

# City of Mississauga

# Corporate Report



Date: May 27, 2020

To: Mayor and Members of Council

From: Gary Kent, CPA, CGA, ICD.D, Commissioner of  
Corporate Services and Chief Financial Officer

Originator's files:

Meeting date:  
July 8, 2020

## Subject

**Single Source Contract Authorization for Siemens Canada Limited for the Building Automation System (BAS) Renewals and Expansion at Edward J Dowling Transit Campus**

## Recommendation

1. That the Corporate Report entitled, "Single Source Contract Authorization for Siemens Canada Limited for the Building Automation System (BAS) Renewals and Expansion at Edward J Dowling Transit Campus" dated May 27, 2020 from the Commissioner of Corporate Services and Chief Financial Officer be received.
2. That the Purchasing Agent be authorized to award and execute a contract in the estimated amount of \$449,985 (pre-tax), including contingency of \$50,000, under PN 19780, with Siemens Canada Limited on a single-source basis for the Building Automation System (BAS) renewals and expansion at Edward J Dowling Transit Campus.

## Report Highlights

- Building Automation System is a technology solution that controls mechanical (HVAC) and lighting equipment in a building, and similar to any technology or electronic equipment, requires renewal due to the short life of electronic chips and advancing technology.
- City of Mississauga pre-qualified three (3) BAS vendors in order to better manage the maintenance and operation of the systems. Since then only these three vendor-specific systems have been installed in City's buildings through a competitive procurement process. In 2010 a Building Automation System provided by Siemens Canada Limited was installed at Edward J Dowling Transit Campus.
- Currently approximately 60% of the existing BAS (proprietary to Siemens Canada

Limited) hardware at Edward J Dowling Transit Campus is at the end of its life and it is also discontinued and no longer supported by Siemens. In addition there is a need to upgrade the limited software for the graphical user interface and to expand the BAS to the new mechanical equipment which will be installed as part of the life cycle replacement cycle.

- Originally the building automation system renewals and expansion was combined with various mechanical renewals at the campus for maximizing construction efficiencies and minimizing site disruptions, which included a single source retention of Siemens Canada Limited by a mechanical contractor through a competitive contract with the City.
- However labour, material, and construction schedule uncertainties around COVID-19 coronavirus disease resulted in low participation, high/uncompetitive bids, procurement cancellation due to bids being above budget, and construction deferral to 2021.
- Upon discussions with Siemens Canada Limited, the building automation system renewals and expansion scope can be separately executed this year through a single-source contract with a net savings of \$36,000 (pre-tax), which represents an approximately 8% saving on the original quoted value.
- It is recommended that the Purchasing Agent be authorized to award and execute a contract in the estimated amount of \$449,985 (pre-tax), including contingency of \$50,000, under PN 19780, with Siemens Canada Limited on a single-source basis for the BAS renewals and expansion at Edward J Dowling Transit Campus.

## Background

Building Automation System (BAS) is installed at City facilities as a technology solution to control mechanical (HVAC) and lighting equipment for energy efficiency and comfort. A competitive procurement process was conducted in 2005 to establish City Standard BAS selected vendors. Three (3) vendors were selected and approved by Council as City Standards, reference GC-0578-2005, including Siemens Building Technologies (now Siemens Canada Limited), Direct Energy Business Services (now Ainsworth Inc.) and Thermo Automation Canada (now Convergent Technologies). Since 2005, vendor-specific BAS have been installed in City buildings through a competitive procurement process between the three (3) vendors, including a Siemens Canada Limited BAS at Edward J Dowling Transit Campus installed in 2010.

Similar to electronic and IT equipment like computers, laptops, and cell phones, BAS have a fixed lifecycle of 10 years due to the short life of electronic chips and advancing technology. While an ongoing maintenance program on these systems often increases their lifecycle further, hardware, communication network, and software renewals become a necessity as a result of discontinued servicing on older products from the vendor. Lack of vendor servicing on the older products put the controlled systems at risk of failure.

## Present Status

The existing BAS at Edward J Dowling Transit Campus is a proprietary system that can only be serviced and renewed by Siemens Canada Limited. Approximately 60% of the hardware controllers across the campus have been discontinued and are no longer supported by the vendor. In order to ensure that the vendor can continue to support the BAS and that there is no risk of potential failure to the mechanical (HVAC) and lighting systems at the campus, renewal of approximately 60% of the existing system is required.

In addition, the existing software (graphical user interface) is old and contains several limitations, including the inability to set equipment schedules, data trending, and overrides over a web interface, and instead requires access to a single user licensed back-end software. Further, there is a need to drive energy efficiencies at the site by expanding the BAS to additional equipment.

## Comments

The BAS renewals and expansion scope for Edward J Dowling Transit Campus was originally planned to be executed alongside various mechanical renewals in order to maximize construction efficiencies and minimize site disruptions. For this purpose, a single construction tender package was created for competitive contractor procurement under a CCDC-2 contract. The package included single source retention of Siemens Canada Limited by a mechanical contractor to deliver the BAS renewal and expansion scope under the competitive CCDC-2 contract's cash allowance. Best value price from the vendor was ensured by comparing against the cost estimates developed the Engineer of Record for the project. Additionally, the price was also compared to replacing the entire BAS and competitively procuring a new BAS from all three (3) City Standard BAS vendors. By following the two approaches, staff have ensured that best price was obtained from the vendor. A letter from the Engineer stating the same has been included in Appendix 1.

The single construction tender package was issued on March 3rd, 2020. As a result of the outbreak of COVID-19 coronavirus disease, the Province of Ontario ordered a declaration of emergency on March 17th, 2020 and subsequently, all non-essential construction activity was halted by the Province of Ontario on April 5th, 2020. Bids closing for this contract followed on April 7th, 2020. Unfortunately, two bids higher than the project budget were received resulting in cancellation of the procurement and deferral of the project till 2021. The general labour

(safety protocols), material (currency exchange rate for goods purchased from US), and construction schedule (supply chain & transportation delays) uncertainties around the COVID-19 coronavirus conditions resulted in low participation and high/uncompetitive bids. Following this, staff discussed the option of Siemens Canada Limited acting as the Constructor to execute the BAS renewal and expansion scope only at Edward J Dowling Transit Campus, with a net project cost savings of \$36,000 and a slight revision to the original construction schedule. Due to the net savings available as a result of splitting the package and executing the BAS renewal and expansion scope, staff recommend that the Purchasing Agent be authorized to award and execute a contract with Siemens Canada Limited on a single-source basis for the BAS renewal and expansion scope at Edward J Dowling Transit Campus. The contract will be in the estimated amount of \$449,985 (pre-tax), including contingency of \$50,000.

Siemens Canada Limited is a Council approved vendor for the supply of City Standard BAS. In this case, staff recommend retaining Siemens Canada Limited to supply and undertake BAS renewal and expansion at the site. Siemens will be undertaking the site work on a single source basis as it is cost effective to do so. Council approval is required in accordance with the Purchasing By-Law #374-2006, Schedule A (1) (b) (iv) *The solicitation of competitive bids would not be economical to the City.*

## Financial Impact

As a result of splitting the tender package and executing the BAS renewal and expansion scope this year (while the mechanical renewals scope is deferred to 2021), there is a net savings of \$36,000 to the City (represents 8% of the vendor's original contract value). These savings are a result of labour cost savings of \$45,000 (pre-tax) that have been negotiated with the vendor due to their smaller than desirable work backlog. There will be an additional cost of \$9,000 (pre-tax) from the Engineer of Record in order to split the tender package and scope, and resulting additional construction site reviews. Table 1 shows the original, revised, and savings to the contract value as a result.

**Table 1: BAS Vendor's Original and Revised Contract Values**

Scope	Original	Revised	Savings
BAS Renewals and Expansion	\$444,985	\$399,985	\$45,000
BAS tie-in for Mechanical Renewals (to be deferred)	\$12,874	\$12,874	\$0
Split Tendering Consultant Costs	\$0	\$9,000	-\$9,000
Total Pricing	\$457,859	\$421,859	\$36,000

The budget for this request has previously been approved under the project's PN 19780. Therefore, there is no additional request for funds with this report and the revised contract value will amount to \$449,985 (pre-tax), including contingency of \$50,000.

## Conclusion

There is a need to renew the BAS at Edward J Dowling Transit Campus as a result of discontinued servicing on older hardware and communication network products from the vendor, and to avoid equipment failure causing disruptions to site services. Further, there is a need to renew the existing software (graphical user interface) and expand the BAS to additional equipment to drive further energy efficiencies. While the combined mechanical and controls renewal construction work was deferred to 2021 as a result of the uncertainties around the COVID-19 coronavirus conditions, staff is recommending that the BAS renewals and expansion scope be executed this year in order to obtain net project savings of \$36,000. For this purpose, staff recommend:

- That the Purchasing Agent be authorized to award and execute a contract in the estimated amount of \$449,985 (pre-tax), including contingency of \$50,000, under PN 19780, with Siemens Canada Limited on a single-source basis for the BAS renewal and expansion scope at Edward J Dowling Transit Campus, in accordance with the Purchasing By-Law #374-2006, Schedule A (1) (b) (iv).

## Attachments

Appendix 1 - Project 19780 – Edward J Dowling Transit Facility Mechanical System and Controls Renewal Controls Under Cash Allowance



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Gary Kent, CPA, CGA, ICD.D, Commissioner of Corporate Services and Chief Financial Officer

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