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A SITUATION of Conflicting interests: Proximity to rail

Professor Gerard Seijts and Thomas Watson wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

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On July 6, 2013, a runaway freight train owned by Montreal, Maine & Atlantic Railway with 72 tanker cars carrying six million litres of crude oil derailed in Lac-Mégantic, Quebec. The explosion that followed killed 47 people and destroyed half of the municipality’s downtown. At least 30 buildings were lost, including the local library. More than 100 businesses were shuttered or displaced. At the time, Canadian city planners and railway managers had just been given recommendations crafted by the Proximity Initiative, a collaborative effort between the Railway Association of Canada (RAC) and the Federation of Canadian Municipalities (FCM), intended to tackle so-called proximity-to-rail issues. These *Guidelines for New Development in Proximity to Railway Operations* (“Proximity to Rail”) included a call to further push development back from train tracks by setting new setback standards for building on private and public property in proximity-to-rail operations.

Thanks to urban growth and railway expansion, the need to better address the conflicting interests that existed between population centres and railway operations—ranging from noise and vibrations to blocked roads and public safety—had been on the rise for decades. The Lac-Mégantic tragedy galvanized this need. In early 2015, Montreal made headlines by becoming the first major Canadian city to adopt the Proximity Initiative’s guidelines. Around the same time, Calgary City Manager Jeff Fielding sat in his office contemplating staff recommendations that essentially favoured following Montreal’s lead.

Calgary and the province of Alberta had recently been affected by several disasters, including a historic flood in the city and throughout southern Alberta in 2013, and a significant wildfire in northern Alberta in 2011. The City of Calgary was lauded for its response, coordination, and recovery activities in these disasters. Years of intentional investment in comprehensive emergency management—preparedness, mitigation, response, and recovery—had proven indispensable as these disasters hit the city and province. These disaster preparedness practices ensured comprehensive land use planning decisions that included life safety considerations such as first response access, economic diversification resulting from a wide economic base, and the pursuit of a vital and sustainable community.

Looking out at the Canadian Pacific Railway (CP) line that ran through the downtown core of his city, a community built on the historic contributions of rail, oil, and agriculture, Fielding understood the controversy that would be generated by imposing the Proximity to Rail guidelines in his municipality. There had to be a better approach more suited to Calgary’s specific context.

Calgary’s Centre City, or downtown, was the business and cultural heart of the city. The Municipal Development Plan identified a goal to accommodate 232,000 jobs and 70,000 people in the downtown within the next 60 years. Founded on the principles of sustainable development and guided by a philosophy of fiscal responsibility and managed growth, these densification goals required city planners to provide “leadership on growth and change within a strategic framework that achieves the best possible social, environmental, and economic outcomes while operating within the City’s financial capacity.” This was to be sought through purposeful and dense residential and commercial development. Fielding was interested in building stronger relationships with the community to attract development and retain investment in the City. Implementing the Proximity Initiative’s guidelines, while intended to limit potential safety risks in the case of a derailment or volume release, would simultaneously limit urban development opportunities, particularly within the downtown. The guidelines were not standards required by law, nor were the guidelines developed with significant and relevant contribution by the City of Calgary. The guidelines did not consider balancing public safety with the economic diversification specific to Calgary’s context. Fielding concluded, “We would have to think harder about a solution for Calgary.”

RISK ASSESSMENT

The Proximity Initiative was created to help RAC and FCM members address conflicting interests, including the transport of dangerous goods via rail through population centres. The Proximity to Rail guidelines were created to help municipal and provincial governments mitigate the effects of having new development in proximity-to-railway operations.[[1]](#footnote-1) The report strongly recommended municipalities take a proactive approach to identifying and planning for potential conflicts between rail operations and new development in proximity-to-rail corridors. The report emphasized the urbanization of cities, the interest of municipalities to curb urban sprawl, the demand for new forms of residential properties, and the conversion of commercial and industrial properties in proximity-to-rail locations to residential uses. The guidelines were specifically not intended to be applied to locations where proximity issues already existed, as these had to be addressed on a site-specific basis. The tabled guidelines, however, required no significant adjustment to railway operations while asking municipalities to accept the potential loss of development options along rail corridors. And while the proposed setbacks could limit the damage of a common derailment or volume release, the guidelines would not appreciably limit the risk of catastrophic rail accidents.

Risk in a municipal context was generally assessed on its likelihood or probability—how realistic it was for risk to occur in relation to other contributing factors—and according to its impact—what the effects of the risk would be on life safety, property, the environment, and the economy. The probability of a catastrophic rail event was low relative to other major events and catastrophes that Calgary could face. However, the impact of a train derailment or volume loss on life safety, property protection, and environmental preservation was understood to be potentially significant. A derailment was not out of the range of possibilities—for example, during the 2013 flood event, a rail car derailment occurred that could have resulted in a threat to life safety and brought about severe environmental consequences. However, the City of Calgary and external partners, including the rail industry, had trained and exercised for exactly such an event, and they were able to mitigate the impact of the derailment during an exceptionally trying time—in the midst of a disastrous flood event. Meanwhile, the effects of imposing the Proximity to Rail guidelines within the city’s downtown core presented a real threat to economic and environment vitality.

Fielding was certain that following the guidelines would limit development opportunities, particularly within the downtown core, while doing little to lower the risk of train derailment or reduce the amount of hazardous materials travelling through Calgary. He believed that to address proximity in what he considered a responsible manner, Calgary needed a different approach. The approach had to recognize the value of the rail industry to Calgary, and influence the RAC to bear a share of the responsibility associated with conducting its operations in a heavily populated area. Additionally, the approach should refrain from creating additional development industry pressures not grounded in defensible risk reduction, and should avoid losing the confidence and trust of the city’s planning and emergency response staff, who had worked hard on preparing recommendations that aligned with the guidelines suggested by the FCM. Importantly, Fielding was not willing to sacrifice public safety to support real estate values and land development opportunities. “As city manager and a member of the Canadian Institute of Planners,” Fielding said, “I am responsible for upholding professional standards.”

CALGARY’S STEEL SPINE

Calgary lands were originally inhabited more than 8,000 years ago by the First Nations people and were called Moh’kinsstis, the traditional territory of the Blackfoot people. Calgary owed its name to Royal Canadian Mounted Police officers, who saw the local landscape and rivers as an ideal location to build a fort. Known as “The Elbow” or “Bow River Fort,” the police detachment was later briefly dubbed “Brisebois” by Inspector A.E. Brisebois. This did not impress Colonel James Macleod, who preferred Calgary, the name of his home in the Scottish Highlands. However, although the fort gave Calgary its name, it did not spawn the city. Calgary had become what it was now because of its steel spine. In 1883, the arrival of the CP railway facilitated travel across Alberta, which led waves of pioneer ranchers from across the world to settle near the fort. With a population of 4,000, Calgary was officially proclaimed a city in 1884. Ever since, the railway had played a major role in local development.[[2]](#footnote-2)

At one point, CP owned most of Calgary’s downtown, where the signature street was named after the company’s first president, Lord Mount Stephen. The Calgary Tower was funded by a CP subsidiary in 1968. The community of Mount Royal was built to house CP executives. The city’s grid and streetcar routes were designed to transport rail workers to the company’s Ogden Yard, which opened in 1912, when CP was the largest employer in Calgary. As the Canadian Broadcasting Corporation (CBC) put it in a special report on the city’s development, “The CPR has shaped Calgary’s evolution more than any other corporation over the past 100 years. Some might even say Calgary’s entrepreneurial spirit is a legacy from the CP’s pioneer vision of building a transcontinental railway more than 100 years ago.”[[3]](#footnote-3) With its head office in Calgary, CP remained a major employer and taxpayer in the city of 1.3 million. There were 158 kilometres of rail lines in Calgary, of which 7 per cent ran through the downtown core, all at grade level.

Thanks to urban expansion, the relationship between Calgary and its steel spine had never been closer. In 2004, a team of city planners and community members offered a variety of competing ideas to transform the city’s “Midtown” district, most of which involved moving rail operations. According to media reports, the cost of these ideas proved prohibitive, partly because “CP’s position was [that] somebody else would have to pay for all the relocation cost, and they would still retain ownership of the land.”[[4]](#footnote-4) This focused ideas on redeveloping land near existing tracks. As the CBC noted in a special report on the City’s changing relationship with rail operations, downtown land in close proximity to rail that was once mostly surface parking lots had, in recent years, “become construction sites for major new offices, hotels, condos, and museums.” The National Music Centre, for example, was built on a formerly barren surface parking lot across from rail tracks. Even CP had redeveloped property in close proximity-to-rail operations, transforming Ogden Yard into a head office campus.[[5]](#footnote-5)

Simply put, Calgary’s long-range planning goals had long been entwined with the CP operations that literally run through the heart of the city. These operations created the potential for more adverse effects for Calgary from any implementation of the new proximity guidelines than for its municipal peers. The period of economic success that preceded the oil market crash saw Calgary experiencing long-awaited development interest and permit submissions within the Centre City, including some properties along the rail lines. With the economic downturn, however, these permits were at risk of being withdrawn. As a result, railway setback guidelines had to be considered in the context of the additional development pressures they represented for Calgary during changing economic conditions.

DERAILED COLLABORATION

In 2003, the FCM and the RAC signed a memorandum of understanding to develop a solution that could be commonly applied in a fair way “to mitigate the impacts of locating new development in proximity-to-railway operations.” The FCM–RAC Proximity Initiative Steering Committee was established in 2004, with an equal number of FCM officials and senior RAC railway representatives as well as members of the Canadian Association of Municipal Administrators and observers from Transport Canada and the Canadian Transportation Agency. In 2013, after almost a decade of collaboration on the issue, new guidelines were released to assist municipal governments and railways in reviewing and determining general planning policies and provisions for the conversion of land in proximity-to-rail operations.

The stated objective was to ensure quality of life by mitigating railway-oriented effects such as noise, vibrations, and safety hazards. The tabled guidelines included six primary recommendations (see Exhibit 1), primarily intended for new residential development. The most contentious for Calgary was the call to establish the following new setback standards for building on private and public property in proximity-to-rail operations.

* Freight Rail Yard: 300 metres
* Principal Main Line: 30 metres
* Secondary Main Line: 30 metres
* Principal Branch Line: 15 metres
* Secondary Branch Line: 15 metres
* Spur Line: 15 metres

Measured from railway property lines instead of tracks, these recommended setbacks would obviously allow railway managers to breathe easier by providing an additional buffer zone on municipal land, expanding the distance between communities and rail corridors and freight yards, permitting the dissipation of rail-oriented emissions, vibrations, and noise. They further served railways by pushing urban development back, potentially limiting disaster-related costs and damages. But while setbacks served the interest of railways, they wiped out development opportunities near rail operations while doing nothing to prevent rail incidents or events. “The proposed common guidelines,” Fielding noted, “mitigate impact, not risk. They don’t reduce the chances of having derailments or explosions in my city caused by operator error, travelling speeds, failure of rail or track infrastructure, or dangerous cargo.”

While tasked with finding workable solutions that were fair to both urban development and railway operations, the Proximity Initiative collaboration effort was challenged from the start by different needs, conflicting agendas, and uneven levels of influence.

Originally formed as The Canadian Railway War Board in 1917 to coordinate rail activities and ensure the efficient movement of troops and supplies during the First World War, the RAC represented more than 50 freight and passenger railway companies that moved 75 million people and CA$250 billion[[6]](#footnote-6) worth of goods in Canada annually. Until 2000, the organization—formally incorporated in 1953—had dealt primarily with member services and operational issues at the national level, as well as the coordination of standards on a continental basis. At the start of the new millennium, however, RAC received a new mandate, which included public policy advocacy on behalf of its members, who had a common interest in limiting regulations and cost increases related to proximity issues.

The well-funded RAC railway industry organization was formed to protect the bottom line of its membership by opposing the “frenzied lobbying or exaggerated anecdotal complaints from interest groups” when fighting an earlier version of Bill C-52, *An Act to Amend the Canada Transportation Act and the Railway Safety Act*.[[7]](#footnote-7) On the other side of the Proximity Initiative table was the FCM, which counted about 2,000 local governments across Canada as members, representing 91 per cent of the Canadian population. Varying in size, location, and economic health, each of these municipalities had unique challenges and interests, especially when it came to proximity-to-rail issues.

In a submission outlining its guidelines to the Canada Transportation Act Review, the FCM–RAC Proximity Initiative argued its model of collaboration “demonstrates that municipalities, railways, and government can work together to improve rail safety.” At the time, the proposed guidelines were widely supported by railways but had been adopted only by the cities of Windsor, London, Ottawa, and Montreal. The federal government was therefore urged to work with provincial governments, which held land planning jurisdiction, to help advance common land use planning practices and avoid a city-by-city approach to proximity issues. In other words, the people behind the new guidelines wanted to ensure rail interests were not affected by any municipality that considered the new guidelines a harder pill to swallow.[[8]](#footnote-8)

MIXING SEMINAL MOMENTS WITH PUBLIC POLICY MAKING

The magnitude of the Lac-Mégantic disaster—which was alleged to have been the result of a criminal failure to apply backup hand brakes on a train carrying dangerous materials, and that was left unlocked and unattended on a main rail line, up a hill, next to a residential area—highlighted the need to ensure that railways did not unreasonably threaten public safety. In addition to killing dozens of people and causing millions of dollars’ worth of damage, the oil train explosion—which could be seen from space—led to the evacuation of about 2,000 people, roughly a third of Lac-Mégantic’s population. Local land and waterways were contaminated. Family members of missing people were forced to provide DNA from belongings such as toothbrushes to help identify burned bodies, at least in the cases where remains recovery was considered possible. As one disaster worker noted, few people were wounded in the fire because, “They’re all dead.”

Following the incident, the transport of dangerous cargo by rail became a political hot potato, particularly in Canada, where pipeline capacity did not meet the needs of an energy sector that served as an important economic pillar. This was amplified by increased media coverage of rail incidents and disasters, and of political campaigning for the next federal election.

On July 23, 2013, Transport Canada issued an emergency directive that, among other things, required at least two people to operate trains carrying dangerous materials, and prohibited the practice of leaving trains with dangerous materials parked unattended on main lines.

In April 2014, the Canadian government ordered a phase-out or retrofit of older DOT-111 oil-by-rail cars.

On February 20, 2015, the federal government introduced the *Safe and Accountable Rail Act*. Amending the *Canada Transportation Act* and the *Railway Safety Act*, Bill C-52 strengthened the liability and compensation regime for federally regulated railway companies. It primarily aimed to establish minimum insurance levels for freight railway operations; to establish that a railway company “is liable, without proof of fault or negligence, for damages resulting from an accident involving crude oil; [to] increase the industry liability insurance coverage; and [to] establish a fund financed by levies on shippers to cover the damages resulting from a railway accident involving crude oil that exceed liability insurance coverage.”

Bill C-52 was widely seen as sensible because Montreal, Maine & Atlantic Railway filed for protection from creditors following the Lac-Mégantic incident, leaving hundreds of millions of dollars in cleanup costs and legal claims unpaid. The company’s insurance policy had a per-occurrence limit of just $25 million.[[9]](#footnote-9) But in March 2015, demand for regulatory action intensified after four North American oil-train events occurred in a matter of weeks. Noting the trains in question were travelling at moderate speeds and hauling CPC-1232 tanker cars, which were supposed to be safer than the rail cars involved in Lac-Mégantic, critics insisted much more needed to be done. As the CBC noted,

For some, this raises questions about rail safety, train speeds and length, tanker-car standards and stabilizing the oil within the tankers. For others, it means we should be talking about pipelines again. “Slowing down is one option,” said Ian Naish, a former director of rail and pipeline investigations at the Transportation Safety Board of Canada. “Shorter trains might be another option, but that will cost money. And then, dare I say it, another option is pipelines or some other mode of transportation.”

When it comes to pipelines versus rail, it’s not comparing apples to apples. When a pipeline leaks, more product is spilled, but it’s not likely to explode. When an oil car derails, there is a higher chance of loss of life or destruction of property, but the spill is relatively contained. It really depends on what you’re worried about—cost, CO2 [carbon dioxide] emissions, safety, or the environment? “This is a discussion we absolutely need to have,” said Michal Moore, director of energy and environmental policy at the University of Calgary. “It needs to start with safety, but also needs to consider what transfers and stores the highest volume of [oil] material at the lowest possible cost.”[[10]](#footnote-10)

In April 2015, Federal Transport Minister Lisa Raitt announced a 64-kilometre-per-hour speed limit on trains carrying dangerous goods through urban areas with a population of 100,000. She also called for increased inspections of key routes used for transporting dangerous goods. At the time, the Canadian National Railway (CN) and CP had already imposed a 56-kilometre-per-hour speed limit, which was still twice the speed some critics considered safe.

In July 2015, as ongoing cleanup operations in Lac-Mégantic were temporarily halted and church bells rang 47 times to mark the disaster’s anniversary, federal opposition leaders attacked the ruling Conservative Party for failing to ensure Canadian communities were protected from rail operations. Claiming the Harper government was not doing enough, then Liberal leader Justin Trudeau told the nation, “Every possible precaution must be taken to ensure such an incident is never repeated.” Meanwhile, Tom Mulcair, leader at the time of the New Democrat Party (NDP), promised that an NDP government “would build a railway bypassing Lac-Mégantic, which has already paid a high price in human lives.”[[11]](#footnote-11) Raitt defended the government. “Safety is Transport Canada’s top priority,” she insisted. “And in the wake of the accident, we took immediate, concrete action to further protect Canadians and maintain the safety and integrity of the Canadian rail system.”[[12]](#footnote-12)

In the aftermath of Lac-Mégantic, politicians and industry leaders were pressured to do something—or appear to do something—to make the public safer. In this charged environment, many lost sight of the fact that the new proximity guidelines would cost some municipalities a great deal while failing to address any of the issues that critics insisted needed to be addressed to reduce the risk of rail car derailments and/or explosions. These issues included train speeds, train lengths, car standards, infrastructure maintenance, and volatile cargo. The relatively low risk of a catastrophic accident posed to Canadian communities by well-managed railway operations was also lost in the heated public discussion.

According to a government report on rail safety, while the transport of regulated dangerous goods by CN and CP had increased by almost 60 per cent between 1997 and 2006 (in terms of thousands of freight cars moved and millions of revenue ton miles), reportable incidents involving regulated dangerous goods declined considerably.[[13]](#footnote-13) Furthermore, while Canada had experienced rail disasters more deadly than the 2013 incident, which put the spotlight on proximity issues, Lac-Mégantic had been the worst since Confederation.[[14]](#footnote-14) The deadliest rail incident in Canadian history occurred in 1864, when a Grand Trunk train with more than 350 passengers flew off a raised bridge and plunged into the Rivière Richelieu near Mont-St-Hilaire, Quebec, killing an estimated 99 people.[[15]](#footnote-15)

With 48,000 kilometres of track, Canada had one of the largest rail networks in the world. Nevertheless, in the five-year period from 2010 to 2015, the nation experienced 20 train derailments significant enough to be reported in the media (see Exhibit 2). Fewer than 100 people were injured as a result of these incidents and 51 people killed, including the 47 fatalities in Lac-Mégantic. Meanwhile, the number of Canadian motor vehicle fatalities in 2013 alone was 1,951, while the number of serious injuries caused by automobile mishaps topped 10,000. In the 2010 to 2014 period, there were more than 8,000 Canadian fatalities and more than 45,000 serious injuries due to automobile-related incidents.[[16]](#footnote-16)

“Calgary,” Fielding noted, “probably faces more risk from tanker trucks on city streets than rail explosions.”[[17]](#footnote-17) Hazard identification and risk analysis had long been undertaken at the City of Calgary, including the development of a principal corporate risk summary that included the analysis of natural, human-caused, economic, social, and environmental risks. An annual risk assessment was conducted by the director of Emergency Management and was integrated into this corporate risk summary. The City administration understood the importance of analyzing and preparing for the likelihood and impact of a derailment or mass volume release along the rail lines. The steps the City had been taking to mitigate rail risk included derailment exercises and training by emergency response personnel and emergency management partners, land use policy collaborative planning and permit review, and ongoing relationship development with the rail industry. Furthermore, a quarter century ago, as a condition of subdivision application approval, the City of Calgary implemented a minimum 27.5-metre distance setback from the boundary of the railway right-of-way to the closest part of any habitable building in residential areas. This was with the intent of reducing proximity-to-rail risks.

In the midst of other cities adopting the guidelines and Calgary determining what to do with them, two specific commercial and residential applications for development immediately adjacent to the rail lines were submitted to the City. As part of their applications, the developers had been asked by the City to provide a risk assessment. Each developer used a separate methodology, resulting in different risk results. From this, and contextualized with the interests and objectives of the Municipal Development Plan, it became evident there was a need for a consistent methodology and base line understanding of the risk probability and impact to life safety, property protection, and environmental preservation.

In 2015, Progressive Conservative MPP (member of provincial parliament) Lisa Thompson, whose Ontario riding included Walkerton, held a press conference to warn policy makers about the tendency of tragic events to lead to solution-making for the sake of solution-making. Noting that the Walkerton tragedy[[18]](#footnote-18) had led to waves of costly regulations, all designed to somehow ensure that an incident caused by neglecting to adhere to existing rules never happened again, Thompson called on all politicians to look closely at the “ridiculousness of regulations” that followed Walkerton.[[19]](#footnote-19)

Though not minimizing the primary importance of life safety for both response personnel and the public, Fielding felt the same way about the new proximity guidelines based on the probability of a derailment or disaster and the management of that specific risk.

CHALLENGING CONVENTIONAL PRACTICE

As an experienced city manager, Fielding was aware of rail safety issues when contemplating the dilemma he faced by raising his concerns over the new proximity-to-rail guidelines and challenging his staff to be comprehensive about defining and managing the risk. Prior to becoming the city manager for Calgary, he had been the city manager for Burlington, Ontario, where three VIA Rail Canada employees were killed and dozens of passengers hospitalized after a train came off its tracks in 2012. Less than three months after the Lac-Mégantic incident, several rail cars full of flammable liquids derailed in Calgary as a slow-moving train left CP’s Alyth Yard, located just five kilometres east of the downtown core.

But the new proximity guidelines had been issued months before Lac-Mégantic generated increased demand for regulatory actions to improve public safety. And Fielding could not help but notice that implementing them would not limit the risk of death and destruction caused by similar disasters. A 30-metre setback, for example, did not reduce the destruction caused when a “tsunami of fire” sparked by human negligence rolled through a populated area. That had been the situation in Lac-Mégantic, where waves of spilled oil sparked a fire three times the height of downtown buildings, generating heat two kilometres away. In some cases, people were forced to jump from the upper floors of downtown buildings to escape the sea of fire that rolled into buildings and storm sewers and re-emerged as towering flames from chimneys and street manholes.

The problem, of course, was that others did not see things the same way as Calgary’s city manager, owing in part to the magnitude of the Lac-Mégantic tragedy. “I needed people to look at the probability and impact of the risk materializing—to consider many options that may not have been part of conventional thinking,” Fielding noted. The City’s administration continued to work collaboratively with external stakeholders to find solutions to the fundamental issue: How would The City of Calgary support the continued development and economic value of lands in proximity to rail, while protecting public safety and buildings? Fielding continued to put this in context with maintaining relationships to support a diversified economy, accommodating growth within the major urban centre, and retaining Calgary’s vision of being a “great place to make a living, a great place to make a life.”

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EXHIBIT 1: PROXIMITY POLICY RECOMMENDATIONS

**Policy Recommendation 1**: Municipalities should establish minimum setback requirements through a zoning bylaw amendment.

**Policy Recommendation 2**: Municipalities should consider amending their Official Plan or other appropriate legislation to require noise impact studies as part of any re-zoning or Official Plan amendment near railway operations.

**Policy Recommendation 3**: Urban Design Guidelines for development near railway corridors would be a valuable tool in suggesting building layout and design. Alternatively, municipal planners should pay close attention to these issues through a site planning process. Jurisdictions that do not allow comprehensive site planning may wish to consider amendments to their land use planning legislation. Comprehensive zoning for podiums would be a valuable tool for areas in proximity to railway operations that municipalities have identified for redevelopment. Urban Design Guidelines can also speak to appropriate built form, including podium design, setbacks, step backs, etc. At minimum, municipal planners should secure podium massing as part of a site-specific zoning bylaw amendment. Balconies can be regulated through zoning, if administered comprehensively, and can be secured as part of a site-specific zoning bylaw. Urban Design Guidelines should also speak to appropriate balcony design (e.g., recessed versus protruding balconies). Urban Design Guidelines should contain comprehensive information on best practices for landscape design, and appropriate types and species of plants. Urban Design Guidelines can speak to materiality. Some jurisdictions, such as Ontario, allow municipalities to regulate external materials through the site plan process. This practice should be encouraged, and jurisdictions that do not currently allow for this should consider making appropriate amendments to their land use planning legislation.

**Policy Recommendation 4**: Municipalities should consider amendments to their Official Plan, where necessary, to make vibration studies a requirement for any zoning bylaw amendment and Official Plan amendment applications.

**Policy Recommendation 5**: Urban Design Guidelines may be useful tools for establishing specifications for the proper use and design of berms.

**Policy Recommendation 6**: Trespass issues can be avoided through careful land use planning. Land uses on each side of a railway corridor or yard should be evaluated with a view to minimizing potential trespass problems. For example, schools, commercial uses, parks, or plazas should not be located in proximity to railway facilities without the provision of adequate pedestrian crossings.

Source: The Federation of Canadian Municipalities and the Railway Association of Canada, *Guidelines for New Development in Proximity to Railway Operations*, May 2013, accessed December 20, 2017, http://proximityissue.wpengine.com/wp-content/uploads/2017/09/2013\_05\_29\_Guidelines\_NewDevelopment\_E.pdf.

EXHIBIT 2: FEDERALLY REGULATED RAILWAY OCCURRENCES AND CASUALTIES IN CANADA (2001-2010)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2001** | **2002** | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** |
| **Main-Track Train Collisions** | 7 | 9 | 6 | 5 | 6 | 2 | 9 | 7 | 5 | 4 |
| **Main-Track Train Derailments**  **(1 - 2 cars)** | 71 | 66 | 83 | 96 | 103 | 83 | 76 | 66 | 39 | 40 |
| **Main-Track Train Derailments**  **(3 or more cars)** | 61 | 58 | 73 | 64 | 96 | 56 | 83 | 62 | 28 | 40 |
| **Crossing Accidents** | 279 | 260 | 250 | 236 | 269 | 243 | 218 | 221 | 188 | 181 |
| **Non-Main-Track Collisions** | 108 | 131 | 111 | 123 | 98 | 110 | 102 | 91 | 95 | 94 |
| **Non-Main-Track Derailments**  **(1 - 2 cars)** | 533 | 482 | 525 | 562 | 587 | 567 | 456 | 427 | 383 | 431 |
| **Non-Main-Track Derailments**  **(3 or more cars)** | 181 | 182 | 170 | 151 | 171 | 136 | 175 | 143 | 114 | 109 |
| **Collisions/Derailments**  **Involving Track Units** | 19 | 11 | 23 | 26 | 19 | 17 | 30 | 27 | 50 | 34 |
| **Employee/Passenger Accidents** | 8 | 8 | 7 | 12 | 8 | 16 | 18 | 12 | 12 | 9 |
| **Trespasser Accidents** | 80 | 73 | 65 | 100 | 83 | 91 | 101 | 73 | 72 | 81 |
| **Fires/Explosions** | 36 | 25 | 23 | 15 | 17 | 25 | 25 | 12 | 20 | 30 |
| **Other** | 48 | 27 | 16 | 23 | 20 | 25 | 27 | 38 | 37 | 23 |
| **TOTAL** | 1,431 | 1,332 | 1,352 | 1,413 | 1,476 | 1,371 | 1,320 | 1,179 | 1,043 | 1,076 |
| **Combined Fatalities** | 98 | 96 | 79 | 101 | 103 | 95 | 84 | 74 | 71 | 81 |
| **Combined Serious Injuries** | 91 | 73 | 81 | 93 | 78 | 71 | 58 | 64 | 50 | 62 |

Source: Transportation Safety Board of Canada, “Statistical Summary—Railway Occurrences 2010,” Government of Canada, March 18, 2014, accessed December 20, 2017, http://tsb.gc.ca/eng/stats/rail/2010/ss10.asp.

1. The Federation of Canadian Municipalities and the Railway Association of Canada, *Guidelines for New Development in Proximity to Railway Operations*, 1-8, May 2013, accessed December 19, 2017, http://proximityissue.wpengine.com/wp-content/uploads/2017/09/2013\_05\_29\_Guidelines\_NewDevelopment\_E.pdf. [↑](#footnote-ref-1)
2. “History of Calgary,” The Calgary Connection, accessed December 1, 2016, www.incalgary.com/History%20of%20Calgary.htm. [↑](#footnote-ref-2)
3. Richard White, “Possible Futures for the CP Rail Line in Downtown Calgary,” CBC: Calgary, September 17, 2016, accessed December 1, 2016, www.cbc.ca/beta/news/canada/calgary/calgary-cp-rail-downtown-debate-richard-white-crossroads-1.3765380. [↑](#footnote-ref-3)
4. Ibid. [↑](#footnote-ref-4)
5. Ibid. [↑](#footnote-ref-5)
6. All currency amounts in the case are in CA$. [↑](#footnote-ref-6)
7. Michael Bourque, “We Don’t Need Bill C-52: Railway Association of Canada,” iPolitics, March 22, 2013, accessed December 2, 2016, http://ipolitics.ca/2013/03/22/we-dont-need-bill-c-52-railway-association-of-canada/. [↑](#footnote-ref-7)
8. Cynthia Lulham, “Submission to the Canada Transportation Act Review,” FCM–RAC Proximity Initiative, accessed December 1, 2016, https://www.tc.gc.ca/eng/ctareview2014/pdf/FCM-RAC%20%20Proximity%20Submission.pdf. [↑](#footnote-ref-8)
9. Stikeman Elliott, “Bill C-52 – Changes to the Liability and Compensation Regime for Shipping Crude Oil by Rail,” Stikeman.com, February 24, 2015, accessed December 1, 2016, www.canadianenergylaw.com/2015/02/articles/oil-and-gas/bill-c52-changes-to-the-liability-and-compensation-regime-for-shipping-crude-oil-by-rail/. [↑](#footnote-ref-9)
10. Tracy Johnson, “Analysis: Pipelines vs. Trains: Which is Better for Moving Oil?,” CBC News: Business, March 10, 2015, accessed December 3, 2016, www.cbc.ca/news/business/pipelines-vs-trains-which-is-better-for-moving-oil-1.2988407. [↑](#footnote-ref-10)
11. The Canadian Press, “Lac-Mégantic Marks Sombre Second Anniversary of Rail Disaster,” thestar.com, July 6, 2015, accessed December 1, 2016, https://www.thestar.com/news/canada/2015/07/06/lac-megantic-marks-somber-second-anniversary.html. [↑](#footnote-ref-11)
12. Ibid. [↑](#footnote-ref-12)
13. “Chapter 2: State of Rail Safety in Canada,” Transport Canada, modified March 6, 2013, accessed December 1, 2016, https://www.tc.gc.ca/eng/tcss/RSA\_review/chapter2-372.htm. [↑](#footnote-ref-13)
14. Confederation was1867, when Canada became a country. [↑](#footnote-ref-14)
15. “10 of Canada’s Worst Train Accidents,” Blog of Lists, *Maclean’s*, July 9, 2013, accessed December 1, 2016, www.macleans.ca/society/life/10-of-canadas-worst-train-accidents/. [↑](#footnote-ref-15)
16. Canadian Motor Vehicle Traffic Collision Statistics 2014, Transport Canada, accessed December 20, 2017, https://www.tc.gc.ca/media/documents/roadsafety/cmvtcs2014\_eng.pdf. [↑](#footnote-ref-16)
17. Case interview. [↑](#footnote-ref-17)
18. Bacterial contamination of municipal water in the small community of Walkerton, Ontario led to seven deaths and the illness of 2,300 people in May 2000. [↑](#footnote-ref-18)
19. Richard J. Brennan, “Walkerton Water Tragedy Produced Too Much Red Tape, Says Tory MPP Lisa Thompson,” thestar.com, March 11, 2014, accessed December 1, 2016, https://www.thestar.com/news/queenspark/2014/03/11/walkerton\_water\_tragedy\_resulted\_in\_too\_much\_red\_tape\_says\_tory\_mpp\_lisa\_thompson.html. [↑](#footnote-ref-19)