

Item No. 9.1.1
Audit & Finance Standing Committee
May 21, 2014

TO: Chair and Members of Audit & Finance Standing Committee
Original Signed

SUBMITTED BY: Richard Butts, Chief Administrative Officer
Original Signed

Kathleen Llewellyn-Thomas, P. Eng., A/Director, Transportation and Public Works

DATE: May 6, 2014

SUBJECT: **Approval Advanced Project Funding & Award - RFP # P13-323, Traffic Signal Control Solution**

ORIGIN

The Approved 2014/15 Capital Budget.

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.

Recommendation on page 2..

RECOMMENDATION

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

- a) Award **RFP #P13-323, Traffic Signal Control Solution** to the highest scoring proponent, Delcan, for a Total Price of \$3,233,370.74 (net HST included) with funding in the amount of \$2,899,898.53 from CT140001 – Traffic Signal System Integration and \$333,472.21 from future Operating Budgets, as outlined in the Financial Implications section of this report.
- b) Approve capital spending of \$1,109,991.11 (net HST included) for project costs related to Project CT140001 – Traffic Signal System Integration as per the Financial Implications section of this report.
- c) Approve, in advance, a funding commitment in the amount of \$596,400 for Project CT140001 - Traffic Signal System Integration for the 2015/2016 fiscal year, by reducing the 2015/16 requirement for Project CT000004 - Controller Cabinet and Detection Program by \$300,000 and reducing the 2015/16 requirement for Project CTU01085 - Traffic Signal Installation by \$296,400.

BACKGROUND

Halifax Regional Municipality (HRM) owns and operates 265 signalized traffic intersections. The existing SCOOT centralized traffic signal control system was installed in 1990 in the former City of Halifax and has reached the end of its life cycle.

Due to the outdated SCOOT system operating 91 locations on the peninsula, the first step is to implement the TSC solution at intersections as illustrated in the attached map (Appendix B).

HRM's new TSC solution will:

- Improve mobility for the public by reducing vehicular delays through intersections and reducing related greenhouse emissions,
- Improve safety for visually-impaired persons with the inclusion of specific equipment design features,
- Provide bicycle detection equipment,
- Expand the traffic signal pre-emption system to provide better signal pre-emption for emergency vehicles,
- Minimize risks associated with current aging technology and infrastructure, and
- Allow for future expansion to remaining intersections.

Once the new Traffic Signal Control Solution is under way, Staff will develop a new traffic model and timing plans to better manage traffic flow. The completion of this project will lay the foundation to expand to remaining intersections; these are the key building blocks (software and equipment).

The Request for Proposal was to secure a vendor to provide HRM with a new, turnkey Traffic Signal Control (TSC) Solution and partner with the HRM team to complete final design, testing and implementation of:

- Intelligent NETWORKS Traffic Signal System;
- Core system equipment that ties into the central system including new traffic signal cabinet assemblies, controllers, Malfunction Management Units (MMUs) and detection equipment;

- Reuse of existing equipment where feasible;
- OPTICOM-ready equipment to enable expanded use of transit signal priority and/or emergency vehicle pre-emption; and,
- A cellular communication solution that is compatible with HRM's Cellular Data Services and enables transit signal priority, emergency vehicle pre-emption, real-time intersection monitoring and control, real time equipment and communication status, data logging, and error reporting.

DISCUSSION

RFP # P13-323, Transportation and Public Works Traffic Signal Control (TSC) Solution was publicly advertised on the Nova Scotia Public Tenders portal on October 10, 2013 and closed on February 13, 2014. HRM's objective was to seek proposals from qualified Proponents for a complete turnkey deployment of a total TSC Solution.

Four (4) proposals were received from the following proponents:

- GJ Cahill
- Delcan
- Electromega
- Tacel

The proposals were evaluated by a team of staff from TPW and ICT and facilitated by Procurement per the evaluation criteria listed in Appendix A of the RFP (attached).

The proposals were scored using a two-envelope process. Envelope One was the technical component and Envelope Two consisted of the financial elements of the proposal. Cost Proposals were evaluated based on a five (5) year total cost including the core Traffic Signal Control solution, maintenance (including upgrades) and support. Electromega's technical proposal did not achieve the minimum of 75% of technical score; as a result, the cost proposal will be returned unopened.

Delcan's proposal fully met HRM's requirements and included detailed analysis to support each component of their proposed 'Total Traffic Signal Control Solution'. Reference checks support the information provided. Based on the RFP Evaluation Criteria, Delcan's proposal was the highest-scoring Technical and Cost Proposal. Effective analysis and due diligence enabled Delcan to propose a cost-effective total solution that maximizes use of HRM's existing equipment and can be expanded to meet HRM's future needs. Delcan's proposal provides HRM with a high level of confidence in relation to the total solution, management of the contract and the successful outcome of the project.

Initial budget projections were based on a study completed by HRM in 2010 which did not include modifications/repairs to existing infrastructure. The team completed a preliminary review of in-scope intersections and included costs, as outlined in the Financial Implications section of this report, to address any necessary repairs to implement the traffic signal control solution.

FINANCIAL IMPLICATIONS

The total additional **Capital Cost** of the Traffic Signal Integration (TSI) project is \$4,009,889.64, including:

- The highest scoring proponent's cost for the Traffic Signal Control solution and future functionality of \$2,899,898.53 (net HST included), and
- HRM's project costs for infrastructure, traffic model and timing plan development, and resources

(Project Manager, Business Analyst, Architect, Technical Analyst and Project Administrator) for project implementation of \$1,109,901.11 (net HST included).

Funding is available from Project No. CT140001 – Traffic Signal System Integration. The budget availability has been confirmed by Finance.

Budget Summary: Project Account No. CT140001 - Traffic Signal System Integration

Cumulative Unspent Budget	\$3,413,502.07
Add: 2015/16 pre-approved funding	\$ 596,400.00
Less: RFP No. 13-323	\$2,899,898.53
Less: Project Implementation Costs	<u>\$1,109,901.11</u>
Balance	\$12.43

Implementation of the TSI project will span 3 fiscal years, and the balance of the funds will not be required until 2015/2016. If this RFP is awarded, \$596,400 must be set aside in the 2015/2016 Project Budget. As the current 2015/16 Project Plan does not include any funding for this project, this amount will be accommodated within the Traffic Improvements envelope by reducing the 2015/16 requirement for Project CT000004 (Controller Cabinet and Detection Program) by \$300,000 and the 2015/16 requirement for Project CTU01085 (Traffic Signal Installation) by \$296,400, resulting in a net zero change to the advanced funding commitment in the amount of \$51,432,500 previously approved by Council for 2015/2016.

Project#	Current 2015/16 Project Plan	Revised 2015/16 Project Plan
CT140001 – Traffic Signal System Integration	\$0	\$596,400
CT000004 – Controller Cabinet and Detection Program	\$500,000	\$200,000
CTU01085 – Traffic Signal Installation	\$750,000	\$453,600
TOTAL	\$1,250,000	\$1,250,000

Operating Costs

The highest scoring proponent’s cost for maintenance and support for five years is \$333,472.21 (net HST included), which includes:

- Maintenance of hardware/equipment, software technical support and communications – lease costs.
 - \$45,204.85 in 2015/16 and
 - \$96,089.12 annually for the subsequent three (3) years.

The required increase to the operating budget will be \$45,204.85 in 2015/16 and \$96,089.12 annually for subsequent years, and this amount will be included in future operating budgets as follows:

Cost Centre – G/L	2015/16	Subsequent
R827 6602 – Traffic Lights Electrical		\$50,885
A732 6204 – Business Application Computer S/W and Lic	\$30,400	\$30,400
A421 6201 – ICT Corporate Services Telephone	\$14,804	\$14,804
TOTAL	\$45,204	\$96,089

COMMUNITY ENGAGEMENT

Although there was no specific community engagement, Transportation and Public Works has received complaints, suggestions and requests from community groups for updated technology to provide better customer service including but not limited to visually impaired citizens and citizens who use bicycles as a mode of transportation throughout HRM (bicycle detection).

ENVIRONMENTAL IMPLICATIONS

There are no environmental implications.

ALTERNATIVES

Council could choose not to award this RFP. The current Traffic Signal Control system has reached the end of its life cycle; the communication network is using outdated technology that is not fully supported and the aging equipment has reached its capacity. Significant development and resources would have to be dedicated to upgrade on an intersection-by-intersection basis to meet requirements. Staff does not recommend this alternative.

ATTACHMENTS

Appendix A – Evaluation Criteria

Appendix B – Traffic Signal Integration (TSI) Project – Peninsula Overview

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

Report Prepared by: Taso Koutroulakis, P.Eng., PTOE, Manager, Traffic & Right of Way Services (490-4816)

Original Signed

Report Reviewed by:

Donna Davis, Chief Information Officer (490-4417)

Original Signed

Financial Approval by:

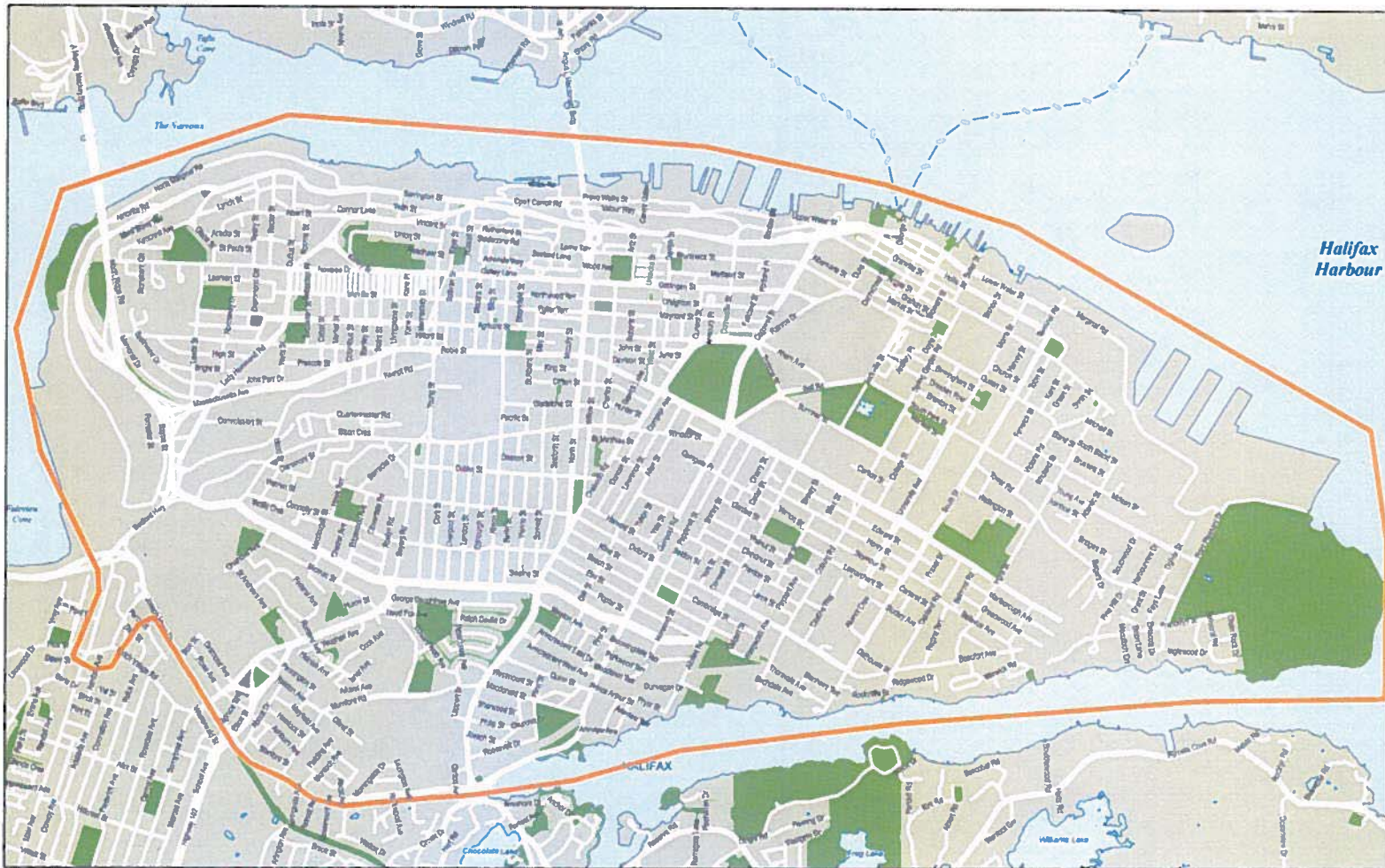
Greg Keefe, Director of Finance & ICT/CFO, 490-6308

RFP # 13-323 Traffic Signal Control Solution- APPENDIX A – Proposal Evaluation Criteria					
CRITERIA	SUMMARY-(considerations may include but are not limited to the following)	SCORE	Delcan*	GJ Cahill	Tacel
Proposal Submission	<ul style="list-style-type: none"> Clarity and readability of written proposal 	5	5	4.5	4.5
Understanding of HRM Requirements/Needs	<ul style="list-style-type: none"> Understanding of the requirements of the scope of work Attention to risks and mitigation strategies Value added propositions and recommendations Attention to relevant challenges and proposed mitigation Demonstrates detailed understanding of requirements and needs 	10	9.43	8.21	8.5
Technical Solution	<ul style="list-style-type: none"> Solution addresses all functional/technical aspects of the project as identified in the RFP Solution draws on proven, successful implementations Ability to meet 'total integrated solution' requirement Solution achieves HRM's objectives and meets requirements 	25	22.32	19.52	21.73
Approach/ Methodology & Project Management	<ul style="list-style-type: none"> Understanding of the project scope and staged implementation Proven experience with solution integration – implementing all scope components Detailed implementation approach Acceptable proposed schedule and project plan 	15	14.63	11.25	8.63
Corporate and Team Experience	<ul style="list-style-type: none"> Sector specific experience of the Proponent Firm Experience of individual team members with projects of similar scope and size Team members' appropriate skills and education Demonstrated history of proposed team in successfully completing projects of a similar nature on time and on budget 	15	13.5	10.13	9.38
Subtotal (Technical Proposal) 75% of 70 pts = 52.5 pt/pass		70	64.88	53.61	52.74
Net Hst Included Project Cost :			\$2,899,898.53	\$5,842,445.86	\$5,898,357.76
5 year Maintenance Cost:			\$333,472.21	\$383,428.24	\$518,693.54
Total Cost with Net HST Included			\$3,233,370.74	\$6,225,874.20	\$6,417,051.30
Score for Cost		30	30.00	2.23	0.46
Administrative and Legal Requirements	<ul style="list-style-type: none"> Based on level of risk identified in Stage 2 technical evaluation. 	**0	-1	-1	
Total		100	93.88	54.84	53.20

Recommended*

Points Deducted**- for the assessment of risk related to minor exceptions noted to terms & conditions.

Appendix B - Traffic Signal Integration (TSI) Project – Peninsula Overview



HALIFAX
REGIONAL MUNICIPALITY

Traffic Signal
Intersection Project
ICT Proj # 0853



Project Area of Interest
HRM Parks



Halifax Regional Municipality makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information and data provided on this map. This map is for informational purposes only and should not be used for engineering, or surveying purposes. The user is for the user's own financial business and personal purposes. Halifax Regional Municipality assumes no responsibility for its use.