

NO: k

COUNCIL DATE: **KyO**

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **July 17, 2014**

FROM: **Acting General Manager, Engineering**

FILE: **8710-01**

SUBJECT: **Rail Safety Initiatives Update**

RECOMMENDATIONS

The Engineering Department recommends that Council:

1. Receive this report as information;
2. Endorse the work being undertaken by staff and the Federation of Canadian Municipalities (FCM) to promote rail safety and the specific priorities identified by its National Municipal Rail Safety Working Group that focus on establishing clear safety, legal and funding responsibilities in respect of rail safety, all as generally described in this report; and
3. Endorse staff efforts to work with Transport Canada, railway companies, Port Authorities and any other relevant stakeholders in efforts to progress towards resolution of concerns outlined in this report.

BACKGROUND

Railways have played a fundamental role since the early 19th century in the growth and industrialization of Canada, forming the backbone of the country connecting different regions and supporting the growing demand for resources. The coming of a railway was often tied to the success of a region, with railway activity centres throughout the network transforming over time into established towns and cities. Moving forward to present day, the railway industry continues to provide a valuable contribution our regional economy and employment base with Metro Vancouver acting as Canada's Gateway to the Asia Pacific Region. Port Metro Vancouver trades \$75 billion in goods annually with more than one hundred and sixty (160) trading economies, generating an estimated \$10.5 billion in GDP and 129,500 jobs across Canada.

Although the railways have supported much of the region's growth and cities have continued to also build-out and densify around these railway lines to the point where increasing train lengths and increasing frequencies have started to adversely impacts local traffic movement and raise community liveability and safety concerns.

The public have also become better informed on the nature and risks of goods being transported through their communities. Recent tragic rail disasters have served to remind everyone that even with safety processes and procedures, accidents can occur and are an ever present risk. So much so, that the Federation of Canadian Municipalities (FCM) established a National Municipal Rail Safety Working Group (the “Working Group”) in direct response to growing concerns over recent years and in particular to the rail disaster in Lac-Megantic, Quebec (2013) in which 47 lives were lost.

The Working Group is chaired by Mayor Doug Reycraft of the Municipality of Southwest Middlesex, Ontario, who is the current Chair of the FCM Standing Committee on Municipal Infrastructure and Transport. The FCM work takes into account concerns from across Canada, with the FCM seeking input on rail safety issues and concerns from municipal organisations. This report outlines issues and initiatives currently identified that are specific to the City of Surrey.

DISCUSSION

The City of Surrey by virtue of its geographic position in the Metro Vancouver Region has a number of railway lines (see Appendix I) and continues to experience increases in rail traffic associated with Canada’s expanding trade with Asia and its rapidly growing energy needs. In general the City’s exposure to historic rail issues has been quite limited and as such has little involvement related to the goods that are being transported by rail through the City and regarding the standards, regulations and protections which have been implemented by others to ensure the safety of the public in Surrey (speed limits, train lengths, staff numbers and training, track maintenance, container designs and so on).

Over recent years staff have become ever more involved in rail related regional projects (e.g. Roberts Bank Rail Corridor Combo Project and Fraser Surrey Docks Terminal Expansion) that affect our City. This has provided opportunities to become directly engaged with the rail operators and their regulators, and for staff to become better informed on current rail regulations and practices.

The City of Surrey has identified the following areas of concern and safety in relation to the management of rail traffic and railways in our City:

1. Delays Crossing Railway Tracks
2. Senior government and Railways Funding to Mitigate Rail Impacts
3. Rail Safety Concerns
4. Railway Emergency Protocols and Response
5. Grade Crossing Regulations (GCR) and Standards (GCS)
6. Roberts Bank Terminal 2 Project (RBT2)
7. Crescent Beach Community
8. BNSF Relocation

Explanation of each issue is provided as follows:

1. Delays Crossing Railway Tracks

As international trade through the region's ports continues to grow, the City will continue to see increasing train frequency and longer trains. This will have a significant effect on the public using the roads crossing these railways.

The Grade Crossing Regulations provide a mechanism for a municipality to deem delays at a crossing as a safety concern, which then require the railways to work with the municipality to resolve the issue; however, this mechanism only applies where there are no other crossings within three (3) kilometres, thus would not apply to any crossings in Surrey. The FCM has requested that Transport Canada remove this restriction, however they have not pursued a maximum duration for a moving train to block a crossing.

Irrespective of this limitation, Surrey staff believe stronger restrictions should be applied to the railways and thus the City will continue to work with the FCM and ultimately Transport Canada to advocate a five (5) minute maximum blockage of crossings by moving trains. This is explained further in issue number 5 of this report.

2. Senior Government and Railways Funding to Mitigate Rail Impacts

The new regulations require railways and municipalities to improve at-grade crossings to new standards over a five (5) year period. For many municipalities, this will be at significant cost and will be difficult to achieve. Surrey residents also have significant concerns regarding the use of train whistles, which are extremely loud and can be heard over many kilometres, the varying duration and frequency of use and the effect they are having on residents ability to sleep and the overall liveability of neighbourhoods in proximity to rail crossings. To quantify this issue the City is undertaking a study to assess twenty six (26) rail crossing locations where improvements would be needed to enable whistle cessation.

It would be appropriate for senior government to assist in funding the mandated improvements, along with the whistle cessation improvements sought by residents.

The increase in rail traffic and the need to limit the duration that moving trains block road crossings will require more grade separations. Given that Provincial and Federal governments benefit from improved and increasing goods movement to the Asia Pacific and elsewhere, it would be similarly appropriate for senior government to assist in funding grade separations to address the impact of increasing goods movement by rail.

3. Rail Safety Concerns

The following four issues highlight the need for higher rail maintenance standards to ensure that the significant number of derailments (620 Canada-wide in 2010) are reduced and minimize the chances of another major disaster like the 2013 Lac Megantic derailment.

Rail Traffic through Sensitive/Fragile Environments

The BNSF Railway, the Canadian National Railway Company (CN), the Canadian Pacific Railway (CP), the Southern Railway of British Columbia (SRY), and the BC Railway Company (BC Rail) all have tracks that are adjacent to, or run through, sensitive ecosystems (such as the Campbell River delta) and agricultural lands in Surrey. Derailments could have significant, long-lasting effects on these areas.

Bank Stability along the BNSF Railway in South Surrey

The BNSF Railway operates along the coastline for much of its length in South Surrey, with the line operating along the toe of a relatively high bluff. There have been many slope failures along the bluff over the years, primarily during the wet season when soils are saturated. Some slides have resulted in blockages to the BNSF rail tracks and have caused a train derailment on one occasion. The City relies on BNSF Railway to monitor slope stability on their lands to ensure that appropriate precautions are taken to protect their railway, the City's residents and property owners against railway derailments.

Railway Bridges and other Load-Bearing Railway Infrastructure

The City is concerned that old rail bridges in Surrey could pose danger to adjacent communities and the environment should they fail. BNSF is currently in the process of replacing the existing wooden trestle bridge crossing Mud Bay; and similarly there are efforts by BNSF to replace deteriorated bridge spans across the Campbell River as well as SRY to replace an old bridge crossing of the Serpentine River. The latter works are currently on hold while site access issues are resolved with the Semiahmoo First Nations Reserve.

Movement of Coal by Rail through Surrey

Asia is buying more North American coal to meet rapidly expanding energy needs. Fraser Surrey Docks (FSD) is proposing a Direct Coal Transfer Facility that would transfer coal received by rail to barges. As referenced in Corporate Report R156; 2013 (Appendix II), the City has requested that FSD address the concerns raised by Council and the community in relation to:

- a. Coal dust;
- b. Noise; and
- c. Increased rail traffic

To date, FSD have proposed strategies to mitigate noise and coal dust issues at their facility, including dust suppression spraying prior to trains crossing into Canada. However, with spraying planned to occur some 500km away from the Canadian border, staff have concerns regarding its effectiveness by the time trains cross into Canada. Port Metro Vancouver (PMV) has asked FSD to provide further assessment of the potential effects of the project on human health, with the City requesting that the Fraser Health Authority undertake a review of the Environmental Impact Assessment released by FSD.

A comprehensive study and Fire Response Plan needs to be conducted by FSD regarding the issue and probability of fire in and around any proposed Coal Facility at FSD. Specialized equipment and suppression chemicals may need to be purchased and stored on site by FSD, as well; FSD would need to provide any required specialized training to personnel and/or Surrey Fire Services personnel.

The City, as part of the Independent Interagency Review Committee, has also requested that PMV postpone any decision on the FSD application to allow the Committee time to independently review the FSD proposal. This will also allow time for the proponent to apply for a Metro Vancouver Air Quality Permit, which will help ensure the health impacts from the FSD facility are fully reviewed, consulted, and accurately assessed via the Air Permit process. This process will lead to a better outcome and will assist PMV with public acceptance of the findings, regardless of what they may be.

With respect to concerns about increased traffic, PMV has indicated that they do not have jurisdiction over rail operations outside their terminal and have suggested related issues are discussed directly with BNSF and/or Transport Canada. PMV further note that agreements exist between BNSF and emergency providers with respect to emergency procedures.

The City believes that this disassociation of responsibility is unacceptable and that senior government should be taking a stronger role in requiring comprehensive safety assessments that is holistic in that the assessment area extended beyond the specific site works, to consider impacts along supply corridors, both rail and road.

4. Railway Emergency Protocols and Response

There have been relatively few rail incidents requiring an emergency response from Surrey Fire Service in the past ten years and they are satisfied with the current arrangement as described following:

- a. Surrey Fire Service maintains a working and training relationship with all the rail companies operating in Surrey to ensure a reasonable level of familiarity regarding rail car safety. All rail companies participate in joint first responder training, which includes tanker car familiarity and evacuation scenario exercises.
- b. Surrey Fire Service maintains communication with Rail Traffic Controllers at all times during a Railway Emergency, and initiates a "Stop Train Protocol" when necessary to keep community accesses open during an emergency response. In a worst case situation of a train failure which result in an extended road blockage, train-breaking (separating rail cars) protocols have been established between the Surrey Fire Services, RCMP and BNSF Railway which falls under the Transport Canada regulations that a level crossing may not be blocked by a stopped train for more than 5 minutes.

- c. The Ministry of Transportation introduced Protective Direction No. 32 on November 20, 2013. This protective direction ensures that local authorities and first responders obtain the information they need about the dangerous goods being transported by rail in their communities in order to support their emergency planning and response training. The Protective Order provides strict terms and conditions for the disclosure of Dangerous Goods information by the railways and for the use and protection of that information by the receiving parties under confidentiality undertaking. The railway companies, however, do not provide regular notification to the City regarding the goods and materials transported by rail in or through Surrey. The protocol during an emergency is for the Rail Master to provide a manifest of the goods being carried on a specific train to First Responders so First Responders can determine an appropriate response. Surrey Fire Services are satisfied with this approach.
- d. Surrey Fire Services respond to all major railway events in Surrey by initiating the City's Emergency Operations Centre and activating the City's All Hazards Response/Recovery Plan; however, due to resourcing constraints, containment, clean-up and recovery of any major incident is the responsibility of rail companies and senior levels of governments.

5. Grade Crossing Regulations (GCR) and Standards (GCS)

The City has reviewed the Canada Gazette I which is part of an overall senior government consultation and formalization process in establishing new regulations and standards. A number of concerns have been identified which should be addressed prior to the next stage publication of the Canada Gazette II, which moves forward to senior government for approval and implementation. These concerns have been forwarded to Transport Canada (TC) and the FCM. The FCM and TransLink have also contacted TC regarding these concerns (see Appendix III).

The City's concerns are as follows:

- a. As detailed under Section 1, the City recommends that the GCR be amended to limit the blockage of at-grade crossings by moving trains to no more than five (5) minutes.
- b. The road authority is required to ensure sightline requirements are met. There is no consideration for obstructions on private property outside the City's jurisdiction. It also presents challenges if an existing building or structure is an obstruction. The municipal obligations need to be amended to address these issues.
- c. Clarity is required on cost sharing between rail operators and the municipalities for grade crossing improvements, and a dispute resolution process needs to be defined.
- d. The 'standards' (as opposed to 'guidelines') do not allow flexibility for the application of engineering judgement, nor for engineers to follow a risk-based approach to prioritize improvements.

6. Roberts Bank Terminal 2 Project (RBT2)

Delta Port, which has seen and will continue to see Roberts Bank Terminal Expansions, is a vital component of the Economic success of the Region and Canada; however, the movement of goods to the Port has impacts to roads and communities along the goods movement corridors. The majority of container traffic to and from Roberts Bank travels on the Roberts Bank Rail Corridor (RBRC). Port Metro Vancouver increased the capacity of their Roberts Bank Facility with the construction of a third berth. This was accompanied by the construction of improvements along the Roberts Bank Rail Corridor, including overpasses at 152 Street, 192 Street, 196 Street, and 54 Avenue.

Further planned expansion of the Roberts Bank Terminal (RBT2) is expected to increase the current number of daily trains from 22 to over 60 by the 2020's. If unmitigated, the increases will result in substantive at-grade crossing delays, congestion, train whistling issues, and local pollution. In Surrey, there are two remaining key at-grade road crossings on the BC Railway, at 168 Street and at 184 Street, both of which will need to be grade-separated to support expansion efforts.

The federal environmental assessment of the proposed project will not address container movements by rail and truck outside a relatively tight project scope area including the terminal and causeway. The South of Fraser communities (excluding Delta) have drafted a joint letter of concern which will be sent to CEAA, the Transportation Minister, Members of Parliament, and others to voice concern.

While the RBT2 team is indicating that they will initiate a separate process to more fully assess these impacts, the Federal government needs to establish a formal process and requirements for major projects like RBT2 so that municipalities do not have to rely on the goodwill of project proponents.

7. Crescent Beach Community

The BNSF Railway operates along the coastline of Boundary Bay and Mud Bay in South Surrey. The railway track crosses Crescent Road and McBride Avenue which form the only two vehicular access points into the community. Given the close proximity of these two crossing (approx. 500m), any passing train blocks both road accesses. If trains stop across these access roads the community of Crescent Beach has no means for vehicles to travel into or out of the community. This is of particular concern during emergency circumstances and also for regular daily transportation requirements for the community.

The provision of a grade separated community access has been thoroughly investigated. The study demonstrated that the preferred solution for grade separation would be a vehicular underpass of Crescent Road under the railway. However, the conclusion of the review process was that the City should not proceed with the project based on impacts to GVRD twin mains and pump station (not supported by GVRD) and a very high cost of \$8-\$9 Million along with the fact that protocols are in place to ensure access during emergency events. These protocols are explained in issue number 4 of this report. However, as the railway traffic and associated impacts continue to grow, the demand and need for grade separation will increase. Therefore, the City will pursue funding partners in an effort to move this initiative forward. Partners could include, senior government, BNSF and Fraser Surrey Docks.

As discussed in section 2, the City is currently undertaking a review of twenty-six (26) rail crossing locations in Surrey. Review of Crescent Beach crossings has already been completed in efforts to secure whistling cessation. At this point the City and BNSF are in dispute over the extent of improvements required at these locations, which the City intends to pursue with the Canadian Transportation Agency upon enactment of the new Canadian Roadway Railway Grade Crossing Standards (CRRGCS). In addition the City is also experiencing challenges in obtaining appropriate insurance coverage for these crossings. In contrast White Rock has historically had grandfathered whistle cessation which has been implemented since the mid 1990's. However, as a result of the pedestrian fatality in August 2013 and the subsequent Transport Canada review of the crossings this has since been revoked. Currently the City of White Rock is in dialogue with Transport Canada and BNSF to identify and implement appropriate crossing improvements to improve safety and in effort to re-establish whistling cessation. Discussions with BNSF have indicated that they will not support a similar whistling cessation arrangement as previously experienced by White Rock at Crescent Beach without location improvements, which have been identified through the whistle cessation crossing review process.

8. BNSF Rail Relocation

The City, in collaboration with the City of White Rock, hosted a public Open House in November, 2013 in response to growing public concerns with rail safety along this environmentally sensitive corridor.

While there is a lot of public support to relocate the BNSF rail corridor away from the coastline to a more direct and faster inland alignment, there was concern about the impact to agricultural land and to residents living in the proposed corridors.

To move this proposal forward, significant budget and resourcing would be required, along with cooperation of many agencies. The high level estimate for the realignment is in the order of \$0.5 B. As such, it was seen as critical to have either senior government or BNSF lead this effort. To date, there has been no interest by any other agency to take a role in this initiative.

The City still believes there is a long term merit in evaluating an ultimate relocation of the railway and that through further consultation and feasibility studies a suitable alternate corridor and mitigation could be found.

As a result, the City's shorter term focus will be to improve safety along the existing corridor, but the City will also continue to work with other agencies with a view to relocating the line in the longer term.

9. Dangerous Goods Movement

In April 2014, Minister Raitt (Minister of Transport) ordered the railways to develop a permanent rule governing risk assessments along key dangerous goods routes. The order includes a list of 28 factors that Transport Canada expects to be included (See Appendix IV).

As part of the order, the railways must “include a process to consult with the Federation of Canadian Municipalities on how to incorporate municipal input on safety and security concerns in risk assessments.”

Staff will work with the FCM to ensure concerns regarding movement of dangerous good movement and other related concerns as previously described within this report are reflected in our feedback.

Several rail challenges faced within the City of Surrey are also common in the City of White Rock, as such staff have met with White Rock in efforts to collaborate and consolidate known information, in an effort to better outline vulnerabilities/concerns. City staff will continue to work together on these issues.

SUSTAINABILITY CONSIDERATIONS

Improving rail safety will assist in achieving the objectives of City’s Sustainability Charter; more particularly, the goal of creating a safe and secure environment for the City’s residents, businesses and visitors. In particular, the project supports the City Sustainability Charter scope action:

- SC13: Creating a Fully Accessible City

CONCLUSION

Surrey’s geographic positioning relative to Canada’s west coast Gateway to Asia and the Pacific Rim countries has led to a circumstance where the City experiences significant rail traffic within its boundaries with such rail traffic continuing to grow annually. The direct impacts and potential impacts of rail traffic on our communities is very concerning. In this regard based on the discussion in this report, it is recommended that Council:

1. Endorse the work being undertaken by the Federation of Canadian Municipalities (FCM) to promote rail safety and the specific priorities identified by its National Municipal Rail Safety Working Group that focus on establishing clear safety, legal and funding responsibilities in respect of rail safety, all as generally described in this report; and
2. Endorse staff efforts to work with Transport Canada, railway companies, Port Authorities and other relevant stakeholders in efforts to progress towards resolution of concerns outlined in this report.

Gerry McKinnon
Acting General Manager, Engineering

GMC/JB/JA/MD/ras

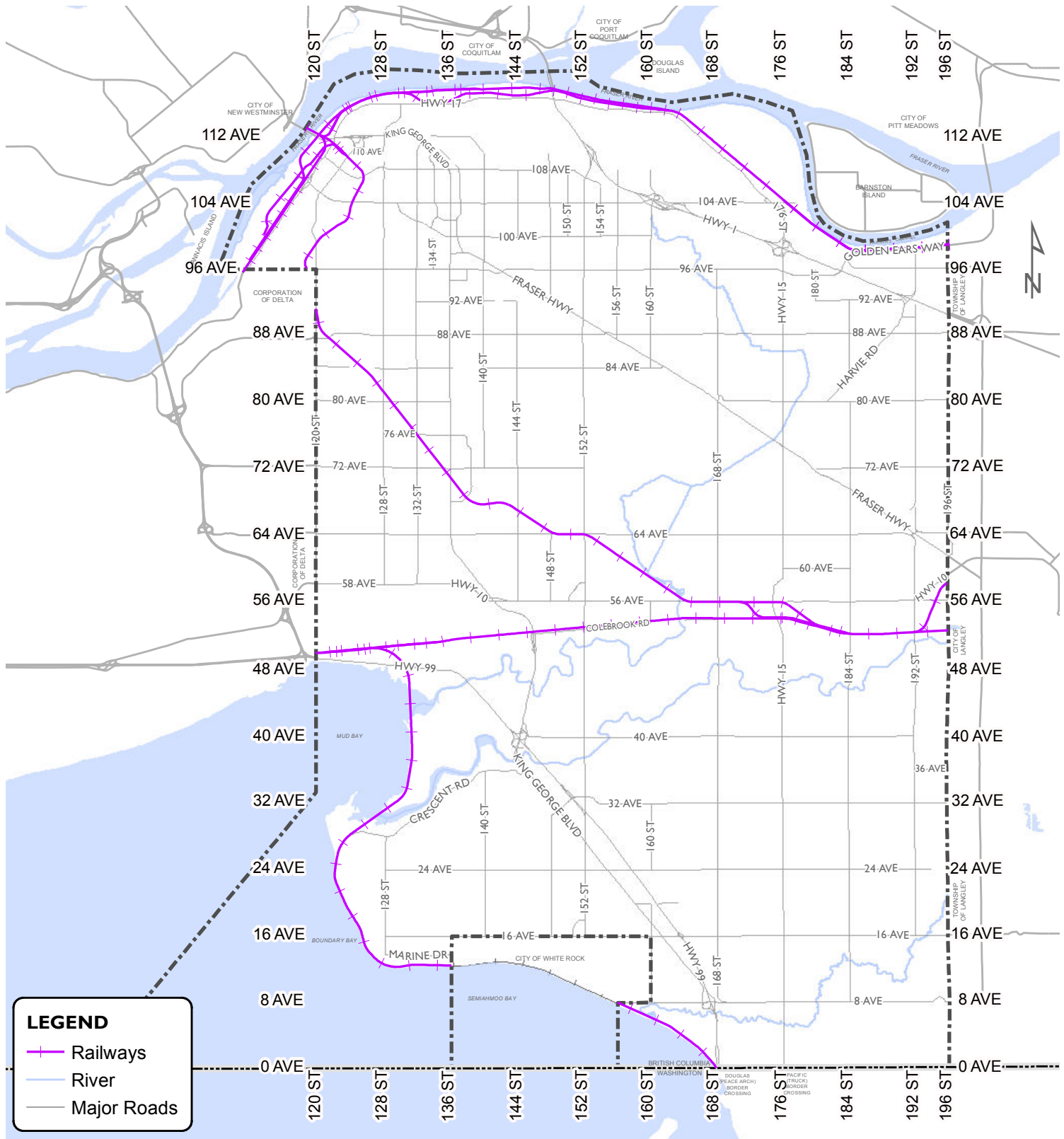
Appendix I – Map: Railway Lines in Surrey

Appendix II – Corporate Report R156; 2013

Appendix III – Grade Crossing Regulations and Standards Communications

Appendix IV – Transport Canada: Formulation of rules requirement regarding dangerous goods

APPENDIX I



Produced by GIS Section: 16-Jul-2014, C9W



Railway Lines in Surrey

ENGINEERING
DEPARTMENT

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey.
This information is provided for information and convenience purposes only.
Lot sizes, Legal descriptions and encumbrances must be confirmed at the Land Title Office.

NO: **R156**

COUNCIL DATE: July 22, 2013

REGULAR COUNCIL

TO: **Mayor & Council** DATE: **July 22, 2013**

FROM: **General Manager, Planning and Development** FILE: **5650-20(FRPA)**
General Manager, Engineering

SUBJECT: **Update on the Application to Port Metro Vancouver by the Fraser Surrey Docks to Implement a Direct Transfer Coal Facility at the Fraser Surrey Docks**

RECOMMENDATION

The Planning and Development Department and the Engineering Department recommend that Council:

1. Receive this report as information; and
2. Instruct the City Clerk to forward a copy of this report to each of Fraser Surrey Docks and PortMetro Vancouver along with a copy of Council's resolution related to this report.

INTENT

The purpose of this report is to provide an update on the application by Fraser Surrey Docks ("FSD") to implement a Direct Coal Transfer Facility at FSD and regarding strategies that FSD is proposing to address the concerns raised by Council and the community in relation to the installation and operation of the proposed Direct Transfer Coal Facility at FSD.

BACKGROUND

At its Regular Council meeting on March 11, 2013 Council considered Corporate Report No. R044, titled "Application to Port Metro Vancouver by Fraser Surrey Docks for a Proposed Direct Transfer Coal Facility at Fraser Surrey Docks", a copy of which is attached as Appendix "A" to this report. The report provided details on an application by FSD to Port Metro Vancouver ("PMV") to install and operate a Direct Transfer Coal Facility (the "Facility") at the existing Surrey terminal. Under the proposal, coal hauled from the USA by Burlington Northern Santa Fe ("BNSF") railway would be loaded at the Facility onto barges for towing to Texada Island. The proposed Facility would handle up to four million metric tonnes of coal per year. The report outlined concerns related to the transportation of coal through Surrey by way of the BNSF railway and the operation of the Facility. The concerns centred around three main issues:

- coal dust;
- noise; and
- increased rail traffic.

Council instructed the City Clerk to forward a copy of that report and the related Council resolution to PMV and FSD as the City's comments on the application. Council also directed staff to request that a specific response be sought from PMV addressing the concerns outlined in the report.

At its meeting on May 6, 2013 Council considered the following recommendation of the Environment and Sustainability Advisory Committee:

". . . that Council recommend staff and the Environmental Advisory Committee be part of the consultative and Environmental Assessment Review process for the Fraser Surrey Docks Ltd. Partnership – Coal Facility Project proposal".

After considering the recommendation, Council resolved as follows:

"That the recent correspondence received by the City of Surrey from Port Metro Vancouver related to the Fraser Surrey Docks Coal Transfer Facility be forwarded to the Environmental Advisory Committee and that the Committee be advised that the authority related to approving the Fraser Surrey Dock (FSD) application including environmental considerations rests with Port Metro Vancouver who are consulting with stakeholders including affected municipalities as part of the process of considering the application".

Council also requested that:

"Staff to provide a summary or copy of the environmental review information from Washington and Oregon to Council and the Environmental Advisory".

Staff has researched information about similar proposals that have been or are being considered at US Pacific ports. Appendix "B" attached to this report provides a summary of staff's research.

On May 15, 2013 the City received a notice from PMV of additional consultation in the form of open houses being hosted in Surrey by FSD on May 23 and 25, 2013. Included in the PMV notice was information about how the concerns outlined in Corporate Report No. Ro44;2013 would be addressed, among other concerns. A copy of the PMV notice is attached as Appendix C to this report. Staff attended the FSD open house on May 23, 2013 and found that the concerns raised at this meeting were consistent with those previously considered by Council

DISCUSSION

FSD is proposing a variety of mitigation strategies to address the concerns raised by the community and stakeholders during the initial phase of consultation. These strategies relate to the following elements of the proposal:

- Construction of the Facility;
- Transportation of coal by rail cars through Surrey;
- Operation of the Facility (including the unloading of rail cars, the loading of coal onto barges, and the temporary storage of coal at the Facility in an emergency stockpile);
- Transportation of coal by barge down the Fraser River; and
- Emergency response (in relation to the Facility itself).

The concerns raised in the previous report to Council related to the transportation of coal through Surrey, and the operation at the Transfer Facility. The mitigation strategies related to these elements are discussed in this report.

Coal dust, noise, and increased rail traffic are the main issues of concern for the City with respect to the proposed Facility. The proposed Facility is expected to generate an average of approximately one train every two days in the first year of operation and increasing after the first year to approximately one train per day. Each train will result in two train trips through Surrey; one in each direction. Presently, approximately 16 to 20 trains per day pass through Surrey on the BNSF railway. The additional trains carrying coal would amount to a 10% increase in rail traffic on the BNSF railway.

FSD is a 24-hour-a-day 7-day-a-week operation. The proposed Facility may operate at any time of the day and any day of the week. Rail cars are expected to arrive at the Facility between 12:00 a.m. and 6:00 a.m.; unloading of rail cars is expected to occur between 8:00 a.m. and 4:30 p.m.; and trains hauling the empty rail cars are expected to depart the rail yard between 5:00 p.m. and 10:00 p.m. FSD notes that arrival, unloading and departure may occur at any time of the day due to unforeseen circumstances with logistics, failures, weather, etc.

The following strategies have been proposed by FSD to mitigate the concerns raised by various stakeholders who have shared their concerns.

Coal Dust Mitigation Strategies:

- BNSF rail cars will be loaded with coal in accordance with BNSF's Load Profile Template which requires smoothing of the coal in each rail car such that it is more aerodynamic and less susceptible to dust loss from wind;
- The coal in the rail cars will be covered with a topper coating or surface stabilizer to reduce the release of dust in transit;
- Rail cars will unload coal through doors in the bottom of each car;
- The coal will be dumped into receiving pits at FSD from a maximum height of about three feet;
- The coal receiving pits will be within a covered structure;
- Atomized water mist will be sprayed at the receiving pits during unloading to capture coal dust that results from the unloading operation;
- The sides and bottom of each empty rail car will be sprayed with water at a rail car wash station and the runoff will be collected in an adjacent water treatment/settling pond;
- Coal will be transferred from the receiving pits to barges via a covered conveyor system;
- All transfer points from one conveyor to another will be fully enclosed and equipped with water/misting spray to capture dust;
- Coal drop heights onto the barge and emergency stockpile area will be limited through the use of a variable height loader and directional snorkel;
- The coal pile on the barge and emergency stockpile area will be manually shaped to reduce the ability of the coal to catch wind and create dust;
- On days with no precipitation, sunny conditions and winds greater than 19 km/hr water will be applied to wet the coal as it is loaded onto the barge and when the barge is sitting at the berth awaiting departure;
- A wind speed gauge and dust monitor will be installed near the barge loader. Operations will shut down in periods of winds in excess of 40 km/hr on a sustained basis of more than five minutes;

- Two of the six re-circulated barges will be fitted with dust monitoring stations. Based on the collected data after the first year of operations the monitoring strategy will be assessed and modified where necessary;
- The height of the emergency stockpile will be limited to 3 metres and a concrete wall/berm will be constructed to a height of 2.3 metres;
- Coal will not be stored in the stockpile for more than 48 hours; and
- On days with no precipitation, sunny conditions and winds greater than 19 km/hr water will be applied to wet coal in the stockpile.

Noise Mitigation Strategies

- All rail movement within FSD and the adjacent Port Authority Rail Yard will be restricted to a speed of 3 mph or less;
- Cars will be shunted through the receiving pits via an electric positioner which is quieter than a locomotive as it eliminates the frequent starting and stopping that occurs with a locomotive;
- The on-dock rail line has been designed to have turning angles no greater than 12.5 degrees in order to reduce noise. If unexpected wheel squealing noise does occur at certain points, track lubricators will be installed; and
- The coal will be dumped into the receiving pits from a maximum height of about three feet to limit noise.

Each of the noise mitigation strategies described above relate to activities at the Facility or adjacent PMV properties. No mitigation strategies have been proposed to address the increased noise along the BNSF railway resulting from additional trains including noise from locomotives, the wheel noise of the train cars, and the train whistle noise at road crossings.

Stopped Train Mitigation Strategies:

The existing Stopped Train Protocol provides immediate access at railway crossings during emergency situations. This protocol will apply to all trains including trains hauling coal to the Facility. No additional mitigation strategies have been proposed to address the increase in rail traffic and its impacts on emergency access to areas like Crescent Beach. Similarly, no strategies have been proposed to address the impacts on public access related to the additional trains.

FSD advises that the increase in rail traffic will be modest (about a 10% increase in the number of trains per day) and train movements to and from the Facility are expected to occur outside of heavy road traffic volume periods. Trains are expected to arrive at the Facility between 12:00 a.m. and 6:00 a.m. and depart from the Facility between 5:00 p.m. and 10:00 p.m.; however, FSD acknowledges that train movements may occur at any time of day.

Impacts to Municipal Infrastructure

The proposed Facility and the planned on-site coal dust mitigation strategy of spraying water will have an impact on the City's infrastructure. To assess these impacts further information is required. Appendix "D" attached to this report lists the information that is required to evaluate the impacts on the City's infrastructure.

CONCLUSION

An application by FSD to install and operate a Direct Transfer Coal Facility is under consideration by PMV. As part of the consultation process the City has been asked for comment on the application. It is noted that the City does not have any jurisdiction or authority in relation to the approval of the application. A previous report to Council was forwarded to the FSD, which identified concerns related to the proposed Facility, including issues related coal dust, noise, and increased rail traffic at the proposed Facility and along the BNSF railway through Surrey. FSD has developed a set of mitigation strategies intended to address these concerns. Staff has identified some servicing matters that will also need to be addressed in relation to the subject Facility. These are listed in Appendix "D" attached to this report. It is recommended that Council instruct the City Clerk to forward a copy of this report to the FSD and PMV as information and for appropriate follow up.

Original signed by
Jean Lamontagne
General Manager,
Planning and Development

Original signed by
Vincent Lalonde, P.Eng.
General Manager, Engineering

AD/JRA/saw

Attachments:

- Appendix "A" Corporate Report No. Ro44, titled "Application to Port Metro Vancouver by Fraser Surrey Docks for a Proposed Direct Transfer Coal Facility at Fraser Surrey Docks"
- Appendix "B" Information regarding Coal Transfer Facility Proposals in the United States
- Appendix "C" Notice from Port Metro Vancouver, dated May 13, 2013
- Appendix "D" Items that need to be Addressed in relation to the City's Infrastructure

CORPORATE REPORT

NO:

COUNCIL DATE:

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **March 7, 2013**

FROM: **General Manager, Engineering
General Manager, Planning and Development**

FILE: **5650-20(FRPA)**

SUBJECT: **Application to Port Metro Vancouver by Fraser Surrey Docks for a Proposed
Direct Transfer Coal Facility at Fraser Surrey Docks**

RECOMMENDATION

The Engineering Department and the Planning & Development Department recommend that Council:

1. Receive this report as information; and
2. Instruct the City Clerk to forward a copy of this report and the related Council resolution to Port Metro Vancouver (PMV) and the Fraser Surrey Docks (FSD) as the City's comments on the application by FSD to PMV to install and operate a Direct Transfer Coal Facility at Fraser Surrey Docks and include in such communication a request that PMV address the concerns listed in this report in the application review process.

INTENT

The purpose of this report is to provide an overview of a Direct Transfer Coal Facility that is being proposed by Fraser Surrey Docks (FSD) at the Fraser Surrey Docks in Surrey and for which an application has been submitted to Port Metro Vancouver (PMV) and to document concerns with the proposed Facility that should be addressed by PMV in its consideration of the subject application.

BACKGROUND

The Vancouver Fraser Port Authority, which operates under the name Port Metro Vancouver (PMV), is a federal agency that is responsible for the operation and development of port interests along 600 km of shoreline in the Metro Vancouver area including the port activities along the Fraser River in Surrey.

Fraser Surrey Docks (FSD) is a tenant of the PMV lands in Surrey and is a large multi-purpose marine terminal that handles a variety of cargo including containers, steel, forest products, salt, and bulk materials.

FSD has submitted a project permit application to PMV for the development of a Direct Transfer Coal Facility (the "Facility") at the southwest end of the existing FSD terminal to handle up to 4,000,000 metric tonnes of coal per year.

The coal will be hauled by Burlington Northern Santa Fe (BNSF) railway to the Facility and will be loaded directly onto barges from the rail cars. The coal is expected to originate from Montana and Wyoming and will ultimately be shipped overseas. No coal is expected to be stored at the FSD terminal during normal operations; however, the Facility is being designed to accommodate the temporary storage of up to 30,000 metric tonnes of coal to address unforeseen circumstances.

When the coal is loaded on barges at the Facility, tugs will tow single barges down the Fraser River to its mouth. Once the barges pass Sand Heads, they will be towed in tandem to Texada Island, where the coal will be off-loaded and stored before being transferred to deep sea vessels for shipment overseas.

Although the current application is seeking to transfer as much as 4,000,000 metric tonnes per year, there is potential to increase volumes up to a total of 8,000,000 metric tonnes per year over the longer term but such an expansion would be subject to a new application to PMV for a project permit.

The current application process has included community engagement and has included referral to First Nations.

DISCUSSION

Staff has met with representatives of PMV and of FSD to better understand the proposed Facility and to identify potential implications that its implementation may have on stakeholders in Surrey.

The following sections document the results of staff's review of the proposal and list the concerns that from staff's perspective should be addressed by PMV in relation to its consideration of the application for the Facility. There are two fundamental aspects to the proposal, each of which has potential concerns to stakeholders in Surrey. These aspects are:

- A. The transportation of the coal through Surrey by way of the BNSF railway to the Facility;
and
- B. The operation of transferring the coal from rail cars to barges at the Facility.

A. Concerns Related to Transporting Coal by Railway through Surrey

Description:

The FSD is planning to receive coal by way of trains that will travel on the BNSF railway through Surrey and that will be approximately 135 rail cars long, approximately 7,500 feet in length. At the outset of the operation, FSD is planning to transfer 2,000,000 metric tonnes of coal per year at the Facility, which equates to approximately 160 trains per year or on average approximately one train every two days. FSD has advised that after the first year the amount of coal to be transferred through the Facility will be increased to 4,000,000 metric tonnes per year, which equates to 320 trains per year or an average of 1 train per day approximately. Each such train would pass through Surrey in a loaded condition going north and would pass through Surrey again after being

unloaded heading south (i.e., each train would result in two trips through Surrey; one in each direction).

Concerns:

1. *BNSF train blockages at Crescent Road and at other grade level rail/road crossings in Surrey*
Increases in rail traffic on the BNSF railway will result in increased delays at the single access point to Crescent Beach at Crescent Road. Approximately 16 to 20 trains per day currently pass Crescent Beach on the BNSF rail line. Six hundred and forty (640) new trains per year, which is the expected volume for the Facility, would increase total train movements by approximately 10% at this crossing (i.e., an average increase of just under 2 movements a day).

There is already concern within the Crescent Beach community regarding emergency access and regular access to the community being blocked due to trains on the BNSF railway. As mentioned above, Crescent Road is the only road connection to the Crescent Beach community. Although a “stopped train” protocol has been implemented with the BNSF through the Crescent Beach area, even when trains don’t stop they can cause extended blockages at Crescent Road due to speed restrictions on the railway trestle that crosses Mud Bay.

FSD has advised that it is expecting trains to arrive at the Facility between 12:00 a.m. and 6:00 a.m. and depart between 5:00 p.m. and 10:00 p.m. thereby minimizing the likelihood for delays at rail crossings in Surrey during normal higher road traffic periods.

2. *Coal Dust*
Members of the community have raised concern with the potential for the coal on the trains to shed coal dust due to wind turbulence that occurs as the trains move through Surrey and that the coal dust could have health, environmental and aesthetic impacts on the residents and properties located along the railway.
3. *Noise*
Additional train traffic will result in additional noise caused by the engines pulling the trains, the wheel noise of the train cars and the whistle noise at road crossings.

B. Concerns Related to the Transfer of Coal from Rail Cars to Barges at the FSD Facility

1. *Coal Dust*
Members of the community have raised concern with the potential for the transfer operation to cause coal dust that will be blown into the adjacent communities and which could cause health, environmental and aesthetic impacts on the residents and properties in these communities.
2. *Noise*
There is concern that the additional train traffic and the transferring of coal at the Facility will cause noise that will be a disturbance to those that work and/or live in the vicinity of the Facility. The City has experienced receiving complaints from residents in the area of the FSD in the past in relation to materials being handled at the FSD such as the moving of steel that has been handled at FSD.

3. Safety

There is concern that the storing of and transfer of coal at the Facility could be dangerous in relation to potential fires in view of the volatility of coal as a fuel.

Economic Development Interests

The City of Surrey is interested, subject to all stakeholder interests being reasonably addressed, in ensuring that the Fraser Surrey Dock Facility is used to its maximum potential so as to assist in ensuring a vibrant and sustainable economy in our City and the Region. It is recognized that port-related jobs are relatively high value jobs and therefore are good for the broader economy.

Public Consultation

PMV representatives and FSD representatives have met with City staff and have made presentations to each of the Environmental Advisory Committee (EAC) and the Transportation and Infrastructure Committee (TIC).

The EAC has resolved to advise Council as follows:

“that Council be made aware of the community and Environmental Advisory Committee concerns of coal dust and train noise when considering the Coal Transfer Facility proposal from the Fraser Surrey Dock Ltd. Partnership.”

The TIC did not pass a formal resolution but the comments in this report generally reflect the comments that were made by the Committee.

PMV representatives and FSD representatives have also met with the Crescent Beach Property Owners Association, the Corporation of Delta and the City of New Westminister. The concerns that are listed in the previous sections of this report are consistent with those raised during these other consultations.

CONCLUSION

Based on the above discussion, it is recommended that Council instruct the City Clerk to forward a copy of this report and the related Council resolution to Port Metro Vancouver (PMV) and the Fraser Surrey Docks (FSD) as the City’s comments on the application by FSD to PMV to install and operate a Direct Transfer Coal Facility at Fraser Surrey Docks and include in such communication a request that PMV address the concerns listed in this report in the application review process.

Original signed by
Jean Lamontagne
General Manager,
Planning & Development

Original signed by
Vincent Lalonde, P.Eng.
General Manager,
Engineering

JB/JA/brb

Information regarding Coal Transfer Facility Proposals in the United States

Over the past few years, there have been as many as six coal transfer projects being considered in Washington and Oregon State.

Plans for one coal transfer project in Washington and two in Oregon were recently withdrawn by the applicants. They are as follows:

- Grays Harbor at Hoquiam, Washington, in August 2011;
- Port of Coos Bay in Coos Bay, Oregon, in April 2013; and
- Port Westward at the Port of St. Helens in Columbia City, Oregon, in May 2013.

Currently there are two active applications for coal transfer projects being considered in Washington and one in Oregon. They are as follows:

- Gateway Pacific Terminal at Cherry Point, Washington;
- Millennium Bulk Terminals – Longview, Washington; and
- Coyote Island Terminals, Oregon.

Gateway Pacific Terminal at Cherry Point – State of Washington

Pacific International Terminals, a subsidiary of SSA Marine, has proposed building a new deep-water marine terminal at Cherry Point in Whatcom County, which is approximately 15 km south of the Surrey / Washington State border.

The proposed Gateway Pacific Terminal would handle import and export of up to 54 million metric tonnes per year of bulk commodities, mostly exporting coal. In a related project, Burlington Northern Sante Fe (BNSF) Railway Inc. has proposed adding rail facilities adjacent to the terminal site and installing a short segment of new track.

Millennium Bulk Terminals - Longview – State of Washington

Millennium Bulk Terminals – Longview, LLC, with members Ambre Energy North America and Arch Coal, has submitted an application for a proposed coal export terminal at the site of the former Reynolds Aluminum smelter, in Cowlitz County, which is approximately 400 km south of the Surrey / Washington State border. The terminal would export up to 44 million metric tons of coal annually.

Coyote Island Terminals – State of Oregon

Ambre Energy subsidiary Coyote Island Terminals, LLC, has applied to Portland District for a Department of the Army permit to build a new coal transfer facility at the Port of Morrow on the Columbia River near Boardman, Oregon, which is approximately 600 km south of the Surrey / Washington State border. The terminal would export up to 8 million metric tons of coal annually.

Environmental Reviews of the Proposed Projects

Unlike the proposed Facility by FSD, each of the proposed projects being considered in Washington and Oregon requires a new terminal (dock) to be constructed at each location. As a result, each application must go through a significant application process.

The U.S. Army Corps of Engineers (USACE) are the permitting agency on all three projects, and as part of their application process they coordinate the environmental reviews under the National Environmental Policy Act (NEPA) and applicable local and state legislation.

Each environmental assessment includes consultation with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service to determine the project's potential impacts to species listed under the Endangered Species Act. Should any significant impacts be identified, a more rigorous environmental impact statement (EIS) is required. The EIS provides the public and agency decision makers with information on likely environmental impacts, including human health effects related to the construction and operation of the projects, as well as reasonable alternatives and measures to reduce those effects.

Environmental assessments have been completed for both the Gateway Pacific Terminal at Cherry Point and the Millennium Bulk Terminals – Longview and each assessment concluded that significant impacts are likely from each of the proposed projects, and therefore, each project must complete an EIS.

The Gateway Pacific Terminal at Cherry Point EIS process started in September 2012 with scoping, which included inviting the public, local agencies, and local governments to comment on what should be covered in the EIS. Approximately 125,000 comments were collected through this process, and were used to prepare the terms of reference for the EIS. A consultant has just been selected to complete the EIS, and it is expected to be completed in 2014 or 2015.

The Millennium Bulk Terminals - Longview EIS is just starting, with scoping just commencing. Public consultation has to take place, and USACE staff were unable to provide a timeline on when the EIS is expected to be completed.

The USACE are currently conducting their environmental assessment of Coyote Island Terminals, and have yet to determine if an EIS will be required. The environmental assessment is currently underway, and a 60-day public consultation process completed in April 2012 received approximately 20,000 comments. USACE staff were unable to provide a timeline on when the environmental assessment will be completed, and when an EIS would start if deemed necessary.



PORT METRO
vancouver

May 13, 2013

VIA E-MAIL & COURIER

Jean Lamontagne
General Manager
Planning & Development
City of Surrey
14245 - 56 Avenue
Surrey, BC V3X 3A2

Dear Mr. Lamontagne:

Re: Application to Port Metro Vancouver by Fraser Surrey Docks for Proposed Direct Transfer Coal Facility at 11060 Elevator Road, Surrey, V3V 2R7

Port Metro Vancouver (PMV) is currently reviewing an application by Fraser Surrey Docks (FSD) to develop a Direct Transfer Coal Facility for handling up to 4 million metric tonnes of coal (PP, 2012-072).

In response to municipal and community interest for more public consultation on this project, PMV has required FSD to conduct further consultation activities on the project and to provide opportunities for public, stakeholder and First Nation review and comment on their proposed mitigation strategies.

As part of this second phase of consultation, we wish to notify you that FSD will be hosting two open houses at the Sheraton Vancouver Guildford Hotel in Surrey on May 23 and May 25, 2013. Details are below should City representatives or staff wish to attend:

Sheraton Vancouver Guildford Hotel
15269 104 Avenue Surrey, BC
Thursday, May 23rd, 5:30 pm to 8:30 pm
Saturday, May 25th, 1:00 pm to 4:00 pm

FSD representatives, along with their rail and marine logistic providers, BNSF and Lafarge, will be on hand to answer questions. PMV staff will be attending the open houses as observers and to answer questions about the PMV's Project Permit and Environmental Assessment process.

Enclosed are copies of FSD's consultation materials for your review and comment. The enclosed materials include the following:

- FSD Updated Drawings and Plans
- FSD Draft Air Quality Management Plan
- FSD Draft Mitigation Summary Table
- FSD Open House Discussion Guide and Feedback Form

...2.

100 The Pointe, 999 Canada Place, Vancouver, B.C. Canada V6C 3T4

100 The Pointe, 999 Canada Place, Vancouver, C.-B. Canada V6C 3T4

portmetrovancover.com

Canada

These materials are also available for public viewing on FSD's website:
<http://www.fsd.bc.ca/index.php/company/community-outreach/>

For additional information about the project, please visit our website at:
[http://portmetrovanancouver.com/en/projects/OngoingProjects/Tenant-Led Projects/FraserSurreyDocks.aspx](http://portmetrovanancouver.com/en/projects/OngoingProjects/Tenant-Led%20Projects/FraserSurreyDocks.aspx)

Should the City wish to provide comments on this phase of the project, we would appreciate your submission by **June 17, 2013**.

Should you have any questions or would like to arrange a meeting to discuss this project further, please give me a call at (604) 665-9129 or email:
lilian.chau@portmetrovanancouver.com.

Sincerely,



PORT METRO VANCOUVER

Lilian Chau
Senior Planner

- Encl: FSD Updated Drawings and Plans
FSD Draft Air Quality Management Plan
FSD Draft Mitigation Summary Table
FSD Open House Discussion Guide and Feedback Form
- CC: Mayor Watts & Members of Council, City of Surrey
Vincent Lalonde, General Manager, Engineering, City of Surrey
Jeff Scott, President & CEO, Fraser Surrey Docks
Jurgen Franke, Director, Engineering & Maintenance, Fraser Surrey Docks
Greg Yeomans, Manager, Planning & Development, PMV

Items that need to be Addressed in Relation to the City's Infrastructure

Stormwater and Sanitary Sewer

- A stormwater management plan needs to be prepared, as it is unclear as to the capacity for which the detention ponds are sized and what rainfall event it can manage. Any plan must clearly identify the location of all stormwater discharge points.
- Stormwater is not permitted to be discharged to the City's sanitary sewer system. Surrey's *Sanitary Sewer Regulation and Charges By-law, 2008, No. 16611*, states that:

"No person may discharge or continue to allow to be discharged into a *building sanitary sewer* or the *sanitary sewerage system* any *stormwater* or permit any *groundwater* infiltration." as it results in added costs resulting from the unnecessary conveyance and treatment.

The discharge of stormwater and groundwater to the City's sanitary sewer system can increase the frequency and duration of sanitary sewer overflows, which have recently occurred along Metro Vancouver's system in this area.

- A Waste Discharge Permit is required from Metro Vancouver in order to discharge a high volume, stormwater, uncontaminated water or water or any substance for the purpose of diluting any Non-Domestic Waste to the City's sanitary sewer system,

Water

- A water use plan needs to be prepared that details the projected water use from the dust control system.
- The proposed dust control system may negatively impact the City's ability to supply water to the surrounding area. All water necessary to service the Proposed Direct Transfer Coal Facility and its dust control system must be solely obtained from the Metro Vancouver connection.
- All connections to the City's or Metro Vancouver's water system will require a water meter and the appropriate backflow prevention device.

April 24, 2014

File: 5405-30

REPLY TO: Transportation Division
ATTENTION: Amer Afridi, M.Sc., P.Eng.

Operations Management Branch
Railway Safety Directorate
Department of Transport
14th Floor, 427 Laurier Avenue West
Ottawa, Ontario K1A 0N5
E-mail: railsafety@tc.gc.ca

Attention: Marie-Josée Goulet, Chief Engineer

Dear Madam:

Re: City of Surrey Comments for Transport Canada's Proposed Grade Crossing Regulations and Standards

On February 8, 2014, Transport Canada published the proposed Grade Crossing Regulations (GCR) and Grade Crossing Standards (GCS) in Canada Gazette I. A 90 day consultation period is currently underway. The GCR will come into force once it is published in Canada Gazette II, which is expected to take place before the end of 2014. Below are the City of Surrey's comments with respect to the latest version of the GCR and GCS.

Cost of Improvements

The documents do not specify how the costs for improvements and upgrades to meet standards are shared between the road authority and railway companies. Disagreements between the road authority and railway companies over cost may arise and may affect the process to bring the grade crossings up to standard. Since all grade crossings must meet standards within five years, this will involve significant capital to upgrade all grade crossings in the City within a five year period.

Dispute Process

There is no process provided in the proposed regulations to resolve disputes in the interpretation of the GCR and GCS between the road authority and the railway companies. It is not known whether any disagreements should be resolved through Transport Canada staff, the Canadian Transportation Agency (CTA), or mediation.

Standards vs. Guidelines

The GCR and GCS are standards that must be met and do not allow flexibility for engineering judgment. Typical engineering documents outline best practices and allow the engineer to follow a risk-based approach for prioritizing improvements and projects. These standards may be impractical when applied to existing crossings, and may trigger substantial cost to the City in order to meet it.

Sightlines

Article 3 in the GCR states the road authority must ensure that the requirements with respect to sightlines are met. While the removal of trees and brush that obstruct sightlines on municipal property poses little to no issues, it would be difficult for the City to enforce these standards on private property, as City staff are not permitted to perform work on private properties. It also presents a challenge for the municipality to remove any existing building or structure that is obstructing sightlines if proper permits and approvals were obtained when they were built.

Obstruction of Grade Crossings

Policy, originally drafted in 2012, has imposed a time limit of ten minutes for moving trains obstructing a public grade crossing, and five minutes for standing and switching operations when a road user requires passage over the crossing; however, the time limit for moving trains has been removed in the Canada Gazette I version of the GCR. With trains approaching four kilometres long in some cases, trains are occupying each grade crossing for close to or even exceeding ten minutes, depending on the speed each train is traveling at. This causes traffic congestion and long delays for residents, commercial vehicles, and emergency vehicles which may lead to frustration and dangerous driving behaviours at blocked crossings. It is suggested that a five minute time limit be imposed on moving trains as well, to be consistent with all rail operations.

Article 93 in the GCR also states that any city, town, municipality, or other organized district may declare a resolution that the obstruction causes a safety concern if railway equipment regularly obstructs a crossing in which the railway company and road authority must collaborate to resolve the safety concern; however, it only applies to crossings have no other nearby crossings within three kilometres. All crossings located in Surrey have at least one adjacent crossing within three kilometres, and as a result, such a clause would provide no benefit to municipalities such as Surrey in dealing with the issue of blocked grade crossings.

Limited Use Warning Systems with Walk Light

The regulation and standards prescribe that a warning system with walk light may be used at private crossings, controlled by a locked barrier and for the exclusive use of the occupant of the land, as shown in Appendix C of the GCS. The light is to be illuminated continuously and only extinguished prior to the arrival of railway equipment. Although such a system is to be accompanied by a sign indicating to cross only when both signals are illuminated, this is counter-intuitive for pedestrian, as they are accustomed to warning systems being in the off state and only activated during a rail event at public crossings. There are also concerns that pedestrians may confuse that the walk light may have malfunctioned and proceed to cross when the lights are extinguished to signal a rail event.

Other Comments

Article 7.1.2 in the GCS refers to article 24(1)(b) of the GCR in regards to classes of track; however, it should refer to article 25(1)(b).

Article 7.5 in the GCS refers to Table 7-1 to obtain D_{stopped} , however, the table is not included in any part of the GCS.

Section 9 and Appendix D refers to a forecast cross-product. It is not clear whether “forecast cross-product” and “cross-product” have the same or differing meaning.

If you have any questions, please contact the undersigned at (604) 591-4149 or by e-mail at AAAfridi@surrey.ca.

Yours truly,



Amer Afridi, M.Sc, P.Eng.
Traffic Signals Team Leader

AA/clr



President
Président

Claude Dauphin
Maire,
Arrondissement de Lachine,
Ville de Montréal, QC

First Vice-President
Premier vice-président

Brad Woodside
Mayor,
City of Fredericton, NB

Second Vice-President
Deuxième vice-président

Raymond Louie
Councillor,
City of Vancouver, BC

Third Vice-President
Troisième vice-président

Clark Somerville
Councillor,
Regional Municipality of
Halton, ON

Vice-President at Large
Vice-président hors cadre

Ben Henderson
Councillor,
City of Edmonton, AB

Chief Executive Officer
Chef de la direction

Brock Carlton
Ottawa, ON

24, rue Clarence Street,
Ottawa, Ontario K1N 5P3

T 613-241-5221
F 613-241-7440

www.fcm.ca

May 8, 2014

Attn: Marie-Josée Goulet, Chief Engineer
Operations Management Branch
Railway Safety Directorate
Department of Transport
14th Floor, 427 Laurier Avenue West
Ottawa, Ontario K1A 0N5
Email: railsafety@tc.gc.ca

FCM Comments on Proposed Grade Crossings Regulations
Canada Gazette, Part I, February 8, 2014

Dear Ms. Goulet:

The Federation of Canadian Municipalities (FCM) appreciates the opportunity to provide comments on the proposed Grade Crossings Regulations, which were pre-published in the *Canada Gazette*, Part I, on February 8, 2014.

FCM has been the national voice of municipal government since 1901. With 2,000 member municipalities, FCM represents the interests of municipal governments on policy and program matters that fall within federal jurisdiction. Members include Canada's largest cities, small urban and rural communities, and 18 provincial and territorial municipal associations.

FCM recognizes that the proposed Grade Crossings Regulations ("the GCR" or "the Regulations") reflect extensive pre-consultation by Transport Canada with municipalities and the railway industry, and that the Regulations have been streamlined as compared to the draft policy and standards released in 2012.

While FCM fully supports the intent of the GCR, upon further consultation with our members, there remains a need for additional refinements that address the outstanding concerns of the municipal sector while continuing to meet Transport Canada's regulatory objectives.

.../2



We ask that Transport Canada respond to the following issues prior to the publication of the GCR in the *Canada Gazette*, Part II. We expect that individual municipalities will also be providing comments on the GCR, and ask that these complementary submissions and recommendations receive full consideration.

1. Obstruction of Grade Crossings – Safety Concerns

The issue of safety concerns caused by repeated obstruction of grade crossings by moving trains is a critical issue for municipalities in all regions of Canada.

FCM recognizes that the process for dealing with such concerns, as specified in section 93 of the GCR, is an attempt to address cases of repeated blocking at specific crossings without applying a time limit for obstruction by moving trains (as had been originally proposed in the 2012 draft policy).

In order for this process to provide a benefit to all municipalities with such concerns, **FCM strongly recommends that all references to “no other road crossing within 3 km of the crossing surface, measured along the line of railway that crosses the line of railway” be removed from section 93(1).**

This change is warranted for two reasons. First, the distance between crossings (as measured along the line of railway) in many municipalities is typically less than 3 km. Maintaining the 3 km distance would, therefore, exclude these municipalities from receiving any benefit from the provision. Second, the actual road detour between crossings is typically much longer than the distance measured along the line of railway. This could have a significant impact on driver behaviour in cases with repeated obstructions. For these reasons, FCM sees no reason why municipalities should be prevented from utilizing the process outlined in section 93 due to an arbitrary distance from the nearest alternative crossing – especially given the decision to not include a prescriptive time limit for moving trains, even in limited cases.

In addition to the 3 km threshold, FCM has concerns regarding section 93(5), and specifically what actions the Minister may take if a satisfactory outcome is not achieved. For this reason, **FCM recommends that Transport Canada provide clarity on the application of the Minister’s existing powers under section 31 of the *Railway Safety Act* in cases where the railway and municipality are unable to resolve the safety concern within the 90-day period.**

FCM and its members remain extremely concerned about the issue of repeated obstruction by moving trains at grade crossings. Should the process laid out in section 93 of the GCR not prove effective in addressing the safety concerns of municipalities, it will be necessary for Transport Canada to re-consider a time-based restriction for the obstruction of crossings by moving trains.

As you are aware, FCM is fully supportive of the current prohibition on stopped trains or switching operations from obstructing a public grade crossing for more than 5 minutes as specified in section 103(d) of the *Canadian Railway Operating Rules*, and in section 92 of the GCR.

2. Definition of “Design Speed”

Sections 11 and 13 require municipalities to provide railways with the “road design speed”, and changes to that speed, at each public grade crossing. “*Road design speed*” is defined as “the motor vehicle speed used by a road authority in the design of a grade crossing.” While it is our understanding that “road design speed” may refer to the “posted speed” at a crossing, for the sake of clarity, **FCM recommends that the GCR refer to “*the design speed or posted speed, whichever is less.*”**

3. Compliance Manual

During pre-consultation on the draft 2012 policy, FCM and its members expressed a clear preference for the adoption of risk-based engineering guidelines, which provide more flexibility than the regulated standards. We recognize that the GCR is intended to provide only a minimum set of standards, while allowing rail and road authorities some flexibility in meeting the various requirements (sightlines, for instance). This intent can only be realized, however, if there is sufficient guidance and clarity provided by Transport Canada on how authorities may choose to meet the requirements of the GCR. FCM believes there is a considerable risk of unintended non-compliance should additional guidance not be provided.

For example, while section 17 establishes sightline requirements for existing grade crossings that need to be met five years after coming into force, all other basic requirements for existing public grade crossings are outlined in sections 57 to 66. Separating these requirements is likely to cause significant confusion. Furthermore, there is currently no guidance provided on which measures rail and road authorities can take to meet the sightline requirements. Without such guidance, authorities may assume that active warning systems may need to be installed at all existing crossing where sightlines are not currently met, when there actually may be a far less costly alternative available in some cases (e.g. installing a stop sign may eliminate the sightline requirements for visibility of approaching railway equipment on the road approach from the SSD to the stop position as shown in figure 7-1(a) of the Grade Crossings Standards).

FCM strongly recommends that Transport Canada produce a detailed Compliance Manual, explaining in simple language both the respective obligations of rail and road authorities, and possible approaches to meeting requirements where there is room for flexibility (i.e. sightlines). Publication of the GCR in the *Canada Gazette*, Part II should not take place until the Compliance Manual is prepared and made publicly available.

.../4

Other issues that Transport Canada should address in the Manual include:

- *Obstruction of sightlines (sections 21-23)* – The Manual should clarify what measures municipalities can take in order to meet their obligations under these sections, and the responsibilities of road and rail authorities for meeting sightlines on adjoining lands (i.e. within the sightline triangle, but outside the rail right-of-way and the vicinity of the road approach). For clearing of trees and brush (section 23), the Manual should explain the road authorities' power to enter land on private property adjoining the railway as specified in section 25(1.1) of the *Railway Safety Act*. For sightline obstructions due to buildings and structures that were erected with proper municipal permits and approvals prior to the introduction of the GCR, the Manual should explain what measures are available to the road authority to meet the sightline requirement (i.e. reduction of speed, installation of warning system, etc.). Clarity is also needed regarding the circumstances under which the Minister would use his/her powers to authorize removal of obstructions and/or grant an exemption.
- *Cost apportionment / Canadian Transportation Agency* – The GCR does not indicate how the cost of shared improvements at crossings is to be apportioned between rail and road authorities. The Manual should explain the role of the CTA in determining cost apportionment in cases where the parties do not come to an agreement. It should also outline the funding available under Transport Canada's Grade Crossing Improvement Program.
- *Dispute resolution* – the Manual should outline the process for resolving disputes in the interpretation of the GCR between road and rail authorities.
- *Compliance and Enforcement Policy* – the Manual should explain Transport Canada's approach to non-compliance, as stated in the Compliance and Enforcement Policy.

4. Timeline for Information Sharing

Sections 4 to 16 of the GCR specify the information that must be shared between road authorities and railway companies. Given that basic standards and sightlines must be met at existing crossings within 5 years, **FCM recommends that the GCR require information sharing to be completed no later than 3 years after coming into force.** This change will ensure that both parties have sufficient time to review the information received, discuss and agree to an approach to meeting the basic standards and sightlines, and conduct any necessary work at existing crossings prior to the deadline.

5. Existing Crossings – Cost to Meet Basic Standards and Sightlines

During pre-consultation on the draft 2012 policy, FCM expressed its concerns regarding the cost implications of the Regulations and indicated that additional financial support may be needed to assist municipalities in meeting the basic standards at existing crossings.

Although the GCR has been streamlined, there remains a possibility that municipalities will face significant costs in order to meet the sightline requirements at existing crossings. There is a large disparity between the costs estimated in the Regulatory Impact Analysis Statement (approx. \$10 million for municipalities) and those anticipated by the railways and by individual municipalities. Unfortunately, it will be impossible to determine actual costs until after the Regulations have come into force.

FCM therefore recommends a future increase in the funding available under the Grade Crossing Improvement Program (maintaining the fixed cost apportionment to municipalities of 12.5%), commensurate with the actual cost implications of the GCR on municipal governments (to be determined).

In closing, thank you again for the opportunity to share FCM's views on the proposed Grade Crossing Regulations. Should you have any questions regarding this submission, please contact Daniel Rubinstein, FCM Senior Policy Advisor at drubinstein@fcm.ca or 613-907-6294.

Sincerely,



Brock Carlton
Chief Executive Officer



April 30, 2014

Our File No. 0155-01
General Correspondence

Via Electronic Submission to RailSafety@tc.gc.ca

Transport Canada
Rail Safety Branch
Mailstop: ASR
427 Laurier Street West,
Ottawa, Ontario
K1A 0N5

Dear Sir or Madam:

Re: Grade Crossings Regulations and Standards

TransLink is Metro Vancouver's regional transportation authority with a mandate to ensure that the movement of people and goods across and through the region is safe and efficient. TransLink is the first North American transportation authority to be responsible for the planning, financing and managing of all public transit in addition to major regional roads and bridges.

TransLink shares responsibility with municipalities for the Major Road Network (MRN) which encompasses the heaviest travelled and highest traffic corridors for vehicles and goods movement outside the Provincial highway network. TransLink co-plans, co-manages and co-funds the MRN, in order to preserve and enhance safety and efficiency of the network. TransLink works with municipalities through the Major Roads and Transportation Advisory Committee (MRTAC), which is the forum for senior municipal staff to review and discuss multi-modal transportation matters in the Metro Vancouver region with TransLink staff. The MRTAC membership includes all 22 municipalities, as well as unincorporated areas.

TransLink supports the comments from individual municipalities as submitted to Transport Canada under separate cover (and attached). TransLink and MRTAC wish to advise Transport Canada that there are elements of the proposed Grade Crossing Regulations and Standards which may negatively impact local government road authorities and the movement of goods by truck.

Our data suggests that the Metro Vancouver region has 630 railway crossings, of which 117 are on arterial roads and 202 crossings are on truck routes. The Insurance

Corporation of British Columbia (ICBC) advises that collisions at or near railway crossings represent only 0.08% of total road collisions in British Columbia. While TransLink supports improved road safety at railway crossings, we are concerned that certain elements of the standards may impose undue high costs on municipal road authorities by compelling them to achieve the standard within a limited time frame. Municipal road authorities may need to divert general road safety funding to railway crossing upgrades. The diversion of municipal funds to railway crossing upgrades may reduce available funding for improvements on the wider road network, where 99.9% of collisions occur. To avoid this diversion of needed road safety funding, and an unintended degradation in overall network safety performance, TransLink encourages a re-examination of the “standard” designation and/or the proposed timeframe for compliance.

A summary of core comments received from municipalities follows:

- Blocking of Grade Crossing – it is suggested that a time limit of 5 minutes be set for how long a moving or stationary train can occupy a crossing. If a time limit is not specified, trains could block the crossing for an extended period of time, without notice or predictability, thus delaying all vehicles, goods movement, and emergency vehicles response time to attend to life threatening incidents.
- Standard vs. Guidelines – it is suggested that the document should establish guidelines and not set standards, to permit flexibility of application and to use a risk based approach to allow prioritization of limited resources. The overall Canadian approach to road safety engineering, as established by the Transportation Association of Canada, is based on the principle of establishing guidelines.
- Cost & Timeline of Improvements – the timeline to meet compliance should be lengthened. The new standard requires significant capital to upgrade all crossings to meet the 5 year timeframe. This will degrade resources available to manage road safety throughout the network.
- Financial Allocation – It is unclear if regulatory compliance regarding crossing warning systems is the responsibility of the rail companies or the municipal road authorities.
- Minimum Sightline Requirements – It presents challenge for municipalities to remove any existing building or structure that are obstructing sightlines if proper permits and approval were obtained when they were built. Municipal staff are restricted from entering onto private property and performing work except under emergency conditions.
- Limited Use Warning Systems with Walk Light – The requirement to provide a continuously illuminated walk light to be extinguished only prior to the arrival of railway equipment is counter-intuitive for pedestrians. Pedestrians may think the

walk lights have malfunctioned and proceed to cross when the lights are extinguished to indicate a rail event.

- Rationale for the New Standards – It is unclear what is the rationale for the proposed standards. Based on statistics provided in the Transport Canada document, the number of collisions is projected to decrease by approximately 45% at public crossings without any implementation of new standards or regulations.
- Dispute Process – The proposed regulations do not provide any mention of a dispute process should there be a discrepancy over the interpretation of the standards or regulations.
- Overpass Requirements – The proposed standards do not address the issue of converting grade crossings into grade separated crossings. Grade separations should be addressed as a guideline and not standard to avoid overburdening railway companies and road authorities (municipalities).
- Grade Crossing Improvement Program – It is not clear if there will be an increase in federal funding to support this program. Municipal requests for funding are projected to increase particularly with the proposed standards.
- Private Crossing Regulations and Standards – It is unknown if local residents are aware of the new regulations.

Thank you for the opportunity to provide input. A response from Transport Canada to these issues would be appreciated. TransLink is committed to working with Transport Canada towards creating a safe and efficient transportation system for a sustainable region. If you have any questions, please contact Wisdom Chan, Transportation Engineer at 778-375-7812.

Yours truly,

Sany R. Zein, M.Eng., P.Eng.

Director, Infrastructure and Network Management

Att (5)

Minister of Transport Order Pursuant to Section 19 of the *Railway Safety Act*

MO 14-01

Paragraph 19(1)(a) of the *Railway Safety Act* gives the Minister of Transport the authority to order a railway company or a local railway company to formulate rules respecting any matter referred to in subsection 18(1) or 18(2.1) or to revise its rules respecting that matter.

Pursuant to the provisions of paragraph 19(1)(a) of the *Railway Safety Act*, all railway companies and local railway companies are hereby ordered to formulate rules respecting the safe and secure operations of trains carrying certain dangerous goods and flammable liquids.

Rules should be based on an assessment of safety and security risks, and shall, at a minimum:

1. Govern the route and speed of any Key Train to 50 miles per hour (MPH) or lower, including but not limited to a further speed restriction to 40 MPH or lower for any Key Train transporting one or more DOT-111 loaded tank cars containing UN1170 ETHANOL, UN1202 DIESEL FUEL, UN1203 GASOLINE, UN1267 PETROLEUM CRUDE OIL, UN1268 PETROLEUM DISTILLATES, N.O.S., UN1863 FUEL, AVIATION, TURBINE ENGINE, UN1993 FLAMMABLE LIQUID, N.O.S., UN3295 HYDROCARBONS, LIQUID, N.O.S., or UN3475 ETHANOL AND GASOLINE MIXTURE in areas identified as higher risk through the risk assessment process. DOT 111 tank cars are those that are pre-CPC-1232/TP18477 specification.
2. Require initial risk assessments and periodic updates based on significant change to determine the level of risk associated with each Key Route over which a Key Train is operated by the company, and in such risk assessments:
 - o identify safety and security risks associated with that route, including:
 - 1. Volume of dangerous goods being transported;
 - 2. Rail traffic density;
 - 3. Trip length for route;
 - 4. Presence and characteristics of railroad facilities;
 - 5. Track type, class, and maintenance schedule;
 - 6. Track grade and curvature;
 - 7. Presence or absence of signals and train control systems along the route ("dark" versus signaled territory);
 - 8. Presence or absence of wayside hazard detectors;
 - 9. Number and types of grade crossings;
 - 10. Single versus double track territory;
 - 11. Frequency and location of track turnouts;
 - 12. Proximity to iconic targets and natural hazards;
 - 13. Environmentally sensitive or significant areas;
 - 14. Population density along the route;
 - 15. Venues along the route (stations, events, places of congregation);
 - 16. Emergency response capability along the route;
 - 17. Areas of high consequence along the route;

- 18. Presence of passenger traffic along route (shared track);
 - 19. Speed of train operations;
 - 20. Proximity to en-route storage or repair facilities;
 - 21. Known threats, including any non-public threat scenarios;
 - 22. Measures in place to address apparent safety and security risks;
 - 23. Availability of practicable alternative routes;
 - 24. Past incidents;
 - 25. Overall times in transit;
 - 26. Training and skill level of crews;
 - 27. Impact on rail network traffic and congestion; and
 - 28. Geohazard
- identify and compare alternative routes if available;
 - factor potential or future railway operational changes such as new customers moving goods subject to an Emergency Response Assistance Plan under the *Transportation of Dangerous Goods Act* and population growth; and
 - include a process to consult with the Federation of Canadian Municipalities on how to incorporate municipal input on safety and security concerns in risk assessments.
3. Include requirements for any Key Train at meeting or passing points.
 4. Require Wayside Defective Bearing Detectors at specific minimum intervals along Key Routes.
 5. Provide minimum safety requirements for Key Routes on which a Key Train may operate, including enhanced minimum main track inspection frequencies.

For the purpose of this order,

- "Key Train" means an engine with cars
 1. that includes one or more loaded tank cars of dangerous goods that are included in Class 2.3, Toxic Gases and of dangerous goods that are toxic by inhalation subject to Special Provision 23 of the *Transport of Dangerous Goods Regulations*; or
 2. that includes 20 or more loaded tank cars or loaded intermodal portable tanks containing dangerous goods, as defined in the *Transportation of Dangerous Goods Act, 1992* or any combination thereof that includes 20 or more loaded tank cars and loaded intermodal portable tanks.
- "Key Route" means any track on which, over a period of one year, is carried 10,000 or more loaded tank cars or loaded intermodal portable tanks containing dangerous goods, as defined in the *Transportation of Dangerous Goods Act, 1992* or any combination thereof that includes 10,000 or more loaded tank cars and loaded intermodal portable tanks.

Subsection 19(2) of the *Railway Safety Act* requires that a company shall not file rules with the Minister unless it has first, during a period of sixty days, given a reasonable opportunity for consultation with it on the rules to:

1. In the case of a railway company, each relevant association or organization that is likely to be affected by the implementation of the rules; or

2. In the case of a local railway company, any railway on whose railway the local railway operates railway equipment that is likely to be affected by the implementation of the rules.

Pursuant to the provisions of paragraph 19(1)(b) of the *Railway Safety Act*, the rules shall be filed with the Minister for approval within 180 days of the date of this order.

Acting Assistant Deputy Minister
Safety and Security
