

## **COMMITTEE OF THE WHOLE – NOVEMBER 5, 2007**

### **EROSION AND SEDIMENT CONTROL PRACTICES JOINT EVALUATION STUDY**

#### **Recommendation**

The Commissioner of Engineering and Public Works recommends:

1. That this report be received for information purposes;
2. That Council endorses the City's participation in the Erosion and Sediment Control Practices Evaluation Study in conjunction with the Toronto and Region Conservation Authority and other partners; and
3. That funding for the City's participation in the Erosion and Sediment Control Practices Evaluation Study, in the amount of \$45,000, be provided from the approved Capital Budget project No. 1590-0-06.

#### **Economic Impact**

There are no immediate economic impacts resulting from the adoption of this report.

#### **Communications Plan**

Not applicable.

#### **Purpose**

To inform Council and seek their endorsement of the City's participation in the Erosion and Sediment Control Practices Evaluation Study in conjunction with the Toronto and Region Conservation Authority (TRCA) and other partners.

#### **Background - Analysis and Options**

Municipal infrastructure and building construction activities have been identified as a significant source of sediment in urban streams. During the grading process vegetation is removed, natural drainage is modified, and stable topsoil is disturbed. When left uncontrolled, erosion of exposed soils can lead to elevated levels of suspended sediment in local watercourses resulting in deleterious effects on aquatic life. In Ontario, erosion and sediment control measures have been required on construction sites for several decades. However in many cases, recommended practices are either not implemented, or are improperly installed, under-engineered, or not maintained. Published in December 2006, the Greater Golden Horseshoe Area Conservation Authorities (GGHCA) "Erosion and Sediment Control Guideline" provides an overview of the elements of an effective Erosion and Sediment Control (ESC) plan. The guideline emphasizes erosion prevention as a primary strategy for minimizing the environmental impacts of construction sites.

As a follow up to the release of the above noted guidelines, the GGHCA are looking to secure funding for a study to evaluate the effectiveness of the new guideline by scrutinizing a range of ESC practices on a construction site in the City of Vaughan. The proposed study area was discussed and agreed upon by the effected landowners, staff and the TRCA. The chosen site is located southeast of Pine Valley Drive and Major Mackenzie Drive, the Vellore Village Development in block 39, identified in Attachment No 1. It is an 88 hectare residential construction project which outlets to Marigold Creek (a tributary of Purpleville Creek) and ultimately drains to the East Humber River. The evaluation will include four main components:

- (i) erosion and sediment controls;
- (ii) process by which ESC practices are implemented and altered throughout construction;
- (iii) barriers preventing implementation of practices or procedures in a given situation; and
- (iv) impacts of construction site runoff on receiving waters.

The plan and implementation process for this study will be guided by a project steering committee made up of representatives from the City of Vaughan, TRCA, Developers, and their consulting engineers, inspectors and contractors in charge of implementing the plan. Study findings will be used to evaluate the effectiveness of the guideline and provide training of personnel involved in ESC plan development, implementation and enforcement. This would include Vaughan construction inspection staff.

The study proposes to monitor all phases of construction from plan formation, to earthworks, servicing, dwelling construction, and final stabilization of the site. Pre-construction monitoring will establish baseline conditions and define ecosystem health indicators against which future impacts can be evaluated. Reports will document study findings and recommendations on an annual basis.

The total study funding proposal has been compiled by a number of partners as coordinated by staff at the TRCA and is broken down into two main components: evaluation of the guidelines and follow-up training based on findings. Tables 1 and 2 below provide a breakdown of study partners and funding amounts.

**TABLE 1 - Guideline Evaluation Funding**

<b>FUNDING SOURCE</b>	<b>FUNDING (\$000)</b>
Great Lakes Water Quality Agreement and Remedial Action Plan (RAPs) (Environment Canada & MOE)	15
Great Lakes Sustainability Fund	15
City of Vaughan	25
City of Toronto	10
Peel Region	7
York Region	7
Fisheries and Oceans Canada (DFO)	10
Ontario Ministry of Environment (MOE)	5
<b>TOTAL</b>	<b>94</b>

**TABLE 2 - Funding for Training**

<b>FUNDING SOURCE</b>	<b>FUNDING (\$000)</b>
City of Vaughan	20
Great Lakes Water Quality Agreement and Remedial Action Plan (RAPs) (Environment Canada & MOE)	5
Fisheries and Oceans Canada	20
<b>TOTAL</b>	<b>45</b>

Capital project number 1590-0-06 in the amount of \$52,000 for a Sediment and Erosion Control Study was approved as part of the 2006 Capital Budget. The study was to be a detailed review of the City's current sediment and erosion control practices and criteria relating to the development process. Its purpose was to ensure compliance with all TRCA, MOE and DFO regulations and initiatives, and the City's due diligence for its environmental responsibilities. The funding for this study has been included under the Growth Related Engineering Studies of the Development Charges Background Study, Revised Final Report dated August 2003 by Hemson Consulting Ltd.

The joint Erosion and Sediment Control Practices Evaluation Study exhibits a similar theme to the originally approved Vaughan Capital Budget study. By partnering with the TRCA and other organizations the City is getting greater value from its Capital Budget project funds. The scope of this project is much greater than what would be possible had the City undertaken a similar project on its own. The endorsement of this joint study via the contribution of resources will serve to reinforce the City of Vaughan's commitment to the environment through environmental research and sustainability.

### **Relationship to Vaughan Vision 2007**

This recommendation is consistent with the priorities set forth in Vaughan Vision 2007, particularly A-3, "Safeguard Our Environment", in addition to D-2, "Develop Internal/External Collaborative Solutions" and D-3, "Enhance Technology & Pursue Innovation".

### **Regional Implications**

The City of Vaughan and the Region of York will be participating in a collaborative effort to preserve our natural ecosystem within the Greater Golden Horseshoe area by committing resources to environmental research and innovation. Ultimately, the effects of construction on our environment will be minimized.

### **Conclusion**

Council's endorsement is being sought for the City to participate in the Erosion and Sediment Control Practices Evaluation Study in conjunction with the TRCA and other partners. Funding in the amount of \$45,000 will be provided for this study from the approved Capital Budget Project No. 1590-0-06. The study will evaluate the effectiveness of the Erosion and Sediment Control Guideline developed by the GGHCA. Participation in the project will demonstrate the City's commitment to safeguarding our environment through research and innovation. Should Council concur, the recommendations in this report may be adopted accordingly.

### **Attachments**

1. Study Location Plan

### **Report prepared by:**

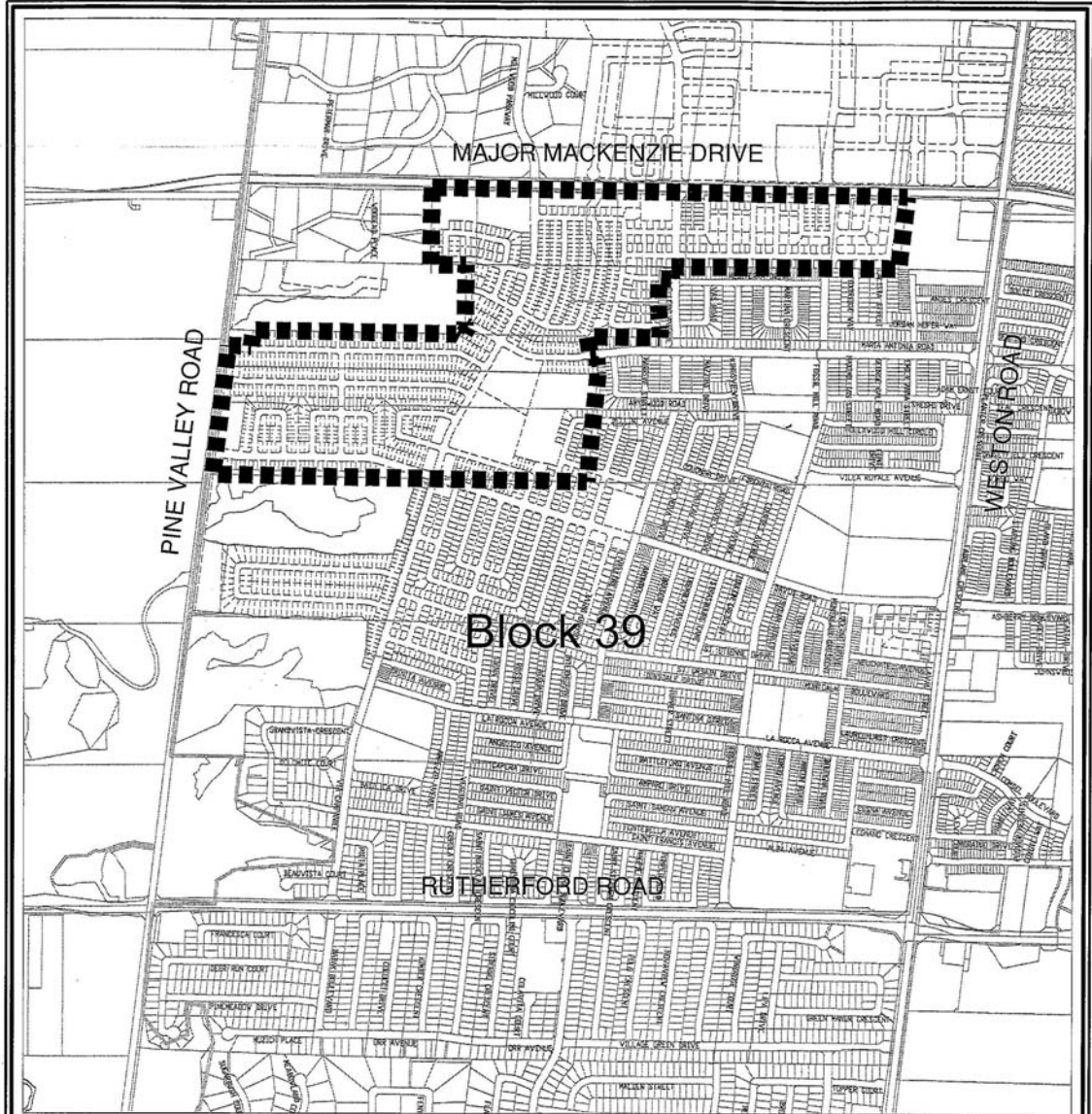
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Respectfully submitted,

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Commissioner of Engineering and Public Works

Michael Frieri, C.E.T.  
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# ATTACHMENT NO. 1



STUDY LOCATION: VELLORE VILLAGE

BLOCK 39

■■■■ Study Limits



N.T.S.