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SOUTH SHORE COMMUNITY BROADBAND (SSCB) NETWORK

The Finance and Administration Committee recommends the adoption of the recommendations contained in the following report, September 21, 2006, from the Commissioner of Finance:

1. RECOMMENDATIONS

It is recommended that:

1. Council approve the installation of wireless network equipment by South Shore Community Broadband, a not-for-profit corporation, at the Transportation and Works' water supply facility at 27083 Kennedy Road and the sewage pumping facility on Woodbine Avenue in Georgina Township at an estimated total capital cost of \$58,888 plus tax on condition that the Region be entitled to unlimited use of the network with no further cost and that all operating costs be borne by South Shore Community Broadband . This network equipment is to provide a redundant data transmission capability at these sites for the Region and a platform for South Shore Community Broadband to offer Internet based network services to the surrounding residents and businesses.
2. The Clerk be authorized to execute a contract for a term of ten years, that utilizes Transportation and Works' standard form access agreement, waiving the customary fees; and that defines the terms of the ownership, installation, use by the Region and support of the wireless network equipment by South Shore Community Broadband, subject to the prior approval of the Commissioner of Transportation and Works and the Region Solicitor.
3. That the Director of Information Technology Services be authorized to pay the capital costs of the wireless network equipment proposed for these two sites from the approved Information Technology Services' 2006 capital budget.

2. PURPOSE

This report is to update Committee and Council on the evaluation of a proposal by South Shore Community Broadband (SSCB) to supply, install and operate wireless networking communications equipment at two Transportation and Works sites in Georgina Township and to recommend Council approve implementation of this equipment at the two facilities.

3. BACKGROUND

In November 2005, in response to a presentation by SSCB, the e-Government Sub-Committee directed Information Technology Services to investigate whether SSCB's network services could be a feasible solution for a portion of the Region's voice and data network. Information Technology Services provided information to SSCB on the locations and existing communications link speeds for Region offices in SSCB's service area. SSCB provided status on the services they could provide to these sites.

In July 2006, Information Technology Services and Transportation and Works received a proposal from SSCB to provide wireless network connectivity for two Transportation and Works sites in the Town of Georgina. Information Technology Services meet with SSCB to clarify certain technology questions and subsequently met with representatives of Transportation and Works - Water and Waste Water unit to review SSCB's proposal.

3.1 Overview of SSCB

SSCB is a not for profit co-operative corporation. Their mission is: "To make affordable broadband universally available in Georgina and Georgina Island." SSCB was legally incorporated as a not-for-profit organization in September 2003, and operates on a community-wide partnership principle. The Board of Directors includes representation from the Town of Georgina, Town of East Gwillimbury, Chippewas of Georgina Island First Nation, South Lake Community Futures, Georgina Chamber of Commerce and 7 local businesses.

3.2 Overview of SSCB Proposal

SSCB proposes to provide internet technology network connectivity to the Georgina Water Supply facility at 27083 Kennedy Road and the Sewage Pumping facility on Woodbine Avenue. SSCB would create new SSCB network nodes at these sites by erecting two types of network antennae and installing transmission equipment at each site. REDLINE point-to-point wireless gear would link the site to the rest of the SSCB wireless network and Wi-Fi wireless gear (similar to that being used by Toronto Hydro Telecom in downtown Toronto) would provide wireless access to internet services such as the WEB and e-mail. SSCB wish to use the Wi-Fi network functionality to re-sell WEB and e-mail services to residents / businesses in the area. The two Region sites would be connected to the Region's network via a link from SSCB's internet services provider -Internet Lake Simcoe (ILS). ILS has a network node at the Tannery Mall in Newmarket that could be connected to the Region computer centre at 17250 Yonge Street.

The SSCB network provides wireless connection speeds of approximately 14 - 18 Mbps at each network node, scalable up to 48 Mbps. The Region currently implements 10 Mbps and 100 Mbps managed and monitored fibre links at our large sites and 3 – 6 Mbps managed and monitored digital subscriber line (DSL) network connections at small sites. The water supply facility currently has 10 Mbps fibre service; the sewage pumping

station has DSL service. SSCB do not currently provide active network monitoring although the Region could install network monitoring devices at the two sites. While the SSCB network can carry voice over internet protocol (VoIP) telephone calls, it does not offer the quality of service (QoS) functionality that the Region is implementing on its fibre communications links.

4. ANALYSIS AND OPTIONS

3.3 Technology Fit to the Region's Network Infrastructure

As a technology solution, the SSCB proposed services can be integrated into the Region's data network and provide data networking connectivity to the two proposed sites. Without quality of service functionality we would not recommend it for voice communications. The two proposed sites are currently serviced by connections from Bell Canada under the converged network agreement. There would be a penalty if the Bell service is cancelled. However since the two sites are SCADA sites, the SSCB solution could be implemented as a redundant link to the Bell Canada service and act as backup for the two SCADA sites proposed. This configuration would provide the enhanced level of reliability that Transportation and Works requires for SCADA sites. The operational requirements of the Transportation and Works Water and Waster Water unit need to be considered in the final configuration of the service and in the negotiation of the business agreement.

3.4 Installation and Support

SSCB have local installers who install and maintain the network equipment. Much of the design and maintenance work is done by volunteers from the subscribers and the member organizations.

5. FINANCIAL IMPLICATIONS

5.1 Cost

The cost for each site is quoted as a one time capital cost of \$24,512 plus tax for the transmission and antenna equipment plus a monthly access fee to connect to the SSCB network. The access fee depends on the number of computers the Region has at each site. Estimates are in the area of \$100 per site plus tax per month. SSCB will negotiate a discount to the access fee if businesses and homes in the surrounding area use the Wi-Fi portion of the installation to subscribe to SSCB's Internet service.

SSCB recommend that the Region invest in spare transmission equipment in the amount of \$8,464 to reduce the average repair time should the original transmission equipment break. Active monitoring of network nodes could be installed at an estimated capital cost of \$600 - \$700 per site. In addition, the Region will have a small operating costs

consisting of the electricity to run the equipment and perhaps insurance coverage for the equipment.

In summary, the capital cost is calculated to be \$25,212 per site plus tax plus \$8,464 plus tax for redundant equipment for a total capital cost of \$58,888 plus tax. The capital cost over ten years represents value that compares favourably with other commercial alternatives for network communications at the two sites.

It is recommended that in recognition of the Region paying the capital cost that it be entitled to unlimited use of the network at no further cost and that all other operating costs be the responsibility of SSCB.

5.2 Waiver of Rent for Installation of Network Equipment on Region Premises

At other Region sites, the practice is to charge network vendors a monthly rent to erect network equipment and install network communications equipment. SSCB have indicated that their monthly fee to the Region for use of the redundant network service is negotiable. Waiver of these fees could be used to negotiate the waiver of any SSCB monthly charges to the Region for use of the network.

6. LOCAL MUNICIPAL IMPACT

SSCB's proposal offers the Region the opportunity to participate in a local community infrastructure project by helping to distribute broadband signals to local residents and businesses in surrounding areas.

7. CONCLUSION

SSCB's proposal is one of a number of technically feasible alternatives for providing Region network infrastructure to Region sites in Georgina Township. The SSCB solution could be implemented as a redundant link to the Bell Canada service at the two sites proposed and act as a backup service.

The Senior Management Group has reviewed this report.