



March 5, 2025

City of Rochester Hills
511 E. Auburn Road
Rochester Hills, Michigan 48307

Attn: Tracey Balint, P.E., City Engineer

Re: RC-01 Meter Vault, Valve & Piping Improvements
Proposal for Professional Engineering Services

HRC Job No. 20240984

Dear Ms. Balint:

In accordance with your request, we are pleased to present you with a proposal and estimated budget to provide preliminary engineering and design development services for the above referenced project. We have developed a comprehensive understanding and gained valuable insights on the scope of work through prior discussions with your Department of Public Services (DPS) staff, completion of the 2019 Water System Reliability Study, previous coordination with GLWA construction projects and from previous water system improvement projects with the City.

BACKGROUND

The City of Rochester Hills would like to replace existing valves and piping in the shared underground valve vault at RC-01 and right-size the pressure reducing valves (PRVs) within the structure. RC-01 is the main feed to Pressure District #2 and Pressure District #1 (through internal PRVs). RC-01 supplies the south central and southeast portions of the City.

RC-01 is located on the northwest corner of Livernois Ave. and South Blvd. and was constructed in the early 1970's. The existing underground concrete vault at RC-01 contains City of Rochester Hills water system valves, piping and PRVs but also GLWA valves, piping and meter. The existing 16" and 24" Ross PRVs are nearing the end of their useful life and are recommended for replacement. The City does not use PRVs manufactured by Ross any longer so a different type of valve may need to be specified. In addition, the existing size of the two PRVs should be evaluated based on needed capacity and existing performance. The existing underground vault does not have adequate access to remove large valves and equipment so a utility chase would need to be designed to provide room for the removal and replacement of the large PRVs, valves and associated piping associated.

We understand GLWA is undergoing a meter replacement program, and that RC-01 is planned for a replacement meter in the next phase of the project. As a result, the coordination of the City's RC-01 improvements with the GLWA work would be beneficial to the overall project success as system shutdown could be coordinated and some project costs may be able to be shared.

PRELIMINARY ENGINEERING (STUDY PHASE)

HRC will review existing and proposed flow and projected distribution from RC-01, pressure differential through RC-01 and evaluate operational characteristics of the PRVs to confirm proposed PRV sizing. HRC will confirm recommended PRV sizing through hydraulic model analyses of current and future water system operations (specifically any changes to PRV 20 that may modify flow distribution). HRC will review operational and maintenance features of different PRVs to confirm the valve that best suits the City's needs and solicit vendor assistance with other accessory features that City operations staff may want to include with the valve. HRC will summarize all the information collected into a final deliverable Basis of Design report to document the decisions made during the Study Phase.

HRC proposes two (2) meetings during the Study Phase; 1) a kickoff meeting to revisit historical system operations for Pressure Districts #1 & #2, review flow distributions through RC-01 and discuss operation and maintenance issues with current PRVs within the system and 2) a review meeting of the Basis of Design report, to provide direction on PRV sizing and features, prior to beginning design development. HRC would also propose discretionary meetings with PRV vendors should the City desire to hear from vendors outside the standard models the City currently specifies.

DESIGN DEVELOPMENT SERVICES

HRC will need to obtain a topographic survey to determine property lines, right-of-way constraints, and construction disturbance limits for the meter vault improvements and how this disruption would fit within the existing features of the area. Additionally, supplementary property and boundary research will need to be done to define the limits of the right-of-way in the area and determine if any property or easement acquisition is necessary as part of the project. HRC will also need to review both Rochester Hills and GLWA water system valve configurations to determine the impact of system shutdown in order to perform the proposed work within the meter vault and communicate and coordinate that with the stakeholders of each organization.

HRC proposes two (2) meetings as the design progresses. A kickoff meeting to discuss project goals and delivery timelines is necessary to program the design process. This kickoff meeting can coincide with the kickoff meeting for the Study Phase if the City desires to expedite the design process. However, HRC will require a structure dive as part of the design kickoff meeting to review the condition of the underground structure and collect measurements of flange spacing (HRC will provide our own confined space entry team and equipment for this structure dive).

An Owner review meeting will be facilitated at the 75% design stage to allow opportunity for City staff input into design details such as facility access configuration, hatch selection, equipment/piping configuration, performance specifications, and sequence of construction. Meeting agendas, notes, attendance sheets, and other project communications would be provided by HRC. HRC will provide all services required to deliver a complete biddable set of construction contract documents for the vault improvements based on our understanding of the project and the scope of work developed in the Study Phase and discussed during the project kickoff meeting and subsequent review meetings. This effort will include any necessary field work, equipment review, preparation of permit applications, and identified draft submittals.

It is unknown at this time, the extent of permitting that will be required. Since water main and control valves are being replaced, it is likely that EGLE Part 399 permitting will be required. In addition, if not already separate, GLWA may require that the City separate the electrical service to this site (it is not clear whether both GLWA and City electrical services are provided by a single service drop) to operate their SCADA system and any monitoring points, so a City Electrical Dept. permit may be necessary. It is assumed that the City will handle any necessary mechanical, electrical, and/or plumbing permits internally; however, it will be noted in the Contract Documents that the Contractor will need to pull any that are necessary. HRC has assumed that there are no municipal facilities that will require relocation and has not included design and permitting of these facilities in this scope of work.

HRC will provide assistance during the bidding process including but not limited to; developing addendum materials for City Procurement Dept. distribution, answering vendor questions and assisting the City with a pre-bid meeting if it is required.

It is recommended that any long lead time items, such as PRVs, large diameter pipe and fittings and large valves, be pre-purchased ahead of bidding if a desired schedule is to be met. It is assumed that any pre-purchasing of materials or equipment from a local vendor will be coordinated through the City. However, HRC will work with the City to confirm the appropriate materials and sizes of equipment and fittings, new PRVs, and associated work and review all shop drawings and purchase orders to confirm compliance with the City specifications.

ADDITIONAL SERVICES

HRC has excluded easements and/or right-of-way acquisition services from our proposal. At this time, it is unknown if additional easements or right-of-way will be required to construct these meter vault improvements. Should additional property or temporary easements be required, HRC can provide a separate proposal for services upon request.

This proposed fee does not include construction engineering services. HRC would welcome the opportunity to provide these services which we feel are vital to the successful construction of the proposed project. We would appreciate the opportunity to discuss these services as the project gets closer to the letting date and can issue a subsequent proposal for these services under separate cover.

ANTICIPATED PROJECT SCHEDULE

Due to the planned improvements to RC-01 by GLWA the intended goal of this project is to complete the Design Documents to "shovel ready" that can be shelved and readily available to coordinate the project with GLWA. As such, the Contract Documents will be developed and permits obtained, but a schedule for construction procurement has not been identified. HRC estimates that it would take 4 to 6 weeks to complete the preliminary engineering work. Design of this project can be completed within 2 to 3 months following the completion of the preliminary engineering work, however, EGLE permitting delays will be the main driver of when this project can be constructed. Due to the importance of this connection to the supply to Pressure District #1, it is recommended that construction during low demand periods would be most appropriate and this project should be coordinated with any work at PRV 20 so that both projects are not under construction at the same time. Considering everything above, the following schedule is proposed;

Study Phase Kickoff Meeting	January 13, 2026
Topographic Survey	January 19, 2026 – January 23, 2026
Begin Design Development	February 3, 2026
Draft Basis of Design to City	February 12, 2026
Basis of Design Meeting	February 19, 2026
PRV Vendor Meetings	March 2, 2026 – March 13, 2026
Finalize BOD	March 19, 2026
75% Plans to City	April 16 2026
75% Owners Review Meeting	April 23 2026
Submit for Permits (Part 399, Electrical, etc.)	June 2, 2026
Final Contract Documents (minus EGLE Revisions)	June 26, 2026
Anticipated Part 399 Permit Approval	October 2, 2026
Project Procurement	TBD
Project Award	TBD
Project Construction	TBD

OPINION OF PROBABLE CONSTRUCTION COSTS

A budgetary construction cost estimate for the project including new access utility chase, PRVs, isolation valves and piping, and a new electrical service and rack is approximately \$360,000 to \$460,000.

FEE SUMMARY

Our proposed Tasks and the estimated hours and fees to complete the work have been identified in Table 1 (attached). As shown, we have budgeted 386 hours for a proposed not-to-exceed fee of \$54,100 (11.7%-15.0%)-for our Professional Engineering Services for this project (\$14,100 Study Phase, \$40,000 Design Development Phase). As noted previously, all work would be completed under the terms and conditions of our Agreement for Professional Engineering Services.

Daniel Mitchell, P.E., President will be the Principal In-Charge. We are proposing to utilize Bradley Shepler, P.E., as the Managing Engineer. Other key team members include Beth Clarke, PE, Senior Project Engineer, Michael Roskelley, P.E. Electrical Dept. Manager, Krista Schoonveld, Structural Engineer and Ray Chartouni, Staff Engineer as specialists in water distribution system hydraulic modeling and metering facility design and construction. All HRC staff members listed in this Proposal are familiar with this project and have extensive experience with the municipal water systems in the area. We believe you are familiar with all of these individuals but can provide detailed resumes upon request.

Once the City deems this proposal acceptable, we kindly request your signature on one copy to be promptly returned to our office, while retaining one copy for your records. We sincerely appreciate the opportunity to contribute our expertise to this vital water project and serve the City with utmost dedication.

If you have any questions or require any additional information, please contact the undersigned.

Very truly yours,

HUBBELL, ROTH & CLARK, INC.



Bradley W. Shepler, P.E., CCCA, LEED AP
Senior Associate

Attachment

pc: City of Rochester Hills; A. Hysinger, L. Luedeman, W. Rybak
HRC; D. Mitchell, B. Clarke, C. Crist, File

Accepted By:

Signature: _____

Written Name: _____

Title: _____

Dated: _____

**CITY OF ROCHESTER HILLS
RC-01 METER VAULT, VALVE & PIPING IMPROVEMENTS**

**TABLE 1
ESTIMATED HOURS AND FEES**

March 5, 2025

HRC Job No. 20240984

Task Description	Rate Classification & Estimated Hours								Total Hours
	Managing Engineer	Sr. Project Engineer	Structural Engineer	Electrical Engineer	Staff Engineer	Cadd Technician	Survey Office Supervisor	Survey Crew/ CSE	
Preliminary Engineering									
1 Review of Background Information/Scoping Confirmation	2	4	-	-	-	-	-	-	6
2 Kickoff Meeting	2	4	-	-	-	-	-	-	6
3 Hydraulic Modeling	2	16	-	-	8	-	-	-	26
4 PRV Vendor Selection Evaluation/Meetings	8	-	-	-	-	-	-	-	8
5 Basis of Design Memorandum	2	16	-	-	6	-	-	-	24
6 Basis of Design Review Meeting	2	6	-	-	-	-	-	-	8
7 Final Study Phase Deliverables	4	8	-	-	-	-	-	-	12
Sub Total	22	54	0	0	14	0	0	0	90
Design Development									
1 Design Kickoff Meeting	4	-	-	-	4	-	-	-	8
2 Topographical Survey & Processing	-	-	-	-	-	4	4	8	16
3 Structure Dive	4	-	8	-	4	-	2	6	24
4 Schematic Design (75%)	12	4	12	8	16	24	-	-	76
5 75% Design Progress Meeting	4	-	2	2	6	-	-	-	14
6 Design Development & Technical Specifications	8	2	12	8	24	24	-	-	78
6 GLWA Coordination	8	-	-	-	-	-	-	-	8
7 Permitting	2	2	-	2	6	2	-	-	14
8 Final Design Phase Deliverables	4	-	6	4	16	18	-	-	48
9 Bidding & Procurement Assistance	2	-	-	-	4	4	-	-	10
Sub Total	48	8	40	24	80	76	6	14	296
PROJECT TOTALS	70	62	40	24	94	76	6	14	386

Notes:

1) Rates were developed projecting 2026 Calendar Year work.

ESTIMATED FEE SUMMARY

PERSONNEL	HOURS	RATE		TOTAL
Managing Engineer	70	\$	193.00	\$ 13,510.00
Sr. Project Engineer	62	\$	148.00	\$ 9,180.00
Structural Engineer	40	\$	132.00	\$ 5,280.00
Electrical Engineer	24	\$	139.50	\$ 3,350.00
Staff Engineer	94	\$	129.00	\$ 12,130.00
Cadd Technician	76	\$	85.00	\$ 6,460.00
Survey Office Supervisor	6	\$	165.00	\$ 990.00
Survey Crew/ CSE	14	\$	225.00	\$ 3,150.00

TOTAL LUMP SUM NOT-TO-EXCEED \$ 54,100.00