. Extension of the Completion Date.

- 2.2.1. The time allowed for execution of the works as specified in the Contract data shall be the essence of the Contract. The execution of the works shall commence from the 15th day or such time period as mentioned in letter of Award after the date on which the Engineer-in-Charge issues written orders to commence the work or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, Government shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee / Security deposit absolutely.
- 2.2.2. As soon as possible after the Contract is concluded the Contractor shall submit the Time & Progress Chart for each milestone and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per milestone given in contract data.
- 2.2.3. In case of delay occurred due to any of the reasons mentioned below, the Contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.
 - i) Force majeure, or
 - ii) Abnormally bad weather, or
 - iii) Serious loss or damage by fire, or
 - iv) Civil commotion, local commotion of workmen, strike or lockout affecting any of the trades employed on the work, or
 - v) Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract.
 - vi) In case a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost, or vii) Any other cause, which, in the absolute discretion of the authority mentioned, in Contract data is beyond the Contractor's control.
- 2.2.4. Request for reschedule and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.
- 2.2.5. In any such case a fair and reasonable extension of time for completion of work may be given. Such extension shall be communicated to the Contractor by the Engineer-in-Charge in writing, within 3 months of the date of receipt of such request. Non-application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-Charge and this shall be binding on the contractor.

2.1. Compensation for Delay.

- 2.1.1. If the contractor fails to maintain the required progress in terms of clause 2 of P-1 Contract or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the Chief Construction Engineer (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day / month (as applicable) that the progress remains below that specified in Clause 2 of P-1 Contract or that the work remains incomplete.

This will also apply to items or group of items for which a separate period of completion has been specified. Compensation @1.5% per month for delay of work, delay to be completed on per Day basis. Provided

always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% of the Tendered Value of work.

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the Government. In case, the contractor does not achieve a particular milestone mentioned in contract data, (which is in this case the original work programme furnished by the Contractor and approved by the Engineer-in-Charge which formed a part of agreement) or the rescheduled milestone(s) in terms of Clause 2.5 of P-1 Contract, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of extension of time. Withholding of this amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest whatsoever shall be payable on such withheld amount.

2.2. Bonus for early completion

2.4.1 Amendment to Para 3.5.5 (v) Note – iii of OPWD Code Vol.-I by inclusion

For availing Incentive Clause in any project which is completed before the stipulated date of completion, subject to other stipulations it is mandatory on the part of the concerned Executive Engineer to report the actual date of completion of the project as soon as possible through Fax or e-mail so that the report is received within 7 (seven) days of such completion by the concerned Chief Construction Engineer, Chief Engineer & the Administrative Department.

The incentive for timely completion should be on a graduated scale of 1 (one) percent to 5 (five) percent of the contract value. Assessment of incentives may be worked out for earlier completion of work in all respect in the following scale.

¼ Before 30% of contract period = 5% of Contract Value

¼ Before 20% to 30% of the contract period = 4% of contract value.

¼ Before 10% to 20% of the contract period = 3 % of contract value.

¼ Before 5% to 10% of the contract period = 2% of contract value. ¼ Before 5% of the contract period = 1%

of contract value.

The amount of bonus, if payable shall be paid along with final bill after completion of work.

2.3 . Management Meetings.

2.3.1. Either the Engineer or the Contractor may require the other to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.

2.3.2. The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

Clause-2 (b) of Percentage Rate P-1 Agreement: - Rescission of Contract (Amendment as per letter No.10639 dt.27.05.2005 of Works Department, Odisha):-

To rescind the contract (of which rescission notice in writing to the contractor under the hand of the Executive Engineer shall be conclusive evidence), 20% of the value of left over work will be released from the contractor as penalty.

106. A contractor may be black listed as per amendment made to Appendix XXXIV to OPWD Code Vol.-II on rules for black listing of Contractors vide letter no.3365 dt.01.03.2007 of Works Department, Odisha.

As per said amendment a Contractor may be blacklisted

- a. Misbehavior/threatening of Departmental & supervisory officers during execution of work/tendering process.
- b. Involvement in any sort of tender fixing.
- c. Constant non-achievement of milestones on insufficient and imaginary grounds and non-adherence to quality specifications despite being pointed out.
- d. Persistent and intentional violation of important conditions of contract.
- e. Security consideration of the State i.e. any action that jeopardizes the security of the State.

- f. Submission of false/ fabricated / forged documents for consideration of a tender.
- g. Non submission of Additional Performance Security (APS) within stipulated period as specified in Clause 28 (iii) as per Works Department Office Memorandum No.14402 dtd.06.10.2017

107. ELGIBILITY CRITERIA: - To be eligible for qualification, applicants shall furnish the followings.

- a. Required E.M.D (Bid Security) as per the clause No. 06 and Cost of Bid document as per Clause No.04. The Engineer contractor having required class of registration and seeking for exemption of EMD need to upload an affidavit stating that they have not availed exemption for 3 (three) No of works during the current financial year.
- b. Scanned Copy of valid Contractor's Registration Certificate, GST Registration certificate, GSTIN, PANcard along with the tender documents as per **Clause No.07**.
- c. Information regarding (i) Evidence of ownership of principal machineries / equipments in Schedule-C as per Annexure-I of Schedule-C (ii) Annexure-III of Schedule-C (DEPLOYMENT OF MACHINERIES IF ANY) & (iii) Annexure-IV of Schedule-C if required as per Clause No.13. Scanned copy of all documents are to be furnished with the bid. (iv). **The contractor intending to hire/lease equipments / machineries are required to furnish proof of ownership from the authorized person of the company with due power of attorney (copy to be enclosed) / owner providing equipment/machineries on hire/lease along with contracts/ agreements/lease deed and duration of such contract. The contracts/agreements/lease deed should be on long term basis i.e. for a minimum period as mentioned in contract data from the last date of receipt of Bid documents otherwise the bid will be summarily rejected.**
- d. Information in scanned copy regarding current litigation, debarring / expelling of the applicant or abandonment of work by the applicant in schedule "E" and affidavit to that effect including authentication of tender documents and Bank guarantee in schedule "F" as per clause 14. **Non furnishing** of the scanned copy of information in **Schedule – E** and required affidavit in **Schedule – F**, the bid document will be **summarily rejected**.
- e. **Scanned copy of M.O.U. (Memorandum of Understanding with electrical contractor) with registered electrical HT/LT/MV license as per Clause No.10 and Schedule-I.**
- f. **To qualify for award of the contract each bidder in its name should have satisfy the following criteria.**
 - (i) Achieved minimum annual financial turnover (In all class of civil class of construction works only) 60% of amount put to bid i.e **60 Lakh in any one financial year during last 5(five) years i.e 2021-22 to 2025-26**. Audited Turnover certificate from Chartered Account mentioned with UDIN must be enclosed with the bid. Submission of Turnover certificate without UDIN will be considered as non-responsive thus liable for rejection.
 - (ii) The bidder should have satisfactorily completed similar nature of work and not less than 40% of the Estimated Cost put to tender i.e **40 lakh** as a prime contractor within last 5(five) financial year in a single contract. Experience Certificates from the concerned officer not below the rank of Executive Engineer or Equivalent need to be furnished by the bidder. Work awarded/executed directly under Government Department will only be considered. Failure to submit proof in support will result in non-consideration of the tender. **(Similar nature of works means construction of buildings inclusive of Electrical installations and P.H. works).**

108. Defect Liability: -

The Engineer shall give notice to the contractor of any defects before the end of the defects liability period, which begins at completion of the work and continues for next **12 months**. The defects liability period shall be extended for as long as defects remain to be corrected. Every time notice of defect is given, the contractor shall correct the notified defect within the length of time specified by the Engineer's notice. If the contractor has not corrected a defect within the time specified in the Engineer's notice. The Engineer will assess the cost of having the defects corrected and the contractor will pay the amount.

109. Special Condition

All reinforcement steel and structural steel shall be procured from primary producers of steel-SAIL/RINL/TATA/JINDAL STEEL/ SHYAM STEEL. In case of exigency, other brands (primary producers) of steel may be used with proper justification and prior approval of competent authority satisfying the tests as required by BIS's Code. The Cement of the companies having their own manufacturing units in the State of Odisha is to be used in all works.

Total: - 109 (One hundred Nine) clauses only

TECHNICAL SPECIFICATION OF CIVIL PORTION OF WORK

Materials of following specification are to be used in work. The Tenderer are expected to possess and be well conversant with the following IS standard and code of practice.

1.	Cement	Will be as per I.S. 269/255 (However the grade of cement to be selected by the Engineer-in-Charge of work and complex cube test before commencement of work in each batch).
2.	Steel	I.S. 432 (Plain) and 1785 (Tor)
3.	Vibrator	I.S. 7246
4.	Aggregate	I.S. 383, I.S. 515
5.	Water for mixing and curing	Shall be clean, free from injurious amount of oil, salt, acid, vegetable materials and other substances and harmful to concrete in conformity to I.S. 456 and I.S. 2025.
6.	Sand / Fine Aggregate	I.S. 2116, 383
7.	Binding wire	I.S. 280 (41 authorized minimum 1 mm)
8.	Rain water pipe	I.S. 2527
9.	Construction joints	I.S. 3414
10.	Steel Window Frame	I.S. 1038/83
11.	Steel Door Frame	I.S. 4351/75
12.	Fitting & Fixtures for journey works	Conforming to I.S. 7452/82 strictly conform to I.S. specification and as per direction of Engineer-in-Charge.

Note :For road work (Approach Road) specification as per road and bridges (latest edition) published by I.R.C & M.O.S.T. shall be followed. In case of any doubt and absence of provision, regarding specification I.S. shall be referred (Indian standard).

ITEM OF WORK

- Concrete shall be with conformity to I.S.456.
- Foundation shall be with conformity to I.S.1080.
- Stone masonry (R.R.) shall be with conformity to I.S.1597 (Part-I)
- C.R. Masonry shall be with conformity to I.S.1597.
- Brick masonry shall be with conformity to I.S.2212.
- Cement plastering shall be with conformity to I.S.9103 & 6925.
- Mortar shall be with conformity to I.S.2250
- White and colour washing shall be with conformity to I.S.6278.
- CC in foundation shall be with conformity to I.S.2571.
- Anti-Termite Treatment shall be with conformity to I.S.6813. (Part – I & Part – II)
- Painting to all surfaces shall be with conformity to I.S.2395 (Part – I & Part – II)
- DPC shall be with conformity to I.S.3067
- Tar felt treatment shall be with conformity to I.S.1346
- Mosaic flooring with conformity to I.S.2114
- Steel painting shall be with conformity to I.S.1477 (Part – I & Part – II) I.S.1661

HIRE & RUNNING CHARGES OF PLANTS & MACHENERIES

The hire charges of Plant & Machinerics shall be recovered at the prescribed rates as fixed by the Chief Engineer (D.P.I & Roads), Odisha , Bhubaneswar from time to time.

PART-II

ADDITIONAL APPENDIX TO BILL OF QUANTITY :

(For P.H. Items of Work)

1. Name of the work:-
- 2.. Estimated Amount :-
- 3.. The quantities of items mentioned in the tender schedule may increase or decrease during execution of works but the contractor will complete the work as per his tendered rates in accordance with the instruction of Engineer in charge.
- 4.. **Specification:**The standard PHD and PWD specification will be followed for execution of work. During the course of execution of work, the instructions of the Engineer in charge shall be final and binding.
- 5.. The Sales Tax element should not be added to the analysis of rates and the previous practice should be followed as per the Works Department letter No. IIT.22-89-18170 dt. 18.7.1989
- 6.. There should be no clause either in the tender or in agreement for payment of any additional claim on account of Sales Tax on completed works which will be deemed to be recovered by existing omnibus stipulation as per the works Department letter No.MT 22/89-18170 dt. 18.7.89 /
- 7.. It is the responsibility of the Contractor to arrange watch and ward to the installations until testing commissioning and handing over for which no extra payment towards watch and ward will be paid,
- 8.. The contractor shall maintain a separate site order book for P.M. portion of work.
- 9.. The P.H. portion of work shall be open for inspection the higher authorities and instructions imparted during the course of Inspection should be binding on the contractor.
- 10.. Materials not covered by any of the above categories of items in the bill of quantity have to be approved by the competent authorities before 42uthorize the 'same in works. In such event, the payment of such item will be made as per actual on due approval by the competent authority.
11. All materials required for the work shall be supplied by the contractor as per standard specifications appended with due approval by the Engineer in charge. In case the materials as per make specified is not available, the materials of equivalent, make and as per I.S. Specifications or of best quality when not covered by I.S. Specifications. Can be42uthoriz on prior approval of Engineer in Charge, Bhubaneswar or the officers duly 42uthorized by him.
It is binding on the part of the contractor to use such items of materials which are available in the Departmental store and in such case the deduction from the bills will be made at stock issue rates.

PART-II

TECHNICAL SPECIFICATIONS OF P.H. PORTION OF WORK

10 WATER SUPPLY & SANITARY INSTALLATIONS :

Materials of following standard manufacturers are to be used in the work. The contractor shall indicate, in the offer, the brand or make of the materials, for which the rates are quoted.

(a) Sanitary fixtures :

To be of best quality vitreous ware of porcelain.

10 Indian water closet

(ii) Foot Rests

(iii) Wash Hand Basin

(iv) Kitchen Sink

Hindustan Sanitary Ware/Parry

(v) Urinals

Ware / Neycer ISI marked

(vi) Drain Board

(vii) Orissa Closet

(viii) European Water Closet & Low

(ix) Level Flushing Cistern.

(b) **C.I. High Level Flushing Cisterns :** Sushila Industries Prabhat Iron Foundry/ East India Steel / I.S.I. marked. “

(c) **H.C.I. Soil Waste Pipes:** Confirming to I.S.I. 1729-1954, having I.S.I. Mark.

(d) **C.P. Bath Room Fittings:** ZJM / Kingstone / Jaquar I.S.I. marked & confirming to-latest ISS

(e) **Brass Fittings :** Anupama /Luster/I.S.I.Marked.

(f) **Gunmetal Valves :** Anupama / Leader / B.S.I.S.I. marked.

(g) **G.I. Pipes (Medium Class):** Manufactured by TATA / JINDAL / B.ST. having I.S.I. Mark.

(h) **Galvanised Iron fittings :** I.S.I. marked C/R brand.

(i) **Paints:** Asian / Berger / Jonson/Confirming to I.S.S

(j) **Cast Iron Manhole cover frame:** Sushila Industries / Prabhat Iron Foundry/ East India Steel make confirming to I.S.S. 7.26

(k) **Stone Ware Pipes & Fittings:** Manufactured by Orissa Ceramic Industries / Orissa industries / Keshab Ceramic confirming to I.S.S. Specification No.651 / 1980 {Grade A}

(l) **P.V.C. (S.W.R.) &**

Manufactured by the Supreme Industries

P.V.C (Rigid.)

Ltd., Bombay/Oriplast,BalasoreDuroplast

Pipe/Fittings:

confirming to I.S. Specification No.

4985/81

(Class IV)

(B) BUILDING MATERIALS:

(a) Bricks:

Bricks shall be of locally available best quality clean burnt. Bricks shall be well burnt, uniform deep red, cherry or copper coloured, free from cracks and flaws, well shaped, uniform in size, homogeneous in textures and shall emit a clear metallic sound when struck, bricks shall have a minimum crushing strength 75 Kg/Cm^2 and shall not absorb water more than 20% by weight.

(b) Cement Mortar:

Mortar shall be well mixed to a uniform colour and consisting in the proportion as specified in the items of work. Sand shall be measured on the basis of its dry volume and the quantity shall be adjusted for bulking of damp sand. Cement shall be mixed, taking 50 kg. or 0.035 Cum. In volume only required quantity that can be consumed within 30 minutes of adding water shall be mixed at one time.

- (c) **Cement:**
Cement should confirm to IS-269/IS-455.
- (d) **Sand:**
Locally available best river sand medium size.
- (e) **Course Aggregates:**
The course aggregate shall be of hard granite stone and shall generally confirm to I.S. 389. Porous Course aggregate shall not be used. The aggregate shall be free from clay films and other adherent coatings. Aggregate containing clay films over the stone materials shall be thoroughly washed. The aggregate shall be from approved quarry and crusher broken. Course aggregates shall be composed of particles ranging between the sizes 2.36 to the maximum size as may be specified in the relevant item of work. Within the range, the aggregates shall be well graded so as to produce a dense concrete.
- (f) **Reinforcements:**
Mild steel Round Bars, cold twisted and deformed bars of steel of medium tensile strength will be used as reinforcement as per drawing and design and directions. Mild steel bars shall confirm to I.S.;226/1962 standard quality or IS:432/1966 - Grade- I. Black annealed wire (Not thinner than 24 gauge for tying the reinforcements shall be used.

TECHNICAL SPECIFICATION FOR SANITARY & PLUMBING WORKS

10 Sanitaryware & allied fittings :

1. General:

All Sanitary fixtures and their allied fittings, should be of first quality, manufactured by Hindustan Sanitary Ware / Parry ware / Neycer, These should be approved by the Engineer-in- charge of the G.P.H. Wing before use.

2. Squatting Pattern W.C. (pan) (Or I see Pattern Closets):

The water closet shall be of vitreous China of specified size and pattern, with an integral flushing rim. It shall have the flushing inlet at the back. The Orissa closet should be of approved quality confirming to I.S.S.-2656 (Part-III).

The squatting type Indian Water Closet (Orissa Closet) shall be sunk in floor sloped towards the pan in a workmanship like manner. The closet shall be fixed on a proper cement concrete base of 1.3.6 proportion, taking care that the cushion is uniform and even, without closet, to receive the specified thickness of the floor finishing. The joint between the Closet and the P.V.C. (S.W.R) trap shall be made with W.C. ring and rubber lubricant and shall be leak proof.

3. Flushing Cistern :

The flushing of the Indian water closet (Orissa Closet) shall be done by C.I. or Polyaterine High Level low-level porcelain valve-less authorize flushing cistern of approved brand and quality I.S.I. Marked and capacity as specified. The connection between the cistern and water closet shall be made by 32 dia O.I. flush pipe, made from G.I. Pipe (Light Quality) or 32 dia P.V.C, Pipe as specified in the tender schedule. The flush pipe with an offset should be fixed to wall by using C.I. Holder Bat Clamps. The capacity of the cistern should be 10 Ltrs. As per I.S.S.

15 Ltrs. In case of low-level cisterns. The Cistern shall be fixed on cast Iron or Rolled Steel Cantilever Brackets (Bulletin type), which shall be firmly embedded in the wall, with C.C.

1.2.4. The Cistern shall be provided with 20mm dia. P.V.C. Overflow Pipe with fittings, which shall terminate into mosquito proof coupling secured in a manner that will permit it to be readily cleaned or renewed.

The 32mm dia. Flush Pipe shall be connected to the Water Closet by means of approved type joint. The Flush Pipe shall be fixed to wall by using C.I. Holder Bat Clamps. The bend and the Offset as required in the Flush pipe shall be made cold. The inside of the Cistern shall be painted with two coats of approved black bitumen paint. The Outer face of the Cistern, Brackets Overflow pipe and Flush Pipe etc., shall be painted with two coats of any synthetic enamel paint of approved shade and make, over a coat of priming. The cost of the rate quoted for the flushing cistern.

The inlet connection to the Cistern shall be made with 450 mm 1 cmg 15 mm dia. P.V.C. Heavy type connection Pipe.

4. Wash Hand Basin:

The Wash Hand Basins shall be of the White Vitreous China of approved quality, make and brand I.S.I, marked. It shall be one-piece construction with an integral combined overflow. The size of the basin shall be as specified. Each basin shall be provided with one 15 mm dia. C.R Brass Pillar Tap, 32mm dia. C.R Waste, C.R. Chain and Rubber Plug, Unions, Joints, C.R Bottle trap cast complete in all respects of approved quality.

The Basin shall be supported on a pair of R.S. or C.I. Cantilever brackets (built in type) embedded and fixed in wall with cement concrete, 1.2.4. These brackets shall be painted to the required shade with two coats of approved synthetic enamel paint over a coat of priming.

The waste of the Basin shall discharge into a floor trap or Channel through bottle traps as specified. One 32 dia. C.P. Bottle Trap is to be fixed to the Waste of the Basin & the outlet of the bottle trap is to be connected to the waste pipe to discharge the waste to the Pipe, to discharge the waste to the aforesaid floor trap. The inlet connection to the Basin shall be made with 450mm Long 15mm dia. Heavy type P.V.C. connection pipe.

5. Kitchen Sink:

Unless otherwise mentioned the Kitchen Sink and drain board (if used) shall be of white Vitreous China or fire clay as specified and approved quality, make a brand, confirming to T.S.S, It shall be of one piece construction with integral combined overflow. The size of the sink and Drain Board shall be as specified.

Each Sink shall be provided with one 15mm dia. C.P. brass, Bib Cock, long body, 40mm C.P. Waste with overflow C.R. Chain & Rubber Plug, unions etc., complete in all respects as specified and of approved quality.

The sink shall be supported on a pair of M.S. or C.I. Cantilever Brackets (Built in type) embedded or fixed in position in the wall by Cement Concrete 1.2.4. The brackets shall be painted to required shade with two coats of approved synthetic enamel paint over a coat of priming. The waste should discharge into a floor Trap or Channel. The waste pipe should be 40mm dia. P.V.C. Pipe jointed to the waste of the Sink with a Brass union nut.

6. Standing Urinals:

The Urinals shall be flat pattern lipped front basin of required dimension of White Vitreous China and one piece construction with internal flushing box rim of an approved make and brand as specified, it shall be fixed in the position by using wooden plug embedded in the wall with screws of proper size. Each Urinal shall be connected to a 40mm dia. R.V.C. Waste Pipe, which shall discharge into a channel of floor trap. The lip of Urinals shall be kept at 525mm from floor level, while fixing the Urinal on wall.

Where no. of Urinals are fixed in a line, the distance between the centre to centre of each Urinal shall be kept 750mm. and each Urinal should be separated from one to other by a partition plate. The centre to centre of partition plates shall be kept 750mm apart. The partition plate shall be of one-piece 25mm thick marble plates, cut to size and front corners rounded. The partition plates shall be embedded in wall with cement concrete and finished smooth. The bottom of the partition plate should be kept 350mm above floor level and top should be kept at 1250mm above floor level. The plates should project 600mm from wall surface. The width of the plates to be embedded inside the wall should not be less than 100mm. The thickness of the plates shall be minimum 25mm.

For flushing the Urinals each Urinals shall be connected with one 20mm dia. G.I. Pipe (Medium Class), One of this pipe shall be inserted into the inlet of the Urinal and jointed with Jute and putty where as the other end is connected either with a Tee or Bend with the 25mm dia. Size Water Pipe Line fixed on the wall horizontal above the Urinals. In each 20mm dia. Flush pipe one 20mm dia. Cum-metal Gate valve, the water will flow to thermal of Urinal through the inlet pipe and flush the Urinal. After flush, the valve can be closed to avoid wastage of water. One 40mm dia. P.V.C. Waste Pipe shall be connected to the waste of each Urinal, to discharge the Waste into the Channel of Trap. One end of this Waste pipe shall be made a cup size to fit into the projected waste and tightened with screws.

10 Squatting Urinal Plates :

The Urinal Plates shall be of White Glazed Vitreous China with integral flushing rim of size 450 X 350mm of approved make and brand as specified. There shall be white vitreous channel with stop and outlet pieces in front. These plates shall be fixed on C.C. at 75mm to 100mm above floor level. For flushing arrangement, one 25mm dia. G.I. Common Water Pipeline (minimum size) shall be fixed on the wall parallel to floor. For each urinal one 20mm dia. G.I. Branch Pipe shall be taken down up to 200mm from floor level just at the centre of each plate, in which one 20mm dia. Gate Valves is fixed at 350mm above floor level. At 1200mm height, the 20mm dia. Flush pipe shall be divided into two branches shall be taken downward and connected to the inlets of the urinals plate at floor level. By operating the valve as above, the water will rush into the rims of the urinal plate and flush it. Where there are number of urinals fixed in a line, each urinal should be separated by a partition plate fixed in the centre of two urinal plates. The centre-to-centre distance of the partition plates shall be kept 750mm.

The partition plates shall be of one-piece marble plate, 25mm thick, cut to sizes and front corners rounded. The plates are to be embedded in wall with cement concrete and finished smooth. The bottom of the

partition plates shall be kept flushed to urinal top level and the top level of partition plate shall be kept at 1200mm from the urinal plate top and the projection from the wall shall be 600mm. The width of the plate to be embedded inside the wall should not be less than 100mm.

(B) Soil and waste pipes and fittings

1. H.C.I. Pipe Fittings

The Cast iron Soil, Waste and design pipes (spigot & socket joints) shall be of make and brand as specified (under specification of materials), confirming to I.S.S. 3989-1970 and IS) marked with approved clamps are to be used. The pipes and fittings shall be free from cracks, laps, pinholes, and other imperfection and carefully cited.

The access door fittings shall be designed and made so as to avoid dead space in which filth may accumulate and door shall be provided with 3mm thick rubber insertion packing when closed and bolted.

WEIGHT OF HCI PIPES

2.	Dia. Of Pipe in mm	Thickness in mm	Length of pipe & width	
1.8mtr.	D/s	1.8mtr		
50	mm5 mm	16.00kg.	15.00kg.	
75	mm5 mm	13.83kg.	16.52kg.	100 mm
24.00kg.	22.00kg.	150 mm	8mm.	26.70 kg.
			31.82kg.	

Tolerance 10%

3. The jointing should be done with pig lead confirming to I.S. 782-1966 - grade 99.94. The spigot and of Pipes and Fittings should enter into the socket end. The annular space shall be packed with spun yarn gasket, compacted so as to leave a depth for receiving required quantity of lead in a continuous pouring from ladder. After pouring lead in the joints in full, caulking is to be done three times round with the caulking chisels, so that the joints may be sealed with lead. The depth of lead in a point should be 35mm and the rest depth of the joint should be packed with spun yarn Gasket.

4. Requirement of lead and Gasket cement for jointing H.C.I. Pipes (Each Joint)

Dia of pipe in mm.	Lead in kg.	Gasket in kg.	Cement
		kg. (same for lead & cement joint)	
100	1.2kg.	0.13kg.	0.12kg.
50	0.36 kg.	0.06 kg.	0.06 kg.

5. The inside of the pipes and fittings shall be well coated with special tar or bitumen solution of approved quality. Where the pipe and fittings are laid below the ground, the outer surface of the pipes and fittings shall also to be painted with two coats of black anticorrosive paint of approved quality.

On completion of the work the exposed pipes and fittings are to be painted with two coats of synthetic enamel paint of approved colour & quality over a coat of red oxide primer. The cost of paint should include in the rates.

6. Soil pipes for ventilation Is to be connected to the sewer at its floor and without a trap and be carried to such an eight, at least above roof level, to prevent damage to health by commission of foul air, The pipe shall terminate as open and protected by a cowl.

7. The waste water pipe shall be connected with the nearest yard gully or a surface drain.

8. The traps should be of hard cast iron and should have water seal at least 50mm deep.

9. All the soil and waste pipes and fittings, after laid and fixed shall be smoke tested, to the entire, satisfaction of the Engineer-in-charge. The Cost of testing is to be included in the offer. For smoke-test the materials usually burat greases cotton waste, which gives out a clear pungent smoke, which is easily detected by sight and small. Smoke shall be pumped to the drains from the lower end from a smoke machine, which consists of lower, and burner.

(e) P.V.C (S.W.R.) & P.V.C (Rigid) Pipes & Fittings

9.01 The P.V.C. (S.W.R.) and P.V.C. (Rigid), soil Waste & Vent Pipes (Spigot & Socket, & couples joints), shall be of make & brand as specified (Under Specification of materials) confirming to I.S.S., B.S.S. & DIN are tube used.

The main specification of P.V.C. Soil & Waste pipes and fitting are as below.

10 Materials – Un-plasticised Poly Vinyl-Chloride (UPVC).

- b) Colour - Grey
- c) Dimensions -
 - (i) Diameter - Fittings– 75mm/110mm/63mm & 63mm. Pipes – 75mm, 110mm, on lengths of 3.or 6 mtr.
- d) Wall thickness - Fittings– Minimum 3.2mm at any port.
 - Pipes - As per application
 - For Rainwater - 75mm-1.8. to 2.2.mm, 110mm-2.5. to
 - Waste & Soil - 75mm -1.8 to 2.2mm, 110mm -2.5 to 3 mm, 63mm –
 - Underground drainage with
 - light/NIL Traffics - 110mm – 2.5 to 3mm Light/Nil in Heavy traffic - 110mm 3.7 to 4.3mm
- e) Standard Confirming to Attributes Confirms to Standard No.
 - i) Fittings & Wall Thickness - B.S.4514, DIN 10531
 - ii) Pipe Wall - DIN 19534 I.S.7834 – PVC (Rigid)
 - iii) thickness - IS 4905
 - iv) Rubber ring - IS 5382)
 - v) Fitting P.V.C., DIN 19531 –
 - v) Fitting P.V.C., DIN 19534
- vi) dimensions S.W.R. IS – 7834 V.C. (Rigid)
 - v) Pipe Dimensions IS 4985

(a) Laying instructions & Jointing Procedure

a-1 Jointing of P.V.C. (S.W.R.) Pipes & Fittings

Clean the outside of the pipes spigot and the inside of the sealing groove of the fitting. Apply the rubber lubricant, to the spigot end, sealing ring and pass the spigot end into the socket, containing sealing ring, until fully homed. Mark and position of the Socket edge with pencil on the pipe, then withdraw the pipe from the socket by approx. 10mm towards thermal expansion gap.

a-2 Fixing of the Pipes and fittings on wall surface.

P.V.C. pipes both (S.W.R.) & (Rigid), fixed on wall surface, are to be supported by P.V.C. pipe clips, specially made for these pipes, with horizontal runs, the pipe clips should be spaced at intervals of more than 10 times the outside diameter of the pipes. In vertical lines the clips are to be spaced at intervals of one meter to a maximum of two metres according to pipe diameter.

a-3 Jointing of P.V.C. (Right) Pipe Fittings

Clean the Outside of the pipes and inside of the socket of 9 fitting of the inside of the couplers (where 2 plain ended pipes are jointed) of. Apply solvent cement solution, evenly and smoothly on the outer surface of the pipe end and inside surface of either the coupler of the socket and pass the pipe end into the socket of the fittings. Up to full depth of socket. In case of jointing 2 plain-ended pipes 1st. push the coupler up to half depth on the end of one pipe and the outer half of the coupler should be pushed to the end of other pipe and thus, both pipes are jointed.

a-4 Fixing of P.V.C. pipes and Fittings through holes of Walls or Chajja of roofs etc.

The Wall/concrete slots should allow for a stress free installation, Pipes and fittings to be inserted into the slots, without a cement base, have to be applied first with a thin coat of P.V.C. Solvent cement, followed by sprinkling of dry sand (medium size). Allow it to dry. This process gives a sound base for cement concrete fixation, around the pipes/fittings while mending the damages.

a-5 Antisiphonage Pipes

All the antisiphonage pipes and fittings to be used are of 63mm. If these are not available under the items of P.V.C. (S.W.R.) materials, 63mm pipes and fittings, manufactured under P.V.C.(right) materials can be used, since the raw materials for both is same.

a-6 All traps should have a minimum water sea) of 50mm as per I.S. 5329 and IS 2556 (Part XIII). Where antisiphonage connection is required, the traps to be supplied and used should have a 50mm antisiphonage vent horn on the outlet side. All the Traps used with the closets, should be of the size 125mm X 110mm i.e. Inlet (Socket end) of 125mm & outlet (spigot end) of 110mm only.

a-7 Installation of Water Closet

Determine the correct Location of the P/S Trap & set on a firm base, relative to the floor finish by pouring concrete on a slab. Bedding can be carried out by pouring concrete around the trap, ensuring that the traps outlet is left clear of concrete. Place the W.C. Connector ring to the socketed end of 125/110mm R/S trap. Apply rubber

lubricant on W.C. Connector ring as well as outer side of water closet (connection point) and now complete the joint by pushing the W.C. to home of 125mm socket of the trap.

a-8 P.V.C. (Rigid) Pipes and Fittings

63mm (O.D.) P.V.C. Pipes to be used for these work either in antisiphonage system or else where, should be of "Quick Fit" Pipes Class 2 (4kg. F/Cm²), Quick Fit, Pipes have one and socketed. The P.V.C. (Rigid) fittings, such as 63mm elbow, 63mm equal Tees 110mm x 63mm reducer etc. used in the work, should be of injection-moulded fittings.

9. One –'jointing rubber ring will be available, with each P.V.C. (S.W.R.) pipe and fitting and hence, the cost of therein will not be added in the joint.

10. Measurement

All pipes shall be measured not/length as laid or fixed and shall be measured over all fittings such as bends, junctions, traps etc. The length shall be taken along the counter line of the pipes and fittings. Fittings will be counted extra over.

11. Before fixing and painting, the pipe shall be tested hydraulically to pressure 0.4Kg/Cm² for pipes under I.S.-1729/1964 and at a pressure 0.7 Kg/Cm² for pipes under I.S. 3989-1970 without showing any sign of leakage, sweating of or her defect of any kind. The pressure should be applied internally and shall be maintained for not less than 15 seconds.

Water Supply Pipes and Fittings :

1. Materials.

All authorized Iron Pipes are to be of mild steel continuous welded, screwed tubes, medium quality conforming to I.S.S. and bearing IS! Marks manufactured by reputed Firms and approved brands as specified. The pipes shall conform to LS.1239 (Part-I) -1975.

All G.I. Fittings shall be of 'R' Brand manufactured by M/s. R.M. Engineering Ltd., Ahmadabad and 'C' brand manufactured by Present Engineering works or equivalent best quality.

2. Laying of Pipes

The lay out of the mains and service pipe set etc., will be done in accordance with the drawings. The contractor is to mark out the exact position of the pipes and fittings at site and take approval of the Engineer In-charge, before taking up the work.

3. Where the Pipes are laid, underground these must not be laid less than 450mm below ground level and coated with one coat of approved black bituminous paint. For laying the G.I. pipes and fittings below ground level, the width and the depth of the trenches for different dimensions for the pipes shall be given as below :

Dia. Of Pipe	Width of Trench	Depth of Trench
15mm to 50 mm	300 mm	600 mm
65mm to 100mm	450 mm	750 mm

The pipes shall be laid on a layer of 75mm thick sand and filled up with sand up to 75mm above pipes and the remaining portion of the trench shall then be filled up with proper ramming as described in "Excavation and refilling". The surplus earth shall be disposed of as directed.

Thrust or anchor blocks of cement concrete 1.2.4 in hard granite chips shall be constructed on all bends or branches to transmit the hydraulic pressure without impairing the ground and spreading it over a sufficient area. Pipes shall not be laid to pass through manholes, catchpit, drain, where, it is unavoidable the pipes shall be carried in sleeve pipe of M.S./G.I., as approved by the Engineer-in-charge. The rate should include such a situation.

4. Where Pipes run along walls, the same are to be fixed to the wall with holder bat clamps /M.S. Hooks as below:

Dia. Of pipe in	15	20	25	32	40	50
Horizontal line	2m	2.50m	2.50m	2.50m	3m	3m
Vertical line	2.5m	3m	3m	3m	3.5m	3.5m

Where the pipes are passing through the R.C.C. / Masonry wall / Volume / beam or pillars, these must pass through the appropriate higher sizes of C.I./G.I Sleeve Pipes and are to be included in the rates.

In case the pipes are embedded in walls and floors it should be painted with one coat of anticorrosive paint of approved quality. ,

All pipes should be fixed horizontal and vertical. For taking the pipes through the walls and floors & roof slabs etc. the holes shall be made by filling with chisels or jumper and not by dismantling the brickwork or concrete. After fixing, the holes shall be made good with cement concrete 1:2:4 and properly finished with C. Plaster 1.4 to match the adjacent surface. Union Nuts are to be provided in each of the vertical riser or drop on and from G.I. Tank and near the Valve and as and where necessary. The long screw fittings of 3 meters. For long horizontal lines and inside the lavatory / Kitchen etc.

5. After laying and jointing the pipes and fittings shall be inspected under working condition of pressure and flow. Any joint found leaking pipes should be removed and replaced without extra cost. The pipes and fittings after they are laid shall be tested to hydraulic pressure of 6 Kg/Cm^2 . The test pressure should maintain without loss of for at least half an hour.

6. **Painting**

On completion of the test, the exposed pipes and fittings are to be painted with two coats of synthetic enamel paint of approved colour and brand over a coat of priming.

7. **Measurement**

The length shall be measured in running meter. Correct to centimeter for the finished work, which shall include the pipes and fittings such as Bends, Tees, Elbows, etc., but excludes brass or Gun-metal fixture like tap, Cooks, Valves, PVC connection pipes etc.

8. **Ball Valve**

The ball valve shall be high or low pressure class as stipulated in the Tender Schedule and shall conform to I.S. 1703-1968, The nominal size of ball valve shall be that corresponding to the size of Pipe for which it is used. The Ball valve shall be of brass or gun-metal and the float for low pressure polyethylene and for high pressure in copper. Each and every ball valve while in closed position shall withstand and internally applied hydraulic pressure of 20 Kg/Cm^2 for a minimum period of two minutes without leakage or sweating. Every high pressure ball valve when assemble in working condition, with the float immersed to not more than half its volume shall remain closed against a test pressure of 10.5 Kg/Cm^2 and a low pressure ball valve against a test pressure of 5.3 Kg/Cm^2 .

Polyethylene floats shall be watertight and non-absorbent and shall not contaminate water and with do jointing adhesive jointing parts. The minimum thickness of the copper sheet used for making copper floats shall be of 0.45 mm. The thickness of materials of the float shall be uniform throughout.

9. **Ferrule**

The ferrules for connection with C.I. main shall generally conform to I.S. 2692-1964 and shall be of nominal bore as specified. The ferrule shall be fitted with 3 screw and 1 plug or valve capable of complete cutting off the supply to the connected pipe as and when required. For fixing the ferrule, the C.I. main shall be drilled and tapped during non-supply hour at 45 to the connected Pipe as that when required. The ferrule must be so fitted, that no portion of the sunk shall be left projecting within the main on which it is fitted. After the ferrule is connected, one C.I. bell mouth cover or with bricks (as specified) shall be kept over the ferrule to cover the ferrule to protect it and the cost thereof is to be included in the item, even if there is no mention.

10. **Non-return Valve (Check Valves)**

The non-return valve shall be of Brass or Gunmetal and shall be of horizontal or vertical flow type and of the size as specified and confirm to I.S. 7810-1959 and I.S. 778-1957. The approximate weights of the valves are given below.

Dia.inmm	Horizontal type(inkg)	Vertical type(inkg)
15	0.30	0.25
20	0.55	0.25
25	0.90	0.75
32	1.25	0.90
40	1.70	1.20
50	2.90	1.45
65	5.25	2.15
80	7.70	4.10
	±Tolerance 5%	

Foot Valve

Foot valve is generally placed at the lower end of the suction pipe of the centrifugal pump to prevent the suction pipe from emptying. On vertical non-return valve may also be fixed in place of foot-valve. The foot valve shall confirm to I.S.0381967.

11. **Water meters (Domestic types)**

Water meter up to 50mm nominal size shall confirm to I.S.-779-1968. The meter body shall be of bronze/ Gun-metal and marked to read in liters complete with registration box and lid. The water meters shall be provided with Strainers. Strainers shall be of material, which is not susceptible to electrolyte, clean and shall be fitted on the inlet side of water meter. It shall be possible to remove and clean the strainer and not permit disturbing the registration box. The offer should include the same. The water meters shall bear ISI Mark.

12. **Bibcock & Stopcock**

These shall confirm to I.S.781-1967 and bear ISI Mark. The bibcock is a draw off tap with a horizontal inlet and free outlet and stopcock is a valve with a suitable means of connection for Insertion in a pipeline for controlling or stopping the flow. This shall be of screw down type. The cock shall open in anti-clockwise direction. The stopcocks should be of C.R open type/concealed type/angle valves type as specified in tender schedule. Bibcock should be also C.R Brass bibcock.

13. **Full way Valve (Brass)**

Full way valve is a valve with suitable means of connection for insertion in a pipeline for controlling or stepping the flow. The valve shall be of brass fitted with a castiron wheel and shall be of gate valve type confirming to I.S, 780-1960, opening Full way and of the size as specified.

Dia. In mm	Flanged End Valves in kg	Screwed End Valve in kg
15	1.021	0.567
20	1.503	0.680
25	2.498	1.077
32	5.232	1.559
40	6.082	2.268
50	6.691	3.232

65	10.149	6.840
80	13.281	8.845

14. Gun Metal Full way Valve

This shall be of the Gun-Metal fitted with wheel and shall be of Gate-Valve type opening full way. This shall confirm to I.S, 778-1971. Class I. The Valves should bear ISI Mark.

TECHNICAL SPECIFICATION FOR STONEWARE PIPE ETC.

1. Stoneware Pipes (Materials)

The S.W. pipes & fitting should be of Grade 'A' confirming to I.S 651/1965. The pipes shall be sound, free from visible defects such as fire crack or hair crack and flow or blister. The pipes shall give a sharp clear line when struck with a light hammer and should be perfectly salt glazed.

Internal dia. of Pipe in mm.	Thickness of the Barrel in mm.	Weight of each pipe in kg.
100	12	14
150	16	23
200	17	33
230	19	44
250	20	52
300	25	79
350	30	100
400	35	125
450	38	147

The length of pipes is 600mm exclusive of the internal depth of socket.

2. Excavation of Trench for laying Sewer Pipes

The trenches for the pipes shall be excavated to the lines & level as directed. The bed of the trench shall have to be evenly dressed throughout from one change of grade to the next. The gradient is to stout by means of sight rails and boning rods and required depth be excavated at any point. The depth of the trench shall not less than one metre, measured from top of the pipe to the surface of the ground under roads and not less than 0.75mm elsewhere. The width of the trench shall be the nominal diameter of the pipe plus 350m. The bed of the trench if in soft or made up earth, shall be well watered and rammed before laying the pipes and the depressions if any shall be properly filled with sand and consolidated in 200mm layers. Depending on soil condition, piling may even be necessary if so desired by the Engineer In-charge. If rock is met with, it shall be removed 150 mm below the level of the pipe and the trench will be refilled with sand and consolidated.

The excavated materials shall not be placed within One metre or half of the depth of the trench whichever is greater from the edge of the trench.

The trench shall be kept free from water. Shoring and shuttering shall be provided wherever required. Excavation below water label shall be done after dewatering the trenches.

After the excavation of the trench is completed, foundation of cement concrete 1.4.8 in hard granite metal (size 40mm) shall be laid with proper level all along under the length of the pipe with launching on all around concrete as per drawing.

3. Laying, Jointing, launching of the Pipes and fittings.

Drain Pipes (S.W. pipe & other pipes used for drain and Sewer) shall be laid in straight lines and to the even gradients as shown in the layout drawings.

The socket and of the pipes shall face stream. Adequate care shall be exercised in setting out and determining the level of the pipes and the contractor shall provide suitable instruments, templates, sight rails, boning rods and other equipments necessary for the purpose. In the case of pipes with joints to be made with loose collars, the collars shall be slipped on before the next pipe is laid. In those joints, a tight ring of twisted

tarred jute soaked in cement mortar filling to ensure proper alignment and prevent. Cement entering the pipes, Cement compound joints is to be finished with proportion 1.1 with 45 bevelling. The joints are to be kept wet with wet bag until the same are properly set with. The cement mortar joints shall be cured at least for 7 (Seven) days. In the case of S.W. Pipe joints (socket & spigot), they should be caulked first with tarred jute (Spun) of required diameter, almost quarter depth of the socket, after which cement mortar 1:1 is pushed in with wooden chisel and finishing 52uthori at outside at 45 degree. Instead of jute of hump rubber gasket of proper size may also be used. The whole joint must be cured for not less than three days. In case of pipes less than 250m dia., joints should be made at ground level with three pipes at a time and for larger ones two pipes at a time and after curing they should be soiled in foundation with the help of the ropes. All pipes should be properly launched with cement concrete 1.3.6 with washed gravel where the pipes are crossing the drain or all round concrete 1.3.6 with washed gravel is to be done to 150 mm thick over the barrel of the pipe.

The whole of the drain work shall be tested when laid, and at the completion of the contract, to the satisfaction of the Engineer-in-charge and shall be retested if necessary until found satisfactory. The test shall be made by means of water under pressure at the highest point of the Section under test and providing an air pipe at the lower end of the line. Maximum head of 5 (five) fact (1.5m) must be maintained.

4. Excavation and Hilling.

Excavation for drain and pipe trenches shall be straight and to correct depth and gradient. The trench bottom shall be of required width as per specification to allow working space for pipe jointing.

Excavated materials shall be dumped away from the site as directed by Engineer-in-charge. Suitable precautions are to be taken to prevent in flow of water into the excavated area, during construction.

The contractor at his own expense shall pump out or otherwise remove any or all water which during the continuance of contract may be found in the excavated trenches to keep the trench clear of water during the work under progress.

The pipeline shall not be refilled and covered, until the line therein has been passed and tested.

5. Burried Services

All pipes, cable mains and other services exposed by the excavations shall be effectively supported by timbering or other means for which no extra payment will be allowed. The contractor shall be responsible for any damage occurring to buried services and make good the same at his own cost to the satisfaction of the Engineer-in-charge.

6. Trench condition :

Where a trench is excavated and refilled after laying the pipe, settlement of the earth in the refilled trench take place. The filling above the top of pipe, settles relatively, more than the sides of the trench, thereby developing frictional resistance. The contractor is required to take special precaution against this, while refilling the trenches. Procedure for backfilling as stipulated earlier should be strictly followed.

7. Inspection Chambers/Manholes

At every change of alignment, gradient or diameter of a drain there shall be a manhole or Inspection Chamber.

The maximum distance between man hole chamber shall be 30 metres for the linelald straight.

All manhole and inspection chamber shall have internal dimension as shown in drawing and B.O.Q. The depth of invert shall be fixed to the gradient. The foundation for Manhole shall be 175mm thick & with cement concrete 1.3.6 in hard stone metal / granite metal of 40mm size. The concrete shall project 150mm beyond the external faces of the brickwork.

The brick masonry shall be done in cement mortar in the proportion of 1:4 and thickness of the brick wall should be 250mm thick upto 1200mm depth from Ground Level and beyond that the wall thickness shall be maintained 375mm. The inside surface of the walls of the chamber, shall be finished with cement plaster 1.3 and out side with cement pointing 1.3. In addition to this, the inside surface should also be provided with cement punning.

On the top of base concrete channeling on C.C. 1.2.4 with granite chips is to be done keeping the diameter equal to the dia. Of drain pipe and depth equal to half of the dia. Of pipe. The channel, 'should¹ be done longitudinally at the centre, connecting both the ends of the pipe. The channel is to be hunched up with concrete 1.2.4 with hard granite chips of size 12mm sloping upwards from the edge of channel to meet the side of chamber at gradient of 1.6. The channel and benching are to be finished smooth and cement mortar 1.3 and punning unless it is unavoidable. The branch should deliver sewerage in the Manhole in the direction of main flow and the junction must be made with care so that the flow in the main is not impeded. Channels for drains coming from the side of the Manhole Chamber, shall be curved to meet the main drainage channels.

The Manhole and Inspection Chambers shall be covered with R.C.C. cover slab of thickness 100mm to 150mm according to the requirement at site. One C.I. Manhole cover of diameter and weight as stipulated in the tender schedule shall be fixed, on the cover slab. Unless otherwise

mentioned the C.I. Cover and Frames shall confirm to I.S. 1726/1960. Heavy duty covers etc., under heavy vehicular traffic condition and capable of bearing wheel loads up to 11.25 tons, are to be used and medium duty under light type wheel traffic loads and light duty for domestic premises are to be used. Covers and Frames

shall be clearly cast, double water seal type and they shall be free from all and sand holes. The cover shall be gas tight and water tight with proper water-seal. The C.I. Cover and frame shall be coated with two coats of black bituminous paint. The frame of Manhole cover shall be fixed on the slab while the slab is cast. R.C.C.M.H. covers of 50cm dia. And 100mm thickness shall be fitted ki line of C.I.M.H. cover if stipulated in the bill of quantity of the tender schedule.

8. Gully Trap Chamber

The size of chamber for 100mm HCI yard gully shall be of 300mm X 300mm (Inside). Foundation with 100mm thick cement concrete 1.3.6 with hard granite metal of size 40mm from outer surface of wall and Brick work in cement mortar 1.4,125mm thick, depth up to 600mm maximum. The finishing of masonry wall both inside and outside should be done in cement mortar 1.4 cement punning should be provided on the inner surface the trap should be buried in cement concrete 1.2.4 in H.G. chips up to the mouth and one hinged C.I. Grating of size 300mm x 300mm are to be fixed on the top of mouth of Gully trap to arrest rubbishes shall be provided. The foundation, should project 75mm from outer.

9. Kota/Marble Stone flooring

The Kota/Marble stones shall be of thickness specified but not less than 20mm and of uniform with edges absolutely square & straight. They shall be laid in Cement Mortar (1.4) over masonry or concrete base. The sides of the stones shall be arranged to butt against each other truly so as to came the joints practically invisible and certainly not more than 0.8mm in width any where. The joints shall not be filled with mortar but may afterwards be grouted with neat white cement mixed with matching colour pigment. When the floor has completely set, it, should be polished with pumice stone and finally with pads of felt.

10. Glazed tile dado

The glazed porcelain tiles shall be of approved size and thickness 5mm to 6mm with edges absolutely straight & surface accurately plain. They shall be fixed in 6mm. thick cement mortar 1.3 using cement slurry over pre-cement plastered base. The sides of the tiles shall be arranged to but against each other truly so as to make the joints practically invisible. However, the joints may be granted with white cement mixed with colouring materials to match the tiles and neatly cleaned leaving no trace of excess grouting materials. The tiled surface and edges should be perfectly vertical and straight. The corner points must be normally right angled unless the site condition demands otherwise,

PART-III

TECHNICAL SPECIFICATION OF INTERNAL ELECTRICATION WORKS

The details of internal wiring, the position of fittings, fans, switches and plug sockets etc. are indicated in the layout drawings. The position of light fittings, fans, switchboards etc. indicated n these drawings are only for the guidance of the supplier and the actual position of these shall be mutually decided between the supplier and the purchaser. The supplier shall submit the purchaser of his consideration and approval all runs of wiring and the exact position of all the points and the switch boxes first marked on the points buildings.

All internal wiring shall be done in conformity to the latest Indian standard specification/Rules, code of practice adopted by CPWD and other standard practices prevalent in the part of the country. For the purpose of the specification the terminology used shall be as defined in IS:732 and IS:1356 for the definition of points wiring. The installation shall be carried out in conformity to all requirements of IE Act,1910 and IE Rules 1956.

- a) CEILING ROSE IN (IN CASE OF CEILING AND EXHAUST FAN).
- b) CEILING ROSE OR CONNECTOR (IN CASE OF PENDANTS EXCEPT STIFF PENDANT POINTS)
- c) BANK PLATE (IN CASE OF STIFF PENDANT).
- d) SOCKET OUTLET (IN CASE OF SOCKET OUTLET POINTS)
- e) LAMPS HOLDER (IN CASE OF WALL BRACKET, BATTEN HOLDER BULK HEAD FITTING AND SIMILAR OTHER FITTINGS)
- f) CALL BELL / BUZZER (IN CASE WORDS 'VIA' THE SWITCH SHALL BE READ 'VIA' THE CEILING ROSE /Socket outlet for bell push, where no ceiling rose / socket outlet its provided. The following shall be deemed to be included in the point wiring .
 - a) Switch and ceiling rose are required
 - b) In case of wall brackets, bulk head fittings, cables as required up to the lamp holders]
 - c) Bushed conduit for porcelain tubing where cables pass through walls.

- d) All wood or metal blocks, boards and boxes, R.J. Boxes sunks or surface type including those required for fan regulator but excluding those under the distribution board and main control switch.
- e) Earth wire from 3 pin socket point to the common earth including connection to the earth dolley.
- f) Earth wire of 16SWG/14 SWG/I.G. wire for loop earthing of the fixture
- g) All fixing accessories such as clips, nails, screw, plug, rawl plug, wooden plug, round blocks etc. as required
- h) Joint for junction boxes and connecting the same as required
- i) Connections to ceiling rose or connection socket outlet, lamp holders, switch , fan regulators etc

The point wiring in case of fan and light points shall mean the distance between the control switch and ceiling rose, connect or back plate, socket outlet or lamp holder depending upon the fittings measured along the runs of wiring irrespective of the number of wires in run. In the case of socket outlet points, the length shall mean the distance between the socket outlet and the tapping point of live wire on the nearest switchboard or junction box, as the case may be.

In the case of exclusive socket outlet circuits wired on 'Joint Box' system of wiring, any junction provided for extending the wiring beyond the point referred to, shall be treated as the nearest tapping point. In case of call bell / buzzer points the length shall mean the distance between the call bell and the ceiling rose / socket outlet or the bell push (when the ceiling rose / socket outlet is not used).

Sub main shall include the earth wire of adequate size main distribution Board up to sub distribution board B.B. such wiring has been classified on the basis of length. For the internal lighting, either surface conduct wiring system or recessed conduit or batten wiring system shall be provided as specific in the bill of quantities and working drawings.

Conduit wiring

For recessed conduit wiring system the conduit shall be placed in the ceiling / columns etc. before the casting of the slab or column. The conduit pipes shall be properly positioned and fixed so that it will not be displaced at the time of concreting. The junction boxes provided shall be so arranged that its cover will be flushed with the finished surface of the ceiling or column.

For placing the conduits in the walls, chases of ample dimension shall be made neatly to fix the conduit in a desired manner. The conduit pipe shall be fixed by means of staple or saddles not more than 600mm apart. Fixing of standard bends or elbows shall be avoided and all curves maintained by bending the conduit itself with a long radius will permit easy drawing of the conductors. Suitable inspection boxes shall be provided to permit periodical inspection and removal or replacement of wires if necessary. There shall be mounted flush with the wall with holes in the cover of the box.

The switch or regulator box shall be made of metal on all sides except on the front where backlight sheet or Perspex cover painted to match the colours of the wall shall be used I case of surface wiring system. For recessed wiring system, these boxes shall be made flush with the conduit of each conduit or section shall be completed before conductors are drawn in. The entire system of conduit after installation shall be tested or mechanical strength and electrical continuity throughout the earthing of the entire installation shall be carried out in accordance with I.E. Rules and standards.

The number of wires drawn in the conduits shall not exceed the numbers those specified in Indian standard specification No.732.

Main and Sub distribution Boards:

The position of main boards for lighting and sub distribution board for different buildings are approximate and the exact location shall be given to the successful tenderer at the time of installation.

The scope of this specification includes installation of the panel boards and distribution boards and making necessary connections. The installation of the boards shall be done strictly in accordance with the details supplied with the specifications; the instructions supplied by the switchgear manufacturer, Indian standard specifications and H.E. rules.

The supplier shall submit the details of installations to the purchaser for his consideration and approval, prior to installation.

When the switchboards are wall / column mounted top, they shall, be mounted on a suitable angle iron framework. All the metal supports etc. shall be protected against corrosion. The mounting height for such switchboards shall be such that it can be conveniently operated.

Earthing

Earthing shall generally be carried out in accordance with the requirements of Indian Electricity Rules and the relevant rules and regulations of electrical supply authorities. The complete earthing work for

the installation covered by this specifications shall also be provided taking into account Indian Standard Specification No.IS:732 and IS:3043. The earthing system adopted shall also have adequate mechanical strength.

The work shall include earthing of non current carrying metallic parts of all the equipment, light fittings, conduit pipes, cable and cable supports and earth strips (the design to be approved by the purchaser) and all the inter connection between the earthing system to a value mutually agreed upon between the purchasers and the supplier.

Installation, testing and Commissioning:

The supplier shall be responsible for the installation testing the commissioning of all the equipment and materials supplied by him against this specification. This shall also include the provision of miscellaneous wiring and supports and earthing in compliance with Indian Electricity rules and to the full satisfaction of the Government Electrical Inspector. All small items such as clamps, bolts, nuts, racks, supports, miscellaneous wiring etc. required to make the installation complete, shall constitute the part of major items specified in the bill of quantities and the tenderer should quote for each item taking these into consideration.

The responsibility of the supplier shall include receiving all the equipment and materials at site, storage for required period, handling the same at the site of erection, final execution, erections, revisions of equipment, if any, testing and commissioning and handing over the installation complete in all respect to the entire satisfaction of the purchaser's authorized representative. The supplier shall make good of all the damaged equipment and materials during this period at his own expense.

The supplier shall submit sample of each and every equipment and materials for the final approval of the purchaser's representatives immediately after the acceptance of offer. All the equipments and materials shall be supplied exactly as per to the approved samples. If at any stage the purchaser brings to the notice of the supplier any discrepancy or defect the supplier shall replace the same at his own expense.

The supplier shall render all reasonable assistance to the purchaser in getting the installation approved by the Government Electrical Inspector prior to the energization and supply necessary drawings, test certificates and both for tests carried out at the factory and site as well as the tests which the inspector may demand. In case any addition of alternations are required, to be made in the installation or in the equipment as per the directive of the Government Electrical Inspector / Local Authorities, the same will have to be carried out by the supplier, at his own expense.

The position of light fittings, main board, switches, sockets and routes of pipes and cables shown in the drawings are only indicative. The actual position of these shall be decided at site at the time of execution jointly by the supplier and the purchaser's authorized representative. The position of light fittings, pipes and board if required, to be changed / shifted due to the change in the building design etc by the purchaser's authorized representative, the same shall be carried out at no extra cost.

All the materials supplied to the contractor according to the Contract condition will be subject to inspection and approval of the officer or his representative from time to time. The contractor will provide all facilities of such inspections free of cost. At the time of inspection, the owner or his representative will have full liberty to reject any such materials, which does not conform to the specification / requirement. No claim for any rejected materials will be entertained by the owner. The contractor will remove all rejected materials from site at his own cost.

No surplus materials procured by the contractor will be accepted by the owner.

The contractor will be responsible to get the Electric installations cleared by the Electrical Inspector of Odisha Government.

Only the inspection fee will be reimbursed by Department on production of challan copy. **Installation and Maintenance Tools:**

The supplier along with the tender shall furnish a complete list of tools, appliances and accessories required for the installations of switch gear, light fittings, pipes cables and wires.

Drawings:

All drawings, test certificates, instructions manuals etc. shall be in English Language and all dimensions and weights shall be in metric units.

The tenderer shall submit with the tender general arrangement drawings for the installations work, typical methods and cabling and cables supports pipe work and pipe supports, typical methods of earthing and fixing of light fittings earthing etc. as offered by him in the tender.

The contractor shall submit for the purchaser's approval all layout, the general arrangement drawings as well as the typical details of all types of installation work in three sets before commencing the manufacture and the site installations work well in advance so that the site work shall not suffer.

After obtaining approval of the above drawings the contractor shall supply three sets of the following drawings:

- (a) The arrangement and support of conduit pipe
- (b) The position of light fittings, switches / plug socket and switch boards

(c) Earthing installations

(d) Layout plan showing the entire cable network

On completion of work, the successful tenderer shall supply one set of tracing in transparent linen and five sets of prints of all drawings incorporating all the changes / modifications affected during the execution of the contract. All wiring diagrams shall indicate clearly, the switch board, the runs of main and sub main wiring and the position of all the points with their controls. All the circuits shall be clearly indicated and numbered in accordance with IS:375.

The technical literatures and operating instructions and the maintenance manuals shall also be supplied in triplicate to the purchasers after the completion of the installations work.

Test:

Manufactures standard tests in accordance with Indian Standard and other standards, adopted shall be carried out on all the equipment and accessories covered by this specification so as to ensure efficient and satisfactory performances of all the components and also the equipment as a whole under working conditions at site. The tenderer shall submit a complete list of all such tests. If the purchaser, if so desired for special tests, to be carried out, under certain conditions the same shall be made by the successful tenderer at his own expenses.

All equipment shall be tested at site before the commissioning in accordance with the adopted standard and Indian Electricity Rules. Voltage test shall be carried out on each circuit on completion of wiring and cabling.

Technical Data:

The tenderers shall submit with their tender all such technical data, which are required for complete evaluation of the equipment offered. The suppliers shall give complete technical information of the equipment as detailed in Annexure and relevant Indian standards. The tenderer should supply such details of all equipment and materials offered specially with regard to the following.

- a) Fuse switch board and distribution boards
- b) Light fittings
- c) Conduits and the accessories for them
- d) Switches / plug sockets
- e) Cable and wires

The tender shall give along with his tender the following details:

- a) Complete details of earthing electrodes, earthing station and earthing conductors
- b) Details of conduit supports
- c) Details of all the equipment and accessories to be supplied

Exception to Specifications:

The object of this specification is to have all tenderers quote for equivalent materials and workmanship. It is, however, understood the certain manufacturers may not be able to offer as specified in every case, where the tenderer may find it necessary to deviate from the exact letter and not the intent of the specification, he must specifically state what these deviations may be at the time he submits the tender. All deviations must be grouped in one statement.

No deviations other than those includes in the tender will be permitted. These deviations should be listed as per Annexure.

PVC insulated Cables and Wires:

For 415V Distribution system, cables of voltage grade not less than 1000V shall be used. These cables shall be heavy-duty class, PVC insulated and PVC sheathed with aluminium conductors. The wires used in the lighting installation shall be PVC insulated n sheathed in case of conduits wiring and of 660V grade. Wires of different colours shall be made use of for quick identification of phase wire / neutral wire etc. All cable of wires shall comply with the requirements regarding the manufacture and testing etc as specified in India Standard Specification IS: 1554 and IS:694.

The length of cables indicated in the bill of quantities and drawings are only indicative and the successful tenderer will be paid for the exact length of cables laid at site. No joint shall be allowed in a run of cables, which can be covered by a possible drum length of cables.

Fuse switch / switch fuse shall be metal clad dust and vermin proof suitable for use under climatic conditions prevailing at site. Switch fuse / fuse switch units shall comply in general to IS:1567/4064 with regard to design and constructional / features.

The 'ON' and 'OFF' position of the switch handles shall be distinctly indicated and interlocks shall be provided to ensure that the switch cover cannot be opened unless the switch is in the 'OFF' position. Means shall, however, be provided for releasing the interlock to permit closing of switch with cover open for testing purposes. Designs with normal conventional position of switch handles, i.e. with switch handle up in the 'ON' position and

down I the 'OFF' position shall be preferred. All live parts inside the switch shall be properly surrounded and inter phase barrier shall be provided.

Switch fuse / fuse switch units, distribution boards shall be provided with necessary metal frame work so that they can be mounted on wall / columns structure etc. as desired. The panel boards, shall be wall mounted type or floor mounted type as specified in the bill of quantities or drawings. Necessary supporting metal frame of approved design shall be provided for all panel boards.

The arrangements of work boards shall be such that the operational handle of the top mounted switches are within the convenient of operators (about 1.2 M from the finished floor level) and proper space shall be provided for the termination of the cable in the switches provided below the bus-bars.

The bus-bars within the bus-bar chamber shall be liberally spaced for taking the riser connection. The bus bars with aluminum conductors shall be provided and PVC sleeves of different colour shall be mounted on them for easy identification, Clamped joints for taking the riser connections, instead of bolted type shall be preferred.

Two bolted type earthing terminals shall be provided on the switch boards. All individual switches shall be connected with suitable size earth wire to the main earthing terminals of the switchboard.

Hanger Board and shock treatment / charts shall be supplied wherever required.

At the incoming side of each pen phase, 3-neon type indicating lamps should be provided at the main board.

Switches and Plug Sockets

Switches provided for control of light points shall conform to IS:1087 and shall be rated for 5A/15A 250V

Ceiling Fans and Exhaust Fans:

Ceiling fans shall conform to Indian standard specification IS: 374-1960. The fans shall be supplied with all standard accessories like regulator and capacitors etc.

The performances rating of the propeller fans shall in accordance with stipulations of IS:2312. All fans shall be robust in design and construction and shall be supplied complete with wall brackets/ clamps etc.

Fluorescent Fittings:

All fluorescent fittings supplied shall confirm in general to IS:1913 and shall be complete with all standard accessories like choke, starter and capacitor etc

The type of enclosure provided for the fittings shall be of that specified in the bill of quantities and the working drawings. The materials of construction for fittings used for outdoor installations and for use in the work anodes shall be such that they shall withstand the atmospheric condition in that area.

Lamp holders used shall be fully shock proof, spring-loaded rotary type to ensure positive lamp locking. It should also be not possible to touch live parts of the lamp holder both after the lamp has been taken out and during the insertion or removal of the lamp. The starters shall be designed to give designed starting characteristics that shall promote full lamp life. Starter shall have high mechanical strength and topic proof construction. It should be incorporated with radio suppression capacitor o adequate rating and capacity. Power factor improvement capacitors are provided with hermetically sealed housing to ensure long and trouble free service. Terminal soldering tango shall be provided for easy electrical connections. The capacitors in general shall confirm to IS:1569-1963 and P.F improvement up to 0.95 for twin fluorescent light fittings and 0.9 for single fluorescent light fittings is to be maintained.

The ballast provided in the fluorescent fittings shall generally be in accordance to IS:1534. The ballast should incorporate the following design features.

- i) Low working temperature
- ii) Correct pre heating current for the electrodes iii) Proper wave foam
- iv) Small in dimensions
- v) Correct power supply to the lamp
- vi) No hum.

10 Easy connection leads.

All the metal construction of the fittings shall be such that they shall:

- 1) Withstand the atmospheric condition prevailing in the area
- 2) Provide maximum mechanical protection to the tubes and fittings accessories. Assists in maximum and uniform light distribution.

All fittings shall be provided complete with florescent lamps. All lamps shall confirm to IS:2418.

Incandescent Fittings:

The incandescent fittings shall be supplied strictly as per the details given in the enclosed annexure and bill of quantities, deviation if any regarding design, construction of materials should be specified clearly.

All the metal parts used in construction of the fittings shall have no effect due to dust / fumes / gases likely to exist in the atmosphere. All the bolts , clamps, nuts and guard wire etc shall be galvanized.

The wall fittings shall be provided with necessary hooks / clamps / supports etc for fixing the light fittings on wall / ceiling etc as detailed in the bill of quantities and the working drawings.

Light fittings shall be suitable for connection with 19mm dia. Conduit pipe as required. If fittings are to be connected through PVC cables, glands of adequate size and capacity shall be provided.

The lamp holders provided in the fittings shall conform to IS:1528.

CODES

Codes shall mean the following including the latest ascendants and / or replacement if any.

10 Indian Boiler Act, 1923 and Rules and Regulations made their under

- b) Indian Electricity Act, 1923 and Rules and Regulations made there under
- c) Indian Factories Act, 1948 and Rules and Regulations made thereunder
- d) The minimum wages Act
- e) The Women's Compensation Act
- f) The Payment of Wages Act
- g) The Fatal Accident Act
- h) The Industrial Employment Act
- i) The Employment provident Fund Act
- j) Indian Explosive Act 1984 the Rules and Regulations made there under
- k) Indian Petroleum Act 1934, and Rules and Regulations made there under
- l) A.S.M.E. Test Codes
- m) AIRE Test, Codes
- n) American Society of Materials Testing Codes
- o) Standards of the Indian Standards Institution

1) Low Tension Circuit Breakers :	IS 2516-1955 Part I Sec.1
2) Switchgear Bus Bars	IS 375-1963
3) HRC fuse links	IS 2208-1962
4) Distribution fuse boards	IS2675-1966
5) Enclosure for Low Voltage switchgear	IS214701962
6) PVC Cables	IS1554-1975
7) Tabular fluorescent lamps for Cameral lighting service	IS2418-1963
8) Tungsten Filament Lamps for cameral service	IS415-1963
9) Ceiling Fans	IS274-1966
10) Flood lights	IS1947-1961
11) Wall Glass flame-proof electric light fittings	IS2206-1962 (Part 1)
12) Water Tight Electric Light Fittings	IS3553-1956
13) Steel Boxes for Enclosure of Electrical Accessories	IS5133-1969
14) Fittings for Rigid Steel conduit	IS2667-1979
15) Rigid steel circuits for electrical wiring	IS3837-1966
16) Accessories for Rigid Steel Conduits for Electrical Wiring	IS3837-1966
17) Switch Socket Outlets	IS3837-1966
18) PVC Wiring	IS694-1977
19) Switches for domestic and similar purpose	IS3854-1966
20) PVC wiring	IS694-1977
21) Call Bell and Buzzers	IS2268-1966
22) Straight through joint boxes and leads sleeves or paper insulated cables- EID-0032-1964	
23) Earthing	IS3043-1966
24) Electrical Wiring installations	IS732-1963
25) Switchgear	IS3072-1965 (Part I)
26) Lighting protection	IS2309 –1969
27) Public Address system	IS1882-1962
28) Low Tension switch use units	IS4064-1978
29) Code of Practice for Automatic FIRE ALAM system	IS2189-1970
30) Specification for Heat Sensitive Fire Detectors	IS2175-1977
31) Guide for Safety procedure in Electric work	IS5216-1969
32) Rubber Mats for Electric works	IS5424-1969

p) Other internationally approved standards and / or Rules and Regulations touching the subject matter of the contract.

GENERAL CONDITIONS

1. Drawings & Specifications

The Contractor, after the award of the contract and on signing the agreement shall be furnished free of cost two copies of each of the drawings specifications, descriptive schedules and other details necessary for execution of the work. All further drawings and details as may be prepared by the department from time to time for reasonable development of the work described in the contract documents and reasonably necessary to explain and amplify the contract drawings and to enable the contractor to execute and complete the work shall also be supplied in duplicate to contractor free of cost.

Any further copies of such drawings, required by the contractor shall be paid for by him.

The contractor shall keep one copy of all the drawings specifications, price schedule of items and quantities at work site and the Engineer-in-charge or his authorized representative shall at all reasonable times have access to the same.

2. Contractor's Responsibility.

a The contractor shall provide at his cost everything necessary for the proper execution of the works according to the intend and meaning of the drawings, schedule of items and quantities and specifications taken together, if the same is not particularly shown or described therein, provided that the same can reasonably be inferred there from, if the Contractor finds any discrepancy in the drawings or between the drawing and schedule of quantities and specifications, he shall immediately in writing refer the same to the Engineer-in-charge whose decision shall be final & binding.

b Any work done at any time or even before receipt of such details shall be removed/replaced by the contractor without any expense to the department If the work is not in order and if so directed by the Engineer-in-charge error inconsistencies in drawings and local conditions affecting the works shall be brought to the notice of the Engineer-in-charge immediately for his decision.

All drawings, bill of quantities and specifications and copies therefore furnished by the department, are their property. They shall not be used on any other work and shall be returned to the Department on request on completion and before issue of final certificate or termination of the contract.

c All materials and workmanship shall be of the respect kinds described in the specification. B.O.Q, contract and in accordance with the instruction of the Engineer-in-charge. The contractor must satisfy himself about the same while furnishing samples for approval of the Engineer-in-charge before incorporation in the works.

d The Engineer-in-charge may from time to time cause at his discretion such tests on samples of materials or workmanship of all/any materials and work, as he may consider necessary at places of manufacture, fabrication, on the site or at such other places. The expenditure incurred for all such tests shall be borne by the contractor.

e All approved samples are to be preserved by the contractor in a regular manner in the site office for inspection and verification of the Engineer-in-charge or his representative from time to time.

10 Alteration / Addition & Omissions

The Engineer-in-charge shall make any variation of the form, quality or quantity of the works or any part thereof that may be in his opinion be necessary and for that purpose or if for any, other reason it shall, in his opinion be desirable, he shall have power to order the Contractor to do so and the Contractor shall do any or all of the followings :

- a) Increase or decrease the quantity of any work included in the contract.
- b) Omit any such work.
- c) Change the levels, lines, position and dimensions of any part of the works, and
- d) Execute additional works of any kind necessary for the completion of the work.

No such variation shall in any way radiate or invalidate the contract, but the value of all such variations shall be taken into account and shall be added to or deducted from the contract sum accordingly, but no such variation shall be made by the contractor without prior written instruction from the Engineer-in-charge.

e) The Schedule of quantities/rates shall be deemed to have been prepared and included in accordance with the method of measurement of work set out and as per the relevant specifications or in its absence relevant I.S. code of practice.

Any error in the specification or in quantity or omission of any item from the schedule of quantities/ rates shall not vitiate the contract, but he adjusted by adding to or deduction from the contract sum provided that no rectification of errors, if any, shall be allowed in the contract schedule of rates.

4. Valuation of variations

- a) All extra or additional work done or work omitted shall be valued at the rates and price set out in the prices schedule of quantities, and/or derived there-from, if in-arriving at the contract sum, the Contractor have added to or deducted from the total of the items in the tender any sum either as a percentage or proportion, then the same percentage of proportion shall apply to all. Items or works in the prices schedule as also for valuation of variation.
- b) If the contract does not contain any rate or price applicable to the extra or additional work, or the rate or price in the priced schedule of quantities has become inapplicable in the opinion of the Engineer-in-charge by virtues of such addition or omission, then suitable rates or price shall be agreed such rates shall be derived by analysis based on standard schedule of rates of State P.W.D. / P.H.D or in case such is not available therein, form any approved schedule with the various elements valued at local market price plus 15 (fifteen) percent towards over-heads.

5. The Offers are also to include

- a) To supply all materials, labour, supervision, services, supports, scaffoldings, approach road, construction equipments, tools and plants etc., as required for proper execution of all the items of the work as per drawing and specification.
- b) To provide all incidental items not shown or specified in particular, but reasonable or necessary for successful completion of the work in accordance with the drawings, specifications and schedule of quantities.
- c) Cleaning, Uprooting the stumps, vegetation and old masonry etc., met in the trenches and excavations.
- d) Providing shoring and shuttering to avoid sliding of the soils and removal of the same or completion.
- e) De-watering as required and directed.^{6/}
- f) Excavation at all depths (Unless otherwise mentioned in schedule), stacking separately usable and disposal of surface earth and materials from site as directed.
- g) Curing of ail concrete and cement works as per specification and direction,
- h) Centering, shuttering as required for all concrete work.
- i) Bending, binding, tying the grill & placing in position, including supply of all materials & labour etc.
- j) To provide water and power required for construction testing and commissioning,
- k) Testing of materials and works as per specification and direction .

**Sd:-
Executive Engineer
Fishery Engineering Division
Bhubaneswar**

SCHEDULE A to I

Bidder(s) is / are required to submit the information in the following Schedules

SCHEDULE-A

CERTIFICATE OF NO RELATIONSHIP

I/We hereby certify that I/We* am/are* **related/not related**(*) to any officer of the rank of Assistant Engineer & above and any officer of the rank of Assistant / Under Secretary and above of the F& ARD Department, Govt. of Orissa I/We* am/are* aware that, if the facts subsequently proved to be false, my/our* contract will be rescinded with forfeiture of E.M.D and security deposit and I/We* shall be liable to make good the loss or damage resulting from such cancellation.

I/We also note that, non-submission of this certificate will render my / our tender liable for rejection.

(*) – Strike out which is not applicable

Signature of the Tenderer

Date:-

ANNEXURE – I OF SCHEDULE-C

LIST OF PLANT AND EQUIPMENTS TO BE DEPLOYED ON THE CONTRACT WORK (MINIMUM REQUIREMENT)

SI No	List of plants and equipments	Requirement	Marks
1	Complete Set of Piling Equipment	1 Nos	10
2	Truck/Tipper	2 Nos	20
3	Tractor with Trolley	1 No	10
4	Water Tanker (4000 Litres)	1 Nos	10
5	Needle Vibrator	2 Nos	10
6	Plate Vibrator	2 Nos	10
7	Generator (10 KVA)	1 Nos	10
8	Concrete Mixer	1 Nos	10
9	Centering Shuttering Material	100 Sqm	10
		TOTAL	100

NOTE:

1. Capacity of each plant and equipment should be as per specification attached separately.
2. The above equipment should either be owned or availed on long-term lease extended beyond the duration of the work, the authority of which in either case is to be substantiated before award of the work.
3. The equipment mentioned above must be included in Schedule “C” and clearly indicated as “Owned/leased.”
4. The above list is not exhaustive. All other machinery/equipments as will be required for satisfactory completion of the work shall have to be deployed by the agency.
5. For deploying additional sophisticated machinery by the agency for completion of the work, no claim shall be entertained.

ANNEXURE – II OF SCHEDULE-C

CAPACITY OF PLANTS AND EQUIPMENTS

a)	Piling Equipments	Piling equipment should have piling winch, Tremie pipe of dia150 mm, Tripod with pulley of minimum capacity to lift 3 MT, Monkey hammer and Metal hopper.
b)	Truck/Tipper	The Truck or Tipper should have capacity of minimum 12 tonne
c)	Tractor	The tractor should have a minimum capacity of 22 to 50 H.P.
d)	Water Tanker	The water tanker should be a truck/Tractor mounted one or asa trailing unit having minimum capacity of 4000 liters.
e)	Concrete Mixer 04/0.28cum	2.5 Cum/Hour
f)	Diesel Generator	Having Capacity of 10 K.V.A

ANNEXURE – III OF SCHEDULE-C

**CERTIFICATE TO BE ISSUED BY THE SUPERINTENDING ENGINEER/ EXECUTIVE ENGINEER
UNDER WHOM THE MACHINERIES / EQUIPMENTS ARE DEPLOYED.**

Not issued prior to 90 days of receipt of tender

Sl No	Name of Machineries equipments	Identification No. /Engine / Chassis No	Capacity	Year of Purchase	Condition (working / breakdown)	Since when deployed under him	When it is likely to be released from current assignment

Certified that,

1. I have verified the ownership documents with the identification no. of the Machineries / Equipments.
2. Machines are currently utilized exclusively for the work under the Division.
3. The facts provided are true as on the date of issue of this document to the best of my knowledge.

**SUPERINTENDING ENGINEER /
EXECUTIVE ENGINEER**

ANNEXURE – IV OF SCHEDULE-C

**TIME SCHEDULE FOR MOVEMENT OF EQUIPMENT / MACHINERIES AVAILABLE WITH THE
TENDERER FROM ONE SITE TO WORK SITE WHEN THE CONTRACTOR IS EXECUTING SEVERAL
WORKS**

Sl. No	Name of Equipment &Machineries	Required No.	Name of the work for which Equipment& Machineries deployed	Name of the Division under whose jurisdiction Equipment & Machineries deployed	Name of the place where equipments and machineries deployed.	Time schedule for movement of equipment/ machineries to work site for use in tendered work
1	Complete Set of Piling Equipment	1 Nos				
2	Truck/Tipper	2 Nos				
3	Tractor with Trolley	1 No				
4	Water Tanker (4000 Litres)	1 Nos				
5	Needle Vibrator	2 Nos				
6	Plate Vibrator	2 Nos				
7	Generator (10 KVA)	1 Nos				
8	Concrete Mixer	1 Nos				
9	Centering Shuttering Material	100 Sqm				

Certified that, the above machineries shall be available solely for this work from the date mentioned against them.

Signature

SCHEDULE "C"

PLANT AND EQUIPMENT PROPOSED TO BE EMPLOYED BY THE APPLICANT FOR USE ON THE WORK

SINo	Nameoftheequipment	Total			EquipmentinHand			Equipment to be			Whetherdocumentaryevidencefurnished	Referenceto documentary	Remarks
		NoofUnits	Kindandmake	Capacity	Noofeach	Year of Manufacture & presentcondition	Presentlocation	Noofeach	Capacity	Throughlease			
1	2	3	4	5	6	7	8	9	10	11	12	13	14

- A. Construction Equipments
 - B. Vehicle Trucks etc.
- Reference Annexure I for list of essential equipments for contracts
If leased indicate the date when the current lease expires

Signature of the Bidder
Date

SCHEDULE-D

WORKING EXPERIENCE

D-1. LIST OF SIMILAR NATURE OF PROJECTS EXECUTED

Name of Employer	Name of location and name of work	Contract price in Indian Rupees	Items of works	Date of starting the work as per Agreement	Stipulated date of completion of the work as per Agreement	Actual date of completion of the work	Reasons for delay in starting/ completion, if any
1	2	3	4	5	6	7	8

Note: The above information is to be certified by the Engineer in Charge / Employer not below the rank of Executive Engineer.

Signature of the Bidder
Date

SCHEDULE-“E”

INFORMATION REGARDING CURRENT LITIGATION, DEBARRING EXPELLING OF TENDERED OR ABANDONMENT OF WORK BY THE TENDERER

- 1. a) Is the bidder currently involved in any litigation relating to the works. Yes / No
- b) If yes: give details:
- 2. Has the bidder or any of its constituent partners been debarred/expelled by any agency in India during the last 5 years. Yes / No
- 3. a) Has the bidder or any of its constituent partners failed to perform on any contract work in India during the last 5 years. Yes / No
- b) If yes, give details:

Note: If any information in this schedule is found to be incorrect or concealed, qualification application will summarily be rejected.

Signature of the Bidder
Date.

SCHEDULE – F

AFFIDAVIT

(On Non-Judicial Stamp Paper only)

I, the undersigned, Sri/Miss/Smt. _____, aged _____ years, S/o / D/o / W/o _____, Proprietor/Partner/Authorized Signatory of M/s. _____, do hereby solemnly affirm and declare as follows;

- 1. That I do hereby certify that all the statements made in the required attachments submitted in connection with the bid for the work, “**Climate Resilient Coastal Fishermen Village (CRCFV) at Jamboo in Kendrapada District Odisha Under PMMSY 2024-25. (Civil, Electrical & Plumbing Work)**” vide Bid Identification No. **FED -04/2026-27** are true and correct to the best of my knowledge and belief.
- 2. That I further certifies that neither my / our firm / company / individual entity namely M/s. _____, nor anyof its constituent partners/directors have abandoned any road/ bridge/Irrigation /Buildings or other project work in India nor any contract awarded to us for such works have been rescinded during the last five years prior to the date of this bid.
- 3. That I hereby authorise(s) and request(s) any bank, person, firm or Corporation to furnish pertinent information as deemed necessary and as requested by the Department to verify this statement or regarding my (our) competency and general reputation.
- 4. That I understands and agrees that further qualifying information may be requested by the Department and I undertake to furnish any such information at the request of the Department as and when required.
- 5. The undersigned undertakes that if the above declarations are found to be false or incorrect at any stage, our firm shall be liable for disqualification, termination of contract, and any other penal action as deemed fit by the competent authority, including blacklisting and legal proceedings.

(Signature of Bidder)
Name of Firm
Date:

**CERTIFICATE OF EMPLOYMENT OF UNEMPLOYED GRADUATE
ENGINEER/DIPLOMA HOLDERS**

(For Super Class/Special Class/‘A’ Class Contractor only)

I/We hereby certify that at present, the following Engineering personnel are working with me/in our firm/
Company and their bio-data are furnished below.

Sl. No.	Name of Engineering personnel appointed for supervising contractor's work with address	Qualification	Date of Appointment	Monthly emolument	Whether full time engagement and continuous	If they are superannuated/retired/ dismissed or removed personnel from state Govt. / Central Govt. / Public Sector Undertaking/private Companies and anyone ineligible for Government Service.
1	2	3	4	5	6	7

Signature of the Bidder
Date.

SAMPLE FORMATS
UNDER TAKING

This is to certify that

1. My firm has neither been associated, directly or indirectly, with the Consultant or with any other entity that has prepared the design, specifications, and other documents for the Project nor has any person associated with been proposed as Project Manager for the Contract.
2. My firm has not engaged any agency and any of its affiliates engaged by the Engineer-in-Charge to provide consulting services for the preparation or supervision of this work.
3. My firm has not engaged any Engineer of gazetted rank employed in Engineering or Administrative duties in an Engineering Department of the Government of Odisha or other gazetted officer retired from Government service during last two years without prior permission of the Government of Odisha in writing on or before submission of this tender. I am aware that my contract is liable to be cancelled if either I or any of my employees is found any time to be such a person who had not obtained the permission of the Government of Odisha as aforesaid.
4. That I/we agree to abide by all the terms, conditions, and obligations contained in the Tender Document and shall execute the work in conformity with the scope, specifications, and timelines mentioned therein, if the contract is awarded to us.
5. That I/we will produce the original documents for verification as and when required by the tender inviting authority.
6. I/We hereby declare that I/We shall comply with all statutory requirements such as GST, EPF, ESI, and Labour Laws applicable under the contract and shall submit relevant documents when required.
7. I/We agree that the decision of the Tender Accepting Authority with regard to qualification/disqualification of my/our bid shall be final and binding.

Signature of the Bidder.

Date: -

Note: i. Strike out whichever is not applicable

ii. In case any person is under his employment with due permission from Government, the same may be cited in a separate letter.

RELATIONSHIP DECLARATION

To,
The Tender Inviting Officer,

Subject: (Name of the Work)

Reference: (Bid reference number)

Sir,

Pursuant to DTCN, it is to inform that I have relative(s) employed as an Officer in the rank of an Assistant Engineer/Under Secretary under the _____ Department. His (Their) details are as follows.

Relationship:

Name:

Designation

Office

Address

Pursuant to DTCN, I am to submit herewith the names of persons who are working under my firm having near relatives to any gazetted officer in the rank of an Assistant Engineer/Under Secretary in the _____ Department.

Sl No	Name of the my employee and his designation in the firm	Presently working at	Details of his relatives working in the Department
			Relationship Name: Designation Office Address
			Relationship Name: Designation Office Address

I am also duty bound to inform the relationship of any subsequent employment with any gazetted officer in the rank of an Assistant Engineer/Under Secretary in the _____ Department. I am aware that any breach of this condition would render my firm liable for penal action for suppression of facts.

Yours Sincerely

Signature of the Bidder.

Date: -