

CONTRACT NO.

**WATER AND SANITATION MANAGEMENT ORGANISATION
GANDHINAGAR**

(GOVERNMENT OF GUJARAT UNDERTAKING)



BID DOCUMENT FOR CONSTRUCTION OF VARIOUS COMPONENTS INCLUDING TRANSPORTATION OF P.V.C PIPELINE, SPECIALS FOR FITTING, SERVICE SADDLE EXCAVATION, LOWERING, LAYING, JOINTING, REFILLING, JOB CONNECTION, ENCASING, VALVE, VALVE FITTING, VALVE CHAMBER OF DISTRIBUTION AND BORE TO SUMP PIPELINE, RISING MAIN SUMP TO ESR HDPE PIPELINE, R.C.C. E.S.R. 2,50,000 LITER CAPACITY AND 18.0 MT HEIGHT, HOUSE HOLD CONNECTION, TRANSPARENCY, WATER QUALITY BOARD AND SLOGAN PAINTING WORKS. AT. MOTA ZINZUDA VILLAGE WATER SUPPLY SCHEME. TALUKA: SAVARKUNDLA, DISTRICT: AMRELI. UNDER AUGMENTATION TAP CONNECTIVITY IN RURAL AREA GENERAL PROGRAMME.

Estimated Cost :- Rs. 61,21,585.00

VOLUME- II

VOLUME - IIA, Extent of Work

VOLUME - IIB-I Technical Specifications - Civil

VOLUME - IIB-II Technical Specifications - Mechanical+Electrical

VOLUME - IIC Data sheet Civil+Mechanical

VOLUME - IID O & M mech. specification

**CHIEF Engineer
WATER AND SANITATION MANAGEMENT ORGANISATION
WASMO - GANDHINAGAR.**

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**WATER AND SANITATION MANAGEMENT ORGANISATION
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VOLUME- IIA

EXTENT OF WORK

**CHIEF Engineer
WATER AND SANITATION MANAGEMENT ORGANISATION
WASMO - GANDHINAGAR.**

Content

- Extent of Work
- General Schedule
- General Specification - Civil Works
- Technical Specification - Civil Works

EXTENT OF WORKS

1.0 GENERAL:

BID DOCUMENT FOR CONSTRUCTION OF VARIOUS COMPONENTS INCLUDING TRANSPORTATION OF P.V.C PIPELINE, SPECIALS FOR FITTING, SERVICE SADDLE EXCAVATION, LOWERING, LAYING, JOINTING, REFILLING, JOB CONNECTION, ENCASING, VALVE, VALVE FITTING, VALVE CHAMBER OF DISTRIBUTION AND BORE TO SUMP PIPELINE, RISING MAIN SUMP TO ESR HDPE PIPELINE, R.C.C. E.S.R. 2,50,000 LITER CAPACITY AND 18.0 MT HEIGHT, HOUSE HOLD CONNECTION, TRANSPARENCY, WATER QUALITY BOARD AND SLOGAN PAINTING WORKS. AT. MOTA ZINZUDA VILLAGE WATER SUPPLY SCHEME. TALUKA: SAVARKUNDLA, DISTRICT: AMRELI. UNDER AUGMENTATION TAP CONNECTIVITY IN RURAL AREA GENERAL PROGRAMME.

The Scope of Work under this Contract includes the Design, Engineering, Manufacture, Supply, Inspection and testing at works, Packing and forwarding, Delivery to site, Unloading, Handling, Safe Storage, Insurance, Erection, Installation, Testing, Trial Run, Commissioning and Demonstration of Performance Guarantee Parameters, Handing over, **TRANSPORTATION OF P.V.C PIPELINE, SPECIALS FOR FITTING, SERVICE SADDLE EXCAVATION, LOWERING, LAYING, JOINTING, REFILLING, JOB CONNECTION, ENCASING, VALVE, VALVE FITTING, VALVE CHAMBER OF DISTRIBUTION AND BORE TO SUMP PIPELINE, RISING MAIN SUMP TO ESR HDPE PIPELINE, R.C.C. E.S.R. 2,50,000 LITER CAPACITY AND 18.0 MT HEIGHT, HOUSE HOLD CONNECTION, TRANSPARENCY, WATER QUALITY BOARD AND SLOGAN PAINTING WORKS. AT. MOTA ZINZUDA VILLAGE WATER SUPPLY SCHEME. TALUKA: SAVARKUNDLA, DISTRICT: AMRELI. UNDER AUGMENTATION TAP CONNECTIVITY IN RURAL AREA GENERAL PROGRAMME.** Work specified in different sections of this Tender Specifications.

Any item of work, for erection of material / equipment which have not been specifically mentioned in the specification but are necessary for safe and trouble-free operation and guaranteed performance of the entire system, plant and equipment offered shall be deemed to be included within scope of this specifications and shall be provided by the bidder without any extra price and time implication to the employer.

The successful bidder shall have to undertake site surveys, route surveys for ascertaining the terrain for planning and designing of the schemes in consultation with Engineer-in-charge, as Structure as to conduct geotechnical investigations for designing of foundation system of structures. The bidders shall submit actual path of laying of transmission network based on actual site condition.

Civil works shall include design, manufacture, performance testing at manufacturer's works, painting, supply, delivery at site, storage at site, installation / erection, testing and commissioning at site, final painting and handing over to Department.

The scope of work shall also include obtaining necessary statutory approvals for the components as required.

GWSSB will be responsible to get all other statutory permissions and clearances from the concerned central / state or local statutory authorities. However, the contractor shall have to manage the day-to-day co-ordination and follow up activities based on these clearances on site.

In the work of construction of structures, if the following condition like ground situation, SBC reports, type of strata encountered in foundation, natural rainfall drain patterns, Ground

water table of locations, etc. occurs and the engineer in charge feels the necessity of consideration of ground water table, the structural design shall be incorporate necessary water uplift pressure. The decision of engineer-in-charge shall be binding to the bidder. Bidders are advised to quote the rate keeping in view this point as no extra payment shall be given for this. In case of any ambiguity, the decision of Superintending Engineer shall be final and binding to the bidder.

Before starting the actual work, the contractor must provide and fix necessary DISPLAY BOARDS at all works site as per design, details, including writing with paints necessary details as directed by Engineer-in-charge at Contractor's own cost. No extra payment shall be made for this work. These shall be property of GWSSB / Client after completion of works.

2.0 DETAILS OF PROPOSED SCHEME

2.1 SCOPE:

TRANSPORTATION OF P.V.C PIPELINE, SPECIALS FOR FITTING, SERVICE SADDLE EXCAVATION, LOWERING, LAYING, JOINTING, REFILLING, JOB CONNECTION, ENCASING, VALVE, VALVE FITTING, VALVE CHAMBER OF DISTRIBUTION AND BORE TO SUMP PIPELINE, RISING MAIN SUMP TO ESR HDPE PIPELINE, R.C.C. E.S.R. 2,50,000 LITER CAPACITY AND 18.0 MT HEIGHT, HOUSE HOLD CONNECTION, TRANSPARENCY, WATER QUALITY BOARD AND SLOGAN PAINTING WORKS. AT. MOTA ZINZUDA VILLAGE WATER SUPPLY SCHEME. TALUKA: SAVARKUNDLA, DISTRICT: AMRELI. UNDER AUGMENTATION TAP CONNECTIVITY IN RURAL AREA GENERAL PROGRAMME.

CIVIL WORKS

2.2 Civil Works: GENERAL

- The general arrangements given in the specification is indicative, the contractor to develop detailed drawings to suit process level requirements, capacity specified in specification and available plot area.
- Valve Chambers
- Anchorage/Thrust Blocks/Culvert/Nalla/Drain/River Crossing

2.2.1 Valve chambers

Contractor shall carry out the construction of valves chambers in consultation with the engineer in charge.

2.2.2 Anchor/Thrust Block

Anchor/thrust blocks shall be provided wherever necessary in consultation with engineer in charge. Contractor shall carry out the design and submit the same for review and approval before execution.

2.2.3 Civil Works for Transmission Piping:

The schematic diagram for pipeline is as shown in the bid drawings. This is only for reference and the selected bidder have to prepare the route map after carrying out necessary survey and fix the alignment in consultation with the Engineer in Charge.

- Hydraulic design shall be prepared and submitted to GWSSB and consultant for approval.

- Contractor has to conduct Route Survey and submitted to GWSSB and consultant for approval.
- Geotechnical survey along the pipe route and submitted to GWSSB and consultant for approval.
- Excavation of pipe trenches.
- Constructing pedestals/ column support/ saddles/ steel bridge, Raising the pipe.
- Supplying and Laying of MS pipe of designed diameters with all specials along the route as per the approved route map (to be surveyed and prepared by the selected bidder).
- Transportation of pipes and materials to fabrication / erections including loading and unloading.
- Contractor shall plan and accordingly phase the supply of items according to his requirement to best utilize the available storage space at site.
- Providing coating/ lining/painting as specified in this tender specification.
- Providing and fixing sluice/Butterfly/Scour valves and Air Valves on pipeline, as specified in relevant data sheets, detailed technical specifications, particular technical specifications
- Providing tapings as required.
- Providing pipe bedding as per the requirements.
- Backfilling of pipe trench with selected soil immediately after erection of pipe excluding pipe joints.
- Encasing of pipelines as per specifications.
- Hydro testing of pipeline in segments.
- Back filling of pipe trench at pipe joints.
- Providing and fixing electro-magnetic flow meter on Existing and New pipelines at specified locations.
- Construction of Chambers as per design and drawing.
- Contractor has to prepare air valve riser drawing and design and get approved from GWIL.
- Supplying, fixing construction of riser pipe for air valves as per approved design and drawings.
- Connection of newly laid pipes with existing pipes.
- Flushing of entire pipeline with clean water at least for 24hours.
- Testing and commissioning all the laid Rising main.
- Preparation of as-built drawings.

1.0 SAFETY CODE :

- Necessary safety sign board shall be fix on site.
- Taking all precautionary measure to safeguard against any accident for the contractors employees, general public, supervisory staff of GWSSB and Consultant by providing necessary safety equipments, helmets and MS sheet barricading etc. at work site. The site has to be kept clean all the time of all debris, rubbish, dirt & surplus/waste material.
- All workers should be provided with safety helmets, safety shoes, safety gloves and safety belts etc.
- Every working platform and every gangway shall be closely boarded unless other adequate measures are taken to ensure safety.
- Every working platform and every gangway shall have adequate width, and Every working platform, gangway, working place and stairway shall be suitably fenced.
- Every opening in the floor of a building or in a working platform shall except for the time and to the extent required to allow the access of person or the transport or shifting of materials be provided with suitable means to prevent the fall of persons or material.

- When persons are employed on a job where there is danger of falling from a height exceeding 3 meter suitable precaution shall be taken to safeguard the persons or material.
 - Suitable precautions shall be taken to prevent persons being struck by articles which might fall from scaffolds or other working places.
 - Safe means of access shall be provided to all working platforms and other working places.
 - The contractor shall comply with the following regulations as regards the hoisting appliances to be used by him.
 - Hoisting machines and tackle including their attachments, anchorages and support shall be of good mechanical construction, sound material and adequate strength and free from patent defect, and
 - Be kept in good repair and in good working order.
 - Every rope used in hoisting or lowering materials or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect.
 - Hoisting machines and tackles shall be examined and adequately tested after erection on the site and before use and be re-examined in position at intervals to be prescribed by Engineer-in-charge.
 - Every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering materials or as a means of suspension shall be periodically examined.
 - Every crane driver or hoisting-appliance operator shall be properly qualified.
 - In the case of every hoisting machine and of every chain, ring hook, shackle, swivel and pulley block used in hoisting or lowering or as a means of suspension, the safe working load shall be ascertained by adequate means.
 - Every hoisting machine and all gears referred to in preceding regulation shall be plainly marked with the safe working load.
 - In the case of hoisting machine having a variable safe working load, each safe working load and conditions under which it is applicable shall be clearly indicated.
 - No part of any hoisting machine or gear referred to in regulation 'g' above shall be loaded beyond the safe working load except for the purpose of testing.
- Motors, gears, transmissions, electric wiring and other dangerous parts of hoisting appliances shall be provided with sufficient safeguards

2.3 Special Attention

The Contractor has to manage following register and Record in each project site.

All Register will be maintained properly by contractor with signature of engineer in charge.

Sr. No.	Name of Register
1	Concrete Pour Card
2	Cube Testing Register
3	Steel Testing Register
4	Cement Consumption Register
5	Daily Progress Register
6	Site Visit Register
7	Pipeline Purchase Register
8	Pipeline Laying Register
9	Drawing Register
10	Steel Purchase Register

11	Steel Consumption Register
12	Daily log Register
13	Level Register
14	Hydraulic Testing of Pipeline, Sump, ESR
15	Work Order Register