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<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON FEBRUARY 25, 2013</b>
<b>FROM:</b>	<b>EDWARD SOLDO, P. ENG. DIRECTOR, ROADS &amp; TRANSPORTATION</b>
<b>SUBJECT:</b>	<b>RAILWAY PEDESTRIAN CROSSING SAFETY</b>

<b>RECOMMENDATION</b>
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That, on the recommendation of the Director, Roads and Transportation:

- a) The Railway Pedestrian Crossing Safety report **BE RECEIVED** for information; and
- b) Civic Administration **BE AUTHORIZED** to undertake a Railway Pedestrian Crossing Assessment study to determine the appropriate pedestrian focused solutions at railway crossings.

<b>BACKGROUND</b>
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**PURPOSE:**

The purpose of this report is to provide Committee and Council with an update on the status of a number of railway safety related initiatives in London.

The City of London is serviced by a network of railway lines that move freight and passengers. The network is comprised of railway owned by Canadian National Railway (CNR), Canadian Pacific Railway (CPR) and Goderich-Exeter Railway (GEXR). The railways are crucial to the economic prosperity of London and Southwestern Ontario as they provide a reliable and affordable way to transport goods.

<b>DISCUSSION</b>
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On December 1<sup>st</sup> 2012, a fatality occurred at the Canadian Pacific Railway (CPR) level crossing at Third Street north of Dundas Street. The fatality occurred when the young pedestrian crossed the path of the oncoming CPR train, at the time of the incident the roadway gates were down and the flashing lights and bell were operating.

At the Strategic Priorities and Policy Committee meeting, as part of the operating budget discussions, staff was asked to report back on any potential engineering measures and associated capital/operating costs related to this incident prior to the finalization of the 2013 budget process.

**SAFETY REVIEWS**

In 2007, a review was completed by the City, Transport Canada, Canadian National Railway, Canadian Pacific Railway and Goderich-Exeter Railway of all railway crossings in the City of London. The review looked at signage, pavement markings, vegetation, fencing and other issues. The City completed all of the recommended changes that were within its control (e.g. signage, pavement markings and some vegetation).

The CPR level crossing on Third Street was part of this review and the recommendations did not identify any specific issues with the crossing. The review did include a general recommendation that painted stop bars similar to those used on the road be located on all

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sidewalks as they approach a railway crossing. The stop bar provides a visual clue for pedestrians to not proceed further until the train has passed and the signals stop.

#### **TRANSPORTATION SAFETY BOARD INVESTIGATION**

The Transportation Safety Board of Canada (TSB) reviews incidents involving train collisions with vehicles and pedestrians. The TSB initiated an investigation of the train/pedestrian collision at the CPR/Third Street crossing. The City met with the TSB and Transport Canada on December 13<sup>th</sup> 2012 to review this incident and to provide any information that the TSB investigators needed. At the meeting, the Transport Canada representative stated that the CPR/Third Street crossing met all of their safety requirements and noted that the crossing included a constant warning system which adjusts the time that gates/signals are activated based on the speed of the approaching train so that the gates and signals are not activated until the train is near the crossing. It was also noted that school children living north of the CPR track on Third Street and south of the GEXR track are taken to school by bus.

The TSB have not completed their investigation and a tentative completion date is not known. Preliminary discussions have focused on the need for additional railway safety education for students.

#### **RAILWAY SAFETY EDUCATION**

Education is an important component in order to reduce/eliminate railway incidents. Operation Lifesaver is a national public awareness program aimed at reducing railway-related incidents. The Railway Association of Canada and Transport Canada operate the Operation Lifesaver ([www.operationlifesaver.ca](http://www.operationlifesaver.ca)) program. The program works in cooperation with the Canada Safety Council, provincial safety agencies, unions, police, public and community groups. Operation Lifesaver uses education, engineering and enforcement to prevent rail collisions and to prevent trespassing incidents that can lead to serious injury or death. Emphasis is placed on dangerous behaviour such as trespassing on railway property or disobeying railway signs and signals.

To achieve this, Operation Lifesaver provides material to the railway companies so that they can educate drivers and pedestrians about railway crossing safety. CPR has identified 40 elementary schools and – 7 secondary schools in London where a railway safety program will be offered. The elementary school target audiences are the Grades 5 to 8 students and the education program will involve presentations. The secondary school education program will involve school announcements. CPR expects to complete the above education program by the end of 2013.

CPR Police are also involved with the London Police “Racing Against Drugs” program which has a railway safety component. This program was offered to Grade 5-6 students the week of February 4<sup>th</sup>.

The last week in April each year is National Railway Safety Week where the railways will be conducting a number of safety initiatives to highlight the importance of railway safety and the risks of trespassing on railway tracks.

#### **WHISTLE CESSATION**

Train whistling requirements are set out in the Canadian Rail Operating Rules, which state that trains must whistle as they pass through public and pedestrian crossings at grade. There are provisions in the *Railway Safety Act*, 2001, for eliminating the use of train whistling at a crossing at the request of a municipality. Equipment that meets specific safety standards, including adequate warning systems, must be put in place to compensate for the elimination of whistling.

Municipal Council has passed several by-laws to regulate the use of train whistles in the urban areas in conformity with Transport Canada guidelines. The oldest by-law still in force is dated September 3<sup>rd</sup>, 1963 and includes the CPR/Third Street crossing. One safety option to consider is the repeal of those by-laws at all or some locations so that train crews would announce their approach to a crossing.

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## **ENGINEERING MEASURES**

As part of the 2007 review, the signage and pavement markings were brought up to standard including "2<sup>nd</sup> Train" warning signs for multiple tracks and sidewalk stop bars throughout the City.

In 2009, pedestrian gates were installed on Richmond Street at the CPR crossing at a cost of \$200,000 including the necessary fencing to prevent access around the gate. The crossing is the only location in London that has full pedestrian gates. The City's share of this work was \$25,000 (12.5%) with the balance of the funds coming from CPR (7.5%) and 80% from Transport Canada as a result of a funding application submitted in 2004.

It should be noted that pedestrians continue to climb over or around the gates and a train/pedestrian collision occurred at the CPR/Richmond Street crossing after the pedestrian gates were installed. CPR has an active trespass enforcement program in the London area that does specifically target the CPR tracks in the Richmond Street area.

## **RAILWAY PEDESTRIAN CROSSING ASSESSMENT**

The City currently does not have any funding in the 2013 budget for the implementation of any engineering solutions at railways crossings.

In response to the City's request, CPR provided a cost estimate for the installation of the pedestrian gates at the Third Street railway crossing. The installation would cost approximately \$210,000 plus an annual operating/maintenance fee of \$8,000. A City wide approach at all locations would cost approximately \$10,000,000 plus annual operating costs of \$350,000.

The maximum funding from Transport Canada is now 50% and CPR stated that they would expect to split the remaining work equally. Transport Canada funds for 2013 are all committed and CPR have stated that they need approximately 18 months after funding is approved to prepare a design and order the materials before construction can begin.

The challenge of providing safe crossing control and warning for pedestrians is particularly complex, especially for children, persons with mobility impairments (who may require specific facility features) and senior citizens (who may require additional time for crossing).

In order to determine the appropriate pedestrian focused solution that reduces the risk of incidents at railway grade crossing, it is recommended that a prioritization process based on objective data about each location's pedestrian risks be completed. A Railway Pedestrian Crossing Assessment would develop solutions that may include engineering solutions and/or education strategies to change specific behaviours.

The prioritization process would assess the risks; identify potential solutions and financial implications. Solutions could range from:

- Marked pedestrian pathways
- Treatment of the pavement approaches
- Signs for pedestrians (route and information signing)
- Slow down devices such as swing gates and maze barriers
- Pedestrian signals (additional warning lights and/or pedestrian gates)
- Guide fencing

The financial implications of the Railway Pedestrian Crossing Assessment should be reviewed in the context of the overall transportation infrastructure system to prioritize expenditures based on the overall value, risk mitigation and social benefit.

The London 2030 Transportation Master Plan identifies a number of lifecycle, growth and service enhancement needs to meet the goals and objectives of a sustainable transportation system.

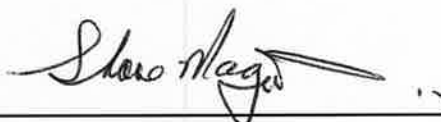

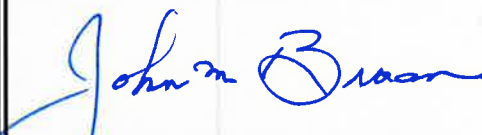
A TMP implementation strategy is currently being developed that will identify the gap in capital and operating budget funding along with an approach to optimize the level of investment in transportation infrastructure. The strategy will provide a road map for the delivery of the roadway expansions, Bus Rapid Transit, bridges/culverts rehabilitation, railway grade

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separations, cycling infrastructure, TDM program, traffic signals, street lighting, road reconstruction, traffic calming, noise walls and roadway/railway safety improvements.

It is recommended that the Railway Pedestrian Crossing Assessment be undertaken to provide a holistic and comprehensive review of the needs, analyze risk levels, develop appropriate pedestrian focused solutions and prioritize the improvements from a broader transportation system perspective in terms of relative value.

The funding for the Railway Pedestrian Crossing Assessment study (approximately \$30 k) will be accommodated from the Miscellaneous Traffic Studies account that is used to undertake similar initiatives such as the London Road Safety Strategy.

<b>PREPARED BY:</b>	<b>RECOMMENDED BY:</b>
	
<b>SHANE MAGUIRE, P. ENG. DIVISION MANAGER ROADWAY LIGHTING &amp; TRAFFIC CONTROL</b>	<b>EDWARD SOLDO, P.ENG. DIRECTOR, ROADS AND TRANSPORTATION</b>
<b>REVIEWED &amp; CONCURRED BY:</b>	
	
<b>JOHN BRAAM, P.ENG. MANAGING DIRECTOR ENVIRONMENTAL &amp; ENGINEERING SERVICES AND CITY ENGINEER</b>	

January 16, 2013  
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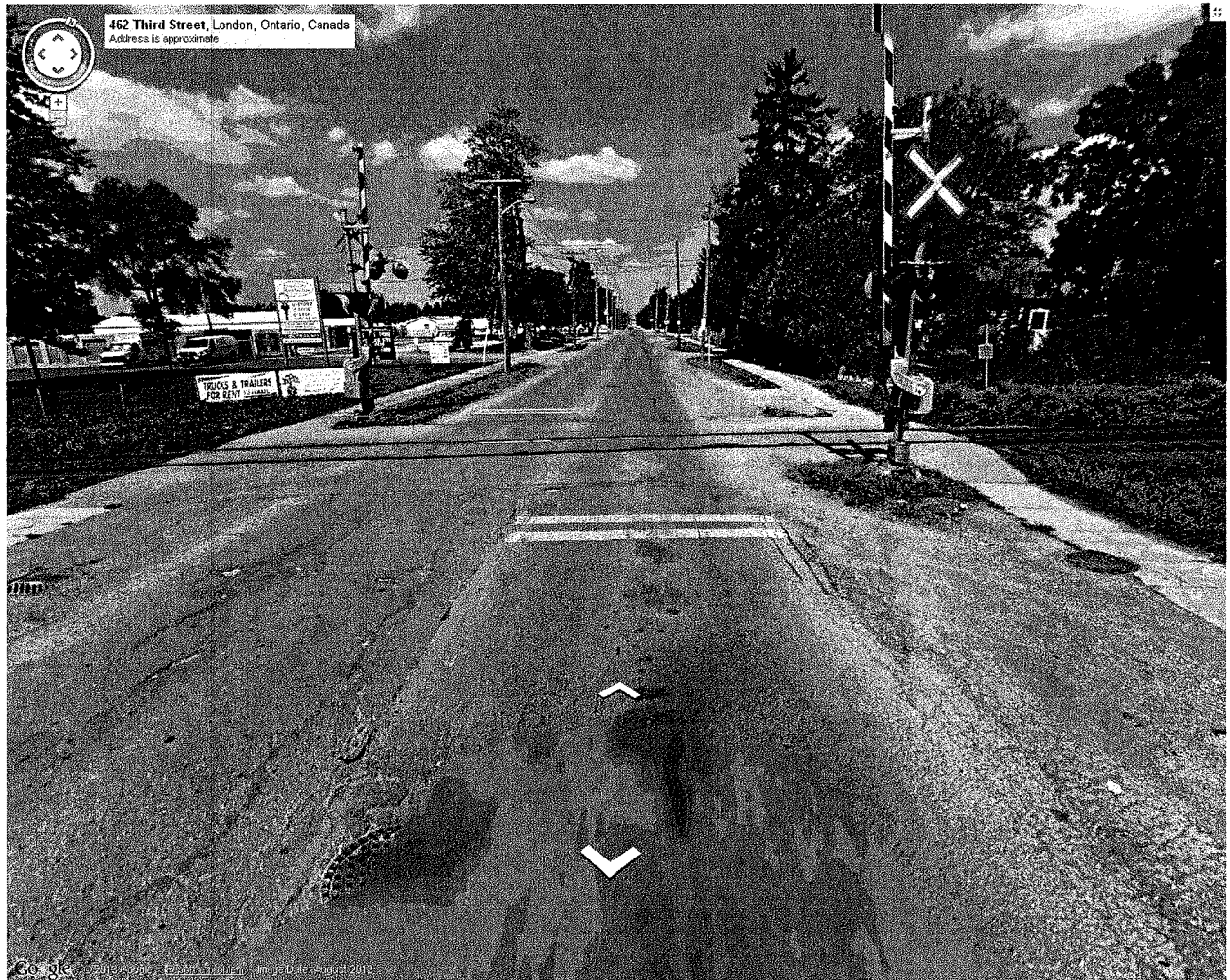
Attach: Appendix "A" – Railway Crossing Photographs

c.c. Randy Marsh, Manager, Community Relations, Canadian Pacific Railway

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**Appendix "A"**  
**CPR/Third Street Crossing Photographs**



**Figure 1 - Third Street looking north**



**Figure 2 - Third Street sidewalk looking north**

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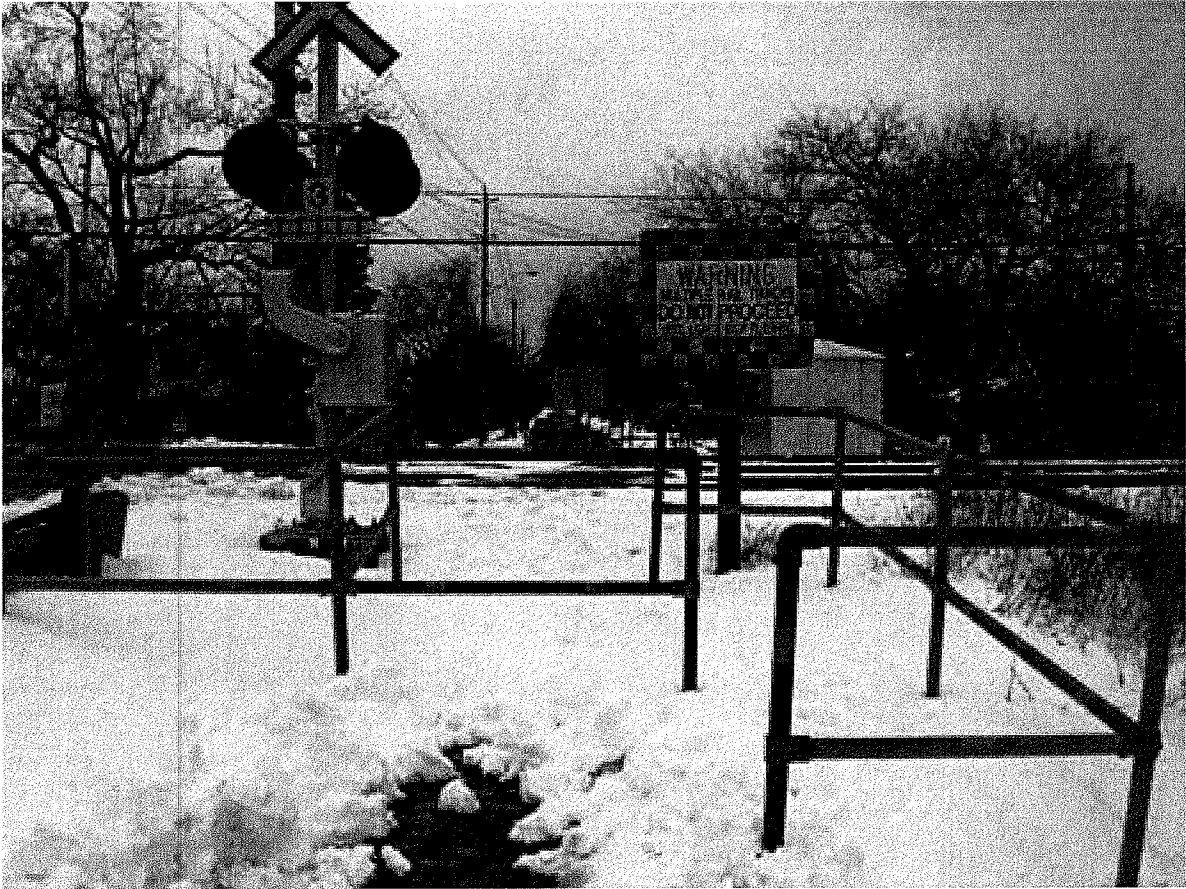
**Figure 3 - Third Street sidewalk looking south**



**Figure 4 - Pedestrian gate installation**

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**Figure 5 - Pedestrian maze installation**