NRC·CNRC
Institute for Research in Construction

Bringing quality to the built environment

An Integrated Approach to Sustainable Management of Municipal Infrastructure Assets

Objective

To develop a method for integrating asset management processes for inter-related municipal infrastructure assets, specifically road, water and sewer networks.

Background

Road, water and sewer assets are typically managed independently, with little or no consideration paid to their inter-relationships. This lack of integration can result in significant inefficiencies and misdirection of limited renewal resources. This project aims to develop and implement techniques for integrating asset management processes to improve the coordination and cost-effectiveness of asset prioritization and renewal planning.

Statement of Work

The research will consist of the following tasks:

- Develop integrated data and process models for road, water and sewer network assets
- Develop a framework for implementing integrated municipal asset management systems
- Develop a prototype Geographical Information System (GIS)-based decision-support system that demonstrates the application of the proposed framework.

Expected Outcomes

- Data and process models to enable municipalities to integrate their asset management data and processes.
- An algorithm for the long-term renewal planning of municipal assets.
- A framework for implementing integrated GIS-based municipal infrastructure asset management systems.

Partner

City of Regina

Start/Expected Completion Dates

This project began in January 2005 and will be completed in July 2007.

Project Manager

Dr. Mahmoud Halfawy: 306-780-5396; Mahmoud.Halfawy@nrc-cnrc.gc.ca

For more information, see http://irc.nrc-cnrc.gc.ca/csir/projects/sustainable_e.html

Factsheet 62, September 2005