GOVERNMENT OF ODISHA

DEPARTEMNT OF WATER RESOURCES

UNDER A.I.B.P SCHEME

KANUPUR IRRIGATION PROJECT

TENDER SCHEDULE

FOR THE WORK

"Sinking 03 nos. 125/100 mm dia Tube Well through DTH rig at Kalhahundula Cluster for the DPs of village Murusuan of KIP".

CONTRACTOR SUPERINTENDING ENGINEER

CONTENTS

Chapter No.	Description	Page No.
Chapter – I	General Information	3-7
Chapter-II	Detailed Tender Call Notice	8-34
Chapter-III	Information & Instructions to Tenderer	35-57
Chapter-IV	Percentage rate tender and contract for works	58-88
	Special conditions	89-93
Chapter-V	Technical specification	94-125
Chapter-VI	Drawings	126

CONTRACTOR SUPERINTENDING ENGINEER

CHAPTER - I

GENERAL INFORMATION

DETAILS OF WORKS

Name of the work: -

"Sinking 03 nos. 125/100 mm dia Tube Well through DTH rig at Kalhahundula Cluster for the DPs of village Murusuan of KIP".

CONTRACTOR SUPERINTENDING ENGINEER

General Information

1.0. SCOPE OF WORK

The work under tender pertains to **"Sinking 03 nos. 125/100 mm dia Tube Well through DTH rig at Kalhahundula Cluster for the DPs of village Murusuan of KIP"** under Joda Block, in the District of Keonjhar in the State of Odisha.

The above work comprises of **"Sinking 03 nos. 125/100 mm dia Tube Well through DTH rig at Kalhahundula Cluster for the DPs of village Murusuan of KIP".**

1.1. LOCATION OF WORK SITE.

The site of the work **"Sinking 03 nos. 125/100 mm dia Tube Well through DTH rig at Kalhahundula Cluster for the DPs of village Murusuan of KIP"** is located in under Jhumpura Block, in the District of Keonjhar in the State of Odisha. The work site is located **68** KM away from the District Head Quarter Keonjhar. It is **282** KM away by road from Bhubaneswar, the capital city and also connected by rail with nearest Railway Station at Keonjhar. Nearest Air Port is Bhubaneswar.

1.2 TRANSPORTATION/ COMMUNICATION FACILITIES:

The work site is connected with the District Head Quarter Keonjhar by **N.H. 20 up to Rimuli & by NH-520 from Rimuli to Basudevpur** and to worksite by **village road.**

1.3 GENERAL INFORMATION

The information and data related to work and site conditions described thereafter, represent the site conditions in general. It shall be presumed that the contractor visits the site of proposed works for his satisfaction as to the nature and location of work and local conditions in general and particularly about the availability of power supply, water supply, storage and handling of materials, disposal of soil, road communication data and bore hole data, availability of labour and other related matters required for planning for execution etc., before quoting his percentage rate for the work. The department therefore will not bear any responsibility of site conditions and consequence thereof.

1.4 AVAILABLITY OF LABOUR

Labourers required for the works may be available to some extent near project area. It is preferable to engage local labourers as far as practicable and possible. However, the contractor must make his own arrangements for execution of works after proper assessment of availability and requirement of labourers and machineries & equipments.

1.5 TOWNS:

The nearest town is Keonjhar, the District Head Quarter.

1.6 AVAILABILITY OF DIESEL AND LUBRICANT.

The nearest Filling Station for POL is located at **Kandara, Bileipada & Raghualasahi.**

1.7 OBSERVATION OF RULES

a) The contractor shall take all precautions to ensure safety to the workers. The Department will not take any responsibility for any accident if occurred at work site or at any place relating to this work. The relevant norms of the Government must be strictly adhered to for the purpose of compensation and other benefits etc.

b) The contractor shall take action to rectify the defects, if any, required for installation of machineries and equipments, pointed out by the Departmental Engineer in a reasonable time.

1.8 HOUSING

Private houses may be available for housing in nearby villages of the work site. But, the Contractor shall make his own arrangements for housing the labourers, materials, staff and site offices at the work site.

1.9 ELECTRIC POWER SUPPLY FOR CONSTRUCTION PURPOSE

The contractor will take steps to illuminate the borrow area and portions of haul roads as may be required while carrying out the work. No compensation will be paid to the contractor due to failure of electricity to any or entire part of the work site resulting in disrupting the construction activities of the work and for the idle labour, machinery & equipments. The electric supply for the domestic purpose of the contractor and his labourers will be the responsibility of the contractor. Supplying electricity to work shops, crushers quarries etc. by the contractor is not the responsibility of the department and shall be arranged by the contractor at his own cost. The contractor has to make his own arrangement for power supply. If the department supplies electricity, the contractor may avail the facility on payment of charges fixed by the department from time to time.

1.10 MEDICAL AID

There is a Community Health Centre at **Basudevpur which is 13 Km away from project site** and Government Hospitals are available at **Champua & Keonjhar**. The contractor shall make at own cost for the first aid arrangements at various work sites in accordance with rules and regulations of prevailing Labour Act.

1.11 LOCAL ROADS

The Contractor may use the existing approach roads to the site of work, to the extent of availability. The contractor shall, however construct & maintain connecting roads within the working area and in his labour colony areas including drainage crossings. The contractor shall construct and maintain haul roads, and other approach roads including river and drainage crossing, traffic management during construction, diversions etc. as may be necessary for the purpose of execution of the work at his own cost.

1.12 DUMP AREAS

Materials excavated from the foundations of structures and canal excavation and in connection with other items of work shall be dumped as per the direction of Engineer-in-charge with necessary expenditure on safeguarding environment. The Contractor shall construct and maintain all roads to the working areas at his own expenses for disposal of excavated materials.

1.13 OTHER CONTRACTORS

In the matter of dumping the excavated materials, haul roads, diversions, excavations etc. the Contractor shall take into consideration the needs and requirements of other Contractors if any, working in the vicinity. There should be proper and adequate co-operation with other working Contractors, if any other contractor is working in the vicinity. The direction of the Engineer-in- Charge must be carried out on this score. Further, the contractor shall not cause disruptions, discontentment or disturbance to the work, labourers or arrangements etc. of the other contractors working in the vicinity of the work site.

1.14 USE OF SITES

a) Construction of temporary houses shall be made by the Contractor at his own expenses on the available Government land acquired for the project, if available and permitted by the Engineer-in- Charge, for storage sheds, office, residence etc. for non-commercial use on the land handed over to him. After the completion of the work, these structures should be dismantled and the site should be cleared before handing over to the Department.

1.15 FLOOD

a) In case of flash and untimely flood in the river during the working season i.e. resulting in overtopping of coffer dam and flooding of the work areas, the Contractor shall make his own arrangements at his own cost to shift the machinery, equipment, materials, labour and any departmental machinery hired by the contractor to a safe place. The work shall have to be

resumed after receding of floods and necessary strengthening of Cofferdam and de-watering will be done by the contractor at his own cost. Suitable extension of time shall however be granted on such occasions for the loss of working time on the request of the contractor if, he so desires.

b) The silt, debris, sand and other materials accumulate in the working area, during flash floods or regular floods in the monsoon, shall be removed by the contractor as required for continuing the work at his own cost. If any excavated portion, which could not be filled with concrete or earth by the Contractor, is filled up during the monsoon period with earth and silt during the execution of work whatsoever the reasons may be, the contractor will have to re-excavate such portion of work at his own cost.

c) It is the entire responsibility of the contractor to make all arrangements required from time to time for the work and protect the men, machinery, materials etc deployed by him and the work under progress, the items of work for which the payment has already been made on recorded measurements, against any damage either during working season or during the flood season. The Department accepts no liability for any damage or loss caused.

CHAPTER - II

DETAIL TENDER CALL NOTICE (DTCN)

GOVERNMENT OF ODISHA
Office of the Superintending Engineer
Kanupur Rehabilitation, Camps & Building Division,
AT/PO-Basudevpur, Dist.-Keonjhar, PIN-758047.
e- PROCUREMENT NOTICE
Bid Identification No. SE, KRC & BD- 24/2026-27
Email- eekrcbdbasudevpur@gmail.com

Sl. No	Name of work	Approx. value of work. (Rs. in Lakh)	E.M.D./ Bid Security. in Rs. (To be remitted online)	Cost of Bid document in Rs. (To be remitted online)	Period of Completion	Class of Contractor	Name & address of the Division under which the work will be executed
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
01	"Sinking of 03 nos. 125/100 mm dia Tube Well through DTH rig at Bhangabandha & Nardapur Majhi Sahi cluster for the DPs of village Remenshapur (ka) of KIP ".	4.97	5,000.00	2,000.00	01(One) Calendar months	"D" & "C"	Kanupur Reh. Camps & Building Division, At/PO-Basudevpur, Dist.-Keonjhar
02	"Sinking 03 nos. 125/100 mm dia Tube Well through DTH rig at Kalhahundula Cluster for the DPs of village Murusuan of KIP".	4.98	5,000.00	2,000.00	01(One) Calendar months	"D" & "C"	Kanupur Reh. Camps & Building Division, At/PO-Basudevpur, Dist.-Keonjhar

Procurement Officer	Bid Identification No.	Availability of tender online for bidding		Date & time of opening of tender		Place of opening
		From	To	Date	Time	
1	**2**	**3**	**4**	**5**	**6**	**7**
Superintending Engineer, Kanupur Reh. C. & B. Division, Basudevpur, Dist- Keonjhar.	SE, KRC & BD-24/ 2026-27	**22.10.26** From 10.00 Hours	**31.10.26** Up to 17.00 Hours	**02.11.26**	11.00 Hours	O/o the Superintending Engineer Kanupur Reh. C. & B. Division, Basudevpur, Dist- Keonjhar.

Superintending Engineer
Kanupur Reh. C.& B. Division,
Basudevpur

CONTRACTOR SUPERINTENDING ENGINEER

GOVERNMENT OF ODISHA
Office of the Superintending Engineer
Kanupur Rehabilitation, Camps & Building Division,
AT/PO-Basudevpur, Dist.-Keonjhar, PIN-758047
e- PROCUREMENT NOTICE
Bid Identification No. SE, KRC & BD- 24/2026-27
Email- eekrcbdbasudevpur@gmail.com

The Superintending Engineer, Kanupur Rehabilitation, Camps & Building Division, Basudevpur on behalf of Hon'ble Governor of Odisha invites on-line percentage rate tender in **single** cover system through e-procurement for execution of the works noted below. The bid should be submitted by eligible class of contractors as mentioned below registered in **CDMS** with State Government & contractors of equivalent grade / class registered with Central Government / MES / Railway to be eventually drawn in P1 form through on-line in the Govt. website www.tendersodisha.gov.in . The bidders should have necessary portal enrolment (with own digital signature certificate). The registered bidders of outside Odisha state can also participate in this on-line tender process after necessary portal enrolment, but shall have to subsequently undergo registration with appropriate authority of the state govt. within a month of acceptance of bid. The bidders registered outside the state are required to submit an under taking in the form of an affidavit, that they are not registered under the GST act in the state of Odisha as they have not started any business in the state and they have no liabilities under the act. But the successful bidder has to produce GSTIN certificate before signing of agreement.

Sl. No	Name of work	Approx. value of work. (Rs. in Lakh)	E.M.D./ Bid Security. in Rs. (To be remitted online)	Cost of Bid document in Rs. (To be remitted online)	Period of Completion	Class of Contractor	Name & address of the Division under which the work will be executed
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Procurement Officer	Bid Identification No.	Availability of tender online for bidding		Date & time of opening of tender		Place of opening
		From	To	Date	Time	
1	**2**	**3**	**4**	**5**	**6**	**7**
Superintending Engineer, Kanupur Reh. C. & B. Division, Basudevpur, Dist- Keonjhar.	SE, KRC & BD-24/ 2026-27	**22.10.26** From 10.00 Hours	**31.10.26** Up to 17.00 Hours	**02.11.26**	11.00 Hours	O/o the Superintending Engineer Kanupur Reh. C. & B. Division, Basudevpur, Dist- Keonjhar.

02. Bid documents consisting of qualification, information and eligibility criteria of bidders, plans, specifications and schedule of quantities along with rates of the works are available in web-site and

CONTRACTOR SUPERINTENDING ENGINEER

the set of terms and conditions of contract and other necessary documents can be seen in the web-site till **dt.31.10.2026 up to 17.00** hours i.e. **last date of availability of tender** online for bidding. The cost of "Bid documents "shall be remitted online by the bidder by using internet banking enabled account with designated banks (SBI, ICICI, HDFC Bank) or their aggregator banks. A bidder having account in other banks can make payment using NEFT/RTGS facilities of designated banks such as SBI, ICICI, HDFC Banks.

03. The bids for the works shall remain valid for a period of **90** days from the last date of receipt of bids. If any bidder tender withdraws his bid/ tender before the period or makes any modification in the terms and condition of the bid, the EMD deposited at the time of submission of tender shall stand forfeited.

04. The percentage rate excess or less to be quoted should be up to **two** decimal points only. In case, the percentage rate in excess or less up to two or more decimal points, the 1st two decimal points will be considered without rounding up.

05. After careful observation, government has been pleased to abolish the extant provisions of threshold negative bid caps (14.99%) introduced in Appendix-IX, Clause 36 of OPWD Code Volume-II in the procurement of works undertaken by the Gov. of Odisha and its agencies to ensure the procurement process results in viable and successful manner with adoption of following incremental **Additional Performance Security (APS)** system.

06. Additional Performance Security (APS)

I. The Additional Performance Security (APS) shall be calculated as a percentage of the accepted Bid Price of the selected bidder.

II. For the purpose of determining the APS, the percentage by which the accepted Bid Price is lower than the Cost Put to Tender shall be calculated and rounded off.

III. The rounded-off percentage so determined shall be referred to as the Rounding Off of Percentage Less (ROPL) of accepted Bid Price and shall form the basis for calculation of the APS In accordance with the applicable incremental rate prescribed under this Office Memorandum.

IV. Rounding Off of Percentage Less (ROPL) of acted Bid Price, ie, the percentage by which the accepted Bid Price is less than the Cost Put to Tender, shall be as follows:

- Where the decimal fraction is less than 0.50, the percentage shall be rounded off to the next lower whole percentage.
- Where the decimal fraction is 0.50 or above, the percentage shall be rounded off to the next higher whole percentage.

- For avoidance of doubt, 13.25% less shall be reckoned as 13% less, whereas 13.50% less shall be reckoned as 14% less, for the purpose of determining the applicable APS under this Office Memorandum.

V. Calculation of Additional Performance Security:

- Where the accepted bid price is such that the ROPL is up to (-)10%, no additional performance security is required.

CONTRACTOR SUPERINTENDING ENGINEER

- where the accepted bid price is such that the ROPL is below (-)10% but not below -20%, the additional performance security percentage shall be incremented by 0.2% for every percentage of ROPL below (-)10%; for avoidance of doubt, if ROPL is (-)13%, then APS shall be @ 0.2% x (13-10)=0.6% of accepted bid price.

- where the accepted bid price is such that the ROPL is below (-)20% but not below (-)30% the additional performance security percentage shall be incremented by 0.3% for every percentage of ROPL below (-)20% in addition to 2% of the accepted bid price; for avoidance of doubt, if ROPL is (-)24%, then APS shall be @ 0.3% x (24-20) +2% 1.2% + 2% = 3.2% of accepted bid price.

- Where the accepted bid price is such that the ROPL is below (-)30% or more, the additional performance security percentage shall be incremented by 0.5% for every percentage of ROPL below (-)30% in addition to 5% of the accepted bid price; for avoidance of doubt, if ROPL is (-)37%, then APS shall be @ 0.5% x (37-30) + 5% = 3.5%+5% 8.5% of accepted bid price.

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

VII. The provision of additional performance security shall be applicable to all forms of tender except Turnkey Tender.

VIII. Justification for abnormally low bids shall be scrutinized by the Technical Committee and recommended to the Competent Authority for Acceptance of Tender as per Para 6.3.15 of OPWD Code, Vol-1 for the approval of the Additional Performance Security (APS). An abnormally low bid is one in which the Bid price, in combination with other elements of the Bid, appears so low that it raises material concerns as to the capability of the Bidder to perform the contract at the offered price. Procuring Entity may, in such cases, seek written clarifications from the Bidder, including detailed price analysis of its Bid price in relation to scope, schedule, resource mobilization, allocation of risks and responsibilities, and any other requirements of the bid document. If, after evaluating the price analysis, the procuring entity determines that the Bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Procuring Entity may reject the Bid/ Proposal. However, it would not be advisable to fix a normative percentage below the estimated cost, which would automatically be considered as an abnormally low bid.

IX. If more than one bid is quoted (decimal up to two numbers will be taken for all practical purposes, in percentage rate tenders) as lowest, either at the estimated cost put to tender or less than the estimated cost put to tender, the Tender Accepting Authority will finalize the tender through a transparent lottery system, where all the concerned bidders/their authorized representatives, the concerned SE/EE of the concerned Division and DAO will remain present.

X. If the rate quoted by the SC and ST Category Contractors comes to the rate quoted by the lowest bidder (decimal up to two numbers will be taken for all practical purposes, in percentage rate tenders) after availing 10% price preference as per Para 2 of Works Department Resolution No. 16262 dated 30.10.2018, the tender shall be finalized by the Tender Accepting Authority through a transparent lottery system along with other categories of contractors.

The APS amount will be received in shape of N.S.C./ Post Office Savings Bank Account/ Post Office Term Deposit Account/ Kisan Vikas Patra/ Bank Guarantee in favour of the Divisional Officer from any Nationalized Scheduled Bank in India counter guaranteed by its local Branch at Bhubaneswar/ e-Bank Guarantee executed on the National e-Governance Services Limited (NeSL) Digital Document Execution Portal/Insurance Surety Bond issued by an Insurance Company authorized by the Insurance Regulatory and Development Authority of India (IRDAI) within seven

days of issue of Letter of Acceptance (LoA) by the Divisional Officer (by e-mail) to the successful bidder otherwise the bid of the successful bidder shall be cancelled. Further, processing for Black listing shall be initiated against the bidder as per amendment to Para 3.5.5. (v) of OPWD Code, Volume-I vide Works Department Memorandum No.14459/W dated 20.09.2018 (O.M. No.07556900052021- 4559/W, Bhubaneswar, Dated the 05.04.2021).

07. 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 black list 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 L1 bidder otherwise tender will be cancelled. In case a contractor is blacklisted, it will be widely publicized and intimated to all departments of Government and also to Govt. of India agencies working in the state.

08. The scanned copies of **valid R.C (Registration certificate), valid Active GSTIN, PAN card, Affidavit regarding authenticity of bid (Annexure-A), Litigation debarring expelling of tendered (Annexure-B), No Relation Certificate (Annexure-C), Labour undertaking (Annexure-D), Affidavit (Schedule-F) and acknowledgements / receipts, paper cost etc**. should be submitted through web-site which in original should be produced in the office of the undersigned on demand for verification after opening of the tender, otherwise, the bid will be rejected. The date and time of **opening of Bid** on **dt.02.11.2026 at 11.00 hours** in the office of the Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur, Dist- Keonjhar. If the date of opening happens to be a holiday, the next official day will be the date of opening at the same time and venue.

09. Single tender received in the 1st call shall be cancelled without opening of the bid. The acceptance of the single tender received even after retendering should have prior approval of next higher authority vide O.P.W.D. Para-3.5.18 and office memorandum No.16/W dated 01.01.2015 of works Department Govt. of Odisha.

10. Only those bidders who successfully remit their Cost of Tender Paper & EMD 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.

11. Exemption of EMD to the Engineer Contractor will be allowed for a maximum of three (3) works in a financial year and the fact of awarding a work with exemption of EMD should be entered in the original registration certificate of the Engineer contractor. Engineer Contractor desirous to avail the exemption of EMD is required to submit an affidavit to the effect that he/she has not yet availed the facility for more than two works during the current financial year.

12. The Schedule Caste/ Schedule Tribe Contractors desirous to avail the facility of price preference as per Works Department are required to submit an affidavit to this effect. The bidders have to produce their original registration certificate stating the fact of caste by their registration authority and to furnish as and when required for verification of the tender failing which they will not get price preference as per Rule.

13. **The bidder shall transfer the required amount of E.M.D/ Bid security@ 1% of the amount put to the tender i.e., as mentioned in Col no.4 in NIT and cost of bid document as mentioned in Col. No.5 of above table by online through a process as mentioned in DTCN.**

14. Under section 12 of contract labour (Regulation and Abolition Act. 1970) the contractor who undertakes execution of work through labour, should produce valid license from licensing authority of labour department (Labour license) before commencement of the work.

15. Authority will not be held responsible for system failure, malfunction of internet or traffic jam. Bidders are advised to submit their bids well in advance within the stipulated period.

16. The bidder should mention his/her valid E-Mail Address/Phone No. in the separate sheet for communication regarding the tender. The date of time of the lottery if required will be intimated to the qualified bidders through their valid E-Mail ld./ Contact Number provided in the tender website.

17. Any addendum corrigendum /cancellation of above tender will be published in the web-site www.tendersodisha.gov.in. The system shall generate a mail to those bidders who have already uploaded their tenders and those bidders if they wish, can modify their tenders.

18. Authority reserves the right to reject any or all the tenders without assigning any reasons thereof. No tenderer can demand the cause of rejection of his offer.

Superintending Engineer,
Kanupur Reh. C. & B. Division,
Basudevpur.

CONTRACTOR SUPERINTENDING ENGINEER

DETAIL TENDER CALL NOTICE (DTCN)

1.1 Invitation.

a. The **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur, Keonjhar** on behalf of Hon'ble Governor of Odisha invites sealed on-lined tender in Single cover system for percentage rate bid through website to be eventually drawn in P.W.D. form P_1 from **"D" & "C" Class** Contractors Registered with the State Govt. of Odisha or from contractors of equivalent grade / class registered with other State Govt. / Central Govt. / M.E.S. / Railways or other Govt. undertakings. All the contractors are to be registered in the State portal and must possess compatible digital signature certificate of Class-II / III for online bidding. The website for online bidding is **http://tendersodisha.gov.in**

b. The tender documents can be downloaded from the website identified as http://tendersodisha.gov.in from Dated **22.10.2026 10.00 hrs. to 31.10.2026 up to 17.00 hrs.** The bidder for participation in on line bidding will have to pay Rs.2,000/- (Rupees Two thousand) only for each set online as per Works Department Office Memorandum No.07556900012016-17254/W dt.05.12.2017. The Bid will be received through e-procurement portal from dt. **22.10.2026 10.00 hrs. to 31.10.2026 up to 17.00 hrs.** The bid will be opened on Dt.**02.11.2026** at **11.00** hours in the office of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur, Keonjhar** in presence of the tenderers or their authorized agents. The bidders who participated in the online bidding can witness the opening of the bid from any system logging onto 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. In the event of the specified date of bid opening being declared a holiday, the bid will be opened at the specified time and location on the next working day.

c. The value of the work tendered for is **Rs.4.98 Lakhs.**

d. No tenderer will be permitted to furnish their tender in their own manuscript.

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

f. The bidder shall submit the scanned copies of the documents in the designated locations for bid. Submission of bid documents shall be affected by using DSC of appropriate class and thus shall be in encrypted form. 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.

1. EARNEST MONEY DEPOSIT/ BID SECURITY (online)

The bid must be accompanied by Earnest Money Deposit (remitted online) as per Works Department Office Memorandum No.07556900012016-17254/W dt.05.12.2017 @ 1% of the amount put to tender i.e. **Rs.5,000.00**. Non-submission of "**bid security"** and **"Cost of bid document"** within the specified period shall debar the bidder from participating in the on-line bidding system and his portal registration shall be cancelled. His name shall also be informed to the registering authority for cancellation of his registration. Cash / Cheque payment shall not be entertained.

Adjustment of earnest money given with other tenders previously and submitted with other tenders shall not to be entertained.

1.3 Additional Performance Security (APS)

I. The Additional Performance Security (APS) shall be calculated as a percentage of the accepted Bid Price of the selected bidder.

II. For the purpose of determining the APS, the percentage by which the accepted Bid Price is lower than the Cost Put to Tender shall be calculated and rounded off.

III. The rounded-off percentage so determined shall be referred to as the Rounding Off of Percentage Less (ROPL) of accepted Bid Price and shall form the basis for calculation of the APS In accordance with the applicable incremental rate prescribed under this Office Memorandum.

IV. Rounding Off of Percentage Less (ROPL) of acted Bid Price, ie, the percentage by which the accepted Bid Price is less than the Cost Put to Tender, shall be as follows:

- Where the decimal fraction is less than 0.50, the percentage shall be rounded off to the next lower whole percentage.
- Where the decimal fraction is 0.50 or above, the percentage shall be rounded off to the next higher whole percentage.

- For avoidance of doubt, 13.25% less shall be reckoned as 13% less, whereas 13.50% less shall be reckoned as 14% less, for the purpose of determining the applicable APS under this Office Memorandum.

V. Calculation of Additional Performance Security:

- Where the accepted bid price is such that the ROPL is up to (-)10%, no additional performance security is required.
- where the accepted bid price is such that the ROPL is below (-)10% but not below -20%, the additional performance security percentage shall be incremented by 0.2% for every percentage of ROPL below (-)10%; for avoidance of doubt, if ROPL is (-)13%, then APS shall be @ 0.2% x (13-10)=0.6% of accepted bid price.
- where the accepted bid price is such that the ROPL is below (-)20% but not below (-)30% the additional performance security percentage shall be incremented by 0.3% for every percentage of ROPL below (-)20% in addition to 2% of the accepted bid price; for avoidance of doubt, if ROPL is (-)24%, then APS shall be @ 0.3% x (24-20) +2% 1.2% + 2% = 3.2% of accepted bid price.
- Where the accepted bid price is such that the ROPL is below (-)30% or more, the additional performance security percentage shall be incremented by 0.5% for every percentage of ROPL below (-)30% in addition to 5% of the accepted bid price; for avoidance of doubt, if ROPL is (-)37%, then APS shall be @ 0.5% x (37-30) + 5% = 3.5%+5% 8.5% of accepted bid price.

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

VII. The provision of additional performance security shall be applicable to all forms of tender except Turnkey Tender.

VIII. Justification for abnormally low bids shall be scrutinized by the Technical Committee and recommended to the Competent Authority for Acceptance of Tender as per Para 6.3.15 of OPWD Code, Vol-1 for the approval of the Additional Performance Security (APS). An abnormally low bid is one in which the Bid price, in combination with other elements of the Bid, appears so low that it raises material concerns as to the capability of the Bidder to perform the contract at the offered price. Procuring Entity may, in such cases, seek written clarifications from the Bidder, including detailed

price analysis of its Bid price in relation to scope, schedule, resource mobilization, allocation of risks and responsibilities, and any other requirements of the bid document. If, after evaluating the price analysis, the procuring entity determines that the Bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Procuring Entity may reject the Bid/ Proposal. However, it would not be advisable to fix a normative percentage below the estimated cost, which would automatically be considered as an abnormally low bid.

IX. If more than one bid is quoted (decimal up to two numbers will be taken for all practical purposes, in percentage rate tenders) as lowest, either at the estimated cost put to tender or less than the estimated cost put to tender, the Tender Accepting Authority will finalize the tender through a transparent lottery system, where all the concerned bidders/their authorized representatives, the concerned SE/EE of the concerned Division and DAO will remain present.

X. If the rate quoted by the SC and ST Category Contractors comes to the rate quoted by the lowest bidder (decimal up to two numbers will be taken for all practical purposes, in percentage rate tenders) after availing 10% price preference as per Para 2 of Works Department Resolution No. 16262 dated 30.10.2018, the tender shall be finalized by the Tender Accepting Authority through a transparent lottery system along with other categories of contractors.

The APS amount will be received in shape of N.S.C./ Post Office Savings Bank Account/ Post Office Term Deposit Account/ Kisan Vikas Patra/ Bank Guarantee in favour of the Divisional Officer from any Nationalized Scheduled Bank in India counter guaranteed by its local Branch at Bhubaneswar/ e-Bank Guarantee executed on the National e-Governance Services Limited (NeSL) Digital Document Execution Portal/Insurance Surety Bond issued by an Insurance Company authorized by the Insurance Regulatory and Development Authority of India (IRDAI) within seven days of issue of Letter of Acceptance (LoA) by the Divisional Officer (by e-mail) to the successful bidder otherwise the bid of the successful bidder shall be cancelled. Further, processing for Black listing shall be initiated against the bidder as per amendment to Para 3.5.5. (v) of OPWD Code, Volume-I vide Works Department Memorandum No.14459/W dated 20.09.2018 (O.M. No.07556900052021- 4559/W, Bhubaneswar, Dated the 05.04.2021).

2. TAX CERTIFICATES:

The tenderers are also required to upload the scanned copies of **valid R.C (Registration certificate), valid active GSTIN, PAN card, Affidavit regarding authenticity of bid (Annexure-A), Litigation debarring expelling of tendered (Annexure-B), No Relation Certificate (Annexure-C), Labour undertaking (Annexure-D), Affidavit (Schedule-F) and acknowledgements / receipts, paper cost etc** submitted through web-site along with tender documents failing which his tender shall not be considered. The original documents are to be produced on demand for verification before **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** during office hours after opening of the tender.

1.5 TIME OF COMPLETION:

The work is to be completed within **01 (One)** calendar months including rainy season commencing from the date of issue of order to proceed with the work.

3. OTHER INFORMATIONS FOR SUBMISSION OF BIDS THROUGH e-PROCUREMENT PORTAL

2.1 The bidders shall prepare the documents and upload the scanned typed document in **PDF** format and **BOQ in excel format** (or as specified in the portal) in appropriate place.

2.2. An intelligent BOQ in **MS Excel format** shall be made available to the bidder through e-procurement portal. The bidder shall open that particular excel sheet and fill in the percentage rate in figures at the appropriate location. The bidder is not supposed to change or modify the

format of the excel sheet in any form. If the bidder does not fill percentage rate for the work, his bid will stand cancelled.

2.3. It is allowed to modify the bid through the e-procurement portal. The bidder shall have to log in the system and resubmit the documents as asked for by the system including the financial bid. In doing so, the bids already submitted by the bidder will be removed automatically from the system and latest bid only will be admitted. But, the bidder should avoid modification of the bid at the last moment to avoid system failure or malfunction of the internet or traffic jam. If the bidder fails to submit his modified bids within the designated time of receipt, the bids already in the system shall be taken for evaluation.

2.4. Withdrawal of bid is also allowed in the e-procurement portal. 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 officer inviting the bid and upload the scanned document from portal in respective bid. The system shall not allow any withdrawal after expire of the closure of the bid.

4. PRE-BID INSPECTION BY CONTRACTORS:

The tenderers are required to go through each clause of PWD form P-1 carefully in addition to clause mentioned herein before tendering. In any case the tenderer shall be deemed to have carefully examined the tender documents, visited the site of work and its surroundings and satisfied himself as the form and nature of the site approach roads, haul roads, local conditions, assessed all the facilities including requirement and availability of labour and materials needed to complete execution of the work and made an inventory of such information as to the risks, contingencies and other circumstances which would influence or affect his tender before tendering. He should also satisfy himself about the sufficiency of availability of materials in quarry and borrow area. The Department will not be responsible for any misjudgment of the tender on the account for any future claims.

4. VALIDITY OF TENDER:

4.1 The tender should be uploaded bearing the correct identification number mentioned in the tender call notice. Tendering authority shall not be held responsible if the tender uploaded with incorrect Identification number.

4.2 The bidders are required to submit the Valid/correct copy/copies of documents.

5. The tenderer must furnish the scanned copies of **valid R.C (Registration certificate), valid Active GSTIN, PAN card, Affidavit regarding authenticity of bid (Annexure-A), Litigation debarring expelling of tendered (Annexure-B), No Relation Certificate (Annexure-C), Labour undertaking (Annexure-D), Affidavit (Schedule-F) and acknowledgements / receipts, paper cost etc** submitted through web-site along with tender documents.

4.4 The percentage rate quoted shall remain valid for a period of **90 (Ninety)** days from the last date prescribed for receipt of tenders.

4.5 The tender, not in the prescribed proforma and not strictly in accordance with the terms and conditions of the tender call notice, is liable for rejection.

CONTRACTOR SUPERINTENDING ENGINEER

4.6 Alternate tenders, conditional tenders and tenders containing indefinite terms will not be entertained. The tenders will be considered giving special emphasis on the capability of the tenderer and the implements and earth moving machinery at his disposal for the work.

4.7 Letters and communications etc, raising and lowering the percentage rate or dealing with any point in connection with the tender will not be considered.

4.8 (a) The contractor has to quote percentage excess or less over the estimated cost in the Price Bid. The estimated cost is excluding GST. The rates of items basing on which estimated cost has been derived are excluding GST on different components to arrive at such rates.
(b) Percentage rate quoted should be for the complete work considering the factors required to complete all the items of the work to finished shape as per the description of the schedule (Bill) of quantity and specification. The quoted rate shall include all taxes as applicable, rent,royalty, cess, general &incidental charges pertinent to the work, other charges of materials, Octroi, ferry tolls, conveyance charges, other costs on account of land and buildings including temporary building required by the tenderer for collection and storage of materials, housing of staff or other purpose for the work.

The tenderer must quote the percentage rate for the complete work to be included in contract. Tenders containing indefinite terms and conditions shall not be considered.
I The bidder has to quote his rates for each item including all taxes as applicable, royalties, cess, Income tax and Surcharge. GST on works contract as applicable from time to time shall be paid at the time of bills.
(d) Prevailing rate of TDS on GST as applicable under Act on the gross amount of the bill will be deducted from the contractor's bill as tax deduction at source (TDS) as per rules.
I **Tax Invoice by the contractor**:- While submitting the work bills, the contractor will have to submit tax invoice as per rule-46 of OGST rule, 2017.

4.9 The tenderer shall bear the cost of various incidentals sundries and contingencies or of similar category, required for the work as mentioned below.

i) Labour camps and hutments necessary to a suitable scale including contingency and sanitary arrangements, medical aids thereon to the satisfaction of the health authorities

ii) Water arrangements for labourers as well as for the works. No claim for carriage for water, whatsoever, will be entertained.

iii) Fees and dues levied by the Municipality or/and Water Supply Authorities shall be borne by the contractor.

iv) Suitable equipment and wearing apparatus for the labourers engaged in risky operations and medical aid to the labourers engaged for the work.

vi) Suitable fencing, barriers, signals, including parapet and electrical signal, where ever necessary at works, and approaches in order to protect the public and employees from accidents.

vii) No compensation for any damage done by rain or by similar action during execution of the works shall be paid.

viii) The tenderer shall write the percentage rate of the whole work in figures only in appropriate column.

ix) Rent, royalties and other charges of materials, octroi, cess, entry tax, ferry tolls &including all taxes as applicable, conveyance charges, and other cost on account of land and buildings including temporary building and temporary electric connection to work site as well as construction of coffer dam, construction of service road, diversion road and its maintenance till completion of work required by the tenderer for collection of materials, storage housing of staff other purpose of the work.

4.10 The tender is to be decided as per prevailing Codal provisions taking into consideration in accordance with the stipulation made in the bid document along with the capacity of the tenderer and equipments available with him for the work. **The authority reserves the right to reject any or all tenders without assigning any reason thereof.**

CONTRACTOR SUPERINTENDING ENGINEER

4.11 All the tenderers are required to submit, along with their tenders declaration about the names of their relatives employed in Water Resources Department in the prescribed format appended in **Annexure-"C"**. In case, they have no relative in Water Resources Department a certificate along with tender to the effect that he is not related to any officer in the rank of Assistant Engineer & above in the department of Water Resources. If the fact subsequently proved to be false, the contract will be rescinded, the earnest money & the total security will be forfeited & he shall be liable to make good to the loss or damages resulting in due to such cancellation.

4.12 No Engineer of Gazetted rank or other Gazetted officer employed in Engineering or Administrative duties in an Engineering department of the State Government is allowed to work as a contractor for a period of two years after his retirement from Government service, without Government permission.

4.13 The correct cost of tender paper and EMD/Bid Security must be furnished by the tenderers as asked in the DTCN.

4.14 An affidavit shall be furnished by the bidder at the time of submission of tender paper about the authentication of tender documents including bid security. The scanned copy of the affidavit is to be uploaded through the e-procurement portal along with the bid. The affidavit in original is to be produced before the officer inviting tender on demand for verification after opening of the tender.

4.15 The percentage rate to be quoted by the contractor for the work should be consistent and rational. Tenders with in-consistent percentage rate and / or speculative percentage rate shall be liable for rejection.

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

6. Payment for RA bill shall be made in level section measurement and no string section measurement will be considered.

4.18 TENDERER'S CERTIFICATE

The tenderer will furnish his tender with a certificate that he has gone through all documents, including plans, drawings etc. of this tender schedule and clauses of P1 agreement in vogue and that he has visited the works spot and satisfied himself with the local conditions, sufficiency of availability of labourers and materials visited the quarries, assessed the availability of materials, water etc. camp facilities and quoted his percentage rate for the work as whole considering the finished items in the work, to cover all contractual obligations and contingencies arising thereof.

5. AWARD OF CONTRACT

5.1 The tenderer whose tender is selected for acceptance shall within a period of seven days upon written intimation being sent to him by e-mail/ Regd. Post for acceptance of his tender, deposit the initial security deposit (including E.M.D) @ 2% (Two percent) of the accepted tender amount in shape of N.S.C./ Post Office Savings Bank Account/ Post Office Time Deposit Account/ Kisan Vikas Patra./ Bank Guarantee in favour of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** from any Nationalized Scheduled Bank in India counter guaranteed by its local Branch at Bhubaneswar/ e-Bank Guarantee executed on the National e-Governance Services Limited (NeSL) Digital Document Execution Portal towards E.M.D/Initial Security Deposit/ any other security deposit from the contractor or supplier and sign agreements in the P.W.D. Form **P_1 (Schedule XLV Form No.61**) for fulfillment of the contract in the office of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division,**

Basudevpur. This initial security deposit together with the E.M.D. and the amount withheld according to the provision of P_1 agreement shall be retained as security deposit for fulfillment of this contract. Failure to enter into the required agreement and to pay the aforementioned security deposit within the specified period shall entail forfeiture of the earnest money. No tender shall be finally accepted until the required amount of security money is deposited. The written agreement to be executed between the contractor and Government shall be the foundation of the rights of both the parties & the contract shall be deemed incomplete until the agreement has been signed first by the contractor and then the Superintending Engineer. The department will accept the initial security deposit in the accepted form prescribed in above duly pledged in favour of **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur and** no other form.

5.2. The work may be distributed among the several contractors on splitting if considered necessary due to exigency of the circumstances and the contractor will not be entitled to any profit/ compensation on this account.

5.3. In case of delay in acquisition of land no compensation will be admissible but extension of time will be granted, if applied by the contractor in prescribed form within due time to keep the contract in force.

5.4. The earnest money will be retained in case of the successful tenderer and will be dealt with as per the terms and conditions of O.P.W.D. code. The earnest money of the unsuccessful tenderer except the three lowest tenderers shall be refunded on application after the financial bid is opened and *comparative* statement prepared. The EMD given by the other two parties except one whose tender is accepted shall also be refunded within 15 days of acceptance of tender and drawl of agreement. After award of contract the EMD already transferred @1% shall be refunded to the successful bidder.

5.5. Super/Special Class contractors shall employ under him one Graduate Engineer and two Diploma holders belonging to the State of Orissa. Likewise and A' Class contractor shall employ under him one Graduate Engineer or two Diploma holders belonging to state of Odisha. The employment of such graduate Engineer and Diploma holders under the Contractor shall be full time and continuous and they shall not be superannuated, retired, dismissed or removed personnel from any State Government/Central Government Service / Public Sector Undertakings /Private companies and firm or be ineligible for appointment to Govt. service. The contractor shall pay them monthly emoluments, which shall not be less than the emoluments of the personnel of equivalent qualification employed under the State Govt. of Orissa. The Chief Engineer, Roads, Odisha may however assist the contractor with names of such unemployed Graduate Engineers and Diploma holders, if the contractor seeks for such help.

The name of such Engineering personnel appointed by the contractor who will supervise the works shall be intimated to the tender receiving authority along with each tender. Each bill of the contractor shall be accompanied by an employment roll of engineering personnel together with certificate of the Graduate Engineer or Diploma holder employed by the contractor to the effect that the work executed as per the bill has been supervised by him.

5.6. No part of the contract shall be sublet without written permission of the Engineer-in-charge or any transfer shall not be made by power of attorney authorizing others to receive payment on behalf of the contractor.

5.7 No tenderer is permitted to furnish their tender in his own manuscript paper. The tender must be furnished in the manuscript used in the Bid documents.

5.8(i) All intending tenderers are required to submit the information in the forms and Annexures appended in Chapter-III for information and instruction to tenderers (IIT). In this context, they will have to submit the necessary supporting (authentic) documents as per conditions laid down in DTCN and IIT failing which their bid shall be considered as "non-responsive" and be liable for rejection.

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

5.8(iii) 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. In that case, the L-2 bidder, if fulfils, other required criteria would be called for drawing agreement for execution of work subject to the condition that L-2 bidder negotiates at par with the rate quoted by the L-1 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.

5.8(iv) 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 Superintending Engineer to report the actual date of completion of the project as soon as possible through FAX or e-mail so that the report is received within 7 (seven) days of such completion by the concerned Superintending Engineer, Chief Engineer& the Administrative Department.

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

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

5.8(v) In case of tender accepted below schedule of rate, the tender amount excluding percentages shall be treated as sanctioned amount and allotment will be limited to that extent. Any deviation in scope of work affecting the agreement amount in such an agreement will be governed by the relevant provisions of OPWD Code.

5.8(vi) For works above values Rs 5.00 lakh in civil works and work value above Rs 1.00 lakh in electrical/PH works the J.E.s & A.E.s will be required to submit bill for each ongoing work on 20th or next working day of every month to the concerned S.E. The S.E on receipt of the bill will take steps for payment of the same by 30th or the next working day during the month. The S.E. in charge of the Division will furnish a certificate to the Chief Engineer with copy to the concerned Additional Chief Engineer that the bills for all ongoing months have been paid failing action will be initiated against the erring officer."

5.8(vii) 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 damage will be imposed.

5.8(viii) Single tender received in the 1st call shall be cancelled without opening of the bid. The acceptance of the single tender received even after retendering should have prior approval of next higher authority vide O.P.W.D. Para-3.5.18 and office memorandum No.16/W dated 01.01.2015 of works Department Govt. of Odisha.

5.8(ix) When in response to a notice calling for tenders, only a single tender is received in the first time, the tender shall be cancelled without opening of the bid and fresh tender be invited publicly. If single tender is received, even after retendering, then the approval of the next higher authority should be obtained, if the tender is otherwise in order and acceptable.

5.9 Online receipt of Tender Paper Cost through e-procurement Portal as per Works Department Office Memorandum No.07556900012016-17254/W dt.05.12.2017 communicated vide their Lr. No.07679600032015-17276/W dt.06.12.2017.

6. OBSERVATIONS OF LAWS AND LOCAL REGULATIONS ACCIDENTS AND SAFETY MEASURES:

6.1 The Contractor shall **observe all State and Local rules and regulations** so far as they are relevant in controlling the operations involved carrying out the work and indemnify the Govt. and employees of the Govt. against all suites, losses, demands, actions, judgments and cost of every kind resulting in due to the commissions and omissions of the contract and his employees in violation of the said rules and regulations.

7. Payment of the compensation under workmen's compensation act VI of 1923 to the workmen awarded by any competent court of law is the responsible of the contractor. If the contractor fails to pay the compensation to the concerned work man violating the order of the competent Court, the same will be recovered from the dues of the contractor and will be paid to the workmen.

6.3 The contractor shall have to be abided by the Labour Laws and Rules in vogue and shall provide at his own cost housing, water supply, sanitation, medical aid and other facilities to the labourers engaged in the work as required under Labour Laws and Regulations. The Contractor shall not employ labourer of minor age group. Any violation to the labour laws in vogue shall not absolve the contractor from penal action.

6.4 The contractor shall have to be abided by the safety code introduced by the Govt. of India, Ministry of works. Housing and supply in their standing order No.44150 dated 25.11.57 violation of which shall drag the contractor to the orbit of penal action.

6.5 Blasting where required shall be taken up only when proper precaution have been taken for the protection of lives and property in accordance with I.S. 4081 – 1967 safety code for blasting and related drilling operations. Only persons having license for the purpose and well conversant with the working methods and precaution measures is to be deployed in using explosives and carrying out the blasting operation. To avoid the danger of injury from flying debris, all personnel in a blasting area shall retreat to an adequate cover. While carrying out excavation, adequate precautions in accordance with I.S. 3764 – 1966, Safety code for excavation works shall be taken for the safety of workers. The contractor shall have to be abided by the rules & regulations on this score.

6.6 In case of any damage to Govt. or public property or to the property owned to any persons, firms or bodies due to negligence or any such action of the contractor resulting in damage or stoppage of work thereby, the contractor shall be liable to be penalized to the extent of the assessed value of the damage or the out turn lost. The certificate of the Engineer-in- Charge is conclusive and binding on this score.

7. CHANGE OF ADDRESS OF CONTRACTOR:

The Contractor shall inform the Engineer-in- Charge and the Department regarding change of his postal address from time to time which he has given in the tender paper and authorize any person with due intimation to the Engineer-in-charge and the Department to receive instruction or communication from the Department on his behalf if he desires , failing which the said undelivered instructions and communications published in notice board of the Engineer-in-charge shall be treated as intimation to the Contractor which is conclusive and binding on him.

8. ARCHAEOLOGICAL FINDINGS

The contractor shall deliver to the Engineer-in-charge all articles of archaeological importance as and when those are found in course of execution.

9. CONTEMPORARY CONTRACTORS

The contractor shall take into consideration the needs and requirements of the other contractors if any, working in the vicinity during the tenure of his contact and shall neither take nor cause to be taken any steps or actions that may cause disruption disturbance to their work, labour or arrangements etc. Any action by the contractor that the Engineer-in-charge in his unquestioned direction may consider as infringement of the above would be considered as a breach of contract and he may take such action against the contractor as deemed fit.

10. TAXES:

a. The percentage rate quoted by the Contractor shall be deemed to have been excluding of GST (OGST & CGST) as applicable and inclusive of other taxes e.g. income tax, labour, cess and royalties of all materials that the contractor will have to purchase for performance of this contract.

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

c. INCOME TAX:

Income Tax will be deducted from the gross amount of each bill as applicable for Individual Contractor/ Firms (Provisional or as advised by Income tax Department from time to time).

d. ROYALTY OF MATERIALS

The Orissa Minor Mineral Concession Rules 2016 has been published in the Orissa Gazette on dt.14.12.2016 revising the percentage rate of royalty of all minor minerals with effect from **15.12.2016**. Accordingly, royalty of materials and borrow earth used in the work site will be deducted from the bill of the contractor at the prevailing rate.

In case of amendment(s) to the existing provision(s) is made during the tenure of contract, the same will be applicable to the contract.

g. CESS:

1% (One Percent) of gross amount of each running bill will be recovered towards Cess under the Building & Other Construction Workers (Regulation and Employment and Conditions of Service) Act,1996, as enforced vide Government of Odisha, Labour& Employment Department Resolution No. LL-I-(iii)-25/07-12653, dated. 15.12. 2008.

11. INTEREST:

Under no circumstances interest is payable for dues of the Contractor, if any, lying unpaid or payable for the work for any reason.

12. PLANS AND DRAWINGS:

The work has to be carried out in accordance with the Odisha Detailed Standard Specification and relevant I.S. Specification pertaining to the tendered items of work and specifications and special conditions appended hereto. Drawings will be supplied to the contractor to execute the work, in general, conformity therewith. These drawings will be supplemented by such additional, general and details drawings or directions as may be considered necessary or desirable as the work progress. No claim will be entertained due to change of drawings. Where details shown on those drawings differ from the requirement of the specifications, the requirement of the specifications shall govern and the contractor shall not work without proper drawings, direction and instructions. He shall check all drawings carefully and bring to the notice of the Engineer-in-charge any error and omissions and
discovered, where upon the Engineer-in-charge shall prepare revised additional drawings and specifications as may be required. All such additional general and detailed drawings will be binding on the Contractor under the same terms and conditions as provided in clauses of P_1 agreement. The decision of the Engineer-in-charge with regards to specification is final, for which no compensation or claim will be entertained.

13. CONSTRUCTION PROGRAMME:

A. Construction programme proposed and submitted by the contractor prior to issue of work order may be approved by the Engineer-in-charge. The contractor shall arrange for additional shifts whenever necessary to suit the revised construction programme. No extra payment on this account is admissible.

B. The contractor shall sign as a token of final acceptance of the plans, sections and agreements for the work prior to take up the work for execution.

C. The date of commencement of work shall be as notified in work order.

D. On signing the agreement the site will be handed over to the contractor for execution and completion of works in all respect.

E. The contractor has to make adequate lighting arrangements for night works wherever necessary in fulfillment of the construction programme at his own cost and no extra payment on this account is admissible.

14. AVAILABILITY OF LABOUR:

Labourer required for the work may not be available to the full extent in the locality. The contractor may have to import labourer from outside. He shall arrange and regulate the labour strength according to necessity. The Department shall not entertain the claim for any idle labour. The contractor's percentage rate in the tender is deemed to have adequate coverage because of import and employment of required labourers and providing facilities and amenities to them. **No extension of time shall be allowed to the contractor for non-availability of labourer.**

15. SUSPENSION OF WORK:

The Engineer-in-charge may from time to time by written orders without in any way deviating the contract, direct the contractor to suspend the work or any part thereof at such time and the contractor shall not after receiving such written order proceed with the work or items thereof ordered to be suspended until he shall have received a written notice from the Engineer-in-charge to proceed with the work again.

Should the work be ordered to be suspended directly in the interest of safety of the work due to acts of God or major war or indirectly as a result of the contractor not complying with any of the provisions of the contract in respect of the quality of the materials, workmanship programmed of

execution, he shall not be entitled to claim any compensation for any loss he may be put to directly or indirectly for such suspension of work.

During the period of suspension of the work, the contractor shall properly protect and secure the works as necessary in the opinion of the Engineer-in-charge. No compensation shall be paid to the contractor for suspension of work on any ground and protection of executed work as directed by the Engineer-In-Charge.

16. ITEMS NOT COVERED IN THE BOQ.

The items of work not covered in the BOQ of the agreement shall be paid in the current schedule of rate of the State and those not covered by the said schedule of rate, will be paid on actual analysis on actual observation approved by competent authority prevailing during the execution of work.

8. FORCE MAJEURE:

The contractor shall take all precautions to protect the work from damages due to any cause except major natural calamity and make good to such damage, if any, at his own cost during the period of execution and till the work is taken over by the Department. No compensation will be paid to the contractor because of idle labourers and machineries due to above reason.

18. TOOLS AND PLANT:

The contractor should arrange necessary tools, plant and machineries for the efficient execution of work at his own cost and the percentage rate quoted should be inclusive of such charges. No compensation shall be paid to the contractor for idle charges of machineries deployed in the work as it is the responsibility of the contractor to deploy the machineries and plants at work at his own risk and responsibility as per requirement.

19. HAUL ROADS:

All haul roads to Borrow areas and quarries will be constructed and maintained by the contractor at his own cost. The roads so constructed shall be allowed to be used free of cost by agencies working in other reaches of the canal including Govt. Department unless otherwise restricted by the Engineer-in-charge.

20. DEPARTMENTAL SUPPLY OF MATERIALS.

In principle, no materials shall be supplied to the contractor as per the current policy of Govt. of Odisha, Vide G.O.No.48443/F dt.11.12.95 come in to force from 01.04.96. The contractor shall be responsible for procurement of all materials at his own cost and shall get it tested and approved as per relevant clauses of contract before use.

21. CONSTRUCTION SHEDS:

21.1 Temporary structures may be erected by the contractor at his expenses for storage sheds, office, residence, labour hutments etc. on the land available with the Department with the permission of the Engineer-in Charge. All preliminary works such as vats, mixing platforms etc are to be done by the contractor at his own cost.

On completion of the work these structures should be dismantled and the site to be cleared. The percentage rate to be quoted should be for the work as a whole considering finished items of works inclusive of such incidental items of works.

21.2. In the event of delay in supply of detailed structural designs for unavoidable reasons, reasonable extension of time will be granted on the request of the contractor. But no claim for monetary compensation will be entertained under any circumstances for this reason.

21.3. Any slip debris and other foreign materials deposited on the working region on account of rains, flood or any other cause prior to and during the course of execution and till the work is completely taken over the department have to be cleared by the contractor at his cost. The percentage rate

quoted by the contractor shall be inclusive of all such contingencies. If any excavated portion that could not be filled with concrete by the contractor gets filled up during the monsoon period with earth/ silt, no payment shall be made to the contractor for such removal again. The contractor will have to excavate and remove the same at his own cost.

21.4. The contractor shall not interfere with the execution of water supply or electrical arrangements or any other works entrusted to any other agency by the Department during execution of work.

21.5. It shall be the responsibility of the contractor to make such arrangements as may be required from time to time to protect men, machinery and the works against damage due to flood or any other natural calamity and the department shall not be responsible whatsoever for damage or loss on the context.

22. SITE CLEARANCE:

The entire work site or a portion thereof, as may be considered necessary for the purpose of alignment and demarcation, shall be cleared by the contractor at his own cost. The Department shall suitably demarcate the limits of the structure within which work will be carried out within the scope of the contract.

The contractor has to supply necessary labour at his own cost for fixing benchmark pillars/alignment pillars / alignment and pegs and for layout, leveling and profiling and maintaining the same until completion of the work. The contractor at his own cost will supply cement concrete pillars required for layout.

The contractor should keep him in touch with the Engineer-in-charge for smooth execution of work and arrange adequate labour depending upon the workload and working space available. No claim whatsoever for detention / idle of labour and machineries will be entertained.

23. OTHER CONTRACTORS:

Contractor's operations shall be planned to prevent water flowing from his work or finding way in to the neighboring reaches. In the event of flowing water into the neighboring reaches, the respective contractor shall be liable to pay compensation towards the expenditure incurred and loss or damage sustained by the concerned contractor(s) because of the said reasons unless they otherwise mutually settle the issue amongst themselves. If any dispute arises among the contractors on the account of such compensation, the decision of the Engineer-in-charge shall be final, conclusive and binding on the concerned contractor.

24. ORDER BOOK:

An order book with pages serially numbered issued by the Superintending Engineer shall be maintained by the Sectional Officer systematically till completion of the work and there after surrendered it to the Engineer-in-charge for record. The order book shall be available at the site during working hours for recording instructions relating to the work.

Order regarding the work as and when necessary, shall be entered in this book by the Superintending Engineer or his superiors with their dated signature in exercising the statutory power vested with them which shall be duly noted by the contractor or his authorized agent with his dated signature. The authorized field functionaries, in charge of work shall also record their observations as to defective work and such orders / observation entered in the order book, and noted by the contractor or his authorized representative shall be considered to have been duly given to the contractor. Similarly, orders entered by the Superintending Engineer and Chief Engineer shall be deemed to have been duly issued by the Engineer – in – charge of the work.

25. CLAIM BOOK:

A claim book of pages serially numbered shall be issued by the Superintending Engineer to the contractor who shall maintain it systematically and securely, and shall record in it such items as are not covered in the contract and or involves extra claim, shall be entered in this book under the dated signature of the contractor or his duly authorized agent at the end of each month.

A certificate should be furnished by the contractor along with claims. He is to certify to the effect that beyond the claims entered in the book, he has no other claims up-to-date. If in any month, there is no claim, a recorded certificate to that effect should be furnished by the contractor in the claim book. Each claim must be definite with the claimed quantity and amount as far as practicable and accurate. The claim book must be submitted regularly by the contractor to the Engineer-in-charge by the 10th day of each month for his orders. Claims not made in this manner are liable to be summarily rejected. The claim book shall be finally surrendered by the contractor to the Engineer-in-charge for record after completion of the work and before settlement of the final claim.

26. RULE TO VERBAL ORDER:

It is the contractor's responsibility to get the verbal order, instructions or directions if any given for the interest of work by the competent authorities of the Department, confirmed in writing within a week without which no cognizance will be taken of such verbal orders, instructions or directions for settlement of any claim arising thereof.

27. STATUTORY OBLIGATIONS OF THE CONTRACTOR:

27.1. The contractor shall have to arrange water required for the work at his own cost.

27.2. The contractor shall have to construct and maintain coffer dam as required for the work during execution at his own cost.

27.3. Bailing out water from foundation of structures and construction of cross bund, dewatering wherever necessary during execution of the work shall have to be done by the contractor at his own cost and no extra payment will be made on that account. The term dewatering shall mean the execution or operation of the items due to standing water as well as due to percolated water. The percentage rate of respective items of work is in inclusive of dewatering.

27.4. Gangway, scaffolding or any such arrangements required for the work are to be provided by the contractor at his own cost as per direction of the Engineer-in-charge. The Department shall have the right to inspect such arrangement made for the work and reject it partly or fully, if found defective in opinion of the Engineer-In-Charge.

27.5 Department shall not pay compensation to the contractor for the damage occurred to the materials and work entrusted to him due to natural calamities the contractual or extended period of the contract. If any damage caused due to natural calamity, the contractor shall make good the loss and damage at his own cost.

28. DEPARTMENT'S RIGHT FOR DEVIATION IN QUANTITIES:

28.1 The Engineer-in- Charge reserves right to make any increase or decrease in quantity or item of work mentioned in the schedule of quantities attached to the tender notice as may be considered necessary in his opinion for satisfactory completion of the work and such increase or decrease shall in no way invalidate / vitiate the agreed percentage rate as per the Agreement. The contractor shall not be entitled for any compensation on this account except grant of extension of time where considered necessary. The decision of the Engineer-in- Charge is final and conclusive.

28.2 No claim will be entertained regarding the extra items of work or extra quantity of any item besides estimated amount, unless written order is obtained from the Engineer-in-charge and percentage rate settled before execution of the extra items of work or extra quantity of any item of work.

29. EMERGENCY MEASURE:

The work may be distributed to other contractors on splitting if considered necessary under compelling circumstances due to exigency and the contractor will not be entitled to any compensation to this account.

30. SAFETY OF MACHINERIES:

Unusual flood may occur during the working season. In the event of overtopping or breach in the cofferdam/embankment due to such flood in the working season resulting in flooding of the working area or outside the working area, the contractor shall make his own arrangement to shift the machineries and equipments, materials etc. to a safe place at his own cost. Any damage or loss for such occurrence shall be the responsibility of the contractor and no compensation on this score is permissible.

The work shall be resumed after the floods. Necessary reconstruction of the cofferdam / embankment clearing the working area of debris and silt shall have to be done by the contractor at his own cost. Suitable extension of time may however be granted in such eventualities at the request of the contractor, but no compensation whatsoever shall be paid in this regard.

31. CONTRACTOR DYING, BECOMING INSOLVENT, INSANE OR IMPRISONED:

(a) In the event of the death, insanity, insolvency and imprisonment of the contractor or the contractor being a partnership or firm becomes dissolved or being a corporation goes into the liquidation, the contract may be terminated by notice in writing posted at the site of work and advertised in one issue of the local newspaper and all acceptable works shall be paid for after recovering all the dues payable to Govt. there from at appropriate percentage rate to the person or persons entitled to receive and given dishonor-age for the payment.

(b) If the contractor becomes bankrupt or has a receiving order made against him or compound with his creditor or being a Corporation commence to be would up not being a voluntary winding up for the purpose only an amalgamation or reconstruction or carry on its business under a receiver for the benefit of the creditors of any of them, the Department shall be at liberty.

i) To give such liquidator receiver, or other person the option of carrying out the contract subject to his providing a guarantee for the due, faithful performance of the contract up to an amount to be determined by the Department.

ii) To terminate the contract forthwith by notice in writing to the contractor or to the liquidator or receiver or to any person in whom the contract may become vested and to act in the manner as per prevalent clauses of P_1/F_2 contract.

32. REMOVAL OF CONTRACTOR'S MEN:

The contractor shall on the written direction of the Superintending Engineer immediately remove from the works any person employed thereon, who may, in the opinion of the Engineer-in-charge, be incompetent or has misconduct himself. Such person shall not be employed again on the works without the written permission of the Engineer-in-charge.

33. DETAILS TENDER CALL NOTICE BEING PART OF CONTRACT:

The **Detail Tender Call Notice and all the Annexures thereto will form the part of the agreement** when the work will be awarded to the contractor. All the correspondences made with the contractor and all his correspondences with the department after the tender is received will also be attached with the agreement.

34. FAIR WAGES CLAUSE:

34.1 The contractor should abide the fair wage clause introduced by the Govt. and shall not pay less than the fair wages fixed by the Govt. to the labourers engaged by him in the work.

34.2 In case of any complaint by the labourer about the nonpayment of his wages as per latest minimum wages Act., the Superintending Engineer will have the right to investigate and if the contractor is found to be at fault, Superintending Engineer may recover such amount due in any form from the contractor and pay such amount to the labourer directly under intimation to the local labour office of the Govt. The decision of the Superintending Engineer is final and binding on the contractor.

35. LABOUR LICENSE AND REGISTRATION:

The contractor is to furnish labour license as per the relevant labour Act and rules in force before signing the agreement, failing which execution of agreement will not be entertained.

36. PRICE PREFERENCE:

a) The concession / facilities for 10% Price Preference shall be allowed only to the individual registered contractors belonging to Schedule Caste and Schedule Tribe having Registration Certificate **up to 'B' Class**. If the tender of the individual registered contractors belonging to Schedule Caste and Schedule 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 accordance with Works Department Resolution No. 16262 dated 30.10.2018

37. QUALITY CONTROL AND TESTING:

37.1 Within the defined scope of the functions of the officer-in-charge of quality control organization working under the Chief Construction Engineer, Kanupur Irrigation Project, Basudevpur shall have the right to inspect the various items of works executed under the contract in respect of the quality and monitoring thereof. Such staff will exercise all necessary field control requirement complying to proper specification and drawing and conduct standard test on construction materials and finished products in accordance with B.I.S. codes and ASTM procedure so as to enable the Engineer-in-charge to ensure the corrective measures from the quality analysis programme and statically control analysis of the test results. Any work executed not confirming exactly, fully and faithfully to the specification and drawings and instruction in writing relating the work signed by the quality control Officer in charge and considered as unacceptable by the Engineer-in-charge shall be removed from the site and redone at the contractor's cost.

The contractor has to bear the cost of all materials required for the tests as and when required including the cost, conveyance from work site to laboratory, if any. **The testing charges will be borne by the contractor**.

9. Correction of Defects:

On receipt of notice from the Engineer-in-Charge, the contractor will rectify the defects in stipulated period at his own cost. If the defects are not rectified in the stipulated period, the Engineer-in-charge shall asses the cost, get the defect rectified and recover the cost from the dues of the contractor.

38. TESTING OF THE STRUCTURES:

During execution of work, the contractor shall arrange the requisite equipments for testing of the work at his own cost, if found necessary.

39. RESOLUTION OF DISPUTES:

a) All claims are to be settled by a Civil Court of Competent jurisdiction by way of Civil Suit.

10. The contractor shall not be entitled to invoke Civil Suit until and unless he has completed the work or until the Govt. has made alternative arrangements for completion of work in question as the case may be.

11. Non-decision of Civil Suit proceedings shall not disentitle the Government's right to terminate the contract and make alternate arrangement for completion of the work.

40. JURISDICTION OF COURT:

40.1. For the purpose of jurisdiction in the event of dispute, if any contractor should be deemed to have entered into within the State of Odisha and it is agreed that neither part to the contractor nor the agreement will be competent to bring a suit in regard to matters covered by this contract any place outside the state of Odisha.

40.2 If any further necessary information is required, the **Superintending Engineer, Kanupur Rehabilitation camps & building Division, Basudevpur** will furnish such information on written request, but it must be clearly understood that tenderer must be received in order and according to instructions / specifications appended herewith.

41. The security will be refunded after lapse of defect liability period on completion of the work in all respect provided the final bill is passed and the security deposit shall not carry any interest. Any defect noticed during the defect liability period after the actual date of completion of the work shall be rectified by the contractor at his own cost. Failure to comply such rectification, the defective work shall be rectified by the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** and cost involved thereof shall be recovered from the contractor from his dues. (Ref. works Deptt order No.17823/WE dt. 11.10.2006).

42. Earnest Money Deposit (EMD) / Bid Security will be forfeited in any of the following cases.

(a) If the bidder backs out his offer before acceptance of tender by the competent authority, as concurred by Works Deptt. OM No:- 5984 dt. 27.04.2021.

(b) In the case of a successful bidder, if the bidder fails within the specified time limit to
   (i) Furnish the required performance and additional performance security.
   (ii) Enter into the agreement

12. IIf any of the statements, documents, certificate uploaded by the bidder through e-procurement portal, is found to be false / fabricated / bogus, the bidder will be black listed in this case.

43. In case of discrepancy revealed between P_1 form and Detailed Tender Call Notice, condition in P_1 form shall prevail over the Detailed Tender Call Notice.

44. The clause of printed form of P_1 contract with latest addition/ deletion/ corrections/ substitution etc. shall also prevail

45. No claim for idle labour, machineries etc. on any amount will be entertained by the Department whatsoever the reason may be.

46. <u>UNDERTAKING FOR PAYMENT OF MINIMUM WAGES</u>

I/We do hereby undertake that I/We shall pay minimum wages to the unskilled labourers engaged by me/us for execution of the work, at the rate specified in Department of Labour and Employment, Govt. of Odisha Notification. If the minimum wages will be changed by the Government during execution of the work, I/We shall pay to the unskilled labourer and wages of different category of labour at the rate, specified in Department of Labour and Employment, Govt. of Odisha Notification.

<u>Signature of the Contractor.</u>

In case the Superintending Engineer is not satisfied that the minimum wages has not been paid to the labourers, he will have the right to deduct such amounts from the bills of the contractor and pay to the labourers.

47. EXECUTION OF QUANTITY MORE THAN 10%

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

(ii) **Schedule of quantity accompanies the tender notice**: It shall be definitely under stood that the Government do not accept any responsibility for the correctness and completeness of this schedule and this schedule is liable for alternations or omissions, deductions or additions as set forth in the condition of contract and such omissions, deductions, additions or alternations shall in no way invalidate/ vitiate the contract and no extra monetary compensation will be entertained.

48. SAMPLE OF MATERIALS.

The contractor shall supply sample of all materials fully to be used for the work before procurement for testing and acceptance as may be required by the concerned Superintending Engineer.
The transportation and cost of construction materials will be borne by the contractor.

49. PROVISION OF INCENTIVE IN EXECUTION

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 Superintending Engineer to report the actual date of completion of the project as soon as possible through FAX or e-mail so that the report is received within 7 (seven) days of such completion by the concerned Additional Chief Engineer, Chief Engineer & the Administrative Department.

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

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

The bonus/incentive should be paid in respect of individual project for new construction/ substantial additional improvement works, the minimum value of work for which the bonus /incentive applicable is given below.

Category of work	Minimum value
1. Building work/P.H. Work	Rs.40.00lakh
2.Road Work	Rs.300.00lakh
3.Irrigation work	Rs.1000.00lakh

Incentive will be paid with approval of next higher authority of tender accepting authority on completion of original work before original time schedule.

CONTRACTOR SUPERINTENDING ENGINEER

50. ELECTRICAL WORKS

The contractor will give the undertaking that he will execute the electrical works through a registered electrical license holder contractor. The attested copy of the registered electrical license and willingness of the electrical contractor who will execute the work shall be submitted by the contractor before execution of the agreement.

51. Electricity is to be arranged by the Contractor at his own cost and risk.

52. Steel volume involved in RCC works shall not be deducted from the volume of the concrete.

53. Conditional tender is not acceptable and is liable for rejection.

54. As regards to the extra items of work besides the agreement items and extra quantities of any item of work beyond the schedule of quantities, written order must be obtained from the Engineer-in-Charge before the work is taken up.

55. Dewatering from the foundation of structures when and where necessary during execution will have to be done by the contractor and no extra payment will be made on that account. The contractor's percentage rate should be including the cost of all the dewatering works as and when necessary, till the final date of completion.

The term dewatering shall mean the execution or operation of the items due to standing water as well as due to percolation water.

56. After the work is finished all surplus materials and debris's should be removed from the site of the work. Preliminary work such as vats, mixing platforms etc. shall be dismantled and all materials shall removed from the site and premises shall be made neat and clean and this is inclusive of the percentage rate quoted by him.

57. <u>GENERAL INSTRUCTIONS TO CONTRACTORS</u>

1. Any Agency or Contractor executing a work should be aware about the local festivals like Makar Sankranti, Raja Sankranti, Chaiti Parba, Danda Nata or any such festivals which may affect the work schedule, Therefore, the contractor should engage more workforces during working period available at his disposal to complete the work as per schedule.
2. In the peak summer season, working hour is curtailed by the Labour Department to avoid exposure to personnel to the scorching sun and heat. It is the duty of the agency to increase the number of workforce and to employ the existing workforce during morning and afternoon hours as per Government orders.
3. Rainfall is a normal occurrence during monsoon in Odisha. So, unless there is unusually heavy rainfall resulting in a declared calamity, the Contractor is not eligible for any extension of time. The Contractor should plan the deployment of workforce and machinery, so as to complete the work as per schedule considering ordinary vagaries of the nature.

   The same applies for borrow areas ponding also. The contractor should foresee possible ponding of borrow area in monsoon and likewise lift more quantity of soil/other materials during dry period, so as to complete the work as per schedule.

13. The Contractor should take up the work with due diligence in the acquired land without waiting for acquisition of the entire land. This should be completed in proportionally less period depending on the quantum of available work front.

5. Only the day(s) of elections to the Local Bodies / Assembly / Parliament will be treated as a non- working day (s).

CONTRACTOR SUPERINTENDING ENGINEER

58. FORMS AND ANNEXURES.

All Annexure from 'A' to 'D', Schedule-F along with checklist attached to IIT must be filled up properly and submit along with the authenticated documentary evidence required therein failing which the bids shall be treated as 'non-responsive' and be liable for rejection. In case of submission of bids through e- procurement portal, the bidder shall upload the scanned copy / copies of above documents as required under Clause 4 of IIT (Chapter-III) and Clause 4.3 of DTCN (Chapter-II).

59. The joint venture is not allowed for this bid.

CHAPTER – III

INFORMATION AND INSTRUCTION TO TENDERERS (IIT)

INFORMATION & INSTRUCTIONS TO TENDERER (IIT)

- Bidder should do the registration in the tender site using the option available.
- Then the Digital Signature registration to be done with the e-token of SIFY/nCode/TCS after logging into the site.
- Bidder may go through the tenders published in the site and download the required documents/tender schedules for the tenders he is interested.
- Bidder then login to the site through the secured log in by giving the user id/password chosen during registration & then the password of the e-token.
- Bidder should go through the tender schedules carefully and submit the documents as asked; otherwise, the bid will be rejected.
- If there are any clarifications, this may be obtained through the site, phone, e-mail or during the pre-bid meeting. Bidder should take into account of the corrigendum (s) published before submitting the bids online.
- Bidder in advance gets ready the bid documents to be submitted as indicated in the tender schedule and they should be in PDF format.
- Bidder selects the tender which he is interested in through search option & then moves it to the my favorites folder.
- From the favourites folder, he selects the tender to view all the details indicated.
- The bidder should read the terms & conditions and accepts the same to proceed further to submit the bids.
- The details of the required documents/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the bid submitted will not be acceptable.
- The bidder has to enter the password of the e-token and the required bid documents have to be uploaded one by one as indicated.
- The percentage rate offered have to be entered separately in a spread sheet file (xls) in the space allotted and should be updated as BOQ.xls file for each tender after the financial bid.
- The tendering system will give a successful bid updating message & then a bid summary will be shown with the bid no.& the date & time of submission of the bid with all other relevant details.
- The bid summary has to be printed and kept as an acknowledgement as a token of the submission of the bid.
- The bid summary will act as a proof of bid submission for a tender floated and will also act as an entry point to participate in the bid opening date.
- For any clarifications with the TIA, the bid no. can be used as a reference.
- Bidder should log into the site well in advance for bid submission so that he submits the bid in time i.e. on or before the bid submission time. If there is any delay, due to other issues, bidder only is responsible.

- Each document to be uploaded through' online for the tenders should be less than 2 MB. If any document is more than 2MB, it can be reduced through' zip and the same can be uploaded. However of the file size is less than 1 MB the transaction uploading time will be very fast.

- Only one e-token should be used for a bidder and should not be misused by others

- Bidder should get ready with the EMD as specified in the tender. The original should be posted/couriered/given in person to the Tender Inviting Authority, within the bid submission date for the tender. DELETED

- The time settings fixed in the server side & displayed at the top of the tender site, will be valid for all actions of requesting, bid submission, bid opening etc., in the e-tender system. The bidders should follow this time during bid submission

2. Method of submission of Tender Documents

2.1 If the intending tenderer is an individual, the documents shall be signed by the individual above with his full type written name and current address.

2.2 If the intending tender is a proprietary firm, it shall be signed by the proprietor above his full name and with his current address.

14. If the intending tenderer is a firm in partnership it shall be signed by a partner holding the power of attorney for the firm in partnership in which case a certified copy of power of attorney shall accompany in the technical documents.

15. If the intending tenderer is a limited company or Corporation, it shall be signed by a duly authorized person holding the power of attorney in which case certified copy of power of attorney shall accompany.

2.5 The tenderer has to quote percentage rate up to two places of decimal. The entry beyond this will not be considered.

2.6 All witness and sureties shall be of person of status and probity and their full names, occupation and address shall be stated below their signatures.

2.7 The agency will install display board mentioning information about the work at worksite after drawal of the agreement at his cost.

3. Opening of Tender Documents.
The Bid will be opened on **dt. 02.11.2026 at 11.00 hrs.** in the office of the **Superinteding Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur, Keonjhar**. In the presence of the tenderers or their authorized representatives who wish to be present. The bidder can also watch it on online in the address given in tender call notice. Date & time of opening of Financial Bid will be intimated later on to the successful bidders.

4. **Eligibility criteria:-** to qualify for award of contract each bidder in its name should have **valid R.C (Registration certificate), valid Active GSTIN, PAN card, Affidavit regarding authenticity of bid (Annexure-A), Litigation debarring expelling of tendered (Annexure-B), No Relation Certificate (Annexure-C), Labour undertaking (Annexure-D), Affidavit (Schedule-F) and acknowledgements / receipts, paper cost etc** which are mandatory.

CONTRACTOR SUPERINTENDING ENGINEER

5. **Final Decision making authority**
The competent authority reserves the right to accept or reject or disqualify any of the tender of pre qualification without assigning any reasons thereof and its decision shall be final.

6. **Further Clarification**
The **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** may be contacted during office hours on any working days for any further clarification. The bidder can also seek clarification through the portal within 7 days from start of the sale of bid documents. The officer inviting the tender will respond for the queries' raised by the bidder through the same portal.

7. **Sample of all material:** The contractor shall supply sample of all materials fully before procurement for the work for testing and acceptance as may be required by the concerned Superintending Engineer.

8. **Trial Boring:** The foundation level as indicated in the body of the departmental drawing is purely tentative and for the general guidance only. The Department has no responsibility for the suitability of actual strata at the foundation level. The contractor has to conduct his own boring before starting the work and get the samples tested at his own cost to ascertain the S.B.C. and credibility of the strata at founding level. While quoting his percentage rate for tender the contractor shall take in to account of the above aspects.

9. From the commencement to the completion of the work, the contractor is responsible to make good all injuries, damages and repairs occasioned or rendered necessary to the same by fire or other causes and he holds the Govt. of Odisha harmless for any claims for injuries to person or structural damage to property happening from any neglect, default, want of proper care or misconduct on the part of the contractor or any one in his employers during the execution of the work. In addition, no claim shall be entertained for loss due to earth quake, flood, cyclone, epidemic, riot or any other calamity whether natural or incidental. Damages so caused will have to be made good by the contractor at his own cost.

10. Where it will be found necessary by the Department, the Officer-in-Charge of the work shall issue an order book to the contractor to be kept at the site of the work with pages serially numbered. Orders regarding the work whenever necessary are to be entered in his book by the Officer(s)-in-Charge of the work with their dated signatures and noted by the contractor or his authorized agents with their dated signature. Orders entered in his book and noted by the contractor's agent shall be considered to have been duly given to the contractor to follow it with strict adherence. The order book shall be the property of the Department and shall not be removed from the site of work without written permission of the Engineer (Superintending Engineer) and to be submitted to the Engineer-in-Charge every month.

11. The tenderer should conduct three bores at each pier and SBC of soil at foundation level and abutments location and furnish the test results in conformity with IRC code at his own cost before execution of the work and percentage rate quoted by the contractor should be inclusive of such bores and SBC tests etc without any extra cost to the Department.

12. In case of submission of bids through e-procurement portal, the bidder shall upload the scanned copy/ copies of document as required vide clause No.**1.4, 4.3, 58** of DTCN & clause **4** of IIT (Chapter-III). The online bidders shall have to produce the original documents in support of scanned copies and statements uploaded in the portal to the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** after opening of bid.

13. (a) **Memorandum of Government of Odisha, Works Department, Bhubaneswar issued vide Letter No 7885Dated 23.07.2013 consists of the procedural requirement of e-procurement which shall be made part of the Detailed Tender Call Notice or Instruction to Bidder for all 'works' tenders hoisted in the portal.**

(i) The e-Procurement portal of the Government of Odisha is "https://tendersodisha.gov.in".

(ii) 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.

(iii) 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.

(iv) For all purpose, the server time displayed in the e-procurement portal shall be the time to be followed by all the users.

(v) Government after careful consideration has 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 hosting 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.

(vi) 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.

(vii) 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.

(viii) Contractors 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.

(ix) For the role management "Department "is the Administrative Department, Organization or wing is the Chief Engineer or highest tender accepting authority or equivalent officer, Division is the Superintending Engineer or equivalent Officer and Sub-Division is the Assistant Engineer or equivalent Officer.

(x) 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.

13(b). Application Administrator (NIC and State Procurement Cell)

i. Master Management.
ii. Nodal Officer Creation
iii. Report Generation
iv. Transfer of Officer's login ID
v. Blocking and unblocking of officer's and bidder's login ID

13I Nodal Officer (At 39rganization 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 and unblocking of officer's login ID

13(d) 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.

13I 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

13(f) Procurement Officer- Opener: (Generally Sub- ordinate Officer to Officer inviting Tender)

7. Opening of Bid

13(g) Procurement Officer- Evaluator (Generally Sub-ordinate officer to Officer inviting Tender)

8. Evaluating Bid

13(h) Procurement Officer- Auditor (Procurement Officer, Publisher and / or Accounts Officer/Finance Officer)

9. To take up auditing.

14. NOTICE INVITING BID (NIB) OR INVITATION FOR BID(IFB):

14.1 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.

14.2 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:

(i) Name of the Work:-

(ii) Estimated Cost: Rs.

(iii) Period of completion

(iv) Date & Time of availability of bid document in the portal

(v) Last date/ time for receipt of bids in the portal

(vi) Name and address of the O.I.T.

Further details can be seen from the e- procurement portal "https://tendersodisha.gov.in"

14.3 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 Tenders". The Bidders/ Guest users can download the Bid documents only after 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".

15 ISSUE OF ADDENDA/ CORRIGENDA/ CANCELLATION NOTICE:

15.1 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

15.2 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.

16 CREATION AND PUBLISHING OF BID:

16.1 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.

16.2 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

16.3 Procurement Officer Administrator creates under by filling up the following forms.

i. BASIC DETAILS

ii. COVER CONTENT: The procurement officer Administrator should briefly describe the name and type 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, GSTN, PAN, Contractor RC	Pdf
		Affidavits, undertakings and any other documents as per SBD/DTCN	Pdf
		BoQ	Xls

CONTRACTOR SUPERINTENDING ENGINEER

b. For Two Cover/ Packet:

Sl No	Cover Type	Document Description	Type
1	Fee/Prequal/Technical	Tender cost, EMD, GSTN,, PAN, Contractor RC	Pdf
		Affidavits, undertakings and any other documents 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. WORKITEM DETAILS

v. FEE DETAILS : The Procurement Officer Administrator should mention the cost of tender paper and EMD amount as laid down DTCN/ SBD.

vi. CRITICAL DATES: The Procurement Officer Administrator should mention the critical dates of tender such as publishing date, document download start date and end date, seek clarification start date and end date (optional), bid submission start date and 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 organization.

17. PARTICIPATION IN BID:

17.1 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 & (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.

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

17.1.2. 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.

17.2. 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 the 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.

17.3 DOWNLOADING OF BID:

The bidder can download the tender of his choice and save it in his system, undertake the necessary preparatory work offline and upload the completed tender at his convenience before the closing date and time of submission.

17.4 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.

17.5 PREPARATION OF BID:

17.5.1. 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 take out 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.

17.5.2. 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, Bid Security, Declaration form, Price bid etc. and store in the system.

17.6. PAYMENT OF EMD / BID SECURITY AND COST OF BID DOCUMENTS;

17.6.1 The Bidder shall furnish, as part of his Bid, a Bid security for the amount mentioned under DTCN in online mode. Non-submission of bid security within the designated period shall debar the bidder from participating in the on-line bidding system.

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

The success full bidder is to furnish Initial Security Deposit (ISD) (2% of the bid value) 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. The ISD in the form of FD / TD shall be from a Nationalized Bank valid for a period of 45 days beyond the validity of the Bid.

17.6.3 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 L-1 bidder.

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

17.6.6 Government of Odisha has introduced e-payment gateway in to the portal for payment of cost of Bid and Bid Security/ Earnest Money Deposit. The process of using e-payment gateway is mentioned in the works department Office memorandum No.07556900012016- 17254 /W, dated, 05.12.2017

10. SUBMISSION OF BID:

18.1 The bidder shall carefully go through the tender and prepare the required documents. The Bid generally consist of cost of Bid documents, EMD/Bid Security, GSTIN, PAN, Registration Certificate, Affidavits, Profit Loss statement, Joint venture Agreement, List of similar nature 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.

18.2 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.

18.3. 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 Bid.

18.4. 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.

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

18.5.1 Bids can not be submitted after due date and time. The bids once submitted cannot 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 cannot be opened even by the OIT or the Procurement Officer-Publisher / Opener before the due date and time of opening.

18.5.2 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.

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

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

18.5.5 The Bidder should check the system generated confirmation statement on the status of the submission.

18.5.6 The Bidder should upload sufficiently ahead of the bid closure time to avoid traffic rush and failure in the net work.

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

18.5.8 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 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.

18.5.9 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.

18.6 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 registration in the portal shall be blocked and the bidder is liable to be blacklisted.

11. SECURITY OF BID SUBMISSION:

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

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

20. RESUBMISSION AND WITHDRAWAL OF BIDS:

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

20.2 Resubmission of bid shall require uploading of all documents including price bid afresh.

20.3 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.

20.4 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.

20.5 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.

21.OPENING OF BID:

21.1 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.

21.2 All bid openers have to log-on to the portal to decrypt the bid submitted by the bidders.

21.3. 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.

21.4 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.

21.5 Combined bid security for more than one work is not acceptable.

21.6 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.

21.7 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.

22. EVALUATION OF BIDS:

22.1 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".

22.2 The bidder may be asked in writing/online(in their registered e-mail ids) to clarify on the uploaded documents provided in the Bid, if necessary, with respect to any doubts or eligible documents. The Officer inviting Tender may asked for any other document of historical nature during bid Evaluation of the tender. Provided in all such cases, furnishing of any documents 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.

22.3 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.

22.4 The Evaluation of all bids shall be carried out as per information furnished by Bidders.

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

22.6 The bids of the 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 bids.

12. The Bid will be opened on the notified date and time in the presence of bidders or their authorized representative who wish to be present.

22.6.2 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.

22.6.3 The Procurement Officer-openers shall sign on each page of the downloaded BoQ and the comparative statement and furnish a certificate to that respect.

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

22.6.5 System provides an option to Procurement Officer – publisher for reconsidering the rejected bid with the approval of concerned Chief Engineer/ Head of Department.

23. NEGOTIATION OF BIDS:

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

24. NOTIFICATION OF AWARD AND SIGNING OF AGREEMENT:

24.1 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 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 furnished. The issue of the letter of Acceptance shall be treated as closure of the Bid process and commencement of the contract.

24.2 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 up load the summary and declare the process as complete.

24.3 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. In case a contractor is black listed, it will be widely publicized and intimated to all departments of Government and also to Govt. of India agencies working in the state.

25. BLOCKING OF PORTAL REGISTRATION:

25.1 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.

25.2 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.

25.3 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 (Technical)for

blocking of portal registration within 10 days of intimation to the defaulting bidder regarding his unsatisfactory reply with intimation to Registering Authority and concerned Chief Engineer/ Heads of Office, if any, of the following provisions are violated.

25:3:1 Fails to furnish original technical/financial (Tender Paper Cost, BID Security Declaration) documents before the designated officer within the stipulated date and time.

25:3:2 Backs out from the bid on any day after the last date of receipt of tender till expiry of the bid validity period.

25.3.3 Fails to execute the agreement within the stipulated date.

25.3.4 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 (Technical), State Procurement Cell, Odisha for blocking of portal registration of bidder and simultaneously action shall also the initiated OFFICER INVITING TENDER for blacklisting as per Appendix-XXXIV of OPWD Code, Volume-II.**

26. <u>GUIDE LINES FOR UNBLOCKING OF PORTAL REGISTRATION</u>:

26.1. 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**
Senior Manager(Finance), SPC	**-**	**Member**
Officer Inviting Tender	**-**	**Member**
Chief Manager(Technical),SPC	**-**	**Convener**

26.2. The Chief Manager (Technical), 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 and shall consider the recommendation of the officer inviting tender for unblocking of portal registration. The quorum of the meetings will be four.

26.3 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.10,000.00(Rupees ten thousand) only (Nonrefundable) under the head of accounts '0059 –Works' as processing fees. The officer inviting tender shall forward the application filed by the contractor to the Chief Manager (Technical), State Procurement Cell.

26.4 On receipt of recommendation from the concerned Chief Engineer along with the copy of challanas mentioned above, the Chief Manager (Technical)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 recommended for unblocking of the portal registration of said contractor if the Committee is satisfied that the fault committed by contractor is either unintentional or done for the first time.

26.5 After Scrutiny by the State Procurement Cell it is found that the portal registration of a contractor has been blocked for the 2nd time the Chief Manager (Technical), 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 and if considered proper he may report to the Chief Manager (Technical), 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 committee 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.

CONTRACTOR SUPERINTENDING ENGINEER

FORM – A

STRUCTURE AND ORGANISATION

Name of Tenderer. ……

Nationality of Tenderer. ……

Office Address. ……

Telegraphic Address ……

Telephone No : ……

Mobile No : ……

Telex Number ……

Location of establishment ……

The tenderer is

1. An individual
2. A proprietary firm.
3. A limited company or limited corporation
4. A member of a group of companies (If yes, give names, address and present description of other companies.)
5. A subsidiary of large organization
   (If yes, give names, address of the present organization)

13. if the company is subsidiary, state what involvement if any, will the parent company have in the project.

    Attach the organization chart showing the structure of the organization including the names of the Directors position of officer.

14. Number of year of experience

a. As a prime contractor
   - I. In own country
   - II. Other country (specify country)

b. In a Joint venture
   - I In own country
   - II Other country (specify country)

8. Name of the address of any associates the tenderer has in India who are knowledgeable in the procedure of customs, immigration takes and other information necessary to do work.
9. How many years has your organization been in business under your present name? Add what were your fields were and when you established your organization. When did you add new field (if any)?
10. Were you ever required for suspending construction for a period of more than six months continuously after you started? If so, give the names of project and reason of failure.
11. Have you ever not completed any work awarded to you? If so give name of project and reasons for not completing the work.

13 In how many projects were imposed penalties for delay? Please give details.

13. In which fields of Civil Engineering construction do you claim specialization and Interest.
14. Give details of your experience in modern concreting / Earth work and quality control.

15 Give details of your material testing laboratory.

Signature of tenderer

FORM-B

RESOURCES PERSONNEL

Details of key Technical and Administrative personnel who could be assigned to the work be mentioned in the following proforma.

A Details of the Board of Directors.

1. Name of the Director.

2. Organization

3. Address

4. Remarks

B. Key Technical and Administrative personnel

1. Individual Name

5. Qualification

6. Present position of Office

7. Professional experience and details of works

8. Years with the tenderer

9. Languages known

10. Remarks

Signature of Tenderer

ANNEXURE – "A"

AFFIDAVIT

I, Sri…… Aged ……years Son/ Daughter/ Wife of Sri…… at present residing At…… P.O…… P.S…… Dist…… Pin…… Do here by solemnly affirm as follows.

11. That, I / We possess a valid license for execution of works contract issued by *…… …… belongs to……Class & is valid up to * *……

ii) I am submitting tenders before the **Superintending Engineer, Kanupur Rehabilitation camps & Building Division, Basudevpur** for execution of following works in response to Invitation For Bid (IFB) Identification No. **SE, KRC & BD-24/ 2026-27**

1. …… * * *

2. ……

Etc.

12. I am the authorized signatory on behalf of contractor for the tender for the work / works mentioned above.

13. I am swearing this affidavit that all tender documents and accompanying papers those being submitted by me before the **Superintending Engineer, Kanupur Rehabilitation camps & Building Division, Basudevpur** are all authentic and bonafied documents in the eyes of the law of the land.

That the facts stated in the affidavit are true to the best of my knowledge and belief.

Signature of Contractor /
Authorized Signatory

Note:

*Mention the license issuing authority.

* *Mention the date up to which the license is valid

* * *Mention name of works for which tender is being submitted.

ANNEXURE – "B"

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

1.	a)	Is the tenderer at current involved in any litigation relating to the works	Yes/No
	b)	If yes : give details :	Yes/No
2.	a)	Has the tenderer or any of its Constituent partners been debarred/ Expelled by any agency in India During the last three years.	Yes./No
3.	a)	Has the tenderer or any of its Constituent partners failed to Perform on any contract work in India during the last three years.	Yes/No

14. If yes, give details:

Note

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

Note: Strike out/Cross out the incorrect option against each point otherwise it will be considered non-responsive.

Signature of tenderer

CONTRACTOR SUPERINTENDING ENGINEER

ANNEXURE-"C"

No Relationship Certificate

I/We hereby certify that I/We am / are not related to any officer of the Water Resources Department in the rank of Asst. Engineer and above and any officer of the rank of Deputy Secretary and above.

Signature of Contractor

Address _____

_____

Date: _____

List of Relatives of the tenderer serving in Water Resources Department.

Sl No	Name of the Relatives	Rank	Place of present posting with Office / Division of the Department.
1	2	3	4
1. 2. 3. 4.			

Signature of Contractor

(Vide Para – 7 of Appendix P – 33 of P.W.D. Code Vol. II)

CONTRACTOR SUPERINTENDING ENGINEER

ANNEXURE-"D"

UNDER TAKING BY THE CONTRACTOR

I do here by undertake that, I will pay the minimum prevailing wages and other allowances (VDA) as fixed by Government of Odisha from time to time per day to the labourers engaged by me.

Contractor

CONTRACTOR SUPERINTENDING ENGINEER

SCHEDULE-F

AFFIDAVIT

I Sri/Smt._____, aged about_____,C/o_____, at present residing At-_____, Po.: _____, P.S.: _____, Dist-_____, Odisha, Pin-_____, do hereby solemnly affirm as follows.

1. The undersigned do hereby certify that all the statements made in the required attachments are true and correct.

2. The undersigned also hereby certifies that neither our firm M/s _____ nor any of its constituent partners have abandoned any road/bridge/ Irrigation/Building or other project work in India nor any contract awarded to us for such works have been rescinded during the last five years prior to the date of this bid.

3. The undersigned hereby authorized and request (s) any bank, person, firm or corporation to furnish pertinent information as deemed necessary and as requested by the Department to verify this statement or regarding my (our) competency and general reputation.

4. The undersigned understands and agrees that further qualifying information may be requested and agree to furnish any such information at the request of Department.

Signature of Contractor /
Authorized Signatory

CHECK LIST
SUBMITTED OR NOT

1.	Form A Structure and Organization	Yes/No
2.	Form B Resources / Personnel	Yes/No
3.	Annexure-A (Affidavit regarding authenticity of bid)	Yes/No
4.	Annexure-B	Yes/No
5.	Annexure-C (No Relationship Certificate)	Yes/No
6.	Annexure-D (Labour Undertaking)	Yes/No
7.	Schedule-F (Affidavit)	Yes/No
8.	Documentary evidence in support of statement under clause-4 of IIT (Chapter-III)	Yes/No
9.	Certified copy of power of attorney in case of partnership firm, limited or Corporation attached.	Yes/No

Note: Strike out/ Cross out the incorrect option against each point otherwise it will be considered non-responsive.

CONTRACTOR SUPERINTENDING ENGINEER

CHAPTER-IV

PERCENTAGE RATE TENDER

AND

CONTRACT FOR WORKS

CONTRACTOR SUPERINTENDING ENGINEER

ORISSA PUBLIC WORKS DEPARTMENT

(FORM P_1)

Percentage Rate Tender and Contract for works

General Rules and Directions for the Guidance of Contractor.

1. The work proposed for execution by contract will be notified in a form of invitation to tender posted through the Govt. web-site "https://tendersodisha.gov.in."

This notice will state the work to be carried out, the items and rates and approximate quantities thereof as well as the date for submitting and opening tenders also the amount of earnest money to be deposited and the amount of the security deposit to be deposited by the successful tenderer and the percentage if any, to be deducted from bills. Copies of the specification, designs, and drawings and any other documents required in connection with the submission of tender signed for the purpose of identification by the Sub-divisional Officer / Superintending Engineer shall also be open for inspection by the contractor at the office of the Sub-divisional Officer/ Superintending Engineer during office hours.

2. In the event of the tender being submitted by a firm it must be signed separately by each member thereof, or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so.

3. Receipts for payments made on account of work, when executed by a firm, must also be signed by the several partners, except where the contractors are described in their tender as a firm in which case the receipt must be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipts for the firm.

4. The memorandum of work tendered for and the memorandum of materials to be supplied by the Public Works Department and their issue rates shall be filled in and completed in the office of the Sub-divisional Officer / Superintending Engineer before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in, he shall request the office to have this done before he completes and delivers his tender.

5. The amount of earnest money and security money to be deposited shall confirm to the following.

(a) All the contractors for the purpose of participation in tender have to deposit 1% of Bid amount as earnest money at the time of submission of tender and another 1% of the Bid amount at the time of drawal of agreement as initial security deposit.

(b) Besides earnest money and initial security deposit, contractors of Super, Special, A & B class will be required to furnish security deposit by way of deduction from their bills at the rate of 5% of the gross amount of each bill where as in case of C & D class contractors such deductions will be made at the rate of 3% of the gross amount of each bill. Thus the total security deposit from the contractors will be 7% for Super, Special, A & B class and 5% for C & D class contractors.

(c) The earnest money and initial security deposit will be made as per rules mentioned earlier in DTCN.

6. Any person who submits a tender shall fill up the usual printed form/ tender document downloaded from the website through e-procurement portal stating at what percentage rate he is willing to undertake the work. Incomplete tender and tenders which propose any alternation in the work specified in the said form of invitation to tender, or which contain any other conditions of any sort, or omit to note the time within which the work can be furnished or which are not accompanied by the required earnest money will be liable to rejection. No single tender shall include more than one work. But contractors who wish to tender for two or more works shall submit a separate tender for each. Tender shall bear the name of the work to which they refer written outside the envelope.

7. The Engineer or his duly authorized assistant will open the tenders in the presence of any intending contractors who may be present at the time and will enter the amounts of the several tenders in a

comparative statement in a suitable form. In the event of a tender being rejected, the earnest money forwarded therewith shall there upon be returned to the tenderer with a refund order for the amount of the earnest money.

8. The Engineer shall have the right of rejecting all or any of the tenders.

9. In the event of a tender being selected for acceptance the Engineer who opened the tenders will, if he is competent to accept the tender, inform the tenderer of the selected tender who shall there upon sign copies of the specification and other document mentioned in rules 1 and 4 for the purpose of identification and for his acceptance with tender. The tenderer of the selected tender shall also deposit the required amount of the security money within the prescribed time. If the tenderer fails to deposit the required amount of the security money within the prescribed time, the Engineer may reject the tender.

If the Engineer is not competent to accept the tender himself, he will forward the tender with the specification and other documents signed by the tenderer for acceptance to the Engineer competent to accept the same. In case he rejects the tender the security money deposited shall be refunded to tenderer.

10. When a tender is selected for acceptance the tenderer shall deposit the required amount of the security money and no tender shall be finally accepted until the required amount of the security money has been deposited.

11. The amount of security money to be deposited by the tenderer whose tender is selected for acceptance shall be **2** percent of the bid value of the work and towards this amount, the earnest money already deposited by him shall be credited, failing which tender shall be liable for rejection.

12. When tender has been selected for acceptance and the required amount of the security money has been deposited the Engineer shall scrutinize all pages of the form of item, rate, tender and contract for works to see that the form has been properly filled up and signed by the contractor and the signature witnessed. He shall then, if he is competent to accept the tender, sign the acceptance of the tender or if he is not so competent, shall send the form for signature of the acceptance to the officer competent to accept it.

13.(i) A separate and specific bank account may be opened to keep the security deposits deducted from the running bills in any Nationalized Bank only in the name of the concerned Superintending Engineer of the Division/ FA & CAO, but not in personal name.

(ii) The security amount so deposited should be withdrawn from the same account after completion of the defect liability period of the concerned work and after the work is found defect free in all respects.

14. All tenderers are required to submit a list of works, which are in hand at the time of submitting their tenders. The list of works are required to be submitted in the proforma by the Superintending Engineer under whom he has executed the work in order to judge their past performance (vide Works Department Circular No. 15443 dt. 01.08.2005.)

15. The earnest money deposited is liable to be forfeited to Govt. if the tenderer backs out from the offer before acceptance of the tender by the competent authority.

16. T.D.S (Tax Deducted at Source) towards GST (OGST and CGST) as applicable will be deducted at the rate prescribed in the GST acts as applicable & as amended from time to time. The Cess will be deducted @ 1% under the Building & Other Construction Workers (Regulation and Employment and Conditions of Service) Act,1996, as enforced vide Govt of Orissa, Labour & Employment Department Resolution No. LL-I-(iii)-25/07- 12653, dt. 15.12.2008.

17. The contractor has to mention percentage excess or less over the estimated (in figures as well as words) in prescribed format of the Bill of Quantity (BOQ) appended to the tender document.

18. Only percentage quoted shall be considered. Percentage quoted by the contractor should be accurately filled-in figures and words, so that there is no discrepancy.

(a) If any discrepancy is found in the percentage quoted in words and figures, then the percentage quoted by the contractor in words shall be taken as correct.

(b) The contractor will write percentage excess / less up to two decimal points only.

(c) The tender shall be written legibly and free from erasures, over writings or corrections of figures. Corrections, over writings and interpolations, where unavoidable, shall be made by making out, initiating, dating and rewriting.

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

CONTRACTOR SUPERINTENDING ENGINEER

TENDER FOR WORKS

I/We hereby tender for the execution for the Governor of Odisha of the work specified in the under written memorandum at the percentage rate specified therein within a period of **01 (One)** months from the date of written order to commence and complete in all respect with the specifications, designs, drawings and other documents referred to in rule-1 there of and subject to the annexed conditions of contract and with such material as are provided for by and in all other respects in accordance with such conditions so far as applicable.

MEMORANDUM

a)	If several sub works are included they should be detailed in a separate list.	a)	Name of work :	**"Sinking 03 nos. 125/100 mm dia Tube Well through DTH rig at Kalhahundula Cluster for the DPs of village Murusuan of KIP".**
		b)	Name of the Contractor :	
		c).i ii.	Amount put to tender : Agreement Amount :	**Rs.4.98 Lakhs**
		d)	Earnest money deposit :	**Rs.5,000.00 (To be transferred online)**
e)	The deposit will be 2% of the bid value of the work	e) i)	Initial Security deposit (including earnest money) to be deposited before the commencement of the work: Additional Performance Security :	2% of accepted amount
f)	This percentage deduction from bills will be credited to the contractor's security deposit	f)	Percentage to be deducted from bills :	**3%**
		g)	Time required for the work from date of written order to commence :	**01 (One)** Calendar Months
		h) i	Date of written order to commence :	
		ii.	Stipulated date of completion:	
i)	Total number of items of work tendered for :			**Refer- BOQ attached**

CONTRACTOR SUPERINTENDING ENGINEER

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

Dated the ……..day of ……

Signature of the Contractor

Signature of the Contractor before submission of tender

Witness:
Address:

Signature of one witness to Tenderer's signature

Occupation:

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

Dated the ……day of ……

Signature of the Officer
by whom accepted

CONDITIONS OF CONTRACT.

Compensation for delay.

Clause 1. All compensation or other sums of money payable by the contractor to Govt. under the terms of his contract may be deducted from or paid by sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due or may become due to the contractor by Govt. on any account whatsoever and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid the contractor shall within ten days thereafter make good in cash or Government securities endorsed as aforesaid any sum or sums which may have been deducted from, or raised by, sale of the security deposit or any part thereof.

Clause 2 (a) The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date of which the written order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be carried on with all due diligence (time being deemed to be of the essence of the contract on the part of the contractor) and the contractor shall pay as compensation an amount ½ percent on the amount of the estimated cost if the whole work as shown by the tender for every day that the work remains un-commenced, or unfinished after the proper dates and further, to ensure good progress during the execution of the work the contractor shall be bound, in all cases in which the time allowed for any work exceeds one month, to complete one-fourth of the whole of the work before one fourth of the whole time allowed under the contract has elapsed one-half of the work, before one-half of such time has elapsed, and three-fourth of the work, before three-fourth of such time has elapsed, in the events of the contractor failing to comply with the conditions he shall be liable to pay as compensation, an amount equal to one third percent of the said estimated cost of the whole work for every day that the due quantity of work remains incomplete. Provided always that the entire amount of compensation to be paid under the provisions of this clause shall not exceed 10 percent on the estimated cost of the work as shown in the tender.

Action when whole security deposit is forfeited.

Clause 2 (b) If there are possibilities of exceeding this compensation amount as mentioned in clause (A) 10 percent of the estimated cost or in any case in which under any clause or clauses of this contract the contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit in the hands of Govt. (whether paid in one sum or deducted by installments) the Superintending Engineer on behalf of the Governor of Orissa shall have power to adopt any of the following courses, as he may deemed best suited to the interest of Govt.

i) To rescind the contract (of which rescission notice in writing to the contractor under the hand of the Superintending Engineer shall be Conclusive evidence) and 20% of the value of left over work will be realized from the contractor as penalty.

ii) To employ labour paid by the Public works department and to supply materials to carry out the work, or any part of the work, debiting the contractor with the cost of the labour and the price of the materials (of the amount of which cost & price certificate of the

CONTRACTOR SUPERINTENDING ENGINEER

Superintending Engineer shall be final and conclusive against the contractor) and crediting him with the value of the work done, in all respects in the same manner and at the same percentage rate as if it had been carried out by the contractor under the terms of his contract the certificate of the Superintending Engineer as to the value of the work done shall be final and conclusive against the contractor.

iii)To measure up the work of the contractor, and to take such part of the work of the contract as shall be unexecuted out of his hands and to give it to another contractor to complete, in which case any expenses which may be incurred in excess of the sum which would have been paid to the original contractor if the whole work had been executed by him (of the amount of which excess the certificate in writing of the Superintending Engineer shall .be final and conclusive) shall be borne and paid by the original contractor and may be deducted from any money due to him by Govt. under the contract or otherwise, or from his security deposit or the proceeds of sale thereof, or a sufficient part thereof.

In the event of any of the above courses being adopted by the Superintending Engineer, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchase or procured any materials or entered into any engagements or made any advance an account of or with a view to the execution of the work or the performance of the contract and in case the contract shall be rescind under the provision aforesaid the contractor shall not be entitled to recover or be paid any sum for any work there to force actually preformed under this contractor unless and until the Superintending Engineer shall have certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

iv) Security deposit of the contractor shall be refunded **only 01 (One) year** after the date of completion of the work provided the final bill has been paid and defects if any rectified.

Clause 3. In any case in which any of the powers, conferred upon the Superintending Engineer by clause 2 hereof shall have become exercisable and the same shall not be exercised the nonexercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall not withstanding be exercisable in the event of any future case default by the contractor of which by any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected in the event of the Superintending Engineer putting in force the powers vested in him under the preceding clause he may if he so desire, take possession of all or any tools, plants materials and stores, in or upon the works or the site thereof or belonging to the contractor or procured by him and intended to be used for the execution of the work or any part thereof paying or allowing for the same in the account as the contract percentage rate, or in case of these not being applicable at current market percentage rate to be certified by the Superintending Engineer whose certificate thereof shall be final otherwise the Superintending Engineer may be notice in writing to the contractor or

Contractor remains liable to pay compensation if action not taken under Clause - 6

Power to take possession of or require removal of or sell contractor plants.

his clerk of the works, foreman or other authorized agents require him to remove such tools plants, materials or stores from the premises (within a time to be specified in such notice) and in the event of the contractor failing to comply with the such requisition the Superintending Engineer may remove them at the Contractor's expenses or sell them by auction or private sale on account of the contractor and at his risk in all respect, and the certificate of the Superintending Engineer as to the expenses of any such removal and the amount of proceeds and expenses of any such sale shall be final and conclusive against the contractor.

Clause 4. If the contractor shall desire an extension of the time for completion of the work, on the ground of his having been unavoidably hindered in its execution or any other ground, he shall apply in writing to the Superintending Engineer within 30 days of the date of the hindrance on account of which he desires such extensions as aforesaid and the Superintending Engineer shall if in his opinion (which shall be final) reasonable grounds be shown therefore, authorize such extension of time, if any, as may in his opinion, be necessary or proper. The Superintending Engineer shall at the same time inform the contractor whether he claims compensation for delay. Extension of time

Clause 5. On completion of the work the contractor shall be furnished with a certificate by the Superintending Engineer (herein after called the Engineer-in-charge) of such completion but no such certificate be given nor shall the work be considered to be complete until the contractor shall have removed from the area of the premises (to be distinctly marked by the Superintending Engineer in the site plan) on which the work shall be executed, all scaffolding, surplus materials, and rubbish and cleared off the dirt from all wood works doors windows, walls, floors or other parts or any building in, upon or about which the work is to be executed or of which he may have had possession for the purpose of the execution thereof, nor until the work shall have been measured by the officer of the Public Works department in accordance with the rules of the department whose measurements shall be binding and conclusive against the contractor. If the contractor shall fail to comply with the requirements of this clause as to removal of scaffolding surplus materials and rubbish and cleaning off dirt on or before the date fixed for the work the Engineer-in-charge may at the expenses of the contractor remove such scaffoldings, materials and rubbish and dispose of the same as he thinks fit and clean of such dirt as aforesaid and the contractor shall forthwith pay the amount of all expenses incurred and shall have no claim in respect of any such scaffolding of surplus materials as aforesaid except for any sum actually realized by the sale thereof. Final Certificate.

Sub-Clause 5. If in the opinion of the Engineer-In-Charge, which shall be final & binding on the contractor, occupation or utilization of a portion of the work completed no way interferes with progress of the work the same may be occupied or utilized by on behalf of the Government under the written order of the Engineer-In-Charge and get the defects, if any rectified by the contractor at his own cost within six months from the date of completion of the whole work provided that the Contractor will not be allowed any concession either

in the shape of extension of stipulated period or any other monetary compensation on account of such occupation or use.

Clause 6. 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 or his subordinate shall take the requite measurement for the purpose having the same verified and the claim 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 or his subordinate shall measure up the said work in the presence of the contractor whose countersignature to the measurement list will be sufficient warrant and the Engineer-in-charge or his subordinate shall be binding on the contractor in all respects.

Payment on intermediate to be regarded as advances and bill to be submitted monthly.

Provided that, if any balance of 5% security is outstanding from each such payment shall be deducted so much, not exceeding 5% as may be necessary to make up the balance of the security. All such intermediate payments to the contractor shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed and shall not preclude the requiring of bad, unsound the imperfect or unskillful work to be removed and taken away and reconstructed or re-erected or to be considered as an admission of due performance of the contract or any part thereof in any respect or the accrual of any claim nor shall it conclude determine or effect in any way the powers of the Engineer-in-charge under these conditions or any of them as to the final settlement or adjustment of the accounts or otherwise or in any other way very or affect the contract.

Clause 7. The final bill shall be prepared by the officers of the Public Works Department in accordance with the rules of the department in the presence of the contractor within one month of the date fixed for completion of the work.

Clause 8. Deleted

Clause 8 (a) Deleted

Clause 8 (b) Deleted

Clause 9. The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner and both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly full and faithfully to designs, drawings and instructions in writing relating to the work signed by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitled to have access at such office for the purpose of inspection during office hour and the contractor shall if he so require be entitled at his own expense to make or cause to be made copies of the specifications and of all such design, drawings and instruction as aforesaid.

Work to be executed in accordance with specification, drawing and order

Sub-clause -9 The work should be done strictly in accordance with the relevant specifications of the ISI Codes. If the work is not covered by the specification of ISI it should be done in accordance with the provision in the Detailed standard specifications (O.D.S.S.). In case, the work is not covered by O.D.S.S. the work should be executed as per the instruction of the Engineer-in-charge.

Clause 10. The Engineer-in-charge shall have power to make any alternation in or additions to the original specification, drawings, designs, and instructions that may appear to him necessary and advisable during the progress of work and the contractor shall be bound to carry out the work in accordance with any instructions which may be given to him in writing singed by the Engineer-in-charge and such alternation shall not invalidate the contract and any additional work which the contractor may be directed to do in the manner above specified as part of the work shall be carried out by the contractor on the same conditions in all respect on which he agreed to do the main work and at the same rate as are specified in the tender for the main work. The time for the completion of the work shall be extended in the production that the additional work differs to the original contract work and the certificate of the Engineer-in-charge shall be conclusive as to such proportion. And if the additional work includes any class work for which no rate is specified in this contract then such class of work shall be carried out at the rate entered in the sanctioned schedule of rate of the locality during the period when the work is being carried on and if such last mentioned class of work is not entered on the schedule of rate of the district then the contractor shall within seven days of date of his receipt of the order to carry out the work inform the Engineer-in-charge of the rate which it is his intention to charge for such class of work and if the Engineer-in-charge does not agree to this rate he shall by notice in writing be at liberty to cancel

Alternation in specification and designs

Do not invalidate contracts

Extension of time in consequence of alternations.

his order to carry out such class of work and arrange to carry it out in such manner as he may consider advisable.

No deviations from the specification stipulated in the contractor additional items of work shall ordinarily be carried out by the contractor nor shall any altered additional or substituted work be carried out by him unless the rate of the substituted altered or additional items have been approved and fixed in writing by the Engineer-in-charge. The contractor shall be bound to submit his claim for any additional work done during the month on or before the 15th day of the following month accompanied by a copy of the order in writing of the Engineer-in-charge for the additional work and that the contractor shall not be entitled to any payment in respect of such additional work if he fails to submit his claim within the aforesaid period.

Rate of works not in estimate of schedule or rate of the district.

Provided always that if the contractor shall commence work or incur any expenditure in regard thereof before the rate shall have been determined as lastly herein before mentioned in such case he shall only be entitled to be paid in respect of the work carried out or expenditure incurred by him prior to the date of the determination of the rate as aforesaid according to such rate as shall be fixed by the Engineer-in-charge. In the event of a dispute the decision of the Superintending Engineer of the Circle will be final.

Clause 11. If at any time after the commencement of the work the Govt. or Orissa shall for any reason whatsoever nor 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 the 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 alteration having made in the original specifications, drawings, designs and instruction which shall involve any curtailment of the work as originally contemplated.

No compensation or alteration in or restriction of work to be carried out.

Clause 12. If it shall appear to the Engineer-in-charge or his subordinate-in-charge of the worm, that any work has been executed with unsound, imperfect unskillful workmanship or with materials of any inferior description, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or otherwise not in accordance with the contract, the contractor shall on demand in writing from the Engineer-in-charge specifying the work materials or articles complained of not withstanding that the same may have been inadvertently passed certified and paid for forth with rectify or remove and reconstruct the work so specified in whole or in part as the case may require or as the case may be remove the materials or articles at his own proper charge and cost and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in his demand aforesaid then the contractor shall be liable to pay compensation at the rate of one

Action and compensation payable in case of bad work

percent on the amount of the estimate for every day not exceeding ten days while his failure to do so shall continue and in the case of any such continue and in the case of any such failure the Engineer-in-charge may rectify or remove and execute the work or remove and replace with others the materials or articles complained of as the case may be at the risk and expense in all respect of the contractor.

Clause 13. All work under or in course of execution or executed in pursuance of the contract shall at all time be open to the inspection and supervision of the Engineer-in-charge and his subordinates and the contractor shall at all times during the usual working hours and at all other times at which reasonable notice of the intension of the Engineer-in-charge or his subordinate to visit the works shall have been given to the contractor either himself be present to received orders and instructions, or have a responsible agent duly accredited in writing present for that purposes. Orders given to the contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

Work to be open for inspection.

Contractor or responsible Agents to be present.

Clause 14. The contractor shall give not less five days notice in writing to the Engineer-in-charge or his subordinate in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is so covered up or placed beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his subordinate in charge of the work and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained the same shall be uncovered at the contractor's expense or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Notice to be given before work is covered up.

Clause 15. If the contractor or his work people or servants shall break defect injure or destroy any part of building in which they may be working or any building road, fence, enclosure or grass land or cultivated ground contiguous to the premises on which the work or any part of it is being executed or if any damage shall happen to the work while in progress from any clause whatever or any imperfection became apparent in it within six months from the date of final certificate of its completion shall have been given by the Engineer-in-charge as completion shall have been given by the Engineer-in-charge as aforesaid, the contractor shall make the same to be made good by other workmen and deduct the expense (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 deposit or the proceeds of sale thereof, or of a sufficient portion thereof and the contractor shall be liable to pay any part of the expenses not so recovered by the Engineer-in-charge.

Contractor liable for damage done and for 6 months from date of final certificate of its completion.

Clause 16. The contractor shall supply at his own cost all materials (except such special materials if any as may in accordance with the

contract be supplied from the Engineer-in-charge's stores) plant, tools, appliances, implements ladders, cordage, tackle scaffolding and temporary works requisite or proper for the proper execution of the work, whether original altered or substituted and whether included in the specification or other documents forming part of the contractor or referred to in the conditions or not or which may be necessary for the purpose of satisfying or complying with the requirement of the Engineer-in-charge as any matter as to which under this conditions entitled to be satisfied, which he is entitled to require together with carriage therefore to & from the work. The contractor shall also supply without charge the requisite no of persons with the means & materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurement or examination at any time and form time to time of the work or materials. Failing his so doing the same may be provided by the Engineer-In-Charge at the expense of the contractor also provide all necessary fencing and light required to protect the public from accident and shall be bound to under the contract, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The contractor shall bear the expenses of defense every suit action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit action proceedings to any such person or which may with the consent of the contractor be paid to compromise any claim by any such person.

Contractor to supply plants, ladders, scaffolding etc.

And is liable for damages arising from non-provision of lights fencing etc.

Clause – 17 No female labour shall be employed within the limits of a cantonment. The contractor shall not employ for the purpose of this contract any labour below the age of twelve year, and shall pay to each labourer; for the work done by such labour, wages not less than the wage paid for similar work in the neighborhood.

Explanation : Fair wages means wages whether for time or piece work prescribed by State P.W.D. provided that where higher percentage rate have been prescribed under the minimum wages Act 1948 wages at such higher percentage rate would constitute "Fair wages" [W/D No.22059 dated 16.8.77.

The Superintending Engineer shall have the right to enquire into and decide any complaints 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 neighborhood.

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

Clause – 17 (a) The contractor shall, if so required by the Engineer-in-charge employ one more Engineering Graduate or Diploma holder as apprentices at his own cost if the cost of work as shown in the tender exceeds Rs.2,50,000/- The apprentices will be selected by the Chief Engineer. The period of employment will commence within one month after the date of work order and would last till the date when 90% of work is completed. The stipend to be paid to the apprentices, should not be less than Rs.200/- per day in case of graduate Engineers and not less than Rs.150/- per day in case of Diploma holders. The number of apprentices to be employed should be fixed by the Chief Engineer in a manner so that total expenditure does not exceed 1% of the tender cost of the work.

Clause – 17 (b) Super/Special class Contractor shall employ under him one Graduate Engineer and Two Diploma Holders belonging to the State of Orissa. Like wise 'A' class contractor shall employ under him one Graduate Engineer or Two Diploma holders under the contractor shall be full time & continuous and they should not be superannuated, retired, dismissed or removed personnel from any State Govt. or Central Govt. service/public Sector undertakings, private companies and firms or be ineligible for appointment to Government service. The contractor shall pay them monthly emoluments which shall not be less than the emoluments of the personnel of equivalent qualification employed under the State Government of Orissa. The Chief Engineer, Roads Orissa may however, assist the contractor with names of such unemployed Graduate Engineer and Diploma holders if such help is sought for by the contractor. The names of such Engineering personnel appointed by the contractor should be intimated to the tender receiving authority along with the tender.

Employment of Graduate Engineers & Diploma Holders

Each bill of the / **A class /Special Class contractor** shall be accompanied by an employment Roll of the Engineering personnel together with a certificate of the Graduate Engineer or Diploma holder employed by the contractor to the effect that the work executed as per the bill has been supervised by him.

Clause 18. The contractor shall not be assigned or sublet without the written approval of the Superintending Engineer. And if the contractors shall assign or sublet his contract or attempt so to do or become insolvent or commence any insolvency proceedings, or make any composition with his creditor or attempt so to do or if any bribe gratuity, gift, loan perquisite reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given promised or offered by the contractor or any of his servants or agents to any public officer or person in the employ of Govt. in any way relating to his office employment or if any such officer on person shall become in any way directly or indirectly interested in the contract, the Superintending engineer may thereupon by notice in writing to rescind the contract and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of Government and the same consequences shall ensure as if the contract has been rescind under clause 3 thereof and in addition the contractor

Work not to be sublet without written permission from Engineer-in-Charge.

Contract may be rescinded and any security deposit forfeited for subletting bribing or if contractor becomes in solvent

shall not be entitled to recover or be paid for any work there to for actually performed under the contract.

Clause 19. All sums payable by way of compensation under any of the conditions shall be considered as reasonable compensation to be applied to the use of Govt. without reference to the actual loss or damages sustained, and whether or not any damage shall have been sustained.

The sum payable by way of compensation to be considered as reasonable without reference to actual loss.

Clause 20. In the case of a tender by partners any change in the constitution of the firm shall be forth-with notified by the contractor to the Engineer-in-charge for his information.

Change in constitution of firm

In case of failure to notify the change in the constitution within fifteen day the Engineer-in-charge may by notice in writing rescind the contracts and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of Govt. and the same consequences shall ensure as if the contract had been rescinded under clause 3 thereof and in addition the contractor shall not be entitled to recover or be paid for any works therefore actually performed under the contract.

Clause 21. All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Superintending Engineer of the circle for the time being who shall be entitled to direct at what point or points and in what manner they are to be commenced and from time to time carried on.

Clause 22. Deleted

Clause 23. When the estimate on which a tender is made includes lump sumps in respect of parts of the work the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same percentage rate as are payable under this contract for such items, or if the part of the work in question is not in the opinion of the Engineer-in-charge capable of measurement the Engineer-in-charge may by his discretion pay the lump sum amounts entered in the estimate and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of this clause.

Lump sums in the estimate.

Clause 24. In the case of any class of work for which there is no such specification as is mentioned in rule. I, such work shall be carried out in accordance with the circle specification and in the event of the there being no circle specification then in such case the work shall be carried out in all respects in accordance with the instruction and requirements of the Engineer-in-charge.

Action where no specification.

Clause 25. The expression "works " or "work" where used in these conditions shall unless there be something either in the subject or context repugnant to such construction be construed and taken to mean the 'works' by or by virtue of the contract contracted to be

Definition of works

executed whether temporary or permanent and whether original altered substituted or additional

Clause 26. Government shall be entitled to recover in full from the contractor any amount that the Govt. may be liable to pay under Workmen's Compensation Act VIII of 1923 to any workmen employed in course of execution of any part of the work covered by these contract.

Clause 27. That 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 the contract or agreement will be competent to bring a suit in regard to the matters covered by this contract at any place outside the State of Orissa.

Clause 28. The department will have the right to inspect the scaffolding and centering made for the work and can reject partly or fully such structure if found defective in their opinion.

Clause 29. The contractor at his own cost for his labour camp will make sanitary arrangements.

Clause 30. The contractor shall bear all taxes including sales tax, income tax, royalty fair-weather charges and tollage where necessary.

Clause 31. Price Escalation (AS per Works Dpt. Let No15847/W dated 19.11.2019)
Contract price shall be adjusted for increase or decrease in rates and price of labour, cement, steel, bitumen, pipes, POL & other materials component in accordance with the following principles and procedure as per formula given below.

31.1 : 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 date 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.

CONTRACTOR SUPERINTENDING ENGINEER

31.2: 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:-

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

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

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

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

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

	Price adjustment for increase or decrease in the cost of Steel, procured by the contractor shall be paid in accordance with the following formula:
V_S =	0.85 x Ps/100 x R x (S1-S0)/S0
V_S =	Increase or decrease in the cost of work during the month under consideration due to changes in 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 Seel Component of the work

31(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 x P_b/100 x R x (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 IOC / 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 IOC / BPCL depot at nearest center for the 15th day of the month under consideration.
P_b =	Percentage of Bitumen Component of the work

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

	Price adjustment for increase or decrease in the cost of Pipe shall be paid in accordance with the following formula:
V_{pi} =	$0.85 \times P_{pi} /100 \times R \times (P_{i1}-P_{i0})/P_{i0}$
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 wholesale 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 wholesale 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.

31(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 the Government of Odisha as prevailed on the last stipulated date ofreceipt 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

31(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 IOC / BPCL/ HPCL at nearest center on the day28 days prior to the date of opening of Bids.

F1 =	The official retail price of (HSD) at the existing consumer pumps of IOC / BPCL/ HPCL at nearest center for the 15th day of the month under consideration.
Pf =	Percentage of fuel and lubricants component of the work

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

31(d): Adjustment for Plant and Machinery Spares component

	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.
P0 =	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
P1 =	The all India wholesale price index for manufacture of machinery for mining, quarrying and construction for the moth under consideration as published by the Ministry of Commerce and Industry, Government of India, New Delhi
Pp =	Percentage of Plant and machinery spares component of the work

Note: For the application of this clause, index of manufacturing of machinery for mining, quarrying and construction has been chosen to represent 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 & parts	Construction Machinery	Manufacture of machinery for mining, quarrying & construction

31(e): APPLICATION OF ESCALATION CLAUSE.

The Contractor shall for the purpose of availing re-imbursement/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 alternation in the price of such material, wages of labour and /or price of P.O.L. 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)	POL (P_f)	Steel (P_s)+Cement (P_c) +Bitumen (P_b)+ Pipes (p_p) +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 work	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 n "Appendix to Bid".(enclosed herewith).

CONTRACTOR SUPERINTENDING ENGINEER

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}

Name of the Work - **"Sinking 03 nos. 125/100 mm dia Tube Well through DTH rig at Kalhahundula Cluster for the DPs of village Murusuan of KIP".**

Cl.No.-31 of P1 contracts Sl. No.	Index description	Source of Index	Base value*	Base Date*	Weightage of Item**
31(a)(i)	Other Materials	All India whole sale price index (all commodities) as published by the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			
31(a)(ii)	Cement	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	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			5.00%
31 (c)	POL	Official retail price of HSD at nearest IOCL/GPCL/BPCL Consumer pump depot.			5.00%
31(d)	Plant and Machinery	Whole sale price index for Manufacture of Machinery for Mining, Quarrying and Construction as published by the office of the Economic Advisor to the Govt. of India, Ministry of Commerce and Industry.			-
			Total		100%

Clause 32. After the work is finished all surplus materials and debris are to be removed by the contractor and preliminary works such as vats, mixing platforms, etc are to be dismantled and all materials removed from site. The ground up to 100'-0" wide from the building should be cleared and dressed.

FAIR WAGE CLAUSE

Clause 33. (a). The contractor shall not employ for the purpose of this contract any person who is below the age of twelve years and shall pay to each labour for work done by such laborers fair wages.

Explanation : 'Fair Wage' means wages, whether for time of piece work prescribed by the State Public Works Department provided that where higher percentage rate have been prescribed under the minimum wages Act 1948 wages at such higher percentage rate should constitute fair wages.

The Superintending Engineer shall have the right to enquire into and decide any complain alleging that the wages paid by the contractor to any laborer for the work done by such labor is less than the wages as per sub-paragraph (1) above.

(b) The contractor shall, not withstanding the provision 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 contractors 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 deduction from wages recovery of wages not paid and deduction unauthorized 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 matters of alike nature.

(d) The Superintending Engineer or Sub-Divisional Officer concerned shall have the right to deduct, from the money due to the contractor, any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non fulfillment of the conditions of the contract for the benefit of the workers non payment of wages or of adductions 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-a-Vis, the Govt. 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 deemed to be a part of this contract and any branch thereof shall be branch of this contract.

Odisha P.W.D. / Electricity Department
Contractor's Labour Regulations

1. Short title - These regulations may be called "The Orissa Public Works Department / Electricity Department Contractor's Regulation."

2. Definitions - in these Regulations, unless otherwise expressed or indicated the following words and expressions shall have the meaning hereby assigned to them respectively, that is to say-

1) **"Labour,"** mean workers employed by a contractor of the Orissa Public Works Department/Electricity Department directly or indirectly through a sub-contractor or other persons or by an agent on his behalf.

2) **"Fair Wages"** means wages whether for time or piece work prescribed by the State Public Works Department provided that where higher percentage ratehave been prescribed under the minimum wages Act, 1948 wages at such higher percentage rate should constitute fair wages.

3) **"Contractor"** shall include every person whether a sub-contractor or headman or agent employing labour on the work taken on contract.

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

3. Display of notice 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 wages prescribed by the State Public Works Department / Electricity Department for the district which the work is done.

b) Send a copy of such notice to the Engineer-in-charge of the work.

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.

5. Fixation of wage period:

i. The contractor shall fix the wage period in respect of which the wages be payable.
ii. No wage period shall exceed one month.
iii. 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.
iv. 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 of which his employment is terminated.
v. All payments of wages shall be made on working days.

6. Wage book and wage 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.

CONTRACTOR SUPERINTENDING ENGINEER

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 Superintending Engineer may grant an extension from the maintenance of wage bond, wage cards to a contractor, who in his opinion may not directly or indirectly employ more than 100 persons on the work.

7. Fines and deduction, which may be made from wages -

1) The wages of a worker shall be paid to him without any deduction of any kind except the following –

a) Fines:

b) Deductions for absence from duty, i.e. from the place or places where by 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 absent.

c) Deductions for damage to or loss of goods 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 Orissa Government may allow from time to time

2. 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 any opportunity of showing cause against such fines or deduction.

3. 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 paisa in a rupee of the wages payable to him in respect of that wage period.

4. No fine imposed on any worker shall be recovered from his by installments or after the expiry or 60 days from the date on which it was imposed.

8. Register of fines etc:

1. The contractor shall maintain a register of fines and of all deductions for damage or loss such register shall mention the reason for which fine was imposed or deductions for damage or loss was made.

2. The contractor shall maintain a list in English and in the local Indian language, clearly defining acts and commissions for which penalty of fine can be imposed it shall display such list and maintain it in clean and legible condition in conspicuous places on the work.

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 months after date of the last entry made in them.

10. Power of Labour Welfare Officers to make investigation or enquiry:

The Labour Welfare Officers or any other persons authorized by the Govt. of Orissa 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 by the contractor, sub-contractor in regard to such provisions.

11. Report of Labour Welfare Officers:

The Labour Welfare Officer or others authorized as aforesaid shall submit report of the results of his investigation or inquiry to the Superintending Engineer concerned, indicating the extent if any to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other due be paid to the labourers concerned.

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 Superintending Engineer concerned by subject to such appeal the decision of the officer shall be final and binding upon the contractor.

13. Inspection of registers:

The contractor shall 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 Commission or any other person authorized by the Govt. of Odisha on his behalf.

14. Submission of return:

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

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 Commission or any other person authorized by the Govt. of Orissa in that behalf shall be final.

Clause 34. The term and condition of the agreements have been read/ explained to me and certified that I have clearly understand them.

WITNESS **CONTRACTOR**

ADDENDUM TO CONDITION OF CONTRACT

2. TIME CONTROL.

2.1 Progress of work and re-scheduling programme.

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

2.1.2 Within 15 days of issue of the letter of acceptance, the contractor shall submit to the Engineer-in-charge for approval and programme commensurate to clause no 2 showing the general methods, arrangements, and timing for all the activities in the works along with monthly cash flow forecast.

2.1.3. To ensure good progress during the execution of the work the contractors shall be bound in all cases in which the time allowed for any work exceeds one month to complete, 1/4th of the whole of the work before 1/4th of the whole time allowed under the contract has elapsed, ½ of the whole of the work before ½ of the whole time allowed under the contract has elapsed, 3/4th of the whole of the work before 3/4th of the whole time allowed under the contract has elapsed.

2.1.4 If at any time it should appear to the Engineer-in-charge that the actual progress of the works 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 hold the amount of 1% of the contract value from the next payment certificate and continue to withhold this amount until the next payment after the date on which the over dues programme has been submitted.

2.1.5 An update of the programme shall be a programme showing the act all progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.

2.1.6 The Engineer-in-charge's approval of the programme shall not after the contractor's obligations. The contractor may revise the programme submit it to the Engineer-in-charge again at any time. A revised programme is to show the effect of variations and compensation events.

2.2. Extension of the Completion date.

2.2.1 The time allowed for execution of the work as specified in 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 issue 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 and performance guarantee/security deposit absolutely.

2.2.2 As soon as possible after the contract is concluded the contractor shall submit a time and progress chart for each milestone and get it approved by the Department. The chart shall be prepared in direct relation to the time stated in the contract documents for completion of items of the works, it shall indicates the forecast of the dates of commencement and completion of various trades of section of the work and may be amended as necessary by agreement between the Engineer-in-charge and the Contractor within the limitation of time imposed in the contract documents, and further to ensure good progress during the execution of the work the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for

special jobs for which a separate programme has been agreed upon) complete the work as per milestone given in contract data.

2.2.3 In case of delay occurred due to any of the reasons mentioned below, the contractor shall immediately give notice therefore in writing to the Engineer-in-charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-charge to proceed with the works.

i. Force major, or
ii. Abnormally bad weather or –
iii) Serous loss or damage by fire, or
iv) Civil commotion, local commotion of workmen, strike or lockout, officers any of the heads employed on the work or
v) Delay on the part of other contractors or tradesmen engaged by Engineer-in-charge, in executing work not forming part of the contract.
vi) In case of variation is issued which makes it impossible for completion to be achieved by the intended completion date without the contractor taking steps to accelerate the remaining work and which would cause the contractor to incur additional cost or
vii) Any other cause, which, in the absolute discretion of the authority mentioned, in contract date is beyond the contractor's control.

2.2.4 Request for re-schedule and extension of time to be eligible for consideration shall be made by the contractor in writing within fourteen days of the happening of the event causing delay. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.

2.2.5 In any such case a fair and reasonable extension of time for completion of work may be given. Such extension shall be communicated to the contractor by the Engineer-in-charge in writing. Within 3 months of the date of receipt of such request, Non application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-charge and this shall be binding on the contractor.

2.3 Compensation for delay.

2.3.1 If the contractor fails to maintain the required progress in terms of clause 2 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 percentage rate stipulated below as the Superintending Engineer (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every complied day /month (as applicable) that the progress remains below that specified in clause 2 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 computed 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 item 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 particulars milestone mentioned in contract date, 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 contract. 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 such milestone missed subsequently also shall be withheld. However no interest whatsoever, shall be payable on such withheld amount.

2.4 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 Superintending Engineer to report the actual date of completion of the project as soon as possible through FAX or e-mail so that the report is received within 7 (seven) days of such completion by the concerned Additional Chief Engineer, Chief Engineer & the Administrative Department.

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

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

The Bonus / Incentive should be paid in respect of individual project for new construction / substantial additional improvement works, the minimum value for which the Bonus / Incentive applicable is given below.

Name of work	**Minimum Value**
1. Building work / P.H. Work	Rs. 40.00 Lakhs
2. Road Work	Rs. 300.00 Lakhs
3. Irrigation works	Rs. 1000.00 Lakhs

Incentive will be paid with approval of next higher authority of tender accepting authority on completion of original work before original time schedule.

2.5 Management of Meetings.

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

2.5.2 The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the employer. The responsibility of the parties for actions to be taken is 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.

NOTE: The Existing relevant provisions in this contract shall stand modified accordingly.

CHAPTER IV
SPECIAL CONDITIONS

CONTRACTOR SUPERINTENDING ENGINEER

SPECIAL CONDITIONS

1. The contractor is to supply labour for giving section and profiles. All materials necessary for such work will be supplied by the Contractor at his own cost and responsibility and profiles are to be maintained till the work is completed.

2. During excavation of foundation, shoring, shuttering including cost, carriage of materials including all taxes is to be borne by the contractor. Only the designed sectional quantity will be paid. Dewatering from the foundation trenches including and running charges of pump and coffer dam if required will be borne by the contractor.

3. It must be definitely understood that the Government do not accept any responsibility for the correctness and completeness of the trial borings shown in the cross sections.

4. Cement shall be used confirming to relevant IS code and weight of one bag of cement being taken as 50Kg or weight of one cubic metre of cement to be taken as 14.30 quintal.

5. Excavated materials and debris unused in the area are to be removed from the site by the contractor at his own cost and responsibility as per the direction of Engineer-in-charge.

6. All measurement for earthwork excavation will be taken by section measurement. The tenderer is to sign the longitudinal section and cross section of existing ground level before starting execution of the work. Final levels will be taken after completion of the work in all respects.

7. The contractor is entitled to be paid only at the percentage rate quoted by him and entertained in the Agreement. If the contractor is required to do any ancillary work for doing the main work as per the contact, will be entirely to his account and nothing extra over and above the agreement rate will be paid.

8. No claim whatsoever on account of interest will be entertained under any circumstances.

9. The work will be executed as per approved drawing, design and B.I.S. specification and as per the instruction of Engineer-in-charge.

10. Construction and maintenance of water supply system including of pipeline and procuring and erecting pumps water tank if necessary shall be done by the contractor at his own cost. If pumps and pipes are available the same will be given on hire or sale basis.

11. The detail specification enclosed with the tender papers for different item of work should be strictly adhered to in course of execution of work.

12. Electricity is not available at site of work. If the contractor intends to use electricity the same can be given to the contractor at his own request and water supply can be provided if the contractor bears the water installation and service connection charge. Unit of power supply shall be recovered from the contractor's bill at the prevailing tariff of NESCO.

13. The Contractor will remain responsible to arrange all mechanical means whenever required to complete the work in time at his own cost.

14. Unutilized Metal, Chips, Sand and stones outside the specific alignment will not be taken into consideration for measurement.

CONTRACTOR SUPERINTENDING ENGINEER

15. Any damage caused to the work due to any cause except major natural calamity whatsoever during the execution will be made good by the contractor until it is handed over to the Department in complete shape. As a matter of abundant pre-caution and to protect the interest of Government, the contractor is required to take insurance cover on the following events which are due to contractor's risk (a) loss or damage to the works, plant, materials (b) loss or damage to equipments (c) loss or damage to property & (d) personnel injury and death.

16. The quantities provided in the tender schedule are tentative which is likely to vary during execution as directed by the Engineer-in- charge. Before starting the work, the initial levels will be taken for his acceptance.

17. Borrowing earth for the Embankment is the responsibility of the Contractor. The type of soil to be used in the embankment is to be got approved by the Engineer-in- Charge before use.

18. If use of explosives is necessary for the purpose of blasting of rock required at any stage of the execution, the contractor is to obtain necessary area license from the appropriate authorities and procure the explosives and store them at his own responsibility and arrange in the work sites. The procurement and storage of the explosives is the sole responsibility of the contractor he shall abide by all the laws of explosive act.

19. The approach road to work site will be maintained by the contractor.

20. If departmental land is available the contractor will be allowed to use the same for accommodation of his labourers, stores and machineries free of rent. If department land is not available the contractor will made his own arrangement to land at his own cost.

21. The tenderer should obtain equipment for the work. However, some equipment if available in the department will be given on hire and condition to be fixed by the Engineer-in-charge. Time for charging of cost of hire will be reckoned from the date on which equipment will be handed over to the contractor to the date of its return to the department after the work is completed or the contract is rescinded, or when the contractor is not required the same finally. The daily hire charges of the machineries will be realized from the contractor's bill on the basis of each day the machines will be under his custody. The contractor will return the equipment in perfect running condition as it was at the time of issue. While the departmental machineries given on hire are with the contractor, compensation towards any loss or damage of the same shall be paid by the contractor to make good the loss or damage. The amount of compensation will be decided by the Engineer-in – charge. The contractor shall not remove the equipment from the site while the same is in his custody. If any equipment or any part thereof is required to be sent out from the site for repair or otherwise, written permission from the Engineer-in-charge shall be taken. The contractor should maintain repair, overhaul and the equipment with due diligence and care. Proper grades of fuel, oil and lubricants should be used. Only good and genuine parts should be used. The equipment shall be made available for inspection by the Engineer-in-charge or other competent authority. If the equipments are not maintained, repaired or used properly, the contractor is liable to pay compensation to the department towards the damage caused to the equipment for improper use. The Amount of compensation shall be assessed by the Engineer-in-charge which will be final. The equipment shall be handed over initially as they are. It will be the responsibility of the contractor to get the machine actually commissioned and used in the work.

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

23. The period of completion is fixed and can not be altered except in case of exceptional circumstances with due approval of next higher authority.

24. Royalty, DMF, EMF & Additional charges for stone products, sand and Borrow earth are to be recovered from the contractor's bill as follows:-

i) Royalty for Stone products @ **Rs.130.00** per cum.
ii) Royalty for Sand/ Borrow area earth/ Moorum @ **Rs.35.00** Per cum
iii) Additional charges for sand @ **Rs.70.00** per cum
iv) Additional charges for stone products @ **Rs.260.00** per cum
v) EMF **@5%** of Royalty
vi) DMF @ **10%** of Royalty

Statutory increase in the rate of royalty, if any, shall be reimbursed. On the other hand, the same shall be recovered if there is any decrease in rate.

25. The rates of cement and steel have been adopted as per market rate in preparation of the estimate. The rates of the other materials have been adopted as per current schedule of rate for preparing the estimate under this bid. The minimum prevailing labour rates of the state has been adopted in framing the estimate.

Material	Basic Rate:-
Cement	**Rs. 593.22** per qntl.
Steel	**Rs.** per MT.

26. After use of cement in the work, the cost of empty gunny/HDPE bags will be recovered **@4.00**/bag from the contractor, if the same are not returned by him to the Department.(The above rate may vary as per govt. order from time to time)

27. The Joint venture is not allowed for this bid.

28. Refund of Security Deposits made by way of Deduction / withholding payment from work bills through works expenditure Module of iOTMS (As per Finance Department Order No.FIN-WM-LC-0034/2011-68(5) Dated 01.01.2013).

i) The Security Deposits to be recovered on or after 01.01.2013 should be entered in the iOTMS incorporating the details.

ii) Before allowing refund the Divisional Officers / FA & CAOs are to obtain approval of the Head of the Department concerned.

iii) After obtaining approval of the Head of the Department, the Divisional Officers/ FA & CAOs are to issue cheque against the amount approved for repayment from the balance available in the Deposit Register and enter the particular of the cheque and the Deposit appearing in Deposit Register in IOTMS.

29. Testing of reinforcement bar and concrete works.

(i) If, in the opinion of the Engineer-in-Charge of the work (**Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur)** or any other authorities, such as **Chief Construction Engineer, Kanupur Irr. Project, Basudevpur, Keonjhar** the reinforcement bars to be used in the work requires testing in order to confirm its technical specification, the same shall be tested either in the Department laboratory or in any other authorized laboratory as referred by the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** at the cost of the contractor. The contractor shall bear all the cost towards supply of required samples,

transportation and testing. The decision of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** on this aspect is final and binding on the contactor.

(ii) All the testing of concrete works shall be carried out as per the direction of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** or his authorized field functionaries and in case of any dispute arises on this aspect, the decision of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur is** final and binding on the contractor. Testing of all the concrete works of all grade required for structures, Cement Concrete lining and in any other construction activities of the work shall be tested in the Department Laboratory at the cost of the contractor. The contractor shall supply all the required samples at his own cost including transportation and bear all the testing charges of the concrete. The cost for the testing as charged by the **Executive Engineer, Quality Control & Designs Division, Kanupur Irrigation Project** shall be final and binding on the contractor. If, in the opinion of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur**, a Field Laboratory for acceleration of testing of concrete is required, the contractor shall install it at the work site at his own cost with all the required machineries and equipments as per the direction of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur** and cement testing work shall be carried out in the Field Laboratory under the direct supervision of the Field functionaries of the Quality Control & Designs Division, Kanupur Irrigation Project under guidance of the **Executive Engineer, Quality Control & Design Division, Kanupur Irrigation Project**.

30. Minor Minerals for the work to be collected by the contractor observing all the statutory acts/ rules such as PESA/ OMMC Rule-2004 etc.

CHAPTER –V

TECHNICAL SPECIFICATION

SECTION –1

SECTION –1

GENERAL SPECIFICATION

The terms the India Standard Specification herein after referred to as BIS as used therein means the relevant Bureau of Indian Standard codes with all amendments published up to the date of Submission of tenders. A statement of relevant BIS is applicable to this contest is enclosed.

LIST OF INDIAN STANDARDS

Sl. No.	Short Title	B.I.S Number
(I)	**CEMENT**	
1.	Specification to ordinary and Low heat Portland cement	269-1976
2.	Specification for Portland Pozzolana Cement	1489-1976
3.	Portland Slag Cement (Third revision)	455-1976
4.	Method for physical tests for hydraulic cement (Reaffirmed 1980)	4031-1968
5.	Method of Chemical analysis for hydraulic cement (First revision)	4032-1985
6.	Rapid hardening Portland cement	8041-1978
7.	Hydrophobic Portland cement	8043-1978
8.	High Strength ordinary Portland cement	8112-1976
(II)	**AGGREGATES**	
1.	Specification for coarse and fine Aggregates from natural source for concrete	383-1970
2.	Specification for sand for masonry mortars	2116-1965
3.	Method of Tests for aggregates for concrete	2385-1969 (Part I to Part VIV)
4.	Standard sand for testing of cement (First revision) with amendment 1 and 2 Reaffirmed 1980	650-1966
5.	Methods for sampling of aggregates for concrete	2430 -1969
(III)	**BUILDING STONES**	
	Methods of Test for Determination of strength properties of natural building stones Part-I Compressive Strength Part-II Transverse Strength Part-III Tensile Strength Part-IV Shear Strength	1221-1974
(IV)	**STEEL**	
1.	Code of practice for bending and fixing of bars	2502-1963
2.	Specification for cold worked steel deformed bars for concrete reinforcement	1786-1979
3.	Code of practice for welding of MS Bars used for reinforced concrete construction.	2751-1966
4.	Code for practice for use of Metal are welding for general construction of mild steel	818-1989
5.	Deformed bars for concrete reinforcement hot rolled mild steel and medium tensile steel (Revised)	1139-1966
6.	Recommendations for detailing of reinforcement in reinforced concreted works	5525-1969
7.	Specification for Mild Steel and medium tensile steel Bars for Concrete reinforcement.	432-1966 (Part I)
8.	Code for practice for safety and health requirement in Electric and Gas welding and cutting operations	818-1968

9.	Code for practice for fire precautions in welding and cutting operation.	3016-1965
10.	Measurement of building and Civil Engineering works, method part VIII steel work and iron work	1200-1974 (Part VIII)
11.	Code of procedure for manual or metal ARC and welding of Mild steel	823-1964
12.	Specification for filler rods and wires for gas welding	1278-1972
13.	Recommendations for welding cold worked steel bars for reinforced concrete construction	9417-1979
14.	Hard drawn steel wire fabrics for concrete reinforcement	1566-1982
(V)	**MASONARY**	
1.	Code of practice for construction of stone masonry Part-I Rubble stone Masonry	1597-1967(part-I)
2.	Code of practice for construction of stone Masonry Part_II Ashlar Masonry	1597-1967(part-II)
3.	Specification for fly-ash for use as Pozzolana and admixture	3812-1981(Part-I)
4.	Method of Measurement of building and Civil Engineering Works Part-XII plastering and pointing	1200-1976(Part-XII)
(VI)	**CONCRETE**	
1.	Method of Measurement of building and Civil Engineer works Part-II cement concrete works.	1200-1968 (Part-II)
2.	Code of practice for plain and reinforced concrete	456-2000
3.	Specification for pre cast concrete coping blocks.	5751-1969
4.	Methods of tests for strength of concrete	516-1959
5.	Code of practice for laying in situ cement concrete Lining on canals	3873-1993
6.	Specification for Admixtures for concrete	9103-1979
7.	Method of Test for Autoclaved cellular Concrete Products.	6441-1972-73 (Part-I to IX)
8.	Method of Sampling and Analysis of concrete	1199-1959
9.	Specification of Batch type concrete mixtures	1791-1963
10.	General requirements for Concrete Vibrators immersion type	2505-1980
11.	Specification for concrete vibrating tables	2514-1963
12.	Method of test for permeability of cement mortar & concrete	3085-1965
13.	Specification for fly ash for use as pozzolana as admixture for Concrete	3812-1981 (Part-II)
14.	Specification for Portable swing weigh batch for concrete (single and double bucket type)	2722-1964
15.	Code of practice for installation of joints in concrete pavements	6509-1972
16.	Code of practice for general construction of plain and reinforced concrete for dams and other massive structures	457-1957
17.	General requirement for concrete vibrator screed board type (First revision)	2506-1985
18.	Code of practice for concrete structures for shortage of liquids	3370 (Part-1 to 4)
19.	Code of practice for use of immersion vibrator for consolidating concrete (First revision)	3558-1983
20.	Method for testing performance of batch type concrete mixer	4634-1968
21.	From vibrators for concrete	4656-1968
22.	Concrete batching and mixing plant	4925-1968
23.	Ready mixed concrete (First revision)	4926-1976
24.	Code of practice for sealing joints in concrete lining on canals	5256-1992
25.	Vibrating plate compactor	5889-1970

26.	Concrete transit mixer and agitator	5892-1970
27.	Concrete pavers	7245-1974
28.	Concrete slump test apparatus	7320-1974
29.	Method of making curing and determining compressive strength of accelerated cured concrete test specimen	9013-1978
(VII)	**EARTH WORK**	
1.	Method of Measurement of building and Civil Engineering Works Part I, Earthwork.	1200-1969 (Part-I)
2.	Safety code for piling and other deep foundations	5121-1969
3.	Code of practice for Design installation, observation and Maintenance of uplift pressure pipes for Hydraulic structures on permeable foundation.	6532-1972
4.	Safety code for excavation works	3764-1966
5.	Code of practice for protection of slope for Reservoir embankment	8237-1985
6.	Code of practice for earth work on canals	4701-1982
7.	Guidelines for lining of canals in expansive soils	9451-19
8.	Method of test for soils Part-II Determination of water concrete	2720-1973 (Part-II)
9.	Method of test for soils Determination of water content dry density relation using light compaction.	2720-1974 (Part-VII)
10.	Method of test for soils determination of dry density of soils in place by the sand replacement method	2720-1974 (Part-XXVIII)
11.	Method of test for soils determination of dry density of soils in place by the core cutter method	2720-1975 (Part-XXIX)
12.	Classification and identification of soils for general	1498-1970
13.	Safety code for blasting and related drilling operation with Amendment No. I (Reaffirmed 1978)	4081-1967
14.	Portable Pneumatic drilling machine (First revision)	5441-1986
15.	General requirement for black hold drilling rigs	7209-1974
16.	Safety code for working with construction machinery	7293-1974
17.	Code of practice for stability analysis of earth dams	7894-1975
18.	Guidelines for design of under seepage control measures for earth and rock fill dams	8414-1977
19.	Filtration media sand and gravel	8419-1977 (Part-I)
20.	Guidelines for design of large earth and rock fill dams	8826-1978
21.	Under drainage arrangements of lined canals.	4558-1995
22.	Pre-cast cement concrete stables for canal lining	3868-1966
23.	Methods of tests of soils	2720 (Part-1 to X)
24.	Ammonium nitrate for explosive	4668-1967
25.	Method of test for commercial blasting explosives and accessories.	6609 Part-1 to V)
26.	Detonators	7632-1975
27.	Method of load test on soils (Second revision)	1888-1982
28.	Method for standard penetration test for soil (First revision)	2131-1981
29.	Glossing of terms and symbolic relating to soil engineering.	2809-1972
30	Method of sampling and preparation of stabilized soils for testing	4332 (Part-I of 1967)
31.	Test in over burden	5529

		(Part-1 of 1969)
(VIII)	**OTHER SUBJECTS**	
1.	Safety code for scaffolds and ladders part I scaffolds	3696-1966
2.	Safety code for scaffolds and ladders Part 2 ladders.	3696-1966 (Part-II)
3.	Recommendation s on stacking and storage of construction materials at site.	4082-1977
4.	Plywood for general purposes (Second revision amendment 1 to 3)	303-1975
5.	Test Sieves	460-1985
6.	Code practice for under drainage of lined canals (2nd revision)	4558-1995
7.	Code of for practice for in situ permeability test	5529 (Part-1 & 2)
8.	Structural steel (Standard quality) (with amendment No.1 to 3)	IS: 226-1975
9.	Hard drawn steel wires (Third revision)	IS: 432-1982 (Part-II)
10.	Concrete pipes (with and without reinforcement) (2nd revision)	IS: 458-1971
11.	Code of practice for lying of concrete pipes	IS: 783-1959
12.	Specification for mild steel tubes, tubular and other wrought Steel fittings Part-I mild steel tubes (fourth revision) (With Amendments No. 1 to 5)	IS:1239-1979
13	Hard drawn steel wire fabric for concrete reinforcement (Second revision)	IS: 1566-1982
14.	Asbestos cement pressure pipe (Second revision)	IS: 1592-1980
15.	Preformed filler for expansion test in concrete payment and structures (non extruding and resilient type)	IS: 1838-1961
16.	Cast iron detachable joints for use with asbestos cement pressure pipes.	IS:8794-1978
17.	Structural steel (Fusion welding quality) (Second revision)	IS: 2062-1980
18.	Code of practice for laying of cast iron pipe (With amendment No. I)	IS: 3114-1965
19.	Methods of testing for concrete pipes	IS 3597-1966
20.	Rubber sealing rings for gas mains water mains and sewers	IS: 5382-1969
21.	Centrifugally cast (spun) iron low pressure pipes for water gas and sewage (First revision)	IS: 6163-1978
22.	Code of practice for laying of asbestos cement pressure pipes	IS: 6530-1972
23.	Cast iron detachable joints for use with asbestos cement pressure pipes.	IS: 8794-1978
24.	Other Publications: Ministry of shipping and transport Specification for Road and Bridge works No. 7900	
(IX)	**STONE PITCHING AND LAUNCHING APRON**	
1.	Methods of test for determination of strength properties of natural building stone.	IS: 1121-1975 (Part-1 to 4)
2.	Method of test determination of true specific gravity of natural building stone (First revision)	IS: 1122-1974
3.	Method of identification of natural building stone (1st Revision)	IS: 1123-1975
4.	Method of test for determination of water absorption apparent specific gravity and porosity of natural building stone (1st Revision)	IS: 1124-1974
5.	Method of test for determination of weathering of natural building stones (First revision)	IS: 1125-1974
6.	Method of test for determination of durability of natural building stone (First revision)	IS: 1126-1974
7.	Recommendations for dimensions and workmanship of natural building	IS: 1127-1970

	stones for masonry work (First revision)	
8.	Recommendation of dressing of natural building stone (1st Revision)	IS:1129-1972
9.	Sand for plaster (First revision)	IS:1542-1977
10.	Code of practice for construction of stone masonry	IS: 1597-1967
11.	Rubble stone masonry	IS: 1597-1967 (Part 1to II)
12.	Method for determination of resistance to wear by abrasion of natural building stones (1st Revision)	IS: 1706-1972
13.	Sand for masonry mortars (1st Revision)	IS: 2116-1980
14.	Code of practice for preparation and use of masonry mortars (1st Revision)	IS: 2250-1981
15.	Stone facing	IS: 4101-1967 (Part-I)
16.	Method of test for determination of water transmission rate by capillary action through natural building stones	IS: 4121-1967
17.	Method of test for surface softening of natural building stones by exposure to acidic atmospheres	IS: 4120-1967
18.	Methods of test for determination of permeability of natural building stones (1st Revision)	IS: 4348-1973
19.	Method of test for toughness of natural building stones	IS: 5218-1969
20.	Gujarat State, Section 2, Engineering properties of building stones	IS: 7779-1975 (Part1/Sec.2)
21	Recommendation practice for quarrying stones for construction purpose.	IS: 8881-1977
(X)	**MISCELLANEOUS ITEMS-**	
(a)	**PIPES AND PIPE LAYINGS**	
	Centrifugally Cast (Spun) Iron pressure pipes For wate,gas and Sewage (second Revision)	1536-1976
	Cast iron fittings for pressure pipes for water, gas and sewage (second revision)	1538(Part-I-24)
	Laying cast iron pipes (3rd revision)	3114-1978
	Caulking lead(3rd revision)	782-1978
	Milk steel tube and other wrought steel fittings	1239(Part-I 1979) (Part-II-1982)
	Code for practice for laying of welded steel pipes for water supply	5882-1986
	Anticorrosive to pipes & fittings	IS:1022
	Welding of M.S. pipe line	IS:814-1967
(b)	**FITTINGS**	
	Fully way valve-check valves	778
	Self closing taps(2nd revision)N.R.valves	1711-1984
	Pillar Taps for water supply (2nd revision)	1795-1982
	Sluice valves for water works purpose (sixth revision) (50mm to 300mm)	780-1984
	Installation of sluice valves(1st revision)	2685-1971
	Foot valves(2nd revision)	4838-1986
(c)	**PUMPS**	
	Horizontal centrifugal pumps for water supply (2nd revision)	IS:2520-1980
	Horizontal centrifugal self priming pumps	IS:8418-1977
(d)	**FIRE FIGHTING**	
	Leading valve	IS:5290
	Hose pipe	IS:492-1968

	Fire hydrant	IS:908-1975
(e)	**PLUMBINGS**	
	National building code of India-1983 Part-9 Plumbing services Sec-I water supply	SP7-1983
	Hand book on water supply drainage with special emphasis on plumbing	SP-35-1987
	Code of practice for Water Supply in building (2nd revision)	2065-1983
	Code of practice for plumbing in multistoried buildings-Part-I-Water supply.	12183-1987
(f)	**WHITE/COLOURED GLAZED PROCELAIN PRODUCTS**	

ITEM	**SIZE**	**MAKE**
Indian Water Closet (Orissa Pattern	580 x 440x 290mm	NYCER(Vitreous) / PARRY Ware(Vitreous)
European Water Closet	100mt x 390depth x 370 width	NYCER(Vitreous)/ PARRY Ware(Vitreous)
Wash Hand Basin (Rectangular)	550 x 400 x 200 mm	NYCER(Vitreous)/PARRY Ware(Vitreous
Wash Hand Basin(circular)	470/500 Dia x 200mm	NYCER(Vitreous)/PARRY Ware(Vitreous
Standing type lipped Wall Urinal	460 x 380 x 305 mm	NYCER(Vitreous)/PARRY Ware(Vitreous
Squatting Urinals	600 x 350 x 100 mm	NYCER(Vitreous)/PARRY Ware(Vitreous
Marble Partitions Wall Glass Mirror	1000 x 750 x 25 to 32mm 600 x 450 x 55mm	Of approved quality Of approved quality NYCER/PARRY WARE
White Glazed tiles	(30 x 30 x 15 x 15.10 x 10cm)	As per IS-777-1970

(XI)	**ELECTRICAL INSTALLATION-**	
1	Low Tension Air Circuit Breakers	IS:2516-1955 Part-I Sec-I
2.	Switch-gear Bus Bars	IS:375-1963
3.	HRC Fuse Boards	IS:2208-1962
4.	Distribution Fuse Boards	IS:2675-1966
5.	Enclosures for Low Voltage Switch-gear	IS:2147-1962
6.	PVC Cables	IS:1554-1975
7.	Tablan Fluorescent Lamps for Cameral lighting service	IS:2418-1963
8.	Tungstan Filament lamps for cameral service	IS:415-1963
9.	Ceiling fans	IS:374-1966
10.	Flood lights	IS:1974-1961
11.	Walls glass flame proof Elec. Light fittings	IS:2206-1962 Part-I
12.	Water tight electric light fittings	IS:3553-1956
13.	Steel Boxes for enclosure of electric accessories	IS:5133-1969
14.	Fittings for rigid steel conduit	IS:2667-1976
15.	Right steel circuits for electrical wiring	IS:1653-1972
16.	Accessories for rigid steel conduits for electrical wiring	IS:3837-1966
17.	Switch socket outlets	IS:3837-1966
18.	Three pin plug and socket outlets	IS:1293-1967
19.	Switches for domestic & similar purpose	IS:3854-1966
20.	P.V.C. wiring	IS:694-1977660 Volt grade
21.	Call Bell and Buzzers	IS:2268-1966
22.	Straight through joint boxes and leads sleeves for paper insulated cables	ETDC0032-1964
23	Earthing	IS:3043-1966

24	Electric wiring installations	IS:732-1966
25	Switch –Gear	IS:3072-1965 part-I
26.	Lighting Protection	IS:2309-1969
27.	Public address system	IS:1887-1962
28.	Low tension switch fuse units	IS:4064-1969
29.	Code of practice for automatic fire alarm system	IS:2189-1978
30.	Specification for heats sensitive fire detectors	IS:2175-1977
31.	Guide for safety procedure in electrical works	IS:5216-1969
32.	Rubber mats for electrical works	IS:5424-1969

In addition to the relevant BIS code, the specifications prescribed and guidelines issued by Central water Commission Standard Specifications shall also be followed where BIS specifications are not available.

SECTION-2

1. EXCAVATION OF FOUNDATIONS

1.1.1 All excavation (in foundation) shall be done as per the profile indicated by the Engineer-in-charge.

1.1.2 Excavation shall be carried out to the required line and levels, width and depths so that the dimensions of the permanent work shall not be les than what are indicated.

1.1.3 All excavated materials shall be brought to surface and disposed of as directed by Engineer-in-charge.

1.1.4 Selected and approved excavated materials, required for filling etc. shall be kept as per the approval of Engineer-in-charge.

1.1.5 The phasing and method of excavations for all foundations and earthwork be as per the approval of Engineer-in-charge.

1.1.6 No permanent construction shall be started over the excavated surface until and unless approved by the Engineer-in-charge.

1.1.7 Excavations done, wider or dipper than that required to contain the permanent work, shall be filled-in at the Contractor's expenses. However, exceptions may be specially permitted in certain situations as in the case of sand beds etc.

1.1.8 Excavations taken wider than required shall be filled back with selected materials thoroughly compacted in layers of 150mm thickness.

1.2 **Site Clearance:** Before the earth work is started, the area coming under cutting and refilling shall be cleared of shrubs, vegetations, grass, brushwood trees and sapling of girth up to 30cm measured at a height of 1m. above ground level and such other things, and rubbish removal up to a distance of 50m. Outside the periphery of the area under cleanse. The rate of such cleanse is deemed to be included in the rate of Earth work.

1.3 **Earth work in excavation in Trenches for foundation.**

1.3.1 All excavation shall generally be described as 'Excavate' and 'Get-out'. Getting out shall include throwing of the excavated of the excavated materials not less than one meter or less than half the depth of excavated trench clear of the edge of excavation whichever is greater and the subsequent disposal of excavated materials shall wither be stated as a separate item or included with the item of excavation stating the lead. Foundation trenches shall be dug to the exact dimensions as shown in the drawings or as directed by the Engineer-in-charge.

1.3.2 The bed of the trenches shall be made level and firm by watering and ramming soft or otherwise. Defective spots shall be dub-out and filled with concrete of same mix as the foundation concrete or as may be directed by the Engineer-in-charge. The cost of such digging out of the soft spots and filling with concrete shall be paid extra. If the excavation is done to a depth greater than that shown in the drawings or as requested by the Contractor, the excess depth shall be made good, at the cost of contractor, with concrete of the same proportion as specified for the foundation concrete. The trenches shall be inspected and passed by the Engineer-in-charge, before the foundation concrete is laid or may other permanent work erected.

1.4 **Protection:** fencing and/ other suitable measures for protection against rock of accident due to open excavation shall be provided, at Contractor's cost.

1.5 **Excavation in disintegrated or soft rock in trenches for foundation**

1.5.1 Excavation in disintegrated of soft rock shall be carried out by crow bars, pickaxes, or pneumatic drills of suitable mans. Blasting operation are not generally successful in this case. If the Contractor desires to resort to, blasting can do so, with the permission of Engineer-in-charge, but nothing extra shall be paid to him.

1.6 Excavation in hard rock in trenches for foundation.

1.6.1 Excavation in hard rock shall be done by chiseling only, where blasting operations are prohibited or are not practicable. In trenches and drains, where blasting is not otherwise prohibited the excavation in hard rock shall be carried out by blasting in the first instance and finally by chiseling so as obtain the correct section of trench as per drawings.

1.7 Filling excavated earth in foundation trenches and plinth or under floors.

1.7.1 Earth used for filling shall be free from salts, organic or other foreign matter. All clods or earth shall be broken or removed.

1.7.2 Filling sides of Trenches

As soon as the work in foundation has been completed, the sides of foundation shall be cleared of all debris, brick bats, mortar droppings etc. and filled with earth in layers not exceeding 20cm. Each layer shall be adequately watered, rammed and consolidated before the succeeding one is laid. Earth shall be rammed with iron rammers, where feasible, and with the butt ends crowbars, where rammer can not be used.

1.7.3 Plinth Filling : Filling Under Floors

The plinth shall be similarly filled with sand of approval quality inlayers not exceeding 20cm. adequately water and consolidated by ramming with iron or wooden rammers. When filling reaches the finished level, the surface shall be flooded with water for atleast 24 hours, allowed to dry and then rammed and consolidated in order to avoid any settlement at later state. The finished level of filling shall be kept to slope intended to be given to the floor. Sand shall be clean and free from organic and other foreign matter. Sand filling shall bed one in manner similar to earth filling in plinth. The surface of the consolidated sand shall be dressed to required level and slope. Conforming of floor shall not be started till the Engineer-in-charge has inspected and approved the filling.

2. BRICK WORK

2.1 Laying

2.1.1 Bricks, used for masonry in cement, mortar, shall be thoroughly soaked in clean water for at least as hour immediately before use. (The absence of bubbling, when the soaked brick is immersed in water, is the test for through soaking). The soaked bricks shall be kept on a platform free from dirt, mud or any foreign element. Bricks shall be laid in English bonds with frogs upward normally. Half or cut bricks shall not be used except as closure which may be required to complete the bond. It shall be ensured that horizontal and vertical bonds are completely filled with mortar without any void in brick work.

2.1.2 Brick work shall be raised true to plump. All courses shall be laid truly horizontal. Vertical joints shall be truly vertical and those in alternate courses be in the same vertical line. The thickness of brick courses shall be uniform (slight difference in the dimension of bricks being adjusted in joint thickness). The levels of window-sills, soffit levels of lintels and such other levels shall be kept as shown in the drawings or other wise specified and courses shall be so adjusted to get complete number of courses up to these levels.

2.1.3 In case of one brick or half brick thick wall at least one face should be kept smooth and plane even if the otherwise is slightly rough (due to variation in size of bricks). In case of walls of thickness greater than that of one brick, both the sides shall be smooth and plane.

2.1.4 All connected brick work shall be raised uniformly and no portion of brick work shall be left more than one meter below the rest of work. Where this is not possible the

work shall be racked back according to the bond (and not left toothed) at an angle not steeper than 45.

2.1.5 All iron fixtures, pipe outlets of water, hold fasts of doors and windows etc, which are required to be built in wall, shall be embedded in cement mortar or in cement concrete as specified and be in their correct position, as the brick work is raised Such cement concrete shall be paid for separately but nothing extra shall be paid for cement mortar use for embedding the fixtures.

2.2 Joints

2.2.1 The points shall be racked, to a minimum depth of 1.5mm, by raking toll during the progress of the work while the mortar is still green so as to provide proper key of the plaster or to facilitate pointing to be done at a later date. When plaster or pointing is not required to be done, the joints shall be struck flush and finished side by side with the laying of brick.

2.2.2 The face of thick work shall be cleared on the same day it is laid and all mortar droppings removed.

2.3 Protection and Curing

2.3.1 Green work shall be protected from rain by suitable covering. Masonry in cement mortar shall be kept constantly moist over all the faces minimum period of 7 days. The top of the masonry work shall be left flooded at the close of the day.

2.4 Scaffolding

2.4.1 For exposed brick work double scaffolding, having two sets of vertical supports, shall be provided. Only minimum number of holes shall be formed by omitting a header brick in brick work for supporting horizontal scaffolding poles. No holes shall be permitted in pillars under one meter width near the skew back of arches. The holes left in masonry shall be made good by fixing full brick into the holes plastering. The scaffolding shall be strong and shall be maintained during construction.

2.5 Measurement

2.5.1 All brick work shall be measured net, in decimal system as fixed in its place subject to tolerance limits mentioned below. Any work done extra over the specified dimensions shall be ignored.

2.5.2 Dimensions shall be measured correct up to 0.01 meters. Areas shall be worked our correct to 0.01 square meters. Volume shall be worked out correct up to 0.01 cubic meter.

2.5.3 The thickness of brick walls up to and including 75cm thickness shall however be measures in multiples of half bricks, viz.

(a) For brick work with modular brick it shall be multiples of 10cm.
(b) For brick work with conventional FPS bricks it shall be multiples of 11.2cm.
(c) For brick work with FPS large size bricks it shall be multiples of 12.5cm.
beyond 75 cm thickness actual thickness of wall shall be measures.

2.5.4 For any person the thickness of bricks is required to be thickness of wall shall be taken as next higher multiple half brick thickness provided that the actual thickness exceeds such multiples of half brick by more than 2cm. In the later case actual specified thickness shall be measured.

2.5.5 Walls of half brick thickness or less shall be described as half brick wall stating its thickness measured separately in square meters. The following shall be taken as half brick measurement.

For bricks 19 x 9 x 9cm	10cm.
For bricks 9" x 43/8" x 23/4"	4 ½" or 11.5cm.
For bricks 10" x 47/8" x 3"	5" or 12.5cm.

2.5.6 Corbels, string courses, projecting plasters, aprons, sills, cornices, dip courses and other projections etc., shall be fully described starting dimensions of each and measured in running meters.

2.5.7 Reinforced brick work shall be kept separate from plain brick work Reinforcement shall be measured separately unless specially included in item of brick work as iron in the case of half brick masonry wall with reinforcement.

Brick work in the following situation shall be measured separately.

a) between foundation level and plinth level.

b) between plinth level and roof level of ground floor but not exceeding a height of 3m. from plinth level. Brick work in parapet shall be included in the corresponding masonry item of the story

2.5.8 No deductions shall be made from the quantity of a brick work, nor any extra payment for embedding in masonry of making holes in respect of the following in items.

i. Ends of joints, beams, rafters, purlines corbels, steps etc. whose cross sectional area does not exceed 500 sqcm.

ii. Opening not exceeding 1000 sqcm.

iii. Wall plates and bed plates, bearing of slabs, chajjas and the likes thickness does not exceed 10cm. And bearing does not exceed to the full thickness of wall.

iv. Drainage holes and recesses for cement concrete blocks to embedded hold fasts for doors and windows.

v. Iron fixtures, pipe up to 300mm dia, hold fasts for doors and windows built into masonry.

2.5.9 Half Brick Masonry : Work shall be measured in square meters.

Moulding and cornices – The sectional periphery of mouldings and cornices shall be measured in centimeters along the curve(excluding the portion in contact with the wall). The length shall be measured in meters. The unit for payment shall be per cm. Of periphery by per meter length of mouldings and cornices measured as above.

2.5.10 Work in Foundation and Plinth For purpose of measurement of masonry work, in foundation and plinths, shall be determined as follows :

i. For buildings, masonry work below ground floor (floor-1) level of 1.20m. above ground level whichever is lower.

ii. For abutments, piers and retaining walls of culverts, bridges, walls of reservoirs and basements, entire masonry work shall be considered as work in foundation and plinth.

2.5.11 Work in Superstructure :

For Building – Masonry work above ground floor level or above 1.20m level above ground whichever is lower.

i. Fair face of brick work with bricks selected from the lot.

ii. Raking out joints, for plastering or pointing done as a separate item, or finishing joints flush, as the work proceed.

iii. Preparing tops and sides of existing walls for raising are extending and

iv. Rough cutting and waste for forming gables, cores, skew backs and all rough cuttings, unless otherwise specified.

At least one set of tools comprising of wooden straight edge, mason's sprit level, square half meter rule, line and pins, string and plumb line shall be available for each group of three masons working on a job for regular checking as the work progress.

Following Indian Standards shall be followed :

1. Code of practice for brick work IS-2212-1962
2. Method of measurements of Civil Engineer Works-Brick Works IS-1200(Part III)-1976
3. Classification of Brunt clay solid bricks IS- 3102-1971

3. PLASTERING AND POINTING

3.1 Plastering with cement mortar

3.1.1 General : For external plaster, the plastering operation shall be started from top floor and carried downwards. For internal plaster, the plastering operations may be started whenever the building frame and cladding work are ready and the temporary supports of the ceiling resting on wall or floor have been removed. The surfaces to be plastered shall first be prepared. The surfaces shall be thoroughly cleaned of all dirt, dust, mortar droppings and other foreign matters.

3.2 Application of Plaster

3.2.1 One coat plaster work. The plaster about 15cm x 15cm shall be first applied, horizontally and vertically not more than 2m. intervals over the entire surface to serve as gauges. The surfaces of these gauges areas shall be truly in the plane of the finished plaster surface. The mortar then shall be laid on the wall between the gauges with trowel. The mortar shall be applied ion a uniform surface slightly more than the specified thickness and then brought to the true surface by working a wooden straight edge reaching across the gauges with small upward and sideways movements at a time. Finally the surface shall be finished future with a trowel or wooden float according as a smooth or sandy granular texture is required. Excessive toweling or over working the float shall be avoided. A' comers arises, angles shall be truly vertical or horizontal as the case may be and shall be carefully finished, rounding or chamfering corners, arises, junctions, etc. shall be corned with proper templates to the size required.

In suspending the work at the end of the day, the plaster shall be left out clean to line both horizontally and vertically. When recommending the plastering the edge of the old work shall be scrapped clean and wetted before the plaster is applied to the adjacent areas to enable the two join together. Plastering work shall be closed at the end of the day on body of the wall and nearer than 15cm to any corners or arises. It shall not be closed on the body of features such as plaster bands, cornices nor at the corners or arises. Horizontal joints in plaster works shall not also occur on parapet tops and coping as there are invariably lead to leakages. No portion of the surface shall be left out initially to be later on. Cement plaster Shall be used within half on hour after addition of water. Any mortar of plaster which is partially set, shall be rejected and removed forthwith from the site.

3.3 Curing

3.3.1 This shall be started 24 hours after finishing the plaster. The plaster shall be kept damp continuously for a period of 7 days. Soaking of walls shall be avoided and only as much water as can be ready absorbed shall be used. Excessive evaporation on the sunny or wind ward sides of the buildings in hot air dry weather, shall be prevented by hanging matins or gunny bags on the outside of the plaster and keeping them wet.

3.4 Cement Mortar

3.4.1 Proportioning : Cement mortar for plastering shall be prepared by mixing cement and sand specified proportion. It is convenient to take the amount of measurement for cement as a bag of cement weighing 50Kg., and this shall be taken as 0.035 cum sand in specified proportion shall be measured in boxes of suitable sizes (40 x 35 x 25cm). It shall be measured on the basis of its dry volume. In case damp sand its quantity shall be measured suitably to allow for bulkage. Following table gives the relation between the mixture content and percentage of bulking which may be used as guide.

Moisture Content % by weight	Bulking percent (volume)
2	15
3	20
4	25
5	30

Dry and saturated sands almost have the same volume.

3.4.2 Mixing : The mixing of mortar shall be done in a mechanical mixer. The Engineer-in-charge may however, relax the condition at his discretion taking into account the nature, magnitude and location of the work, practicability of the use of these machines etc. or where items involving small quantities are tobe done or if in his opinion, the use of these mixers is not otherwise feasible. In case, where mixers are not to be used, the Contractor shall take prior permission of the Engineer-in-charge in writing, before commencement of work.

(a) Mixing by Mechanical Mixer : Cement and sand in the specified proportion shall be fed into the mixer thoroughly in the mixer. Water shall then be added gradually and wet mixing continued alt least 32 minutes after addition of water. Care shall be taken not add more than that which shall bring the mortar to consistency of stiff paste. Only that quantity of mortar, that can be used within 30 minutes of its mixing, shall be prepared at any time. When mixing is stopped, the stage of the machine shall be cleared each time.

(b) Hand Mixing : The requisite and measure quantity of sand shall be leveled on a clean water-right masonry platform and cement bags emptied on top. The cement and sand shall be thoroughly mixed dry to a homogenous mixture of uniform colour by using curing over and turning, backwards and forward several times.

3.4.3 Retampering of Mortar : In case mortar using cement, the mortar that has stiffed because of evaporation of water from the mortar, may be retampered by adding water as frequently as needed to restore the requirement of consistency but this retampering shall be permitted only up to two hours from the time of addition of cement.

3.4.4 Not formed in accordance of with the specifications given above or lying unused after the as mentioned above, or found partly set or dried or otherwise spoilt, shall be rejected and removed from site of work at the Contractor's risk and cost.

3.4.5 For opening, having door frames equal to or projecting beyond the thickness of the wall, full deduction for opening shall be made for each plastered face of wall.

In case openings of area above 3sqm each, deductions shall be made for openings but jambs, soffits and shall be measured.

Plastering on ceilings and walls shall be measured separately.

a) These shall be measured, between the walls of participations and openings, before plastering shall take up.

b) Ceiling at height greater than 5cm. Shall be so described and shall be measured separately stating the height in stages of 1m. of part thereof.

c) Ceiling with projected beams shall be measured over beams and plastered sides of beam shall be measured and added to plastering on ceiling.

d) Soffits of stairs shall be measured as plastering on ceiling.

e) Ribs and mouldings in ceilings shall be measured as for cornices, deductions being made from the plastering on ceiling in case of width/girth of the mouldings exceed 150mm.

3.5 Measurement and Rates

3.5.1 Preparing of background i.e. cleaning of masonry/concrete surface of all dust, loose mortar droppings, races of Algae, fluoresce in and other foreign matters and

roughening by wire brushing or hacking as may be required unless otherwise stated, is included in the times and shall not be measured and paid for separately.

3.5.2 Raking out of joints and trimming off projections on brick/concrete surface before plastering where necessary, shall not be measured and paid for separately.

3.5.3 All plastering shall be measured in square meters unless otherwise specified length breadth and height shall be measured correct to 0.01 meters.

3.5.4 Thickness of plaster shall be exclusive of thickness of the i.e. grooves of open joints in brick work,stone work etc, or space between laths. Thickness of plaster shall be measured to the minimum thickness at any point on a surface. Dubbing out shall not measured and paid for in the case of new work nor for rough surface of old brick stone masonry, where the face is in plumb, as the rates for plastering includes for the necessary dubbing to such surfaces.

The measurement of wall plastering shall be taken i.e. of the walls or partitions (Dimensions before the plastering being taken) for length and from the top of floor of skirting to ceiling for higher.

The measurement of wall plastering widths or in widths not forming part of general plastering work as in bounds, corices, sunk panels etc. shall be measures as follows.

a) 300mm. Or below in width/girth in running meters.
b) Width/girth above 300mm in square meters.

Plastering at height greater than 10 meters above and ground/datum level shall be measured separately in stages of 5 meters height except interior plastering in case of building which shall be measured for each society.

Soffits of stairs shall be measured as plastering on ceilings.

A coefficient of 1.63 shall be adopted for the measurement one side plastering on honey comb having 6cm x 10 cm. opening.

Plaster of sides, projections etc. shall be added to plaster on walls.

Mouldings, architraves, ceiling ribs, cornices and the like on plasters and around openings etc. shall be measured separately. Length shall be measured at the center of girth, Girth shall be along curve of moulding.

3.5.5 Deductions:

For jambs, soffits, sills, for opening not exceeding 0.5 sqm. Each in area for ends of joints, beams, posts, girders, steps etc. not exceeding 0.5 sqm. Each in area and for opening exceeding 0.5 sqm. And not exceeding 23 sqm. In each area, deductions shall made in the following manner.

a) No deduction shall be made for ends of joints, beams, posts, etc. and opening not exceeding 0.5 sqm. Each and no addition seal made for jambs, soffits, sills etc. for these openings nor for finish to plaster around ends of joints, beams posts etc.

b) Deductions for opening exceeding 0.5 sqm. but not exceeding 3sqm each shall be made as follows and no addition shall be made for reveals, jambs, soffits, sills etc. of these openings.

1. When both faces wall are plastered with same plaster, deductions shall be made for one face only.
2. when two faces of wall are plastered with different types of plastered and other pointed, deductions shall be made from the plaster or pointing on the side of frame of door, window etc. on which width of reveals is less than that on otherwise but not deductions shall be made on the other side. Where widths of reveals on both faces of wall are equal, deduction of 50% of area of opening on each face shall be made from areas of plaster and/or pointing as the case may be.

When only one face is plastered and other faces not, full deductions shall be made from plaster, if the width of reveal on plastered side is less than that on un plastered.

Side but if width of reveal on both sides are equal or width of reveal on un plastered side is more no deductions shall be made.

4. FLOORING

Cement Concrete Flooring or Artificial Stone Flooring (A.S. Flooring)

4.1 **Materials** : Cement concrete of specified mix/proportion shall be used and shall generally conform to the specification given under cement concrete work.

4.2 **Workmanship** : The flooring shall be laid on concrete sub-grade (Lean concrete), where so provided. The sub-grades in some works are also specified as 10cm. dry rammed khoa. The slope of floors in places like verandah, kitchen, baths, water closets and court yard shall be provide width adequate slopes for proper drainage of washings and rain water. Where sub-grade is not provided earth below shall be proper drainage of washing and rain water. Where sub-grade is not provided earth below shall be properly sloped, watered, rammed and consolidated before laying the flooring is shall be moistened.

If the sub-grade is lean concrete, the flooring shall be commended within 48 hours of laying of the laying the sub-grade, failing which the sub-grade shall be roughened with steel wire brushes without disturbing the concrete, wetted and smeared with a coat of cement slurry at 2.75 kg of cement per square meter so as to give a good between sub-grade and flooring.

Plinth masonry offsets shall be depressed so as to allow the sub-grade concrete to rest on it.

If the cement concrete flooring is to be laid directly on the RCC slab the surface of RCC slab shall be roughened with brushes, when concrete is green. This shall be done carefully without disturbing the concrete.

As large unbroken areas of cement concrete are liable to crack, it is advisable to divide the floor either into strip into square or rectangular called panels.

4.3 **Panels** : Flooring of specified thickness(25mm) shall be laid in accordance with approved pattern or as directed by the Engineer-in-charge. The border shall have a measured joints at corners of the room and immediately joints shall be ion straight line with the panel joints. The panels shall be uniform in size and the length of panels shall not exceed $\frac{1}{2}$ times is breadth. Alternate panels shall be laid on different days.

4.4 **Finishing** : Finishing operation shall start shortly after cessation of beating the laid concrete and shall be spread over a period of one to six hours depending upon the temperature and atmospheric condition. The surface shall be left for sometime till moisture disappears from it. Use of dry cement or concrete and sand mixtures sprinkled on the surface to stiffen the concretes or absorb excessive moisture shall not be permitted.

Fresh quantity of cement of 2.2kg per sqm. of flooring shall be mixed with water to form a thick slurry and spread over the surface while the concrete is still given. The cement slurry then be properly pressed twice by means of iron floats, once when the slurry is applied and second time when cement starts setting and finished floats smooth. Floor finish over ramps, stairs and other similar situations specially if they are liabale to get wet, shall be finished in chequered pattern to make them non slippery.

Then junctions of floors with wall plaster, dado skirting shall be rounded there so required up to 25mm radius.

4.5 **Curing** : After 24 hours laying of concrete, the surface shall be cured by flooring water up to 2.5mm depth and by putting wet absorbed bent. The curing shall be done 7 days unless otherwise specified.

4.6 **Precautions** : Flooring in lavatories and bath rooms shall be laid after mixing of water closets and squatting paris and floor traps, which shall be plugged, while laying the

floor and opened after the floors are complete. Any damages done to water supply and supply and sanitary fittings during execution of work shall be made good.

No concrete shall be laid within half an hour of the closing time of the day, unless permitted by the Engineer-in-charge.

4.7 **Measurements** : Flooring shall be measured as laid in square meter correct to two places of decimal for length and breadth, dimensions, correct to a cm., before laying skirting dado or wall plaster shall be taken/. No deductions shall be made or extra paid for any opening up to 0.1sqm. inarea in the floor. Nothing extra shall be paid for laying the floors at different levels in the same room.

The thickness of flooring shall be specified in the description of the item and shall be measured correct to 1mm. Flooring laid in borders, margins and heads of steps shall be measured under flooring in respective width.

4.8 **Rate** : Rate shall include the cost of all materials and labour involved in all operations described above. Application of cement slurry on RCC slab or on sub-grade shall not tobe paid for separately unless otherwise specified. Noising of steps are included and shall not be paid separately.

5. CEMENT CONCRETE

5.1 Cement concrete for in situ casting. This shall be prepared by mixing graded stone aggregate of nominal size as specified with cement and sand in specified proportions.

5.2 **Proportioning** : Proportioning shall be done by volume. Boxes of suitable sizes shall be used for measuring sand and aggregate. The size of boxes(internal) shall be 35 X 25 cm. and 40 cm. deep. The unit of measurement of cement shall be a bag of cement weighing 50kg and this shall be taken as 0.035 cubic meter. While measuring the aggregate and sand the boxes shall be filled shaking ramming or hammering. The proportioning of sand shall on the basis of its volume and in case of damp sand allowance of bulkage shall be made as below.

Moisture content % by dry weight	Bulking percent (Volume)
2	15
3	20
4	25
5	30

Dry sand saturated sands almost have the same volume.

5.3 **Mixing** : Mixing of cement concrete shall as a rule be done in a mechanical mixture. However the Engineer-in-charge may permit hand mixing in specific cases, where in this opinion its is not practicable to resort to mechanical mixing, either on account of the quality of cement concrete required being small or for any other reason. In such cases he should ensure, the at inferior quality of concrete produced by hand mixing will not adversely affect the structure.

5.3.1 Mechanical Mixing :

Measured quality of aggregate, sand and cement required for each batch shall be poured into the drum of the mechanical mixture, while it is continuously running. After about half a minute of dry mixing measured quantity of water required for each bath of concrete mix shall be added gradually and mixing continued for another one and half minute. It shall be ensured that total mixing time for each batch shall be 2 minutes. The mixed concrete for one drum shall then be discharged completely and drum recharged as before for the next batch mix. The mixed concrete shall be used within 30 minutes form the time of adding water. The mixture shall be closed thoroughly before suspending the work each time by revolving the drum with plenty of water.

5.3.2 Hand Mixing :

A heap of convenient size shall be formed by picking the calculated quantity aggregate, sand and cement(in the order) in layers. The ingredients shall be mixed dry thoroughly by turning them over and over again. The calculated quantity of water then shall be added gradually and the whole thing slowly and thoroughly mixed again.

5.4 Consistency :

5.4.1 The quantity of water to be used for each containing 50kg of cement to give required consistency shall not be more than.
34 liters for 1:3:6 mix
32 liters for 1:2:4 mix
30 liters for 1:11/2:3 mix
27 liters for :1:1:2 mix
In case of vibrated concrete, the above quantity shall be suitably reduced.

5.5 Transporting :

5.5.1 Concrete shall be handled from the place of mixing to place of final deposit as rapidly as practicable by methods, which will prevent segregation or loss of any of the ingredients. If segregation occurs during transport, the concrete shall be remixed before being placed.

5.6 Laying :

Before laying the concrete, shall sub base cleared off all injurious or foreign matter, water and well consolidated.
Mixed concrete, that has been left standing, shall not be used after initial setting has commended. The addition of water or cement, to make such a mix workable, shall not be allowed.
In foundation trenches or such either situations, the entire concrete used in the work shall be laid gently(not thrown) in layers not exceeding 15cm thick.
In deep trenches concrete shall be placed through chutes as directed by Engineer-in-charge. The chute plant shall be of such size and design as to ensure practically continuous flow in the chute. The slope of the chute shall be such as to allow the concrete to flow without the use of excessive quantity of water and without-segregation of the ingredients. The delivery end of the chute shall be as close as possible to the point of deposit. The chute shall be thoroughly flushed with water before and after each working period and water used for purpose shall be discharged outside the place of laying of the concrete.
The concrete so deposited shall be thoroughly vibrated means of mechanical vibration till a dense concrete is obtained. The Engineer-in-charge may however release the condition at his discretion for certain items, depending on thickness of the members, and feasibility of vibrating the same. The layers of concrete shall be placed that the bottom layer does not finally set before the top layer is placed. Compaction shall be complete before initial setting starts i.e. within 30 minutes for original cement and 5 minutes for rapid hardening cement on addition of water to dry mixture. For items, where vibrators and not to be used, it shall be the duty of the contractor to take prior permission of the Engineer-in-charge before the start of work.

5.7 Curing :

5.7.1 After the concrete has began to harden i.e. about 2 hours after its laying, it shall be protected from quick drying with moist gunny bags, and any other materials approved by the Engineer-in-charge. After 24 hours of laying of the concrete, the surface shall be cured by flooring water up to 25mm depth or by covering with wet absorbent materials. Over the foundation concrete, the masonry work may be started after 48 hours of its laying., but the curing of concrete shall be continued along with masonry work or a minimum period 7 days or for such period as specified. In case of cement

concrete used as sub-grade for flooring the flooring may be commenced within 48 hours of laying of laying of sub-grade and covering continued along with top layer mm period of 7 days laying the top layers of flooring or for lesser period as specified.

6. REINFORCED CEMENT CONCRETE

Reinforced cement concrete caste-situ work

6.1 **General** : Reinforced cement concrete cast-in-situ work comprise of the following which may be paid for as separate item or as a composite item as indicated in the description of work.

a) Form work b) Reinforced c) Concreting

6.2 **Form work** : The form work shall be rigid and so constructed as to retain the shape a dimensions of the members being cast. It shall have sufficient strength and rigidity to withstand the load of concrete, and vibration, movement of men, materials, planted and any other incidental loads without excessive deflection beyond permissible limits. The form work shall be constructed as removable by unscrewing or otherwise loosening them without hammering or leveling with force. Only wages, clamps, bolts and screws etc. shall be used in preference to nails or spikes. All side pieces shall be easily removable without disturbing the bottom pieces. Where, however use of nails or spikes become unavoidable, these shall be left projecting so that they can be easily withdrawn.

If at any stage of work during or after placing concrete in structure , the form work sags or bulges but beyond the required shape of the structure, the concrete shall be removed and work redone with fresh concrete and adequately rigid form work details of shuttering and centering shall be subject to the approval of Engineer-in-charge.

6.2.1 Propping or Centering : Props shall consists of ballies or bricks masonry pillars in mud mortar., Ballies shall be placed as spacing of 1 to 1.2 m. and shall rest squarely on wooden sole plates of 40mm thickness with minimum bearing of 0.1sqm. laid either on ground or brick masonry pillar in mud mortar. Double wedges shall be provided between the sole plates and the wooden prop so as to facilitate tightening provided between the sole plates and the wooden prop so as to facilitate tightening and casing of shuttering without jarring the concrete. In case brick masonry pillars are used as props, the wooden sole plates shall be provided at the top of pillars and double wedges inserted between the sole plate and the bottom of shuttering.

In case of structures with two or more floors, the weight of concrete and centering of any upper floor shall be suitable supported on at 1 least two floors below the same. In such case props of upper floor must necessarily come over the props of lower floor. The form work and concreting of upper floors shall not tobe done until the concrete of the lower floor has set for at least 14 days.

6.2.2 Shuttering : Shuttering shall be either of wooden planking of 30mm. Minimum thickness with or without steel sheet lining on steel plates welded by steel angles and would be such as to give the required type of finishing the surface., The timber used in shuttering shall not be so dry as to absorb water from concrete and swell and bulge nor as so green or as to shrink after creation.

The timber shall be accurately sawn and planned on sides and surface coming in contact with concrete. Thus the shuttering will have smooth and even surface and the cured shall not permit any leakage of cement grout or slurry.

Unless otherwise desired, all angles in concrete work shall be sharp and well defined. Where however, a rounded edge or beloved edge or moulding is required the provision shall be made in formulate its self. Opening of fan clamps and other fittings concreted with services shall be provided in the shuttering as directed by the Engineer-in-charge.

From lining shall be such as would not discolour the concrete nor would interfere with the normal chemical reaction of cement. When steel sheets are used for lining, the sheets shall be placed and mounted on forms with minimum mountain of kinks and other imperfections.

6.2.3 Surface Treatment for Shuttering :

Forms should be cleaned of all dust, wood shaving dirt and other matter by washing with water. This process is facilitated by providing drainage holes in the shuttering. The surface shall then be coated with soap solution applied before concrete is done. Soap solution for the purpose shall be prepared by dissolving yellow soap in water to get consistency of paint. Alternately a coat of raw linseed oil refined pale paraffin mineral oil of approved manufacturer may be applied. In case steel shuttering is used, soap solution or raw linseed oil shall be applied after thoroughly cleaning the surface evenly. Care shall be taken that coating does not get into construction joint surfaces and reinforcement bars.

The centering for beams and slabs shall have camber of 4mm per meter (1 in 250) or as directed by the Engineer-in-charge. The form shall be created true to line, vertical or battered to proper slope as required and free from twist. The completed form work shall be inspected and approved by the Engineer-in-charge.

6.2.4 Striking and Removal of form Work :

Form shall be removed gently. They shall be eased carefully in order to prevent the being suddenly transferred to concrete. Form works shall not be removed unless the concrete has attained the strength atleast twice the stress to which concrete may be subjected at the time of the period, that shall clapse after concrete has been laid and before easing and removal centering and shuttering is undertaken, shall be as follows:

Sl. No.	Part of Structure	(Period)
1.	Sides of foundations, columns and walls	48 hours
2.	Underside of slab to	
	a) 4.5m span	7 days.
	b) Over 4.5m span	14 days.
3.	Underside of Beams soffits arches upto	
	a) 6m span	14 days.
	b) Over 6m span	21 days.
4.	Shells, vaults, plates and structure of mechanical nature	As per written instruction of Engineer -in-charge.

This period is given for concrete work using ordinary Portland cement for rapid hardening cement this period equal 3/7th of above period and will be sufficient in all cases except for vertical sides of beams and slabs and which case it shall be 24 hours. In slabs and T beam construction sides shall be stripped off first, then the underside of slabs and lastly that of beam.In case of cantilever slabs and beams, centering shall remain till structures for counteracting or holding down have been erected and have attained sufficient strength.

Measurements :

Form work to secondary beams shall be measured upto the sides of main beams, but no deduction shall be made from form work of the main beam at the sides of main intersection point. No deduction shall be made from form work of a column at intersection of beam.

6.3 Reinforcement :

6.3.1 The type of steel reinforcement to be used in the work shall be specified in the item of work., it shall confirm to the relevant Indian Standards given below :

1. Mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement. IS 432-1966
2. Deformed bars for concrete reinforcement hot rolled mild steel and medium tensile steel. IS 1139-1966
3. Cold twisted steel bars for concrete reinforcement IS 1786- 1966
4. Hard drawn steel wire fabrics IS 1566- 1967

Steel shall be supplied by the department where so stipulated in the contract. But where contractor has to arrange these steel products, he shall to the Engineer-in-charge a copy of the Manufacturer's certificate the Indian Standard to which the particular steel conform and the grade, if any, before it is incorporated in work.

6.3.2 Bending and Overlapping : Bending reinforcement shall confirm accurately to the dimensions and shapes as shown in the detailed drawings or as directed by the Engineer-in-charge. Bars shall not be straightened in a manner that will cause permanent damage to the materials. Bars with cracks shall not be used. Bars shall be bend cold to the shape and dimensions as shown the detailed drawings or as directed by the Engineer-in-charge.

Only bars of full lengths shall be used. But where this can not be done, over lapping shall be done as per the direction of the Engineer-in-charge. As far as possible, over lapping be could not be touch each other, but these shall be kept apart 25mm of 11/4 times the maximum of the coarse aggregates whichever is greater with concrete between them. But where not done the overlapping has shall be properly tied with annealed steel wire 1.00 mm to 1.60 mm thickness twisted tight. The overlaps shall be staggered for different bars and located at points along the span, where both shear bending moments are below.

Deformed bars may be used without hooks, provided anchorage requirements are adequately met with when hooks are formed in deformed bars, the internal radius of bend bars shall be at least 3 times the dia bars.

6.3.3 Placing in Position : all reinforcement bars shall be accurately placed in position with spacing and cover as shown in the drawing or as specified and firmly held so during the packing and vibrating and setting of concrete., bars shall be thoroughly cleared of rust, scales, grease, oil and any other foreign matter before placing them in position. The bars crossing one another shall be tied at every intersection with two standards of annealed wire 1.00mm to 1.60mm thickness twisted tight, to make the skeleton of steel work rigid so that reinforcement does not get displaced during deposition of concrete.The bars shall be kept in position by the following methods.

a) In case of beam and slab construction, sufficient number of precast over blocks in cement mortar 1:2 about 4 x 4cm section and thickness equal to the specified cover shall be placed between hard and shuttering, so as to secure and maintain the requisite cover of concrete over the reinforcement. In case of cantilevered or doubly reinforced beams or slabs, the main reinforcing bars shall be held in position by introducing chairs or support bars at 1.0 to 1.20m. centers.

b) In case of columns and walls, the vertical bars shall be kept in position by means of timber templates with slots accurately art in them. The templates will be removed after concreting has been done below it.

6.3.4 Inspection : Full details of numbers, sizes, lengths, laps, welds, spacing of bars placed in position in different parts of the works shall be recorded, certified and signed the Engineer-in-charge to shown that all reinforcement has been placed correctly as per sanctioned drawing or as ordered by the Engineer-in-charge. No concrete shall be deposited until the Engineer-in-charge has inspected and certified the correctness of reinforcement recorded the steel reinforcement by the Engineer-in-charge it will be the contractors responsibility to see that the reinforcement, spacing and arrangements are tampered with in anyway before concreting.

6.3.5 Measurements: Reinforcement including authorizes spacer bars and lapping shall be measured in length of different diameters, as actually used in the work nearest to a cm, and their weight calculated in Kg., on the basis of which steel is calculated in Kg. Wastage and unnecessary overlaps shall not be paid, for annealed steel wire required for binding shall not be measured. Its cost being included in the rate of reinforcement. Reinforced concrete shall be classified and measured separately as follows :

1. Footing, bases for columns etc. and mass concrete.
2. Walls (any thickness) including attached plasters, butteresses, plinth and string courses.
3. Suspended floors, roofs, landings, shelves and their supports and balconies.
4. Chajjasupto 15cm thickness shall be measured separately from those Exceeding 15cm in thickness including position on bearing wall.
5. Lintels, beams, girders and cantilevers.
6. Columns, pillars, posts and struts.
7. Stairs including balustrades.
8. Vertical and horizontal fins individually or forming box, lowers and bands.

The work under the following categories shall be measured separately.

i. in foundation.
ii. from foundation level to floor two level
iii. from floor two level to floor and so on; and
iv. RCC in parapet shall be measured together with the corresponding item in wall of the story next below.

No deduction shall be made for the following ;

1. ends of dismilar materials (eg. Joists, beams, posts girders, purlins, rafters upto 50Sqm cm. in section.
2. openingupto 100sqm.
3. volume occupies by reinforcement shall not be deducted, and
4. volume occupied by drainage, water popes, conduits etc. not exceeding 100 sq cm each in cross sectional areas shall not be deducted. Nothing extra shall be paid for leaving and finishing such cavities and holes. All plain, rebated, grooved.

7. WHITE WASH AND COLOUR WASH

7.1 Materials

White wash shall be prepared from freshly burnt stone lime. The unslacked item shall be placed in water tubes filled with water, allowed to slake for 2 or 3 days and frequently stories. When the liquor is of a thin cream like consistency, it shall be screened. Clean gum shall be added to the mixture.

7.2 Method :

Before application the walls shall be thoroughly cleaned. Surface shall be scrapped and smoothed off with a wire brush. White washing shall be applied with the held jute brushes, the brush strokes being given horizontally and then vertically. A vertically as a horizontal brushing done at the same shall be termed as "one coat of white wash".

The coats of white wash are generally required for new work. Mark of the breach should not be visible, when the work is finished.
When white washing is being done ,the floors must be protected with mats or bags. All stains from floors, doors or windows and other parts of the building shall be removed, when the white washing has been completed.

7.3 **Measurement:** Measurement will be as per sqm. of area.

7.4 Colour washing will be as per white washing except that colouring material is to be added to the white wash.

8. ELECTRIC WORKS

8.1 Internal Electrification Works

8.1.1 The details of internal wiring ,the position of fittings, fans, switches and plough sockets etc., are indicated in the layout drawings . The position of light fittings ,fans ,switch boards etc. indicated in these drawings are only for the guidance of the supplier and the actual positions of these shall be mutually decided between te supplier and the purchaser. For this the supplier shall submit to the purchaser for this consideration and approval of all run of wiring and the exact positions of all the points and the switch boxes firm by marked on the points of the building.

8.1.2 All internal wiring shall be done in conformity to the latest Indian Standar Specification /Rules, code of practice adopted by OPWD and other standards practices prevalent in that part of the country. For the purpose of the specification , the terminology used shall be as defined in IS:732 and IS:1356 for the definition of points wiring. The installations shall be carried out in conformity to all requirements of IE Act 1910 and IE Rules1956.
The following shall be deemed to be included in the point wirings:

a. Switch and ceiling rose as required in case of ceiling and exhaust fans.
b. In the case of wall brackets, bulk head fittings ,cables as required up to the lamp holders.
c. Bushed conduit for porcelain tubing, where cables pass through walls.
d. All wood or metal blocks ,boards and boxes, R.J. Boxes sunk or surface type including those required for an regulator but excluding those under the distribution boards and main control switch.
e. Earth wire from 3 pin socket point to the common earth including connection to the earth dolly.
f. Earth wire of 16/14 SWG GI wire for loop earthing of the fixture.
g. All fixing accessories such as clips, nails, screws, plugs, raw plugs, wooden plugs, round blocks etc. as required.
h. Joint for junction boxes and connection the same as required.
i. Connections to ceiling rose or connector socket outlet, lamp holder, switch, fan regulators etc.

The point wiring in case of fan and light points shall be the mean distance between the control switch and ceiling rose, connector or back plate, socket outlet or lamp holder depending upon the fittings , measured along the run of wiring irrespective of the number wires in run. n the case of socket outlet points ,the length shall mean the distance between the socket outlet and the tapping point of live wire on the nearest switch board or junction box, as the case may be.
In the case of exclusive socket outlet circuits wired on "Joint Box" system of wiring, any junction provided for extending the wiring beyond the point reffered to shall not be treated ask the nearest tapping point. In case of call bell/buzzer points the length shall mean the distance between the call bell and the ceiling rose/socket outlet or the

ball push(when the ceiling rose/socket outlet is not used).The connection between call bell and ceiling rose or bell push, if wired by flexible wire shall be paid extra on linear basis

Circuit wiring shall include the length of wiring along with 14 SWG GI wire for loop earthing from the sub distribution board up to the tapping point, that is up to the first switch shall be considered as circuit wiring. Such wiring has been classified on the basis of length.

Sub-main wiring shall include the earth wire of adequate size Main Distribution Board up to sub-distribution board (BDB).Such wiring has been classified on the basis of length. For the internal lighting either surface on conduit wiring system or recessed conducting or pattern wiring system shall be provided as specified in the bill of quantities and working drawings.

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

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

Conduit pipes shall be jointed by means of screwed couplers and screwed accessories only. In long distance straight run of conduits, inspection type couplers at [reasonable interval shall be provided or running threads with couplers and jam nuts shall be provided. Outer ends of conduit pipes shall not have sharp edges left to avoid damage to the insulation of the conductors, while pulling them through the pipes.

The switch or regulator box shall made of metal on all sides except on the front where bakelite sheet or porcelain painted to match the colours of the wall shall be used , in the case of surface wiring system. For recessed wiring system, these boxes shall be made flush with the conduct of each circuit or section and shall be completed before conductors are drawn in the entire system of conduit. After installation they shall be tested for mechanical strength and electrical continuity throughout. The earthing for the entire installation shall be carried out in accordance with TE Rules and Standards. The number of wires drawn in the conduits shall not exceed the numbers those specified ion Indian Standard Specification No.732.

8.1.3 Main and Sub-Distribution Boards:

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

The scope of this specification includes installation of the panel boards and distribution boards and making necessary connections. The installation of the boards shall be done strictly in accordance with the instruction supplied by the switch gear manufacturer. Indian Standard specification and I.E. rules. The supplier shall submit the details of installation to the purchaser for his consideration and approval, prior to installation.

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

8.1.4 Cable Installation Work:-

The cable are to be taken out from the cable erid boxes, provided on the lighting distribution board located in the substations to the concerned switch gear distribution boards for lighting located in the different buildings or from the nearest pole mounted fuse distribution box to the main incoming switch of the buildings. The scope of work under this specifications shall include providing connection at both ends and laying of the cable in ground.

The method of directly burying 600mm below the finished ground and shall be duly partitioned by bricks and protected on top by concrete slab all along the run or with top bricks coverings. The cables shall be laid within a reasonably thick bed of sand.The back filling of the earth shall be done in successive layers with watering and ramming and rest of about 100mm. Thick of earth shall be made on the trench.

When directly buried cable cross the roads, pipe lines, power and telecommunication cables, they shall be protected against technical damage.All necessary protection must be give to the cables as may be required for a particular Installation conditions, irrespective of whether it has been specifically shown in the drawing or not and to the entire satisfaction of the purchaser.

When the cable directly buried come out of the ground or enter the buildings they shall be laid in protective pipe properly clamped and sealed.

Buildings of GI pipes where required , shall be done so as to damage or deform the wall of the pipe. The installation of cable shall generally be carried out in accordance with Indian Standard Specification 1255.

8.1.5 Earthing:-

Earthing shall generally be carried out in accordance with the requirement of Indian Electricity Rules and the relevant rules and regulations of electrical supply authorities .The complete earthing work for the installation covered by these specifications shall also be provided, taking in to account Indian Standard Specification No. IS732 and IS3043.The earthing system adopted shall also have adequate mechanical strength.

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

8.1.6 Installation ,Testing & Commissioning:-

The supplier shall be responsible for the installation, testing and commissioning of all the equipment and materials supplied by him against this specification. This shall also include the Provision of miscellaneous wiring and supports and earthing in compliance with Indian Electricity Rules and to the full satisfaction of the Government Electrical Inspector.

All small items such as clamps, bolts, nuts, supports, miscellaneous wiring etc., required to make the installation complete, have not been specified separately. All the items required to make the installation complete, shall constitute the part of major items specified in the bill of quantities and the tender should quote for each item taking these in to consideration.

The responsibility of the supplier shall include receiving all the equipment and materials at site, storage for the required period, handling the same at the site of erection, final erection, revision of equipment, if any, testing and commissioning and handling over the installation complete ion all respect to the entire satisfaction of the purchaser's

authorized representative. The supplier shall make good of all the damaged equipment and materials during this period, at his own expense.

The supplier shall submit samples of each and every equipment and materials for the final approval of the purchasers representative. Immediately after the acceptance of offer all the equipment and materials shall be supplied exactly as per to the approved samples. If any stage the purchaser brings to the notice of thee supplier and discrepancy or defect, the supplier shall replace the same at his own expense.

The supplier shall render all reasonable assistance to the Purchaser's ion getting the installation approved by the Government Electrical Inspector prior to imaginations and supply necessary drawings, test certificates and also for test, which the inspector may demand. In case any additions or alternations are required to be made in this installation or ion the equipment as per the directive of the Government ELECTRICAL Inspector/ Local Authorities, the same will have to be carried out by the supplier, at his own expense.

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

8.1.7 Standard :

Unless other wise specified, all switch gears, equipment and materials covered under this specification shall be designed, manufactured, tested and installed in conformity with the latest Indian Standard Specifications or B.S. Specifications, wherever Indian specifications are not published for such items. All equipment shall conform to the latest Indian Electricity Rules P.W.D., and Local/State /Bye laws as regards safety, earthing and other essential provisions specified therein.

All the equipments and materials selected shall be also be supplied and installed taking into consideration the Factories Act, Fire Regulations and local laws/byelaws. All lighting, fittings and equipment selected shall be of well tried out design. All the materials, used in the assembly of fittings and their accessories, shall be high quality and manufactured in accordance with the best modern practice.

All the materials supplied by the Contractor, according to the contract conditions, will be subject to inspection and approved by the Engineer or his representative from time to time. The contractor will provide all facilities of such inspections free of cost. At the time of inspection the Engineer or his representative will have a full liberty to reject any such materials which do not on firm to the specification or requirement. No claim for any rejected materials will be entertained by Employer. The contractor will remove all rejected materials from site at his own cost.

No surplus materials produced by the contractor will be accepted by the Engineer.

The contractor will be responsible to get the electric Installation cleared by the Electrical Inspector of Orissa Government. Only the inspection fee will be rembursed on production of chalan copy.

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

The bus bars with aluminium conductors shall be provided and PVC sheet of different clour shall be mountain in them, for easy identification. Botted type joints for taking the riser connections, instead of clamped type shall be preffered.

Two bolted type earthing terminals shall be provided on the switch boards. All individual switches shall be connected with suitable size earth wire to the main earthing terminals of the switch board.
Danger boards and shock treatment charts shall be supplied, where ever required.

8.1.8 Installation & Maintenance Tools :

The supplier, along with this bid, shall furnish a complete list of tools, appliances and accessories required for the installation of switch gears, light fittings, pipes, cables and wires.

8.2 Drawings :

All drawings, test certificate instruction manuals etc. shall be in English language and all dimensions and weights shall be in metric units.
The tender shall submit with their tender the general arrangement drawings for the installation works, typical methods of cabling and cable supports, pipe work and pipe supports, typical methods of earthing and fixing of light fittings, earthing etc. as offered by him in the tender.
The Contractor shall submit for the Purchaser's approval, all layout and general arrangement drawings as well as the typical details of all types of installation work in three sets, before commencing the manufacturer and the site installation work well in advance so that the site work shall not suffer.
After obtaining approval of the above drawings, the Contractor shall supply three sets of the following drawings.

a. The arrangement and support of conduit pipe.
b. The position of lights, switches, plug sockets and switch-boards.
c. Earthing installation.
d. Lay out plan showing the entire cable network.

On completion of work, the successful tender shall supply one set of tracing ion transparent line and five sets of prints of all the drawings incorporating all the changes/modifications effected during the execution of the contract. All wiring and the position of all the points also be supplied in triplicate to the purchaser after the complete of the installation work.

8.3 Tests :

Manufacturer's standard tests in accordance with Indian standard and other standards adopted shall be carried out on all equipment and accessories covered by this specification, so as to ensure efficient and satisfactory performance of all the components and also the equipment as whole under working conditions as site. The tender shall submits a complete list of all such tests. If the purchaser, if so desire for special tests to be carried out under certain conditions, the same shall be made by the successful tender at his own expenses.
All equipments shall be tested at site before the commissioning in accordance with the adopted standard and Indian Electricity rules. Voltage tests shall be carried out on each circuit on completion of wiring and cabling.

8.4 TECHNICAL DATA:

The tenders shall submit with their tender all such technical data, which are required for complete elevation of the equipment offered. The suppliers shall give complete technical information of the equipment as detailed in Annexures and relevant Indian

standards. The tenderer should supply such details of all equipment and materials offered specially with regard to the following.

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

The tenderer shall also give along with his tender the following details.

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

8.4.1 Switches and Plug-sockets :

Switches provided for control of light points shall confirm to ISD:1087 and shall be rates for 5, 250VV or 15A, 250V as required.
The plug-sockets provided in all the places shall be three pin type. The box sockets shall be flush mounted type.

8.4.2 Celling fans & Exhaust fans :

Ceiling fans shall conform to Indian Standard Specifications IS:374 1960. The fans shall be supplied with all standard accessories like regulator and capacitors etc.
The performance rating of the propeller fans shall in accordance with stipulations of IS:2312. All the fans shall be robust in design and construction and shall supplied complete with wall bracket clamp etc.

8.4.3 Fluorescent Fittings :

All fluorescent fittings supplied shall conform ion general to IS : 1913 and shall be complete with all standard accessories like choke, started and capacitors etc.
The type of enclosure provides for the fittings shall be that specified in the bill of quantities and the working drawings. The materials of construction of fittings used outdoor installations and for use in the work and shall be such that they shall withstand the atmospheric condition in that area.
Lamp holders used shall be fully shock proof, spring loaded, rotary type ensure positive lamp locking. It should also be nor possible to touch live parts of the lamp-holder both after the lamp has been taken out and during the insertion or removal of the lamp.

8.4.4 Makes :

1.	Switches and plug sockets, switches provided for control of light, fan plug points, shall confirm to IS 1087 & shall be rated for 5 Amps 250V 15A 250V as required.	
2.	The plug sockets provided in all the places shall be three pin type. The sockets shall be flush mounted type.	
2.1	5A FT switch socket and plug ball push	Anchor/Cona/CPI having ISI mark
2.2	15Amps switch socket and plug ball push	-: do :-
2.3	B.K. Angle Holder	-: do :-
2.4	Superior type Bulk head with prermetative glass Steel guard water and dust proof including holder (Porcelain)	Bajaj/GEC/Crompton

2.5	ICB/DB made of 16 GI sheet painted with Red Oxide Paint in 2 coats and one coat of grey paint with Red 15 Amps, 240V. cut out and neutral base having hinged type arrangement with bass screen.	Anchor/GEC/ Crompton/ Havels/ C&S
2.6	16 Amps 322 A ICDP main switch.	B.P.C./ Crompton J.J./Havels/C&S
2.7	16mm2 / 2.5.mm2 / 4mm2 PVC	Having ISI Mark
2.8	M.S. board of 16 guage M.S. sheet duly painted With red oxide paint in two coats and one cost of Grey paint with 3 mm. Thick white bakelite cover.	

3. Pollythene pipe superior quality with an uniform thickness of 3 mm conforming to relevant ISS: 6946/1973 (Non-metallic flexible conduits for electrical wiring)

4. M.S. Conduit pipes of 16 SWG conforming to IS 1653/72 with amendments upto date.

9. WATER SUPPLY AND SANITARY INSTALLATION

9.1 GENERAL SPECIFICATION :

The Agency/supplier shall be responsible for the installation, testing the commissioning of all the and materials supplied by him against the specification. All the item required to make the installation complete, shall constitute the part of major items specified in the specification/drawings and as prescribed in bill of quantities and tenders should quote for complete item, taking into consideration the major items required, if any, for finished item work.

Position of valves, porcelain, installation, C.I., pipes, GI pipes etc. inside toilets, ducts and position of external services etc. shown in the drawing are only indicative. The actual position services of these shall be decided at site by the Engineer-in-charge.

The contractor is not at liberty to charge any extra cost for the related item on account of this. All the materials supplied by the contractor according to the contract conditions will be subject to inspection and approval by the Engineer or his representative from time to time in order to certify them that they are up to required standards. The contractor will provide all facilities of such inspections free of cost. At the time of inspection, the Engineer (owner) or his representative will have a full liberty to reject any such materials, which do not confirm to the specifications/requirement. No claim for any rejected materials, will be entertained by the owner. The contractor will remove all the rejected materials from site at his own cost &risk., No surplus materials procured by the contractor will be acceptable by the contractor.

These materials having I.S. specifications, shall be available best make and quality and the same make is to be approved by the Engineer-in-charge of the work before putting in use by the contractor.

All the materials shall be supported with manufacturer's test certificate.

In case of any dispute or variation in any opinion, the decision of Engineer-in-charge or his representative is final.

During testing if any component /item/any materials found to be defective, the same have to replaced/rectified by the contractor at his own cost and risk.

During execution and till handover of work to the Department, the contractor will be the custodian of the materials, and all items of work and any theft, loss damages in this regard shall be accounted at the risk and cost of the contractor.

The measurement of any item of work shall have to be agreed both by Department and Contractor.

During payment any item, some percentage at the item (depending upon gravity of the item) have to be make withheld by the Engineer-in-charge of the towards testing, when

in turn depends upon the quality. The same will be released only after successful testing.
The contractor to has make good of all the damaged items and materials during his working period at his own expenses and risk.
All the item will be executed as per latest relevant Indian Standard if found more, other than the list of I.S. attached.
During execution the drawings attached herewith will also be followed in addition to Indian Standard and detailed specifications.
All the items of works include cost, conveyance, taxes of all materials, specials, jointing materials, labour T&P including cost of all other related components, that are required for finished item of work including testing and commissioning.
The contractor will be responsible for successful commissioning and testing of complete of external and internal water and sanitary system, fire fighting water supply system., The contractor is to handover the work to the Department only after successful testing and running of complete system.

9.2 EXTERNAL SEWERAGE SYSTEM:

The scope includes collection of disposals from inspection chambers through a 150mm dia S.W. pipe line and man holes which will be connected to septic tank.
150mm. dia glazed stone ware pipe line is to be laid to proper slop confirming to relevant IS payment will be made for finished catch meter line, which includes excavation in all kinds of soil rock upto 1.50m depth, bed concrete 1:3:6 of 150mm. thick with 40mm. size hard granite metal as per IS:383-1970 and cement IS 269-1976, laying pipe line, jointing with tarred gasket and CM (1:1) haunchingalround of 150mm. thick with CC 1:3:6 as mentioned above, curing testing filling trenches with excavated materials.
Required man holes of size (1200 mm x 900 mm) size 1000 mm will be provided along the lines as shown in the layout drawing whose exact position will be as per field condition. Payment will be made for each man hole which includes excavation in all kinds of soil/rock, bed concrete 150mm thick of CC 1:3:6 with 25 to 40 mm size black hard granite metal, 250mm thick 1st class K.B. brick masonry in CM (1:4) cement flush pointing (1:3) to out side benching with CC 1:2:4 with 12mm size granite chips C.P.(1:4) with cement punning to all inside surface excluding roof, channeling and finishing RCC (1:2:4) in floor slab of 150 mm thick using Fe-415 grade for steel rods @1.5 Qntl/m3 of concrete, Centering shuttering 600mm dia RCC cover slab with handles, filling cavities round the structure, etc. and as directed by the Engineer-in-charge.
Extra payment will be made for each additional depth of 0.10 mm for above man hole beyond specified depth of 1.00 m.
The contractor is to connect the new sewer line to existing man hole, including making good to the damages.
All the items includes cost conveyance, taxes of all materials and labour T&P latest relevant supporting IS if found more is to be followed during execution. Also the work is to be taken up as per relevant annexed supporting drawings.

9.3 INTERNAL WATER SUPPLY

Delivery G.I. lines of sizes as in drawing (TATA medium quality ISI certification mark) will run from O.H. tank to respective floors through duct.
Separate rate payment will be made to the contractor per mtr. Length of GI line for laying inside RCC door, inside duct and on side ground where required. The rate will include cost GI pipe (socked joined), all special socked jointing materials threading labour& T&P, testing, laying pipe lines in above situations in all floors, as per detailed specification of bill of quantities.
Separate rate will be paid for fixing of each regulating valves and cocks, along the line in all floors whose unit rate includes cost of valves fitting jointing materials and testing

etc. all the materials will carry ISI certification mark. All the joint will screwed threaded joints. The GI lines inside toiler will be of concealed wiring which will be embedded ion wall with groove 75 x 100 mm and making good to the damages. The detailed specifications for laying& jointing will be followed as per detailed as in bill of quantities.
All the connecting valves shall confirm to IS 778. all the GI lines will be painted with two coats of anticorrosive paint before putting into use. All the valves shall be of brass valves and the taps (COCKS) shall be of CP on brass fittings.

The rate for water cooler of reputed make with complete installation have to be quoted per each including testing.
All the finished item includes cost conveyance, taxes of all materials and labour T & P.

9.4 INTERNAL SEWERAGE SYSTEM :

100mm Dia SCI pipes line separately for floor/basin & night soil/urinals waste with50mm diaantisyphone line will run inside duct fixed with wall surface by bobbins, clamps and pins as required depending upon site condition between 4th floors. Further 100mm dia SCI and 50mm dia SCI/GI lines will run inside RCC floors slab as required for collecting waste from different points to junction/grating points.
Payment will be made per mt. length to above size of lines which includes cost of pipes, all special are required like bends, junctions, tees, pass over, cross overs, traps, offset, H.R. bend, vent trap, bottle trap, gratings etc. for connecting pipes with different fixtures for smooths conveyance/ collections from various points including supply of all jointing materials for cement components (1) with gasket to outside joints and \lead joints to the joints coming inside toilet with all labour T&P painting pipes and fixing with two coats of anticorrosive paints.
The position/type of fitting will be as per requirement of site condition which is subject to change. The contractor have brief idea from the drawings.
Payment will be made for each complete installation of porcelain furnishing like WEC and IWC with low level cistern of 10 lits. Capacity, hand wash basin, gents & ladies urinal etc., which includes cost of complete installations with all ancillary components & jointing materials, labour T&P and testing. The detailed make specification shall be as per IS lists and detailed bill quantities.
Inspection chambers of sizes 900 x 800 mm will be made per each basis. The specification of the same will be as that of man hole chambers, but only instead of 600 dia RCC hole cover, 600 CIMH hole weighting to 40 kg will be used.
Gulley trap chambers will be constructed where required depending upon site condition as per detailed specification as in drawings.
White/coloured glazed ceramic tiles conforming to IS 777-1970 will be fixed on toilet wall surface on base plaster of 12 mm thick CP (1:3) and joints finished smooth with white cement etc.
The position of porcelain furnishing may get changed during actual execution depending upon site condition for which the contractor is not at the liberty to charge extra cost account of using extra cost on account of using extra pipes fittings specials of SCI/GI/CP as required for smooth connection to disposal points.
All the GI and SCI lines will paint anti corrosive paint before putting into use.

10. <u>WOOD WORK</u>

10.1 Wood work shall be executed with sound, well seasoned timber of the variety specified and the best of its kind available.

10.2 Timber will be sawn, dressed or planed as required and when finished must be true to the sections as per drawings and/or specifications. The joints shall be simple, efficient

and well fitting and according to the best carpentry standards and suitable for the type of stress the joints have to transit.

10.3 No wedging or filling shall be allowed ion the joints, should any gaps ion the joints, other than those caused by the natural shrinking of seasoned timber be noticed before the expiry of six months after completion of work, such work shall be rejected, or rectified, if allowed by the Engineer-in-charge at the contractor's cost. The contractor shall also be responsible to give well fitting joints and easy working of doors and windows after doings necessary rectification of defects arising out of natural shrinkage till the expiry of six months after completion of the work.

10.4 Detail specification for the under noted classes of timber work are given in the numbered paragraphs which follow :

1. Structural timber in roof trusses, rafters, batterns, beams, posts, etc.
2. Door shutters.

11. PAINTING

Standard paints of reputed company as per direction as per direction of Engineer-in-charge is to be used. The methods differ slightly according to the nature of the surface to be treated and are described in the following paragraphs separately for iron, wood and plastered surfaces. In the entire surface shall first be cleaned and otherwise prepared for application of the pints. The painting itself generally consists of two or more coats applied in succession after the previous coat has dried. The first coat is called "priming" coat and generally is of a different composition from the following coats. Usually on a new surface two coats of paint over a coat of priming are required. In applying paint the greatest uniformity is attained by using a spraying outfit. Good results are however obtained by using proper paint brushes Rags must never be used, as not only good work can not be done by this method, but there is serious danger to workmen, when using lead paints. When using a spraying machine, precautions are necessary to prevent from coming into contact with the skin of the workmen, as lead paints are dangerous when inhaled or in contact with skin., when spraying, it is desirable for the protection of the workmen to provide them with masks, goggles, gloves and also special overalls. While painting is in progress, the paint in the pot shall not be allowed to settle but shall be kept stirred, so as to be of uniform consistency. The surface of the paint shall be protected from dust and dirt, as long as it is soft or wet enough to absorb dust. After the day's work the brushes or spraying machines must be cleaned of all paint with the help of turpentine etc., or else they will become clogged on drying of the paint.

12. STEEL AND IRON WORK

Joints channels, Tees, angles, squares, rounds, flats and other rolled sanctions shall be originally straight unless curved length are specially ordered for structural pieces like fame work for domes, curved lintels, etc. any cutting required shall be done accurately by machine or with a hack saw. If accidently bend in transit or otherwise, provided that the metal is not damaged, they may straighten by pressure but not by hammering. Heat must not be applied except with the special permission of the Chief Construction Engineer. When heat is applied this should be done from flames smokeless or by other suitable means to prevent carbon getting mixed with the steel and interfering with its physical properties.

CHAPTER VI

DRAWING

N.B. All the relevant approved drawings for this work are available in the Office of the **Superintending Engineer, Kanupur Rehabilitation Camps & Building Division, Basudevpur,Dist.-Keonjhar**.