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Item No. 9.1.3
Audit & Finance Standing Committee
July 23, 2014

TO: Chair and Members of Audit & Finance Standing Committee

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SUBMITTED BY:

Richard Butts, Chief Administrative Officer
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Jane Fraser, Director, Planning & Infrastructure

DATE: July 12, 2014

SUBJECT: **Award – Quotation No. Q14M069 Solar Wall Installation at Dartmouth Sportsplex**

ORIGIN

- Approved Green Municipal Fund/Sustainable Communities Reserve Project; and
- Opportunity to address the roofing aesthetic problem.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Council approved, Dec 11, 2012, that all budget increases are to be presented to the Audit and Finance Standing Committee, prior to submission to Council.

Halifax Charter, section 93(1) - The Council shall make estimates of the sums that are required by the Municipality for the fiscal year; Halifax Charter, section 79(1) - Specifies areas that the Council may expend money required by the Municipality; Halifax Charter, section 35(2)(d)(i) - The CAO can only authorize budgeted expenditures or within the amount determined by Council by policy; Halifax Charter, section 120(6) - The Municipality may maintain other reserve funds for such purposes as the Council may determine; Halifax Regional Municipality policy on Changes to Cost Sharing for Capital Projects - Changes requiring Council approval; and the Halifax Regional Municipality Reserve Policy - No reserve funds will be expended without the CAO's recommendation and Council approval.

RECOMMENDATIONS ON PAGE 2

RECOMMENDATION

It is recommended that the Audit & Finance Standing Committee recommend Regional Council:

1. Approve a budget increase of \$124,284.96 to Project Account No. CB000002 – Major Facilities Upgrades, with funding from the 2014/15 Operating Account D948 – Sustainable Community Projects, to reflect additional funding required for Solar Wall Installation at Dartmouth Sportsplex.
2. Award Quotation No. Q14M069 – Solar Wall Installation at Dartmouth Sportsplex, to Markland Associates at a cost of \$104,284.96, net HST included, with funding as outlined in the Financial Implications section of this report.

BACKGROUND

Project Funding: Funding for the project is provided for by an existing Federation of Canadian Municipalities Green Municipal Fund grant that has provided funding to the Sustainable Communities Reserve Q127. Green Municipal Fund staff approved the project in November 2013 and is included in the Operating Account D948 (Sustainable Community Projects) approved in the 2014 / 2015 Operating Budget (funded from Reserves). Upon development of the award report, it was determined that the project must be captured as a capital project and a net zero increase to the Project Budget recommended to comply with tangible capital asset accounting criteria. With the re-alignment of the project from an Operating funded project to a Capital funded project it requires approval from the Audit and Finance Standing Committee even though it is a net zero increase.

The Dartmouth Sportsplex is an 116,000 ft² recreation center with an indoor pool, rink, gym and community spaces. Current energy expenditures are approximately \$400,000 annually. Due to the buildings operations, and need to ventilate/dehumidify air, there are significant costs associated with heating outside air prior to building use.

HRM and Sportsplex staff have been investigating the use of SolarWall technology to reduce the heating costs associated with this outside air use. A SolarWall is a Canadian made technology that preheats outside air via a perforated exterior wall membrane. With a solar efficiency of 80 percent, it is recognized as practical, low maintenance, and has a long life in reducing ventilation costs.

With several south facing sloped roofs, the Dartmouth Sportsplex is an ideal location. The project site is also suitable because work is underway to strip and re-paint sections of the Sportsplex roof. The section of the roof for the SolarWall will not require repainting (SolarWall coating has a 40 year warranty). The proposed project is to install approximately 3,000 ft² of SolarWall for one of the six air handling units that service the building.

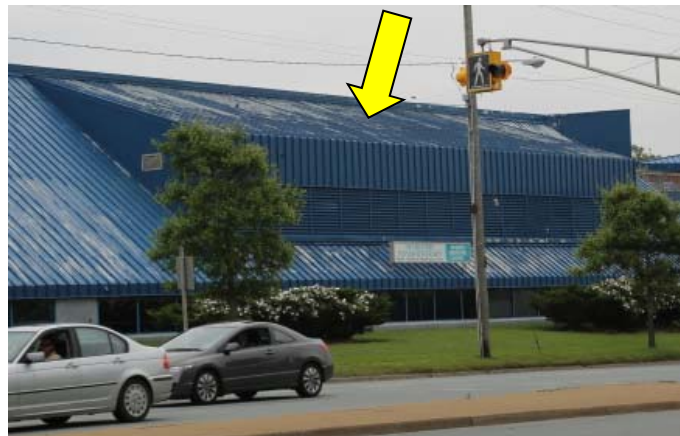


Figure 1. Solar Wall location on top of existing mechanical room

This installation would be HRM's first experience with SolarWall technology as a retrofit or recapitalization solution, and lessons learned from this installation could be applied to future renovations at the Dartmouth Sportsplex and other HRM facilities. The Tantallon Fire Station adopted a small SolarWall installation in the new construction specification in 2011.

It is anticipated the modifications will be completed by October and prior to next year's heating season.

The opportunity to use the energy solution to address the cosmetic roofing issue is important in bringing the viability of the project to justification. Energy modeling has predicted a savings of \$8,000 to \$10,000 a year (in 2014 costs) from the installation. Without the roofing recoating cost consideration, the project has approximately a 10 year payback. With the roofing work offset by this installation, the project has an anticipated 5 to 6 year payback period.

DISCUSSION

Scope of Work and Schedule:

The project involved two components: a new SolarWall installation by a roofing/siding company and modifications to internal ductwork and controls (which will be administered by Sportsplex operations staff). Work is to be completed by December 2014.

Quotation No. Q14M069 - Solar Wall Installation at Dartmouth Sportsplex, was publicly advertised on the Nova Scotia Public Tenders website on April 28, 2014, and closed on May 26, 2014. One (1) quotation was received as follows:

Bidders: Tender #Q14M069

Company	Total Cost Net HST included
Markland Associates	\$104,284.96

The quoted price is slightly higher than the original estimate of \$95,000 for the SolarWall installation component of the project. It is understood that only one bid was received due to a significant capacity shortage in the metal roofing/siding industry.

To complete the installation there will have to be modifications to the air intake ductwork, installation of a bypass damper (for summer mode operation) and modifications to the existing building automation system which will require \$20,000 in expenditures by Dartmouth Sportsplex operations staff, which can be accommodated in the approved 2014/2015 operating budget for D948 - Sustainable Community Projects.

Risks:

There are minimal risks to the installation of the SolarWall. The technology is well proven, the contractor has experience installing similar systems and work can be mostly completed prior to winter.

FINANCIAL IMPLICATIONS

In addition to the Markland Associates quoted price of \$99,999.00, plus net HST of \$4,285.96, for a net total of \$104,284.96, the additional modifications to the existing building systems and other relative works being undertaken by the Dartmouth Sportsplex will require an extra cost of \$20,000. All funding is provided through Operating account D948 which is fully funded from Sustainable Communities Reserve Acct-Q127. Budget availability has been confirmed by Finance.

Budget Summary:	<u>Project Account No. CB000002 – Major Facilities Upgrades</u>	
	Cumulative Unspent Budget	\$ 4,062,500.14
	Increase from Operating Account D948	\$ 124,284.96
	Less: Quotation 14M069 and modifications	<u>\$ 124,284.96</u>
	Balance	\$ 4,062,500.14

If approved there will be an increase to the gross project budget but not the net Budget.

COMMUNITY ENGAGEMENT

There will be natural gas savings and greenhouse gas reductions resulting from the optimum utilization of the solar array to assist with pool heating. Dartmouth Sportsplex staff plan on highlighting the performance of the SolarWall thru live monitoring on existing public energy displays within the facility.

ENVIRONMENTAL IMPLICATIONS

It is estimated the installation of the SolarWall will save \$10,000 annually in natural gas costs and approximately 60 tonnes of GHG reductions. Dartmouth Sportsplex Operations staff will be trending the performance of the system and reporting back results to the HRM Energy and Environment staff.

ALTERNATIVES

The CAO could choose to not approve the recommendations in this report, but this is not recommended by staff as there are reasonable operating savings associated with the proposed retrofit project.

ATTACHMENTS

None

A copy of this report can be obtained online at <http://www.halifax.ca/boardscom/SCfinance/index.php> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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