

Punjab Govt. has decided to provide 100% Water Supply, Sewerage, STP, Street Light and Roads in all 165 Urban Local Bodies of Punjab costing about Rs. 6000 Cr. To implement this project and to get these works executed in a fixed time frame schedule, a meeting was held by Hon'ble Deputy Chief Minister Punjab, with major executing agencies on 29.05.2015.

As decided in this meeting sample DNIT of Bathinda tender (**Vol.-I**) has been uploaded on website **www.pwssb.com**. This office also proposes to add incentive clause for early completion and provision of survey of town and modification, if any, of Water Supply & Sewerage design as per field survey.

Your kind comments and suggestions are solicited for improvement in this DNIT latest by 17.06.2015 at 11.00 A.M.

Director Planning & Design

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“DNIT (4th revision) for Providing & Laying of DI-K7 Pipe for water supply, S. W, PIPE SEWER, RCC Cast in situ sewer , RCC P1 Rising Main of various sizes, Construction of WTP, OHSR of 5.00 Lac gal capacity, RCC MPS^s, roads, street Lights, making house connections for W/S & Sewerage and planning, designing, and construction of STP based on any suitable technology and O & M of existing and proposed services for W/S, Sewerage & proposed roads, Street Lights, revenue collection for 10 years from the date of start of work & all other works contingent thereto as per DNIT in Bathinda town

Sr No	Volume	Description
1	I	Notice inviting tender, instructions to bidders, form of agreement and clause of contract
2	II	Scope of work and technical specifications
3	III	Price Bid
4	IV	Cost
5	--	Drawings

Punjab Water Supply and Sewerage Board Division No.1, Bathinda.

Phone- 0164-2270284

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“DNIT (4TH revision) for Providing & Laying of DI-K7 Pipe for water supply, S. W, PIPE SEWER, RCC Cast in situ sewer , RCC P1 Rising Main of various sizes, Construction of WTP, OHSR of 5.00 Lac gal capacity, RCC MPS^s, roads, Street Lights making house connections for W/S & Sewerage and planning, designing, and construction of STP based on any suitable technology and O & M of existing and proposed services for W/S, Sewerage & proposed roads, Street Lights, revenue collection for 10 years from the date of start of work & all other works contingent thereto as per DNIT in Bathinda town

Volume- I



(SCOPE OF WORK AND TECHNICAL SPECIFICATION)

Punjab Water Supply and Sewerage Board Division No.1, Bathinda.

Phone- 0164-2270284

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Name of the Work : "Providing & Laying of DI-K7 Pipe for water supply, S. W, PIPE SEWER, RCC Cast in situ sewer , RCC P1 Rising Main of various sizes, Construction of WTP, OHSR of 5.00 Lac gal capacity, RCC MPS^{rs}, roads, street lights, making house connections for W/S & Sewerage and planning, designing, and construction of STP based on any suitable technology and O & M of existing and proposed services for W/S, Sewerage & proposed roads, street lights, revenue collection for 10 years from the date of start of work & all other works contingent thereto as per DNIT in Bathinda town.

PUNJAB WATER SUPPLY & SEWERAGE BOARD, CHANDIGARH

Superintendent

DIVISION: Punjab water Supply & Sewerage Division No 1 Bathinda

AGREEMENT

AND

CONTRACT FOR WORKS

This agreement made this -----day of -----between -----
------(hereinafter called the "Contractor") of the one part, and the Executive
Engineer-Punjab Water Supply & Sewerage Division No 1 Bathinda

----- (hereinafter called "PUNJAB WATER SUPPLY & SEWERAGE
BOARD") of the other part.

Where as the Contractor has offered to execute the work of Providing & Laying of DI-K7 Pipe for water supply, S. W . pipe sewer, RCC cast in situ Sewer, RCC P1 Rising Main of various sizes, Construction of 5.00 MGD,WTP, OHSR of 5.00 Lac gal capacity, RCC MPS^{rs}, roads, street lights, making house connections for W/S & Sewerage and planning, designing, and construction of 4.50 MLD STP based on any suitable technology and O & M of existing and proposed services for W/S, Sewerage & proposed roads, street lights, for 10 years & all other works contingent thereto as per DNIT in Bathinda town

And, the Engineer in Charge has accepted his tendered offer for the execution of
aforementioned works. NOW THIS AGREEMENT WITNESSED AS FOLLOWS:

1. In this agreement, words and expressions shall have the same meanings as are respectively assigned to them as per the conditions of contract hereinafter referred to :
2. The following documents shall be deemed to form and be construed as part of this Agreement:
 - i. "Brief Scope of Work", "Notice Inviting Tender" & "Instructions to Contractor/Bidders" as at Annexure 'A' to this agreement
 - ii. Condition of e-tendering as per Annexure A1 to this agreement
 - iii. Percentage rate tender for Works at Annexure 'B-I & B-II' to this agreement
 - iv. Definitions and Clauses of Contract as at Annexure 'C' to this agreement
 - v. Scope of Work and technical specifications as per Vol II of Tender Document
 - vi. Price bid as per Vol III
3. The work will be executed strictly according to specifications and approved drawings relating to the works as indicated in the "Notice Inviting Tender". The schedule of items of works to be carried out will be as per approved "Notice Inviting Tender".
4. All correspondence and modification of tender offer and acceptance letter will form part of this Agreement.
5. In consideration of the payments to be made by the Engineer in charge to the Contractor in respect of completed work or item of work, the Contractor here by covenants with the Engineer in Charge, to execute the work in conformity in all respects with the provisions of this Agreement.
6. The Engineer in charge hereby covenants to pay the Contractor, in consideration of execution of works, the price in the manner as specified in this agreement.

Witness thereof the parties hereto set their respective hands and seals on the day and year first above written.

In the presence of

Signature of Contractor

NAME & ADDRESS

Address -----

1. -----

2. -----

Signed sealed & delivered by -----in the capacity of Executive Engineer in the presence of

NAME & ADDRESS

Executive Engineer
PWSSD No 1 Bathinda.

for & on behalf of CHIEF EXECUTIVE OFFICER, PUNJAB WATER SUPPLY & SEWERAGE BOARD

1. -----

2. -----

ANNEXURES

ANNEXURE - A

BRIEF SCOPE OF WORK, NOTICE INVITING TENDER AND INSTRUCTIONS TO THE BIDDERS

Under National Competitive Bidding (NCB)

“Providing & Laying of DI-K7 Pipe for water supply, S. W, PIPE SEWER, RCC Cast in situ sewer , RCC P1 Rising Main of various sizes, Construction of WTP, OHSR of 5.00 Lac gal capacity, RCC MPS^s, roads, street lights, making house connections for W/S & Sewerage and planning, designing, and construction of STP based on any suitable technology and O & M of existing and proposed services for W/S, Sewerage & proposed roads, street lights, revenue collection for 10 years from the date of start of work & all other works contingent thereto as per DNIT in Bathinda town.

The Executive Engineer, Punjab Water Supply and Sewerage Division No 1 Bathinda invites online Technical and Financial bids for Providing & Laying of DI-K7 Pipe for water supply, S. W, pipe sewer, RCC cast in situ Sewer, RCC P1 Rising Main of various sizes, Construction of 5.00 MGD,WTP, OHSR of 5.00 Lac gal capacity, RCC MPS^s, roads, street lights, making house connections for W/S & Sewerage rehabilitation of specified old W/S & Sewerage System and planning, designing, and construction of 4.50 MLD STP based on any suitable technology and O & M of existing and proposed services for W/S, Sewerage & proposed roads, street lights, for 10 years & all other works contingent thereto as per DNIT in Bathinda town under National Competitive Bidding (NCB), from the Contractor/Bidders, who meet the eligibility criteria specified in the tender documents

2. Brief Scope of Work

The scope of work shall include but not limited to the following:.

Part -A

Sr No	Water Supply	
Sub head No i (i)	5.00 MGD WTP Growth Centre Water Works at Bathinda	i) S&S Tank = Av Size 290 x 165 Mtr Capacity = 290903 KI depth upto FSL = 6.10 Mtr ii) CWT = 24 x 24 x2.44 Mtr or 6309 kl iii) Clear Water Well, Raw Water Well, =12 ft Dia one each iv) Pump Chamber (23' x 30' ft) with Machinery, chlorination plant,
ii	Providing Distribution Lines	67.869 Km
a.	100mm I/d DI-K7 Pipe	52.287 Km

b	150mm I/d DI-K7 Pipe	6.190 Km
c.	200mm I/d DI-K7 Pipe	4.392 Km
d	250mm i/d DI-K7 Pipe	1.500 Km
e	300mm i/d DI-K7 Pipe	3.500 Km
	Total	67.869 Km
iii	Rehabilitation of Existing W/S System	
a	100mm I/d DI-K7 Pipe	10.00 Km
	150mm I/d DI-K7 Pipe	2.50 Km
	200mm I/d DI-K7 Pipe	2.50 Km
		15.00 Km
iv	Rehabilitation of house connections with replacement pipe	2500 No
v.	Replacement of existing 400 mm i/d rising main from main water works to Subash park OHSR	500 mtr
Vi	Repair of OHSR	2 No.
vii	S & S tank repair	2 No.
Viii	Prov and installing flow meters actuators SV, Flocculate with panel etc	12 no. Actuator 10 no. SV Flocculation system
IX	Gantry 3 ton capacity at water works	4 no.
X	Chlorination system	1 no.
xi	Providing Metering system to all existing connections & new water supply connections	52510 Nos. metering 9746 Nos. New Connections
xii	Providing & Fixing of Single Air Valve complete	10 Nos
xiii	Providing & Fixing of Double Air Valve complete	5 Nos
xiv	Providing & Fixing of 100mm dia pressure gauge complete	70 Nos

Part-B
Sewerage Scope

Part-B (1): Detailed scope of intercepting / outfall sewer and lateral sewer						
S. No	Description	Across Railway line	Across Sirhind Canal	Bikaner Bye Pass	City Area	Total
	Sewerage					
1. i)	200 mm i/d SW Pipe	15522	39017	2722	14060	71321
ii)	250 mm i/d SW Pipe	609	3347		2080	6036
iii)	300 mm i/d SW Pipe		2405	1615	256	4276
iv)	400 mm i/d SW Pipe	3120	6557	1433	723	11833
					Total	93466
					Say 93.47 Km	
2	760 mm i/d PT Sewer	825	3327	1295	1000	6447
					Total	6447
					Say 6.45 Km	
Part-B (2): Detailed scope of MPS and Rising Main						
S. No	Description	Length				
1	Rising Main					
i)	500 mm i/d DI-K9	6000 Mtr				
2	MPS (Across Sirhind Canal) including machinery	1 No				
3	Intermediate Pumping Station (Kheta Basti) including machinery	1 No				
4	Aug of Pumping Station at Sanguana Basti & Deep Nagar	2 No				
Part-B (3) Rehabilitation of existing sewerage system.						
1	200 mm i/d SW Pipe Sewer	10000 Mtr				
2	250 mm i/d SW Pipe Sewer	3350 Mtr				
3	400 mm i/d SW Pipe Sewer	578 Mtr				

4	Construction of New Manhole	85 No
5	Replacement of non-clog pump	4 nos
6	Replacement of Gen-set	1 no
7	CI Sluice Gate 1500x1500 mm	1 no

Part-B (4) Construction of Roads and reconditioning

Sr No	Description	Qty	Unit
1	Dismantling of bitumen roads	60651	Sqm
2	Reconditioning of metalled road with new material	40813	Sqm
3	Reconditioning of metalled road with old material	27208	Sqm
4	Preparation of black top surface	203852	Sqm
5	Dismantling of DB roads	165797	Sqm
6	Reconditioning of DB road with new material	115354	Sqm
7	Reconditioning of DB road with old material	76902	Sqm
8	Reconditioning of KACHA road with new DB material	12441.60	Sqm
9	Reconditioning of KACHA road with new INTERLOCKING material	3110.40	Sqm

Part-B (5) Pumping Station and rising main along with sullage carrier (for storm water)

S. No	Description	Length
1	1200 mm i/d RCC P/1 Rising main	12485 Mtr
2	Pump Chamber (9.00 mtr x 6.10 Mtr)	1 No
3	Collecting Tank (13.50 Mtr Dia)	1 No
4	Machinery :- Non Clog pump set discharge 340 LPS and Head 10 Mtr	6 No
5	Generating Set = 500 KVA	2 No
6	Transformer = 500 KVAR	2 No

Part-B (6) Detailed scope of Storm Sewer

S. No	Description	Length (In Mtr)
1	Storm Sewer	
i)	600 mm i/d DI-K9 R/M	1600
ii)	400 mm i/d RCC NP-2 Pipe sewer	1050

iii)	800 mm i/d RCC NP/2 Sewer	950
Part-B (7) Detailed scope of House Connections		
S. No	Description	Nos
1	No of House Connections	19350
Part-B (8) Detailed scope of street lights		
S. No	Description	Nos
1	No of Sodium Lights	900
2	No of LED Lights	100
Part-C		
Part-C	OHSR 5.00 Lac glns capacity at Growth centre water works	1 No
Part-D	WTP 5.00 MGD at Growth centre water works	1 No
Part-E	4.50 MLD STP and O&M for 10 Years	1 No
Part-F	O&M of existing services of W/S and Sewerage and revenue collections for 10 Years from date of start of work	The scope also includes O&M of works of W/S & Sewerage system being done at present and proposed to be done by the other contractors.
Part-G	O&M of proposed services of W/S and Sewerage proposed roads and revenue collections up to 10 Years from date of start of work	

DETAIL OF WORK TO BE DONE UNDER SUB HEAD NO Part E i.e. STP

- i. Designing, Planning & Construction of civil engineering works for all the units and all the ancillary structures.
- ii. Designing, Planning Supply, erection, testing & commissioning of all the mechanical equipment.
- iii. Designing, Planning Supply, erection, testing & commissioning of all the electrical & instrumentation equipment.
- iv. Designing, Planning Supply, erection, testing & commissioning of all the piping, valves and specials etc.
- v. Hydraulic testing of all the water retaining structures
- vi. Operation & Maintenance of Sewage Treatment Plant for startup/stabilization for a period of Three months or complete stabilization of the Plant process whichever is longer.
- vii. O & M of existing and proposed services for W/S, Sewerage & proposed STP and roads for 120 months from the date of start of work and proposed STP for 120 months after stabilization period.
- viii. For STP, If the actual energy consumption on account of reduced average actual treated effluent during the energy consumption bill cycle period is less than average

guaranteed power consumption as per allotment on proportionate basis, then the excess energy consumption shall be recovered from the agency as prescribed below: During stabilization and operation & maintenance period electricity charges for electric energy supplied through PSPCL grid and genset shall be borne by the department to the extent of average guaranteed energy consumption quoted by the agency. If the actual energy consumption exceeds average guaranteed energy consumption, the charges for the excess energy consumption shall be borne by the agency. Electric energy consumption from PSPCL grid shall be charged as per bill raised by PSPCL, however, electric energy consumption from genset (as per energy meter to be installed by agency) shall be charged as per rate fixed by EIC in writing. All other consumable material and required staff for operation and maintenance will be provided by bidder.

For example : Considering energy consumption bill cycle period as 60 days, if the design discharge is 10 MLd & average guaranteed power consumption is given by the bidder is 1500 kWh/d and actual average discharge is 4 MLd then in case average power consumption is more than $1500 \times 4 \times 60 / 10 = 36000$ kWh & if the actual energy consumed is 42000 kWh (700 kWh/dx60) then the recovery shall be made for 6000kWh from the agency. However, average guaranteed energy consumption with respect to design discharge shall only be considered for evaluation of bids.

- ix. Defect liability for a period of twelve (12) months after the completion of works.
- x. Supply of equipment drawings, Technical specification/Catalogue.
- xi. Supply of as built drawings hard and soft copies (5 Nos)
- xii. Manufacturer manual for Operation & Maintenance of the equipment supplied.

3 BID SUBMISSION

- A. The bidders who satisfies the eligibility criteria in principle and has been issued tender document online on e-procurement portal etender.punjabgovt.gov.in

A-1 PRE-QUALIFICATION (STAGE-I)

This shall contain:-

- 1. Earnest money @ 1% of cost of DNIT is to be submitted online in the account of Executive Engineer, PWSSD No1 Bathinda. The Earnest money submitted in shape of Bank guarantee of any scheduled bank encashable at Bathinda is also acceptable. However, the successful bidder shall convert the Bank guarantee submitted as earnest money deposit to cash deposit with Engineer –in-charge within a period of 30 days from the date of award of work.

2. Duly filled Prequalification Performa along with supporting documents supporting eligibility criteria.

A-2 TECHNICAL BID (STAGE-II)

This shall consist of following DNIT documents duly filled & signed by the bidder.

- (i) Notice inviting tender, instruction to bidders, forms of agreement & clauses.
- (ii) Scope of work for Capital works of W/S, WTP, MPS, Sewerage and capital works for STP.
- (iii) Scope of work for operation & maintenance of existing and proposed services for W/S, Sewerage, WTP, STP & proposed roads for 10 years
- (iii) Process calculations including pipe size calculation.
- (iv) Layout plan.
- (v) Hydraulic diagram and P&I diagram
- (vi) A copy of the power of attorney in the name of the person signing the tender.
- (vii) Deviations, if any, from the bid document.
- (viii) Memorandum of understanding or agreement with the technology provider.
- (ix) Copy of one unpriced bid format as per tender duly signed, stamped and accepted confirming that no other condition is mentioned in the sealed price envelope.
- (X) Technology provider shall provide detailed documents indicating the features of process / process design criteria and operational philosophy. This must be supported by diagrams / photographs/video clips etc.

Notes :

1. The bidder's proposal must clearly specify the following information:
 - Proposed area for the Blower Room, MCC, PLC, Toilet, centrifuge shed, chlorination room, tonner shed, sludge storage platform etc.
 - Technical data such as no. of items, technical specifications, capacity and make of all the supply items including electrical & mechanical works, instrumentation ,pipes, valves and gates.
2. The following schedules duly filled in as per attached performa are to be submitted.
 - Electrical drive list
 - Pipeline schedule
 - Field instrumentation

Chemical requirement

A-3 Price Bid (Stage-III): shall be the Price Bid containing as per Volume III of Tender Documents.

4 BID EVALUATION

B-1 (Stage-I) The reference detail of earnest money submitted online or in shape of bank guarantee and application for pre qualification shall be opened first. The tenders without full amount of earnest money in the desired shape shall be rejected and no further evaluation shall be done for such cases.

B-2 The data provided by the bidder in support of his eligibility shall be scrutinized with respect to the eligibility criteria specified in the tender document. The bids which do not fulfil the eligibility criteria shall be rejected and **Technical and Price bid shall not be opened for such cases.**

B-3 Technical Bid- (Stage-II) of the bidders who fulfil the eligibility criteria shall be opened later in the presence of the bidders or their representatives who choose to be present in the office of EIC at the date and time to be intimated by EIC.

B-4 The Technical Bid thus opened shall be evaluated by the department as per tender document. Tenderers shall furnish all Information that the Department may require & clarifications whatever during evaluation of Technical bid. Tenderers whose offers may be deviating from the tender document (DNIT) shall be asked to confirm their acceptance of tender specifications and terms. After the Technical bid evaluation is completed, the date for Price Bid opening shall be separately intimated to those tenderers whose 'technical bid' offer is found acceptable.

B-5 The Dept. will carry out a detailed evaluation of the Bids to be substantially responsive in order to determine whether the Technical aspects are in accordance with the requirements set forth in the bidding documents. In order to reach such a determination, the Department will examine and compare the technical aspects of the Bids on the basis of overall completeness and compliance with the Technical specifications. Deviation from Specifications, if acceptable to department, in so far as practicable, will be converted to Rupees Value and added to the Bid Price to compensate for the deviation from the specification.

B-6 Price Bid (Stage-III) of those tenderers will not be opened whose Technical Bids are not acceptable.

B-7 (Deleted)

B-8 Price Bid (Stage-III), shall be opened on the date and time so intimated, in presence of intending tenderers or their authorized representative who may like to be present.

B-9 The part of bid for STP shall be evaluated on the basis of life cycle cost worked out as under:

Lifecycle cost = Capital Cost (as per Vol. III) + Net present value of the power consumption

B-9.1 Price quoted by the bidder

The bidder shall have to quote his rates as under

- a) Being item based work the rates for W/S, Sewerage, MPS and roads, street lights and O & M shall be quoted as %age above or below the rates entered in schedule of items in Vol- III
- b) **Being Lump-Sum work the rates for STP's including O & M for 120 months & daily guaranteed power consumption for STP shall be Quoted by the bidder. Accordingly life cycle cost of STP shall be worked out as explained in Vol-1 of tender documents**

B-9.2 Net present value of power consumption

Net present value of the average guaranteed power consumption indicated in the Price Bid shall be worked out on the basis of following parameters:

- Rate per kWh of energy consumption = Rs 4.50 per kWh
- Period of capitalisation = 15 years
- Rate of interest / rate of return = 10%

Example:

Average guaranteed power consumption	= A kWh per day
Energy charges	= Rs 4.50 per kWh
Annual Energy charges = 4.50 x 365 x A	= Rs 1642.50 A
Net present value factor	= 7.6061
Net present value of power consumption	= 7.6061 x 1642.50 A
	= Rs 12493 A

Note: In case actual energy consumption exceeds the average guaranteed energy consumption, the charges for the excess energy consumption shall be borne by the contractor. These shall be deducted by the Department out of his running bills. Cycle for calculating excess energy consumption shall be bill to bill basis issued by the Electricity Department.

Clause B-10 Value of Bid for Evaluation

For determining the lowest bidder the Cost of following components quoted by the bidder shall be summed up:-

- a) The total cost of W/S, OHSR WTP Sewerage, MPSs, Construction of roads etc.

including O & M as per the scope of DNIT.

b) The total life cycle cost of STP as (As explained above)

4. Time Schedule and Earnest Money Deposit

S.No.	Description	Unit	Completion Time	Amount for Earnest Money Deposit (Rs. Lacs)
1.	Providing & Laying of DI-K7 Pipe for water supply, S. W. pipe sewer, RCC cast in situ Sewer, RCC P1 Rising Main of various sizes, Construction of 5.00 MGD WTP, OHSR of 5.00 Lac gal capacity, RCC MPS ^{rs} , roads, street lights, making house connections for W/S & Sewerage rehabilitation of specified old W/S & Sewerage system and planning, designing, and construction of 4.50 MLD STP based on any suitable technology including 3 months for start upto stabilization of STP.	One unit	30 Months	1% of contract amount
2	Operation and Maintenance for proposed STP after stabilisation		120 months after stabilization period	
3	O & M of existing W/S & Sewerage system.		120 months from the date of start of the contract	
4	O & M of proposed services for W/S, Sewerage system & proposed roads, Street lights for 10 years		-do-	

General information on the location, scope and duration of the contract and other relevant data are attached in the tender document.

5. ELIGIBILITY CRITERIA

- a) Net worth of the applicant should not be less than 50% of DNIT cost.
- b) The general annual average financial turnover of the applicant should not be less than 50% of DNIT amount during last three financial years (2011-2012 to 2013-14) i.e. the total

turnover for the last three financial years should not be less than Rs. 276.00Crore which is 1.5 times of the DNIT amount on average basis.

- c) The average annual Technical turnover (construction of w/s , sewerage or both works) of the applicant should not be less than 30% per year of DNIT amount except cost of STP during last three financial years i.e. the total technical turnover for the last three financial years should not be less than Rs. 160.67 Crore which is 0.9 times of the DNIT amount except STP cost on average basis.
- d) The average annual technical turn over (for construction of STP) of the applicant should not be less than 30% per year of DNIT cost of STP during last three financial years should not be less than Rs 4.93Crore Which is 0.9 times of DNIT cost of STP on average basis.
- e) The agency shall have satisfactorily/successfully completed & commissioned.
One STP of 80% capacity i.e. 3.60 MLD based on similar technology.
Or
Two STP's of 50% capacity i.e. 2.25 MLD based on similar technology.
Or
Three STP's of 40% capacity i.e. 1.80 MLD based on similar technology.
STP works completed and commissioned during last 7(seven) financial years shall only be considered and these shall be of the same technology as offered by the bidder.

For Roads and street lights works, the firm can get this work executed from some other firms who fulfils the following eligibility criteria as sub contractors. Credentials of this other firm shall be submitted before execution of work of roads and street lights:-

- f) The Average annual technical turn over (for construction of roads) of the applicant should not be less than 30% per year of DNIT cost of the road work component, during last three financial years i.e. the total technical turnover for the last three financial years should not be less than Rs 10.71 Crore, which is 0.9 times of the DNIT cost of road work component on average basis
- g) The Average annual technical turn over (for street lights component) of the applicant should not be less than 30% per year of DNIT cost of the street light component, during last three financial years i.e. the total technical turnover for the last three financial years should not be less than Rs 1.32 Crore, which is 0.9 times of the DNIT cost of street light component on average basis.

Note :

- i) Similar nature of work means construction of sewerage system, water supply system STPs and roads as defined in the scope of work

- ii) In case of STP/ETP constructed for clients other than the Government /Semi-Government, in addition to the completion and performance certificate of the client, a certificate by the concerned state pollution control authority regarding satisfactory performance of the STP/ETP shall be required. .
 - iii) In support of annual turnover of the preceding three years and for net worth value relevant authenticated document should be submitted.
 - iv) Submission of false Information /document by the prospective tenderer will invite dis-qualification from tendering process including forfeiture of EMD.
 - v) The applicant shall produce authenticated certificate regarding all the above conditions from the client department.
 - vi) All the documents, certificates submitted shall be issued by Engineer-in-Charge of rank not below Executive Engineer or Equivalent.
- B. The applicant shall necessarily tie up with a technology provider for providing design/ performance guarantee/key equipments for STP of any suitable sustainable & proven technology.
- The technology provider must meet the following minimum criteria:
 “The technology provider must have provided the required technology for minimum of three Sewage Treatment Plant not less than **4.50 MLD** capacity each any where in world & these Plants should have been completed and commissioned satisfactorily”.
- C. Joint Venture: - Bids can be submitted by Joint Venture of firm. Criteria for joint venture is at Clause-37 of Annexure-C
- D. Personnel Requirement.**
- i) The contractor / bidder shall provide suitable qualified personal to fillup the senior position required at site during the execution of the capital work as given under.

Sr. No.	Position	Minimum Qualification	Experience (Years)	Min. Numbers required.
1	Project Director	BE Civil	15	1
2	Works Manager	BE Civil	10	2
3	Engineer	BE Mechanical	10	1
4	Engineer	BE Civil	10	1
5	Engineer	BE Electrical	10	1
6	Site Engineer	Diploma (Civil)	5	6
7	Chemist	B.Sc (Chemistry)	3 year in reputed laboratory	1

ii) The contractor / bidder shall provide suitable qualified personal to fill up the senior positions required at site during the execution of O&M work (except O&M of STP) as given under.

S. No.	Position	Minimum Qualification	Experience (Years)	Min. Numbers required.
1	Project Director/Executive Engineer for O&M	BE Civil/Elect/Mech.	10	1
2	Financial Manager	CA	5	1
3	Superintend	Graduation	5	1
4	Works Manager/ Sub Divisional Engineer	BE Civil/Elect/Mech.	5	1
5	Clerk cum computer operator	BCA	5	1
6	Site Engineer/ Junior Engineer	Diploma Civil/Elect/Mech.	5	3
7	Chemist	B.Sc. Chem.	5	1
8	Peon	-	-	1
9	Chowkidar	-	-	1
10	Driver	-	5	1
11	PLC / SCADA Operator	BCA	5	1

iii) Equipment & machinery Requirement.

The following equipment / machinery shall be kept available by the contractor at Bathinda during the whole O&M period.

S. No.	Description	Quantity
1	Suction cum jetting machine	3 No.
2	Super suction cum jetting machine	1 No.
3	Trolley mounted pump set cum Generator	2 Nos.
4	Pick up van for sewerage maintenance	1 No.
5	Pick up Van for Water supply maintenance	1 No.
6	Pneumatic sewerage plug for all sizes (200mm to 1145mm) 2 for each size	Two for each size.
7	Gypsy for man power/field staff for W/S & Sewerage	2 Nos.
8	Water tanker and tractor	2 Nos.
9	Sewer cleaning machine	2 Sets.

6. Tender documents can be downloaded online from the e- procurement Portal

7. As the bids are to be submitted online, the Bidders are advised to obtain Digital Signature Certificate (DSC) at the earliest. For obtaining Digital Signature Certificate, the Bidders should follow point No. 2 under "Annexure-A1 Conditions of e-tendering".

Key Dates

S. No.	PWSSB stage	Contractor Stage	Start Date and Time	Last Date and time for uploading of tenders
	Release of tender document	-		
1	-	Downloading of tender documents and payment of tender document fee	19.11.14 from 11.00 hours.	16.12.14 up to 17.00 hours.
2	Submission of pre-bid queries through mail/post/by hand		Up to ___ at 17.0 hrs	
3.	Pre bid meeting	-	19.11.14 at 11.30 Hrs.	
4.	Opening of prequalification	17.12.14 at 14.30 hrs.		
5	Opening of technical bid	To be intimated later-on		
6	Opening of price bid	-do-		

- 8 The bidders can download the tender documents from the e-procurement Portal etender.punjabgovt.gov.in after making the Non refundable payment of Rs. 7500/- in Tender document fee has to be paid online through payment gateway during the “Downloading of Tender Documents & Payment of Tender Document Fees” stage and Earnest money has to be deposited through Real Time Gross Settlement transaction/ net banking.
- 9 The details of the EMD are required to be filled at the time of Bid submission stage, the Bidders are required to keep the EMD details ready beforehand.
- 10 Tender will be accepted through online mode only.
- 10.1 All the supporting documents shall be submitted in scanned form only.
- 10.2 Bidder will have to pay Rs. 5618/- online as Tender processing fee in favour of ITI Ltd. Delhi.
- 11 The societies shall upload & produce a copy of the resolution of the Co-Operative department for e-tendering.
- 12 The bid for the work shall remain open for acceptance during the bid validity period to be reckoned from the date of “Online Bid submission”. If any bidder withdraws his bid before the said period, any modification in the terms and conditions of the bid, the said earnest money shall stand forfeited. Bids would required to be valid for 6months from the date of closing of online “ Bid submission”.

- 13 MoU with technology provider for STP: - Bidder shall submit, along with his bid, memorandum of understanding/agreement signed with the technology provider as per format appended hereto. If any, technology provider enters into MoU/Joint venture with more than one bidder, he shall be bound to give same terms, conditions and rates to all bidders who wish to enter into MoU/Joint venture with this technology provider. In such case, Department shall be at liberty to request the technology provider to provide proof thereof. Also MoU between the technology provider/contractor shall be made part of the bid/contract. Both the contractor and technology provider shall be jointly and severally responsible for the performance of the plant. The process design & drawings shall be vetted and signed by the technology provider also.
- 14 The Executive Engineer, Punjab Water Supply and Sewerage Division No 1 Bathinda shall reserve the right to reject any or all of the tender/bid, without assigning any reason whatsoever and his decision shall be final and binding. No Contractor/Bidder shall have any claim arising out of such action.
- 15 Successful bidder/contractor, within 30 days of award of work, shall produce VAT registration No. (TIN) issued by the Department of Excise & Taxation, Punjab.
- 16 The Average Ground Level of STP Area is 208.38 Mtr. (approx). The Contractor/Bidders are advised to visit and examine the sites where the works are to be carried out and its surrounding and obtain for themselves on their own responsibility all information and satisfy himself with prior arrangement as to the conditions prevalent there w.r.t execution of works as per the scope of work. No claim, whatsoever on any accounts shall be entertained by the PUNJAB WATER SUPPLY & SEWERAGE BOARD in any circumstances.
- 17 Contractor/Bidder is expected to examine all instructions, forms, terms, clauses, PUNJAB WATER SUPPLY & SEWERAGE BOARD requirements and other information in the Tender Document. Failure to furnish all information as required in the tender document or submission of bid not substantially to the tender documents in every respect will be at the Contractor/Bidder's risk and may result in rejection of the bid.
- 18 The Contractor/Bidder, whose bid is accepted, shall be required to furnish security deposit at the rate of 5% (five percent) of the allotted cost of the work, by deductions from the running bills. 3% (Three percent) of the total cost to cover defects liability & short comings and 2%(two percent) of the total cost till the satisfactory completion. The EMD of the successful Contractor/Bidder will be treated as part of the security deposit.
- 19 The offer shall remain valid for Acceptance for a period of 6 (Six) Months from the date of closing of on line bid submission. The earnest money shall be forfeited if the Tenderer / Contractor withdraws or modifies his offer within the validity period at his own or fails to sign the (Formal Contract) agreement after acceptance of his offer within 10 days. After the forfeiture of earnest money, the contract shall be immediately nullified.

- 20 Address for communication, collection and submission of bids:
The Executive Engineer,
Punjab Water Supply and Sewerage Division No 1 Bathinda, Tel No. 0164-2270284
- 21 On acceptance of the tender, the Contractor shall either himself remain available at site of work or arrange the availability of an accredited representative, legally authorised in writing at the site of work to receive instructions of the Engineer-in-charge or his representative and to ensure prompt compliance thereof.
- 22 The Engineer-in-Charge does not bind himself to accept the lowest rate or any tender and reserves to himself, the right of accepting the whole or part of the tender and Tenderer/ Contractor shall be bound to perform the same at the accepted rates.
- 23 Sales tax / VAT, labour cess or any other tax etc. on the material or the turnover shall be payable by the Contractor and PUNJAB WATER SUPPLY & SEWERAGE BOARD will not entertain any claim in this respect.
- 24 The Contractor shall comply with the provisions of the Apprentices Act 1961, minimum wages Act 1948, Workmen's compensation Act 1923, contract labour (Regulation and Abolition Act 1970), payment of wages Act 1936 Employer's liability Act 1938, Maternity Benefits Act 1961 and the Industrial Disputes Act 1947 as applicable and the rules and regulations and amendments issued there under from time to time. Failure to do so shall amount to breach of the contract and the Engineer-in-charge may at his discretion to terminate the contract. The Contractor shall also be liable for any pecuniary loss liability arising on account of violation by him of the provision of the Act.
- 25 The Tenderer/ Contractor shall bear all costs associated with the preparation and submission of his tender and the department shall in no case be liable for these costs.
- 26 Each Tenderer/ Contractor shall submit only one tender for this work. A Tenderer/ Contractor, who submits or participates in more than one tender, will be disqualified.
- 27 Unless otherwise stated, the contract shall be for the whole work as described in the "Scope of Work" and the approved drawings. The Contractor shall be bound to complete the whole work as described in the scope of work and the approved drawings, including the additional items if any, as per approved drawings and instructions. The certificate of completion as issued by the Engineer-in-charge shall be the conclusive proof of completion of work.
- 27 A The tender shall be typed or written in ink and shall be signed by the Tenderer/ Contractor or a person or persons duly authorised to sign on behalf of the Tenderer/ Contractor. He shall sign all pages of the tender documents containing the entries and all corrections made there in including drawings.
- 28 Incomplete tenders or tenders not fulfilling any of the conditions specified above, are liable to be rejected without assigning any reason.

- 29 Whenever required under Government regulations, it shall be incumbent on the successful Contractor/Bidder to pay stamp duty on the contract agreement, as per ruling on the date of execution of the contract agreement.
- 30 Contractor/Bidders shall carefully examine the Tender Documents and fully converse themselves about all the conditions and matters, which may in any way, affect the work or the cost thereof. If the Contractor/Bidder finds discrepancies or omission in the specifications or other documents or should he be in doubt as to their meaning, he may discuss with Engineer-in Charge during office hours on any working day before submitting his bid.
- 31 At any time prior to the deadline for submission of Bids, the Executive Engineer may, for any reason, whether at his own initiative or in response to clarification requested by prospective Contractor/Bidders modify the Tender Documents by issuing Addenda.
- 32 Such Addenda will be sent to all prospective Contractor/Bidders who have received the Tender documents and will be binding upon them .The Contractor/Bidders shall duly sign and return the Addenda along with their Bids, which shall form a part of their Bids. Non-receipt of addenda by the Contractor/Bidders will not form basis for any claim whatsoever.
- 33 In order to afford prospective Contractor/Bidder's reasonable time in which to take such Addenda into account in preparing their Bids, the Executive Engineer may at his discretion extend the deadline for the submission of Bids.
- 34 No alteration whatsoever be made in the text of the Bid form by the Contractor/Bidder. Any remark/deviation or explanation should be sent in a separate covering letter.
- 35 The Bid prepared by the Contractor/Bidder and all correspondence and Documents relating to the Bid exchanged by the Contractor/Bidder and the Executive Engineer shall be in English Language. Supporting Documents and printed literature furnished by the Contractor/Bidder with his Bid may be in another language provided they are accompanied by an appropriate translation of the same into English language. The failure to comply with this condition may cause rejection. For the purpose of interpretation of the Bid, the text in the English language shall prevail.
- 36 The price bid should be submitted as per the Price Schedule and should conform to the scope of work specifications and Conditions given in Volume-II. The Price Bid will contain in %age above or below the rates entered in schedule of items approved in Vol.-III and Lump-sum rates for STP's including O & M of 10 years. Conditional Price bid shall be rejected and Contractor/Bidder will be disqualified.
- 37 The Contractor/Bidder shall quote for the entire works on a "single responsibility" basis such that the total price covers all the Contractor's obligation mentioned in or to be reasonably inferred from the tender documents in respect of the design, drawings including procurement, delivery, construction, erection and completion of works. This includes all requirements under the Contractor's responsibilities for testing and

commissioning of the works.

- 38 The unit rates and prices shall be quoted by the Contractor/Bidder entirely in Indian Rupees. All payments to the successful Contractor/Bidder under the proposed contract shall be made entirely in Indian Rupees (Rs.).
- 39 No interest shall be paid on Earnest Money/Security Deposit.
- 40 In exceptional circumstances, prior to expiry of the original Bid validity period, the Executive Engineer may request the Contractor/Bidder for a specified extension in the period of validity. The request and the response there-to shall be made in writing. A Contractor/Bidder agreeing to the request will not be permitted to modify his bid on his own but will be required to extend the validity of his Bid and Bid Security correspondingly. The provision regarding discharge and forfeiture of bid security shall continuously apply during the extended period of bid validity.
- 41 If the Bid is made by a limited company or a limited corporation, it shall be signed by a duly authorized person holding power of Attorney for signing the Bid in which case a certified copy of the Power of Attorney shall accompany the Bid.
- 42 All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses shall be stated below their signatures.
- 43 To assist him in the examination, evaluation, and comparison of Bids, the Executive Engineer may ask Contractor/Bidders individually for clarification of their Bids including breakdown of unit rates / prices. The request for clarification and the response shall be in writing, but no change in the prices or substance shall be sought, offered or permitted on Contractor/Bidders desire except as required to confirm the correction of arithmetical errors discovered by the Executive Engineer during the evaluation of Bids.
- 44 Bids determined to be substantially responsive will be checked by the Executive Engineer for any arithmetical error in computation and summation. Error will be corrected by the Executive Engineer.
Where there is a discrepancy between amount in figures and in words, lower amount will govern.
- 45 On completion of the works before issuing of the completion certificate by the Engineer-in-Charge the Contractor/ Bidder shall submit 5 (five) sets of as-built drawings. A soft copy of the drawings on Compact Disk (CD) pendrive will also be supplied.
- 46 One set of approved drawings and all other documents relating to the works under contract shall be kept in the site office and made readily available for discussions, examinations of the Engineer or his representatives along with the testing equipment and machinery.
- 47 As soon as the allotment letter is issued to the Contractor/ Bidder, he will submit to the Engineer-in-Charge his programme to complete the works by the time indicated in the contract, in the form of a Bar Chart for review of the Engineer-in-Charge and make

suggested modifications before his approval of the same. The approved bar chart shall be diligently and strictly followed with a view to complete the works as per schedule. The progress & planning of works shall be reviewed from time to time and he may modify the same depending upon the exigencies of the work and stage of the works.

- 48 Contractor/ bidder is advised to read carefully all chapters and give complete information regarding his proposals, substantiating the same with calculations, drawings literature, with clear reference to any standards adopted (which are not mentioned in the tender), in such manner that there is no ambiguity or nothing is left to change. All relevant information, so as to make the proposal understandable shall be given. If in the opinion of the Engineer-in-charge, the proposal is grossly incomplete, this will form sufficient reason for complete rejection of the tender on technical grounds.
- 49 **Contractor/ bidder shall note that this is a %age/ Lump-sum turnkey tender. The Contractor/Bidder shall give rate as per volume-III for evaluation of tender.** However, his proposal is subject to scrutiny and approval. He shall therefore take utmost precaution to offer very standard equipment manufactured by only reputed manufacturers (wherever the makes are specified in the DNIT, only the same shall be offered).
- 50 The Contractor/Bidder should note that after the tenders are opened, all modifications, corrections, changes shall be carried out entirely to the satisfaction of the Engineer-in-Charge at no extra cost to PUNJAB WATER SUPPLY & SEWERAGE BOARD. The Contractor/ bidder shall not be allowed to change the price quoted on his own.
- 51 All initial defects shall be rectified to the entire satisfaction of the Engineer-in-charge. Damaged or non-working parts shall be replaced at no extra cost to PUNJAB WATER SUPPLY & SEWERAGE BOARD. The equipments supplied and erected by the bidder shall be guaranteed for 12 months from the date of stabilisation of STP. If during guarantee period, any equipment gets damaged the same shall be replaced at no extra cost.
- 52 Electric Connection or generator set & water supply required for the execution of work shall be arranged by the Contractor/ bidder at his own expenses.
- 53 The department shall not issue any material.**
- 54 Details regarding submission of bids and evaluation of bids are given in Vol I of the tender document.
- 55 All major equipments and materials shall be inspected on inspection call by the contractor. The inspection will be carried out by the Officer authorised by the Superintending Engineer, PUNJAB WATER SUPPLY & SEWERAGE BOARD Circle, BATHINDA. The inspection of material can be done either at factory premises or at work site as per the sole discretion of Superintending Engineer, PUNJAB WATER SUPPLY & SEWERAGE BOARD Circle, Bathinda
- 56 The performance of the Plant operated under design conditions as specified in the bid documents specifications shall be guaranteed for its process performance. Performance of

the individual units and the total treatment Plant, ultimate quality of the treated effluent for influent conditions, guarantee for utilities including power and chemical consumption as specified in the process. In the event that certain of the guaranteed performance have not been met during the performance guarantee period, the Bidder shall make suitable additions, deletions, or modifications, if required, to the process and the Plant, to ensure the guaranteed results without making any change in consumable items. All the costs incurred for such additions, deletions or modification as mentioned above shall be borne by the Contractor without any liability on the part of the Department.

57 Performance Guarantees:

- a) The successful bidder shall furnish 5% of the capital amount of work as performance bank guarantee.
- b) The successful bidder shall also furnish 5% of the contract amount of O & M work as performance bank guarantee
- c) The technology provider shall furnish 1% of the STP cost including O&M period as performance bank guarantee.

57A The SPV/ Contractor will submit to the department after study and analysis the basic / datum line information on water supply system and its network after 1 year of O&M. These details will include the present level of tariff calculation, percentage of non revenue water (NRW) , monthly / yearly electricity consumption / charges, customer complaints, quality of water supplied and quality of treated effluent etc this data after approval of the department will be thge basis of determination and calculation of key performance indicators (KPIs) at end of the second year., The future O&M of MC Bathinda will then be based on these KPIs.

58 Contractors who are near relatives of Engineering Officers between the grades of SUPERINTENDING ENGINEER, Executive Engineer and Sub- Divisional Engineer, Assistant Engineer and Junior Engineer of the PUNJAB WATER SUPPLY & SEWERAGE BOARD will not be allowed to tender for works in the Circle (responsible for award and execution of contracts) where their near relative is working. Contractors who are near relatives of Chief Engineer and higher ranked officers will not be allowed to work in the Department as a whole.

Note:- By the term near relative meant is wife, husband, parents, children, brothers, sisters. **(Brother/sister in Law, son/daughter in law, uncle, first cousin and father in law)**

59 All Bank Guarantees shall be encashable at Bathinda

- 60 Priority of the work will be decided by the Engineer-in-charge.
- 61 The work of railway crossings is not in the scope of the bidder.
- 62 The word MD/Managing Director may be read as CEO/Chief Executive Officer
- 63 The technology provider must provide a process expert of minimum qualification
B.Tech / B.E in environmental of chemical engineering during O&M period for STP.

ANNEXURE –A1
CONDITIONS OF E-TENDERING

Instructions to Bidders on Electronic Tendering

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

All the bidders intending to participate in the tenders processed online, are required to get registered for the Electronic Tendering System on the e-procurement Portal etender.punjabgovt.gov.in For more details, please see the information in Registration info link on the home page.

1. The bidders will have to obtain class 3 digital certificate from any certifying authority. For this they can contact Punjab e- procurement help desk at B-99, Phase-8, Mohali or can contact at help desk.

Nos. 92572- 09340

81466-99878

0172- 5095926

0172- 5095927 (Fax)

E mail- Punjab eproc @ etender wizard.com

2. In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/ power of attorney to that user. The firms has to authorize a specific individual via an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificate are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm for Punjab Water Supply and Sewerage Board tenders as per information Technology Act 2000. The digital signature of this authorized user will be binding on the firm. It shall be the responsibility of management/ partners of the registered firms to inform the certifying authority or sub certifying authority, in case of change of authorized user and applies for a fresh digital certificate and issue an 'authorization certificate' for the new user. The procedure for application of a digital certificate will remain same for the new user.

The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

3. Online viewing of Notice Inviting Tenders:

The contractors can view the NIT and the time schedule (Key Dates) for all the packages floated using the electronic tendering system on the **e-procurement portal etender.punjabgovt.gov.in**

4. Opening of an Electronic Payment Account:

4.1 For purchasing the tender documents online, contractors are required to pay the tender documents fees online using the electronic payments gateway service as mentioned at Sr.No.6 below.

4.2 For the list of payments using which the online payments can be made, please refer to the Home page of **e-procurement portal etender.punjabgovt.gov.in**.

5. Submission of Earnest Money Deposit:

5.1 The EMD payment can be made by eligible contractors through Real Time Gross Settlement/ Net Banking Transmission/ in shape of bank guarantee encashable at Bathinda. The original bank guarantee submitted for earnest money should reach the office of Executive Engineer, PWSSB, Division No1, Bathinda before the time of opening of tender. The photo copy of the same should be uploaded alongwith the tender at stage-I.

6. Submission of Tender Document Fees:

The payment can be made by eligible contractors online directly via Credit Card/ Internet Banking Account/ Cash Card/ Debit card. The contractors have to pay for the tender documents online by making online payment of tender document fee using the service of the secure electronic payment gateway. The secure electronic payments gateway is an online interface between contractors and credit card/online payment authorization networks.

7. Purchase of Tender Documents:

Downloading of Tender Documents: The tender documents can only be downloaded from the Electronic Tendering System on e-procurement portal etender.punjabgovt.gov.in

8. Submission of Bid Seal of online Bids:

Submission of bids will be preceded by submission of the digitally signed bid seal (Hash) as stated in the tender time schedule (Key dates) of the Tender. Bidders

should take note of any corrigendum being issued on the website on a regular basis. They should view and note down the bid seal and ensure that it matches with their previous noted bid seal before conforming the rates.

9. Key Dates

9.1 The bidders are strictly advised to follow dates and time as indicated in the Notice Inviting Tender. The Date and time will be binding on all the bidders. The bidders are required to complete the stage within the stipulated time as per the schedule to continue their participation in the tender. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and time of the stage as defined in the Notice Inviting Tender. The bidder should check the status of a particular stage by following the below mentioned procedure:-

- a) Click on “Main” after login into the portal.
- b) Select “Tender Search “ and click on “Go”.
- c) Next screen will appear on the screen and click on “Search” button to view the list of various tenders.
- d) Select the tender whose status is to be viewed by clicking on the tender no.
- e) Click on “Action page” button. The status of all the stages i.e. whether “Pending” or “completed” can be viewed.

The bidder should ensure that the status of a particular stage should be shown as “Completed” before the expiry date and time of that particular stage and he should possess a copy of receipt of completion of each stage to be performed from his end. It will be the sole responsibility of the bidder if the status of a particular stage is “Pending” till the expiry date and time of that stage and he is not able to proceed further in the e-tendering process.

Other Information:

1. The intending bidders shall fill the lump-sum rates for STP and item rate @ above/ below in percentage in the online templates of the online tender. The price Bid has to be submitted mandatory online.
2. The Technical Bid Documents that cannot be submitted online, if any should be duly signed on all pages by the bidder & put in separate sealed envelopes and these sealed envelopes together with the documents listed below should be sealed in another cover and delivered to this office before the date and time mentioned in the Tender Notice.
 - i) A list of all documents accompanying the sealed envelopes containing the tender documents.

- ii) Duly accepted power of Attorney in original along with its two certified copies in the name of bidder or authorized representative to act on behalf of the agency.
- 3. Tender must strictly abide by the stipulations set forth in notice inviting tender & while tendering for the work, the bidder shall adopt only the three stage system.
- 4. The Price Bid – Price Bid has to be submitted mandatory online and shall not be accepted physically under any circumstances. In case any bidder does not comply with procedure given above, it will be presumed that he is not interested in the work and the work shall not be let out to him. Further he may be de-listed without further notice to him for failing to abide by the strictly approved terms of notice inviting tender for this work.
- 5. The tenders which are not accompanied by the earnest money do not strictly follow the technical requirement, are liable to be rejected summarily.
- 6. Tenders/ quotations which are dependent upon the quotations of another bidder shall be summarily rejected.
- 7. The tender of the bidders who does not satisfy the qualification in the bid documents are liable to be rejected summarily without assigning any reason and no claim what so ever on this account will be considered.

Note:- Bidders participating in e-tendering shall check his/her validity of Digital Signature Certificate before bidding in the specific work floated online at e-procurement portal of etender.punjabgovt.gov.in Also, the bidder will be held liable solely, in case, while bidding in particular stage- Date & Time expire as per the key dates available.

ANNEXURE - B-I

MEMORANDUM ON ESTIMATED COST, EARNEST MONEY DEPOSIT, SECURITY DEPOSIT, PERFORMANCE GUARANTEE DEPOSIT

I/we hereby offer to execute for the PUNJAB WATER SUPPLY & SEWERAGE BOARD, the work, specified in the under written Memorandum within the time specified in such memorandum at PERCENTAGE/ Lump-Sum entered in the Price Schedule (Vol.-III) referred to the "Notice Inviting Tender" and annexed here to and in accordance in all respects, with the specifications, design, drawings and instructions in writing and "Conditions of Contract" and with such material as are provided for and in all other respects in accordance with such conditions so far as applicable.

Memorandum

a) General description

Providing & Laying of DI-K7 Pipe for water supply, S. W. pipe sewer, RCC cast in situ Sewer, RCC P1 Rising Main of various sizes, Construction of 5.00 MGD WTP, OHSR of 5.00 Lac gal capacity, RCC MPS^s, roads, making house connections for W/S & Sewerage and planning, designing, and construction of 4.50 MLD STP based on any suitable and O & M of existing and proposed services for W/S, Sewerage & proposed roads for 10 years from date of start of work & all other works contingent thereto as per DNIT in Bathinda town

- | | |
|---|--|
| b) Estimated cost | i) 184.00 Crore [W/S & Sewerage, MPS, Construction of roads, street lights STP including O&M of STP and O & M of existing and proposed services for W/S, Sewerage & proposed roads, street lights for 10 years |
| c) Earnest money | 1% of DNIT amount |
| d) Security deposit | 5% of the Amount of capital work done |
| e) Performance guarantee | i) 5% of amount of capital work
ii) 5% of amount of O&M work
iii) 1% of amount of STP work including O & M cost from technology provider |
| f) Percentage if any to be deducted from running bills. | Income Tax, Work Tax, Labour Welfare Cess and any surcharge or any other tax as applicable from time to time. |

g) Time allowed for completion from the date specified in the Acceptance letter issued to the Contractor/ bidder = 30 months for all works specified in schedule of work including Three months or complete stabilization period whichever is longer for STP and O&M of specified works for 10 years from date of start of contract.

Should this offer be accepted in whole or in part, I/we hereby agree to abide by and fulfil all the terms and provisions of the said conditions of contract and all the terms provisions contained in the detailed "Notice Inviting Tender" and /or in default there to forfeit and pay to PUNJAB WATER SUPPLY & SEWERAGE BOARD or his successors in office, the sum of money mentioned in the said conditions.

A sum of Rs 184.00 Lac is hereby deposited online in the account of Executive Engineer, PUNJAB WATER SUPPLY & SEWERAGE BOARD Division No 1 Bathinda / a bank guarantee amounting to Rs. _____ of _____ bank encashable at Bathinda is being submitted as earnest money payable at Bathinda.

I/we agree that the full value of Earnest money will be forfeited without prejudice to any other right of remedies to the PUNJAB WATER SUPPLY & SEWERAGE BOARD or his successor in office, should I/we (i) withdraw or modify my/our offer during the period of validity or (ii) fail to sign the contract agreement after acceptance of the offer within 10 days or (iii) fail to commence the work within time specified in the issue of acceptance of my/our offer, otherwise the said Earnest money shall be retained by PUNJAB WATER SUPPLY & SEWERAGE BOARD towards security deposit against clause (d) of the above memorandum.

Dated -----

Signature of the Contractor/ bidder.

Witness -----

Address -----

Address -----

Occupation -----

Telephone -----

The above offer is hereby accepted by me on behalf of the CHIEF EXECUTIVE OFFICER, PUNJAB WATER SUPPLY & SEWERAGE BOARD.

Signature

Designation:

Dated -----

ANNEXURE - B-II
**DECLARATION OF CONTRACT DOCUMENT BY THE CONTRACTOR/
BIDDER**

1. I/we _____ have read the general and special conditions of the contract which are appended to the Bid and I/we agree to the conditions laid therein if the contract is awarded to me/us.
2. I/we have also read the specifications, studied the preliminary drawings, and understood the scope of work included in the Bid and to be executed by us.
3. I/we have visited the site of works and am/are well acquainted with the local practices, availability of the materials and labour and their prevailing market rates
4. I/we agree to abide by the departmental rules regarding deductions made in the bills like income tax, VAT, Labour Welfare Cess security deposits and cost of materials issued by the department etc.
5. I/we shall not ask for revision of rates except as applicable under the price adjustment clause, due to any escalations in rates of materials or labour in the rates quoted by me/us in this offer through out the period of construction and completion of the works.
6. I/we undertake to complete the work and hand-over the same within the stipulated/allotted time for the completion of the work in good workmanlike manner.
7. The Price Offer is valid for a period of 6 (six) months from the date of closing of on line bid submission.
8. I/we stand guarantee for the rectification of the defects in the work if any to the full satisfaction of the Engineer-in Charge as per clauses of agreement.
9. I/we have no doubts or un-cleared ambiguities regarding the specifications, details in the preliminary drawings, scope of the work, and have fully understood our responsibilities in executing and completing the work to the full satisfaction of the EIC.
10. I/we have based our Bid rates having the full knowledge of the statements and facts.

Place: -----

Signature -----

Date: -----

Name -----

Address -----

Witness :

Name -----

Address-----

ANNEXURE - C

DEFINITIONS AND CLAUSES OF CONTRACT

Definitions

In this contract as here in after defined, the following words and expressions shall have the meanings hereby assigned to them (except where the context requires otherwise):

1. The "Work" means the works as *desired* in the tender documents issued for the purpose of bidding including the start up/stabilization for 3 months or complete stabilization of STP whichever is later.
2. The "Contract" means the documents forming the tendered offer and acceptance there of constituting a binding contract between the Executive engineer PWSSB, and the Contractor/ bidder. The tender documents including the conditions, the preliminary/approved engineering drawings, design the specification supplemented with instructions issued from time to time by the Engineer-in-charge shall be binding on the parties in the stated order of precedence. All these documents taken together with the tendered offer and its acceptance shall be deemed to form the contract and shall be complementary to one another.
3. The "Common Schedule of rates" Shall mean a printed document containing rates of different items of works pertaining to different Branches of PWD i.e. Irrigation, B&R (Building & Roads Branch) and Public Health Branch and approved by the committee on direction of Chief Engineers of these PWD Branches and the Punjab Government.
4. (i) "Completed capital works for STP shall mean the work completed in all respect as per laid down specifications, approved drawings, approved NIT, start up and stabilization of STP for three month or longer till complete stabilization to entire satisfaction of the Engineer-in-charge. O&M of plant shall start after stabilization of plant".
(ii) "Completed O&M work of STP shall mean the work of operation & maintenance successfully completed in all respects to the entire satisfaction of Engineer-in-charge as per tender documents.
(iii) Completed Water supply including construction of WTP , OHSR & sewerage works (including construction of MPS and Construction of roads, street lights)shall mean the work completed in all respect as per laid down specifications, approved drawings, approved NIT to the entire satisfaction of Engineer-in-charge.
(iv) Completed O & M of existing and proposed services for W/S, Sewerage & proposed roads successfully completed in all respects to the entire satisfaction of Engineer-in-charge.

The entire contract shall be deemed to have been completed, thereafter.

5. The "Contractor/ bidder" shall mean the individual or firm or company whether incorporated or not undertaking the work and shall include the legal personal representative or the persons comprising such firm or company or the successors of such firm or company as well as the assignees of such individual or firm or company whose tendered offer has been accepted.
6. The "Completion date" is the date when the Engineer-in-charge certifies that the work including start up, stabilization and operation & maintenance has been completed satisfactorily.
7. "Communication between parties are the written and signed letters, notices, reminders, memorandum and instructions recorded in the instruction book or books kept at site.
8. "Days & months" are calendar days and calendar months.
9. The "Engineer-in-charge " mean the Executive Engineer who shall supervise the work and administer the contract with the assistance of his authorized subordinates who shall be in-charge of the work and who shall sign the contract on behalf of the PUNJAB WATER SUPPLY & SEWERAGE BOARD.
10. "CEO/CE" means the CHIEF EXECUTIVE OFFICER/Chief Engineer of PUNJAB WATER SUPPLY & SEWERAGE BOARD.
11. The "Site" shall mean the land or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street which may be allowed to be used for the purpose of carrying out the contract.
12. The "Start date" is the date when contract came in to existence upon the issue of "letter of acceptance" by the Engineer-in-Charge and as notified in the letter of allotment.
13. "Scope of Work" shall mean the items of work to be executed at site of work pertaining to work allotted to the Contractor/ bidder.
14. The "Works or work" shall unless the context otherwise requires mean what the Contractor/ bidder is required to execute and hand over to the PUNJAB WATER SUPPLY & SEWERAGE BOARD.
15. "PUNJAB WATER SUPPLY & SEWERAGE BOARD" means Punjab Water Supply & Sewerage Board .
16. Owner' or 'Department' or 'Client' means Punjab Water Supply & Sewerage Board (PUNJAB WATER SUPPLY & SEWERAGE BOARD), Chandigarh (Punjab) or Punjab Water Supply & Sewerage Circle (PWSSC) or Punjab Water Supply & Sewerage Division (PWSSD).
17. 'Tender' means the documents issued by PUNJAB WATER SUPPLY & SEWERAGE BOARD,
18. 'Bid' means the documents submitted by Contractor/ bidder to whom tender has been issued.

19. 'Contractor/Bidder' means the Contractor/ bidder/agency who submits the bid against the invitation for bid.
20. 'Award' means the written acceptance of bid by the PUNJAB WATER SUPPLY & SEWERAGE BOARD, to the successful Contractor/Bidder.
21. 'Department' means the PUNJAB WATER SUPPLY & SEWERAGE BOARD, Punjab. The words department and Executive Engineer, Punjab water supply & Sewerage Division, and his representatives have been used interchangeably at places and mean the same, i.e., the engineer, or his representatives.
22. "Consultant" means the consultant appointed by the PUNJAB WATER SUPPLY & SEWERAGE BOARD for the purpose of providing consultancy services.
23. "MPS" means Main Pumping Station.
24. "STP" means Sewage Treatment Plant based on any suitable, sustainable and proven technology & covered under this tender document.
25. WTP means water treatment plant based on rapid sand filtration Plant
26. "Government" means the Govt. of India/Govt. of Punjab.
27. "Drawings" means the drawings referred to in the list of drawings attached to the tender and any modification of such drawings approved/issued in writing by the Engineer-in-charge and such other drawings as may from time to time be furnished or approved in writing by the Engineer.
28. The "contract sum" means the sum identified in the contract for the completion of works as per contract.
29. "Contractor/ bidder's equipment" means all appliances or machinery of whatsoever nature materials or other things intended to form or forming part of the works.
30. "Portion of the work" means a part of the work or section of the work.
31. "Specifications" and "particular specifications" means the regulating guidelines contained in the Punjab PWD/PUNJAB WATER SUPPLY & SEWERAGE BOARD specifications, Manual of Sewerage and Sewage Treatment, Manual on Water Supply and Treatment published by the Central Public Health and Environmental Engineering Organization (CPHEEO) under the Ministry of Works and Housing, Indian Standard specifications and codes, all of latest editions and those contained in the tender documents and also those based on good engineering practices.
32. "Time for completion" means the time as stipulated for completion of the works or any section or portion there-of as stated in the contract or as extended under clause and shall be calculated from the date specified in the contract. It will be the date when the contract enters into force for fulfillment of any obligation as per necessary legal, financial or administrative requirements.
33. "Defect liability period" i.e.12 months means the period after actual completion of the work (as mentioned at Sr. No.4 above) during which the Contractor/ bidder will carry the full

- liability to make good to the complete satisfaction of the Engineer-in-Charge, any defects in the completed work or any bad work.
34. "Cost" means the amount which shall be deemed to include all overhead costs whether incurred on or off the site, all taxes, excise duties, royalties etc. as applicable on the materials, labour or any other item which is required to complete the works.
 35. "Temporary Works" mean temporary works of every kind required in or about the execution of works.
 36. "Permanent Works" mean the permanent works to be executed and maintained in accordance with the Contract.
 37. "Construction / Working Drawing of a particular component / item / equipment of the Sewage Treatment Plant" means the detailed engineering drawing of that item submitted by the Contractor/ bidder and approved by the Engineer-in-charge, PUNJAB WATER SUPPLY & SEWERAGE BOARD, prior to construction / fabrication / erection of that component, and based on which the same shall be carried out.
 38. "As-built Drawing of a particular component / item / equipment of the Sewage Treatment Plant" means the engineering drawing submitted by the Contractor/ bidder prior to commissioning, showing the actual details on which the construction / fabrication / erection of that particular item has been carried out.

Note: - In interpreting these "Clauses of contract" singular also means plural, male means female and vice versa

Abbreviations

The abbreviations used in the tender documents or any other correspondence will stand for the full forms given as under:

AAP	=	Alarm Annunciation Panels
AC	=	Asbestos Cement
ACB	=	Air Circuit Breaker
CI	=	Cast Iron.
CPCB	=	Central Pollution Control Board
CPHEEO	=	Central Public Health and Environment Engg. Organization
DFE	=	Dual Fuel Engines
DG	=	Diesel Generator
DI	=	Ductile Iron
DPR	=	Detailed Project Report
E&M	=	Electrical and Mechanical
FDB	=	Final Discharge Body
FRC	=	Fiber Reinforced Concrete
FSL	=	Full Supply Level
GAP	=	Ganga Action Plan
GG	=	Gas Generator
GL	=	Ground Level
Gol	=	Government of India
GP	=	Generator Panel
GPD	=	Ganga Project Directorate
GSW	=	Glazed Stone Ware
HDPE	=	High Density Polyethylene
HFL	=	Highest Flood Level
HRT	=	Hydraulic Retention Time
I&D	=	Interception and Diversion
IPS	=	Indian Patent Stone
KVA	=	Kilo Volts Ampere
kWh	=	Kilo Watt Hour
LPCD	=	Litres per Capita per Day
CEOF	=	Municipal Development Fund
MEP	=	Main Electrical Panel
MLD	=	Million Litres Per Day
MoEF	=	Ministry of Environment and Forests
MPS	=	Main Pumping Station
MS	=	Mild Steel
MSL	=	Mean Sea Level
NRCD	=	National River Conservation Directorate
NRCP	=	National River Conservation Plan
O&M	=	Operation and Maintenance
OHSR	=	Over Head Service Reservoir
P&I	=	Process and Instrumentation
PDB	=	Power Distribution Board
PFR	=	Project Feasibility Report
PIDB	=	Punjab Infrastructure Development Board.
PM	=	Project Manager/Plant Manager
PSC	=	Pre Stressed Concrete
PWSSB	=	Punjab Water Supply & Sewerage Board
RCC	=	Reinforced, Cement Concrete.
RNE	=	Royal Netherlands Embassy
SAP	=	Satluj Action Plan
SS	=	Stainless Steel
STP	=	Sewage Treatment Plant
T&P	=	Tools and plant
TOR	=	Terms of Reference
SW	=	Stoneware

SECTION 3

CONDITIONS OF CONTRACT

- (i) GENERAL CONDITIONS OF CONTRACT
- (ii) CONDITIONS OF PARTICULAR APPLICATION

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(i) GENERAL CONDITIONS OF CONTRACT

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(i) **GENERAL CONDITIONS OF CONTRACT**

A. GENERAL

1. DEFINITIONS

1.1 Terms which are defined in the **Contract Data** may not necessarily have been defined in the conditions of Contract but keep their defined meanings. Capital initials are used to identify defined terms.

Bill of quantities means the priced and completed Bill of Quantities forming part of the Bid.

Compensation Events are those defined in Clause 41 hereunder.

The **Completed Work** means the work completed in all respects as per laid down specifications, drawings & conditions of the contract to the entire satisfaction of Engineer.

The **Completion Date** is the date of completion of the Works as certified by the Engineer in accordance with Sub-Clause 51.1.

Communication between parties are the written and signed letters, notices, reminders, memorandum and instructions recorded in the instruction book or books kept at site.

The **Contract** is the contract between the Employer and the Contractor to execute, complete and maintain the Project/Works during defect liability period. It consists of the documents listed in Clause 2 below.

The **Contract Data** defines the documents and other information which comprise the Contract.

The **Contractor** is a person or corporate body whose Bid to carry out the Project/Works has been accepted by the Employer.

The **Contractor's Bid** is the completed Bidding Documents submitted by the Contractor to the Employer and includes Technical and Financial Bids.

The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.

Days are calendar days; **Months** are calendar months.

A **Defect** is any part of the Project/Works not completed in accordance with the Contract.

The **Defects Liability Period** is the period named in the **Contract Data** and calculated from the Completion Date.

The **Employer** is the party named in the **Contract Data** who will employ the Contractor to carry out the works.

The **Engineer** is the person named in the **Contract Data** (or any other competent person appointed and notified to the Contractor to act in replacement of the Engineer) who is responsible for supervising the works/projects, administering the Contract, certifying payments due to the Contractor, issuing and valuing Variations to the Contract, awarding extensions of time, and valuing the Compensation Events and getting the contract

executed on behalf of the Employer.

Equipment is the Contractor's machinery and vehicles brought to the Site to construct the Project/Works.

The **Government** or the **State Government** shall mean the Governor of Punjab.

The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.

The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Project/Works. The Intended Completion Date is specified in the **Contract Data**. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.

Materials are all supplies, including consumables, used by the Contractor for incorporation in the Project/Works.

Plant is any integral part of Project/Works which have a mechanical, electrical, electronic or chemical or biological function.

Routine Maintenance is the maintenance as specified in the **Contract Data**.

The **Site** is the area defined as such in the **Contract Data**.

Site Investigation Reports are those which were included in the Bidding documents and are factual interpretative reports about the surface and sub-surface conditions at the site.

Specifications means the Specification of the Project/Works included in the Contract and any modification or addition made or approved by the Engineer.

The **Start Date** is given in the **Contract Data**. It is the date when the Contractor shall commence execution of the Project/Works. It does not necessarily coincide with any of the Site Possession Dates.

A **Sub-Contractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract which includes work on the Site.

The **Superintending Engineer** is the engineer in charge of an administrative circle of the Punjab Water Supply & Sewerage Board, under whose supervision the Project/Work activities will be carried out.

Temporary works are works designed, constructed, installed and removed by the Contractor which are needed for construction or installation of the Works.

The **Tender Processing Committee [TPC]** is the committee constituted by the Executive Engineer/Employer for receiving, opening, processing and evaluating the bids.

A **Variation** is an instruction given by the Engineer, which varies the Project/Works. The **Project/Works**, as defined in the **Contract Data**, are what the Contract requires the Contractor to construct, install, maintain and turn over to the Employer through the Engineer, as defined in the **Contract Data**. This term shall be used synonymously with the term "Works" hereinafter or anywhere in the Contract.

46. INTERPRETATION

- 46.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter and the other way around. Headings have no significance.

Works have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about the Conditions of the Contract.

- 2.2 If sectional completion is specified in the **Contract Data**, references in the Conditions of Contract to the Works, the Completion Date and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion date for the whole of the Works.)
- 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
- a) Agreement
 - b) Letter of Acceptance, notice to proceed with the works
 - c) Contract Data
 - d) Conditions of Contract including Conditions of Particular Application
 - e) Specifications
 - f) Drawings
 - g) Bill of Quantities and
 - h) Contractor's Bid
 - i) any other document listed in the **Contract Data** as forming part of the Contract

If there are varying or conflicting provisions in the documents forming part of the contract, the authority competent to approve the tender shall be the final deciding authority with regard to the intention of the document.

3. LANGUAGE AND LAW

- 3.1 The language of the Contract and the law governing the contract are stated in the **Contract Data**.

4. ENGINEER'S DECISIONS

- 4.1 Except where otherwise specifically stated, the Engineer shall decide contractual matters between the Employer and the Contractor in the role representing the Employer. Any clarifications on the **Contract Data** shall be given by the Engineer.

55.2 DELEGATION

The Employer may delegate any of his duties and responsibilities to other person after notifying the Contractor and may cancel any delegation after notifying the Contractor.

55.3 COMMUNICATIONS

- 6.1 Communications between parties which are referred to in the conditions are effective only when in writing. A notice shall be effective only when it is delivered under Registered post or Speed post or Facsimile (fax) or other electronic means. The notice sent by Registered post or Speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service. The notice sent by

Facsimile (fax) or other electronic means shall be effective on confirmation of the transmission.

7. SUB-CONTRACTING

- 7.1 The Contractor may sub-contract any portion of work, upto a maximum limit of 25% of contract value or as specified in **Contract Data** whichever is less, with the approval of the Engineer but shall not assign the Contract without the approval of the Engineer in writing. Sub-contracting does not alter the Contract's obligations and responsibilities under the contract.

8. OTHER CONTRACTORS

- 8.1 The Contractor shall cooperate and share the Site with other Contractors, public authorities, utilities and the Engineer between the dates given in the Schedule of other Contractors. The Contractor shall as referred to in the **Contract Data**, also provide facilities and services for them as described in the Schedule. The Engineer may modify the schedule of other Contractors and shall notify the Contractor of any such modification.

9. PERSONNEL

- 9.1 The Contractor shall employ the key personnel named in the Schedule of Key Personnel as referred to in the **Contract Data** to carry out the functions stated in the Schedule or other personnel approved by the Engineer. The Engineer will approve any proposed replacement of key personnel only if their qualifications, abilities and relevant experience are substantially equal to or better than those of the personnel listed in the Schedule.
- 9.2 If the Engineer asks the Contractor to remove a person who is a member of Contractor's staff or his work force or Sub contractor's staff or his work force stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.

10. LABOUR & COMPLIANCE WITH LABOUR REGULATIONS

- 10.1 The Contractor shall unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, housing, feeding and transport.
- 10.2 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 number of the several classes of labour from time to time employed by the Contractor on the site and such other information as the Engineer may require.
- 10.3 During continuance of the contract, the Contractor and his sub-Contractors shall abide at all times by the all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any act or rules made there under, regulations, or notifications including amendments. 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 in the notifications/bye laws/Acts/Rules/regulations including amendments, on the part of the Contractor, the Engineer/Employer shall have the right to deduct this amount from any money due to Contractor, including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated

to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

11. EMPLOYER'S AND CONTRACTOR'S RISKS

11.1 The Employer carries the risk which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.

11.2 Employer's Risks

The Employer is responsible for the excepted risks which are (a) in so far as they directly affect the execution of the Works in India, the risks of war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection or military or usurped power, civil war, riot commotion or disorder (unless restricted to the Contractor's employees) and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than where design submitted by contractor.

11.3 Contractor's Risks

All risks of loss of or damage of physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks referred to in clause 11.2, are the responsibility of the Contractor.

12. LIMITATION OF LIABILITY

Neither party shall be liable to the other party in respect of any loss on any account whatsoever in relation to the work, towards any loss of estimated profit, loss of any other thing or for any direct or indirect/consequential loss or damage, which might be suffered or has been suffered by the other party in connection with any event arising out of the contract except for those, which have been specifically provided for in the contract agreement.

13. INSURANCE

13.1 The Contractor shall provide, in the joint names of the Engineer and the Contractor, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the **Contract Data** for the following events which are due to the Contractor's risk:

- (a) loss of or damage to the Works, Plant and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage of property (except the Works, Plant, Materials and Equipment) in connection with the Contract: and
- (d) personal injury or death.

13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.

13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and

recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.

13.4 Alterations to the terms of insurance shall not be made without the approval of the Engineer.

13.5 Both parties shall comply with any conditions of the insurance policies.

14. WORKS TO BE COMPLETED BY THE INTENDED COMPLETION DATE

14.1 The Contractor may commence execution of the works on the Start Date and shall carry out the works in accordance with the programme submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

15. ECOLOGICAL BALANCE

15.1 The Contractor shall maintain the ecological balance by preventing deforestation, water pollution and defacing of natural landscape. The Contractor shall so conduct his construction operation as to prevent destruction, scarring or defacing of natural surroundings in the vicinity of work or damage to any tree, shrub or water course unless any of same is specifically required to be cleared or removed for construction purpose. Such removal shall only be done with prior approval of Engineer who may require the Contractor to do compensatory plantation at his cost.

15.2 No separate payment shall be made for compliance with provisions of this clause and all costs shall be deemed to have been included in the bid.

15.3 The Contractor shall make his own arrangement for the disposal of the spoils from the works to such place where the same shall not cause nuisance and should be acceptable to the authorities concerned.

16. SITE INVESTIGATION REPORT

16.1 The Contractor, in preparing the Bid, may rely, at his own risk, on any Site Investigation Report referred to in the **Contract Data**, supplemented by any other information available to him, before submitting the bid.

17. QUERIES ABOUT THE CONTRACT DATA

17.1 The Engineer will clarify queries on the **Contract Data**.

18. CONTRACTOR TO CONSTRUCT THE WORKS

18.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.

19. APPROVAL BY THE ENGINEER

19.1 The Contractor shall submit Specifications and Drawings complete in all respects, supported by documents showing the proposed Temporary Works to the Engineer, who is to approve them if they comply with the Specifications and Drawings.

- 19.2 The Contractor shall be responsible for design of Temporary Works.
- 19.3 The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.
- 19.4 The Contractor shall obtain approval of third parties to the design of the Temporary Works where required.
- 19.5 All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use. In case of dispute, if any, decision of the Chief Engineer will be final and binding.

20. SAFETY

- 20.1 The Contractor shall be responsible for maintaining the safety of all activities on the site, including smooth flow of traffic at his own cost as per guidelines of the IRC/MORT&H.
- 20.2 In respect of all labour directly or indirectly employed in the work for the performance of the Contractor's part of this contract, the Contractor shall at his own expense arrange for the safety provisions as per Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the Contractor fails to make arrangement and provide necessary facilities as aforesaid, the Employer shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the Contractor. The decision of the Engineer in this regard shall be final and no claim on account of this shall be entertained.

21. DISCOVERIES

- 21.1 Anything of historical or other interest or of significant value unexpectedly discovered on the site is the property of the Employer. The Contractor is to notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

22. POSSESSION OF THE SITE

- 22.1 The Employer shall give possession of the site to the Contractor, as per the work programme of the Contractor approved by Engineer. If possession of a part of the site required as per the work programme is not given by the date when it is actually required for carrying out the work, the Employer is deemed to have delayed the start of the relevant activities for that part of the site and this will be a Compensation Event for the purpose of time extension only.

23. ACCESS & INSPECTION

- 23.1 The Employer, Engineer or any other person authorized by the Engineer or Employer shall at all times have access to the Site, to any place where work in connection with the Contract is being carried out or is intended to be carried out and to any place where materials or plant are being manufactured/ fabricated/ assembled for the works.
- 23.2 All the work under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Engineer and his senior/subordinate and the Contractor shall at all times during the usual working hours and at all other times at which reasonable notice of the intention of the Engineer or his senior/subordinate to visit the works shall have been given to the

Contractor, either himself to be present to receive orders and instructions or have a responsible agent, duly accredited in writing, present for that purpose. Orders given to a Contractor's agent shall be considered to have the same force as if they had been given to the Contractor himself.

24. INSTRUCTIONS

- 24.1 The Contractor shall carry out all the instructions of the Engineer pertaining to works which comply with the applicable laws where the site is located.
- 24.2 The Contractor shall permit the Employer to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the Employer, if so required by the Employer.

25. DISPUTES RESOLUTION MECHANISM

- i) If any dispute or differences of any kind what-so-ever arise between the Government/Employee its authorized representatives and the Contractor in connection with or arising out of this contract or the execution of work, these shall be resolved as under.
- ii) Whether before its commencement or during the progress of Project/Work or after the termination, abandonment or breach of the contract, the dispute shall in the first instance supported with complete documents and further documents, if any, required by him, be referred for settlement to the Engineer of the work and he shall, within a period of sixty (60) days after being requested in writing by the Contractor to do so, convey his decision to the Contractor. Such decision in respect of every matter so referred shall, subject to arbitration as hereinafter provided, be final and binding upon the Contractor. In case the work is already in process, the Contractor shall continue with the execution of the work as aforesaid with all due diligence, whether any of the parties requires arbitration as hereinafter provided or not.
- iii) If the Engineer has conveyed his decision to the Contractor and no claim for arbitration has been filed by the Contractor within a period of sixty (60) days from the receipt of the letter communicating the decision, the said decision shall be final and binding upon the Contractor and will not be a subject matter of arbitration at all.
- iv) If the Engineer fails to convey his decision within a period of sixty (60) days from the date on which the said request was made by the Contractor, he may refer the dispute for arbitration as hereinafter provided.
- v) All disputes or differences in respect of which the decision is not final and conclusive shall, at the request of either party made in communication sent through registered A.D. post, be referred for arbitration as per following :
- a. For original contract of the value upto Rs. 5.00 Crore, the disputes shall be referred to the sole arbitration of the Superintending Engineer of the concerned circle of Punjab Water Supply & Sewerage Board acting as such at the time of reference unless debarred from acting as an Arbitrator by an order of the Punjab Government, in which event, the Employer shall appoint any other Superintending Engineer of the department to act as an arbitrator on receipt of a request from either party.
- b. For original contract of the value more than Rs. 5.00 Crore and upto Rs. 15.00 Crore, the disputes shall be referred to the sole arbitration of any other Superintending Engineer of the department to be appointed by the Employer.
- c. For original contracts of the value more than Rs. 15.00 Crore, the disputes shall be referred to the Arbitral Tribunal consisting of three (3) members. The composition of tribunal will be as under :

- One official member, Chairman of the Tribunal, who shall be a serving Chief Engineer of Punjab Water Supply & Sewerage Board other than the Chief Engineer incharge of the work. The appointment of the chairmanship of the Tribunal shall be done by the Employer;
 - One official member, not below the rank of Superintending Engineer (serving) of the Punjab Water Supply & Sewerage Board to be appointed by the Employer and
 - One non-official member, who will be a technical expert, not below the rank of Superintending Engineer (serving/retired) of the Punjab Water Supply & Sewerage Board selected by the Contractor from a panel of three (3) persons given to him by the Employer.
- vi) The Employer shall have the authority to change the arbitrator/any member of arbitral tribunal on an application by either the Contractor or the Engineer requesting change of arbitrator giving reasons thereof, either before the start of the arbitration proceedings or during the course of such proceedings. The arbitration proceedings would stand suspended as soon as an application for change of Arbitrator/any member of Arbitral Tribunal is filed before the Employer and a notice thereof is given by the applicant to the Arbitrator. The Employer after hearing both the parties may pass a speaking order rejecting the application or accepting to change the arbitrator or simultaneously, appointing a technical officer as Arbitrator/any member of arbitral tribunal under the contract. The new Arbitrator/Arbitral Tribunal so appointed may enter upon the reference afresh or may continue the hearings from the point these were suspended before the previous Arbitrator/Arbitral Tribunal.
- vii) The reference to the Arbitrator/Arbitral Tribunal shall be made by the claimant party within one hundred twenty (120) days from the date of dispute of claim arises during the execution of work. If the claim pertains to rates or recoveries introduced in the final bill, the reference to the Arbitrator/Arbitral Tribunal shall be made within six calendar months from the date of payment of the final bill to the Contractor or from the date a registered notice is sent to the Contractor to the effect that his final bill is ready by the Engineer (whose decision in this respect shall be final and binding) whichever is earlier.
- viii) It shall be an essential term of this contract that in order to avoid frivolous claims, the party invoking arbitration shall specify the disputes based upon facts and calculations stating the amount claimed under each claim and shall furnish a “deposit-at-call” for ten percent of the amount claimed, on a scheduled bank in the name of the Arbitrator/Chairman of the Arbitral Tribunal, by his official designation who shall keep the amount in deposit till the announcement of the award. In the event of an award in favour of the claimant, the deposit shall be refunded to him in proportion to the amount awarded with respect to the amount claimed and the balance, if any, shall be forfeited and paid to the other party.
- ix) The provisions of the Arbitration and Reconciliation Act, 1996 or any other statutory law there under or modification thereof and for the time being in force shall apply to the arbitration proceedings under this clause.
- x) The Arbitrator/Arbitral Tribunal shall give a reasoned award for each claim/counter claim.
- xi) The independent claims of the party other than one seeking arbitration as also the counter claims of any party shall be entertained by the arbitrator.
- xii) The venue of arbitration shall be such place or places in Punjab or Chandigarh as may be fixed by the arbitrator in his sole discretion. The work under the contract shall continue during the arbitration proceedings.
- xiii) The stamp fee due on the award shall be payable by the party as desired by the Arbitrator/Arbitral Tribunal and in the event of such party's default, the stamp fee shall be recoverable from another sum due to such party under this or any other

contract.

- xiv) Neither party shall be entitled to bring a claim for arbitration, if it is not filed as per the time period already specified or within six months of the following:-
- a) of the date of completion of the work as certified by the Engineer or
 - b) of the date of abandonment of the work or breach of contract under any of its clauses, or
 - c) of its non-commencement or non resumption of work within 10 days of written notice for commencement or resumption as applicable, or
 - d) of the cancellation, termination or withdrawal of the work from the Contractor in whole or in part and/or revision for closure of the contract, or
 - e) of receiving an intimation from the Engineer that the final payment due or to be recovered from the Contractor had been determined, for the purpose of payment/adjustment whichever is the latest. If the matter is not referred to arbitration within the period prescribed above, all the rights and claims of either party under the contract shall be deemed to have been forfeited and absolutely barred by the time for arbitration and even for civil litigation.
- xv) No question relating to this contract shall be brought before any civil court without first invoking and completing the arbitration proceedings, if the issue is covered by the scope of arbitration under the contract. The pending arbitration proceedings shall not disentitle the Engineer to terminate the contract and to make alternate arrangement for completion of the works.
- xvi) Arbitrator/Arbitral Tribunal shall be deemed to have entered into the reference on the day, notice is issued to the parties fixing the first date of hearing. The Arbitrator/Arbitral Tribunal may, from time to time, with the consent of the parties enlarge the initial time for making and publishing the award. However the Arbitrator/Arbitral Tribunal shall make all out efforts to decide each claim within a period of 6 months from the date of initiation.
- xvii) The expiry to the contractual time limit, whether originally fixed or extended, shall not invalidate the provisions of this clause.

B. TIME CONTROL

26. PROGRAMME

- 26.1 Within the time stated in the **Contract Data** the Contractor shall submit to the Engineer for approval a programme showing the general methods, arrangements, order, and timing for all the activities in the works along with monthly cash flow forecast.
- 26.2 An update of the Programme shall be a Programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining work including any changes to the sequence of the activities.
- 26.3 The Contractor shall submit to the Engineer, for approval, an updated Programme at intervals no longer than the period stated in the **Contract Data** If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the **Contract Data** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue programme has been submitted.

- 26.4 The Engineer's approval of the Programme shall not alter the Contractor's obligations. The Contractor may revise the programme and submit it to the Engineer again at any time. A revised programme is to show the effect of variations if any and compensation events.

27. EXTENSION OF THE INTENDED COMPLETION DATE

- 27.1 If the contractor shall desire an extension of the time for completion of the work on the ground of his having been unavoidably hindered in its execution or any other ground, he shall apply in writing to the Engineer (with corresponding time extension in Performance Security) within thirty (30) days of the date of hindrance (but before the expiry of time limit) on account of which he desires such extent in as aforesaid" and the Superintending Engineer shall if in his opinion (which shall be final) reasonable grounds be shown therefore, authorize such extension of time as may in his opinion be necessary or proper. No application for extension of time received late or addressed to the Sub-Divisional Engineer or any officer other than the Engineer shall be considered valid. If the contractor fails to apply for extension as aforesaid and the work is not completed within the time limit, the contract shall be determined absolutely after action under relevant clauses.

28. DELAYS ORDERED BY THE ENGINEER

- 28.1 The Engineer may instruct the Contractor to delay the start or progress of any activity within the works.

29. MANAGEMENT MEETINGS

- 29.1 The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for remaining work and to deal with matters raised in accordance with the early warning procedure.
- 29.2 The Engineer shall record the business of management meetings and is to provide copies of his record to those attending the meeting and to the Employer. The responsibility of the parties for actions to be taken is to be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all who attended the meeting.

30. EARLY WARNING

- 30.1 The Contractor is to notify the Engineer at the earliest opportunity of specific likely future events or circumstances that may adversely affect the quality of work, increase the Contract Price or delay the execution of works. The Engineer may require the Contractor to provide an estimate of the expected effect of the future event or circumstance on the Contract Price and Completion Date. The estimate is to be provided by the Contractor as soon as reasonably possible.
- 30.2 The Contractor shall cooperate with the Engineer in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Engineer.

C. QUALITY CONTROL

31. QUALITY ASPECTS

- 31.1 a) For carrying out mandatory tests as prescribed in the specifications, the Contractor shall establish field laboratory at the location decided by Engineer. The field laboratory will have minimum of equipment as specified in the Contract Data. The contractor shall be solely responsible for:
- i) Carrying out the mandatory tests prescribed in the Specifications, and
 - ii) For the correctness of the test results, whether performed in his laboratory or elsewhere.
- (b) The Engineer will be free to conduct surprise, random or in situ checks any time during the execution and after the completion of the work but not later than the Defect Liability Period, so as to have cross check in quality of works/projects and compliance to specifications and standards at all stages of the work.
- (c) Nothing in this clause shall reduce the overall responsibility of the Contractor regarding quality and he shall remain liable for any defect in the execution of the Project/Works at all stages.

32. IDENTIFYING DEFECTS

- 32.1 The Engineer shall check the Contractor's work and notify the Contractor of any defects that are found. The notice of the Engineer shall give the description of the defects in sufficient detail, including the obligations as per the Contract. Such checking shall not affect the Contractor's responsibilities. The Engineer may also instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.
- 32.2 If the Engineer instructs the Contractor to carry out a test not specified in the Specification to check whether any work has a defect and the test shows that it does, the Contractor shall pay for the test and any samples. If there is no Defect the test shall be a Compensation Event.

33. CORRECTION OF DEFECTS

- 33.1 The Engineer shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion and is defined in the **Contract Data**. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 33.2 Every time notice of a Defect is given, the Contractor shall correct the notified Defect within the length of time specified by the Engineer's notice.

34. UNCORRECTED DEFECTS

- 34.1 If the Contractor has not corrected a Defect within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and recover **twice** of this amount from the payments due to the Contractor or retention money.

Note: *Where in certain cases, the technical specifications provide for acceptance of works within specified tolerance limits at reduced rates, Engineer will certify payments to Contractor accordingly and the Contractor shall be bound by the same.*

D. COST CONTROL

35. BILL OF QUANTITIES

- 35.1 The Bill of Quantities shall contain items for the construction, installation, testing and commissioning of work to be done by the Contractor.
- 35.2 The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of work done at the rate in the Bill of Quantities for each item.

36. CHANGE IN THE QUANTITIES

- 36.1 The Engineer shall have power to make any variations, alterations omission, additions to or substitutions for the original specifications, drawings, designs and instructions that may appear to be necessary or advisable during the progress of the work, and the Contractor shall be bound to carry out the work in accordance with any instructions which may be given to him in writing, signed by the Engineer. Such alterations/additions/substitutions shall not invalidate the contract and shall be carried out by the Contractor on the same conditions in all respect on which he agreed to do the main work. The time of completion of the work shall be extended in the proportion that the altered, additional or substituted works bears to the original contract work and the certificate of the Engineer shall be conclusive as to such proportion.
- 36.2 If the final quantity of work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent provided the change exceeds 1% of initial Contract Price, the Engineer shall adjust the rate to allow for the change, duly considering.
 - a) Justification for rate adjustment as furnished by the Contractor.
 - b) Economies resulting from increase in quantities by way of reduced plant, equipment and overhead costs.
 - c) Entitlement of the Contractor to compensation events where such events are caused by any additional work.
 - d) The revised rates will be applicable to the quantity that exceeds 25% limit and not on the entire quantity.
- 36.3 The Engineer shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Employer.
- 36.4 If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate in the Bill of Quantities.

37. VARIATIONS

- 37.1 All variations shall be included in updated Programmes produced by the Contractor.

38. PAYMENT FOR VARIATIONS

- 38.1 The Contractor shall provide the Engineer with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven days of the

request or within any longer period stated by the Engineer and before the Variation is ordered.

- 38.2 If the work in the Variation corresponds with an item description in the Bill of Quantities and if, in the opinion of the Engineer, the quantity of work above the limit stated in Sub Clause 36.1 or the timing of its execution do not cause the cost per unit of quantity to change, the rate in the Bill of Quantities shall be used to calculate the value of the Variation. If the cost per unit of quantity changes, or if the nature or timing of the work in the Variation does not correspond with items in the Bill of Quantities, the quotation by the Contractor shall be in the form of new rates for the relevant items of work.
- 38.3 If the Contractor's quotation is unreasonable, the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's cost.
- 38.4 If the Engineer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 38.5 The Contractor shall not be entitled to additional payment for costs which could have been avoided by giving early warning.

[Alternate Clauses 35 to 38 for Lump Sum Contracts are as follows]

35. SCHEDULE OF PAYMENT

- 35.1 The Schedule of Payment (S-1) shall contain items for the construction, installation, testing, and commissioning work to be done by the Contractor.
- 35.2 The Contractor shall be paid for the quantity of work completed by him on a pro-rata basis at the time of submission of monthly statement pursuant to Clause 39 as per Schedule of Payment (S-1).

36. VARIATIONS & CHANGE IN THE SCOPE OF WORK

- 36.1 The Engineer shall have power to make any variations, alterations omission, additions to or substitutions for the original specifications, drawings, designs and instructions that may appear to be necessary or advisable during the progress of the work, and the Contractor shall be bound to carry out the work in accordance with any instructions which may be given to him in writing, signed by the Engineer. Such alterations/ additions/substitutions shall not invalidate the contract and shall be carried out by the Contractor on the same conditions in all respect on which he agreed to do the main work. The time of completion of the work shall be extended in the proportion that the altered, additional or substituted works bears to the original contract work and the certificate of the Engineer shall be conclusive as to such proportion.
- 36.2 If the final scope of work differs from the original by more than 1% of initial Contract Price, the Engineer shall adjust the rate to allow for the change, duly considering:
- (a) Justification for rate adjustment as furnished by the Contractor,
 - (b) Economies resulting from increase in quantities by way of reduced plant, equipment, and overhead costs.
 - (c) Entitlement of the Contractor to compensation events where such events are caused by any additional work.

- 36.3 The Engineer shall not adjust rates from changes in scope of work, if thereby the Initial Contract Price is exceeded by more than 15 percent, except with the prior approval of the Employer.
- 36.4 If requested by the Engineer, the Contractor shall provide the Engineer with a detailed cost breakdown of any rate of the item undergoing variation in the scope of work.
- 36.5 All variations shall be included in updated Programmes produced by the Contractor.

37. PAYMENTS FOR VARIATION

- 37.1 Any variation that is, increase or decrease in the scope of this work, shall be regulated as per schedule S-II (variation schedule), Section 9 in so far as the payments/recoveries are concerned. All other conditions of contract shall remain unchanged.
- 37.2 If rate is not available in schedule S-II, the Contractor shall provide the Engineer with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Engineer. The Engineer shall assess the quotation, which shall be given within seven days of the request or within any longer period stated by the Engineer and before the Variation is ordered.
- 37.3 If the Contractor's quotation is unreasonable, the Engineer may order the Variation and make a change to the Contract Price which shall be based on Engineer's own forecast of the effects of the Variation on the Contractor's costs.
- 37.4 If the Engineer decides that the urgency of varying the work would prevent a quotation being given and considered without delaying the work, no quotation shall be given and the Variation shall be treated as a Compensation Event.
- 37.5 The Contractor shall not be entitled to additional payment for costs which could have been avoided by giving early warning.

38. CASH FLOW FORECASTS

- 38.1 When the Programme is updated, the Contractor is to provide the Engineer with an updated cash flow forecast.

39. PAYMENT CERTIFICATES

- 39.1 The Contractor shall submit to the Engineer monthly statements/bills of the estimated value of the work completed less the cumulative amount certified previously, along with copies of the following documents:-
- (i) Measurements and quantities of items of work done since last bill.
 - (ii) Copies of quality control tests in specified format covering the work done since last bill.
 - (iii) Copies of instructions recorded in the instruction book containing the instructions and compliance made thereof, covering the work done since last bill.

The Contractor shall submit all bills on the printed forms to be had on application from the office of the Engineer.

- 39.2 The Engineer shall check the Contractor's monthly statements within 30 days and

certify the amount to be paid to the Contractor after taking into account any deductions for advance payments, retention, other recoveries in terms of the contract and taxes at source, as applicable under the law, and the credit or debit for the month in question in respect of materials for the works in the relevant amounts and under conditions set forth in clause 47. The Contractor shall be required to sign the corrections made, if any, in token of acceptance of the same, before release of payment.

- 39.3 The value of work executed shall be determined by the Engineer.
- 39.4 The value of work executed shall include the valuation of Variations and Compensation Events. The Contractor shall be deemed to have waived off all claims not included in such bills/statements and will have no right to enforce any claim not so included, whatsoever be the circumstances.
- 39.5 The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in light of later information.

40. PAYMENTS

- 40.1 The Engineer on behalf of Employer shall pay the Contractor the amounts certified by the Engineer.
- 40.2 Items of the Project/Work, for which no rate or price or percentage of lump sum rate has been entered in, will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.
- 40.3 Any excess payment made to the Contractor inadvertently or otherwise under this contract or on any account whatsoever and any other sum found to be due to the Government by the Contractor in respect of this contract or any other contract or work-order or any account whatsoever may be deducted from any sum payable by the Government to the Contractor either in respect of this contract or any work order or contract or any other account by any other department of the Government.
- 40.4 The Engineer may refuse or suspend payments on account of a work when executed by a firm or by a Contractor described in his bid as a firm, unless receipts are signed by all the partners, or one of the partners or an authorized representative of the Contractor who produces a valid authority in writing enabling him to give effectual receipts on behalf of the firm.
- 40.5 All the intermediate payments shall be regarded as payments by way of advance against the final payment only and not as payments for work actually done and completed ; and shall not preclude the requiring of bad, unsound , imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the performance of the contract or any part thereof in any respect of the occurring of any claim , nor shall it conclude , determine or effect in any way the powers of the Engineer under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way , vary or affect the contract.
- 40.6 The receipt of the Accountant or Clerk for any money paid by the Contractor to the department will not be considered as a receipt of payment to the Engineer and the Contractor shall be responsible for ensuring that he procures a receipt duly signed by the Engineer or his Sub Divisional Engineer.

41. COMPENSATION EVENTS

- 41.1 The following are Compensation Events unless they are caused by the Contractor:
- a) The Engineer does not give access to a part of the Site as stipulated in Clause 22 by the Site Possession Date stated in the **Contract Data**.
 - b) The Employer modifies the schedule of other Contractors in a way which affects the work of the Contractor under the contract.
 - c) The Engineer orders a delay or does not issue drawings, specifications and/or instructions required for execution of works on time.
 - d) The Engineer gives an instruction for dealing with an unforeseen condition, caused by the Employer, or other reasons.
 - e) The effect on the Contractor of any of the Employer's Risks.
 - f) The Engineer unreasonably delays issuing a Certificate of Completion.
 - g) Other Compensation Events listed in the **Contract Data** or mentioned in the Contract.
- 41.2 If a Compensation Event would cause additional cost or would prevent the work being completed before the Intended Completion Date, the Contract Price shall be increased and/or the Intended Completion Date is extended. The Engineer shall decide whether and by how much the Contract Price shall be increased and whether and by how much the Intended Completion Date shall be extended.
- 41.3 As soon as information demonstrating the effect of each Compensation Event upon the Contractor's forecast cost has been provided by the Contractor, it is to be assessed by the Engineer and the Contract Price shall be adjusted accordingly. If the Contractor's forecast is deemed unreasonable, the Engineer shall adjust the Contract Price based on Engineer's own forecast. The Engineer will assume that the Contractor will react competently and promptly to the event.
- 41.4 The Contractor shall not be entitled to compensation to the extent that the Employer's interests are adversely affected by the Contractor not having given early warning or not having cooperated with the Engineer.

42. TAXES

- 42.1 The rates quoted by the Contractor shall be deemed to be inclusive of all the taxes, levies, etc. including their variations as notified by the concerned authority from time to time, and also of all the new taxes and levies that may be imposed that the Contractor will have to pay for the performance of this Contract. The Engineer on behalf of the Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.
- 42.2 The Contractor shall comply with the proper bye-laws and legal orders of the local body or public authority under the jurisdiction of which the work is executed and pay all fees and charges for which he may be liable. Nothing extra shall be payable on this account.

43. CURRENCIES

All payments shall be made in Indian Rupees.

44. PRICE ADJUSTMENT

44.1 Contract price shall be adjusted for increase or decrease in rates and price of Bitumen, Cement, Steel, DI & CI pipes only in accordance with the following principles and procedures and as per formula given in the **Contract Data**:

- (a) The price adjustment shall apply for the work done from the start date given in the **Contract Data** upto end of the initial intended completion date or extensions granted by the Engineer. However for the work done during the period for which extension has been granted by the Engineer, the price adjustment shall be made using either the rates/prices prevailing at the time of intended date of completion, or the rates/prices as prevailing for the period under consideration, whichever is less.
- (b) The price adjustment shall be determined during each month from the formula given in the **Contract Data**. It will exclude value for works executed under variations for which rates will be worked separately based on the terms mutually agreed.

(No price adjustment is to be paid for the work done in first six months from the date of allotment of work irrespective of the time period specified except for bitumen component in case of road works for which (a) above shall apply)

44.2 To the extent that full compensation for any rise or fall in costs to the Contractor is not covered by the provisions of this or other clauses in the contract, the bid price shall be deemed to include amounts to cover the contingency of such other rise or fall in costs.

45. RETENTION MONEY (SECURITY DEPOSIT)

- 45.1 The Engineer on behalf of the Employer shall retain 5% of the amount of each payment due to the Contractor until Completion of the whole of the Project/Work to cover the cost that may be involved in removal of defects, imperfections, or taking remedial measures in the work executed. This retention shall be inclusive of the initial bid security deposited by the bidder.
- 45.2 50% of the total amount retained shall be repaid to the Contractor after three months of completion of the whole of the Project/Work as certified satisfactory by the Engineer with respect to removal of all defects, imperfections, short comings and taking remedial measures, that may be necessary and after recording of final measurements of work done, for which the certificate of the Engineer would be conclusive.
- 45.3 The remaining amount of the retained money shall be repaid after one year or when the Defects Liability Period has passed, whichever is later, and after the Engineer has certified that all Defects notified by the Engineer to the Contractor before the end of this period have been corrected.

47. LIQUIDATED DAMAGES

46.1 The Contractor shall ensure due diligence to achieve progress of work not less than that indicated in the following milestones:-

- i) On Lapse of 25% contractual time : 10%
- ii) On Lapse of 50% contractual time : 30%
- iii) On Lapse of 75% contractual time : 65%
- iv) On Lapse of 100% (full) contractual time : 100%

In case of default, the Contractor shall, notwithstanding issuance of a prior notice in this regard, pay prospectively as liquidated damages an amount upto 1% of the amount of contract or such lesser amount that the Engineer may levy on behalf of the Employer, for every week of the period for which the work remains un-commenced after 10 days of the issue of acceptance letter; or the minimum progress of work stated above is not achieved; or the work remains unfinished after the completion date.

- 46.2 In case of continued default or shortfall in progress, the Engineer may go on enhancing the levy of liquidated damages, each time limited to 1% of the amount of contract per week of further default subject to maximum limit of five (5) percent of the Contract value.
- 46.3 The Superintending Engineer on representation from Contractor and after hearing both the Engineer and Contractor may reduce the amount of liquidated damages after passing speaking orders and his decision in writing shall be final and binding.
- 46.4 If the Intended Completion Date is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.
- 46.5 If the Contractor fails to comply with the time for completion as stipulated in the tender, then the Contractor shall pay to the Employer (through the Engineer), the relevant sum stated in the **Contract Data** as Liquidated damages for such default and not as penalty for everyday or part of day which shall elapse between relevant time for completion and the date stated in the taking over certificate of the whole of the works on the relevant section, subject to the limit stated in the **Contract Data**.
- 46.6 If, before the Time for Completion of the whole of the Works or, if applicable, any Section, a Taking – Over Certificate has been issued for any part of the Works or of a Section, the liquidated damages for delay in completion of the remainder of the Works or of that Section 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 Section, as applicable. The provisions of this Sub- Clause shall only apply to the rate of liquidated damages and shall not affect the limit thereof.

47. ADVANCE PAYMENT

- 47.1 The Engineer on behalf of the Employer shall make advance payment to the Contractor of the amounts upto 5% of the contract amount (excluding maintenance cost if any) against provision by the Contractor of an Unconditional Bank Guarantee in a form and by a bank acceptable to the Engineer on behalf of the Employer in amounts and currencies equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall be charged at the rate of 9% per annum on the advance payment.
- 47.2 The Contractor is to use the advance payment only to pay for Equipment, Plant and Mobilization expenses required specifically for execution of the works. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Engineer.
- 47.3 The advance payment shall be repaid by deducting proportionate amounts from payments otherwise due to the Contractor, following the schedule of completed percentages of the Works on a payment basis. No account shall be taken of the advance payment or its repayment in assessing valuations of work done, Variations, Price Adjustments, Compensation Events, or Liquidated Damages.

48. SECURED ADVANCE

48.1 The Contractor, on signing an indenture in the form to be specified by the Engineer, shall be entitled to be paid, during the execution of work, upto 75% of the estimated value of any materials, which, in the opinion of the Engineer, are non-perishable and which have been procured and adequately stored against damage, but which have not been incorporated in the works at the time of making advance.

This secured advance shall be subject to the following :

- a) The materials are in accordance with the specification for works;
- b) Such materials have been delivered to site, and are properly stored and protected against damage or deterioration to the satisfaction of the Engineer. The Contractor shall store the bulk material in measurable stacks;
- c) The Contractor's records of the requirements, orders, receipt and use of materials are kept in a form approved by the Engineer and such records shall be available for inspection by the Engineer;
- d) The Contractor has submitted with his monthly statement the estimated value of the materials on site together with such documents as may be required by the Engineer for the purpose of valuation of the materials and providing evidence of ownership and payment thereof;
- e) Ownership of such materials shall be deemed to vest in the Employer for which the Contractor has submitted an Indemnity Bond in an acceptable format; and
- f) The quantities of materials are not excessive and shall be used within a reasonable time as determined by the Engineer.

49. SECURITIES

The Performance Security (including additional security for unbalanced bids) shall be provided to the Engineer on behalf of the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount and form and by a bank or surety acceptable to the Engineer on behalf of the Employer and denominated in Indian Rupees. The Performance Security shall be valid until a date 28 days pursuant to the date of expiry of the Defects Liability Period and the additional security for unbalanced bids shall be valid until a date 28 days from the issue of the certificate of completion.

50. COST OF REPAIRS

50.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

E. FINISHING THE CONTRACT

51. COMPLETION

51.1 The Contractor shall request the Engineer to issue a Certificate of Completion of the works and the Engineer, within 30 days of the receipt of such request, shall inspect the work and if there is no defect in the work, shall furnish the Contractor with a

certificate of completion. Otherwise, the Engineer may issue a provisional certificate of completion indicating the defects (a) to be rectified by the Contractor and/or (b) for which payment shall be made at reduced rates. However no certificate, provisional or otherwise, shall be issued nor shall the work be considered to be complete until the Contractor has cleared all scaffolding, surplus materials, garbage and all huts and sanitary arrangements set up for the labour at the site and cleaned off the dirt from work.

52. TAKING OVER

52.1 The Engineer on behalf of the Employer shall take over the Site and the Works within seven days of having issued a Certificate of Completion to the Contractor.

53. FINAL ACCOUNT

53.1 The Contractor shall supply to the Engineer a detailed account of the total amount that the Contractor considers payable under the Contract before the end of the Defects Liability Period. The Engineer shall issue a Defect Liability Certificate and certify any final payment that is due to the Contractor within 56 days of receiving the Contractor's account if it is correct and complete. If it is not, the Engineer shall issue within 56 days a schedule that states the scope of the corrections or additions that are necessary. If the Final Account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate, within 56 days of receiving the Contractor's revised account.

54. MANUALS & REGISTERS

54.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the **Contract Data**.

54.2 If the Contractor does not supply the Drawings and/or manuals by the dates stated in the **Contract Data**, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the **Contract Data** from payments due to the Contractor.

54.3 The Contractor shall also furnish, if so desired by the Engineer, the following documents duly signed by him or his authorized representatives:

- i) Variation statement showing the altered items, if any against those provided in the original drawings.
- ii) Original site instruction book.
- iii) Original registers for various quality control tests as specified.
- iv) Register of consumption of Cement, Steel and Bitumen.

55. TERMINATION

55.1 The Engineer on behalf of the Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract. For this purpose, 14 days notice in writing shall be served by either party on the other party clearly mentioning the particular grounds of Breach of Contract with a copy to the Employer.

- 55.4 Fundamental breaches of Contract include, but shall not be limited to the following:
- (a) the Contractor stops work for 28 days when no stoppage of work is shown on the current programme and the stoppage has not been authorized by the Engineer;
 - (b) the Employer or the Contractor is declared bankrupt or goes into liquidation other than for a reconstruction or amalgamation;
 - (c) the Engineer gives Notice that failure to correct a particular defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer;
 - (d) the Contractor does not maintain a security which is required;
 - (e) the Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined in the **Contract Data**; and
 - (f) If the Contractor, in the judgment of the Engineer or the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.
 - (g) If the Contractor, having been given a notice in writing by the Engineer, fails to rectify, reconstruct or replace any defective work or continues the execution of work in an inefficient, improper, unworkman – like manner or not in accordance with sound Engineering practices or without complying with the directions and requirements within a period of 10 days of the issue of said notice.
 - (h) If the Contractor being a company shall pass a resolution or a court shall make an order of the effect that the company shall be wound up or if a receiver or a manager on behalf of the credit or shall be appointed or if circumstances shall arise which entitle the court of creditor to appoint a receiver or manager or to make a winding up order.
 - (i) If the Contractor commits any acts of defaults with respect to conditions of contract.
- 55.3 Notwithstanding the above, the Engineer on behalf of the Employer may terminate the Contract for convenience.
- 55.4 If the Contract is terminated the Contractor shall stop work immediately, make the Site safe and secure and leave the Site as soon as reasonably possible.
- 55.5 After the termination of the contract under this clause, the Employer shall be at liberty to get the balance work executed through some other contractual agency or through departmental means or to abandon the balance work altogether or to modify the design and scope of the work in any manner. The Contractor shall have no claim against the Employer in this regard.

56. PAYMENT UPON TERMINATION

- 56.1 If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done less advance payments received upto the date of the issue of the certificate, less other recoveries due in terms of the contract, less taxes due to be deducted at source as per applicable law and less 5% of the contract value towards compensation for the breach of contract. The total amount of liquidated damages and compensation for breach of contract shall, however, be limited to 7.5% of the contract value or the

amount available with the Engineer (in the shape of retention money, performance security and due amount of work done if any), whichever is less. The requisite amount for which the Contractor may become liable shall be realized by encashing the performance security furnished by the Contractor and/ or from other amounts due to the Contractor in respect of this work.

- 56.2 If the Contract is terminated at the Employer's convenience or because of a fundamental breach of Contract by the Employer, the Engineer shall issue a certificate for the value of the work done. This work value shall take into account the cost of balance material brought by the Contractor and available at site, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the works. The advance payment received upto to the date of the certificate, other recoveries due in terms of the contract and the taxes due to be deducted at source as per applicable law, shall be deducted from the work value.

56.3 **No Compensation for Alteration in or Restriction in Works**

If at any time after the commencement of the work the Government, for any reason whatsoever, does not require the whole Project/Work or part thereof to be carried out, the Engineer shall give notice in writing of the fact to the Contractor, who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage, which he might have derived from the execution of the work in full, but which he did not derive in consequence of the full amount of work not having been carried out, neither shall he have any claim for compensation by reasons of any alteration having been made in the original specifications, drawings, designs and instructions, which shall involve any curtailment of the work originally contemplated.

57. PROPERTY

- 57.1 All materials on the Site, Plant, Equipment, Temporary works and Works are deemed to be the property of the Employer, if the contract is terminated as per Clause. 55.2 above because of a Contractor's default.

58. RELEASE FOR PERFORMANCE

- 58.1 If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of either the Employer or the Contractor the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving it and for any work carried out afterwards to which commitment was made.

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SECTION 3

(ii) CONDITIONS OF PARTICULAR APPLICATION [COPA]

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CONDITIONS OF PARTICULAR APPLICATION

Conditions/Clauses of the contract which are required in case of particular or specific work shall form part of this section. Such conditions may include additional qualification conditions for the bidders. For example, for construction of a bridge work in running canal conditions, an additional qualifying condition can be that the bidder should have experience of having done construction in such demanding conditions. Fresh administrative or financial instructions can also be included in this section.

Clauses included in the General Conditions and Clauses of the Contract may need to be modified or deleted to suit the particular situation. Those modifications and deletions in reference to the clauses should also be inserted in this part.

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SECTION 4

CONTRACT DATA

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Contract Data

Name of the Project/Work :

.....

.....

Contract Identification No. :

The Contract Data hereunder pertains to some specific, but in no way exhaustive, information on the Project/Work. The bidders are required to study and account for this data in conjunction to various other Sections of the Document. GCC stands for 'General Conditions of Contract'.

Conditions	Ref. GCC Clause	Data
Employer's name and address.	1.1	Name: Chief Executive Officer, Punjab Water Supply & Sewerage Board, Chandigarh. Address: Punjab Water Supply & Sewerage Board, Sector-27-A Plot No. 1B Chandigarh.
Authorised representative of the Employer	1.1
Engineer's name and address.	1.1	Executive Engineer, Punjab Water Supply & Sewerage Division,
Defect Liability Period.	1.1 & 33	It is year from the date of completion.
Start Date.	1.1	The start date shall be from the date of issue of the allotment Letter by the Engineer.

Intended Date of Completion.	1.1 & 14	The intended completion date for the whole works is Months after start of the work.
Additional document that also form part of contract.	2.3 (i)
The law which applies to the Contract.	3.1	The Law of the Union of India and the language shall be English
Amounts of Insurance & Deductions by Engineer.	13.1
The Site possession dates are:	22	i. For Date of Award Contract ii. For iii. For
The Period for Submission of the Programme for approval of Engineer.	26	21 days from the issue of Letter of Acceptance.
The Additional Compensation Events are:	41.1 g)	(i) Substantially adverse ground conditions encountered during the course of execution of work not provided in the bidding Document. (ii) Removal of underground utilities detected subsequently. (iii) Significant change in classification of soil requiring additional mobilization by the Contractor, e.g. ordinary soil to rock excavation, (iv) Removal of unsuitable material like marsh, debris dumps, etc. not caused by the Contractor. (v) Artesian conditions. (vi) Seepage, erosion, landslide. (vii) Presence of historical, archeological or religious structures, Monuments interfering with the works. (viii) Restriction of access to ground imposed by civil, judicial, or military authority.
The currency of the Contract.	43	Indian Rupees

<p>The formula (e) for adjustment of prices are;</p>	<p>44</p>	<p>i) ADJUSTMENT FOR BITUMEN COMPONENT</p> <p>Price adjustment for increase or decrease in the cost of bitumen shall be paid in accordance with the following formula;</p> $V_b = P_b \times (B_i - B_0)$ <p>V_b = Increase or decrease in the cost of bitumen work during the month under consideration due to Changes in rates for bitumen.</p> <p>B_0 = The official retail price of bitumen at the Indian Oil Corporation (IOC) Depot at nearest center (Panipat) considered by the Department while approving the invitation of the Bids. This price for the work under consideration is Rs. [Bitumen price as on _].</p> <p>B_i = The official retail price of bitumen of IOC Depot at nearest center (Panipat) for the month under consideration.</p> <p>P_b = quantity of bitumen actually consumed in the work done in the period under consideration.</p> <p>If the prices of bitumen change during the period under consideration for working out escalation, the period shall be split up to calculate appropriate adjustment.</p> <p>Contractor's profit shall not be considered on Price Adjustment.</p> <p>ii) ADJUSTMENT FOR CEMENT COMPONENT</p> <p>Price adjustment for increase or decrease in the cost of cement procured by the Contractor shall be paid in accordance with the following formula:</p> $V_c = N_c \times R_c (C_i - C_0) / C_0$ <p>V_c = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for cement.</p> <p>C_0 = The initial price of grey cement per 50 kg bag based on the All India Wholesale Price Index for grey cement, as published by the Ministry of Industrial Development, Government of India, New Delhi, As on the date on which the rate of cement R_c was enforced by the Department.</p> <p>C_i = The current price of grey cement per 50 kg bag based on the All India average Wholesale Price Index for grey cement published by the Ministry of Industrial Development, Government of India, New Delhi (current = month under consideration).</p>
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		<p> R_C = Rate of grey Cement per 50 Kg bag considered by the Department while inviting the bids, i.e. Rs.-- ---per bag as on-----(date of fixing of this rate as a CSR rate). </p> <p> N_c = Number of 50 Kg cement bags actually consumed in work during the period under consideration. </p> <p>Contractor's profit shall not be considered on Price Adjustment.</p> <p>iii) ADJUSTMENT FOR STEEL COMPONENT</p> <p>Price adjustment for increase or decrease in the cost of steel procured by the Contractor shall be paid in accordance with the following formula:</p> <p> $V_S = Q_S \times R_S (S_i - S_0) / S_0$ </p> <p> V_S = Increase or decrease in the cost of work during the month under consideration due to changes in the rates for steel. </p> <p> S_0 = The initial price of steel per metric tonne based on the All India whole sale price index for steel, as published by the Ministry of Industrial Development, Government of India, New Delhi, As on the date on which the rate of steel Rs. _ was enforced by the Department. </p> <p> S_i = The current price of steel per metric tonne based on the All India average whole sale price index for steel, as published by the Ministry of Industrial Development, Government of India, New Delhi (Current=Month under consideration). </p> <p> R_S = Rate of Steel per metric tonne considered by the Department while inviting the bids, i.e. Rs. per metric tonne as on (date of fixing of this rate as a CSR rate). </p> <p> Q_s = Quantity of Steel in metric tonne actually consumed in work during the period under consideration. </p> <p>Contractor's profit shall not be considered on Price Adjustment.</p>
The schedule of submission of operating and Maintenance manual:	54.1	15 days after completion of work.

**IV ADJUSTMENT
FOR DI & CI
PIPES
COMPONENT**

Price adjustment for increase or decrease in the cost of DI & CI pipes procured by the Contractor shall be paid in accordance with the following formula:

$$V_p = Q_p \times \frac{R_p (P_i - P_o)}{P_o}$$

V_p = Increase or decrease in the cost of work during the month under consideration due to changes in rates for DI & CI pipes.

P_o = The initial price of DI & CI pipes per meter based on the All India Wholesale Price Index for Pig Iron, as published by the Ministry of Industrial Development, Govt. of India, New Delhi. As on the date on which the rate of DI& CI pipes R_p was enforced by the Department.

P_i = The current price of DI & CI Pipes per meter based on the All India average Wholesale Price Index for Pig Iron, as published by the Ministry of Industrial Development, Government of India, New Delhi (current = month under consideration).

R_p = Rate of DI & CI Pipes per meter considered by the Department while inviting the bids, i.e. Rs.....per meter as on (date of fixing of this rate as a CSR rate).

		<p>Qp = Quantity of DI & CI pipes in meter actually consumed in work during the period under consideration.</p> <p>Contractor's profit shall not be considered on Price Adjustment.</p>
<p>The schedule of submission of operating and Maintenance manual:</p>	54.1	15 days after completion of work.

The amount to be withheld for failing to supply "as built" drawings, if any, by the date required:	54.2	Rs. 10,000 (Rupees Ten Thousand only) or 1% of the contract amount, whichever is higher.
The Events which shall also mean fundamental breach of contract:	55.2	The Contractor has contravened Clause 9 of GCC.

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SECTION 5

**TECHNICAL CONDITIONS, SPECIFICATIONS &
REQUIREMENTS**

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This section shall include detailed Technical Conditions, Specifications & Requirements specific to the Project/Work.

Every organization using this bidding document shall define these conditions at its own level.

SECTION 6

MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

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MODEL RULES FOR THE PROTECTION OF HEALTH AND SANITARY ARRANGEMENTS FOR WORKERS

1. APPLICATION

These rules shall apply to all buildings and construction works in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress.

2. DEFINITION

Work place means a place where twenty or more workers are ordinarily employed in connection with construction work on any day during the period during which the contract work is in progress.

3. FIRST-AID FACILITIES

- i) At every work place there shall be provided and maintained, so as to be easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed.
- ii) The first-aid box shall be distinctly marked with a red cross on white back ground and shall contain the following equipment:-
 - a) For work places in which the number of contract labour employed does not exceed 50- Each first-aid box shall contain the following equipments :-
 1. 6 small sterilized dressings.
 2. 3 medium size sterilized dressings.
 3. 3 large size sterilized dressings.
 4. 3 large sterilized burn dressings.
 5. 1 (30 ml.) bottle containing a two per cent alcoholic solution of iodine.
 6. 1 (30 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.
 7. 1 snakebite lancet.
 8. 1 (30 gms.) bottle of potassium permanganate crystals.
 9. 1 pair scissors.
 10. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
 11. 1 bottle containing 100 tablets (each of 5 gms.) of aspirin.
 12. Ointment for burns.
 13. A bottle of suitable surgical antiseptic solution.
 - b) For work places in which the number of contract labour exceed 50, each first-aid box shall contain the following equipments.
 1. 12 small sterilized dressings.
 2. 6 medium size sterilized dressings.
 3. 6 large size sterilized dressings.
 4. (15 gms.) packets sterilized cotton wool.
 5. 1 (60 ml.) bottle containing a two per cent alcoholic solution iodine.
 6. 1 (60 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.
 7. 1 roll of adhesive plaster.
 8. 1 snake bite lancet.
 9. 1 (30 gms.) bottle of potassium permanganate crystals.
 10. 1 pair scissors.
 11. 1 copy of the first-aid leaflet issued by the Director General Factory Advice

Service and Labour Institutes /Government of India.

12. A bottle containing 100 tablets (each of 5 gms.) of aspirin.

13. Ointment for burns.

14. A bottle of suitable surgical antiseptic solution.

- iii) Adequate arrangements shall be made for immediate recoupment of the equipment when necessary.
- iv) Nothing except the prescribed contents shall be kept in the First-aid box.
- v) The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.
- vi) A person in charge of the First-aid box shall be a person trained in First-aid treatment, in the work places where the number of contract labour employed is 150 or more.
- vii) In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty and shall be available at all hours when the workers are at work.
- viii) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

4. DRINKING WATER

- i) In every work place, there shall be provided and maintained at suitable places, easily accessible
- ii) Where drinking water is obtained from an Intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.
- iii) Every water supply or storage shall be at a distance of not less than 50 feet 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, the 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 and waterproof.
- iv) 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.

5. WASHING FACILITIES

- i) In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract labour employed therein.
- ii) Separate and adequate cleaning facilities shall be provided for the use of male and female workers.
- iii) Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

6. LATRINES AND URINALS

- i) Latrines shall be provided in every work place on the following scale namely :-

a) Where female are employed there shall be at least one latrine for every 25 females.

b) Where males are employed, there shall be at least one latrine for every 25 males.

Provided that where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be up to the first 100, and one for every 50 thereafter.

ii) Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.

iii) Construction of latrines : The inside walls shall be constructed of masonry or some suitable heat-resisting nonabsorbent materials and shall be cement washed inside and outside at least once a year, Latrines shall not be of a standard lower than borehole system.

iv) a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men only" or "For Women Only" as the case may be.

b) The notice shall also bear the figure of a man or of a woman, as the case may be.

v) There shall be at least one urinal for male workers up to 50 and one for female workers up to fifty employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females up to the first 500 and one for every 100 or part thereafter.

vi) a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.

b) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.

vii) Water shall be provided by means of tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.

viii) Disposal of excreta: - Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately excreta may be disposed of by putting a layer of night soil at the bottom of a pucca tank prepared for the 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 to manure).

(ix) The Contractor shall at his own expense, carry out all instructions issued to him by the Employer to effect proper disposal of night soil and other conservancy work in respect of the Contractor's workmen 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 on his behalf.

7. PROVISION OF SHELTER DURING REST

At every place there shall be provided, free of cost, four suitable sheds, two for meals and the other two for rest separately for the use of men and women labour. The height of each shelter shall not be less than 3 metres (10 ft.) from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sq.m. (6 sft) per head.

Provided that the Employer may permit subject to his satisfaction, a portion of the building under

construction or other alternative accommodation to be used for the purpose.

8. CRECHES

- i) At every work place, at which 20 or more women worker are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom.
- ii) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.
- iii) The Contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the bed room.
- iv) The Contractor shall provide one ayaa to look after the children in the creche when the number of women workers does not exceed 50 and two when the number of women workers exceed 50.
- v) The use of the rooms earmarked as creches shall be restricted to children, their attendants and mothers of the children.

9. CANTEENS

- i) In every work place where the work regarding the employment of contract labour is likely to continue for six months and where in contract labour numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the Contractor for the use of such contract labour.
- ii) The canteen shall be maintained by the Contractor in an efficient manner.
- iii) The canteen shall consist of at least a dining hall, kitchen, storeroom, pantry and washing places separately for workers and utensils.
- iv) The canteen shall be sufficiently lighted at all times when any person has access to it.
- v) The floor shall be made of smooth and impervious materials and inside walls shall be lime-washed or colour washed at least once in each year. Provided that the inside walls of the kitchen shall be lime-washed every four months.
- vi) The premises of the canteen shall be maintained in a clean and sanitary condition.
- vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.
- viii) Suitable arrangements shall be made for the collection and disposal of garbage.
- ix) The dining hall shall accommodate at a time 30 per cent of the contract labour working at a time.
- x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square meter (10 sft) per diner to be accommodated as prescribed in sub-Rule 9.
- xi) a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number.
 - b) Washing places for women shall be separate and screened to secure privacy.

- xii) Sufficient tables stools, chair or benches shall be available for the number of diners to be accommodated as prescribed in sub-Rule 9.
- xiii) a) 1. There shall be provided and maintained sufficient utensils crockery, furniture and any other equipments necessary for the efficient running of the canteen.
2. The furniture utensils and other equipment shall be maintained in a clean and hygienic condition.
b) 1. Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.
2. A service counter, if provided, shall have top of smooth and impervious material.
3. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipments.
- xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.
- xv) The charges for food stuffs, beverages and any other items served in the canteen shall be based on 'No profit, No loss' and shall be conspicuously displayed in the canteen.
- xvi) In arriving at the price of foodstuffs, and other article served in the canteen, the following items shall not be taken into consideration as expenditure namely:-
 - a) The rent of land and building.
 - b) The depreciation and maintenance charges for the building and equipments provided for the canteen.
 - c) The cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils.
 - d) The water charges and other charges incurred for lighting and ventilation.
 - e) The interest and amounts spent on the provision and maintenance of equipments provided for the canteen.
- xvii) The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

10. ANTI-MALARIAL PRECAUTIONS

The Contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Employer including the filling up of any borrow pits which may have been dug by him. The above rules shall be incorporated in the contracts and in notices inviting tenders and shall form an integral part of the contracts.

11. AMENDMENTS

Government may, from time to time, add to or amend these rules and issue directions - it may consider necessary for the purpose of removing any difficulty which may arise in the administration thereof.

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SECTION 7

CONTRACTORS' LABOUR REGULATIONS

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Punjab Water Supply & Sewerage Board ("CONTRACTORS LABOUR REGULATIONS

1. SHORT TITLE

These regulations may be called Punjab Water Supply & Sewerage Board Contractor's Labour regulations.

2. DEFINITION IN THE REGULATIONS

Unless otherwise expressed or indicated the following word and expressions shall have the meaning here by assigned to the respectively that is to say.

- (i) "LABOUR" mean workers employed by Punjab Water Supply & Sewerage Board Contractor directly or indirectly through a Sub-Contractor or other person or by an agent on his behalf.
- (ii) "FAIR WAGES" means wages whether for time or piece work notified as the time of inviting tenders for the work and where such wages have not been notified, the wages prescribed by the Pwssb for in which the work is done.
- (iii) Contractor shall include every person whether a sub-Contractor or headman or agent employing labour on the works taken on contract.
- (iv) "WAGES" shall have the same meaning as defined in the payment of Wages Act, 1936 and include times and rates wages.

3. DISPLAY OF NOTICES, REGARDING WAGES, ETC.

The Contractor shall before the commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clean and legible conditions in conspicuous place on the work, notices in English and in the local Indian languages spoken by the majority of the workers giving the fair wages notified or prescribed by the Punjab Water Supply & Sewerage Board and the hours of work for which such wages are earned.

4. PAYMENT OF WAGES

1. Wages due to every worker shall be paid to him directly.
2. All wages shall be paid in cash or check or both.

5. FIXATION OF WAGES PERIOD

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

6. WAGES BOOK AND WAGE SLIPS etc.

1. a). The Contractor shall maintain wages book of each worker in such form as may be convenient but the same shall include the following particulars.
 - b). Rate of daily or monthly wages.
 - c). Nature of work on which employed.
 - d). Total number of days worked during each wages period.
 - e). Total amount payable for the work during each wage period.
 - f). All deduction made from the wages with an indication in each cases of the ground for which the deduction is made.
2. The Contractor shall also maintain a wage slip for each worker employed on the work.
3. The authority competent to accept the contract may grant and exemption from the maintenance of wage book and wage slips to a Contractor who in his opinion may not directly or indirectly employ more than 100 persons on the work.

7. FINES AND DEDUCTION WHICH MAY BE MADE FROM WAGES

The wages of a worker shall be paid to him without any deduction of any kind except following:

- (a) Fines
- (b) Deductions for absence from duty i.e. from the place or places where by the terms of his employment, he is required to work out the amount of deduction shall be in proportion to the period which he was absent.
- (c) Deductions for damages to or loss of goods expressly entrusted to the employed person for custody or for loss of money for which he is required to account, where such damage or loss is directly attributable to his neglect or default.
- (d) (i) Any other deductions which the PWSSB. may from time to time allow.
 - (ii) No fine shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deduction.

8. REPORT OF LABOUR WELFARE OFFICER:

The Labour Welfare Officer or any other person authorized as aforesaid shall submit a report of the results of his investigations or enquiry to the Executive-Engineer concerned, indicating the extent, if any, to which the default has been committed and the amount of fine recoverable in respect of the act of omission and commission of the labourer with a note that necessary deduction from the Contractor will be made and the wages and other dues be paid to the labourers concerned.

9. APPEALS AGAINST THE DECISION OF LABOUR WELFARE OFFICER;

Any person aggrieved by the decision and recommendation of Labour Welfare Officer person so authorised may appeal against such decision to the Labour Commissioner, but subject to such

appeal, the decision of the Officer shall be final and binding upon the Contractor.
No party shall be allowed to be represented by a lawyer during any investigation enquiry appeal or any other proceeding under these regulations.

10. INSPECTION OF REGISTER

The Contractor shall allow inspection of Wage and Wage slips to any of his worker or to his agent at a convenient time and place after due notice is received by the Punjab Water Supply & Sewerage Board on his behalf.

11. SUBMISSION OF RETURNS

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

12. AMENDMENTS

The Punjab Government may from time to time add or amend these regulations. The decision of the labour Commissioner Punjab Government in the behalf shall be final.

- (a) The Contractor shall pay not less than fair wage to laborers engaged by him on the work, Fair wage means wage whether for time to piece work notified, at the time of inviting tender for the work and where such wages have not been so notified, the wages prescribed by the Punjab Government for the district in which the work is done.
- (b) The Contractor shall not withstanding the provision of any agreement to the contract caused to be paid for wage to labourers indirectly engaged on the work, including any labour engaged by his sub-Contractors in connection with the said work as if the labourers had been directly employed by him.
- (c) In respect of all labour directly or indirectly employed on the work for the performance of the Contractor's part of this agreement the Contractor shall comply with Labour Regulations made by Govt. from time to time in regard to payment of Wages, Wage period, Deduction from wages, recovery of wages not paid and deductions unauthorizely made intendancy of wage book, wage slips, publication of wages and other terms of employment, inspection and submission of periodical returns and all other matters of alike nature.
- (d) The Executive Engineer or Sub Division Engineer concerned shall have the right to deduct from the moneys due to the Contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract from benefit of the workers, non payment of wages deductions made from his or their wages, which are not justified by the terms of the contract of the regulations referred to in clause (c) above.
- (e) Vis-à-vis the Punjab Government the Contractor shall be primarily liable of all payment to be made under and for the observation of the regulations aforesaid without prejudice to his right to claim indemnity from his sub Contractors.
- (f) The regulation aforesaid shall be deemed to be part to his Contractor and any breach thereof shall be deemed to be breach of his contract.

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ESTABLISHMENTS ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORKS

- a) **Workmen Compensation Act 1923** : The act provides for compensation in case of injury by accident arising out of and of course of employment.
- b) **Payment of Gratuity Act 1972** : Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if any employee has completed 5 years service or more, on death, the rate of 15 days wages for every completed year of service. The act is applicable to establishments employing 10 or more employees.
- c) **Employees PF and Misc. Provision Act 1952** – The Act provides for monthly contributes by the employer (i.e. contractor) plus workers @ 10% or 8.33% The benefits payable under the Act are :
 - i) Pension or family pension on retirement or death, as the case may be.
 - ii) Deposit linked insurance on the death in harness of the worker.
 - iii) Payment of P.F. accumulation on retirement/death etc.
- d) **Maternity Benefit Act 1951** : This act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & Abolition Act 1970** : The act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided by the Principal Employer by Law. The Principal Employer is required to take certificate of registration and the Contractor is required to take licence from the designated officer. The act is applicable to the establishments or Contractor of Principal Employer, if they employ 20 or more contract labour.
- f) **Minimum Wages Act 1948** :- The Employer is supposed to pay not less than the Minimum wages fixed by appropriate Government as per provisions of the Act, if the employment is a scheduled employment. Construction of Buildings, Roads, Runways are scheduled employments.
- g) **Payment of Wages Act 1936** : It lays down as to by what date the wages are to be paid, when wit will be paid and what deductions can be made from the wages of the workers.
- h) **Equal Remuneration Act 1979** :- The Act provided for payment of equal wages for work of equal nature to Male and Female workers and for not making discrimination against Female employees in the matters of transfers, training and promotions etc.
- i) **Payment of Bonus Act 1965**: The act is applicable to all establishments employing 20 or more employees. The act provides for payments of annual bonus subject to a minimum 8.33% of wages and maximum 20% of wages to employees drawing Rs. 3500/- per month or less. The bonus is to be paid to employees getting Rs. 2500/- per month or above upto Rs. 3500/- per month shall be worked out by taking wages as Rs. 2500/- per month only. The act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. Some of the State Governments have reduced the employment size from 20 to 10 for the purpose of applicability of this Act.
- j) **Industrial Dispute Act 1947**: The Act lays down the machinery and procedure for resolution of Industrial disputes, in what situations a strike or lock out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) **Industrial Employment (Standing Orders) Act 1946**: It is applicable to all establishments employing 100 or more workmen (employment size reduced by some of the State and Central Government to 50). The act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get the same certified by the designated Authority.

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- l) **Trade Unions Act 1926** : The Act lays down the procedure for registration of trade unions of workmen and employers. The Trade unions registered under the act have been given certain immunities from civil and criminal liabilities.
- m) **Child Labour (prohibition & regulation) Act 1986** : The act prohibits employment of children below 14 years of age in certain occupation and processes and provides for regulation of employment of children in all other occupations and progress. Employment of Child labour is prohibited in Building and Construction Industry.
- n) **Inter State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act 1979** : The act is applicable to an establishment which employs 5 or more interstate migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state) The inter State migrant workmen in an establishment to which this act becomes applicable, are required to be provided certain facilities such as housing, medical and traveling expenses from home upto the establishment and back etc.
- o) **The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996** :- All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this act. All such establishments are required to pay cess at the rate no exceeding 25 of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as Canteens, First Aid facilities, Ambulance, Housing accommodations for workers near the work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) **Factories Act 1948** : The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing 10 persons or more with aid of power or 20 or more persons without the aid of power engaged in manufacturing process.

OPERATION & MAINTENANCE OF WATER SUPPLY, SEWERAGE & ROADS

CONDITIONS:

1. In case of contamination of drinking water in particular locality, the contractor will disconnect the W/S line at once & make alternative arrangement to supply Potable water through tankers at his own cost till rectification of the fault.
2. Any repair to the machinery, civil structure, equipments etc. required during the contract period will be got done by the contractor at his own cost including cost of material.
3. All consumable items for successful O & M of system will be provided by the contractor at his own cost.
4. During any breakdown of power Gen. Sets shall be put in operation immediately for which he will maintain the proper log books and the cost of diesel consumed shall be reimbursed on production of actual purchase bill and proof of its actual consumption.
5. Bleaching powder/ Chlorine gas/ Alum or any other material to be used for disinfection of the water will be arranged by the contractor at his own cost. The contractor will also maintain record for consumption of disinfection agents used for this purpose.
6. Electricity bills shall be paid by the M.C Bathinda. However if any type of surcharge is levied on the electricity bill for reason like less power factor, over loading, Sparking or short circuiting of equipments, due to loose connection etc. shall be chargeable to the contractor.
7. O & M of existing W/S and sewerage system shall be taken in hand by the contractor from date of start mentioned in the allotment letter on as is, where is basis. The new lines of W/S & Sewer being laid under this project will be added to the O&M work continuously as and when they are completed and commissioned during the construction period of the Project till the whole system is covered for O&M. The O&M of works, being executed at present and likely to be executed in near future by the other contractor is also included.
8. The contractor will collect, collate and submit the bench mark for both W/S & Sew. system for arriving at KPI within one year and based on thus collected basic data, will give the schedule of improvement in performance of the system and he will insure the achievement of laid down KPI's
9. The payment for O&M work will be made as fixed payment for the period up to 2 years and for the remaining 8 years it will be based on the above mentioned performance targets in the ratio of 60:40 means 60% of the O&M cost will be paid as fixed payment and 40% "monthly variable payment" shall be paid on performance basis as mentioned below

a) Revenue collection

I) Target

X% to more than or equal to 90% increase in the phased manner as under:- (Value of X% will be submitted by contractor in the basic data to be submitted as mentioned above)

- i. From start of 3rd year from X% to 70%

- ii. –do- 4th year from 70% to 80%
- iii. –do- 5th year from 80% to 90%
- iv. From start of 6th year to end of contract equal to or more than 90%

II) Payment

50% payment out of "monthly variable payment" will be made if the revenue collection is increased from existing X% to T%. (Where T% is the target fixed for that period). If the achievement remains in between X% to T% then the payment will be made as illustrated below.

Let the value of X = 50%
 Achievement Y = 70%
 Target T = 90%
 Due payment = Monthly variable payment X 50% X ((70-50)/ (90-50))

If the target achieved by the contractor is 10% more than the fixed target than an incentive of Rs. 5.0 lac will paid to the contractor during that year.

If the achievement comes down from X% then the reduction in the fixed payment will be made as illustrated below and no payment of variable part will be made.

Let the value of X = 50%
 Achievement Y = 35%
 The fixed payment will be reduced to
 = Monthly payment X (60 X 35/50) %

b) Decrease in Non revenue Water

Decrease in Non Revenue water supply from A% to less than or equal to 15% in a phased manner as under:-(Value of A% will be submitted by contractor in the basic data to be submitted as mentioned above)

I) Target

- i. From start of 3rd year from A% to 40%
- ii. –do- 4th year from 40% to 30%
- iii. –do- 5th year from 30% to 20%
- iv. –do- 8th year from 20% to 15% or less

II) Payment

10% payment out of monthly variable payment will be made if the unaccounted water is decreased from A% to T%. (Where T% is the target fixed for that period). If

the achievement remains in between A% to T% then the payment will be made as illustrated below.

Let the value of A = 35%

Achievement Y = 28%

Target T = 20%

Due payment = Monthly variable payment X 12.5% X ((28-20)/ (35-20))

If the target achieved by the contractor is 10% more than the fixed target than an incentive of Rs. 5.0 lac will paid to the contractor during that year.

If the achievement is more then A% then the reduction from the fixed payment will be made as illustrated below and no payment of variable part will be made.

Let the value of A = 35%

Achievement Y = 40%

The fixed payment will be reduced to

= Monthly payment X (60 X 35/40)%

c) Assurance of 24x7 Water Supply

15% of the "monthly variable payment" will be made if the 24x7 water supply is assured by the contractor for the full month. If contractor fails to do so then reduction@1% per day will be made out of 15%. But if he fails to maintain this service for a period less than 25 days in the month then no payment on this account will be made . All wards of city should have 24x7 water supply in a phased manner. By the end of 2nd year he will assure it in at least area of two wards and by the end of 5th year it should be applied to the entire town. Nothing extra will be paid to the contractor on this account.

d) Redressal of complaint

10% of the "monthly variable payment" will be made if the complaints are redressed within 48 hours from the time of its receipt. He fails to redress less than 90% of the complaints received during the month then no payment on this account will be made. If due to laxity of contractor any type of penalty is imposed under RTS act & any fine is imposed by consumer forum or any court of law etc. and legal fee and charges if any will be borne by the contractor.

e) Quality assurance of Water Supply

15% of the monthly variable payment will only be made if the No. of samples not meeting the norms remains less than or equal to 5% out of daily collected samples during the month. In case of failure of more than 5% samples in a

month the entire value of variable payment i.e. 40% of the monthly payment will be recovered / forfeited.

10. The payment will only be made for the period actually the services are maintained by the contractor. Interruption period due to any reason will not be paid. The contractor will on occurrence of interruption in W/S set right the defects within 24 hours. In case the contractor fails to rectify the defects within 24 hours, the department is at liberty to rectify these defects. The deptt. shall recover double the cost of rectification from the contractor.
11. Log book for every unit of installation in operation shall be maintained by the contractor & same will be accessible to the officer/ official of the department.
12. The duplicate keys to all the locks will be placed in the custody of the SDE in charge.
13. The schedule of operation of Installations & W/S distribution system will be prepared by the contractor for smooth & satisfactorily running of the scheme. The same will be got approved from concerned SDE. Changes, if any shall be adopted on written consent of SDE Incharge.
14. The contractor will have to make arrangement for watch and ward of the installations & will be totally responsible for the safety and security of the installations.
15. This O&M period is extendable for further period of 10 years in case the services are of high standards by manually agreement between MC Bathinda authority and the contractor. The period of the contract can be extended by two months in emergency by giving seven days notice to the contractor at same terms & conditions and rates as approved for the whole tendered period. In case it is necessary to terminate the contract, Engineer-in-charge can do the same without assigning any reason with a notice of fifteen days.
16. In case the fault in operation or maintenance continuous for more than 24 hours due to negligence of contractor, the Engineer-in-charge is at liberty to remove such fault at its own cost & shall recover the double cost from the contractor to ensure continuity of essential services without any prior notice.
17. The contractor will get comprehensive group insurance of all his workers under the contract. The payment of EPF deposited and insurance shall be reimbursed to the contractor on production of actual deposit receipt / challan issue by concerned department as proof of its deposit.
18. The contractor will also take all precautions and preventive measures required to handle the machinery for operation of installation to ensure safety of its workmen and prevent accidents at the site. In case of any accident in spite of all protections taken by him, he shall be responsible for payment of compensation if any to the workmen and shall settle any/all other legal complication & claims there at his own.
19. The contractor will maintain "service centres" at suitable places in the town, showing the receipt & redressal of the complaints & submit daily report to the concerned SDE. The

complaints received through toll free numbers, from M.C & PWSSB official also shall be incorporated. He shall make arrangement for IVRS system for redressal of complaints.

- 19a. The water supply and sewerage bill shall be generated on bimonthly basis by the contractor and he will setup a bill collection centre having sufficient windows at office of the Municipal Corporation, Bathinda. The contractor can set up as many bills collection centres in the city and for this purpose he can tie up with banks also but no payment as this account will be paid to him.
- 20 In case W/S & Sewerage scheme is taken over by the M.C. then the PWSSB is a liberty to transfer the contract to M.C authorities & no Claim in this account shall be entertained.
- 21 The equipment & machinery mentioned in eligibility criteria mentioned in volume-I shall be kept available at Bathinda by the contractor in working condition throughout the O&M period. The contractor will quote hire charges for super-sucker machine and jet-cum-suction machines. These charges should be complete including cost of operators, experts and fuel etc. so that these can be used at other towns on hire basis, if & when required.
- 22 During the O&M period, no overflow of manholes in the town is acceptable.
- 23 On taking possession of the installations, the contractor will provide one coat of enamel paint to the doors and piping etc. dry distemper to the interior of pump chamber, snowcem to the exterior and boundary pillars in the required colors schemes and shades to the satisfaction of Engineer-in-charge or his representative. This shall be undertaken regularly at intervals of every three years.
- 24 The contractor shall maintain the landscaping of premises/parks etc. to the entire satisfaction of the Engineer-in-charge or his representative.
- 25 The installations should be operated by the qualified pump operators as per Punjab Government rules having industrial training institute (ITI) Electrician Trade certificate.
- 26 The contractor shall set up water quality surveillance program including laboratory to undertake daily, weekly and monthly testing of water quality at consumer taps for checking the residual chlorine content and also physical, chemical and bacteriological quality parameters. The residual chlorine of 0.2 ppm shall be maintained at the farthest end of town .The Engineer-in-charge is at liberty to get the random water samples tested from any other reputed laboratories & cost there of recovered from the contractor.
- 27 The contractor shall make special arrangements, as desired in case of out break of epidemics, fires and any such like emergency situation.
- 28 Some other conditions to be met in the O&M cost shall be as follows:-
 - a. To restore the drinking water supply within 12 hours of any break down.
 - b. Blockage of sewer line shall be removed within 24 hours.
 - c. Desilting of sewer lines shall be carried out regularly in routine and especially before start of rainy season as per schedule given by the department and the record of the same shall be maintained.

- d. The contractor shall have to strictly ensure, the use of safety kits/equipments by the sewer men and other staff to check any type of mishap for which he shall be responsible.
 - e. Hygienic disposal of silt/ manure is included in the scope of the contractor.
- 29 The contractor shall undertake prompt repair of leakages in the distribution network regularly & maintain record.
- 30 Sufficient quantity of all consumable such as pipes, Pig lead, D. joints, manhole Cover & Frames of various sizes etc. for operation & Maintenance of the system shall be kept in stock by the contractor.
- 31 Sampling and testing of treated water should be done as per CPHEEO norms and proper record should be maintain the report of the same shall be submitted to the concerned SDE preferably the following schedule of sampling & testing should be adopted.

S. No	Location	No. of Samples	Rotation
1	At source of supply	1 at each source	daily
2	At Consumer end	1 in each ward	Alternative day

The location of consumer end shall be fixed with the consent of the representative of MC/PWSSB and besides this Municipal / PWSSB/ Administration / Health etc authorities are free to get the sudden sampling from any location and get it tested from any reputed lab.

- 32 The Punjab W/S & Sewerage Board / Municipal Corporation, Bathinda has employees working on O&M of W/S & Sewerage system including the revenue collection . Besides this, supervisory staff of two JE i.e. one for W/S and second for sewerage system will be deputed for joint team of the O&M management of all O&M purposes . These employees will be part and parcel of the O&M and revenue collection. The category wise salary and service profile of all the employees is attached in the tender document. The salary of these employees will be paid by MC Bathinda directly based on attendance / duty sheet submitted by the contractor. Such attendance/duty sheet should be submitted by 25th of every month. After retirement of any employee from the service no replacement will be provided. However, replacement of any other ground like compassionate ground will continue as per prevailing rules.
- 33(a) The service charges if any on O&M work shall be reimbursed to the contractor on production of proof of actual deposit with the concerned department.
- 34 The contractor will dispose off hygienically the material collected at screens every day in the nearby municipal dump & ensure clean and healthy environment in side & outside the pumping stations/installation.
- 35 In case break down in the installation is likely to take more then 6 hours for repairs; the installation shall be made functional by putting stand-by / spare machinery. The list of installations is attached in the tender document.
- 36 O&M of new contract WTP is also included as part of the overall O&M contract.
- 37 All surcharges / penalty by other departments will be charged to the contractor.

- 38 The contractor will do GIS mapping within first 6 months of start of this work for the whole existing as well as new W/S & Sewerage system. The base maps for this purpose will be provided by MC Bathinda. The cost of preparation of base map and its software will be borne by the Municipal Corporation Bathinda. He will continue updating the data as the execution of work progresses.
- 39 The contractor shall provide automatic control system by providing PLC / SCADA system etc. The automation shall include water works, Sub water works, WTPs, OHSRs, Bulk Meter, MPS & STP etc.
- 40 Bulk water meters at the source and the domestic & industrial water meter at the consumer end will be provided by the contractor for measuring the un-accounted for water (UFW).
- 41 Buildings inside the installations will be transferred to the contractor for O&M purposes.
- 42 At least one fitter experienced in repair of domestic water meters should be employed by the contractor.
- 43 Contractor should assess the current electricity consumption at various installations and ensure that electricity consumption is reduced from existing levels.
- 44 For OHSR, contractor should ensure that there is no overflow at any point of time and come up with the automation for the same to avoid unnecessary spillage of treated water.
- 45 Contractor should ensure proper cleanliness and landscaping of various existing / proposed installations like water works, MPS & STP etc;
- 46 The contractor will ensure water supply distribution zoning and achieve 24x7 water supply in a phased manner. Water supply scheme should be implemented successfully and results should be visible in terms of minimum head available at the consumer end as per standards.
- 47 Obtaining NOC from various departments like electricity Board, B&R, Irrigation, Forest and Railway departments will be joint responsibility of PWSSB and MCB & the contractor.
- 48 It is intimated that there is no storm sewer in Bathinda city and in rainy days, the storm water finds ingress into sewer system and agency should make arrangement for by passing the same from STP to avoid any type of defect on the performance of the STP.
- 49 The surface drains are connected with sewer through road gullies and screening chambers. The cleaning and maintenance of these is also included in scope of O&M work.
- 50 Copy of current tariff rate is attached in the tender document.
- 51 The Contractor shall hand over the all assets to the Engineer-in-charge to his entire satisfaction he should ensure that all the machines & equipments are in working conditions.
- 52 The contractor will monitor the proper pressure at various points on the W/S net work from the pressure gauge and the proper record of the pressure shall be maintained and the copy of the record will be submitted to EIC office every month.

O&M of roads

- The roads which are proposed in this NIT shall be maintained by the contractor at his own cost, if he fails to do so the EIC is at liberty to do the same after giving him 7 days

notice and expenditure thus incurred shall be recovered at double the cost from the contractor.

- The contractor shall conduct routine maintenance regularly. The roads should be kept in tip top throughout the O&M period and re-carpet the black top as per requirement. Atleast all roads should be re-carpeted once during the contract period.

O&M of street lights

- The street lights which are proposed in this NIT shall be maintained by the contractor at his own cost, if he fails to do so the EIC is at liberty to do the same after giving him 2 days notice and expenditure thus incurred shall be recovered at double the cost from the contractor.
- The contractor shall conduct routine maintenance regularly. The street lightening should be kept in working condition throughout the O&M period and replaced as per requirement.