



मिरा-भाईंदर महानगरपालिका

पाणी पुरवठा व मलनिसारण विभाग
स्व. इंदिरा गांधी भवन, छत्रपती शिवाजी महाराज मार्ग, भाईंदर (प)
ता. जि. ठाणे - 401 101



जाक्र.मनपा/पापु व मलनि/1846/2024-25

दि. 26 / 11 / 2024

प्रति,

सिस्टम मॅनेजर

संगणक विभाग

मिरा-भाईंदर महानगरपालिका

विषय :- मिरा भाईंदर महानगरपालिकेच्या मल:शुद्धीकरण केंद्रे, मलवाहिन्यांचे जाळे तसेच पाणी उदंचन केंद्रांचे लेखापरीक्षण (AUDIT) करणे, सुधारणा सुचविणे, DPR व DTP तयार करणे, तसेच प्रकल्प व्यवस्थापन सल्लागार म्हणून कामाची अंमलबजावणी करणे.. या कामाचे अंदाजपत्रक तयार करणेकरीता ऑन-लाईन दर मागविणेबाबत.

मिरा भाईंदर महानगरपालिकेच्या मल:शुद्धीकरण केंद्रे, मलवाहिन्यांचे जाळे तसेच पाणी उदंचन केंद्रांचे लेखापरीक्षण (AUDIT) करणे, सुधारणा सुचविणे, DPR व DTP तयार करणे, तसेच प्रकल्प व्यवस्थापन सल्लागार म्हणून कामाची अंमलबजावणी करणे या कामाचे अंदाजपत्रक तयार करायच्याचे आहे. परंतु सदर कामाकरीताचे दर, दरसुचीमध्ये उपलब्ध नसल्याने त्यांचे ऑन-लाईन दर मागविणे आवश्यक आहे. याकरीता लागणाऱ्या बाबींचा तक्ता सोबत जोडत आहे, सदर तक्ता मनपाच्या www.mbmcc.gov.in या संकेत स्थळावर प्रसिध्द करण्यात यावा.

(दीपक खांबिता)

शहर अभियंता

मिरा-भाईंदर महानगरपालिका



मिरा-भाईदर महानगरपालिका
पाणी पुरवठा व मल:निसारण विभाग
स्व. इंदिरा गांधी भवन, छत्रपती शिवाजी महाराज मार्ग, भाईदर (प)
ता. जि. ठाणे - 401 101



मिरा भाईदर महानगरपालिकेच्या मल:शुद्धीकरण केंद्रे, मलवाहिन्यांचे जाळे तसेच पाणी उदंचन केंद्रांचे लेखापरीक्षण (AUDIT) करणे, सुधारणा सुचविणे, DPR व DTP तयार करणे, तसेच प्रकल्प व्यवस्थापन सल्लागार म्हणून कामाची अंमलबजावणी करणे या कामाचे अंदाजपत्रक तयार करणेकमी मिरा-भाईदर महानगर पालिका खालील तक्त्यातील बाबींकरिता ऑनलाईन दर मागवीत आहे.

उपरोक्त कामांतर्गत बाबींचे दर दि. 26.11.2024 ते दि. 03.12.2024 रोजी दुपारी १२.०० वाजेपर्यंत watersupply@mbmc.gov.in या ई-मेलवर पाठविण्यात यावे.

DESCRIPTION OF WORK	Qty	Unit	Rate (Excluding GST)
<p>To carry out STP, UGD & Water Audit of all STPs, UGD & Water Pumping Stations under MBMC, Process improvement suggestion, DPR & DTP preparation, and to carry out Project Management Consultancy upto completion of work, as per details in ANNEXURE-I</p> <p style="text-align: center;">A) PART-1 AUDIT</p> <p>1. STP AUDIT- To carry out STP Audit of all STPs under MBMC. To inspect/Study all the units of STPs in detail. Suggestion for improvements in Process to meet MPCB norms with OCEMS & SCADA. Submission of Technical Report.</p> <p>2. UGD AUDIT- To carry out UGD Audit of Sewer Pipe line laid, GAP Works, Problems in laying Sewer Pipe line in Gap Work & Solution on it. Improvements on O&M of Under Ground Sewer System with suggestion of latest machineries required. Submission of Technical Report.</p> <p>3. WATER AUDIT- To carry out Water Audit of all Water Pumping Stations under MBMC. To inspect/Study all the units of WPS in detail. Suggestion for improvements for operation of WPS on SCADA. Submission of Technical Report.</p> <p>(DETAILED SCOPE OF WORK ENCLOSED HERE WITH IN ANNEXURE-A)</p>	<p>9</p> <p>1</p> <p>14</p>	<p>STPs</p> <p>JOB</p> <p>Pumping Station</p>	

B) PART-2 PROJECT MANAGEMENT

CONSULTANCY

1. STP CONSULTANCY- Study of Audit Report. Preparation of Detailed Estimates, with Drawing & Design. Technical Sanction from MJP. Appraisal from IIT Mumbai. Submission of DPR & DTP. Supervission, Quality Assurance & Quality Control during Execution & Completion of work.
2. UGD CONSULTANCY – Study of Audit Report. Preparation of Detailed Estimates, with Drawing & Design. Technical Sanction from MJP. Submission of DPR & DTP. Supervission, Quality Assurance & Quality Control during Execution & Completion of work.
3. WATER CONSULTANCY - Study of Audit Report. Preparation of Detailed Estimates, with Drawing & Design. Technical Sanction from MJP. Submission of DPR & DTP. Supervission, Quality Assurance & Quality Control during Execution & Completion of work.

1

JOB

**The Rates
quoted should
be on % basis of
Approved DPR**

1

JOB

1

JOB

(DETAILED SCOPE OF WORK ENCLOSED HERE WITH IN ANNEXURE-A)


शहर अभियंता

मिरा-भाईंदर महानगरपालिका

जा.क्र.मनपा/पा.पु.व मलनि/84/2024-25

दि. 26/11/2024

MIRA-BHAYANDAR MUNICIPAL CORPORATION

ANNEXURE - A

NAME OF WORK

TO CARRY OUT STP, UGD & WATER AUDIT OF ALL STPS, UGD & WATER PUMPING STATIONS UNDER MBMC, PROCESS IMPROVEMENT SUGGESTION, DPR & DTP PREPARATION, AND TO CARRY OUT PROJECT MANAGEMENT CONSULTANCY UPTO COMPLETION OF WORK.

BRIEF SCOPE OF WORK-

TO CARRY OUT STP AUDIT, UGD AUDIT & WATER AUDIT, PREPARATION OF AUDIT REPORT, SUGGESTION FOR PROCESS IMPROVEMENTS, PREPARATION OF DPR & DTP, INSPECTION OF WORKS DURING EXECUTION UP TO COMPLETION OF WORKS.

1. STP AUDIT & CONSULTANCY- To carry out STP Audit of all STPs under MBMC. To inspect/Study all the units of STPs in detail. Suggestion for improvements in Process to meet MPCB norms with OCEMS & SCADA.
2. UGD AUDIT & CONSULTANCY - To carry out UGD Audit of Sewer Pipe line laid, GAP Works, Problems in laying Sewer Pipe line in Gap Work & Solution on it. Improvements on O&M of Under Ground Sewer System with suggestion of latest machineries required.
3. WATER AUDIT & CONSULTANCY - To carry out Water Audit of all Water Pumping Stations under MBMC. To inspect/Study all the units of WPS in detail. Suggestion for improvements for operation of WPS on SCADA.

STP AUDIT

1. STP AUDIT & CONSULTANCY - To carry out STP Audit of all STPs under MBMC. To inspect/Study all the units of STPs in detail. Suggestion for improvements in Process to meet MPCB norms with OCEMS & SCADA. Details are as below-

1.1. PROCESS PARAMETERS & DESIGN AUDIT POINTS

- 1.1.1. Evaluate the analysis reports provided by MBMC.
- 1.1.2. Study in depth, existing STP treatment scheme and unit operations involved.
- 1.1.3. Evaluate the capacities and dimensions of individual unit operation of existing STP.
- 1.1.4. Suggest appropriate treatment scheme with appropriate capacities (Civil, Mechanical, Electrical and Instrumentation Work) that would meet the Pollution Control Board discharge standards.
- 1.1.5. Provide brief description of the scheme of newly added units and equipment's with engineering detail & drawings (mechanical, electrical, instrumentation and civil work).

1.2 CIVIL AND STRUCTURAL AUDIT POINTS

- 1.2.1 Structural Integrity: Inspect the overall condition of buildings, tanks and structures for cracks, corrosion, and settlement issues.
- 1.2.2 Design Compliance: Verify that structures meet engineering design specifications and local codes.
- 1.2.3 Access and Safety: Evaluate access points for maintenance, ensuring they meet safety standards and allow for safe operation.

1.3 ELECTROMECHANICAL EQUIPMENT AUDIT POINTS

- 1.3.1 Equipment Condition: Inspect electromechanical equipment for wear, corrosion, and operational performance.
- 1.3.2 Calibration and Testing: Review calibration records for instrumentation and control systems to ensure accurate measurements.
- 1.3.3 Control Systems: Evaluate the effectiveness of PLC/SCADA and other control systems for monitoring and automation of processes.
- 1.3.4 Power Supply and Backup: Assess the reliability of power supply, including backup systems (e.g., Generators) for uninterrupted operation.
- 1.3.5 Maintenance Records: Review maintenance logs for electromechanical equipment to ensure regular servicing and adherence to schedules.
- 1.3.6 Energy Efficiency: Analyse energy consumption patterns and identify opportunities for improving energy efficiency.
- 1.3.7 Safety Interlocks: Inspect safety interlocks and emergency shutdown systems for proper functionality.
- 1.3.8 Piping and Valves: Check the condition of piping systems, valves, and fittings for leaks and operational integrity.
- 1.3.9 Waste Handling Equipment: Evaluate equipment used for the handling and disposal of bio solids and other by-products.

1.4 GENERAL CONSIDERATIONS

- 1.4.1 By focusing on these audit points, the evaluation can ensure that both the civil and electromechanical components of the Sewage Treatment Plant will be functioning optimally and are compliant with applicable standards.

1.5 CONSULTANCY

- 1.5.1 Prepare and provide Process Flow Diagram, Layout, Hydraulic Flow Diagram, P&ID and detail of existing & newly added units and equipment's.
- 1.5.2 To prepare General Arrangement drawings / to obtain from vendor (Civil, Mechanical, Electrical and Instrumentation work).
- 1.5.3 Provide Interconnecting piping drawings and its selection of material.
- 1.5.4 Provide Electrical and Instrumental specifications - Detailing of capacity of all drives, MCC, Specification, cable layout as well as earthing system for the installation.
- 1.5.5 Suggest appropriate primary and secondary sludge handling technology.
- 1.5.6 Provide specification for Mechanical Units along with appropriate vendors.
- 1.5.7 Incorporate Cost Estimate for overall Project – CAPEX & OPEX (for Civil, Mechanical, Electrical, Instrumentation work and required Chemicals & Manpower).

1.5.8 Technical Sanction to be obtained from MJP & also Technical Appraisal for STP process from IIT Mumbai.

- 1.5.9 Provide Bar Chart of project execution.
- 1.5.10 Provide necessary support in Preparation And Evaluation of Tender document required for finalisation of project execution agencies.
- 1.5.11 Support for co-ordination with statutory bodies for submission of DPR.
- 1.5.12 Provide support for necessary clarifications/presentations as may be required with various statutory bodies during the process of acceptance of DPR.
- 1.5.13 Documentation Review: Ensure all Design, Maintenance, and Operational documentation is up-to-date and accessible.
- 1.5.14 Training and Competence: Assess staff training on electro-mechanical systems to ensure safe and effective operation.
- 1.5.15 Inspection of works during execution up to completion of work till satisfaction of all units working as per requirements.

NOTE- "THE SCOPE OF WORK PROVIDED SERVES AS A PRIMARY GUIDELINE AND INCLUDES, BUT IS NOT LIMITED TO, THE TASKS MENTIONED. THE AGENCY MAY ALSO BE REQUIRED TO PERFORM ADDITIONAL DUTIES OR SERVICES RELATED TO THE PROJECT, AS NECESSARY, TO MEET ITS OBJECTIVES. SUCH ADDITIONAL WORK WILL BE DISCUSSED AND AGREED UPON PRIOR TO EXECUTION." THIS ENSURES TRANSPARENCY AND ESTABLISHES THE NEED FOR MUTUAL AGREEMENT ON ADDED RESPONSIBILITIES.

UGD AUDIT

- 2 UGD AUDIT & CONSULTANCY – To carry out UGD Audit of Sewer Pipe line laid, GAP Works, Problems in laying Sewer Pipe line in Gap Work & Solution on it. Improvements on O&M of Under Ground Sewer System with suggestion of latest machineries required.

2.1 GENERAL SCOPE OF WORK

- 2.1.1 Study in details of Sewer Lines laid in MBMC area.
- 2.1.2 Preparation of Autocad Drawing of all all laid sewer line Network. Marking of Manholes & Property connections with all details.
- 2.1.3 Study on Gap Work in Sewer line Net work.
- 2.1.4 Study on sewer line which are not functional. Remedy on it.
- 2.1.5 Safety precautions to be taken during sewer line cleaning.
- 2.1.6 Study on sewer lines to be laid for future expansion.
- 2.1.7 Study on Sewer lines which are to be laid before construction of Concrete Roads.
- 2.1.8 Suggestion on commissioning of full sewer line network and solution there of.

2.2 CONSULTANCY

- 2.2.1 Provide Bar Chart of project execution.
- 2.2.2 Technical Sanction to be obtained from MJP
- 2.2.3 Provide necessary support in Preparation And Evaluation of Tender document required for finalisation of project execution agencies.
- 2.2.4 Support for co-ordination with statutory bodies for submission of DPR.

- 2.2.5 Provide support for necessary clarifications/presentations as may be required with various statutory bodies during the process of acceptance of DPR.
- 2.2.6 Documentation Review: Ensure all Design, Maintenance, and Operational documentation is up-to-date and accessible.
- 2.2.7 Training and Competence: Assess staff training on electro-mechanical systems to ensure safe and effective operation.
- 2.2.8 Inspection of works during execution up to completion of work till satisfaction of all units working as per requirements.

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WATER AUDIT

- 3 **WATER AUDIT & CONSULTANCY** - To carry out Water Audit of all Water Pumping Stations under MBMC. To inspect/Study all the units of WPS in detail. Suggestion for improvements for operation of WPS on SCADA

3.1 ELECTRO-MECHANICAL EQUIPMENT AUDIT POINTS

- 3.1.1 Equipment Condition: Inspect electro-mechanical equipment for wear, corrosion, and operational performance.
- 3.1.2 Calibration and Testing: Review calibration records for instrumentation and control systems to ensure accurate measurements.
- 3.1.3 Control Systems: Evaluate the effectiveness of PLC/SCADA and other control systems for monitoring and automation of processes.
- 3.1.4 Maintenance Records: Review maintenance logs for electromechanical equipment to ensure regular servicing and adherence to schedules.
- 3.1.5 Energy Efficiency: Analyse energy consumption patterns and identify opportunities for improving energy efficiency.
- 3.1.6 Safety Interlocks: Inspect safety interlocks and emergency shutdown systems for proper functionality.
- 3.1.7 Piping and Valves: Check the condition of piping systems, valves, and fittings for leaks and operational integrity.
- 3.1.8 Waste Handling Equipment: Evaluate equipment used for the handling and disposal of bio solids and other by-products.

3.2 GENERAL CONSIDERATIONS

By focusing on these audit points, the evaluation can ensure that the Civil, Electro-Mechanical & Instrumentation components of all the Water Pumping Station under MBMC will functioning optimally and are compliant with applicable standards.

3.3 CONSULTANCY

- 3.3.1 Prepare and provide P&ID and detail of existing & newly added units and equipment's.
- 3.3.2 To prepare General Arrangement drawings / to obtain from vendor (Civil, Mechanical, Electrical and Instrumentation work).

- 3.3.3 Provide Electrical and Instrumental specifications - Detailing of capacity of all drives, MCC, Specification, cable layout as well as earthing system for the installation.
- 3.3.4 Provide specification for Mechanical Units along with appropriate vendors.
- 3.3.5 Incorporate Cost Estimate for overall Project – CAPEX & OPEX (for Civil, Mechanical, Electrical, Instrumentation work and required Chemicals & Manpower).
- 3.3.6 **Technical Sanction to be obtained from MJP**
- 3.3.7 Provide Bar Chart of project execution.
- 3.3.8 Provide necessary support in Preparation And Evaluation of Tender document required for finalisation of project execution agencies.
- 3.3.9 Support for co-ordination with statutory bodies for submission of DPR.
- 3.3.10 Provide support for necessary clarifications/presentations as may be required with various statutory bodies during the process of acceptance of DPR.
- 3.3.11 Documentation Review: Ensure all Design, Maintenance, and Operational documentation is up-to-date and accessible.
- 3.3.12 Training and Competence: Assess staff training on electro-mechanical systems to ensure safe and effective operation.
- 3.3.13 Inspection of works during execution up to completion of work till satisfaction of all units working as per requirements.

NOTE- "THE SCOPE OF WORK PROVIDED SERVES AS A PRIMARY GUIDELINE AND INCLUDES, BUT IS NOT LIMITED TO, THE TASKS MENTIONED. THE AGENCY MAY ALSO BE REQUIRED TO PERFORM ADDITIONAL DUTIES OR SERVICES RELATED TO THE PROJECT, AS NECESSARY, TO MEET ITS OBJECTIVES. SUCH ADDITIONAL WORK WILL BE DISCUSSED AND AGREED UPON PRIOR TO EXECUTION." THIS ENSURES TRANSPARENCY AND ESTABLISHES THE NEED FOR MUTUAL AGREEMENT ON ADDED RESPONSIBILITIES.

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