

Memorandum

To: Honorable Board of Directors

Thru: Cheryl Porter, Chief Operating Officer – Water and Field Services

From: Timothy Kuhns, P.E., Director – Water Supply Operations Engineering
Erich Klun, P.E., Engineer – Water Supply Operations Engineering

CC: GLWA Executive Leadership Team

Date: June 17, 2025

RE: CIP #112008/Requisition No. 2400082/REQ-0000330
Northeast Water Treatment Plant Filter Replacement
Budget and Request for Proposals Bid Summary

The purpose of this memorandum is to summarize the bidding activities and provide a bid summary for the subject request for proposals (RFP). The scope of the RFP was to solicit design build proposals for the rehabilitation of the filtration processes at the Northeast Water Treatment Plant (NEP) to meet the requirements of the Administrative Consent Agreement (ACA-399-15-2023) between the GLWA and the Michigan Department of Environment, Great Lakes, and Energy (EGLE). Bids were reviewed in accordance with the qualifications-based selection process defined by the Procurement Policy.

PROJECT BUDGET

The value of the contracted work in the approved FY25-29 5-year Capital Improvement Program (CIP) was estimated to be \$85.5M (\$10M for engineering and \$75.5M for construction) based on an opinion of probable construction cost (OPCC) dated March 2023. This OPCC was prepared as an Association for the Advancement of Cost Engineering (AACE) Class 5 estimate carrying a 35% contingency with a 2.3% inflation rate over a 4-year contract duration. The contract duration was split between design and construction, providing two (2) years for each phase.

The scope of the project was further defined in FY24 during development of the Indicative Design for the RFP. The Indicative Design was advanced to a 30% complete design level to shorten the design phase and allow more time for construction. The contract period was revised to one (1) year for design followed by three (3) years of construction. The 3-year construction duration is needed to provide three (3) low demand seasons required to complete the filter rehabilitation while simultaneously maintaining plant operations during construction. The result of this revised scope definition, which occurred during the FY26-30

5-year CIP update cycle, was an increase in project cost to \$94.5M (\$10M for engineering and \$84.5M for construction).

During bidding, a final OPCC was prepared based on the final RFP scope issued for advertisement. The OPCC dated February 2025 estimated the value of contracted work to be \$125M (\$20M for engineering and \$105M for construction). This final OPCC was prepared as an ACCE Class 4 estimate carrying a 30% contingency with a 3% inflation rate over a 4-year contract period.

The final OPCC is higher than previous OPCCs primarily due to the addition of electrical and instrumentation work required to modernize the filter controls. Specifically, electrical, instrumentation, and controls for the filter control valves and filter wash water pumping systems need significant updates to make the new filtration system reliable and in conformance with current supervisory control and data acquisition (SCADA) and cyber security standards. These updates replace Filter Building and Wash Water Building low voltage electrical systems, including locating all new motor control centers (MCCs) and power distribution panels (PDPs) currently located in the pipe galleries to the operating galleries of the Filter Building and Wash Water Building. These new MCCs and PDPs also power existing heating, ventilation, and air conditioning (HVAC) and auxiliary equipment to remain, as well as the new proposed HVAC equipment necessary to control the building environments for the new control system. The pipe galleries are susceptible to flooding and have been subjected to a lot of moisture damage resulting from non-functioning dehumidification equipment.

Additional improvements further defined during development of the RFP scope resulting in additional costs since the original OPCC include the following:

1. Architectural – new interior and exterior Filter Building and Wash Water Building doors, sealing of operating galleries from the filter areas, replacement of access stairs in the pipe galleries, and painting of all metallic surface to remain.
2. Process Mechanical – replacement of the non-functioning phosphate-free pumping units.
3. Structural – inclusion of filter bed wall modifications required to eliminate the existing caulked leaded joints related to process piping wall penetrations and filter bed modifications required for installation of the new wash water troughs. Additionally, monorails and hoists in the Wash Water Building are being replaced to provide reliable means of removing equipment from the lower levels of both the Filter Building and Wash Water Building.
4. Instrumentation – demolition of the existing pneumatic and high-pressure water system(s) and replacement with a new electric programable logic control (PLC)-based system was required due to new electrically actuated filter control valves, including a new control system architecture and integration into Ovation.
5. Electrical – in addition to the new low voltage power distribution system noted above, new lighting systems were included for the Filter Building and Wash Water Building.

6. Instrumentation – start-up and commissioning of the new systems in accordance with the current GLWA CS-12/CS-13 SCADA standards.
7. Allowances – inclusion of a provisionary allowance specifically for design of unforeseen conditions/improvements not identified in the scope of work and a cash allowance for Emerson (Ovation) hardware.

Table 1 shows the changes in the OPCCs for the evolution of the scope of work described above. Item 1, Engineering, increased primarily due to engineering being a percentage of construction. Additionally, engineering costs increased due to additional field representation associated with the longer construction phase. Item 11, Uncategorized, includes provisionary and cash allowances, as well as start-up and commissioning activities.

PROJECT BIDDING

Bid Period

The bid period is summarized as follows:

- Advertisement: October 25, 2024
- Pre-bid Date: November 1, 2024
- Site Tour Date: November 1, 2024
- Original Bid Date: December 6, 2024
- Final Bid Date: February 17, 2025
- Oral Interviews: April 1, 2025
- Negotiation Meeting No. 1: April 22, 2025
- Negotiation Meeting No. 2: May 7, 2025

Three (3) additional site tours were provided at the request of bidders. The bid due date was extended at the request of bidders to address the pricing requirements of the base and alternate base scopes of work.

Addenda

Eight (8) addenda were issued. A total of 126 questions were asked resulting in six (6) changes to the RFP documents. The remaining 120 questions were related to the specifics of the Solicitation, technical clarifications, requests for extensions on question/bid due dates, and requests for additional site visits.

Bids

Two (2) bids were submitted. Proposals were received by Kokosing Industrial, Inc. (KII) and Walsh Construction Company, LLC (WCC).

Bid Results

Proposals were reviewed and scored in accordance with Procurement Policy resulting in KII having the highest score. Consequently, KII is deemed the successful bidder.

Bid pricing was received using separate bid forms for base scope and alternate base scope bid items. Additionally, the RFP allowed bidders to include volunteer alternate base scope bid items. Alternates contained work items that were both additions and deductions from the base scope of work. Table 2 compares the base scope bid pricing of each bidder against the Engineer's estimate. Table 3 compares the bid pricing of each bidder for the alternate and volunteer alternate base scope bid items against the Engineer's estimate. Table 4 compares the bid pricing for each bidder assuming GLWA acceptance of Alternates 1, 2, 3, 6, and 8 as discussed below.

KII's base scope bid price is \$133,325,000. During negotiations with KII, GLWA elected to include Alternates 1, 2, 3, 6, 8, and Volunteer Alternate 3 offered by KII in the contract resulting in a final negotiated contract value of \$138,989,000. In accordance with the RFP, costs associated with each accepted alternate were rolled into the project tasks identified in Exhibits A and D of the contract. Table 5 compares the original base bid pricing by task with the final negotiated pricing by task.

Table 4 shows that KII's bid pricing for both the base scope and base scope plus non-negotiated accepted alternates was substantially lower than WCC's (approximately \$27M and \$30M, respectively).

Cost Analysis

Table 5 compares KII's bid and final negotiated prices against the Engineer's estimate based on the line items in the bid form. Observations from Table 5 include:

1. KII's final negotiated price of \$138,989,000 is \$9,989,000 higher than the Engineer's estimate of \$129,000,000.
2. The sum of KII's Task 2 through 4 pricing (totaling \$7,486,655), representing the engineering design costs, accounts for approximately 5% of the overall project cost.
3. The sum of KII's Task 7, Resident Engineering, and portion of Task 6, General Construction, related to engineering services during construction (\$5,913,345) accounts for approximately 6% of the overall project cost.
4. Combined, engineering design and engineering services during construction account for 11% of the overall project cost.
5. Task 6, General Construction, makes up approximately 82% of the overall project cost.

The percentage of overall project costs tied to engineering and construction are generally in line with what is expected on a rehabilitation project. Although there are discrepancies between all the bid items, most of this overage is related to the cost of Task 6, General Construction, which accounts for more than 80% of the overall project cost.

Table 6 looks at the overall project costs broken down by project engineering/construction discipline. Items 9 and 10, Electrical and Instrumentation, respectively, show the largest discrepancies. Collectively, these two (2) items account for approximately 23% of the overall

project cost and represent 63% percent (\$6,300,000) of the \$9,989,000 difference between KII's price and the Engineer's estimate. The reason for the costs being higher than the estimate for these items include:

1. The Engineer's estimate being based on the new electrical equipment (i.e., PDPs, MCCs, etc.) being located on the Filter Building Operating Galleries.
2. KII's cost being based on the new electrical equipment being located on the 3rd Floor of the Wash Water Building due to space constraints in the Operating Galleries. Space is limited due to the existing floor hatches, windows, and space needed for the proposed HVAC equipment that needs to be installed in the Operating Galleries.
3. HVAC equipment needed to control the environment where the new electrical equipment will be located on the 3rd Floor of the Wash Water Building.

In addition to the direct costs associated with the location of the new electrical equipment, architectural and structural modifications, costs of which are included in Items 5 and 6 of Table 6, to the Wash Water Building are needed to provide access to the new electrical equipment for maintenance.

Table 1 – Engineer’s Base Scope Opinion of Probable Construction Cost (OPCC)

Item No.	Item Description/Discipline	FY25-29 OPCC (March 2023)	FY26-30 OPCC (June 2024)	Current OPCC (February 2025)
1	Engineering	\$10,000,000	\$10,000,000	\$19,000,000
2	Demolition	\$11,200,000	\$12,600,000	\$6,500,000
3	Civil	\$0	\$0	\$4,000,000
4	Architectural	\$0	\$0	\$2,700,000
5	Structural	\$200,000	\$250,000	\$3,500,000
6	Process	\$44,800,000	\$50,500,000	\$55,100,000
7	HVAC/Plumbing	\$6,000,000	\$6,750,000	\$3,700,000
8	Electrical	\$11,000,000	\$12,400,000	\$5,200,000
9	Instrumentation	\$1,800,000	\$2,000,000	\$17,600,000
10	Ovation	\$0	\$0	\$500,000
11	Uncategorized	\$0	\$0	\$7,200,000
	Total Estimated Cost	\$85,000,000	\$94,500,000	\$125,000,000

Table 2 – Base Scope Bid Table Summary

Item No.	Description	Qty	Unit	Kokosing Industrial, Inc. (KII)	Walsh Construction Company, LLC (WCC)	Engineer's Estimate (GLWA)
#0-1	Task 1 Project Management	1	LS	\$ 5,600,000	\$ 10,580,000	\$5,000,000
#0-2	Task 2 Basis of Design (50% Design)	1	LS	\$ 3,000,000	\$ 2,200,000	\$4,500,000
#0-3	Task 3 Detailed Design (75% Design)	1	LS	\$ 2,200,000	\$ 2,600,000	\$4,250,000
#0-4	Task 4 Detailed Design (100% Design)	1	LS	\$ 1,800,000	\$ 1,400,000	\$2,500,000
#0-5	Task 5 Mobilization	1	LS	\$ 3,000,000	\$ 3,200,000	\$2,500,000
#0-6	Task 6 General Construction	1	LS	\$ 113,225,000	\$ 133,240,000	\$103,000,000
#0-7	Task 7 Resident Engineering	1	LS	\$ 2,500,000	\$ 4,100,000	\$1,250,000
#0-8	Task 8 Demobilization	1	LS	\$ 500,000	\$ 1,600,000	\$500,000
#0-9	Cash Allowance for Emerson Hardware	1	LS	\$ 500,000	\$ 500,000	\$500,000
#0-10	Provisionary Allowance for Design	1	LS	\$ 1,000,000	\$ 1,000,000	\$1,000,000
	Total Base Scope Bid Price			\$133,325,000	\$160,420,000	\$125,000,000

Table 3 – Base Scope Alternate and Bidder Volunteer Alternate Bid Table Summary

Item No.	Description	Qty	Unit	Kokosing Industrial, Inc. (KII)	Walsh Construction Company, LLC (WCC)	Engineer's Estimate (GLWA)
#0-1	Alt. 1 – Filter Area Safety Railing	1	LS	\$476,000	\$405,000	\$700,000
#0-2	Alt. 2 – Reuse of Existing Wall Castings	1	LS	\$(947,000)	\$(2,700,000)	\$(2,000,000)
#0-3	Alt. 3 – Filter Area HVAC Improvements	1	LS	\$3,556,000	\$6,900,000	\$3,500,000
#0-4	Alt. 4 – SST Underdrains in Filters 11 and 35	1	LS	\$446,000	\$0	\$450,000
#0-5	Alt. 5 – SST Underdrains in Lieu of Rehabilitated Clay Underdrains	1	LS	\$9,060,000	\$8,900,000.00	\$11,000,000
#0-6	Alt. 6 – Replacement of WW Pumping Units 1 thru 4	1	LS	\$2,720,000	\$3,990,000.00	\$2,800,000
#0-7	Alt. 7 – Reuse of Existing Embedded Conduits	1	LS	\$62,500	\$0	\$(100,000)
#0-8	Alt. 8 – Salvage and Reuse Existing Field Instruments	1	LS	\$(370,000)	\$(190,000)	\$(450,000)
#0-9	Alt. 9 – Extension of Date of Substantial Completion of 470 Days	1	LS	\$4,355,000	\$1,000,000	Not Applicable ¹
#0-10	Vol. Alt. 1 (KII) – No Air Scour Piping for Alt. 4	1	LS	\$(176,000)	Not Applicable ²	Not Applicable ⁴
#0-11	Vol. Alt. 2 (KII) – No Air Scour Piping for Alt. 5	1	LS	\$(2,327,000)	Not Applicable ²	Not Applicable ⁴
#0-12	Vol. Alt. 3 (KII) – Retain and Rehabilitate Existing Elevated Tank	1	LS	\$(310,000)	Not Applicable ²	Not Applicable ⁴
#0-10	Vol. Alt. 1 (WCC) – Alternate Media Profile	1	LS	Not Applicable ³	\$1,250,000	Not Applicable ⁴
#0-11	Vol. Alt. 2 (WCC) – Retain Existing Wall Castings with New Lead Joints	1	LS	Not Applicable ³	\$(1,680,000)	Not Applicable ⁴
#0-12	Vol. Alt. 3 (WCC) – Retain Existing Wall Castings with Alternate to Lead Joints	1	LS	Not Applicable ³	\$-	Not Applicable ⁴
#0-13	Vol. Alt. 4 (WCC) – Addition of 6-inch Filter-to-waste Flow Meter	1	LS	Not Applicable ³	\$500,000	Not Applicable ⁴
#0-14	Vol. Alt. 5 (WCC) – Addition of 20-inch Filter-to-waste Flow Meter	1	LS	Not Applicable ³	\$65,000	Not Applicable ⁴
#0-14	Vol. Alt. 6 (WCC) – Condition Assessment and Reuse Existing Gallery Piping	1	LS	Not Applicable ³	\$(2,000,000)	Not Applicable ⁴

¹ Engineering Estimate for Alternate No. 9 not applicable due to costs being entirely based on the Bidder's sequence of construction and required labor to meet the Contract Times. Extended General Conditions based on 470 additional days are estimated to be approximately \$4,000,000.

² Not applicable to WCC's bid because KII's volunteered alternate.

³ Not applicable to KII's bid because WCC's volunteered alternate.

⁴ Not applicable to Engineering Estimate because Bidders' volunteered alternate.

Table 4 – Base Scope and GLWA-Accepted Alternate Bid Table Summary (non-negotiated prices)

Item No.	Description	Qty	Unit	Kokosing Industrial, Inc. (KII)	Walsh Construction Company, LLC (WCC)	Engineer's Estimate (GLWA)
#0-1	Task 1 Project Management	1	LS	\$ 5,600,000	\$ 10,580,000	\$5,000,000
#0-2	Task 2 Basis of Design (50% Design)	1	LS	\$ 3,000,000	\$ 2,200,000	\$4,500,000
#0-3	Task 3 Detailed Design (75% Design)	1	LS	\$ 2,200,000	\$ 2,600,000	\$4,250,000
#0-4	Task 4 Detailed Design (100% Design)	1	LS	\$ 1,800,000	\$ 1,400,000	\$2,500,000
#0-5	Task 5 Mobilization	1	LS	\$ 3,000,000	\$ 3,200,000	\$2,500,000
#0-6	Task 6 General Construction	1	LS	\$ 113,225,000	\$ 133,240,000	\$103,000,000
#0-7	Task 7 Resident Engineering	1	LS	\$ 2,500,000	\$ 4,100,000	\$1,250,000
#0-8	Task 8 Demobilization	1	LS	\$ 500,000	\$ 1,600,000	\$500,000
#0-9	Cash Allowance for Emerson Hardware	1	LS	\$ 500,000	\$ 500,000	\$500,000
#0-10	Provisionary Allowance for Design	1	LS	\$ 1,000,000	\$ 1,000,000	\$1,000,000
	Total Base Scope Bid Price			\$133,325,000	\$160,420,000	\$125,000,000
#0-1	Alt. 1 – Filter Area Safety Railing	1	LS	\$476,000	\$405,000	\$700,000
#0-2	Alt. 2 – Reuse of Existing Wall Castings	1	LS	\$(947,000)	\$(2,700,000)	\$(2,000,000)
#0-3	Alt. 3 – Filter Area HVAC Improvements	1	LS	\$3,556,000	\$6,900,000	\$3,500,000
#0-6	Alt. 6 – Replacement of WW Pumping Units 1 thru 4	1	LS	\$2,720,000	\$3,990,000.00	\$2,800,000
#0-8	Alt. 8 – Salvage and Reuse Existing Field Instruments	1	LS	\$(370,000)	\$(190,000)	\$(450,000)
	Total Accepted Alternate Price			\$5,435,000	\$8,405,000	\$4,000,000
	Total Base Scope and Accepted Alternate Price			\$138,760,000	\$168,825,000	\$129,000,000

Table 5 – Task Comparison of Kokosing Industrial, Inc. vs Engineer’s Estimate

Item No.	Description	Bid Price (w/o alternates)	Final Negotiated Price (w/ alternates)	Engineer’s Estimate (w/o Alternates)	Engineer’s Estimate (w/ Alternates)
#0-1	Task 1 Project Management	\$5,600,000	\$5,725,000	\$5,000,000	\$5,400,000
#0-2	Task 2 Basis of Design (50% Design)	\$3,000,000	\$3,355,841	\$4,500,000	\$4,650,000
#0-3	Task 3 Detailed Design (75% Design)	\$2,200,000	\$2,274,357	\$4,250,000	\$4,400,000
#0-4	Task 4 Detailed Design (100% Design)	\$1,800,000	\$1,856,457	\$2,500,000	\$2,600,000
#0-5	Task 5 Mobilization	\$3,000,000	\$3,000,000	\$2,500,000	\$2,500,000
#0-6	Task 6 General Construction	\$113,225,000	\$118,248,045	\$103,000,000	\$106,200,000
#0-7	Task 7 Resident Engineering	\$2,500,000	\$2,500,000	\$1,250,000	\$1,250,000
#0-8	Task 8 Demobilization	\$500,000	\$500,000	\$500,000	\$500,000
#0-9	Cash Allowance for Emerson Hardware	\$500,000	\$500,000	\$500,000	\$500,000
#0-10	Provisionary Allowance for Design	\$1,000,000	\$1,029,300	\$1,000,000	\$1,000,000
	Total Price/Estimate	\$133,325,000	\$138,989,000	\$125,000,000	\$129,000,000

Table 6 – Discipline Comparison of Kokosing Industrial Pricing, Inc. vs. Water Engineering’s Estimate

Item No.	Item Description	KII Bid Price w/o Alternates	KII Final Price w/ Alternates	WE OPCC Est. w/o Alternates	WE OPCC Est. w/ Alternates
1	General Conditions	\$7,000,000	\$8,159,700	\$8,000,000	\$8,200,000
2	Engineering	\$15,225,000	\$15,900,000	\$20,000,000	\$20,600,000
3	Demolition	\$9,200,000	\$9,600,000	\$6,000,000	\$6,000,000
4	Civil	\$3,300,000	\$3,200,000	\$3,500,000	\$3,500,000
5	Architectural	\$6,500,000	\$6,800,000	\$2,500,000	\$2,800,000
6	Structural	\$3,800,000	\$3,900,000	\$3,200,000	\$1,700,000
7	Process	\$53,600,000	\$55,200,000	\$51,000,000	\$53,000,000
8	Plumbing/HVAC	\$2,200,000	\$2,700,000	\$3,300,000	\$6,000,000
9	Electrical	\$19,300,000	\$20,000,000	\$4,800,000	\$4,900,000
10	Instrumentation	\$11,600,000	\$12,000,000	\$21,200,000	\$20,800,000
11	Allowances	\$1,500,000	\$1,529,300	\$1,500,000	\$1,500,000
	Total Price/Estimate	\$133,325,000	\$138,989,000	\$125,000,000	\$129,000,000

Table 7 – Discipline Summary by Percentage of Total Cost Comparison

Item No.	Item Description	KII Bid Price w/o Alternates	KII Final Price w/ Alternates	WE OPCC Est. w/o Alternates	WE OPCC Est. w/ Alternates
1	General Conditions	5%	6%	6%	6%
2	Engineering	11%	11%	16%	16%
3	Demolition	7%	7%	5%	5%
4	Civil	2%	2%	3%	3%
5	Architectural	5%	5%	2%	2%
6	Structural	3%	3%	3%	1%
7	Process	40%	40%	41%	41%
8	Plumbing/HVAC	2%	2%	3%	5%
9	Electrical	14%	14%	4%	4%
10	Instrumentation	9%	9%	17%	16%
11	Allowances	1%	1%	1%	1%
	Totals	100%	100%	100%	100%