

Annexure-IV

Special Condition of Contract

For the general guidance and information of the prospective tenderers a brief note on the existing water supply system for Munger Nagar Nigam is given below, HOWEVER THE TENDERERS MUST NOTE THAT BEFORE PARTICIPATING IN THE BID, THEY MUST VISIT THE SITE AND SATISFY THEMSELVES BY BECOMING FULLY CONVERGENT/FAMILIAR WITH THE ENTIRE EXISTING SYSTEM AND ALL RELEVANT SITE CONDITIONS. THE RATES QUOTED MUST BE INCLUSIVE OF ALL TAXES AND DUTIES FOR ALL THE COMPONENTS.

Requirement of water: - The water requirement for Munger Nagar Nigam has been considered on the basis of 135 Lpcd.

Type of soil: - In general the soil is alluvial mixed with fine sand.

Scope of work: - The scope of work includes Design, drawing supply all material, execute the work and commissioning of the works for construction of Water Supply Scheme for Munger Nagar Nigam.

Water Demand has been considered as 135 litres per capita per day as per CPEEHO Manual.

(A) Kind and Scope of Work

The Successful bidder is to design, build, operate and maintain a complete and fully functioning water supply system in the Water Supply Area in accordance with the Bid Documents. The obligations of the Operator shall be regulated by the Design Build and Operation & Maintenance Agreement for the Water Supply Area to which the present Technical Specifications form an integral part. The scope of work shall include the following activities:

- Carry out detailed assessment of existing utilities to be included in the Operator's operations and maintenance contract;
- Field survey and investigation with total station survey, Preparation of Maps and drawings on AutoCAD and GIS and Geo technical survey wherever required.
- Establish and confirm organic and inorganic content of the existing raw water source (Ground Water), sanitary survey of the ground water source;
- Prepare detailed design for improvements (as assessed required by the Operator for fulfilling the output requirements) of existing utilities to be included in the Operator's operations and maintenance contract;
- Prepare detailed designs of new works and processes required to fulfill the output requirements for the defined main pipes, reservoirs and distribution system (replacements and extensions);

- Supply all materials for the construction and installation of the plant and supply and install all pipes and controls required for the water facilities;
- Provide and install required mechanical and electrical equipment for full operation of the specified
- Supply and install all cabling and control panels for safe and effective operation of the plant and equipment;
- Supply and install all storage facilities, pumping requirements, distribution piping, valves, and house connections;
- Prepare operations and maintenance manuals for all installations;
- Carry out Tests on Completion and Tests after Completion and commission the works;
- Recruit and train water supply personnel in the operation and maintenance of the Works;
- Provide lubricants and tools for routine maintenance;
- Provide spare parts for all items of equipment and accessories; and
- Operate and maintain the water supply and distribution system for the period defined in the Operations and Maintenance Contract.

The design, construction, operation and maintenance of the water supply system shall be executed in compliance with international best practise and all relevant Indian legislation.

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(B) Design and Build Specifications

The Operator shall be responsible for the provision of all relevant permits necessary for construction, the preparation of detailed design and the construction of the element as defined in the attached bid document.

The water supply system shall as a minimum include the infrastructure defined in Appendix A. The design and construction of the water supply system shall facilitate future expansion of the system

as the population of the water supply area grows.

(C) Operation and Maintenance of the Site

The Operator shall be responsible for the operation and maintenance of the water supply system as described in the attached Operations and Maintenance Specifications.

The Operator shall manage, operate and maintain all plant and ancillary equipment that support the operation of the Project, including without limitation:

- High Yielding Tube well, motor pump and accessories;
- Transmission mains;
- Main piping system;
- Disinfection plant(s) with installations;
- Reservoirs with all installations;
- Distribution pipeline system with all fittings and particulars;
- Service connections;
- Any other work as defined in the Contract.

All Personnel employed by the Operator at the Project shall hold relevant qualifications and appropriate training and shall have sufficient relevant experience in the operation and management of the Works, to ensure the Project is operated and maintained in compliance with the requirements of the Contract. The Operator shall familiarise himself with the terms of the Indian legislation for Water Supply and any statutory consents for the Water Supply System and shall perform the Service in conformity with all of the conditions of these consents.

(D) Technical Documentation

The following documents shall form an integral part of the contract:

- The Design Build Operate & Maintain Agreement for the Operator in the Water Supply Area

- The Bidders Technical Proposal on Operation & Maintenance. The Operator shall have familiarized himself with;
- The Project Implementation Plan.

Works related with OPERATION AND MAINTENANCE OF ALL COMPONENTS

Deployment of manpower, supply of all chemicals, checking of status of supply in fed up area, repairing of leakages, maintaining log book at all pumping stations, submission of daily / weekly / monthly and yearly report of water quality, tested by district laboratories, replacing the damaged parts of any machinery / the machinery as a whole, annual / bi-annual maintenance of all built-up / installed civil/mechanical/electrical structures / units under the scheme , including round-the clock watch & ward **for 60 calendar months** from the date of completion of trial run (excluding energy charges)

O & M cost for the first 12 calendar months	-	1 Job.
O & M cost for the Second 12 calendar months	-	1 Job.
O & M cost for the Third 12 calendar months	-	1 Job.
O & M cost for the Fourth 12 calendar months	-	1 Job.
O & M cost for the Fifth 12 calendar months	-	1 Job.

BREAK UP SCHEDULE FOR PAYMENT

Item No. 1 Transformer

- Supplying and fixing of distribution transformer of proper approved make including all accessories : 60%
- On completion of erection work : 30%
- On successful commissioning and test run to guarantee : 10%

Item No. 2 Installation of Pumping plants and other related works

- Supplying of pumping plants : 60%
- Installation of pumping plant : 30%
- Testing of pump & motor : 10%

Item No. 3 Rising and Distribution mains and other related works

- Supply of pipe at work site : 60%
- Excavating trenches ,Lowering in trenches, laying, jointing and back partly filling : 30%
- Disinfection and successful testing : 10%

Item No. 4 Chlorinators

- Supply : 60%
- Installation : 30%
- Testing : 10%

Item No. 5 High yield Tube well

- Supplying of M.S. housing pipe, blank pipe & Slotted pipe / Johnson filter 30%
- Drilling of bore for tube well : 40%
- Lowering of pipes : 10%
- Supplying of Pea gravel & Packing the same in annular Space between bore & lowered pipe : 5%
- Developing of tube well till sand free, smell free, wholesome water discharge. : 15%

Item No. 6 Construction of Pump House, Clear water reservoir staff quarter and chlorinator room including all components of WTP.

- Foundation & brick work upto roof level with RS Joist : 55%
- RCC roof slab : 15%
- All finishing work including wood work, flooring & Painting, electrical, sanitary, sewerage, septic tank and water supply work etc. : 30%

Item No. 7 Stand Posts

- On completion of each Stand Posts with platform and drain as per approved drawing : 100%

Item No. 8 Construction of Boundary wall & its allied works

- On erecting of brick work with piling and capping beam in complete length : 65%
- Complete plaster work and painting : 35%

Item No. 9 Elevated Service reservoir (For each reservoir).

- On completion of excavation and PCC work in foundation : 10%
- Completion of RCC work in foundation : 15%
- On completion of work up to 1st half of staging Height and including casting of room roof slab : 10%
- On completion of balance staging bottom Dome circular beam head beam and Conical wall : 10%
- On completion of vertical side walls : 10%
- On completion of top dome : 10%
- On supply of C.I. pipe fittings of inlet valve : 7%
- On fitting and fixing of C.I., D/F pipes specials and sluice valve : 3%
- On supply and fixing of MS ladders, railing, lightening arrester, doors, windows and water level indicator : 5%
- On completion of brick work, wood work and steel work in Door and window in office room with toilet and its allied works : 5%

painting, white washing, color washing etc.	:	1%
• Testing of the full hydraulic structure of elevated water tank	:	4%
• On successful commissioning and test run to guarantee	:	10%
Item no. 10 Supply all materials and providing house connections	:	100%
Item No. 11 Raw water Bus line		
• Supply of Pipe at work site	:	45%
• Laying jointing etc	:	40%
• Disinfection and successful testing	:	15%
Item No. 12 Raw water Pump, Clear water pump		
• Supply of pumping plants	:	60%
• Installation of pumping plants	:	30%
• Testing of pump & Motor	:	10%
Item No. 13 Clear water pipe line		
• Supply of pipe at work site	:	45%
• Lowering in trenches, laying, jointing and back party filling	:	40%
• Disinfection and successful testing	:	15%
Item No. 14 Gangway		
• On Completion of foundation work up to GL	:	30%
• Work completion from ground level to Bottom of pathway	:	30%
• Completion of pathway	:	30%
• Finishing work	:	10%
Item No. 15 Intermediate pumping station		
• Excavation and RCC in foundation	:	40%
• RCC wall to upto roof level	:	30%
• RCC roof slab	:	20%
• All finishing work including testing all complete	:	10%
Item No. 16 Supplying, Installation and testing of Chlorinator	:	100%
Item No. 17 Supplying, Installation and testing of Lifting Arrangement	:	100%

Item No. 18 Supplying, fixing and finishing of Main Gate : 100%

Item No. 19 Installation of MDPB, MCC Panel, APFC panel and other related work

- Supplying : 60%
- Installation : 30%
- Testing : 10%

Item No. 20 SCADA

- Supplying : 50%
- Installation : 40%
- Successful running & Testing : 10%

Item No. 21 Demolishing and Restoring of PCC

- Demolishing of PCC : 30%
- Restoring PCC : 70%

Item No. 22 Sluice valve/air valve and other related works

- Supply of valve at work site : 60%
- Laying trenches, jointing and back partly filling : 30%
- Successful testing : 10%

In all rooms, accommodation and related works electric, water supply and sanitation facility should be provided as required and as per direction of E/I without any extra cost to the department.

All essential / minor items which have not been mentioned in schedule of quantities, but required to be completed for efficient working should be done as per direction of E/I without any extra cost. These items are deemed to be covered under different items which has been mentioned in schedule of quantities

SPECIAL CLAUSES PERTAINING TO TIME CONTROL QUALITY CONTROL AND COST CONTROL

(A) TIME CONTROL

Within the time stated in the Contract data the contractor shall submit to the Engineer in charge for approval a program showing the general methods, arrangements, order, and timing for all the activities in the works along with monthly cash flow forecast.

An update of the program shall be a program 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.

The contractor shall submit to the Engineer in charge, for approval, an updated program at intervals no longer than the period stated in the contract data. If the contractor does not submit an updated program within this period, the Engineer in charge 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 program has been submitted.

The Engineer's approval of the program shall not alter the contractor's event occur or a variation is issued which makes it impossible for completion to be achieved by the intended completion date without the contractor taking steps to accelerate the remaining work and which would cause the contractor to incur additional cost.

(B) QUALITY CONTROL

The Engineer shall check the contractor's work and notify the contractor of any defects that are found. Such checking shall not affect the contractor's responsibilities. The Engineer in charge may instruct the contractor to search for a defect and to uncover and test any work that the Engineer in charge considers may have a defect.

If the Engineer in charge 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.

The Engineer in charge 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.

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.

If the contractor has not corrected a defect within the time specified in the Engineer's notice, the Engineer in charge will assess the cost of having the defect corrected, and the contractor will pay this amount.

(C) COST CONTROL

The bill of quantities shall contain items for the construction, installation, testing, and commissioning work to be done by the contractor.

The bill of quantities is used to calculate the contract price.

CERTIFICATE OF UNDERTAKING

1. We shall replace, repair and adjust free of all charges to the Employer any part of the work which fails to comply with the specifications for, wear and tear expected until the completion.
2. All the work will be reliable. The material and equipment supplied will be as per the information given in schedule.
3. All the work will be of a type which has been proved in service to be suitable for the duty required by the specifications and will have been manufactured and tested in accordance with the appropriate standard specifications approved by the Engineer in charge.
4. We accept and abide by the clauses relating to Quality and guarantee of work.
5. All the testing of materials like Cement, Steel, M.S. plates etc. required during the execution of the contract will be got tested by me at my own cost from Government recognized Laboratory. The sampling and testing will be done as given in relevant I.S. Codes.
6. We guarantee performance of all the equipment and material complying with the figures filled in respective schedule and the same will operate satisfactorily throughout the operating range specified in the tender.
7. We will comply with all necessary rectification within total time granted for rectification without any cost to BUIDCo.