AMENDMENT NUMBER 4 TO THE
PROFESSIONAL SERVICES AGREEMENT BETWEEN
GEOSYNTEC CONSULTANTS OF MICHIGAN, INC.
AND THE CITY OF ANN ARBOR

This Amendment Number 4 ("Amendment") is to the agreement between the City of Ann Arbor, ("City") and GEOSYNTEC CONSULTANTS OF MICHIGAN, INC., ("Contractor") for Professional Engineering Services, which is dated January 3, 2023 ("Agreement"). City and Contractor agree to amend the Agreement as follows:

1) Article II, DURATION, is amended to read as follows:

This Agreement shall remain in effect until satisfactory completion of the Services specified below unless terminated as provided for in Article XI. The terms and conditions of this Agreement shall apply to the earlier of the Effective Date or Commencement Date.

Contractor agrees to extend this Agreement through December 31, 2027.

2) Article III, SERVICES, is amended to read as follows:

A. The Contractor agrees to provide Professional Engineering Services ("Services") in connection with the Project as described in Exhibit A, and as amended for additional tasks by Amendment Number 1, Amendment Number 2, Amendment Number 3, and Amendment Number 4 (Exhibit A-4). The City retains the right to make changes to the quantities of service within the general scope of the Agreement at any time by a written order. If the changes add to or deduct from the extent of the services, the compensation shall be adjusted accordingly. All such changes shall be executed under the conditions of the original Agreement.

B. Quality of Services under this Agreement shall be of the level of quality performed by persons regularly rendering this type of service. Determination of acceptable quality shall be made solely by the Contract Administrator.

C. The Contractor shall perform its Services for the Project in compliance with all statutory, regulatory, and contractual requirements now or hereafter in effect as may be applicable to the rights and obligations set forth in the Agreement. The Contractor shall also comply with and be subject to the City of Ann Arbor policies applicable to independent contractors.

D. The Contractor may rely upon the accuracy of reports and surveys provided to it by the City (if any) except when defects should have been apparent to a reasonably competent professional or when it has actual notice of any defects in the reports and surveys.

3) Article V, COMPENSATION, is amended to read as follows:

A. The Contractor shall be paid in the manner set forth in Exhibit B, and as amended by Amendment Number 1, Amendment Number 2, Amendment Number 3, and Amendment Number 4 (Exhibit B-4). The total fee to be paid the Contractor for the Services shall not exceed $996,700.00. The original contract amount was $100,000.00. Amendment No. 1 amount was $115,700.00. Amendment No. 2 amount was $125,000.00. Amendment No. 3 amount was $100,000.00. Amendment No. 4 amount is $556,000.00. Payment shall be made monthly, unless another payment term is specified in Exhibit B or Exhibit B-4, following receipt of invoices submitted by the Contractor, and approved by the Contract Administrator.

B. The Contractor will be compensated for Services performed in addition to the Services described in Article III, only when the scope of and compensation for those additional Services have received prior written approval of the Contract Administrator.

C. The Contractor shall keep complete records of work performed (e.g. tasks performed, hours allocated, etc.) so that the City may verify invoices submitted by the Contractor. Such records shall be made available to the City upon request and submitted in summary form with each invoice.

All terms, conditions, and provisions of the Agreement, unless specifically amended above, shall apply to this Amendment and are made a part of this Amendment as though expressly rewritten, incorporated, and included herein.

City and Contractor agree that for this Amendment and any documents related to the Agreement: 1) signatures may be delivered electronically in lieu of an original signature; 2) to treat electronic signatures as original signatures that bind them; and 3) signatures may be executed and delivered by facsimile and upon such delivery, the facsimile signature will be deemed to have the same effect as if the original signature had been delivered to the other party.

This Amendment to the Agreement shall be binding on the Parties' heirs, successors, and assigns.

[SIGNATURE PAGE FOLLOWS]

For_____

Contractor Name

By_____

Name:_____

Title:_____

Date: _____

For City of Ann Arbor

By _____
Christopher Taylor, Mayor

Dated: _____

By _____
Jacqueline Beaudry, City Clerk

Dated: _____

Approved as to substance

_____
Milton Dohoney Jr., City Administrator

Dated: _____

_____
Jordan Roberts, Public Services
Area Administrator

Dated: _____

Approved as to form and content

_____
Atleen Kaur, City Attorney

Dated: _____

EXHIBIT A-4
SCOPE OF SERVICES

SCOPE OF SERVICES CHANGES

The additional Professional Engineering Services included in this Amendment No. 4 is provided below.

Proposed Work Plan – Design of Concrete Repairs for Ann Arbor Dams

Geosyntec Consultants of Michigan, Inc. (Geosyntec) is pleased to present this proposal to the City of Ann Arbor (City) for the detailed design of concrete repairs for Barton and Superior Dams. Currently, we are finalizing concrete repair plans for the City in which repairs are identified and prioritized based on the criticality (i.e., the combination of the observed condition and the importance of the component to prevent an uncontrolled release of the reservoir) of each dam component. The concrete repair plans also include recommended repairs with conceptual designs, cost estimates for the recommended repairs, and a recommended schedule for implementing the repairs in future fiscal years (FY).

We will prepare design documents for the recommended concrete repairs at Barton and Superior Dams, including the following deliverables:

- Design drawings;
- Technical specifications;
- Estimated construction schedule; and
- Engineer's opinion of probable cost (EOPC).

We will also provide bidding assistance to the City during the construction contractor (CC) selection process and will coordinate with the Federal Energy Regulatory Commission (FERC) and other regulatory bodies during design and CC selection.

Our detailed design will include repairs of the following concrete components at the request of the City:

Barton Dam

- Left downstream retaining wall of the powerhouse tailrace
- Powerhouse right exterior wall
- Powerhouse intake and forebays and left upstream retaining wall
- Spillway interior piers
- Right end wall of spillway interior

Superior Dam

- Concrete-encased steel struts within sluiceway
- Sluiceway downstream retaining walls
- Spillway crest columns and the crest beams
- Upstream side of the spillway piers supporting the walkway

The following sections present additional details of our proposed scope of work.

Design Documents

For each dam, Geosyntec will prepare design drawings, technical specifications, an EOPC, and an estimated construction schedule (collectively referred to as design documents) for three design steps: (1) 50 Percent, (2) Issued for Bid (IFB) (i.e., 100 Percent), and (3) Issued for Construction (IFC).

Geosyntec will be prepared to promptly begin work on July 1, 2026 in anticipation of notice to proceed. We will perform a structural analysis for each repair design for each concrete component using simplified methods and models. Our team will perform the structural analyses with input from a technical advisor and review by a senior engineer for quality assurance. We will perform the analyses concurrently with our preparation of the design drawings and technical specifications to reduce the

overall schedule.

At the 50 Percent design step, we will submit the design documents to the City for review and to FERC via the E-file system. Upon receipt of a single set of consolidated comments from the City and their consultant, we will review the comments and lead a meeting with the City to resolve any questions. We will revise the design documents to address the comments from the City for the IFB design documents submittal.

We will also lead an initial Construction Potential Failure Modes Analysis (CPFMA) workshop with FERC to discuss FERC comments and potential failure modes (PFMs) prior to submitting the IFB design documents. More information regarding the CPFMA workshop is presented in the Regulatory Coordination task of this proposal. We will strive to address all FERC comments in the IFB design documents submittal. However, given the accelerated project schedule, any comments that cannot reasonably be addressed within the project timeline will be documented and incorporated in the IFC design documents.

We will prepare a set of IFC design drawings and technical specifications, sealed by the Design Engineer (DE) who will be a Professional Engineer licensed in the State of Michigan. We will address comments from the City and their consultant regarding the IFB design documents in this deliverable. We will also address any unresolved comments from FERC in the IFC design documents. We will prepare a bulletin summarizing all revisions made to the IFC documents after the IFB submittal.

Geosyntec's CAD designers will prepare the design drawings under the direction of the DE sealing the IFC drawings with support from a task leader familiar with Barton and Superior Dams. The design documents will be reviewed by technical advisors with experience in preparing drawings and specifications for similar concrete repairs. A senior review of the design documents will be provided for quality assurance before submitting to the City. The 50 Percent and IFB design drawings will be provided to the City in .pdf format and the IFC drawings will be provided to the City in .pdf and .dwg formats. The other 50 Percent design documents will be provided to the City in .docx format. The IFB and IFC design documents will be provided to the City in .docx and .pdf formats.

Assumptions for Design Documents

We have made the following assumptions when preparing this proposal:

- Geosyntec will be ready to begin work on July 1, 2026, the anticipated date the City will provide the Notice to Proceed.
- The drawings will be developed by digitizing existing .pdf files of design and repair drawings and details for the dams.
- Geosyntec will perform field measurements of structures, as needed. A survey to measure all concrete structures will not be performed.
- If confined space entry is required to obtain field measurements, the City will provide the necessary personnel, equipment, and monitoring. One Geosyntec representative, trained in confined space entry, will make entry and collect the required measurements.
- This is a repair project and, therefore, the standard milestone submittals for FERC (i.e., 30%, 60%, 90%, and 100%) and a Basis of Design Report will not be required.
- The EOPC and construction schedule will not be required for the IFC submittal as these will be provided by the CC during the bidding process.
- The City will provide the General Conditions portion of the specifications.
- Geosyntec will lead two meetings with the City and the City's consultant to resolve comments; one after the 50 Percent submittal and one after the IFB submittal.
- Geosyntec will lead an update meeting with the City or their designee every week for the duration of this task (i.e., completion of IFC design documents).

Regulatory Coordination

In addition to regulatory oversight of the dams by FERC, work performed below the water line (e.g., left downstream retaining wall for Barton Dam) will require a Joint Permit, administered by the State of Michigan Department of Environment, Great Lakes, and Energy (EGLE) and the U.S. Army Corps of Engineers. After the 50 Percent design document submittal, we will prepare a Joint Permit Application for any repairs to be performed below the water line. We will finalize and submit the Joint Permit Application to the City for submittal to EGLE after receiving comments from the City on the 50 Percent design documents. Geosyntec and our subcontractors will perform a wetland delineation survey as well as a threatened and endangered species survey at each dam to facilitate the Joint Permit Application.

Geosyntec is experienced in navigating the challenges associated with FERC hydropower regulation at Barton Dam. We will implement that experience and be proactive in communicating and collaborating with FERC for this project. Based on our experience and understanding of the scope for this project, we propose the following activities and approximate schedule to engage FERC throughout the project and mitigate the impacts of FERC comments:

- We will prepare a letter to inform FERC of the development of concrete repairs and present conceptual details of the repairs.
- We will lead a virtual Kickoff Meeting with the City, FERC, and the City's consultant to discuss the conceptual design of the repairs and FERC's concerns.
- Approximately 70 days after submitting the 50 Percent design documents, and before submitting the IFB design documents, we will lead a virtual CPFMA workshop with FERC. We will discuss FERC comments on the 50 Percent design documents as well as PFMs and associated risk reduction measures (RRMs).
    - We will prepare a list of relevant background documents for each participant to review before the CPFMA workshop.
    - We will prepare Microsoft Powerpoint slides to be used by our facilitator during the CPFMA workshop.
    - We will identify likely PFMs before the CPFMA to expedite the workshop.
    - During the workshop, we will populate the FERC PFM tables with input from the workshop attendees.
    - After the workshop, we will prepare a CPFMA report for submittal to FERC via the E-file system.
    - We will incorporate RRMs identified during the workshop into the design documents and other FERC-required plans (described below).
- We expect FERC-required plans will include a Quality Control Inspection Plan (QCIP), Temporary Conditions Emergency Action Plan (TCEAP), and Construction Dam Safety Surveillance and Monitoring Plan (CDSSMP). We will prepare drafts of these documents for submittal to FERC and inclusion with the City's Request for Bids. This will expedite FERC comments and provide prospective CCs with a general understanding of the associated requirements.
- After the City selects a CC, we will lead a second virtual CPFMA workshop with FERC and the selected CC. We will discuss FERC comments on the IFB design documents and the draft FERC-required plans. We will review the previously identified PFMs and associated RRMs with the CC and FERC to solicit CC feedback and identify any appropriate changes to the PFMs or RRMs.
    - We will prepare a list of updates made since the initial CPFMA workshop.
    - We will prepare Microsoft Powerpoint slides to be used by our facilitator during the CPFMA workshop.
    - During the workshop, we will update FERC PFM tables with input from the workshop attendees.

    - After the workshop, we will prepare a CPFMA report for submittal to FERC via the E-file system.
- We will prepare final versions of the QCIP, TCEAPs, and CDSSMPs following the second CPFMA workshop to include the RRMs identified during the CPFMA as well as the quality control personnel and their qualifications. We will submit the final FERC-required plans to the City with the IFC design documents for submittal to FERC via the E-file system.

Assumptions for Regulatory Coordination

We have made the following assumptions when preparing this proposal:

- A single QCIP will be prepared to include both dams because the quality control and inspection requirements and procedures are expected to be similar for both dams. However, a separate CDSSMP and TCEAP will be prepared for each dam.
- The virtual CPFMA workshops will each require up to 3 days (24 hours) to complete.

Bidding Assistance and FERC Follow-Up Efforts

We will provide bidding assistance to the City during the CC selection process to evaluate the qualifications of each potential CC and the submitted bids. We recognize the repair construction project may be advertised as a single contract for both dams or as two separate contracts, one for each dam. We will prepare our IFB documents to suit the City's chosen option. As part of this task, we will review and provide comments on the City's request(s) for bids before the bid period is opened. We will respond to requests for information (RFIs) submitted by potential bidders.

Once the bids are opened, two members of the Geosyntec team will review the bids. We will identify items of concern, prepare draft questions for the bidders, and other general comments for discussion with the City. For each contract, we will:

- Meet with the City and their consultant in person to review the bids and identify a short list of up to two bidders for interviews;
- Schedule an interview with each short-list bidder and prepare appropriate questions;
- Interview each short-list bidder with the City and their consultant; and
- Meet with the City and their consultant to evaluate the bidders using the City's bid evaluation matrix.

Once the CC(s) is selected, we will assist the City with submitting CC qualifications, submittals, and engineering recommendations to FERC for review.

Assumptions for Bidding Assistance and FERC Follow-Up Efforts

We have made the following assumptions when preparing this proposal:

- The repair construction project will be advertised as two separate contracts, one for each dam.
- If necessary, we will prepare a bid addendum summarizing any significant changes that would influence the ability of the CC to perform the repairs or significantly impact costs.

EXHIBIT B-4
FEE SCHEDULE

Contractor shall be paid for those Services performed pursuant to this Amendment inclusive of all reimbursable expenses (if applicable), in accordance with the terms and conditions as set in the original Contract. The Compensation Schedule included herein states natures and amount of compensation the Contractor may charge the City.

The total amount of fees to be paid under the amended Agreement shall not exceed $996,700.00. The original contract amount was $100,000.00. Amendment No. 1 amount was $115,700. Amendment No. 2 amount was $125,000.00. Amendment No. 3 amount was $100,000.00. Amendment No. 4 amount is $556,000.00, and is broken down in the table below:

Fee Proposal – Design of Concrete Repairs for Ann Arbor Dams

A breakdown of estimated costs for each task to be performed as part of the Design of Concrete Repairs for Ann Arbor Dams work is provided in Table 2 below.

Table 2 – Detailed Summary of Costs

Task	Task Description	Labor Hours	Labor	Expenses	Total Cost
	TOTAL	**2,128**	**$540,600.00**	**$15,400.00**	**$556,000.00**
1	***Design Documents***	***1391***	***$341,900.00***	***$0.00***	***$341,900.00***
2	***Regulatory Coordination***	***573***	***$152,500.00***	***$15,400.00***	***$167,900.00***
3	***Bidding Assistance and FERC Follow-up Efforts***	***164***	***$46,200.00***	***$0.00***	***$46,200.00***