

Mr. Glen Wiczorek, P.E.
City of Ann Arbor
919 Sunset Road
Ann Arbor, MI 48103

May 2, 2024
NTH Project No. 62-210340
(Revised May 3, 2024)

**RE: Request for Contract Amendment No. 3
Barton Dam (P-3142) Right Embankment Remediation
Ann Arbor, Michigan**

Dear Mr. Wiczorek:

Pursuant to our recent discussions, we have prepared this request for a contract amendment to the NTH Consultants, Ltd. (NTH) contract with the City of Ann Arbor (the City) entitled, Barton Dam Right Embankment Remediation Project. As discussed, this contract amendment request is primarily the result of extended efforts in 2024 during documentation finalization because of additional efforts associated with contractor bidding. These efforts were not part of the original contract, Amendment No. 1, or 2. Additionally, as a result of recent contractor bidding, it is anticipated that construction is not likely to start in FY2024 and may be delayed into FY2025 with additional bidding likely to occur if the preferred contractor is unable to hold their pricing. As a result, there will be additional support needed for continued surveillance of the Dam during the interim period as well as for additional support to the City in advance of anticipated start of construction in Spring 2025.

SCOPE OF SERVICES

We have divided the additional engineering services currently required or anticipated to potentially be required into the following categories:

1. Additional Bidding Assistance Efforts
2. Additional "Out-of-Scope" Submittal and Interaction Required by FERC – Construction Dam Safety Surveillance Monitoring Plan (CDSSMP) and 3-day Potential Failure Mode Analysis (2nd round)
3. Revisions to Evaluations, Analysis, Plans, and Design per FERC Direction (after August 2023 – Amendment No. 2 – post 60% design)
4. EGLE/City of Ann Arbor Floodplain Permit Compensatory Cut Analysis and Collector Ditch Watercourse Joint Permit Application (JPA) extended review efforts and future monitoring of conditions at the dam site
5. Additional Dam Surveillance, Data Review, Bidding Evaluation, and Continued Project Management
6. Owner-Approved Miscellaneous Allowance

In addition to the engineering team is requesting additional funding to finalize the engineering documentation for completion of this phase of the project ahead of construction commencing, likely in the Spring of 2025.

The following sections present the specific services associated with each of the categories.

1. Additional Bidding Assistance Efforts

During the bidding process, the engineering team originally envisioned a bidding process that involved issued for bidding documents, conducting a pre-bid meeting, responding to requests from contractors and issuing addendum as required, a post-bid interview with the low bidder only and a recommendation letter for award to the City. The bidding process engaged in multiple rounds of bidding scorecard reviews (2), multiple rounds (2 rounds) of interviews with multiple (2) bidders, several interactions with bidders to further clarify and refine their bid understanding to further refine the evaluation, checking references of the contractors and their dewatering subcontractors, and significant interaction with the City throughout the course of the process to determine the recommendation for award in order to allow the City to determine how to proceed forward. Additionally, after recommendation, there was additional effort by the team to further refine the City's strategy how to execute the work considering budgetary constraints.

2. Additional "Out-of-Scope" Submittal and Interaction Required by FERC – Construction Dam Safety Surveillance Monitoring Plan (CDSSMP) and 3-day Potential Failure Mode Analysis (2nd round)

Based on communications with FERC, additional effort beyond that anticipated at the proposal stage or in the preparation of Contract Amendment No. 1 or 2 was necessary. This effort includes:

- Completion of the Construction Dam Safety Surveillance Monitoring Plan (CDSSMP).
- Completion of a 2nd PFMA was envisioned after the 60% design submittal in the original scope; however, it occurred after the issued for bid documents were completed and extended to 3 days, instead of an assumed 1-day duration. Additionally, after completion of 60% design, additional meeting consultation was conducted with FERC to ensure their alignment with the overall design parameters.

3. Revisions to Evaluations, Analysis, Plans, and Design per FERC Direction (after August 2023 – Amendment No. 2 – post 60% design)

After the PFMA and during bidding, several revisions had to be made to the engineering design to accommodate requests from FERC during the PFMA or bidding phase by the City including:

- Minimizing excavation into the existing face of the dam per FERC. This analysis required the bench to be widened from 12 feet to 15 feet to maintain the required thicknesses of the filter/mineral drain.
- Revising the thickness of mineral/filter drains at TD-23 and TD-43 to accommodate the removal of grouting these toe drains.
- Eliminating the grouting program from the project.

- Revising the mineral drain and filter details at the tapered ends of the stabilization berm.
- Thicken the topsoil from 6 inches to 12 inches per direction from the City of Ann Arbor.

Once the final cross section was established through NTH's analysis and discussion with FERC and the City, the remedial design had to be modified. These revisions occurred after the 60 percent design submittal which covered the previous inclusion of design modifications in Amendment No. 2.

To accommodate the revisions, the previously completed evaluations, analyses, and drawings have to be revised. This effort will include:

- Revisions to the seepage and stability modeling presented in the BODR submitted June 2023.
- Updating the previously submitted BODR for resubmission to FERC. This effort also included revisions to address a modest number of comments from FERC pursuant to its PFMA review.
- Revising all of the engineering drawings to incorporate the revisions.
- Updating several specification sections to be consistent with the PFMs developed during the PFMA conference.

4. EGLE/City of Ann Arbor Floodplain Permit Compensatory Cut Analysis and Collector Ditch Watercourse Joint Permit Application (JPA) extended review efforts and future monitoring conditions

Based on meetings with EGLE and the City of Ann Arbor, additional effort beyond that anticipated at the original scope, Amendment No. 1 or 2 was necessary including:

- Evaluation of compensatory cut, including volume and location evaluations, that may have been required by EGLE/City of Ann Arbor for the floodplain/floodway filling required by the project.
- Ongoing discussions and negotiations with EGLE regarding the designation of the existing toe ditch as a natural stream including review of DRAFT permit conditions, long-term monitoring requirements and finalization of the JPA efforts for the project that exceeded the effort originally envisioned as part of Amendment 2. The team's efforts included additional coordination and meeting time with EGLE and the City regarding permit conditions and edits of the submitted documents required by EGLE to satisfy their determination of the collector ditch as a watercourse. This includes an additional 30 hours of effort from DLZ.
- Additional coordination with the City of Ann Arbor's floodplain manager to evaluate the project and required conditions to comply or obviate the requirements of the City's floodplain management ordinance.

5. Additional Dam Surveillance, Data Review, Bidding Evaluation, and Continued Project Management

Due to budgetary constraints and the team's desire to select the most-qualified bidder, it is currently understood that the project is likely to extend to an estimated construction start in Spring 2025 and may include an additional round of bidding due to the City's procurement process. This will extend the project schedule and incur additional project management effort by the engineering team. Additionally, continued dam surveillance and data evaluation will be necessary through April 2025 until construction is expected to commence. Services provided under this task include:

- Extension of weekly progress calls with Stantec from March 2024 through June 2024 (FY24). Continuation of monthly progress calls from July 2024 through April 2025 (FY25).
- Extension of internal project coordination and management meetings from March 2024 through April 2025 (FY24 and FY25).
- Completion of monthly dam surveillance and data review in consultation with Stantec to satisfy ongoing evaluation of dam conditions during the interim period prior to construction in Spring 2024. We have assumed this monthly dam surveillance will include 1 site visit every other month plus 2 hours per month of data review and consultation from July 2024 through April 2025 and include no more than 8 visits (FY25).
- Completion of an additional round of contractor bidding to include pre-bid meeting, response to bidder questions/inquiries, issuance of bidding addenda (if needed), a single round of bidder (no more than 2) interviews, and a single round of bidder scorecard review/analysis prior to a recommendation for award (FY25).

6. Owner-Approved Miscellaneous Allowance

Given the unknown nature of additional project needs or demands prior to construction in Spring 2025, the engineering team requests a miscellaneous allowance be set aside to address any project needs or requests from various stakeholders involved in this project. The use of these miscellaneous allowance funds would not be permitted unless specifically authorized by the City prior to completing efforts or assignments for the Barton Dam Right Embankment Remediation project.

FEES FOR SERVICES

We have developed cost estimates to provide the services presented herein. We have developed these costs based on the original hourly rates used in the preparation of our original proposal for FY 2024 and updated fee schedule rates for work anticipated in FY 2025. The estimated fee for each of the service categories identified above are summarized in Table 1.



Table 1 – Summary of Fees		
Task No.	Task	Estimated Fees
FY 2024		
1	Additional Bidding Assistance Efforts	\$24,000
2	Additional “Out-of-Scope” Submittal and Interaction Required by FERC – Construction Dam Safety Surveillance Monitoring Plan (CDSSMP) and 3-day Potential Failure Mode Analysis (2nd round)	\$24,600
3	Revisions to Evaluations, Analysis, Plans, and Design per FERC Direction (after August 2023 – Amendment No. 2 – post 60% design)	\$61,600
4	EGLE/City of Ann Arbor Floodplain Permit Compensatory Cut Analysis and Collector Ditch Watercourse Joint Permit Application (JPA) extended review efforts and future monitoring conditions	\$17,000
5	Additional Dam Surveillance, Data Review, Bidding Evaluation, and Continued Project Management	
	- Continued Project Management	\$15,000
Total Cost FY2024		\$142,200
FY 2025		
	Additional Dam Surveillance, Data Review, Bidding Evaluation, and Continued Project Management	
5	- Dam Surveillance and Data Review	\$14,000
	- Additional Bidding Evaluation	\$18,500
	- Continued Project Management	\$28,000
6	Owner-Approved Miscellaneous Allowance	\$25,000
Total Cost FY2025		\$85,500
Total Cost		\$227,700

We look forward to continuing to serve you and the community on this interesting and important project. Once you have reviewed this letter, please do not hesitate to contact us with any questions or comments.

Sincerely,

NTH Consultants, Ltd.

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David R. Lutz

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David R. Lutz, P.E.

Senior Vice President

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