GLWA
Great Lakes Water Authority

MEMORANDUM

TO: Tim Kuhns, Director – Water Supply Operations Engineering

FROM: Corey Brecht, LPM – Water Supply Operations Engineering

SUBJECT: RFP 2401015 – 96-inch WTM Relocation Project Phase III

DATE: March 11, 2025

CIP 122004 - Phase 3 of the 96-inch WTM Relocation Project

The purpose of this memorandum is to document the price differences between the executed Funds Approval Request (FAR) and the RFP 2401015 received bid costs. Within the FAR, the listed estimated project costs were determined to be $100M to fully execute the scope of work identified within the RFP documents at the time of drafting the FAR. The bid received for RFP 2401015 was significantly higher than the estimated costs as illustrated in Table No. 01. Several factors may have contributed to the cost difference, but two primary reasons are listed listed below:

1) FAR approval timeframe and RFP scope changes
    a. FAR was approved in March 2024 but the RFP was not advertised until October 2024. During this period, the engineering team continued to evaluate and finalize the RFP documents including the scope of work.
    b. Internal meetings were held with Field Services and SCC to discuss additional operational strategies associated with the line stop implementation plan which led to an additional allowance incorporated for rehabilitation and improvements at the Dorsey Dickinson Valve (DDV).
    c. GLWA experienced water leaks at the I-Valve Train No. 03 assembly located at North Service Center (NSC). This leak was temporarily repaired to avoid a prolonged shutdown of the 96-inch WTM at NSC. The opportune timeframe for replacement of the valves and piping for I-Valve Train No. 03 is during Phase III when the 96-inch WTM is isolated for connections between NSC and RBPS. The project team included additional scope for removal and replacement of this assembly which will be funded from a new project allowance.

2) Line Stop Cost Estimate
    a. GLWA entered an agreement with RA Consultants (RA) to perform an independent line stop feasibility study on the existing 96-inch PCCP WTM. In the study, RA reviewed two locations and two different configurations involving single or double line stops. A requirement of the feasibility study was to provide cost estimates associated with the different line stop options. The costs

provided in the study were approximately 44% less than the received line stop costs within the bid. Refer to Table No. 01

CIP 122004 – Phase 1-3 Project Costs

In addition to the Phase 3 price analysis, the project team has been tracking the overall costs compared to the original 90% OPCC provided by GLWA's consultant in 2022. As of March 11, 2025, the project is forecasted to be below the anticipated costs outlined in the original 90% OPCC. This primarily is a result of the project team's willingness to makes changes and deliver the project within phases utilizing a contract delivery method that best suites the scope of work. The project phases resulted in the below delivery methods:

1) Phase 1 – Construction Manager at Risk (CMAR)
    a. This delivery method was selected due to the high risk involved with the overall project and final connections of the new WTM.
    b. The project later evolved into phase 1 & 2 under the CMAR contract due to the SRF funding constraints
    c. The CMAR contract delivery method was deemed unnecessary when the GLWA project team decided to further divide the project into Phase 2 & 3 due to SRF funding and the finalization of the implementation plan. Additionally, GLWA was unable to agree on a reasonable cost for Phase 2 with the CMAR contractor and decided to terminate the contract. This resulted in approximately $70M in savings in Phase 2.

2) Phase 2 - Traditional Design/Bid/Build
    a. GLWA and its consultant developed final bid package for Phase 2 that comprised of additional 8,000LF of pipe to complete work within Oakland County Road Commissions' ROW. Phase 2 was low risk since the scope involved additional pipe installation with no connections to the existing system.
    b. Phase 2 scope and limits were also a factor in the SRF funding schedule. There wasn't sufficient time to finalize an entire scope involving connections, isolation valves, backup water service plans, and temporary backup facilities. If SRF funding approval did not occur during FY 2023, there was a potential for Phase 3 to not qualify for funding in future fiscal years.

3) Phase 3 – Design-Build Contract
    a. The project team decided on a Design-Build contract delivery method for Phase 3 based on the below reasons:
        i. Risks involved with implementation for final connections involving the lines top and backup services
        ii. Qualification based selection to ensure the right team was involved, specifically the line stop specialty contractor
        iii. Contractor constructability input during the final design process involving the line stops, backup plans, and final connections.

Although, Phase 3 costs are higher than anticipated, the overall project has benefited from the above strategy to minimize overall costs throughout the 7 year long duration of this critical CIP project. Table No. 02 shows the comparison of the original CMAR delivery method, mixed delivery method strategy, the original 90% OPCC and the revised 90% OPCC. The project team has continued to evaluate costs and scope to ensure GLWA is achieving the objective of the project while staying within the original estimates for the entire project (Phases 1-3).

Table No. 01

RFP 2401015 - Cost Table	Estimate	Bid Price	Negotiated Costs	Comments
Task 1 - Project Management	*Included throughout below facilities*	$ 23,087,000.00	$ 19,059,409.27	Estimated GC's, OH&P, Escalation, Bonds & Insurance costs were divided among the the estimated individual Facilties 1-6
Task 2 - Risk Management	$ 5,500,000.00	$ 142,000.00	$ 142,000.00	
Task 3 - Basis of Design		$ 2,607,000.00	$ 2,385,277.00	
Task 4 - 95% Design		$ 1,369,000.00	$ 1,312,976.00	
Task 5 - 100% Design		$ 210,000.00	$ 200,300.00	
Chesterfield Loop Temporary Booster Pump Station (CLTBPS)	$ 15,000,000.00	$ 11,315,014.00	$ 7,574,198.17	This scope change encompasses the elimination of the prefabricated pump station at Snover Road and replacement with a temporary stand alone pumping system and header. The savings amount is based on the use of diesel operated pumps with backup generator power and includes all of the necessary telemetry and electrical for remote operation.
Linestop Construction	$ 7,000,000.00	$ 12,481,942.00	$ 12,481,942.00	
Facilities 1,2,3,5,6	$ 68,000,000.00	$ 95,554,330.00	$ 82,755,778.73	Large cost difference on Facility 2 - Pipe Installation and Final Connections. Cost per LF is close to average costs experienced on past projects. The higher costs are asscoiated with connection points, 24-7 labor, cautious pipe removal, and preperation of existing pipe for final connections in three locations
Subtotal	**$ 95,500,000.00**	**$ 146,766,286.00**	**$ 125,911,881.17**	
Allowances				
Provisional Allowance	$ 6,000,000.00	$ 10,000,000.00	$ 2,500,000.00	Modified RFP documents increased provisional allowance after FAR approval
Permit Allowance	$ 250,000.00	$ 250,000.00	$ 250,000.00	
Temp Station Utility Allowance	$ 150,000.00	$ 150,000.00	$ 150,000.00	
Scada Allowance	$ 200,000.00	$ 200,000.00	$ -	Removed in negotiation due to VE items and scope changes
DDV Allowance	$ -	$ 5,000,000.00	$ 5,000,000.00	DDV allowance and scope change after the FAR approval
LSIP Allowance	$ 1,000,000.00	$ 1,000,000.00	$ -	
Owner Furnished Material Use Tax	$ 200,000.00	$ 200,000.00	$ 200,000.00	
I-Valve Allowance	$ -	$ 4,500,000.00	$ 4,500,000.00	DDV allowance and scope changed after the FAR approval
Hydraulic Modeling Allowance	$ -	$ -	$ 100,000.00	Moved modeling efforts from Task 3 into an allowance. Level of effort should be minimal based on the existing model to be shared with the DB team once project is awarded.
Total	**$ 103,300,000.00**	**$ 168,066,286.00**	**$ 138,611,881.17**	

Table No. 02

Project Scope	Scenario No 01- CMAR Contract - Kiewit	Scenario No 02 - Mixed Contract Delivery Method	Jacobs 90% OPCC (Including Allowances and Revised Phase 3 Scope)	Jacobs 90% OPCC (Before Phase 3 Final Scope)
Phase 1	$ 38,699,440.00	$ 38,699,440.00	$ 35,342,098.50	$ 35,342,098.50
Phase 2	$ 128,886,242.00	$ 52,350,500.00	$ 207,666,667.00	$ 232,000,000.00
Phase 3 (including Linestop)	$ 179,000,000.00	$ 138,611,881.17		
Jacobs Engineering Contract (Phase 1-3)	$ 31,510,086.00	$ 31,510,086.00	$ 31,510,086.00	$ 31,510,086.00
Phase 1 & 2 Pipe Purchase (GLWA Pre-purchase)	$ 9,237,583.00	$ 9,237,583.00	Included in Phase 2 & 3 above	Included in Phase 2 & 3 above
84-inch Valve Purchase (GLWA Pre-purchase)	$ 3,240,588.46	$ 3,240,588.46	Included in Phase 2 & 3 above	Included in Phase 2 & 3 above
Other Costs	$ -	$ -	$ -	$ 1,000,000.00
Future Abandonment Phase	Included in Phase 2 & 3 above	$ 8,500,000.00	Included in Phase 2 & 3 above	Included in Phase 2 & 3 above
Subtotal	**$ 390,573,939.46**	**$ 282,150,078.63**	**$ 274,518,851.50**	**$ 299,852,184.50**
RCOC Cost Share Agreement Phase 1	$ (1,633,328.41)	$ (1,633,328.41)	$ -	$ -
RCOC Cost Share Agreement Phase 2	$ (2,194,534.71)	$ (2,194,534.71)	$ -	$ -
Total Project Costs	**$ 386,746,076.34**	**$ 278,322,215.51**	**$ 274,518,851.50**	**$ 299,852,184.50**

	Removed (2) discharge facilities, (2) 84" Valves, and added linestop estimate of $7M based on revised Phase 3 scope
	Forcasted cost at completion
	Engineer's OPCC did not include cost share agreements