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CORPORATE REPORT

NO: **R043** COUNCIL DATE: **March 12, 2012**

REGULAR COUNCIL

TO: **Mayor & Council** DATE: **March 8, 2012**

FROM: **General Manager, Engineering** FILE: **3811-300/8**

SUBJECT: **Approval of Agreement with Transport Canada for Funding and Award of Contract for the Deployment of an Adaptive Traffic Signal Control System – Project No. 2011 - 01**

RECOMMENDATIONS

The Engineering Department recommends that Council:

1. Approve the execution by the appropriate City officials of an Agreement with Transport Canada under which Transport Canada will provide funding for the Deployment of an Adaptive Traffic Signal Control System in Surrey as a pilot project;

2. Approve the award of Contract No. 2011 – 01 to Delcan for the supply and installation of adaptive traffic signal system equipment and software (for five years) at intersections on 72 Avenue in the amount of $364,000 (including HST); and

3. Set the expenditure authorization limit for Project No. 2011–01 at $400,000 (including contingency and HST).

BACKGROUND

Adaptive Traffic Signal Control (ATSC) System is a leading edge technology and its implementation in Surrey will be the first truly adaptive system in BC and the first fully operational system in Canada.

The ATSC system allows for automatic and frequent adjustments to traffic control signal timing from a control centre in response to real-time traffic flows occurring on the road network. This method of control, which retains coordination between adjacent traffic signals, typically reduces delays for motorists by between 5% and 15% compared to traditional coordinated signal timing plans. The benefits of this system include:

- Reduced travel time for motorists operating all types of vehicles;
- Economic benefits associated with travel time savings;
- Reduced stop/start activities and associated wear and tear on vehicles especially trucks and buses;
- Reduced emissions including but not limited to greenhouse gases;
- Reduced congestion, queuing and driver frustration and a corresponding improvement in safety due to a decrease in traffic collisions; and

- Reduced need for traffic signal timing plan design by road authorities, and hence associated reduction in signal operating costs.

DISCUSSION

Project Scope

The Adaptive Traffic Signal Control System Pilot Project is proposed to be implemented at seven intersections along 72 Avenue between 122 Street and 134 Street. The work involves software enhancements, vehicle detector loop installation, equipment supply and installation and system verification along with before and after analysis and reporting. The pilot system will manage the signal timing in real time along the subject section of 72 Avenue.

Subject to Council approval of the recommendations of this report, it is expected that the enhanced traffic control system will be operational by March 31, 2012. Fine tuning and evaluation of the system will occur thereafter.

The Engineering Department will report back to Council in early 2013 on the results of the pilot project and with recommendations regarding expanded deployment of the system.

Project Costs and Funding

A partnership between the City and Delcan has been developed to implement and evaluate the Adaptive Traffic Signal Control Pilot Project in Surrey using Delcan's "Multi Criteria Adaptive Control System" software. An application was submitted by the City to Transport Canada for funding from the Strategic Highway Infrastructure Program (SHIP) in support of the pilot project. The application was successful with Transport Canada awarding a grant of $250,000 subject to the execution of an Agreement with the City. The Agreement documents how the funding is to be used and the timeframe within which it is to be used. The Agreement has been reviewed by Legal Services who have identified no concerns.

The total cost of the pilot project is estimated at $560,000, which will be divided among the funding partners as follows:

Transport Canada	$250,000
Delcan Corporation	$142,240
City of Surrey	$142,760
ICBC	$ 25,000
Total	$560,000

Delcan's Adaptive Traffic Signal Control System software will be licensed to the City for five (5) years for use at the seven intersections that will make up the pilot project.

Funding for the City's Share of the Costs:

Funding to cover the City's share of the costs of this Contract is available in the approved 2012 Capital Budget.

SUSTAINABILITY CONSIDERATIONS

The Implementation of the Adaptive Traffic Signal Control System Pilot Project will assist in achieving the objectives of the City's Sustainability Charter; more particularly the following Charter action items:

- SC13: Creating a Fully Accessible City; and
- EN13: Enhancing the Public Realm.

The enhanced traffic control system should reduce delays experienced by Surrey motorists at signalized intersections, which will reduce travel time, vehicle wear and tear, GHG emissions and associated costs for Surrey motorists.

CONCLUSION

Based on the above discussion, it is recommended that Council:

- Approve the execution by the appropriate City officials of an Agreement with Transport Canada under which Transport Canada will provide funding for the Deployment of an Adaptive Traffic Signal Control System in Surrey as a pilot project;

- Approve the award of Contract No. 2011 – 01 to Delcan for the supply and installation of adaptive traffic signal system equipment and software (for five years) at intersections on 72 Avenue in the amount of $364,000 (including HST); and

- Set the expenditure authorization limit for Project No. 2011–01 at $400,000 (including contingency and HST).

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