



**STAFF REPORT
ACTION REQUIRED**

**Re-Construction of a Retaining Wall – Turner Road
Flankage of Premises No. 29 Hillcrest Drive**

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| Date: | June 20, 2007 |
| To: | Budget Committee |
| From: | Executive Director, Technical Services General Manager, Transportation Services |
| Wards: | Ward 21 - (St. Paul's) |
| Reference Number: | p:\2007\ClusterB\tra\tim\bc07019tim |

SUMMARY

The purpose of this report is to provide an update on the condition of a deteriorating retaining wall along the flankage of Premises No. 29 Hillcrest Drive, located in Ward 21 (St. Paul's), and to request authority to reallocate funding from within approved divisional Transportation Services targets in order to facilitate its reconstruction, which is of an urgent nature and, correspondingly, to award the necessary work.

RECOMMENDATIONS

The Executive Director of Technical Services and the General Manager of Transportation Services recommend that:

- (1) the City proceed with the slope stabilization, remediation and reconstruction of a retaining wall located on the Turner Road flankage of Premises No. 29 Hillcrest Drive, at an estimated cost of \$498,390.18;
- (2) cash flow funding in the amount of \$378,390.18 be accelerated from within approved 2007 Transportation Services debt targets and reduced by an equal amount from another approved 2007 Transportation Services program;
- (3) given the urgent nature of the work involved, that this report be considered for approval by City Council at its meeting of July 16, 2007; and
- (4) the appropriate City Officials be authorized and directed to take the necessary action to give effect thereto.

FINANCIAL IMPACT

Consistent with recent initiatives by Transportation Services to defer approved 2007 cash flow funding from various projects that, for a number of reasons, will be delayed, similar mechanisms are recommended to allow for the reconstruction of the retaining wall described herein. The Transportation Services Division will arrange through Finance staff the acceleration of an equivalent amount of cash flow funding to cover the cost of this work. This reallocation will not result in any changes to net debt target levels for 2007 or future years. For various reasons, including escalating prices and modified design approach, there is a considerable change in scope (\$378,390.18) from the initial estimated cost (\$120,000.00) from over two years ago.

The Deputy City Manager and Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

The Policy and Finance Committee, at its meeting of May 5, 2005, in considering a communication dated May 3, 2005 from the Toronto and East York Community Council pertaining to a deteriorated retaining wall at the above-noted property, deferred consideration of the matter to its July 7, 2005 meeting and requested the Acting General Manager, Transportation Services, to attempt to negotiate a settlement with the owners of Premises No. 29 Hillcrest Drive that would avoid litigation and also limit the City's exposure to liability (Clause 38 (j) of Report No. 5 of the Policy and Finance Committee).

At its meeting of July 7, 2005, the Policy and Finance Committee submitted the matter to City Council without recommendation, as the engineering assessment and discussions with the owner had not been completed, and requested the Acting General Manager, Transportation Services to submit a report on the matter directly to Council at its meeting of July 19, 2005 (Clause 40 of Report No. 7 of the Policy and Finance Committee).

At its meeting of July 19, 20, 21 and 26, 2005, City Council adopted staff recommendations contained in the July 18, 2005 report from the Acting General Manager, Transportation Services, to proceed with the slope stabilization and the construction of the retaining wall at an estimated cost of \$120,000.00.

ISSUE BACKGROUND

Premises No. 29 Hillcrest Road flanks the west side of Turner Road. The house and rear yard of the property are elevated approximately 3.0 to 3.7 metres above the level of the City sidewalk on Turner Road. There is a concrete "toe" wall, approximately 0.6 metres in height immediately back of the public sidewalk and serves to retain the land behind it to create a level sidewalk area. There is a considerable slope on the public portion of the

sodded area immediately behind the concrete “toe” wall containing some brush and small tree cover, up to the street-line located at the top of the embankment.

At the top of the embankment, extending partially into the street allowance (about 0.09 metres to 0.35 metres) and partially on the private property, is a deteriorating retaining wall. It is mainly composed of dry-laid stone, approximately 1.0 metres high and 0.6 metres wide, and extends from the rear of the house for approximately 25 metres to the rear lot line of the property. There is a further partial concrete block retaining wall behind the stone wall on private property. As far as City staff can ascertain, the retaining walls at the top of the slope were constructed primarily for the purpose of maintaining a level back yard and are not required for protection or support of any public facilities. By all indications, the stone wall was built some decades ago and there is no apparent reason or evidence to indicate that the City was involved, or approved, its original construction.

Structural engineers, retained by City staff, have identified a slope stability concern within the public right-of-way between the sidewalk and stone retaining wall located at the top of the embankment. The engineers did not identify any problems with the stability of the stone retaining wall itself. As a result of this engineering assessment, City staff have attempted to develop measures to rectify the slope stability concerns within public right-of-way. Several options were assessed and all essentially involved a re-grading of the embankment to reduce its slope, the installation of proper drainage system, and the replacement of the concrete “toe” wall located at the bottom of the embankment, immediately behind the sidewalk. Various construction methods and wall types were assessed, ranging in cost from \$120,000.00 to \$200,000.00.

As tender drawings were being prepared, it was discovered that there was an existing Bell duct bank located directly behind the proposed wall. Provisions were made in the contract to work around the duct bank resulting in increased costs to relocate the wall caissons. Other encumbrances also contributed to an increase in the original project estimate of \$120,000.00 including traffic controls, bonding costs, fencing and landscaping.

COMMENTS

A contract for the retaining wall with pre-cast panels was tendered in May 2006 and two bids were received. The bid prices were \$433,136.00 and \$465,589.10. The tender prices were higher than anticipated due to escalating costs throughout the entire construction sector and the complications due the presence of the Bell duct bank located directly behind the proposed wall. A decision was made to cancel the tender and review the options for this project in an effort to reduce the overall project cost.

The City’s structural consultant developed alternative wall designs and a more economical system, which involved the relocation of the Bell duct bank to a new alignment that would not impact the new wall construction, was selected as the preferred option. The engineering estimate for this preferred option was estimated to cost \$323,000.00. However, it was decided to issue a new tender package, reflecting this

preferred option, at a later date when market conditions were expected to be more favourable.

The project was re-tendered in May 2007 and four bids were received. Of the four bids received, one was declared informal by the Purchasing and Material Management Division. The remaining three formal bids varied in price from \$498,390.18 to \$546,960.00. After a detailed review of the bids and the current market conditions, it was concluded that another re-tender or possibly a redesign of the wall would not likely result in lower bid prices.

Given the concern with the stability of the embankment immediately behind the sidewalk within the public right-of-way adjacent to 29 Hillcrest Drive, as determined by the structural engineers retained by the City, it is recommended that the public right-of-way lands be re-graded as soon as possible to ensure public safety. This work should also include the installation of proper drainage and the replacement of the concrete “toe” wall located at the bottom of the embankment, immediately behind the sidewalk.

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