



**GOVERNMENT OF WEST BENGAL  
DIRECTORATE OF FORESTS  
Office of the Divisional Forest Officer,  
Rupnarayan Division.**

**E-Tender for Selection of bona-fide persons/agencies/companies, including consortium and partnership firms to undertake under Construction of Pipe Spillway and Inlet for Construction of Water Detention Structure in Rupnarayan Division under Jaltirtha Scheme.**

eNIT No. WBFOR/DFORPN/eNIT-.37/ JALTIRTHA(2<sup>nd</sup> Call) of 2023-24 of Rupnarayan Division



**Government of West Bengal**  
**Directorate of Forests**  
**Office of the Divisional Forest Officer, Rupnarayan Division**  
**PO Vidyasagar University, Rangamati, Midnapore, Paschim Medinipur-721102.**  
**Phone & Fax-03222-275494, E-mail : dforupmid-wb@nic.in**

Memo No. 2208 /2- e\_Tender

Dated, Midnapore the 21/11/2023

Notice Inviting Tender No. WBFOR/DFORPN/eNIT 37/JALTIRTHA(2<sup>nd</sup> Call) OF 2023-24

**Tender for Construction of Pipe Spillway and Inlet for Construction of Water Detention Structure in Rupnarayan Division under Jaltirtha Scheme.**

The Divisional Forest Officer, Rupnarayan Division invites e-tenders for the following work(s) from the eligible persons/agencies/companies, including consortium and partnership firms as detailed in the table below. [Collection (downloading) and Submission (uploading) of Tender can be made online through the website <https://wbtenders.gov.in>].

<b>Name of Project:</b> Construction of Pipe Spillway and Inlet for Construction of Water Detention Structure in Rupnarayan Division under Jaltirtha Scheme.	
Administrative Approval	No. 6980/P&S(P)/3D-685(WC)/2019-20
Work Sites	Babuikhulia Mouza & Nayanankati Mouza of Hoomgarh Range

Tender Notice No	Name of work	Location of works	Estimated Amount Put to tender (Rs.)	Earnest Money [2%] to be deposited (Rs.)	Period of Completion of the work
WBFOR/DFOR PN/e-NIT 37/JALTIRTHA (2 <sup>nd</sup> Call) of 2023-24	Construction of Pipe Spillway and inlet for Construction of Water Detention Structure in different locations under Rupnarayan Division	Babuikhulia Mouza under Hoomgarh Range	62,79,052/-		90 days of issuance of work order.
		Nayabankati Mouza under Hoomgarh Range	70,02,904/-		
<b>Total Rs.</b>			<b>1,32,81,956/-</b>	<b>2,65,639/-</b>	

**The Divisional Forest Officer, Rupnarayan Division reserves the right to cancel any work without assigning any reason thereof.**

In the event of e-filling, intending bidder may download the tender documents from the website <https://wbtenders.gov.in> directly with the help of Digital signature Certificate. Tenderer will select the tender to bid and initiate payment modes (vide Finance Department Memorandum no. 3975-F(Y) Dated 28/07/2016)

- i) Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment gateway.
- b) Exemption of any kind for any of the eligible bidder towards cost of EMD will be according to
- i. 4245-F(Y) dated 28<sup>th</sup> May 2013 issued by Finance Department, Audit Branch, Government of West Bengal.
  - ii. 6718-F(Y) dated 08/09/2015 issued by Finance Department, Audit Branch, Government of West Bengal.

**Schedule of Dates:**

Sl.No.	Particulars	Date & Time
1	Date of uploading N.I.T. Documents—Online (Publishing Date)	06.12.2023 at 2.00 AM
2	Documents download start date (Online)	06.12.2023 at 2.10 AM
3	Documents download end date (Online)	29.12.2023 at 2.00 AM
4	Bid submission start date (Online)	06.12.2023 at 2.30 AM
5	Bid submission closing date (Online)	29.12.2023 at 05.00 PM
6	Bid opening date for Technical Proposal (Online)	02.01.2024 at 11.00 AM
7	Date of uploading technically qualified bidders (Online)	To be notified in due course
8	Date of opening Financial Bids (Online)	To be notified in due course

Note:

- 1) In case of any unscheduled holiday or on days of Bandh or natural calamity on the aforesaid dates, the next working day will be treated as scheduled / prescribed date for the same purpose.
- 2) The Tender Inviting Authority may change the venue of opening the Technical or Financial Bids in case of exigent circumstances like breakdown of communications link or conditions of force majeure.
- 3) The Tender Inviting Authority reserves the right to defer the date of opening of either Technical or Financial Proposal or both, if required.

## INSTRUCTION TO BIDDERS (ITB)

### Section – A

#### 1. General Guidance for e-Tendering

1.1 Instructions / Guidelines for tenderers for electronic submission of the tenders online have been shown in Web site <https://wbtenders.gov.in>

#### 1.2 Registration of Contractors

Any contractor willing to take part in the process of e-tendering will have to be enrolled and registered with the Government e-Procurement System.

#### 1.3 Digital Signature Certificate (DSC)

Each contractor is required to obtain a Class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders.

#### 1.4 Collection of Tender Documents

The contractor can search and download NIT and tender documents electronically from computer once he logs on to the website mentioned in Clause 1.1 using the Digital Signature Certificate. This is the only mode of collection of tender documents.

#### 1.5 Participation in more than one work

A prospective bidder shall be allowed in the job either in the capacity of individual or as a partner of a firm or registered company.

#### 2. Submission of Tenders:

##### 2.1 General process of submission:

Tenders are to be submitted online through the website stated in Clause 1.1 in two folders, at a time for each work, one is Technical Proposal and the other is Financial Proposal, before the prescribed date and time mentioned in the list attached. Using the Digital Signature Certificate (DSC), the documents are to be uploaded, virus scanned and digitally signed. Tenderers should specially take note of all the addendum/corrigendum related to the tender and upload the latest documents as part of the tender.

##### 2.2 Technical Proposal

The Technical Proposal should contain scanned copies and/or a declaration in standardized formats of the following in two covers (folders).

##### A. Technical File (Statutory Cover) containing

- i. NOTICE INVITING TENDER (NIT) (to be submitted in “NIT” Folder).
- ii. Section B (Form I, Form II, Form III, Form IV and AFFIDAVIT – Y)  
(to be submitted in “FORMS” Folder).
- iii. Instructions to Bidders. (to be submitted in “ITB” Folder)
- iv. General Terms & Conditions of Contract. (to be submitted in “GT AND CC” Folder)
- v. Technical Specification. (to be submitted in “TS ” Folder)
- vi. Drawing if Any to (“DRAWING” Folder)

*Note:*

*Tender document may be downloaded from website & submission of Technical Bid/Financial Bid as per Tender Schedule*

vii. Addenda/Corrigenda, if published: Contractors are to keep track of all the Addendum/Corrigendum issued with a particular tender and upload all the above, digitally signed, along with the NIT. Tenders submitted without the Addendum/Corrigendum will be treated as invalid and liable to be rejected.

B. My Document (Non-Statutory Cover)

Sl. No.	Category Name	Sub-Category Description	Document Name	
A.	CERTIFICATES	CERTIFICATES	(For details see Clause 3 of ITB & relevant clauses of NIT)	
			1	Up to date Professional Tax deposit receipt challan
			2	Updated GST Registration Certificate & updated GST Return for the last month.
			3	I.T.R. Acknowledgement Receipt (last 3 years)
			4	I.T. PAN Card, ESI & EPF Registration Certificate (If EPF and ESI is not required by law, declaration with proper justification is to be submitted on letter head of The Company/ Firm properly stamped and signed).
			5	Voter ID Card / Aadhar Card
			6	Enlistment Certificate/ Trade License for Construction of Pipe Spillway and Inlet for Construction of Water detention structure or similar nature of work
			7	ESI and EPF up to date payment certificate
B.	COMPANY DETAILS	COMPANY DETAILS	8	All up-to-date documents regarding taxes and charges as applicable
			1	Proprietorship Firm - Trade Licence.
			2	Partnership Firm - Registered Partnership Deed, Registered Power of Attorney, Trade licence.
			3	Pvt. Ltd. Company - Registration Certificate under Company's Act, MOA & AOA, Registered Power of Attorney, Trade licence.
C.	CREDENTIAL	CREDENTIAL	4	Registered Un-employed Engineers and Labour Co-operative Societies Limited.
			1	Credentials of Construction of Pipe Spillway and Inlet for Construction of Water detention structure or similar nature of work from designated authority as mentioned in 3(s).
D.	EQUIPMENTS	PLANTS & MACHINERIES	2	Certificate from chartered accountant of total monetary value of construction work performed for each of the last three years.
			1	Authenticated copy of invoice, challan and way bill (Machinery/Tools/Equipment).Bidder should own required machinery for execution of work & upload necessary supporting documents online.
E.	FINANCIAL (INFO)	Turnover	1	Profit & Loss statement & Last Three years Audited Balance Sheet.
		PAYMENT CERTIFICATE	2	Only Payment Certificate of work issued by the Concerned authority and not the TDS certificate

Inclusive of all other Govt. Rules for attending tender.

F	Declaration	Structure & organisation	1	Details of structure and organisation Section B Form III
		AFFIDAVIT-Y	2	An affidavit made that no adverse report against the bidder
		TECHNICAL STAFF	3	An affidavit mentioning the name of the technical staff.

2.3. Financial Proposal

i) The financial proposal should contain the Bill of Quantities (B.O.Q) in one cover (folder). The contractor is to quote the percentage rate indicating

- Excess in % or
- Less in % or

- Excess or Less 0.00% to indicate at par in the space marked for quoting rate in the BOQ.
- ii) Only downloaded copy of the B.O.Q. are to be uploaded quoting the rate, virus scanned & digitally signed by the contractor.

### **3. Eligibility Criteria for participation in tender:**

(a) The bidder should have been all necessary permission, registration and license as applicable. The bidder should have valid PAN, GSTIN Registration, ESI and EPF registrations. (If EPF and ESI is not required by law, declaration is to be submitted on letter head of The Company/ Firm properly stamped and signed). Bidders should also upload copy of bank solvency certificate.

(b) All categories of prospective Tenderers shall have to submit valid and upto date Professional Tax receipt challan, GST registration certificate, Income Tax Return Acknowledgement receipt for last 3 years, PAN card issued by Income Tax Department, Voter ID card, Aadhar Card and Trade licence for similar nature of work in respect of the prospective tenderer.

(c) Where an individual person holds a Certificate in his own name duly issued to him against the company or the firm of which he happens to be a director or partner, such individual person shall, while submitting any tender for and on behalf of such company or firm, invariably submit a copy of registered power of attorney showing clear authorization in his favour, by the rest of the directors of such company or the partners of such firm, to submit such tender. The Power of Attorney shall have to be registered in accordance with the provisions of the Registration Act, 1908. (Non-statutory Documents).

(d) Neither prospective Tenderer nor any of the constituent partners had been debarred to participate in any Tender by the State/ Central Government, State /Central Government undertaking, Statutory/ Autonomous bodies constituted under the Central/ State statute during the last 5 (five) years prior to the date of this NIT. Such debarment will be considered as disqualification towards eligibility. (A declaration in this respect has to be furnished by the prospective bidders as per prescribed format). [Non-statutory Documents]

(e) The partnership firm shall furnish the Registered Partnership Deed and the Company shall furnish the Memorandum of Association (MOA) and Article of Association (AOA.) [Non-statutory Documents]

(f) Registered Un-employed Engineers' Co-operative Societies / Labour Co- operative Societies are required to furnish the following documents: - [Non-statutory Documents]

- i. Current "No Objection Certificate" from the Assistant Registrar of Co-operative Societies.
- ii. Supporting documents showing area of operation.
- iii. Bye-laws duly approved by the Assistant Registrar of Co-operative Societies.
- iv. Name with address and signature (in original) of the present Board of Directors of the Co-operative Society
- v. Copies of Minutes of last Annual General Meeting and Audit Report of the Co-operative Society with the evidence of submission of the same to the concerned Authorities, duly attested.

(g) The prospective Tenderers or any of their constituent partner shall neither have abandoned any work nor any of their contract have been rescinded during the last 5 (five) years. Such abandonment or rescission will be considered as disqualification towards eligibility.

(h) Joint Ventures not allowed.

(i) A prospective Tenderer shall be allowed to participate in the job either in the capacity of individual or as a partner of a firm. If the prospective Tenderer is found to have applied severally in a single job, all his applications will be rejected for that job.

(j) Conditional / Incomplete Tender will not be accepted under any circumstances.

(k) Credential of Pipe Spillway and Inlet for Construction of Water Detention Structure or other similar nature of work is to be submitted as per PWD, Govt of West Bengal Order No. 04-A/PW/O/10C-02/14 dated 18.03.2015.

(l) Absence of any of these details / lack of proof or lack of sufficient documents to substantiate the above shall make the Tenderer / Bidder ineligible for further consideration. During the process of evaluation, if undersigned finds that there are any wrong details, mis-representation or false declarations given by the Tenderer / Bidder, the undersigned shall have the right to disqualify and / or black list the firm and take other action as deemed necessary.

(m) Tenderers has to produce duly self-attested supporting documents/certificate from the employer/client with whom they

have worked. Audited Balance Sheet duly certified by the Chartered Accountant and valid payment certificate issued by the Govt. Organisation/PSU/Semi Govt. Organisation along with the application (online). Information of audited financial statements for the last 3 years to demonstrate the current soundness of the bidders financial position. The bidder's net worth for the last year calculated on the basis of capital, profit and free reserve available to the firm should be positive.

(n) Agencies are required to give a detail work programme in the form of a bar chart/work flow chart along with tender.

(o) The bid submission by an intending tenderer who is already blacklisted in any State/Central Government, State/ Central Government Undertaking, Statutory/ Autonomous bodies constituted under the Central/ State Statute will not be entertained.

(p) All the participants have to upload undertaking that they do not have any litigation that past or present with any Govt./PSU/Semi-Govt. Organisation of the State.

(q) The eligibility of a bidder will be ascertained on the basis of the attached documents uploaded using digital signature in support of the minimum criteria and the declaration executed through prescribed affidavit in non-judicial stamp paper (must be upload both sides of Stamp Paper) of appropriate value duly notarised. If any documents submitted by a bidder is either manufacture or false, in such cases, the eligibility of the bidder/tenderer will be out rightly rejected at any stage without any prejudice.

(r) The successful L1 Bidder must submit the hard copy of all tender documents to the tender inviting authority with his acceptance letter of the LOI (Letter of intent). Failure to submit the hard copy with the acceptance letter within the time period prescribed for the purpose may be constructed as an attempt to disturb the tendering process and dealt with such matter will be legal process including blacklisting the bidder.

(s) Completion of work for Construction of Pipe Spillway and Inlet for Construction of Water Detention Structure or similar nature of work is to be submitted. "Completion" means completion certificate from the Divisional Forest officer /Divisional Engineer/ equivalent is to be produced in support of above criteria clearly stating that the works entrusted to the bidder have been successfully completed. In case of completion certificate having other works clubbed in addition to those mentioned above, the value of works pertaining to works as applicable for tender must be mentioned separately. Completion certificate produced as credential should clearly indicate the description of works, value contract, executed work value, date of award, actual date of completion etc and name, address, telephone no. of the client. Certificate from the private individual and organisation for whom such work are executed shall not be accepted.

#### **4. Opening of Technical Proposal: -**

Technical proposals will be opened by the authorized representatives electronically from the website stated in Clause 2.1, using their Digital Signature Certificate.

Intending tenderers may remain present, if they so desire.

Cover (Folder) for Statutory Documents should be opened first, if found in order, Cover (Folder) for Non-statutory Documents will be opened. If there is any deficiency in the Documents, the tender will summarily be rejected.

Decrypted (transformed into readable formats) documents of the non-statutory Cover will be downloaded, and handed over to the Tender Evaluation Committee (constituted for evaluation of tenders).

#### **5. Uploading of summary list of technically qualified tenderers:**

Pursuant to scrutiny and decision of the Tender Evaluation Committee (TEC), the summary list of eligible tenderers with the serial number of work(s) for which their Financial Proposals will be considered will be uploaded in the web portals.

While evaluation, the Committee may summon the tenderers and seek clarification / information or additional documents or original hard copy of any of the documents already submitted and if these cannot be produced within the stipulated time frame, their proposals will be liable for rejection.

#### **6. Final publication of summary list of technically qualified tenderers :**

Date of opening of financial bid will to be intimated in the final summary list.

#### **7. Opening and Evaluation of Financial Proposal :**

Financial proposals of the tenderers declared technically eligible by the Tender Evaluation Committee will be opened electronically from the web portal stated on the prescribed date.

The encrypted copies will be decrypted and the rates will be read out to the contractors remaining present at that time.

After evaluation of Financial Proposal, by the appropriate Authority of Divisional Forest Officer, Rupnarayan Division, may upload the final summary result containing inter-alia, name of contractors and the rates quoted by them against each work

provided Tender evaluation committee is satisfied that the rate obtained is fair and reasonable and there is no scope of further lowering down of rate.

**8. Procedures to be followed when one / two technically qualified tenderers participated in any tender:**

Financial bid of technically qualified single / two tenderers may not be opened immediately 2nd call may be invited.

**9. Acceptance of Tender (Technically eligible/qualified)**

Lowest valid rate should normally be accepted. However, the Tender Accepting Authority does not bind himself to do so and reserves the right to reject any or all the tenders, for valid reasons and also reserves the right to distribute the work amongst more than one tenderer at the accepted rate after formal consultation with L1 (accepted rate) bidder and taking consent of L1 bidder for smooth & quick completion of the work.

**10. Grounds for Suspension and Debarment**

The procedure as laid down below shall govern the suspension/debarment of Suppliers/Contractors/Consultants (Contractors for brevity) involved in procurement for offences or violations committed during competitive bidding and contract implementation, for the works.

(1) Submission of eligibility requirements containing false information or falsified documents.

(2) Submission of Bids that contain false information or falsified documents, or the concealment of such information in the Bids in order to influence the outcome of eligibility screening or any other stage of the bidding process.

(3) Unauthorized use of one's name/digital signature certificate for the purpose of bidding process.

(4) Any documented unsolicited attempt by a bidder (A Person/Contractor/Agency /Joint Venture/Consortium/Corporation participating in the procurement process and/or a person / Contractor / Agency / Joint Venture / Consortium / Corporation having an agreement/contract for any procurement with the department shall be referred as Bidder) unduly influencing the outcome of the bidding in his favour.

(5) Refusal or failure to post a self-declaration to the effect of any previous debarment imposed by any other department of State Government and/or Central Government.

(6) All other acts that tend to defeat the purpose of the competitive bidding such as lodging false complain about any Bidder, lodging false complain about any Officer duly authorized by the Department, restraining any interested bidder to participate in the bidding process, etc.

(7) Assignment and subcontracting of the contract or any part thereof without prior written approval of the procuring entity.

(8) Whenever adverse reports related to adverse performance, misbehaviour, direct or indirect involvement in threatening, making false complaints etc. damaging the reputation of the department or any other type complaint considered fit by the competent authority of the department, are received from more than one Officer or on more than one occasion from individual Officer.

(9) Refusal or failure to post the required performance security / earnest money within the prescribed time without justifiable cause.

(10) Failure in deployment of Technical Personnel, Engineers and/or Work Supervisor having requisite license / supervisor certificate of competency as specified in the contract.

(11) Refusal to accept an award after issuance of "Letter of Acceptance" or enter into contract with the Government without Justifiable cause.

(12) Failure of the Contractor, due solely to his fault or negligence, to mobilize and start work or performance within the specified period as mentioned in the "Letter of Acceptance", "Letter of Acceptance cum Work Order", "Work Order", "Notice to Proceed", "Award of Contract", etc.

(13) Failure by the Contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the Contractor to comply with any written lawful instruction of the Procuring Entity/Authority (the Officer authorized by the Divisional Forest Officer, Rupnarayan Division. for procurement) or its representative(s) pursuant to the implementation of the contract.

(14) For the procurement of Consultancy Service/Contracts, poor performance by the Consultant of his services arising from his fault or negligence. Any of the following acts by the Consultant shall be construed as poor performance.

(i) Non deployment of competent technical personnel, competent Engineers and/or work supervisors;

(ii) Non-deployment of committed equipment, facilities, support staff and manpower;

(iii) Defective design resulting in substantial corrective works in design and/or construction;

(iv) Failure to deliver critical outputs due to consultant's fault or negligence;

(v) Specifying materials which are inappropriate and substandard or way above acceptable standards leading to high procurement cost;

(vi) Allowing defective workmanship or works by the Contractor being supervised by the Consultant.

(15) For the procurement of goods, unsatisfactory progress in the delivery of the goods by the manufacturer, supplier, or distributor arising from his fault or negligence and/or unsatisfactory or inferior quality of goods, vis-à-vis as laid down in the contract.

(16) Wilful or deliberate abandonment or non-performance of the project or Contract by the Contractor resulting in substantial breach thereof without lawful and/or just cause.



**CATEGORY OF OFFENCE :-**

- (A) First degree of offence: 1 to 16 of the above Clause-41 to be considered as First degree of offence.  
(B) Second degree of offence: Any one of the offences as mentioned under 'A' above, committed by a particular Bidder/Contractor/Supplier on more than one occasion, be considered as Second degree of offence.

In addition to the penalty of suspension/debarment, the bid security / earnest money posted by the concerned Bidder or prospective Bidder shall also be forfeited.

**PENALTY FOR OFFENCE :-**

- (I) For committing First degree of offence: Disqualifying a Bidder from participating in any procurement process under Directorate of Forest, Govt of West Bengal up to 2 (two) years.  
(II) For committing Second degree of offence: Disqualifying a Bidder from participating in any procurement process under the Directorate of Forest, Govt of West Bengal up to 3 (three) years.

**11. Earnest Money Deposit (EMD):**

a) Earnest Money payment:

- i. Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment gateway.

b) Exemption of any kind for any of the eligible bidder towards cost of EMD will be according to

- i. 4245-F(Y) dated 28<sup>th</sup> May 2013 issued by Finance Department, Audit Branch, Government of West Bengal.  
ii. 6718-F(Y) dated 08/09/2015 issued by Finance Department, Audit Branch, Government of West Bengal.

c) **Refund of EMD:** The EMD of the unsuccessful Tenderer will be refunded as per notification issued by Finance Department, Government of West Bengal, Memo no. 3975-F(Y) dated 28/07/2016.

d) Intending Tenderers should download the Tender Documents from the website <http://wbtenders.gov.in> directly with the help of Digital Signature Certificate.

e) Both Technical Bid and Financial Bid should be submitted duly digitally signed by the Tenderer through the website <http://wbtenders.gov.in> as per the 'Date & Time Schedule' stated in this N.I.T. (Details of which has been narrated in 'Instruction to Bidders')

**12. Opening of Tender:**

- (a) The Technical Bid shall be publicly opened by the authority receiving tender or by his authorized representative, as per the Date & time Schedule mentioned in NIT.  
(b) Prospective Tenderers or their authorized representatives may be present during the opening process.  
(c) Financial Bids of only those tenderers who would qualify in the Technical Bid evaluation will be opened.  
(d) The intending Tenderers shall clearly understand that whatever may be the outcome of the present Invitation of Tender, no cost of Tendering shall be reimbursable by the Government. The Divisional Forest Officer, Rupnarayan Division reserves the right to reject any tender or all Tenders without assigning any reason whatsoever and is not liable for any cost that might have incurred by any Tenderer at any stage of Tendering.  
(e) The acceptance of the tender rests The Divisional Forest Officer, Rupnarayan Division who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all the tenders received without assigning any reason thereof.  
(f) The Contractor/Bidder should see the site of works and Tender Documents, Drawings etc. before submitting e-Tender and satisfy himself/herself regarding the condition and nature of works and ascertain difficulties that might be encountered in executing the work, carrying materials to the site of work, availability of drinking water and other human requirements & security etc. Work on river banks may be interrupted due to a number of unforeseen reason viz. sudden rises in water levels, inundation during flood, inaccessibility of working site for carriage of materials. Engineer-in Charge may order the contractor to suspend work that may be subjected to damage by climate conditions. No claim will be entertained on this account. There may be variation in alignment, height of embankment or depth of cutting, location of revetment, structures etc. due to change of topography, river condition and local requirements etc. between the preparation and execution of the scheme for which the tendered rate and contract will not stand invalid. The Contractor will not be entitled to any claim or extra rate on any of these accounts.

13. The selected Contractor must arrange to procure all materials required for the proper completion of the work (as per the Technical Specifications of the tender document). The Employer will not on any account be responsible for procuring the same. The selected contractor shall apply to Divisional Forest Officer, Rupnarayan Division for seeking permission for utilization of land at the close proximity of the site for arranging required (if any) plant & machineries, store of materials, labour shed, laboratory etc. at his own cost and responsibility. All such temporary shed etc. shall have to dismantled and all debris etc. cleared from site post completion of the work or as directed by Divisional Forest Officer, Rupnarayan Division. Once an order to the effect is issued the Divisional Forest Officer, Rupnarayan Division. in this regard, it shall be brought to effect by the contractor without contest.

14. The bidder whose tender will be accepted shall perform formal agreement with the Divisional Forest officer, Rupnarayan division, within 7 days from the date of intimation after purchase of formal agreement documents from the concerned division office. The duly signed agreement papers then are to be submitted to the office of the undersigned. If the contractor fails to perform these formalities his tender will be liable to be cancelled with forfeiture of earnest money.

**15. Validity of Bids:**

Generally, Bids will be valid for 120 days from the date of opening of the financial proposal. However, extension of bid validity may be suitably considered by the Tender Inviting Authority, if required, subject to obtaining a written confirmation of the contractor/bidder(s) to that effect. Withdrawal of e-Tender once the bid has been submitted online and after passing of end date for submission which has been accepted for further processing is not allowed. EMD will be forfeited by Divisional Forest Officer, Rupnarayan Division and the bidder/contractor penalized in terms of provisions in the notice of the tender (Sl. 10 of ITB).

**16. Verification of credentials/onsite projects:**

Before issuance of the work order, the Tender Accepting Authority may verify the credential and other original documents of the lowest Tenderer if found necessary. After verification, if it is found that such documents submitted by the lowest Tenderer is either manufactured or false in that case, work order will not be issued in favour of the Tenderer under any circumstances and legal action will be taken against him.

**17. Cancellation of Tender :**

The Divisional Forest Officer, Rupnarayan Division reserves the right to cancel this N.I.T. due to unavoidable circumstances and no claim in this respect will be entertained.

**18. Security Deposit:**

While making any payment to the contractor whose tender has been accepted for work done under the contract, the authority making payment shall deduct such sum which together with the Earnest Money already deposited and converted into security deposit, shall amount to 3% of the value of works executed at the material point of time and paid during the progressive running accounts bills, so that total deduction together with Earnest Money constitute 3% of the tendered value of work actually done (Vide memo No. 796-F(Y) Date: 25th February, 2022, Finance Department, Audit Branch, Government of West Bengal).

The Head of account for depositing the EMD with Operator's Code is **8443-00-109-003-07** (EMD) (Operator's Code-**109**) and that of Security deposit with Operator's Code is **8443-00-109-003-07** (Security Deposit) (Operator's Code-**109**). The adjustment through refund shall be made through the head of Account **00-8443-00-109-003-0-23-00** after maintaining due formalities in this regard.

Compensation of all other sums of money payable by the contractor to the Government under the terms of the contract may be deducted from the security deposit.

However, even though the earnest money deposited exceeds the prescribed percentage, due to reduction of tendered amount due to any reason whatsoever, such additional earnest money shall be deemed to have been converted into security and further deductions from progressive bills shall be made, taking into consideration the enhanced component of earnest money so converted into security.

**Additional Performance Security @ 10%** of the tendered amount in the form of Bank Guarantee from a Scheduled Bank, valid up to the date of completion of work, shall be obtained from the successful bidder, if the accepted bid value is 80% or less than the estimated amount put to tender.

If the bidder fails to submit Additional Performance Security within 7 (seven) working days from the date of LoI or the time period as approved by the Tender inviting Authority, his Earnest Money will be forfeited.

If the bidder fails to complete the works successfully, the Additional Performance Security along with Security Deposit lying with the Divisional Forest Officer, Rupnarayan Division shall be forfeited at any time during the pendency of contract period as per relevant Clauses of the Contract.

Necessary provisions regarding deductions of Security Deposit from the progressive bills of the Contractor as per relevant clauses of the contract will in no way be affected/ altered by this Additional Performance Security.

**19. Technical Specification and Quality of Works (To be read in conjunction with "Specification of Works"):**

Unless otherwise stipulated, all the works are to be done as per the Technical Specifications of the tender document. Contractor

may refer to the relevant PWD (W.B.) Schedule of Rates for the working area including up to date addenda and corrigenda, if any, published by Public Works Department, Government of West Bengal. The project should be executed as per current procedure and practice of Directorate of Forests, Govt. of West Bengal.

**20. Deduction of Taxes Etc:**

Deduction of Income Tax & other taxes from the Contractors Bill will be made as per existing govt. rules.

**21. Defect Liability Period:**

If the contractor or his workmen or servants or authorized representatives shall break, deface, injure, or destroy any part of building, in which they may be working, or any building, road, road-curbs, fence, enclosure, water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous to the premises, on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatsoever or any imperfection become apparent in it at any time whether during its execution or within a period of three months or six month or one year or three years or five years, as the case may be (depending upon the nature of the work as described in the explanation appended hereto) hereinafter referred to as the Defect Liability Period, from the actual date of completion of work as per completion certificate issued by Divisional Forest Officer, Rupnarayan Division, the contractor shall make the same good at his own expense, or in default, Divisional Forest Officer, Rupnarayan Division, may cause the same to be made good by other workmen and deduct the expense (of which the certificate of Divisional Forest Officer, Rupnarayan Division shall be final and binding on all concerned) from any sums, whether under this contract or otherwise, that may be then, or at any time thereafter become due to the contractor from the Directorate for Forests, West Bengal or from his security deposit, either full, or of a sufficient portion thereof and if the cost, in the opinion of Divisional Forest Officer, Rupnarayan Division (which opinion shall be final and conclusive against the contractor), of making such damage or imperfection good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the Directorate for Forests, West Bengal to recover the excess cost from the contractor in accordance with the procedure prescribed by any law for the time being in force.

**22. Removal of Discrepancy:**

If any discrepancy arises between two similar clauses on different notification, the clause as stated in later notification will supersede former one in following sequence:-

- a. Form of Agreement
- b. N.I.T.
- c. Technical Specifications
- d. General Terms and Conditions
- e. Relevant PWD (W.B.) Schedule of Rates
- f. Instructions to Bidders

**23. MOBILISATION ADVANCE/ COST OVER RUN:**

No Mobilisation Advance and Secured Advance will be allowed.

24. Canvassing in connection with the tender is strictly prohibited.

25. Site of work and necessary drawings may be handed over to the successful Tenderer along with the work order or in a phase wise manner as deemed fit by The Divisional Forest Officer, Rupnarayan Division. No claim in this regard will be entertained.

26. The successful Tenderer will have to start the work as per the work order to commence the work.

27. The contractor shall not be entitled for any compensation for any loss suffered by him due to delay arising out for modification of the work, due to non-delivery of the possession of site and / or modification of work etc.

28. Prevailing safety norms has to be followed by the successful Tenderer during execution of the work so that LTI (Loss of time due to injury) is zero.

29. Guiding schedule of works should be followed as per existing norms, patterns, lying in the working division. The whole work should be started after informing the concerned Forest Range Officer and the work will be monitored by the undersigned, his authorized representative and 3<sup>rd</sup> party monitoring.

30. No tenderer shall be deemed to be fit for consideration unless the tender documents are fully and completely filled in. All information that may be asked from the Tenderer must be unequivocally furnished. The eligibility of a Tenderer will be ascertained on the basis of the documents submitted by a Tenderer in support of eligibility criteria. If any document submitted by a Tenderer is found to be incomplete/incorrect/ manufactured / fabricated or false, his Tender will be out rightly rejected at any stage and legal action will be taken against him.

31. A Tenderer is to quote in figures as well as in words, his rates in the following forms as applicable in his cases against the estimated value put to tender of the tender form (BOQ).

32. In the event of a tender being submitted by a firm, it must be signed by a member or members of the firm having legal authority to do so and if called for, legal documentations in support thereon must be produced for inspection and in the case of a firm carried out by one member or a joint family it must disclose that the firm is duly registered under the Indian Partnership Act.

33. The Tenderer must sign at the bottom of each page of the tender documents as a proof of acceptance of terms and conditions of the Tender. Overwriting shall not be allowed. All corrections, alternations etc. must be duly signed.

34. It must be clearly understood that the quantities of the various items indicated in the schedule or probable items are approximate only and may be appreciably increased or decreased during actual execution. The contractor shall remain effected by alteration.

35. The successful tenderer shall have to comply with the provision of the Minimum Wages Act, 1948 (d) and the subsequent amendments thereof.

36. Work order will be issued subject to availability of fund, administrative approval and financial sanction from the competent authority.

37. The completion of works shall be checked by engaging a third party having requisite technical qualification to ensure the quality and quantity of the work. The final payment will be subject to such evaluation & submission of report thereof.

**38. In case of any clarification, the norms/conditions laid down in Audit Branch, Finance Department, Government of West Bengal G.O No. 5696-F(Y) dated 1<sup>st</sup> October, 2019 shall prevail over.**

RATES ARE FIRM FOR THE PERIOD OF THE PROJECT. IN CASE ANY ABNORMAL DEVIATION IS OBSERVED DURING THE COURSE THE TENDER ACCEPTING AUTHORITY MAY REFER TO THE APPROPRIATE HIGHER AUTHORITY OF DIRECTORATE OF FORESTS, WEST BENGAL IN DECIDING ON THE RATE REVISIONS (IF NEEDED).


Sd/-Manish Kumar Yadav  
Divisional Forest Officer,  
Rupnarayan Division.

Memo No. 2208 /2- e\_Tender

Dated, Midnapore the 21/11/2023

Copy for information and wide Circulation to: -

1. The Sabhadhipati, Paschim Medinipur Zilla Parishad.
2. The Principal Chief Conservator of Forests & HoFF, West Bengal
3. The Chief Conservator of Forests, Western Circle, West Bengal-along with a request to return one copy duly approved.
4. The Chief Conservator of Forests, MIS & E-Governance –with a request to publish Tender/E-Tender Notice on website.
5. The Conservator of Forests, Administration, Publicity & Marketing, West Bengal
6. The District Magistrate, Paschim Medinipur.
7. The Superintendent of Police, Paschim Medinipur.
8. The District Information & Culture Officer, Paschim Medinipur.
9. The Sub-Divisional Officer, Midnapore Sadar, Paschim Medinipur.
10. The Treasury Officer, Midnapore Treasury.
11. All Divisional Forest Officer's, Western Circle, West Bengal.
12. The Assist. Divisional Forest Officer, Rupnarayan Division.
13. The Head Clerk, Rupnarayan Division.
14. The Budget, Accounts & Revenue Section.
15. All Range Officers (Territorial), Rupnarayan Division.
16. The Attached Forest Ranger, Rupnarayan Division.
17. Notice Board, Rupnarayan Division.
18. Shri / FPC\_\_\_\_\_.

  
Divisional Forest Officer,  
Rupnarayan Division

Section – B  
FORM-I  
APPLICATION

(To be submitted in the original letterhead of The Firm/Company)

To,  
Divisional Forest Officer, Rupnarayan Division.

Subject: Name of the Work with Tender reference no. \_\_\_\_\_.

Reference: (N.I.TNo.) \_\_\_\_\_

Dear Sir / Madam,

Having examined the Statutory, Non-statutory and NIT documents; I/We hereby submit all the necessary information and relevant documents for evaluation.

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

I/We are interested in bidding for the work mentioned above.

I/We understand that

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

The application is made by me/us on behalf of \_\_\_\_\_ in the capacity of \_\_\_\_\_ duly authorized to submit the tender.

Enclosure:

- (1) Technical Proposal (Envelop-1/Folder)
- (2) Financial Proposal (Envelop-2/Folder)

Date: \_\_\_\_\_

Authorized signatory of the firm/company: \_\_\_\_\_

Title & Capacity of the officer: \_\_\_\_\_

Name of the Firm with Seal: \_\_\_\_\_

Section-B  
FORM II  
(TO BE FILLED UP BY TENDERER)  
(To be submitted in the original letterhead of The Firm/Company)

To,  
Divisional Forest Officer, Rupnarayan Division.  
Dear Sir/ Madam,

Ref:-  
Tender Reference No. ....

1. I/We refer to the tender notice issued by you for the work of ..... in \_\_\_\_\_ division vide tender reference no. \_\_\_\_\_ mentioned above.
2. I/ We have satisfied myself/ ourselves as to the site conditions, examined the drawings and all aspects of tender conditions, subject above, I/ We hereby agree, should this tender be accepted in whole or in part, to:
  - (a) abide by and fulfil all the terms and provisions of the said conditions annexed hereto;
  - (b) complete the works within .....days.
3. I/ We have deposited the earnest money of Rs. \_\_\_\_\_ only which, I/ We note that deposited EMD, will not bear any interest and is liable for forfeiture-
  - (i) If our offer is withdrawn within the validity period of acceptance.
  - (ii) If the contract is not executed within 7 days from the date of receipt of the letter of acceptance.  
Or
  - (iii) If the work is not commenced within 7 days after issue of work order/ handing over of the site whichever is later.
4. I/ We understand that you are not bound to accept the lowest or any tender you receive.

Yours faithfully,

Signature.....  
Designation : .....  
Address : .....

Name of Proprietor/Partners/Directors of the Firm/Company:

- 1) \_\_\_\_\_.
- 2) \_\_\_\_\_.

Section – B  
FORM – III  
STRUCTURE AND ORGANISATION  
(To be submitted in the original letterhead of The Firm/Company)

A.1. Name of the applicant (Tenderer):

A.2. Office Address:

Telephone No.:

Fax No.:

e-mail :

A.3. Name and address of Bankers:

A.4. Attach an organization chart showing the structure of the company with names of key personnel and technical staff with Bio-data

Date: \_\_\_\_\_

Authorized signatory of the Firm/Company: \_\_\_\_\_

Title & Capacity of the officer: \_\_\_\_\_

Name of the Firm with Seal: \_\_\_\_\_

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

**FORM IV  
EXPERIENCE PROFILE**

List of Projects completed that are similar in nature to the Works  
(To be submitted in the original letterhead of The Firm/Company)

Name of the Employer	Name, Location and Nature of Work	Name of Authorised Supervisor with designation	Contract price in Indian Rupees	Percentage of participation of company	Original date of starting work	Original date of completion of work	Actual date of starting of work	Actual date of completion of work	Reasons for delay in completion

- Note: a) Certificate from the employer to be attached  
b) Non-disclosure of any information in the schedule will result in disqualification of the firm.

Date.....

Authorized signatory of the Firm/Company

\_\_\_\_\_

Title and capacity of the Officer

\_\_\_\_\_

Name of the firm with seal

\_\_\_\_\_



Section-B

AFFIDAVIT – Y

(To be furnished in Non-judicial stamp paper of appropriate value duly notarized)

- (I) I, the undersigned do certify that all the statements made in the attached documents are true and correct. In case of any information submitted, proved to be false or concealed, the application may be rejected and no objection/claim will be raised by the undersigned.
- (II) The undersigned also hereby certifies that neither our Firm/ Company \_\_\_\_\_ nor any of constituent partners had been debarred to participate in tender by State/ Central Government, State /Central Government undertaking, Statutory/ Autonomous bodies constituted under the Central/ State statute in favour of whom credentials are preferred by the undersigned towards eligibility criteria claim; during the last 5 (five) years prior to the date of publication of this N.I.T.
- (III) The undersigned would authorize and request any Bank, person, Firm, or Corporation to furnish pertinent information as deemed necessary and/or as requested by The Divisional Forest Officer, Rupnarayan Division, herein referred to as the Tender Inviting & Accepting Authority, to verify this statement.
- (IV) The undersigned understands that further qualifying information may be requested and agrees to furnish any such information at the request of the Tender Inviting & Accepting Authority.
- (V) Certified that I have applied in the tender in the capacity of individual/as partner of a firm & I have not applied severally for the same job.

Date: \_\_\_\_\_

Authorized signatory of the Firm/Company: \_\_\_\_\_

Title & Capacity of the officer: \_\_\_\_\_

Name of the Firm with Seal: \_\_\_\_\_

## GENERAL TERMS & CONDITIONS OF CONTRACT

### 1. Drawing / Map:

The work is to be carried out in accordance with drawings / maps (if any) related to these contract and specification, the priced schedule of probable items with approximate quantities and directions or instructions which may be issued by the Employer or his Representative from time to time during the execution of the contract.

### 2. Interpretations:

In constructing these conditions, the specifications, the schedule of quantities, tender and Agreement, the following words shall have the meaning herein assigned to them except where the subject of context otherwise requires:

- I) The term EMPLOYER/AUTHORITY shall mean Divisional Forest Officer, Rupnarayan Division, and include its successor and assigns or the Officers authorized to deal with any matters which those presents are concerned on its behalf.
- II) The term REPRESENTATIVE shall mean Authorized Official of The Divisional Forest Officer, Rupnarayan Division.
- III) CONTRACTOR shall mean the firm or company or person whose tender has been accepted by the employer and includes his (their) heirs, legal representative assigns and successors.
- IV) SITE shall mean the site of the contract work including any erections thereof and any other land adjoining thereto (inclusively as aforesaid allotted by the Employer for the contractor's use).
- V) This CONTRACT shall mean Articles of Agreement, these conditions, the schedule of quantities, the general instructions to the Contractor, the specifications, the drawings / maps and correspondences by which the contract is added, amended, valued of modified in any way by mutual consent.
- (VI) ACT OF INSOLVENCY shall mean any act of insolvency as desired by the Presidency Towns Insolvency Act or the Provincial Insolvency Act or any amending statutes.
- (VII) THE WORKS shall mean the work or works to be executed or done under this contract.
- (VIII) The DRAWINGS / MAPS shall mean the drawing/map or drawings/maps mentioned in NIT and any modifications of them approved by the Employer or any further Working drawings/maps or sketches by the Employer or any further working drawings/maps or sketches which may be furnished or approved in writing by the Employer.
- (IX) The SPECIFICATION shall include the plantation specification and general specifications forming part of this contract.
- (X) The SCHEDULE OF QUANTITIES, BILL OF QUANTITIES shall mean the Schedule or Quantities as specified and forming part of contract.
- (XI) The PRICED SCHEDULE OR QUANTITIES shall mean the schedule duly priced.
- (XII) NOTICE IN WRITING or WRITTEN NOTICE shall mean a notice in writing typed or printed characters sent (unless delivered personally) or otherwise proved to have been received by Registered Post to the last known private or business address as registered office of the addressee and shall be deemed to have been received when in the ordinary course of post it would have been delivered. If the employer feels that the contractor (who has signed the agreement) should himself come & personally meet to the employer for necessary discussion in connection with the work; he must contact personally. In case the contractor (not his authorized person) does not meet personally and intentionally avoids or do not reply the letter, the matter will fall under the breach of the contract. The work progress should be in the proportionate of the time frame set forth for the completion of the works.
- (XIII) The term APPROVED, DIRECTED or SELECTED mean the approval direction or selection of the Employer and where ever the words ALLOW, INCLUDE, and PROVIDE occurs the cost of the items is as the risk of the contractor. COMPLETION shall mean that the plantation in the opinion of the Tender Inviting Authority; completed in all respect.
- (XIV) WORDS imputing persons include Firms and Corporation, words imputing the singular only also the plural and vice/versa where the context so requires.

### 3. Scope of works:

Scope of work/supply includes furnishing all materials, labour, tools, machinery and equipment and management necessary for and incidental to the completion of the work. Mechanisation as approved by the Employer is preferred. All work during its progress and upon completion shall conform to lines as shown on the drawing/map furnished by the employer. Should any details essential for efficient completion of the work be omitted from the drawings/maps and specifications it shall be the responsibility of the Contractor to inform the Employer and to furnish and install such details with their concurrence, so that upon completion of the proposed work the same will be acceptable and ready for use. The Tenderers are to note that the scope of work as mentioned may be reduced to any extent which is absolutely at the discretion of the Employer. This reduction of the extent of work should not be a criterion for extra claim in respect of materials stored, establishment and cost incurred or any

other losses occurring out of these causes. The Contractor shall carry out and complete the works in every respect in accordance with this contract and in accordance with the directions and to the satisfaction of Employer who shall be the final authority. The Employer may in their absolute discretion issue further area drawings/maps and /or written instructions, details, direction and explanations which are hereafter collectively referred to as the Employer's instructions in regard to:

- a) The variation or modification of the design, quality or quantity of works or the addition or omission or substitution of any work.
- b) Any discrepancy in the drawings/maps or between the schedule of Quantities and /or Drawings/Maps and/or Specifications.
- c) The removal from the site of any materials brought thereon by the Contractor and the substitution of any other materials thereof.
- d) The demolition, removal and/or re-execution of any work executed by the Contractor.
- e) The dismissal from the work of any person employed thereupon.
- f) The opening up for inspection of any work covered up.
- g) The rectification and making goods of any defects under Clause hereinafter and those arising during the maintenance period (retention period).

The Contractor shall forthwith comply with and duly execute any work comprised in such Employer's instructions provided always that verbal instructions, directions and explanations given to the Contractor or his representative upon the works by the Employer shall, if involving a variation, be confirmed in writing by the contractor within seven days. No work, for which rates are not specifically mentioned in the priced schedule of quantities, shall be taken up without written permission of the Employer. Rates of items not mentioned in the Priced Schedule of Quantities shall be fixed by the Employer, as provided in Clause VARIATION. If complete with the Employer's instructions as aforesaid involves work and/or loss beyond that contemplated by the Contract then, unless the same were issued owing to some breach of this contract by The Contractor, the Employer shall pay to the Contractor the price of the said work an extra to be valued as hereinafter provided and /or loss.

#### 4. Variations:

The Contractor may when authorized and shall when directed, in writing by the Employer or one or more representative of Employer whom the Employer may for that purpose appoint, shall be bound to add or omit from or vary the works shown upon the Drawings/Maps or described in specification or included in the Schedule of Quantities but the Contractor shall make no addition, omission or variation without such authorization or direction. A verbal authority or direction by the Employer, if confirmed by the Contractor in writing within seven days, be deemed to have been given in writing.

No claim for an extra shall be allowed unless it shall have been executed by the Contractor on specific direction on the Authority of Employer as herein mentioned any variation i.e. additions, omissions or substitutions shall vitiate the Contract. The employer may order to plant one species instead of another species (mentioned in specification), wherever necessary, the contractor will be bound to do such work(s) on same schedule rates. If the employer feels that the whole or part of works of any item of estimate is to be done departmentally, or nature of work is changed such conditions shall be acceptable for the contractor. The rates of items not included in the Schedule or Quantities shall be settled by the Employer in accordance with the following rules:

(a) For the rates for the additional, altered or substituted work for items mentioned in the tender, the tender at quoted rates will be applicable.

(b) For the rates for the additional, altered or substituted work for items not mentioned in the tender, the Contractor shall, within 7 days of the date of receipt of the order to carry out the work, inform the Employer of the rates which it is his intention to charge for such class of work, supported by required documents, vouchers etc. and analysis of rates claimed and the Employer shall determine the rates on the basis of the prevalent market rates and certify for the payment accordingly. The analysis shall be prepared on the basis of actual cost of materials and labour plus 10 (ten) per-cent to cover overhead supervision and profit etc. However the Employer, by notice in writing, will be at liberty to cancel their order to carry out such work and arrange to carry out as they may consider advisable. But under no circumstances, the Contractor shall suspend the work on the plea of non-settlement of the rates of item falling under this clause.

(c) Where extra work cannot be properly measured or valued, the Contractor shall be allowed day work price as the net rates stated in the Tender or the schedule of quantities, if not so stated, then in accordance with local day work rates and wages for the district provided that in either case vouchers specifying the daily time (and if required by the Employer the workman's names) and materials used be delivered for verification to the Employer at or before the end of the work following that in which the work has been executed.

(d) As regards determination of the rates, the decision of the Employer shall be accepted as final. No supplementary items shall be taken up for execution except with prior written approval of the employer. The Employer is not bound to recognize the

cost of materials furnished in vouchers and in case the market value of such materials, found to be lower than the depicted in the vouchers the Employer at their discretion will fix the price of such materials based upon market value. The contractor may be asked to produce original bills and /or Cash Memos in respect of purchases of such materials from market. Bills and Cash Memos in this regard shall not be entertained unless purchases are affected from registered regular merchants engaged in the trade of such items.

**5. Deviations:**

No deviation from the contract will on any account be allowed unless an order in writing is obtained from the Employer.

**6. Site Conditions:**

The contractor shall inspect the work site where the work under this contract are to be carried out, and note carefully the area restrictions and obtain for themselves at their own responsibility all the information which may be necessary for the purpose of the successful execution of the contracted work. They must also make themselves conversant with all the local conditions, means of access to the site of work, transport facilities and character of the work, the supply of materials, conditions affecting labour and other matter that may affect their tender. Employer does not undertake any responsibility, to obtain any concessions, permission from the owner of the adjoining plot or from other party in respect of any allowance, access, encroachments etc. whether for the facility of the works or otherwise. No claim therefore will be entertained should Contractors have failed to comply with this condition. All equipment required to be maintained are to be kept free from damages due to operation connection with the work. The site shall be made available to the Contractors in the present condition. Site organization within this site boundary shall be the responsibility of the Contractors.

**7. Persons Tendering shall visit SITE Etc.**

Persons tendering shall visit the site and make themselves thoroughly acquainted with the Nature and requirements of the case, facilities of transport, conditions affecting labour and materials and removal of rubbish, cost of carriage freight and other charges and shall allow for in their tenders for any special difficulty in carrying out the work.

**8. Contractor to provide everything necessary:**

The Contractor shall provide everything necessary (all inclusive and fixed rates for the proper execution of the work according to the intent and meaning of the drawings/maps, schedule of probable items with approximate quantities, specifications taken together whether the same may or may not be particularly shown or described there in provided that the same can reasonably be inferred therefore and if the Contractor finds any discrepancy therein, he will immediately refer the case in writing to the Employer whose decision shall be final and binding on the parties. Figures dimensions shall be followed in; preference to scale. The Employer shall on no account be responsible for the expense incurred by the Contractor for hired ground or water obtained from elsewhere. The quantities given in the schedule of quantities are only indicative being based on preliminary design and are liable to modification in the final design. The schedule of items and quantities include so far as can at present be determined, every materials which the Contractor is likely to be called upon to perform or supply. The rate quoted against individual item will be inclusive of everything necessary to complete the said items of the work within the contemplation of the contract and beyond the unit prices no extra payment will be allowed for individual or contingent work, labour and /or materials inclusive of all taxes and duties whatsoever except for specific items, if any, stipulated in the tender documents. The Contractor shall supply, fix and maintain at his own cost during the execution of any work necessary for alignment watching required not only for the proper execution and protection of the said work, but also for the protection of adjacent trees or plants and the safety of any adjacent roads, houses etc. The Contractor, shall at all times give access to staffs employed by the Employer or any man deployed on the plantation site/adjacent forest areas and to allow such deployed staffs with proper identity for watch & patrolling duty or any other entrusted job.

**9. Protective Measures:**

The Contractor from the time of being placed in possession of the site must include for watching and protecting the work, the site and surrounding property during their working hour. The Contractor shall indemnify the Employer against any possible damage to the adjoining forest areas, trees, roads, or wild animals during execution of the work.

**10. Access:**

The Employers/His Authorised Representatives shall at all times have free access to the work site/and or other places where materials are being prepared for the contract and also to any place the materials are lying or from who they are being obtained and the Contractor shall give every facility to the all of them and their representatives necessary for inspection and examination and test of the materials and workmanship. Except the representatives of Public Authorities no person shall be allowed on the

work at any time without the written permission of the Employer. If any work is to be done at a place other than the site of the work, the Contractor shall obtain the written permission of the Employer for doing so.

**11. Quality of Materials & Workmanship:**

All the works specified and provided for in the specification or which may be required to be done in order to perform and complete and part thereof shall be executed in the best and most workmanlike manner with materials to the best and approved quality of the respective kinds in accordance with the particulars contained in and implied by the specification and as represented by the drawings/maps or according to such other additional particulars and instructions as may from time to time be given by the Employer during the execution of the work and to their entire satisfaction.

**12. Removal of Improper Work:**

The Employer shall during the progress of the work have power to order in writing from time to time for the removal of Improper work within such reasonable time as may be specified in the order of any materials or system of planting which in the opinion of the Employer are not in accordance with the specifications or their instructions, and the Contractor shall forthwith carry out such an order. The Employer shall have the power to employ and pay other persons to carry out the same and all expenses consequent thereon or incidental there to as certified by the Employer shall be borne by the Contractor or may be deducted by the Employer from any money due or that may become due to the Contractor. No certificates which may be given by the Employer in these respects shall relieve the Contractor from his liability in respect of unsound work of unskilled workers.

**13. Contractor's Employees:**

The Contractor shall keep for the full time qualified engineers and skilled supervisors defined in the ITBA and approved by the Employer, assisted with adequate staff constantly on the work, who will be responsible for the carrying out of the work to the true meaning of the specifications and schedule and quantities and instructions and directions given to him by the Employer. Any directions or instructions given to him in writing shall be held to have been to the Contractor officially.

The Employer/Authorized representative will have at all times access to the work site for inspection and examination of the work and materials proposed to be used. Authorised representatives of the Contractor shall have power of Attorney for receiving materials, cheque, signing measurement book etc. Any Supervisor, foreman, labour or other persons employed on the work by the contractor who fails or refuses to perform the work in the manner specified herein shall be discharged immediately and such person shall not again be employed on the work. When required in writing by the Employer the Contractor shall discharge any person(s) who is in their opinion incompetent, disorderly or otherwise unsatisfactory. Such Discharge shall not be the basis of any claim for compensation or damages against the Employer or any of its officers or employees.

The Contractor shall employ local labourers of adjoining forest areas and members of adjoining FPC (Forest Protection Committee) and EDC if they want to carry out planting works in that particular planting site. No labour shall be employed on the work who is below the age of eighteen years and who is not an Indian National. If female labour is engaged the Contractor shall make necessary provision for safeguarding small children and keeping them clear of the site of operations. The Contractor shall at his own expenses provide or arrange for provision of foot-wear for any labour doing the any specific work. Any labourer supplied by the Contractor to be engaged on the work on daily work basis either wholly or partly under the direct order or control of the Employer or their representative shall be deemed to be a person employed by the Contractor. The Contractor shall comply with the provisions of all labour legislation including the requirements of payment of wages Act, 1936, minimum wages Act, 1948 and Workman's Compensation Act the rules framed there under and modifications thereof in respect of men employed by him in carrying out the contract. It shall be the responsibility of the Contractor to see that any sub-contract under him, similarly complies with the above requirements. (The Employer shall not however recognize any sub-contract or sub-contractor).

The Contractors shall keep the Employer saved, harmless and indemnified against claims if any of the workmen and all costs and expenses as may be incurred by the Employer in connection with any claim that may be made by any workman. The Contractor shall arrange to provide first aid treatment to the labourers engaged on the works. He shall within 24 hours of the occurrence of any accident at or about the site or in connection with execution of the works, report such accident to the Employer and also to the competent authority where such report is required by law.

**14. Working Hours:**

Each shift shall be at least of eight hours duration and that the work must be completed within the time specified in the tender document. Work shall also be done on Sundays and Holidays with prior permission of the respective authority.

**15. Temporary Water Supply:**

The Contractor shall make suitable arrangement for supply of water for the work. The Contractor shall have to make their own arrangement for carrying water at the work site.

16. Clearing Away:

All rubbish and superfluous materials either from Contractor's own work or from works of other agencies shall be removed from the plantation site on completion to the satisfaction of the Employer.

17. Contractor Not To Sublet:

The Contractor shall not without the written consent and approval of the Employer assign the agreement or sublet any portion of the work.

18. Agreement:

The successful Tenderer shall have to enter into an agreement with the Employer. Stamp duty and all other costs connected with execution of such agreement shall be borne by the successful Tenderers.

19. Defect Liability Period:

If the contractor or his workmen or servants or authorized representatives shall break, deface, injure, or destroy any part of building, in which they may be working, or any building, road, road-curbs, fence, enclosure, water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous to the premises, on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatsoever or any imperfection become apparent in it at any time whether during its execution or within a period of three months or one year or three years or five years, as the case may be (depending upon the nature of the work as described in the explanation appended hereto) hereinafter referred to as the Defect Liability Period, from the actual date of completion of work as per completion certificate issued by The Divisional Forest Officer, Rupnarayan Division. The contractor shall make the same good at his own expense, or in default, Divisional Forest Officer, Rupnarayan Division. may cause the same to be made good by other workmen and deduct the expense (of which the certificate of Divisional Forest Officer, Rupnarayan Division shall be final and binding on all concerned) from any sums, whether under this contract or otherwise, that may be then, or at any time thereafter become due to the contractor from the West Bengal Forest Directorate. or from his security deposit, either full, or of a sufficient portion thereof and if the cost, in the opinion of Divisional Forest Officer, Rupnarayan Division (which opinion shall be final and conclusive against the contractor), of making such damage or imperfection good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the West Bengal Forest Directorate to recover the excess cost from the contractor in accordance with the procedure prescribed by any law for the time being in force.

19. Materials:

The selected Contractor must arrange to procure all materials required for the proper completion of the work. The Employer will not on any account be responsible for procuring the same. The non-availability of the above materials shall not in any way be considered to be an excuse for the extension of time.

21. Method of Measurement:

Unless otherwise mentioned in the schedule of quantities the measurement will be net quantities of the work produced in accordance with the up-to-date rules laid down by the Indian Standard Institution. In the event of any disputes with regard to the measurement of work executed the decision of the Employer shall be final and binding.

22. Earnest Money & Security Deposit:

a) Earnest Money payment:

- i. Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment gateway.
- ii. RTGS/NEFT in case of offline payment through bank accounts in any bank.

b) Exemption of any kind for any of the eligible bidder towards cost of EMD will be according to

- i. 4245-F(Y) dated 28<sup>th</sup> May 2013 issued by Finance Department, Audit Branch, Government of West Bengal.
- ii. 6718-F(Y) dated 08/09/2015 issued by Finance Department, Audit Branch, Government of West Bengal.

c) Refund of EMD: The EMD of the unsuccessful Tenderer will be refunded as per notification issued by Finance Department, Government of West Bengal, Memo no. 3975-F(Y) dated 28/07/2016.

Security Deposit While making any payment to the contractor whose tender has been accepted for work done under the contract, the authority making payment shall deduct such sum which together with the Earnest Money already deposited and converted into security deposit, shall amount to 3% of the value of works executed at the material point of time and paid during the progressive running accounts bills, so that total deduction together with Earnest Money constitute 3% of the tendered value

of work actually done (Vide memo No. 796-F(Y) Date: 25th February, 2021, Finance Department, Audit Branch, Government of West Bengal).

In case of excess/and supplementary work over the tendered amount, additional security @ of 10% of such additional amount is to be deposited for all such excess/ and supplementary works beyond the tendered amount before payment of final bill. Compensation of all other sums of money payable by the contractor to the Government under the terms of the contract may be deducted from the security deposit.

However, even though the earnest money deposited exceeds the prescribed percentage, due to reduction of tendered amount due to any reason whatsoever, such additional earnest money shall be deemed to have been converted into security and further deductions from progressive bills shall be made, taking into consideration the enhanced component of earnest money so converted into security.

**Additional Performance Security @ 10%** of the tendered amount in the form of Bank Guarantee from a Scheduled Bank, valid up to the date of completion of work, shall be obtained from the successful bidder, if the accepted bid value is 80% or less than the estimated amount put to tender.

If the bidder fails to submit Additional Performance Security within 7 (seven) working days from the date of LoA or the time period as approved by the Tender inviting Authority, his Earnest Money will be forfeited.

If the bidder fails to complete the works successfully, the Additional Performance Security along with Security Deposit lying with the. shall be forfeited at any time during the pendency of contract period as per relevant Clauses of the Contract. Necessary provisions regarding deductions of Security Deposit from the progressive bills of the Contractor as per relevant clauses of the contract will in no way be affected/ altered by this Additional Performance Security.

#### 23. Final Payment:

Payment may be made by the undersigned in part of the running bill or at the end of the work as single bill depending upon the quantity and quality of the completion of works. Final Payment will be subject to availability of fund, administrative approval and financial sanction from the competent authority.

#### 25. Substitution:

Should the Contractor desire to substitute any materials and workmanship, he must obtain the approval of the Employer, in writing for any such substitution well in advance. Materials designated in this specification indefinitely by such terms and 'Equal' or other Approved etc. shall be considered as coming under the provisions of this clause as substitutions and no such materials shall be used until specific approved by the Employer has been obtained in writing.

#### 26. Commencement and Completion of Work:

The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with all due diligence. Time being deemed to be the essence of the contract on the part of the contractor, the contractor shall be bound in all cases, to achieve the 'Milestones' as defined and specified in the NIT into various 'Identifiable and quantifiable work related stages' pertaining to the work. In the event of the contractor failing to comply with any of the conditions related to achieving the 'Milestones' within the specified time period prescribed for such 'Milestone', he/she shall be liable to pay compensation.

If the contractor fails to commence and/or maintain required progress viz. Milestones defined in the Notice Inviting Tender over the total time allotted for its full completion and in terms of NIT or fails to complete the work and clear the site on or before the end of contract period or extended date of completion, he/she shall, without prejudice to any other right or remedy available under the law on account of such breach, pay as agreed compensation to the implementing Department. This will also apply to items or group of items for which a separate period of completion has been specified.

Provided always, that the total amount of compensation for delay, to be paid under this clause shall not exceed 10% of the tendered value of work or the tendered value of the item or group of items of the work, for which a separate period of completion is originally given. The amount of compensation may be adjusted or set-off against any sum payable to the contractor under this contract, if the contractor catches up with the progress of work subsequently, part or full of the desired progress as per the contract in accordance with the decision of the Tender Accepting Authority, under powers delegated by Government to be communicated by the Employer, the withheld amount shall be released. However, no interest, whatsoever, shall be payable on such withheld amount.

#### 27. Escalation of Prices:

The rates quoted by the Contractor shall be firm throughout the tenure of the contract (including extension of time, if any granted) and will not be subject to any fluctuation due to increase in cost of materials, labour, sales tax, Octroi etc.

28. Damage to Persons and Property/Insurance in respect of:

The Contractor shall be responsible for all injury to persons/labourers, animals or things, and for all damage to the plantation/or adjacent forest property which may arise from the operations or neglect of himself or of any sub-contractor or of any of his sub-contractor's employees, whether such injury or damage arises from carelessness, accident or any other cause whatever in any way connected with the carrying out of his contract. This clause shall be held to include, internally, any damage to plantation, whether immediately adjacent or otherwise and any damage to roads, footpaths, bridges or ways forming the subject of this contract by frost, rain, wind or other inclemency of the weather.

The contractor shall indemnify the employer and held them harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of Government or otherwise and also in respect of any award or compensation or the Contractor shall restore and repair all damage of every sort mentioned in this clause so as to deliver up to the whole of contract works complete and perfect in every respect so as to make good or otherwise satisfy all claims for damage to the property of the third parties. The contractor shall indemnify the Employer against all claims which may be made against the Employer by any member of the public or other third party in respect of anything which may arise in respect of the works or in consequence thereof and shall at his own expense arrange to effect and maintain, until the completion of the contract with any approved Insurance Company, a policy of insurance in the joint policy or policies with the Employer from time to time during the currency of this contract, and shall duly and punctually pay the premium payable thereof and if so required produce receipts for such payments, for the inspection of the Employer. The Contractor shall also indemnify the Employer against all claims which may be made upon the Employer, whether under the workman's Compensation Act or any other Statute in force during the currency of this contract or common law in respect of any injury to any of the contractor's or /and sub-contractor workmen or labour and shall at his own expense effect and maintain until the completion of the contract, with the approved Insurance Company a policy of Insurance in the joint names of the Employer and the Contractor against sub-risks and deposit such policy or policies with the Employer from time to time during the currency of this contract. The Contractor shall be responsible for anything which may be excluded from the Insurance Policies above referred to and also for all other damage to any property arising out of an incidental to the negligent or defective carrying out of this contract. The Contractor shall also indemnify the Employer in respect of any costs, charges or expenses arising out of any claims or proceeding and also in respect of any award of compensation of damages arising therefore the Employer shall be at liberty and have the power to deduct the amount of any damages, compensation costs, charges and expenses arising or to become due or to become due to the Contractor. The Contractor shall on signing the contract, issue the works and keep them insured (the works and keep them insured) until the Completion of the contract against loss or damage by the fire and /or earthquake with any approved Insurance Company in the joint name of the Employer and the Contractor for the full amount of the contract and for any further sum if called upon to be so by the Employer the premium of such further sum being allowed to the Contractor as an authorized extra. Such policy shall cover the property of the Contractor or of any sub-contractor or Employees. The Contractor shall deposit the policy and receipts for the premium with the Employer within 21 days from the date of signing the contract unless otherwise instructed by the Employer. In default of the Contractor insuring as provide above, the Employer on his behalf may so insure and may deduct the premium paid from any money due or which may become due to the Contractor. The Contractor shall as soon as the claim under the policy is settled or the work reinstated by the Insurance Company should they elect to do so, proceed with all due diligence with the completion of the work in the same manner as through the fire had not occurred and in all respect under the same conditions of contract. The contract shall in case of rebuilding or reinstatement after fire shall be entitled to such extension of time for completion as the Employer may deem fit.

29. Termination of Contract by Employer:

If the contractor (being an individual or a firm) commit any act of insolvency or shall be adjusted as an insolvent or shall make an assignment or composition of the greater part in number or amount of his creditors or shall enter into a deed of assignment with his creditors, or (being incorporated company), shall have an order made against him or pass an affective resolution for winding up either compulsorily or subject to the supervision of the court or voluntarily, or if the official assignee of the contractor shall repudiate the contract, or if the official assignee or the liquidator in any such winding up shall be unable within 7 (Seven) days after notice to him requiring him to do so, to show to the responsible satisfaction of the employer that he is able to carry out and fulfil the contract and if required by the employer to give security or if the contractor (whether in individual form or incorporated company) shall suffer any payment under this contract to be attached by or on behalf of any of the creditors of the contractor or if the contractors shall assign or sublet the contract without the consent in writing of the employer first obtained if the contractor shall change or encumber this contract or any payment due to which may become due to the contractor their under or if the employer shall certify in writing of that in his opinion the contractor :



- a) has abandoned the contract, or
- b) has failed to commence the work, or has without any lawful excuse under these conditions suspended the progress of the work for 14 days after receiving from the Employer written notice to proceed, or
- c) has failed to proceed with the work such due diligence and failed to make such due progress as would enable the work to be completed within the time agreed upon, after receiving from Employer to employ more men, or,
- d) has failed to remove materials from site or to pull down and retained work within 7 days after receiving from the Employer as written notice that the said materials or work were condemned or rejected by the Employer under those conditions, or,
- e) has neglected or failed persistently to observe and perform all or any of the acts, matter or things by this contract to be observed and performed by the Contractor for 7 days after written notice shall have been given to the contract requiring the Contractor to observe or perform the same, or
- f) has to the detriment of good workmanship or define of the Employers instruction to the contrary sub-let any part of the contract.

Then and in any of the said causes the employer notwithstanding any previous order after giving 7 (Seven) days notice in writing to the contractors, determine the contract, but without thereby affecting the powers of the employer of the obligations and liabilities of the contractor, the whole of which shall continue to be in force as fully as if the contractor has not been so determine and as if the works subsequently executed has been executed by or on behalf of the contractor and further the employer, his agents or representative may enter upon and take possession of the works and all plants, tools, shades, machinery and other power tools, utensils and materials, lying upon the premises or the adjoining land or roads and use the same as his own property or may employ the by means of his own representative and workman in carrying on and completing the work or by employing any other contractors or other persons or person to complete the work, and the contractor shall not in any way interrupt, or do any matter or thing to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the work when the works shall be completed or as soon thereafter as convenient, the employer shall give a notice in writing to the contractor to remove his surplus materials and plant and should the contractor failed to do so within a period of 14 (Fourteen) days after receipt thereof by him the employer may sell the same by public auction and shall give credit to the contractor or for the amount so realised.

The employer shall thereafter ascertain and certify in writing under his hand that (if anything) shall be due or payable to or by the employer, for the value of the said plant and materials so taken possession of by the employer and the expense or loss which the employer shall have been put to in getting the work to be so completed and amount if any owing to the contractor and the amount which shall be certified shall there upon be paid by the employer as the case may be and the certificate shall there upon be paid by the employer, as the case may be and the certificate of the employer shall be final and conclusive between the parties.

### 30. Settlement of Dispute, Arbitration:

Except where otherwise provided in the Contract, all questions and disputes relating to the meaning of the specifications, designs, drawings and instruction herein before mentioned and as to the quality of workmanship or materials used on the work, or as to any other question, claim, rights, matter, or things whatsoever, in any way arising out of or relating to the contract, design, drawings, specifications estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure or execute the same, whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the sole arbitration of the Chief Conservator of Forests, Western Circle. Should the Chief Conservator of Forests, Western Circle., be for any reason unwilling or unable to act as such arbitrator, such questions and disputes shall be referred to an arbitrator to be appointed by the DEPARTMENT OF FORESTS, GOVT OF WEST BENGAL. The award of the arbitrator shall be final, conclusive and binding both parties to this contract and no suit shall lie in Civil Court in respect of the award by the Arbitrator.

Sd/- Manish Kumar Yadav  
 Divisional Forest Officer,  
 Rupnarayan Division.

## **Special Terms & Conditions**

1. All works are to be carried out as per plan, specification and estimate of works subject to modification made in writing by the undersigned or his authorized officer, The technical supervisor as engaged by the contractor to check work as per plan, specification and estimate of works & work measurement to be recorded time to time by the technical supervisor in his own record and that will be cross verified by specified WMNB maintained by the concerned Beat Officer and duly signed by the Range Officer under whose jurisdiction the Jaltirtha project is being executed.
2. While engaging the labourers, JFMC members may be given preference when they are willing to do the work. Payments to the labourers to be made as per the Minimum Wages Act, 1948.
3. In case of implementation of the works at field, the decision of the Range Officers or his authorized persons or any of his superior officers shall be final and binding on the successful bidders implementing the works at field.
4. All works have to be finished within given period without fail. No extension of time will be allowed for execution of the work. But the tenderer shall not be held responsible if the delay in execution occurs due to causes beyond his/her control, such as acts of God like natural calamities, civil wars, fire strike, frost, floods, riot and acts of unsurpassed power. In the event of delay due to such causes, the tenderer may apply for extension of time for that period. The undersigned, as per direction received from the Chief Conservator of Forest, Western Circle, in this regard, may extend for a length of time equal to the period of force majeure or such period as he thinks suitable for that or may reject the application. Such cancellation would be without any liability whatsoever on the part of the undersigned.

Sd/- Manish Kumar Yadav  
Divisional Forest Officer,  
Rupnarayan Division.

Supplying and laying Polythene Sheet (150gm / sq.m.) over damp proof course or below flooring or roof terracing or in foundation or in foundation															
<b>A) PIPE SPILLWAY</b> (It.no. 3/Page - 47 / PWD Building)															
7	Pipe Bed	1	X	1	X	7.50	X	2.55		=	19.13				
	Abutment	1	X	2	X	2.55	X	0.60		=	3.06				
	D/S bed	1	X	1	X	1.00	X	2.55		=	2.55				
	Toe wall	1	X	1	X	300.00	X	0.50		=	150.00				
	<b>Total</b>									=	174.74	174.74	Sqm	24.00	₹ 4,193.76
Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor), 25 mm to 30 mm shuttering without staging in foundation															
<b>A) PIPE SPILLWAY</b> (It.no. 36 (D)Page - 43 / PWD Building)															
8	Pipe Bed	1	X	2	X	7.50	X	0.15		=	2.25				
	Abutment	1	X	2	X	2.55	X	0.15		=	0.77				
	Abutment cutoff	1	X	2	X	0.60	X	0.15		=	0.77				
		2	X	2	X	2.55	X	1.50		=	15.30				
		2	X	2	X	0.60	X	1.50		=	3.60				
	Bed cutoff, D/S	1	X	2	X	0.50	X	0.10		=	0.10				
	Bed cutoff, side	1	X	4	X	2.55	X	0.50		=	2.55				
		3	X	2	X	1.00	X	0.50		=	2.00				
	D/S bed	1	X	3	X	0.30	X	0.50		=	0.90				
		1	X	3	X	2.55	X	0.10		=	0.77				
	<b>Total</b>									=	30.99	30.99	Sqm	203.00	₹ 6,290.97
Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement,if any, in ground floor as per relevant IS codes. (a) Pakur Variety															
[As per rate analysis of PWD schedule (Enclosed )]															
<b>A) PIPE SPILLWAY</b>															
9	Pipe Bed	1	X	1	X	7.50	X	2.55	X	0.15	=	2.87			
	Abutment	1	X	2	X	2.55	X	0.60	X	0.10	=	0.31			
	D/S bed	1	X	1	X	1.00	X	2.55	X	0.10	=	0.26			
	Bed cutoff, D/S	1	X	1	X	2.55	X	0.30	X	0.50	=	0.38			
	Bed cutoff, side	1	X	2	X	1.00	X	0.30	X	0.50	=	0.30			
	Toe wall wearing coat	1	X	1	X	300.00	X	0.50	X	0.075	=	11.25			
	<b>Total</b>									=	15.37	15.37	Cum	6173.38	₹ 0,94,884.85
Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement,if any, in ground floor as per relevant IS codes. (a) Pakur Variety															
[As per rate analysis of PWD schedule (Enclosed )]															
<b>A) PIPE SPILLWAY</b>															
10	Spillway Abutment wall	1	X	2	X	2.55	X	0.60	X	1.50	=	4.59			
	Toe Wall	1	X	1	X	300.00	X	0.50	X	1.50	=	225.00			
	<b>Total</b>									=	229.59	229.59	Cum	6173.38	₹ 14,17,346.31
Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor).[Excluding cost of chipping over concrete surface]															
a) Mortar Mix. 1 : 6, (i) 20 mm thick															
(Item No.- 1 (i) (b) / Page No.- 49 / PWD, SOR Vol 1 3rd Corrigendum)															
<b>A) PIPE SPILLWAY</b>															
11	Abutment	1	X	2	X	2.55	X	1.70		=	8.67				
	Deduction for pipe	1	X	6	X	0.785	X	0.49		=	-2.31				
	<b>Total</b>									=	6.36	6.36	Sqm	153.00	₹ 00,973.08
Neat cement punning about 1.5mm thick using Cement 0.152 cu.m per 100 sq.m. in wall,dado,window sill, floor etc.															
(Item No.- 15 / Page No.- 192 / PWD, SOR Vol 1)															
Same as plaster															
12										=	6.36	6.360	Sqm	34.00	₹ 0,216.24
Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row Providing and laying reinforced cement concrete pipe NP3 with spigot socket for culverts on first class bedding of granular material in single row including fixing with cement mortar 1:2 as per Technical Specification Clause 1106 for Rural Roads of MORD. (D) 600 mm dia															
[As per rate analysis of PWD schedule (Enclosed )]															
13										=	22.5	22.5	M	2852.92	₹ 64,190.70

**DETAILS ESTIMATE FOR EARTH WORK EXCAVATION, CONSTRUCTION OF PIPE SPILLWAY FOR CONSTRUCTION OF WATER DETENTION STRUCTURE AT MOUZA: BABUIKHULIA, JI. NO: 226, PLOT NO: - UNDER HOOMHARH RANGE, BLOCK: HOOMHARH, DIST: PACHEM MADINIPUR**

Sl No	Description of Item	Qnt.	Unit	Rate (Rs.)	Amount (Rs.)	
1	Cutting uprooting and clearing jungles including shrubs, water weeds, bushes, trees, plants, upto 30 cm. Girth including removing as directed by Engineer-in-charge.  Page-C, item-1.23 of I & WD USoR 2018					
	1 x 100.00 x 60.00 = 6000.00	6000.00	Sqm	5.00	₹ 30,000.00	
2	Excavation in ordinary soil / mixed soil i.e. clay mixed with moorum, kankar, pebbles / silt dry or moist / slushy silt / sticky soil for WDS / WHS / RESERVOIR / SFMIS etc with hydraulic excavator of required bucket capacity including cutting and loading in tippers, trimming bottom and side slopes in accordance with requirement of lines, grades and cross section and transporting to embankment/ disposal site within all lifts and lead upto 1500 m including spreading, leveliing disposed spoils at disposed area. ( mode of measurement : pre work and post work)					
	Total excavated earthwork 120.00 x 100.0 x 2.00 = 24000.00 100.00 x 80.0 x 1.78 = 14240.00					
	Total = 38240.00					
	For embankment 200.00 x ((2.00 + 7.00)/2) x 2.50 = 2250 cum (It.no. 1 /page - 112 / WRDD / Chapter-11)					
	30.00 % of excavated eartwork = 11472.00	11472.00	Cum	60.35	₹ 6,92,335.20	
3	Excavation in gravel / moorum / kankar / compact moorum / very much weathered rock / sticky soil mixed with moorum or ghooting for WDS / WHS / RESERVOIR / SFMIS etc with hydraulic excavator of required bucket capacity including cutting and loading in tippers, trimming bottom and side slopes in accordance with requirement of lines, grades and cross section and transporting to embankment/ disposal site within all lifts and lead upto 1500 m including spreading, leveliing disposed spoils at disposed area. ( mode of measurement : pre work and post work)					
	(It.no. 2 /page - 112 / WRDD / Chapter-11)					
	40.00 % of excavated eartwork = 15296.00	15296.00	Cum	69.78	₹ 10,67,354.88	
4	Excavation in soft weather rock / silt laterite rocks for WDS / WHS/RESERVOIR / SFMIS etc with hydraulic excavator of required bucket capacity including cutting and loading in tippers, trimming bottom and side slopes in accordance with requirement of lines, grades and cross section and transporting to embankment/ disposal site within all lifts and lead upto 1500 m including spreading, leveliing disposed spoils at disposed area. (mode of measurement : pre work and post work)					
	(It.no. 3 /page - 112 / WRDD / Chapter-11)					
	30.00 % of excavated eartwork = 11472.00	11472.00	Cum	82.98	₹ 9,51,946.56	
5	Extra rate where land is to be arranged by the contractor on items no 2, 3 & 4 for disposal of spoils.  (It.no. 5 /page - 112 / WRDD / Chapter-11)					
	= 35938 cum	35937.80	Cum	7.54	₹ 270,971.01	
6	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches, levelling, dressing and ramming the bottom, bailing out water as required complete. (a) Depth of excavation not exceeding 1,500 mm. (It.no. 2 (A)/Page - 1 / PWD Building )					
	<b>A) PIPE SPILLWAY</b>					
	Pipe Bed 1 x 1 x 7.50 x 2.55 x 0.30 = 5.74					
	Abutment 1 x 2 x 2.55 x 0.90 x 0.80 = 3.67					
	D/S bed 1 x 1 x 1.00 x 2.55 x 0.25 = 0.64					
	Bed cutoff, D/S 1 x 1 x 2.55 x 0.30 x 0.50 = 0.38					
	Bed cutoff, side 1 x 2 x 1.00 x 0.30 x 0.50 = 0.30					
	Cutoff bellow 1 x 2 x 2.55 x 0.60 x 1.50 = 4.59					
	Toe wall 1 x 1 x 300.00 x 1.20 x 0.75 = 270.00					
	<b>Total</b>	<b>285.32 Cum</b>	285.32	Cum	119.27	₹ 34,030.12

**REFERENCE**

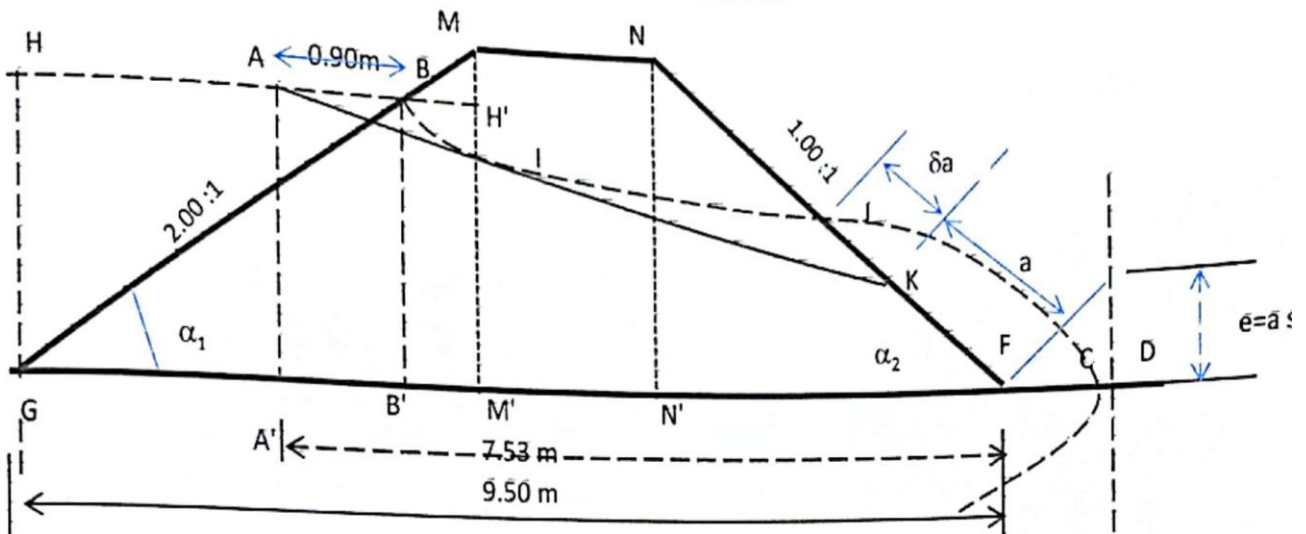
SI No	Type of area	Value of K		
		Flat land 0-5% slope	Rolling land 5-10% slope	Hilly land 10-30% slope
1	<b>Urban area</b>			
	30% area impervious(paved)	0.4	0.5	-
	50% area	0.55	0.65	-
	70% area	0.65	0.8	-
	Single family	0.3		
2	<b>Cultivated areas</b>			
	Open sandy loam	0.3	0.4	0.52
	Clay and silt loam	0.5	0.6	0.72
	Tight clay	0.6	0.7	0.82
3	<b>Pastures</b>			
	Open sandy loam	0.1	0.16	0.22
	Clay and silt loam	0.3	0.36	0.42
	Tight clay	0.4	0.55	0.6
4	<b>Wooded land and forested area</b>			
	Open sandy loam	0.1	0.25	0.3
	Clay and silt loam	0.3	0.35	0.5
	Tight clay	0.4	0.5	0.6

Depo	Average annual percpitation ( P ) (mm)
	100
	200
	300
	400
	500
	600
	700
	800
	900
	1000
	1200
	1400
	1600
	1800
	2000

Computation of Surface Runoff from catchment			
Data Input :			
Catchment	1. Catchment area or the scheme (A)	33.0 Ha.	
	2. Type of vegetation of catchment area	Cultivated areas	
	3. Sloped range of Catchment area	5-10 %	
	4. Soil texture of catchment area	Clay and silt loam	
	5. Run off co-efficient factor (K) from Table -1	0.6	
	6. Average annual Rainfall (P)	1306 mm.	
	7. Dependability factor for 60 % chance of occurrence from Table -2	0.94	
Reservoir	1. Average Reservoir area ( $A_r$ )	1.20 Ha.	
	2. Total Reservoir storage depth ( $H_r$ )	5.26 m.	
	3. Total Reservoir storage Volume (V) (Ha-m)	6.34 Ha-m.	
	4. Average Monthly Seepage losses ( $W_{sep}$ ) @ 4mm/day	0.14 Ha-m.	
	5. Average Monthly Evaporation losses ( $W_{evp}$ ) @ 5 mm/day	0.18 Ha-m.	
	6. Dead storage @ 10 % of total storage (Ha-m)	0.63 Ha-m.	
	7. Total Live Reservoir ( $V_{Live}$ ) storage (Ha-m)	5.39 Ha-m.	
Command area		Rabi	5.00 Ha.
		Kharif	15.00 Ha

Data Analysis :													
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan	Feb	Mar.	April	May
Calculation of surface Runoff	1. Raintall (P) (mm)	195.00	329.05	290.11	251.29	69.36	8.68	6.01	9.91	14.93	14.28	25.21	91.53
	2. 60 % dependable Rainfall ( $P_d = P \times \text{factor}$ ) in mm	183.3	309.31	272.7	236.21	65.2	8.16	5.65	9.32	14.03	13.42	23.7	86.04
	3. Surface runoff (Q = $AKP_d/1000$ ) in Ha-m	3.63	6.13	5.4	4.68	1.29	0.16	0.11	0.18	0.28	0.27	0.47	1.71
Calculation of Water Demand	1. Total Irrigation water requirement (TIWR)	0.37	0.19	1.24	1.89	3.15	0.26	0.36	0.53	0.43	0.34	0.90	0.29
Storage volume	Total Live storage (Ha-m) after meeting crops water requirement	5.39	5.39	5.39	5.39	3.20	2.78	2.20	1.53	1.06	0.66	-0.09	1.00
Excess runoff Volume after meeting crop irrigation requirement		0.00	0.74	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.71
<p style="text-align: center;"><b>There fore, total Storage Volume is sufficient in respect of availability of water and demand of water through out of the year.</b></p>													

DESIGN OF EARTHEN EMBANKMENT FOR CONSTRUCTION OF WATER DETENTION STRUCTURE AT M  
 BABUIKHULIA, JL NO: 226, PLOT NO: - UNDER, G.P-HOOMHARH, BLOCK: HOOMHARH, DIST:PACH  
 MADINIPUR



Preliminary dimension as per Strange	
Length of the embankment(L)	200.00 m
Free board	= 1.00 m
Top width of the embankment(B <sub>T</sub> )	= 2.00 m
Height of embankment	= 2.50 m
U/S side slope	= 2.00 :1
D/S side slope	= 1.00 :1
Bottom width(B <sub>B</sub> )	= 9.50 m
Here seepage line	= BIK
U/S side Slope Angle( $\alpha_1$ )	= 26.49
D/S side slope Angle( $\alpha_2$ )	= 43.66
From figure(BH)	= 3.01 m
AB	= 0.90 m
Horizontal distance between A'F(b)=AB+BH'+MN+N'F	= 7.53 m
Distance between directrix(D) and focus (F), $S=\sqrt{(A'F^2+GH^2)}-A'F$	= 0.40 m
From figure, $(a+\delta a)=JF=S/1-\cos\alpha_2$	= 1.462 m
As per Casagrande's solution, $\delta a=(a+\delta a)[180^\circ-\alpha_2/400^\circ]$	= 0.498 m
So length of discharge face(KF=a)	= 0.96 m
So provide inclined drainage blanket	= 1.00 m
Distance from base to the intersection of seepage line on the D/S side, $(e)=a*\sin\alpha_2$	= 0.67 m
co-efficient of permeability of embankment material(k)	= 0.000010 m/sec
Seepage discharge rate per metre width of embankment, $q=KS$	= 0.000004 cumec/m length

Calculation of Irrigation Water Requirement of crops (putting DATA in shaded cell)

Location		District - PACHEM MADIN IPUR											
& Time		Latitude - 22.81961 SOUTH					Please input DATA in shaded cell						
		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May
Nos of days		30	31	31	30	31	30	31	31	28	31	30	31
Crops Characteristics	1.a. Type of crops	Kharif (HYID Paddy)					Rabi			Wheat			
	1.b. Growing period (Days)	120					120			90			
	1.c. Av. crop factor (K <sub>crop</sub> )	0					1.1			1.25			
	1.d. Command area (Ha)	15.00					2.25			2.50			
Crops Characteristics	2.a. Type of crops									Summer Vegetables			
	2.b. Growing period (Days)									120			
	2.c. Av. crop factor (K <sub>crop</sub> )									0.45			
	2.d. Command area (Ha)									0.75			
Calculation of Water Requirement of crops by the Blaney Criddle Method	1. T <sub>max</sub> (°C)	38.60	35.80	35.20	35.80	34.00	30.8	30.8	30	34.6	40.4	42.6	42.6
	2. T <sub>min</sub> (°C)	23.20	24.20	24.40	23.60	19.30	13.6	9.4	8.6	11	16.2	21	22.4
	3. T <sub>mean</sub> (°C)	30.9	30	29.8	29.7	26.95	22.2	20.1	19.3	22.8	28.3	31.8	32.5
	4. (p = mean daily % of annual daytime hours) from Table -3	0.30	0.30	0.29	0.28	0.26	0.25	0.24	0.23	0.26	0.27	0.26	0.3
	5. ET <sub>0</sub> = p (0.46 x T <sub>mean</sub> + 8) (mm/day)	6.66	6.54	6.3	6.07	5.3	4.55	4.14	4.21	4.81	5.67	6.50	6.89
	6. ET <sub>crop1</sub> = ET <sub>0</sub> x K <sub>crop1</sub> (mm)	0	7.19	7.88	8.19	5.3	2.05	3.11	4.85	3.85	1.98	7.5	3.1
	6. ET <sub>crop2</sub> = ET <sub>0</sub> x K <sub>crop2</sub> (mm)	0	0	0	0	0	0	0	0	2.16	4.25	7.5	5.51
	7. Monthly water requirement (W <sub>crop1</sub> )	0	222.89	244.28	245.7	164.3	61.5	96.41	150.35	107.8	61.38	226.2	96.1
	7. Monthly water requirement (W <sub>crop2</sub> )	0	0	0	0	0	0	0	0	50.48	131.75	226.2	170.81
	Total Water Requirement	Soil Saturation (SAT) mm	50										
Water Layer (WL) mm		75											
Percolation losses (PERC) mm		25	25	25	25	25	25	25	25	25	25	25	25
Total water Requirement (TW <sub>crop1</sub> ) = W <sub>crop1</sub> + SAT + WL + PERC		150	247.89	269.28	270.7	189.3	86.5	121.41	175.35	132.8	86.38	251.2	121.1
Total water Requirement (TW <sub>crop2</sub> ) = W <sub>crop2</sub> + SAT + WL + PERC		25	25	25	25	25	25	25	25	85.48	156.75	251.2	195.81
Rainfall	Monthly Rainfall (P) (mm)	195.41	329.05	290.11	251.29	69.36	8.60	6.01	9.91	14.93	14.28	25.21	91.53
	Effective Rainfall (Pe) = 0.8P - 25 if P > 75 mm/month or 0.6P - 10 if P < 75 mm/month in mm	131.33	238.24	207.39	176.03	31.62	0.00	0.00	0.00	0.00	0.00	5.11	48.22
Actual Irrigation Requirement	Net Irrigation requirement (IIJ <sub>net1</sub> ) = (TW <sub>crop1</sub> - Pe) mm	18.65	9.65	62.9	94.67	157.68	86.50	121.41	175.35	132.80	86.38	246.07	72.88
	Net Irrigation requirement (IIJ <sub>net2</sub> ) = (TW <sub>crop2</sub> - Pe) mm	0.00	0.00	0.00	0.00	0.00	25.00	25.00	25.00	85.48	156.75	246.07	147.59
	Irrigation efficiency (e) in %	75	75	75	75	75	75	75	75	75	75	75	75
	Actual Irrigation requirement (IRI <sub>act1</sub> ) = (IIJ <sub>net1</sub> / e) * 100 (mm)	24.87	12.87	82.92	126.23	210.24	115.33	161.88	233.8	177.07	115.17	328.09	97.17
	Actual Irrigation requirement (IRI <sub>act2</sub> ) = (IIJ <sub>net2</sub> / e) * 100 (mm)	0	0	0	0	0	33.33	33.33	33.33	113.97	209	328.09	196.79
	Total irrigation water Requirement: (TIWR) = (CA * IRI <sub>act</sub> / 1000) Ha-m	0.37	0.19	1.24	1.89	3.15	0.26	0.36	0.51	0.43	0.34	0.90	0.29



**COST BENEFIT RATIO FOR CONSTRUCTION OF WATER DETENTION STRUCTURE AT MOUZA:  
BABUIKHULIA, JL NO: 226, PLOT NO: - UNDER, G.P-HOOMHARH, BLOCK: HOOMHARH, DIST:PACHEM  
MADINIPUR**

Cost of Scheme: **62,79,052.00**      Command area : Kharif : **15.00** Ha. = **37.10** Acre  
Rabi : **5.00** Ha. = **12.35** Acre  
49.45 Acre

**Benefit / Acre :**

Name of Crops	Cost of Cultivation		Gross Income (Rs.)		Net Income (Rs.)	Area of Cultivation	Annual Net Benefit (Rs.)
<b>A. Kharif :</b>							
Aman Paddy	Cost of Labour	6500.00	Av yield(qt/Ac)	18.00		37.10 Acre	4,35,925.00
	Cost of Land Preparation	1800.00	Market Price/qt	1300.00			
	Cost of Seed	750.00	Income from Paddy	23400.00			
	Cost of Fertiliser	1060.00	Income from Straw	1260.00			
	Cost of manure	1000.00					
	Cost of Irrigation	900.00					
	Cost of Plant Protection	900.00					
	Total	12,910.00		24,660.00			
<b>B. Rabi :</b>							
Wheat	Cost of Labour	5500.00	Av yield(qt/Ac)	13		6.16 Acre	37,884.00
	Cost of Land Preparation	1800.00	Market Price/qt	1500.00			
	Cost of Seed	1350.00	Income from Wheat	19500.00			
	Cost of Fertiliser	1900.00	Income from Straw	500.00			
	Cost of manure	1000.00					
	Cost of Irrigation	2000.00					
	Cost of Plant Protection	300.00					
	Total	13,850.00		20,000.00			
Brinjal	Cost of Labour	6500.00	Av yield(qt/Ac)	90		0.62 Acre	0,71,734.00
	Cost of Land Preparation	1800.00	Market Price/qt	1500.00			
	Cost of Seed	1300.00	Income from Brinjal	135000.00			
	Cost of Fertiliser	1700.00					
	Cost of manure	1000.00					
	Cost of Irrigation	3000.00					
	Cost of Plant Protection	4000.00					
	Total	19,300.00		1,35,000.00			
Tomato	Cost of Labour	6500.00	Av yield(qt/Ac)	150		1.24 Acre	1,65,664.00
	Cost of Land Preparation	1800.00	Market Price/qt	1000.00			
	Cost of Seed	1300.00	Income from Tomato	150000.00			
	Cost of Fertiliser	3800.00					
	Cost of manure	1000.00					
	Cost of Irrigation	1500.00					
	Cost of Plant Protection	500.00					
	Total	16,400.00		1,50,000.00			
Mustard	Cost of Labour	4200.00	Av yield(qt/Ac)	4.5		1.24 Acre	10,738.40
	Cost of Land Preparation	1800.00	Market Price/qt	4200.00			
	Cost of Seed	240.00	Income from Mustard	18900.00			
	Cost of Fertiliser	1600.00					
	Cost of manure	800.00					
	Cost of Irrigation	900.00					
	Cost of Plant Protection	700.00					
	Total	10,240.00		18,900.00			

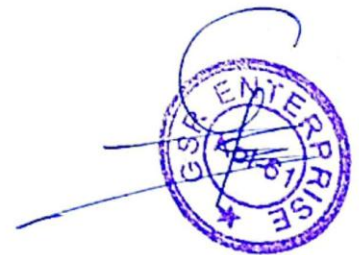
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14	Providing weep holes in Brick masonry / Plain / Reinforced concrete butment, wing wall / return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V:20H towards drawing face. Complete as per drawing and Technical specifications. (Pg 297, SI no 13.03 of PWD Road schedule & 15 th Corrigenda)	50 Nos	50	No	115	₹ 5,750.00
15	Supplying, testing and installation of open Weave Jute Geo-textile (JGT) having overall weight of 500 gm/sq.m, thickness 6mm, width 1220mm, Tensile strength 10KN/m (Warp direction) x 7.50KN/m (weft direction) on slopes of embankments dressed and cut to a gradient as per design and drawing for control of surface soil erosion on proposed banks slope of embankment including the cost of preparation of sub-grade and excavating the trenches of 500mm deep and spade-width wherever necessary, and filling the trenches with earth duly secured to sub-grade by U shape MS staples (11 gauges) or wooden or plastic pegs at an interval of 450 mm, providing side lapping of 100mm and horizontal lapping of 300mm as per direction complete. The rate is inclusive of all incidental charges, transportation by all means to the worksite, all leads and lifts complete. (Payment will be made on the basis of finished surface area of the slope).	520 x 11.20 = 5824.00	5824.00	Sqm	58.00	₹ 3,37,792.00
<i>Item no 2.81/ page - C25/A&amp;WD/ Capter -1 ISOR2018</i>						
16	Precast concrete blocks or lining units as per designed size and specification, with well graded stone metal aggregate, including dressing, ramming, shuttering, finishing the top surface with 1:3 cement and sand mortar, curing, transporting and laying the blocks or lining units at worksite in position, over filter, layer, keeping a gap of 6mm between the adjacent units, by use of removable ply boards or non removable thermocol boards, with all leads and lifts, including supply and carriage of all materials complete. (The rate is exclusive of the cost of stone aggregate and its carriage upto site. Construction in which to add the cost of same from the SoR of PW (Roads) to derive the consolidated rate. Consumption chart of the USoR may be used for assessing the quantity of coarse aggregate per cum of concrete). With Stone Aggregate (Pakur, North Bengal or Rajmahal varieties) a) Nominal Mix. 1:2:4 with 20 mm down coarse aggregate b) Nominal Mix. 1:1.5:3 with 20 mm down coarse aggregate	150.00 X 3.00 X 0.15 = 67.50	67.50	Cum	6981.53	₹ 4,71,253.28
<i>Item no 2.54/ page - C19/A&amp;WD/ Capter -1 ]</i>						
17	Construction of a Sign board of size 1.80 m x 1.20 m made of brick masonry (1:4) cement mortar 125 mm thick inside surrounding with 250 mm x 250 mm thick out side, foundation depth 0.60 m, with 15 mm thick plaster (1:6). Lettering should be done with approved Black paint over Yellow Background complete as per direction of E-I-C. [Approved rate of S.E. (A-1), Bankura (A-1) Circle]		1.00	L.S.	3500.00	₹ 3,500.00
<b>Total</b>						<b>₹ 60,12,108.94</b>
<b>Say</b>						<b>₹ 60,12,109.00</b>

TECHNICALLY VETTED

*3/9/2020*  
Superintendent Engineer  
Kangsabati Circle-II  
I & W. Div. Govt. of W.B.  
Paschim Medinipur

*44*  
Divisional Forest Officer  
Rupnarayan Division



Supplying and laying Polythene Sheet (150gm / sq.m.) over damp proof course or below flooring or roof terracing or in foundation or in foundation															
(It.no. 3/Page - 47 / PWD Building)															
<b>A) PIPE SPILLWAY</b>															
7	Pipe Bed	1	X	1	X	7.50	X	2.55		=	19.13				
	Abutment	1	X	2	X	2.55	X	0.60		=	3.06				
	D/S bed	1	X	1	X	1.00	X	2.55		=	2.55				
	Toe wall	1	X	1	X	320.00	X	0.50		=	160.00				
	<b>Total</b>									=	<b>184.74</b>	184.74	Sqm	24.00	<b>₹ 4,433.76</b>
Hire and labour charges for shuttering with centering and necessary staging upto 4 m using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete slabs, beams and columns, lintels curved or straight including fitting, fixing and striking out after completion of works (upto roof of ground floor), 25 mm to 30 mm shuttering without staging in foundation															
(It.no. 36 (f)/Page - 43 / PWD Building)															
<b>A) PIPE SPILLWAY</b>															
8	Pipe Bed	1	X	2	X	7.50	X	0.15		=	2.25				
		1	X	2	X	2.55	X	0.15		=	0.77				
	Abutment	1	X	2	X	2.55	X	0.15		=	0.77				
		1	X	2	X	0.60	X	0.15		=	0.18				
	Abutment cutoff	2	X	2	X	2.55	X	1.50		=	15.30				
		2	X	2	X	0.60	X	1.50		=	3.60				
		1	X	2	X	0.50	X	0.10		=	0.10				
	Bed cutoff, D/S	1	X	2	X	2.55	X	0.50		=	2.55				
	Bed cutoff, side	1	X	4	X	1.00	X	0.50		=	2.00				
		3	X	2	X	0.30	X	0.50		=	0.90				
	D/S bed	1	X	3	X	2.55	X	0.10		=	0.77				
	<b>Total</b>									=	<b>30.99</b>	30.99	Sqm	203.00	<b>₹ 6,290.97</b>
Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any, in ground floor as per relevant IS codes. (a) Pakur Variety															
[As per rate analysis of PWD schedule (Enclosed)]															
<b>A) PIPE SPILLWAY</b>															
9	Pipe Bed	1	X	1	X	7.50	X	2.55	X	0.15	=	2.87			
	Abutment	1	X	2	X	2.55	X	0.60	X	0.10	=	0.31			
	D/S bed	1	X	1	X	1.00	X	2.55	X	0.10	=	0.26			
	Bed cutoff, D/S	1	X	1	X	2.55	X	0.30	X	0.50	=	0.38			
	Bed cutoff, side	1	X	2	X	1.00	X	0.30	X	0.50	=	0.30			
	Toe wall wearing coat	1	X	1	X	320.00	X	0.50	X	0.075	=	12.00			
	<b>Total</b>									=	<b>16.12</b>	16.12	Cum	6330.90	<b>₹ 1,02,054.11</b>
Ordinary Cement concrete (mix 1:2:4) with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any, in ground floor as per relevant IS codes. (a) Pakur Variety															
[As per rate analysis of PWD schedule (Enclosed)]															
10	Spillway Abutment wall	1	X	2	X	2.55	X	0.60	X	1.50	=	4.59			
	Toe Wall	1	X	1	X	320.00	X	0.50	X	1.50	=	240.00			
	<b>Total</b>									=	<b>244.59</b>	244.59	Cum	6330.90	<b>₹ 15,48,474.83</b>
Plaster (to wall, floor, ceiling etc.) with sand and cement mortar including rounding off or chamfering corners as directed and raking out joints including throating, nosing and drip course, scaffolding/staging where necessary (Ground floor). [Excluding cost of chipping over concrete surface]															
a) Mortar Mix. 1 : 6, (i) 20 mm thick															
(Item No.- 1 (i) (b) / Page No.- 49 / PWD, SOR Vol 1 3rd Corrigendum)															
<b>A) PIPE SPILLWAY</b>															
	Abutment	1	X	2	X	2.55	X	1.70		=	8.67				
	Deduction for pipe	1	X	6	X	0.785	X	0.49		=	-2.31				
	<b>Total</b>									=	<b>6.36</b>	6.36	Sqm	153.00	<b>₹ 00,973.08</b>
Neat cement punning about 1.5mm thick using Cement 0.152 cu.m per 100 sq.m. in wall, dado, window sill, floor etc.															
(Item No.- 15 / Page No.- 192 / PWD, SOR Vol 1)															
Same as plaster															
	<b>Total</b>									=	<b>6.36</b>	6.360	Sqm	34.00	<b>₹ 0,216.24</b>
Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row Providing and laying reinforced cement concrete pipe NP3 with spigot socket for culverts on first class bedding of granular material in single row including fixing with cement mortar 1:2 as per Technical Specification Clause 1106 for Rural Roads of MORD. (D) 600 mm dia															
[As per rate analysis of PWD schedule (Enclosed)]															
	<b>Total</b>									=	<b>22.5</b>	22.5	M	2924.92	<b>₹ 65,810.70</b>

DETAILS ESTIMATE FOR EARTH WORK EXCAVATION, CONSTRUCTION OF PIPE SPILLWAY FOR CONSTRUCTION OF WATER DETENTION STRUCTURE AT MOUZA: NAYABANKATI, JL. NO: 34, PLOT NO: - UNDER HOOMHARIH RANGE, BLOCK: HOOMHARIH, DIST:PACHEM MADINIPUR													
Sl No	Description of Item								Qnt.	Unit	Rate (Rs.)	Amount (Rs.)	
1	Cutting uprooting and clearing jungles including shrubs, water weeds, bushes, trees, plants, upto 30 cm. Girth including removing as directed by Engineer-in-charge.												
	Page-C,-item-1.23 of I & WD USoR 2018												
		1	x	100.00	x	60.00	=	6000.00	6000.00	Sqm	5.00	₹ 30,000.00	
2	Excavation in ordinary soil / mixed soil i.e. clay mixed with moorum , kankar, pebbles / silt dry or moist / slushy silt / sticky soil for WDS / WHS / RESERVOIR / SFMIS etc with hydraulic excavator of required bucket capacity including cutting and loading in tippers, trimming bottom and side slopes in accordance with requirement of lines, grades and cross section and transporting to embankment/ disposal site within all lifts and lead upto 1500 m including spreading , levelling disposed spoils at disposed area. ( mode of measurement : pre work and post work)												
	Total excavated earthwork		160.00	x	100.0	x	2.00	=	32000.00				
			130.00	x	80.0	x	1.00	=	10400.00				
	Total						=	42400.00					
	For embankment		200.00	x	(2.00 + 7.00)/2	x	2.50	=	2250 cum				
	(It.no. 1 /page - 112 / WRDD / Chapter-11)												
	20.00 % of excavated eartwork						=	8480.00	8480.00	Cum	60.35	₹ 5,11,768.00	
3	Excavation in gravel / moorum / kankar / compact moorum / very much weathered rock / sticky soil mixed with moorum or ghooting for WDS / WHS / RESERVOIR / SFMIS etc with hydraulic excavator of required bucket capacity including cutting and loading in tippers, trimming bottom and side slopes in accordance with requirement of lines, grades and cross section and transporting to embankment/ disposal site within all lifts and lead upto 1500 m including spreading , levelling disposed spoils at disposed area. ( mode of measurement : pre work and post work)												
	(It.no. 2 /page - 112 / WRDD / Chapter-11)												
	40.00 % of excavated eartwork						=	16960.00	16960.00	Cum	69.78	₹ 11,83,468.80	
4	Excavation in soft weather rock / soft laterite rocks for WDS / WHS/RESERVOIR / SFMIS etc with hydraulic excavator of required bucket capacity including cutting and loading in tippers, trimming bottom and side slopes in accordance with requirement of lines, grades and cross section and transporting to embankment/ disposal site within all lifts and lead upto 1500 m including spreading, levelling disposed spoils at disposed area. (mode of measurement : pre work and post work)												
	(It.no. 3 /page - 112 / WRDD / Chapter-11)												
	40.00 % of excavated eartwork						=	16960.00	16960.00	Cum	82.98	₹ 14,07,340.80	
5	Extra rate where land is to be arranged by the contractor on items no 2 , 3 & 4 for disposal of spoils.												
	(It.no. 5 /page - 112 / WRDD / Chapter-11)												
							=	39364 cum	39364.11	Cum	7.54	₹ 296,805.39	
6	Earth work in excavation of foundation trenches or drains, in all sorts of soil (including mixed soil but excluding laterite or sandstone) including removing, spreading or stacking the spoils within a lead of 75 m. as directed. The item includes necessary trimming the sides of trenches, levelling, dressing and ramming the bottom, bailing out water as required complete.												
	(a) Depth of excavation not exceeding 1,500 mm.												
	(It.no. 2 (A)/Page - 1 / PWD Building )												
	A) PIPE SPILLWAY												
	Pipe Bed	1	x	1	x	7.50	x	2.55	x	0.30	=	5.74	
	Abutment	1	x	2	x	2.55	x	0.90	x	0.80	=	3.67	
	D/S bed	1	x	1	x	1.00	x	2.55	x	0.25	=	0.64	
	Bed cutoff, D/S	1	x	1	x	2.55	x	0.30	x	0.50	=	0.38	
	Bed cutoff, side	1	x	2	x	1.00	x	0.30	x	0.50	=	0.30	
	Cutoff below	1	x	2	x	2.55	x	0.60	x	1.50	=	4.59	
	Toe wall	1	x	1	x	320.00	x	1.20	x	0.75	=	288.00	
	Total								303.32 Cum	303.32	Cum	119.27	₹ 36,176.98

### Computation of Surface Runoff from catchment

#### Data Input :

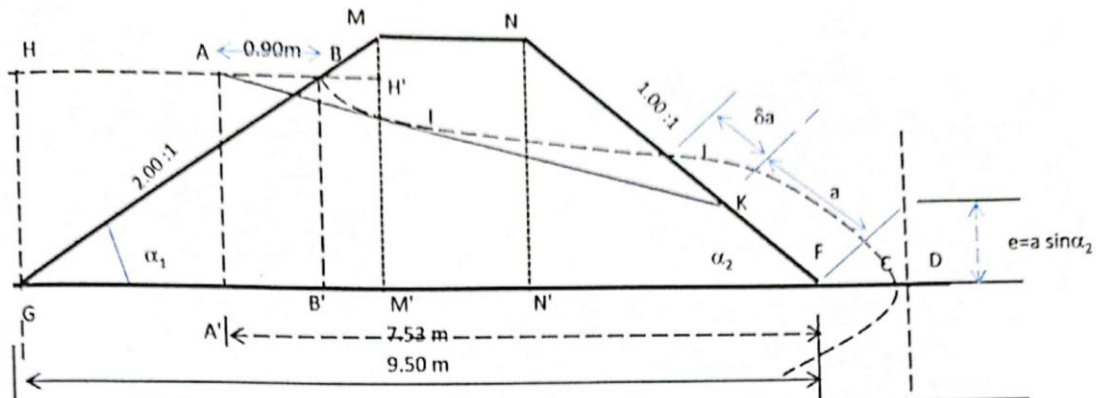
<b>Catchment</b>	1. Catchment area of the scheme (A)	33.0 Ha
	2. Type of vegetation of catchment area	Cultivated areas
	3. Sloped range of Catchment area	5-10 %
	4. Soil texture of catchment area	Clay and silt loam
	5. Run off co-efficient factor (K) from Table -1	0.6
	6. Average annual Rainfall (P)	1306 mm.
	7. Dependability factor for 60 % chance of occurrence from Table -2	0.94
<b>Reservoir</b>	1. Average Reservoir area (A <sub>r</sub> )	1.60 Ha.
	2. Total Reservoir storage depth (r <sub>t</sub> )	4.50 m.
	3. Total Reservoir storage Volume (V) (Ha-m)	7.20 Ha-m.
	4. Average Monthly Seepage losses (W <sub>sep</sub> ) @ 4mm/day	0.19 Ha-m.
	5. Average Monthly Evaporation losses (W <sub>evp</sub> ) @ 5 mm/day	0.24 Ha-m.
	6. Dead storage @ 10 % of total storage (Ha-m)	0.72 Ha-m.
	7. Total Live Reservoir (V <sub>Live</sub> ) storage (Ha-m)	6.05 Ha-m.
<b>Command area</b>		
	<b>Rabi</b>	5.00 Ha.
	<b>Kharif</b>	15.00 Ha

#### Data Analysis :

		June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan	Feb	Mar.	April	May
<b>Calculation of surface Runoff</b>	1. Raintall (P) (mm)	195.00	329.05	290.11	251.29	69.36	8.68	6.01	9.91	14.93	14.28	25.21	91.53
	2. 60 % dependable Raintall (P <sub>d</sub> = P*factor) in mm	183.3	309.31	272.7	236.21	65.2	8.16	5.65	9.32	14.03	13.42	23.7	86.04
	3. Surface runoff (Q = AKP <sub>d</sub> /1000) in Ha-m	3.63	6.13	5.4	4.68	1.29	0.16	0.11	0.18	0.28	0.27	0.47	1.71
<b>Calculation of Water Demand</b>	1. Total Irrigation water requirement (TIWR)	0.37	0.19	1.24	1.89	3.15	0.26	0.36	0.53	0.43	0.34	0.90	0.29
<b>Storage volume</b>	Total Live storage (Ha-m) after meeting crops water requirement	6.05	6.05	6.05	6.05	3.76	3.22	2.54	1.76	1.18	0.68	-0.19	0.80
	Excess runoff Volume after meeting crop irrigation requirement	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.91
<p><b>There fore, total Storage Volume is sufficient in respect of availability of water and demand of water through out of the year.</b></p>													

RUN OFF CALCULATION

**DESIGN OF EARTHEN EMBANKMENT FOR CONSTRUCTION OF WATER DETENTION STRUCTURE AT MOUZA:  
NAYABANKATI, JL NO: 34, PLOT NO: - UNDER, G.P-HOUMHARH, BLOCK: HOUMHARH, DIST:PACHEM  
MADINIPUR**



Preliminary dimension as per Strange	
Length of the embankment(L)	200.00 m
Free board	= 1.00 m
Top width of the embankment(B <sub>T</sub> )	= 2.00 m
Height of embankment	= 2.50 m
U/S side slope	= 2.00 :1
D/S side slope	= 1.00 :1
Bottom width(B <sub>B</sub> )	= 9.50 m
Here seepage line	= BIK
U/S side Slope Angle(alpha <sub>1</sub> )	= 26.49
D/S side slope Angle(alpha <sub>2</sub> )	= 43.66
From figure(BH)	= 3.01 m
AB	= 0.90 m
Horizontal distance between A'F(b)=AB+BH'+MN+N'F	= 7.53 m
Distance between directrix(D) and focus (F), S= $\sqrt{(A'F^2+GH^2)}-A'F$	= 0.40 m
From figure,(a+delta a)=JF=S/1-cos alpha <sub>2</sub>	= 1.462 m
As per Casagrande's solution, delta a=(a+delta a)[180°-alpha <sub>2</sub> /400°]	= 0.498 m
So length of discharge face(KF=a)	= 0.96 m
So provide inclined drainage blanket	= 1.00 m
Distance from base to the intersection of seepage line on the D/S side,(e)=a * sin alpha <sub>2</sub>	= 0.67 m
co-efficient of permeability of embankment material(k)	= 0.000010 m/sec
Seepage discharge rate per metre width of embankment, q=KS	= 0.000004 cumec/m length

ABSTRACT FOR CONSTRUCTION OF WATER DETENTION STRUCTURE AT MOUZA: NAYABANKATI, JL NO: 34,  
PLOT NO: - UNDER HOOMHARIH RANGE, BLOCK: HOOMHARIH, DIST:PACHEM MADINIPUR

ANNEXURE "X"

GENERAL ABSTRACT OF COST

SL NO	DESCRIPTION	AMOUNT
1	COST OF WORK	₹ 6,012,108.94
2	GST@ 12 % , AS APPLICABLE ON SL NO 1	₹ 721,453.07
3	COST OF ALL WORKS EXCLUDING LABOUR WELFARE CESS	₹ 6,733,562.01
4	LABOUR WELFARE CESS @ 1% ON SL NO 3	₹ 67,335.62
5	CONTIGENCY CHARGE @ 3% ON SL NO 3	₹ 202,006.86
6	COST OF ALL WORKS INCLUDING LABOUR WELFARE CESS AND CONTEIGENCY	₹ 7,002,904.49
	Say	₹ 7,002,904.00

TECHNICALLY VETTED

*M. S. S. S.*  
29/9/2020  
Superintending Engineer  
Kangsalati Circle-II  
I & W. Dte. Govt. of W.B.  
Paschim Medinipur

*Y. P.*  
Divisional Forest Officer  
Rupnarayan Division



Analysis of Rates as per PWD Schedule of Rates (SOR Vol-III) w.e.f. 01.12.2015 for Providing and laying Reinforced Cement Concrete Pipe NP 3 as per drawing in single row.						
Distance from MADINIPUR Railway stack yard to Pin pointed site					= 40 KM	
Sl. no	Reference Pg. No & Item no of PWD Sch.	Description of Item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1	P-276, Item no.-11.03 (d) 15 th Corrigenda & Addenda	Providing and laying reinforced cement concrete pipe NP3 with spigot socket for culverts on first class bedding of granular material in single row including fixing with cement mortar 1:2 as per Technical Specification Clause 1106 for Rural Roads of MORD drawing and Technical specifications. for 600 mm dia pipe	1.00	m	382.00	382.00
2	Table II-1, Page 4 It.no. 8 (a) , 11 th Corrigenda & Addenda	Supply of 600 mm dia NP 3 pipe with spigot	1.00	m	2258.00	2258.00
3	P-227, Item no.-7	Carriage of RCC Pipes over pucca road up to 600 mm dia.Any distance upto 5 Km.	1.00	m	49.00	49.00
		Above 5 Km upto 10 Km	1.00	m	4.40	22.00
		Above 10 KM upto 20 KM	1.00	m	4.00	40.00
		Above 20 KM upto 40 KM	1.00	m	3.80	76.00
			0.00		0.00	0.00
4	Page-225, Item No.-1.03, A(J) (i)	Loading in to trucks at the lifting point, unloading at destination, stacking properly in go downs or yard etc. as directed including carriage by head load up to a lead of 50.00 m at each of the two points. R.C.C pipes, C.I. Pipes and unreinforced Cement Pipe	1.00	m	25.92	25.92
<b>Total Cost</b>						<b>₹ 2,852.92</b>
<b>Rate per m. of NP 3 600 mm dia pipe Rs. 2852.92</b>						
#NAME?						



Analysis of Rates as per PWD Schedule of Rates (SOR Vol-III) w.e.f. 01.12.2015 for Masonry work with cement-sand mortar (1 : 4) & Boulder above 225 mm of Hura, Puncha, Malti, Barabazar.						
Boulder above 225 mm for 1 cum Masonry work (1:4)						1.25 cum
Distance from Hura, Puncha, Malti, Barabazar to Pin pointed site						= 120 KM
Sl. no	Reference Pg. No & Item no of PWD Sch.	Description of Item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1	P-326, Item no.-18.32 (b) (i) 15 TH CORRIGENDA & ADDENDA	Masonry work with rough dressed Stones of size as directed with cement mortar, true to line, level and shape, including dressing and shaping boulders to size as required, curing complete including cost and carriage of all materials complete.	1.00	Cum	1833.00	1833.00
2	P-5, 11 th corrigendum it no 22	Cost of Boulder above 225 mm at Hura, Puncha, Malti, Barabazar. Boulder required for 1 Cum Masonry work 1.25 Cum.	1.25	Cum	189.00	236.25
3	P-227, Item no.-3 (a)	Cost of carriage of Boulder of 1.25 Cum above 225 mm size from Hura, Puncha, Malti, Barabazar to pin-pointed site Any distance upto 5 Km.	1.25	Cum	124.00	155.00
		Above 5 Km upto 10 Km	1.25	Cum	10.90	68.13
		Above 10 KM upto 20 KM	1.25	cum	10.10	126.25
		Above 20 KM upto 50 KM	1.25	cum	9.50	356.25
4	Page-224, Item No.-1.03, A(d)	Above 50 KM upto 100 KM	1.25	cum	8.40	525.00
		Loading in to trucks at the lifting point, unloading at destination, stacking properly in go downs or yard etc. as directed including carriage by head load up to a lead of 50.00 m at each of the two points. (d) Stone aggregate 40 mm nominal size and above	1.25	Cum	62.25	77.81
<b>Total Cost</b>						<b>₹ 3,377.69</b>
<b>Rate per Cum. of Masonry work with cement-sand mortar (1 : 4) is Rs.3377.69</b>						
#NAME?						

Analysis of Rates as per PWD Schedule of Rates (SOR Vol-III) w.e.f. 01.12.2015 for Providing and laying Pitching on slopes with Boulder 225-150 mm of Hura, Puncha, Malti, Barabazar.						
Boulder 225-150 mm for 1 cum Pitching work						1.20 cum
Distance from Hura, Puncha, Malti, Barabazar to Pin pointed site						= 120 KM
Sl. no	Reference Pg. No & Item no of PWD Sch.	Description of Item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
1	P-308, Item no.-15.03	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications.	1.00	Cum	496.00	496.00
2	Table III-1, It no. 23, P-5, 11 th Corrigenda & Addenda	Cost of Boulder 225-150 mm at Hura, Puncha, Malti, Barabazar. Boulder required for 1 Cum Masonry work 1.20 Cum.	1.20	Cum	216.00	259.20
3	P-227, Item no.-3 (a)	Cost of carriage of Boulder of 1.20 Cum above 225-150 mm size from Hura, Puncha, Malti, Barabazar. to pin-pointed site Any distance upto 5 Km.	1.20	Cum	124.00	148.80
		Above 5 Km upto 10 Km	1.20	Cum	10.90	65.40
		Above 10 KM upto 20 KM	1.20	cum	10.10	121.20
		Above 20 KM upto 50 KM	1.20	cum	9.50	342.00
4	Page-224, Item No.-1.03, A(d)	Above 50 KM upto 100 KM	1.20	cum	8.40	504.00
		Loading in to trucks at the lifting point, unloading at destination, stacking properly in go downs or yard etc. as directed including carriage by head load up to a lead of 50.00 m at each of the two points. (d) Stone aggregate 40 mm nominal size and above	1.2	Cum	62.25	74.70
<b>Total Cost</b>						<b>₹ 2,011.30</b>
<b>Rate per Cum. (200 mm th.)of Providing and laying Pitching is Rs. 2011.3</b>						
#NAME?						

Analysis of Rates as per Current PWD Schedule of Rates for Ordinary Cement Concrete (1:2:4) with 20 mm nominal size stone aggregate of Pakur variety from MADINIPUR Railway Stack Yard to site						
Stone Aggregate 20 mm nominal size for 1 cum Cement concrete (1:2:4) (B-60)					0.66 cum	
Stone Aggregate 10 mm nominal size for 1 cum Cement concrete (1:2:4) (B-60)					0.22 cum	
Distance from nearest Rly. Stack Yard (MADINIPUR) to Pin pointed site					= 40 KM	
Sl. No.	Ref. page no & item no of PWD Schedule	Description	Qty.	Unit	Rate (Rs.)	Amount
1	Item no. 4 a Page no. 24 3rd CORRIGENDA & ADDENDA	Ordinary Cement Concrete (mix1:2:4) with garaded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any in ground floor as per relevant IS code., a) Pakur variety	1.00	cum	4,242.00	4,242.00
2	P-309 Table T-1	Cost of 20 mm nominal size stone aggregate at MADINIPUR Rly.Stack Yard (Pakur Variety)	0.66	cum	1,700.00	1122.00
3	P-309 Table T-1	Cost of 10 mm nominal size stone aggregate at MADINIPUR Rly.Stack Yard (Pakur Variety), Stone aggregate required for 1 cum Cement Concrete	0.22	cum	1,569.00	345.18
4	P-310, Table T-2, Item no 1 (a)	Cost of carriage of stone aggregate of 0.88 Cum 20 mm nominal size from MADINIPUR Stack Yard to Pin pointed site. Any distance upto 5 Km.	0.88	Cum	124.00	109.12
		Above 5 Km upto 10 Km	0.88	Cum	10.90	47.96
		Above 10 KM upto 20 KM	0.88	cum	10.10	88.88
		Above 20 KM upto 40 KM	0.88	cum	9.50	167.20
			0.00		0.00	0.00
5	P-311, Table T-3, Item no 1 (a)	Loading into trucks at the lifting points, unloading at destination, stacking properly in godowns or yard etc. as directed including carriage by head load up to a lead of 50.00 mtr at each of the two points. a) Stone aggregate below 40 mm nominal size.	0.88	cum	58.00	51.04
Total						₹ 6,173.38
Rate per Cum. of Ordinary Cement Concrete (1:2:4) with 20 mm nominal size stone aggregate of Pakur variety is Rs. 6173.38						
#NAME?						

Analysis of Rates as per Current PWD Schedule of Rates for Ordinary Cement Concrete (1:1.5:3) with 20 mm nominal size stone aggregate of Pakur variety from MADINIPUR Railway Stack Yard to site						
Stone Aggregate 20 mm nominal size for 1 cum Cement concrete (1:1.5:3) (B-60)					0.573 cum	
Stone Aggregate 10 mm nominal size for 1 cum Cement concrete (1:1.5:3) (B-60)					0.287 cum	
Distance from nearest Rly. Stack Yard (MADINIPUR) to Pin pointed site					= 40 KM	
Sl. No.	Ref. page no & item no of PWD Schedule	Description	Qty.	Unit	Rate (Rs.)	Amount
1	Item no. 10 Page no. 26 3rd CORRIGENDA & ADDENDA	Ordinary Cement Concrete (mix1:1.5:3) with garaded stone chips (20 mm nominal size) excluding shuttering and reinforcement, if any in ground floor as per relevant IS code., a) Pakur variety	1.00	cum	4,957.00	4,957.00
2	P-309 Table T-1	Cost of 20 mm nominal size stone aggregate atMADINIPUR Rly.Stack Yard (Pakur Variety)	0.516	cum	1,700.00	877.20
3	P-309 Table T-1	Cost of 10 mm nominal size stone aggregate at JHARGARAM Rly.Stack Yard (Pakur Variety).	0.344	cum	1,569.00	539.74
4	P-310, Table T-2, Item no 1 (a)	Cost of carriage of stone aggregate of 0.86 Cum 20 mm nominal size from MADINIPUR Stack Yard to Pin pointed site.	0.86	Cum	124.00	106.64
		Above 5 Km upto 10 Km	0.86	Cum	10.90	46.87
		Above 10 KM upto 20 KM	0.86	cum	10.10	86.86
		Above 20 KM upto 40 KM	0.86	cum	9.50	163.40
			0.00		0.00	0.00
5	P-311, Table T-3, Item no 1 (a)	Loading into trucks at the lifting points, unloading at destination, stacking properly in godowns or yard etc. as directed including carriage by head load up to a lead of 50.00 mtr at each of the two points.	0.86	cum	58.00	49.88
Total						₹ 6,827.59
Rate per Cum. of Ordinary Cement Concrete (1:2:4) with 20 mm nominal size stone aggregate of Pakur variety is Rs. 6827.59						
#NAME?						

RATE ANALYSIS final

Pag

14	Providing weep holes in Brick masonry / Plain / Reinforced concrete butment, wing wall / return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V:20H towards drawing face. Complete as per drawing and Technical specifications. <i>(Pg 297, Sl no 13.03 of PWD Road schedule &amp; 15th Corrigenda)</i>	50	No	115	₹ 5,750.00
15	Supplying, testing and installation of open Weave Jute (Geo-textile (JGT) having overall weight of 500 gm/sq.m, thickness 6mm, width 1220mm, Tensile strength 10KN/m (Warp direction) x 7.50KN/m (weft direction) on slopes of embankments dressed and cut to gradient as per design and drawing for control of surface erosion on proposed banks slope of embankment including the cost of preparation of sub-grade and excavating the trenches of 500mm deep and spade-width wherever necessary, and filling the trenches with earth duly secured to sub-grade by U shape MS staples (11 gauges) or wooden or plastic pegs at an interval of 450 mm, providing sidelapping of 100mm and horizontal lapping of 300mm as per directi on complete. The rate is inclusive of all incidental charges, transportation by all means to the work site, all leads and lifts complete. (Payment will made on the basis of finished surface area of the slope).	4928.00	Sqm	58.00	₹ 285,824.00
<i>[Item no 2.81/ page - C251&amp;WD/ Capter -1 ]SOR2018</i>		440	x	11.20	= 4928.00
16	Precast cement concrete block or lining units as per designed size and specification, with well graded stone metal aggregate, including dressing, ramming, shuttering, finishing the top surface with 1:3 cement and sand mortar, curing, transporting and laying the blocks or lining units at work site in position, over filter, layer, keeping a gap of 6mm between the adjacent units, by use of removable ply boards or non removable thermoc olboards, with all leads and lifts, including supply and carriage of all materials complete. (The rate is exclusive of the cost of stone aggregate and its carriage up to site. Constructioning has to add the cost of same from the SoRoPW (Roads) to derive the consolidated rate. Consumption chart of the USoR may be used for assessing the quantity of coarse aggregate per cum of concrete). With Stone Aggregate (Pakur, North Bengal or Rajmahal varieties) a) Nominal Mix. 1:2:4 with 20 mm down coarse aggregate b) Nominal Mix. 1:1.5:3 with 20 mm down coarse aggregate	67.50	Cum	6827.59	₹ 4,60,862.33
		150.00	X	3.00	X 0.15 = 67.50
<i>[Item no 2.54/ page - C191&amp;WD/ Capter -1 ]</i>					
17	Construction of a Sign board of size 1.80 m x 1.20 m made of brick masonry (1:4) cement mortar 125 mm thick inside surrounding with 250 mm x 250 mm thick out side, foundation depth 0.60 m, with 15 mm thick plaster (1:6). Lettering should be done with approved Black paint over Yellow Background complete as per direction of E-I-C.	1.00	L.S.	3500.00	₹ 3,500.00
<i>[Approved rate of S.E.(A-I), Bankura (A-I) Circle]</i>					
<b>Total</b>					<b>₹ 53,90,670.01</b>
<b>Say</b>					<b>₹ 53,90,670.00</b>

TECHNICALLY VETTED

*16/19/2020*  
Superintendent Engineer  
Kangsabati Circle-II  
I & W. Dte. Govt. of W.B.  
Paschim Medinipur

*48*  
Divisional Forest Officer  
Rupnayan Division



ABSTRACT FOR CONSTRUCTION OF WATER DETENTION STRUCTURE AT MOUZA: BABUIKHULIA, JL NO: 226,  
PLOT NO: - UNDER HOOMHARH RANGE, BLOCK: HOOMHARH, DIST:PACHEM MADINIPUR

ANNEXURE "X"

GENERAL ABSTRACT OF COST

SL NO	DESCRIPTION	AMOUNT
1	COST OF WORK	₹ 5,390,670.01
2	GST@ 12 % , AS APPLICABLE ON SL NO 1	₹ 646,880.40
3	COST OF ALL WORKS EXCLUDING LABOUR WELFARE CESS	₹ 6,037,550.41
4	LABOUR WELFARE CESS @ 1% ON SL NO 3	₹ 60,375.50
5	CONTIGENCY CHARGE @ 3% ON SL NO 3	₹ 181,126.51
6	COST OF ALL WORKS INCLUDING LABOUR WELFARE CESS AND CONTEIGENCY	₹ 6,279,052.42
	Say	₹ 6,279,052.00

TECHNICALLY VETTED  
11/9/2020  
Superintending Engineer  
Kangsabati Circle-II  
I & W. Dte. Govt. of W.B.  
Paschim Medinipur

44  
Divisional Forest Officer  
Rupnarayan Division

