CITY OF NOVI CITY COUNCIL
OCTOBER 25, 2021

SUBJECT: Consideration of approval to award a service contract to Ferguson Waterworks, through the Oakland County Cooperative Purchasing Contract, for the replacement of residential water meters (Phase 3 and 4) as part of the City's initiative to implement an Advanced Metering Infrastructure network, in the amount of $1,891,380.67.

SUBMITTING DEPARTMENT: Department of Public Works, Water & Sewer Division

EXPENDITURE REQUIRED	**$ 1,891,380.67**
AMOUNT BUDGETED	**$ 2,040,523**
APPROPRIATION REQUIRED	**$ 0**
LINE ITEM NUMBER	**592-592.00-982.027**

BACKGROUND INFORMATION:

The Department of Public Works' Water and Sewer Division has installed the majority of the Advanced Metering Infrastructure (AMI), which is a fixed network system using technology that will allow City staff to remotely obtain meter reading data and other information, such as consumption, potential leakage, meter tampering, and backflow events for each user in the City's water distribution system. This will eventually replace the City's current Automated Meter Reading system, which involves staff driving by each meter in close enough proximity to allow a collector to receive transmitted data. The AMI system will eliminate the need to drive the entire city to collect meter data, which is typically a four to six day process.

The next step for implementing the AMI system involves the replacement of the non-compatible meters and older meters assumed to be under-registering water usage. The meter replacements were started in 2019, replacing aging commercial meters that were large water users, and therefore, considered to be significant contributors to the City's apparent water loss (i.e. unbilled water usage).

In 2020, the City focused on residential meters that have exceeded their expected usage threshold, or have meter components that need to be upgraded. Approximately 4,900

meters or meter components were be replaced last year (Phase 1 and 2), with an additional 6,900 proposed for replacement this year (Phase 3 and 4).

All residents included in the program will receive an initial notice to introduce the program including instructions about scheduling their appointment. The scheduling of the meter replacements will be managed by Ferguson Waterworks and their contractor, Utility Metering Solutions, with whom they have worked with successfully on similar completed projects, and successfully completed Novi's program last year. City staff will exercise oversight throughout the entire replacement program.

Ferguson Waterworks was asked for a proposal to complete the implementation of this meter replacement program. Ferguson Waterworks is the sole distributor of Neptune water meters in the state of Michigan, and supplies all the water meters purchased by the City. The attached proposal was provided for the both Phases 3 and 4 for reference. The pricing for the equipment included is based on the Oakland County Cooperative Purchasing Contract.

RECOMMENDED ACTION: Approval to award a service contract to Ferguson Waterworks, through the Oakland County Cooperative Purchasing Contract, for the replacement of residential water meters (Phase 3 and 4) as part of the City's initiative to implement an Advanced Metering Infrastructure network, in the amount of $1,891,380.67.

FERGUSON Waterworks
Meter & Automation Group

October 15, 2021

Mr. Ben Croy
City of Novi
26300 Lee BeGole Dr.
Novi, MI 48375

Subject: Residential Water Meter Replacement, Phases 3 and 4

Dear Mr. Croy:

Ferguson Waterworks is pleased to provide the City of Novi with the following proposal for phase three and four of the City's residential water meter replacement program. The City of Novi, Ferguson Waterworks), and Neptune Technology Group have a long standing and valued partnership and we sincerely appreciate this opportunity. The pricing within the following proposal is taken directly from the Oakland County Cooperative Purchasing Contract #005894 with Ferguson Waterworks, where applicable.

Ferguson Waterworks is the sole distributor of Neptune Water Meters in the state of Michigan, as well as in 10 other states across the country. As such, we have experience managing residential and commercial meter replacement projects across the Country. Ferguson Waterworks' Meter and Automation's Michigan headquarters is located in Warren, where we maintain a very large inventory of Neptune products.

To implement this project, Ferguson Waterworks will be partnering with Utility Metering Solutions (UMS) to provide meter and R900 installation. We have worked with UMS on several successfully completed projects, and they are industry leaders in the installation field. UMS' work order management system is second to none and makes the installation and transfer of data to the City's billing software accurate and seamless. Collectively, our goal is to make this project as easy as possible for the City's employees and to ensure that the process is accurate and efficient.

Again, thank you for the opportunity to work with the City of Novi on this project. Should you have any questions regarding this proposal, please do not hesitate to contact us.

Sincerely,

Matthew Rizzo
Business Development Manager
Ferguson Waterworks

FERGUSON Waterworks
Meter & Automation Group

Section One | Process

Background

Ferguson Waterworks has worked closely with the City of Novi to determine the most sensible area to begin residential meter replacement for the next phases of this project by considering the following factors: Budgeted resources, usage of meters and register, and register and radio type. Based on these factors we have recommended a plan of action that ensures we are best leveraging the City's continued investment into their metering system. The proposal below will provide a cost estimate for Billing Cycle 1 and Billing Cycle 3 based on the following criteria:

Phase 3 Installation (Cycle 1) –

We propose to begin installation for phase 3 in routes 1 through 6, which will take an estimated 4-6 months to complete. This is a total of 3,410 meters. Based on the plan of action developed, the following is a breakdown of the work needing to be completed:

- 2,757 meters exceed the AWWA specified usage threshold and we are recommending them to be replaced, and a new R900 MIU will be installed.
- 317 meters were within the AWWA specified usage threshold and have the latest version of R900 MIU. Nothing needs to be done to these meters.
- 175 meters were within the AWWA specified usage threshold; however, these accounts have internal MIU's affecting system performance. We are proposing a register and R900 MIU replacement for these accounts.
- 72 Accounts* were within the AWWA specified usage threshold; However, these accounts had old versions of the R900 MIU. We are proposing only a new MIU on these accounts.
- 89 accounts had the newest version of MIU but the meter exceeded AWWA recommended the AWWA Usage Threshold. For these accounts, we are proposing only a new meter to be installed.

Phase 4 (Cycle 3) Installation –

We propose to continue installation in routes 13 through 17 Which will take an estimated 5-8 months to complete. This is a total of 4,461 meters. Based on the plan of action developed, the following is a breakdown of the work needing to be completed:

- 2,892 meters exceed the AWWA specified usage threshold and we are recommending them to be replaced, and a new R900 MIU will be installed.
- 287 meters were within the AWWA specified usage threshold and have the latest version of R900 MIU. Nothing needs to be done to these meters.
- 257 meters were within the AWWA specified usage threshold; however, these accounts have internal MIU's affecting system performance. We are proposing a register and R900 MIU replacement for these accounts.
- 494 Accounts* were within the AWWA specified usage threshold; However, these accounts had old versions of the R900 MIU. We are proposing only a new MIU on these accounts.
- 140 accounts had the newest version of MIU but the meter exceeded AWWA recommended the AWWA Usage Threshold. For these accounts, we are proposing only a new meter to be installed.

* Assumes all R900 MIU's are on the outside of home

FERGUSON Waterworks
Meter & Automation Group

Section Two | Proposal

Phase Three – Based on the plan of action described above

Description	Unit cost	Quantity	Total Cost
5/8" Neptune T-10 Procoder Water Meter	$99.00	2,122	$210,078.00
1" Neptune Water Meter	$185.00	724	$133,940.00
5/8" T-10 Procoder Register Only	$83.56	104	$8,690.24
1" T-10 Procoder Register Only	$83.56	71	$5,932.76
R900W MIU	$83.25	3,004	$250,083.00
Meter, R900 Installation Complete	$101.00	2,757	$278,457.00
Register and R900W Installation	$95.00	264	$25,080.00
R900W Only Installation*	$50.00	72	$3,600.00
Phase Three Total:			**$915,861.00**

Phase Four – Based on the plan of action described above

Description	Unit cost	Quantity	Total Cost
5/8" Neptune T-10 Procoder Water Meter	$99.00	2,572	$254,628.00
1" Neptune Water Meter	$185.00	461	$85,285.00
5/8" T-10 Procoder Register Only	$83.56	224	$18,717.44
1" T-10 Procoder Register Only	$83.56	33	$2,757.48
R900W MIU	$83.25	3,315	$275,973.75
Meter, R900 Installation Complete	$101.00	2,893	$292,193.00
Register and R900W Installation	$95.00	397	$37,715.00
R900W Only Installation*	$50.00	165	$8,250.00
Phase Four Total:			**$975,519.67**