Review of Level Crossings and the Construction of Grade Separations in the City of Toronto

(City Council on August 1, 2, 3 and 4, 2000, adopted this Clause, without amendment.)

The Works Committee recommends:

(1) the adoption of the report dated May 31, 2000, from the Commissioner of Works and Emergency Services;

(2) that the level crossing of the CN Bala Subdivision south of Sheppard Avenue East between Provost Drive and Old Leslie Street be identified within the inventory of existing rail level crossings in the City of Toronto; and

(3) that priority be given to the construction of grade separations on rail lines which are serving all-day GO Transit rail service or are scheduled for upgrades to all-day GO service, and that the Commissioner of Works and Emergency Services be requested to investigate the potential to share the costs with GO Transit for these upgrades.

The Works Committee reports, for the information of Council, having requested the Commissioner of Works and Emergency Services to submit a report to the Committee on:

(i) the possibility of any financial contribution from the various railway companies; and

(ii) the frequency of trains and their impact on traffic.

The Works Committee submits the following report (May 31, 2000) from the Commissioner of Works and Emergency Services:

Purpose:

To respond to a request from the former Urban Environment and Development Committee on the issue of level crossings and grade separations in the new City of Toronto.

Financial Implications and Impact Statement:

There are no financial implications resulting from the adoption of this report.

Recommendation:

It is recommended that a program to construct high priority grade separations in the City of Toronto be considered as part of the City of Toronto’s response to the recently announced federal infrastructure program.
Background:

The former Urban Environment and Development Committee, at its meeting of July 13, 1998, in considering a communication dated June 1, 1998, requested that the General Manager of Transportation Services report on the issue of level crossings and grade separations in the new City of Toronto, particularly the locations of all level crossings in Toronto, the financial formulas to be used for the construction of grade separations, the contributions of benefitting developers/industries, and the status of the Strachan Avenue level crossing (Clause No. 24 of Report No. 9).

Comments:

Railway level crossings and the need for grade separations throughout the City of Toronto are reassessed on an ongoing basis due to changing patterns of railway and vehicular movements and the corresponding need for additional crossing protection. Factors typically considered in the determination of need for grade separations include traffic safety, congestion, future growth, capital spending priorities, and the availability of financial assistance from other levels of government. Prior to amalgamation, the seven former municipalities approached the issue of separating road and rail grades at level crossings from a number of perspectives as set out below.

Metropolitan Toronto:

Former Metro Transportation, with its regional mandate and focus on arterial roads, proactively pursued the issue of grade separations for a number of years in light of ongoing service upgrades on major rail lines and increases in traffic volumes on arterial roads. In the mid-eighties, during the adoption of new National Transportation Agency (N.T.A.) guidelines, the federal government withdrew funding support for grade separations.

In revisiting Metropolitan Toronto’s Rail Grade Separation Program in 1992, Metro Council petitioned the Ministry of Transportation of Ontario to provide a special subsidy for necessary grade separations on the CN Bala and Uxbridge Subdivisions. The Minister subsequently denied the special funding request for grade separations due to financial constraints and suggested that funding for any projects be through established subsidy arrangements. These established arrangements subsequently were eliminated and no formal program currently exists for contributions by senior levels of government to fund grade separations.

City of Toronto:

The Council of the former City of Toronto endorsed from time to time a policy report advanced by the Commissioner of Public Works on bridges and underpasses. Progress Report No. 4 on City of Toronto Bridges and Underpasses, which was approved by City Council on March 23 and 24, 1992, noted that the protection afforded to existing crossings was adequate and that no new grade crossings were required at the time or in
the near future. This conclusion was based on an assessment of safety record, delay time to local traffic, current land use, contemplated future changes affecting vehicular and pedestrian traffic and the continuing annual cost to the City for its share of operating and maintaining the crossings.

City of York:

As far as staff can ascertain, there were no formal policies in effect relating to programming or funding grade separations in the former City of York.

Borough of East York:

The Council of the former Borough of East York endorsed Metropolitan Toronto’s Rail Grade Separation Program. Apart from this endorsement and several requests to Metro to advance the construction of grade separations in East York, it would appear that there were no formal policies in effect relating to programming or funding grade separations.

City of Etobicoke:

Staff of the former City of Etobicoke recognised the need for grade separations and carried out a number of feasibility and preliminary engineering studies in the early eighties, namely along the Canpa Subdivision crossing Evans Avenue and Horner Avenue. In addition, staff have been taking a site specific approach on priorities through technical analysis and area redevelopment. The Council of the former City of Etobicoke endorsed the construction of an underpass at the North Queen/CPR Level crossing west of Kipling Avenue under the Ontario Strategic Transportation Improvement Program in 1995 and work was completed in 1996.

City of North York:

As far as staff can ascertain, there were no formal policies in effect relating to programming or funding grade separations in the former City of North York.

City of Scarborough:

Staff of the former City of Scarborough recognised the need for grade separations at a number of locations through ongoing analysis, identified priorities and acknowledged the need for additional funding. The Council of the former City of Scarborough, in considering a staff report dated December 9, 1996, respecting priorities for future grade separations, recommended that staff monitor the progress of Bill C-43: Proposed Amendments to the Railway Safety Act through communication with Transport Canada and the Federation of Canadian Municipalities with respect to potential legislative and financial impacts on the City of Scarborough. At the time, staff identified four locations where grade separations were warranted. Funding for these projects has not been made available to date.
Inventory of Level Crossings:

In the context of the amalgamated city, there are roughly 44 level mainline crossings currently in operation, as shown on Table 1, attached. Rail spur lines are included but are not priorities for grade separations as train volumes are insignificant. The list also shows related information such as the rail subdivision name, road classification and exposure index. The exposure index is the average annual daily traffic (AADT) multiplied by the number of trains passing per day, and has been traditionally used on a municipal, provincial and federal level to assist in setting priorities for grade separations. Transport Canada typically indicates that a grade separation should be considered when the exposure index for a grade crossing exceeds 200,000. For the information of the Committee, 11 existing crossings currently have an exposure index exceeding this threshold.

Funding:

Since the withdrawal of dedicated federal funding in the late eighties, grade separation projects have been implemented on a site specific basis and cost sharing arrangements negotiated where possible. In the last ten years, only one grade separation has been constructed within the City of Toronto – the North Queen Street/CP underpass identified above. This underpass was built by the former City of Etobicoke at a cost of about $8 million that was cost shared between the local, provincial and federal government. Future infrastructure programs have the potential to be the vehicle to accelerate a grade separation program in the new City.

The Transportation Services Division’s preliminary projection of capital works for the period 2000-2009 includes a proposed grade separation at the Finch Avenue East/CN Uxbridge crossing, at an estimated cost of $22 million for commencement in 2003, and at the Steeles Avenue/CN Uxbridge crossing, at an estimated cost of $15.4 million, for the years 2003-2005.

There are no currently established financial formulas for the funding of grade separations as each situation is unique, with costs varying from approximately $5 to $20 million, depending on functional requirements and local conditions. However, on the basis of detailed assessment and design work carried out over the past five years at a number of locations, the total cost of grade separating all 44 active crossings would be in the order of $400-$500 million.

Having regard to the considerable costs associated with the construction of grade separations, staff have been endeavouring to secure cost sharing arrangements with developers of abutting or nearby properties where growth may warrant separations. Moreover, a number of grade separation projects have been identified as increased service needs in the Development Charge Background Study with implementation targeted towards the 2004-2011 time frame. Unfortunately, despite the inclusion of cost sharing obligations in the Development Charges By-law and site specific development agreements, the substantial capital costs involved may prohibit construction of these facilities in the absence of sustained funding from other levels of government. It should be noted that recent amendments to the federal Railway Safety Act did not address the provision of additional funding for rail grade separations.
In the context of the recently announced federal infrastructure program, staff are investigating the potential of including the funding of some high priority grade separations as part of a City of Toronto response.

Status of the Strachan Avenue Level Crossing:

The former City of Toronto has previously identified the need to grade separate the Strachan Avenue level crossing should redevelopment in the immediate area proceed to the extent that incremental traffic volumes on Strachan Avenue increase the exposure index to an unacceptable level. Specifically, as recently as 1986, during the review of the redevelopment of the former Massey-Ferguson/King Business Centre Lands north of the rail corridor, both the City and developer agreed that given the nature of development contemplated and associated anticipated traffic volumes, a grade separation at the CNR/CPR rail corridor was required prior to proceeding with the second phase of development. At that time, although detailed design had not proceeded, it was originally expected that the grade separation would be a bridge and its cost, estimated in the order of $15 million, would be shared between the City and developer in portions of 25 percent and 75 percent, respectively.

The economic downturn of the late eighties and early nineties had a considerable impact on the pace of redevelopment in the Massey-Ferguson/King Business Centre Lands and the site was sold well in advance of reaching the second stage of development. Subsequently, development plans were revised significantly and the grade separation no longer required.

The need for and configuration of the Strachan Avenue grade separation has been recently tabled within the context of the redevelopment of lands to the south of the rail corridor and discussions have again commenced between City staff and the developers. The future of this crossing will largely depend on adjacent development, the Front Street Extension, plans for the Gardiner Expressway and, most importantly, approved funding.

Conclusions:

This report provides an overview of the status of level rail crossings in the City of Toronto.

Given the City’s state of good repair needs, the viability of embarking upon a proactive program of grade separations at this time on a city-wide basis is unlikely without a sustained funding commitment on the part of City Council and senior levels of government. In the short term, staff will continue to evaluate the need for grade separations at site specific locations with implementation through the annual capital program. In addition, staff will explore alternate funding scenarios through private development initiatives and ongoing discussions with railway companies and senior levels of government, including the recently announced federal infrastructure program.
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List of Attachments:

Table 1 - Existing Rail Level Crossings in the City of Toronto
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