

**KARNATAKA URBAN WATER SUPPLY AND
DRAINAGE BOARD**

BID DOCUMENT FOR

**Providing 24x7 Water Supply System
(Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24,
28, H-10 & D-24 of Hubli-Dharwad twin city under
UWSS.**

Part-A

**Study, Survey, Preparation of Base map,
Conditional Survey, Assessment of NRW,
Customer Survey, Analysis, Design & Drawing.**

Part-B

**Providing and Laying of 762, 660, 508 & 457 mm
dia MS Feeder Mains.**

Part-C

**Providing & Laying of 250mm, 300mm and
400mm dia D.I. and 75mm, 90mm, 110mm,
160mm, 200mm dia HDPE pipeline for 24x7
distribution system.**

Part-D

**Operation and Maintenance of 24x7 distribution
system for a period of 5 years.**

GENERAL SPECIFICATIONS

**OFFICE OF THE
CHIEF ENGINEER (NORTH)
KARNATAKA URBAN WATER SUPPLY
AND DRAINAGE BOARD, DHARWAD**

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TECHNICAL BID

**OFFICE OF THE
CHIEF ENGINEER (NORTH)
KARNATAKA URBAN WATER SUPPLY
AND DRAINAGE BOARD, DHARWAD**

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

BID DOCUMENT FOR Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

Part-A

**Study, Survey, Preparation of Base map,
Conditional Survey, Assesment of NRW,
Customer Survey, Analysis, Design & Drawing.**

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**Providing and Laying of 762, 660, 508 & 457 mm
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400mm dia D.I. and 75mm, 90mm, 110mm,
160mm, 200mm dia HDPE pipeline for 24x7
distribution system.**

Part-D

**Operation and Maintenance of 24x7 distribution
system for a period of 5 years.**

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Chapter 7: Sample Forms of Acceptance and Agreement
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Chapter 10: Standard Specifications.

To,
The Chief Engineer (North),
Karnataka Urban Water Supply & Drainage Board,
Jalamandali Compound,
DHARWAD.

PARTICULARS OF THE TENDER

1.	Tender / Contract No.	:	No. KWB / CE-N / SGEE-BGM / DCE-1 / TA-5 / AE-3 / TND / 2012-13 / 2431 Dtd: 04-12-2012
2.	Name of the Project	:	Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.
3.	Name of work	:	Part-A Study, Survey, Preparation of Base map, Conditional Survey, Assessment of NRW, Customer Survey, Analysis, Design & Drawing. Part-B Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains. Part-C Providing & Laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for 24x7 distribution system. Part-D Operation and Maintenance of 24x7 distribution system for a period of 5 years.
4.	Amount put to Bid	:	Rs. 64,65,10,687/-
5.	Bid security	:	Rs. 96,98,000/- (Rs. NintySix Lakhs and Ninety Eight Thousand only). The Bid Security may be paid through e-payment. The payment through NEFT/RTGS challan shall be made atleast one day prior to the closing time and date for submission of Bid.
6.	Cost of blank Bid document (Non-refundable)	:	Rs. 15,750/- (Including all taxes). The cost of Bid Documents may be paid through e-payment. The payment through NEFT/RTGS challan shall be made at least two days prior to the closing time and date for requisition for Bid documents
7.	Last date for receipt of Bids	:	22-01-2013 upto 17.30 hours.

Contractor

Employer/Engineer

8.	Signature of issuing officer with date and seal	:	Chief Engineer (North), KUWS & D. Board, DHARWAD.
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NOTE:

1. The contractor has to quote the rates for all Components.
2. The incomplete bids will not be considered for acceptance.
3. The right to reject any or all the bids rests with the Chief Engineer (North), K.U.W.S & D. Board DHARWAD.
4. Non-receipt or delay in receipt of Bids within due date, due to any reason will not be accepted.
5. For any dispute pertaining to the package tenders, the decision of Managing Director K.U.W.S & D.B Bangalore is final and binding.
6. Legal proceedings if any pertaining to the package tenders is with Dharwad city jurisdiction only.

**Chief Engineer(North),
K.U.W.S. & D Board, Dharwad.**

	<u>Abstract of Tender</u>	
1.	Name of the Project:	Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.
2.	Name of the Work:	<p>Part-A Study, Survey, Preparation of Base map, Conditional Survey, Assesment of NRW, Customer Survey, Analysis, Design & Drawing.</p> <p>Part-B Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.</p> <p>Part-C Providing & Laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for 24x7 distribution system.</p> <p>Part-D Operation and Maintenance of 24x7 distribution system for a period of 5 years.</p>
3.	Sanctioning Agency:	Karnataka Urban Water Supply and Drainage Board, Bangalore. Phone –(080) 41106503, Telefax: (080) 26539206

4.	The Employer:	The Chief Engineer (North), Karnataka Urban Water Supply and Drainage Board, Jalamandali Compound, Dharwad. Phone – (0836) 2447090, Fax: 0836 – 2446890
5.	a) Date of issue of Blank Tender Schedules (Bid Documents)	7-12-2012 to 21-01-2013 upto 17.30 Hours.
	b) Last Date and Time for receipt of Bids: (In Duplicate: Clause 23, Instructions to Bidders)	22- 01 -2013 up to 17:30 Hours.
	c) Pre-Bid Meeting: (Clause 20, Instructions to Bidders)	3-1- 2013 at 11:00 Hours
6.	Period of Tender Validity: (Sub-Clause 17.0, Instructions to Bidders)	120 (One hundred twenty) days.
7.	Amount of Bid Security: (Subclause 18.1, Instructions to Bidders)	Rs. 96,98,000/- (Rs. NintySix Lakhs and Ninety Eight Thousand only). The Bid Security may be paid through e-payment. The payment through NEFT/RTGS challan shall be mad atleast one day prior to the closing time and date for submission of Bid.
8.	Performance Security: (Sub-Clause 42.0 Instructions to Bidders, and Clause 10, General Conditions of Contract)	:: Total 6% of the Contract Price in the form of an Unconditional Bank Guarantee from any Nationalised Bank or Banking company registered under the Companies Act 1956 to be provided within 28 days of the date of Letter of Acceptance to be valid until completion of the Project and defects liability period.
9.	Retention Money:	:: Not included.
10.	Refund of Retention Money:	:: Not included.
11.	Advance Payment: (Sub-Clause 60.7, General Conditions of Contract and Clause of Special Conditions of Contract)	:: - DELETED -

12.	Period Within Which Formal Agreement Shall be Executed After Notification by the Employer:(Clause 41, Instructions to Bidder, and Appendix to Tender)	:: Within 21 (Twenty one) days of the date of the Letter of Acceptance.
13.	Latest Date Allowed for Starting the Work: (Sub-Clause 41.1, General Conditions of Contract, and Appendix to Tender)	:: Within 21 (Twenty one) days from the date of issue of the notice to proceed.
14.	Completion Time: (Sub-Clause 1.2 of Instructions to Bidders, Sub-Clause 43.1, General Conditions of Contract, and Appendix to Tender)	:: (i) Maximum 24 (Twenty four) Months including monsoon Period from the date of issue of the Notice to Proceed. No extension of time will be allowed without justified reasons. (ii) Operation & maintenance period of 60 months from the successful date of commissioning including 12 months of defect liability period.
15.	Amount of Liquidated damages for Delay in Completing Works: (Sub-Clause 47.1, General Conditions of Contract, and Appendix to Tender)	:: 1 % (One percent) of the amount put to tender for every 100% of delay subject to a maximum of 7.5% of amount put to tender.
16.	Defects Liability Period: (Sub-Clause 49.1, General Conditions of Contract, and Appendix to Tender)	:: 365 (Three hundred and sixty five) days from the date of Substantial Completion of the Works, as certified in the taking Over Certificate, or of any Section which has a separate substantial completion date.
17.	Currency of Payment:	:: Indian Rupees
18.	Deduction of Advance Income Tax and Advance Works Tax: (Sub-Clause 60.10, General Conditions of Contract, and Appendix to Tender)	:: As per the prevailing Tax Rules of the Government of India and the Government of the State of Karnataka.

19.	Deduction of Royalty for Materials Used. (Sub-Clause 60.1, General Conditions of Contract, and Appendix to Tender)	:: As per the prevailing rates established under the Karnataka Minor Minerals Concession Rules, 2007 as provided in Chapter 3, Special Conditions of Contract.
20.	Karnataka Building and other construction workers Welfare cess (Sub Clause 60.1 General Conditions of Contract and Appendix to Bid)	: 1% (One percent) cess on the total tender amount will be recovered from the Bills of the Contractor under building and other Construction Worker's Welfare Cess Act 1996 as per the Government Order No. LD/ 300/LET / 2006 Bangalore dated 18-01-2007 .

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

BID DOCUMENT FOR

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

Part-A

Study, Survey, Preparation of Base map, Conditional Survey, Assessment of NRW, Customer Survey, Analysis, Design & Drawing.

Part-B

Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.

Part-C

Providing & Laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for 24x7 distribution system.

Part-D

Operation and Maintenance of 24x7 distribution system for a period of 5 years.

INVITATION FOR BIDS

**OFFICE OF THE
CHIEF ENGINEER (NORTH)
KARNATAKA URBAN WATER SUPPLY
AND DRAINAGE BOARD, DHARWAD**

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

BID DOCUMENT FOR

**Providing 24x7 Water Supply System
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UWSS.**

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**Study, Survey, Preparation of Base map,
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Part-D

**Operation and Maintenance of 24x7 distribution
system for a period of 5 years.**

CHAPTER-1

INSTRUCTIONS TO BIDDERS

**OFFICE OF THE
CHIEF ENGINEER (NORTH)
KARNATAKA URBAN WATER SUPPLY
AND DRAINAGE BOARD, DHARWAD**

CHAPTER 1: INSTRUCTIONS TO BIDDER

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Chapter 1: INSTRUCTIONS TO BIDDERS

A : GENERAL

Karnataka Urban Water Supply and Drainage Board has introduced electronic tendering process to enhance transparency through automation in the tendering process. All the tenders are invited through electronic tender only. In this electronic tendering process, the bid documents are being obtained and as well as the bids are submitted to electronic tender box through Internet only.

1. SCOPE OF BID

1.1 The Chief Engineer, Karnataka Urban Water Supply and Drainage Board, hereafter referred to as “the Employer” wishes to receive bids for

The scope of work under this contract includes the following under,

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

The scope includes survey, establishing sufficient Benchmarks, Design and preparation of working drawing and approval from competent authority, implementation & successful commissioning of 24x7 water supply system in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli & Dharwad twin city including providing and commissioning of House Service Connections and also operation & maintenance for a period of 60 months including 12 months defect liability period.

– ITEM RATE

Part-A - Study, Survey, Preparation of Base map, Conditional Survey, Assesment of NRW, Customer Survey, Analysis, Design & Drawing.

Part-B - Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.

2. Providing, Laying, Jointing, Testing and Commissioning 660 mm, 508mm & 457 mm dia (OD) M.S Feeder Main From Nrupathungabetta to Keshwapur, HDMC Park & Tabib Land Service Reservoirs in Hubli City.

Part-C- Providing and laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for continuous pressurised Water Supply (24x7) distribution system including house service connections.

1. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone - 8 from ESR at Mahadevi layout for 24x7 Water Supply (Phase-I, Part-2) in Hubli city.
2. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone- 10 from N R Betta GLSR for 24x7 Water Supply (Phase-I, Part-2) in Hubli city.
3. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone H-17 from ESR at Gabbur for 24x7 Water Supply (Phase-I part-1) in Hubli city.
4. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone - 24 from ESR at Gulaganjikoppa for 24x7 Water Supply (Phase-I, Part-2) in Dharwad city.
5. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone - 28 from GLSR at Saraswatpur for 24x7 Water Supply (Phase-I, Part-2) in Dharwad city.
6. Providing pressure relief valves & water meters for the distribution system executed in Water Zone- 1 from ESR at Tabib land for 24x7 Water Supply (Phase-II) in Hubli city.
7. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone D-24 from ESR at K C Park for 24x7 Water Supply (Phase-I, Part-2) in Dharwad city.
8. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone H-10 from proposed 15 LL RCC ESR at Keshwapur for 24x7 Water Supply (Phase-I part-2) in Hubli city.

Part-C- Operation & maintenance for a period of 60 months from the successful commissioning of the proposed 24 x 7 distribution system in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli & Dharwad twin city of Hubli-Dharwad water supply system including 12 months defect liability period.

2. The successful bidder will be expected to complete the Works within **24 (Twenty four) Months, including monsoon period**, from the date of issue the Notice to Commence the Work.
3. Throughout these bidding documents, the terms "bid" and "tender" and their derivatives (bidder / tenderer, bid / tender, bidding/tendering, bidding documents/ tender documents, etc.) are synonymous, and "day" means calendar day.

2. Source of Funds

The detailed estimate for Providing 24x7 Water Supply System (Phase-I part-2) in water zones 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city"- under UWSS amounting to Rs. 7100.00 Lakhs has been approved by the Government of Karnataka vide G.O.No.UDD/02/UWS-2012, Bangalore Dated: 08-10-2012. The draft tender schedules amounting to **Rs. 64,65,10,687/-** is prepared.

3. ELIGIBLE BIDDERS

1. This Invitation to Bid is open to bidders from India who fulfils the following Financial & Technical Eligibility Criteria

a) Financial Eligibility

i) Annual Turn over :-

1) The Bidder should have in the last five financial years achieved in three maximum Turn over years a minimum average annual turnover of Rs. 6465.10 Lakhs.

2) Assessed available Bid capacity should be more than the Bid value. The available Bid capacity will be calculated as $A \times N \times 1.5 - B$

Note: A = Maximum value of work executed in any one year during the last 5 years.

N = Number of years prescribed for completion of work.

B = Value of existing commitment and ongoing works.

The Bidder should provide the above details along with the Bid. Failure to submit the details will lead to disqualification of the Bid.

The necessary balance sheets certified by the Chartered Accountant for the last five financial years shall be scanned and uploaded through web only. No hand copy is acceptable.

b) Technical eligibility:-

- 1) The Bidder should have satisfactorily completed Water Supply / UGD project work with value of work done in any one project not less than Rs.3233.00 Lakhs during the last five financial years.
- 2) (i) The Bidder should have satisfactorily completed the MS / DI Pipeline for a length of 5000 Mtrs. (Minimum 250 mm dia) and HDPE pipeline for a length 65000 Mtrs. (Minimum 63mm dia) in one or more projects during the last five financial years
(ii) The bidder should have completed the providing distribution system under 24x7 in one or more projects during the last five financial years to the minimum of Rs. 3233.00 Lakhs.
- 3) The bidder should have satisfactory experience in 24 x 7 with operation and maintenance for atleast two years in one or more projects during the last five financial years fulfilling the required parameters.
- 4) The bidder should have carried out the work of house connections with minimum No. of 5,500 under 24X7 water supply distribution in one or more projects during the last five financial years.
- 5) Experience certificate from the competent Government / Semi Government shall be furnished. The certificate furnished should be issued not below the rank of the Executive Engineer. In case of Government / Semi Government authorities.

Note:

1. Weight age of 10% per year will be added to the Annual Turn Over and also to the value of completed works of previous Years to bring them to the price level of financial year 2012-13.
2. It is mandatory to upload the various technical and financial eligibility requirements and also fill up the formats mentioned in various chapters of the bidding documents. The incomplete bids shall be considered as substantially non-responsive.

2. The bidder shall not be affiliated with a firm or entity which as provided consultancy services during the preparation stages of the work or of the project of which the works forms a part of which has hired (or proposed to be hired) as Engineer for the contract.

3. The bidder shall provide such evidence of their eligibility satisfaction to the employer if the employer so desires.

4. ELIGIBLE MATERIALS, EQUIPMENT, AND SERVICES

1. The materials, equipment, and services to be supplied under the Contract shall have their origin in India, and all expenditures made under the Contract will be limited to such materials, equipment, and services. At the Employer's request the bidder having offered the lowest evaluated bid may be required to provide evidence of the origin of materials, equipment, and services satisfactory to the Employer.
2. For purposes of Clause 4.1 above, "origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing or substantial or major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

3. QUALIFICATION OF THE BIDDER

- 5.1 The bidding document will be issued to Contractors/Firms who submit their requisition along with cost of bid through only in the form of e-payment. The request of bid document through NEFT or RTGS shall be made at least two days prior to the closing date and time mention in the Bid Notification for receipt or requisition for bid document. DD will not be accepted..

6. ONE BID PER BIDDER

1. Each bidder shall submit only one bid. A bidder who submits or participates in more than one bid for the particular Works will be disqualified. The limitation however will not apply in respect of bids which include specialist. Sub-contractors or named equipment suppliers who are used by more than one bidder.

7. COST OF BIDDING

1. The bidder shall bear all costs associated with the preparation and submission of his bid and the Employer will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

8. SITE/FIELD VISIT

1. The bidder is advised to visit and examine the site of works and its surroundings and obtain for himself on his own responsibility all information that may be necessary for preparing the bid and entering into a Contract for construction of the Works. The costs of visiting the site shall be at the bidder's own expense.
- 8.2 The bidder and any of his personnel or agents will be granted permission by the Employer to enter upon his premises and lands for the purpose of such inspection, but only upon the express condition that the bidder, his personnel and agents, will release and indemnify the Employer and his personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of the inspection.

B- BIDDING DOCUMENTS

9. CONTENT OF BID DOCUMENTS

1. The bidding documents are those stated below, and should be read in conjunction with any Addenda issued in accordance with Clause 11:

	Abstract of Tender
	Invitation for Bids
Chapter1:	Instructions to Bidders
Chapter 2:	General Conditions of Contract
Chapter 3:	Special Conditions of Contract
Chapter 4:	Special Specifications
Chapter 5:	Form of Bid, Appendix to Bid, & Qualification Information.
Chapter 6:	Bill of Quantities
Chapter 7:	Sample Forms of Acceptance and Agreement
Chapter 8:	Sample Form of Securities
Chapter 9:	Drawings
Chapter 10:	Standard Specifications

- 9.2 Wherever any Clause or Sub-Clause is referred to in these documents without the Chapter number, it should be assumed that the Clause or Sub-Clause belongs to that particular Chapter in which it is discussed. Also when reference is made to a particular Clause, it is deemed to cover all Sub-Clauses of that Clause.
3. The bidder is expected to examine carefully the contents of all the above documents. Failure to comply with the requirements of bid submission will be at the bidder's own responsibility. Pursuant to Clause 28 & 35, bids which are not substantially responsive to the requirements of the bidding documents will be rejected.
- 9.4 In the event that there is any conflict or discrepancy within the bidding documents, the order of precedence will be determined as follows:
 - a. Conditions of Contract: The provisions of Chapter 3, Special Conditions of Contract, will take precedence over those of Chapter 2, General Conditions of Contract.
 - b. Specifications: The provisions of Chapter 4, Special Specifications, will take precedence over those of Chapter 9, Drawings, and Chapter 10, Standard Specifications.

10. CLARIFICATION OF BID DOCUMENTS

1. The eligible bidder requiring any clarification of the bid documents may notify the Employer in writing at the Employer's address indicated in the Invitation for Bids. The Employer will respond to any request for clarification, which he receives earlier than 6 days prior to the deadline for submission of bids. The copies of the Employer's response will be forwarded to all purchasers of the bid documents, including a description of the enquiry but without identifying its source.

11. AMENDMENT OF BID DOCUMENTS

- 11.1 At any time prior to the deadline for submission of bids, the Employer may, for any reason, whether at his own initiative or in response to a clarification requested by the contractor via their e-mail address, modify the bidding documents by issuing addenda through employer's e-mail ID. The same will be available in the web site www.tenderwizard/KUWSDB. It will be the duty of the Contractor/ Bidder to watch the same and take note of the addenda failing which Employer will not be responsible for the same.
- 11.2 Any addendum thus issued shall be part of the bidding documents pursuant to Sub Clause 9.1 and shall be communicated through the Employer's e-mail address to all purchasers of the bidding documents. Bidders shall acknowledge receipt of each addendum through their e-mail address.
- 11.3 To afford bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer may extend as necessary the deadline for submission of bids, in accordance with clause 23. However decision of the Board shall be final.

C. PREPARATION OF BIDS

12. LANGUAGE OF BID

1. The bid, and all correspondence and documents related to the bid exchanged by the bidder and the Employer shall be written in Kannada or English language.

13. DOCUMENTS COMPRISING THE BID

- 13.1 **Techno commercial bid (Technical Proposal) shall comprise the following :**

- i) Certificates / Documents to demonstrate that the Bidder fulfills the financial eligibility criteria in accordance with clause 3.1(a)
- ii) Certificates / Documents to demonstrate that the Bidder fulfills the Technical eligibility criteria in accordance with clause 3.1(b)
- iii) Bid Security through e-payment.
- iv) power of attorney
- v) Schedule of Major Items of Equipments.
- vi) Schedule of Major Items of Constructional Plant
- vii) Schedule of Key Personnel
- viii) Schedule of Sub-Contractors
- ix) Schedule of Recommended Spare Parts
- x) Schedule of Compliance with the Bidding Documents.

Certificates for fulfillment of the Financial and Technical Eligibility should be compulsorily scanned and uploaded through e-tender, and no hard copies should be submitted at the time of submission of tender.

Any other materials required to be completed and submitted in accordance with the bid document including, as applicable, the information on eligibility and qualifications, instructions to bidders, general conditions of the contract, special conditions of the contract, alternative offers if invited and any other submittals required.

3. The price proposal shall contain the following:-
Chapter 6: Bill of Quantities

14. BID FORM AND PRICE SCHEDULES:-

- 14.1 The bidders shall complete the bid schedules furnished in the bidding documents in the manner and details indicated therein, following the requirements of Clause 15 & 16.

15. BID PRICES

- 15.1 Unless stated otherwise in the bid documents, the Contract shall be for the whole Works as described in Sub-Clause 1.1, based on the schedule of unit rates and prices submitted by the bidder.
2. The bidders shall fill in rates and prices for all items of the Works described in the Bill of Quantities.
3. The quoted rates shall be for each item of finished work and shall be inclusive of all costs including supply, transportation and safe storage of materials at site, cost of protection of the Works, accommodation and sanitation of the workers, protection of workmen, working notices, temporary works, drainage facilities and/or detours, sign Boards, public protection including providing security personnel, barricades and lighting, etc., incidental costs, royalties and taxes of any kind whatsoever (excluding excise duty wherever exemption is applicable as per rules).
4. All cess, taxes and other levies payable by the contractor under the contract shall be included in the rates and prices and the total bid price submitted by the bidder and the evaluation and comparison of bids by the employer shall be made accordingly. The materials/ equipments pertaining to water supply schemes, the Excise Duty is exempted as per Circular No.659/50/2002-CX, dated 06-09-2002 issued in F.No.354/154/159/2002 – TRU Govt. of India, Ministry of Finance and Company Affairs, Dept. of Revenue, Tax Research Unit with latest amendments. **Hence, the bidder shall quote their rates exclusive of Excise Duty wherever applicable.** The Executive Engineer shall arrange the necessary Excise Duty Exemption Certificate from the concerned Deputy Commissioner.
5. The rates and prices quoted by the bidder shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account unless otherwise provided for in the Special Conditions of Contract.

16. Bid currencies:

Prices shall be quoted by the bidders entirely in Indian Rupees.

17. BID VALIDITY

1. The bid shall remain valid for a period of 120 (One hundred & twenty) days after the date of bid opening specified in Clause 26.
- 17.2 In exceptional circumstances, prior to expiry of the original bid validity period, the Employer may request in writing that the bidders extend the period of validity for a specified additional period. A bidder may refuse to extend the validity of his bid without forfeiting his Bid Security. A bidder agreeing to the request will be required to extend the validity of his Bid for the period of the extension, in compliance with Clause 18 in all respects. In case the Contract is not awarded by the extended date of validity period, the bids shall be discarded and new bids invited.

18. BID SECURITY.

1. The bidder shall furnish, as part of his bid, a bid security in the amount of **Rs. 96,98,000/- (Rs. NintySix Lakhs and Ninety Eight Thousand only) shall be paid through e-payment i.e., Credit card (VISA/ MASTER) or Debit Card or NEFT or RTGS. The bid security in the form of DD will not be accepted.**

The payment through NEFT / RTGS challan shall be made at least one day prior to closing time and date for submission of bid, No interest will be paid on the Bid Security.

2. Any bid not accompanied by an acceptable bid security shall be rejected by the Employer as non-responsive.
3. The bid securities of the unsuccessful bidders shall be returned as promptly as possible, but not later than 45 days after the expiration of the period of bid validity.
4. The successful bidder will have to furnish additional bid security for the difference amount of award amount and estimated amount put to tender at the time of entering into the agreement. The Bid security of successful bidder will be refunded to the bidders within 45 days after completion of O & M period including Defects liability period.

18.5 The bid security shall be forfeited:

- (1) if the bidder withdraws his bid during the period of bid validity;
- (2) If the bidder does not accept the correction of the bid price as per clause 36 of chapter-1.
- (3) in the case of a successful bidder, if he fails within the specified time limit to :or
 - (a) sign the Agreement, or
 - b) furnish the required performance security.
- (4) If any of the Certificates furnished by the Bidder found to be forged, bogus or not genuine or in-correct.

Note: Submission of correct document is the responsibility of the bidder.

19. ALTERNATIVE PROPOSALS BY BIDDERS

-- Deleted --

20 PRE-BID MEETING

1. The bidder or his official representative may attend a pre-bid meeting which will take place on **3-1-2013 at 11:00 Hrs.** at

THE CHIEF ENGINEER (NORTH)

Karnataka Urban Water Supply & Drainage Board,
Jalamandali Compound, Sir. M.Vishveshvarayya Road,
Dharwad-580 001.

Phone: (0836) 2447090, Fax : (0836) 2446890

e-mail: kwbcen@yahoo.co.in / kwbcen@indiatimes.com

- 20.2 The Purpose of the meeting will be to clarify issues and to answer questions, which have been submitted in writing.
- 20.3 The bidder shall submit any questions in writing to reach the Employer not later than two days before the meeting. The Employer shall not pay to bidder any expenses incurred by the bidder for attending the pre-bid meeting.
- 20.4 Minutes of the meeting, including the text of the questions raised and the response given will be transmitted without delay to all purchasers of the bidding documents. Any modifications of the bidding documents listed in Sub-clause 9.1 which may become necessary as result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an Addendum pursuant to Clause 11 and not through the minutes of the pre-bid meeting. The Addendum so issued will form a part of the bid document.
- 20.5 Non-attendance at the pre-bid meeting will not be cause for disqualification of a bidder.

21. FORMAT OF BID:

- 21.1 The bidder shall prepare technical proposal and the financial proposal as issued through the e-mail and will be available in the Board web site [www.tenderwizard](http://www.tenderwizard.com) / KUWSDB.
- 21.2 All copies of the bid shall be typed and shall be authorized by a person or persons duly authorised to on behalf of the bidder, pursuant to Sub-clause 5.1 or 5.2 as the case may be. Authorization of the bid indicates that the Contractor / Bidder has gone through all the terms & Conditions of the Contract and abides to execute the work accordingly.
- 21.3 For the details furnished in e-tendering, the bidder is solely responsible for the genuinity of documents. If any false information furnished by the bidder will be liable for legal action.
- 21.4 The tenderer will have to bid for the proposal made as per Tender schedule.

D SUBMISSION OF BIDS

22. Submission of Bids

1. The Bids are invited through **Electronic Mode** only. A prospective bidder, who wishes to submit the bid shall adopt the following procedure.
2. The Techno Commercial Bid (Technical Proposal) shall consist of the following:

i) All the documents related to qualification of Bid as per clause 3.1 and all documents as per clause 13.

ii) Bid security .

iii) Any other documents related to above work.

All the above documents shall be scanned and uploaded to the website compulsorily failing which tender is liable for rejection in view of incomplete bid.

22.3 - deleted –

22.4 The bidder is solely responsible for the details furnished and also for genuineness of documents. If any false documents are produced by the bidder the Bid Shall be considered as not-responsive and Rejected. The bidder shall be liable for legal action & forfeiture of EMD and FSD paid by the Bidder

5. The Cost Bid (Financial Bid) shall consists of Bill of Quantities (BOQ.xls)
The bidder shall download the bill of quantities and key in the rates in the Bill of Quantities sheet and upload the same file on to the website on or before the time and date indicated in notification/Section IFB.

22.6 The bidders shall not delete or modify any or all specification of items in the bid. Any modification in the bid shall be declared as non-responsive & rejected.

23. DEADLINE FOR SUBMISSION OF BIDS

1. Bids must be uploaded to the website not later than 17:30 hours on **22-1-2013**. The bids will be opened on **24-1-2013** at the office of the Chief Engineer (North), KUWS & D Board, Jalmandali Compound Sir M.Vishveshwarayya Road, Dharwad 580 001.

2. The Employer may, at his discretion, extend the deadline for submission of bids by issuing an amendment in accordance with Clause 11, in which case all rights and obligations of the Employer and the bidders previously subject to the original deadline will thereafter be subject to the deadline as extended.

24. LATE BIDS

1. Board is not responsible for non-receipt of bids on the stipulated date & time prescribed in clause 23, due to Internet Problems, improper uploading or any other cyber related problems.

25. MODIFICATION AND WITHDRAWAL OF BIDS

No bid can be modified or withdrawn by the bidder after the bid has been submitted in the electronic Tender Box. i.e., our web site [www.tenderwizard](http://www.tenderwizard.com) / KUWSDB.

1.

E. OPENING AND EVALUATION OF TECHNO COMMERCIAL BID

26. OPENING OF TECHNO COMMERCIAL BID

- 26.1 The Employer will open the techno commercial bid in the presence of bidder's representatives who choose to attend at the place and on the date specified in Clause 23. The bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of bid opening being declared a holiday for the Employer, the technical proposals shall be opened at the appointed time and place on the next working day.
- 26.2 The Cost Bid (Financial Proposal) will remain unopened till the date of open of cost proposal as indicated in the Invitation for Bid. If there is any change in the time, date and location of the bid opening of the price proposals, the same will be advised in writing/fax/e-mail by the Employer.
- 26.3 The bidders name, the presence of a Bid Security, and such other details as the Employer may consider appropriate will be announced and recorded by the Employer at the opening. The bidder's representatives will be required to sign this record.
- 26.4 The Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with Sub-Clause 26.3.

27. PROCESS TO BE CONFIDENTIAL

- 27.1 Information relating to examination, clarification, evaluation and comparison of bids and recommendations for the award of a Contract shall not be disclosed to bidders or any other persons not officially connected with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of the bidder's bid.

28 PRELIMINARY EXAMINATION OF TECHNICAL PROPOSALS

- 28.1 Prior to the detailed evaluation of the bids, the Employer will examine the bids to determine whether they are complete, whether the documents have been properly signed, whether the required security is included, and whether the bids are generally in order. Any bids found to be non-responsive for any reason or not meeting the minimum levels of the performance or other criteria specified in the bidding documents will be rejected by the Employer and not included for further consideration.
- 28.2 A substantially responsive bid is one, which conforms to all the terms, conditions, and specifications of the bid documents, without material deviation or reservation. A material deviation or reservation is one: (i) which affects in any substantial way, the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the bidding documents, the Employer's right or the bidders obligations under the Contract; or (iii) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- 28.3 Technical proposals will be considered not substantially responsive of any of the following grounds:
 - a. If the bid is not accompanied by the requisite bid security in acceptable form.
 - b. If the bid is conditional.

- c. If all required documents are not submitted and the bid is incomplete.
- d. If any other factor substantially affects the scope, quality or performance of the Work or limits the Employer's rights or bidders obligations.
- e. If any of the ;certificates furnished by the Bidder found to be forged, bogus or not genuine
- f. The Employer shall carry out a detailed evaluation of qualification information of the Bids in order to determine whether the Bidder are qualified and whether the technical aspects are substantially responsive to the requirements set forth in the Bidding documents. In order to reach such a determination, the employer will examine the information supplied by the Bidders and other requirements in the Bidding documents taking in to the factors in the pro-forma appended in the Chapter-5 Qualification information for the evaluation of performance criteria. The self evaluation in the format and documentary proof for qualification information shall be attached for evaluation. The certificates shall be signed by the employer not below the rank of Executive Engineer or equivalent. In case the performance of any contractor is found not satisfactory the Techno commercial bid shall be considered as not substantially responsive and the financial Bid shall not be opened.

The above notwithstanding, the Employer reserves the rights to waive any minor irregularity on the part of the bidder if such irregularity does not materially deviate from the terms, conditions and specifications of the bidding documents and if it is in the Employer's interest to do so.

- 4. If the technical proposal is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

29. EVALUATION AND COMPARISON OF TECHNICAL PROPOSALS

29.1 The Employer will carry out a detailed evaluation of the bids in order to determine whether the bidders are qualified and whether the technical aspects are substantially responsive to the requirements set forth in the bidding documents. In order to reach such a determination, the Employer will examine the information supplied by the Bidders and other requirements in the bidding documents, taking into account the following factors:

a) Qualification

- i) The determination will take into account the Bidder's financial, technical and production capabilities and past performance; it will be based upon a examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to Clause 5, as well as such other information as the Employer deems necessary and appropriate; and
- (ii) An affirmative determination will be a prerequisite for the Employer to continue with the evaluation of the technical proposals; a negative determination will result in rejection of the Bidder's bid.

b) Technical

- (i) Overall completeness and compliance with the Employer's Requirements; the technical merits of plant and equipment offered and any deviations from the Employer's Requirements; suitability of the facilities offered in relation to

the environmental and climatic conditions prevailing at the site; quality, function and operation of any process control concept included in the bid;

- (ii) Achievement of specified performance criteria by the facilities;
- (iii) Compliance with the time schedule called for in Appendix to Technical Proposal and any alternative time schedules offered by Bidders, as evidenced by a milestone schedule provided in the bid;
- (iv) Type, quantity and long-term availability of spare parts and maintenance services;
- (v) Adequacy of staffing and arrangement for operation and maintenance of the facilities, Revenue collection and training of Employer's personnel;
- (vi) Any deviations to the contractual provisions stipulated in the bidding documents.

30. CLARIFICATION OF TECHNICAL PROPOSALS

- 30.1 The Employer may conduct clarification meetings with each or any bidder to discuss any matters, technical or otherwise, where the Employer requires amendments or changes to be made to the Technical Proposal in order to ensure that the bidder's proposal fully conforms, in all respects, to the Employer's Requirements as set out in this bid document.
- 30.2 Where amendments or changes are required by the Employer, bidders will be requested through the writing to adjust their proposals accordingly and submit a supplementary price proposal within Seven (7) days. The supplementary price proposal should only contain the changes in price resulting from the changes in the technical proposal. Bidders should note that if the Employer, during the evaluation of the price proposals, considers that the changes in price are unrealistic in comparison with the original price proposals, the bid is liable to be rejected. Bidders not wishing to change their technical proposals may withdraw from the bidding process and their price proposals will be unopened.
- 30.3 The Bidder seal the original and duplicate supplementary price proposal in a single envelop and shall clearly mark it as the "supplementary price proposal".
- 30.4 Supplementary price proposals which are not received as required by the Employer in time due to negligence or technical error, will result in the rejection of the bid. The Employer will assume no responsibility for the late bids. Hence it is the responsibility of the Contractor/Agency to ensure that bids reach the Employer within the stipulated time.

31. INVITATION TO ATTEND OPENING OF COST BID (FINANCIAL PROPOSALS)

- 31.1 At the end of the evaluation of the technical proposals the Employer will invite bidders who have submitted substantially responsive technical proposals and who have been determined as being qualified for award to attend the bid opening of the price proposals.

F. OPENING AND EVALUATION OF COST BID (FINANCIAL PROPOSALS)

32. OPENING OF COST BID

- 32.1 The employer will open the cost bids of all bidders who submitted substantially responsive technical proposals at the time and date at the

Contractor

Employer/Engineer

location advised to the bidders. The bidder's representatives who are present shall sign a register evidencing their attendance.

32.2 The Bidder's name, the Bid Prices the total amount of each Bid, and such other details as the Employer may consider appropriate, will be announced and recorded by the Employer at the opening. The Bidder's representatives will be required to sign this record.

32.3 The Employer shall prepare minutes of the bid opening, including the information disclosed to those present in accordance with Sub- Clause 32.2.

33. PROCESS TO BE CONFIDENTIAL

33.1 Information relating to the examination, clarification, evaluation and comparison of bids and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Employer's processing of bids or award decisions may result in the rejection of the bidder's bid.

34. CLARIFICATION OF COST BID

34.1 To assist in the examination, evaluation and comparison of price proposals, the Employer may, at its discretion, ask any bidder for clarification of its bid. The request for clarification and the response shall be in writing or by cable, but no change in the price or substance of the bid shall be sought, offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Employer in the evaluation of the bids in accordance with Clause 36.

35. PRELIMINARY EXAMINATION OF COST BID AND DETERMINATION OF RESPONSIVENESS.

1. The bidder should compulsorily quote the rates for all the items in Figures only.

35.2 The Employer will examine the bids to determine whether they are complete, whether the bids are substantially responsive to the requirements of the bidding documents, and whether the bids provide any clarification and/or substantiation that the Employer may require pursuant to Clause 36.

35.3 A substantially responsive bid is one which conforms to all the terms, conditions and requirements of the bidding documents without material deviation or reservation and includes the amendments and changes, if any, requested by the Employer during the evaluation of the bidder's technical proposal. A material deviation or reservation is one : (i) which affects in any substantial way, the scope, quality or performance of the Works; (ii) which limits in any substantial way, inconsistent with the bidding documents, the Employer's right or the bidders obligations under the Contract; or (iii) whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.

35.4 Bids will be considered not substantially responsive on any of the following grounds

- a. If the columns of unit rate and prices are not filled up for all items.
- b. If the bid is conditional.

- c. If rates offered in separate Annexures/Statements by the Bidders, instead of in the BOQ enclosed in the Board bid document /Tender schedules.
- d. If all required documents are not submitted and the bid is incomplete.
- e. Any other factor substantially effects the scope, quality or performance of the work or limits the employer's rights or bidders obligations.

The above notwithstanding, the employer reserves the rights to waive any minor irregularity on the part of the bidder if such irregularity does not materially deviate from the terms, conditions & specifications of the bidding documents, and if it is in the Employer's interest to do so.

- 35.5 If a price proposal is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the non-conforming deviation or reservation.

36. **CORRECTION OF ERRORS.**

- 36.1 Bids determined to be substantially responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:

2. Where there is a discrepancy between the quoted unit rate and the line item total resulting from multiplying the unit rate by the quantity, the unit rate as quoted will govern and the line item total will be correspondingly corrected.
3. Where there is a discrepancy between the quoted total bid amount and the sum of the total costs for all line items, the sum of the total costs will prevail and the total bid amount will be correspondingly corrected.
4. If the bidder does not accept the corrected amount of the bid, his bid will be rejected and the bid security shall be forfeited in accordance with Sub-Clause 18.5.
5. If the Bidder quotes two different rates for similar items under different work, lowest will be considered for all purpose.

37. EVALUATION AND COMPARISON OF BIDS.

1. The Employer will evaluate and compare only the bids determined to be substantially responsive in accordance with Clause 35.
2. In evaluating the bids, the Employer will determine the Evaluated Bid Price by adjusting the Bid Price by making any correction for arithmetic errors pursuant to Clause 36.
3. The Employer reserves the right to accept or reject any variation, deviation or alternative offer. Variations, deviations, alternative offers and other factors which are in excess of the requirements of the bidding documents or otherwise result in the accrual of unsolicited benefit to the Employer shall not be taken into account in bid evaluation.
4. The estimated effect of any price adjustment provisions (if any) of the special Conditions of Contract applied over the period of execution of the Contract shall not be taken into account in bid evaluation.
5. If the bid of the successful bidder is seriously unbalanced in relation to or is substantially below the Engineer's estimate of the cost of work to be performed under the Contract, the Employer may require the bidder to produce detailed price analysis for any or all items of the Bill of Quantities to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. In the event that the detailed price analysis fails to support the tendered rates, or is deemed on evaluation to be unbalanced or unworkable, the Employer reserves the right to either:
 - a. reject the bid as being substantially non-responsive; or
 - b. require that the amount of the performance security set forth in Clause 34 be increased at the expense of the successful bidder to a level sufficient to protect the Employer against financial loss in the event of default of the successful bidder under the Contract.
6. Comparison of bids will only be between bids which conform fully to the Specifications and the bid documents.

G. AWARD OF CONTRACT

38. AWARD

1. Subject to Clause 39, the Employer will award the Contract to the bidder whose bid has been determined to be substantially responsive to the bid documents and who has offered the Lowest Evaluated Bid Price, provided that such bidder has been determined to be (i) eligible in accordance with the provisions of Sub-Clause 3.1, and (ii) qualified in accordance with the provisions of Clause.5.

39. EMPLOYER'S RIGHT TO ACCEPT ANY BID AND REJECT ANY OR ALL BIDS

- 39.1 Notwithstanding Clause 38, the Employer reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected bidder or bidders or any obligation to inform the affected bidder or bidders of the grounds for the Employer's action.

40. NOTIFICATION OF AWARD

- 40.1 Prior to expiration of the period of bid validity prescribed by the Employer, the Employer will notify the successful bidder by cable or fax confirmed by registered letter that his bid has been accepted. This letter (hereinafter and in the Conditions of Contract referred to as the "Letter of Acceptance") shall name the sum which the Employer will pay the Contractor in consideration of the execution, completion and maintenance of the Works by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called the "Contract Price").
- 40.2 The notification of award will constitute the formation of the Contract.
- 40.3 Upon the furnishing by the successful bidder of a performance security, the Employer will promptly notify the other bidders that their bids have been unsuccessful.

41. SIGNING OF AGREEMENT

- 41.1 At the same time that the Engineer notifies the successful bidder that his bid has been accepted, the Employer will send the bidder the Form of Agreement provided in the bidding documents, incorporating all agreements between the parties.
2. Within **21 (Twenty one)** days of the date of the Letter of Acceptance, the successful bidder shall prepare the Form of Agreement, in duplicate, on Government Stamp Paper of Rs 100.00 (Rupees one hundred only) value and meet with the concerned Engineer during normal office hours on any working day to furnish the performance security as per Clause 42 and to sign the said Agreement. One copy of the signed Agreement will be provided to the successful bidder, and the original will be retain by the Engineer.

42. PERFORMANCE SECURITY

- 42.1** Total 6% of the Contract Price in the form of an irrevocable and Unconditional Bank Guarantee from the contractor / Firms issued by any Nationalized Banks / from any Banking Company Registered under Companies Act 1956. The guarantor Banks should ask by the Contractor / Firm to forward the Bank Guarantee by Registered post or by Courier mail to the concerned Executive Engineer as the case may be. The Bank guarantee shall be provided within 28 days of the date of the Letter of Acceptance to be valid until completion of the Project and defects liability period. The forms of performance security provided in Chapter 8 of the bidding document shall be used. The institution providing such guarantee shall be subject to the approval of the Employer. No interest will be payable on the performance security.
2. Failure of the successful bidder to comply with the requirements of Clause 41 or 42 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security.

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

Part-A

Study, Survey, Preparation of Base map, Conditional Survey, Assessment of NRW, Customer Survey, Analysis, Design & Drawing.

Part-B

Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.

Part-C

Providing & Laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for 24x7 distribution system.

Part-D

Operation and Maintenance of 24x7 distribution system for a period of 5 years.

ITEMRATE TENDER

CHAPTER – 2

GENERAL CONDITIONS OF CONTRACT

Chapter-2: Contents for General Conditions of Contract (Item rate Tender)

(Preamble: Note that the section headings are presented for convenience only. Sub-Clause numbers are presented for reference and for cross-referencing, and are not necessarily sequential).

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5. Payment of Claims

54.0 CONTRACTOR'S EQUIPMENT, TEMPORARY WORKS AND MATERIALS :

1. Exclusive use for the works
2. Employer not liable for damage
3. Incorporation of clause in sub-contracts.
4. Approval of material not implied.

55.0 MEASUREMENT

1. Quantities
1. Works to be measured
1. Method of measurement
2. Breakdown of lump sum item

(Clause 58 And 59 Not Included)

60.0 CERTIFICATE AND PAYMENTS

1. Monthly statements and bills
2. Monthly payments
3. Material and plant for the permanent works
4. Place of payment
5. Retention money
6. Refund of retention money
7. Advance payment
8. Time for payment
9. Correction of Certificate
10. Statement at completion
11. Final statement
12. Discharge

13. Final Certificate
14. Cessation of Employer's liability

61.0 DEFECTS LIABILITY

1. Approval only by defects liability certificate
1. Defects liability certificate
2. Unfulfilled obligations

63.0 REMEDIES

1. Default of contract
2. Valuation of date of Termination
3. Payment after Termination
4. Assignment of benefit of agreement

64.1 Urgent remedial works

65.0 SPECIAL RISKS

- 65.1 No liability for special risk
- 65.2 Specials risks
- 65.3 Damage to works by special risks
- 65.4 Projectile, Missile
- 65.5 Increased costs arising from special risks
- 65.6 Outbreak of war
- 65.7 Removal of contractor's equipment on termination
- 65.8 Payment if contractor terminated
- 66.1 Payment in event of release from performance

67.0 SETTLEMENT OF DISPUTES

1. Engineer's Decision
2. Remedy when the Engineer's decision is not accepted.
3. Amicable settlement
4. Legal Action
5. Contractor to Execute work pending settlement

68.0 NOTICES

1. Notice to Contractor
2. Notice to Employer and Engineer
3. Change in Address

69.0 DEFAULT OF EMPLOYER

1. Contractor's entitlement to suspend works
2. Resumption of work

70.0 CHANGES IN COST AND LEGISLATION

70.1 Price Adjustment

70.2 Price Adjustment Formula

(70.3 To 70.9 not included)

(Clause 71 and 72 not included)

73.0 TAXATION

1. Foreign taxation

2. Local taxation

3. Income taxes on staff

1. Bribes

1. Termination of Contract for employer's convenience

1. Restriction of eligibility

1. Joint and several liability

1. Details to be confidential

1. Contractor's temporary moorings

1. Life-saving appliances and First-Aid equipment

1. Drawings and Photographs of the works

1. The apprentices Act 1961.

Annexure – A (Ref. Clause 34.2):

Extracts of contract labour (Registration & Abolition) act 1970

Annexure – A-1 (Ref. Cl. 35.1) :

Extracts of contract labour (Registration & Abolition) act 1970.

CHAPTER 2: GENERAL CONDITIONS OF CONTRACT

DEFINITIONS AND INTERPRETATION

1.1 DEFINITIONS

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

- (a) (i) "Board" shall mean the Karnataka Urban Water Supply & Drainage Board and its successor if any.
- (ii) "Government" shall mean the Government of Karnataka State.
- (iii) "Chairman" shall mean Chairman Karnataka Urban Water Supply and Drainage Board, Bangalore.
- (iv) "Managing Director" shall mean Managing Director Karnataka Urban Water Supply and Drainage Board, Bangalore.
- (v) "Employer" means the person named as such in Chapter 3, Special Conditions of Contract and the legal successors in title to such person, but not (except with the consent of the Contractor) any assignee of such person.
- (vi) "Contractor" means the person whose tender has been accepted by the Employer and the legal successors in title to such person but not (except with the consent of the Employer) any assignee of such person.
- (vii) "Subcontractor" means any person named in the Contract as Subcontractor for a part of the Works or any person to whom a part of the Works has been subcontracted with the consent of the Engineer or employer and the legal successors in title to such person, but not any assignee of such person.
- (viii) "Engineer" shall mean the Chief Engineer Karnataka Urban Water Supply and Drainage Board or such other officer as maybe appointed to as Engineer for the purpose of Contract and shall also mean and include Executive Engineer or officers of equivalent drawing directly incharge of work or any part of there.
- i) "Engineer's Representative" shall mean the Executive Engineer or Assistant Executive Engineer directly incharge of the works or is duly authorized representatives.
- (b) (i) "Contract" means these General Conditions, the Special Conditions, the Specification, the Drawings, the Bill of Quantities, the Bid, the Letter of Acceptance, the Contract Agreement (if completed) and such further documents as may be expressly incorporated in the Letter of Acceptance or Contract Agreement (if completed).
- (ii) "Specification" means the specification of the Works included in the Contract and any modification thereof or addition thereto made by the Engineer or submitted by the Contractor and approved by the Engineer.
- (iii) "Drawings" means all drawings provided by the Engineer to the Contractor under the Contract and all drawings, calculations, samples, patterns, models, operation and maintenance manuals and other technical information of a like nature submitted by the Contractor and approved by the Engineer.
- (iv) "Bill of Quantities" means the priced and completed bill of quantities forming part of the Tender.
- (v) "Tender" means the Contractor's priced offer to the Employer for the execution and completion of the Works and the remedying of any defects

- therein in accordance with the provisions of the Contract, as accepted by the Letter of Acceptance. The word 'Tender' is synonymous with 'Bid' and the word 'Tender Documents' with 'Bidding Documents'.
- (vi) "Letter of Acceptance" means the formal acceptance by the Employer of the Tender.
- (vii) "Contract Agreement" means the contract agreement (if any) referred to in Sub-Clause 9.1.
- (viii) "Appendix to Tender" means the appendix comprised in the form of Tender annexed to these Conditions.
- (c) (i) "Commencement Date" means the date specified in the notice to commence issued by the Engineer to the Contractor.
- (ii) "Time for Completion" means the time for completing the execution of and passing the Tests on Completion of the Works or any Chapter or part thereof as stated in the Contract (or as extended by the Employer) calculated from the Commencement Date.
- (d) (i) "Tests on Completion" means the tests specified in the Contract or otherwise agreed by the Engineer and the Contractor which are to be made by the Contractor before the Works or any Chapter or part thereof are taken over by the Employer.
- (ii) "Taking-Over Certificate" means a certificate issued pursuant to Sub-Clause 48.1 to 48.5.
- (e) (i) "Contract Price" means the sum stated in the Letter of Acceptance as payable to the Contractor for the execution and completion of the Works and the remedying of any defects therein in accordance with the provisions of the Contract.
- (f) (i) "Works" means the Permanent Works and the Temporary Works or either of them as appropriate.
- (ii) "Permanent Works" means the permanent Works to be executed (including Plant) in accordance with the Contract.
- (iii) "Temporary Works" means all temporary Works of every kind (other than Contractor's Equipment) required in or about the execution and completion of the Works and the remedying of any defects therein.
- (iv) "Plant" means machinery, apparatus and the like intended to form or forming part of the Permanent Works.
- (v) "Contractor's Equipment" means all appliances and things of whatsoever nature (other than Temporary Works) required for the execution and completion of the Works and the remedying of any defects therein, but does not include Plant, materials or other things intended to form or forming part of the Permanent Works.
- (vi) "Chapter" means a part of the Works specifically identified in the Contract as a Chapter.
- (vii) "Site" means the places provided by the Employer where the Works are to be executed and any other places as may be specifically designated in the Contract as forming part of the Site.
- (g) (i) "Cost" means all expenditures properly incurred or to be incurred, whether on or off the Site, including overhead and other charges properly allocable thereto but does not include any allowance for profit.
- (ii) "Day" means calendar day.
- (iii) "Writing" means any hand written, type written, or printed communication, including telex, cable and facsimile transmission.

1.2 HEADINGS AND MARGINAL NOTES

The headings and marginal notes in these Conditions shall not be deemed part thereof or be taken into consideration in the interpretation or construction thereof or of the Contract.

1.3 INTERPRETATION

Words importing persons or parties shall include firms and corporations and any legal entity and any organisation having legal capacity.

1.4 SINGULAR AND PLURAL

Words importing the singular only also include the plural and vice versa where the context requires.

1.5 NOTICES, CONSENTS, APPROVALS, CERTIFICATES AND DETERMINATIONS

Wherever in the Contract provision is made for the giving or issue of any notice, consent, approval, certificate or determination by any person, unless otherwise specified such notice, consent, approval, certificate or determination shall be in writing and the words “notify”, “certify” or “determine” shall be construed accordingly. Any such consent, approval, certificate or determination shall not unreasonably be withheld or delayed.

2.0 ENGINEER AND ENGINEER’S REPRESENTATIVE

2.1 ENGINEER’S DUTIES AND AUTHORITY

- (a) The Engineer shall carry out the duties specified in the Contract.
- (b) The Engineer may exercise the authority specified in or necessarily to be implied from the Contract, provided, however, that if the Engineer is required, under the terms of his appointment by the Employer, to obtain the specific approval of the Employer before exercising any such authority, particulars of such requirements shall be set out in Chapter 3, Special Conditions of Contract. Provided further that any requisite approval shall be deemed to have been given by the Employer for any such authority by the Engineer.
- (c) Except as expressly stated in the Contract, the Engineer shall have no authority to relieve the Contractor of any of his obligations under the Contract.

2.2 ENGINEERS’ REPRESENTATIVE

The Engineer’s Representative shall be appointed by and be responsible to the Engineer and shall carry out such duties and exercise such authority as may be delegated to him by the Engineer under Sub-Clause 2.3.

2.3 ENGINEER’S AUTHORITY TO DELEGATE

The Engineer may from time to time delegate to the Engineer’s Representative any of the duties and authorities vested in the Engineer and he may at any time revoke such delegation. Any such delegation or revocation shall be in writing with prior consent of the employee and shall not take effect until a copy thereof has been delivered to the Employer and the Contractor. Any communication given by the Engineer’s Representative to the Contractor in accordance with such delegation shall have the same effect as though it had been given by the Engineer. Provided that:

- (a) Any failure of the Engineer’s Representative to disapprove any work, materials or Plant shall not prejudice the authority of the Engineer to

- disapprove such work, materials or Plant and to give instructions for the rectification thereof;
- (b) If the Contractor questions any communication of the Engineer's Representative he may refer the matter to the Engineer who shall confirm, reverse or vary the contents of such communication.

2.4 APPOINTMENT OF ASSISTANTS

The Engineer or the Engineer's Representative may appoint any number of persons to assist the Engineer's Representative in the carrying out of his duties under Sub-Clause 2.2. He shall notify to the Contractor the name, duties and scope of authority of such persons. Such assistants shall have no authority to issue any instructions to the Contractor save in so far as such instructions may be necessary to enable them to carry out their duties and to secure their acceptance of materials, Plant or workmanship as being in accordance with the Contract, and any instructions given by any of them for those purposes shall be deemed to have been given by the Engineer's Representative.

2.5 INSTRUCTIONS IN WRITING

Instructions given by the Engineer shall be in writing, provided that if for any reason the Engineer considers it necessary to give any such instruction orally, the Contractor shall comply with such instruction. Confirmation in writing of such oral instruction given by the Engineer, whether before or after the carrying out of the instruction, shall be deemed to be an instruction within the meaning of this Sub-Clause. Provided further that if the Contractor, within 7 days, confirms in writing to the Engineer any oral instruction of the Engineer and such confirmation is not contradicted in writing within 7 days by the Engineer, it shall be deemed to be an instruction of the Engineer.

The provisions of this Sub-Clause shall equally apply to instructions given by the Engineer's Representative and any assistants of the Engineer or The Engineer's Representatives pursuant to Sub-Clause 2.4.

2.6 ENGINEER TO ACT IMPARTIALLY.

Wherever, under the Contract, the Engineer is required to exercise his discretion by:

- a. Giving his decision, opinion or consent, or
- b) Expressing his satisfaction or approval, or
- c. Determining value, cost or extension of time, or
- d. Otherwise taking action which may affect the rights and obligations of the Employer or the Contractor, he shall exercise such discretion impartially within the terms of the Contract and having regard to all the circumstances. Any such decision, opinion, consent, expression of satisfaction, or approval, determination of value or action may be opened up, reviewed or revised as provided in Sub-Clause:-67 to 67.5.

3.0 ASSIGNMENT AND SUBCONTRACTING

3.1 ASSIGNMENT OF CONTRACT

The Contractor shall not, without the prior consent of the Employer (which consent notwithstanding the provisions of Sub-Clause 1.5, shall be at the sole discretion of the Employer), assign the Contract or any part thereof, or any benefit or interest therein or there under, otherwise than by:

- (a) A charge in favour of the Contractor's bankers of any moneys due or to become due under the Contract, or
- (b) Assignment to the Contractor's insurers (in cases where the insurers have discharged the Contractor's loss or liability) of the Contractor's right to obtain relief against any other party liable.

4.1 SUBCONTRACTING

The Contractor shall not sub-contract the whole of the Works. The Contractor shall not subcontract any part of the Works without the prior consent of the Engineer, except where otherwise provided by the Contract. Any such consent shall not relieve the Contractor from any liability or obligation under the Contract and he shall be responsible for the acts, defaults and neglects of any Subcontractor, his agents, servants or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents, servants or workmen.

Provided that the Contractor shall not be required to obtain such consent for:

- a. The provision of labour, or
- b. The purchase of materials which are in accordance with the standards specified in the Contract, or
- c. The subcontracting of any part of the Works for which the Subcontractor is not in the Contract.

In the event of a Subcontractor having undertaken towards the Contractor in respect of the work executed, or the goods, materials, Plant or services supplied by such Subcontractor, any continuing obligation extending for a period exceeding that of the Defects Liability Period under the Contract, the Contractor shall at any time, after the expiration of such Period, assign to the Employer, at the Employer's request and cost, the benefit of such obligation for the unexpired duration thereof.

5.0 CONTRACT DOCUMENTS

5.1 LANGUAGE AND LAW

- (a) The English or Kannada language shall be used in the Contract documents and all official correspondence.
- b) The law which shall apply to the Contract and according to which the Contract shall be construed is that in force in Karnataka.

5.2 PRIORITY OF CONTRACT DOCUMENTS

The several documents forming the Contract are to be taken as mutually explanatory of one another, but in case of ambiguities or discrepancies the same shall be explained and adjusted by the Engineer who shall thereupon issue to the Contractor instructions thereon and in such event, unless otherwise provided in the Contract, the priority of the documents forming the Contract shall be as follows

- 1) The Contract Agreement
- 2) The Letter of Acceptance

- 3) The Bid
- 4) Chapter 3; Special Conditions of Contract
- 5) Chapter 2; General Conditions of Contract
- 6) Chapter 4; Special Specifications (including written instructions of the Engineer)
- 7) Chapter 6; Priced Bill of Quantities
- 8) Chapter 10; Standard Specifications
- 9) Chapter 9; Drawings

6.0 DRAWINGS AND DOCUMENTS

6.1 CUSTODY AND SUPPLY OF DRAWINGS AND DOCUMENTS

The Drawings shall remain in the sole custody of the Engineer. The Contractor shall make at his own cost any number of copies required by him. Unless it is strictly necessary for the purposes of the Contract, the drawings, Specifications and other documents provided by the Employer or the Engineer shall not, without the consent of the Engineer, be used or communicated to a third party by the Contractor. Upon issue of the Defects Liability Certificate, the Contractor shall return to the Engineer all Drawings, Specifications and other documents provided under the Contract.

The Contractor shall supply to the Engineer six copies of all Drawings, Specifications and other documents submitted by the Contractor and approved by the Engineer in accordance with Sub-Clause:-7.1 to 7.3, together with a reproducible copy of any material which cannot be reproduced to an equal standard by photocopying. In addition the Contractor shall supply such further copies of such Drawings, Specifications and other documents as the Engineer may request in writing for the use of the Employer, who shall pay the cost thereof.

6.2 ONE COPY OF DRAWINGS TO BE KEPT ON SITE

One copy of Drawings, provided to or supplied by the Contractor as aforesaid, shall be kept by the Contractor on the Site and the same shall at all reasonable times be available for inspection and use by the Engineer and by any other person authorised by the Engineer in writing.

6.3 DISRUPTION OF PROGRESS

The Contractor shall give notice to the Engineer, with a copy to the Employer, whenever planning or execution of the Works is likely to be delayed or disrupted unless any further drawing or instruction is issued by the Engineer within a reasonable time. The notice shall include details of the drawing or instruction required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late.

6.4 DELAY AND COST OF DELAY OF DRAWINGS

If, by reason of any failure or inability of the Engineer to issue, within a time reasonable in all the circumstances, any drawing or instruction for which notice has been given by the Contractor in accordance with Sub-Clause:-6.3, the Contractor suffers delay then the Engineer shall, after due consultation with the Employer and the Contractor, determine any extension of time to which the Contractor is entitled under Sub-Clause:-44.1 to 44.3, and shall notify the Contractor accordingly, with a copy to the Employer. Any price adjustment which may be applicable for such time extension granted by the Engineer will be determined in accordance with the provision of Sub-Clause:-70.1 to 70.8.

6.5 FAILURE BY CONTRACTOR TO SUBMIT DRAWINGS.

If the failure or inability of the Engineer to issue any drawings or instructions is caused in whole or in part by the failure of the Contractor to submit Drawings, Specifications or other documents which he is required to submit under the Contract, the Engineer shall take such a failure by the Contractor into account when making his determination pursuant to Sub Clause 6.4.

7.1 SUPPLEMENTARY DRAWINGS AND INSTRUCTIONS

The Engineer shall have authority to issue to the Contractor, from time to time, such supplementary Drawings and instructions as shall be necessary for the purpose of the proper and adequate execution and completion of the Works and the remedying of any defects therein. The Contractor shall carry out and be bound by the same.

7.2 PERMANENT WORKS DESIGNED BY CONTRACTOR

Where the Contract expressly provides that part of the Permanent Works shall be designed by the Contractor, he shall submit to the Engineer, for approval:

- (a) Such Drawings, Specifications, Calculations and other information as shall be necessary to satisfy the Engineer as to the suitability and adequacy of that design, and
- (b) Operation and maintenance manuals, together with Drawings of the Permanent Works as completed, in sufficient detail to enable the Employer to operate, maintain, dismantle, reassemble and adjust the Permanent Works incorporating that design.

The Works shall not be considered to be completed for the purpose of taking over in accordance with Sub-Clause 48.1 to 48.5 until such operation and maintenance manuals together with "As-built" Drawings on completion, have been submitted to and approved by the Engineer.

7.3 RESPONSIBILITY UNAFFECTED BY APPROVAL

Approval by the Engineer, in accordance with Sub-Clause 7.2, shall not relieve the Contractor of any of his responsibilities under the Contract.

8.0 GENERAL OBLIGATIONS

8.1 CONTRACTOR'S GENERAL RESPONSIBILITIES

The Contractor shall, with due care and diligence, design (to the extent provided for by the Contract), execute and complete the Works and remedy any defects therein in accordance with the provisions of the Contract. The Contractor shall provide all superintendence, labour, materials, Plant, Contractor's Equipment and all other things, whether of a temporary or permanent nature, required in and for such design, execution, completion and remedying of any defects, so far as the necessity for providing the same is specified in or is reasonably to be inferred from the Contract.

The Contractor shall promptly notify the Employer and the Engineer of any error, omission, fault or any other defect in the design of or specifications for the Works which he discovers when reviewing the Contract documents or in the process of execution of Works.

8.2 SITE OPERATIONS AND METHODS OF CONSTRUCTION

The Contractor shall take full responsibility for the adequacy, stability and safety of all Site operations and methods of construction for the Works provided that the Contractor shall not be responsible (except as stated hereunder or as

may otherwise be agreed) for design or specification of permanent Works, or for the design or specification of any Temporary Works not prepared by the Contractor. Where the Contract expressly provides that part of the permanent Works shall be designed by the Contractor, he shall be fully responsible for that part of such Works, notwithstanding any approval by the Engineer.

9.0 CONTRACT AGREEMENT

The Contractor shall, if called upon so to do by the Employer, enter into and execute the Contract Agreement in the form annexed to these conditions with such modifications as may be necessary.

10.0 BID SECURITY

The Bidder shall furnish as part of his Bid, the bid security amount of **Rs. 96,98,000/- (Rs. NintySix Lakhs NintyEight Thousand only)** shall be paid through e-payment i.e., Credit Card (VISA / MASTER) or Debit Card or NEFT or RTGS. The bid security in the form of DD will not be accepted.

The payment through NEFT / RTGS challan shall be made at least one day prior to closing time and date for submission of bid, No interest will be paid on the Bid security.

The Bid securities of the unsuccessful bidder shall be returned as promptly as possible, but not later 45 days after the expiration of the period of bid validity. The successful bidder will have to furnish additional bid security for the difference amount of award amount and estimated amount put to tender at the time of entering into the agreement.

The Bid security shall be forfeited:

- (1) If the bidder withdraws his bid during the period of bid validity;
- (2) If the bidder does not accept the correction of his bid price, as per Sub-Clause:- 36; of chapter-1.
- (3) In the case of a successful bidder, if he fails within the specified time limit to:
 - (a) Sign the Agreement, or
 - (b) Furnish the required performance security.
- (4) If any of the certificates furnished by the bidder are found to be forged, bogus or not genuine or in-correct.

10.1 PERFORMANCE SECURITY

The Contractor shall provide security for his proper performance of the Contract to the Employer **within 28 (Twenty eight)** days of the date of the Letter of Acceptance. The performance security shall be total 6% of the Contract Price in the form of an irrevocable and Unconditional Bank Guarantee from the contractor / Firms issued by any Nationalized Banks / from all Banking Company Registered under Companies Act 1956. The guarantor Banks should ask by the Contractor / Firm to forward the Bank Guarantee by Registered post or by Courier mail to the concerned Exe. Engineer. The bank guarantee shall be provided within **28 days** of the date of the Letter of Acceptance to be valid until completion of the Project and defects liability period. The forms of performance security provided in Chapter 8 of the bidding document shall be used. The institution providing such guarantee shall be subject to the approval of the Employer. The cost of the complying with the requirements of this Clause shall be borne by the Contractor. When providing such security to the

Employer, the Contractor shall notify the Engineer of so doing. No interest will be payable on the performance security. The validity of the guarantee shall be in force till the end of the project including defect liability period.

10.2 PERIOD OF VALIDITY OF PERFORMANCE SECURITY

The performance security shall be valid until the Contractor has executed and completed the Works and remedied any defects therein in accordance with the Contract. No claim shall be made after the issue of the Defect Liability Certificate, and such security shall be returned to the Contractor within 14 days after the issue of the said Defects Liability Certificate.

10.3 CLAIMS UNDER PERFORMANCE SECURITY

Prior to including a claim under the Performance Security the Employer shall, in every case, notify the Contractor stating the nature of the default in respect of which the claim is to be made.

11.1 INSPECTION OF SITE

The Employer shall have made available to the Contractor, before the submission by the Contractor of the Tender, such data on hydrological and sub-surface conditions as have been obtained by or on behalf of the Employer from investigations undertaken relevant to the Works but the Contractor shall be responsible for collection of any additional data, for carrying out any additional surveys and tests, and for his own interpretation thereof.

The Contractor shall be deemed to have inspected and examined the Site and its surroundings and information available in connection therewith and to have satisfied himself so far as is practicable before submitting his Tender, as to

- a) the form and nature thereof, including the sub-surface conditions,
- b) the hydrological and climatic conditions,
- c) the extent and nature of work and materials necessary for the execution and completion of the Works and the remedying of any defects therein, and
- d) the means of access to the Site and the accommodation he may require and, in general, shall be deemed to have obtained all necessary information, subject as above mentioned, as to risks, contingencies and all other circumstances which may influence or affect his Tender.

11.2 ACCESS TO DATA.

Data made available by the Employer in accordance with Sub-Clause:-11.1 shall be deemed to include data listed in Chapter 3, Special Conditions of Contract, which shall be open for inspection at the specified location.

12.1 SUFFICIENCY OF TENDER

The Contractor shall be deemed to have based his Tender on the data made available by the Employer and on his own inspection and examination, all as aforementioned.

The Contractor shall be deemed to have satisfied himself as to the correctness and sufficiency of the Tender and of the rates and prices stated in the Bill of Quantities, all of which shall, except insofar as it is otherwise provided in the Contract, cover all his obligations under the Contract (including those in respect of the supply of goods, materials, Plant or services or of contingencies) and all matters and things necessary for the proper execution and completion of the Works and the remedying of any defects therein.

12.2 ADVERSE PHYSICAL OBSTRUCTIONS OR CONDITIONS.

If, however, during the execution of the Works the Contractor encounters physical obstructions or physical conditions, other than climatic conditions on the Site, which obstructions or conditions, were in his opinion, not foreseeable by an experienced contractor, the Contractor shall forthwith give notice thereof to the Engineer, with a copy to the Employer. On receipt of such notice, the Engineer shall, if in his opinion such obstructions or conditions could not have been reasonably foreseen by an experienced contractor, after due consultation with the Employer and the Contractor determine any extension of time to which the Contractor is entitled under Sub-Clause:-44.1 to 44.3, and shall notify the Contractor accordingly, with a copy to the Employer. Any price adjustment which may be applicable for such time extension granted by the Engineer will be determined in accordance with Sub-Clause:-70.1 to 70.8.

13.1 WORK TO BE IN ACCORDANCE WITH CONTRACT

The Contractor shall execute and complete the Works and remedy any defects therein in strict accordance with the Contract to the satisfaction of the Engineer. The Contractor shall comply with and adhere strictly to the Engineer's instructions on any matter, whether mentioned in the Contract, or not, touching or concerning the Works. The Contractor shall take instructions only from the Engineer or, subject to the provisions of Sub-Clause:-2.2 to 2.6, from the Engineer's Representative.

14.1 PROGRAMME TO BE SUBMITTED

The Contractor shall, within **28 days** after the date of the Letter of Acceptance, submit to the Engineer for his consent a programme, in such form and detail as acceptable to the Engineer, for the execution of the Works. **The Contractor shall also provide in writing for the information the Engineer a general description of the arrangements and methods which the Contractor proposes to adopt for the execution of the works & also for the operation & maintenance of the works.**

14.2 REVISED PROGRAMME

If any time it should appear to the Engineer that the actual progress of the Works does not conform to the programme to which consent has been given under the preceding Sub-Clause:-14.1, the Contractor shall produce a revised programme showing the modifications to such programme necessary to ensure completion of the Works within the Time for Completion.

14.3 CASH FLOW ESTIMATE TO BE SUBMITTED

The Contractor shall, within **28 days** after the date of the Letter of Acceptance, provide to the Engineer for his information a detailed cash flow estimate, in quarterly periods, of all payments to be made to the Contractor for the works entrusted to him and the Contractor shall subsequently supply revised cash flow estimates at quarterly intervals, if required to do so by the Engineer.

14.4 CONTRACTOR NOT RELIEVED OF DUTIES OR RESPONSIBILITIES

The submission to and consent by the Engineer of such programmes or the provision of such general descriptions or cash flow estimates shall not relieve the Contractor of any of his duties or responsibilities under the Contract.

14.5 REPORTS TO BE SUBMITTED

The Contractor shall maintain a daily log of the labour, equipment and materials supplied to and used at the site, and shall prepare monthly progress reports in such form and detail as acceptable to the Engineer.

15.1 CONTRACTOR'S SUPERINTENDENCE

The Contractor shall provide all necessary superintendence during the execution of the Works and as long thereafter as the Engineer may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. The Contractor, or a competent and authorised representative approved of by the Engineer, which approval may at any time be withdrawn, shall give his whole time to the superintendence of the Works. Such authorised representative shall receive, on behalf of the Contractor, instructions from the Engineer or, subject to the provisions of Sub-Clause:-2.1 to 2.6, the Engineer's Representative.

If approval of the representative is withdrawn by the Engineer, the Contractor shall, as soon as is practicable, having regard to the requirement of replacing him as hereinafter mentioned, after receiving notice of such withdrawal, remove the representative from the Works and shall not thereafter employ him again on the Works in any capacity and shall replace him by another representative approved by the Engineer.

16.1 CONTRACTOR'S EMPLOYEES

The Contractor shall provide on the Site in connection with execution and completion of the Works and the remedying of any defects therein:

- (a) only such technical assistants as are skilled and experienced in their respective callings and such foremen and leading hands as are competent to give proper superintendence of the Works; and
- (b) such skilled, semiskilled and unskilled labour as are necessary for the proper and timely fulfilling of the Contractor's obligations under the Contract.

16.2 ENGINEER AT LIBERTY TO OBJECT

The Engineer shall be at liberty to object to and require the Contractor to remove forthwith from the Works any person provided by the Contractor who, in the opinion of the Engineer, misconducts himself, or is incompetent or negligent in the performance of his duties, or whose presence on Site is otherwise considered by the Engineer to be undesirable, and such person shall not be again allowed upon the Works without the consent of the Engineer. Any person so removed from the Works shall be replaced as soon as possible.

16.3 LANGUAGE ABILITY OF CONTRACTOR'S STAFF.

If the Contractor's authorised representative is not, in the opinion of the Engineer, fluent in English or Kannada the Contractor shall have available on site at all times a competent interpreter to ensure the proper transmission of instructions and information.

The Contractor is encouraged, to the extent practicable and reasonable, to employ staff and labour from within the State of Karnataka. A reasonable proportion of the Contractor's superintending staff shall have working knowledge of Kannada, or the Contractor shall have available on site at all times a sufficient number of interpreters to ensure the proper transmission of instructions and information.

17.1 SETTING-OUT

The Contractor shall be responsible for

- (a) The accurate setting-out of the Works in relation to original points, lines and levels of reference given by the Engineer in writing;

- (b) The correctness, subject as above mentioned, of the position, levels, dimensions and alignment of all parts of the Works; and
- (c) The provision of all necessary instruments, appliances and labour in connection with the foregoing responsibilities.

If, at any time during the execution of the Works, any error appears in the position, levels, dimensions or alignment of any part of the Works, the Contractor, on being required so to do by the Engineer, shall, at his own cost, rectify such error to the satisfaction of the Engineer, unless such error is based on incorrect data supplied in writing by the Engineer, in which case the Engineer shall determine an addition to the Contract Price in accordance with Sub-Clause:-52.1 to 52.3 and shall notify the Contractor accordingly, with a copy to the Employer. The checking of any setting-out or of any line or level by the Engineer shall not in any way relieve the Contractor of his responsibility for the accuracy thereof and Contractor shall carefully protect and preserve all bench-marks, sight-rails, pegs and other things used in setting-out the Works. The Contractor shall give to the Engineer not less than 48 hours notice of his intention to set out or give levels for any part of the Work so that timely arrangement may be made for checking and issuing instructions.

18.1 BOREHOLES AND EXPLORATORY EXCAVATION

If at any time during the execution of the Works the Engineer requires the Contractor to make boreholes or to carry out exploratory excavations in excess of the requirement specified else where in the Contract, such requirements shall be the subject of an instruction in accordance with Sub-Clause:-51.1 to 51.2 unless an item or provisional sum in respect of such Works is included in the Bill of Quantities.

19.1 SAFETY, SECURITY AND PROTECTION OF THE ENVIRONMENT

The Contractor shall, throughout the execution and completion of the Works and remedying of any defects therein

- (a) Have full regard for the safety of all persons entitled to be upon the Site and keep the Site (so far as the same is under his control) and the Works (so far as the same are not completed or occupied by the Employer) in an orderly state appropriate to the avoidance of danger to such persons.
- (b) Provide and maintain at his own cost all lights, guards, fencing, warning signs, watching, when and where necessary or required by the Engineer or by any duly constituted authority, for the protection of the Works or for the safety and convenience of the public or others.
- (c) Take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation and
- (d) Screen all lights provided by the Contractor so as to not to interfere with any signal light on the railways or with any traffic or signal lights of any local or other authority.

19.2 EMPLOYER'S RESPONSIBILITIES

If under Sub-Clause:-31.1 to 31.2 the Employer shall carry out work on the site with his own workmen he shall, in respect of such work

- (a) Have full regards to the safety of all persons entitled to be upon the Site, and

- (b) Keep the site in an orderly state appropriate to the avoidance of danger to such persons.

If under Sub-Clause:-31.1 to 31.2 the Employer shall employ other contractors on the site he shall require them to have the same regard for safety and avoidance of danger.

20.1 CARE OF WORKS

The Contractor shall take full responsibility for the care of the Works and materials and Plant for incorporation therein from the Commencement Date until the date of issue of the Taking-Over Certificate for the whole of the Works, when the responsibility for the said care shall pass to the Employer. Provided that:

- (a) If the Engineer issues a Taking-Over Certificate for any Section or part of the Permanent Works the Contractor shall cease to be liable for the care of that chapter or part from the date of issue of the Taking -Over Certificate, when the responsibility for the care of that Chapter or part shall pass to the Employer, and
- (b) The Contractor shall take full responsibility for the care of any outstanding Works and materials and Plant for incorporation therein which he undertakes to finish during the Defects Liability Period until such outstanding Works have been completed pursuant to Sub-Clause:-49.1 to 49.5 .

20.2 RESPONSIBILITY TO RECTIFY LOSS OR DAMAGE

If any loss or damage happens to the Works, or any part thereof, or materials or Plant for incorporation therein, during the period for which the Contractor is responsible for the care thereof, from any cause whatsoever other than the risks defined in Sub-Clause 20.4, the Contractor shall, at his own cost, rectify such loss or damage so that the Permanent Works conform in every respect with the provisions of the Contract to the satisfaction of the Engineer. The Contractor shall also be liable for any loss or damage to the Works occasioned by him in the course of any operations carried out by him for the purpose of complying with his obligations under Sub-Clauses:-49.1 to 49.5 and 50.1.

20.3 LOSS OR DAMAGE DUE TO EMPLOYER'S RISK

In the event of any such loss or damage happening from any of the risks defined in Sub-Clause:-20.4 or in combination with other risks, the Contractor shall, if and to the extent required by the Engineer, rectify the loss or damage and the Engineer shall determine an addition to the Contract Price in accordance with Sub-Clause:-52.1 to 52.3 and shall notify the Contractor accordingly, with a copy to the Employer. In the case of a combination of risks causing loss or damage any such determination shall take into account the proportional responsibility of the Contractor and the Employer.

20.4 EMPLOYER'S RISKS

The Employer's risks are

- (a) In so far as they directly affect the execution of Works in the country where the Permanent Works are executed:
 - i) War and hostilities (whether war be declared or not), invasion, act of foreign enemies;
 - ii) Rebellion, revolution, insurrection, or military or usurped power, or civil war;

- iii) Ionizing radiation, or contamination by radioactivity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive nuclear assembly or nuclear component thereof;
 - iv) Pressure waves caused by aircraft or other aerial devices traveling at sonic or supersonic speeds
 - v) Riot, commotion or disorder, unless solely restricted to the employees of the Contractor or of his Subcontractors and arising from the conduct of the Works;
- b) Loss or damage due to the use or occupation by the Employer of any Chapter or part of the Permanent Works, except as may be provided for in the Contract
- c) Loss or damage to the extent that it is due to the design of the Works, other than any part of the design provided by the Contractor or for which the Contractor is responsible and
- d) Any operation of the forces of nature (in so far as it occurs on the site) which an experienced contractor
 - i) Could not have reasonably foreseen, or
 - ii) Could reasonably have foreseen but against which he could not reasonably have taken at least one of the following measures:
 - a) Prevent loss or damage to physical property from occurring by taking appropriate measures, or
 - b) Insure against.

21.0 INSURANCE

21.1 INSURANCE OF WORKS AND CONTRACTOR'S EQUIPMENT

Not included

21.2 SCOPE OF COVER

Not included

21.3 RESPONSIBILITY FOR AMOUNTS NOT RECOVERED

Not included

21.4 EXCLUSIONS

Not included

21.5 WAR RISK INSURANCE

Not included.

22.1 DAMAGE TO PERSONS AND PROPERTY

Not included.

22.2 EXCEPTIONS

Not included.

22.3 INDEMNITY BY EMPLOYER

Not included.

23.1 THIRD PARTY INSURANCE (INCLUDING EMPLOYER'S PROPERTY)

Not included

23.2 MINIMUM AMOUNT OF INSURANCE

Not included

23.3 CROSS LIABILITIES

Not included

24.1 ACCIDENT OR INJURY TO WORKMEN

Not included

24.2 INSURANCE AGAINST ACCIDENT TO WORKMEN

Not included

25.1 EVIDENCE AND TERMS OF INSURANCE

Not included

25.2 ADEQUACY OF INSURANCE

Not included

25.3 REMEDY ON CONTRACTOR'S FAILURE TO INSURE

Not included

25.4 COMPLIANCE WITH POLICY CONDITIONS

Not included

25.5 SOURCE OF INSURANCE

Not included

26.0 CONTRACTOR'S OBLIGATIONS

26.1 COMPLIANCE WITH STATUTES, REGULATIONS

The Contractor shall conform in all respects, including by the giving of all notices and the paying of all fees, with the provisions of

- (a) Any National or State Statute, Ordinance, or other Law, or any regulation, or bye law of any local or other duly constituted authority in relation to the execution and completion of the Works and the remedying of any defects therein, and
- (b) The rules and regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the Works, and the Contractor shall keep the Employer indemnified against all penalties and liability of every kind for breach of any such provision. Provided always that the Employer shall be responsible for obtaining any planning, zoning or other similar permission required for the Works to proceed and shall indemnify the Contractor in accordance with Sub-Clause 22.3.

27.1 FOSSILS

All fossils, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological interest discovered on the Site shall, as between the Employer and the Contractor, be deemed to be the absolute property of the Employer. The Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such article or thing and shall, immediately upon discovery thereof and before removal, acquaint the Engineer of such discovery and carry out the Engineer's instructions for dealing with the same. If, by reason of such instructions, the Contractor suffers delay and/or incurs costs then the Engineer shall, after due

Contractor

Employer/Engineer

consultation with the Employer and the Contractor, determine any extension of time to which the Contractor is entitled under Sub-Clause:-44.1 to 44.3, and shall notify the Contractor accordingly, with a copy to the Employer. Any price adjustment which may be applicable for such time extension granted by the Engineer will be determined in accordance with Sub-Clause:-70.1 to 70.8.

28.1 PATENT RIGHTS

The Contractor shall save harmless and indemnify the Employer from and against all claims and proceedings for or on account of infringement of any patent right, design trademark or name or other protected rights in respect of any Contractor's Equipment, materials or Plant used for or in connection with or for incorporation in the Works from and against all damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto, except where such infringement results from compliance with the design or Specification provided by the Engineer.

28.2 ROYALTIES

Except where otherwise stated, the Contractor shall pay all tonnage and other royalties, rent and other payments or compensation, if any, for getting stone, sand, gravel, clay or other materials required for the Works.

28.3 KARNATAKA BUILDING AND OTHER CONSTRUCTION WORKER'S WELFARE CESS

Karnataka Building and other construction worker's welfare cess at 1% of contract value as per G.O.No.LD/30/LET/2006. Bangalore Dated:10.1.2007 will be recovered from the Bills.

29.1 INTERFERENCE WITH TRAFFIC AND ADJOINING PROPERTIES

All operations necessary for execution and completion of the Works and the remedying of any defects therein shall, so far as compliance with the requirements of the Contract permits, be carried on so as not to interfere unnecessarily or improperly with:

- (a) The convenience of the public, or
- (b) The access to, use and occupation of public or private roads, railways, footpaths and any other right of way to or of properties whether in the possession of the Employer or of any other person.

The Contractor shall save harmless and indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of, or in relation to, any such matters insofar as the Contractor is responsible therefor.

30.1 AVOIDANCE OF DAMAGE TO ROADS

The Contractor shall use every reasonable means to prevent any of the roads or bridges communicating with or on the routes to the Site from being damaged or injured by any traffic of the Contractor or any of his Subcontractors and, in particular, shall select routes, choose and use vehicles and restrict and distribute loads so that any such extraordinary traffic as will inevitably arise from the moving of materials, Plant, Contractor's Equipment or temporary Works from and to the Site shall be limited, as far as reasonably possible, and so that no unnecessary damage or injury may be occasioned to such roads and bridges.

30.2 TRANSPORT OF CONTRACTOR'S EQUIPMENT OR TEMPORARY WORKS

Save insofar as the Contract otherwise provides, the Contractor shall be responsible for and shall pay the cost of strengthening any bridges or altering or improving any road communicating with or on the routes to the Site to facilitate the movement of Contractor's Equipment or Temporary Works and the Contractor shall indemnify and keep indemnified the Employer against all claims for damage to any such road or bridge caused by such movement, including such claims as may be made directly against the Employer, and shall negotiate and pay all claims arising solely out of such damage.

If it is found necessary for the Contractor to move one or more loads of heavy constructional and equipment, materials or pre-constructed units or parts of units of work over roads, highways, bridges on which such oversized and overweight items are not normally allowed to be moved, the Contractor shall obtain prior permission from the concerned authorities. Payments for complying with the requirements, if any, for protection of or strengthening of the roads, highways or bridges shall be made by the Contractor and such expenses shall be deemed to be included in his Contract Price.

30.3 TRANSPORT OF MATERIALS OR PLANT

If, notwithstanding Sub-Clause 30.1, any damage occurs to any bridge or road communication with or on the routes to the Site arising from the transport of materials or Plant, the Contractor shall notify the Engineer with a copy to Employer as soon as he becomes aware of such damage or as soon as he receives any claim from the authority entitled to make such claim. Where under any law or regulation the haulier of such materials or Plant is required to indemnify the road authority against damage the Employer shall not be liable for any costs, charges or expenses in respect thereof or in relation thereto.

30.4 WATERBORNE TRAFFIC

Where the nature of the Works is such as to require the use by the Contractor of waterborne transport the foregoing provisions of the Clause shall be construed as though "road" included a lock, dock, sea wall or other structure related to a waterway and "vehicle" included craft, and shall give effect accordingly.

31.1 OPPORTUNITIES FOR OTHER CONTRACTORS

The Contractor shall, in accordance with the requirements of the Engineer, afford all reasonable opportunities for carrying out their work to:

- (a) Any other contractors employed by the Employer and their workmen,
- (b) The workmen of the Employer, and
- (c) The workmen of any duly constituted authorities who may be employed in the execution on or near the Site of any work not included in the Contract or of any contract which the Employer may enter into in connection with or ancillary to the Works.

31.2 FACILITIES FOR OTHER CONTRACTORS

If, however, pursuant to Sub-Clause 31.1 the Contractor shall, on the written request of the Engineer:

- (a) Make available to any such other contractor, or to the Employer or any such authority, any roads or ways for the maintenance of which the Contractor is responsible, or
- (b) Permit the use, by any such, or Temporary Works or Contractor's Equipment on the Site, or

- (c) Provide any other service of whatsoever nature for any such Works the Engineer shall determine an addition to the Contract Price in accordance with Clause:-52 and shall notify the Contractor accordingly, with a copy to the Employer.

32.1 CONTRACTOR TO KEEP SITE CLEAR

During the execution of the Works the Contractor shall keep the Site free from all unnecessary obstruction and shall store or dispose of any Contractor's Equipment and surplus materials and clear away and remove from the Site any wreckage, rubbish or Temporary Works no longer required.

33.1 CLEARANCE OF SITE ON COMPLETION

Upon the issue of any Taking-Over Certificate the Contractor shall clear away and remove from that part of the Site to which such Taking-Over Certificate relates all Contractor's Equipment, surplus material, rubbish and Temporary Works of every kind, and leave such part of the Site and Works clean and in a workmanlike condition to the satisfaction of the Engineer. Provided that the Contractor shall be entitled to retain on Site, until the end of the Defects Liability Period, such materials, Contractor's Equipment and Temporary Works as are required by him for the purpose of fulfilling his obligations during the Defects Liability Period.

33.2 EPIDEMICS

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with such regulations and carry out such orders as are issued by the Government or Local Authority.

34.0 LABOUR

34.1 ENGAGEMENT OF STAFF AND LABOUR

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

34.2 COMPLIANCE WITH LABOUR REGULATIONS

The Contractor and his Sub-contractors shall abide by the local laws and regulations governing labour as detailed in Annexure A and Annexure A- I.

35.1 RETURNS OF LABOUR AND CONTRACTOR'S EQUIPMENT

The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such information in respect of Contractor's Equipment as the Engineer may require. For Contractor's Labour Regulation, refer to Annexures-A and A-I.

36.0 MATERIALS, PLANT AND WORKMANSHIP

36.1 QUALITY OF MATERIALS, PLANT AND WORKMANSHIP

All materials, Plant and workmanship shall be:

- (a) Of the respective kinds described in the Contract and in accordance with the Engineer's instructions, and
- (b) Subjected from time to time to such tests as the Engineer may require at the place of manufacture, fabrication or preparation, or on the Site or at

such other place or places as may be specified in the Contract, or at all or any of such places.

The Contractor shall provide such assistance, labour, electricity, fuels, stores, apparatus and instruments as are normally required for examining, measuring and testing any materials or Plant and shall supply samples of materials, before incorporation in the Works, for testing as may be selected and required by the Engineer.

The Contractor is encouraged, to the extent practicable and reasonable, to use plant and materials from sources within India.

36.2 Cost of Samples

All samples shall be supplied by the Contractor at his own cost if the supply thereof is clearly intended by or provided for in the Contract.

36.3 Cost of Tests

The cost of making any test shall be borne by the Contractor if such test is:

- (a) Clearly intended by or provided for in the Contract, or
- (b) Particularized in the Contract (in cases only of a test under load or of a test to ascertain whether the design of any finished or partially finished work is appropriate for the purposes which it was intended to fulfill) in sufficient detail to enable the Contractor to price or allow for the same in his Tender.

36.4 Cost of Tests Not Provided For

If any test required by the Engineer which is:

- (a) Not so intended by or provided for, or
 - (b) (In the cases above mentioned) not so particularized, or
 - (c) (Though so intended or provided for) required by the Engineer to be carried out at any place other than the Site or the place of manufacture, fabrication or preparation of the materials or Plant tested,
- shows the materials, Plant or workmanship not to be in accordance with the provisions of the Contract to the satisfaction of the Engineer, then the cost of such test shall be borne by the Contractor.

37.1 Inspection of Operations

The Engineer, and any person authorised by him, shall at all reasonable times have access to the Site and to all workshops and places where materials or Plant are being manufactured, fabricated or prepared for the Works and the Contractor shall afford every facility for and every assistance in obtaining the right to such access.

37.2 Inspection and Testing

The Engineer shall be entitled, during manufacture, fabrication or preparation to inspect and test the materials and Plant to be supplied under the Contract. If materials or Plant are being manufactured, fabricated or prepared in workshops or places other than those of the Contractor, the Contractor shall obtain permission for the Engineer to carry out such inspection and testing in those workshops or places. Such inspection or testing shall not release the Contractor from any obligation under the Contract.

37.3 Dates for Inspection and Testing

The Contractor shall agree with the Engineer on the time and place for inspection or testing of any materials or Plant as provided in the Contract. The Engineer shall give the Contractor not less than 24 hours notice of his intention to carry out the inspection or to attend the tests. If the Engineer, or his duly

authorised representative, does not attend on the date agreed, the Contractor may, unless otherwise instructed by the Engineer, proceed with the tests, which shall be deemed to have been made in the presence of the Engineer. The Contractor shall forthwith forward to the Engineer duly certified copies of the test readings. If the Engineer has not attended the tests, he shall accept the said readings as accurate.

37.4 Rejection

If, at the time and place agreed in accordance with Sub-Clause 37.3, the materials or Plant are not ready for inspection or testing or if, as a result of the inspection or testing referred to in this Clause, the Engineer determines that the materials or Plant are defective or otherwise not in accordance with the Contract, he may reject the materials or Plant and shall notify the Contractor thereof immediately. The notice shall state the Engineer's objections with reasons. The Contractor shall then promptly make good the defect or ensure that rejected materials or Plant comply with the Contract. If the Engineer so requests, the tests of rejected materials or Plant shall be made or repeated under the same terms and conditions. All costs incurred by the Employer by the repetition of the tests shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer and may be deducted from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

37.5 Independent Inspection

If the Engineer so desires, he may delegate inspection and testing of materials or Plant to an independent inspector. Any such delegation shall be effected in accordance with Sub-Clause 2.4 and for this purpose such independent inspector shall be considered as an assistant of the Engineer. Notice of such appointment (not being less than 14 days) shall be given by the Engineer to the Contractor.

38.1 Examination of Work Before Covering Up

No part of the Works shall be covered up or put out of view without the approval of the Engineer and the Contractor shall afford full opportunity for the Engineer to examine and measure any such part of the Works which is about to be covered up or put out of view and to examine foundations before any part of the Works is placed thereon. The Contractor shall give notice to the Engineer whenever any such part of the Works or foundations is or are ready or about to be ready for examination and the Engineer shall, without unreasonable delay, unless he considers it unnecessary and advises the Contractor accordingly, attend for the purpose of examining and measuring such part of the Works or of examining such foundations.

38.2 Uncovering and Making Openings

If, for any reason whatsoever, the Contractor fails to comply with the provisions of Sub-Clause 38.1 before covering up the works, the Contractor shall uncover any part of the Works or make openings in or through the same as the Engineer may from time to time instruct and shall reinstate and make good such part. All costs shall be borne by the Contractor.

39.1 Removal of Improper Work, Materials or Plant

The Engineer shall have authority to issue instructions from time to time, for:

- (a) The removal from the Site, within such time or times as may be specified in the instruction, of any materials or Plant which, in the opinion of the Engineer, are not in accordance with the Contract,
- (b) The substitution of proper and suitable materials or Plant, and
- (c) The removal and proper re-execution, notwithstanding any previous test thereof or interim payment therefore, of any work which, in respect of
 - (i) Materials, Plant or workmanship, or
 - (ii) Design by the Contractor or for which he is responsible,is not, in the opinion of the Engineer, in accordance with the Contract.

39.2 Default of Contractor in Compliance

In case of default on the part of the Contractor in carrying out such instruction within the time specified therein or, if none, within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

40.0 SUSPENSION

40.1 Suspension of Work

The Contractor shall, on the instructions of the Engineer, suspend the progress of the Works or any part thereof for such time and in such manner as the Engineer may consider necessary and shall, during such suspension, properly protect and secure the Works or such part thereof so far as is necessary in the opinion of the Engineer.

Unless such suspension is:

- (a) Otherwise provided for in the contract, or
- (b) Necessary by reason of some default of or breach of Contract by the Contractor or for which he is responsible, or
- (c) Necessary by reason of climatic conditions on the site, or
- (d) Necessary for the proper execution of the Works or for the safety of the Works or any part thereof (save to the extent that such necessity arises from any act or default by the Engineer or the Employer or from any of the risks defined in Sub-Clause 20.4), Sub-Clause 40.2 shall apply.

40.2 Engineer's Determination Following Suspension

Where, pursuant to Sub-Clause 40.1 this Sub-Clause applies the Engineer shall after due consultation with the Employer and the Contractor, determine any extension of time to which the Contractor is entitled under Sub-Clause 44.1 to 44.3 and shall notify the Contractor accordingly, with a copy to the Employer. Any price adjustment which may be applicable for such time extension granted by the Engineer will be determined in accordance with Sub-Clause 70.1 to 70.8.

40.3 Suspension Lasting More than 180 Days

If the progress of the Works or any part thereof is suspended on the written instructions of the Engineer and if permission to resume work is not given by the Engineer within a period of 180 days from the date of suspension then, unless such suspension is within paragraph (a), (b), (c) or (d) of Sub-Clause 40.1 the Contractor may give notice to the Engineer requiring permission, within 28 days from the receipt

thereof, to proceed with the Works or that part thereof in regard to which progress is suspended. If, within the said time, such permission is not granted, the Contractor may, but is not bound to, elect to treat the suspension, where it affects part only of the Works, as an omission of such part under Sub-Clause 51.1 to 51.2 by giving a further notice to the Engineer to that effect, or where it affects the whole of the Works, treat the suspension as an event of default by the Employer and suspend his work under the Contract.

41.0 COMMENCEMENT AND DELAYS

41.1 Commencement of Works

The Contractor shall commence the Works as soon as is reasonably possible after the receipt by him of a notice to this effect by the Engineer, which notice shall be issued within the time stated in the Appendix to Tender after the date of the Letter of Acceptance. Thereafter, the Contractor shall proceed with the Works with due expedition and without delay.

Provided that:

- a) The Engineer will, whenever possible, endeavour to issue the notice to proceed on the same day as the formal agreement is signed, subject to provision by the Contractor of a satisfactory Performance Security pursuant to Sub-Clause 10.1 to 10.3 and proof of insurance pursuant to Sub-Clause 25.1; and
- b) The Contractor will commence the Works not later than **21(Twenty one)** days after issue by the Engineer of the notice to proceed.

42.0 Access to Site

42.1 Possession of Site and Access Thereto

Save insofar as the Contract may prescribe:

- (a) The extent of portions of the Site of which the Contractor is to be given possession from time to time and,
- (b) The order in which such portions shall be made available to the Contractor and subject to any requirement in the Contract as to order in which the Works shall be executed, the Employer will, with the Engineer's notice to commence the Works, give to the Contractor possession of
- (c) So much of the Site, and
- (d) Such access as, in accordance with the Contract, is to be provided by the Employer as may be required to enable the Contractor to commence and proceed with the execution of the Works. The Employer will, from time to time as the Works proceed, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due dispatch in accordance with the agreed programme or proposals, as the case may be.

42.2 Failure to Give Possession

If the contractor suffers delay and / or incurs cost from failure on the part of the employer to give possession in accordance with the items of sub-clause 42.1, the Engineers shall after due consultation with the employer and the contractor, determine any extension of time to which the contractor is entitled and clause 42 and shall notify the contractor accordingly with a copy to the employer.

42.3 Way leaves and Facilities

The Contractor shall bear all costs and charges for special or temporary way leaves required by him in connection with access to the Site. The Contractor

shall also provide at his own cost any additional facilities outside the Site required by him for the purposes of the Works.

43.0 Time

43.1 Time for Completion

The whole of the Works and, if applicable, any section required to be completed within a particular time as stated in the Appendix to Tender, shall be completed, in accordance with the provisions of Sub-Clause 48.1 to 48.5, within the time stated in the Appendix to Tender for the whole of the Works or the Chapter (as the case may be), calculated from the Commencement Date, or such extended time as may be allowed under Sub-Clause 44.1 to 44.3.

44.1 Extension of Time of Completion

In the event of

- a) The amount or nature of extra or additional work, or
- b) Any cause of delay referred to in these Conditions, or
- c) Exceptionally adverse climatic conditions, or
- d) Any delay, impediment or prevention by the Employer, or
- e) Other special circumstances which may occur, other than through a default of or breach of contract by the Contractor for which he is responsible, being such as fairly to entitle the Contractor to an extension of the Time for Completion of the Works, or any Chapter or part thereof, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of such extension and shall notify the Contractor accordingly, with a copy to the Employer.

44.2 Contractor to Provide Notification and Detailed Particulars

Provided that the Engineer is not bound to make any determination unless the Contractor has:

- a) Within 28 days after such event has first arisen notified the Engineer with a copy to the Employer, and
- b) Within 28 days, or such other reasonable time as may be agreed by the Engineer, after such notification submitted to the Engineer detailed particulars of any extension of time to which he may consider himself entitled in order that such submission may be investigated at the time.

44.3 Interim Determination of Extension.

Provided also where an event has a continuing effect such that it is not practicable for the Contractor to submit detailed particulars within the period of 28 days referred to in Sub-Clause 44.2 (b), he shall nevertheless be entitled to an extension of time provided that he has submitted to the Engineer interim particulars at intervals of not more than 28 days and final particulars within 28 days of the end of the effects resulting from the event. On receipt of such interim particulars, the Engineer shall, without undue delay, make an interim determination of extension of time and on receipt of the final particulars, the Engineer shall review all the circumstances and shall determine an overall extension of time in regard to the event. In both such cases the Engineer shall make his determination after due consultation with the Employer and the Contractor and shall notify the Contractor of the determination, with a copy to the Employer. No final review shall result in a decrease of any extension of time already determined by the Engineer.

45.1 Restriction on Working Hours

Subject to any provision to the contrary contained in the Contract, none of the Works shall, save as hereinafter provided, be carried on during the night or on locally recognized days of rest without the consent of the Engineer, except when work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer. Provided that the provisions of this Clause shall not be applicable in the case of any work which it is customary to carry out by multiple shifts.

46.1 Rate of Progress

If for any reason, which does not entitle the Contractor to an extension of time, the rate of progress of the Works or any Chapter is at any time, in the opinion of the Engineer, too slow to comply with the Time for Completion, the Engineer shall so notify the Contractor who shall thereupon take such steps as are necessary, subject to the consent of the Engineer, to expedite progress so as to comply with the Time for Completion. The Contractor shall not be entitled to any additional payment for taking such steps. If, as a result of any notice given by the Engineer under this Clause, the Contractor considers that it is necessary to do any work at night or on locally recognized days of rest, he shall be entitled to seek the consent of the Engineer so to do. Provided that if any steps, taken by the Contractor in meeting his obligations under this Clause, involve the Employer in additional supervision costs, such costs shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

47.0 LIQUIDATED DAMAGES

47.1 Liquidated Damages for Delay

If the Contractor fails to comply with the Time for Completion in accordance with Sub-Clause 48.1 to 48.5 for the whole of the Works or, if applicable, any Chapter within the relevant time prescribed by Sub-Clause 43.1, then the Contractor shall pay to the Employer the relevant sum stated in the Appendix to Bid as liquidated damages for such default and not as a penalty (which sum shall be the only monies due from the Contractor for such default) for every week or part of a work which shall elapse between the relevant Time for Completion and the date stated in a Taking-Over Certificate of the whole of the Works or the relevant Chapter, subject to the applicable limit stated in the Appendix to Bid. The Employer may, without prejudice to any other method of recovery, deduct the amount of such damages from any monies due or to become due to the Contractor. The payment or deduction of such damages shall not relieve the Contractor from his obligation to complete the Works, or from any other of his obligations and liabilities under the Contract.

47.2 Reduction of Liquidated Damages

If, before the Time for Completion of the whole of the Works or, if applicable, any Chapter, a Taking-Over Certificate has been issued for any part of the Works or of a Chapter, the liquidated damages for delay in completion of the remainder of the Works or of that Chapter shall, for any period of delay after the date stated in such Taking-Over Certificate, and in the absence of alternative provisions in the Contract, be reduced in the proportion which the value of the

part so certified bears to the value of the whole of the Works or Chapter, as applicable. The provisions of this Sub- Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

48.0 TAKING OVER

48.1 Taking-Over Certificate

When the whole of the Works have been substantially completed and have satisfactorily passed any Tests on Completion prescribed by the Contract, the Contractor may give a notice to that effect to the Engineer, with a copy to the Employer, accompanied by a written undertaking to finish with due expedition any outstanding work during the Defects Liability Period. Such notice and undertaking shall be deemed to be a request by the Contractor for the Engineer to issue a Taking-Over Certificate in respect of the Works. The Engineer shall, within 21 days of the date of delivery of such notice, either issue to the Contractor, with a copy to the Employer, a Taking-Over Certificate stating the date on which, in his opinion, the Works were substantially completed in accordance with the Contract, or give instructions in writing to the Contractor specifying all work which, in the Engineer's opinion, is required to be done by the Contractor before the issue of such Certificate. The Engineer shall also notify the Contractor of any defects in the Works affecting substantial completion that may appear after such instructions and before completion of the Works specified therein. The Contractor shall be entitled to receive such Taking-Over Certificate within 21 days of completion, to the satisfaction of the Engineer, of the Works so specified and remedying any defects so notified.

48.2 Taking Over Of Section or Parts

Similarly, in accordance with the procedure set out in Sub-Clause 48.1, the Contractor may request and the Engineer shall issue a Taking - Over Certificate in respect of

- (a) Any Section in respect of which a separate Time for Completion is provided in the Appendix to Tender, or
- (b) Any substantial part of the Permanent Works which has been both completed to the satisfaction of the Engineer and, otherwise than as provided for in the Contract, occupied or used by the Employer, or
- (c) Any part of the Permanent Works which the Employer has elected to occupy or use prior to completion (where such prior occupation or use is not provided for in the Contract has not been agreed by the Contractor as a temporary measure).

48.3 Substantial Completion Parts

If any part of the Permanent Works has been substantially completed and has satisfactorily passed any Tests on Completion prescribed by the Contract, the Engineer may issue a Taking-Over Certificate in respect of that part of the Permanent Works before completion of the whole of the Works and, upon the issue of such Certificate, the Contractor shall be deemed to have undertaken to complete with due expedition any outstanding work in that part of the permanent Works during the Defects Liability Period.

48.4 Surfaces Requiring Reinstatement

Provided that a Taking-Over Certificate given in respect of any Section or part of the Permanent Works before completion of the whole of the Works shall not be deemed to certify completion of any ground or surfaces requiring reinstatement, unless such Taking-Over Certificate shall expressly so state.

Contractor

Employer/Engineer

48.5 Prevention from Testing

If the Contractor is prevented from carrying out the Tests on Completion by a cause for which the Employer or the Engineer or other contractors employed by the Employer are responsible, the Employer shall be deemed to have taken over the Works on the date when the Tests on Completion would have been completed but for such prevention. The Engineer shall issue a Taking-Over Certificate accordingly. Provided always that the Works shall not be deemed to have been taken over if they are not substantially in accordance with the Contract.

If the Works are taken over under this Sub-Clause the Contractor shall nevertheless carry out the Tests on Completion during the Defects Liability Period. The Engineer shall require the tests to be carried out by giving 14 days notice.

49.0 DEFECTS LIABILITY

49.1 Defects Liability Period:

In these Conditions the expression "Defects Liability Period" shall mean the defects liability period named in the Appendix to Tender, calculated from:

- (a) The date of completion of the Works certified by the Engineer in accordance with Sub-Clause 48.1 to 48.5, or
- (b) In the event of more than one certificate having been issued by the Engineer under Sub-Clause 48.1 to 48.5, the respective dates so certified and in relation to the Defects Liability Period the expression "the Works" shall be construed accordingly.

49.2 Completion of Outstanding Work and Remedying Defects

To the extent that the Works shall, at or as soon as practicable after the expiration of the Defects Liability Period, be delivered to the Employer in the condition required by the Contract, fair wear and tear excepted, to the satisfaction of the Engineer, the Contractor shall:

- (a) Complete the work, if any, outstanding on the date stated in the Taking-Over Certificate as soon as practicable after such date, and
- (b) Execute all such work of amendment, reconstruction, and remedying defects, shrinkage or other faults as the Engineer may, during the Defects Liability Period or within 14 days after its expiration, as a result of an inspection made by or on behalf of the Engineer prior to its expiration, instruct the Contractor to execute.

49.3 Cost of Remedying Defects

All work referred to in Sub-Clause 49.2 shall be executed by the Contractor at his own cost if the necessity thereof is, in the opinion of the Engineer, due to:

- (a) The use of materials, Plant or workmanship not in accordance with the Contract, or
- (b) Where the Contractor is responsible for the design for part of the Permanent Works, any fault in such design, or
- (c) The neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract.

If, in the opinion of the Engineer, such necessity is due to any other cause, he shall determine an addition to the Contract Price in accordance with Sub-

Clause 52.1 to 52.3 and shall notify the Contractor accordingly, with a copy to the Employer.

49.4 Contractor's Failure to Carry Out Instructions

In case of default on the part of the Contractor in carrying out such instruction within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and if such work is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer and may be deducted from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer.

49.5 Extension of Defect Liability

The provisions of this Clause shall apply to all replacements or renewals of Plant carried out by the Contractor to remedy defects and damages as if the replacements and renewals had been taken over on the date they were completed. The Defects Liability Period for the Works shall be extended by a period equal to the period during which the Works could not be used by reason of a defect or damage. If only part of the Works is affected the Defects Liability Period shall be extended only for that part. In neither case shall the Defects Liability Period extend beyond 2 years from the date of taking over.

When progress in respect of Plant has been suspended under Sub-Clause 40.1 to 40.3, the Contractor's obligation under this Clause shall not apply to any defects occurring more than 2 years after the Time for Completion established on the date of the Letter of Acceptance.

50.1 Contractor to Search

If any defect, shrinkage or other fault in the Works appears at any time prior to the end of the Defects Liability Period, the Engineer may instruct the Contractor, with a copy to the Employer, to search under the directions of the Engineer for the cause thereof. Unless such defect, shrinkage or other fault is one for which the Contractor is liable under the contract, the Engineer shall, after due consultation with the Employer and the Contractor, determine the amount in respect of the costs of such search incurred by the Contractor, which shall be added to the Contract Price, and shall notify the Contractor accordingly, with a copy to the Employer. If such defect, shrinkage or other fault is one for which the Contractor is liable, the cost of the work carried out in searching as aforesaid shall be borne by the Contractor and he shall in such case remedy such defect, shrinkage or other fault at his own cost in accordance with the provisions of Sub-Clause 49.1 to 49.5.

51.0 ALTERATIONS, ADDITIONS AND OMISSIONS

51.1 Variations

The Engineer shall make any variation of the form, quality or quantity of the Works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion, be appropriate, he shall have the authority to instruct the Contractor to do and the Contractor shall do any of the following

- (a) Increase or decrease the quantity of any work included in the Contract,

- (b) Omit any such work (but not if the omitted work is to be carried out by the Employer or by another contractor),
- (c) Change the character or quality or kind of any such work,
- (d) Change the levels, lines, position and dimensions of any part of the Works,
- (e) Execute additional work of any kind necessary for the completion of the Works,
- (f) Change any specified sequence or timing of construction of any part of Works.

No such variation shall in any way vitiate or invalidate the Contract, but the effect, if any, of all such variations shall be valued in accordance with Sub-Clause 52.1 to 52.3. Provided that where the issue of an instruction to vary the Works is necessitated by some default of or breach of contract by the Contractor or for which he is responsible, any additional cost attributable to such default shall be borne by the Contractor.

51.2 Instructions for Variations

The Contractor shall not make any such variation without an instruction of the Engineer. Provided that no instruction shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of an instruction given under this Clause, but is the result of the quantities exceeding or being less than those stated in the Bill of Quantities.

52.1 Valuation of Variations

All variations referred to in Sub-Clause 51.1 to 51.2 and any additions to the Contract Price which are required to be determined in accordance with Sub-Clause 52.1 to 52.3 (for the purpose of this Clause referred to as “varied works”) shall be valued at the rates and prices set out in the Contract if, in the opinion of the Engineer, the same shall be applicable. If the Contract does not contain any rates or prices applicable to the varied work, the rates and prices in the Contract shall be used as the basis for valuation so far as may be reasonable, failing which, after due consultation by the Engineer with the Employer and the Contractor, suitable rates or prices shall be agreed upon between the Engineer and the Contractor. In the event of disagreement the Engineer shall fix such rates or prices as are, in his opinion, appropriate and shall notify the Contractor accordingly, with a copy to the Employer. Until such time as rates or prices are agreed or fixed, the Engineer shall determine provisional rates or prices to enable on-account payments to be included in certificates issued in accordance with Sub-Clause 60.1 to 60.14.

52.2 Power of Engineer to Fix Rates

Provided that if the nature or amount of any varied work relative to the nature or amount of the whole of the Works or to any part thereof is such that, in the opinion of the Engineer, the rate or price contained in the Contract for any item of the Works is, by reason of such varied work, rendered inappropriate or inapplicable, then, after due consultation by the Engineer with the Employer and the Contractor, a suitable rate or price shall be agreed upon. In the event of disagreement the Engineer shall fix such other rate or price as is, in his opinion, appropriate and shall notify the Contractor accordingly, with a copy to the Employer. Until such time as rates or prices are agreed or fixed, the Engineer shall determine provisional rates or prices to enable on-account payments to be included in certificates issued in accordance with Sub-Clause 60.1 to 60.14.

52.3 Variations Exceeding 10 percent

If, on the issue of the Taking-Over Certificate for the whole of the Works, it is found that as a result of:

- (a) All varied work, valued under Sub-Clauses 52.1 and 52.2, and
- (b) All adjustments upon measurement of the estimated quantities set out in the Bill of Quantities, excluding Provisional Sums, day works and adjustments of price made under Sub-Clause 70.1 to 70.5.

but not from any other cause, there have been additions to or deductions from the Contract Price which taken together are in excess of 10 percent of the "Effective Contract Price" (which for the purpose of this Sub-Clause shall mean the Contract Price, excluding Provisional Sums and allowance for day works, if any) then and in such event (subject to any action already taken under any other Sub-Clause of this Clause), after due consultation by the Engineer with the Employer and the Contractor, there shall be added to or deducted from the Contract Price such further sum as may be agreed between the Contractor and the Engineer or, failing agreement, determined by the Engineer having regard to the Contractor's Site and the general overhead costs of the Contract. The Engineer shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer. Such sum shall be based only on the amount by which such additions or deductions shall be in excess of 10 percent of the Effective Contract Price.

53.0 PROCEDURE FOR CLAIMS

53.1 Notice of Claims

Notwithstanding any other provision of the Contract, if the Contractor intends to claim any additional payment pursuant to any Clause of these Conditions or otherwise, he shall give notice of his intention to the Engineer, with a copy to the Employer, within 28 days after the event giving rise to the claim has first arisen.

53.2 Contemporary Records

Upon the happening of the event referred to in Sub-Clause 53.1, the Contractor shall keep such contemporary records as may reasonably be necessary to support any claim he may subsequently wish to make. Without necessarily admitting the Employer's liability, the Engineer shall, on receipt of a notice under Sub-Clause 53.1, inspect such contemporary records and may instruct the Contractor to keep any further contemporary records as are reasonable and may be material to the claim of which notice has been given. The Contractor shall permit the Engineer to inspect all records kept pursuant to this Sub-Clause and shall supply him with copies thereof as and when the Engineer so instructs.

53.3 Substantiation of Claims

Within 42 days, or such other reasonable time as may be agreed by the Engineer, of giving notice under the Sub-Clause 53.1, the Contractor shall send to the Engineer an account giving detailed particulars of the amount claimed and the grounds upon which the claim is based. Where the event giving rise to the claim has a continuing effect, such account shall be considered to be an interim account and the Contractor shall, at such intervals as the Engineer may reasonably require, send further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. In cases where interim accounts are sent to the Engineer, the Contractor shall send a

final account within 28 days of the end of the effects resulting from the event. The Contractor shall copy to the Employer all accounts sent to the Engineer pursuant to this Sub-Clause.

53.4 Failure to Comply

If the Contractor fails to comply with any of the provisions of this Clause in respect of any claim which he seeks to make, his entitlement to payment in respect thereof shall not exceed such amount as the Engineer considers to be verified by contemporary records (whether or not such records were brought to the Engineer's notice as required under Sub-Clause 53.2 and 53.3).

53.5 Payment of Claims

The Contractor shall be entitled to have included in any interim payment certified by the Engineer pursuant to Sub-Clause 60.1 to 60.14 such amount in respect of any claim as the Engineer, after due consultation with the Employer and the Contractor, may consider due to the Contractor provided that the Contractor has supplied sufficient particulars to enable the Engineer to determine the amount due. If such particulars are insufficient to substantiate the whole of the claim, the Contractor shall be entitled to payments in respect of such part of the claim as such particulars may substantiate to the satisfaction of the Engineer. The Engineer shall notify the Contractor of any determination made under this Sub-Clause, with a copy to the Employer.

54.0 CONTRACTOR'S EQUIPMENT, TEMPORARY WORKS AND MATERIALS

54.1 Exclusive Use for the Works

All Contractor's Equipment, Temporary Works and materials provided by the Contractor shall, when brought on to the Site, be deemed to be exclusively intended for the execution of the Works and the Contractor shall not remove the same or any part thereof, except for the purpose of moving it from one part of the Site to another, without the consent of the Engineer. Provided that consent shall not be required for vehicles engaged in transporting any staff, labour, Contractor's Equipment, Temporary Works, Plant or materials to or from the Site.

54.2 Employer Not Liable for Damage

The Employer shall not at any time be liable, save as mentioned in Sub-Clause 20.1 to 20.5 and 65.1 to 65.8, for the loss of or damage to any of the said Contractor's Equipment, Temporary Works or materials.

54.3 Incorporation of Clause in Sub-Contracts

The Contractor shall, where entering into any subcontract for the execution of any part of the Works, incorporate in such subcontract (by reference or otherwise) the provisions of this Clause in relation to Contractor's Equipment, Temporary Works or materials brought on to the Site by the Subcontractor.

54.4 Approval of Material Not Implied

The operation of this Sub-Clause 54.1 to 54.4 shall not be deemed to imply any approval by the Engineer of the material or other matters referred to therein nor shall it prevent the rejection of any such materials at any time by the Engineer.

55.0 MEASUREMENT

55.1 Quantities

The quantities set out in the Bill of Quantities are the estimated quantities for the Works, and they are not to be taken as the actual and correct quantities of the Works to be executed by the Contractor in fulfillment of his obligations under the Contract.

56.1 Works to be Measured

The Engineer shall, except as otherwise stated, ascertain and determine by measurement the value of the Works in accordance with the Contract and the Contractor shall be paid that value in accordance with Sub-Clause 60.1 to 60.14. The Engineer shall, when he requires any part of the Works to be measured, give reasonable notice to the Contractor's authorised agent, who shall

- (a) Forthwith attend or send a qualified representative to assist the Engineer in making such measurement, and
- (b) Supply all particulars required by the Engineer.

Should the Contractor not attend, or neglect or omit to send such representative, then the measurement made by the Engineer or approved by him shall be taken to be the correct measurement of such part of the Works. For the purpose of measuring such Permanent Works as are to be measured by records and drawings, the Engineer shall prepare such records and drawings as the work proceeds as he deems necessary or appropriate and the Contractor, as and when called upon to do so in writing, shall within 14 days, attend to examine and agree such records and drawings with the Engineer and shall sign the same when so agreed. If after examination of such records and drawings, the Contractor does not agree the same or does not sign the same as agreed, they shall nevertheless be taken to be correct, unless the Contractor, within 14 days of such examination, lodges with the Engineer notice of the respects in which such records and drawing are claimed by him to be incorrect. On receipt of such notice, the Engineer shall review the records and drawings and either confirm or vary them.

57.1 Method of Measurement

The Works shall be measured net, notwithstanding any general or local custom, except where otherwise provided for in the Contract. The Measurements shall be recorded in electronic spread sheets as per the circular issued by the Managing Director, KUWS & DB, Bangalore vide ltr. No. KWB/TEC/SR2008-09/Vol-2/3899/2008-09 dtd. 4.3.2009 (Refer Annexure-B).

57.2 Breakdown of Lump Sum Items

For the purpose of statements submitted in accordance with Sub-Clause 60.1, the Contractor shall submit to the Engineer, within **28 days** after the receipt of the Letter of Acceptance, a breakdown for each of the lump sum items contained in the Tender. Such breakdowns shall be subject to the approval of the Engineer.

58.1 Not Included

59.1 Not Included

60.0 CERTIFICATES AND PAYMENTS

60.1 Monthly Statements and Bills

The Contractor shall submit a statement in 3 copies to the Engineer by 7th day of each month for the work executed up to the end of previous month in a tabulated form approved by the Engineer, showing the amounts to which the Contractor considers himself to be entitled. The statement shall include the following items, as applicable, which shall be taken into account in the sequence listed:

- (a) The estimated Contract value of the Temporary and Permanent Works executed up to the end of the month in question, at base unit rates and prices
- (b) The actual value certified for payment for the Temporary and Permanent Works executed up to the end of the previous month, at base unit rates and prices
- (c) The estimated Contract value at base unit rates and prices of the Temporary and Permanent Works for the month in question, obtained by deducting (b) and (a)
- (d) The value of any variations executed up to the end of the month in question, less the amount certified in the previous Interim Payment Certificate, pursuant to Sub-Clause 52.1 to 52.3
- (e) Amount reflecting changes in cost and legislation, if any, pursuant to Sub-Clause 70.1 to 70.8
- (f) Any amount to be deducted as repayment of the Advance under the provisions of Sub-Clause 60.7
- (g) Any other sum, to which the Contractor may be entitled under the Contract
- (h) Any deduction for the advance income tax, advance works contract tax and Royalties on materials as per the relevant act and as provided in the Appendix to Tender.
- (i) 1%(one percent) cess on the total tender amount will be deducted from the Bills of the contractor towards Building and other construction workers welfare cess Act 1996 as per G.O. LD/300/LET/2006/Bangalore Dated 18-01-2007

60.2 Monthly Payments

The said statement shall be approved or amended by the Engineer in such a way that in his opinion, it reflects the amounts due to the Contractor in accordance with the Contract after deduction, other than pursuant to Sub-Clause 47.1 to 47.2, of any sums which may have become due and payable by the Contractor to the Employer. In case where there is a difference of opinion as to the value of any item the Engineer's view shall prevail. Within 30 days following the receipt of the monthly statement referred to in Sub-Clause 60.1, the Engineer shall determine the amounts due to the Contractor and shall issue to the Employer and the Contractor a certificate, herein called the "Interim Payment Certificate", certifying the amount due to the Contractor. Provided that the Engineer shall not be bound to certify any payment under this Sub-Clause if the billed amount is less than the Minimum Amount of Interim Payment Certificate stated in the Appendix to Tender.

Notwithstanding the terms of this Clause or any other Clause of the Contract, no amount will be certified by the Engineer for payment until the performance security has been provided by the Contractor and approved by the Employer.

60.3 Material and Plant for the Permanent Works

With respect to procurement and delivery of major items of materials and Plant brought by the Contractor to the Site for incorporation in the Permanent Works which are specifically listed in the Special Conditions of Contract, the Contractor shall be paid for the reasonable cost of procurement and delivery in accordance with the stipulated proportion of his quoted rates under the monthly progress payment, subject to satisfactory compliance with the following conditions:

- (i) The materials and Plant delivered to the site are those which are reasonably required by the Contractor for accomplishing the smooth and timely performance of the Works, and the delivery schedule for such materials and Plant has been approved in advance by the Engineer;
- (ii) The materials and Plant are in accordance with the specification for the Works;
- (iii) The materials and Plant are properly stored and protected against loss, damage or deterioration;
- (iv) The Contractor's records of the requirements, orders, receipts and use of materials and Plant are kept in a form approved by the Engineer and such records are available for inspection by the Engineer;
- (v) The Contractor has submitted a statement of his cost of acquiring and delivering the materials and Plant to the Site, together with such documents as may be required for the purpose of evidencing such cost; and
- (vi) The Contractor has adequately indemnified the Employer against loss or damage to the materials and Plant during the period between delivery to the site and incorporation into the Works.

Payment by the Employer under this Clause for materials and Plant delivered to the Site does not, in any way, relieve the Contractor of his responsibility to ensure the safety and protection of such materials and Plant during the period between delivery to the site and their incorporation into the Permanent Works. In the event that any materials and Plant are lost, damaged or deteriorated between their delivery to the site and their incorporation into the Permanent Works, the Contractor shall be fully responsible to replace such materials and Plant, or to make such repairs as may be required to restore the materials and Plant to the specified condition, at his own cost.

60.4 Place of Payment

Payments to the Contractor by the Employer shall be made into a bank account or accounts nominated by the Contractor, or as may otherwise be agreed.

60.5 Retention Money

Not included.

60.6 Refund of Retention Money

Not included.

60.7 Advance Payment only for the Works where the amount put to tender is more than Rs. 5.00 Crores

- DELETED-

60.8 Time for Payment

The amount due to the Contractor under any Interim Payment Certificate issued by the Engineer pursuant to this Clause, or to any other term of the Contract shall, subject to Sub-Clause 47.1, be paid by the Employer to the Contractor within 60 days after the Contractor's monthly statement has been submitted to the Engineer for certification or, in the case of the Final Certificate, pursuant to Sub-Clause 60.13 within 90 days after the agreed Final Statement and written discharge have been submitted to the Engineer for certification.

60.9 Correction of Certificate

The Engineer may by any Interim Payment Certificate make any correction or modification in any previous Interim Payment Certificate which has been issued by him, and shall have the authority, if any work is not being carried out to his satisfaction, to omit or reduce the value of such work in any Interim Payment Certificate.

60.10 Statement at Completion

Not later than 42 days after the issue of the Taking-Over Certificate in respect of the whole of the Works, the Contractor shall submit to the Engineer a statement at completion with supporting documents showing in detail, in the form approved by the Engineer:

- (a) The final value of all work done in accordance with the Contract up to the date stated in such Taking-Over-Certificate;
- (b) Any further sums which the Contractor considers to be due; and
- (c) An estimate of amounts which the Contractor considers will become due to him under the Contract.

Estimated amounts shall be shown separately in such Statement at Completion. The Engineer shall certify payment in accordance with Sub-Clause 60.2.

60.11 Final Statement

Not later than 28 days after the issue of the Defect Liability Certificate pursuant to Sub-Clause 62.1, the Contractor shall submit to the Engineer for consideration a draft final statement with supporting documents showing in detail, in the form approved by the Engineer:

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

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

If, following discussions between the Engineer and the Contractor and any changes to the draft final statement which may be agreed between them, it becomes evident that a dispute exists, the Engineer shall issue to the Employer an Interim Payment Certificate for those parts of the draft final statement which are not in dispute. The dispute shall then be settled in accordance with Clause 67. The final statement shall be agreed upon settlement of the dispute.

60.12 Discharge

Upon submission of the Final Statement, the Contractor shall give to the Employer, with a copy to the Engineer, a written discharge confirming that the total of the Final Statement represents full and final settlement of all monies due to the Contractor arising out of or in respect of the Contract. Provided that such discharge shall become effective only after payment due under the Final Certificate issued pursuant to Sub-Clause 60.13 has been made and the performance security referred to in Sub-Clause 10.1 has been returned to the Contractor.

60.13 Final Certificate

Within **28 days** after receipt of the Final Statement and the written discharge, the Engineer shall issue to the Employer (with a copy to the Contractor) a Final Certificate stating:

- (a) The amount which, in the opinion of the Engineer, is finally due under the Contract; and
- (b) After giving credit to the Employer for all amounts previously paid by the Employer and for all sums to which the Employer is entitled under the Contract other than Sub-Clause 47.1 and 47.2, the balance, if any, due from the Employer to the Contractor or from the Contractor to the Employer as the case may be.

60.14 Cessation of Employer's Liability

The Employer shall not be liable to the Contractor for any matter or thing arising out of or in connection with the Contract or execution of the Works, unless the Contractor shall have included a claim in respect thereof in his Final Statement and (except in respect of matters or things arising after the issue of the Taking - Over Certificate in respect of the whole of the Works) in the Statement at Completion referred to in Sub-Clause 60.10.

61.0 DEFECTS LIABILITY

61.1 Approval Only by Defects Liability Certificate

Only the Defects Liability Certificate, referred to in Sub-Clause 62.1 and 62.2, shall be deemed to constitute approval of the Works.

62.1 Defects Liability Certificate

The Contract shall not be considered as completed until a Defects Liability Certificate shall have been signed by the Engineer and delivered to the Employer, with a copy to the Contractor, stating the date on which the Contractor shall have completed his obligations to execute and complete the Works and remedy any defects therein to the Engineer's satisfaction. The Defects Liability Certificate shall be given by the Engineer within 28 days after the expiration of the Defects Liability Period or, if different defects liability periods shall become applicable to different Sections or parts of the Permanent Works, the expiration of the latest such period, or as soon thereafter as any works instructed, pursuant to Sub-Clauses 49.1 and 49.5 and 50.1, have been completed to the satisfaction of the Engineer.

62.2 Unfulfilled Obligations

Notwithstanding the issue of the Defects Liability Certificate the Contractor and the Employer shall remain liable for the fulfillment of any obligation incurred under the provisions of the Contract prior to the issue of the Defects Liability Certificate which remains unperformed at the time such Defects Liability

Contractor

Employer/Engineer

Certificate is issued and, for the purpose of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force between the parties to the Contract.

63.0 REMEDIES

63.1 Default of Contractor

If the Contractor is deemed by law unable to pay his debts as they fall due, or enters into voluntary or involuntary bankruptcy, liquidation or dissolution (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), or becomes insolvent, or makes an arrangement with, or assignment in favour of, his creditors, or agrees to carry out the Contract under a committee of inspection of his creditors, or if a receiver, administrator, trustee or liquidator is appointed over any substantial part of his assets, or if, under any law or regulation relating to reorganization, arrangement or readjustment of debts, proceedings are commenced against the Contractor or resolutions passed in connection with dissolution or liquidation or if any steps are taken to enforce any security interest over a substantial part of the assets of the Contractor, or if any act is done or event occurs with respect to the Contractor or his assets which, under any applicable law has a substantially similar effect to any of the foregoing acts or events, or if the Contractor has contravened Sub-Clause 3.1, or has an execution levied on his goods or if the Engineer certifies to the Employer with a copy to the Contractor, that, in his opinion, the Contractor:

- (a) Has repudiated the Contract, or
- (b) Without reasonable excuse has failed
 - (i) To commence the Works in accordance with Sub-Clause 41.1, or
 - (ii) To proceed with the Works, or any Section thereof, within 28 days after receiving notice pursuant to Sub-Clause 46.1, or
- (c) has failed to comply with a notice issued pursuant to Sub-Clause 37.4 or an instruction issued pursuant to Sub-Clause 39.1 within 28 days after having received it, or
- (d) despite previous warning from the Engineer, in writing, is otherwise persistently or flagrantly neglecting to comply with any of his obligations under the Contract, or
- (e) has contravened Sub-Clause 4.1, then the Employer may, after giving fourteen days notice to the Contractor, enter upon the Site and terminate the employment of the Contractor without thereby releasing the Contractor from any of his obligations or liabilities under the Contract or affecting the rights and powers conferred on the Employer or the Engineer by the Contract, and may himself complete the Works or may employ any other contractor to complete the Works at the risk and cost of the defaulting Contractor. The Employer or such other contractor may use for such completion so much of the Contractor's Equipment, Plant, Temporary Works and materials which have been deemed to be reserved exclusively for the execution of the Works under the provisions of the Contract as he or they may think proper and the Employer may at any time sell any of the said Contractor's Equipment, Temporary Works and unused Plant and materials and apply the proceeds of sale in or towards the satisfaction of any sums due or which may become due to him from the Contractor under the Contract.

63.2 Valuation at Date of Termination

The Engineer shall, as soon as may be practicable after any such entry and termination by the Employer, fix and determine expert, or by or after reference to the parties or after such investigation or enquiries as he may think fit to make or institute, and shall certify:

- (a) What amount (if any) had, at the time of such entry and termination, been reasonably earned by or would reasonably accrue to the Contractor in respect of work then actually done by him under the Contract, and
- (b) The value of any of the said unused or partially used materials, any Contractor's Equipment and any Temporary Works.

63.3 Payment after Termination

If the Employer shall enter and terminate the employment of the Contractor under this Clause, the Contractor shall forfeit the Performance Security provided under the terms of Clause 10. The Employer shall not be liable to pay to the Contractor any further amount (including damages) in respect of the Contract until the expiration of the Defects Liability Period and thereafter until the costs of execution, completion and remedying of any defects, damages for delay in completion (if any) and all other expenses incurred by the Employer have been ascertained and the amount thereof certified by the Engineer. The Contractor shall then be entitled to receive only such sum (if any) as the Engineer may certify would have been payable to him upon due completion by him after deducting the said amount. If such amount exceeds the sum which would have been payable to the Contractor on due completion by him, then the Contractor shall, upon demand, pay to the Employer the amount of such excess and it shall be deemed a debt due by the Contractor to the Employer and shall be recoverable accordingly.

63.4 Assignment of Benefit of Agreement

Unless prohibited by law, the Contractor shall, if so instructed by the Engineer within 14 days of such entry and expulsion referred to in Sub-Clause 63.1, assign to the Employer the benefit of any agreement for the supply of any goods or materials or services and/or for the execution of any work for the purposes of the Contract which the Contractor may have entered into.

64.1 Urgent Remedial Works

If, by reason of any accident, or failure, or other event occurring to, in, or in connection with the Works, or any part thereof, either during the execution of the Works, or during the Defects Liability Period any remedial or other work is in the opinion of the Engineer, urgently necessary for the safety or progress of the Works and the Contractor is unable or unwilling at once to do such work, the Employer shall be entitled to employ and pay other persons to carry out such work as the Engineer may consider necessary. If the work or repair so done by the Employer is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any monies due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Provided that the Engineer shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof.

65.1 No Liability for Special Risks

The Contractor shall be under no liability whatsoever in consequence of any of the special risks referred to in Sub-Clause 65.2 whether by way of indemnity of otherwise, for or in respect of:

- (a) Destruction of or damage to the Works, save to work condemned under the provision of Sub-Clause 10.12 prior to the occurrence of any of the said special risks, or
- (b) Destruction of or damage to property, whether of the Employer or third parties, or
- (c) Injury or loss of life.

65.2 Special Risks

The special risks are the risks defined under para (a) sub-paras (i) to (v) of Sub-Clause 20.4

65.3 Damage to Works by Special Risks

If the Works or any materials or Plant on or near or in transit to the Site, or any of the Contractors Equipment, sustain destruction or damage by reason of any of the said special risks, the Contractor shall be entitled to payment in accordance with the Contract for any Permanent Works duly executed and for any materials or Plant so destroyed or damaged and, so far as may be required by the Engineer or as may be necessary for completion of the Works, to payment for:

- (a) Rectifying any such destruction or damage to the Works, and
- (b) Replacing or rectifying such materials or Contractor's Equipment,

and the Engineer shall determine an addition to the Contract Price in accordance with Clause 52 (which shall in the case of the cost of replacement of Contractor's Equipment include the fair market value thereof as determined by the Engineer) and shall notify the Contractor accordingly, with a copy to the Employer.

65.4 Projectile, Missile

Destruction, damage, injury or loss of life caused by the explosion or impact whenever and wherever occurring, of any mine, bomb, shell, grenade or other projectile, missile, munitions, or explosive of war, shall be deemed to be a consequence of the said special risks.

65.5 Increased Costs Arising from Special Risks

Save to the extent that the Contractor is entitled to payment under any other provision of the Contract, the Employer shall repay to the Contractor any costs of the execution of the Works (other than such as may be attributable to the cost of reconstructing work condemned under the provisions of Clause 39 prior to the occurrence of any special risks) which are howsoever attributable to or consequent on or the result of or in any way whatsoever connected with the said special risks, subject however to the provisions in this Clause hereinafter contained in regard to outbreak of war, but the Contractor shall, as soon as any such cost comes to his knowledge, forthwith notify the Engineer thereof. The Engineer shall, after due consultation with the Employer and the Contractor, determine the amount of the Contractor's costs in respect thereof which shall be added to the Contract Price and shall notify the Contractor accordingly, with a copy to the Employer.

65.6 Outbreak of War

If during the currency of the Contract, there is an outbreak of war, whether war is declared or not, in any part of the world which, whether financially or otherwise, materially affects the execution of the Works, the Contractor shall, unless and until the Contract is terminated under the provision of this Clause, continue to use his best endeavors to complete the execution of the Works. Provided that the Employer shall be entitled, at any time after such outbreak of war, to terminate the Contract by giving notice to the Contractor and upon such notice being given, the Contractor shall, except as to the rights of the parties under this Clause and to the operation of Clause 67, terminate, but without prejudice to the rights of either party in respect of any antecedent breach thereof.

65.7 Removal of Contractor's Equipment on Termination

If the Contract is terminated under the provisions of Sub-Clause 65.6, the Contractor shall, with all reasonable dispatch, remove from the Site all Contractor's Equipment and shall give similar facilities to his Subcontractors to do so.

65.8 Payment if Contract Terminated

If the Contract is terminated as aforesaid, the Contractor shall be paid by the Employer, insofar as such amounts or items have not already been covered by payments on account made to the Contractor, for all Works executed prior to the date of termination at the rates and prices provided in the Contract and in addition:

- a. The amounts payable in respect of any preliminary items referred to in the Bill of Quantities so far as the Work or service comprised therein has been carried out or performed and a proper proportion of any such items which have been partially carried out or performed.
- b. The cost of materials, Plant or goods reasonably ordered for the Works which have been delivered to the Contractor or of which the Contractor is legally liable to accept delivery, such materials, Plant or goods becoming the property of the Employer upon such payments being made by him.
- c. A sum being the amount of any expenditure reasonably incurred by the Contractor in the expectation of completing the whole of the Works insofar as such expenditure has not been covered by any other payment referred to in this Sub-Clause.
- d. Any additional sum payable under the provisions of Sub-Clause 65.3 and 65.4
- e. Such proportion of the cost as may be reasonable, taking into account payments made or to be made for work executed, of removal of Contractor's Equipment under Sub-Clause 65.7 and if required by the Contractor, return thereof to the Contractor's main plant yard in his country of registration or to other destination at no greater cost.
- f. The reasonable cost of repatriation of all the Contractor's staff and workmen employed on or in connection with the Works at the time of such termination.

Provided that against any payment due from the Employer under this Sub-Clause, the Employer shall be entitled to be credited with any outstanding balances due from the Contractor for advances in respect of Contractor's Equipment, materials and Plant and any other sums which, at the date of termination, were recoverable by the Employer from the Contractor under the

terms of the Contract. Any sums payable under this sub-Clause shall, after due consultation with the Employer and the Contractor, be determined by the Engineer who shall notify the Contractor accordingly, with a copy to the Employer.

66.1 Payment in Event of Release from Performance.

If any circumstance outside the control of both parties arises after the issue of the Letter of Acceptance which renders it impossible or unlawful for either party to fulfill his contractual obligations, or under the law governing the Contract the parties are released from further performance, then the sum payable by the Employer to the Contractor in respect of the work executed shall be the same as that which would have been payable under Sub-Clause 65.1 to 65.8 if the Contract had been terminated under the provisions of Sub-Clause 65.1 to 65.8.

67.0 SETTLEMENT OF DISPUTES

67.1 Engineer's Decision

If any dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of, the Contract or the execution of the Works, whether during the execution of Works or after their completion, and before or after repudiation or other termination of the Contract, including any dispute as to:

- a. The meaning of the specifications, designs, drawings and instructions herein before mentioned,
- b. The quality of the workmanship or materials,
- c. Any opinion, instruction, determination, certificate or valuation of the Engineer, or
- d. Any other question, claim, right, matter or anything whatsoever in any way arising out of or relating to the contract, designs, drawings, specification, estimates, instructions, conditions, orders or the failure to execute the same, the dispute shall, in the first place, be referred in writing to the Engineer who has jurisdiction over the Works specified in the Contract, with a copy to the other party. Such reference shall state that it is made pursuant to this Clause. Not later than the forty second day after the day on which he received such reference the Engineer shall give written notice of his decision to the Employer and the Contractor. Such decision shall state that it is made pursuant to this Clause. Subject to other forms of settlement hereinafter provided, the Engineer's decision in respect of every dispute or difference so referred shall be final and binding upon the Contractor and the Employer. Unless the Contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the Works with all due diligence and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer until or unless the same shall be revised in an amicable settlement or as hereinafter provided.

67.2 Remedy When the Engineer's Decision is Not Accepted

If either the Employer or the Contractor be dissatisfied with any decision of the Engineer, or if the Engineer fails to give notice of his decision on or before the forty second day after the day on which he received the reference, then either the Employer or the Contractor may, on or before the twenty eighth day after the day on which he received notice of such decision, or on or before the twenty eighth day after the day on which the said period of 42 days expired, as the case may be, give notice to the other party, with a copy to the Engineer, of

his intention to approach the law courts of the State of Karnataka for settlement of the dispute.

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no written notice to approach the law court has been given by either the Employer or the Contractor on or before the twenty eighth day after the day on which the parties received notice as to such decision from the Engineer, the said decision shall become final and binding upon the Employer and the Contractor.

67.3 Amicable Settlement

Where notice of intention to commence legal action as to a dispute has been given in accordance with Sub-Clause 67.2, legal action shall not be commenced unless an attempt has first been made by the parties to settle the dispute amicably. Provided that, unless the parties otherwise agree, legal action may be commenced on or after the fifty-sixth day after the day on which the notice of intention to commence legal action of such dispute was given, whether or not any attempt at amicable settlement thereof has been made.

67.4 Legal Action

Any dispute in respect of which:

the decision, if any, of the Engineer has not become final and binding pursuant to Sub Clause 67.1, and amicable settlement has not been reached within the period stated in Sub-Clause 67.3 shall be finally settled, unless otherwise provided in the Contract, in the Municipality or District in which the Contract is being executed, and under the laws of the State of Karnataka. Legal action may be commenced prior to or after completion of the Works, provided that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reason of the legal action being conducted during the progress of the Works.

67.5 Contractor to Execute Work Pending Settlement

Whether the dispute is referred to the Engineer, to amicable settlement, or to the law courts, as the case may be, the Contractor shall, unless the Contract has been repudiated or terminated, proceed to execute and complete the Works with all due diligence pending settlement of the said dispute or differences.

68.0 NOTICES

68.1 Notice to Contractor

All certificates, notices or instruction to be given to the Contractor by the Employer or the Engineer under the terms of the Contract shall be sent by post, cable, telex or facsimile transmission to, or left at, the Contractor's principal place of business or such other address as the Contractor shall nominate for that purpose.

2. Notice to Employer and Engineer

Any notice to be given to the Employer or to the Engineer under the terms of the Contract shall be sent by post, cable, telex or facsimile transmission to, or left at, the respective addresses nominated for that purpose in the Special Conditions of Contract.

68.3 Change in Address

Either party may change a nominated address to another address in the Country where the Works are being executed by prior notice to the other party,

Contractor

Employer/Engineer

with a copy to the Engineer, or the Engineer may do so by prior notice to both parties.

69.0 Default of Employer

1. Contractor's Entitlement to Suspend Works

Without prejudice to the Contractor's entitlement to payment under Sub-Clause 60.8 the Contractor may, if the Employer fails to pay the Contractor the amount due under any certificate of the Engineer within 56 days after the expiry of the time stated in Sub-Clause 60.8 within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, after giving 28 days prior notice to the Employer, with a copy to the Engineer, suspend work or reduce the rate of work.

If the Contractor suspends work or reduces the rate of work in accordance with the provisions of this Sub-Clause and thereby suffers delay or incurs cost the Engineer shall, after due consultation with the Employer and the Contractor, determine any extension of time to which the Contractor is entitled under Sub-Clause 44.1 to 44.3, and shall notify the Contractor accordingly, with a copy to the Employer.

69.2 Resumption of Work

Where the Contractor suspends work or reduces the rate of work, having given notice in accordance with Sub-Clause 69.1, and the Employer subsequently pays the amount due pursuant to Sub-Clause 60.8, the Contractor's entitlement under Sub-Clause 69.1 shall, lapse and the Contractor shall resume normal working as soon as is reasonably possible.

70.0 CHANGES IN COST AND LEGISLATION

70.1 Price adjustment:

The Government has issued the following Orders for Price Adjustment vide

G.O.No. FD/ 03 / PCL /2008, dt. 21-11-2008.

- (a) For all works costing more than Rs.50.00 lakhs, if the period of execution is more than 12 months, the price adjustment will be calculated as prescribed in Annexure to G.O. No .FD 59 PRO Cell/2004, dt. 26.11.2004.
- (b) If the period of execution is more than 6 months but less than or equal to 12 Months for work costing more than Rs.50.00 lakhs, Star rates in respect of specified materials (cement, steel and bitumen) only shall be payable to the contractor based on the all India average wholesale price index for the said materials. The star rates adjustment shall be as per the increase or decrease in the index as applied to the said materials between the last date for receiving bids and the date of execution as per the approved programme of works submitted by the contractor at the time of execution of agreement which shall mandatorily be a part of the agreement.

(c) If the period of execution is less than or equal to 6 months, for all works irrespective of the cost of the works, price adjustment or star rates shall not be applicable.

(d) In works contracts where, Price Adjustment clause is provided, the Price Adjustment shall be admissible from the date of opening of tenders (Original or extended).

(e) Price Adjustment clause shall not be included in Goods and equipment tender documents. However, in respect of tender documents for procurement of Electric cables, Transformers, Generators, Motors that have raw material component subject to price fluctuations, appropriate Price Adjustment clauses may be incorporated by the Tender Inviting Authority in the tender documents, with the specific approval of the concerned Head of the Department or Managing Director of the Public Undertaking Board.

70.2 Price Adjustment:

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

- a. The Price Adjustment shall apply for the work done from the date of commencement up to the end of original period of completion or extensions granted by the Employer and shall not apply to work carried out beyond the stipulated period of completion for reasons attributable to the contractor.
- b. The price adjustment shall be determined during each quarter from the formula given hereunder.
- c. Following expressions and meanings are assigned to the work done during the quarter:

R = Total value of work done during the quarter. It would include the amount of secured advance for materials paid for (if any) during the quarter, less the amount of the secured advance recovered during the quarter. It will exclude value for works executed under variations for which price adjustment (if any) will be worked out separately based on the terms mutually agreed.

- d. 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 included in the contract shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

70.3 Price Adjustment Formulae:

Adjustment for labour component:

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

$VL = 0.85 \times PL / 100 \times R \times (Li - Lc) / Lc$ Where,

VL = Increase or decrease in cost of work during the quarter under consideration due to changes in rates for local labour;

Lc = The average consumer price index for industrial workers for **Hubli-Dharwad** Centre for the quarter preceding the date of opening of tenders as published by the Labour Bureau, Ministry of Labour, Government of India;

Li = The average consumer price index for industrial workers for **Hubli-Dharwad** Centre for the quarter under consideration as published by Labour Bureau, Ministry of Labour, Government of India;

PL = Percentage of labour component of the work.

Note: The consumer price indices are available in [http:// Labourbureau.nic.in](http://Labourbureau.nic.in)

Adjustment for Cement Component:

Contractor

Employer/Engineer

- (ii) Price adjustment for increase or decrease or decrease in the cost of cement component procured by the contractor shall be paid in accordance with the following formula.

$$VC = 0.85 \times PC / 100 \times R \times (Ci - Cc) / Cc \text{ Where,}$$

Vc = Increase or decrease in cost of work during the quarter under consideration due to changes in rates for cement;

Cc = The all India average wholesale price index for **grey cement** (Ordinary Portland Cement) for the quarter preceding the date of opening of the tenders as published by the Office of Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

Ci = The all India average wholesale price index for **grey cement** (Ordinary Portland Cement) for the quarter under consideration as published by the Office of Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

PL = Percentage of cement component of the work.

The index numbers are available in the website [http:// ea industry.nic.in](http://ea.industry.nic.in)

Adjustment for steel component:

- (iii) Price adjustment for increase or decrease in the cost of steel procured by the contractor shall be paid in accordance with the following formula.

$$VS = 0.85 \times PS / 100 \times R \times (Si - Sc) / Sc \text{ Where,}$$

VS = Increase or decrease in cost of work during the quarter under consideration due to changes in rates for steel;

Sc = The all India average wholesale price index for steel (**Rebars for reinforcement steel, steel: pipes and tubes for MS pipes, steel structures for structural steel and Pig iron for DI pipes, CI pipes and DI/CI Valves**) for the quarter preceding the date of opening of Bids as published by the Office of Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

Si = The all India average wholesale price index for steel (**Rebars for reinforcement steel, steel: pipes and tubes for MS pipes, steel structures for structural steel and Pig iron for DI pipes, CI pipes and DI/CI Valves**) for the quarter under consideration as published by the Office of Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi.

PS = Percentage of steel component of the work.

Adjustment for Fuel and Lubricant component:

- (v) Price adjustment for increase or decrease in the cost of Fuel and Lubricants shall be paid in accordance with the following formula.

$$VF = 0.85 \times PF / 100 \times R \times (Fi - Fc) / Fc \text{ Where,}$$

VF = Increase or decrease in cost of work during the quarter under consideration due to changes in rates for Fuel and Lubricants;

Fc = The official retail price of High Speed Diesel (HSD) at the IOC/HPCL/BPL or other consumer pump at **Hubli-Dharwad** on the day 30 days prior to the date of opening of Bids;

Fi = The official retail price of HSD at the IOC/HPCL/BPL or other consumer pump at **Hubli-Dharwad** for the 15th day of the middle calendar month of the quarter under consideration;

PF = Percentage of Fuel and Lubricant component of the work.

Adjustment for Plant and Machinery Spares component:

(vi) Price adjustment for increase or decrease in the cost of Plant and Machinery Spares procured by the contractor shall be paid in accordance with the following formula.

$$VP = 0.85 \times PP / 100 \times R \times (Pi - Pc) / Pc \text{ Where,}$$

VP = Increase or decrease in cost of work during the quarter under consideration due to changes in rates for Plants and Machinery spares;

Pc = The all India average wholesale price index for **Construction Machinery** and Parts for the quarter preceding the date of opening of bids, as published by the Office of the Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

Pi = The all India average wholesale price index for **Construction Machinery** and Parts for the quarter under consideration as published by the Office of the Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

PF = Percentage of Plant and Machinery Spares component of the work(PF).

Adjustment for Other materials:

(vii) Price adjustment for increase or decrease in the cost of other materials other than cement, steel, bitumen and Fuel and Lubricants¹¹, procured by the contractor shall be paid in accordance with the following formula.

$$VM = 0.85 \times PM / 100 \times R \times (Mi - Mc) / Mc \text{ Where,}$$

VM = Increase or decrease in cost of work during the quarter under consideration due to changes in rates for local materials other than cement, steel, bitumen and Fuel & Lubricants;

Mc = The all India average wholesale price index for all commodities for the quarter preceding the date of opening of bids, as published by the Office of the Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

Mi = The all India average wholesale price index for all commodities for the quarter under consideration as published by the Office of the Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

PM = Percentage of other material component (Other than cement, steel, bitumen and Fuel & Lubricants) of the work.

Adjustment for HDPE materials:

(viii) Price adjustment for increase or decrease in the cost of HDPE materials procured by the contractor shall be paid in accordance with the following formula.

$$VM = 0.85 \times PM / 100 \times R \times (Mi - Mc) / Mc \text{ Where,}$$

VM = Increase or decrease in cost of work during the quarter under consideration due to changes in rates for HDPE materials

Mc = The all India average wholesale price index for polythene / plastic Granules for the quarter preceding the date of opening of bids, as published by the Office of the Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

Mi = The all India average wholesale price index for polythene / plastic Granules for the quarter under consideration as published by the Office of the Economic Advisor, Ministry of Commerce and Industry, Government of India, New Delhi;

PM = Percentage of HDPE materials (polythene / plastic Granules) of the work.

Note: The all India average whole sale price Indices are available in website

[http:// eaindustry.nic.in](http://eaindustry.nic.in)

The following percentages ¹² will govern the price adjustment for the entire contract

¹³

1.	Labour – P _L	18 %
2.	Cement – P _C	2 %

Contractor

Employer/Engineer

3.	Steel	
a)	Reinforcement Steel –	1 %
b)	M.S pipes & tubes	10 %
c)	DI pipes, CI pipes,& DI /CI valves	18 %
4.	Fuel and Lubricant – PF ¹⁴	5 %
5.	Plant & Machinery Spares– PF ¹⁵	8 %
6.	Other Materials – PM	8 %
7.	HDPE materials	30 %
	TOTAL	100 %

11 Add delete or change depending on the nature of work

12 The percentage has to be approximately worked out on the estimates of cost and incorporated in the tender document before the issue. It shall not be changed even if there is change of scope of work during execution.

13 The components could be added or deleted or changed depending on the nature of work.

14 This could vary from 5% for normal works and 10% for highly mechanized operations in the work

15 This could vary from 15% for normal works and 30% for highly mechanized operations in the work

16 The total of the percentage for the various components of the work should be 100

70.3 Adjustment Formulae

Included

70.4 Sources of Indices

Included

70.5 Base, Current and Provisional Indices

Included

70.6 Adjustment after Completion

Not included

70.7 Weightings

Not included

70.8 Subsequent Legislation

Not included

71. Not Included

72. Not Included

73.0 TAXATION

73.1 Foreign Taxation

The prices bid by the Contractor shall include all taxes and other charges imposed outside the Employer's country on the production, manufacture, sale and transport of the Contractor's Equipment, Plant, materials and supplies to be used on or furnished under the Contract, and on the services performed under the Contract.

73.2 Local Taxation.

The prices bid by the Contractor shall include all business taxes, income and other taxes that may be levied in accordance to the laws and regulations in being as of the date 28 days prior to the closing date for submission of bids in the Employer's country on the Contractor's Equipment, Plant, materials and supplies (permanent, temporary and consumable) acquired for the purpose of

the Contract and on the services performed under the Contract. Nothing in the Contract shall relieve the Contractor from his responsibility to pay any tax that may be levied in the Employer's country on profits made by him in respect of the Contract.

73.3 Income Taxes on Staff

The Contractor's staff, personnel and labour will be liable to pay personal income tax in the Employer's country in respect of such of their salaries and wages as are chargeable under the laws and regulations for the time being in force, and the Contractor shall perform such duties in regard to such deductions thereof as may be imposed on him by such laws and regulations.

74.1 Bribes

If the Contractor, or any of his Subcontractors, agents or servants gives or offers to give to any person any bribe, gift, gratuity or commission as an inducement or reward for doing or forbearing to do any action in relation to the Contract or any other contract with the Employer, or for showing or forbearing to show favour or disfavor to any person in relation to the Contract or to any other contact with the Employer, then the Employer may enter upon the Site and the Works and expel the Contractor and the provisions of Sub-Clause 63.1 to 63.4 hereof shall apply as if such entry and expulsion had been made pursuant to that Clause.

1. Termination of Contract for Employer's Convenience

The Employer shall be entitled to terminate this Contract at any time for the Employer's convenience after giving 56 days prior notice to the Contractor, with a copy to the Engineer. In the event of such termination, the Contractor

(a) shall proceed as provided in Sub-Clause 65.7, and

(b) shall be paid by the Employer as provided in Sub-Clause 65.8

76.1 Restriction on Eligibility

Not included.

77.1 Joint and Several Liability

- Deleted-.

78.1 Details to be Confidential

The Contractor shall treat the details of the Contract as private and confidential, save insofar as may be necessary for the purposes thereof, and shall not publish or disclose the same or any particulars thereof in any trade or technical paper or elsewhere without the previous consent in writing of the Employer or the Engineer. If any dispute arises as to the necessity of any publication or disclosure for the purpose of the Contract the same shall be referred to the decision of the Employer whose award shall be final.

79.1 Contractor's Temporary Moorings

Should the Contractor for the purpose of the Contract desire to provide temporary mooring for his craft and floating plant, he will be allowed to do so in positions and manners approved by the Engineer. The Contractor shall not lay such moorings so as to interfere with traffic in the waterways and such moorings shall be removed if and when required by the Engineer.

80.1 Life-Saving Appliances and First-Aid Equipment

The Contractor shall provide and maintain upon the Works sufficient, proper and efficient life saving appliances and first aid equipment to the approval of the Engineer and in accordance with the requirements of ILO Convention 62. The appliances and equipment shall be available for use at all times.

81.1 Drawings and Photographs of the Works

The Contractor shall not disclose details of drawings furnished to him and works on which he is engaged without the prior approval of the Engineer in writing. No photograph of the Works or any part thereof or Plant employed thereon shall be taken or permitted by the Contractor to be taken by any of his employees or any employees of his Subcontractors without the prior approval of the Engineer in writing, and no such photographs shall be published or otherwise circulated without approval of the Engineer in writing. Provided however, that the provisions of this Clause will not prevent the Contractor from taking such photograph as are necessary or desirable for maintaining proper records of the work progress and site conditions, and provided further that the approval of the Engineer shall not unreasonably be withheld.

82.1 The Apprentices Act 1961

The Contractor shall duly comply with the provisions of the Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all liabilities and penalties provided by the said Act and said Rules.

Extracts of Contract Labour (Regulation and Abolition) Act 1970

ANNEXURE – A

(Reference Clause 34.2 And 35.1)

- (a) The Contractor shall, at all times during the continuance of the Contract, comply fully with all existing Acts, regulations and bylaws including all statutory amendments and re-enactment of State or Central Government and other local authorities and any other enactments, notifications and acts that may be passed in future either by the State or the Central Government or local authority, including Indian Workmen's Compensation Act, Contract Labour (Regulation and Abolition) Act 1970 and Equal Remuneration Act 1976, Factories Act, Minimum Wages Act, Provident Fund Regulations, Employees Provident Fund Act, schemes made under the same Act and also Labour Regulations mentioned in Annexure A to Section IV, Health and Sanitary Arrangement for Workmen, Insurance and other benefits and shall keep Employer indemnified in case any action is commenced by competent authorities for contravention by the Contractor. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated henceforth on the part of the Contractor, the Engineer shall have the right to deduct from any moneys due to the Contractor, his amount of performance security or recover from the Contractor personally any sum required or estimated to be required for making good the loss or damage suffered by the Employer, responsibility in connection with the employees of the Contractor, who shall, in no case, be treated as the employees of the Employer at any point of time.

Fair Wages

- (b) The Contractor shall pay the labourers engaged by him on the work not less than fair wage which expression shall mean, whether for time or piecework, the

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respective rates of wages fixed by the Public Works Department as fair wages for the area payable to the different categories of labourers or those notified under the Minimum Wages Act for corresponding employees of the Employer, whichever may be higher.

- (c) The Contractor shall, notwithstanding the provisions of a contract to the contrary, cause to be paid a fair wage to labourers indirectly engaged on the Works, including any labour engaged by sub/contractors in connection with the sand works as if the labourer had been directly employed by him.

NOTICES

- (d) The Contractor shall, before he commences the work, display, and correctly maintain, in a clean and legible condition at a conspicuous place on the Site, notices in English and in a language spoken by the majority of the workers, stating therein the rate of wages which have been fixed as fair wages and the hours of work for which such wages are earned and send a copy of such notices to the Engineer.

Wages Records

- (e) The contractor shall maintain records of wages and other remuneration paid to his employees in such form as may be convenient and as per the requirements of the Employer/Engineer and the Conciliation Officer (Central), Ministry of Labour, Government of India, or such other authorised person appointed by the Central or State Government and the same shall include the following particulars of each worker:
 - (i) Name, worker's number and grade;
 - (ii) Rate of daily or monthly wage;
 - (iii) Nature of work on which employed;
 - (iv) Total number of days worked during each wage period;
 - (v) Total, amount payable for the work during each wage period;
 - (vi) All deduction made from the wage with details in each case of the ground for which the deduction is made;
 - (vii) Wage actually paid for each wage period.

- (f) The Contractor shall provide a Wage Slip for each worker employed on a the Works.

- (g) The Wage records and Wage Slips shall be preserved for a least 12 months after last entry;

Inspection of Wage Records

- (h) The Contractor shall allow inspection of the aforesaid Wage Records and Wage Slips to the Engineer and to any of his workers or to his agent at a convenient time and place after due notice is received or to the Employer or any other person authorised by him on his behalf.
- (i) The Employer, the Engineer or any other person authorised by them on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of the Fair Wages Clause. He shall also have the Power to investigate into any complaint regarding any default made by the Contractor or sub-contractor in regard to such provision.

- (j) The Employer shall have the right to deduct from the money's 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-payment of the aforesaid fair wage, except on account of any deductions that may be permissible under any law for the time being in force.
- (k) (i) A workman shall be entitled to be represented in any investigation or enquiry under this Clause by:
 - (a) An officer of a registered Trade Union of which he is a member.
 - (b) An officer of a federation of Trade Unions to which the Trade Union referred to in previous sub-clause is affiliated.
- (c) Where the worker is not a member of any registered Trade Union, by an officer of a registered Trade Union connected with or by any other workmen employed in the industry in which the worker is employed.
- (d) The Contractor or sub-contractor shall be entitled to be represented in any investigation or inquiry under this Clause by an office of an Association of Employers of which he is member.
- (e) No party shall be represented by a legal practitioner in any investigation or inquiry under this Clause, unless all parties agree otherwise.

Safety Provisions

- 1) The Contractor shall comply with all the precautions as required for the safety of the workmen by the I.L.O. Convention No.62 as far as they are applicable to the contract.

The Contractor shall provide all necessary safety appliances, gears like goggles, helmets, masks, etc., to the workmen and the staff.
- (i) Suitable scaffolds shall be provided for workmen for all work that cannot safely be done from the ground, or from solid construction except for such short period work as can be done safely from ladders, When a ladder is used, an extra labour shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable foot-holds and hand-holds shall be provided on the ladder, which shall be given an inclination not steeper than 1/4 to (1/4) horizontal in 1 vertical).
- (ii) Scaffolding or staging more than 3.25 metres above the ground or floor, swing or suspended from an overhead support or erected with stationary support shall have guard rail properly attached bolted, braced and otherwise secured 1 metres high above the floor or platform of such scaffolding or staging and extending along the entire length may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the support for structure.
- (iii) Working platform, gangways, and stairways shall be so constructed that they do not sag unduly or unequally and if a height of a platform or gangway or stairway is more 3.25 metres above ground level or floor level, it shall have closely spaced boards, have adequate width and be suitably provided with guard rails as described in (ii) above.
- (iv) Every opening in floor of a structure or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of one metre.

- (v) Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length. Width between side rails in a rung ladder shall in no case be less than 30 cm for ladders upto and including 3 metres in length. For longer ladders the width shall be increased at least 6mm for each additional 30cm of length. Spacing of steps shall be uniform and shall not exceed 30cm.

Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The Contractor shall provide all necessary fencing and lights to protect public from accidents and shall be bound to bear expenses of defending 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 or proceeding to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.

- (vi) Excavation and Trenching: All trenches, 1.5 metres or more in depth, shall at all times be supplied with at least one ladder for each 20 metres in length or fraction thereof. Ladder shall be extended from bottom of trench to at least 1 metres above surface of the ground. Sides of trench which is 1.5 metres or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of collapsing of sides. Excavated material shall not be placed within 1.5 metres of edge of trench or half the depth of trench, whichever is more. Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.
- (vii) Demolition: Before any demolition work is commenced and also during the process of the work:
- A. All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - B. No electric cable or apparatus which is liable to be a source of danger over a cable or apparatus used by operator shall remain electrically charged.
 - C. All practical steps shall be taken to prevent danger to persons employed by the Employer, from risk of fire or explosion, or flooding. No floor, roof or other part of a building shall be so overloaded with debris or materials as to render it unsafe.
- (viii) All necessary personal safety equipment as considered adequate by the Engineer shall be available for use of persons employed on the Site and maintained in a condition suitable for immediate use and the Contractor shall take adequate steps to ensure proper use of the equipment by those concerned.
- A. Workers employed on mixing asphaltic materials, cement, lime mortars/concrete shall be provided with protective footwear and protective goggles.
 - B. Those engaged in handling any material which is injurious to eyes shall be provided with protective goggles.
 - C. Those engaged in welding works shall be provided with welder's protective eye-shield.
 - D. Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - E. When workers are employed in sewers and manholes, which is in use, the Contractor shall ensure that manhole covers are open and manholes are ventilated at least for an hour before workers are allowed to get into them.

Manholes so open shall be cordoned off with suitable railing and provide warning signals or boards to prevent accident to public.

The Contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Whenever men above the age of 18 years are employed on the work of lead painting, the following precautions shall be taken.

No paint containing lead or lead products shall be used except in the form of paste or ready made paint.

Suitable face masks shall be supplied for use by workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.

Overalls shall be supplied by the Contractor to workmen and adequate facilities shall be provided to enable workers to wash during and on close of day's work.

- (ix) When work is done near any place where there is risk of drowning all necessary equipment shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
- (x) Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following:
 - (A) (i) These shall be of good mechanical construction, sound material and adequate strength and free from patent defects and shall be kept in good adequate strength and free from patent defects and shall be kept in good working order and properly maintained.
 - (ii) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from defects.
- (B) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 shall be in charge of any hoisting machine including scaffold or of signals to operator.
- I In case of every hoisting machine and of every chain hook, shackle swivel and pulley block used in hoisting, lowering or as means of suspension, safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with safe working load. In case of a hoisting machine or a variable safe working load each safe working load and conditions under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in the paragraph shall be loaded beyond safe working load except for the purpose of testing.
- (D) In case of the Employer's machine, safe working load shall be notified by the Engineer or his representative. As regards Contractor's machines, the Contractor shall notify safe working load of each machine to Engineer or his representative whenever he brings it to site of work and get it verified by him.
- (xi) Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliance shall be provided with efficient safeguards hoisting appliances shall be provided with such means as will reduce the risk of accident during descent of load to the minimum. Adequate precautions shall be taken to reduce to the minimum risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energised, insulating mats, working apparel such as gloves, sleeves and boots, as may be necessary, shall be provided, workers shall not wear any rings, watches and carry keys or other material which are good conductors of electricity.

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- (xii) All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities shall be provided at or near places of work.
- (xiii) These safety provisions shall be brought to the notice of all concerned by display on a notice board at a prominent place at the workspot. Persons responsible for ensuring compliance with the safety code shall be named therein by the Contractor.
- (xiv) To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the Engineer or his representative and the Inspecting Officer as defined in the Contractor's Labour Regulation mentioned in thereafter these Documents as Annexure A of Section IV.
- (xv) Notwithstanding anything contained in conditions (i) to (xiv) above, the Contractor shall remain liable to comply with the provisions of all Acts, rules, regulations and byelaws for the time being in force in India and applicable in this matter.
- (m) The Contractor shall be responsible for observance, by his sub/contractors, of the forgoing provisions.
- (n) For work carried out in the vicinity of any wharf or quay, the Contractor shall abide by all the provisions of the Dock Workers (Safety, Health and Welfare) Scheme, 1961.

Footwear

- (o) The contractor shall at his own expense provide footwear for all labour engaged on concrete mixing work and other types of work involving the use of tar, cement, etc., to the satisfaction of the Engineer or his Representative, and on his failure to do so, the Employer shall be entitled to provide the same and recover the cost from the Contractor.

Local Labour

- (p) The Contractor is encouraged as far as possible to employ, in the execution of the Contract, qualified Indian citizens as workmen. Employment of expatriate personnel is subject to the Indian Laws and Regulations. In case the contractor wishes to employ expatriate personnel in any particular trade or skill required to execute the contract, the Employer will assist the Contractor in obtaining permission for which the Contractor shall submit requisite data.

Model Rules for Labour Welfare

(i) Definitions:

- (A) Workplace means a place at which, on an average, twenty or more workers are employed.
- (B) Large workplace means a site at which, on an average, 250 or more workers are employed.

(ii) First Aid:

At every workplace, there shall be maintained in a readily accessible place first aid appliances including an adequate supply of sterilized dressings and sterilized cotton wool as prescribed in the Factory Rules of the State in which the work is carried on. The appliances shall be kept in good order and, in large work places, they shall be placed under the charge of a responsible person who shall be readily available during working hours.

At large workplaces, where hospital facilities are not available within easy distance of the Works, First Aid Posts shall be established and be run by a trained compounder.

Where large workplaces are remotely situated and far away from regular hospitals, an indoor ward shall be provided with one bed for every 250 employees.

Where large workplace are situated in cities, towns or in their suburbs and no beds are considered necessary owing to proximity of city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to these hospitals. At other workplaces, some conveyance facilities shall be kept readily available to take injured person on persons suddenly taken seriously ill, to the nearest hospital.

At large workplaces, there shall be provided and maintained an ambulance room containing the prescribed equipment and in the charge of such medical and nursing staff as may be prescribed. For this purpose, the relevant provisions of the Factory Rules of the State government of the area where the work is carried on, may be taken as the prescribed standard.

iii) Accommodation for Labour:

The Contractor shall during the progress of the Work provide, erect and maintain necessary temporary living accommodation and ancillary for labour at his own expenses to the standards and scales as approved by the Engineer.

iv) Drinking Water:

In every workplace, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.

Where drinking water is obtained from an intermittent public water supply, each workplace shall be provided with storage of cold water fit for drinking.

Ever water supply storage shall be at a distance of not less than 15 metres from any latrine, drain or other source of pollution. Where water has to be drawn from an existing well, which is within such proximity of latrine, drain or any other source of pollution, well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust-proof and water-proof.

A reliable pump shall be fitted to each covered well. The trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

(v) Washing and Bathing Places :

Adequate washing and bathing places shall be provided separately for men and women. Such places shall be kept in clean and drained condition.

vi) Scale of Accommodation in Latrines and Urinals:

There shall be provided within the precincts of every workplace, latrines and urinals in an accessible place, and the accommodation, separately for each of these, shall not be less than at the following scale:-

	No. of Seats
Where number of persons does not exceed 50	2
Where number persons exceed 50 but does not exceed 100	3
For additional persons per 100 or part thereof	3

In particular cases, the Engineer shall have the power to increase the requirement, wherever necessary.

(vii) Latrines and Urinals:

Except in workplaces provided with water/flushed latrines connected with a water borne sewage system, all latrines shall be provided with receptacles on dry-earth system which shall be cleaned at least four times daily and at least twice during working hours and kept in a strictly sanitary condition. Receptacles shall be tarred inside and outside at least once a year.

If women are employed, separate latrine and urinals, screened from those for men and marked in the vernacular in conspicuous letters. "For Women Only" shall be provided on the scale laid down in rule (vi). Those for men shall be similarly marked "For Men Only". A poster showing the figures of a man and a woman shall also be exhibited at the entrance to latrines for each sex. There shall be adequate supply of water, close to latrines and urinals.

(viii) Construction of Latrines:

Inside walls shall be constructed of masonry or other non-absorbent material and shall be cement washed inside and outside at least once a year. The dates of cement washing shall be noted in a register maintained for the purpose and kept available for inspection. Latrines shall have at least thatched roof.

(ix) Disposal of Excreta:

Unless otherwise arranged for by the local sanitary authority, arrangement for proper disposal of excreta by incineration at the workplace shall be made by means of suitable incinerator approved by the local medical, health and municipal or cantonment authorities. Alternatively, excreta may be disposed off by putting a layer or night soils at the bottom of a pucca tank prepared for that purpose and covering it with a 15 cm layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn into manure).

The Contractor shall, at his own expense, carry out all instructions issued to him by the Engineer to effect proper disposal of soil and other conservancy work in respect of Contractor's work-purpose or employees on the site. The Contractor shall be responsible for payment of any charges which may be levied by municipal or cantonment authority for execution of such work on his behalf.

(x) Provisions of shelters during rest:

At every workplace, there shall be provided, free of cost, four suitable sheds, two for meals and two others for rest, separately for use of men and women labour. Height of each shelter shall not be less than 3 metres from floor-level to lowest part of roof. Sheds shall be kept clean and the space provided shall be on the basis of at least 0.5 sqm per head.

xi) Creches:

At a place at which 20 or more women are ordinarily employed, there shall be provided at least one hut for use of children under the age of 6 years belonging to such women. Huts shall not be constructed to a standard lower than that of thatched roof, mud floor and wall with wooden planks spread over mud floor and covered with matting.

Huts shall be provided with suitable and sufficient openings, for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be two maid-servants in attendance. Sanitary utensils shall be provided to the satisfaction of local medical, health and municipal or cantonment authorities. Use of huts shall be restricted to children, their attendants and mothers of children.

Where the number of women workers is more than 25 but less than 50, the Contractor shall provide at least one hut and one maid-servant to look after children of women workers.

Size of creche(s) shall vary according to the number of women workers employed.

Creche(s) shall be properly maintained and necessary equipment like toys, etc., provided.

(xii) Canteen:

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

(xiii) Planning, setting and erection of the above mentioned structures shall be approved by the Engineer or his representative and the whole of such temporary accommodation shall at all times during the progress of the work be kept tidy and in a clean and sanitary condition to the satisfaction of the Engineer or his representative and at the Contractor's expense. The Contractor shall conform generally to sanitary requirements of local medical, health and municipal or cantonment authorities and at all times adopt such precautions as may be necessary to prevent soil pollution of the site.

On completion of the Works, the whole of such temporary structures shall be cleared away, all rubbish burnt, excreta or other disposal pits or trenches filled in and effectively sealed off and the whole of site left clean and tidy at the contractor's expense to the entire satisfaction of the Engineer.

xiv) Anti-malarial precautions:

The Contractor shall, at his own expense, conform to all anti-malarial instructions given to him by the Engineer, including filling up any borrow pits which may have been dug by him.

xv) Enforcement:

Inspecting Officer mentioned in the Contractor's Labour Regulations or any other Officer nominated on his behalf by the Engineer shall report to the Engineer all cases of failure on the part of the Contractor and/or his sub-contractor to comply with the provisions of these Rules either wholly or in part and the Engineer shall impose such fines and other penalties as are prescribed in the conditions of contract.

xvi) Interpretations, etc.:

On any question as to the application, interpretation or effect of these Rules, the decision of the Chief Labour Commissioner or Deputy Chief Labour Commissioner (Central) shall be final and binding.

Xvii) Amendments:

The Employer may, from time to time, add to, or amend these Rules and issue such directions as it may be considered necessary for the proper implementation of these Rules or for the purpose of removing any difficulty which may arise in the administration thereof.

Extracts of Contract Labour (Regulation and Abolition) Act 1970

ANNEXURE – A – 1

(Reference Clause 34.2 And 35.1)

CONTRACTOR'S LABOUR REGULATIONS

Regulation 1 – Definition

In these regulations, unless otherwise expressed or indicated, the following words and expression shall have the meaning hereby assigned to them :

- a) "Labour" means workers employed by a contractor directly, or indirectly, through a sub-contractor, or by an agent on his behalf on a payment not exceeding Rs.1.600/- per month.
- b) "Wages" means wages, which shall include wages for weekly day of rest and other allowance, whether for time or piece work, after taking into consideration prevailing market rates for similar employments in the neighborhood but shall not be less than the minimum rates of wages fixed under the Payment of minimum Wages Act.
- c) "Contractor" for the purpose of these regulations shall include an agent or sub-contractor employing labour on the work taken on contract.
- d) "Inspecting Officer" means any Labour Enforcement Officer, or Assistant Labour Commissioner of the chief labour Commissioner's Organisation.
- e) "Form" means a form appended to these Regulations.

Regulation 2 – Notice of Commencement

The Contractor shall within SEVEN days of commencement of the Work, furnish in writing to the Inspecting Officer of the area concerned the following information :

- a) Name and situation of the work
- b) Contractor's name and address
- c) Particular of the Department for which the work is undertaken
- d) Name and address of sub-contractors as and when they are appointed
- e) Commencement and probable duration of the work
- f) Number of workers employed and likely to be employed
- g) Fair wages for different categories of workers

Regulations 3 – Hours of Work and Weekly Day of Rest

- I. **Number of hours of work which shall constitute normal working day :-**
The number of hours which shall constitute a normal working day for an adult shall be NINE hours. The working day of an adult worker shall be so arranged that, inclusive of intervals, if any, for rest, it shall not spread over more than

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Twelve hours on a day. When an adult worker is made to work for more than nine hours on any day or for more than FORTY EIGHT hours in a week, he shall in respect of overtime work, be paid wages at double the ordinary rate of wages.

- II. **Weekly day of Rest:** - Every worker shall be given a weekly day of rest which shall be fixed and notified at least TEN days in advance. A worker shall not be required or allowed to work on the weekly rest day unless he has or will have a substituted rest day, one of the five days immediately before or after the rest day. Provided no substitution shall be made which will result in the worker working for more than ten days consecutively without a rest day for a whole day.

Where in accordance with the foregoing provisions, a worker works on the rest day and has been given a substituted rest day, he shall be paid wages for the work done on the weekly rest day at the overtime rate of wages.

NOTE: The expression "ordinary rate of wages" means the fair wage the worker is entitled to.

Regulations 4 – Display of Notice Regarding wages, Weekly day of Rest, etc.,

The Contractor shall 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 works, notice in English and in the local language spoken by majority of workers, giving the rate of fair wages, the hours of work for which such wages are payable, the weekly rest days workers are entitled to and name and address of the Inspecting Officer. The Contractor shall send a copy of each of such notice to the Inspecting Officer.

Regulation 5 – Fixation of Wage periods

The Contractor shall fix wage periods in respects of which wages shall be payable. No wage period shall normally exceed one week.

Regulation 6 – Payment of wages

1. Wages due to every worker shall be paid to him direct. All wages should be paid in current coins or currency or in both.
2. Wages of every worker employed on the Contract shall be paid where the wage period is one week, within THREE days from the end of the wage period ; and in any other case before the expiry of the 7th day or 10th day from the end of the wage period according as the number of workers does not exceed 1,000 or exceeds 1,000.
3. When employment of any worker is terminated by or on behalf of the Contractor, the wages earned by him shall be paid before expiry of the day succeeding the one on which his employment is terminated.
4. Payment of wages shall be made at the Work Site on a working day except when the work is completed before expiry of the wage period in which case final payment shall be made at the Work Site within 48 hours of the last working day and during normal time.

Note: The term “Working Day” means a day on which the work on which the labour is employed is in progress.

Regulation 7 – Register of Workmen

A register of workmen shall be maintained in the Form appended to the regulations and kept at the work site or as near to it as possible and relevant particulars of every workman shall be entered therein within THREE days of his employment.

Regulation 8 – Employment Card

The Contractor shall issue an Employment card in the Form appended to these regulations to each worker on the day of work or entry into his employment. If a worker already has any such card with him issued by the previous employer, the Contractor shall merely endorse that Employment Card with relevant entries. On termination of employment, the Employment Card shall again be endorsed by the Contractor and returned to the worker.

Regulation 9 – Register of Wages etc.

1. A Register of Wages cum Muster Roll in the Form appended to these regulations shall be maintained and kept at the Work Site or as near to it as possible.
2. A wage slip in the form appended to these regulations shall be issued to every worker employed by the Contractor at least a day prior to disbursement of wages.

Regulation 10 – Fines and Deductions which may be made from Wages

1. Wages of a worker shall be paid to him without any deductions of any kind except the following :
 - a) Fines
 - b) Deductions for absence from duty ; i.e. from the place of his employment where he is required to work. The amount of deduction shall be in proportion to the period for which he was absent;
 - c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money which is required to be accounted for, where such damage or loss is directly attributable to his neglect or default.
 - d) Deductions for recovery of advances or for adjustment of overpayment of wages, advance granted being entered in a register; and
 - e) Any other deductions which the Employer may from time to time allows.
2. No fines shall be imposed on any worker save in respect of such acts and omissions on his part as have been approved by the Chief Labour commissioner.
3. No fine shall be imposed on a worker and no deductions for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.

4. The total amount of fines which may be imposed in any one wage period of a worker shall not exceed an amount equal to 0.3% of the wages payable to him in respect of that wage period.
5. No fine imposed on a worker shall be recovered from him on installments, or after expiry of sixty days from the date on which it was imposed. Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.
6. The Contractor shall maintain both in English and the local language a list, approved by the Chief Labour Commissioner, clearly stating the acts and omissions for which penalty or fine may be imposed on a workman and display it in good condition in a conspicuous place on the Work Site.
7. The Contractor shall maintain a register of fines and the register of deductions for damage or loss in the forms appended to these regulations which should be kept at the place of work.

Regulation 11 – Register of Accidents

The Contractor shall maintain a register of accidents in such form as may be convenient at the work place but the same shall include the following particulars:

- a) Full particulars of the labourers who met with accident.
- b) Rate of wages
- c) Sex
- d) Age
- e) Nature of accident and cause of accident
- f) Time and date of accident
- g) Date of Time when admitted to hospital
- h) Date of discharge from the hospital
- i) Percentage of loss of earning capacity and disability as assessed by the medical Officer.
- j) Claim required to be paid under Workmen's Compensation Act.
- k) Date of payment of compensation.
- l) Amount paid with details of the person to whom the same was paid
- m) Authority by whom the compensation was assessed
- n) Remarks

Regulation 12 – Preservation of Register

The Register of workmen and the Register of wages cum Muster Roll required to be maintained under these Regulations shall be preserved for 3 years after the date on which the last entry is made therein.

Regulation 13 – Enforcement

The Inspecting Officer shall either on his own motion or on a complaint received by him carry out investigations and send a report to the Engineer specifying the amounts representing Workers Dues and amount of penalty to be imposed on the Contractor for breach of these regulations, that have to be recovered from the Contractor, indicating full details of the recoveries proposed and the reason

Contractor

Employer/Engineer

therefor. It shall be obligatory on the part of the Engineer on receipt of such a report to deduct such amounts from payments due to the Contractor.

Regulation 14 – Disposal of Amounts Recovered from the Contractor

The Engineer shall arrange payment to workers concerned within FORTY FIVE days of receipt of a report from the Inspecting Officer except in cases where the Contractor had made an appeal under Regulation 16 of these regulations. In cases where there is an appeal, payment of workers dues would be arranged by the Engineer wherever such payment arise, within THIRTY days from the date of receipt of the decision of the Regional Labour Commissioner (RLC).

Regulation 15 – Welfare Fund

All moneys that are recovered by the Engineer by way of worker's dues which could not be disbursed to workers within the time limit prescribed above, due to reasons such as whereabouts of workers not being known, death of workers, etc., and also amounts recovered as penalty, shall be credited to a Fund to be kept under the custody of the Employer for such benefit and welfare of workmen employed by Contractors as the Engineer may deem fit.

Regulation 16 – Appeal against decision of Inspecting Officer

Any person aggrieved by a decision of the Inspecting Officer may appeal, against such decision of the Regional Labour Commissioner concerned with THIRTY days from the date of the decision forwarding simultaneously a copy of this appeal of the Engineer.

The decision of the Regional Labour Commissioner shall be final and binding upon the Contractor and the Workmen.

Regulation 17 – Representation of Parties

1. Workmen shall be entitled to be represented in any investigation of enquiry under these Regulations by an officer of a registered trade union of which he is a member or by an officer of a Federation of Trade Unions to which the said trade union is affiliated or where the workman is not a member of any registered trade union by an officer of a registered trade union, connected with, or by any other workmen employed in the industry in which the worker is employed.
2. A contractor shall be entitled to be represented in any investigation or enquiry under these Regulations by an officer of an association of Contractors of which he is a member or by an officer of a Federation of associations of Contractors to which the said association is affiliated or by an officer of association of employees connected with or by any other employer engaged in the industry in which the Contractor is engaged.
3. No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these Regulations.

Regulation 18 – Inspecting of Books and Other Documents

The Contractor shall allow inspection of the Registers and other documents prescribed under these Regulations by Inspecting Officers and the Engineer or his authorised representative at any time and by the worker or his agent on receipt of due notice at a convenient time.

Regulation 19 – Interpretation etc.

On any question as to the application, interpretation or effect of these regulations, the decision of the Chief Labour Commissioner or Deputy Chief Labour Commissioner (Central) as the case may be, shall be final and binding.

Regulation 20 – Amendments

The Employer may, from time to time, add to or amend these Regulations and issue such directions as it may consider necessary for the purpose of removing any difficulty which may arise in the demonstration thereof.

SECTION IV (Regulation 7)

1. Name and address of the Contractor _____
2. Number and date of Contract _____
3. Name and address of the Department awarding the Contract _____
4. Nature of the Contract and location of the work _____
5. Duration of the Contract _____

Sl. No.	Name and Surname	Age & Sex	Father's/ Husband's name	Nature of Employment Designation	Permanent Home Address of Employee (Village, Dist : Thana)	Present Address	Date of Commencement of employment	Date of termination or leaving of employment	Signature or thumb impression of the employee	Remarks
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Contractor

Employer/Engineer

SECTION IV**SHEET NO. A-14****A – 13****EMPLOYMENT CARD
(Regulation 8)**

1. Name and Sex of the Worker _____
2. Father's / Husband's Name _____
3. Address _____
4. Age or Date of Birth _____
5. Identification marks _____

Particulars of next kin (wife/husband and children, if any, or of dependent next of kin in case the worker has no wife/husband or child).

Name _____
Full address of Dependents
(Specify Village, Distt and State _____)

Sl. No.	Name and address of Employer (specify whether a contractor or a subcontractor)	Particulars of location of work site and description of work done	Total period for which the worker is employed (from ---- to ----)	Actual number of days worked	Leave taken (No. Of days should be specified)	Nature of work done by the worker	Wage period	Wage rate with particulars of unit in case of piece	Total wages earned by the worker the period shown under	Remarks	Signature of the employer

N.B. For a worker employed at one time on piece work basis and at another on daily wages, relevant extra in respect of each type of employment should be made separately.

Contractor

Employer/Engineer

**WAGE SLIP
(Regulation 9)**

SHEET NO. A-9

Name of Contractor

Place

Name of the Worker with father/
husband's name
Nature of Employment
Wage Period
Rate of Wages Payable
Total attendance/Unit of work done
Date(s) on which overtime worked
Overtime Wages
Gross Wages Payable
Total Deductions (including nature of
deductions)
Net Wages Payable

Signature/Thumb Impression
of Contractor

Signature/Thumb Impression
of employee

Contractor

Employer/Engineer

REGISTER OF FINES
(Regulation No. 10 (vii))

Sl. No.	Name	Father's/ Husband's name	Sex	Department	Nature and date of the offense for which fine imposed	Whether workman showed cause against fine or not, if so enter date	Rate of wages	Date & amount of fine imposed	Date on which fine realized	Remarks

Contractor

Employer/Engineer

ANNEXURE – B

CIRCULAR FOR ADOPTION OF ELECTRONIC SPREAD SHEETS IN LIEU OF MEASUREMENT BOOKS

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

Part-A

Study, Survey, Preparation of Base map, Conditional Survey, Assessment of NRW, Customer Survey, Analysis, Design & Drawing.

Part-B

Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.

Part-C

Providing & Laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for 24x7 distribution system.

Part-D

Operation and Maintenance of 24x7 distribution system for a period of 5 years.

ITEM RATE TENDER

CHAPTER – 3

SPECIAL CONDITIONS OF CONTRACT

CHAPTER 3: SPECIAL CONDITIONS OF CONTRACT

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CHAPTER 3: SPECIAL CONDITIONS OF CONTRACT

1. Interpretation of the Clauses of Special Conditions

- 1.1 In these Special Conditions of Contract, the word Contractor shall be understood to mean the successful bidder. Responsibilities and bindings of the Contractor as described under different clauses shall be understood to be applicable after the successful bidder has been awarded the work. Further, the Clauses and Sub-Clauses under these Special Conditions of Contract shall prevail over the relevant Clauses and Sub-Clauses of Chapter 1, Instructions to Bidders, and Chapter 2, General Conditions of Contract, in case there are any discrepancies.

2 Brief Description of the Project

General

The detailed estimate for Providing 24x7 Water Supply System (Phase-I part-2) in water zones 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city"- under UWSS amounting to Rs. 7100.00 Lakhs has been approved by the Government of Karnataka vide G.O.No.UDD/02/UWS-2012, Bangalore Dated: 08-10-2012.

The zoning of water districts, population, wards covered and other details for the above proposed water zones are as below:

Sl. No.	Water Zone No.	Location of Storage Reservoir	Capacity of Service Reservoir (in LL)	HDMC Wards Covered (As per - 2001 Census)	Present Ward Nos. Covered	Population Covered			Approximate House Service Connections	Remarks
						2011	2026	2041		

1	1	Tabib Land ESR (E) Tabib Land ESR (OG)	15.00 10.00	51, 52, 53, 56	51P, 52P, 54P, 55P, 56P	23645	38294	39565	-	The HSC has already been taken up by HDWS Main. Divn., Hubli for the newly laid HDPE distribution network.
2	8	Mahadevi Layout ESR (OG)	10.00	47	48	12325	25450	35902	3900	
3	10	N T Betta GLSR (OG)	68.50	33	34	10685	11021	11928	2150	
4	17	Gabbur ESR (E)	15.00	67(56%)	66P, 67P	10675	14400	18950	1300	
5	24	Gulaganjikop pa GLSR (E) + ESR (OG)	13.60 + 10.00	4(72%), 5	4P, 5	12925	24746	27692	3000	
6	28	Saraswathpur GLSR (E)	33.00	15, 16, 19	14P, 15P, 16, 19, 22P	40690	68690	99757	9900	
7	D-24	K C PARK OHT	10.00		4P, 5P, 7P, 12P, 13P	10000	13000	16000	2250	
8	H-10	KESHWAPU R OHT	15.00		31F, 47P, 48P	17600	25000	35000	50000	
		Total				138545	182601	233794	27500	

3. **Scope of Work**

Pursuant to Sub-clause 1.1 of Chapter-I, the scope of work under this Contract includes carrying out designing, preparation of working drawings, providing and construction, Testing and Commissioning, of the following components and operation and maintenance for a period of 60 months including satisfactory completion of Defect liability period of 12 months with the approved service level bench marks.

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

The scope includes survey, establishing sufficient Benchmarks, Design and preparation of working drawing and approval from competent authority, implementation & successful commissioning of 24x7 water supply system in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli & Dharwad twin city including providing and commissioning of House Service

Connections and also operation and maintenance of 24x7 water supply system for a period of 60 months from the date of successful commissioning including 12 months defect liability period.

– ITEM RATE

Part-A - Study, Survey, Preparation of Base map, Conditional Survey, Assesment of NRW, Customer Survey, Analysis ,Design, & Drawing.

Part-B - Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.

1. Replacing the Old 700 mm dia Hume steel Rising Main between Ch. 4470 to Ch. 6470 (L=2000 m) from Dhumwad Pumping Station to Kanvihonnapur WTP by Providing, Laying, Jointing, Testing and Commissioning 762 mm dia (OD) of M.S Pipeline.
2. Providing, Laying, Jointing, Testing and Commissioning 660 mm, 508mm & 457 mm dia (OD) M.S Feeder Main From Nrupathungabetta to Keshwapur, HDMC Park & Tabib Land Service Reservoirs in Hubli City.

Part-C- Providing and laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for continuous pressurised Water Supply (24x7) distribution system along with house service connections.

1. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone - 8 from ESR at Mahadevi layout for 24x7 Water Supply (Phase-I, Part-2) in Hubli city.
2. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone- 10 from N R Betta GLSR for 24x7 Water Supply (Phase-I, Part-2) in Hubli city.

3. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone H-17 from ESR at Gabbur for 24x7 Water Supply (Phase-I part-1) in Hubli city.
4. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone - 24 from ESR at Gulaganjikoppa for 24x7 Water Supply (Phase-I, Part-2) in Dharwad city.
5. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone - 28 from GLSR at Saraswatpur for 24x7 Water Supply (Phase-I, Part-2) in Dharwad city.
6. Providing pressure relief valves & water meters for the distribution system executed in Water Zone- 1 from ESR at Tabib land for 24x7 Water Supply (Phase-II) in Hubli city.
7. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone D-24 from ESR at K C Park for 24x7 Water Supply (Phase-I, Part-2) in Dharwad city.
8. Providing, Laying, Jointing, Testing & Commissioning of DI & HDPE Water distribution network and House Service Connections in Water Zone H-10 from proposed 15 LL RCC ESR at Keshwapur for 24x7 Water Supply (Phase-I part-2) in Hubli city.

Part-D- Operation & maintenance for a period of 60 months from the successful commissioning of the proposed 24 x 7 distribution system in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 Hubli & Dharwad twin city under O & M of Hubli-Dharwad water supply system including 12 months defect liability period & approved service level bench marks.

A Key map showing the various components of the building is presented in Chapter 9, drawings.

- 3.1 Carrying out survey using total station, establishing sufficient bench marks, design of network using the latest version & licensed water GEM software approved by employer, preparation of working drawings and obtaining pre-construction approval from competent authority.

- 3.2 Earth work excavation, laying of bedding wherever specified laying of pipes laying, jointing, testing and commissioning, back filling the trenches and restoring and making good all surfaces which are damaged during excavation.
- 3.3 Fixing and connecting all pipe line fixtures such as valves, bends, tees, blank flanges, tail pieces, flow meter etc., and air vessel tee with a blank flange at the start of the rising main.
- 3.4 Supplying, laying and jointing, testing and commissioning of MS/DI/HDPE pipe distribution network including house service connections.
- 3.5 Testing and commissioning of the HDPE distribution pipeline network with the required designed discharge and pressure. The minimum pressure at any point of place and time is to be 7m head at the consumer point and 10 m head at tapping point of house service connection.
- 3.6 Operation & Maintenance of all the works under the scope of the tender for a period of 60 months from the date of successful commissioning including the defect liability period of 12 months. The bidder shall get the O & M plan approved from the competent authority based on the service level bench mark criteria for successful 24x7 water supply system with quantity, quality & pressure management, etc. During defect liability period of 12 months, the contractor has to set right defects of any kind in the manufacture, transit, construction and any other works in the scope of tender at free of cost.
- 3.7 Dismantling and reconstruction of structures such as culverts, storm water drains, utility lines such as water supply pipe lines, sewer lines or any other structure in the way of proposed alignment.
- 3.8 All work shall be done as per the specifications, relevant IS codes and QAP. The works shall include providing all materials, equipment, labour, tools, plants, transport etc., and all other services necessary for the complete construction including necessary sub-soil investigations.
- 3.9 The Distribution Network Drawings are furnished in Chapter-9 Drawing are approximate/indicative. Further details shall be worked out and furnished in the construction drawings during the construction stage.

4.0 TIME FOR COMPLETION

- 4.1 Pursuant to Sub-Clause 1.2 of Chapter 1 and Sub-Clause 43.1 of Chapter 2 the Contractor shall be required to complete the Works, including testing, commissioning and completion period, within **24 (Twenty four) months** including monsoon season(s), from the date specified in the Notice to Commence the Works. The Taking-Over Certificate will be issued upon successful completion of the Trial Run and rectification of any defects which are observed during this period.
- 4.2 In connection with this, the Contractor shall be required to complete the following Chapters of the Works, and to meet the milestones indicated, in accordance with the time limits stipulated in the Appendix to tender as summarized below:

Additional milestones will be determined as per the approved construction programme submitted by the contractor in accordance with the Clause 6.10 of Chapter 2.

Sl. No.	Description of Milestones	Time for Completion
i)	Commencements of the works, including mobilization to site and establishment of site office (Sub-clause 12.1 of chapter 2, General condition of contract)	21 days from the date of issue of Notice to proceed.
ii)	Submission of hydraulic design calculations, drawings and other documents (clause 12.0 of this chapter)	21 days from the date of issue of letter of acceptance.
iii)	Implementation & completion of 24x7 water supply system and all equipments/gadgets necessary.	21 days before start of the trial run
iv)	Completion of Testing and commissioning and commencement of trial run.	One month before the end of the time for completion
v)	Completion and handing over to the Employer	After the satisfactory completion of defects liability period and O & M period.

5.0 ISSUE OF BLANK TENDER FORMS:

- Deleted -.

6.0 ALTERNATIVE PROPOSALS BY BIDDER

6.1 - Deleted –

7.0 Employer, Engineer and Engineer's Representatives

7.1 Reference to the Sub-Clause 1.1 of Chapter 2

(a) The Employer is: **Chief Engineer (North)**

Karnataka Urban Water Supply and Drainage Board
(KUWS&DB)
Jalamandali Compound, Dharwad
Phone: (0836) 2447090
Fax : (0836) 2446890

(b) **The Employers Representative:-** Executive Engineer
KUWS & D.B, Division, Dharwad

Any communication given by the employer's representative shall have the same effect as though it had been given by the employer.

(c) The Engineer is: **Executive Engineer,**

Karnataka Urban Water Supply and Drainage Board
Division, Dharwad

(d) Without limiting the authority of the Engineer to appoint Engineer's Representatives from time to time as may be required, the Engineer's Representatives shall include authorized representatives of :

Asst. Executive Engineer, KUWS & DB No- Sub Dvn. Dharwad.

Or

his duly authorised representative: Any communication given by the engineer's representative shall have the same effect as though it had been given by the engineer.

8.0 ENGINEER'S DUTY AND AUTHORITY

8.1 Reference to Sub-Clause 2.1 of Chapter 2, (Engineer's Duties and Authority), the Engineer shall obtain the specific approval of the Employer before taking any of the following actions specified in Chapter 2, General Conditions of Contract::

- (a) Approving subletting of any part of the Works under Sub-Clause 3.1&4.1 of Chapter 2;
- (b) Certifying additional costs determined under Clause 52.2 of Chapter 2;
- (c) Determining an extension of time under Sub-Clause 44.1 of Chapter 2;
- (d) Issuing a variation order under Clause 52.1 of Chapter 2, except:
- (e) Fixing rates or prices of the variation item.

9.0 ACCESS TO DATA / INFORMATION

9.1 Reference to Sub-Clause 6.5 of Chapter 2 (Access to Data), additional information, if any, in connection with Employer's scheme and design considerations shall be made available for inspection by the bidder at the office of, The CHIEF ENGINEER (NORTH), Karnataka Urban Water Supply and Drainage Board, Sir M.Visvesvaraya Road, Jalamandali Compound, Dharwad Tel. Ph. 0836 – 2447090 FAX : 0836 – 2446890 during normal office hours. The Employer make this information available on the understanding that they are not responsible for the accuracy or sufficiency of the data collected, or for the interpretation of said data. The successful bidder shall be fully responsible for collecting any additional data, and for carrying out any additional investigations which he may deem necessary.

9.2 Data available includes the following:
i. Levelling and Contour Plan(Bidder has to verify the correctness).
ii. Chapter 10: Standard Specifications
iii. Copies of Tender drawings.
iv. Manual on operation & maintenance of water supply prepared by the Board.

10.0 Work Programme

10.1 Reference to Sub-Clause 14.10 of Chapter 2 (Programme to be Submitted), the Contractor shall submit his detailed work programme in PERT/CPM form(in soft copy also) which shall clearly set out his proposed schedule for the whole of the Works, the times for completing the major sections of the Works, and his schedule for mobilizing the materials and equipment necessary for implementing the Works in a timely and efficient manner. In developing the work programme, the Contractor shall give paramount importance in minimizing any inconvenience to the public, and to ensure that the various sections of the Works are completed and the affected areas are restored as expeditiously as possible. The Contractor's work programme will be subject to the approval of the Engineer, and the approved programme shall be adhered to during execution of the Works. The contractor work program should demonstrate minimum progress as per the milestone given below. Progress means both physical and financial in all components.,

I Milestone :- 25 % of the work in 25% of the Tender Period

II Milestone :- 50 % of the work in 50% of the Tender Period

III Milestone :- 75 % of the work in 75% of the Tender Period

IV Milestone :- 100 % of the work before 15 days of the Tender Period

Note- The bidder should submit the work programme while concluding agreement and it shall become part of the agreement.

11.00 REPORTS TO BE SUBMITTED:-

Reference to sub-clause 14.5(Reports to be submitted) of Chapter 2, the
Contractor Engineer/ Employer

contractor shall prepare and submit monthly progress reports to the Engineer in six copies within **28 days** following the end of the previous month. Reporting shall continue until the contractor has completed all work which is known to be outstanding as on the completion date as stated in the Taking over certificate for the works each report shall include:

- a) Photographs and detailed description of the progress, including the works completed and in progress, the status of supply and delivery of major materials and plant to be incorporated in the works, and the supply of major items of the contractor's equipment on site.
- b) Records of personnel and contractor's equipment on site;
- c) Copies of quality assurance documents, test results and certificate of materials.
- d) Safety statistics, including details of any hazardous incidents and activities relating to environmental aspects and public relations, and
- e) Comparison of actual and planned progress, with details of any aspects which may jeopardize the completion in accordance with the contract, and the measures being (or to be) adopted to overcome such aspects.
- f) The Bidder shall establish the water quality and quantity measuring equipment at a reasonable number of places with the approval of the employer. He should indicate the same while submitting the Bid.
- g) Demand, Collection and balance results to be submitted on monthly basis

12 CONTRACTOR'S EMPLOYEES

- 12.1 Reference to Sub-Clause 16.1 of Chapter 2 (Contractor's Employees), the Contractor shall not employ any person who is under the age of 18 years.

13 INSURANCE. -Deleted.-

14 ROYALTIES

- 14.1 Reference to Sub-Clause 28.2 of Chapter 2 (Royalties), the Employer shall deduct Royalties on materials used in the Works from the progress payments to the Contractor at the rates specified in the most recent "Amendment to the Karnataka Minor Minerals Concession Rules - 2007" as published by the Commerce and Industries Department (Mines) and as illustrated in **Annexure-I**, attached at the end of this Chapter.

- 14 A Karnataka building and other construction workers welfare cess:** Reference to the sub clause 60.1 of chapter 2, as per G.O No. LD/300/LET/2006/Bangalore dated 18-01-2007, the employer shall deduct 1%(one percent) cess over the tender amount from the bills of the contractor under Building and other Construction Workers Welfare Cess Act 1996.

15 PRICE VARIATION

- 15.1 Except as under the situation stipulated in Sub-Clause 51.1 (Variations) and Sub-Clause 51.2 of Chapter 2, the rates and prices quoted by the Bidder shall be fixed for the entire duration of the Contract and not be subjected to variation under any circumstances, except as under clause 70.1 to 70.2 of Chapter-2.

16 SITE ORDER BOOK

- 16.1 The Contractor shall maintain an identical pair of Site Order Books (one marked original and the other marked duplicate), at the Site at all times during the execution of the Works for the use of the Engineer and the Contractor. All

instructions issued by the Engineer to the Contractor shall be recorded in both sets of the Site Order Book and shall be signed by the issuer and countersigned by the Contractor. After compliance with the instruction the Contractor shall record the same in both sets of the Site Order Book duly signed and countersigned by the Engineer. Acceptance of any part of the work executed by the Contractor shall be subject to verification with respect to compliance of respective instructions of the Engineer through the Site Order Book. The Engineer shall retain the original copy of the Site Order Book, while the Contractor shall retain the duplicate one.

17 QUARY MATERIALS

- 17.1 The Contractor shall be wholly responsible to identify the suitable sources for quarry materials required for the Works, such as earth, sand, stone, murrum etc., and to make his own arrangements for collection and transportation of the materials irrespective of the leads and lifts required. The quarry thus identified by the Contractor should have proper license from the Government of Karnataka. All materials supplied by the Contractor shall satisfy the requirements set forth in the Specifications and shall be subject to the approval of the Engineer. The Contractor shall take this into account while offering his rates and no claims whatsoever shall be entertained for extra costs on this account.

18 CONSTRUCTION DOCUMENTS

- 18.1 The Employer will provide the construction drawings after award of the job according to the agreed programme for construction. The Contractor shall not commence the construction of any part of the work unless he receives from the engineer signed approval of the construction drawing/document relevant to such part of the work.

19. AS-BUILT DRAWINGS

- 19.1 The Contractor shall be responsible to maintain accurate records of all works completed and to prepare detailed "As-Built" drawings, incorporating all changes and/or modifications made to the works during construction. The Contractor shall provide the employer with one original set of "As-Built" drawings on a reproducible media along with two record copies prior to acceptance of the works and issuance of the Taking-Over Certificate.

20. TAKING-OVER CERTIFICATE

Reference to Sub-Clause 48.1 (Taking Over Certificate) of Chapter 2, the Engineer shall, within 21 days of the date of delivery of the request by the Contractor to issue a Taking-Over Certificate, conduct a joint Final Inspection of the works with the Contractor to determine the date of substantial completion and to identify all work which is required to be done, or defects which are required to be corrected, by the Contractor prior to issuance of the Taking-Over Certificate. The above provisions notwithstanding, successful completion of any Tests on Completion prescribed by the Contract will be a condition to issuance of the Taking-Over Certificate.

21. THIRD PARTY INSPECTION AND TESTING :

1. The employer will fix the 3rd party agency for inspection of materials at Manufacturers works & site and also the construction activities at site. The inspection charges will be paid directly by the Board to the third party agency only for the successful visits and the offer shall be exclusive of the 3rd party inspection charges. The inspection charges for the unproductive visits if any are to borne by agency. The 3rd party agency has to carry out the inspections as per QAP.

2. The employer will also fix third party for the O&M period. Engineer will bear the 3rd party inspection charges.

22. TECHNICAL SPECIFICATIONS

22.1 Engineer shall have the right to modify / alter the Particular Specifications and/or Standard Specifications at any time which promise to confer equal or better quality than the standard specified in the tender document. Such modification or alteration shall be acceptable to the Contractor subject to no additional financial burden to either the Contractor or the Employer.

22.2 THIRD PARTY INSPECTION AND TESTING.

The employer will fix the 3rd party agency for inspection for the materials at manufacturers works and also site activities. The inspection charges will be paid directly by the Board to the third party agency only for the successful visits and the offer shall be exclusive of 3rd party inspection charges. The Inspection charges for the unproductive visits if any are to borne by the agency. The 3rd party agency has to carry out the inspections as per the following and QAP enclosed at the end of this chapter.

Items for Third party inspection and stages of inspection:

Sl. No.	Items	Stages of Inspection
1	M.S. Pipes	<ol style="list-style-type: none">1. Visual and dimensional check2. Review of chemical and physical test certificates as per the relevant Indian standard specifications.3. Hydrostatic pressure test as per the relevant Indian Standard Specifications.4. Hydraulic proof testing Standard factory.5. Ultrasonic testing of welded joints for MS Pipes6. Checking the integrity of epoxy lining for MS pipes at joints after laying and jointing pipes.
2	D.I. Pipes	<ol style="list-style-type: none">1. Visual and dimension check, thickness and coating test.2. Review of chemical and physical test as per relevant ISS.3. Hydraulic proof testing at factory as per ISS.4. Hydraulic pressure testing as per ISS. <p>All the above tests should confirm to IS 8329 / 94, ISO 4179 and with latest amendments.</p> <p>Any other inspection based on the QAP enclosed to the bid document.</p>
3	D.I Specials	Visual & dimension check, Review of chemical test certificate as per IS 1538:1983.

4	HDPE Pipes	<ol style="list-style-type: none"> 1. Visual and dimension check, pipes shall confirm to IS 4984:1995, with latest amendments. 2. Review of mechanical test certificates as per IS: 3589-2001. 3. Hydraulic proof test at factory. 4. Hydraulic test/leakage test after laying and jointing pipes. 5. Other tests as per QAP enclosed 6. And as per QAP enclosed. <p>Any other inspection based on the QAP enclosed to the bid document.</p>
5	DI Sluice Valves/ PRV	<ol style="list-style-type: none"> 1. Material Identification Physical, Chemical and Mechanical Properties. 2. Visual Inspection. 3. Dimensional check. 4. Performance 5. MASS 6. Hydrostatic Pressure Test 7. Coating/ Painting 8. Marking
6	DI Air valves	<ol style="list-style-type: none"> 1. Material Identification Physical, 2. Chemical and Mechanical Properties. 3. Visual Inspection. 4. Dimensional check. 5. Performance 6. MASS 7. Hydrostatic Pressure Test 8. Coating/ Painting 9. Marking
7.	Electro-magnetic flow meters / other gadgets	To be approved by the Employer.

23 RE-MEASUREMENT

1. Reference to Clause 57.1 of Chapter 2 (Measurement), the Engineer shall ascertain and determine by measurement the value of those parts of the Works which are to be re-measured in accordance with the Contract. Such parts of the Works shall be measured net, notwithstanding any general or local custom, except where otherwise provided for in the Contract. The Engineer shall, when he requires any such part of the Works to be measured, give reasonable notice to the Contractor, who shall promptly :

- attend or send a qualified representative to assist the Engineer in making such measurement, and
 - supply all particulars required by the Engineer.
- 23.2 Should the Contractor not attend, or neglect or omit to send such representative, then the measurement made by the Engineer or approved by him shall be taken to be the correct measurement of such part of the Works.

24 EXTRA WORK

1. It is binding on the Contractor to carry out such extra work(s) as may be ordered by the Engineer when, in the opinion of the Engineer, the same can conveniently and economically be carried out by the Contractor and when such extra work forms an integral part of the main work which can not be conveniently carried out by other agency. The payment against such extra works shall be decided by the Engineer on the basis of prevailing PWD or KUWSDB Schedule of Rates of Karnataka based as appropriate, and by mutual agreement.

25.STORAGE OF MATERIALS AND PLANT

- 25.1. The Contractor shall provide appropriate storage facilities for materials like cement, steel, aggregates, consumable supplies, equipment, mechanical and electrical items, etc., and shall take all safety and security measures against theft and deterioration in quality, at his own cost.

26. EXTENSION TO COMPLETION TIME

- 26.1. Pursuant to Sub-Clause 44.1 of Chapter 2 (Extension of Completion Time), extension to the scheduled completion time may be granted in favor of the Contractor by the Employer on the recommendation of the Engineer for the delay in completion of the work, provided such delay is beyond the control of the Contractor. Contractor, for this purpose, shall maintain a hindrance register recording cause of every delay in the work, its time of occurrence and time up to which such delay prevailed, duly signed by the Engineer in token of acceptance. The extension of the completion time in all cases shall however be without prejudice to the right of the Employer to recover liquidated damages from the Contractor.

27. LIQUIDATED DAMAGES

- 27.1 The penalty at the rate of **1 % (One percent)** of the amount put to tender for every 100% of delay subject to a maximum of 7.5% of amount put to tender.
- 27.2 The work should progress according to the milestones fixed as per CPM/PERT chart and the Contractor is responsible to achieve these approved milestones. The progress will be reviewed once in every six months. In case of any delay which is not beyond the control of the Contractor, Liquidated Damages shall be levied as per Clause 27.1 of this Chapter 2.

The decision of the Employer will be final and binding on the Contractor.

28. CHANGE IN COST AND LEGISLATION:-

Price adjustment calculated in accordance with Sub-clause 70.1 to 70.3 of

Chapter-2, General Conditions of contract is applicable.

29 ADVANCE PAYMENT FOR MOBILIZATION :

-- DELETED-

30. PAYMENT OF ADVANCE TOWARDS MATERIALS FOR THE PERMANENT WORKS :

-- DELETED ----

31. PROGRESSIVE PAYMENT TO CONTRACTOR

- 31.1 Progressive payment shall be released to the Contractor on the basis of executed quantity and contracted rates on certification of the Engineer. Generally the progressive payment will be released monthly for which the Contractor shall raise his monthly on account invoice. The Measurements shall be recorded in electronic spread sheets as per the circular issued by the Managing Director, KUWS & DB, Bangalore vide ltr. No. KWB/TEC/SR2008-09/Vol-2/3899/2008-09 dtd. 4.3.2009 (Refer Annexure-B of chapter-2).

32 Contractor to Co-ordinate his Work with Other Contractors

- 32.1 The Contractor has to connect the blank flanges/end connections at Water Treatment Plant and different Over Head Tanks. The Contractor has to obtain the details and exact locations of these connections from the Engineer. The Contractor has to co-ordinate with the other concerned Contractors for all such works as per the Engineer's directions at no extra cost.

33. MAJOR CROSSINGS OF RAW WATER / PURE WATER RISING MAIN

If any additional civil structures are to be constructed other than those specified/ given in the BOQ for the purposes of crossing these utility lines, the same shall be constructed by the Contractor and the payment for the same shall be as per the rates quoted by the tenderer for similar items of work.

34. CURRENCY OF PAYMENT

All payments made under this Contract shall be in Indian Rupees.

35. MODE OF PAYMENTS;

35.1 For Providing and laying MS pipeline works:-

- a) 60% of quoted rates against supply of bare pipes and after due third party inspections.
- b) 10% of quoted rates after inner lining and outer coating as per tender specification and after third party inspections.
- c) 15% of quoted rates after, laying & jointing of these pipes as per tender specification.
- d) 10% of quoted rates after successful hydraulic testing of the pipeline in sections.
- e) 5% of quoted rates after successful commissioning of entire pipeline.

35.2 For HDPE / DI Pipes

- a) 75% of quoted rates against supply of finished pipe and after due third party inspection.
- b) 10% of the quoted rates after laying and jointing of these pipes as per tender specification.
- c) 10% of the quoted rates after successful hydraulic testing of the pipeline in sections.
- d) Balance 5% of the quoted rates after successful commissioning of the

entire pipeline.

For civil work based on the progress of work, payment shall be made based on running bills.

35.3 For House Service Connection equipments and Water Meters.

1. 60% against supply of tapping equipments & water meters.
2. 30% after fixing and successful hydraulic test.
3. 10% after successful commissioning.

For Civil work based on the progress of work, payment shall be made based on running bills.

35.4 For Valves:-

1. 75% of quoted rates against supply of valves after third party inspection
2. 10% of quoted rates after laying & jointing of these valves as per tender specification
3. 10% of quoted rates after successful hydraulic testing of valves
4. 5% of quoted rates after successful commissioning of entire pipeline.

36. Procurement of Materials:

- (i) The Contractor shall use only Rajashree, Raasi, Coromandel, Zuari, ACC Suruksha, L & T & Vasavadatta, Penna, Madras cement, Kittu cement brand of 43 grade ordinary Portland cement conforming to IS 8112 / 89 with latest amendments with ISI mark. The Contractor should furnish the manufacturer test certificate for the above brand of cement for having manufactured the cement as per relevant, IS standard and guarantee certificate before using the cement. The Executive Engineer of the Board will also test cement brought to the site from the reported testing Laboratory / Engineering College for which the contractor has to bear the testing charges.
- (ii) The Contractor shall procure the steel from VISL / SAIL / VSP / TISCO/ M/s SUJANA METAL / M/s SRMB STEEL / M/s SHYAM STEEL and manufacturer test certificate is to be produced. The Executive Engineer of the Board will also test Steel bought to the site from the reputed testing Laboratory / Engineering College for which the contractor has to bear the testing charges.

NOTE:-

- 1) It is mandatory for the bidder to quote for all the items indicated in the bill of quantities which includes all the works under the scope of the tender. The decision of the Chief Engineer is final. If not quoted for any item in the BOQ, the Bidder should do it free of cost. If the Bidder does not quote the rates for all the items, the bid shall be treated as non-responsive & rejected.
- 2) The Contractor shall submit the designs & drawings for the component under the scope of the Tender and the same shall be got approved from the Employer before execution.
- 3) If there is any delay on the part of the Board in handing over the land to the Contractor suitable time extension for the above delay period will be considered without penalty and no extra cost / escalation or compensation will be paid by the Employer / Board.
- 4) It is understood from the information and certificates furnished by you for pre-qualification to get the eligibility; you are capable of executing the work by yourself without sub-letting and the certificates are genuine.
- 5) While executing the work care should be taken to avoid any damages to the existing water supply pipe line, sewer line, telephone cable, power line and any other structures. The concerned authority should be intimated in advance in writing before executing the work. Any damages made to the above structures the contractor will be held responsible and the contractor has to make good to original at his own cost.

37. PRICES :

37.1 The offer of the Bidder shall be exclusive of excise duty wherever E.D. exemption is applicable and inclusive of Taxes, Cess, sales tax, octroi, freight, transit, insurance, packing, stacking and handling charges inclusive of all, work contract tax etc., and shall be for destination project site. In case any import license is necessary the supplier shall arrange for the same and the department shall not take any responsibility whatsoever. The concerned Executive Engineer shall arrange for the issue of the Excise duty exemption Certificate from the concerned Deputy Commissioner after receiving the request from the Bidder. Any delay by the Bidder, he will be responsible for any consequences.

37.2 The bidder should quote the rates for the O&M cost for a period of 60 months from the date of successful commissioning of the distribution system of the proposed 24x7 system separately while bidding as per schedule B.

37.3 a) The O & M cost should be quoted duly considering the various aspects indicated in clause 39.0.

b) Quantitative, qualitative water supply will be analysed by the employer. Failure will lead to penalty and other actions.

37.4 The rates quoted for the O&M period includes the cost of all pipe materials & specials, spares of valves, D I pipe rubber rings, & spares for all gadgets flow-meters, PRV, pressure gauges, etc., personnel, implements, tools required for O & M and revenue management of 24x7 water supply system.

38. SCHEDULE OF MATERIALS:

SCHEDULE "A"

Schedule showing (approximate) the materials to be supplied from the Karnataka Urban Water Supply & Drainage Board free of cost for the works contracted to be executed for **Providing 24x7 Water Supply System (Phase-I part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli & Dharwad twin city under UWSS.**

Sl. No.	Particulars	Approx. Qty.	Unit	Place of Delivery
	-- Nil--			

PART B

OPERATION & MAINTENANCE OF THE PROPOSED 24x7 Water Supply System (Phase-I part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli & Dharwad twin city under the O & M of Hubli-Dharwad water supply system.

39.0 Operation & Maintenance: The contractor shall carry out the operation & maintenance of the proposed **24x7 Water Supply System (Phase-I part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli & Dharwad twin city** for a period of 60 months from the date of successful commissioning including 12 months defect liability period.

This includes: (1) Complete establishment charges (Human resources): This includes the salary of valve man/ leakage attending personnel/ fitters/ waterman/ watchman/ supervisors/ Meter readers /Data Entry operators etc., The minimum no. of personnel for O & M will be as per clause 49 & 50 of chapter-3.

(2) Operation & maintenance of offices established by the contractor at Dharwad & Hubli which includes office room of 150 Sqm including partition cubicles of Board approved make wooden panels / laminates with drawers revolving chairs, Almshouses/ wardrobes/cupboards, operating & maintaining Desktop computers, Laptop, printer, WAN/LAN, Servers, etc.(as per Annexure-VI).

(3) Operating & maintaining Equipments required for the O & M of the distribution system i.e., Butt welding machine/electro-fusion welding machine & Chlorination plant. (as per Annexure-VI).

(4) Material/Spares component : Since all the materials are supposed to be defect free for 12 months of defect liability period, any defects due to manufacturer, laying & jointing, the same are to be repaired/replaced free of cost during defect liability period. However, the cost of materials required in case of breakdown & repairs during the O & M period after the defect liability period is included in the Schedule B.

39.1 (a) Operation and maintenance (including routine/preventive/breakdown maintenance) of the proposed 24 x 7 distribution network.

39.1 (b) Operation and maintenance (including routine preventive maintenance) of all valves & pipeline/appurtenances/electro-mechanical equipment & other devices supplied, installed/erected & commissioned by the contractor in the proposed 24 x 7 distribution network.

39.1 (c) The Contractor shall carry out routine checkup and preventive / periodical maintenance of the proposed 24 X 7 distribution network as per manufactures manual/ instructions and standard engineering practice or as directed by Engineer in-charge.

39.2 The Revenue management includes meter reading, Generation of bills, issue of bills, preparation of DCBS etc., complete excluding cash collection.

39.2 Arrangement of spares

The Contractor shall procure the necessary spares at his cost required for the maintenance of the proposed 24 x7 distribution network from OHT to the respective zone.

39.3 Arrangement of Consumables

All Consumable items used for operation and maintenance of valves and other devices installed in the distribution system e.g. gland packing, nut bolts, etc., shall be procured and maintained by the contractor.

39.4 DELAYS IN PROCUREMENT OF SPARES AND CONSUMABLES

Whenever Engineer in charge feels that the Contractor is delaying the procurement and installation / use of some particular spare or consumable and which in his opinion may hamper the proper operation of distribution system, then the Engineer in-charge will be authorized to procure the same & get it installed/fixed through some other agency and the cost incurred would be recovered from the payment due to Contractor or his deposit lying with the department. Such situation will be treated as unsatisfactory performance of Contractor and he shall be liable as per clause of special conditions of contract.

39.5 DAMAGES TO DEPARTMENTAL EQUIPMENTS

Normally there should not be any break down in the system. However if break down is found to happen because of damage of any part or equipment due to negligence of contractor then the same shall have to be replaced / repaired by the contractor at his cost with out any loss of time.

39.6 REPLACEMENT OF EQUIPMENTS AND THEIR PARTS

Any part or equipment found necessary by the contractor to replace during the preventive maintenance shall be replaced after written approval of Engineer In charge. The cost of such part / equipment shall be borne by the contractor only.

39.7 Cleaning / desilting of existing storage reservoirs

Cleaning / de silting of sump, Over head tanks, etc., shall be done by the contractor as per direction of the Engineer in-charge. The dates of cleaning of these units shall be finalized in consultation with the employer.

39.8 UP KEEPING of LOG BOOKS AND RECORDS

The following records shall be maintained and produced periodically by the contractor and shall be made available to the Engineer in-charge for regular checking and verification. (As per pro – forma desired by Engineer in charge) The log book / necessary other records shall be up dated on daily basis.

- a. Log book showing pressure & discharge in the distribution system, levels in storage reservoirs, and interruption of power if any, to be recorded. The format of log book shall be finalized in consultation with Engineer in-charge.
- b. History sheet of overhauling / maintenance / replacement of consumable / non consumable related to all the important mechanical equipments which will be duly verified by the Engineer in-charge.
- c. A return in the format prescribed at Appendix shall be prepared and submitted to the Engineer in- charge (separately) on the say of due date.
- d. The observation in the log books should be recorded on hourly basis. Printed log books shall be provided by the Contractor at his own cost. The log books shall be securely kept under the charge of a responsible person and shall be made available to any officer of the department on demand. Log books of the previous month shall be deposited to the Engineer concerned every month. All the log books will be deposited to the Engineer In –charge after completion of the contract.
- e. An inspection Register will be maintained by the contractor. Instruction recorded in the register shall be compiled with immediately under the directions of the Engineer in charge and the compliance shall be recorded in books.

39.9 UP KEEPING AND GUARDING OF DISTRIBUTION SYSTEM

Watch & ward shall be made available round the clock for safety of the valves and other devices installed in the distribution system.

39.10 Periodical maintenance and overhauling of equipments

All type of valves and other devices shall also be operated and periodically maintained as per manufacture manual and standard practice. All measuring equipments / devices for measuring pressure discharge, levels etc., shall be operated and periodically maintained and calibrated as per manufacturer's manual.

39.11 Manual on operation of valves & distribution system

Manual indicating the location, type, and operation of different valves and the operation system of distribution system is to be prepared by the contractor and necessary training to the Board/ULB staff is to be provided by the contractor.

39.12 Bench marks : Pressure, water quality and quantity, water auditing / Non revenue water (to be limited to 15%)of bulk supply measure for each DMA.

39.13 Daily flow measurements shall be recorded & the data shall be updated into the computers of the offices established at Dharwad & Hubli by the contractor.

40. Any associated work which has not been mentioned here in the tender document but is required or anticipated to be done by the tenderer, should be included while quoting the rates by him for successful 24x7 water supply system.

41. Environmental Management Plan for each of the Distribution Operating Zone

I

Project Activity	Environmental Impacts	Mitigation Measures	Responsibility
			Primary
1.Isolation of Distribution Operating Zone	1. Temporary disruption of water supplies to the consumers during Implementation.	1.Alternative water supply arrangements such as supply through tankers shall be provided	Engineer
	2.Flooding and leakage of water in the influence Area during implementation	2.Appropriate bypass and leak control arrangements shall be ensured	Bidder
2.Replacing the boundary valve	1.Temporary disruption of water supply to the consumer during Implementation	1. Alternative supply arrangements such as supply through tankers shall be provided.	Bidder
3.Construction of valve chamber with strainer, pressure reducing valve and meter	1.Temporary disruption to traffic during construction	1.Appropriate traffic diversion plans shall be prepared and implemented during construction	Engineer
4.Leak detection and replacement of mains	1.Disruption of water supply to the consumers during execution	1.Alternative supply arrangements such as supply through tankers shall be provided.	Engineer
	2.Disruption of traffic during execution	2.Appropriate traffic diversion plans shall be prepared and implemented during construction	Bidder
	3.Safety hazards to labour	3.Adequate safety precautions such as helmets, safety shoes, gloves, etc. shall be provided to the labour	Bidder
	4.Safety hazards to households in the neighborhood	4. Provision of temporary crossings/ bridges in the implementation area	Bidder
	5.Flooding and leakage of water in the leak detection areas	5.Adequate temporary drainage arrangements shall be provided	Bidder
	6.Distrubance to other utilities such as telephone cables and sewer lines etc	9. Scheduling activities in consultation with the other utility agencies. and ensuring minimum disturbance to the utilities	Bidder
5.Replacement of service connections	1.Temporary disruption of water supply	1. Alternative supply arrangements such as supply through tankers shall be Provided.	Engineer
6.Provision of appropriate water meters & taps	1.Temporary disruption of water supply	1. Alternative supply arrangements such as supply through tankers shall be Provided..	Engineer
7.Continuous supply of water during operation	4.Improvement of health and hygiene of the communities due to improved / increased water quality	Positive Impact	

Project Activity	Environmental Impacts	Mitigation Measures	Responsibility
	5.Reduction of illegal connections, pit taps, etc. leading to reduction damages to water supply infrastructure	Positive Impact	
	6.Reduction in community investment on water storage, pumping and other expenditure leading to positive economic impacts	Positive Impact	
	7.Reduced community disputes on water supply within the zone	Positive Impact	

42. OPERATION & MAINTENANCE MANAGEMENT PLAN

The contractor shall undertake the O & M management plan as shown below:

Maintenance Management
Recording of complaints
Complaints management
Maintenance Request Processing
Job Card Processing
Work Scheduling
Emergency maintenance
Maintenance Reporting
Formulation of proactive programs
Maintenance & Repairs
Inspections
Monitoring & Control
Log reading
Quality sampling
Bulk meter Reading
Pressure-Flow reading
Leakage detection and network location
Operations Management
Zone management
Real time balancing

Contractor

Engineer/ Employer

43. Water Quality Management Plan

The Contractor shall analyse water quality readings for the last year at inlet, at consumer points and at dead ends to establish current levels of water quality.

The Contractor shall analyse supply records for the last year to establish input water volumes and patterns per zone/ groups of zones (as possible).

The Contractor shall obtain current pressure readings and quantity of supply details in the network and at consumer points to establish current pressure levels of supply by utilizing appropriate instruments and equipment duly calibrated.

Analyse influence of water quality variables at any network source.

Provide recommendations for:

(i)Equipment requirements: The Contractor shall provide clear, detailed recommendations of any additional equipment the CMC/urban local body will need for improving meter reading, enabling customer/ connection field surveys, enabling network field surveys and investigations both for data validation and leakage detection purposes etc.,

(ii)Institutional Strengthening: The Contractor shall provide clear, detailed recommendations in terms of identifying and defining (1) required human resources, in terms of organisational structure, job titles and job descriptions, (2) required business procedures to be adopted, (3) "Best-practice" methodologies to be deployed, (4) Deliverables to be expected from the department, (5) a detailed Action plan required to bring the recommended changes, encompassing a training plan, a change management plan and a risk management plan.

(iii) Staff Training: The Contractor shall provide training for the Board/urban local body staff whenever instructed by the employer.

(iv) Water quality management program: Activities shall include the review of existing practices and procedures and the development of a new program. The program shall define required tests, procedures for sampling and testing, monitoring points.

43.1 Leakage management program:

The Contractor shall provide clear specific guidelines and programme addressing all known components of leakage. Also the existing UFW & NRW is to be exactly assessed using the leak detection instruments for all the zones and to submit the report before implementation of 24/7 system.

43.2 Emergency Response Plan:

Activities shall include the investigation of current procedures and resources, recommendations towards formulating an Emergency Response Plan.

43.3 Safety Plan:

Activities shall include investigation of current procedures and resources, the preparation of a Safety Plan and report, and the development of an Occupational Health and Safety guidelines.

REVENUE COLLECTION

43.4 Meter reading/Billing/dis-connection & re-connection of house service connection, are included in the scope of the contract. If there is any dispute the decision of the employer is final and binding.

43.5 The cost of the pipes/ fittings /materials/ Machineries/computers, etc., required during the O&M period of 48 months after the defect liability period is included in the schedule B. However during the initial 12 months defects liability period any Repairs / replacement are to be done by the Bidder at free of cost for those components which are executed by the contractor.

44 Quality aspects

44.1 The bidder shall maintain 100% water quality during the O&M period and shall also identify & establish chlorination plants with the advice of the Board and the cost is included in the schedule B. It shall meet the CPHEEO recommendations/IS standards.

45 Schedule of material for O & M

45.1 All the major equipments viz., / computers / servers/WAN-LAN, printers, Electro-fusion/Butt welding machines/Chlorination plants/Air-conditioning, etc., & office/communication centre at Dharwad & Hubli shall be established by the contractor for which the cost is paid as per schedule B.

45.2 The maintenance of all these computers / machines / equipments / office established by the contractor is his responsibility and shall be paid as per schedule B.

45.3 The cost of stationeries required for the office works during O & M period shall be paid to the contractor as per schedule B.

45.4 Office accommodation will be provided by the engineer free of cost in the Water Board office premises at Hubli & Dharwad. However, establishing office room of 150 Sqm including partition cubicles of Board approved make wooden panels / laminates with drawers, revolving chairs, Almirahs/wardrobes/ cupboards etc., shall be provided by the contractor and the cost is included in the schedule B. The energy charges of both the offices established by the contractor shall be borne by the contractor.

46 Payment for O & M.

Monthly payment will be released duly verifying the performance/targets achieved and as follows:

85% before the 12th of the subsequent month of billing. (Example: If the billing month is January, 85% part payment shall be released on or before 12th of February based on performance/targets achieved)

10% after due verification of the reports submitted at the end of the subsequent month.

5% after the completion of the O & M period.

47. Handing over Plan:- After completion of maintenance period of 12 + 48 = 60 months, the Bidder should hand over the drawings, estimates, repair work datas, Billing data,etc and assets to the engineer.

Any loss of assets will be recovered from the Bidder.

48. If there is any dispute in the targets/bench marks achieved, the decision of the employer shall be binding & final.

49. The bidder shall engage the following minimum personnel for carrying out the O & M of the proposed 24x7 water supply system during the initial 12 months of defect liability period and shall be paid as per schedule B.

Table 1

SI No	Description	Unit	Quantity per Month
I	Supervisory Staff		
1	Technical Manager (Asst Ex-Engineer Cadre)	Nos.	1
2	Distribution Engineer (Asst Engineer Cadre)	Nos.	2

3	System Engineer - Computer Science / Electronics (Junior Engineer Cadre)	Nos.	1
4	Net work Assistants / Engineers (Junior Engineer Cadre)	Nos.	2
5	Accounts Clerk	Nos.	2
6	Computer Operators	Nos.	2
7	Office Assistant cum Store keeper.	Nos.	1
II	Labour Portion		
1	Labour charges for operating & maintaining the proposed 24 x 7 distribution system in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city.		
1.1	Valveman - 8 Nos.	Nos.	8
1.2	Meter readers = 18 Nos (Literate Graduate Assistant)	Nos.	18
III	Quality Control	Nos.	
	Water Samples collecting, Conveying, handing over test samples for testing to reputed labs / Board labs at Amminbhavi/ Kanavihonnapur and submission of reports 3 samples from each zones total 8 zones x 3 = 24 samples - 2 Lab Graduate Assistant Note -Testing charges will be paid by the Board.	Nos.	2
IV	Communication centres one at Hubli and one at Dharwad for Operation & Maintenance - Literate Graduate Assistants / Technically skilled Assistants - 4 Nos	Nos.	4
V	House Keeping and security Charges (security personnel-4nos, House keeping- 2nos)	Nos.	6

50. The bidder shall engage the following minimum personnel in addition to the nos. specified in Table-1 for carrying out the O & M of the proposed 24x7 water supply system during the 48 months after the defect liability period and shall be paid as per schedule B. (Table 1 + Table 2)

Table 2

SI No	Description	Unit	Quantity per Month
1.1	Fitter (Class-I) - 9 nos.	Nos.	19
1.2	Helper (to assist fitters) - 9 nos	Nos.	19
1.3	Heavy labour - 9 nos.	Nos.	19

51. The bidder shall engage the following minimum vehicles for carrying out the O & M of the proposed 24x7 water supply system for a period of 60 months and shall be paid as per schedule B.

SI No	Description	Unit	Quantity per Month
a	Hiring of Jeep / car / Trax or equivalent make vehicle on monthly rental basis including cost of consumables, driver pay, cost of transportation.(1 Dharwad+1 Hubli)	Per month	2

b	Hiring of TATA ACE or equivalent make vehicle on monthly rental basis including cost of consumables, driver pay, cost of transportation.(1 Dharwad+1 Hubli)	Per month	2
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52. The bidder shall maintain the following for a period of 60 months and shall be paid as per schedule B.

SI No	Description	Unit	Quantity per Month
1	Internet Connection Charges per month for each office.	Per month	2
2	Providing office stationary for both the offices at Dharwad & Hubli.	Per month	1
3	Communication system (Mobiles) Monthly rent and Usage charges.	Each	20

53. The energy charges of both the offices established by the bidder at Dharwad & Hubli shall be paid by the Bidder on a monthly basis to the Board/HESCOM.
54. The cost of materials viz., pipes, specials, rubber gaskets etc., required for repairs and replacement of Pipelines, Valves, Flow meters, Pressure regulating Valves and any other gaskets during the 48 months after defect liability period shall be paid as per schedule B.

ANNEXURE-I

SUB: THE KARNATAKA MINOR MINERALS CONCESSION (AMENDMENT) RULES, 2007

COMMERCE AND INDUSTRIAL SECRETARIAT

NOTIFICATION NO. CI 56, MMN 2006, BANGALORE, DATED: 23rd June, 2007

SCHEDULE – I

(See Sub. Rule (1) of Rule 36)

"DEAD RENT"

SL. No.	Name of the Minor Mineral	Rate per Unit/ quantity
1.	ORNAMENTAL AND DECORATIVE BUILDING STONES- as defined under clause (m) of rule 2.	25000
2	Felsite and its varieties suitable for use as Ornamental Stores.	25000
3	Quartzite and Sand stone and their varieties suitable for use as Ornamental Stones.	25000
4	Marble or crystalline lime stone as Ornamental Stone	25000
5	Bentonite	25000
6	Fullers Earth	25000
7	Lime Stone under title " Shahabac Stone"	15000
8	Lime Stone (Non Cement)	15000
9.	Ordinary building stones - Entire state As defined under clause (g) of rule 2	
A	Bangalore, Kolar, Mysore, Mandya and Tumkur	15000
B	Other Districts	10000
10.	Lime Shell	15000
11.	Lime Kankar	15000
12.	Agate and Chalcedony	15000
13.	Ordinary sand	10000
14	Brick and Tile clays	5000
15	Steatite and sand stone used for making household utensils/ articles - Entire state	10000
16	Sand stone used for making house hold articles	10000
17	Murram	3000
18	All other minor minerals - Entire state	5000

Contractor

Engineer/ Employer

SCHEDULE – II
(See Sub. Rule (1) of Rule 36)

ROYALTY

SL. No.	Name of the Minor Mineral	Rate per Unit/ quantity
1.	<p>ORNAMENTAL AND DECORATIVE BUILDING STONES- as defined under clause (m) of rule 2.</p> <p>(A) DYKE ROCKS</p> <p>i) Black granites</p> <p>a) Mysore and Chamarajanagar Districts.</p> <p>b) All other Districts other than (a) above.</p> <p>ii) Other varieties of dykes other than black granites (Entire State)</p> <p>(B) (1) PINK and Red granites (ILKAL PINK VARIETY)</p> <p>(i) Hungund Taluk of Bagalkot and Badami taluk of Bijapur Dist., Kushtagi of Koppal Dist.</p> <p>ii) PINK and Red granites, gneisses and their textural & structural varieties (other than ILKAL Pink variety)</p> <p>(C) GREY & WITH GRAINTES and Their varieties</p> <p>i) Very fine grained grey Granite (SIRAGREY variety)</p> <p>Chintamani, Siddalaghatta of Kolar Dist., Hoskote of Bangalore District.</p> <p>ii) Grey & white granites & their textural varieties having shades of grey, black & white colours, (other than (i) above) Entire State</p>	<p>Rs.3000 per M³</p> <p>Rs.2500 per M³</p> <p>Rs.1500 per M³</p> <p>Rs.2500 per M³</p> <p>Rs.1500 per M³</p> <p>Rs.1500 per M³</p> <p>Rs.1000 per M³</p>
	ii) Grey granite of Sadarahally, Koira of Bangalore District.	Rs.600 per M ³
2.	Felsite and its varieties suitable for use as ornamental stones - Entire state.	Rs.1200 per M ³
3.	Granite and sand stones and their varieties suitable for use as Ornamental stones- Entire State.	Rs.1200 per M ³
4.	Marble or crystalline lime stone as ornamental stone - Entire state	Rs.1200 per M ³
5.	Bentonite – Entire state	Rs.200 per MT
6.	Fullers earth - Entire state	Rs.200 per MT
7.	Lime stone under the title "Shahabad stone"	Rs.80 per 10 Sq.m
8.	Lime stone (Non cement) when used for building stone - Entire state	Rs.20 per MT
9.	Ordinary building stones - Entire state as defined under clause (g) of rule 2.	Rs.30 per MT
10.	Lime Stone - Entire state	Rs.60 per MT

Contractor

Engineer/ Employer

11.	Lime Kankar (Non- Cement) - Entire state	Rs.25 per MT
12.	Agate Chalcedony Flint- Entire state	Rs.120 per MT
13.	Ordinary sand – Entire state	Rs. 30 per MT
14.	Steatite and sand stone used for making household utensils/ articles - Entire state	Rs.20 per MT
15 a)	Murum (All types of soils) – Entire state	Rs. 10 per MT
b)	Clay used for manufacturing tiles and bricks	Rs. 20 per MT
16.	All other minor minerals - Entire state	30% of sale value at mouth
17.	Waste rocks generated in ornamental stone quarry - Entire state (See explanation under Rule 36)	Rs.200 per Tonne Or Rs. 600 Per M ³
18.	Irregular shaped waste rock, Generated in Stone quarry which is not suitable for ornamental purposes- Entire state.	Rs.30 per MT
19.	Waste rocks generated in Shahabad stone quarries- Entire state See explanation under Rule 36.	Rs.30 per MT
20.	Finished kerb stones/cubes not exceeding 30 cms. Each face – Entire State	Rs.80 per MT.

**By Order and in the name of the Governor of
Karnataka**

**Sd/-
H.V.RAMACHANDRARAO
Desk Officer (Mines),
Commerce & Industries Department.**

ANNEXURE-II

EXCISE DUTY EXEMPTION NOTIFICATION

Contractor

Engineer/ Employer

ANNEXURE-III

QUALITY ASSURANCE PLAN(QAP)

ANNEXURE-IV

List of approved manufacturers for different materials LIST OF APPROVED MANUFACTURERS FOR DIFFERENT MATERIALS

1. M.S. PIPES

1. M/s. Steel Authority of India Ltd., No.8, VISL Building, J.C. Road, Bangalore – 560 002.
2. M/s. Welspun, Trade World, `B' Wing, 9th Floor, Kamala Mills Compound, Senapati Bapat Marg, Lower Parel, Mumbai- 400 013
3. M/s. Swastik Pipes Ltd., No.41, K.M. Delhi, Rohtak Road, District Jhajjar (Haryana)
4. M/s. Asian Mills Pvt. Ltd., 104, Sarkar- III, Opp. Old High Court, Near Income Tax Circle, Ahmedabad- 380 014
5. M/s. Surya Engineers, Plot No. G20/8, MIDC Area, Ahmadnagar, Maharashtra
6. M/s. PSL Holdings, 22, Vaijavor Village, Malai Vaiyavor P.O., Mahuranthakam Taluk, Kancheepuram Dist- 603 308.
7. M/s. Maharashtra Seamless Ltd., Pipenagar, Village Subeli, N.H. 17, B.K.G. Road, Taluk Rona, District Raigad, Maharashtra- 402 126
8. M/s. Mukut Tanks & Vessels, Surindra House, Safaid Pool, M.V. Road, Sakinaka, Mumbai- 400 072
9. M/s. Taher Ali Industries & Projects (P) Ltd., Survey No. 23/A, Agapally Village, Ibrahimpatnam, Sagar Road, R.R. District, Andhra Pradesh
10. M/s. Surindra Engineering Co. Ltd., Surindra House, P.O. Box. 8939, Mumbai
11. M/s. Pratibha Pipes & Structural Pvt. Ltd., Shrikant Chamber, Phase II, 5th Floor, Near R.K. Studio, Sion- Trombay Road, Chembur, Mumbai- 71.
12. M/s. Mukat Pipes Ltd., D-46, M.I.D.C., Baramathi, Pune- 413 133
13. M/s. Subash Pipes Ltd., 279-280, Mysore Bannur Road, Ranganathpura Village, P.O. Rangasamudra District, Mysore
14. M/s. MAN Industries (I) Ltd., Khedoi Village, Anjar Taluk, Kutch District, Gujarat- 370 110.
15. M/s Megha Engineering & Infrastructures Ltd.,S-2 Technocrat Industrial estate, Balanagar, Hyderabad – 500 037 (AP)
16. M/s Sheth and Sura Engineers Pvt. Ltd., A-19, MIDC chincholi, Taal, Mohol District, Solapur
17. M/s Tata Steel Limited, Tata Steel tubes Division, PO Burmamines, Jamshedpur-831 007, Jharkhand.
18. Hazira pipes Mill Ltd.,Essar Technopark Building II, Old Swan Mill compound, LBS Marg, Kurla(W), Mumbai
19. M/s JCO Gas Pipe Ltd., B-2, Borgaon Industrial area, M.P.A.V.K.N. Growth Centre, Borgaon, Tehsil-Sausar, Dist-Cjhindwara, Madhya Pradesh-480 106
20. M/s GPT Pipe Industries Ltd., E-9, Savli, G.I.D.C. Estate, Manjusr Savli, Vadodara-391165, Gujarat
21. M/s Surya Roshni Limited, Prakash Nagar, Delhi-Rohtak Road, Bahadurgarh-124507, Haryana
22. M/s.Armstrong Infrastructure & Projects Ltd., Survey No.347, Village- Khabrau Taluka Bhachau, Dist: Kutch, Gujarat. (India)
23. M/s.Indian Hume Pipe Co. Ltd., Venkataala Village, Yelahanka Post, Bangalore- 560 064.

2. D.I. Pipes

1. M/s. Electrosteel Casting Ltd., 30, B.T. Road, Kharda, P.O. Sukhchar, Dist. 24, Paraganas(N)- 700 115 – West Bengal
2. M/s.Jindal Saw Ltd., Samaghogha Village, Mundra Taluk, Dist. Kutch, Gujarat-392 415
3. M/s.Lanco Industries Ltd., Rachagunneri-517 641 Sri Kalahasti, Chittor, A.P.
4. M/s Electrotherm(India) Ltd., Nr.Toll Naka, Smakhiyali, Tal:Bhachau, Dist: Kutch, Gujarat

3. H.D.P.E. PIPES

1. M/s. Oriplast Ltd., O.T. Road, Balasore- 756 001, Orissa

2. M/s. Relpol Plastics Products Ltd., C-1-MIDC Industrial Area, Shivani Dist. Akola – 444 104, Maharastra
3. M/s. Jain Irrigation Systems Ltd., Jain Plastic Park, P.O. Box: 72, N.H. No. 6, Bambhori, Jalagaon-425 001
4. M/s. Kriti Industries (I) Ltd., Chetak Chambers, 4th floor, 14 RNT Marg, Indore – 452 001 (Madhya Pradesh)
5. M/s. Duraline India Pvt. Ltd., Plot No. L-24, 25, Phase II A, Verna Electronic City, Verna, Salcete, Goa- 403 722
6. M/s. Pioneer Polyfab, Plot No. 12, Site IV, Industrial Area, Sahibabad Dist., Ghaziabad.
7. M/s. Premier Irrigation Equipment Ltd., Plastic Product Division, D-9, MIDC, Butibori, Nagpur- 441 108
8. M/s. Koneti Industries(I) Ltd., Shed No. K-5, IDA Nacharam, Hyderabad – A.P.
9. M/s. Pennwalt Agro Plastics Ltd., Plot No. 272/A, Savli GIDC Village, Manjusar- 391 775. Gujarat.
10. M/s. Reliance Industries, Surath, Hazira Manufacturing Fa Village, Botha Taluq, Surath, Gujarat.
11. M/s Dutron Polymers LTd., Block No.642, NH-8, Hariyala, Taluka MATar, Dist. Kheda, Gujrat.
12. M/s Kisan Irrigations Ltd., Sy. No.108/1/6, Surangi Road, Near Khadoli Sub-Station, Village Khadoli, Silvassa (D & NH)
13. M/s. Aaram Plastics Pvt. Ltd., G-232. Sitapura Industrial Area, Tonk Road, Jaipur– 302 02, Rajasthan
14. M/s Rishi Polymach Pvt. Ltd., 16-A belagola indutrial area metagalli,K.R. Road, Mysore– 570 017
15. M/s Nandi Polymers India Pvt Ltd.,No.B2 & B3, S.No.29 part, Tukvivakam, APIE, Settipalli, Tirupathi– 517 506
16. M/s Tijaria Polypipes Ltd., A 130(E), Road no.9D, VKI Area, Jaipur, Rajasthan.
17. M/s Parixit Industries Ltd., Survey No. 214/1, 214/2, P.O. Iyava, Taluka Sanand, Dist:Ahmedabad-382 110
18. M/s Kataria Industries Pvt. Ltd., 34-38, Industrial Estate, Ratlam- 457 001(M.P)
19. M/s Ronix Polymers Pvt Ltd., Delhi Road, Village Bhadua, P.O.Mollber(Dankuni) DistL Hooghly, West Bengal- 711 224
20. M/s Srinivasa Industries, No.23, II Phase, Laxmi Co.Op Industrila Estate, Hatkanangle-416109, Dist: Kolhapur
21. M/s.Time Technoplast Ltd., Survey No.325/1 & 326/1/1, Village Dhodharpada, Velugam, Silvassa-396 230.
22. M/s. Godavari Polymers Pvt. Ltd., No.153, B & E, C & F, Phase – 2, IDA, Cherlapally, Ranga Reddy District, Hyderabad – 560 051
23. M/s.Joegeetha Plastic Pipes, #274, Vilankurichi Road, Anna Private Industrial Estate, Vilankurichi (PO), Coimbatore-641 035
24. M/s.Nimbus Industries, #E-35 RIICO, Industrial Area Bargru (Ext), Jaipur.
25. M/s.Noble Polymers, S.No.110/2/6, Opp.Nandini Industrial Estate, B/h.66K.V. Sub Station, Amlil Silvassa-396 230 (D & NH U.T), India.
26. M/s.Plastubex Corporation Ind., Plot No. 7, 8, 9, KSSIDC Industrial Estate, Manipal- 576 104
27. M/s.Sindhu Plastics, Plot No.35-B, Shivalli Industrial Area, Manipal- 576 104, Karataka
28. M/s.Tulsi Extrusions Ltd., N-99 & 100, MIDC Jalgaon, At Post-Dist-Jalgaon- 25 114 (also PVC fittings)
29. M/s.Supreme Industries Ltd., 612, Raheja Chambers, Nariman Point, Mumbai- 400 021.

4. G.I. PIPES

1. M/s. Tata Iron & Steel Co. Ltd., No.45, Jubilee Building, II Floor `A' Wing, Museum Road, Bangalore- 560 001
2. M/s. Swastik Pipes Ltd., 1/23 B, Asaf Ali Road, New Delhi- 110 002
3. M/s. Nezone Tubes Ltd., Delhi Road, Village Chakundi, P.O. DCC Township, Dankuni- 711 224. Dist. Hooghly, West Bengal
4. M/s. Indus Tubes Ltd., G.T. Road, Chhaprola Dist., Ghaziabad- 201 001
5. M/s Surya Roshni Limited, Prakash Nagar, Delhi-Rohtak Road, Bahadurgarh-124 507, Haryana

5. DI SPECIALS

1. M/s. Kiswok Industries Pvt. Ltd, Bipranna Para, Via-Begri, Domjur, Howrah-711 411
2. M/s. Electrosteel Casting Ltd., 30, B.T. Road, Kharda, P.O. Sukhchar, Dist. 24, Paraganas(N)- 700 115 – West Bengal
3. M/s. Kejriwal Castings, P-200, Benaras Road, Netajigarh, Howrah – 711 108
4. M/s Juneja Metal WorksVillage Variana, P.O. Nagra, Kapurthala Road,Jalandhar – 13.
5. M/s Krishna Auto Industries, C-31, Focal Point, Jalandhar,-144013(Punjab)
6. M/s.R.G. Industries, Behind Focal Point Extension, Village Fazalpur, Near Randhawn, Masandan, Jalandhar (Pb.)
7. M/s.Lye Manufacturing SDN BHD, Lt 1844, Jalan Kampung Baharu Balakong, 43300 Seri Kembangan, Selangor, Darul Ehsan, Malaysia.

6. AIR VALVES

1. M/s. VAG Valves (India) Pvt. Ltd., Flat A, 1st Floor, Krupa Ashirwad Complex, Hyderbasti, R.P. Road, Secunderabad- 500 003
2. M/s. Kirloskar Brothers Ltd., Gate No. 252/253, Village Kondhapuri, Shirur Dist. Pune
3. M/s. Mayur Valve Co., W-95 (A), M.I.D.C. Satpur, Nashik- 422 007
4. M/s. H.Sarker & Co., Balitikuri, Batultala, Howrah- 711 402
5. M/s. Upadhaya Valves, P 280, Binaras Road, Kolkata
6. M/s. Kamala Valves, Manufacturing Co., 31/2, `Y' Road, Belgachia P.O., Netaji Garh, Kazipura, Howrah- 700 108
7. M/s. Fouress Engg. (I) Ltd., Plot No. 324, Wagale Industrial Estate, Road No. 21, Thane (W)- 400 608
8. M/s Am Flow Technologies Ltd., 1&2, ACME, Dharmaraj Compound, Lake Road, Bhandup (W), Mumbai – 400 708.
9. M/s Juneja Metal WorksVillage Variana, P.O. Nagra, Kapurthala Road,Jalandhar – 13.
10. M/s Shree Balaji Industries Shibtala,Kalitala, Baltikuri, Howrah – 711 402
11. M/s Calsens Pvt Ltd., 6/1A, British India Street, Kolkata – 700 069
12. M/s Kamala Valves & Engineering Pvt Ltd., 41/2, `Q' Road, Belgachia Howrah-71108(CI & DI)
13. M/s HI-TECH Butterfly valves(I) Pvt Ltd., Plot No. 567-68 sector-03, Pithampur, (M.P).(DI)
14. M/s.Lye Manufacturing SDN BHD, Lt 1844, Jalan Kampung Baharu Balakong, 43300 Seri Kembangan, Selangor, Darul Ehsan, Malaysia.(DI)

7. SLUICE VALVES

1. M/s. VAG Valves (India) Pvt. Ltd., Flat A, 1st Floor, Krupa Ashirwad Complex, Hyderbasti, R.P. Road, Secunderabad- 500 003(DI)
2. M/s. Kirloskar Brothers Ltd., Gat No.252/253, Village Kondhapuri, Shirur, Dist- PuneM/s. Mayur Valve Co., W-95 (A), M.I.D.C. Satpur, Nashik- 422 007
3. M/s. R&D Multiples, A-1/17, GIDC Pardi, Valsad, Guj Rath- 396 125
4. M/s. H.Sarker & Co., Balitikuri, Batultala, Howrah- 711 402
5. M/s. Upadhaya Valves, P 280, Binaras Road, Kolkata
6. M/s. Kamala Valves Manufacturing Co., 31/2, `Y' Road, Belgachia P.O., Netaji Garh, Kazipura, Howrah- 700 108
7. M/s. Indian Valve International, 84B, Bhupendra Bose Avenue, Kolkata- 700 004
8. M/s. A.V.Valves, 160, Industrial Estate, Nunhai, Agra – 282 006
9. M/s. Kejriwal Castings, P-200, Benaras Road, Netajigarh, Howrah – 711 108
10. M/s. Steam & Mining Ltd., 1, A.J.C. Brase Road, III Floor, Kolkata- 700 020
11. M/s. Durga Engineering Co., 22/2, Deshpriyan Susmal Road, Howrah- 711 101
12. M/s. Hawa Valves Pvt. Ltd., Plot No. C-252, M.T. Sagar Industrial Estate, Gokul Road, Hubli- 580 030
13. M/s Juneja Metal WorksVillage Variana, P.O. Nagra, Kapurthala Road,Jalandhar – 13.(CI & DI)
14. M/s Ventil Engineers,Plot No.33, Survey No. 739, Khanapur Road, Udaymbag, Belgaum – 590 008
15. M/s HI-TECH Butterfly valves (I) Pvt Ltd., Plot No. 567-68 sector-03, Pithampur, (M.P)(DI valves).
16. M/s Shree Balaji Industries Shibtala,Kalitala, Baltikuri, Howrah – 711 402
17. M/s Calsens Pvt Ltd., 6/1A, British India Street, Kolkata – 700 069
18. M/s Kamala Valves & Engineering Pvt Ltd., 41/2, `Q' Road, Belgachia Howrah-71108(CI & DI)
19. M/s G.M. Dalui & Sons Pvt Ltd., Vivekananda Industrial Area, Balitkuri, Bakultala, Howrah-711 113

20. M/s.Sachdeva Metal Works, C-33, Extension Focal Point, Jalandhar
21. M/s.Lye Manufacturing SDN BHD, Lt 1844, Jalan Kampung Baharu Balakong, 43300 Seri Kembangan, Selangor, Darul Ehsan, Malaysia.(DI)

8. BUTTERFLY VALVES

1. M/s. Advance Valves Pvt. Ltd., A-26, Sector-58, Noida- 201 301
2. M/s. VAG Valves (India) Pvt. Ltd., Flat A, 1st Floor, Krupa Ashirwad Complex, Hyderbasti, R.P. Road, Secunderabad- 500 003
3. M/s. Audco India Ltd.,B8,MMDA Indstl. Area, Maraimalainagar, Tamil Nadu- 603 209
4. M/s. Kirloskar Brothers Ltd., Gate No.252/253, Village Kondhapuri, Shirur District- Pune
5. M/s. Mayur Valve Co., W-95 (A), M.I.D.C. Satpur, Nashik- 422 007
6. M/s. R&D Multiples, A-1/17, GIDC Pardi, Valsad, Gujrat- 396 125
7. M/s. Intervallves India Pvt. ltd., 212/2, Soli Poonawalla Road, Hadapsar, Pune-411 028
8. M/s. Tyco Valves & Controls India, Sy. No.150, Halol-Kalol, Godhra Road, P.O. Maghasar, Dist. Panchmahal, Gujarat
9. M/s. Fouress Engineering, Plot 2, Phase 2, Peenya Industrial Area, Bangalore-560 058
10. M/s. H.Sarker & Co., Balitikuri, Batultala, Howrah- 711 402
11. M/s. Upadhaya Valves, P 280, Binaras Road, Kolkata
12. M/s. Kamala Valves Manufacturing Co., 31/2, 'Y' Road, Belgachia P.O., Netaji Ghar, Kazipura, Howrah- 700 108.
13. M/s Hawa Engineers Ltd., Behind Police Chowky Chandola, Danilimda, Ahmedabad – 380 028
14. M/s Juneja Metal WorksVillage Variana, P.O. Nagra, Kapurthala Road,Jalandhar – 13.
15. M/s Festo Control Pvt Ltd., # 237 B, Bommasandra Indl Area, Bangalore - Hosur Highway Bangalore – 560 099.INDIA(Pneutmatically actuated)
16. M/s HI-TECH Butterfly valves(I) Pvt Ltd., Plot No. 567-68 sector-03, Pithampur, (M.P).
17. M/s Shree Balaji Industries Shibtala,Kalitala, Baltikuri, Howrah – 711 402
18. M/s Calsens Pvt Ltd., 6/1A, British India Street, Kolkata – 700 069
19. M/s Kamala Valves & Engineering Pvt Ltd., 41/2, 'Q' Road, Belgachia Howrah-711 108(CI & DI)
20. M/s.Lye Manufacturing SDN BHD, Lt 1844, Jalan Kampung Baharu Balakong, 43300 Seri Kembangan, Selangor, Darul Ehsan, Malaysia(DI).

9. GATE VALVES

1. M/s. AV Valves, No. 160, Industrial Estate, Nunhai, Agra- 282 006
2. M/s. Juneja Metal Works, Village Variana, Kapurthala Road, P.O. Basti Guzan, Jalandhar (Punjab)
3. M/s. Kirloskar Brothers, Udyog Bhavan, Tilak Road, Pune- 411 002
4. M/s. H. Sarker and Co., Balitikuri Balkultala, Howrah- 711 113
5. M/s. Audco India Ltd., Marai Malai Nagar, B-8, Industrial Area, Chennai
6. M/s. Festo Control Pvt Ltd.,# 237 B, Bommasandra Indl Area,Bangalore - Hosur Highway Bangalore – 560 099.INDIA(Pneumatic type including Ball Valve)
7. M/s HI-TECH Butterfly valves(I) Pvt Ltd., Plot No. 567-68 sector-03, Pithampur, (M.P)(DI)
8. M/s Calsens Pvt Ltd., 6/1A, British India Street, Kolkata – 700 069

10. NON RETURN VALVES/CHECK VALVES

1. M/s. VAG Valves (India) Pvt. Ltd., Flat A, 1st Floor, Krupa Ashirwad Complex, Hyderbasti, R.P. Road, Secunderabad- 500 003
2. M/s. Intervallves India Pvt. ltd., 212/2, Soli Poonawalla Road, Hadapsar, Pune-411 028
3. M/s. H.Sarker & Co., Balitikuri, Batultala, Howrah- 711 402
4. M/s. Upadhaya Valves, P 280, Binaras Road, Kolkata
5. M/s. Indian Valve International, 84B, Bhupendra Bose Avenue, Kolkata- 700 004
6. M/s. Kamala Casting & Engg. Works, # 41/2, 'Q' Road, Belgachia, Howrah– 711 108
7. M/s. Mayur Valves Co., W-95(A) MIDC, Satpur, Nashik- 422 007
8. M/s. Steam & Mining Ltd., 1, A.J.C. Brase Road, III Floor, Kolkata- 700 020
9. M/s. Durga Engineering Co., 22/2, Deshpran Susmal Road, Howrah- 711 101

10. M/s. Hawa Valves Pvt. Ltd., Plot No. C-252, M.T. Sagar Industrial Estate, Gokul Road, Hubli- 580 030
11. M/s Hawa Engineers Ltd., Behind Police Chowky Chandola, Danilimda, Ahmedabad – 380 028
12. M/s Juneja Metal Works Village Variana, P.O. Nagra, Kapurthala Road, Jalandhar – 13.
13. M/s Ventil Engineers, Plot No.33, Survey No. 739, Khanapur Road, Udaymbag, Belgaum – 590 008
14. M/s HI-TECH Butterfly valves(I) Pvt Ltd., Plot No. 567-68 sector-03, Pithampur, (M.P)(DI)
15. M/s Shree Balaji Industries Shibtala, Kalitala, Baltikuri, Howrah – 711 402
16. M/s Calsens Pvt Ltd., 6/1A, British India Street, Kolkata – 700 069
17. M/s Kamala Valves & Engineering Pvt Ltd., 41/2, 'Q' Road, Belgachia Howrah-711 108(CI & DI)
18. M/s.Sachdeva Metal Works, C-33, Extension Focal Point, Jalandhar
19. M/s.Lye Manufacturing SDN BHD, Lt 1844, Jalan Kampung Baharu Balakong, 43300 Seri Kembangan, Selangor, Darul Ehsan, Malaysia (DI).

11. DUAL PLATE CHECK VALVES

1. M/s. Advance Valves Pvt. Ltd., A-26, Sector-58, Noida- 201 301
2. M/s. VAG Valves (India) Pvt. Ltd., Flat A, 1st Floor, Krupa Ashirwad Complex, Hyderbasti, R.P. Road, Secunderabad- 500 003
3. M/s. Mayur Valve Co., W-95 (A), M.I.D.C. Satpur, Nashik- 422 007
4. M/s. R&D Multiples, A-1/17, GIDC Pardi Valsad, Gujrat- 396 125
5. M/s. H.Sarker & Co., Balitikuri, Batultala, Howrah- 711 402
6. M/s. Upadhaya Valves, P 280, Binaras Road, Kolkata
7. M/s Juneja Metal Works Village Variana, P.O. Nagra, Kapurthala Road, Jalandhar – 13.
8. M/s HI-TECH Butterfly valves(I) Pvt Ltd., Plot No. 567-68 sector-03, Pithampur, (M.P).
9. M/s Calsens Pvt Ltd., 6/1A, British India Street, Kolkata – 700 069
10. M/s Kamala Valves & Engineering Pvt Ltd., 41/2, 'Q' Road, Belgachia Howrah-711 108(CI & DI)
11. M/s.Lye Manufacturing SDN BHD, Lt 1844, Jalan Kampung Baharu Balakong, 43300 Seri Kembangan, Selangor, Darul Ehsan, Malaysia (DI).

12. PRESSURE RELIEF VALVES

1. M/s. Mayur Valves Co., W-95 (A), M.I.D.C. Satpur, Nashik- 422 007
2. M/s. R&D Multiples(Metal Cast) Pvt Ltd., A-1/17, GIDC Pardi, Dist-Valsad, Gujrat-396 125
3. M/s. Indian Valves Pvt Ltd., H.O.- 53, Industrial Estate, Satpur, Nashik- 422 007
4. M/s. Indian Valve International, CTI Road, Biradingi, P.O.Netajighar, Howrah-711 108 M/s
5. M/s Hawa Engineers Ltd., Behind Police Chowky Chandola, Danilimda, Ahmedabad – 380 028
6. M/s Calsens Pvt Ltd., 6/1A, British India Street, Kolkata – 700 069
7. M/s Kamala Valves & Engineering Pvt Ltd., 41/2, 'Q' Road, Belgachia Howrah-711 108(CI & DI)

13. CEMENT

1. M/s.Vasavadatta, Cement, Prop.Kesoram Industries Ltd., Post Sedam- 585 222, Gulbarga, Karnataka
2. M/s.Penna Cement Industries Ltd., Talaricheruvu Village, Tadpatri Mandal, Ananthapur Dist. A.P.
3. M/s.Madras Cement, Flat No.100-100/1, M-Floor, Eden Park, No.20, Vittal Mallya Road, Bangalore- 560 001
4. M/s.Kittu Cement Products, 48/A, IDA Nacharam, Hyderabad, AP- 76.

14. WATER METER/FLOW METER

1. M/s. Krohne Marshall, A34/35, MIDC Estate, H block, Pimpri, Pune- 411 018
2. M/s. Chetas Control Systems (P) Ltd., 7, Kruti Industrial Estate, Sy. No. 15, Opp. Samsan Press, Othrud, Pune- 411 029
3. M/s. Aquameas Instruments Pvt Ltd., 307, 3rd Floor, Commerce Avenue, Mahaganesh Society, Paud Road, Pune- 411 038.
4. M/s Endress Hauser Flowtec (India) Pvt. Ltd., M-174/175 MIDC Waluj, Aurangabad– 431 436.
5. M/s Anand water Meter Manufacturing, Cochin.

6. M/s.Venus Industries, No.4, Devayani Industrial Complex, Subramanyapura Main Road, Gowdanapalya, Bangalore- 560 001

15.RUBBER RINGS & RUBBER GASKETS

1. M/s.Durable Polymer Products Pvt Ltd., Boai, 2nd Lane, P.O.Jugberia, Kolkata- 700 110
2. M/s. Prabhat Elastomers Pvt. Ltd., A1/413-415, GIDC Road, No. 4, Sarigam Gujarat- 396 155
3. M/s.Amalgamated Synthetic Moulders,44/14, K.B.Sarani(Mall Road),Kolkatta- 700 080
4. M/s. J.D.Rubber Industries, Survey No. 580/A, Ghatkesar (M) R.R. Dist (A.P.)
5. M/s Andhra Polymers Pvt. Ltd., Plot No.2, Phase – 5, IDA, Jeedimetla, Hyderabad – 560 055

16.FOOT STEPS

1. M/s. K.G.M. Exports, Plot No. 1 & 2, Sector 59, H.S.I.D.C. Indl. Estate, Faridabad
2. M/s. TV Plastics Ltd., 488, Kamakshipalya New Extension, Bangalore- 560 079
3. M/s. Rajvaibhav Enterprises Pvt Ltd., No. 18, KIADB, Industrial Area, Chintamani Road, Hosakote- 14, Bangalore

17.CHLORINATORS

1. M/s. Capital Control India (P) Ltd., 15-AJ, Laxmi Estate, Link Road, Andheri (West), Mumbai- 400 053
2. M/s. Acqua Pura Corporation, S.No.251/3, Gill Nivas, Opposite Aundh Telecom, Aundhshir Village, Baner Pune- 411 007
3. M/s. Aqua Services, 9, Vinayak Society, Gotri Road, Baroda- 390 007
4. M/s Pennwalt Ltd., D-221, MIDC, TTC Industrial Area, Thane Belapur Road, Nerul, Navi Mumbai – 400 706.

18.BATTERIES

1. M/s. Mysore Thermo Electric Pvt Ltd., 36, 4th main, III phase, Peenya Indl Area, Bangalore-560 058

19.UPS

1. Kirloskar Electric Company, Unit I/Unit-III, Unit-V, Unit-XII in P.O.Box No.5555, Maleswaram West, Bangalore
Unit-II in Unit-II in U-2, Gokul Road, Hubli 580 030,
Unit-IV in Belavadi Industrial Area, Mysore- 570 018

20.WATER LEVEL CONTROLLERS

1. M/s. Hitech Systems and Services, White House, 119, Park Street, Kolkata- 700 016
2. M/s. Nivo Controls Pvt Ltd., 104-115, Electronic Complex, Indore- 452 010.
3. M/s. Gujarat Electronics and Controls, (Water level controllers & Water level guards) 7, Adavani Market, Out side Delhi Gate, Ahamedabad- 380 004.

21.PE FITTINGS (For HDPE Pipes)

1. M/s Al Aziz Plastics Pvt Ltd., No. Plot No.5-14, Achhad Industrial Estate, Achhad, Tal:Talasari, Dist: Thane(Maharastra)-401 606

2. M/s.Glynwed Pipe Systems India Private Ltd., A-208, Kailash Complex, Park Site, Vikhroli-Hiranandani Link Road, Vikhroli (W), Mumbai -400 079.
3. M/s.George Fischer Piping System, Plot No.9-B, 1st Floor, Kopri Village, Above China Valley, Powai, Mumbai- 400 076.

ANNEXURE-V

Service level Benchmarks to be achieved in 24x7 Water Supply System Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS Hubli & Dharwad twin city by the Contractor. The Explanation for the following parameter is given and then the actual targets are given at the end.

- 1.1 Coverage of Water Supply Connections
- 1.2 Per Capita Supply of Water
- 1.3 Extent of Metering of Water Connections
- 1.4 Extent of Non-Revenue Water
- 1.5 Continuity of Water Supply
- 1.6 Quality of Water Supplied
- 1.7 Efficiency in Redressal of Customer Complaints

1.1 COVERAGE OF WATER SUPPLY CONNECTIONS

Performance Indicator		
Indicator	Unit	Definition
Household level coverage of direct water supply connections	%	Total number of households in the service area that are connected to the water supply network with direct service connections, as a percentage of the total number of households in that service area. Service area implies a specific jurisdiction in which service is required to be provided.

Data Requirements		
Data required for calculating the indicator	Unit	Remarks
a. Total number of households in the service area	Number	The total number of households (not properties) in the service area should be calculated. The service area refers to either the ward or ULB limits. Cadastre maps supplemented through actual ground level surveys should provide these data. Exclusive Surveys need not be carried out, and data can be collected during other surveys carried out for property tax, or other such purposes may be collected and complied.

Contractor

Engineer/ Employer

b. Total number of households with direct water supply connection	Number	This will include households which receive municipal water supply at one common point, from where it is stored and distributed to all households (for example, as in apartment complexes). Households supplied water through public stand posts or tankers should be excluded. Households completely dependent on other water sources such as bore wells, open wells, etc., should not be included.
Household coverage for water supply connections	%	Coverage = [(b/a)*100]

1.2 PER CAPITA SUPPLY OF WATER

Performance Indicator		
Indicator	Unit	Definition
Per capita quantum of water supplied	litres per capita per day (lpcd)	Total water supplied to consumers expressed by population served per day.

Data Requirements		
Data required for calculating the indicator	Unit	Remarks
a. Water supplied to the distribution system	litres per month	Daily quantities should be measured through metering, and records maintained. The total supply for the month should be based on an aggregate of daily quantum. Only treated water input into the distribution system should be measured. If water is distributed from multiple points, the aggregate of that quantity should be considered. The quantum should exclude bulk water transmission and distribution losses, as measured through water audit tests. This quantum should include water purchased directly from any other sources and put into the distribution system, if any. Water may have been purchased from neighbouring ULBs, Cantonment Boards, etc. Water supplied in bulk to large water intensive industries/industrial estates should be excluded.
b. Population served	Number	The number of people in the service area served by the utility. While typically the number of residents are considered, if the city has a significant floating population of tourists who temporarily reside in the city, such a population should be included. Tourist population estimates can be reasonably computed on the basis of bed capacity of hotels, and occupancy rates.
c. Number of days in the month	Number	The number of days in the specific month.
d. Additional information on areas where water is supplied at a rate less than 70 lpcd	litres per capita per day (lpcd)	The number of people in these service areas served by the utility. The quantity of water supplied to these areas measured through bulk meters or by scientific calculation using flow velocity and head.
Water supplied	lpcd	Per capita water supplied = [(a/c) /b]

1.3 EXTENT OF METERING OF WATER CONNECTIONS

Performance Indicator

Contractor

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Indicator	Unit	Definition
Extent of metering of water connections	%	The total number of functional metered water connections expressed as a percentage of the total number of water supply connections. Public stand-post connections should also be included. Weekly metering in quarterly year may be considered as an average.

Data Requirements		
Data required for calculating the indicator	Unit	Remarks
a. Total number of direct service connections	Number	This will include households and establishments which receive municipal water supply at one common point, from where it may be stored and distributed for all households (for example, as in apartment complexes). Households completely dependent on other water sources such as bore wells, open wells, etc., should not be included.
b. Total number of public stand-posts	Number	The total number of public stand-post connections, which are currently in use, should be considered.
c. Number of metered direct service connections	Number	Of the total number of direct service connections (to all categories of consumers), the number of connections which have functional meters, and metered quantities is the basis for billing of water charges.
d. Number of metered public stand-posts	Number	Typically, public stand-posts are not metered. However, if some are metered, they should be included. Weekly metering in quarterly year may be considered as an average
Extent of metering of water connections	%	Extent of metered connections = $[(c + d) / (a + b)] \times 100$

1.4 EXTENT OF NON-REVENUE WATER (NRW)

Contractor

Engineer/ Employer

Performance Indicator		
Indicator	Unit	Definition
Extent of NRW	%	This indicator highlights the extent of water produced which does not earn the utility any revenue. This is computed as the difference between the total water produced (ex-treatment plant) and the total water sold expressed as a percentage of the total water produced. NRW comprises: a) Consumption which is authorised but not billed, such as public stand-posts; b) Apparent losses such as illegal water connections, water theft and metering inaccuracies; and c) Real losses which are leakages in the transmission and distribution networks.

Data Requirements		
Data required for calculating the indicator	Unit	Remarks
a. Total water produced and put into the transmission and distribution system	Million litres per day (or) month	Daily quantities should be measured through metering, and records on the transmission and distribution system should be maintained. The total supply for the month should be based on the aggregate of the daily quantum. Only treated water input into the distribution system should be measured. If water is distributed from multiple points, the aggregate of that quantity should be considered. This quantum should include water purchased directly from any other sources and put into the distribution system, if any. Water may have been purchased from neighbouring ULBs, Cantonment Boards, etc.

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b. Total water sold	Million litres per day (or) month	The actual volume of water supplied to customers who are billed for the water provided. Ideally, this should be the aggregate volume of water consumed as per which consumers have been billed. However, in the absence of a complete and functionally effective metering regimen, alternate methods of measurement need to be evolved, with lower but acceptable levels of reliability.
NRW	%	NRW = $\frac{(a - b)}{a} \times 100$

Rationale for the Indicator

The reduction in NRW to acceptable levels is vital for the financial sustainability of the water utility. NRW can be reduced through appropriate technical and managerial actions, and therefore monitoring NRW can trigger such corrective measures. The reduction of real losses can be used to meet currently unsatisfied demand or to defer future capital expenditures to provide additional supply capacity. The reduction of NRW is desirable not just from a financial standpoint, but also from the economic and environmental benefits' point of view. The benchmark value for NRW may be considered at 15 percent.

1.5 CONTINUITY OF WATER SUPPLY

Performance Indicator		
Indicator	Unit	Definition
Continuity of water supply	Hours per day	Continuity of supply is measured as the average number of hours of pressurised water supply per day. Water pressure should be equal to or more than a head of 10 metre (m) at the ferrule point/meter point for the connection.

Data Requirements		
Data required for calculating the indicator	Unit	Remarks

Average hours of pressurized supply per day	Hours	The number of hours of supply in each operational zone (or DMA) should be measured continuously for a period of seven days. The average of the seven days should be considered for that month. Measurement should exclude hours of supply where the pressure is less than the minimum standards for piped water supply. The zone-wise figures should be averaged out to get city-wise data.
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1.6 QUALITY OF WATER SUPPLIED

Performance Indicator		
Indicator	Unit	Definition
Quality of water supplied	%	The percentage of water samples that meet or exceed the specified potable water standards, as defined by the Central Public Health and Environmental Engineering Organisation (CPHEEO). The sampling regimen should meet standards and norms laid down.

Data Requirements		
Data required for calculating the indicator	Unit	Remarks
a. Total number of water supply related complaints received per month	Number per month	The actual number of water samples that are taken for testing in the month. Samples should be drawn at both points—outlet of the treatment plant and at the consumer end. The sampling regimen should meet laid down standards and norms.
b. Number of samples that meet the specified potable water standards in the month	Number per month	Of the total number of samples drawn in the month, the number of samples that have met or exceeded the specified potable water standards. All parameters of the quality standards should be met. Even if one standard is not met, the sample cannot be assumed to have met the standards.
Quality of water supply	%	Quality of water supply = [(b/a)*100]

Rationale for the Indicator

The quality of water supplied is as important a performance indicator as other service delivery indicators. Poor water quality can pose serious public health hazards. Water-borne diseases are quite common in Indian cities, particularly among the urban poor. Although, in most cases, the source of water that causes such diseases/epidemics is not the municipal piped water supply, it is very important to monitor the supply. Therefore, this performance indicator must be regularly monitored, the benchmark value for which is 100 percent.

1.7 EFFICIENCY IN REDRESSAL OF CUSTOMER COMPLAINTS

Performance Indicator		
Indicator	Unit	Definition
Efficiency in redressal of customer complaints	%	The total number of water supply-related complaints redressed within 24 hours of receipt of complaint, as a percentage of the total number of water supply related complaints received in the given time period.

Data Requirements		
Data required for calculating the indicator	Unit	Remarks
a. Total number of water supply related complaints received per month	Number per month	The total number of all supply-related complaints from consumers received during the month. Systems for receiving and logging in complaints should be effective and easily accessible to the citizens. Points of customer contact will include common phone numbers, written complaints at ward offices, collection centers, drop boxes, online complaints on the website, etc.
b. Total number of complaints redressed within the month	Number per month	The total number of water supply-related complaints that are satisfactorily redressed within 24 hours or the next working day, within that particular month. Satisfactory resolution of the complaint should be endorsed by the person making the complaint in writing, as a part of any format/proforma that is used to track complaints.

Contractor

Engineer/ Employer

Efficiency in redressal of complaints	%	Efficiency in redressal of complaints = [(b/a)*100]
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Rationale for the Indicator

It is important that, in essential services such as water supply, the ULB/water utility has effective systems to capture customer complaints/grievances, escalate them internally for remedial action and resolve them. While many ULBs/utilities have put in place systems to capture complaints, much more work needs to be done to put in place back-end systems for satisfactory resolution of those complaints on time. As water supply is an essential service, the benchmark time for redressal is 24 hours or the next working day. It is, therefore, important to monitor this indicator. The benchmark value for this indicator will depend on a number of factors such as the size of the city, age of the network, etc. The benchmark value for this indicator is set at 80 percent.

2 **Performance targets:**

- 2.1 Pressure criteria in 24x7 area:** The contractor shall maintain minimum pressure measurement complying to 7 Mtr. residual pressure at customer tap or 10 mtr residual pressure at tapping point for all house connections in the proposed water zones under the scope of work with adequate water supply quantity as per norms.
- 2.2 Revenue water in 24x7 area:** The proportion measured in percentage terms of total volume of water billed to customer in a designated supply are to that of total system input volume in the designated supply area in the distribution operating Zone which the Bidder is supplying continuous pressurized water supply to the customer properties. The percentage shall be 85% restricting NRW / UFW to 15% throughout maintenance period.
- 2.3 Quality Criteria in 24x7 area:** The proportion measured in percentage terms of number of water samples conforming to the water quality specified in the contract out of total water sample tested for checking the quality both in terms of RCL content, chemical quality and bacteriological quality during the six months review in the designated area to which Bidder is supplying continuous

pressurized water supply service. The exclusion in the situations where the bulk water quality is tested for non compliance of specified water quality standards.

2.3.1 Water quality is to be continuously maintained. The minimum of two samples per zone for bacteriological test are to be provided by the Bidder & it shall meet the standards as per IS/ CPHEEO on a daily basis.

2.3.2 Samples for physical & chemical parameters shall be randomly provided by the Bidder to ascertain the water quality at least one sample for each zone on a fortnightly basis.

2.4 Number of connections with 24x7: The total number of customers in distribution operating zone to which continuous pressurized water supply is to be delivered by the Continuous pressurized water supply shall mean that potable safe quality water delivered continuously at 7m pressure at customer tap. Emergency stoppages of not exceeding twelve hours and no more than an average of 3 emergency stoppages of less than 12 hours each shall occur in any continuous period of six months. The Bidder shall shift all the authorized customer connections from old system to new distribution lines and also provide new connections if any along with fixing of water meter within the premises of customer.

3.

term.

Performance targets	Unit	O & M Period					
		112334456	284062840				
Presur e cri teri a in 24 x7 area.	%	88	99	99	99	99	99
		05	55	55	55	55	55
		0/0	0/0	0/0	0/0	0/0	0/0

ANNEXURE-VI

O & M of office accommodation at Dharwad & Hubli, computers, softwares, hardwares, WAN/LAN, servers, printers, billing machines, mobiles, equipments of 24x7 water supply system under Phase-I part2

1. The bidder shall operate & maintain the office accommodations established by him at Dharwad & Hubli:

S.No	Description	Unit	Qty.
1.1.	O & M of office room of 150 Sqm including partition cubicles of Board approved make wooden panels / laminates with drawers, revolving chairs -12 Nos, cup-boards/wardrobes -4 Nos.	Job	02
1.2	O & M of computer-Desktop Sony/HP/WIPRO or equivalent With Preloaded operating system Configuration: Intel core i5 operating system : Microsoft Windows 7 Detail Configuration : Intel Core i3 , 3.1 GHz , 3 MB Cache Chipset : Intel 6 Series or better on OEM Motherboard , Memory : 2 GB 800 MHz RAM with 8 GB Extendibility , Hard Disk : 500 GB 7200rpm ATA HDD , Monitor 47 cm 18.5 " larger TFT , Standard 104 keys Keyboard , mouse : Optical with usb Interface Mouse , Ports : 6 USB Ports , 1 serial , front usb & audio , mike panel , Cabinet : Mini Tower , DVD ROM : 8x or Better DVD ROM , Network : 10/100/1000 on Board integrated Network Port , Operating system : Windows 7 Professional and certification of authentication McAfee Antivirus (Latest Version) for One Year License With Media , Ms Office 2007 Standard INIDC Molp w/o Media (non Academic).	Nos.	08
1.3.	O & M of Lap-Top HP EliteBook 8562 W Mobile Workstation Sony/HP/ WIPRO or equivalent make, Genuine windows 7 versions of Free Dos, Designed to meet the military standard Mil-Std-810G for vibration, dust, altitude, and high and low temperature operation, Workstation-caliber discrete graphics , AMD FirePro M 5950 , Nvidia quadro 1000 M , or Nvidia quadro 2000M, Whitescreen 15.6 – inch diagonal LED – backlite display, HD + wide viewing angle FHD wide viewing angle or FHD ultra wide viewing angle with HP Dream Color, Up to four SODIMMs on configurations with quad-core processor, for system memory upto 32 GB <ul style="list-style-type: none"> • AMD Eyefinity Technology for multi-monitor support • Displayport for high resolution support • SRS premium sound optimized for high fidelity audio • 2nd generation Intel core i5 processors • Intel core i5 with vPro technology (optional) • Flexible wireless connectivity options: Optional integrated HP hs2340 HSPA+ Mobile Broadband Module connects to both HSPA and HSPA+ (UMTS) networks and provides GPS functionality Optional integrated HP un2340 EV-DO/HSPA Mobile Broadband Module(Gobi 3000) provides GPS functionality, integral Intel Centrino 802.11,a/b/g/n 2x2 or 3x3, or Atheros 802.11 a/b/g/n 3x3 wireless LAN module, Bluetooth v2.1+EDR, HP connection manager 4.0	Nos.	01

1.4.	O & M of HP or equivalent make Laserjet printer Pro P1566 (CE663A) Print speed black (normal A4) - upto 22rpm, first page out black(A4, ready) - as fast as 7 sec, print quality black (best)-upto 600x600x2dpi (1200 dpi effective output), print technology-laser, duty cycle(monthly, A4)- upto 8000 pages, recommended monthly page volume-250 to 2000, memory std.-8MB, memory max.-8 MB, processor speed-266 MHz,print languages-host based printing.	Nos.	04
1.5.	O & M of Wan-Lan network connection for both the offices at Dharwad & Hubli.	Job	02
1.6.	O & M of 2 nos. - 1.5 ton capacity TR split Air conditioners Voltas/ Carrier/LG/Dicen/Blue Star Make suitable for operation on A/C supply single phase 50 Hz 230Volts including Voltage Stabilizer suitable for 170 to 270 V, PVC Flexible unarmoured copper control cable of approved make 3c x 2.5 Sqmm Group A, Wiring for lighting / power circuit with PVC insulated 1100 V 2.5 Sqmm grade, multistrand Copper conductor single core cable in open or consealed system of wiring, 25mm, PVC casing and capping on the wall or ceiling, MCB distribution boards on wall, stand fabricated using slotted angle / L.angle of size 6 mm x 50 mm, earthing, etc.	Job	02
1.7.	O & M of of server P ProLiant ML310e Gen8 server or any other Board approved make for establishing data back up for both the O&M offices at Dharwad & Hubli. The following are specifications: 1. Processor family-Intel Xenon E3-1200v2 product family; Intel Core i3; Intel pentium, 2. No. of processors-1 No., 3.Processor core - 4 or 2, 4.Memory maximum - 32 GB, memory slots-4 DIMM slots, memory type-PC3-12800E UDIMMs DDR3, expansion slots-4 nos., Network controller- 1GB 330i ethernet adapter 2 ports, Drive description-LFF SAS/SATA/SSD, supported drives-Non-hot plug LFF 3.5 inch SATA, Non-hot plug LFF 3.5 inch SAS, hot plug SFF 2.5 inch SAS, hot plug SFF 2.5 inch SATA, hot plug SFF 2.5 inch SSD, storage controller-smart array B120i SATA RAID, power supply type-redundant optional, Processor cache-8MB L3; 3MB L3; 2MB L3, infrastructure management-iLO management engine, insight control, Warranty-year(s) (parts/labour/onsite) - 1/1/1 WW	Nos.	03
1.8.	O & M of Handheld machines including application software, High speed processor,batttery back up, AC adapter etc.	Nos.	20
1.9.	O & M of mobile handsets of Board approved make including TFT display,polyphonic,100MB, GPRS, EDGE,Blue tooth, VGA camera, Li-Ion 1020 mAh battery and sim card.	Nos.	20

3. The bidder shall operate & maintain the following equipments for carrying out the O & M of the proposed 24x7 water supply system:

S.No	Description	Unit	Quantity
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2.1.	<p>O & M of Butt fusion Welding Machine: Fusion Provida/George Fisher/Equivalent approved makes of Butt-fusion welding machine for butt welding of HDPE pipes & fittings with a diameter range from 75 mm to 315 mm dia as under: Material PP,PE 80, PVDF, PE 100, Pipe diameter range Outside- Ø = 75-315 mm, Planer- Motor Monophase-alternating current-motor</p> <p>Power 1050 Watt,Voltage 230 V (± 10%), Current : 4 , 0 A Frequency 50 Hz (± 10%), RPM n2 of planer approx. 60 revs/min, Elements: Switch on / off with fixing device Connecting cable and plug with earthing contact, Heating element-Power 2500 Watt, Voltage 230 V (± 10%),Current : 11, 7 A (± 10%), Frequency 50 Hz , Outside- Ø 350 mm Surface Antistick -coated, Elements: Electronic temperature control, Control lamps, switch on / off Connecting cable and plug with earthing contact, Hydraulic aggregate-Power 315Watt, Voltage 230 V (± 10%), current : 1 , 5 A, Frequency 50 Hz , Hydraulic oil tank, Electromotor and pump-RPM 2700 (revs/min), Max.pressure of pump approx. 120 bar, Working pressure 100 bar,Volume velocity 1, 9 I/min, Basic frame- Material frame: Machine steel, Material reduction inserts : Aluminium, Cylinder - Ø 40 mm, Piston rod - Ø 35 mm Length of stroke of cylinder : 150 mm max. force (per cylinder): (F= P* A) 2945 N (at 100 bar) Velocity of piston rod: 6 , 5 cm/s</p>	Nos.	01
2.2.	<p>O & M of Electro fusion Welding Machine</p> <p>Fusion Provida/George Fisher/Equivalent approved makes of Electro fusion welding machine as under:The electro fusion control unit shall be designed for use with any electro fusion fittings required upto 48V. The unit shall operate in three modes, Automatic, Manual and Barcode. The unit shall be complete with all accessories and shall have the following features as minimum.Full output voltage and output current monitoring throughout the jointing cycle.Automated output voltage (True RMS) level control between 10 and 48 VAC Graphical display of output current and voltage levels. Data logging facility for storing minimum 600 joint records and facility for data transfer and print out. Required software shall be provided.Shall have Soft start feature to prevent shock loading on generators.Temperature compensation facility.Protection against fitting overheat.The unit shall give user friendly step by step operator instructions and printing facility (in English & Kannada languages).Shall have back-lit graphical display.Shall have a single combined lead for all modes of operation.RS 232 serial interface cable shall be provided along with the unit.The machine shall be provided with barcode reader and adaptors if any required.These units are provided with 7 segment display unit to select the output voltage, Temperature, Fusion Time and Error message in case of malfunctions occurring before or during the Fusion. The output voltage level control shall be between 10 and 44 VAC.</p> <p>Specification Operating Temperature Range (Min). -10 to +50 Deg C Operating Voltage Range (min) 190 V to 270 V, 45 to 50 Hz Output Voltage 8 to 44 VAC 10 – 44 VAC (Barcode Mode) Enclosure Protection IP 54 Input Cable length Minimum 12 meters Output Cable length Minimum 4 meters</p>	Nos.	01

Contractor

Employer/Engineer

2.3.	O & M of Chlorination plant including 2 nos. of chlorine tonner, GI sheet shed & masonry platform with ramp, regulator, uPVC/ HDPE pipe plumbing work etc.	Nos.	03
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KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

Part-A

Study, Survey, Preparation of Base map, Conditional Survey, Assessment of NRW, Customer Survey, Analysis, Design & Drawing.

Part-B

Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.

Part-C

Providing & Laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for 24x7 distribution system.

Part-D

Operation and Maintenance of 24x7 distribution system for a period of 5 years.

CHAPTER-5

Appendix to Bid Qualification & Information

<u>Description</u>	<u>Sub-clause</u>	
Amount of Performance Security	: 10.1 of Chapter 2	: Total 6% (six percent) of Contract Price plus in the form of unconditional Bank Guarantee issued by any Nationalized bank or any Banking Company registered under the companies Act 1956. The guarantor banks should ask by the contractor/firm to forward the Bank Guarantee by registered post or by Courier mail to the concerned Executive Engineer / Chief Engineer as the case may be. The Bank Guarantee shall be provided within 28 days of the date of the Letter of Acceptance to be valid until completion of the project and defects liability period. No interest will be payable on the performance security.
	:	
Time for Issue of Notice to Commence the Works	: 41.1 of Chapter 2	: Within 28 (Twenty eight) days of the date of the Letter of Acceptance
Time for Completion of the Works	: 43.1 of Chapter 2	: Within 24 (Twenty four) Months including monsoon period from the date specified in the Notice to Commence.
Amount of Liquidated Damages for Delay	: 47.1 of Chapter 2	: 1% (One percent) of the amount put to tender for every 100% delay subject to a maximum of 7.5% (seven point five percent) of amount put to tender.
Limit of Liquidated Damages	: 47.1 of Chapter 2	: 7.5% (Seven point five percent) of the amount put to tender.
Defects Liability Period	: 49.1 of Chapter 2	: 365 (Three Sixty five) days.
Deduction of Advance Income Tax	60.1 of Chapter 2	As per the prevailing Tax Rules of the government of India and the Government of State of Karnataka.
Deduction for Advance Works Contract Tax	60.1 of Chapter 2	As per the prevailing Tax Rules of the Government of India and the Government of the State of Karnataka.

Deduction for Royalty on Materials Used	28.2 and 60.1 of Chapter 2	As per prevailing rates under the Karnataka Minor Minerals Concession Rules, 2007 as provided in Chapter 3, Special Conditions of Contract.
Minimum Amount of Interim Payment Certificates	60.2 of Chapter 2	: -deleted-
Advance Payment	60.7 of Chapter 2	: -Deleted-
Start of repayment	60.7 of Chapter 2	: -Deleted-
Karnataka Building and other construction worker's welfare cess (Sub-clause 60-1, General conditions of contract and appendix to tender.)	14.A Chapter 3	As per the Government of Karnataka order No.LD/300LET/2006 Bangalore Dtd. 18.01.2007 1% (one percent) cess on the total tender amount will be recovered from the bills of the contractor under Building and other construction worker's welfare cess Act-1966.

(Signature, Name, and Address)

Note: It is mandatory to upload the various technical and financial eligibility requirements and also fill up the formats mentioned in various chapters of the bidding documents. The incomplete bids shall be considered as substantially non-responsive.

QUALIFICATION INFORMATION

(The information to be filled in by the bidder in the following pages will be used for Clause 5 of the Instructions to Bidders. This information will not be incorporated in the Contract.)

1. For Individual Bidders

1.1 Constitution or legal status of Bidder: (Attach Copy)
Place of registration: _____
Principal place of business: _____

Power of Attorney of signatory of Bid: (Attach Copy)

1.2 Total value of construction work performed 2011-2012 _____
in the last five years in the following 2010-2011 _____
currency/currencies: _____ 2009-2010 _____
2008-2009 _____
2007-2008 _____

(The bidder shall supply the following information in the format shown)

1.3 Work performed as prime contractor (in its name) on works of a similar nature over the last five years:

Project Name of Remarks Name Employer of the Explaining and Work Order for Delay in	Description Contract	Value of Number (Currency) Work	Date of Contract Completion	Stipulated Issue of Completion	Actual Period of Reasons	Country
						Completion (If Any)

(Bidder to provide details)

1.4 Availability of major equipment required to carry out the contract works:

Item of Equipment Including Make	Requirement (Number and Capacity)	Availability Proposals		Remarks Regarding Condition/Source/ Availability
		Owned/Leased/ to be Procured	Number and Age and Capacity Condition	

(Bidder to provide details)

1.5 Qualifications and experience of key personnel proposed for administration and execution of the Contract. Attach curricula vitae.

PositionName	Years of Experience	Years of Experience in the Proposed (General)	Position
--------------	------------------------	-----------------------------------------------------	----------

(Bidder to provide details)

1.6 Proposed subcontracts (if any) and the firms involved:

SCHEDULE OF SUBCONTRACTORS

Sections of the Works	Value of Sub-contract	Sub-Contractor (Name and Address)	Experience in Similar Work
--------------------------	--------------------------	--------------------------------------	-------------------------------

Contractor

Employer/Engineer

(Bidder to provide details)

-
- 1.7** Financial reports for the last five years: balance sheets, profit and loss statements, auditor's reports (in case of companies/corporation), etc. List these below, and attach copies.
- 1.8** Evidence of access to financial resources to meet the qualification requirements: cash in hand, lines of credit, etc. List these below and attach copies of supporting documents.
- 1.9** Name, address and telephone, telex and fax numbers of the bidders' bankers who may provide references if contacted by the Employer.

1.10 Information on the litigation history in which the bidder is involved:

Other Party/Parties	Cause of Dispute	Amount Involved
---------------------	------------------	-----------------

(Bidder to provide details)

1.11 Proposed work method and schedule. The bidder should attach descriptions, drawings, and charts as necessary to comply with the conditions of the bidding documents.

GUIDELINE FOR EVALUATION OF PERFORMANCE CRITERIA

The Employer will carry out a detailed evaluation of Qualification Information of the bids in order to determine whether the bidders are qualified and whether the technical aspects are substantially responsive to the requirements set forth in the bidding documents. In order to reach such a determination, the Employer will examine the information supplied by the

Contractor

Employer/Engineer

Bidders and other requirements in the bidding documents taking into account the following factors:

The maximum marks for each of the evaluation criteria of Qualification Information are:

Sl. No.	Evaluation Criteria	Max. marks	Documental Evidence to be produced
1	Projects completed (100%) within the stipulated period or within the extended period without penalty with value of work not less than 50% of the Amount put to tender in last five financial years. (10 marks per project)	20	N e c e s s a r y certificates to be enclosed.
2	Projects completed (100%) within the extended period with penalty and value of work not less than 50% of the Amount put to tender in last five financial years. (7 ½ marks per project)	7.5	N e c e s s a r y certificates to be enclosed
3	Projects completed to a minimum of 50% of contract value within the stipulated period with value of work not less than 50% of the Amount put to tender in last five financial years. (7 ½ marks per project)	7.5	N e c e s s a r y certificates to be enclosed
4	Schedule of Key technical and management personnel to be deployed on this contract if awarded and availability of major construction equipments / machineries essential for this project (owned / leased) a. work plan and Methodology b. Major Construction equipments / machineries c. Construction Manager As per d. Supervising Engineer Annexure (2 ½ marks for each)	10	Details to be enclosed
5	Liquid Assets and / or availability of credit facilities of not less than 20% of the Amount put to tender cost from Banks for meeting the fund requirement.	05	Certificate from the Bank to be enclosed
	Total	50	

Eligible score for opening of financial offer is minimum of 20 marks.

If no marks are obtained for 4(c) & 4(d) during evaluation, the bid will be considered as substantially non-responsive even if minimum eligible score is obtained.

- Note:**
1. The Self Evaluation in above format and Documentary proof for above Qualification information shall be attached for evaluation.
 2. The certificates shall be signed by the Employer not below the rank of Executive Engineer or equivalent.
 3. Work done certificate of one work will be considered for only one Evaluation criteria

Contractor

Employer/Engineer

ANNEXURE

Minimum Requirement of Major Construction Equipments / Machineries (Owned / Leased/ Hired)

Sl. No.	Description of Construction Equipment / Machineries	Quantity in nos.
1	Concrete Mixer	2
2	Lift / Hoisting machineries	2
3	Hitachi / JCB	1
4	Truck / Tipper	1
5	D.G. Set	1

Note:- Quantity to be specified by the Employer depending on the nature / size of the work

Minimum Requirement of Construction Manager and Supervising Engineers:

Sl. No.	Designation of Employee	Minimum Experience	No. of Persons	
1	Construction Manager	5 Years	01	
2	Supervising Engineer	2 Years	Graduate Engineer	Diploma Engineer
	Rs. 500 Lakhs to Rs. 1000 Lakhs:		01	01
	Rs. 1000 Lakhs to 2500 Lakhs:		01	02
	Rs. 2500 Lakhs to 5000 Lakhs:		02	02
	More than Rs.5000 Lakhs :		02	02

Note:- Quantity to be specified by the Employer depending on the nature / size of the work

Contractor

Employer/Engineer

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

**Providing 24x7 Water Supply System
(Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24,
28, H-10 & D-24 of Hubli-Dharwad twin city under
UWSS.**

Part-A

**Study, Survey, Preparation of Base map,
Conditional Survey, Assesment of NRW,
Customer Survey, Analysis, Design & Drawing.**

Part-B

**Providing and Laying of 762, 660, 508 & 457 mm
dia MS Feeder Mains.**

Part-C

**Providing & Laying of 250mm, 300mm and
400mm dia D.I. and 75mm, 90mm, 110mm,
160mm, 200mm dia HDPE pipeline for 24x7
distribution system.**

Part-D

**Operation and Maintenance of 24x7 distribution
system for a period of 5 years.**

CHAPTER-7

Sample Form of Acceptance & Agreement

Sample Form of Acceptance

Letter of Acceptance *(Letterhead paper of Employer)*

(Date)

To: _____
(Name and Address of the Contractor)

Dear Sirs,

This is to notify you that your bid dated _____ for the tender work of _____ of _____
(name of the Project and specific Works, as given in the Instructions to Bidders)
for the Contract Price of Rs. _____ (Rupees _____) is hereby accepted by our Agency.

We request that, within **28 days** of the date of this Letter of Acceptance, you:

- (a) provide the requisite Performance Security in accordance with the provisions of Sub-Clause 10.1 of the General Conditions of Contract in the amount of 6% of the above Contract Price;
- (b) Provide additional bid security in the form of Demand Draft for the award amount and estimated amount put to Tender.
- (c) prepare the Form of Agreement, in duplicate, on Government Stamp Paper and meet the Executive Engineer KUWS & D Board Division, Bijapur at the address provided during normal office hours on any working day to sign said Agreement.

One copy of the signed Agreement will be provided to you for your files, while the other copy will remain with us.

Yours faithfully,

()

Sample Form of Agreement **AGREEMENT**

Contractor

Employer/Engineer

This Agreement made this _____ day of _____ 2012 between the Executive Engineer KUWS & D Board Division Dharwad called as Engineer of _____ (hereinafter called "The Employer") of the one part and _____ of (hereinafter called "the Contractor") of the other part. Whereas the Engineer is desirous that certain works should be executed by the Contractor, viz _____ and has accepted a Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein.¹

Now this Agreement witness as follows:

1. In this Agreement words and expressions shall have the same meaning as are respectively assigned to them in the Conditions of Contract hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Letter of Acceptance dated _____
 - (b) The Said Bid;
 - (c) The General Conditions of Contract
 - (d) The Special Conditions of Contract
 - (e) The Special Specifications
 - (f) The Drawings;
 - (g) The Priced Bill of Quantities. _____
 - (h) The Standard Specifications; and _____
 - (i) The Schedules of Supplementary Information.
3. In consideration of the payments to be made by the Engineer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to design, execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.
4. The Engineer hereby covenants to pay the Contractor in consideration of the design, execution and completion of the Works and the remedying of defects therein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

In Witness whereof the parties hereto have caused this Agreement to be executed the day and year first before written.

The Common Seal of _____ as hereunto affixed in the presence of;

Signed, Sealed and Delivered by the

said _____ in the presence of:

Binding Signature of Engineer _____

Binding Signature of Contractor _____

**KARNATAKA URBAN WATER SUPPLY AND
DRAINAGE BOARD**

Contractor

Employer/Engineer

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

Part-A

Study, Survey, Preparation of Base map, Conditional Survey, Assessment of NRW, Customer Survey, Analysis, Design & Drawing.

Part-B

Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.

Part-C

Providing & Laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for 24x7 distribution system.

Part-D

Operation and Maintenance of 24x7 distribution system for a period of 5 years.

CHAPTER-8

Form of Security

PERFORMANCE BANK GUARANTEE (UNCONDITIONAL)

To:

***The Executive Engineer,
KUWS & D Board Division, Dharwad***

WHEREAS _____ *[name and address of Contractor]* (hereinafter called "the Contractor") has undertaken, in pursuance of Contract for the Work of _____

[name of Contract and brief description of Works] (hereinafter called "the Contract"); on item rate basis.

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee by a Nationalised bank or a Banking companies registered under the company act 1956 for the sum specified therein as security for compliance with his obligation in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, up to a total of Rs. *[amount of Guarantee]* *[in words]*, such sum being payable in Rupees in which the contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument any sum or sums within the limits of *[amount of Guarantee]* as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

The guarantee shall be valid until the date of issue of the Defects liability Certificate.

SIGNATURE AND SEAL OF THE GUARANTOR

NAME OF BANK

ADDRESS

DATE

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

**Providing 24x7 Water Supply System
(Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24,
28, H-10 & D-24 of Hubli-Dharwad twin city under
UWSS.**

Part-A

**Study, Survey, Preparation of Base map,
Conditional Survey, Assessment of NRW,
Customer Survey, Analysis, Design & Drawing.**

Part-B

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dia MS Feeder Mains.**

Part-C

**Providing & Laying of 250mm, 300mm and
400mm dia D.I. and 75mm, 90mm, 110mm,
160mm, 200mm dia HDPE pipeline for 24x7
distribution system.**

Part-D

**Operation and Maintenance of 24x7 distribution
system for a period of 5 years.**

CHAPTER-9

DRAWINGS

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

**Providing 24x7 Water Supply System
(Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24,
28, H-10 & D-24 of Hubli-Dharwad twin city under
UWSS.**

Part-A

**Study, Survey, Preparation of Base map,
Conditional Survey, Assesment of NRW,
Customer Survey, Analysis, Design & Drawing.**

Part-B

**Providing and Laying of 762, 660, 508 & 457 mm
dia MS Feeder Mains.**

Part-C

**Providing & Laying of 250mm, 300mm and
400mm dia D.I. and 75mm, 90mm, 110mm,
160mm, 200mm dia HDPE pipeline for 24x7
distribution system.**

Part-D

**Operation and Maintenance of 24x7 distribution
system for a period of 5 years.**

CHAPTER-10

Standard Specifications

DECLARATION FORM

(To be signed and submitted by the bidder alongwith his bid)

To:

**The Chief Engineer (North),
Karnataka Urban Water Supply & Drainage Board,
Jalamandali Compound,
DHARWAD.**

Sir,

1. We have received a copy of the Chapter 10 : Standard Specifications and we have studied and understood all Clauses of this Chapter. We accordingly offer to design, execute and complete the said Works and remedy and defects therein, fit for purpose in conformity with the specified Clauses of this Chapter.
2. We further undertake to accept that these form a part of our bid and we agree to sign these at the time when the contract agreement is executed.

Dated this _____ day of _____, 2012

Signed and Sealed

by _____

I n _____ t h e _____ C a p a c i t y
of: _____

Name and Address of Bidder

(affix company seal)

KARNATAKA URBAN WATER SUPPLY AND DRAINAGE BOARD

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

Part-A

Study, Survey, Preparation of Base map, Conditional Survey, Assessment of NRW, Customer Survey, Analysis, Design & Drawing.

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Part-D

Operation and Maintenance of 24x7 distribution system for a period of 5 years.

FINANCIAL BID

KARNATAKA URBAN WATER SUPPLY

Contractor

Employer/Engineer

AND DRAINAGE BOARD

Providing 24x7 Water Supply System (Phase-I, Part-2) in water zones - 1, 8, 10, 17, 24, 28, H-10 & D-24 of Hubli-Dharwad twin city under UWSS.

Part-A

Study, Survey, Preparation of Base map, Conditional Survey, Assessment of NRW, Customer Survey, Analysis, Design & Drawing.

Part-B

Providing and Laying of 762, 660, 508 & 457 mm dia MS Feeder Mains.

Part-C

Providing & Laying of 250mm, 300mm and 400mm dia D.I. and 75mm, 90mm, 110mm, 160mm, 200mm dia HDPE pipeline for 24x7 distribution system.

Part-D

Operation and Maintenance of 24x7 distribution system for a period of 5 years.

CHAPTER-6

Bill of Quantities