



Report to: Development Services Committee

Date Report Authored: March 6, 2012

SUBJECT: Markham Road from 16th Avenue to Major Mackenzie Drive
Municipal Servicing

PREPARED BY: Dale MacKenzie, Senior Capital Works Engineer, Ext 4055
Alain Cachola, Manager of Capital Works, Ext 2711

RECOMMENDATION:

- 1) THAT the staff report entitled, "Markham Road from 16th Avenue to Major Mackenzie Drive Municipal Servicing" be received;
- 2) AND THAT the existing 300mm diameter sanitary sewer on the East side of Markham Road from north of Edward Jeffrey's Avenue northward to approximately 160m south of Major Mackenzie Drive be upgraded with a new larger diameter sanitary sewer (450mm and 525mm) to accommodate future development within the area;
- 3) AND THAT a new 2012 Engineering Department capital project be created for the proposed upgrade of the existing sanitary sewer on Markham Road, from 16th Avenue to Major Mackenzie Drive, and Anderson Avenue, in the amounts of \$900,000.00, inclusive of HST, to accommodate future development, to be funded from Town Wide Hard (TWH) DC reserve, with subsequent recoveries from the future Area Specific Development Charge (ASDC) reserve, and \$100,000.00, for the non-growth portion, inclusive of HST to be funded from the Non-DC Growth Reserve Fund;
- 4) AND THAT the Development Charges Background Study scheduled to be completed by the fall of 2013, include an Area Specific Development Charge (ASDC) which shall include the sanitary sewer upgrade.
- 5) And that Staff be authorized and directed to do all things necessary to give effect to this resolution.

PURPOSE:

The purpose of this report is to update Council as to the status of underground infrastructure on Markham Road and obtain Council's approval for funding of the replacement of the existing sanitary sewer on Markham Road, from 120m north of Edward Jeffrey's Avenue to 160m south of Major Mackenzie Drive.

BACKGROUND:

Environmental Assessment Completion:

The Class Environmental Assessment for the reconstruction of Main Street Markham from Highway 407 to the future connection of the Donald Cousens Parkway north of

Major Mackenzie Drive was completed and the Environmental Study Report was subsequently endorsed by Council and then submitted to the Ministry of the Environment all in 2010. The Ministry of the Environment gave its approval to the Environmental Study Report on February 24, 2011.

There are three main sections to the Main Street Markham reconstruction as follows:

- 16th Avenue to Major Mackenzie Drive;
- Highway 7 to 16th Avenue;
- Highway 407 to Highway 7;

This report deals specifically with the sanitary servicing of the roadway from 16th Avenue to Major Mackenzie Drive.

Schedule of Works:

The section of Markham Road from 16th Avenue to Major Mackenzie Drive is currently at the 90% detailed design stage and the construction tender is scheduled to be issued in March / April 2012. Construction is expected to start in the spring/summer with completion scheduled for summer 2013.

Sanitary Sewers:

As a part of the overall design exercise, the existing infrastructure (sanitary, storm and water) were reviewed as to their condition and capacity to accommodate future growth. It was determined that the existing sanitary sewer located on the east side of Highway 48, from 120m north of Edward Jeffrey's Avenue to 160m south of Major Mackenzie does not have the capacity to accommodate additional flow from new development proposed in the area. To accommodate the additional sewage flows, the existing 300mm diameter sanitary sewer needs to be replaced with a 450mm and 525mm diameter sewer along the east side of the roadway as shown on Attachment 'A'. In addition the sanitary sewer along Anderson Avenue requires to be upsized and this project includes the replacement of a section of the sewer with a 450mm diameter pipe.

Storm Sewers:

The reconstruction of Highway 48 includes the urbanization of the entire right-of-way which includes removal of the roadside ditches and construction of curbs, gutters and storm sewers. There is a large existing storm sewer located on the west side of the right-of-way extending from Edward Jeffrey's Avenue northward to 340m south of Major Mackenzie Drive which currently conveys storm flows from the Wismer community. The flows from the Markham Road will be conveyed to this existing sewer. A new 375mm diameter storm sewer is proposed (265m) along the west curb line from 340m south of Major Mackenzie drive to 75m south of Major Mackenzie Drive.

The existing ditch on the east side of the road currently drains south and east. With the proposed urbanization of the road, the flows will be conveyed through a new storm sewer along the east curb line and will outlet to four (4) different locations.

The Highway 48 storm drainage system will provide a 100 year storm protection utilizing a 5 year storm sewer and the balance to be conveyed through overland flow routes.

Watermain:

The Environmental Services Department has advised that the existing 300mm diameter cast iron watermain on the east side of Markham Road, from Edward Jeffrey's Avenue to Major Mackenzie Drive, is at the end of its life cycle and should be replaced with a new 300mm diameter PVC watermain. In addition, all existing services including water boxes will be replaced.

The estimated cost for this work is \$1,500,000 (including contingencies, consulting fees and internal fees) which will be funded from the Environmental Services – Watermain Construction and Replacement Program Account 053-6150-12328-005, budgeted at \$2,490,000. There will be further discussions with impacted property owners/tenants as to the coordination of water service replacement.

FINANCIAL CONSIDERATIONS:

The Town of Markham has initiated the update on the Development Charges (DC) Background Study which is scheduled to be completed by the fall 2013. As a part of the update, Town staff has to consider a new Area Specific Development Charge (ASDC) for the development area bounded by the Wismer and Greensborough communities and include such costs into the Town-wide Hard Services Bylaw. The proposed sanitary sewer upgrade in the amount of \$ 900,000, inclusive of HST, will be included in the background study. The balance \$100,000, is to be funded from the Non-DC Growth Reserve Fund. As part of the Development Charges Background study, staff will be preparing a policy in respect to the growth / non-growth assessment of infrastructure (roads, sewers, watermains) for intensification areas.

The following is an update on the accounts and costs associated with this project:

HIGHWAY 48, 16th AVENUE TO MAJOR MACKENZIE DRIVE

Infrastructure	Account Numbers	Budget (HST inclusive)	Notes
*Road Reconstruction	083-5350-10054-005 083-5350-11069-005	\$ 294,688.00 <u>\$5,787,600.00</u> \$6,082,288.00	2010 Approved Budget 2011 Approved Budget
Watermain Replacement	053-6150-12328-005	\$1,500,000.00	Waterworks 2012 Approved Budget
Sanitary Sewer Replacement	To be determined	\$900,000.00 \$100,000.00	Development Charges Non-DC Growth Account
Total Budget		\$8,582,288.00	

*Storm sewer costs included in road reconstruction budget.

ALIGNMENT WITH STRATEGIC PRIORITIES:

The reconstruction of Markham Road from 16th Avenue to Major MacKenzie Drive has long been contemplated as a strategic priority. The project provides the necessary upgrades to the existing roadway infrastructure, and the opportunity to enhance the existing streetscape.

This project is in line with the Town of Markham's strategic focus relating to Growth Management, Transportation/Transit, Safety, the Environment and Municipal Services.

BUSINESS UNITS CONSULTED AND AFFECTED:

The Finance Department and Environmental Services have been consulted and their comments have been incorporated.

RECOMMENDED BY:



Alan Brown, C.E.T.
Director of Engineering

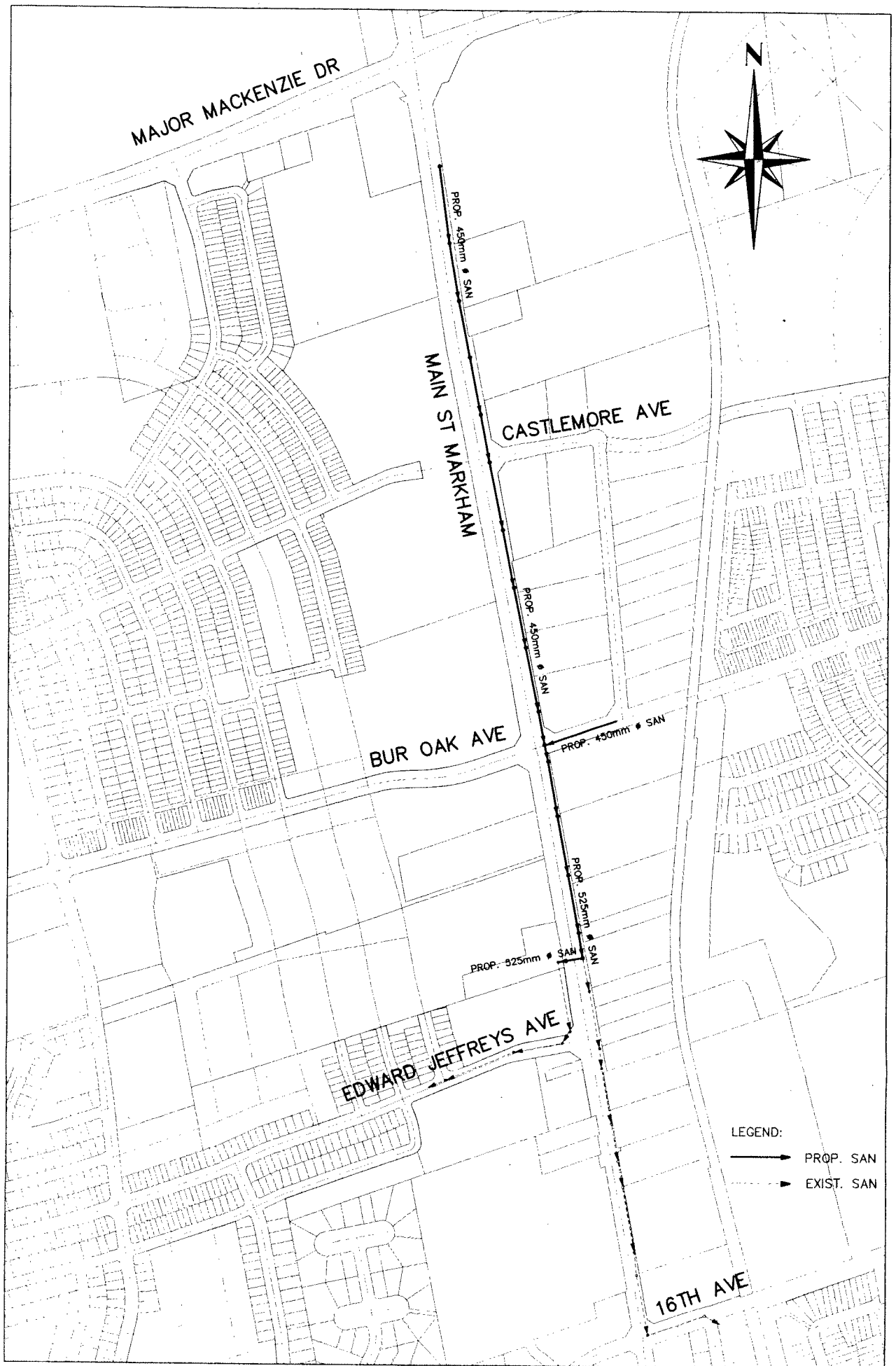


Jim Baird, M.C.I.P., R.P.P.
Commissioner, Development Services

ATTACHMENTS:

Attachment "A" – Sanitary Sewer Drawing

Attachment "B" – Storm Sewer/Drainage Plan



ATTACHMENT A – SANITARY SEWER REPLACEMENT

