

TASK ORDER NO. 11281.B

Pursuant to the

MASTER AGREEMENT FOR PROFESSIONAL SERVICES
BETWEEN

**CITY OF MERIDIAN (OWNER) AND STANTEC CONSULTING SERVICES INC.
(ENGINEER)**

This Task Order is made this 1st day of November, 2022 and entered into by and between the City of Meridian, a municipal corporation organized under the laws of the State of Idaho, hereinafter referred to as “City”, and accepted by Stantec Consulting Services Inc., hereinafter referred to as “Engineer” pursuant to the mutual promises, covenant and conditions contained in the Master Agreement (category 2a) between the above-mentioned parties dated October 1, 2020. The Project Name for this Task Order is as follows:

WRRF MEMBRANE EQUIPMENT PRE-PROCUREMENT AND SUPPORT INVESTIGATIONS

PROJECT UNDERSTANDING-SUMMARY

The City of Meridian (City) Water Resource Recovery Facility (WRRF) is in year five of a ten-year NPDES compliance schedule to reduce phosphorus effluent loadings to Five Mile Creek as required in the 2017 EPA administered NPDES permit. The City has previously completed a Wastewater Resource Recovery Facility Plan (WRRFP) in December 2018 per the facility planning process identified in the Idaho Administrative Procedures Act (IDAPA), section 58.01.16. As part of that effort, a comprehensive Capital Improvement Plan was identified to address the various treatment challenges and regulatory updates. In order to address more stringent total phosphorus removal requirements, the need for additional tertiary filtration was identified as part of that effort.

This Task Order consists of engineering services to implement tertiary filtration improvements. These services are for the design, and bidding support of the pre-procurement of the membrane equipment and additional studies/investigation and associated subconsultant coordination as required to progress detailed design document development.

SCOPE OF WORK

1 General

1.1 Specific Project Requirements

Stantec has identified several requirements for this project that will be used as a framework for establishing the preliminary and final design guidelines and expectations for the work. These project requirements include schedule, criteria, and facility design elements.

Preliminary schedule requirements:

- Task Order 10281.B start by November 11, 2022

1.2 General Project Approach

The following describes assumptions and conventions that were used in developing this scope of services.

Codes, Regulations, and Design Standards

Pre-procurement documents, technical memoranda, and specifications will be prepared in accordance with the standard of care for professional engineering. City design standards, as applicable, will be used. The facilities will be designed in accordance with standards, codes and regulations in effect as of October 2022, and as described in the Preliminary Engineering Report developed under TO1.

Changes in codes and regulations which occur after the project start will be considered a change in scope. Stantec will be using specifications suited specifically for the design-bid-build delivery method based on its standard documents. The City will be responsible to provide front-end equipment and construction procurement documents (Division 00 and 01) the membrane system procurement documents. Stantec will be responsible to provide all other technical specification sections.

Project Standards

Specifications and technical documents developed as part of TO10281.B will be based upon Stantec standards.

1.3 Preliminary Schedule

It is anticipated that TO10281.B activities will begin no later than November 2022. Exact completion dates of each activity are estimated below and will be coordinated with future design services:

- Geotechnical Evaluation (Task 2.2.1) Complete by January 2023
- Hydraulic Confirmation (Task 2.3.1) – Complete by February 2023
- Coagulant Alternative Evaluation (Task 2.3.2) – Complete by January 2023
- Bench Scale Testing Coordination (Task 2.3.3) – Complete by May 2023
- Coagulant System Relocation Evaluation (Task 2.3.4) – Complete by January 2023

2 Membrane Pre-procurement and Support Investigations (Task Order 10281.B)

Stantec will prepare pre-procurement technical documentation and specifications based on the design concepts and criteria developed during Preliminary Design (TO1). These documents and technical memoranda for support investigations will be a progressive development of concepts and decisions implemented during preliminary design. It is not anticipated that new or unresolved project issues will be developed during this process, other than those noted below, unless added by supplemental services. Additional Project Management, task leadership and project engineering services will also be provided as part of TO10281.B.

Draft pre-procurement documentation and technical memoranda will be submitted to the City for general review. The City review period will be two weeks; Stantec will incorporate review comments and issue a final version of the documents described within TO10281.B. Stantec will maintain an up-to-date comment log in electronic format to track City review comments on each submittal.

Assumptions and Exclusions

- **Closed Circuit Television** – It is not anticipated that closed circuit television will be required for any existing utilities on the site, or at the points of interconnection. If a need for these services arises, these services can be authorized as supplemental services.
- **Water Quality Sampling and Analysis** – It is not anticipated that additional sampling and water quality analysis will be required.
- **Dewatering Investigation** – It is not anticipated that a site-specific dewatering investigation will be required, however, the geotechnical report will include groundwater levels, soil characteristics and general recommendations for dewatering based upon the field investigations and site conditions identified and reported on by the geotechnical subcontractor.
- **Survey** – The City will perform the site survey and coordinate with Stantec on the scope of work to incorporate the needs for Stantec’s design team for a comprehensive site survey. It is assumed that the City will be able to perform the survey work prior to January 31, 2023.

2.1 Project Management and Coordination

The project management and coordination work for this task order is assumed to cover up to three months and the work herein that extends past three months will be managed under the TO2B project management task once approved. This task will include:

2.1.1 Project Management Plan Update

Stantec will revise the TO1 project management plan (PMP) developed during preliminary design to define the delivery approach, staffing, responsibilities, schedule, risks and project deliverables. The PMP will be reviewed and updated on a quarterly basis.

2.1.2 Progress Reporting Meetings

Stantec will keep the City advised of the status of the design progress. This coordination will include monthly project management meetings with the City with an average of three Stantec staff to communicate and document identified project risks, action items, change of conditions, schedule updates, financial status, and general project status. The meetings are expected to be 90 minutes in duration, and Stantec will coordinate and submit meeting notes within two working days of the meeting. No design submittal review meetings or technical workshops are included in TO10281.B to discuss deliverables. These design review meetings will be provided as part of TO2B.

2.1.3 Internal Team Coordination

Stantec will meet with design team leads on a bi-weekly basis to coordinate discipline status, identify risks, and provide a forum for issues or questions that need to be communicated or coordinated with the City or that need further attention within the design team.

2.1.4 Progress Tracking and Reporting

Stantec will prepare and maintain tracking tools for monthly reporting and invoicing to the City. The invoicing will include monthly status updates on a task-by-task basis, physical percent complete status and any changes or new risks identified in the billing period.

Assumptions:

- Invoicing will be performed monthly unless otherwise coordinated with the City due to inactivity.
- Progress reporting meetings are assumed to be virtual or with local Stantec staff travelling to Meridian unless otherwise requested or coordinated for external staff to attend.
- Change logs and other documentation requested by the City will be kept and maintained on a Stantec Microsoft Teams SharePoint site. The SharePoint site will be available for the City and Stantec staff and be used for shared and transfer documents.
- Notes will be taken by Stantec and distributed to the City for review and documentation of meeting decisions and topics.

2.2 Site Investigations and Support

The following site investigations and support will be completed. Additional site investigations and support activities will be performed as part of TO2B (future).

2.2.1 Geotechnical

Stantec will provide engineering services to identify areas for geotechnical investigation based on preliminary drawings and designs. Geotechnical services will consist of:

- Geotechnical exploratory work, soil borings, laboratory tests of soils, rock formations, and other geophysical phenomena which are required to provide information for design.
- A geotechnical analysis and report by a qualified geotechnical firm interpreting the data recommendations for design.

Assumptions:

- This activity will be subcontracted by Stantec.
- Deliverables will include draft and final geotechnical reports

2.2.2 Subsurface Investigation

Stantec will coordinate with the City and local utilities to identify potential utilities near the new infrastructure. Each utility will be contacted for record data. These data will be recorded on the design base mapping.

A list of potholes will be created for utilities that may be impacted. Pothole locations will be marked in the field with two Stantec present to review locations with a potholing subcontractor.

It is not anticipated that there will be utility conflicts that will require relocation; therefore, utility review will be conducted concurrent with the permit review period.

Assumptions:

- This activity will be subcontracted by Stantec.
- Ten potholes are assumed.
- Field verification of utilities will be completed in one site visit.
- Site survey work will be completed by the City or others

Deliverables:

- List of potholes
- Utility clearance matrix

2.3 Studies and Technical Memoranda

2.3.1 Preliminary Hydraulics Confirmation

As part of the TO1 (Preliminary Design) effort, Stantec developed a hydraulic profile and modeled flow from the Secondary Clarifier Splitter Box to the Post Aeration Basin. Numerous assumptions were made in this effort which need verification to confirm the hydraulics are acceptable for the new tertiary filtration design. The City will be performing site survey work in late 2022 with information assumed to be available in by January of 2023. Stantec has coordinated with the City on specific survey needs and information requests for their survey effort as part of the hydraulic analysis.

Once the survey information is obtained, Stantec will input the information into the hydraulic model and verify model accuracy. The hydraulic profile will be revised as required to accommodate updated site information and projected design flows. The extent of modeling through downstream processes will be limited to confirmation of

ability to accept 2040 flows, or to identify downstream flow limitations. This modeling will not explore alternatives to expand hydraulic capacity if needed for downstream processes; per discussion with the City that is an activity that would be incorporated into future efforts and CIP projects.

Additionally, Stantec will advise the City of the findings as part of a progress reporting meeting (see Subtask 2.1.2). One revision to the model and hydraulic profile are assumed; the updated hydraulic profile will be included in TO2B design drawings.

2.3.2 Coagulant Alternative Evaluation

In the preliminary design effort, it was identified that the City uses the coagulant PAX-14 for several purposes at the WRRF including TSS and turbidity control (dosing RAS), struvite management in the centrifuge dewatering system, and control of the filamentous bacteria which can create solids settling issues. However, PAX-14 contains phosphorus which is the main constituent that Stantec and the City are trying to remove from the WRRF effluent as part of this tertiary filtration project. Stantec will perform an evaluation that identifies and confirms the ability to substitute (non-phosphorus based) coagulants. This evaluation will focus on the ability to control filamentous bacterial as it appears that alternative coagulants for this are not as well understood.

Stantec will evaluate the systems, evaluate approximate costs of the changes, and prepare a draft technical memorandum for City review. As part of the evaluation, Stantec will lead two meetings. The first meeting will be conducted to review Stantec's evaluation assumptions and the second to review the draft TM. Each meeting will be attended by three Stantec staff with notes distributed following the meeting. The finalized TM will be submitted after incorporating review input from the City.

2.3.3 Bench Scale Testing Coordination

The City is continuing its Phase 2 bench scale testing as part of the work started in the preliminary design. Stantec will continue to support the City and incorporate this information as it is received to optimize the design and further select the appropriate coagulant and dosing. This effort is assumed to be for four months and will include review and compilation of ongoing data, analysis of trends and incorporation of information into chemical feed design.

2.3.4 Coagulant System Relocation Evaluation

During preliminary design, Stantec provided preliminary design documentation for new Chemical Building No. 3 to provide coagulant storage and a feed system to dose chemical to the Secondary Clarifier Splitter Box. The expansion of the existing Dewatering Building was later identified as an alternative location to house the new coagulant storage and feed system. To determine the viability of this alternative, Stantec will perform a site visit to the WRRF to assess the existing Dewatering Building, identifying constraints and retrofit potential.

This effort will be limited to the site visit, desktop review of existing design documents, and qualitative analysis of cost benefits. Stantec will not assign specific quantitative costs to this alternative. Findings will be presented to City staff at a virtual workshop.

2.4 Membrane Equipment Pre-procurement

Membrane equipment pre-procurement will be executed using the Preliminary Design documents as a starting point. This task encompasses the preparation of a Request for Proposal (RFP) which consists of commercial and technical procurement documents, bid solicitation to candidate vendors, quality reviews and recommendation of award to a single supplier. Procurement documents can be issued as private solicitations to candidate vendors, or as public bids, as required for City procurement processes.

Membrane system procurement is envisioned as a single solicitation process (formal prequalification processes are not anticipated) with the process including Owner Pre-purchase of equipment to furnish to the contractor.

Stantec will prepare documents requesting that vendors submit documents for either a single or two design flows. By requiring vendors to submit proposals for two flows, the City has flexibility to choose membrane system size after all bids have been received.

2.4.1 Procurement Kickoff Meeting

It is anticipated that this process will be discussed and mapped in a Procurement Kickoff Meeting, with the following activities to be implemented within that framework. Stantec will prepare and facilitate this meeting.

2.4.2 Front-End Documents

The City will lead the development of the front end documents and Stantec will provide support, review, and recommended edits for the documents to address the specific requirements associated with the selection of the membrane filtration system. Stantec will provide the following to the City for front-end document preparation:

- General project description including facility and process overview (system design criteria).
- Collaborate with City on critical procurement milestones.
- Technical documents to incorporate into an equipment solicitation (RFP).
- Acceptance testing requirements.
- Specific operation evaluation criteria (i.e., unit chemical costs, power cost, building cost allowances, and labor cost components).
- Specific performance evaluation criteria (flow, capacity, pressure, etc.)
- Collaboration with City and review of selection criteria.
- Updated quotes for potential vendor equipment (not included in bid documents)
- Stantec will not include contractual information in the specifications. However, Stantec will provide recommendations for inclusion in the City's contract.

2.4.3 Technical Documents

Stantec will prepare the following Design/Technical Documents in consultation with the City for inclusion in the RFP package:

- Tertiary filtration technical specifications
- Input/Output List for the filtration system
- P&IDs for the filtration system
- Control Narrative for the tertiary filtration system
- Minimum requirements relevant to the membrane filtration system components and equipment: for pump, pipes, valves, instrumentation and control, tanks and system configuration
- The PER and 30% Drawings from TO1 For Reference: Layout, footprint and additional applicable site, and building requirements for the Membrane System.

Stantec will also identify the scope of services to be provided by the City, Stantec, and the membrane system supplier through final design, construction, startup, and acceptance testing.

2.4.4 Membrane System Bidding

Once the RFP is completed, Stantec will assist the City in bidding and procurement. This will consist of Stantec providing:

- Answers to technical questions submitted by prospective proposers to PM and Procurement Manager.
- A senior engineer to be a member of the City's evaluation team and score all proposals received.
- Attendance at City scheduled membrane bid evaluation team meetings.

Assumptions:

- A maximum of two membrane bid evaluation meetings will be required.
- Formal membrane system supplier prequalification is not anticipated.
- Procurement method will be Owner pre-purchase of equipment to furnish to the Contractor.
- Up to 10 formal questions will be received for Stantec review and response.
- No conformed drawings are needed.

Deliverables:

- Responses to bidder questions
- Proposal scoring to City
- Technical documents

TIME OF COMPLETION and COMPENSATION SCHEDULE

| COMPENSATION AND COMPLETION SCHEDULE | | | |
|---|------------------------------------|----------------------------------|---------------------|
| Task | Description | Estimated Completion Date | Compensation |
| 2.1 | Project Management and Coord. | March 31, 2023 | \$39,417 |
| 2.2 | Site Investigations and Support | March 31, 2023 | |
| 2.2.1 | Geotechnical | January 31, 2023 | \$23,463 |
| 2.2.2 | Subsurface Investigation | March 31, 2023 | \$22,394 |
| | SUB TOTAL | | \$45,857 |
| 2.3 | Studies and Technical Memoranda | March 31, 2023 | |
| 2.3.1 | Hydraulics Confirmation | February 28, 2023 | \$13,730 |
| 2.3.2 | Coagulant Alternative Evaluation | January 31, 2023 | \$15,765 |
| 2.3.3 | Bench Scale Testing Coordination | March 31, 2023 | \$5,419 |
| 2.3.4 | Centrifuge Building Addition Eval. | January 31, 2023 | \$16,252 |
| | SUB TOTAL | | \$51,166 |
| 2.4 | Membrane Equip. Pre-Procurement | March 31, 2023 | |
| 2.4.1 | Procurement Kickoff Meeting | November 17, 2022 | \$7,032 |
| 2.4.2 | Front End Documents | January 18, 2023 | \$9,982 |
| 2.4.3 | Technical Documents | January 18, 2023 | \$49,038 |
| 2.4.4 | Membrane System Bidding | March 29, 2023 | \$15,613 |
| | SUB TOTAL | | \$81,665 |
| TASK ORDER TOTAL: | | | \$218,105 |

The Not-To-Exceed amount to complete all services listed above for this Task Order No. 11281.B is (two hundred eighteen thousand one hundred and five dollars) (\$218,105.00). No compensation will be paid over the Not-to-Exceed amount without prior written approval by the City in the form of a Change Order. No travel or expenses will be reimbursed through this agreement. All costs must be incorporated in the individual tasks within the Compensation and Completion Schedule above.

CITY OF MERIDIAN

BY: _____
KEITH WATTS, Procurement Manager

Stantec Consulting Services Inc.

BY: **Nick Smith** Digitally signed by Nick Smith
Date: 2022.10.24 08:23:59
-06'00'

Nick Smith, Principle Project Manager

Dated: _____

Dated: **10/24/2022** _____

City Project Manager:
David Briggs