

AGREEMENT FOR ENGINEERING SERVICES
EVALUATION OF IMPROVEMENTS TO MEADOWPARK LAKE WTP
USING MEMBRANE TECHNOLOGY
CROSSVILLE, TENNESSEE

THIS AGREEMENT, made this _____ day of _____, 2025, by and between the CITY OF CROSSVILLE, TENNESSEE, hereinafter called the OWNER, and J. R. WAUFORD & COMPANY, CONSULTING ENGINEERS, INC., a Tennessee corporation, hereinafter called the ENGINEER.

WHEREAS, the OWNER owns and operates the Meadow Park Lake Water Treatment Plant (WTP) with a current treatment plant capacity of 3.5 million gallons per day (MGD), and

WHEREAS, the ENGINEER has previously prepared a Preliminary Engineering Reported entitled "Raw Water Capacity Master Plan" dated October 2019 for the OWNER, and said report has indicated that an expanded capacity of 7.0 million gallons per day (MGD) will be required in 2028 based on water usage forecasts, and that the 50-year forecast should allow for a future capacity of 12.25 million gallons per day (MGD) of treatment capacity at Meadow Park Lake WTP in around 2040, and

WHEREAS, the OWNER is interested in evaluating replacing the existing gravity sand filtration system with modular ceramic membrane technology and using ceramic membrane technology for the required future expansion(s) of the Meadow Park Lake Water Treatment Plant, and

WHEREAS, the OWNER is desirous of employing the ENGINEER to perform an evaluation of the feasibility and opinion of probable cost to incorporate the use of membrane technology at Meadow Park Lake Water Treatment Plant.

FOR AND IN CONSIDERATION of the covenants contained herein, the OWNER hereby retains the ENGINEER to perform the engineering services described hereinafter and the ENGINEER agrees to perform such work for the consideration enumerated.

1. SCOPE OF SERVICES

a. Preliminary Engineering Services

The ENGINEER shall conduct preliminary engineering and prepare a preliminary engineering report that discusses the following items:

- (1) Evaluation of membrane components required to convert the existing treatment plant with a 3.5 MGD capacity to a membrane

- plant.
- (2) Evaluation of feasibility of using membrane technology in an expanded water treatment plant capable of treating water to supply Crossville's estimated 20-year and 50-year future water demands
 - (3) Prepare a schematic of a new membrane treatment building including membrane skids capable of treating Crossville's 20-year and 50-year future water demands including, settling and flocculation, chemical storage and feed facilities, membrane feed pumps, and other ancillary facilities
 - (4) Evaluate existing TOC test results to determine recommended sizing of membrane system and consider provisions for Powder Activated Carbon (PAC) or Granular Activated Carbon (GAC) for removal
 - (5) Create a request for proposal to be submitted to TDEC for approval and issued to membrane and activated carbon vendors for pilot testing required for use in sizing equipment and estimating long-term operation and maintenance costs of a full-scale system
 - (6) Prepare a Present Value Cost Analysis (PVCA) to evaluate the life-cycle costs of renovating the existing gravity sand filter basins using membrane technology, replacing the gravity sand filter bottoms and continuing the use of the gravity sand filters, and abandoning the sand filter basins and using skid mounted membrane technology in a new building.
 - (7) Prepare Exhibits and Engineer's Opinion of Probable Cost for associated work
 - (8) The ENGINEER shall prepare a preliminary engineering report and deliver up to six (6) hard copies and one digital (PDF) copy to the OWNER. Prior to issuance of the final report, the ENGINEER shall review a draft copy of the report with the OWNER and incorporate comments.

b. Additional Engineering Services

In addition to the scope of services described at Paragraph 1, Subparagraphs a. being performed, the following services may be provided by the ENGINEER upon prior written authorization of the OWNER.

- (1) Hydraulic or other studies that may be required.
- (2) Modification of maps and/or descriptions of any easements or acquisitions after initial easements and descriptions have been provided to the OWNER.
- (3) Redesigns ordered by the OWNER after final technical specifications and construction drawings have been accepted by the OWNER.

- (4) Appearances before courts or boards on matters of litigation or hearings related to the Project.
- (5) Preparation of environmental assessments or environmental impact statements.
- (6) Preparation of information necessary for project financing including grant and/or loan applications.
- (7) Engineering services related to the project, but not specifically included at Paragraph 1. SCOPE OF SERVICES Subparagraph a. hereinbefore.

2. COMPENSATION

The OWNER agrees to pay the ENGINEER for the scope of services performed as stated hereinafter. The amount of any excise, value added or gross receipts tax that may be imposed shall be added to the compensation enumerated herein. The ENGINEER shall present the OWNER with invoices on a monthly basis and the OWNER shall promptly pay the ENGINEER within thirty (30) days of receipt of each invoice.

a. Preliminary Engineering Services

For performance of the scope of services described at Paragraph 1.a. hereinbefore, the OWNER agrees to pay the ENGINEER the lump sum amount of FIFTY-FOUR THOUSAND DOLLARS (\$54,000), payable on a monthly pro rata basis upon submission of invoices as work proceeds.

b. Additional Engineering Services

For performance of any additional engineering services described at Paragraph 1.b. hereinbefore which are requested in writing by the OWNER, the OWNER agrees to pay the ENGINEER based on the Standard Charges listed in Attachment No. 1.

3. EXCLUSIONS

- a. The ENGINEER shall not and will not be considered in charge of or responsible for acts of the construction contractor(s)' methods of construction, construction progress, construction forces or equipment or safety procedures.
- b. The ENGINEER will not be considered responsible for or in charge of nontechnical items not within his purview and/or control including, but not limited to, legal services.

- c. No inclusion or allowance is made for extra work caused by changes in State or Federal laws or regulations after the execution of this AGREEMENT.
- d. No inclusion or allowance is made for boundary surveys required to prepare easement descriptions or acquisition documents; however, the ENGINEER will furnish the OWNER a topographic survey from which proposed boundary lines can be established by an OWNER-procured Registered Land Surveyor.
- e. The ENGINEER will not perform geotechnical analysis nor subcontract directly for these services. In the event geotechnical analysis is determined to be necessary for the successful completion of the Project, the ENGINEER will provide the OWNER with a proposal form for directly procuring geotechnical engineering services and a list of geotechnical firms for solicitation of proposals.
- f. The ENGINEER and its consultants are not product developers or engineers, chemists, or materials scientists. The ENGINEER has no ability or responsibility to determine the detailed physical properties or chemical composition of building materials, systems, and equipment that may be specified for use on the project. The ENGINEER has no ability or responsibility to test products or systems until fully integrated into the construction. The ENGINEER and its consultants are entitled to rely upon the information contained in submittals, product catalogs, and otherwise published by suppliers and product manufacturers regarding the physical characteristics, composition, properties, durability, and suitability for use of all materials, products, and systems.

4. OWNER'S RESPONSIBILITIES

- a. The OWNER will furnish access to all lands required.
- b. The OWNER will furnish any records required.
- c. The OWNER will furnish plans of existing facilities to the extent such plans are available.
- d. The OWNER will furnish liaison with and will be responsible for securing and paying any fees associated with permits, licenses, or other approvals from utility, transportation, building code enforcement, and environmental agencies including electric, gas, water, wastewater, and telephone system owners; railroad and roadway owners; city and county building code departments; and state and federal environmental regulatory agencies.

- e. The OWNER will pay all fees required by STATE review agencies for their review of the technical specifications, construction drawings and contract documents prepared under the terms of this AGREEMENT.
- f. The OWNER will pay all fees associated with the advertisement of required public notices and of notices for bids for the construction contract published in newspapers and/or other publications.
- g. The OWNER shall verify the location and/or elevation of its related underground facilities by excavations if it is uncertain of their size and/or location.
- h. The OWNER agrees to contract directly for geotechnical engineering services if required. The ENGINEER agrees to assist the OWNER during procurement of a geotechnical engineering firm to perform the work at no additional charge.

5. CONFINED SPACES

During the performance of the services under this AGREEMENT, the ENGINEER may find it necessary to enter “confined space(s)” as defined by OSHA regulations in order to observe conditions and/or obtain necessary data. The OWNER is required by regulation to have in place a “Confined Space Permit Program” including the necessary testing and safety equipment. The OWNER shall provide without cost to the ENGINEER the proper “Permit”, the “Attendant” and/or the “Entry Supervisor” together with all necessary testing, safety and emergency equipment and all other means of compliance with OSHA regulations. The ENGINEER will provide general training to its proposed “Authorized Entrant(s)”; however, the OWNER shall provide training required for the equipment furnished, the OWNER’s Permit System or any other condition special to the OWNER’s facilities. The OWNER shall be fully responsible for compliance with the appropriate regulations.

6. DISPUTE RESOLUTION BY MEDIATION

In an effort to resolve any conflicts that arise during the performance of the services or following the completion thereof, the OWNER and the ENGINEER agree that all disputes between them arising out of or relating to this AGREEMENT or the Project shall be submitted to nonbinding mediation. ~~The mediator shall be selected from a panel of persons having experience with and knowledge of the practice of environmental engineering.~~ The place of mediation shall be as mutually agreed upon by the OWNER and the ENGINEER.

7. TERMINATION / SUSPENSION / FORCE MAJEURE

This AGREEMENT may be terminated or suspended, for convenience, by either party upon 30 days advance written notice. Upon termination or suspension, the ENGINEER will be paid for all services performed up through the termination or suspension date. Neither Party shall be liable to the other for any failure or delay in performing an obligation under this AGREEMENT that is due to any of the following causes, to the extent beyond its reasonable control: acts of God, accident, riots, war, terrorist act, epidemic, pandemic, quarantine, civil commotion, breakdown of communication facilities, breakdown of web host, breakdown of internet service provider, natural disasters and catastrophes, governmental acts or omissions, orders of health departments or other government officials, changes in laws or regulations, national strikes, fire, explosion, or other causes of damage to the Project site, or generalized lack of availability of raw materials or energy. The ENGINEER and its consultants shall not be required to perform any service that would require or may result in exposure of their employees to hazardous or unsafe conditions. Remote meetings and remote site observation and inspection by camera, web camera, video camera, unmanned aerial vehicle, or similar platform is authorized for all purposes if reasonably necessary to avoid exposing such employees to unsafe conditions. Force Majeure shall not include: (a) financial distress nor the inability of either party to make a profit or avoid a financial loss, (b) changes in market prices or conditions, or (c) a party's financial inability to perform its obligations hereunder.

8. LIMITATION OF LIABILITY

To the fullest extent permitted by law, and notwithstanding any other provision of this AGREEMENT as amended, the total liability, in the aggregate, of the ENGINEER and the ENGINEER's officers, directors, partners, owners, employees and subconsultants to the OWNER and anyone claiming by or through the OWNER, for any and all claims, losses, costs or damages, including without limitation attorneys' fees and costs and expert-witness fees and litigation costs of any nature whatsoever resulting from or in any way related to the Project or this AGREEMENT from any cause or causes shall be limited to One Hundred Thousand Dollars (\$100,000). It is intended that this limitation apply to any and all liability or causes of action, however alleged or arising. It is intended by the parties to this AGREEMENT that the ENGINEER's services in connection with the Project shall not subject the ENGINEER's individual employees, owners, officers or directors to any personal liability for the risks associated with this Project. Therefore, and notwithstanding anything to the contrary contained herein or in any other AGREEMENT, the OWNER agrees that any claim, demand, cause of action, or suit arising from this AGREEMENT and/or the ENGINEER's services shall be directed and/or asserted only against the ENGINEER.

9. DESIGNATED REPRESENTATIVES

The services to be performed by the ENGINEER under this AGREEMENT are intended solely for the benefit of the OWNER. Nothing contained herein shall confer any rights upon or create any duties on the part of the ENGINEER toward any person or persons not a party to this AGREEMENT including, but not limited to, any construction contractor, construction subcontractor, material or equipment supplier, or sureties of any of them.

The designated representative of the OWNER empowered to receive all correspondence from the ENGINEER and give the ENGINEER instructions within the scope of this AGREEMENT shall be:

OWNER:	Joe Kerley Director of Water Resources City of Crossville 392 Main Street Crossville, TN 38555 (931) 267-1447
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The designated representative of the ENGINEER empowered to receive all correspondence, instructions and payments from the OWNER and to speak for the ENGINEER within the scope of this AGREEMENT shall be:

ENGINEER:	Matthew K. Rice, P.E. Manager, East Tennessee Office J. R. Wauford & Company, Consulting Engineers, Inc. 908 West Broadway Maryville, Tennessee 37801 (865) 984-9638
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The OWNER and the ENGINEER each bind itself, its partners, successors, legal representatives, and assigns to the other party to this AGREEMENT, and to its partners, successors, legal representatives and assigns of such other party in respect to all covenants of this AGREEMENT.

The OWNER and the ENGINEER hereby agree to the full performance of the covenants contained herein.

IN WITNESS WHEREOF, they have executed this AGREEMENT the day and year first written above.

ENGINEER:

J. R. WAUFORD & COMPANY,
CONSULTING ENGINEERS, INC.

BY: 

J. Gregory Davenport, P.E.
President

OWNER:

CITY OF CROSSVILLE,
TENNESSEE

BY: _____

R.J. Crawford
Mayor

ATTEST:

BY: 

Stephen C. Lee, P.E.
Corporate Secretary

ATTEST:

BY: _____

Valerie Hale
City Manager

Attachments:

Attachment No. 1: Standard Charges

Attachment No. 1

STANDARD CHARGES

Effective January 1, 2023

Statements will be issued on a monthly basis in accordance with the following method:

Salary Cost Plus a Multiplier

Two times the salary cost of employees for time properly chargeable to the work. Salary cost includes the actual payroll charge plus direct additives which was calculated to be 76.18% for F.Y. ending 12-31-22. Salary cost includes any overtime pay as mandated by the Department of Labor.

Plus expenses properly chargeable to the work, as listed below, reimbursable at cost.

EXPENSES REIMBURSABLE AT COST

- A. Travel by private vehicle at the rate approved by the IRS.
- B. Travel by scheduled airline or charter plane at cost.
- C. Travel and living expenses for all personnel when required to be away from headquarters in connection with the work.
- D. Printing, reproduction, photography, testing laboratories, or special materials in connection with the work.
- E. Mobile phone bills for resident observers and surveyors.
- F. Other consultant fees as approved by client.