



OFFICE OF THE GENERAL MANAGER,
WATCO Division, Cuttack, Odisha, India

Telephone: - 0671-2547115

E-mail – gmwatcoctc@gmail.com

**DETAILED TENDER CALL NOTICE (DTCN)
FOR**

Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack.

ESTIMATED COST: Rs. 59.49 LAKH

Bid Identification No. GMWATCO (W)-05/2023-24 Dtd.27.10.2023

**COST OF TENDER PAPER:10,000/- + GST @ 18%
(Rupees Ten Thousand plus eighteen percent GST)only**

OCTOBER-2023

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SECTION-1



OFFICE OF THE GENERAL MANAGER,

WATCO Division, Cuttack, Odisha, India

E-mail _gmwatcoctc@gmail.com

NOTICE INVITING TENDER (NIT) FOR THE WORK

“Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack.”

NATIONAL COMPETITIVE BIDDING THROUGH e-Procurement

Bid Identification No. GMWATCO (W)-05/2023-24 Dtd.27.10.2023

The **General Manager, WATCO Division, Cuttack** on behalf of Governor of Odisha invites **Percentage Rate Bids** through **e-Procurement** in conformity with the terms and conditions of the Detailed Tender Call Notice (DTCN) in Two Bid system (Part-I: General & Technical Bid and Part-II: Price Bid) from **“B” Class Contractors** registered with the Odisha State Government and Contractors of equivalent grade/class registered with Central Government/ any other State Government/ MES/ Railways having experience and expertise in Design, Construction, Testing & Commissioning of Similar Type of Works and fulfilling minimum eligibility criteria as stated hereunder and other detailed qualifying requirements given in the DTCN to be eventually drawn up in the **Standard P1 Contract Form of Odisha PWD**. The bid should be submitted on-line in the website www.tendersodisha.gov.in by eligible class of contractors. The bidders should have the necessary Portal Enrolment (with his own Digital Signature Certificate). Contractors registered elsewhere but not registered with Government of Odisha can also participate in the e-procurement after necessary enrolment in the portal but have to subsequently register themselves with the appropriate registering authority of the State Government before award of work / signing of the Agreement as per prevalent registration norms of the State.

Sl. No.	Name of the work	Value of Work (Rs. Lakh)	(EMD) (Rs. Lakh) (Online)	Class of Contractor	Period of Completion	Cost of Bid Document + GST @ 18% (in Rs.) (Online)
1	2	3	4	5	6	7
1	Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack	59.49	0.60	“B”	03 (Three) Months	11800/-

2. Mode of Submission of tender: Tender should be submitted online in **www.tendersodisha.gov.in**.
3. The bidders desirous to participate in bidding must possess compatible Digital Signature Certificate of Class-II or Class-III and should follow the changes/ modifications/ addendum to DTCN if any.
4. The original documents i.e., Affidavits, Undertakings & Certificates as per the Schedules and Annexure of DTCN that have been uploaded by the bidder in the e-tender website should be submitted for verification during evaluation. The Technical Bid will be opened on **Dt.14.11.2023 at 12.30 PM**.

5. **Critical Dates:-**

SN	Description	Critical Dates
(i)	Period of availability of tenders on-line :	From 11.00 AM of Dt.03.11.2023 to 5.00 PM of Dt.13.11.2023
(ii)	Last date & time of bidding on-line :	5.00 PM of Dt. 13.11.2023
(iii)	Date & time of opening of Technical Bid :	12.30 PM of Dt. 14.11.2023

6. **Minimum Eligibility Criteria :-**

- i) **The Registered Contractors should have executed similar nature of work such as laying of PVC pipe line including external and internal PH and sanitary installation works of building** in respective areas & certificate from an officer not below the rank of Executive Engineer is to be furnished.
- ii) The Registered Contractors should have annual financial turnover of not less than **(40% of the estimated cost)** in any one year in civil **Construction Works** during last 5 (five) years and the turnover need to be certified by Chartered Accountant. Weightage @ 10% per year shall be given on the annual turnover of the preceding years.

7. **Escalation Factor (On Compound basis):**

Following enhancement/compounding factors will be used for the costs of works executed and the financial figures to a common base value.

Year before Multiplying factor

One	1.10
Two	1.21
Three	1.33
Four	1.46
Five	1.61

8. To arrive at the value of completed works, Value of multiple contracts executed in a financial year shall be considered. For this purpose, the Completion certificates given by the authorities for any one financial year shall be considered. In case value of works executed in any one financial year is not available in the Certificates, the same shall be calculated on a pro-rata basis, considering that the total completed value and the time schedule in days.

9. The Bidder should have not been black listed by any Govt./ Govt. Undertaking on the bid opening date. **Self-declaration certificate** by Bidder in the form of Affidavit is to be submitted.
10. The bid for the work shall remain valid for a period of **120 (One Hundred Twenty) days from the date of opening of Price Bid**. If any Bidder/ Tenderer withdraws his bid/ tender before the said period or makes any modifications in the terms and conditions of the bid, the said earnest money shall stand forfeited.
11. Bids from Consortium/ Unincorporated Joint Venture is not acceptable.
12. Other details can be seen in the bidding documents, which is available in website **www.tendersorissa.gov.in**.
13. All amendments, time extension etc. will be uploaded in the website only. Bidders should regularly visit the above website to keep themselves updated.
14. Authority reserves the right to reject any or all the tenders without assigning any reasons thereof.
15. **Name and Address of the Officer Inviting Bids**
OFFICE OF THE General Manager, WATCO
Division, Cuttack,-753003,
Odisha, India
Telephone: - 06712547115
E-mail – gmwatcoctc@gmail.com

Sd/-
General Manager,
WATCO Division, Cuttack.

CHECK LIST TO BE FILLED UP BY THE BIDDER

Name of the Work : "Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack."

Sl. No	Particulars	Reference to Clause no.	Whether furnished		Reference to Page no.
			Yes	No	
01.	Cost of Bid Document + GST @ 18% = Rs.11,800/- (Online remittance)	As per NIT			
02.	Earnest Money Deposit (EMD)	One Percent of the quoted value.			
03.	Copy of valid Registration Certificate	DTCN Clause No.2(A).a.v			
04.	Copy of valid GST Registration Certificate / GSTIN	DTCN Clause No.2(A).a.iii			
05.	Copy of PAN Card	DTCN Clause No.2(A).a.iv			
06.	No Relationship Certificate	DTCN Clause No.2(A).a.vii			
07.	Works Experience -	Schedule-D			
(a)	List of similar works executed during last 5 years	Schedule-D (Item-3)			
(b)	Works in hand-Approximate value of existing commitment and ongoing works.	Schedule-D (Item-4)			
(c)	Bid Capacity Calculation Sheet	Schedule-D (Item-5)			
08.	Information regarding current litigation,	Schedule-E			
(a)	debarring / expelling of the tender or abandonment of the work by the tenderer				
(b)	Affidavit / Declaration	Schedule-F			
09.	Work schedule in the form of Bar Chart	DTCN Clause No.7.14			
10.	Sealed envelope containing additional performance security or declaration as the case may be	DTCN Clause No.23.4 of Section -2(B)			
11.	Self-declaration certificate by the bidder in the form of Affidavit- for not being blacklisted by any Govt./ Govt. Undertaking	As per NIT			
12.	Self-declaration certificate by the bidder in the form of Affidavit- declaring that in last 3 financial years they have not applied for/ are undergoing Corporate Debt Restructuring (CDR) /Strategic Debt Restructuring (SDR) or facing recovery proceedings from Financial Institutions or those are facing Sickness and under consideration of Board for Industrial and Financial Reconstruction (BIFR)	DTCN Section - 2(B) Clause No.8.4			

CONTRACT DATA

A. GENERAL INFORMATIONS

SN	Item	Details
1	Bid Identification No.	GMWATCO (W)-05/2023-24 Dtd.27.10.2023
2	Name of the Work	Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack
3	Officer inviting tender	General Manager, WATCO Division, Cuttack
4	Accepting Authority	General Manager, WATCO Division, Cuttack
5	Estimated Cost	Rs.59.49 lakh

B. BID INFORMATION

6	Intended completion period/Time period assigned for Completion	3 (Three) Calendar Months												
7	Last Date & time of submission of Bid	5.00 PM of Dt.13.11.2023.												
8	Cost of Bid Document (To be Remitted Online)	Rs.10000.00 + 18% GST												
9	Earnest Money Deposit (EMD)	One Percent of the quoted value.												
10	Additional Performance Security													
		<table border="1"> <thead> <tr> <th>SI No.</th> <th>Differential Cost i.e., Estimated Cost put to tender minus the Quoted Amount</th> <th>Additional Performance Security to be deposited by the Successful bidder</th> </tr> </thead> <tbody> <tr> <td>i</td> <td>Below 5%</td> <td>No Additional Performance Security</td> </tr> <tr> <td>ii</td> <td>From 5% and above and below 10%</td> <td>50% of (difference between estimated cost put to tender and Bid Amount)</td> </tr> <tr> <td>iii</td> <td>From 10% and above</td> <td>150% of (difference between estimated cost put to tender and Bid Amount)</td> </tr> </tbody> </table> <p>As per amendment Circular No.4559/W, Bhubaneswar Dt.05.04.2021 of Govt. of Odisha Works Department.</p>	SI No.	Differential Cost i.e., Estimated Cost put to tender minus the Quoted Amount	Additional Performance Security to be deposited by the Successful bidder	i	Below 5%	No Additional Performance Security	ii	From 5% and above and below 10%	50% of (difference between estimated cost put to tender and Bid Amount)	iii	From 10% and above	150% of (difference between estimated cost put to tender and Bid Amount)
SI No.	Differential Cost i.e., Estimated Cost put to tender minus the Quoted Amount	Additional Performance Security to be deposited by the Successful bidder												
i	Below 5%	No Additional Performance Security												
ii	From 5% and above and below 10%	50% of (difference between estimated cost put to tender and Bid Amount)												
iii	From 10% and above	150% of (difference between estimated cost put to tender and Bid Amount)												
ii)	Pledged in favour of	General Manager, WATCO Division, Cuttack												
iii)	Payable at	Cuttack												
iv)	Type of Instrument	As specified in the Bid document												
11	The Financial years of last five years	2018-19 to 2022-2023												
12	Bid validity period	120 days from the date of opening of Price Bid												
13	Currency of Contract	Indian Rupees												
14	Language of Contract	English												
C. Agreement Information														
15	Execution of agreement	The successful bidder is to execute the agreement with General Manager, WATCO Division, Cuttack representing CEO, WATCO, Bhubaneswar.												

SECTION- 2(A)
DETAILS OF THE DOCUMENTS TO BE FURNISHED
FOR ONLINE BIDDING

- (a) Scanned copies of the following documents to be up-loaded in appropriate place in PDF format in the website www.tendersodisha.gov.in.
- i. **Remittance of Cost of Bid Document (Online).**
 - ii. **Remittance of (EMD) (Online).**
 - iii. **GST Registration Certificate / GSTIN.**
 - iv. PAN Card.
 - v. Registration Certificate.
 - vi. Affidavit regarding correctness of certificates.
 - vii. Affidavit regarding no relation certificate.
 - viii. Work experience certificate from the authority not below the rank of Executive Engineer.
 - ix. Annual Turnover Certificate from Chartered Accountant for last five financial years with break-up of **Similar type Works & Total Works** for each financial year.
 - x. Any other relevant required document, if any.
- (b) Scanned Copies of the Certificates/Formats showing details of information to be furnished as per the enclosed formats should be uploaded in appropriate place after converting the same to PDF.
- Schedule A - Structure & Organisation.
 - Schedule B - Financial statement
 - Schedule C - List of tools, plant & equipment proposed to be deployed in the work.
 - Schedule D - Work experience
 - Schedule E - Information regarding current litigation/debarment etc.
 - Schedule F - Information on Electrical License/Collaboration.
 - Schedule G - Declaration.
 - Schedule H - Solvency Certification from Bank
 - Schedule I - Any other information.
 - Schedule J - Deleted
 - Schedule K - Form of Bank Guarantee
 - Schedule L - **Form of Bid-Security Declaration**
- (The details of the Format is enclosed in the DTCN)
- (c) Uploaded documents of valid successful bidders will be verified with the original before acceptance of offer.
- (d) DTCN is not to be uploaded by the bidder. The bidder has to only agree / disagree on the conditions in the DTCN. The bidders, who disagree on the conditions of DTCN, can not participate in the tender.
- (e) Cost of Bid Document & (EMD) will be submitted on online mode by the Bidder, failing which the bidder will be disqualified

SECTION- 2(B)

INSTRUCTIONS TO BIDDERS

A. GENERAL

1. **Definitions:**

- (a) "Employer" means the **WATCO, BHUBANESWAR** a Government of Odisha owned company represented by the **General Manager, WATCO Division, Cuttack** or his authorized representative with whom the selected Bidder signs the contract for the services.
- (b) "Contractor" / Bidder / Firm / Engineer Firm / Company carry the same meaning through out the DTCN and Contract.
- (c) "Contract" means the contract/ agreement signed by the parties along with all attached documents listed in the DTCN (Tender Document Part -I & II).
- (d) "Data Sheet" means such part of the Instructions to Contractor as are used to reflect assignment conditions and evaluation of the bid.
- (e) "Day" means a calendar day.
- (f) "Government" means the Government of Odisha.
- (g) "Instructions to Bidders (Section-2(B) of the Part-I of DTCN) means the document which provides all information needed to prepare their proposals.
- (h) "NIT" (Section-1 of the DTCN) means the Letter of Invitation being sent by the Employer.
- (i) "Personnel" means professionals and support staff provided by the Contractor and assigned to perform the services in full or in any part thereof.
- (j) "Proposal" means the Technical Proposal (Tender Document Part I – General & Technical Bid) and the Financial Proposal (Tender Document Part II – Price Bid).
- (k) "DTCN" means the Detailed Tender Call Notice prepared by the Employer for the selection of contractor which includes Part-I & II.
- (l) "Govt". means Govt. of Odisha or Govt. of India as the case may be.

2. **Introduction / Selection Procedure:**

The Employer named in the Data Sheet will select a contract firm to execute the work as described in the scope of work and in the Data sheet.

The Contractor shall bear all costs associated with the execution of the work on **Percentage Rate Bid**. The Employer is not bound to accept any proposal, and reserves the right to annul the selection process at any time prior to contract award without thereby incurring any liability to the Contractor.

3. **Location of the Project:**

The place of action is at **BOSE** of **Cuttack** District in the **State of Odisha**.

4. **Source of Funding:**

The work will be funded by **WATCO**.

5. **Eligibility:**

- 5.1. A Bidder shall be deemed to have the nationality of India.

- 5.2. A Bidder shall be **"B" Class** Contractors registered with the Odisha State Government and Contractors of equivalent grade/class registered with Central Government/ any other State Government/ MES/ Railways.
- 5.3. Registered Contractor of **"B" Class** of Odisha State PWD or equivalent class of CPWD / Railway / MES / Central or other State Govt. Proof of registration is to be furnished along with the tender.
6. **History of Litigation and Criminal Record:**
If any criminal cases are pending against the Contractor (him/her/partners) at the time of submitting the tender, then the tender shall be summarily rejected.
7. The Contractor has to furnish a declaration that no near relatives are working in the cadre of an Assistant Engineer/ Assistant General Manager and above in the Organisation of Public Health Engineering Organisation (PHEO) of State of Odisha.
8. **Other Requirements:**
- 8.1. Even if the Contractor meets other criteria, his tender shall be summarily rejected if he is found to have misled or made false representation in the form of any of the statements submitted in proof of the eligibility and qualification requirements.
- 8.2. The tender shall also be summarily rejected if he has a record of performance such as absconding from work, works not properly completed as per contract, inordinate delays in completion, financial failure.
- 8.3. In addition to the above, even while executing the work, if it is found that he produced false / fake, certificates in his tender, he will be blacklisted.
- 8.4. The bidders who have in last 3 financial years applied for / are undergoing Corporate Debt Restructuring (CDR)/Strategic Debt Restructuring (SDR) or facing recovery proceeding from Financial Institutions or those are facing Sickness and under consideration of Board for Industrial & Financial Reconstruction (BIFR) are not eligible for qualification. Self declaration Certificate by the bidder in the form of affidavit is to be submitted.
9. **Original Certificates:**
Original documents/certificates shall be produced as and when required to verify the copies of statements and other information furnished along with tender. Failure to produce original documents in time will lead to disqualification.
10. **Cost of Tendering:**
The Contractor shall bear all expenses associated with the preparation and submission of his tender, **General Manager, WATCO Division, Cuttack** shall in no case be responsible or liable for reimbursement of such expenses.

11. **Site Visit:**

The contractor is advised to visit and examine the site at **BOSE** in the district of **Cuttack** and its surroundings and obtain for himself all information that may be necessary for preparing the tender and quoting rates at his cost and responsibility.

B. TENDER DOCUMENTS

12. **Tender Documents:**

12.1. A set of Tender Documents comprising of the General & Technical Bid and the Price Bid includes the following together with all Addenda thereto, which may be issued in accordance with **Clause 2(B)13 and Clause 2(B)14**.

PART- I : GENERAL & TECHNICAL BID

Section	Description
DTCN Part – I: General & Technical- Bid	
Section-1	Notice Inviting Tender (NIT)
	Check List to be Filled up by the Bidder
	Contract Data
Section-2(A)	Details of the Documents to be Furnished for Online Bidding
Section-2(B)	Instructions to Bidders
Section-2(C)	Data Sheet
Section-2(D)	Letter for Submission of Tender
Section-2(E)	Tender Declaration
Section-2(F)	Letter of Acceptance of Tender
Section-2(G)	Memorandum
Section-3	Information regarding Tenderer
Section-4	Declaration by the Tenderer
Section-5	Form of Agreement
Section-6	Conditions of Contract
Section-7	Special Conditions of Contract
Section-8	Scope of Work
Section-9	Technical Specifications & Design Criteria
Schedule-A to L	Formats for furnishing Information by the Bidder
Appendix - I	Executive Instruction regarding calling for and acceptance of tenders in e-Procurement in Govt. of Odisha
Appendix - II	Procedure for Electronic Receipt, Accounting and Reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids
DTCN Part – II: Price Bid/BoQ	

12.2. The Contractor is expected to examine carefully all instructions, terms of reference, tender conditions, forms, appendices to tender, addenda in the tender documents.

Failure to comply with the requirements of tender submission will be at the contractor's own risk.

13. Deleted

14. **Amendment of Tender Documents:**

14.1. At any time prior to the dead line for submission of tenders, **General Manager, WATCO Division, Cuttack** may for any reason, whether at its own initiative, modify the tender documents by issuing an Addendum.

14.2. Such addenda will be notifying in the website and will be binding upon them.

14.3. In order to afford prospective Contractor reasonable time to take such addenda into account in preparing their tenders, **General Manager, WATCO Division, Cuttack** at his discretion, may extend the dead line for the submission of tenders, if necessary.

C. PREPARATION OF TENDER DOCUMENT

15. **Language of the Documents:**

All documents relating to the Tender shall be in the English language.

16. **Documents Comprising the Tender:**

- (a) General & Technical Bid (Part-I of Tender Document)
- (b) Price Bid (Part-II of Tender Document)
- (c) All documents stipulated elsewhere in the DTCN.

17. **Sufficiency of Tender:**

The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the services to be provided and of the prices quoted in the financial bid, which shall cover all his obligations under the contract and all matters and things necessary for the successful accomplishment of the work.

18. **Preparation of Proposal:**

18.1. The Proposal (see Section-2(B) Clause 1(J)) as well as all related correspondence exchanged by the employer & the Contractor shall be written in the language specified in the Data Sheet.

18.2. In preparing the proposal, the Contractor is expected to examine in detail the documents comprising the DTCN. Material deficiencies in providing the information requested may result in rejection of a proposal.

18.3. **Site Inspection by tenderer.**

The tenderer shall inspect the site at his own cost and shall satisfy himself with regard to the nature and extent of the work involved, the actual site conditions, existing facilities and shall collect any other information which may be required before

submitting the tender. Any further data required during execution of the work / scheme shall be ascertained by the contractor at his own cost.

19. **Technical Proposal Format and Content:**

The Contractor should have sufficient man power to execute & complete the work within the time schedule. He should have sufficient financial background / work experience with specification in construction of water supply scheme / tools, plant, machinery and equipment required for execution of the work / free from litigation / have good working record of completion of the works in time. It may be noted that the contractor should satisfy the minimum eligible criteria for award of Contract. The Technical Proposal shall provide the information indicated in the following paragraphs (clause 2(B)19.1 to 2(B)19.12) using the attached Standard Forms. A page is considered to be one printed side of A4 or letter size paper.

19.1. The Contractor has to furnish the names of the professional staff to be deployed in the work with their qualification / experience in Scheduled-'A'.

19.2. A description of the approach, methodology and work plan for performing the assignment.

19.3. The list of the tools, plant, machinery & equipment to be deployed in the work as per Schedule 'C'.

19.4. Work completion certificate from an Engineer not below that the rank of General Manager/General Manager equivalent in support of the work executed as furnished in Scheduled-D.

19.5. Bio-data of the professional staff furnished need be signed by the staff themselves or by their authorized representatives.

19.6. Annual financial turn over of the last **5 (Five)** years shall be Audited accounts of the firm/Contractor and certified by Chartered accountant and to be indicated in Schedule-B.

19.7. Solvency Certificate from a Scheduled Bank (Schedule – G).

19.8. **GST Registration Certificate / GSTIN.**

19.9. Copy of PAN Card.

19.10. Copy of Contractor's Registration Certificate.

19.11. General Power of Attorney if required in favour of the authorised signatory.

19.12. Other information as required.

19.13 The Technical Bid shall not include any financial information related to the Price Bid. **Technical Bid containing financial information related to the Price Bid shall be declared non responsive.**

20. **The Financial Proposal:**

- 20.1. The Contractor shall quote his rates on prescribed form of the Bill of Quantities (BoQ) already supplied in the Tender.
- 20.2. The offer shall be inclusive of all costs associated with the assignment including cost of all materials to be utilized in the work, cost of T&P, consumables, infrastructure backup etc. The offer shall also be inclusive of all duties, levies, taxes of the Central and State Govt. Further it shall also include all other expenses incidental thereto for successful accomplishment of the assignment in conformity with the DTCN.
- 20.3. The contractor should make realistic assessment of the exhaustive nature of work and the extent of expert technical and managerial inputs and resources required to carry out the work diligently to complete the work within the stipulated time and quote their offer accordingly.
- 20.4. The rate quoted by the firm shall be firm.
21. **Tender Validity:**
- 21.1. The proposal must remain valid for **120 (One Hundred Twenty) days** from the date of opening of price bid.
- 21.2. A Contractor agreeing to the request of extending the validity period of the proposal will not be required or permitted to modify his tender, but will be required to extend the validity of his EMD.
22. **Authorisation, Corrections, Erasures etc. in Tender Papers:**
- 22.1. The tender document shall be digitally signed by a person duly authorized to do so. Proof of authorization shall be furnished in the form of a certified copy of Power of Attorney, which shall accompany the tender.
- 22.2. The completed tender shall be submitted without any alterations, inter-relations or erasures except those which accord with instructions given by the **General Manager, WATCO Division, Cuttack.**
- 22.3. Only one tender shall be submitted by a contractor. Submission of bids through e-Procurement portal the system shall consider only the last bids submitted through portal.
23. **Earnest Money Deposit / ISD / SD / Additional Perform Security & GST:**
- 23.1. **Earnest Money Deposit:**
The Earnest Money Deposit (EMD) of **Rs.0.60** lakh shall be remitted on online mode. Tenders without EMD or with Part EMD or EMD in any other form shall not be accepted and such tenders shall be out rightly rejected.
- 23.2. **Initial Security Deposit:**
The successful Tenderers, after receipt of formal order shall have to furnish Initial Security Deposit (ISD) **equal to 2% (two percent) of the accepted value of the tender in shape of NSC/Postal Saving Pass Book /Post Office Time Deposit /Kishan Vikash Patra/Deposit Receipt in Schedule Bank duly pledged in favour of the General**

Manager, WATCO Division, Cuttack payable at **Cuttack** within 7(seven) days of receipt of intimation failing which their tender shall be cancelled with the forfeiture of EMD.

23.3. **Additional Performance Security:**

Sl No.	Differential Cost i.e., Estimated Cost put to tender minus the Quoted Amount	Additional Performance Security to be deposited by the Successful bidder
i	Below 5%	No Additional Performance Security
ii	From 5% and above and below 10%	50% of (difference between estimated cost put to tender and Bid Amount)
iii	From 10% and above	150% of (difference between estimated cost put to tender and Bid Amount)
As per amendment Circular No.4559/W, Bhubaneswar dt. 05.04.2021 of Govt. of Odisha Works Department.		

23.4. **GST Registration Certificate / GSTIN:**

Tenderers are required to submit attested copies of valid **GST Registration Certificate / GSTIN**.

23.5. **Security Deposit**

In addition to that, **5% of gross value** will be deducted from bill(s) of the contractor toward **Security Deposit (SD)** which will be refunded after the defect liability period subject to payment of final bill.

23.6. The EMD shall be forfeited, if, (a) a contractor withdraws the tender during the validity period of tender or (b) if the firm fail to furnish ISD within due time or (c) the successful tenderer fails to sign the Agreement for whatever reason.

23.7. In consideration of the **General Manager, WATCO Division, Cuttack** to investigate and to take into account each tender and in consideration of the work thereby involved, all earnest money deposited by the tenderer will be forfeited in the event of such tenderer either modifying or withdrawing his tender at his instance within the validity period.

24. **Signing of Tenders / Bid**

All tender documents will be signed digitally with Digital Signature Certificate (DSC). The online bidder shall digitally sign on all statements, documents, certificates, uploaded by him, owing responsibility for their correctness / authenticity as per IT Act

2000. If any of the information furnished by the bidder is found to be false / fabricated/ bogus, his EMD shall stand forfeited and the bidder is liable to be blacklisted.

- 24.1. If the tender is made by an individual, it shall be signed with his own Digital Signature Certificate (DSC).
- 24.2. If the tender is made by a corporation / company, it shall be signed by a duly authorized officer who shall produce with his tender satisfactory evidence of his authorization. Such a corporation / company may be required before the contract is executed, to furnish evidence of its corporate existence.

The tender shall contain no alterations or additions, except those to comply with instructions issued by the Tender Inviting Officer, or as necessary to correct errors made by the Tenderer, in which case all such corrections shall be digitally signed.

- 24.3. No alteration made by the tenderer in the contract form, the conditions of the contract, statements / formats accompanying the tender shall be recognized and in case of any alterations made by the tenderer, the tender will be void.
 - 24.3.1. All documents furnished by the contractor along with the tender are to be digitally signed by the bidder.

25. Deleted

D. SUBMISSION OF TENDERS

26 In view of adoption of e-procurement process pursuant to Government of Odisha in Works Department Office Memorandum No. FA-R-3/08-4657/W dated 12.03.08, 4666/W dated 12.03.2008, 1027/W Dt.24.01.2009 & 7885/W dated 23.07.2013 following changes/ modification/ addendum shall be effected.

26.1. **Bid Documents:**

Bid documents consisting of technical bid & price bid shall be provided in the portal. Submission of bids will be through the e-Procurement portal. The bidders shall prepare the documents & up load the scanned document to the portal in appropriate place in PDF format.

26.2. Deleted

26.3. **Documents Comprising the Bids:**

In case of submission of Bids through the e-Procurement Portal, the bidder can submit the scanned copy of the documents in the designated locations of Technical Bid and Financial Bid. Submission of document shall be effected by using Digital Signature Certificate (DSC) of appropriate class and thus shall be in encrypted form.

26.4. **Bid Price:**

In case of submission of Bids through the e-Procurement Portal, **an intelligent Bill of Quantity in Microsoft Excel format** shall be made available to the bidder. The

bidder shall download that particular Excel sheet and fill in rates in figures at the appropriate location. The line item total in words and the total amount in case of item rate tenders shall be calculated automatically and shall be visible to the bidder. In case of percentage tender, the bidder will only fill in the designated cell and activate "less" or "excess" to indicate whether his price offer is how much excess or less than the estimate amount. The contractor will write percentage excess or less up to one decimal point only. The bidder is not supposed to change or modify the format of the excel sheet in any form.

26.5. **EMD:**

- (i) The bidder shall remit EMD for the amount shown in Col. 4 of the table of Notice Inviting Tender (NIT) **on online mode.**
- (ii) The EMD will be forfeited in any of the following case.
 - a) If the Bidder withdraws the Bid after Bid opening during the period of Bid validity.
 - b) If the Bidder does not accept the correction of the Bid Price.
 - c) In the case of a successful Bidder, If the Bidder fails within the specified time limit to
 - i) Sign the Agreement / contract or
 - ii) Furnish the required ISD and Performance Security.
 - d) In case of submission of Bids through the e-Procurement Portal, if any of the statements, documents, and certificates uploaded by the bidder is found to be false/ fabricated/ bogus, the bidder will be blacklisted and his EMD shall be forfeited.

26.6. **Submission of Bid:**

In case of submission of bids through e-Procurement portal the bidder shall upload the scanned copy/copies of documents as required as per DTCN. The online bidder shall have to produce the original documents in support of scanned copies & statements uploaded in the portal on demand by the employer prior to award of contract-failing which action as per DTCN will be initiated.

In case of submission of Bids through the e-Procurement Portal, the bidder shall only submit single copy of the document. He is required to check the documents uploaded with the requirement asked for in the bid. Only after satisfying that all the documents have been uploaded, he should activate submit button. His bids shall not be considered responsive and action as per relevant clause shall be taken if he does not provide the required documents or provided illegible document. Clarity of the document may be ensured by taking out a sample printing.

26.7. **Late Bids:**

In case of submission of Bids through the e-Procurement Portal, the system shall reject submission of any bid through portal after closure of the receipt time. For all purposes the portal time displayed in the system shall be the time to be followed by the bidder.

27. **Modification & Withdrawal of Bid:**

In case of submission of Bids through the e-Procurement Portal, it is allowed to modify the bid. The bidder shall have to log on to the system and resubmit the documents as

asked for by the system including the price bid. In doing so, the bids already submitted by the bidder will be removed automatically from the system and the latest bid only will be admitted. But the bidder should avoid modification of bid at the last moment to avoid system failure or malfunction of internet or traffic jam. If the bidder fails to submit his modified bids with in the designated time of receipt, the bids already in the system shall be taken for evaluation.

In case of submission of Bids through the e-Procurement Portal, withdrawal of bid is allowed. The bidder has to click on the "withdraw" button and record the necessary justification for the same in the space provided. In addition to this, he has to write a letter addressed to the Officer inviting the bid and up load the scanned document to portal in respective bid. The system shall not allow any withdrawal after expiry of the closure time of the bid.

28. **Bid Opening:**

In case of submission of Bids through the e-Procurement Portal, the bidders who participated in the online bidding can witness opening of the bid from any system logging on to the portal away from opening place. The bids can only be opened by the pre-designated officials only after the opening time mentioned in the bid.

29. **Award of Work:**

In case of submission of Bids through the e-Procurement Portal, the system shall generate the Award of Contract letter and intimate the bidders in his e-mail.

E. TENDER OPENING AND EVALUATION

30. **Tender Opening:**

30.1 The **General Manager, WATCO Division, Cuttack** will open the tenders electronically on the date & time mentioned in the **Notice Inviting Tender (NIT)**.

30.2 (i) A tender shall be rejected if;

a) Price Bid is not enclosed.

b) Cost of tender document has not remitted online on submission of bid.

c) EMD as per Clause 2(B)23.1 has not remitted online on submission of bid.

30.3. Any such conditions shall be minuted and the price bid shall not be opened. The price bid shall be opened only for those bidders who qualify in the technical evaluation as described at **Clause – 2(B)33**. The date of opening of price bid shall be intimated by FAX/ E-mail/ Speed Post to the qualified bidder of technical evaluation.

30.4. The **General Manager, WATCO Division, Cuttack** may prepare, for his own record, minutes of the tender opening, including the tender opening summary which shall be posted in the portal.

31. Deleted

32. **Determination of Responsiveness:**

- 32.1. Prior to the detailed evaluation of tenders, **General Manager, WATCO Division, Cuttack** will determine whether each tender has been submitted in the proper form and whether it is substantially responsive to the requirements of the tender documents. Tenders, which have not been submitted in the proper form, will be rejected.
- 32.2. Any tender which is not substantially responsive to the requirements of the tender documents will be rejected by the **General Manager, WATCO Division, Cuttack**. Such a tender shall not be allowed subsequently to be made responsive by the contractor by correcting or withdrawing the non-conforming deviation(s) or reservation(s).
- 32.3. Conditional Tender shall not be accepted.
- 32.4. **Bid Capacity:** These stipulations shall apply to all works above **Rs.3.00 Crores**. Applicants who meet the minimum qualification criteria will be qualified only if their available bid capacity at the expected time of bidding is more than the total estimated cost of the works. The available bid capacity will be calculated as under:

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

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

('A' value corresponding to **Schedule-B**, shall be audited for five years by Regd. Chartered Accountant or competent financial organization/authority).

B = Value of current price level of the existing commitments and ongoing works to be completed during the next years (Period of completion of works for which bids are invited) and

N = Number of years prescribed for completion of the works for which the bids are invited.

Note:-

- (1) In case of a joint venture, the available bid capacity will be applied for each partner to extent of his proposed participation in the execution of the works.
- (2) The statement showing the value of existing commitments and ongoing works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer-in-charge not below the rank of an General Manager.
- (3) In case of non-disclosure/hiding of any existing commitment and ongoing works to mislead the tender inviting authority, if detected later, then the tender will be liable for rejection.**

Escalation Factor:

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

<u>Year before</u>	<u>Multiplying factor</u>
One	1.10

Two	1.21
Three	1.33
Four	1.46
Five	1.61

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

In case the financial figures and value of completed works are in foreign currency the above enhanced multiplying factors will not be applied. Instead, current market exchange rate (State Bank of India BC selling rate as on the last date of submission of the bid) will be applied for the purpose of conversion of amount in foreign currency into Indian rupees. (Works Deptt. OM No.FA-Codes-97/11-6300 Dt.16.06.2011.)

33. **Proposal Evaluation:**

33.1. From the time of the proposals are opened to the time, the contract is awarded, the contractor should not contact the client on any matter related to its Technical and/or Financial Proposal except any required in Clause-2(B)31.

33.2. Any effort by a bidder to influence the client in any form directly or indirectly during the examination, evaluation, ranking of proposals, and recommendation for award of the contract may result in the rejection of the contractor's proposal.

33.3. Evaluation of Technical Proposals shall have no access to the Financial Proposals until the technical evaluation is concluded.

33.4. **Evaluation of Technical Proposals:**

33.4.1. The Evaluation Committee shall evaluate the Technical Proposals on the basis of their responsiveness to the DTCN.

33.4.2. A Proposal shall be rejected at this stage if it does not respond to required aspects of the NIT / DTCN.

33.4.3. During technical evaluation, the tenderers should have to make a presentation on the similar nature of works as per eligibility criteria (commissioned & Functional work) before the Evaluation Committee ,if so desired by the Committee.

33.5. **Evaluation of Financial Proposals:**

33.5.1. After the technical evaluation is completed, the Employer shall inform in writing or by mail to the contractors, who have qualified in the General and Technical bid (Part-I of DTCN), the date, time and location for opening the Financial Proposals (Price Bids).

33.5.2. Financial Proposals of the bidders who qualified in technical evaluation shall be opened.

33.5.3. Financial bids determined to be substantially responsive will be checked by the employer for any arithmetic error(s).

33.5.4. The Evaluation Committee will correct any computational errors. When correcting computational errors, in case of discrepancy between a partial amount and the total amount or between words and figures, the amount in words will prevail.

- 33.5.5. If the bid price increases as a result of these corrections, the amount as stated in the bid will be the bid price and any increase will be treated as rebate. If the bid price decreases, the decreased amount will be treated as bid price.
- 33.6. **Selection of contractor on the basis of Price Bid:**
Other condition being equal, the contractor bidding the lowest price will be considered for acceptance by competent authority.
34. **Negotiations:**
- 34.1. Negotiations will be held if required with the lowest valid tenderer. In the event of the L₁ tenderer has furnished any condition which grossly affects the tender value / contains such conditions which make the value of the offer indefinite, he may be given an opportunity to withdraw such condition(s) to make the tender definite. Failure to withdraw such condition(s) may lead to rejection of the tender as in consistent / non responsive. In such case the employer may explore the possibility of considering the next valid tender as L₁.

F. AWARD OF CONTRACT

35. **Award Criteria:**
- 35.1. After acceptance of price bid of the tender by competent authority selected contractor will be intimated about such acceptance.
- 35.2. The contractor is expected to commence the work on the date and at the location specified in the Data Sheet.
36. **Right to Accept or Reject any or all Tenders:**
Notwithstanding Clause 2(B)35, the **General Manager, WATCO Division, Cuttack** reserves the right to accept or reject any tender, annul the tendering process, reject all tenders at any time or any stage prior to the award of contract without thereby incurring any liability to the affected bidders.
37. **Process to be Confidential:**
- 37.1. After the opening of tenders as per Clause 2(B)30 & 2(B)33, information relating to examination, evaluation and comparison of tenders and recommendations, concerning to the award of contract shall not be disclosed to the contractor or any other persons, officially not concerned with the process, until the award of the contract to the successful contractor has been announced.
- 37.2. Any effort by any contractor to influence the Department officials in scrutiny, evaluation and comparison of tenders, and in any decisions concerning award of a contract, may result in the rejection of their Tender.
38. **Notification of Award & signing of Agreement:**
- a) The Employer/ Engineer-in-charge shall notify acceptance of the work prior to expiry of the validity period by cable, telex or facsimile or e-mail confirmed by

registered letter. This Letter of acceptance will state the sum that the Engineer-in-charge will pay the contractor in consideration of the execution & completion of the works by the contractor as prescribed by the contract & the amount of performance security and additional performance security required to be furnished. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.

- b) The contractor after furnishing the required acceptable performance security and additional performance security, "Letter to Proceed" or "Work Order" shall be issued by the Engineer-in-charge with copy thereof to the procurement Officer-Publisher. The Procurement Officer-Publisher shall upload the summary and declare the process as complete.
- c) In the e-Procurement Portal, the system shall generate the template of award letter and the Officer Inviting the Bid shall mention the amount of Performance Security and additional security required to be furnished in the letter and intimate the bidders in his e-mail ID. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.
- d) The bidder shall within 15 days of issue of letter of acceptance, furnish the Performance security & additional Performance security (if any) in the prescribed form & the work programme & shall sign the agreement in prescribed format, failing which the Engineer-in-Charge shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the EMD absolutely. The agreement will incorporate all agreements between the officer inviting the bid and the successful bidder.
- e) If **L₁ bidder does not turn up for agreement** after finalization of the tender, then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. In that case, the L₂ bidder, if fulfils, other required criteria would be called for drawing agreement for execution of work subject to the condition that L₂ bidder negotiates at par with the rate quoted by the L₁ bidder otherwise the tender will be cancelled. In case a contractor is black listed, it will be widely published and intimated to all departments of Government and also to Govt. of India agencies working in the state.

(Amendment to Para-3.5.14 Note-I of OPWD Code Vol.-I , OM No.12366/W dated 8.11.2013)

- f) **Following documents shall form part of the agreement**
 - i. The notice inviting bid, all the documents including additional conditions, specifications and drawings, if any, forming the bid as issued at the time of invitation of bid and acceptance thereof together with any correspondence & documents leading thereto & required amount of performance security including additional performance security as per sub clause 37.B.e. hereof.
 - ii. Standard Bid Document P.W.D. Form **P₁**.

- iii. The letter to proceed with the work shall be issued by Engineer-in-charge only after signing of the agreement. The notification of award will constitute the formation of the contract subject only to the furnishing of performance security and additional performance security in accordance with the provisions of the agreement.
- iv. On acceptance of the composite bids by the competent authority the letter of award will be issued by the Engineer-in-Charge of the major component of the work on behalf of the Governor of Odisha.

SECTION- 2(C)
DATA SHEET

Ref Cl. No	Description
	Name of the Work: Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack.
Section-8	Broad Scope of Works: Laying of pipe line, construction of Manhole chamber etc.
2(B)1.(a)	Name of the Employer: General Manager, WATCO Division, Cuttack.
2(B)33.6	Method of selection: Qualifying in the Technical Bid and L₁ in the Price Bid.
2(B)26.	Two Bid System: Part-I: General & Technical Bid and Part-II: Price Bid to be submitted as detailed at Clause-2(B) 26.
2(B)15.	Proposals shall be submitted in the following language: English
2(B)21.	Offers must remain valid for 120 (One Hundred Twenty) days from the date of opening of Price Bid.
2(B)30	The tender (Technical Bid) will be opened on following date and time: 12.30 PM of Dt.14.11.2023.
2(B)33.5	The date of opening of Price Bid shall be intimated separately by writing or by mail after the technical evaluation is over.

SECTION –2 (D)
LETTER FOR SUBMISSION OF TENDER

[To be filled in by the Bidder]

<i>Note:- (1)</i>	<i>Additional conditions appended to the tender will make the tender liable for rejection.</i>
<i>(2)</i>	<i>Non-submission of EMD in proper shape and other required documents as detailed hereinafter shall make the tender liable for rejection.</i>

Ref. No. _____/Dated _____

To

**The General Manager,
WATCO Division, Cuttack.**

Sub: **Tender for the Work: "Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack".**

Ref: **Identification No. GMWATCO (W)-05/2023-24 Dtd.27.10.2023 published in the website www.tendersodisha.gov.in.**

Dear Sir,

With reference to the above, we are to inform you that in response to your above referred NIT, we have downloaded the Detailed Tender Call Notice (DTCN) Part-I & II and that after having thoroughly examined the same, we hereby tender for the work to execute the work within the stipulated time and in conformity with the relevant clauses of the DTCN along with all related statutory rules and regulations for the amounts as quoted in the accompanying price bid.

2) I/We have studied, acquainted and satisfied ourselves with the site and its working conditions for the successful and timely completion of the work.

3) I/We are submitting herewith Bar Chart to complete the work in time.

4) **Our offer is unconditional and is in conformity with the requirements of the DTCN.** We understand that **any additional condition put by us in the tender shall make our tender liable for rejection.**

5) I/We understood that you are not bound to assign any reason in case of rejection of our tender.

6) I/We agree to keep our offer open for a minimum of 120 (One Hundred Twenty) days from the date of opening of the Price bid. Further extension of validity will be our prerogative.

Should this tender be accepted, we hereby agree to abide by and fulfil all the terms and provisions of this Detailed Tender Call Notice (DTCN).

Thanking you.
Yours faithfully,

Name and Signature
of the authorised signatory
along with seal and address of the firm.

SECTION-2 (E)

TENDER DECLARATION

[To be filled in by the tenderer]

I/We hereby tender for the execution for the Governor of Odisha of the work specified in the enclosed memorandum at the rates given in the price bid and will complete the said work in all respects within the period as specified in the Detailed Tender Call Notice and in accordance with the specifications, designs and drawings and other documents referred to therein, which shall have to be approved by the **WATCO, Odisha, Bhubaneswar** and such other written instructions as may be given by the PHED, Odisha from time to time for duly carrying out of the said works and with such materials as are provided for in accordance with the conditions and special conditions hereto attached. I/We have inspected the work site and studied its conditions, labour, materials and have understood the tender implications fully.

Should this tender be accepted I/We hereby agree to abide by and fulfil all the terms and provisions of the said conditions and special conditions of the contract annexed hereto or in default thereof to forfeit and pay to the Governor of Odisha the sums of money mentioned in the said conditions and in the event of such default the transaction effected by this tender shall cease and determine.

Signature of Tenderer /
Contractor
(Seal)

SECTION-2(F)

LETTER OF ACCEPTANCE OF TENDER

(To be filled in by Chief Executive Officer, WATCO, Odisha, Bhubaneswar)

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

**General Manager,
WATCO Division, Cuttack**
Signed on behalf of the
Governor of Odisha

SECTION-2(G)

MEMORANDUM

(To be filled in by the contractor during signing of Agreement)

1.	Name of the work		Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack
2.	Approximate Cost	:	Rs.59.49 Lakh
3.	Accepted tender Value	:	Rs. _____ Lakh
4.	Security Deposit (Online remittance)	:	Declaration form
5.	Initial Security Deposit (@ 2% of the accepted tender)	:	Rs. _____ Lakh
6.	Percentage to be deducted from each Bill as security deposit	:	@ 3 (three) %
7.	Time allotted for completion of the work (from the date of written order to commence)	:	3 (Three) Calendar Months
8.	Date of written order to commence.	:	
9.	Total number of items of work tendered for (as per schedule attached hereto).	:	

Signature of Tenderer / Contractor

SECTION –3

INFORMATION REGARDING TENDERER

(To be filled in by the Tenderer)

A. In case of individuals:

- i. Name of Tenderer :
- ii. Whether his business is registered :
- iii. Date of commencement of business :
- iv. Whether he pays income tax each year. :
If yes, furnish particulars.

B. In case of Partnership Firm :

- i. Names of Partners :
- ii. Whether partnership is registered. :
- iii. Date of establishment of the firm. :
- iv. In case, income tax is paid by each Partner, the details to be furnished. :

C. In case of limited Liability Company :

- i. Amount of paid up capital. :
- ii. Names of Directors. :
- iii. Date of registration of the Company. :
- iv. Copies of the last three year's balance sheets of the Company. :

Signature of the Tenderer

SECTION-4

DECLARATION BY THE TENDERER

1. I have visited the site and have fully been acquainted myself with the local situation regarding materials, labour and the factors pertaining to the work before submitting the tender.
2. I have carefully studied the conditions of the contract, specification and other documents of this work and I agree to execute the same accordingly.
3. I solemnly pledge that I shall be sincere in discharging my duties as responsible contractor and complete the work within the prescribed time limit. I shall submit detailed construction programme with target dates for various items and stages of work keeping in view the time limit and shall accordingly arrange for necessary labours, materials, and equipments etc., punctually. In case there are deviations from the construction programme, I shall abide by the decision of the Engineer-in-charge for revision of the programme and shall arrange for labour, materials, equipments etc
4. I shall follow all rules and regulations of the state in force with regard to engagement of labour for the work.
5. The documents furnished with the tender are correct to the best of my knowledge and belief and if any information found to be incorrect in future, the Department has the liberty to take any action as deemed fit.

Signature of the Tenderer

SECTION – 5

FORM OF AGREEMENT

This contract made theday of..... to between the Governor of Odisha acting through (designation) Ministry of Department ofGovernment of Odisha (address) (name and address of employer) (hereinafter called "the employer" and (name and address of contractor) (hereinafter called "the Contractor") of the other party).

WHEREAS the Employer is desirous that the contractor executes.

.....
.....
..... (Name and identification number of contract) (hereinafter called "the Works") and the employer has accepted the Bid by the contractor for the execution and completion of such works and the remedying of any defects therein, at a contract price of Rs.....

NOW, THEREFORE IT IS HEREBY AGREED BETWEEN THE PARTIES AS FOLLOWS:

1. In this contract, words and expressions shall assume the same meanings as are respectively assigned to them in the conditions of Contract hereinafter referred to and they shall be deemed to form and be read and construed as part of the Agreement.
2. In consideration of the payments to be made by the employer to the contractor as hereinafter mentioned, the contractor hereby covenants with the Employer to execute and complete the works and remedy the defects therein in conformity in all aspects with the provision of the contract.
3. The Employer hereby covenants to pay the contractor in consideration of the execution and completion of the works and in remedying the defects wherein the contract price or such other sum as may become payable under the provisions of the contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be read and construed as part of this contract, viz:
 - i) Letter of acceptance
 - ii) Notice to proceed with the works
 - iii) Contractor's bid
 - iv) Bidding data
 - v) General conditions of contract (including special conditions of contract)
 - vi) Specifications
 - vii) Drawings
 - viii) Bill of quantities
 - ix) Any other documents listed in the contract data as forming part of the contract.

- x) Drawing and design of structure(s) or part thereof submitted by the tenderer and duly approved by the competent authority after this Agreement.

IN WITNESS WHEREOF the parties have caused this contract to be executed the day and year first before written.

Binding signature of employer signed by.....
(for and on behalf of the Governor of Odisha)

Binding signature of Contractor signed by..... (for and on behalf of duly authorised vide Resolution No..... dated..... of the Board of Directors of)

In the presence of
(Witnesses)

1.

2.

Contractor

General Manager
WATCO Division, Cuttack.

SECTION-6

CONDITIONS OF CONTRACT

6.1. **Decision of General Manager / Director (Projects)/Chief Executive Officer is Final & Binding:**

The party whose tender is accepted hereinafter called the contractor is to provide everything of every sort and kind (with the exceptions noted in the schedule attached) which may be necessary and requisite for the due and proper execution of the several works included in the contract according to the true intent and meaning of the drawings and specification taken together, which are to be signed by the **General Manager**, WATCO Division, Cuttack herein after called the General Manager and the contractor whether the same may or may not be particularly described in the specification or shown on the drawing provided that the same are reasonably and obviously to be inferred there from and in case of any discrepancy between the drawings and the specifications the General Manager is to decide which shall be followed.

6.2 **Amendment of Errors during Progress of Work:**

The contractor is to set out the whole of the works in conjunction with an officer to be deputed by the General Manager and during the progress of the works to amend on the requisition of the General Manager any errors which may arise therein and provide all the necessary labour and materials for doing. The contractor is to provide all plant labour and materials (with the exception noted in Schedule), which may be necessary and requisite for the works. All materials and workmanship are to be the best of their respective kinds. The contractor is to leave the works in all respects clean and perfect at the completion thereof.

6.3. **Fair Wage Clause:**

The contractor shall not employ for the purpose of this contract any person who is below the age of fourteen years, and shall pay to each labourer, for the work done by such labourer, fair wages. Fair wages means wages whether for time or piecework, prescribed by the State P.W.D. provided that where higher rates have been prescribed under the minimum wages Act, 1948, wages at such higher rates should constitute fair wages.

The General Manager shall have the right to enquire into and to decide any complaint alleging that the wages paid by the contractor to any labourer for the work done by such labourer is less than the wages paid for similar work in the neighbourhood.

The Officer-in-charge of the work shall have the right to decide whether any labourer employed by the contractor is below the age of fourteen years and to refuse to allow any labourer whom he decides to be below the age of fourteen years, to be employed by the contractor.

6.4. **Approved Drawings & Specification of Site with Contractors Agent:**

Complete copies of the drawing and specifications signed by the General Manager and the same or copies thereof are to be kept with the works in-charge of the contractor's agent which is to be constantly kept on the ground by the contractor and to whom instructions can be given by the General Manager.

6.5. **Work not to be Sublet:**

The work should not be sublet. During execution of work if it is found that the work/ part of the work is sublet, the General Manager may there upon by notice in writing, rescind the contract and the **security deposit of the contractor shall thereupon stand forfeited** and be absolutely at the disposal of Government. In addition, the contractors shall not be entitled to recover or be paid for any work thereafter actually performed under the contract.

6.6. **Deviation from Approved Drawing and Specifications:**

The contractor is not to vary or deviate from the drawings or specifications or execute any extra work of any kind whatsoever unless upon the authority of the General Manager to be sufficiently shown by any order in writing, by any plan or drawing expressly given and signed by him as an extra or variation or by any subsequent written approval signed by him. In case of daily labour all vouchers for the same are to be delivered to the General Manager or the Officer-in-Charge at least during the week following that in which the work may have been done and no day work shall be allowed unless authorised by the General Manager and no such authority shall be given if the work is capable of being measured and being paid for at an agreed rate.

6.7. **Rate for Extra Work.**

Any authority given by the General Manager, for any alterations or additions in or to the works, is not to vitiate contract. But all additions omissions or variations made to the approved design & drawing or to the item-wise indicative quantities of the work, reflected at **Section-08 (Scope of work) of the DTCN**, in carrying out the works are to be measured and valued and certified by the General Manager, and shall be added to or deducted from the amount of the contract, as the case may be at the rates, in accordance with the sanctioned schedule of rates, in force at the time, when the particular item of work was commenced. In those cases in which rates do not exist, the **Chief Executive Officer, WATCO, Bhubaneswar** will fix the rates to be paid and his decision shall be final.

6.8. **Extension of Time:**

If the contractor shall desire an extension of time for completion of the work on the ground of his having been come across with unavoidable hindrance in its execution or any other grounds he shall apply in writing to General Manager within 30 days of the date of the hindrance on account of which he desires such extension as aforesaid and the authority shall if in his opinion (which shall be final) as reasonable ground be shown thereof authorized such extension of time if any, as may in his opinion, be necessary or proper. The authority shall at the same time inform the contractor whether the authority claims compensation for delay, in case there is any delay in execution due to non-availability of stock materials or land or rise in cost of materials and labour or any reason whatsoever beyond the control of authority, the contractor is bound to execute the work as per the terms and rates in the contract and no monetary claim on such account will be acceptable to the authority but extension of time, proportionate to the delay in execution may be granted by the authority considering the merit of the case. The competent authority reserves the right to take any expert advice of any Committee/ Secretary/ Legal Advisor while considering the

application of the contractor for extension of time and can impose any condition which shall be binding on the contractor.

6.9. Works & Materials at Site to be Property of Government of Odisha.

All works and materials brought and left at site by the contractor or by his orders for the purpose of forming part of the works are to be considered to be the property of the **Governor of Odisha** and the same are not to be removed or taken away by the contractor or any other person without the specific permission in writing of the General Manager but the Governor of Odisha will not be liable for any loss or damage which may happen to or in respect of any such work or materials either by the same being lost or stolen or injured by weather or otherwise.

6.10. Supply of Materials:

The contractor shall at his own expense provide all materials required for the work. The materials supplied by the contractor shall conform to relevant latest editions of the specification and codes of practices of the Bureau of Indian Standards or in their absence to other specifications as may be specified by the Engineer-in-charge. The contractor shall furnish necessary certificates in support of the quality of the materials as may be required by the Engineer-in-charge.

The Engineer-in-charge shall have absolute authority to test the quality of materials at any time through any reputed laboratory at the cost of contractor. The contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The General Manager has full power for removal from the premises of all materials which, in his opinion, are not in accordance with the specification and in case of default, the General Manager is to be at liberty to sell such materials and to employ other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The General Manager is also to have full power to require other proper materials to be substituted and in case of default, the General Manager may cause the same to be supplied and all costs which may attend such removal and substitution are to be borne by the contractor and may be recovered from the sale proceeds of such rejected materials when necessary, the balance, if any, being kept in deposit in the contractor's favour.

6.10.1 *The successful bidder is to purchase materials necessary for execution of work contract from local SSI units & MS Enterprises having valid rate contract & ISI mark.*

6.11. Execution with Defective Workmanship & Improper Materials.

If in the opinion of the General Manager any of the works have been executed with improper materials or defective workmanship, the contractor is then required by the General Manager forthwith to re-execute the same and to substitute proper materials and workmanship and in case of default of the contractor in so doing within a week, the General Manager is to have full power to employ other agency to re-execute the work and the cost thereof shall be borne by the contractor.

6.12. Rectification of Defects within Guarantee Period:

Any defects, shrinkage or other faults which may appear within 12 (twelve) months from the completion of the work arising out of defective or improper materials or workmanship are upon the direction of the General Manager to be amended and made good by the contractor at his own cost unless the General Manager for reasons to be recorded in writing shall decide that they ought to be paid for and in case of default, the Governor of Odisha may recover from the contractor the cost of making good the works.

6.13. Responsibility of the Contractor during Execution of Work:

From the commencement of the works to the completion of the same they are to be under the contractor's charge. The contractor is to be held responsible for and to make good all injuries, damages and repairs occasioned or rendered necessary to the same by fire or other causes and they are to hold the Governor of Odisha harmless from any claims for injuries to persons or for structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or of any one of his employees during the execution of the works.

6.14. Execution of Works in the Site by Other Workmen:

The General Manager is to have full powers to send workmen upon the premises to execute fittings and other works not included in the contract for whose operations the contractor is to afford every reasonable facility during ordinary working hours provided that such operations shall be carried on in such a manner as not to impede the progress of the work included in the contract but the contractor is not to be responsible for any damage which may happen to or be occasioned by any such fittings or other works.

6.15. Time Control:

(Vide Works Department Office Memorandum No.24716 dtd.24.12.2005 and No.8310 dtd.17.05.2006)

a) Progress of work and Re-scheduling programme.

- i) The General Manager / Engineer-in-Charge shall issue the letter of acceptance to the successful contractor. The issue of the letter of acceptance shall be treated as closure of the Bid process and commencement of the contract.
- ii) Within 15 days of issue of the letter of acceptance, the contractor shall submit to the Engineer-in-Charge for approval a Programme showing the general methods, arrangements, and timing for all the activities in the Works along with monthly cash flow forecast.
- iii) To ensure good progress during the execution of the work the contractors shall be bound in all cases in which the time allowed for any work exceeds one month to complete, $1/4^{\text{th}}$ of the whole time allowed under the contract has elapsed, $1/2$ of the whole of the work before $1/2$ of the whole time allowed under the contract has elapsed, $3/4^{\text{th}}$ of the whole of the work before $3/4^{\text{th}}$ of the whole time allowed under the contract has elapsed.
- iv) If at any time it should appear to the Engineer-in-Charge that the actual process of the work does not conform to the programme to which consent has been given the Contractor shall produce, at the request of the Engineer-in-Charge, a revised programme showing the modifications to such programme necessary to ensure completion of the works within the time for completion. If the contractor does not submit an updated Programme within this period, the Engineer-in-

Charge may withhold the amount of 1% of the contract value from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.

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

b) Extension of the Completion Date.

- i) The time allowed for execution of the works as specified in the Contract data shall be the essence of the Contract. The execution of the works shall commence from the 15th day or such time period as mentioned in letter of Award after the date on which the Engineer-in-Charge issues written orders to commence the work or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, Government shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee / Security deposit absolutely.
- ii) The Contractor shall submit the Time & Progress Chart for each milestone Quarter wise indicating each month and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-Charge and the Contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per milestone given in contract data.
- iii) In case of delay occurred due to any of the reasons mentioned below, the Contractor shall immediately give notice thereof in writing to the Engineer-in-Charge but shall nevertheless use constantly his best endeavours to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.
 - (1) Force majeure, or
 - (2) Abnormally bad weather, or
 - (3) Serious loss or damage by fire, or
 - (4) Civil commotion, local commotion of workmen, strike or lockout affecting any of the trades employed on the work, or.
 - (5) Delay on the part of other contractors or tradesmen engaged by Engineer-in-Charge in executing work not forming part of the Contract.
 - (6) In case a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining work and which would cause the Contractor to incur additional cost, or

- (7) Any other cause, which, in the absolute discretion of the authority mentioned, in Contract data is beyond the Contractors control.
- iv) Request for reschedule and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen (14) days of the happening of the event causing delay. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.
- v) In any such case a fair and reasonable extension of time for completion of work may be given. Such extension shall be communicated to the Contractor by the Engineer-in-Charge in writing, within 3 months of the date of receipt of such request. Non-application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-Charge and this shall be binding on the contractor.

c) Compensation for Delay

If the contractor fails to maintain the required progress in terms of clause-2 of P-1 Contract or to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Government on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the **Chief Executive Officer, WATCO, Bhubaneswar** may decide on the amount of tendered value of the work for every completed day / month (as applicable) that the progress remains below that specified in Clause-2 of P-1 Contract or that the work remains incomplete. This will also apply to items or group of items for which a separate period of completion has been specified. Compensation @ 1.5% per month of for delay of work, delay to be completed on per Day basis. Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10% of the Tendered Value of work or to the Tendered Value of the item or group of items of 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 or any other contract with the Government. In case, the contractor does not achieve a particular milestone mentioned in contract data, or the rescheduled milestone(s) in terms of Clause-2.5, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of extension of time. Withholding of this amount on failure to achieve a milestone shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest whatsoever shall be payable on such withheld amount.

d) Bonus for early completion

For availing incentive clause in any project which is completed before the stipulated date of completion, subject to other stipulations it is mandatory on the part of the concerned General Manager to report the actual date of completion of the project as soon as possible through fax or e-mail so that the report is received within 7 days of such completion by the concerned Director, Managing

Director & the Administrative Department. The incentive for timely, completion should be on a graduated scale of one percent to 05 percent of the contract value. Assessment of incentives may be worked out for earlier completion of work in all respect in the following scale.

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

Before 20 to 30 % of contract period = 4 % of Contract Value

Before 10 to 20 % of contract period = 3 % of Contract Value

Before 5 to 10 % of contract period = 2 % of Contract Value

Before 5% of contract period = 1 % of Contract Value

(Amendment to Para-3.5.5 (V) of Note-III of OPWD Code Vol.-I by inclusion vide O.M. No.5288 dt.04.05.2016)

e) Management Meetings

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

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

f) Rescission of Contract:

To rescind the contract (of which rescission notice in writing to the contractor under the hand of the General Manager shall be conclusive evidence), 20% of the value of leftover work will be realized from the contractor as penalty.

(Amendment as per letter No.10639 dt.27.05.2005 of Works Department, Odisha)

6.16. Circumstances for Rescission of Contract:

If the contractor shall become bankrupt or compound with or make any assignment for the benefit of his creditors or shall suspend or delay the performance of his part of the contract (except on account of cause mentioned in **Clause 6.15** or in consequence of not having proper instructions for which the contractor shall have duly applied) the General Manager may give to the contractor or his assignee or trustee as the case may be notice requiring the works to be proceeded with and in case of default on the part of the contractor for a period of seven days, it shall be lawful for the General Manager to rescind the contract, if necessary, and to enter upon and take possession of the work and to employ any other person to carry on and complete the same and to authorise him or them to use the plant, materials and property of the contractor upon the works and the costs and the charge incurred in any way in carrying on and completing the said works are to be paid to the General Manager by the contractor or may be set off by the General Manager against any money due or to become due to contractor. If the assignee or trustee of the Contractor proceeds with the work, the conditions of this contract shall be binding upon the said assignee or trustee.

6.17. **Payment Certificate.**

A Certificate of the General Manager or an award of the refer hereinafter referred to as the case may be showing the final balance due or payable to the contractor is to be conclusive evidence of the works having been duly completed and that the contractor is entitled to receive payment of the final balance, but without prejudice to the liability of the contractor under the provisions of **Clause-6.11.**

6.18. The General Manager shall make payment of work in full or part thereof those shall have been certified, subject to availability of Letter of Credit (LoC).

6.19 **Price Adjustment** (*vide Works Department Office Memorandum No.15847/W Dt.19.11.2019*)

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

(a) The price adjustment shall apply for the work done from the start date given in the contract data up to end of the initial intended completion date or extensions granted by the Engineer and shall not apply to the work carried out beyond the stipulated time for reasons attributable to the contractor.

(b) The price adjustment shall be determined during each month from the formula given in following Paras.

(c) Following expressions and meanings are assigned to the work done during each month:

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

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

The formula (e) for adjustment of prices are:

19(a) (i): Adjustment of Other Materials Component

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

$$V_M = 0.85 \times P_m/100 \times R \times (M_1 - M_0)/M_0$$

V_M = Increase or decrease in the cost of work during the month under consideration due to changes in rates for local materials other than cement, steel, bitumen and POL.

M_0 = The all India wholesale price index (all commodities) on 28 days preceding the date of opening of Bids, as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

M_1 = The all India wholesale price index (all commodities) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P_m = Percentage of local material component (other than cement, steel, bitumen and POL) of the work.

19(a)(ii): Adjustment for Cement Component

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

$$V_c = 0.85 \times P_c/100 \times R \times (C_1 - C_0)/C_0$$

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

C_0 = The all India wholesale price index for Ordinary Portland Cement (OPC) on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

C_1 = The all India wholesale price index for Ordinary Portland Cement (OPC) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P_c = Percentage of Cement Component of the Work.

19(a)(iii): Adjustment for Steel Component

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

$$V_s = 0.85 \times P_s/100 \times R \times (S_1 - S_0)/S_0$$

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

S_0 = The all India wholesale price index for steel (Mild Steel long products) on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi

S_1 = The all India wholesale price index for steel (Mild Steel long products) for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P_s = Percentage of steel component of the work

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

19(a)(iv): Adjustment of Bitumen Component

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

$$V_b = 0.85 \times P_b/100 \times R \times (B_1 - B_0)/B_0$$

V_b = Increase or decrease in the cost of work during the month under consideration due to changes in the rate for bitumen.

B_0 = The official retail price of bulk bitumen at the IOCL/ BPCL depot at nearest center on the day 28 days prior to date of opening of Bids.

B_1 = The official retail price of bulk bitumen at IOCL/ BPCL depot at nearest center for the 15th day of the month under consideration.

P_b = Percentage of bitumen component of the work

19(a)(v): Adjustment towards differential cost of Pipes.

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

$$V_{pi} = 0.85 \times P_{pi}/100 \times R \times (P_{i1}-P_{i0})/P_{i0}$$

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

P_{pi} = Percentage of pipe component of the work

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

P_{i0} = All India Whole sale price index of pipe on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

19(b): Adjustment of Labour Component

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

$$V_L = 0.85 \times P_l/100 \times R \times (L_1- L_0)/L_0$$

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

L_0 = The minimum wages for unskilled labour as Notified by Government of Odisha as prevailed on the last stipulated date of receipt of tender including extension, if any.

L_1 = The minimum wages for unskilled labour as Notified by Government of Odisha as prevailed on the last date of the Month previous to the one under consideration.

P_l = Percentage of labour component of the work.

19(c) : Adjustment of POL (fuel and lubricant) Component

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

$$V_f = 0.85 \times P_f/100 \times R \times (F_1- F_0)/F_0$$

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

F_0 = The official retail price of High-Speed Diesel (HSD) at the existing consumer pumps of IOCL/ BPCL/ HPCL at nearest center on the day 28 days prior to the date of opening of Bids.

F_1 = The official retail price of HSD at the existing consumer pumps of IOCL/ BPCL/ HPCL at nearest center for the 15th day of the month under consideration .

P_f = Percentage of fuel and lubricants component of the work

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

19(d): Adjustment for Plant and Machinery Spares Component

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

$$V_p - 0.85 \times P_p / 100 \times R \times (P_1 - P_0) / P_0$$

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

P_0 - The all India wholesale price index for manufacture of machinery for mining, quarrying and construction on 28 days preceding the date of opening of Bids as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P_1 - The all India wholesale price index for manufacture of machinery for mining, quarrying and construction for the month under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi.

P_p - Percentage of plant and machinery spares component of the work.

Note: For the application of this clause, index of manufacturing of machinery for mining, quarrying and construction has been chosen to represent the Plant and machinery Spares group.

Regarding wholesale price Index (WPI) for appropriate commodity for payment of price adjustment, due to change of base year of WPI from 1993- 94 to 2004-05 & 2011-12, it is observed that, the commodity 'Bars and Rod', 'Cement', 'Heavy machinery and parts' included in the list of WPI 1993-94 series are not mentioned as such in the WPI 2004-05 & 2011-12 series. Therefore, the following items in the WPI 2004-05 & 2011-12 series shall be considered corresponding to items in WPI 1993-94 series:

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

	parts	Machinery	construction.
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19(e): APPLICATION OF ESCALATION CLAUSE:

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

Percentage Table

Sl. No.	Category of works		% Component (cost wise)		
			Labour (P _l)	P.O.L (P _f)	Steel (P _s) + Cement (P _c) + Bitumen (P _b) + Pipes (P _{pi}) + Plant & Machinery Spare & Component (P _p) + Other Materials*
1.	R&B works (% of component)	Road works	5	5	90
		Bridge works	5	5	90
		Building works	5	5	90
2.	Irrigation works (% of component)	Structural work	5	5	90
		Earth, Canal & Embankment work	5	5	90
3.	P.H. Work	Structural work	5	5	90
		Pipeline work	5	5	Pipe – 70% * Machinery + Other material -20%
		Sewer line	5	5	Pipe – 70% * Machinery + Other material -20%

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

Appendix to Bid

Schedule of Adjustment Data

[For all works, adjustment factor for Labour and POL shall be considered @ 5% each. Steel, Cement, Pipes, other Materials and Machinery shall contribute to 90% of Price Adjustment and

shall be calculated for each work separately during preparation of estimate, shall be approved by the authority during technical sanction as a "Schedule of Adjustment Data" and shall form part of the Bid Document]

Cl. No-31 of F2/P1 Contracts Sl. No.	Index description	Source of index	Base value*	Base Date*	Weightage of Item**
31 (a)(i)	Other Materials	All India Whole sale price index (all commodities) as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			
31 (a)(ii)	Cement	All India Whole sale price index for Cement (Ordinary Portland Cement) as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			
31 (a)(iii)	Steel	All India Whole sale price index for Steel (Mild Steel-Long Products) as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			
31 (a)(iv)	Bitumen (VG-30)	Official retail price of bulk bitumen at the nearest IOC/HPCL Depot.			
31 (a)(v)	Pipes	All India Whole sale price index for the type of pipe under consideration, as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			
31 (b)	Labour	Minimum Wage notified by the Labour and Employee's State Insurance Department of Government of Odisha, India.			5%

31 (c)	POL	Official retail price of HSD at nearest IOCL/ HPCL/ BPCL Consumer Pump Depot.			5%
31 (d)	Plant and Machinery	All India Whole sale price index for Manufacture of Machinery for Mining, Quarrying and Construction as published by the Office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			
Total :					100%

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

** Values to be filled up in the bid document.

6.20. If at any time after the commencement of the work the Governor of Odisha shall for any reason whatsoever not require the whole thereof as specified in the tender to be carried out the Engineer-in-charge shall give notice in writing of the fact to the contractor who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage, which he might have derived from execution of the work in full but which he did not derive in consequence of the full amount of the work not having been carried out, neither shall he have any claim for compensation by reason of any alterations having been made in the original specification, drawings, designs and instruction which shall involve any curtailment or increase of the work as originally contemplated.

6.21. Defects Liability Period:

The defect liability is **12 months** from the date of formal taking over of the work by the Engineer-in-charge.

6.22. Contractor Liable for Damage done & for Imperfection for 6 (six) months after Certificate:

If the contractor or his work people or servants shall break, deface, injure or destroy any part of a building or structure in which they may be working or any building, road, fence, enclosure or grass land cultivated ground continue to the premises on which the work or any part of it is being executed or in any damage shall happen to the work while in progress from any cause whatsoever or any imperfection become apparent in it within six months from the date of the final certificate of its completion shall have been given by the Engineer-in-charge, as aforesaid, the contractor shall make the same good at his own expenses or in default the Engineer-in-charge may cause the same to be made good by other workman and deduct the expenses of which the certificate of the Engineer-in-charge shall be final from any sums that may be then or at any time thereafter may become due to the contractor or from his security or the proceeds of sale thereof or a sufficient portion thereof and the contractor shall be liable to pay of the expenses not so recovered by the Engineer-in-charge.

6.23. Action where No Specification is mentioned:

In the case of any class or items of works for which there is no such specification as mentioned in file, if such work shall be carried out in accordance with the detailed standard specification of Odisha, as followed by the State PWD and in the event of there being no specifications born in the said standard specification of Odisha for such items of work, then in such case the said item of work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-charge after obtaining approval from competent authority.

6.24. Payment on Intermediate Certificate to be regarded as Advance and Bill to be submitted Monthly:

A bill shall be submitted by the contractor each month on or before the date fixed by the Engineer-in-charge for all works executed in the previous month and the Engineer-in-charge and/or Assistant Engineer and/or Junior Engineer in immediate charge of the work shall take the requisite measurements for the purpose of having the same verified, and the claims for as admissible adjusted if possible before the expiry of ten days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-charge and/or his Engineering subordinates shall measure up the said work in the presence of the contractor, whose counter signature to the measurement list will be sufficient warrant, and the Engineer-in-charge and/or Assistant Engineer and/or his Engineering subordinates shall prepare a bill from such list which shall be binding on the contractor in all respects. Payment shall be made to the contractor in all respects.

The Engineer-in-charge will deduct @ 5% (five percent) of the value of each running bill prepared and submitted by the contractor, if any, on account of works done, and such sum or sums to be held in deposit as a further security for the due performance of the condition of the contract provided always that the General Manager may refuse to make such monthly payments if in his opinion, the progress of the work or the conduct of the contractor is not satisfactory or the contractor has in any other way done or neglect to do anything as to make it appear doubtful to the authority as to whether the works will be completed by the contractor in accordance with his contract, or has failed to comply with any instruction or order of Engineering personnel. All such interim payments from time to time shall be regarded as payments by way of advance against the final payment only and not as payments of work actually done and completed and shall not preclude the requirement of bad, unsound and imperfect or unskilful work to be removed and taken away and for reconstructed or re-erected, or be considered as an admission of the due performance of the contract, of any part thereof in any respect, or accrual of any claim not shall it conclude, determine or affect in any way the powers of Engineer-in-charge and/or Assistant Engineer and/or the Junior Engineer under these condition or any of them as to the final settlement of adjustment of the accounts or otherwise or in any other way vary or affect this contract. The contractor shall submit the final bill within one month of the date for completion of the work failing which the Engineer-in-charge or his authorized representatives in the presence of the contractor shall prepare the final bill. For recording final measurement of the work, the Engineer-in-charge or his authorized representative shall serve a notice upon the contractor stipulating therein the date fixed for recording such measurement. If the contractor fails to attend the recording

of final measurement by the Engineer-in-charge or his authorized representative on the date as stipulated, the Engineer-in-charge may at his discretion get the measurements recorded ex-parte or fix up another date as per his own convenience. Such measurements and the total amount payable to the contractor as certified by the Engineer-in-charge shall be final and binding on all parties.

6.25. Black Listing:

A Contractor may be black listed as per amendment made to **Appendix XXXIV to OPWD Code Vol.-II on rules for black listing of Contractors vide letter No.3365 Dt.01.03.2007 of Works Department, Odisha**. As per said amendment the Contractor may be blacklisted.

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

6.26. If the rate quoted by the bidder is less than 15% of the tendered amount, then such a bid shall be rejected and the tender shall be finalized basing on merits of rest bids. But if more than one bid is quoted at **14.99%** (Decimals upto two numbers will be taken for all practical purposes) less than the estimated cost, the tender accepting authority will finalize the tender through a transparent lottery system, where all bidders / their authorized representatives, the concerned General Manager and DAO will remain present.

(As included in Appendix – IX, Clause – 36 of OPWD Code Vol.II vide Works Department letter No.12366/W dt.18.11.2013).

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

(As included in Para 3.5.14 Note-I of OPWD Code Vol.I vide Works Department letter No.12366/W dt.18.11.2013).

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

(As included in Para 3.5.18 Note-VIII of OPWD Code Vol.I vide Works Department letter No.12366/W dt.18.11.2013).

6.29. Grant of Concession to Scheduled Caste & Scheduled Tribe Contractors:

If the tender of the individual registered contractors belonging to Scheduled Caste and Scheduled Tribe is within 10% of the rate quoted by the lowest tenderer for any work, the work may be considered for award to him/her at the lowest tendered rate in the relaxation of Rule 18 of the O.G.F.R. Vol.I and Para 3.5.14 of OPWD Code Vol.I.

(Resolution No.16/37 – 27748 Dated 11.10.1977 amended vide No.16262/W Dt.30.10.2018).

SECTION-7

SPECIAL CONDITIONS OF CONTRACT

7.1. Changes in Constitution of Firm:

In the case of tender by a partnership firm, any change in the constitution of the firm shall be forth with notified by the contractor to the **General Manager/ Director/ Managing Director** for his information. In case of failure to notify the change in the constitution within 15 days, the **General Manager/ Director/ Managing Director** may by notice in writing, rescind the contract and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of the Governor of Odisha and the same consequence shall ensure as if the contract had been rescinded thereof and in addition the contractor shall not be entitled to recover or be paid for any work there for actually performed under the contract.

7.2. Engineer's Access to Work:

The General Manager is to have at all times access to the works, which are to be entirely under his control. He may require the contractor to dismiss any person in the contractor's employee upon the works who may be incompetent or misconduct him-self and the contractor is forthwith to comply with such requirements. Other supervising officers shall have all time access to the works.

7.3. Workmen Compensation Act VIII of 1923:

The Governor of Odisha shall be entitled to recover in full from contractor any amount that the Governor of Odisha may be liable to pay under Workman's Compensation Act VIII of 1923 to any workman employed in course of execution of any part of the work covered by this contract.

7.4. Jurisdiction in the Event of Dispute:

That for the purpose of jurisdiction in the event of dispute if any, the contract should be deemed to have been entered into within the State of Odisha and it is agreed that neither party to this agreement will be competent to bring a suit in regard to the matters covered by this contract at any place outside Odisha.

7.5. Lighting & Sanitary Arrangement:

Lighting & Sanitary arrangement and supply of drinking water will be made by the Contractor at his own cost for his labour camp.

7.6. Payment of TAXES:

The Contractor shall bear **Taxes** such as, Income Tax, Royalties, Fair Weather Charges and Tollages where necessary & **Government of Odisha** shall not entertain any claim whatsoever in this respect. Statutory deduction of **Taxes** as applicable shall be done from each running bill.

7.7. The Building & Other Construction Workers Welfare Cess Act 1996.

In accordance with the provisions under the said Act 1% (One) of the approved agreement value will be deducted from the R/A Bill at the time of making payment to the contractor and such amount shall be remitted in favour of The Odisha Building & Other Construction Workers Welfare Board.

7.8. Site Clearance:

After the work is finished or completed, surplus materials and debris are to be removed by Contractor at his own cost and preliminary works such as vats, mixing platforms, level pillars, temporary sheds and go-downs etc. are to be dismantled and all such materials removed from site. The site involved in the construction activities should be cleared and dressed properly with outward slope away from the structure. After the work is completed in all respects as per the contract, the contractor shall vacate the site within three months from the date of completion & commissioning, by making good the damages if any.

7.9. **Works to be Carried Out:**

The work to be carried out under the contract shall include all materials, labour, tools and plants, equipment and transport which may be required in preparation of and for in the full and entire execution and completion of the works. The description given in the schedule of quantities/scope of work shall, unless otherwise stated, be held to include wastage on materials, carriage & cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

7.10. **Sufficiency of Tender:**

The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of quantities (DTCN Part-II Price Bid), which rates and prices shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion and commissioning of the works.

7.11. **Rates:**

The Tenderer shall quote their offer on '**Percentage Rate**' (excess or less) over the estimated cost in the Price Bid appended to the tender document for complete work in all respects. **The estimated cost is excluding GST. The rates of item basing on which estimated cost has been derived are excluding GST on different components to arrive at such rates.** The offer shall be inclusive of cost of all materials, labour, T&P including the building and other construction workers welfare cess with surcharge, tollages, royalties, packing and forwarding, transportation, insurance, loading & unloading, storage, watch and ward, delivery of the materials to the site etc. and all other expenses incidental thereto for successful completion, testing & commissioning of the work.

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

7.12. **Transportation:**

The contractor shall be responsible for the transportation of all materials, tools and plant, equipment and machinery to the work site as may be required at site.

7.13. **Custody of the Materials:**

The contractor shall be responsible for safe custody of the materials at site and the Governor of Odisha will not be responsible for any loss or damage of the property at site.

7.14. **Construction Schedule:**

The contractor shall submit a detailed work schedule in the form of **Bar Chart** along with his tender indicating the detailed break-up of the job. This will include all operations from submission of design & drawing, procurement of materials, construction to final testing & commissioning at site to be indicated in detail with reference to the time period for each.

The construction schedule as submitted by the contractor shall be revised by the General Manager and approved with necessary modification if any after acceptance of the tender. However the Engineer-in-Charge shall reserve the right to modify the sequence of execution of different items/components/sub-items of the project as and when found necessary & in such cases it will be obligatory on the part of the successful bidder to abide by such changes in construction schedule/bar chart as per direction of EIC. No claim and/or condition should either be put forth in any manner by the successful bidder or shall be acceptable to the EIC.

7.14(a) **Progress reports – submission by the contractor**

- (1) The contractor shall submit monthly progress report of the work in a computerised form. The progress report shall contain the following, apart from whatever else may be required as specified:
 - (i) Project information, giving the broad features of the contract.
 - (ii) Introduction, giving a brief scope of the work under the contract, and the broad structural or other details.
 - (iii) Construction schedule of the various components of the work through a bar chart for the next three quarters (or as may be specified), showing the milestones, targeted tasks and upto date progress.
 - (iv) Progress chart of the various components of the work that are planned and achieved, for the month as well as cumulative upto the month, with reasons for deviations, if any, in a tabular format.
 - (v) Plant and machinery statement, indicating those deployed in the work, and their working status.
 - (vi) Man-power statement, indicating individually the names of all the staff deployed in the work, along with their designations.
 - (vii) Financial statement, indicating the broad details of all the running account payments received upto date, such as gross value of work done, advances taken, recoveries affected, amounts withheld, net payments, details of cheque payments received, etc.
 - (viii) A statement showing the extra and substituted items submitted by the contractor, and the payments received against them, items pending for sanction /decision by the Department, broad details of the bank guarantees, indicating clearly their validity periods, broad details of the insurance policies taken by the contractor, if any, the advances received and adjusted.

- (ix) Progress photographs, in colour, of the various items/ components of the work done upto date, to indicate visually the actual progress of the work.
 - (x) Quality assurance plan and quality control tests conducted during the month, with the results thereof.
 - (xi) **Besides above contractor shall have to submit the information required as per the decision taken in the Kick-off meeting headed by the concerned Engineer-in-Charge.**
- (2) The progress report submitted by the contractor shall be checked and certified by the Junior Engineer and the Assistant Engineer, and has to be reviewed by the General Manager and the Superintending Engineer, over their dated signatures.
 - (3) Work of unique importance and character irrespective of the value of the work, should have videography undertaken at various stages of construction right from the day of start of work to date of completion / occupation, covering all major events, inspections, visits by dignitaries, etc.

7.15. **Initial Security Deposit:**

The tenderer whose tender is selected for acceptance shall have to deposit **2% (two percent)** of the accepted tender amount as **Initial Security Deposit (ISD)** within **7 (Seven) days** of receipt of Letter of Acceptance (LoA) and sign the agreement in the prescribed form within **10 (ten) days** of receipt of Letter of Acceptance after depositing the ISD. The ISD shall be deposited in shape of NSC / POTD / Post Office Savings Bank Account / KVP/ Deposit Receipt in Schedule Bank duly pledged in favour of the **Chief Executive Officer, WATCO, Bhubaneswar**. No tender shall be accepted unless required amount of security money is deposited.

In addition to the **ISD, 5%** of the bill amount shall be deducted from each bill towards the security deposit. The earnest money deposit, the initial security deposit before and after acceptance of tender together with the subsequent deduction from the contractor's bill shall form part of the security deposit equivalent to 7% of the contract value for the due fulfilment of the contract.

The security deposit of the contractor shall be refunded only 12 (twelve) months after the date of completion of the work provided the final bill has been paid and defects if any rectified.

If however there is inevitable delay in payment of final bill, the earnest money deposit and initial security deposit forming part of the security deposit may be refunded on orders of competent authority.

7.16. **Monitoring of the Project:**

Time is the essence of the contract. The execution of the project shall be closely monitored to ensure that quality; cost & time of the project are not compromised in any manner.

The contractor shall submit monthly progress reports in a format as may be prescribed by the Engineer-in-charge. The monthly progress report shall be evaluated by the General Manager vis-à-vis the approved **Bar chart & PERT Chart** and any deficiency

observed thereto shall be communicated to the contractor. The contractor shall have to make up the deficiencies within the specific time period communicated to him by the General Manager failing which the contractor shall be liable for action as per **Clause - 7.26**.

In addition, the contractor shall submit monthly day-wise work program one month in advance to General Manager for approval under intimation to the **Chief Executive Officer, WATCO, Bhubaneswar** of the work and effective monitoring at all levels. Failing to do so shall also invite action under **Clause-7.26**.

7.17. Site Order Book:

A site Order Book shall be issued to the contractor by the Engineer-in-charge or his representative. The contractor shall keep this Book always at site and any special order or instruction to be issued to the contractor shall be recorded in this Book by the Engineer-in-charge or his representative. The contractor shall sign all orders and instructions as token of his knowledge about the same. The site Order Book shall be the property of the department but will remain during the period of the progress of the work with the contractor. The safe custody of the site Order Book during this period shall be the responsibility of the contractor. After completion of the work, the Book shall be returned back by the contractor to the Engineer-in-charge, which will be enclosed in the final bill.

7.18. Guarantee:

Defect liability period is **12 (twelve) months** from the date of final acceptance of the work conforming to provisions in scope of work. During this period, the contractor shall replace the defective materials if any or rectify the defects if any at his own cost as pointed out by the Engineer-in-charge to the satisfaction of the later.

7.19. Land:

The Department may provide land if available for construction of site office to the contractor on payment of usual rent.

7.20. Unilateral Stoppage of Work:

Unilateral stoppage of work by the contractor without prior written permission of the Engineer-in-charge shall be considered as breach of contract and the Governor of Odisha reserves the right to take such actions as it may be deemed fit.

7.21. Resident Engineer:

The contractor shall engage for this work competent, qualified and authorised resident Engineers and Assistants to the satisfaction of the Engineer-in-charge. The Resident Engineer shall represent the contractor in his absence in receiving directions from officers of the Department, which will be binding on the contractor.

7.22. Force Majeure:

Neither the contractor nor the General Manager shall be considered in default in delayed performance of its obligation if such performance is prevented or delayed because of work to hostilities, revolution, civil commotion, epidemic, accident, fire,

cyclone, flood, earthquake or because of any law and order proclamation, regulations or ordinance of the Government thereof or because of any act of God or for any cause beyond reasonable control of the party affected. Should one or both the parties be prevented from fulfilling their contractual obligations a state of force majeure lasting continuously for a period of 6 months, the two parties shall consult each other regarding the future execution of the contract for mutual settlement.

7.23. Damages to Persons and Property:

The contractor shall take every precaution not to damage or injure adjoining or other property of any persons. He shall indemnify and keep indemnified the employee against all claims for injuries or damages to any person or any such property (including surface or land or crops in site) which may arise out of or in consequence of any negligence or default on the representatives and against all claim, demands proceedings damages, costs, charges and expenses whatsoever in respect of or in relation thereto. The Department does not take any responsibility on this account.

7.24. Attention to Urgent Works:

If any urgent work in the opinion of Engineer-in-charge becomes necessary to be executed and the contractor is unable and unwilling at once to carry out, the Engineer-in-charge may by his own or through other agency carry it out, as he may consider necessary. All expenses incurred on it shall be recoverable from the contractor or be adjusted against any sum payable to him.

7.25. Safety Devices:

i) **Scaffolding:** Suitable scaffolding shall be provided for workmen for all works that can not be safely done from the ground or solid construction except such short period of work as can be done safely from the ladders. When a ladder is used an extra labour shall be engaged for holding the ladder and if the ladder is used in carrying the materials, suitable foot holds and handholds shall be provided on the ladder.

The Engineer-in-charge will have the right to inspect the scaffolding and centring etc. for the work and can reject partly or fully such structure if found defective in his opinion.

ii) **Working Platforms:** Working platforms, gangways and stairways shall be constructed such that they do not sag unduly or unequally. If the height of the platforms or gangway or stairway is more than 3.25 meters above the ground or floor level, it shall be closely guarded, have adequate width and suitably fenced.

iii) **Safe means of access:** Safe means of access shall be provided to all working platform and other working places.

iv) **Precaution against Electrical Equipment:** Adequate precaution shall be taken to prevent danger from electrical equipment. Hand lamps shall be provided with Mesh guard, wherever required.

v) **Preventing Public from Accident:** No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or public. The contractor shall provide all necessary fencing and light to protect public from accident and shall be bound to bear expenses of defence or any suit action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precaution and to pay any damages and cost which may be awarded in any such suit action or proceedings to any such person or

which may with the consent of the contractor, be paid to compromise any claim by any such person. The contractor not to come cause blockage of traffic /disruption of the traffic.

- vi) **Demolition:** Before any demolition work is commenced and also during process of work:
 - a) all roads and open areas adjacent to the work site shall either be closed or suitably protected,
 - b) no electric cable or apparatus which is liable to be a source of danger shall remain electrically charged,
 - c) all practical steps shall be taken to prevent danger to persons employed from the risk of fire, explosion or flooding,
 - d) no floor roof or other parts of the building shall be so over loaded with debris or materials as may render it unsafe.
- vii) **Personal safety equipment:** All personal safety equipment shall be made adequately available by the contractor for use of persons employed at the site of work and maintained in a condition suitable for immediate use. The contractor shall take adequate steps to ensure proper use of the equipment by persons concerned.
- viii) **Precaution against fire:** Suitable fire extinguishers, water and sand buckets shall be provided at the work site to tackle situations of fire.

7.26. **Rescission of Contract:**

Subject to other provisions contained in this clause the General Manager of the Department may without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, recommend the accepting authority to rescind the contract in any of the following cases:

- i) If the **contractor** having been given by the General Manager a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or un-workmen like manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- ii) If the contractor being a company shall pass a resolution on the court shall make an order that the company shall be wound up or if a receiver or a **manager** on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle to court to make a winding up order.
- iii) If the contractor has, without reasonable cause, suspended the progress of the work with due diligence so that in the opinion of the General Manager (which shall be final & binding) he will be unable to secure completion of the work by the date of completion and continues to do so after a notice in writing of seven days from the General Manager.
- iv) If the contractor fails to comply with the provisions of **Clause-7.15** & other relevant clauses mentioned elsewhere in this DTCN.
- v) If the contractor fails to complete the work within the stipulated date or items of the work with individual date of completion, if any stipulated, on or before such

date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the General Manager.

When the contractor has made himself liable for action under any of the cases aforesaid, the **accepting authority shall have the powers to rescind the contract** (of which rescission notice in writing to the contractor under the hand of General Manager shall be conclusive evidence), **20% of the value of the left over work** will be realized from the contractor as Penalty

7.26.1. In case of rescission of contract as per **Clause-7.26** the contractor shall have no claim to compensation for any loss sustained by him by regions of having purchased or procured any materials or entered any engagement on account of or with a view to execute the work / performance of the contractor.

7.27(a) **Conditions for Reimbursement of Levy/Taxes if Levied after Receipt of Tenders:**

- i) All tendered rates shall be inclusive of all taxes and levies payable under respect statutes. However, pursuant to the Constitution (46th Amendment) Act, 1982, if any further tax or levy is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes/levies the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of the **Chief Executive Officer, WATCO, Bhubaneswar** (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.
- ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorised representative of the Department and/ or the Engineer-in-Charge and further shall furnish such other information/ document as the Engineer-in-Charge may require from time to time.
- iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy, pursuant to the Constitution (Forty Sixth Amendment) Act, 1982, give a written notice thereof to the Engineer-in-Charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

7.27(b) **Other statutory Taxes such as I.T. etc, will be deducted at sources from the bills of the contractor and deposited with concerned authority.**

7.27(c) Royalty at the prevailing rate on minerals will be deducted from the bills of the contractor and deposited with concerned authority.

7.28 **Fair Wages Clause:**

- (a) The contractor shall not employ for the purpose of this contract any person who is below the age of fourteen years and shall pay to each labourer for work done by such labourers fair wages.

Explanation – “**Fair Wage**” means wages, whether for time or piece work prescribed by the State Public Works Department provided that where higher rates have been prescribed under the minimum wages Act 1948 wages at such higher rates should constitute fair wages.

The General Manager shall have the right to enquire into and decide any complaint alleging that the wages paid by the contractor to any labourer for the work done by such labourer is less than the wages as per sub-paragraph-I above.

- (b) The contractor shall, notwithstanding the provisions of any contract to contrary, cause to be paid a fair wage to labourers indirectly engaged on the work including any labour engaged by his sub-contractors in connection with the said work, as if, the labourers had been immediately employed by him.
- (c) In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor shall comply with or cause to be complied with all regulations made by Government in regard to payment of wages, wage period deductions from wages, recovery of wages not paid and deductions unauthorizedly made, maintenance of wage register, wage cards, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of a like nature.
- (d) The General Manager or Manager concerned shall have the right to deduct, from the money due to the contractor, any such required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfilment of the conditions of the contract for the benefit of the workers non-payment of wages or of deduction made from his or their wages, which are not justified by their terms of the contract or non-observance of the regulations. Money so deducted should be transferred to the workers concerned.
- (e) Vis-à-vis, the Government of Odisha, the contractor shall be primarily liable for all payments to be made under and for the observance of the regulations aforesaid without prejudice to his right to claim indemnity from his sub-contractor.
- (f) The regulations aforesaid shall be deemed to be a part of this contract and any breach thereof shall be breach of this contract.

[Odisha PWD/Electricity Department Contractor's Labour Regulations]

7.28.1. Short title – These regulations may be called "**The Odisha Public Works Department / Electricity Department Contractor's Regulations**".

7.28.2. Definitions – In these Regulations, unless otherwise expressed or indicated the following words and expressions shall have the meaning here by assigned to them respectively, that is to say -

- i) "**Labour**" means a worker employed by a contractor of the Odisha Public Works Department / Electricity Department directly or indirectly through a sub-contractor or other person, or by an agent on his behalf.
- ii) "**Fair Wages**" means wages whether for time or piece work prescribed by the State Public Works Department provided that where higher rates have been prescribed under the minimum wages Act, 1948 wages at such higher rates should constitute fair wages.
- iii) "**Contractor**" shall include every person whether a sub-contractor or headman or agent employing labour on the work taken on contract.

- iv) **“Wages”** shall have the same meaning as defined in the payment of Wages Act and include time and piece rate wages, if any.

7.28.3. Display of Notices regarding Wages, etc.:

The contractor shall:–

- (a) Before he commences his work on contract display and correctly maintain and continue to display and correctly maintain, in a clean and legible condition, in conspicuous places on the work, notices in English and in the local Indian language spoken by the majority of the workers, giving the rate of wage prescribed by the State Public Works Department / Electricity Department for the district in which the work is done.
- (b) Send a copy of such notices to the Engineer-in-charge of the work.

7.28.4. Payment of wages:

- (1) Wages due to every worker shall be paid to him direct.
- (2) All wages shall be paid in current coin or currency or in both

7.28.5. Fixation of wage period:

- (1) The contractor shall fix the wage period in respect of which the wages be payable.
- (2) No wage period shall exceed one month.
- (3) Wages of every workman employed on the contract shall be paid before the expiry of ten days, after the last day of the wage period in respect of which the wages are payable.
- (4) When the employment of any worker is terminated by or on behalf of the contractor, the wages earned by him shall be paid before the expiry of the day succeeding the one on which his employment is terminated.
- (5) All payments of wages shall be made on a working day.

7.28.6. Wage book and wages cards, etc.:

- (1) The contractor shall maintain a wage book of each worker in such form as may be convenient, but the same shall include the following particulars-
 - (a) Rate of daily or monthly wages.
 - (b) Nature of work on which employed
 - (c) Total number of days worked during each wage period
 - (d) Total amount payable for the work during each wage period.
 - (e) All deductions made from the wages with an indication in each case of the ground for which the deduction is made.
 - (f) Wage actually paid for each wage period.
- (2) The contractor shall also maintain a wage card for each worker employed on the work.
- (3) The General Manager may grant an exemption from the maintenance of wage book, wage cards to a contractor who, in his opinion – may not directly or indirectly employ more than 100 persons on the work.

7.28.7. Fines and deduction which may be made from wages:

- (i) The wages of a worker shall be paid to him without and deduction of any kind except the following -
 - (a) Fines

- (b) Deductions for absence from duty, i.e., from the place of places whereby the terms of his employment he is required to work. The amount of deductions shall be in proportion to the period for which he was absence.
 - (c) Deductions for damage to or loss of good expressly entrusted to the employed person for custody or for loss of money for which he is required to account where such damage or loss is directly attributable to his neglect or default.
 - (d) Any other deductions which the Odisha Government may from time to time allow.
- (ii) No fines shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deduction.
 - (iii) The total amount of fines which may be imposed in any one wage period on a works shall not exceed an amount equal to five paise in a rupee of the wages payable to him in respect of that wage period.
 - (i) No fine imposed on any worker shall be recovered from him by instalments, or after the expiry of 60 days from the date on which it was imposed.

7.28.8. Register of fines, etc.:

- (i) The contractor shall maintain a register of fines and of all deduction for damage or loss. Such register shall mention the reason for which fine was imposed or deduction for damage or loss was made.
- (ii) The contractor shall maintain a list in English and in the local Indian language, clearly defining acts and omissions for which penalty of fine can be imposed. It shall display such list and maintain it in a clean and legible condition in conspicuous places on the work.

7.28.9. Preservation of register:

The wage register, the wage cards and the register of fines, deduction required to be maintained under the regulations shall be **preserved for 12 (twelve) months** after day of the last entry made in them.

7.28.10. Powers of Labour Welfare Officers to make investigation or enquiry:

The Labour Welfare Officers or any other persons authorized by the Government of Odisha on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of the fair wage clauses and the provisions of these regulations. He shall investigate into any complaint regarding default made by the contractor, sub-contractor in regard to such provisions.

7.28.11. Report of Labour Welfare Officers:

The Labour Welfare Officer or others authorized as aforesaid shall submit a report of the results of his investigation or enquiry to the General Manager concerned, indicating the extent, if any, to which the default has been committed with a note

that necessary deductions from the contractor bill be made and the wages and other dues be paid to the labourers concerned.

7.28.12. **Appeal against the decision of Labour Welfare Officer:**

Any persons aggrieved by the decision and recommendation of the Labour Welfare Officer or other person so authorized may appeal against such decision to the Labour Commissioner within 30 days from the date of decision forwarding simultaneously a copy of his appeal to the General Manager concerned but subject to such appeal, the decision of the officer shall be final and binding upon the contractor.

7.28.13. **Inspection of register:**

The contractor shall also allow inspection of the wage book and wage cards to any of his workers or to his agent at a convenient time and place after due notice is received, or to the Labour Commissioner or any other person authorized by the Government of Odisha on his behalf.

7.28.14. **Submission of return:**

The contractor shall submit periodical returns as may be specified from time to time.

7.28.15. **Amendments:**

The Government of Odisha may from time to time, add to or amend these regulations and on any question as to the application, interpretation of effect of these regulations, the decision of the Labour Commissioner or any other person authorized by the Government of Odisha in that behalf shall be final.

7.28.16. **Quality assurance plan:**

Work, supply of mechanical equipment, electrical panel, mandatory spares or services should offer by the contractor followed with quality assurance plan to the department before taking up the work. A quality assurance plan (**QAP**) has to be approved by the competent authority before taking of work, supply of equipment & services.

The terms and conditions of the agreement have been read by Me/Us and I/We certify that I/We clearly understand them and agree to abide by them.

Contractor

SECTION-8
SCOPE OF WORK
GENERAL

The intent of this Section is to specify the work items to be covered on '**Percentage Rate Basis**' in conformity with the technical specifications as enumerated in the subsequent clauses for the work, "**Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack**".

8.1. Location:

Town : Cuttack
District : Cuttack
State : Odisha

Nearest Railway Station : Cuttack

8.2. Items of Work to be executed (Broad Scope of works):

Installation of saddle & compression fitting with individual house connection, installation of air valves, isolation valves & sluice valves chamber. The detail scope of work as per BOQ attached.

The above scope of works is not exhaustive but gives only an idea about the type of work involved. Any other items/works, which have not been specifically mentioned but required for completeness and soundness of the systems, shall be done by the executing partner.

SECTION-9

TECHNICAL SPECIFICATION

1.0 DESIGN STANDARDS

The work shall be performed conforming to the Indian Standard Specifications and Codes of Practice as well as P.H.D & P.W.D. specification of the State Government and Manual on Water Supply & Treatment by CPHEEO (Central Public Health and Environmental Engineering Organization). In case of any contradiction, the decision of the competent Authority of the Department shall be final binding.

2.0 SPECIFICATIONS & STANDARDS FOR CONSTRUCTION

All the structures shall be designed conforming to state-of the art technology & practice in an economical manner. The quality & standard for construction shall conform to physical and chemical standards stipulated in the relevant manual published by Central Public Health & Environmental Engineering Organization and Indian Standard Code of Practice (latest edition).

- PIPELINE
- EARTH WORK SPECIFICATIONS

EARTH WORK INGRADING, EXCAVATION AND BACK FILLING

- **SCOPE**

This specification covers the general requirement so for the work in excavation in different materials, site grading, filling in areas, filling back around foundations and in plinths, conveyance and disposal of surplus soils or stacking them properly as directed by the Engineer-in-Charge and all operations covered with in the intent and purpose of this specification.

- **SITE CLEARANCE**

General: All areas of the Site falling within the area marked for site grading and excavation or from which material is to be excavated or upon which filling is to be deposited, as directed by the Engineer-in-Charge shall be cleared by the Contractor to the extent required by the Engineer-in-Charge, of all buildings, walls, gates, fences and other structures and obstructions and of all bushes, hedges, trees and stumps (of girth up to 300mm), roots and other vegetation except for trees marked for preservation and trees with girth greater than 300mm. Material so cleared shall so far as suitable be preserved and stacked for further use but shall otherwise be disposed off the Site as directed by the Engineer-in-Charge.

- **Trees:** Where directed by the Engineer-in-Charge trees shall be up rooted or cut down as near to ground level as possible. Branches and foliage shall be removed and disposed off the Site. Useful timber shall remain the property of PHEO and shall be cut into suitable lengths and transported a distance for all leads to a location designated by the Engineer-in-Charge where it shall be off loaded and stacked.
- **Stumps:** Stumps and roots whether existing or remaining after tree felling shall where directed by the Engineer-in-Charge be grubbed out and disposed off the Site for all leads. The resulting hole shall be filled with approved material deposited in 225 mm layers and compacted to the same dry density as the adjoining soil.
- **Forestry Regulations:** The Contractor shall familiarize himself with all local rules and regulations governing land clearance including the special requirements for forestry areas and shall carry out his work in strict compliance with all such requirements.
- **Measurement of Site Clearance:** Items in the Bill of Quantities for Excavations shall include for clearing the Site, including felling of trees and grubbing up of stump so trees of girth less than or equal to 300 mm. Items for felling trees exceeding 300 mm girth shall include for felling, cutting up, and transporting use full timber to the Municipal stock yard as directed by the Engineer-in-Charge. Trees shall be classified for measurement according to their girth measured at 1.5 metres above mean ground level. Separate measurement will not be made for trees with girth less than 300 mm. Items for felling trees shall also include for grubbing up and disposal off the Site of stumps and roots and for filling up the resulting hole all as directed by the Engineer-in-Charge.

GENERAL EXCAVATION

General: General excavation means excavation required for general site grading, structures, road works and borrow areas and shall not include Trench Excavation. General excavation may also include miscellaneous isolated length so trenches inside or adjacent to other structures.

The ground shall be excavated by such methods and to such dimensions and depths as shall allow for the proper construction of the Works and safety of personnel and equipment used on excavation.

Slopes required for stable formation of sides shall be catered to in the rates quoted for the item.

The Contractor shall make his own allowance for any working space required, and any excavation outside the aforesaid limits which has not been or directed by the Engineer-in-Charge, whether it be excavated to suit the Contractor's method of working or unavoidable over break or due to his carelessness or error, shall be held to be Excess Excavation and shall not be paid.

Wherever a socket or collar of pipe or fitting/special occurs, a grip is to be cut in the bottom of the trench or concrete bed to a depth of at least 75 mm below the bed of the pipe so that the pipe may have a fair bearing on its shaft and does not rest upon its socket. Such grip shall be of sufficient size in every respect to admit the hand all around the socket in order to make the joint, and the grip shall be maintained clear until the joint has been approved by Owner/Engineer-in-Charge.

When welding is to be carried out with the pipe sand specials in the trench, additional excavation of not more than 60 cm in depth and 90 cm in length shall be made at joints in order to facilitate welding.

Stripping Topsoil: Where ordered by the Engineer-in-Charge, Topsoil shall be stripped to such depths and over such areas as he may direct, as a separate operation prior to any further excavation, which may be required.

- **Supporting Excavations:** The Contractor shall well and effectively support the sides and end so fall excavation stop prevent any fall or run from any portion of the ground outside the excavation and to prevent settlement or damage to structures adjacent to the excavation. Any extra excavation necessary to provide space for such support or other working space shall be held to be Excess Excavation. If, for any reason, any portion of the bottoms, sides or ends of any excavations shall give way, the Contractor shall at his own expense take all necessary remedial measures including the excavation and removal of all the ground thereby disturbed both within and outside the nominal limits of excavation and such extra excavations shall be held to be Excess Excavation.

Where the Contractor elects and is permitted by the Engineer-in-Charge to perform excavations with sloping faces (other than sloping excavations or required as permanent features of the Works) and without shoring, the excavated faces shall be to stable slopes and heights and there resulting extra excavation shall be held to be Excess Excavation.

- **Trimming Excavations:** When excavating to specified levels for the foundation of any structure or to specified limits for the face of any structure required to about undisturbed ground, the Contractor shall not excavate the last 150mm until immediately before commencing the constructional work, except where the

Engineer-in-Charge shall permit otherwise. Should the Contractor have excavated to within 150mm above the specified levels or to within 150mm of these specified limits before he is ready or able to commence the constructional work he shall, where required by the Engineer-in-Charge, excavate further so as to remove not less than 150 mm of material immediately before commencing the constructional work and such further excavation shall be held to be Excess Excavation.

Before commencement of any constructional work all shattered and loose material shall be removed from the excavations by hand so as to ensure that the work rests on a solid and perfectly clean foundation or abuts against solid ground.

- Inspection by the Engineer-in-Charge: When the specified levels or limits of excavation are reached, the Engineer-in-Charge will inspect the ground exposed and if he considers that any part of the ground is by its nature unsuitable he may direct the Contractor to excavate further. Such further excavation shall be refilled to the specified levels or limits with concrete, selected excavated material or selected imported material as directed by the Engineer-in-Charge, but shall not be held to be Excess Excavation.

Should the material forming the bottom of any excavation, while acceptable to the Engineer-in-Charge at the time of his inspection, subsequently become unacceptable to him due to exposure to weather conditions or due to flooding or have become puddled, soft or loose during the progress of the Works, the Contractor shall remove such damaged, softened or loosened material and excavate further by hand. Such further excavation shall be held to be Excess Excavation.

- **DEWATERING**

All excavations shall be kept free of water. Grading in the vicinity of excavations shall be controlled to prevent tidal and surface water running into excavated areas. Contractor shall remove by pumping or other means any water inclusive of rain water and sub soil water accumulated in excavation and keeps all excavations dewatered until the foundation work is completed and back filled. Sumps made for dewatering must be kept clear of the excavations / trenches required for further work. Method of pumping shall be acceptable to the Engineer-in-Charge, but in any case, the pumping arrangement shall be such that there shall be no movement of subsoil or blowing in due to differential head of water during pumping. Pumping arrangements shall be adequate to ensure no delays in construction.

When there is a continuous inflow of water and quantum of water to be handled is considered in the opinion of Engineer-in-Charge as large, well point system, single

stage or multistage, shall be adopted. The Contractor shall submit to Engineer-in-Charge his scheme of well point system including the stages, the spacing, number and diameter of well points, headers etc., and the number, capacity and location of pumps for approval. Unless separately provided for in the schedule of prices, the cost of dewatering shall be included in the item rate for excavation.

- **BACKFILLING,GENERAL SITEGRADING&SANDFILLING**

- **Fill Material:** All fill material whether such material is brought from outside borrow areas or excavation within the site, will be subject to Engineer-in-Charge's approval. Not with standing any approval given to the fill material or borrow areas from which fill material is proposed to be brought, the Engineer-in-Charge reserves the right to reject such material which in his opinion either does not meet the specification requirements or is not suitable for the purpose for which it is intended.

It shall be Contractor's responsibility to locate suitable borrow areas for required fill material. Such areas will be inspected by Engineer-in-Charge and approved before Contractor makes arrangements to borrow the fill material. The topsoil, which may contain vegetation, rubbish, slush etc., shall not be used. If required by Engineer-in-Charge, Contractor shall arrange to have trial pits of specified dimensions and numbers dug at specified locations, for the Engineer-in-Charge to examine the nature and type of material likely to be obtained from the borrow areas.

Unless separately provided for, all load, lift and transportation required for bringing in the fill material from borrow areas or from excavation from within the site shall be included in the Contractor's quoted unit rates.

The borrowed soil shall be generally granular, and non-cohesive. It shall consist of sand, silty sand, moorum, ordinary soil, gravel and shingle. Dredged material, free from clayey deposit, will be accepted. Fill material shall also be free from sulphates, salts, organic, foreign and other harmful or objectionable materials. Any material rejected by the Engineer-in-Charge shall be removed from the site immediately.

Roads, of temporary nature, required to be constructed for access and for movement of men, materials, equipment, transport vehicles, vehicles carrying fill material etc. to or over borrow areas and/or to or over areas on which fill has to be deposited shall be constructed by the Contractor at his own cost. Such costs shall be deemed to have been included in the unit rates quoted by Contractor. Such access roads shall be maintained in good condition during all seasons to ensure completion of the work according to the time schedule.

- **Backfilling:** Excavated material used as backfilling to excavations or completed structures shall be free from rubbish, vegetation, clods and lumps and shall be approved by the Engineer-in-Charge. The approved materials shall be placed in layers, not exceeding 225 mm in depth before compaction and shall be compacted to a dry density not less than 95% of the maximum dry density obtained by the test in Part VII of IS:2720 or to such higher density as is specified here in after. During compaction the backfill shall have a uniform moisture content equal to or a little above the optimum moisture content recorded in the IS Compaction Test. Where necessary the Contractor shall adjust the moisture content of the backfill either by drying out or by adding water. After such drying out or adding of water the backfill shall be thoroughly mixed until the moisture content is uniform.

Soft material shall not be used as backfilling around structures in rock. The Contractor shall back fill such excess excavation with concrete, rubble, stone or rock fill as directed by the Engineer-in-Charge. Filling other than concrete shall be placed in layers not exceeding 300 mm in thickness, shall be thoroughly compacted and have adequate fines content to fill the voids. Should the material being placed as backfilling, while acceptable at the time of selection, become unacceptable to the Engineer-in-Charge due to exposure to weather conditions or due to flooding or have become puddled, soft or segregated during the progress of the Works, the Contractor shall at his own expense remove such damaged, softened or segregated material and replace it with fresh approved material.

The Contractor shall when placing the backfilling make due allowance for any settlement that may occur before the end of the Defects Liability Period. Where necessary, the Contractor shall during the Defects Liability Period and at or before the end of the Defects Liability Period remove any excess material or make up any deficiency or back filling to the specified levels.

Compaction shall be carried out to achieve at least 95% of standard Proctor Dry Density at an optimum moisture content determined in accordance with the relevant IS Specification. It shall be ensured however that the minimum compacted dry density is not less than 1.6 M.T./M3. As the work progresses field density tests shall be conducted on each layer at the rate of one test for every 1000 square metres to check whether the desired compaction has actually been achieved.

- **General Site Grading:** Site grading shall be carried out as directed by Engineer-in-Charge.

Excavation shall be carried out as specified. Filling and compaction shall be carried out as specified below. The approved material shall be placed in layers not exceeding 225 mm in depth before compaction and shall be compacted to a dry density not less than 95 percent of the maximum dry density obtained by the test in Part 7 of IS2720 or to such a higher density. To ensure that the fill has been compacted as specified, field and laboratory tests shall be carried out by the

Contractor at his own cost. Field compaction test shall be carried out at different stages of filling and also after the fill to the entire height has been completed. This shall hold good for embankments as well. The Contractor shall protect the earth fill from being washed away by rain or damaged in any other way. Should any slip occur, the Contractor shall remove the affected material and make good the slip at his own cost. The fill shall be carried out to such dimensions and levels after the stipulated compaction. The fill will be considered If so specified, the rock as obtained from excavation may be used for filling and leveling to indicate grades without further breaking. In such an event, filling shall be done in layers not exceeding 50 cms approximately. After rock filling to the approximate level indicated above has been carried out, the void in the rocks shall be filled with finer materials such as earth, broken stone, etc. and the area flooded so that the finer materials fill up the voids. Care shall be taken to ensure that the finer fill material does not get washed out. Over the layer so filled, a 100 mm thick mixed layer of broken material and earth shall be laid and compaction carried out by a 12tonne roller. Not less than twelve passes of the roller shall be accepted before subsequent imilar operation sare taken up.

- **Sand Filling in Plinth and Other Places:** Backfilling shall be carried out with sand at places as directed by the Engineer-in-Charge. The sand used shall be clean, medium grained and free from impurities. The filled-in-sand shall be kept with water for 24 hours to ensure maximum consolidation. Any temporary work required to contain sand under flooded condition shall be to Contractor's account. The surface of the consolidated sand shall be dressed to required level or slope. Construction of floors or other structures on sand fill shall not be started until Engineer-in-Charge has inspected and accepted he fill.

- **DISPOSAL OF EXCAVATED MATERIAL OF SITE**

Excavated material which is not required for or is unsuitable for re-use in the works shall be disposed off as directed to locations designated by the Engineer-in-Charge. Such material shall remain the property of the PHEO and shall be transported and deposited at places designated by the Engineer-in-Charge. Material so deposited shall be shaped up or spread and levelled as directed by the Engineer-in-Charge. Any necessary work to provide access to Engineer-in-Charge's tips or other preliminary work in connection therewith shall be carried out by the Contractor in consultation with the Engineer-in-Charge and the expenses thereof shall be included in the rate quoted for the item.

- **FIELD DRAINS IN GENERAL EXCAVATION**

Should any existing sub-soilor field drains be uncovered during general excavation ,the Contractor shall either carefully replace them when backfilling, or, if this is impracticable shall divert them to new drains or ditches, or otherwise relay them as the Engineer-in-Charge may direct, and all work in this connection shall be ordered by the Engineer-in-Charge as additional work.

- **CONCRETE & ALLIED WORKS**

- **SCOPE**

This Specification covers the general requirements for ready mixed concrete and for concrete using on-site production facilities including requirements in regard to the quality, handling, storage of ingredients, proportioning, batching, mixing, transporting, placing, curing, protecting, repairing, finishing and testing of concrete; formwork; requirements in regard to the quality, storage, bending and fixing of reinforcement; grouting as well as mode of measurement and payment for completed works.

It shall be very clearly understood that the specifications given herein are brief and do not cover minute details. However, all works shall have to be carried out in accordance with the relevant standards and codes of practices or in their absence in accordance with the best accepted current engineering practices or as directed by ENGINEER-IN-CHARGE from time to time. The decision of ENGINEER-IN-CHARGE as regards the specification to be adopted and the reinterpretation and the mode of execution of work shall be final and binding on CONTRACTOR and no claim what so ever will be entertained on this account.

- **MATERIALS**

- **CEMENT**

Unless otherwise specified or called for by ENGINEER-IN-CHARGE/OWNER, cement shall be ordinary portland cement conforming IS: 8112 or IS:12269.

Only one type of cement shall be used in any one mix unless specifically approved by ENGINEER-IN-CHARGE. The source of supply, type or brand of cement within the same structure or portion thereof shall not be changed without prior approval from ENGINEER-IN-CHARGE.

Cement, which is not used within 90 days from its date of manufacture, shall be tested at a laboratory approved by ENGINEER-IN-CHARGE and until the results of such tests are found satisfactory, it shall not be used in any work.

- **AGGREGATES**

Aggregates shall consist of naturally occurring stones and gravel and sand. They shall be chemically inert, strong, hard, clean, durable against weathering, of limited porosity, free from dust/silt/organic impurities/deleterious materials and conform to IS: 383. Aggregates such as slag, crushed over burnt bricks, bloated clay ash, sintered fly ash hand tiles shall not be used.

Aggregates shall be washed and screened before use where necessary or if directed by the ENGINEER-IN-CHARGE.

Aggregates containing reactive materials shall be used only after tests conclusively prove that there will be no adverse effect on strength, durability and finish, including long term effects, on the concrete.

The fineness modulus of sand shall neither be less than 2.2 nor more than 3.2. If use of sand having fineness modulus more than 3.2 is unavoidable then it shall be suitable blended with crusher stone dust.

The maximum size of coarse aggregate shall be in no case greater than 1/4 of the minimum thickness of the member, provided that the concrete can be placed without difficulty so as to surround all reinforcement thoroughly and fill the corners of the form. For most work 20mm aggregate is suitable. Where there is no restriction to the flow of concrete into sections, 40mm or larger size is permitted.

In concrete elements with thin sections, closely spaced reinforcements or small cover, consideration should be given to the use of minimum 10mm nominal maximum size.

- **WATER**

Water used for both mixing and curing shall conform to IS: 456. Potable water is generally satisfactory. Water containing any excess acid, alkali, sugar or salt shall not be used.

The pH value of water shall not be less than 6.

Sea water shall not be used for concrete mixing and curing.

The proposed admixtures shall comply with requirements of Specification for Admixtures for Concrete.

- **REINFORCEMENT**

Reinforcement bars shall conform to IS: 1786 and welded wire fabric to IS: 1566.

All reinforcement shall be clean, free from pitting, oil, grease, paint, loose mill scales, rust, dirt, dust or any other substance that will destroy or reduce bond.

Special precaution like coating of reinforcement may be provided with the prior approval of ENGINEER-IN-CHARGE.

- **WASTAGE**

Wastage allowance for cement and steel shall be as specified in IS: 456

- **SAMPLES AND TESTS**

All materials used for the works shall be tested before use. The frequency of such confirmatory tests shall be decided by ENGINEER-IN-CHARGE.

Manufacturer's test certificate shall be furnished for each batch of cement/steel and when directed by ENGINEER-IN-CHARGE samples shall also be got tested by the CONTRACTOR in a laboratory approved by ENGINEER-IN-CHARGE at no extra cost. However, where material is supplied by OWNER, all testing charges shall be borne by OWNER, but transportation and preparation of material samples for the laboratory shall be done by CONTRACTOR at no extra cost.

Sampling and testing of aggregates shall be as per IS:2386 under the supervision of ENGINEER-IN-CHARGE. The cost of all tests, sampling, etc. shall be borne by CONTRACTOR. For coarse aggregate crushing value shall be tested.

CONTRACTOR shall furnish manufacturer's test certificates and technical literature for the admixture proposed to be used. If directed, the admixture shall be got tested at an approved laboratory at no extra cost.

- **STORING OF MATERIALS**

All material shall be stored in a manner so as to prevent its deterioration and contamination, which would preclude its use in the works. Requirements of IS:4082 shall be complied with.

Cement bags shall be stored in dry weather proof shed with a raised floor, well away from the outer walls and insulated from the floor to avoid moisture from ground. Not more than 15 bags shall be stacked in any tier. Storage arrangement shall be approved by ENGINEER-IN-CHARGE. Storage under tarpaulins shall not be permitted. Each consignment of cement shall be stored separately and consumed in its order of receipt. CONTRACTOR shall maintain record of receipt and consumption of cement.

Each size of coarse and fine aggregates shall be stacked separately and shall be protected from dropping leaves and contamination with foreign material. The stacks shall be on hard, clean, free draining bases, draining away from the concrete mixing area.

CONTRACTOR shall make his own arrangements for storing water at site in tanks of approved capacity. The tanks shall be cleaned at least once a week to prevent contamination.

The reinforcement shall be stacked on top of timber sleepers to avoid contact with ground/water. Each type and size shall be stacked separately.

- **PIPE LINE CONSTRUCTION GENERAL**

- **SCOPE**

This specification covers the general requirements of pipeline transporting, handling, stacking, storage, laying, jointing, inspection testing and commissioning for pipes of different materials as directed by the Engineer-in-Charge. In case of any ambiguity between this section and materials specific requirement so following sections, the material specific requirement shall prevail.

- **GENERAL SPECIFICATIONS**

- Preparatory work: The contractor will inspect the route along which the pipe line is proposed to be laid. He should observe/find out the existing underground utilities/construction and propose an alignment along which the pipeline is to be laid. He should make all efforts to keep the pipe as straight as possible. Where ever there is need for deviation, it should be done with the use of necessary specials or by deflection in pipe joints (limited to 75% of permissible deflection as per manufacturer). The alignment as proposed should be marked on ground with a line of white chalk and got approved from Engineer-in-Charge In-Charge. The Contractor will than prepare an L-Section along this alignment showing the location of proposed pipe line. The L-section should be got approved from the site Engineer-in-Charge. The position of fittings, valves, should be shown on the plan.
- **Alignment and the L-Sections:** The alignments, L-section (depth of laying) and location of specials, valves and chambers may be changed at site in co-operation with and after approval of the Engineer-in-Charge in Charge. The minimum cover to the top of the pipe shall be 1m.
- **Standards:** Except as otherwise specified in this technical specification, the Indian Standards and Codes of Practice in their latest version, National Building code and Manual of water supply of GOI shall be adhered to for the supply, handling, laying, installation, and site testing of all material and works.
- **Tools and equipment:** The contractor has to provide all the tools and equipment required for the timely, efficient and professional implementation of the work as specified in the various sections of the contract and as specified by the instructions of manufacturers of the pipes and other material to be handled under this contract. On demand he shall provide to the Engineer-in-Charge in Charge a detailed list of tools and equipment available. If in the opinion of the Engineer-in-Charge in Charge the progress or the quality of the work cannot be guaranteed by the available quantity and type of tools and equipment the

contractor has to provide additional ones to the satisfaction of the Engineer-in-Charge in Charge. The Contractor will always have a levelling instrument on site.

TRANSPORTATION, HANDLING, STACKING AND INSPECTION

- **General**

All pipes and specials manufactured at the mill shall be transported by the Contractor from manufacturer to the site of laying as indicated by the Engineer-in-Charge in Charge. etc., Pipes should be secure during transit. All nuts and bolts flange adaptors and other similar items shall be stored in dry conditions, raised off the ground in sheds or covered areas. Where items require special storage requirements, the method of storage shall be to the approval of Engineer-in-Charge and in accordance with manufacturer's requirements. Storage areas shall be set out to facilitate unloading, loading and checking of materials. End covers and other protection shall not be removed until incorporation of the pipes or fittings into the Works. The Contractor shall provide 2 (two) sets of accurate „Go“ and „No Go“ ring gauges to measure the diameter of pipes, specials and fitting for the use of the Engineer-in-Charge at no extra cost.

Transportation and Handling

Vehicles on which pipes are transported shall have a body of such length that the pipes do not over hang. Pipe shall be transported on flatbed vehicles/trailers. The bed shall be smooth and free from any sharp objects. The pipes shall rest uniformly on the vehicle bed in their entire length during transportation. Whatever method and means of transportation is used, it is essential that the pipes are carefully placed and firmly secured against uncontrolled movement during transportation to the satisfaction of Engineer-in-Charge in charge. Pipes shall be loaded and un-loaded manually or by suitable mechanical means without causing any damage to the stacked pipes. Pipes should be handled with care to avoid damage to the surface, deformation or bending. Pipes shall not be dragged along the ground or the loading bed of a vehicle. The pipes and specials shall be handled in such a manner as not to distort their circularity or cause damage to their surface. Pipe handling equipment shall be maintained in good condition and any equipment which in the opinion of the Engineer-in-Charge may cause damage to the pipes shall be discarded. Under no circumstances shall pipes be dropped, be allowed to strike one another, be rolled freely or dragged along the ground. No defective/damaged pipe shall be used in the works without rectification to the satisfaction of the Engineer-in-Charge. Any damage to the coating shall be repaired by the Contractor at his own cost to the satisfaction of the Engineer-in-Charge. Cranes or chain pulley block or other suitable handling and lifting equipment shall be used for loading and un-loading of heavy pipes. However, for pipes upto 400 mm nominal bore, skid timbers and ropes may be used. Damage to lining must be repaired before pipe laying according to the instructions of the pipe manufacturer. Pipes shall not be thrown directly on the ground. When using

mechanical handling equipment, it is necessary to employ sufficient personnel to carry out the operation efficiently with safety. The pipes should be lifted smoothly without any jerking motion and pipe movement should be controlled by the use of guide ropes in order to prevent damage caused by pipes bumping together or against surrounding objects. Rolling or dragging pipes along the ground or over other pipes already stacked shall be avoided too. Mild steel pipeline with external coating shall be lowered/ lifted field with canvas belts to avoid damages to coating.

Stacking and Inspection

The Contractor shall keep a responsible representative to take delivery of pipes, specials and appurtenances, etc., transported from stock yard. Pipes and appurtenances should be handled, stored and stacked in a suitable manner as directed by Engineer-in-Charge. Padding shall be provided between coated pipes and timber skids to avoid damage to the coating. Gaps must be left between stacked pipes to permit access from one side to the other. The pipes, specials and appurtenances received at site shall be inspected and defects such as protrusions, grooves, dents, notches, damage to the protected coating, etc., shall be pointed out to the Engineer-in-Charge at site and in acknowledgement challans. Such defects shall be rectified or repaired by the Contractor at his expense, to the satisfaction of the Engineer-in-Charge. It will be the responsibility of the Contractor to protect the pipes, specials and other items stacked along the alignment against any possible damages or theft. The pipe should be given adequate support at all times. Pipe should be stored on a reasonably flat surface free from stones and sharp projections so that the pipe is supported throughout its length. In storage, pipe racks should provide continuous support and sharp corners of metal racks should be avoided. Pipes should not be stacked in large piles for all pipes and especially under warm temperature conditions. Pipes should not be stored inside another pipe. On no account the pipes should be stored in stressed or bent condition or near the sources of heat. Pipes should not be stacked more than

1.5 m high and pipes of different sizes and classes should be stacked separately. The ends of the pipes should be protected from abrasion. Contractor shall provide temporary props in order to prevent any sagging of the pipes while they are stacked. Details of proposed propping (strutting) system shall be submitted to Engineer-in-Charge for approval and if required by the Engineer-in-Charge, the method of propping(strutting) shall be demonstrated and tested at site.

- **PIPE TRENCHES:**

General: Trench Excavation means excavation of trenches into which pipes are to be laid and the term pipes shall mean pipes of all kinds and for whatever purpose.

The line and level of trenches shall be as may be required by the Engineer-in-Charge. Before commencing Trench Excavation, the route of the trench shall be pegged out accurately and the ground levels shall be agreed with the Engineer-in-

Charge. Strong sight rails shall then be fixed and maintained at each change of gradient and at as many intermediate points as may be necessary. On the serials shall be marked the centre line and the level to which the excavations to be carried out, such rails being not more than 35metresapart.

Trench Excavation Generally: Trench excavation shall be carried out by such methods and to such lines, dimensions and depths as shall allow for the proper construction of the Works, provided always that, unless the Engineer-in-Charge permits otherwise, no Trench Excavation shall be less than 500 mm in width and no Trench Excavation for pipes larger than 200 mm dia meter shall exceed the widths stated:-

- Excavation infirm ground or soft rock, no shoring required D+ 600mm
- Excavation in soft ground or any conditions requiring shoringD+600mm

The sides of Trench Excavation shall be vertical unless the Engineer-in-Charge permits otherwise. Any widening or deepening of Trench Excavations necessary to accommodate curves, joints or bends in the pipe when ordered by the Engineer-in-Charge shall be held to be `general excavation' but that required by the Contractor to provide extra working space for the construction thereof shall be held to be Excess Excavation. For the purpose of measuring certain work in connection with Trench Excavation, "nominal limits" of Trench Excavation are stated hereof and any excavation outside these limits which has not been ordered by the Engineer-in-Charge, shall be he ld to be Excess Excavation. No length of Trench Excavation shall be started until the pipes to be laid in that length are available on the Site.

Trial Pits or Trenches: The Engineer-in-Charge may require trial pits or trenches be excavated well ahead of the trench excavation to such depths as he shall order to determine the alignment for the trench.

Any further trial pits or trenches required by the Contractor to determine the position of underground services, subsoils, drains or for any other reason shall be excavated and rein stated at the Contractor's expense. The Contractor shall arrange for the refilling and reinstatement of trial pits or trenches to be carried out immediately after the required information is obtained. The reinstatement of the surfaces of trial pits or trenches shall be carried out to the approval of the Engineer-in-Charge.

Trench Excavation in Roads and Footpaths: All Trench excavation and other work carried out within the limits of any road shall be completed as rapidly as possible and not more than half of the width of the carriageway shall be obstructed at a time. Road drains and grips shall be kept free from obstruction. In an event the Contractor shall take special precautions, which shall include the continuous support of the sides of the excavation, from the time when excavation

is begun until the refilling of the trench is placed, to ensure that there is no disturbance of the adjacent road or road foundation.

Where excavated material has temporarily been deposited on grass margin or road pavement, the margin or road pavement shall on completion of refilling be restored entirely to its original condition and left free from loose stones.

Trench Excavation in Fields etc.: The term "fields" includes fields, moorlands, grass verges the like and all private lands, and no length of Trench Excavation located in fields shall be commenced until suitable temporary fencing has been erected around that length unless the Engineer-in-Charge permits otherwise. Temporary fencing shall not be removed without the Engineer-in-Charge's permission which will not normally be given until the Trench Excavation has been refilled and reinstated to the original ground condition or as directed by the Engineer-in-Charge.

The Contractor shall have particular regard to the safety of livestock in fields or which may be introduced to the fields, and shall ensure that all open excavations, access routes and steep or loose slopes arising from the Contractor's operations in these fields are adequately fenced and protected. After the erection of temporary fencing Contractor shall remove Topsoil to such depth and over such areas as may be necessary to provide sufficient material to ensure adequate surface reinstatement of the working areas occupied by the Contractor for construction of the pipeline.

Trimming Trench Excavations: When excavating to specified levels for Trench Excavation or to specified limits for the face of any structure therein required to abut undisturbed ground, the Contractor shall not excavate the last 150mm until immediately before commencing constructional work except where the Engineer-in-Charge permits otherwise. Should the Contractor have excavated to within 150mm above these specified levels or to within 150mm of these specified limits before he is ready to be able to commence the constructional work he shall where required by the Engineer-in-Charge excavate further so as to remove not less than 150mm of material immediately before commencing the constructional work and any such further excavation shall be held to be Excess Excavation.

Where no bedding material is specified to be laid beneath the pipe the bottom of Trench Excavations shall be carefully boned in and trimmed true to grade with the aid of a straight edge at least six metre long so as to ensure a continuous support for the pipes. The trench bottom shall then be pricked over with a fork and any stones or flints either likely to cause the pipe to bed unevenly or to damage the pipe and its coating or greater than 20 mm in size shall be picked out of the pipe bed and any holes so formed shall be filled in with soft material and trimmed to the correct level. Where no bedding material is specified, all shattered and loose material shall be removed from the bottom of the Trench Excavation so that the bedding material rests on a solid and clean foundation.

- **DISPOSING MATERIAL FROM TRENCH EXCAVATIONS**

Subject to any specified requirements of the Contract, the Contractor shall make his own arrangements for the temporary storage of any excavated material which is required for use in refilling Trench Excavations, including any necessary double handling. In this connection the Contractor shall have regard to the working areas available to him for the construction of the pipe line particularly where this is located in roads or in other places to which the public has free access. Any temporary tips alongside the Trench Excavations shall be to stable slopes and heights. Where the nature of the excavated material is suitable the Contractor's temporary storage as aforesaid shall include for these separate storage as the Engineer-in-Charge may direct of any of the various grades of material hereinafter specified for the refilling and surface reinstatement of Trench Excavation, namely, soft material, coarse material, hard material and topsoil.

- **OTHER STRUCTURES ALONG THE PIPELINE**

The Contractor shall carry out further excavation as maybe necessary to accommodate structures such as an chorblook sand valve chambers. Such excavation shall include for disposal of surplus material and where appropriate, for backfilling ground the structures.

- **LAND DRAINS**

Where land drains, mole drains or field drains are severed by Trench Excavation they shall be kept in effective temporary operation during construction of the pipe line. At the appropriate stage of refilling the Trench Excavation, the drains shall be permanently restored as follows: -The drain on either side of the Trench Excavation shall be cut back for at least 300 mm and a suitable length and diameter of approved pipe shall be jointed to the existing drain and laid resting at the ends on solid ground with clay or other stopping to prevent the subsequent run of land drainage water into the pipe trench. During trench refilling, earth shall be carefully placed and thoroughly compacted under the drain pipes to give the made quate support.

- **EXISTING SERVICE**

Where Trench Excavation is carried out close to or across the line of sewers, pipes, cables and other services, the Contractor shall, where necessary, provide temporary supports or slings and where such sewer, pipe, cable or other service is temporarily disturbed it shall be replaced. Where, in the opinion of the Engineer-in-Charge, construction of the pipeline cannot reasonably be carried out unless the sewer, pipe, cable or other service is permanently severed or permanently diverted or permanently supported by concrete he shall order the Contractor to undertake such work. Notwithstanding any relevant information furnished by the Engineer-in-Charge, the Contractor shall be responsible for ascertaining from his

own inspection of the site and from the respective supply authorities and other public bodies the positions of all mains, pipes and cables whether underground or overhead, within or near the Site.

- **OTHER CIVIL AND RELATED WORKS**

Crossing of existing Distribution Pipes and connecting pipes: Existing transmission and distribution pipes and connecting pipes of standpipes have to be protected during the laying of the pipes. In case of impossibility of deviation, the pipes have to be replaced according to the instructions of the Engineer-in-Charge and in co-operation with the local representative (for eg. Assistant Engineer-in-Charge) of PHEO. The Contractor has the full responsibility in case of destruction of pipes due to inattention of his staff. All costs for the reinstatement of the original status of the pipes in case of damage have to be borne by him.

- **HEDGES, FENCES AND WALLS**

Where the Trench Excavation crosses barriers such as hedges, fences and walls, the Contractor, as a temporary measure during construction of the pipeline, shall provide temporary fencing for any parts of such barriers as have had to be removed. After Trench Excavation has been reinstated, the Contractor shall carry out such work as the Engineer-in-Charge may order for permanent restoration of such barriers.

- **CROSSING WATER COURSES ETC**

Where the pipeline crosses culverts and other watercourses, the Contractor shall be deemed to have allowed for all the additional measures necessary for the proper construction of the pipe line at these crossings including maintain in the full flow of water across the trench.

- **SPECIAL FOUNDATION IN POOR SOIL**

Where the bottom of the trench and sub grade is found to consist of material which is unstable to such a degree that in the opinion of Owner/Engineer-in-Charge, it cannot be removed and replaced with an approved material thoroughly compacted in place to support the pipe properly, a suitable foundation for the pipes, consisting of piling, limbers or other materials, as instructed by Owner/Engineer-in-Charge shall be constructed.

- **PIPE LAYING FOR BURIED PIPES**

Pipes shall be laid in accordance with IS 5822, IS 3114, IS 12288, IS 8329 unless otherwise specified herein. The pipeline shall be constructed in lengths with a separate full time gang working on each length. The work on lengths may proceed concurrently. The programme for pipe-laying shall be submitted to and be

approved by the Engineer-in-Charge at the start of the Contract. Any subsequent changes to the programme shall be submitted to and approved by the Engineer-in-Charge before work to a different programme is started. Excavation for the pipeline in any one length shall not at any time proceed more than 2 km beyond the end of a hydraulically tested, completed and backfilled length of pipe, unless otherwise approved by the Engineer-in-Charge. The exposed joints between tested sections shall be disregarded in the above definition.

No metal tools or heavy objects shall be permitted to come into contact with the pipes or fittings. External coated pipe shall be handled at all times with wide non-abrasive canvas, rubber or leather straps or other equipment to prevent damage to the coating. The use of chains, wires lings, or any other handling equipment found to be injurious to the coating shall not be permitted. The timber or skids used to support the coated pipe prior to lowering into the trench shall be properly padded with sufficient bags stuffed with sand or straw for the purpose of protecting the coating. Alternatively, the pipe may be supported alongside the trench on mounds of sand. Any injury to the protective coating from any cause must be repaired before the pipes or fittings placed in the trench. During laying operations, no debris, tools cloth or other material shall be placed in the pipe. Pipes and fittings shall be lowered into the trench with equipment suitable for the weight of the pipes and fittings, and they shall be carefully cleaned before jointing. Pipes shall be laid accurately to the lines and levels within a tolerance of 10 mm. Pipe alignments shall be straight between bends or curves. Length laid to curves shall only be allowed in accordance with detailed proposals approved by the Engineer-in-Charge. Properly painted sight rails shall be supplied and erected, with boning rods of predetermined measurement for the boning of individual pipes to the correct gradient. The sight rails shall be situated vertically above the line of the pipe or immediately adjacent thereto, and there shall at no time be less than three sight rails in position on each length of pipeline under construction to any one gradient. The Contractor may submit to the Engineer-in-Charge for his approval an alternative method of the control of pipe laying to the correct levels and alignment. The joining of pipes shall be made in accordance with the requirements of this Specification. The Contractor shall obtain from manufacturers all special information regarding the handling of the pipes, joint sand other fittings and he will be deemed to have made himself thoroughly conversant with all phases of pipe laying before commencing the works. The Ductile Iron pipe fittings shall be all socketed suitable for rubber gasket joints and should conform to IS: 9523 (Latest revision). A "badger" or "bung" about 10mm smaller than the internal diameter of the pipe shall be kept in the pipe at all times, pulled forward as the work progresses. When pipe laying is not in progress, including overnight, the open end of the pipe line shall be blanked off with a temporary water tight fitting approved by the Engineer-in-Charge. The pipe shall be suitably held down so that the pipe does not become buoyant in the event of the trench becoming flooded. To restrict the flow of rain runoff along the trench the Contractor shall plug the trench with backfill material at distances not exceeding 250 m until the pipeline can be filled in. The plugs shall be removed when trench filling is taking place. In granular bedding areas the plugs shall be of clay and shall be left in.

Level Control: The criterion for the level to which trunk main shall be laid such that the cover above the crown of the pipe to ground level shall be in no case shall be less than 1 metre, unless otherwise directed by Engineer-in-Charge.

Laying to Curves: Where pipes are to be laid to curves, the deflection at each joint shall not exceed one degree. For sharper curves specifically made bends shall be provided.

Lowering and Jointing: The pipe shall be lowered into the trenches such that no part of any shoring is disturbed or damaged and, if necessary, additional temporary struts may be fixed during the lowering operations. Care shall be taken to ensure that the longitudinal joints of two consecutive pipes at each circumferential joint are staggered by 90°. While assembling the pipes, the ends shall have to be brought close enough to leave a uniform gap not exceeding 4mm. There shall be no lateral displacement between the pipe faces to be joined. If necessary, spiders from inside and tightening rings from outside or other suitable

equipment shall be used to bring the two ends in perfect contact and alignment. In no case shall all hammering or longitudinal slitting be permitted. Jacking may be permitted for this purpose in particular circumstances and approval by the Engineer-in-Charge. When the pipe is properly assembled firmly supported on wooden beams and wedges or by other approved means it shall be checked for correct line and level and tack welded. The tack welded circumferential joints shall then be welded fully. On completion of the pipe jointing the external portion shall be coated with the specified protective coating and the trench and the welding pits shall be cleaned. The welding pit shall be filled with approved bedding material and compacted in 150mm layers.

Floatation: The Contractor shall take proper precautions against the risks of floatation and off loading of the excavated works and shall make due allowance in his programme for any closure he considers necessary on account of monsoon. Should any section of the pipeline be affected by floatation in the course of works the entire work shall be removed and then reinstalled to the satisfaction of Engineer-in-Charge. The laying of pipeline again to the correct line and level shall be at Contractor's cost.

- **ABOVE GROUND PIPE LINES:**

General: The procedure for handling the pipes, lowering and assembling specified in previous clauses shall be followed for lifting and laying pipes on supports. The pipeline should be laid on saddle supports directed by Engineer-in-Charge. No material shall be erected unless they have been previously approved by the Engineer-in-Charge. Erection of pipes shall be carried out by the Contractor who shall equip himself, at his cost, with all necessary tools, machinery, labour etc., required for the purpose. The pipeline shall be constructed in lengths with a separate full-time gang working on each length. Except for routine welding of

joints, no other work shall be done in the absence of Engineer-in-Charge, either during the daytime or at night.

Laying procedure: Pipes shall be laid in accordance with IS 5822, IS 3114, IS 12288 unless otherwise specified herein. Pipe laying shall generally start from the fixity points on either side, the expansion joints (in MS pipes) being provided last. Fixity points are at all anchor blocks and fixed supports. Anchor blocks shall be constructed in stages, if specified. The anchorages shall be made from concrete.

The concrete pedestals shall be cast at least 3 weeks before the pipeline is laid on them. In case of any errors in casting the pedestals, corrections shall be applied as directed by the Engineer-in-Charge. The method of joining the pipes and erecting them on the previously cast pedestals shall be determined by the Contractor in consultation with the Engineer-in-Charge. The pipe shall be assembled in position on the pedestal by the equipment approved by the Engineer-in-Charge.

Anchor Blocks: Anchor blocks shall be provided at horizontal bends, vertical bends or/and at intervals on pipelines with gradients in excess of 1 in 6 and at other locations ordered by the Engineer-in-Charge. The anchorages shall be made from concrete. Where faces of anchor blocks are shown to bear against undisturbed ground, the Contractor shall take all necessary measures to ensure that such bearing is given over the full dimensions shown.

- **PIPELINES UNDER EXISTING ROADS**

The Contractor shall programme the Works to reduce disruption to road traffic to a minimum, and before any work commences in existing roads shall:

Obtain the full permission and approval of all authorities concerned serving notices of intent to start work as may be necessary and observing all the local Laws and Regulations

Submit details of his proposals, and obtain approval from the Engineer-in-Charge and local highway authority

Constructing of temporary diversion roads

Pipelines which are laid along a road shall be laid in trench. The bed and surround shall be previously specified but above this the trench shall be back filled. The back fill shall be compacted in layers and the method of compaction used shall achieve not less than 95 % maximum dry density as determined from IS 2720:Part7.

- **TESTING OF THE PIPE LINES**

Sectional tests: After laying and jointing the pipeline shall be tested for tightness of barrels and joints, and stability of thrust blocks in sections approved by the Engineer-in-Charge in Charge. The length of the sections depends on the topographical conditions. Preferably the pipe line stretches to be tested shall be between two chambers (air valve, scour valve, bifurcation, other chamber). At the beginning, the Contractor shall test stretches not exceeding 2 km. After successful organization and execution of tests the length may be extended to more than 2 km after approval of the Engineer-in-Charge in Charge.

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

Complete setting of the thrust blocks.

Partial backfilling and compaction to hold the pipes in position while leaving the joints exposed for leakage control

Opening of all intermediate valves(if any)

Fixing the end pieces for tests and after temporarily anchoring them against the soil (not against the preceding pipe stretch)

At the lower end with a precision pressure gauge and the connection to the pump for establishing the test pressure

At the higher end with a valve for air outlet

If the pressure gauge cannot be installed at the lowest point of the pipeline, an allowance in the test pressure to be read at the position of the gauge has to be made accordingly

Slowly filling the pipe from the lowest point(s).

The water for this purpose shall be reasonably clear and free of solids and

suspended matter Complete removal of air through air valves along the line.

Closing all air valves and scour valves.

Slowly rising the pressure to the test pressure while inspecting the thrust blocks and the temporary anchoring.

Keeping the pipeline under pressure for the duration of the pre-test / saturation of the lining by adding make-up water to maintain the pressure at the desired test level. Make up water to be arranged by Contractor himself at his own cost.

Start the test by maintaining the test pressure at the desired level by adding more make-up water; record the water added and the pressure in intervals of 15 minutes at the beginning and 30 minutes at the end of the test period.

Water used for testing should not be carelessly disposed of on land which would ultimately find its way to trenches.

The pipeline stretch will pass the test if the water added during the test period is not exceeding the admissible limits. No section of the pipe work shall be accepted by the Engineer-in-Charge until all requirements of the test have been obtained.

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

- **HYDROSTATIC TESTS:**

After the new pipe has been laid, jointed and back filled, the pipe line shall be subjected to the following two tests

- **Pressure test:** As per Indian Standards
- **Leakage test:** Leakage test shall be conducted concurrently with the pressure test. Leakage is defined as the quantity of water to be supplied into the newly laid pipe, or any valve section thereof within 0.035 N/mm² of the specified leakage test pressure after the air in the pipe line has been expelled and the pipe has been filled with water. No pipes installation shall be accepted until the leakage is less than the number specified in IS 3114/ IS: 12288/ IS 5822. In case where there are no valves or valve sections are too long, the testing may be permitted to be carried out in suitable segments with in the permission of the authority.

- **CI Piping & Valves:**

Specifications for C.I. pipe	:	IS:1536-1989 Class-A flanged and Tested.
Specifications for C.I. fittings	:	IS:1538-1976(part-1 to 24) tested.
Type of joint	:	Flange Joint.
Code of practice for	:	IS: 3114

laying		
Test pressure	:	1.5timestheworkingpressuresubjecttominimum 1.0kg/cm ² for24 hrs.
MS pipe work :		
Specifications	:	IS:5504-1969forspirallyweldedpipes, IS:3589-1991 :Seamless or electrically welded steel pipes
Wall Thickness	:	Notlessthan8mm
In-lining &out coating	:	AsgiveninIS:10221-1982/IS:5822-1986as applicable
Laying	:	IS:58221986
Flange thickness	:	As per relevant ISS
PVC pipe s& fittings		For internal water supply/sewerage:RelevantISSs.
DI pipes &fitting & their laying	:	As per IS :8329 /1977, IS: 9523/ 1980 & IS: 12288 /1987
Pump Delivery sluice valves & scour valves.	:	Double flanged sluice valves, Rising spindle, Rating :PN1.0(1.60kg) or as per requirement whichever is more.IS:780,IS:2906,Body:CI,Spindle:SS,AISI -410
Non-return valves	:	Double flanged swing check type, rating:PN1.0(1.60 kg)or as per requirement whichever is more.IS:5312,Body:CI Disc: CI, Spindle: SS,AISI -410.
Throttle valve /Control valve	:	Butter fly valves (1.6) suitable rating BS:5155,AWWA:C-504,Body:CI Disc:CI,Spindle:SSAISI-410.
G.I. Pipe Work:		
Specification for pipe	:	IS:1239 (part-I) G.I. Screw/Socket end tested(Heavy)
Specification for fittings	:	IS:1239(Part-II),GI, Screw end tested.
Valves, stopcocks, bibcocks	:	IS:778,Gun Metal Construction, screwed.
Pillar Cocks/Taps	:	IS:1795/1982 Chromium Plated.
Chemical PipeWork:		
Specification & material for chemical dosing pipe.	:	IS:4985/2000UPVC.
Specification &material	:	IS:3006chemicallyresistantstoneware

for		
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Chemical scour/drainpipe		
Valves	:	Teflon, Double flanged Diaphragm type.
Regulating throttle valve	:	S.S. Slim seal type butterfly valves.

- **SURFACE REINSTATEMENT IN ROADS AND FOOTPATHS**

Surface reinstatement of refilled Trench excavations in roads and footpaths shall consist of approved backfill material which has been well compacted and brought up to the sub-grade level of the adjacent road surface. The balance portion shall be made good with similar material as that of the adjacent road, and shall be so maintained (including topping up when necessary) until the end of the Defects Liability Period or until remain over for permanent reinstatement by the appropriate authority, whichever is sooner. The replacement of road structures shall be carried out as soon as practicable after backfilling has been completed. Suitable excavated road pavement which complies with the requirements of the Engineer-in-Charge may be used at the sub-base levels. Compaction shall be carried out with approved mechanical compacting equipment.

The edges of the trench shall be cut to form a uniform line consistent with the varying width of the trench and the agreed trimming allowances. Any part of the structure of the road which has been damaged beyond the width of trench must be cut out and made good. Prior approval for such additional work must be obtained from Engineer-in-Charge before additional payment can be considered in cases where the damage was beyond the Contractor's control. A vertical joint shall be formed between the new work and the existing road surface and shall be painted with hot bitumen or as approved by the Engineer-in-Charge. The joint between the base course and wearing course shall be stepped 75 mm. The finished levels of the completed reinstatement shall conform to adjoining carriageway surface. Reinstatement of wearing courses shall match as nearly as practicable the color or other characteristics of the existing surface.

- **TESTING AND COMMISSIONING**

Commissioning general: After successful sectional tests after pipe laying and other pre-commissioning tests after physical completion, the pipe line shall be commissioned by the Contractor. Commissioning shall be made in conjunction with or after the commissioning of the respective system.

During testing/commissioning, the Contractor shall supply all material and labour to supervise, adjust, test, repair and do all things necessary to maintain the testing/ commissioning. This shall include labour on a 24 hour-a-day basis during the test period and for such other period of continuous operation as the Engineer-in-Charge in Charge may consider necessary to establish the efficient operation of the cluster distribution system. If any test result shows noticeable variation from the specification requirements for the system the Contractor shall immediately take steps to rectify the deficiency without any extra cost to ENGINEER-IN-CHARGE. The Contractor shall test and commission the system for 7 days at a stretch, from the date of commissioning. On expiry of this period the system shall be taken over by the ENGINEER-IN-CHARGE and a taking-over certificate shall be

issued by the Engineer-in-Charge in Charge, provided all defects and/or deficiencies notice dare rectified to the satisfaction of the ENGINEER-IN-CHARGE.

Generally, the timing of most of the commissioning tests will depend on the availability of the respective pumps, the water and power availability at the pumping station and the completion of the reservoir. Should the supply of water from the pumping station fail or should any other event beyond the Contractor's control interfere, the commissioning shall be during such a number of operational periods as the Engineer-in-Charge in Charge may consider equivalent. Any repairs or replacement required during this period shall be done by the Contractor at his own cost. The Contractor shall allow for commissioning to be conducted at any time during the commissioning period without extra charge sunder the Contract. The main indicators for the successful commissioning are:

- No leaks in pipes, joints, specials and valves
- all valves are properly installed and operational
- execution of the entire work including finishing according to the drawings and the specifications
- submission of asbuilt drawings

Chamber Markings

Details like valve type, size and c is tern number shall be pai nted on al l valve chambers as directed by Engineer-in-Charge. Where valve chambers are flush with the ground, suitable marker posts shall be provided adjacent to the chambers at a suitable location with all details approved by Engineer-in-Charge. In case of the pipeline laid above ground details such as chainage, invert levels of pipe, saddle number, culvert number, anchor/thrust block number etc., shall be suitably painted either on the pipe line or the supporting structure indistinct colour.

- **MILD STEEL PIPE LINE**
- **SCOPE**

This specification covers the general requirements for manufacture, supply, laying, jointing, testing and commissioning of welded steel pipeline (either plate welded or spiral welded) above/ below ground, including associated civil works required for the same.

- **STANDARDS**

The details, standards, and codes are part of this specification. All standards, specifications and codes of practice referred to herein shall be the latest edition including all applicable official amendments and revisions.

- **MATERIALS**

Plate welded pipes manufactured from plates conforming to IS

2062 steel. Spiral welded pipes manufactured from

HRcoilsconformingtoIS10748steel.

Cement - Ordinary Portland cement conforming to IS 269 and Sulphate resisting cement to IS12330.

Aggregate-The aggregates shall conform to IS383.

Water - The water used in preparation of concrete mix shall conform to the requirements of mixing water specified in IS: 456.

Steel for reinforcement shall conform to IS1786

Welding consumables - such as electrodes, filler rods and wires shall conform to IS 814, IS3613, IS 6419 and IS 7280

When requested by the Engineer-in-Charge, the Contractor shall provide test samples of the materials to be used in the works for different tests. The cost of such tests shall be borne by the Contractor and shall be included in his item rates.

- **MANUFACTURE OF PIPES AND SPECIALS**

General: Steel pipe shall be spiral welded pipe. The pipes shall be truly cylindrical, and straight in axis. The ends shall be accurately cut and prepared for field welding. The external circumference of the pipe pieces which are to be fixed adjacent to flange adapter with fixed outer diameter shall not deviate from theoretical one by more than 2 mm. Any pipe or part thereof which develops injurious defects in the opinion of Engineer-in-Charge shall be rejected and shall be replaced by new pipe at Contractor's expense. The Contractor shall procure pipes and specials from reputed manufacturers approved by the Engineer-in-Charge. The mill shall be equipped with complete pipe manufacturing and testing equipment.

Spiral Welded Pipes: All spiral welded pipes shall be manufactured as per IS 5504. The requirements for weldable hot-rolled carbon steel strip in coils should conform

to IS 10748. The process of manufacture should be such that it results in pipes conforming to IS 5504 or equivalent international standards.

Length of the Pipe: Steel pipes of lengths ranging from 5.5 to 11 meters shall be supplied to suit to Contractor's methodology of works. The permissible variation in pipe lengths shall be in accordance with relevant IS.

Pipe Ends: Pipes shall have bevelled ends suitable for welding in accordance with relevant IS.

Demonstration: Contractor shall make necessary arrangements to demonstrate at the pipe manufacturing mill individual items of work before commencement of works and during the works at intervals specified and as directed by the Engineer-in-Charge. No payment shall be made in this regard.

The work under demonstration shall include but not limited to the following:

- Manufacture of pipe and specials

- Chemical and mechanical testing of pipes and specials

- Machine and manual welding to qualify Welding Procedures"

- External coating

- Cement mortar lining

- Hydraulic testing after cement mortar lining at 50bar pressure.

- **SPECIALS**

Specials shall be fabricated from IS 2062 Steel. Specials, such as tees, Y-pieces, bends, tapers, etc. shall necessarily be in steel and shall be in accordance with IS 7322/BS 534/AWWAC208 and ASME standards and tested and laid in the same manner as the pipes.

Standard fittings shall be used wherever possible in preference to fabricated fittings. Standard fittings shall be manufactured in accordance with standards specified above. Where fabricated fittings are supplied, with approval of the Engineer-in-Charge they shall be fully work shop fabricated and tested in accordance with above standards.

Tee and Branches on steel pipelines must be reinforced by welding reinforcement collars around the base of the branch and in the case of large diameter branches, increasing the main pipe wall thickness or making use of crotch plates.

The fittings shall be designed and, if considered necessary by the Engineer-in-Charge, fabricated by a specialist Contractor and the design calculations and Drawings shall be submitted to the Engineer-in-Charge for approval. All other fittings, tees, branches, crosses and bends are to be designed by the fabricator.

Steel specials shall have the same chemical and mechanical properties and shall be compatible in all respects with the pipes with which they are to be used. The marking of pipes and fittings shall be as specified.

- **TOLERANCES**

Tolerances for pipes shall be in accordance with relevant IS except for the following. Negative tolerance on pipe wall thickness is not permissible. The permissible tolerances for specials for diameter, arm length and angular deviation shall be in accordance with IS 7322

- **ELECTRODES**

The Contractors shall use appropriate type and size of electrodes with suitable flux covering depending on the wall thickness of pipe and the type of joint. They shall also use standard current and voltage required for the machine in use as per manufacturer's directions. Welding electrodes shall conform to IS 814 and IS 4353. Electrodes from reputed manufacturers shall be used with the approval of Engineer-in-Charge. Wherever possible, Indian made or equivalent foreign made electrodes of the approved quality shall be used. The Contractor shall provide suitable equipment and ovens to keep the electrodes dry at the desired baking temperature.

- **WELDING**

Upon receipt of the order and prior to the start of works, the Contractor shall submit to the Engineer-in-Charge for his approval the „Welding Procedure Method Statement“ he intends to use for the field welding. All components of pipe shell; either straight or bent etc. shall be welded by use of automatic arc welding machine by submerged arc process with alternating current. The strength of the joint shall be at least equal to that of the parent material. Manual welding shall be adopted only when machine welding is not possible.

The Contractor shall use electrodes of approved make and size, the size depending on the thickness of plate and the type of joint. Standard current and arc voltage required for the machine shall be used with necessary modifications as may be found necessary after experimental welding. For this purpose, samples of welded joints shall be prepared and tested in the presence of the Engineer-in-Charge for qualifying the Welding Procedure Method Statement. Only approved welding procedures shall be used throughout the work and if any modifications are to be made, the written permission of the Engineer-in-Charge shall be obtained.

All the shop and field welding shall conform to IS4353, IS9595 and IS 816.

All longitudinal / spiral and circumferential joints shall be Single-V or Double-V butt joints with or without backing plates. After completing the welding joints of pipes or plates from one side, and before the welding on the other side, the joints shall be back chipped/gouged and ground to remove irregular penetration till the even surface is exposed.

All circumferential welds involving plates of unequal thickness shall be so kept that the inside surface of plates match to provide streamlined joints without alteration in the internal diameter.

The welding shall be of the best workmanship free from weld defects. In order to maintain a good standard in welding, welders shall be tested by the Contractor before they are entrusted with the job. Qualification standard for welding procedures, welders and welding operators shall conform to IS: 7307 and IS: 7310 (latest). Only those who pass the test shall be allowed to work on the job. Periodical tests as regards their competence shall also be taken at suitable intervals and those found incompetent shall be removed from the job. If an incompetent welder has already welded some pipes, all welding done by him previously shall be fully checked by X-ray in addition to the regular X-ray inspections. The defects if any, shall be rectified to the satisfaction of the Engineer-in-Charge. All such check tests and rectification of defects shall be entirely at the cost of the Contractor. No pipes or steel sections shall be erected unless the work of the welder concerned has been proved to be satisfactory and qualified. Site welds shall be done by welders qualified for the various welding positions as per applicable IS codes and standards.

A record shall be maintained showing the names of welders and operators who have worked in each individual joint. Manual arc welding shall preferably be carried out by a pair of welders so

that, by observing proper sequence, distortion can be avoided. A joint entrusted to a particular individual or a pair shall be as far as possible, completed by them in all respects, including sealing run. No helper or other unauthorized person shall be permitted to do any welding whatsoever.

The weldment should not become brittle or sensitive to blows and there should be no loss of toughness due to welding or heat treatment. The material after welding and heat treatment shall match with the base metal properties including original ductility. The weld should in no point be less than the nominal thickness of plate. A slight reinforcement as per IS codes shall be maintained on all weld joints. Final welding of closure gaps should be carried out within a temperature range of average air temperature 80°C .

- **HYDRAULIC PRESSURE TEST AT PIPE MANUFACTURING MILL**

A hydraulic test shall be carried out at the mill for each pipe length fabricated. All pipes and specials shall be subjected to hydraulic test after fabrication, but before application of protective coatings and linings.

Prior to testing, the pipe shall be inspected thoroughly and all the apparent defects in welding such as slag, porosity etc. shall be repaired by gouge in gander-welding.

Each pipe shall be filled with water slowly and the pressure increased uniformly until the required test pressure is reached.

The pipe to be tested shall be given a serial number which shall be painted with details such as pipe number, shell thickness, diameter, length etc. It shall be entered in the register to be maintained by the Contractor. The register shall be maintained in suitable format giving the following information for each shell tested:

For indicating the pressure inside the pipe an accurate pressure gauge of approved make duly tested and calibrated for the accuracy of readings shall be mounted on one of the closures which close the pipe ends.

The pressures shall be applied gradually by approved means and shall be maintained for at least 10 minutes or till the inspection of all welded joints is done during which time the pipe shall be hammered throughout its length with sharp blows, by means of a 1kg. handhammer.

The pipe shall withstand the test without showing any sign of weakness, leakage, oozing or sweating. If any leak or sweating is observed in the welded joints, the same shall be repaired by gouging and re-welding done after dewatering the pipe. The repaired pipe shall be re-tested to conform to the specified pressure.

If any leak or sweating is observed in pipe shell the pipe under test shall be rejected. The Engineer-in-Charge shall be supplied with two copies of the results of all the tests carried out. No pipe shall be transported from the mill to the site and laid unless they have been hydraulically tested.

- **TESTS AND INSPECTION**

The Contractor should submit results of inspection and testing covering the following in a suitable proforma, at the time of delivery of pipes in accordance with IS 5504. In case of discrepancy between the requirements of the above standards the more stringent conditions shall apply. Each pipe shall be subjected to mechanical and hydraulic tests as per IS 5504 and the corresponding test certificates shall be furnished along with. The test specimen shall exhibit mechanical and chemical properties not lower than those specified for IS 2062 /IS

10748 steel. The tests should also include determination of yield strength, tensile strength, elongation and bend tests. Tensile tests shall be carried out in accordance with IS 1894 on a test specimen provided from each lot of 100 lengths of pipe. Guided bend tests shall be carried out in accordance with relevant IS.

The Contractor should notify the Engineer-in-Charge, in advance of the procurement of materials and fabrication in order that the Employer may arrange for mill and shop inspection (including third party inspection). The cost of tests including third party inspection shall be at Contractor's expense. The Engineer-in-Charge in his opinion may reject any or all materials or work that does not meet with any of the requirements of this specification. The Contractor shall rectify or replace such rejected material / performed work at his own cost to the satisfaction of the Engineer-in-Charge. The Engineer-in-Charge has the right to have the material tested independently to confirm the quality of the works.

The Contractor shall supply free of cost required specimen of materials for testing by the Engineer-in-Charge at any time during the progress of work and shall bear the cost of such tests or retests to the satisfaction of Engineer-in-Charge.

No separate payment will be made for any of the inspection and tests mentioned above and the rates for items concerned shall be deemed to have been included in Contractor's item rates.

- **TESTING OF FIELD WELDED JOINTS**

Test pieces shall be provided by the Contractors for both longitudinal and circumferential welded joints at the positions pointed out by the Engineer-in-Charge. The sample so taken out shall then be cut to the exact shape and dimensions and machined as described in relevant standards before testing for chemical and mechanical properties.

The entire cost of the tests including provision of test samples, machining the test pieces, transport to and from the laboratory and testing them in a laboratory, payment of all testing fees, cleaning and painting etc. shall be borne by the Contractors. The tests shall be carried out in Government or Semi-Government Institute approved by the Engineer-in-Charge. This shall be arranged by the Contractor with the approval of Engineer-in-Charge. The testing laboratory shall have instruments/equipment which are having calibration requirements traceable to National or International standards. The following tests shall be carried out:

Mechanical Tests: The test plates shall be subjected to all mechanical tests as per the approved Method Statement, or as otherwise reasonably directed by the Engineer-in-Charge. Tests shall be carried out in accordance with relevant standards. The tests shall include determination of yield strength, tensile strength, elongation and bend tests. Tensile tests shall be carried out in accordance with IS 1894. One test plate shall be provided for from each lot of 100 lengths

If a test specimen shows defective machining or develops flaws not associated with welding, it may be discarded and another specimen submitted. The welded joint shall exhibit mechanical and chemical properties not lower than those specified for IS 2062.

Guided Bend test shall be in accordance with relevant IS. One bend test shall be carried out from each lot of 50 lengths. The test shall comply with the requirements specified in relevant IS.

The field welded joints shall be tested in accordance with the procedure laid down in IS 3600. One test plate shall be taken for every 10 joints and shall be subjected to mechanical and chemical tests as specified above.

Retests: If the results of tests of any lot do not conform to the requirements specified, retests of two additional specimens from the same lot shall be made, each of which shall conform to the required specifications. In case of a failure of one or both, gouging and repairing shall be carried out to the particular lot of joints from which the samples have been taken as directed by the Engineer-in-Charge before the lot can be accepted. The rectification process also shall have adequate test plates and they shall be tested for compliance with the IS codes/standards

In case both the samples yield satisfactory results in the re-test described above, gouging and repairing will be required to be carried out on the joint which has failed in the initial test only.

All charges in connection with re-testing of the welded samples including machining, testing etc. shall be borne by the Contractor.

- **JOINTS**

General: Unless detailed otherwise, all pipes and fittings shall have welded joints. Flanged joints or collar sleeve joints shall be provided where required as per direction of Engineer-in-Charge.

- Welded Joints: The use of butt welded joints for joining pipes shall be in accordance with relevant IS. And end preparation shall be in accordance with relevant IS.
- Flanged Joints: Flanges shall comply with IS 7322. The nominal pressure rating shall be at least equal to the highest pressure rating of the pipes or fittings to which they are attached, but with a minimum PN 1.6. The Contractor shall fabricate flanges meeting the requirements of pipe sizes under this contract or otherwise to suit the abutting valves or other connections, if they are not readily available. Flanges shall be provided with all necessary nuts, bolts, washers and

gaskets, as specified herein. The Contractor shall also supply in suitable containers sufficient graphite grease for application to the bolt threads when joints are made.

- **MECHANICAL WORKS**

- **SCOPE**

The scope of this specification shall include design, selection of equipment, supply, inspection & testing at manufacturer's works, delivery to site, unloading and storage at site, erection and commissioning of the mechanical equipment, pipe and fittings, instruments as listed in bill of quantities. In addition to the above, following services are also included:

- Alignment and grouting of equipment
- Drilling of holes on walls slabs, if required
- Clamping of pipes
- Supporting of valves and pipes
- Painting of piping and fittings

- **SLUICEVALVES**

- **Design Requirements**

Sluice valves shall generally conform to IS 14846. Body of the valve shall be designed for 1.5times the rating of the valve. Valves shall be free from sharp projections, which are likely to catch and hold stringy materials. The pressure drop across valve shall be limited to 0.05 mwc. Valve flange faces shall be parallel to each other and flange face should be at right angle to the valve centre line. Back side of valve flange shall be machined or spot faced for proper seating of bolt head and nut. Valves 450 mm and above shall be provided with lifting lugs. Valves 450mm and above shall be furnished with a bushing arrangement for replacement of packing without leakage. Valves 700mm and above shall be with renewable channel and shoe linings.

- **Features of Construction**

Valves shall have non-rising spindle. Valves shall have a back seating arrangement for replacement of packing without leakage. The valve shall incorporate an intermediate valve gearbox connecting valve spindle to the actuator. Flanges shall be drilled as per BS 4504 (16 bar rating). Valves shall be provided with shoe and channel arrangement. The gap between shoe and channel shall not exceed 1.5 mm. Valves shall be with gear arrangement so that force

required on hand wheel shall be limited to 7kg. Direction of closing the valve shall be clockwise.

- Testing

- Body hydrostatic test : 24bar

- Seat leakage test : 16 bar

- Back seat pressure : 8bar

- **SCOUR VALVES**

- **Design Requirements**

Sluice valve shall be use as scour valve. Scour valves shall generally conform to IS 14846. Body of the valve shall be designed for 1.5 times the rating of the valve. Valves shall be free from sharp projections, which are likely to catch and hold stringy materials. The pressure drop across valve shall be limited to 0.05 mwc. Valve flange faces shall be parallel to each other and flange face should be at right angle to the valve centre line. Back side of valve flanges shall be machined or spot faced for proper seating of bolt head and nut. Valves 450 mm and above shall be provided with lifting lugs.

- **Features of Construction**

Valves shall have non-rising spindle. Valves shall have a back seating arrangement for replacement of packing without leakage. The valve shall incorporate an intermediate valve gearbox connecting valve spindle to the actuator. Flanges shall be drilled as per BS 4504 (16 bar).Valves shall be provided with shoe and channel arrangement. The gap between shoe and channel shall not exceed 1.5 mm. Valves shall be with gear arrangement so that force required on hand wheel shall be limited to 7kg. Direction of closing the valve shall be clockwise.

- **Materials of Construction**

- a) Body : CIIS210

- b) Wedge : CIIS210

- c) Spindle : SS Conforming to BS970,Gr.304S11

- d) Wedge rings : Bronze to IS: 318

- e) Wedge nut : Bronze to IS: 318
- f) Internal Hardware : SS316
- g) External Hardware : SS304

3.5.4 AIRVALVES

- Air valves shall be of the kinetic, double orifice type, suitable for releasing or admitting air in large volume when pipe is being charged or emptied and to release accumulated air under pressure.
- The valve shall also automatically release air accumulating in the pipe work during normal working conditions.
- Air valves shall comprise of CI body having faced and drilled flange at inlet. Air valve shall be of double orifice type with a large orifice for ventilation or exhaust of the pipe line and smaller orifice for automatic release of air under normal working pressure.
- Air having been discharged from the line, the orifice shall be positively sealed in the closed position but the float (ball) shall only be raised by the liquid and not by a mixture of air and liquid spray. The seating shall be designed to prevent the floats sticking after long periods in the closed position.
- Air valves shall be provided with a separate cast iron double flanged gate valve for isolation. Both the air valve and gate valve shall be rated for 16 bar.

3.5.5 DISMANTLING JOINTS

- **Design Requirements**

Dismantling joint shall be designed such that adequate space can be created by collapsing the dismantling joint, for removal and for reinstallation of adjacent valves.

All parts of dismantling joints shall be amply proportioned to take care of all stresses that may occur during installation and in operation.

Dismantling joints shall have end, thrust and follower flanges and rubber sealing ring.

Tie rods shall be provided for rigid fixing after installation to enable transmission of thrust. Tie rods shall be provided for minimum 30% of the holes.

With the use of dismantling joints it shall be possible to have an approximate clearance of 25mm with the adjoining fittings.

All dismantling joints shall be designed for a pressure of 16bar.

- **Features of Construction**

Outside of inner sleeve and inside of outer sleeve shall be machined to close tolerances. Inner sleeve end shall be chamfered for easy introduction of rubber ring.

Sleeves shall be of uniform bore and straight in axis. The flanges shall be square to the axis of sleeve. The faces of flanges shall be parallel. The bolt holes circle and outside periphery shall be concentric with the bore and bolt holes equally spaced. Bolt holes in one flange shall be located in line with those in other.

Bolt holes on flanges shall be drilled with the help of drilling jig.

Flanges shall be machined flat faced and shall be full or spot faced on the back side. Flange thickness shall be uniform throughout. Flange periphery also shall be finished smooth. Flanges shall be as per relevant applicable standard corresponding to design pressure. The flanges of dismantling joints matching with valves shall have drilling stranded matching with that of the valve.

- **Materials of Construction**

- Body: CI IS: 210
- Flanges: CI IS: 210
- Sealing: EPDM Rubber
- Tie Rods, Bolts, Nuts and: SS304Washers
- Design parameters
- Rating(bar): 16
- Hydrostatic test pressure(bar): 24
- Data to Be Furnished By Contractor after the Award of Contract

Dimensional and cross section drawing of valves and dismantling joint.

- General Conditions:
- Cement shall not be less than O.P.C.-43 grade of reputed manufactures confirming to relevant IS.
- Reinforcement to confirm Fe-500 and IS 1786
- As and when required, the steel/cement & other building materials will be tested by Engineer-In-Charge at the cost of contractor to ensure proper quality as per IS specification.
- Testing of water tightness shall be conducted as per relevant IS Codes.
- Machine mix shall be used in concrete work for all structure. Design mix of concrete will be preferred. Vibrator of appropriate type shall be used for compaction of concrete. Provision of standby Vibrator of same type shall also be made by the contractor/firm.
- All the structures are to be designed as permanent type and shall have aesthetic elevation.
- Form work shall be of steel plates and frame as decided by Engineer-in-charge to be used for the centring and shuttering of the structures.
- Painting of all steel / MS structure to be done as per approved quality of enamel paint over a coat of primer.

- All the valves are to conform with relevant IS specification and of reputed make.
- The surplus earth and debris should be lifted after completion of work and proper levelling of site as directed by Engineer-in-charge without any extra claim.
- All the work including supply of materials to be executed as per relevant IS specification and direction of Engineer-in-charge.
- Foundation of all structure including supply of materials shall be designed depending on Ground water table / subsoil condition. In no case the Depth of foundation below virgin soil shall be less than 1.8 mtr. at respective places.
- All equipment, accessories, auxiliaries, piping, electrics, instruments, installations, construction, buildings etc. including all mechanical, electrical & civil engineering works covered under the scope of work of contractor shall be subjected to inspection & testing by the Engineer-In-Charge for its material, quality, workmanship and the performance. The contractor shall arrange and carryout all such inspection, testing, trial run etc. and demonstrate in presence of the Engineer-in-charge.
- The cost of such inspection, testing, trial run, demonstration etc. shall be borne by the contractor. All responsibility of such inspection, testing, trial run, demonstration etc. and any damage/loss that may cause directly or indirectly shall exclusively rest with the contractor.

- Such inspection, testing, trial run, demonstration etc. shall, however, not relieve the contractor of their liability for replacing/rectifying any defects, which may subsequently appear or be detected during erection and guarantee period.
- All equipments, sub-assembly and components, auxiliaries and accessories shall be tested at manufacturer's workshop/site in accordance with relevant Indian Standards/International Standards. The contractor shall furnish all test certificates etc. related to the quality of all the materials to the Engineer-In-Charge along with the delivery of the materials at site. However, such test certificates, quality assurance certificate shall not relieve the contractor of its obligation to replace forth with any instrument/materials found defective during tests at works/trial running period/guarantee period.
- Testing for performance of equipment shall be carried out and be checked with the approved parameters and performance characteristic curves for the purpose of acceptance.
- Excavation of foundation includes dressing and levelling the bed in all kinds of soil/rock up to the required depth including shoring, shuttering, dewatering, if necessary, depositing the excavated materials at a suitable place as per direction of Engineer-in-Charge.

- 150mm thick plain concrete of Grade-M-10 under RCC floor slab and footings.
- Reinforced cement concrete Grade-M-30 in all member in contact with water and members close to water like roof slab/dome etc
- Any other RCC members shall be of minimum M-25 grade.
- The following appurtenances shall be provided.
 - All RCC works shall be finished perfectly smooth and no plastering shall be allowed except in the inside surface of container walls and floors which shall be finished with a coat of epoxy paint and cement punning with water proof compound over 20mm thick cement plaster in cement mortar.(1:3)
 - All exposed faces of the concrete and plaster over masonry shall be given two coats of weather coat & all inside surfaces of allied works water bound distemper of approved shade.
 - All masonry works shall be plastered with 16 mm thick cement plaster in 1:6 cement mortar.

SCHEDULE – A

STRUCTURE & ORGANISATION

1. General Information

a) Name of Applicant

b) Head Office Address

e-Mail Address:

Telephone No.

Fax :

Mobile Phone No.

c) Regional Office Address (if any)

e-Mail Address:

Telephone No.

Fax :

d) Local Office (if any)

e-Mail Address:

Telephone No.

Fax :

e) Class of contractor / firm and year of incorporation
(attach copy of certificate of registration)

f) Name and Address of Bankers

g) Main Lines of Business

2. STAFF PROPOSED FOR EXECUTION OF THE WORKS

a) Office

Name(s)	Educational qualification	Designation	Relevant Experience	Remarks

b) Key Engineering Personnel to be deployed at the site

Sl. No.	Name of Engineering Personnel to be deployed	Educational qualification	Experience	Remark
1.				
2.				
3.				
4.				
5.				

Note: BIO-DATA of each personnel shall be attached related with the proposed site.

A summary of the work experience of each key staff shall be attached.

SCHEDULE – B

FINANCIAL STATEMENT

[To be given separately for each constituent Firm]

Financial statement shall be audited for five years by Regd. Chartered Accountant or competent financial organization / authority. The audit certificate should be included with the document.

- 1) Name of Applicant:

- 2) Total annual turnover & Annual turnover in **Construction Works**, undertaken for each of the last five financial years.

(Rs. In lakh)

FINANCIAL YEAR	Home		Abroad		Total	
	Total Turnover	Turnover in Const. Works	Total Turnover	Turnover in Const. Works	Total Turnover	Turnover in Const. Works
2022-23						
2021-22						
2020-21						
2019-20						
2018-19						

3. Applicant's specific financial arrangements (mention amount in Indian Rupees)
 - a) Own Resources
 - b) Bank Credits
 - c) Others (specify)

 4. Credit Facilities :
- To be supported by certificate for the Bank in **Scheduled 'H'**.

SCHEDULE – C

LIST OF TOOLS, PLANT & EQUIPMENT

Proposed to be deployed by the Applicant for use on the work

Sl. No.	List of plants & equipments	Minimum Requirement	Owned	Leased / Hired	Remarks
			Nos. / qty	Nos. / qty	
1	2	3	4	5	6
1.	Concrete Hopper Mixer (tilting hopper type)	2 Nos.			
2.	Plate / Skid Vibrator	2 Nos.			
3.	Needle Vibrator	2 Nos.			
4.	Water Tank	2 Nos.			
5.	Levelling instrument	1 No			
6.	Dewatering Pump set from 5 to 20 HP capacity	1 No.			
7.	Steel shuttering plates (600 x 1200mm) with steel scaffoldings	100 Sqm.			
8.	Transportation trolley	2 Nos.			

SCHEDULE – D
WORK EXPERIENCE

1. Name of the firm :

2. Total number of years of experience in **work** :

3. List of the similar works executed during last 5 years.

(Rs. in lakh)

Sl. No.	Name of the work/ location Agmt. No. & Dt.	Name of the employer	Value of Contract price	Total Value of work executed	Financial year-wise Computed amount	Stipulated date of commencement	Stipulated date of completion	Actual date of completion	Reasons for delay	Remarks
1	2	3	4	5	6	7	8	9	10	11

NB: Certification of the employer not below the rank of General Manager/equivalent is to be furnished in support of the above claim.

6. Works for which bid already submitted but not finalized.

(Rs. in lakh)

Description of work	Place of work	Name & address of employer	Estimated cost of work	Offer valued by the bidder	Stipulated period of completion	Date on which decision expected.	Remarks
1	2	3	4	5	6	7	8

Note: - a) Certificate from the employers not below the rank of General Manager or equivalent may be attached
 b) Non-disclosure of any information in the schedule will result in disqualification of the firm.

SCHEDULE –E

**INFORMATION REGARDING CURRENT LITIGATION,
DEBARRING / EXPELLING OF TENDER OF ABANDONMENT OF
WORK BY TENDER**

1.(a) Is the applicant currently involved in any litigation relating to any contract works -
Yes/No

(b) If yes, give details

2.(a) Has the applicant or any of its constituent partners have been debarred / expelled by
any agency in India during the last 5 years - **Yes/No**

(b) If yes, give details

3 (a) Has the applicant or any of its constituent partners failed to perform/absconded/
rescinded on any contract work in India during the last 5 years - **Yes/No**

(b) If yes, give details

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

SCHEDULE – F

(Applicable where the proposed works covers Electrical Items of works only)

1. The contractor shall have appropriate class of electrical license for External & Internal Electrical Works.
2. If not, collaboration with contractor having Electrical license of equivalent capacity issued by licensing authority is to be furnished.

SCHEDULE – G

AFFIDAVITS / DECLARATION

1. I/We have read the instructions appended in the DTCN.
2. I/We agree that the decision of the Govt. of Odisha in selection of contractors will be final and binding upon me/us.
3. All the information furnished herewith are correct to the best of my/our knowledge and belief. In case of any information or documents furnished found to be false or incorrect, I / we have no objection if my / our tender is rejected.
4. I/We agree that I/We have no objection if inquiries are made about construction work and its related areas regarding all projects and works listed by us in the accompanying sheets or any other enquiry on information furnished herewith in the accompanying sheets.
5. I/We agreed that I/We have no objection if our past construction works are inspected by any authority of Govt. of Odisha to assess the quality of construction.

Date:

Place:

Signature
Name & Designation
Name of the organisation

SCHEDULE – H

(Refer: Schedule "B" Item – 4)

FORM OF SOLVENCY CERTIFICATE FROM A SCHEDULE BANK

This is to certify that to the best of our knowledge and information M/s./Sri
..... having marginally noted address a
customer of our bank and are/is respectable and can be treated as good for any engagement
upto a limit of Rs..... (Rupees
.....)

Signature

For the Bank

Note : In case of partnership firm, certify names of all partners as recorded with the Bank.

SCHEDULE – I

ANY OTHER INFORMATION, IF ANY

SCHEDULE – J

Deleted

SCHEDULE – K

FORM OF BANK GUARANTEE [Additional Performance Security]

To
The General Manager,

_____.

WHEREAS:

(A) _____ [name and address of contractor]

(hereinafter called the "**Contractor**") has executed an agreement (hereinafter called the "Agreement") with the [**General Manager, WATCO Division, Cuttack** , representing Chief Executive Officer, WATCO, Bhubaneswar], (hereinafter called the "**Authority**") for the construction of the work "**Improvement to P.H. works in the Academic block, Gents Hostel field side (G+2), Institution side (G+2), Extension block (G+1), Ladies Hostel No.2 (G+2) & Ladies Hostel No.3 (G+2) such as W/S, S/I & S/D work inside BOSE, Cuttack**" subject to and in accordance with the provisions of the Agreement.

(B) The Agreement requires the Contractor to furnish a Performance Security for due and faithful performance of its obligations, under and in accordance with the Agreement, during the {Construction Period & Defects Liability Period} (as defined in the Agreement) in a sum of Rs. _____ Lakh (Rupees _____ Lakh) (the "**Guarantee Amount**").

(C) We, _____ through our branch at _____ (the "Bank") have agreed to furnish this bank guarantee (hereinafter called the "Guarantee") by way of Additional Performance Security.

NOW, THEREFORE, the Bank hereby, unconditionally and irrevocably, guarantees and affirms as follows:

1. The Bank hereby unconditionally and irrevocably guarantees the due and faithful performance of the Contractor's obligations during the {Construction Period & Defects Liability Period} under and in accordance with the Agreement, and agrees and undertakes to pay to the Authority, upon its mere first written demand, and without any demur, reservation, recourse, contest or protest, and without any reference to the

Contractor, such sum or sums up to an aggregate sum of the Guarantee Amount as the Authority shall claim, without the Authority being required to prove or to show grounds or reasons for its demand and/or for the sum specified therein.

2. A letter from the Authority, under the hand of an officer not below the rank of [General Manager, **WATCO Division, Cuttack**], that the Contractor has committed default in the due and faithful performance of all or any of its obligations under and in accordance with the Agreement shall be conclusive, final and binding on the Bank. The Bank further agrees that the Authority shall be the sole judge as to whether the Contractor is in default in due and faithful performance of its obligations during and under the Agreement and its decision that the Contractor is in default shall be final and binding on the Bank, notwithstanding any differences between the Authority and the Contractor, or any dispute between them pending before any court, tribunal, arbitrators or any other authority or body, or by the discharge of the Contractor for any reason whatsoever.
3. In order to give effect to this Guarantee, the Authority shall be entitled to act as if the Bank were the principal debtor and any change in the constitution of the Contractor and/or the Bank, whether by their absorption with any other body or corporation or otherwise, shall not in any way or manner affect the liability or obligation of the Bank under this Guarantee.
4. It shall not be necessary, and the Bank hereby waives any necessity, for the Authority to proceed against the Contractor before presenting to the Bank its demand under this Guarantee.
5. The Authority shall have the liberty, without affecting in any manner the liability of the Bank under this Guarantee, to vary at any time, the terms and conditions of the Agreement or to extend the time or period for the compliance with, fulfilment and/ or performance of all or any of the obligations of the Contractor contained in the Agreement or to postpone for any time, and from time to time, any of the rights and powers exercisable by the Authority against the Contractor, and either to enforce or forbear from enforcing any of the terms and conditions contained in the Agreement and/or the securities available to the Authority, and the Bank shall not be released from its liability and obligation under these presents by any exercise by the Authority of the

liberty with reference to the matters aforesaid or by reason of time being given to the Contractor or any other forbearance, indulgence, act or omission on the part of the Authority or of any other matter or thing whatsoever which under any law relating to sureties and guarantors would but for this provision have the effect of releasing the Bank from its liability and obligation under this Guarantee and the Bank hereby waives all of its rights under any such law.

6. This Guarantee is in addition to and not in substitution of any other guarantee or security now or which may hereafter be held by the Authority in respect of or relating to the Agreement or for the fulfilment, compliance and/or performance of all or any of the obligations of the Contractor under the Agreement.
7. Notwithstanding anything contained hereinbefore, the liability of the Bank under this Guarantee is restricted to the Guarantee Amount and this Guarantee will remain in force for the period specified in paragraph 8 below and unless a demand or claim in writing is made by the Authority on the Bank under this Guarantee all rights of the Authority under this Guarantee shall be forfeited and the Bank shall be relieved from its liabilities hereunder.
8. The Guarantee shall cease to be in force and effect on ****\$. Unless a demand or claim under this Guarantee is made in writing before expiry of the Guarantee, the Bank shall be discharged from its liabilities hereunder.
9. The Bank undertakes not to revoke this Guarantee during its currency, except with the previous express consent of the Authority in writing, and declares and warrants that it has the power to issue this Guarantee and the undersigned has full powers to do so on behalf of the Bank.
10. Any notice by way of request, demand or otherwise hereunder may be sent by post addressed to the Bank at its above referred branch, which shall be deemed to have been duly authorized to receive such notice and to effect payment thereof forthwith, and if sent by post it shall be deemed to have been given at the time when it ought to have been delivered in due course of post and in proving such notice, when given by post, it shall be sufficient to prove that the envelope containing the notice was posted and a

\$ Insert date being 30 (Thirty) Months from the date of issuance of this Guarantee (in accordance with Clause 23.4 of the Section 2(B) & Clause 6.22 of Section 6).

certificate signed by an officer of the Authority that the envelope was so posted shall be conclusive.

11. This Guarantee shall come into force with immediate effect and shall remain in force and effect for up to the date specified in paragraph 8 above or until it is released earlier by the Authority pursuant to the provisions of the Agreement.

Signed and sealed this _____ day of _____, 20_____ at _____.

SIGNED, SEALED AND DELIVERED

For and on behalf of the Bank by:

(Signature)

(Name)

(Designation)

(Code Number)

(Address)

NOTES:

- (i) The bank guarantee should contain the name, designation and code number of the officer(s) signing the guarantee.
- (ii) The address, telephone number and other details of the head office of the Bank as well as of issuing branch should be mentioned on the covering letter of issuing branch.
- (iii) The stamp papers of appropriate value shall be purchased in the name of bank who issues the "Bank Guarantee".
- (iv) The bank guarantee shall be from a Nationalised/ Scheduled Indian Bank with **counter guaranteed** by its branch at **Cuttack**.

Executive Instruction regarding calling for and acceptance of tenders in e-Procurement in Govt. of Odisha.

**Government of Odisha
Works Department**

Office Memorandum

File No.07556900042013 (Pt-II) – 7885/W Dated 23.07.2013

Sub: Codal Provision regarding e-Procurement

After introduction of e-procurement in Government of Odisha, necessary guidelines / procedures has been issued in Works Department Office Memorandum No.1027 dt.24.01.2009 which consists of the procedural requirement for e-procurement of tenders. After careful consideration Government have been pleased to make following modifications to codal provisions by way of addition as Appendix – IX(A) of OPWD Code Vol.II) as follows:

(Appendix-IX (A) of OPWD Code, Vol-II)

Executive instructions regarding calling for and acceptance of tenders in e-Procurement.

1. This office memorandum consists of the procedural requirement of e-procurement and shall be made part of the Detailed Tender Call Notice or Instruction to Bidder for all “works” tenders hoisted in the portal.
2. The e-procurement portal of Government of Odisha is “<https://tendersodisha.gov.in>”.
3. Use of valid Digital Signature Certificate of appropriate class (Class II or class III) issued from registered certifying authorities (CA) as stipulated by Controller of Certifying Authorities (CCA), Government of India such as n-Code, Sify, TCS, MTNL, e-Mudhra is mandatory for all users.
4. The DSC issued to the Department users is valid for the period of two years only. All the Department users are responsible to revalidate their DSC prior to expiry.
5. For all purpose, the server time displayed in the e-Procurement portal shall be the time to be followed by all the users.
6. Government after careful consideration have decided to hoist all tenders costing 10 lakhs or above in the e-procurement portal. This will be applicable across all Engineering Departments such as Works Department, Department of Water Resources, Rural Development and Housing & Urban Development Department. Government of Odisha also welcomes hoisting of tenders by any other departments, authority, corporations, local bodies etc. of the State with prior approval from Works Department. Works

Department is the Nodal Department for the implementation of e-Procurement in the State.

7. The e-procurement shall be operated compliant to relevant provisions of OGFR/ OPWD code/ Accounts code/ Government statues including any amendments brought from time to time to suit to the requirement of the best national practice.
8. Registration in the e-procurement portal is without levy of any charges but Government reserves the right to levy any charges for such value added services in future.
9. Contractor not registered with Government of Odisha, can participate in the e-Procurement after necessary enrolment in the portal but have to subsequently register themselves with the appropriate registering authority of the State Government before award of the work as per prevalent registration norms of the State.
10. For the role management "Department" is the Administrative Department, Organisation or wing is the Chief Engineer or highest tender accepting authority or equivalent officer, Division is the General Manager or equivalent Officer and Subdivision is the Assistant Engineer or equivalent officer.
11. The e-Procurement software assigns roles for operation of the module for specific function. The terminologies used in the portal and their respective functions in the software are as follows.
 - 11.1 Application Administrator (NIC & State Procurement Cell)
 - i. Master Management
 - ii. Nodal Officer Creation
 - iii. Report Generation
 - iv. Transfer of Officer's login ID.
 - v. Blocking & unblocking of officer's and bidder's login ID.
 - 11.2 Nodal Officer (At organization level not below the Superintending Engineer or equivalent rank)
 - i. Creation of Users
 - ii. Role Assignment
 - iii. Report Generation
 - iv. Transfer of Officer's login ID.
 - v. Blocking & unblocking of officer's Login ID.
 - 11.3 Procurement Officer Publisher (Officer having tender inviting power at any level)
 - i. Publishing of Tender
 - ii. Publishing of Corrigendum / addendum / cancellation of Tender
 - iii. Bid Clarification
 - iv. Uploading of Pre-Bid minutes.
 - v. Report generation.
 - 11.4 Procurement Officer Administrator (Generally sub-ordinate officer to Officer Inviting Tender)
 - i. Creation of Tender

- ii. Creation of Corrigendum / addendum / cancellation of Tender
 - iii. Report generation.
- 11.5 Procurement Officer Opener (Generally sub-ordinate officer to Officer Inviting Tender)
- i. Opening of Bid
- 11.6 Procurement Officer Evaluator (Generally Sub-Ordinate Officer to Officer Inviting Tender)
- i. Evaluating Bid
- 11.7 Procurement Officer-Auditor (Procurement Officer Publisher and/or Accounts Officer / Finance Officer)
- i. To take up auditing

12. NOTICE INVITING BID (NIB) or INVITATION FOR BID (IFB):

- 12.1 The Notice Inviting Bids (NIB) and Bid documents etc., shall be in the Standard formats as applicable to conventional Bids and will be finalized / approved by the officers competent as in the case of conventional Bids.
- 12.2 The officers competent to publish NIB in case of conventional Bids will host the NIB in portal. Simultaneously, a notification should also be published in the newspapers, as per existing rules preferably, in the following format, to effect economy:-

Government of Odisha "e" procurement Notice	
Bid Identification No.-----	
1.	Name of the work:
2.	Estimated cost: Rs.
3.	Period of completion -----
4.	Date & Time of availability of bid document in the portal _____
5.	Last Date / Time for receipt of bids in the portal _____
6.	Name and address of the O.I.T.:.....
Further details can be seen from the e-procurement portal " https://tendersodisha.gov.in "	

- 12.3 The tender documents published by the Tender Inviting Officer (Procurement Officer Publisher) in the website <https://tendersodisha.gov.in> will appear in the "Latest Active Tender". The Bidders/ Guest Users can download the Bid documents only after the due date & time of sale. The publication of the tender will be for specific period of time till the last date of submission of bids as mentioned in the 'Notice inviting Bid' after which the same will be removed from the list of "Latest Active tenders".

13. ISSUE OF ADDENDA/ CORRIGENDA/ CANCELLATION NOTICE:

- 13.1 The Procurement Officer Publisher (Officer Inviting Tender) shall publish any addendum/ corrigendum/ cancellation of tender in the website

<https://tendersodisha.gov.in>, notice board and through paper publication and such notice shall form part of the bidding documents.

- 13.2 The system generates a mail to those bidders who have already uploaded their tenders and those bidders if they wish can modify their tenders. The bidders are required to watch the website till last date and time of bid submission for any addendum/ corrigendum/ cancellation thereof. Tender Inviting Authority is not responsible for communication failure of system generated mail.

14. CREATION AND PUBLISHING OF BID:

- 14.1 All the volumes/documents shall be uploaded in the portal by the tender creating officer (Procurement Officer Administrator) and published by the Officer Inviting Tender (Procurement Officer Publisher) using their DSCs in appropriate format so that the document is not tampered with

- 14.2 The tender document comprise the notice inviting tender, bid document/ SBD, drawings in .pdf format and the schedule of quantities / BoQ in .xls format to be uploaded by the Officer Inviting Tender.

- 14.3 Procurement Officer Administrator creates tender by filling up the following forms:

- i. BASIC DETAILS
- ii. COVER CONTENT: The Procurement officer Administrator should briefly describe the name and type of documents to be uploaded by the bidder in the following format:

(a) For Single Cover/Packet:

Sl No	Cover Type	Document Description	Type
1	Fee/ Prequal/ Technical/ Finance	Tender Cost, EMD, VAT, PAN, Contractor RC	.pdf
		Affidavits, undertakings and any other document as per SBD/DTCN.	.pdf
		BoQ	.xls

(b) For Two Cover/Packet:

Sl No	Cover Type	Document Description	Type
1	Fee/ Prequal/ Technical	Tender Cost, EMD, VAT, PAN, Contractor RC	.pdf
		Affidavits, undertakings and any other document as per SBD/DTCN.	.pdf
2	Finance	BoQ	.xls
		Special condition if any specifically mentioned by Officer Inviting Tender	.pdf

- iii. TENDER DOCUMENT: The Procurement Officer Administrator should upload the NIT in .pdf format.
- iv. WORK ITEM DETAILS
- v. FEE DEATILS: The Procurement Officer Administrator should mention the cost of tender paper and EMD amount as laid down in DTCN/SBD.

- vi. **CRITICAL DATES:** The Procurement Officer Administrator should mention the critical dates of tender such as publishing date, document download start date & end date, seek clarification start date & end date (optional), bid submission start date & closing date, bid opening date as per DTCN/SBD.
- vii. **BID OPENER SELECTION:** The Procurement Officer creator can select two / three / four bid openers for a particular bid. If required the bid openers can also be selected within an organization from other procurement units (Circles /Divisions).
- viii. **WORK ITEM DOCUMENTS:** The Procurement Officer Administrator should upload the digitally signed tender document (SBD/DTCN) or any other addition document/drawings in .pdf format and Bill of Quantities in .xls format.
- ix. **PUBLISHING OF TENDER:** The Procurement Officer Publisher shall publish the tender using his/her DSC after detail scrutiny of the fields created and documents uploaded by the Procurement Officer Administrator. Procurement Officer Publisher can publish tenders for multiple procurement units using multiple DSCs procured for each post separately. After being relieved from the additional charges he has to surrender the additional DSCs to the Nodal Officer of the concerned organisation.

15. **PARTICIPATION IN BID:**

15.1 **PORTAL REGISTRATION:** The Contractor/Bidder intending to participate in the bid is required to register in the portal using his/her active personal/official e-mail ID as his/her Login ID and attach his/her valid Digital signature certificate (DSC) to his/her unique Login ID. He/She has to submit the relevant information as asked for about the firm/contractor. The portal registration of the bidder/firm is to be authenticated by the State Procurement Cell after verification of original valid certificates/documents such as (i) PAN and (ii) Registration Certificate (RC) / VAT Clearance Certificate (for procurement of goods) of the concerned bidder. The time period of validity in the portal is at par with validity of RC/ VAT Clearance. Any change of information by the bidder is to be re-authenticated by the State Procurement Cell. After successful authentication bidder can participate in the online bidding process.

15.1.1 Bidders participating through Joint Venture shall declare the authorised signatory through Memorandum of Understanding duly registered and enrol in the portal in the name and style of the Joint venture Company. It is mandatory that the DSC issued in the name of the authorised signatory is used in the portal.

15.1.2 Any third party/company/person under a service contract for operation of e-Procurement system in the State or his/their subsidiaries or their parent companies shall be ineligible to participate in the procurement process that are undertaken through the e-Procurement system irrespective of who operates the system.

15.2 **LOGGING TO THE PORTAL:** The Contractor/Bidder is required to type his/her *Login ID* and password. *The system will again ask to* select the DSC and confirm it with

the password of DSC as a second stage authentication. For each login, a user's DSC will be validated against its date of validity and also against the Certificate Revocation List (CRL) of respective CAs stored in system database. The system checks the unique Login ID, password and DSC combination and authenticates the login process for use of portal.

15.3 DOWNLOADING OF BID: The bidder can download the tender of his choice and save it in his system and undertake the necessary preparatory work off-line and upload the completed tender at his convenience before the closing date and time of submission.

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

15.5 PREPARATION OF BID

15.5.1 The bids may consist of general arrangements drawings or typical or any other drawings relevant to the work for which bid has been invited. Bidder may download these drawings and takeout print for detail study and preparation of his bid. Any other drawings and documents pertaining to the works available with the Officer Inviting The bid will be open for inspection by the bidders.

15.5.2 The Bidder shall go through the Bid carefully and list the documents those are asked for submission. He shall prepare all documents including cost of Bid Document, EMD, Declaration form, price bid etc. and store in the system.

15.6 PAYMENT OF EMD AND COST OF BID DOCUMENTS:

15.6.1 The Bidder shall furnish, as part of his Bid, a EMD for the amount mentioned under NIT/Contract Data. The bidder shall scan all the written/printed pages up load the same in portable document format (PDF) to the system in designated place of the technical BID. Furnishing scanned copy of such documents is mandatory otherwise his/her bid shall be declared as non-responsive and liable for rejection.

15.6.2 The EMD payable along with the bid is 1% of the estimated contract value (ECV) or as mentioned in the bid document. The validity period of the EMD shall be as mentioned in the bid document. Any bid not accompanied by an acceptable EMD and not secured as indicated in the bid document shall be rejected as non-responsive. The EMD shall be retained till such time the successful bidder furnishes Initial Security Deposit (ISD) or Performance Security acceptable to the Officer Inviting the Bid. Failure of the successful Bidder to comply with the requirements shall constitute sufficient grounds for cancellation of the award and forfeiture of the EMD. The form of FD / BG shall be from a Nationalized Bank valid for a period of 45 days beyond the validity of the bid.

15.6.3 The Fixed Deposit / Bank Guarantee or any other form as mentioned in detailed tender call notice in respect of Earnest Money Deposit and the Bank

Draft in respect of cost of Bid are to be scanned and up loaded in portable document format (PDF) along with the bid.

15.6.4 The tender accepting authority will verify the originals of all the scanned documents of the successful lowest bidder only within 5 days of opening of the tender. In the eventuality of failure on the part of the lowest successful bidder to produce the original documents, he will be debarred in future from participating in tender for 3 years and will be black listed by the competent authority. In such a situation, successful L-2 bidder will be required to produce his original documents for consideration of his tender at the negotiated rate equal to L1 bidder.

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

15.6.6 Government of Odisha has been actively considering integrating e-payment gateway in to the portal for payment of Cost of Bid and Earnest Money Deposit. The process of using e-payment gateway shall be issued separately after it is established.

16. **SUBMISSION OF BID:**

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

16.2 Bidders are to submit only the original BoQ (in .xls format) uploaded by Procurement Officer Publisher (Officer Inviting Tender) after entering the relevant fields without any alteration/ deletion / modification. Multiple BoQ submission by bidder shall lead to cancellation of bid. In case of item rate tender, bidders shall fill in their rates other than zero value in the specified cells without keeping it blank. In the percentage rate tender the bidder quoting zero percentage is valid and will be taken at par with the estimated rate of the work put to tender.

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

16.4 The bidder shall write his name in the space provided in the specified location in the Protected Bill of Quantities (BoQ) published by the Officer Inviting Tender. The bidder shall type rates in figure only in the rate column of respective item(s) without any blank cell in the rate column in case of item rate tender and type percentage excess or less up to two decimal place only in case of percentage rate tender.

16.5 The bidder shall log on to the portal with his/her DSC and move to the desired tender for up loading the documents in appropriate place one by one simultaneously checking the documents.

16.5.1 Bids cannot be submitted after due date and time. The bids once submitted can not be viewed, retrieved or corrected. The Bidder should ensure correctness of the bid prior to uploading and take print out of the system generated summary of submission to confirm successful uploading of bid. The bids can not be opened even by the OIT or the Procurement Officer Publisher/ opener before the due date and time of opening.

16.5.2 Each process in the e-procurement is time stamped and the system can detect the time of log in of each user including the Bidder.

16.5.3 The Bidder should ensure clarity/legibility of the document uploaded by him to the portal.

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

16.5.5 The bidder should check the system generated confirmation statement on the status of the submission.

16.5.6 The Bidder should upload sufficiently ahead of the bid closure time to avoid traffic rush and failure in the network.

16.5.7 The Tender Inviting Officer is not responsible for any failure, malfunction or breakdown of the electronic system used during the e-procurement process.

16.5.8 The Bidder is required to upload documents related to his eligibility criteria and qualification information and Bill of Quantity duly filled in. It is not necessary for the part of the Bidder to up-load the drawings and the other Bid documents (after signing) while uploading his bid. It is assumed that the bidder has referred all the drawings and documents uploaded by the Officer Inviting the Bid.

16.5.9 The Bidder will not be able to submit his bid after expiry of the date and time of submission of bid (server time). The date and time of bid submission shall remain unaltered even if the specified date for the submission of bids declared as a holiday for the Officer Inviting the Bid.

16.6 **SIGNING OF BID:** The 'online bidder' shall digitally sign on all statements, documents, certificates uploaded by him, owning responsibility for their correctness / authenticity as per IT ACT 2000. If any of the information furnished by the bidder is found to be false / fabricated / bogus, his EMD shall stand forfeited & his registration in the portal shall be blocked and the bidder is liable to be blacklisted.

17. **SECURITY OF BID SUBMISSION:**

17.1 All bid uploaded by the Bidder to the portal will be encrypted.

17.2 The encrypted Bid can only be decrypted / opened by the authorised openers on or after the due date and time.

18. **RESUBMISSION AND WITHDRAWAL OF BIDS:**

18.1 Resubmission of bid by the bidders for any number of times before the final date and time of submission is allowed.

- 18.2 Resubmission of bid shall require uploading of all documents including price bid afresh.
- 18.3 If the bidder fails to submit his modified bids within the pre-defined time of receipt, the system shall consider only the last bid submitted.
- 18.4 The bidder should avoid submission of bid at the last moment to avoid system failure or malfunction of internet or traffic jam or power failure etc.
- 18.5 The Bidder can withdraw his bid before the closure date and time of receipt of the bid by uploading scanned copy of a letter addressing to the Procurement Officer Publisher (Officer Inviting Tender) citing reasons for withdrawal. The system shall not allow any withdrawal after expiry of the closure time of the bid.

19. OPENING OF THE BID:

- 19.1 Bid opening date and time is specified during tender creation or can be extended through corrigendum. Bids cannot be opened before the specified date & time.
- 19.2 All bid openers have to log-on to the portal to decrypt the bid submitted by the bidders.
- 19.3 The bidders & guest users can view the summary of opening of bids from any system. Contractors are not required to be present during the bid opening at the opening location if they so desire.
- 19.4 In the event of the specified date of bid opening being declared a holiday for the Officer Inviting the Bid, the bids will be opened at the appointed time on the next working day.
- 19.5 Combined EMD for more than one work is not acceptable.
- 19.6 The electronically submitted bids may be permitted to be opened by the predefined Bid opening officer from their new location if they are transferred after the issue of Notice Inviting Bid and before bid opening. Further, action on bid documents shall be taken by the new incumbent of the post.
- 19.7 In case of non-responsive tender the officer inviting tender should complete the e-Procurement process by uploading the official letter for cancelled / re-tender.

20. EVALUATION OF BIDS :

- 20.1 All the opened bids shall be downloaded and printed for taking up evaluation. The officer authorized to open the tender shall sign and number on each page of the documents downloaded and furnish a certificate that "the documents as available in the portal containing _____ nos. of pages".
- 20.2 The bidder may be asked in writing/ online (in their registered e-mail ids) to clarify on the uploaded documents provided in the Technical Bid, if necessary, with respect to any doubts or illegible documents. The Officer Inviting Tender may ask for any other document of historical nature during Technical Evaluation of the tender. Provided in all such cases, furnishing of any document in no way alters the Bidder's price bid. Non submission of legible documents may render the bid non-

responsive. The authority inviting bid may reserve the right to accept any additional document.

20.3 The bidders will respond in not more than 7 days of issue of the clarification letter, failing which the bid of the bidder will be evaluated on its own merit.

20.4 The Technical evaluation of all the bids shall be carried out as per information furnished by Bidders.

20.5 The Procurement Officer-Evaluators; will evaluate bid and finalize list of responsive bidders.

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

20.6.1 The Financial Bid will be opened on the notified date & time in the presence of bidders or their authorised representative who wish to be present.

20.6.2 At the time of opening of "Financial Bid", bidders whose technical bids were found responsive will be opened.

20.6.3 The responsive bidders' name, bid prices, item wise rates, total amount of each item in case of item rate tender and percentage above or less in case of percentage rate tenders will be announced.

20.6.4 Procurement Officer-Openers shall sign on each page of the downloaded BoQ and the Comparative Statement and furnish a certificate to that respect.

20.6.5 Bidder can witness the principal activities and view the documents/summary reports for that particular work by logging on to the portal with his DSC from anywhere.

20.6.6 System provides an option to Procurement Officer Publisher for reconsidering the rejected bid with the approval of concern Chief Engineer / Head of Department.

21. **NEGOTIATION OF BIDS:**

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

22. **NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT:**

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

22.2 The Contractor after furnishing the required acceptable Performance Security & Additional Performance Security, "Letter to Proceed" or "Work Order" shall be

issued by the Engineer-in-Charge with copy thereof to the Procurement Officer – Publisher. The Procurement Officer-Publisher shall up load the summary and declare the process as complete.

- 22.3 If the L-1 bidder does not turn up for agreement after finalization of the tender, then he shall be debarred from participation in bidding for three years and action will be taken to blacklist the contractor. Besides the consortium / JV / firm where such an agency / firm already happens to be or is going to be a partner/member/proprietor, he/ they shall neither be allowed for participation in bidding for three years nor his/ their application will be considered for registration and action will be initiated to blacklist him / them. In that case, the L-2 bidder, if fulfils other required criteria, would be called for drawing agreement for execution of work subject to condition that the L-2 bidder negotiates at par with the rate quoted by the L-1 bidder, otherwise the tender will be cancelled.

23. BLOCKING OF PORTAL REGISTRATION:

- 23.1 If the Registration Certificate of the Contractor is cancelled /suspended by the registering authority/ blacklisted by the competent authority his portal registration shall be blocked automatically on receipt of information to that effect.
- 23.2 The portal registration blocked in the ground mentioned in the above Para-23.1 shall be unblocked automatically in receipt of revocation order of cancellation / suspension/ blacklisting from the concerned authority.
- 23.3 The Officer Inviting Tender shall make due inquiry and issue show cause notice to the concerned contractor who in turn shall furnish his reply, if any, within a fortnight from the date of issue of show cause notice. Thereafter the Officer Inviting Tender is required to issue an intimation to the defaulting bidder about his unsatisfactory reply and recommend to the Chief Manager (Tech.) for blocking of portal registration within 10 days of intimation to the defaulting bidder regarding his unsatisfactory reply with intimation to the Registering Authority and concerned Chief Engineer/ Heads of Office if any of the following provisions are violated.
- 23.3.1 Fails to furnish original Technical / Financial (Tender Paper Cost, EMD) instruments before the designated officer within the stipulated date and time.
- 23.3.2 Backs out from the bid on any day after the last date of receipt of tender till expiry of the bid validity period.
- 23.3.3 Fails to execute the agreement within the stipulated date.
- 23.3.4 If any of the information furnished by the bidder is found to be false / fabricated / bogus.

Accordingly the Officer Inviting Tender shall recommend to the Chief Manager (Tech.), State Procurement Cell, Odisha for blocking of portal registration of bidder and simultaneously action shall also be initiated by OFFICER INVITING TENDER for blacklisting as per Appendix- XXXIV of OPWD Code, Volume-II.

24. GUIDELINES FOR UNBLOCKING OF PORTAL REGISTRATION:

- 24.1 UNBLOCKING OF PORTAL REGISTRATION:

Unblocking of portal registration of a contractor shall be done by a Committee consisting of the following members.

EIC (Civil)-cum-CPO,	-	Chairman
Engineer-in-Chief (WR)	-	Member
Concerned Chief Engineer	-	Member
Sr. Manager (Finance), SPC	-	Member
Officer Inviting Tender	-	Member
Chief Manager (Technical), SPC	-	Convener

- 24.2 The Chief Manager (Tech), State Procurement Cell will be the convener and he will maintain all records for this purpose. The Committee shall meet not less than once in a month if required & shall consider the recommendation of the officer inviting tender for unblocking of portal registration. The quorum of the meeting will be four.
- 24.3 The minimum period of blocking of Portal Registration shall in no case be less than 90 days. After blocking of Portal Registration, the Contractor whose Portal Registration has been blocked may file application to the concerned officer inviting tender showing sufficient ground for unblocking of his portal registration along with a Treasury Challan showing deposit of Rs. 10,000/- (Rupees ten thousand) only (non-refundable) under the head of accounts '0059 - Public Works' as processing fees. The officer inviting tender shall forward the application filed by the contractor to the Chief Manager (Tech), State Procurement Cell.
- 24.4 On receipt of recommendation from the concerned Chief Engineer along with the copy of challan as mentioned above, the Chief Manager (Tech) being the member Convener of the Committee shall place the case before the Committee for examination and taking a decision in this regard. After examination the Committee may recommend for unblocking of the portal registration of said contractor if the Committee is satisfied that the fault committed by the contractor is either unintentional or done for the first time.
- 24.5 After scrutiny by the State Procurement Cell if it is found that the portal registration of a contractor has been blocked for the 2nd time the Chief Manager (Tech), SPC may not consider his case to be placed before the Committee and may advise the concerned officer inviting tender to issue show cause notice to the contractor asking him to explain as to why his portal registration shall not remain blocked. On receipt of show cause reply from the contractor the officer inviting tender shall examine the same & if considered proper he may report to the Chief Manager (Tech), SPC along with his views furnishing the copy of the show cause reply for placement of the same before the Committee for taking a decision in respect of blocking/ unblocking. If the Committee found that the contractor is in habit of committing such fault again and again intentionally the committee may advise the concerned officer inviting tender to initiate proceeding for blacklisting as per the existing rule.
1. These amendments shall take effect from the date of issue of the order.
 2. This amendment is an addition to the existing provision and will be placed below Appendix-IX to OPWD Col, Vol-II.

3. Accordingly Office Memorandum No.1027 dt.24.01.2009 stands modified.
4. This has been concurred in by the Finance Department vide their UOR No.3-WF-1 dt.04.01.2013.

Sd/19.07.2013
E.I.C-cum-Secretary to Govt.

**Online Receipt of Tender Paper Cost & Earnest Money Deposit
through e-Procurement Portal
as per Works Department Letter No.17276/W Dt.06.12.2017**

**Government of Odisha
Works Department**

Office Memorandum

File No.07556900012016–17254/W Dt.05.12.2017

Sub: Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids.

1. The State Government have formulated rules and procedures for Electronic receipt, accounting and reporting of the receipt of Cost of Tender Paper and Earnest Money Deposit on submission of bids through the e-procurement portal of Government of Odisha i.e. "<https://tendersodisha.gov.in>".
2. Electronic receipt of cost of tender paper has been successfully tested through SBI payment gateway. Now it has been decided to introduce electronic receipt of **Cost of Tender Paper and Earnest Money Deposit on submission of bids** through payment gateway of designated banks such as **SBI/ICICI Bank/HDFC Bank** for all Government Departments, State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc. in phases (ANNEXURE-I). The process outline as well as accounting and reporting structure are indicated below :
 - a) It will be carried out through a single banking transaction by the bidder for multiple payments like **Cost of Tender Paper and Earnest Money Deposit on submission of bids**.
 - b) Various payment modes like **Internet banking/ NEFT/RTGS** of Designated Banks and their Aggregator Banks as well can be accessed by the intending bidders.
 - c) Reporting and accounting of the **e-receipts** will be made from a single source.
 - d) Credit of receipts into the Government accounts and to the designated Bank account of the participating entities indicated in Para 2 above would be faster.
3. Only those bidders who successfully remit their **Cost of Tender Paper and Earnest Money Deposit on submission of bids would be eligible to** participate in the tender/bid process. The bidders with pending or failure payment status shall not be able to submit their bid. Tender inviting authority, State Procurement Cell, NIC, the designated Banks shall not be held responsible for such pendency or failure.

4. **Banking arrangement:**

- a) Designated Banks (**SBI/ICICI Bank/HDFC Bank**) payment gateway are being integrated with e-Procurement portal of Government of Odisha (<https://tendersodisha.gov.in>)
- b) The Designated Banks participating in **Electronic receipt, accounting and reporting of Cost of Tender Paper and Earnest Money Deposit on submission of bids** will nominate a **Focal Point Branch** called e-FPB, who is authorized to collect and collate all e-Receipts. Each such branch will act as the Receiving branch and Focal Point Branch notwithstanding the fact that the bidder might have debited his account in any of the bank's branches while making payment.

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

- a) **Log on to e-Procurement Portal:** The bidders have to log onto **the** Odisha e-Procurement portal (<https://tendersodisha.gov.in>) using his/her digital signature certificate and then search and then select the required active tender from the "Search Active Tender" option. Now, submit button can be clicked against the selected tender so that it comes to the "My Tenders" section.
- b) **Uploading of Prequalification/Technical/Financial bid:** The bidders have to upload the required Prequalification /Technical/Financial bid, as mentioned in the bidding document and in line with Works Department office memorandum no.7885, dt.23.07.2013.
- c) **Electronic payment of tender paper cost and EMD:** Then the bidders have to select and submit the bank name as available in the payment options
 - i. A bidder shall make electronic payment using his/her **internet banking** enabled account with designated Banks or their aggregator banks.
 - ii. A bidder having account in other Banks can make payment using **NEFT/RTGS** facility of designated Banks.
 - Online NEFT/RTGS payment using internet banking of the bank in which the bidder holds his account, by adding the account number as mentioned in the challan as an interbank beneficiary.
- d) **Bid submission:** Only after receipt of intimation at the e-Procurement portal regarding successful transaction by bidder the system will activate the 'Freeze Bid Submission' button to conclude the bid submission process.
- e) **System generated acknowledgement receipt for successful bid submission:** System will generate an acknowledgement receipt for successful bid submission. The bidder should make a note of '**Bid ID**' generated in the acknowledgement receipt for tracking their bid status.

6. **Settlement of Cost of Tender Paper;**

- a) **Cost of Tender Paper:** In respect of Government receipts on account of **Cost of Tender Paper**, the e-Procurement portal shall generate a MIS for the State

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

- b) For the time being, the State Procurement Cell (SPC) will use over the counter payment facility of the Odisha Treasury portal. Thereafter, remittance through NEFT & RTGS will be facilitated through the Odisha Treasury portal.
- c) Similarly, in case of State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc., **Cost of Tender Paper**, the e-Procurement portal shall generate a MIS for the State Procurement Cell (SPC). The MIS will contain an abstract of the cost of tender paper collected with reference to **Bid Identification Number**. The State Procurement Cell shall generate Bank-wise list of challans and instruct the designated Banks to remit the money through the Odisha Treasury portal. The cost of tender papers will be credited to the registered Bank account of the concerned State PSUs, Statutory Corporations, Autonomous Bodies and Local Bodies etc.
- d) Bank will refund (in case the Tender Inviting Authority (TIA) issues such instructions) the tender fee, EMD to the bidder, in case the tender is cancelled before opening of Bid as per direction received from TIA through e-procurement system.
- e) Back-end Transaction Matrix of Electronic receipt of Cost of Tender Paper and Earnest Money Deposit on submission of bids is enclosed in the Annexure.

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

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

8. Forfeiture of EMD :

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

- a) In case the **Earnest Money Deposit on submission of bid** is forfeited, the e-Procurement portal will direct the Bank to transfer the EMD value from the Pooling Account of SPC to the registered account of the tender inviting authority.
- b) The Tender inviting authorities of the Government Departments will deposit the forfeited **Earnest Money Deposit on submission of bid**, in the State Government Treasury under the appropriate head (8782-Cash Remittances and Adjustments between the officers rendering accounts to the same Accounts Officer-102-P.W.Remittances-1683-Remittances-91028-Remittances into Treasury) after taking the amount as a revenue receipt in their Cash Book under

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

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

9. Role of the Banks:

- a) Make necessary provision / customizations at their end to enable the provision for online payments / refunds as per this document.
- b) Provide necessary real-time message to bidders regarding successful or unsuccessful transactions during online payment processes and redirect them to e-Procurement website with necessary transaction reference details enabling them to submit their bids.
- c) The bank shall ensure transfer of funds from the pooling account to the Government Head/current account of PSUs/ULBs within the next bank working day as per the directions generated from e-Procurement portal.
- d) Bank should provide timely reports and reference details to NIC enabling them to carry out their role as stated below.
- e) Refund of amount to bidders as per the XML file provided by e-Procurement system on the next bank working day from the date of generation of the XML file and also provide a confirmation to NIC on the same.

10. Role of State Procurement Cell:

- a) Communicate requirements of Government departments/ State PSUs/ Autonomous Bodies/ ULBs online payment requirements to National Informatics Centre / the authorised Banks for mapping/ customization.
- b) In every working day, the State Procurement Cell shall generate MIS from the e-Procurement portal to ascertain the tender paper cost received in the e-Tendering process separately bank-wise for the Government Department and the PSUs/ULBs. The SPC shall generate bank-wise separate online challans from the Odisha Treasury portal and make the remittance through over the counter facility or NEFT/RTGS (as and when this functionality is available in Treasury portal) and issue instruction to the bank for remittance of the receipt to the State Government account.
- c) The State Procurement Cell shall be responsible for providing challan details and MIS in respect of the remittance towards tender paper cost to the Tender inviting authorities for their record.
- d) State Procurement Cell shall monitor the progress of e-Tendering by different Government departments / State PSUs/ Autonomous Bodies / ULBs through an MIS. State Procurement Cell shall monitor and send monthly progress reports to the Government.
- e) The e-Procurement system will generate a consolidated refund & settlement XML file as an end of the day activity.

- f) e-procurement system will provide a web service for payment gateway (PG) provider to pull the encrypted refund and settlement details in XML file against a day.
- g) Similarly, payment gateway (PG) provider will provide a web service to pull the refund and settlement status against a day
- h) e-procurement system will update the status accordingly for reconciliation report.

11. Role of National Informatics Centre :

- a) Customize e-Procurement software and web-pages of Government of Odisha (<https://tendersodisha.gov.in>) to enable the provision for electronic payment.
- b) The NIC, Odisha will modify / rectify the errors in electronic data relating to the Chart of Account.
- c) NIC will provide an interface to organisations to download the electronic receipt data.
- d) Enable automatic generation of daily XML files from e-Procurement system and ensure delivery of the same to the authorised Banks for enabling automatic refund/settlement of funds.
- e) NIC shall enable the e-Procurement portal to generate MIS as required for the State Procurement Cell in order to make remittance of the tender paper cost to the State Government account using the Odisha Treasury portal.

12. Role of Cyber Treasury :

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

13. Redressal of Public grievances :

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

14. Applicability and modification of existing rules / orders:

The modalities prescribed in this Office Memorandum for downloading of tender paper, submission and rejection of bid, acceptance of Bids as well as refund and forfeiture of earnest deposit will be applicable for electronic submission of bids through e-

procurement portal. Existing provisions regulating cost of tender paper, earnest money deposit in OPWD Code and OGFR would stand modified to the extent prescribed.

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

1. This shall take effect from the date of issue of this Office Memorandum.
2. Accordingly, relevant existing codal/ contractual provision exist vide Office Memorandum No.6785/W Dt.09.05.2017 of Works Department stands modified to the above extent.
3. This has been concurred in by the Finance Department vide their UOR No.-39-WF-I Dt.09.11.2017.

Sd/05.12.2017
E.I.C-cum-Secretary to Govt.

[For any Technical related queries please call at Help desk numbers of State Procurement Cell (SPC), Govt. of Odisha – 1800 3456 765, 0674-2530998, 2530996]

ANNXURE-I of Appendix - IV

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

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

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