FLEIS&VANDENBRINK

DESIGN. BUILD. OPERATE.

January 29, 2020

Howard Linnabary, Township Supervisor
Leoni Township
913 Fifth Street
Michigan Center, MI 49254

RE: Proposal for Design Phase Engineering Services
WWTP MBR Improvements Project
Leoni Township

Dear Mr. Linnabary:

We are pleased to submit this Amendment to our Professional Services Agreement for the design of the Wastewater Treatment Plant (WWTP) MBR Improvements project. We understand the Township's objective is to move forward quickly with the design since the membranes are at the end of their useful life. The design will follow the recommendations presented in the study prepared by Fleis & VandenBrink and presented to the Township Board and Leoni Regional Utility Authority.

We understand the urgency in having the membranes replaced. The recommended work plan for design of the project is structured to provide collaboration among the design team, Township staff, FVOP operations staff, the selected equipment supplier, and EGLE. Our design services include preparation of the EGLE Part 41 WWTP Construction Permit Application to be submitted by the Township.

Enclosed is Amendment No.1 to the Professional Services Agreement (PSA) originally approved by the Township Board for the WWTP Odor Control design project that was executed on November 11, 2019. The terms and conditions of the PSA were previously reviewed by the Township Attorney. Authorization for design phase services can be accepted by executing Amendment No.1 and sending one back to my attention.

If there are any questions or comments, please do not hesitate to contact us.

Sincerely,

FLEIS & VANDENBRINK

Robert W. Wilcox, PE
Project Manager, Sr. Associate

Paul R. Galdes, PE
President

2960 Lucerne Drive SE
Grand Rapids, MI 49546
P: 616.977.1000
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AMENDMENT NO. 1

TO THE

PROFESSIONAL SERVICES AGREEMENT

FLEIS & VANDENBRINK ENGINEERING, INC.
2960 Lucerne Drive SE, Grand Rapids, MI 49546
(616) 977-1000 fax (616) 977-1005

The Professional Services Agreement ("PSA") entered into between Fleis & VandenBrink Engineering, Inc. ("Engineer") and **Leoni Township**, whose address is **913 Fifth Street, Michigan Center, Michigan 49254**, ("Owner") dated **November 11, 2019**, including previous amendments, if applicable, is hereby amended.

DESCRIPTION OF PROJECT AND SCOPE OF SERVICES: The description of the Project ("Project") and the scope of services ("Services") provided under the PSA are amended to include: "***Design Phase engineering services for the Wastewater Treatment Plant MBR Improvements Project,"*** *as described herein.*

AGREEMENT DOCUMENTS: The following additional obligations are hereby included in the Agreement Documents and are incorporated herein by reference.

Scope of Services as identified in the attached Exhibit 1

COMPENSATION OF ENGINEER:

The services to be provided under this Amendment shall be a Lump Sum Fee contract in the amount of **$396,000.00**, billed monthly based on the percentage of Work completed.

Authorized additional services will be provided on an hourly basis plus 1.1 times reimbursable expenses unless otherwise negotiated.

TERMS AND CONDITIONS: The Terms and Conditions of the PSA and amendments to date shall apply to all work performed by Engineer.

ELECTRONIC/FACSIMILE SIGNATURES. The signatures on this PSA shall be deemed to be original signatures when transmitted electronically or by facsimile machine or by any other medium. No party shall be required to produce a PSA with an original signature in order to enforce any provision of this PSA.

IN WITNESS WHEREOF, the parties hereto have made and entered into this Amendment to the PSA. To be valid, this Amendment must be signed by an authorized representative of Fleis & VandenBrink Engineering, Inc.

OWNER
LEONI TOWNSHIP

By: _____

Howard Linnabary

Title: **Township Supervisor**

Date: _____

ENGINEER
FLEIS & VANDENBRINK ENGINEERING, INC.

By: _____

Paul R. Galdes, PE

Title: **President**

Date: _____

AMENDMENT NO.1

EXHIBIT 1

PROJECT DESCRIPTION

Fleis & VandenBrink (F&V) recently prepared the Wastewater Treatment Plant (WWTP) Membrane Replacement Study for Leoni Township. We understand that the Township desires to move forward with design of the recommended improvements in an expedient manner as the existing membranes have reached the end of their useful life and are exhibiting increased fouling and failure rates.

The scope of the WWTP Membrane Bioreactor (MBR) Improvements Project is detailed in the Membrane Replacement Evaluation study and recommendations include the following items:

- Converting the existing anoxic basins into aeration basins.
- Modifying the MBR tanks.
- Providing new MBR equipment.
- Replacement of the existing blowers.
- Providing new membrane cleaning system.
- Providing new permeate pumps.
- Providing additional improvements, including some piping and valve replacement.
- Providing electrical, instrumentation and controls upgrades.

SCOPE OF SERVICES

F&V will develop final bid documents for improvements to the Leoni Township WWTP. The Design Phase will be completed in three steps so that the Township will remain involved in the design development with the opportunity to review and to provide input to the design with key members of the design team and F&V Operations staff. F&V shall develop and provide the following Services:

30% Design Submittal

1.1 Conduct a project kickoff meeting at the Township offices to introduce the project design team, discuss project goals, Owner's concerns, design schedule, and communication plan. A meeting agenda will be prepared, and minutes will be distributed within 7 days following meeting.

1.2 The WWTP Membrane Replacement study serves as the guideline for the proposed design. We will work with the Township to further develop the Basis of Design and advance the design concepts. A Basis of Design Report will be created which will include process modeling of the proposed system, hydraulic calculations, descriptions of the improvements and general equipment selection for the proposed WWTP improvements.

1.3 Review existing mapping, utility information, as-built drawings and other pertinent data, of the site as provided by the Township.

1.4 AutoCad drafting and preparation of 30% Preliminary Design Drawings showing the proposed work at the WWTP.

1.5 Prepare index of proposed specifications.

1.6 Submit 30% Preliminary Design Documents to the Township for review (2 complete sets and PDF Version). Submittal includes the following:

- Basis of Design Report
- 30% Preliminary Design Drawings (full size)
- Specification Index

1.7 Meet with the Township to review the 30% Design submittal at Township offices. A meeting agenda will be prepared, and minutes will be distributed within 7 days following meeting.

1.8 Perform internal QC of 30% Design and address any issues raised in the design review meeting with the Township.

60% Design Submittal

2.1 Update the Basis of Design for the proposed work based on the QC review and the design review meeting with the Township, including process and hydraulic calculations. The update will include near-final calculations, electrical demand estimates, equipment selection and equipment preference documentation.

2.2 Prepare the 60% Preliminary Design Drawings, incorporating Township preliminary design review and QC comments. A total of 60 design drawings are estimated to be prepared by the Engineer, which generally include:

	Sheets
Title Sheet	1
General Notes, Index and Legend	5
Instrumentation & Controls	5
Civil / Site Work	3
Demolition	9
Architectural	3
Structural	4
Process	15
Mechanical & Plumbing	4
Electrical	11

2.3 Prepare preliminary technical specifications using CSI Master Format, Divisions 1 through 48.

2.4 Update Opinion of Probable Construction Cost based on the 60% design drawings and specifications.

2.5 Submit 60% Preliminary Design Documents to the Township for review and approval (2 complete sets and PDF Version). Submittal includes the following:

- Basis of Design Report
- In-Progress 60% Design Drawings (full size)
- Preliminary Specifications
- Opinion of Probable Construction Cost

2.6 Meet with the Township to review the 60% Design submittal at Township offices. A meeting agenda will be prepared, and minutes will be distributed within 7 days following meeting.

2.7 Perform QC of 60% Design and address any issues raised in the design review meeting with the Township.

Final Design (95% and 100% Submittals)

The final design task will include the following activities:

3.1 Update and finalize the Basis of Design report based on the QC review and the design review meeting with the Township.

3.2 Prepare final (95% complete) design and technical specifications incorporating Township preliminary design review and QC comments.

3.3 Update Opinion of Probable Construction Cost based on 95% complete design documents.

3.4 Submit 95% Preliminary Design Documents to the Township for review and approval (2 complete sets and PDF Version). Submittal includes the following:

- Basis of Design Report
- Final (95%) Design Drawings (full size)
- 95% Specifications
- Opinion of Probable Construction Cost

3.5 Meet with the Township to review the 95% Design submittal at Township offices. A meeting agenda will be prepared, and minutes will be distributed within 7 days following meeting

3.6 Complete final internal quality control review.

3.7 Incorporate Township and QC comments and prepare 100% complete design documents for project bidding.

3.8 A Part 41 Construction Permit (Wastewater) from EGLE will be required for construction of the WWTP MBR Improvements project. The permit application will be prepared on behalf of the

Township. Any permit application fees will be paid by the Township. Other permits would be secured by the Contractor prior to beginning construction.

Assumptions:

- Topographic survey and geotechnical services will not be necessary.
- Bid phase and construction phase services will be added by a future authorization.