

BARGE DESIGN SOLUTIONS, INC.

PROFESSIONAL SERVICES AGREEMENT

This agreement is made as of _____ by and between Town of Thompson's Station, TN (**CLIENT**) and Barge Design Solutions, Inc. (**BARGE**) for professional services for the assignment described as follows:

Project: Regional Wastewater Treatment Plant Upgrades

Location: Thompson's Station, TN

Description of Project:

The project includes upgrades to the existing wastewater treatment facility including a new membrane bioreactor (MBR) to increase the capacity of the facility to 1.0 million gallons per day (MGD), new influent pump station, new digester, new dewatering system, and associated piping, site electrical, etc.

I. PROFESSIONAL SERVICES: **BARGE** agrees to perform the following Basic Services under this contract:

Services to be provided under this agreement are provided in Exhibit A

II. COMPENSATION: **CLIENT** shall compensate **BARGE** for the Basic Services in accordance with the Schedule of Standard Charges attached as Exhibit B to this agreement and as follows:

The estimated fee for Tasks 1, 2, and 3 as described in Exhibit A is the amount of \$855,000.00.

Task 4 Funding Application Reports as described in Exhibit A can be provided as an optional service for an estimated fee of \$30,000.

CLIENT shall pay **BARGE** for additional services performed beyond the Basic Services in accordance with the hourly rate schedule attached as Exhibit B to this Agreement.

III. PAYMENTS: Invoices for services rendered will be issued monthly, and payment is due upon receipt of each invoice. Unless special arrangements are made, a finance charge of 1.5% per month will be added to unpaid balances more than thirty (30) days old. In the event legal action is necessary to enforce the payment terms of this agreement, **BARGE** shall be entitled to a judgment for its attorneys' fees, court costs, and other collection expenses.

IV. TIME: Unless agreed otherwise in writing, **BARGE** will commence its services within a reasonable time after receipt of an executed copy of this Agreement. **BARGE** will perform its services in a timely manner commensurate with the exercise of due professional care. Time for performance shall be extended as necessary for delays or suspensions due to circumstances beyond **BARGE's** control. If such delay or suspension extends more than six months (cumulatively), **BARGE's** compensation shall be equitably adjusted.

- V. **SUSPENSION OF SERVICES:** If **CLIENT** fails to pay any invoice when due or otherwise is in material breach of this Agreement, **BARGE** may at its sole discretion suspend performance of services upon five (5) days' written notice to **CLIENT**. **BARGE** shall have no liability to **CLIENT**, and **CLIENT** agrees to make no claim for any delay or damage as a result of such suspension. Upon cure of the cause of the suspension, **BARGE** shall resume services within a reasonable time, and there shall be an equitable adjustment of the project schedule and fees to reflect the effects of such suspension.
- VI. **STANDARD OF CARE:** Notwithstanding any other provision of this Agreement or any other document describing the services, **BARGE** shall perform its services in accordance with the standard of professional care ordinarily exercised under similar circumstances by reputable members of its profession in the same locality at the time the services are provided. No warranty, expressed or implied, is made or intended by **BARGE**. The parties further agree that **BARGE** is not a fiduciary of **CLIENT**.
- VII. **TERMINATION:** The obligation to provide further services under this Agreement may be terminated without cause by either party upon ten (10) days' written notice to the other party. On termination by either the **CLIENT** or **BARGE**, **CLIENT** shall pay **BARGE** all amounts due for any services performed to the date of termination (plus all reimbursable expenses incurred). Upon such termination by **CLIENT**, it shall immediately return to **BARGE** all drawings, reports, documents, and other instruments of professional services prepared by **BARGE**, and **CLIENT** shall make no further use thereof.
- VIII. **OWNERSHIP AND REUSE OF DOCUMENTS:** All documents, including without limitation, drawings, specifications, and reports prepared by **BARGE** pursuant to this Agreement are instruments of professional service. **BARGE** shall own all legal and equitable rights therein, including copyrights. Such instruments are not intended or represented to be suitable for reuse by **CLIENT** or others for additions or modifications of the Project or on any other project. Any reuse without written consent of **BARGE** shall be at **CLIENT's** sole risk and without liability to **BARGE**; and to the fullest extent permitted by law, **CLIENT** shall indemnify, defend, and hold harmless **BARGE** from and against any and all claims, damages, losses, and expenses, including reasonable attorneys' fees and costs of defense arising out of or resulting therefrom. **BARGE** shall be entitled to further compensation for services it is requested to perform in connection with any reuse of its instruments of professional service.
- IX. **ACCESS TO THE SITE/JOBSITE SAFETY:** Unless otherwise stated, **BARGE** will have access to the site for activities necessary for the performance of its services. **CLIENT** agrees that **BARGE** shall have no responsibility for the means, methods, sequences, procedures, techniques, and scheduling of construction, as these decisions are solely the responsibility of the contractors. **BARGE** further shall have no authority or duty to supervise the construction workforce and shall not be responsible for jobsite safety or for any losses or injuries that occur at the Project site.
- X. **INSURANCE:** **BARGE** shall endeavor to secure and maintain insurance in such amounts as it deems necessary to protect **BARGE** from claims of professional negligence arising from the performance of services under this Agreement.
- XI. **RISK ALLOCATION:** In recognition of the relative risks, rewards, and benefits of the Project to both **CLIENT** and **BARGE**, to the fullest extent permitted by law, the parties agree to allocate the risks such that **BARGE's** total liability to **CLIENT** for any and all injuries, claims, losses, expenses, damages, and/or claim expenses arising out of **BARGE's** services under this Agreement from any

cause or causes shall not exceed the amount of **BARGE's** fee or **One Hundred Thousand Dollars (\$100,000)**, whichever is greater. This limitation shall apply regardless of the cause of action or legal theory pled or asserted.

XII. DISPUTE RESOLUTION: It is agreed that all claims, disputes, or other matters in question arising out of or related to this Agreement shall be submitted to nonbinding mediation before any legal proceeding is commenced. The parties shall equally bear the fees and expenses charged by the mediator.

XIII. OPINIONS OF CONSTRUCTION COST: Any opinion of probable construction cost prepared by **BARGE** represents the judgment of one or more **BARGE** design professionals and is supplied for general guidance of **CLIENT**. Since **BARGE** has no control over the construction marketplace and does not use the same pricing methods used by contractors, **BARGE** does not guarantee the accuracy of such opinions.

XIV. GOVERNING LAW: Unless otherwise specified within this Agreement, this Agreement shall be governed by the laws of the State of Tennessee. The venue for any litigation regarding this contract shall be in the Williamson County Chancery Court, Franklin, Tennessee.

Town of Thompson's Station, TN	Barge Design Solutions, Inc.
By:	By:
Printed Name:	Printed Name:
Title:	Title:
Address:	Address:
Date Signed:	Date Signed:

Barge Design Solutions, Inc. (Barge) is proposing the following scope of services to the Town of Thompson's Station (Town) to provide detailed design services for the Regional Wastewater Treatment Plant Upgrades project. The scope of work is presented in the following elements:

- I. Project Description
- II. Scope of Services
- III. Project Schedule

I. Project Description

The treatment plant improvements planned at the Regional Wastewater Treatment Plant (WWTP) are as described in the 2018 Wastewater System Master Plan prepared by Barge dated September 2018 and summarized as follows:

- New Membrane Bioreactor (MBR) facility
- New influent screening facility
- New influent pump station
- Upgrades to the existing operations building including new ultraviolet (UV) system and new additional irrigation pump
- New aerobic digester
- New standby generator
- New sludge dewatering equipment

The above process upgrades will include the following major components:

1. New Membrane Bioreactor (MBR) Facility
 - Installation of a new two-train 1.0 MGD MBR consisting of new metal tank by manufacturer, process pump skid by manufacturer, and two membrane scour blowers.
 - Installation of new site piping including connections to existing force mains
 - Installation of canopy over MBR equipment
2. New Influent Screening Facility
 - New influent screenings structure with two new influent fine screens
 - New screenings washer/compactor
3. New Influent Pump Station
 - Installation of new influent submersible pump station with three 1,050 gallon per minute (gpm) pumps
 - Installation of new 12-foot diameter wet well
 - Installation of new 6-foot by 6-foot valve vault

- Demolition of existing pump station
- 4. Upgrades to the existing operations building including new ultraviolet (UV) system
 - Installation of new 1,200 gpm UV system in addition to the existing UV system.
 - Installation of new irrigation pump package
- 5. New Aerobic Digester
 - New pre-stressed concrete tank
 - Installation of two new blowers on outdoor concrete pad
 - Installation of canopy to cover blowers
- 6. New Standby Generator
 - New 500-kilowatt diesel generator
 - New 200-amp automatic transfer switch
- 7. New Sludge Dewatering Equipment
 - Installation of new screw press or fan press. Equipment selection to be finalized with Town during initial design stage.

II. Scope of Services

The scope of services is summarized into the following major tasks:

Task 1 – Project Management

Task 2 – Preliminary Engineering

2.1 Preliminary Engineering Report

2.2 30% Design Documents

Task 3 – Final Design

3.1 60% Design Documents

3.2 90% Design Documents

3.3 Bidding Documents

Task 4 – Funding Application Reports (Optional upon future Town approval)

Task 5– Bid Phase Services (Optional upon future Town approval)

Task 6 – Construction Management Assistance (Optional upon future Town approval)

The following sections provide a description of the purpose, activities, and deliverables anticipated for each of the tasks.

Task 1 – Project Management

Barge will plan, manage, and execute the work in accordance with the schedule and budget established herein. The project management task will generally include the following activities:

- Facilitate project kick-off meeting, prepare project work plan, and identify key project stakeholders for distribution of project information.
- Coordinate monthly status meetings with the Town, prepare meeting agenda, and prepare meeting summaries with action items and decisions. These meetings will occur as part of each project task.
- Monitor project progress including work completed, work remaining, budget expended, schedule progress, estimated cost of work remaining, and estimated cost at completion.
- Prepare and submit monthly invoices and project status reports with updated schedules and cash flow projections as applicable. Communicate potential scope changes, schedule impacts, and cost risks to allow for timely guidance from town to manage change.
- Provide coordination of Barge's subconsultants, including development of scopes of services, management of scopes, schedules, & budgets, and monitor project progress.
- Three project workshops with Town staff to review the major design milestone submittals (30% Design Documents, 60% Design Documents, and 90% Design Documents) are included in the Final Design task below.

Task 2 – Preliminary Design

Preliminary design including the development of a preliminary design report and as detailed below.

2.1 Preliminary Engineering Report

This task includes defining and clarifying Owner's requirements for the Project, including design objectives and constraints, space, capacity, and performance requirements, flexibility and expandability:

- Utilizing the wastewater treatment facility recommendations from the 2018 Wastewater System Master Plan, review the recommendations and design parameters with the Town.

- Consult with and analyze requirements of governmental authorities having jurisdiction to approve the portions of the Project to be designed or specified by Barge. Conduct preliminary project meeting with Tennessee Department of Environmental and Conservation (TDEC) staff as required by state regulations.
- Prepare a preliminary engineering report (PER) detailing the upgrades recommended. The report will, as appropriate, contain schematic layouts, sketches, and conceptual design criteria with appropriate exhibits to indicate the agreed to requirements, considerations involved, and Engineer's recommended solution(s). The PER will conform to TDEC requirements.
- Conduct review meeting with Town staff to review PER and obtain any feedback from the Town on the elements of the project.
- Submit final PER to Town (PDF format and two hard copies).
- Submit final PER to TDEC for regulatory agency review.

2.2 30% Design Documents

This task includes establishing details regarding equipment selection, building components, process and instrumentation details, and electrical one-lines. The following specific tasks are anticipated:

- Perform a site survey of the portions of the wastewater treatment facility affected by the project. The survey will include the location of existing structures, underground piping as marked on ground by the Town or various utilities, and topography.
- Assist Town with development of scope and request for proposal (RFP) document to procure a geotechnical firm to perform soils investigation and analysis. Assist Town in management of selected geotechnical firm and review draft geotechnical report.
- Prepare process flow diagram and preliminary Process and Instrumentation Diagrams (P&IDs) for all new or modified processes.
- Confirm selection and sizing of process equipment. Prepare detailed equipment list for all new process equipment and major instruments, including size, quantity, basis of design manufacturer, and other pertinent information.
- Perform hydraulic design calculations and prepare hydraulic profile for new or modified processes.
- Prepare preliminary plan drawings of all new or modified facilities.
- Confirm local and state regulatory and jurisdictional agency's requirements, including permits.

- Review work products and obtain quality control reviewer approvals.
- Submit 30% drawings to Town for review (PDF format and two half-sized sets).
- Facilitate review workshop with Town staff to discuss the 30% drawings and receive Town comments. Document review comments and Barge responses.

Task 3 – Final Design

Final Design phase services include preparation of bidding documents through 60%, 90%, and final submittals and reviews.

3.1 60% Design Documents

The 60% design deliverables are based on the details established during the preliminary design task. Following is a list of activities anticipated during this task:

- Incorporate the Town's preliminary design review comments and proceed with detailed design drawings.
- Prepare first draft of technical specifications.
- Prepare preliminary decommissioning and demolition plans.
- Prepare preliminary sequencing plan for of major electrical and process interconnections
- Perform constructability review.
- Hold internal coordination workshop between disciplines.
- Update preliminary opinion of probable construction cost (OPCC) based on the 60% design documents.
- Review work products and obtain quality control reviewer approvals.
- Submit 60% complete design documents to the Town for review and comment (PDF copy and two half-sized sets).
- Facilitate a design review workshop to receive Town review comments. Document review comments and Barge responses.

3.2 90% Design Documents

- Address and incorporate Town's review comments from the design review workshop.
- Finalize design drawings to include standard details and notes.

- Prepare final technical specifications.
- Prepare front end construction contract documents (Divisions 0 and 1) in conjunction with Town purchasing requirements.
- Prepare final calculations and obtain quality control reviewer approvals.
- Perform final coordination review between disciplines.
- Update OPCC based on the 90% design documents.
- Review work products and obtain quality control reviewer approvals.
- Submit 90% complete design documents to the Town for review and comment (PDF copy and two half-sized sets).
- Submit 90% design to TDEC for plan and specification review requirement.
- Facilitate a design review workshop to receive Town review comments. Document review comments and Barge responses.

3.3 Finalize Bidding Documents

- Incorporate Town and regulatory agency review comments into the 90% design documents.
- Submit the final bidding documents to Town for use during bidding (PDF copy, one half size set, and one full size set).
- Update OPCC if needed and submit to Town prior to bidding.
- Prepare permit applications and/or plan review set for submission to TDEC.
- Barge will provide assistance to the Town in obtaining permits from governmental agencies. Assistance will include preparation of applications, exhibits, drawings and specifications as necessary for Town's execution and submittal. Barge will also assist with responses to questions or requests for additional information. The following permits are anticipated:
 - Storm Water Pollution Prevention Permit (SWPPP), if necessary
 - TDEC SOP Permit, if necessary

Task 4 – Funding Application Reports (Optional upon future Town approval)

If the Town elects to pursue funding from the United States Department of Agriculture (USDA) Rural Development, some additional report information and applications will be required. This task includes those items to support the Town's loan application process, including the following:

- Development of the preliminary engineering report (PER) will be completed as part of Task 2
- An environmental assessment, as required by the USDA, will be prepared as part of this Task 4 and added to the PER, which will be submitted to the USDA with the loan application package
- Barge will provide assistance to the Town for completion of loan application documents. It is assumed the Town will provide all information necessary to support the funding application including but not limited to Town financial audits, plant data, and certifications required by USDA.
- Barge will provide electronic (pdf) and two hard copy versions of the PER and application documents to the Town.

Assumptions:

The following assumptions are applicable to the above scope of services:

- Front end documents provided by Barge shall be used as a basis for discussions to arrive at a mutually agreeable set of front-end documents. If Town standard documents are required to be used, additional effort may be required to coordinate with technical specification references.
- Barge standard design procedures, drafting standards, and typical drawing details will be used in the development of the construction documents. The drawings will be 22x34 sheet size.
- Geotechnical services are not included and will be contracted directly between the Town and a geotechnical firm selected through a separate procurement.
- Subsurface Utility Engineering (SUE) is not included in this scope of services. The Town will be responsible for locating and marking existing underground utilities within the plant site.
- Any surveying services required for property transfers or easements including establishment of property lines and rights of way are not included in the basic services proposal and will be considered additional services.
- The Town will provide record drawings for the existing wastewater treatment plant. The record drawings are assumed to be an accurate representation of the current structures and piping.
- This scope of services has been prepared based on the proposed improvements project as described in the September 2018 Wastewater System Master Plan.

- Any abatement and/or remediation work associated with presence of hazardous materials in any of the existing facilities such as asbestos or lead paint is not included as a part of this scope of services.
- Town shall be responsible for payment of all permit and application review fees.
- Assistance with public relations or legal/administrative proceedings are not included in this scope of services.

III. Project Schedule

The preliminary project schedule is shown in the table below.

Task	Duration
30% Design	3 months
60% Design	2 months
90% Design	2 months
Bidding Documents	1 month

BARGE DESIGN SOLUTIONS, INC.

EXHIBIT B SCHEDULE OF STANDARD CHARGES

The following hourly rates apply for **BARGE** and ResourceTek (Barge Subsidiary) personnel for time properly chargeable to the work.

Hourly Rate Schedule

Classification	Hourly Rate
Principal-In-Charge / Sr. Technical Advisor	\$ 225
Sr. Project Manager / Sr. Technical Leader/Quality Control	\$ 215
Sr. Technical Specialist	\$ 205
Sr. Professional Engineer IV / Project Manager II / Engr. Manager II	\$ 195
Sr. Professional Engineer III	\$ 190
Project Manager I / Engineering Manger I / Sr. Architect	\$ 185
Sr. Professional Engineer II	\$ 180
Sr. Scientist/Professional Engineer III	\$ 170
Sr. Professional Engineer I	\$ 155
Professional Engineer II / Architect III	\$ 150
Professional Engineer I / Survey Manager	\$ 135
Staff Engineer II / Architect II	\$ 120
Staff Engineer I / Architect I	\$ 110
Designer III / Sr. Specialist	\$ 155
Designer II	\$ 125
Designer I	\$ 115
CAD Technician II	\$ 110
CAD Technician I	\$ 100
Sr. Registered Land Surveyor	\$ 150
Registered Land Surveyor	\$ 105
2-Man Survey Crew	\$ 150
Survey Tech with Robotic Instrument/GIS	\$ 90
Resident Project Representative III	\$ 150
Resident Project Representative II	\$ 130
Resident Project Representative I	\$ 110
Project Administrator	\$ 75-95
Office Administrator	\$ 75-95
Administrative Assistant	\$ 75-95

Outside services contracted for a specific project, such as professional and technical consultants, laboratory testing, reproduction, photography, etc., will be invoiced at the amount of the subcontractor's statement plus 10 percent.

Other expenses such as travel expenses, mileage (standard IRS rates), reproduction, photography or videography, or other direct expenses incurred by Barge and related to the work will be invoiced at the actual cost incurred.

The hourly rates listed above are valid until January 1, 2021, after which the rates may be adjusted.