

**STAFF REPORT:        ENGINEERING AND PUBLIC WORKS DEPARTMENT**



**REPORT TO:**            Finance & Administration  
**MEETING DATE:**      March 18, 2008  
**REPORT NO.:**         EPW.08.37  
**SUBJECT:**             Standardization Business Case for  
                                 SCADA (Supervisory Control & Data  
                                 Acquisition) within Wastewater Division  
  
**PREPARED BY:**       John Caswell, Manager of Water &  
                                 Wastewater Services  
                                 Sherri Adams, Manager of Purchasing

**A. Recommendations**

THAT Council does receive Staff Report EPW.08.37, "Standardization Business Case for SCADA (Supervisory Control & Data Acquisition) within Wastewater Division" and adopt the recommendation contained herein, being,

THAT Council approve the standardization business case for SCADA System Integration within the Wastewater Division for a three year term, with ARO Technologies named as the System Integrator at a cost of \$70.00 per hour plus GST. It further being noted that ARO be approved to provide all related hardware and software that is required by the Town for the three year term.

**B. Background**

The SCADA system (Supervisory Control & Data Acquisition) is a system which allows the Wastewater operators to view real time operations in the Craigeith Wastewater facilities via computer controls. The operators have an ability to control a number of processes from the operations centre or to view what is happening throughout the process and determine what operational changes are required to remain compliant with Provincial legislation. The SCADA system will eventually be expanded to include all wastewater pump stations and the Thornbury Wastewater Treatment Plant when it is expanded.

The SCADA system provides an ongoing record of the various processes and also allows an operator to view trending of those processes and include the information in year end reports required by Provincial legislation.

The SCADA system components include a combination of controls which include computer hardware, software and computer programming and associated wiring and telecommunication equipment. The SCADA system programming is customized to individual facility requirements. The components utilized by the Town are Allen Bradley, Powerware, Ethernet NIC's and associated computer hardware at required locations.

The PLC (Personnel Logic Controllers) Controls themselves, were and are the most suitable for the process at the time of installation. Many of the components that are utilized are items that are carried by a number of distributors. However, during repairs to an existing SCADA

system or considering new additions to existing SCADA systems it is imperative that there is a smooth transition to streamline the new works with the existing system. The new programming must be “integrated” with the existing system to allow for seamless functionality. New hardware must also be compatible with the existing system and programmed and connected to the existing system in a manner which will not negatively affect ongoing operations.

There is a benefit to having one entity completing the programming and troubleshooting (a System Integrator) since there is a considerable amount of time required to analyze and review the existing system when completing changes or repairs.

ARO has been selected as the most suitable company to be named as system integrator through competitive bidding of hourly rates. ARO’s hourly rate was favourable as their office is located in Collingwood and the Town would not incur additional charges related to travel and mileage. Further, ARO’s skill and knowledge of SCADA systems is extensive which ensures that the Town’s needs will be met.

A term of three years to standardize the System Integrator, who will provide all related hardware and software for the SCADA system is necessary to ensure the integration is a seamless transition.

Various quotations for hardware and software and total labour will be requested from the System Integrator (ARO) as required to suit conditions and requirements. Quotations will be reviewed for reasonableness. The Department Head will review subsequent invoices against quotations to ensure costing is accurate. Staff will continue to check for reasonableness of labour, equipment etc, in quotations.

The Department Head will review the hourly rate proposed annually by ARO. Should there be a change in the hourly rate, the Department Head will review for reasonableness and existing conditions to determine if the proposed rate should be accepted or rebid.

**C. The Blue Mountains’ Strategic Plan** (Statement(s) identifying how actions further the goals of the Strategic Plan)

- 2. Addressing the Town’s municipal infrastructure needs
- 6. Providing a strong, well managed municipal government

**D. Budget Impact** (cc: Treasury if required)

The following chart represents the budget for 2008-2010 for equipment and related SCADA for Craigleith and Thornbury.

	2008	2009	2010
Craigleith	\$42,500	\$42,500	\$32,500
Thornbury	\$17,500	\$17,500	\$17,500

**E. Attached** (Relevant documentation not personal information about an identifiable person)

1. ARO's quotation for hourly rates for 2008 works.

Respectfully submitted,

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John Caswell

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Reg Russwurm

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Sherri Adams