



Hamilton

CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Engineering Services Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	November 13, 2017
SUBJECT/REPORT NO:	Lighting Asset Modernization Project Acceleration (PW17085) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Gord McGuire, O.L.S. (905) 546-2424, Extension 2439 Mike Field, MIES (905) 546-2424, Extension 4576
SUBMITTED BY:	Gary Moore, P.Eng. Director, Engineering Services Public Works
SIGNATURE:	

RECOMMENDATION

- (a) That the acceleration proposal of the Lighting Asset Modernization Project be approved and facilitated through a single source procurement, pursuant to Procurement Policy #11 – Non-competitive Procurements, for the extra costs associated with accelerating to an upset limit of \$185,000;
- (b) That the General Manager of Public Works and Finance & Corporate Services, or his designate, be authorized to enter into and sign on behalf of the City of Hamilton, all negotiated agreements and all necessary associated documents with Fairway Electrical Services Inc., with content acceptable to the General Manager of Public Works, and in a form satisfactory to the City Solicitor.

EXECUTIVE SUMMARY

The 'Lighting Asset Modernization Project' (LAMP) is currently on-going and will eventually replace 27,000 cobra-head style street lights City-wide with LED street lights.

The current completion date for the project is Q3 of 2019. Accelerating the schedule could save approximately \$500,000 in energy but at an additional cost of approximately \$180,000 in contract costs. This would result in a total savings of \$320,000.

Staff proposes that the project be accelerated to be completed Q3 of 2018 (reducing the original schedule by 1-year or 50%) by using the existing Contractor, Fairway Electrical Services Inc.

Alternatives for Consideration – See Page 4

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FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Approval of the recommendations would result in reduced street lighting operating (energy) costs in 2018 and 2019 of an approximate total of \$500,000. Early completion would result in the earlier receipt of the \$1.5M in SaveOnEnergy incentives which are being utilized to off-set the City's capital costs.

Staffing: None

Legal: None

HISTORICAL BACKGROUND

The 'Lighting Asset Modernization Project' (LAMP) is the next phase of LED street lighting upgrades. In 2015, approximately 10,000 street lights were upgraded to LED. The 2015 project has resulted in positive savings which have recouped the capital cost outlay and reduced the 2018 street lighting operating budget by \$750,000 (proposed). LAMP is targeting 27,000 cobra-head style street lights and once completed the majority of the City's 45,000 street lights will be LED leaving only non-cobra head style street lights remaining.

LED street lights installed by the LAMP project will consume approximately 60% less electricity than their HPS counterparts. The LED street lights also have a long in-service life expectancy in excess of 15 years thereby reducing the City's operating costs and further enhancing service levels. Once completed, LAMP will reduce the City's energy usage by approximately 2.1 mega-watts, equal to the amount of electricity consumed by over 1,000 homes.

LAMP breaks the City into four separate geographical phases and scheduled to upgrade street lights phase by phase. Phase 1 & 2 are targeted to be completed in Q2 of 2018, Phase 3 in Q4 of 2018 and Phase 4 in Q3 of 2019. This project has also received pre-approval for multiple SaveOnEnergy incentives totalling approximately \$1.5 million through the IESO, Alectra Utilities and Hydro One Network Inc.

Contract C13-19-17 was issued and awarded to Fairway Electrical Services for the installation of the LAMP LED street lights. Work began on June 26, 2017 and is ongoing. Phase 1, consisting of 7,020 street lights, was completed on schedule at the end of September 2017.

The City is purchasing all LED street lights and photoelectric controllers (photocells) for the project through separate contracts and supplying them to Fairway Electrical Services for installation. The award of the three primary contracts for LAMP (installation, LED luminaires and photocells) resulted in favourable unit costs which were lower than budget estimates.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

Procurement Policy #11 – Non-competitive Procurements would be required to amend Contract C13-19-17.

RELEVANT CONSULTATION

The Procurement Section, Corporate Services was consulted regarding the appropriate procurement authority required to facilitate the LAMP project schedule condensing and this Report's recommendations.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

Based on the LAMP contract award results, the success of the project to date, and continued operating budget pressure (energy costs) Staff investigated the option of accelerating the project to be completed ahead of Q3 2019. A detailed schedule review determined that it would be possible to condense the schedule and shift the completion date from Q3 2019 to Q3 2018 thereby reducing the project timeline by approximately one year.

The primary advantage of condensing the project schedule is accrued energy savings. Staff revised the project energy modelling which demonstrated that reducing the schedule by approximately one year would result in additional energy savings of approximately \$500,000. These savings are an output of installing all project LEDs a year earlier thereby reducing the street lighting system's energy load, particularly prior to the fall/winter/spring of 2018/2019 when nights and street lighting operating times are the longest and the most costly period of the year.

In addition to the energy saving outlined above, condensing the project schedule has additional benefits. The SaveOnEnergy incentives are paid once the project has been complete and therefore would be received at an earlier date. The existing HPS street lights, which the LEDs are replacing, are at or past their end of life and condensing the schedule would remove the HPS street lights faster thereby eliminating the need to conduct costly reactive maintenance to ensure that service levels are maintained. Additionally, maintaining a higher level of service (operation of street lights) ensures that the City benefits from reduced liability exposure by lowering the frequency and quantity of inoperable HPS street lights.

Contract C13-19-17, the installation of the LEDs, was built upon the previously noted project completion schedule and therefore contract costs are based upon this. Condensing the project schedule would require the awarded contractor, Fairway Electrical Services Inc., to apply additional resources (additional field staff and equipment to accommodate higher weekly installation output). In order to facilitate the project compression the contract schedule milestones would need to be formally amended and unit costs revisions/additions would be required to provide compensation to the contractor for additional resources. The additional cost to the Contract is anticipated to be \$180,000. Due to the favourable award of the three primary LAMP contracts (installation, LED street lights and photocells), there is room within the existing project budget to cover the additional anticipated cost associated with condensing the schedule as outlined above.

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OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

Considering that the attributed energy savings (\$500,000) to condensing the schedule out-weigh the anticipated Contract C13-19-17 increase (\$180,000) there is a positive financial advantage of approximately \$320,000 which would be applied to the street lighting operating budget (energy).

ALTERNATIVES FOR CONSIDERATION

Committee could choose not to approve the acceleration of the LAMP project and it would continue on the original project path and completed Q3 of 2019.

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement & Participation

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

Healthy and Safe Communities

Hamilton is a safe and supportive city where people are active, healthy, and have a high quality of life.

Clean and Green

Hamilton is environmentally sustainable with a healthy balance of natural and urban spaces.

Built Environment and Infrastructure

Hamilton is supported by state of the art infrastructure, transportation options, buildings and public spaces that create a dynamic City.

Our People and Performance

Hamiltonians have a high level of trust and confidence in their City government.

APPENDICES AND SCHEDULES ATTACHED

None