



Report to: General Committee

Meeting Date: March 25, 2019

SUBJECT: 042-T-15 Cathodic Protection of Iron Watermains – Contract Extension

PREPARED BY: Prathapan Kumar, Senior Manager, Environmental Services, Ext. 2989
Flora Chan, Senior Buyer, Ext. 3189

RECOMMENDATIONS:

- 1) THAT the report entitled “042-T-15 Cathodic Protection of Iron Watermains – Contract Extension” be received;
- 2) AND THAT contract # 042-T-15 Cathodic Protection of Iron Watermains, awarded to 1460973 Ontario Limited O/A C.P. Systems (C.P. Systems), be extended for three (3) additional years at the same itemized pricing;
- 3) AND THAT the tendering process for the Cathodic Protection of Iron Watermains be waived in accordance with Purchasing By-Law 2017-8, Part II, Section 11.1 (c); which states that “when the extension of an existing Contract would prove more cost-effective or beneficial”;
- 4) AND THAT the annual amount of \$289,283.33, inclusive of HST, be awarded for 2019;
- 5) AND THAT a 8% contingency in the amount of \$23,142.67 be established to cover any additional construction costs and that authorization to approve expenditures of this contingency amount up to the specified limit be in accordance with the Expenditure Control Policy;
- 6) AND THAT the award in the amount of \$312,426.00 be funded from the capital project 053-6150-19241-005 “Cathodic Protection of Iron Watermains”;
- 7) AND THAT the remaining funds of \$65,374.00 in project #19241 “Cathodic Protection of Iron Watermains” be returned to the original funding source;
- 8) AND THAT the contract services award (inclusive of 8% contingency) for:
 - (a) Year 2020 in the amount of \$328,900.12 (\$304,537.15 + \$24,362.97),
 - (b) Year 2021 in the amount of \$443,098.05 (\$410,275.97 + \$32,822.08),be requested as part of the 2020 and 2021 capital budget process, subject to Council approval;
- 9) AND THAT Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to seek Council’s authorization to extend the contract for cathodic protection of iron watermains (042-T-15) with the current contractor, C.P. Systems, for an additional three (3) years from 2019 to 2021, at the same itemized pricing.

BACKGROUND:

External corrosion of iron watermain is the leading cause of municipal watermain breaks. Cathodic protection of iron watermain program is an annual preventative maintenance program for controlling the corrosion rate in cast iron and ductile iron watermain, which reduces costly watermain breaks and extends pipe service life. As part of the program, magnesium anodes are installed using an auger drilling device or a vacuum excavation machine, and are wired to the iron pipe to inhibit the electrochemical corrosion process in the pipe. This protects the pipe itself from corrosion. Anodes are estimated to last for 18 - 20 years, depending on surrounding soil conditions.

Since 1992, Markham has been implementing the cathodic protection preventive maintenance program. The watermain breaks has been significantly reduced from 153 in 1991 to an average of 31 in the last 5 years.

Proposed Program (refer to Attachment A):

2019 – 10.4 km

2020 – 11.0 km

2021 – 15.0 km

Cast iron and ductile iron watermain at the end of their lifecycle are further assessed, planned and replaced as required.

OPTIONS/ DISCUSSION:

Staff considered re-tendering the project but do not recommend due to the following rationale:

Niche Market

As reflected in City's previous tender results in 2009, 2014 and 2015 as well as recent market tender result, there are only a small number of companies who perform this type of work.

Efficiency, Cost and Time Savings

In 2015, the awarded supplier and the recommended supplier under this report was 47% lower in price than the 2nd bidder.

Price competitiveness is further confirmed upon detailed price comparison with current market rates from other municipalities. The City's rate is significantly lower than three local municipalities who tendered this work in 2018. Therefore, for economic reasons, and to mitigate the potential risk of doubling the cost to the City by issuing a new tender, Staff recommend extending the existing contract as per the City's Purchasing By-Law 2017-8, Part II, Section 11.1 (c); which states that "when the extension of an existing Contract would prove more cost-effective or beneficial"

Proven Track Record

C.P. Systems have been working with the City on the cathodic protection program since 2002 and staff are satisfied with their performance.

FINANCIAL CONSIDERATIONS AND TEMPLATE:**Contract Services for 2019:**

The following table summarizes the financial considerations for 2019 - 2021:

Budget Allocation (A)	\$377,800.00	053-6150-19241-005 "Cathodic Protection of Iron Watermains"
Less: Construction Cost (B)	\$289,283.33	} Awarded to 1460973 Ontario Limited O/A C.P. Systems (042-T-15)
Less: Construction Contingency (8%) (C)	\$ 23,142.67	
Total Cost (D) = (B) + (C)	\$312,426.00	
Budget Remaining (E) = (A) – (D)	\$ 65,374.00	*

*The remaining funds in project #19241 "Cathodic Protection of Iron Watermains" in the amount of \$65,374 will be returned to the original funding source.

Future Contract Services for 2020 and 2021:

The Purchase Order will not be issued until 2020 and 2021, subject to Council approval of the respective year's Capital Budgets. Under this award, Staff are able to lock in pricing for these years.

2020 Budget		Subject to Council approval of the 2020 Capital budget
Contract Award (F)	\$304,537.15	
Contingency (8%) (G)	\$ 24,362.97	
Total Cost for 2020 (H) = (F) + (G)	\$328,900.12	
2021 Budget		Subject to Council approval of the 2021 Capital budget
Contract Award (I)	\$410,275.97	
Contingency (8%) (J)	\$ 32,822.08	
Total Cost for 2021 (K) = (I) + (J)	\$443,098.05	
Total Cost for 2020 & 2021 (Q) = (O) + (P)	\$771,998.17	

OPERATING BUDGET AND LIFE CYCLE RESERVE IMPACT

The Waterworks life cycle reserve study will be updated based on this award. There is no incremental operating budget impact.

ALIGNMENT WITH STRATEGIC PRIORITIES:

The proposed cathodic protection program is aligned with City's goal to provide better quality services to the public and is consistent with the Building Markham's Future Together strategic priority on the "Growth Management" and "Environment" as it considers sustainability on the built environment.

BUSINESS UNITS CONSULTED AND AFFECTED:

Finance department has been consulted and their comments have been incorporated.

RECOMMENDED BY:

2019-02-11

X 

Phoebe Fu
Director, Environmental Services
Signed by: cxa

2019-02-11

X 

Brenda Librecz
Commissioner, Fire a& Community Services
Signed by: cxa

ATTACHMENTS:

Attachment "A" - 2019/ 2020/ 2021 Cathodic Protection Areas



Attachment "A" : Location Map - 2019/2020/2021 Cathodic Protection Areas

