



Building Markham's Future Together
Journey to Excellence

Anti-Whistling on Stouffville GO Line in the City of Markham

Project Update

Development Services Committee
September 22, 2015

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Train Whistling at Public Grade Crossings

- Train whistling is an important way to keep drivers, cyclists and pedestrian safe. In some cases, these whistle can be bothersome to people living nearby and municipalities may wish to end the whistling to provide local residents with relief from the noise. (Source: *Transport Canada website: <https://www.tc.gc.ca/eng/railsafety/railsafety-976.html>*)
- The Canadian Rail Operating Rules (CROR) is a set of operating rules for railways in Canada pursuant to the *Rail Safety Act, 1985*. The CROR require all trains to whistle whenever they approach a public grade crossing.

Elimination of Train Whistling under the Act

- The CROR has a provision for the elimination of train whistle.
- The “Procedure for Eliminating Whistling At Public Grade Crossings” is a 8-step process that is consistent with the requirements of section 23.1 of *Railway Safety Act*, section 104 of the new *Grade Crossing Regulations* (GCR) which came into effect on November 27, 2014, and Appendix D of the *Grade Crossing Standards*. The GCR (2014) supersedes Transport Canada’s Guideline No. 1: *Procedure & Conditions for Eliminating Whistling at Public Crossings*, and the Metrolinx’s Guidelines for Whistle Cessation.
- Metrolinx follows the federal-regulated Procedure although it is not a federally-regulated railway. It is regulated by the Ontario Minister of Transportation.

Elimination of Train Whistling under the Act (cont'd)

- Whistling elimination is limited to whistling at the public crossings. There are other situations under Section 14 of CROR that require the whistle to be sounded, e.g. alarm for persons or animals on or near the track
- The ringing of the Engine Bell (CROR Section 13) is not part of the elimination of train whistling
- Metrolinx has advised that whistles are sounded in municipalities where elimination of train whistling is implemented, based on the train engineers' sole discretion
- The CN Bala Subdivision (Richmond Hill GO) currently has an anti-whistling bylaw, and whistles are not sounded at Green Lane and Langstaff Road
- The CN York Subdivision has train whistling at the 14th Avenue crossing

8-Step Procedure for Elimination of Train Whistling

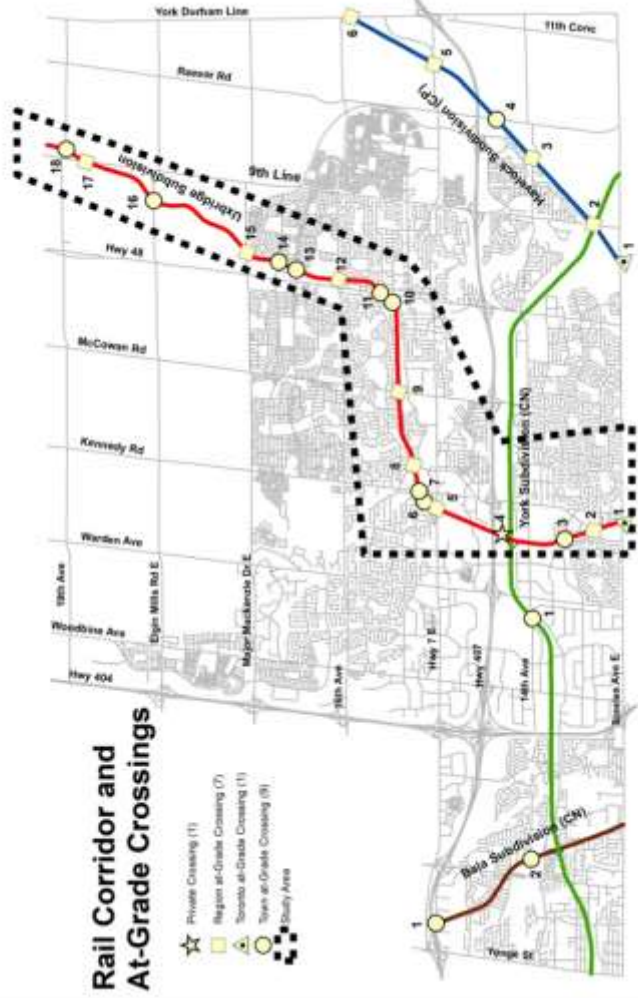
- **Step 1** – Interest for whistling cessation is expressed - **completed**
- **Step 2** – Municipality consults with railway company - **completed**
- **Step 3** – Municipality issues notification and public notice
- **Step 4** – Municipality and railway assess the crossing(s) against the prescribed requirements in the *Grade Crossing Regulations* and *Grade Crossing Standards* – **substantially completed**
- **Step 5** – Municipality and railway agree that the crossing(s) meets the prescribed requirements of the *Grade Crossing Regulations* and *Standards* - **underway**
- **Step 6** – Municipality passes a resolution declaring that it agrees that whistles should not be used in that area, thereby prohibiting train whistling
- **Step 7** – Railway company notifies Transport Canada and informs the municipality within 30 days that it has arranged to have whistling ceased at the crossing(s)
- **Step 8** – Municipality and railway share the responsibility for monitoring and maintaining the conditions that support the cessation of train whistling at the crossing(s).

No. of Public Crossing: 17

York Region: 7
City of Markham: 9
City of Toronto: 1

No. of Private Crossing: 1
(at location #4)

Background Uxbridge Train Line



Future Service Plans for the Stouffville Line

- Stouffville Corridor Rail Service Expansion Class EA (16 km improvement from Scarborough Junction to Unionville GO station) – **completed**
- Regional Express Rail (RER) study is underway to provide electrified service with 2-way, 15-minute service from Union to Unionville, and 20-minute service from Union to Lincolnville. This is part of the Province \$16 billion investment over the next 10 years for transit projects in the GTHA.

Future Service Plans for the Stouffville Line (cont'd)

- As part of RER, Metrolinx is undertaking a number of network-wide studies:
 - Rail/road grade separation
 - Electrification EAs
 - Electric Equipment Study
 - Future station locations
- City of Toronto is undertaking an addendum to the Steeles Avenue Grade Separation Class Environmental Assessment, and will be followed up with the design. Metrolinx and York Region are also funding the EA.

Future Service Plans for the Stouffville Line (cont'd)



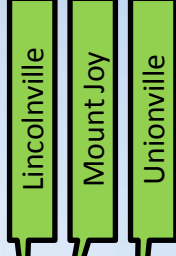
Weekday rush hour

- 15-minute, two-way service between Unionville and Union Station
- 20-minute service from Lincolnville to Union Station in the morning and from Union Station to Lincolnville in the afternoon/evening



Midday, evening and weekend

- 15-minute, two-way service between Unionville and Union Station
- 60-minute, two-way service between Mount Joy and Union Station



Regional Express Rail (RER)

Source: Metrolinx

Average times between trains are shown. Actual times may be shorter or longer depending on location and departure time.

Crossing Safety Assessment by AECOM

- AECOM was retained by the City of Markham to review the safety of the crossings with respect to *Grade Crossing Regulations* for elimination of train whistling. The scope of work is to identify conditions that require mitigation for elimination of train whistling. The assessment is based on the requirements stipulated in the *GCR* and the *Grade Crossing Standards* (July 2014).
- AECOM also made certain recommendations above and beyond the *GCR* and *Grade Crossing Standards* because of Metrolinx's and industry best practices.

Crossing Safety Assessment by AECOM (cont'd)

- The AECOM Assessment report was substantially completed in August 2015, and it identifies mitigations are required due to:
 - ❑ The change in the regulations
 - ❑ The implementation of anti-whistling
- Under the new *Grade Crossing Regulations*, the timing for implementation is:
 - ❑ New crossings or major changes to existing crossings need to comply with new Regulations
 - ❑ Existing crossings have to comply with new Regulations within 7 years.
- Staff requires further discussions with Metrolinx on the extent and cost sharing of these mitigations.

Crossing Safety Assessment by AECOM (cont'd)

- Pedestrian safety at grade crossings and trespassing along the line are important issues.
- There is a range of safety measures that can be implemented from full grade separation, physical barriers, warning system, etc.
- The new Grade Crossing Standards specify what minimum pedestrian safety features are required.
- There are two common types of pedestrian barriers:
 - Automatic pedestrian arm gate
 - Maze gate (or "Z" gates)

Crossing Safety Assessment by AECOM (cont'd)

- Automatic Pedestrian Lights, Bells, and Gates: currently used at Main Street Markham, recommended in the Safety Assessment for McCowan Road and Eureka Street
- Estimated cost: \$200,000 each (generally requires 2 per crossing, i.e. total = \$400,000 per crossing)
- City costs = \$400,000 (Eureka Street)



Crossing Safety Assessment by AECOM (cont'd)

- Maze Gates: currently used at Bur Oak Avenue, Castlemore Avenue
- Recommended in the Safety Assessment for all crossings where there are no exiting or recommended automatic pedestrian arm gates
- Estimated cost: \$10,000 each (generally requires 4 per crossings, i.e. total cost = \$40,000 per crossing)
- City costs = \$160,000



Issues to consider for Anti-whistling

- Existing and Future train traffic on rail line
- Existing and Future Noise impact to residents living nearby
- Safety, risk and liability – see presentation by the City's insurance broker, *Jardine Lloyd Thompson*
- Liability Insurance Agreement with Metrolinx and York Region
- City's share of the Capital costs to mitigate conditions identified in the AECOM cost estimate, and ongoing operating & maintenance costs

Issues to consider for Anti-whistling (cont'd)

- York Region's Anti-Whistling Policy for Trains at Road/Rail Crossings, February 2008 and updated 2009 – the current Regional policy provides for night-time anti-whistling only (10:00 pm to 6:00 am). The residents are requesting anti-whistling for all trains.
- The Region's policy states that it will entertain anti-whistling by-laws from the local municipalities with different hours of restrictions
- As per the Regional policy, Region is responsible for the costs of pedestrian gates/Maze gates if there are pedestrians in the area of the crossing, and for the risk and liability at train crossings on Regional roads (7)
- City is responsible for the cost of all mitigations measures, and the risk and liability at train crossings on City roads (9)

Cost to Upgrade Grade Crossings

- As a separate exercise from the AECOM safety audit, AECOM also provided a cost estimate on what safety upgrades are required.
- The safety upgrades can be divided into two categories:
 - ❑ Minimum upgrades required by the Grade Crossing Regulations and Grade Crossing Standards
 - ❑ Upgrades recommended by AECOM based on Metrolinx and industry best practices for anti-whistling

Cost to Upgrade Grade Crossings (cont'd)

- In a previous report to DSC dated December 6, 2011, AECOM estimated to implement anti-whistling measures for the 13 crossings in the urban area is \$3.96 million which included design/construction fees, Metrolinx fees and crossing improvements.
- The previous estimate did not include Elgin Mills Road, 9th Line and 19th Avenue which are outside the urban boundary.
- The current estimate includes 14 crossings (6 Regional, 7 City and 1 City of Toronto), i.e. Elgin Mills Road, 9th Line and 19th Avenue are not included as they are in rural area.
- The current estimate does not include design/construction fees, Metrolinx fees and contingencies. Staff estimated this component will be about 30% of the construction estimate

Cost to Upgrade Grade Crossings (cont'd)

- Property impact and costs cannot be confirmed until detailed design is completed.
- Current Estimate (including 30% soft costs but no property costs) for 14 crossings are;
 - ❑ Markham = \$1.56 million (7 crossings) → \$3.2 million
 - ❑ Region = \$0.98 million (6 crossings) → \$2.0 million
 - ❑ Toronto = N/A (1 crossing) → Grade separation
 - ❑ TOTAL = \$2.54 million → \$5.2 million - depending on finalizing works and costs
- The difference in the previous cost estimate and current cost estimate is due to the use of the maze gates rather than pedestrian lights, bells and gates at certain crossings as recommended in the previous estimate.

Cost to Upgrade Grade Crossings (cont'd)

- The following items are required in order to fully understand the financial impact to the City:
 - What upgrades are associated with whistling cessation only
 - Clarification with the Region regarding the night time anti-whistling policy
 - York Region financial commitment
 - What upgrades will Metrolinx be responsible for as part of the RER initiative
 - The Safety Assessment identified certain rail crossing control boxes (bungalows) impact the sight line but no cost estimate was provided to rectify this issue. Responsibility of improvements (road authority vs. rail authority) needs to be confirmed
 - Costs and responsibility of anti-whistling works between Markham, York Region and Metrolinx
 - Potential insurance premium increase

Experience from other Ontario Municipalities

- Whistle Cessation implemented on certain lines/crossings
 - ❑ City of Markham (Richmond Hill Line), City of Barrie, City of Brampton, City of Milton, City of Ottawa, Town of Richmond Hill, City of Toronto, City of Brockville (previously 24 hour but reduced to 10 PM to 6 AM after an accident), Town of Whitchurch-Stouffville, Town of Ingersoll, City of Vaughan,
- Municipalities that did not Support Whistle Cessation
 - ❑ City of Vaughan (no new crossings until investigation of Ottawa incident is completed), Town of Bradford West Gwillimbury, City of Clarington, Township of Cramahe, Town of Innisfil, Town of Aurora, Town of Newmarket
- Whistle Cessation under Investigation
 - ❑ City of Markham (Stouffville Line), Town of Whitchurch-Stouffville, Town of Ingersoll, City of Bradford, City of Kingston, City of St. Catharines.
- City of Ottawa incident (VIA Rail and transit bus collision), September 2013
 - ❑ Waiting for Transportation Safety Board (TSB) investigation report.

Anti-Whistling By-laws & Associated Liability

presented to

City of Markham

September 22, 2015

Distinctive. Choice.



Introductions

- **Barbra Anne Vaspori**
 - Vice President, Account Executive, Public Sector
 - 25+ years specializing in Municipal Insurance and Risk Management

Introduction to Jardine Lloyd Thompson

- Globally, JLT Group is one of the largest independent broking and Employee Benefits companies in the world
- JLT Canada has been insuring municipalities for over 40 years
- We currently insure over 300 municipalities across Canada with over 200 of these in Ontario
- City of Markham has been insured through JLT's Municipal program since January, 2010
- Part of this insurance program includes Liability Insurance with limits of \$50 million per occurrence
- The City carries a \$100,000 deductible, which means it self-insures the first \$100,000 of each claim (including defence expenses)

Examples of Recent Serious Incidents at Rail Crossings

- *City of Brockville 2005*
 - Two elementary school girls were struck by a train while crossing the tracks as pedestrians resulting in the death of one and serious injury to the other
 - The girls stepped into the path of an eastward train after the passage of a westward train
 - The roadway gates were down, flashing lights and bell was operating
 - There were no pedestrian gates
 - Anti-Whistling by-law was in effect within Brockville City limits

Examples of Recent Serious Incidents at Rail Crossings

- *City of Brockville 2005*
 - Transportation Safety Board of Canada has issued a Railway Investigation Report
 - Findings “the removal of the....whistle...without consideration of the danger to pedestrian traffic on adjacent sidewalks...decrease the level of safety afforded to the pedestrians”
 - Safety Advisories (1) addressed identification of high-risk locations and the implementation of enhanced pedestrian crossing protection; (2) addressed obstructed sightlines

Examples of Recent Serious Incidents at Rail Crossings

- *City of Brockville 2005*
 - *Coroner's Inquest resulted in 19 recommendations dealing with pedestrian safety at railway crossings, including:*
 - *Pedestrian gates & railway fencing*
 - *Posting of crossing guards in school zones*
 - *Police patrolling of rail lines*
 - *Signs posted stating that whistle bans are in effect*
 - *Stop lines painted on sidewalks*
 - *Safety/education events for school-age children*
 - **Safety Board – Action Required: Assess the risk to pedestrians at all multi-track main-line crossings and implement a program to mitigate risk**

Examples of Recent Serious Incidents at Rail Crossings

- *City of Ottawa 2013*
 - Via Rail train collided with Ottawa City bus
 - Six people were killed with dozens of others injured
 - Signal lights were flashing and vehicle crossing gates were down
 - City by-law restricted whistles and horns between the hours of 22:00 and 12:00
 - The crash occurred at 8:45 a.m.

This incident is still under investigation by the Transportation Safety Board of Canada.

Serious Incidents at Rail Crossings

- There are many other examples of serious incidents that have occurred at rail crossings.
- Incidents lead to claims
- The quantum of such a claim is huge when an individual is killed or severely injured and could result in a multi-million dollar settlement
- Defending claims, alone, even if there is no finding of liability against the City or Rail Authority, could result in hundreds of thousands of dollars in legal/investigation fees

Liability Implications (By-law vs. none)

No By-law

- The Rail Authority would be responsible for any claims involving the rail crossing.
- It would be difficult to bring the City into a civil action for liability due to a crash involving a train or rail crossing on a municipal road.

Anti-Whistling By-law

- The City would sign an agreement with the Rail Authority that would require the City to assume certain liabilities of the Rail Authority should an accident result (indemnity clause) due to the whistle cessation.
- The City will be liable for a train crash on a municipal road, if it was determined it could have been avoided or limited had train whistles been utilized.

Joint & Several Liability (1% rule)

The ability for the Rail Authority or the Injured Third Party to find the City at least 1% at fault for an accident because they implemented an Anti-Whistling By-law within City limits, relating to a municipal road, is not difficult.

Based on the doctrine of Joint and Several Liability, if the plaintiff is able to prove that the City is at least 1% at fault (liable), then the City can be found responsible to pay up to 100% of any judgement awarded.

Liability Insurance & Financial Implications

- Some Insurers impose a surcharge in premium for each railway crossing involving a municipal road where the anti-whistling by-law applies
- JLT's program is not currently underwritten on this basis
- Claims arising from rail crossings due to the by-law would certainly impact the City's claims experience and have a negative impact on the future negotiations of the City's Liability Insurance premium

Liability Insurance & Financial Implications

- The City would be incurring additional costs (within its deductible) to defend allegations of liability for all incidents at rail crossings that the by-law applies to.
- Implementing a whistle cessation by-law and entering into a contract with the Rail Authority results in increased liability where the City would otherwise not be involved.
- Be aware that broadly worded indemnity clauses contained in these contracts often extend beyond the coverage provided within the City's Liability Insurance policy.

JLT Client Data – Anti-Whistling By-law

- We cannot currently provide any statistics regarding how many of our clients currently have this by-law in place as it is not yet part of our liability questionnaire; although we are aware that a number of our clients have implemented a by-law relating to whistle cessation at specific rail crossings
- We are also aware that a number of our clients that had considered anti-whistling by-laws, rejected the same following thorough audits and studies
- To date, we are not aware of any of our clients with this by-law that have had an accident at any of their rail crossings

Risk Management Considerations

- Consider which rail crossings the by-law would apply to
- Consider whether or not a 24 hour whistle cessation is necessary
- Consider the unique characteristics that exist at each proposed rail crossing and surrounding environment
- Have a safety audit performed by a consultant for each proposed crossing being considered in the by-law
- Eliminate trespass locations to rail line where by-law is being considered
- Install all appropriate railway crossing protection systems including flashing lights, bells, and gates at all applicable crossings
- Consider road surface and visibility improvements at all applicable crossings

Risk Management Considerations

- Consider removing all obstructions within pedestrian sightlines
- Consider installing pedestrian gates and railway fencing
- Consider posting crossing guards before and after school if rail crossing is within school zone
- Consider increasing police patrols of rail lines and crossings
- Consider erecting signs at all impacted rail crossings to advise the public of train whistle bans in effect
- Consider painting stop lines on sidewalks approaching rail crossings
- Consider introducing safety and awareness campaigns to educate the public, especially school-age children

Risk Management & Summary

- Be aware that eliminating train whistles may increase both the frequency and severity of accidents
- An Anti-Whistling By-law significantly increases the potential of liability against the City
- By contract with the Rail Authority, the City is assuming liability that it otherwise would not be exposed to
- Should the City proceed with this by-law, we would expect the City to take all appropriate risk control and safety measures available to reasonably minimize the impact of this additional exposure (adhere to all reasonable recommendations of the safety audit as well as follow all requirements of the governing authorities (i.e. Transport Canada))

Train Whistles Save Lives

JLT's & Insurer's Opinion:

Eliminating train whistles at public crossings within the City's boundaries via municipal by-law causes increased liability against the City in the event of an incident resulting in death, injury or harm.

Summary

- Residents near railway tracks have ongoing concerns with train whistles for 15 trains per day (7 southbound and 8 northbound)
- The number of trains will increase on the Stouffville Line under the RER and residents' concerns regarding anti-whistling will intensify:
 - ❑ between Union and Unionville: 15-minute frequency; ± 50 trains
 - ❑ between Unionville and Lincolnville: 20-minute frequency, and hourly service for Midday, Evening and Weekend. ± 40 trains
- Consultant preliminary estimate for works as \$2.54 million to \$5.2 million (includes 30% soft costs, but not property acquisition) for overall crossing upgrades. This estimate needs to be confirmed.
- Cost sharing between Markham, York Region and Metrolinx needs to be finalized

Summary (cont'd)

- There is currently no funding for implementation of anti-whistling
- York Region has an Anti-whistling Policy which will assume certain costs and liabilities on Regional road crossings. Clarification is required regarding night time cessation vs. different hours of restriction
- City's insurance agent has identified safety, risk and liability concerns
- City staff is concerned with risk, liability and capital cost implications

Summary (cont'd)

- Metrolinx will be required to address grade separation and safety measures as part of the Regional Express Rail project, including capital costs and risk implications, which would reduce the Region's and Markham's financial exposure
- From a public safety and risk management perspective, it appears prudent for Markham and the Region to continue with current whistling measures at this time
- City staff will wait for the outcome of the negotiation with Metrolinx and review of future mitigation options

Next Steps

- Finalize safety audit and capital costs for anti-whistling
- Negotiate with Metrolinx on partnership and financial contribution as part of the Regional Express Rail project to fund costs of upgrades and anti-whistling
- Confirm with York Region regarding funding and assumption of liabilities at Regional road crossings
- Review Metrolinx's Liability Insurance Agreement with the City's Legal Department

Next Steps (cont'd)

- Review with Operations Department regarding increased costs (e.g. winter maintenance at the maze barriers, etc.)
- The draft 2016 capital budget includes a \$300,000 allowance to undertake design of safety features to support whistle elimination if directed by Council
- Staff review safety measures at the Green Lane and Langstaff Road crossings on the Richmond Hill line, and advice of safety measures and costs to conform to the Federal/Provincial regulations
- Staff report back to Council on the above issues.