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HIGHWAY ROBBERY:

HOW FEDERAL TELECOM
RULES COST TAXPAYERS AND
DAMAGE PUBLIC ROADS

JUNE 2008

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Acknowledgements

This report was developed, overseen and reviewed by the FCM Telecommunications Subcommittee. Chaired by Councillor Howard Moscoe, City of Toronto, the subcommittee is a team of municipal councillors and officials who have worked on municipal-telecom issues for more than a decade.

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EXECUTIVE SUMMARY

Outdated federal telecommunications rules and the Canadian Radio-television and Telecommunications Commission's (CRTC) interpretation of these rules as they relate to municipal rights-of-way have resulted in an ongoing multimillion dollar subsidy from property tax payers to private telecommunications companies.

This subsidy has cost property tax payers in larger cities \$646 million since 2001, or about \$107 million per year.

The issue stems from the legislative regime that today governs the installation and maintenance of privately-owned telecommunications ducts and cable under municipal roads. This practice results in significant ongoing costs for municipal governments that they cannot recover because of the federal system in place.

Under the current regime, municipal governments have lost both the ability to control their own rights-of-way (ROWs) and the ability to recover the ongoing costs imposed on them when telecommunications companies dig up public roads and install their equipment in public ROWs.

The roots of the problem are entangled in century-old legislation whose right-of-way provisions were not substantially changed when a new *Telecommunications Act* was adopted in 1993.

While the goal of the *Telecommunications Act* may have been to provide a new direction for telecommunications in Canada, many of its key provisions were simply lifted from the previous legislation, including the section governing relations with municipal ROWs.

Even as Canada's telecommunications landscape was undergoing dramatic change as a result of significantly increased competition, a century-old provision, originally designed to permit telephone companies to extend their networks outside railway corridors, was left as the sole legislative guide to resolving disputes with municipalities.

Under the pressures of a fiercely competitive market, and in the hands of a highly-specialized administrative tribunal designed solely to regulate the telecommunications industry, that provision was used to do something it was never intended for: limit municipal property rights and reduce the operating costs of telecommunications ventures.



Compounding the problems stemming from antiquated legislation, the CRTC's singular focus on the telecommunications industry made it incapable of adequately considering municipal governments' perspectives and needs when adjudicating on rights-of-way disputes.

For decades, the CRTC has essentially been the regulator of Canadian telecommunications.

From the frequency spectrum to bandwidth management, from Canadian content rules to media ownership concentration, the CRTC has tackled some of the most visible and technically complex issues in the country. Given the technical knowledge and expertise required to fulfill its core mandate, many present and past CRTC members have been drawn from the Canadian telecommunications industry. Former telecommunications business executives, industry lawyers, engineers, and venture capital financiers all bring their perspective to the issues. Looking inside the Commission, one finds a comparable set of skills among the CRTC's staff.

While such appointments ensure that telecommunications carriers will be well understood when appearing before the Commission, the scenario is quite different when an entity from outside the industry, such as a municipality, appears to defend its interests in this specialized industry forum.

Increased competition within the telecommunications sector meant that a great number of new, commercially aggressive players began requesting access to municipal property, particularly to ROWs.

Existing players also demanded increased access to upgrade networks in the newly competitive environment. As competitors raced to deploy their facilities, municipalities faced successive requests from telecommunications carriers to excavate streets and roads to install their facilities.

From a municipal perspective, this has meant trying to accommodate more and more telecommunications equipment within very confined areas. Municipalities responded to the increased demands for ROW space as they had dealt previously with other private users of public space: they tried to negotiate agreements that spelled out the roles and responsibilities associated with using the street system in a way that would be fair to taxpayers and other street users.

Early on, agreements were reached with a number of telecommunications companies, but the landmark CRTC *Ledcor* decision changed all that. The consequences of the 2001 decision have been catastrophic for municipal rights-of-way management and cost recovery.

The CRTC's application of the policies set out in *Ledcor* has delivered a windfall to the industry at the expense of municipal taxpayers. Within this regulatory context, local authorities essentially have no bargaining power. Some telecommunications companies have stopped honouring existing agreements and a number have lined up to request the CRTC's intervention in renegotiating terms.

While the current situation may favour telecommunications companies by reducing some short-term direct costs, it has created an uncertain and litigious business environment. Ad hoc and unclear CRTC decisions have created a patchwork of rights-of-way access agreements across the country. The result is an uneven playing field that inevitably undermines the principles of an open and competitive telecommunications market.

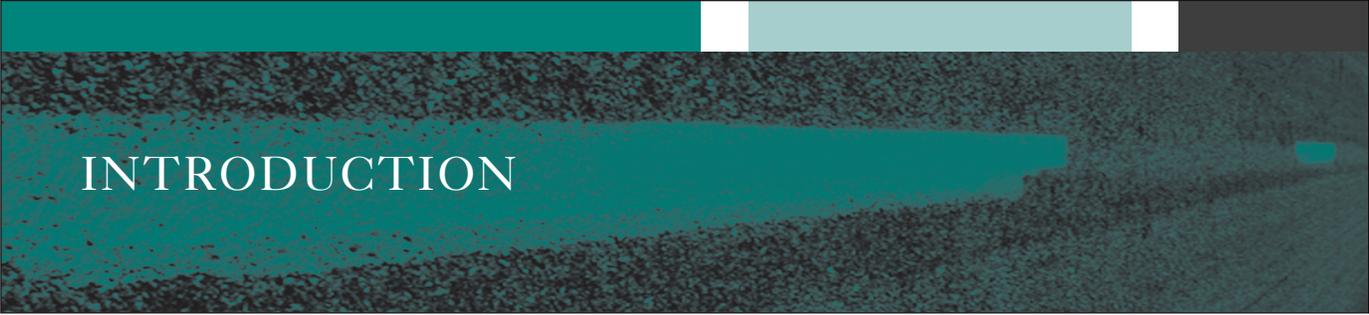
It is difficult to understand the federal government's inaction. The telecommunications industry operates in a competitive market environment. In that context, individual companies must negotiate the costs of all other aspects of their business, including supplies, labour and real property. Negotiating the terms of access to municipal ROWs is no different. If market principles are desirable for the industry, why are they not desirable for municipalities?

By allowing the current situation to continue, the federal government is in conflict with its own policy goals. On the one hand, it has recognized the need to provide assistance to municipal taxpayers to help meet tens of billions of dollars in unfunded infrastructure needs. On the other hand, it continues to leave in place a system that transfers to municipalities significant portions of the infrastructure costs of for-profit telecommunications companies. This situation is costly, counter-productive and devoid of any public policy rationale.

To address the situation, FCM calls on the Government of Canada to amend the *Telecommunications Act* to:

- a. Ensure that telecommunications companies' access to municipal rights-of-way is gained through negotiated agreement with municipal governments;
- b. Protect municipal governments and taxpayers by ensuring that adequate compensation is provided for all direct and indirect costs associated with works undertaken by telecommunications companies;
- c. Give locally elected councils the right to seek fair compensation on behalf of property taxpayers for value of public property occupied by a telecommunications company; and
- d. Create a new dispute-resolution mechanism that responds to the complexity of the issues and the need to balance perspectives in adjudication.





INTRODUCTION

Roads are among the most basic elements of our public infrastructure. They connect us to our neighbours, jobs, schools and businesses. A good local street network is one of the building blocks of our economy and quality of life.

But our local streets and roads are under siege, with multiplying potholes the most visible signs of the damage. Age plus the demands of growing communities and the challenge of a changing climate are straining local road networks.

Municipalities are struggling to deal with this growing problem. Unfortunately, they are hamstrung by the \$123-billion municipal infrastructure deficit, the product of a flawed fiscal system that has shifted too many responsibilities to the municipal property tax base.

Now another factor that is pushing local roads—and property tax payers—to the breaking point has been documented: telecommunications companies that dig up municipal streets and roads to install and upgrade equipment without having to pay the full cost of ongoing repairs.

This contributes to the declining condition of local roads and is, in effect, a subsidy by local property tax payers to for-profit telecommunications companies.

The rules for installing telecommunications equipment below local streets and roads are set by outdated federal legislation and a Canadian Radio-television and Telecommunications Commission (CRTC) that is not equipped to understand the fiscal and infrastructure challenges facing municipalities. Together, these factors have severely undermined the ability of local governments to manage public roads in the public interest.

Municipal governments have lost both their ability to control their own rights-of-way and their ability to recover the full costs they incur as a result of these private projects. This report quantifies, for the first time, the cost to property tax payers of our outmoded federal telecommunications policy framework. It describes how we ended up with a system that makes it so difficult for municipalities to recover their costs.

The report also discusses how the current system has:

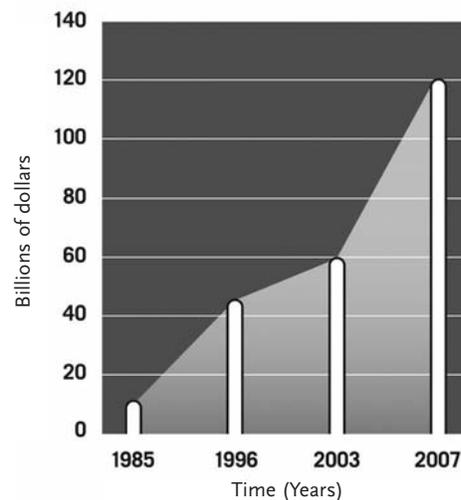
- Led to an unjustified intrusion of federal powers into provincial and municipal areas of responsibility;
- Undermined the ability of municipalities to manage local roads in the public interest; and
- Undermined the principles of an open, competitive telecommunications market by creating an uneven playing field and producing drawn-out negotiations, which have led to thousands of hours of legal fees and untold millions in lost profits due to project delays.

As the report's closing sections make clear, a fairer, more rational, and more affordable policy framework is possible. Property tax payers can be protected, and municipalities supported, without any additional federal expenditures. What is required is to recognize that cities and communities are not obstacles to telecommunications service, but are responsible stewards of public assets and natural partners in making Canada one of the world's most-connected countries.

The Municipal Infrastructure Deficit

The strain on municipal roads, driven by rapidly aging assets, population growth and climate change, is contributing to the municipal infrastructure deficit. Canadian municipalities build, own and maintain most of the infrastructure that supports our economy and quality of life. Yet for the past 20 years, municipalities have been caught in a fiscal squeeze caused by growing responsibilities and reduced revenues. This has driven growth in the municipal infrastructure deficit, which has climbed from an estimated \$12 billion in 1985 to \$123 billion in 2007.¹

Municipal Infrastructure Deficit



¹ M. Saeed Mirza, *Danger Ahead: The Coming Collapse of Canada's Municipal Infrastructure*, 2007



THE ROOTS OF THE PROBLEM

Legislating access to municipal property to support the establishment of a telecommunications network is almost as old as Canada. In 1899, the Parliament of Canada amended the *Railway Act* to grant telegraph and telephone companies the “power to enter” municipal lands. In fact, the provision allowed these corporations to “break up and open any highway, square or other public place.” This provision formed the basis for the provisions of the 1993 *Telecommunications Act* that have become problematic.²

At first, federally regulated companies offering mainly telegraph services were given permission to run their lines along railway tracks. With the growing popularity of the telephone, companies had to be able to locate their infrastructure outside railway corridors and within towns and cities. Parliament intervened to remove restrictions on telephone companies, giving them permission to locate their infrastructure outside railway corridors, primarily on municipal land. The intention was to allow telecommunications companies access to new markets. The 1899 amendment was never intended to strip away the rights of local communities.

In fact, access to municipal land was entirely subject to the approval of the local council. By 1919, the legislation had been amended further to include a dispute-resolution clause. This is where the matter stood for decades while telecommunications technology changed radically.

In the days when telecommunications companies were regulated monopolies and a single telephone company served an entire community, Canadian municipalities and telephone companies maintained a healthy co-existence in the use and occupation of municipal property. Municipalities had to contend with the transmission lines of just a single telephone company, so the disruption and inconvenience during construction and maintenance was minimal.

The 1993 Federal *Telecommunications Act*

After decades of accelerating changes in telecommunications services and technology, the federal government moved to modernize the legislative framework governing telecommunications. The *National Telecommunications Powers and Procedures Act* was repealed and merged with relevant provisions of the *Railway Act* to form the 1993 *Telecommunications Act*. The new Act, combined with the CRTC’s policy drive towards greater competition, introduced many new players who would be allowed to compete in a more open market environment.

While the goal of adopting the new *Telecommunications Act* was to help provide a new direction for telecommunications in Canada, many of the key provisions were simply lifted from the previous legislation, including Section 43. The entire telecommunications landscape was about to

² Section 43 (see Appendix A)

change, but the century-old provision, originally designed to permit telephone companies to extend their networks outside railway corridors, was left as the sole legislative guide to resolving disputes.

Under the pressures of a fiercely competitive market, and in the hands of a highly-specialized administrative tribunal designed to regulate the telecommunications industry, Section 43 was about to morph into something for which it was never intended: limiting municipal property rights to reduce the operating costs of private business ventures.

The CRTC

The second issue is the CRTC, the regulatory body on which these powers have been conferred, and how it has used these powers. For decades, the CRTC has essentially been the regulator of Canadian telecommunications. The CRTC regulates “over 2,000 broadcasters, including television, cable distribution, AM and FM radio, pay and specialty television, direct-to-home satellite systems, multi-point distribution systems, subscription television and pay audio.”³ The commission also regulates “over 80 telecommunications carriers including major Canadian telephone companies.”

From the frequency spectrum to bandwidth management, from Canadian content rules to media ownership concentration, the CRTC has tackled some of the most visible and technically complex issues in the country. Given this important role, as well as the technical knowledge and expertise required to fulfill its core mandate, many present and past CRTC members have been drawn from the Canadian telecommunications industry. Former telecommunications business executives, industry lawyers, engineers, and venture capital financiers all bring their perspective to the issues. Looking inside the Commission, one finds a comparable set of skills among the CRTC’s staff.

While such appointments ensure that telecommunications carriers will be well understood when appearing before the Commission, the scenario is quite different when an entity from outside the industry, such as a municipality, appears to defend its interests in this specialized industry forum. Municipalities are not regulated by the CRTC, and neither the commissioners nor their staff are focused on municipal affairs or the challenges facing cities and communities.

Until recently, this did not pose a problem, since access to municipal land continued to be negotiated. However, increased competition in the telecommunications sector meant that a great number of new, commercially aggressive players began requesting access to municipal property, particularly to ROWs. Existing players also demanded increased access to upgrade networks in the newly competitive environment.

The issue became more urgent when the CRTC introduced “facilities-based” competition. Municipalities suddenly faced unprecedented and multiple demands for the use and occupation of their property. As competitors raced to deploy their facilities to serve the most lucrative customers, municipalities faced successive requests from telecommunications carriers to excavate streets and roads to install their facilities.

From a municipal perspective, this meant trying to accommodate more and more telecommunications equipment within very confined areas. Municipalities responded to the increased demands for ROW space as they had dealt previously with other private users of public space. They tried to negotiate agreements that spelled out the roles and responsibilities associated with using the street system in a way that would be fair to taxpayers and other street users. It was recognized that, unlike sewer, water and hydro-electric

³ CRTC, www.crtc.gc.ca, accessed May 2008



systems, the new telecommunications companies were for-profit businesses using public rights-of-way to serve a niche market, not necessarily the entire community.

Agreements were reached in many cases and, not surprisingly, municipalities continued to include occupancy fees for the use of public space, on the theory that just as other users pay for the use of rights-of-way, from newspaper boxes to outdoor patios, telecommunications companies should also.

Left to themselves, the managers of public street space and the developing telecommunications industry could have developed an understanding. Over time, market forces would have determined what was fair compensation for municipalities and fair payment by the companies. This did not have time to occur.

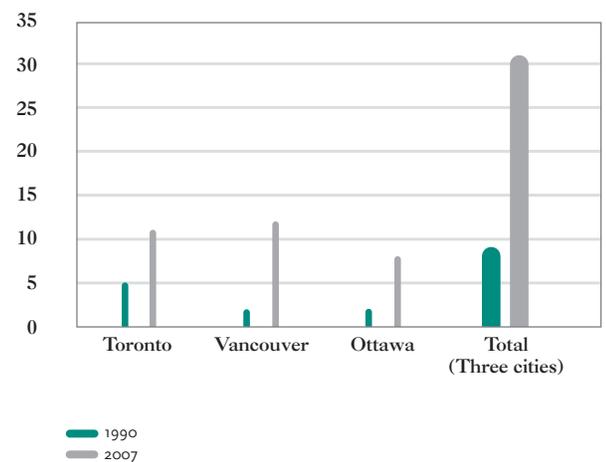
New companies were eager to negotiate with municipalities for access to streets, but these negotiations became more complex as municipalities struggled to understand the impact of multiple telecommunications companies competing for access to the same streets. As with any negotiations, disagreements arose regarding acceptable terms and conditions of access. The telecommunications industry, governed by the federal *Telecommunications Act*, was very experienced in using the CRTC forum to resolve issues and realized the advantage in having the CRTC intervene in disputes with municipalities.

What is a “Telecommunications Carrier”?

The communications services associated with the occupation of municipal roadways are:

- local telephone services
- long distance telephone services
- high-speed data and private line services
- Internet access services
- wireless communications services
- cable TV and other video services
- VOIP (*i.e.*, local and long distance telephone services delivered over personal computers and the Internet)

Telecoms in downtown rights-of-way



THE LEDCOR DECISION

The situation changed in 2001, when the CRTC issued its landmark *Ledcor* decision.⁴ The City of Vancouver discovered that Ledcor Industries had been building ducts for fiber-optic cables beneath city streets without obtaining the city's consent. Rather than negotiate, Ledcor asked the CRTC to order the city to grant access.

In its decision, the CRTC ruled that Ledcor did not have to pay the city occupancy fees for the space housing its cables beneath 18 downtown intersections. The decision also greatly revised the amount of direct expenses the City of Vancouver could recover. However, the CRTC did recognize the right of municipalities and their property tax payers to recover the full costs incurred when telecommunications companies use the municipal street system to access, expand and operate their networks. It also identified a group of "causal cost" categories that have since guided municipal attempts to recover the costs of granting ROW access to telecommunications carriers.

Although *Ledcor* seemed to support municipal cost-recovery in principle, it was, from the municipal perspective, seriously inadequate in practice. The CRTC's highly prescriptive, top-down model for calculating and recovering causal costs proved unduly complicated and expensive to implement. Its methodology was so complex that even large cities did not have the resources to apply them

effectively. The decision also created uncertainty, because it applied specifically to the Vancouver/Ledcor dispute and produced few clear precedents that could be applied elsewhere.

Today, many telecommunications companies cite the "*Ledcor* principles" as hard-and-fast rules, which require a local municipality to justify its road management rules and charges to the company itself. Very few causal costs are actually recovered.

The Ledcor Effect: Torn-up Agreements and Litigation

The consequences of the *Ledcor* decision have been catastrophic for municipal rights-of-way management and cost recovery. The CRTC has expanded the application of the policies set out in *Ledcor*, providing a windfall to the industry at the expense of municipal taxpayers. Local authorities essentially have no bargaining power. Some telecommunications companies have stopped honouring agreements already in place, and a great number have lined up to request the CRTC's intervention in renegotiating terms. The goodwill that had served all parties for over a century is all but gone, and the only avenue left is litigation in an industry-dominated forum, the CRTC.

⁴ *Ledcor/Vancouver – Construction, operation and maintenance of transmission lines in Vancouver*, Decision CRTC 2001-23, 25 January 2001



The course chosen by the CRTC is shortsighted. It may favour the growth of telecommunications companies by reducing some short-term direct costs, but it has created an uncertain and litigious business environment. Ad hoc and unclear CRTC decisions have created a patchwork of rights-of-way access agreements across the country. Companies within the same city are often subject to different fees and conditions for access to rights-of-way. The result is an uneven playing field that inevitably undermines the principles of an open and competitive telecommunications market.⁵

It is difficult to understand the federal government's inaction. The telecommunications industry operates in a competitive market environment. In that context, individual companies must negotiate the costs of all other aspects of their business, including supplies, labour and real property. Negotiating the terms of access to municipal rights-of-way is no different. If market principles are desirable for the industry, why are they not desirable for municipalities?

By allowing the current situation to continue, the federal government is in conflict with its own policy goals. On the one hand, it has recognized the need to provide assistance to municipal taxpayers to help meet tens of billions of dollars in unfunded infrastructure needs. On the other hand, it continues to leave in place a system that transfers to municipalities significant portions of the infrastructure costs of for-profit telecommunications companies. This situation is costly, counter-productive and devoid of any public policy rationale.

ROWs: A looming Constitutional issue

Another significant legal battle which has been slowly brewing in the background, relates to the federal government's authority, through the CRTC, to trample the property rights of municipalities, provincially-regulated utilities and, increasingly, of private property owners.

While the Courts have broadly recognized telecommunications carriers as "federal undertakings", the Constitution grants provincial legislatures exclusive authority over the areas of property rights and civil matters such as contract law. The powers given to the CRTC have allowed it to make significant intrusions into domains of exclusive provincial and local jurisdiction: the CRTC has re-written contractual agreements, it has *de facto* expropriated the value of municipal land and it has forced municipalities to accept the installation of infrastructure with little regard to local constraints and needs.

While Canadian constitutional law does recognize the fact that, in exercising its constitutional powers to fulfill its mandate, the federal government may, at times, infringe on areas of provincial jurisdiction, these infringements must, generally speaking, be shown to be necessary and be limited to what is strictly necessary in order to allow the federal government to fulfill its objectives. Furthermore, from a policy perspective, the federal government itself increasingly recognizes its interest in fostering strong cities and communities, while respecting the unique jurisdiction of municipal governments.

The federal position is made even weaker by the fact that, for almost a century prior to the adoption of the 1993 Act, federal telecommunications policy objectives were quite successfully implemented through negotiated agreements with municipalities.

Continued on page 12

⁵ Many companies also often insist on protecting their agreements with confidentiality clauses on the basis of protecting competitive information. The CRTC's support for these agreements further undermines the ability of municipalities to set fair and open policies.

More recently, in its 2006 Report, the Telecommunications Policy Review Panel – established to provide advice to the federal government on legislative reforms in this area – advocated even freer access to municipally-owned land. However, this extensive document fails to provide any strong evidence to indicate that there is a crisis of access to municipal property. Without a clearly demonstrated need, there is little legal or political justification for trampling provincial constitutional rights and municipal responsibilities to serve property taxpayers.

Adding fuel to this fire are the recommendations contained in the Model Telecommunications Act which was co-authored by one of the review Panel members on behalf of the industry. The document advocates significantly expanding the already problematic “right of entry” provisions. In fact, the wording of the Model Telecommunications Act would see telecommunications companies receive unrestricted access to all publicly-owned lands as well as to private property. Private landlords would lose control over who installs an antenna on their roof and even who has access to a building’s wiring.

In short, were the federal government to follow the advice of the telecommunications industry, it would likely result in the greatest attempted incursion by the federal government into areas of provincial and local jurisdiction in decades and the wholesale transfer to an administrative tribunal of matters properly determined by the Courts.



THE MUNICIPAL-TELECOM FUNDING GAP

In 2008, FCM determined to establish an estimate of the “municipal-telecom funding gap.” This gap is the difference between what cities and communities would need to collect in fees to recover the full costs of housing telecommunications networks within local rights-of-way, and the total fees they are currently recouping from carriers. The gap quantifies the annual (and largely unacknowledged) subsidy paid by property tax payers to private, for-profit telecommunications companies for road repairs and other costs related to telecommunications operations.

The first step in establishing a gap-estimate was to determine which specific costs should be included. For all its practical deficiencies, *Ledcor* identified a core group of cost categories that should be funded by telecommunications companies to enable municipalities to recover costs imposed on property tax payers. While *Ledcor* failed to introduce a workable mechanism for municipal cost-recovery, it provided a high-level road map to a fairer, more rational telecommunications framework.

Key Cost Categories

In developing a formula for the municipal-telecom funding gap, FCM has referenced three key cost categories identified by the CRTC. These are:

1. Plan review and inspection costs;
2. Street degradation costs; and
3. Lost productivity or “work around” costs.

1. Plan Review and Inspection Fees

Municipalities retain staff to review applications for installations on city streets, to review traffic plans, and to inspect the execution of work. The staff time involved can be substantial, because considerable judgment is involved in finding workable alignments for new utilities⁶, taking into account safety, constructability and future needs. While a telecommunications company is able to focus on its own desired alignments and routing, the municipality must consider all utilities, sewer, water, hydro, gas, street lighting, future requirements and other telecommunications companies.

For the municipality, it becomes an exercise in coordination, logistics, mapping and planning. In addition, the municipality must coordinate the work of providers that, in many cases, are competitors who prefer not to share information. As a result of the *Ledcor* decision, this coordination is made even more difficult by telecommunications companies that question municipal authority to determine local standards and processes.

Inspection costs are related to the necessary oversight of construction to ensure that traffic plans are followed, that disruption to the public is minimized, and that installation and soil compaction standards are adhered to.

⁶ Especially in congested downtown ROWs

2. Street Degradation Fees

An asphalt or concrete pavement is an engineered structure that works by flexing and transmitting traffic loads to a wide area of the pavement's substructure.

Installing a typical telecommunications duct in existing pavement requires cutting through the pavement structure, which destroys its ability to flex and distribute loads as a unit. Even when the pavement is repaired, the joint between the old asphalt and the new is very weak and cannot transfer the bending loads that made the pre-existing structure work effectively. As traffic moves over the repaired utility cut, the bond between old and new pavement quickly breaks causing cracking and movement between the panels of asphalt.

Once this cracking occurs, water penetrates the pavement through the cracks and weakens the granular substructure, which in turn causes more movement and more pavement damage. Eventually, the utility cut will cause potholes that need further repair and ultimately will shorten the life of that section of pavement. Limiting this damage requires an ongoing program of crack filling and patching. However, once the pavement is cut, degraded pavement and a shortened pavement life are inevitable.

While the mechanisms of pavement degradation have been well understood for years, it is only recently that extensive research and studies are enabling municipalities to begin quantifying the timelines and cost of degradation from utility cuts.

Typically, utility companies have only been required to patch the area of the utility cut to match as closely as possible the original surface level. If done well, this looked good but left municipal taxpayers

footing the bill for the ongoing maintenance and shortened pavement life. These ongoing long-term costs were not well understood, and utility companies, including municipally-owned sewer and water systems, were not required to fund them. This has turned out to be a significant factor in the shortfall in infrastructure reconstruction funding that cities across the country are experiencing.

The rapid increase in telecommunications construction has raised public awareness of the impact on pavement deterioration, and many municipalities now recognize that these are serious causal costs that can be quantified and should not be borne by the taxpayer.

The CRTC agreed that pavement degradation costs are causal costs that should be reimbursed by telecommunications companies. The CRTC, however, did not recommend any particular methodology for calculating these costs, suggesting instead that each municipality establish the costs for their particular conditions.

This may have been a reasonable conclusion at the time, given that climatic and other local conditions were thought to have an impact on the deterioration of streets. However, studies throughout the United States and Canada do not reflect that difference. An extensive study in Seattle, Wash., for example, shows that the problem is just as much an issue in the wet, mild west coast climate as it is in the freeze-thaw climate of Ottawa, Ont. Different factors are at play, but the end result of ongoing maintenance costs and shorter pavement life are the same.



From road cut to road reconstruction: The toll telecoms take on local streets

Each time a carrier wants to access equipment located within the municipal right-of-way, an incision in the street is required known as a “road cut.” When it comes to repairing a road cut, the initial patch work is generally performed at the carrier’s expense. However, the initial fix falls far short of compensating for the price a typical cut will eventually exact from the surrounding road.

There are a number of structural changes that occur within a road as a result of a road cut. These changes result in an accelerated “degradation cycle” and require that local maintenance crews perform additional maintenance activities. These activities include – but are not limited to – the following:

- **Cracksealing:** An operation where a heated rubberized asphalt sealant is poured into the crack to prevent future moisture infiltration in the base materials.
- **Slot Grinding:** As the degradation cycle progresses there comes a point where both cracking, as well as settlement and surface deterioration of the asphalt will occur above the crack. This situation requires that the surface asphalt be removed and replaced in order to seal the surface and level the road where settlements have occurred.
- **Pothole patching:** Along with “skin patching”, a temporary hot-mix asphalt patch placed on top of a problem-area, these repairs can arise at any time and are made just to make the road temporarily level and safe.



3. Lost Productivity or “Work Around” Costs

When telecommunications companies build their duct facilities, they like to do so as inexpensively and as expeditiously as possible, particularly in a competitive environment. In practical terms, this means that the ducts are placed as shallow as possible to minimize excavation costs and construction time. Often the ducts are built of inexpensive and flimsy materials, typically thin-walled plastic pipe.

Municipalities do not have this luxury in providing the basic sewer and water facilities that they are mandated to provide for public health and safety reasons. Water pipes have to be buried more deeply to keep them from freezing in the winter. Sewer collection systems are usually based on gravity flow and as a result can run very deep in places to maintain flow over a long distance.

Municipalities design and construct their systems to last up to 100 years and consequently go to some effort and expense to protect their systems from damage. For example, ductile iron pipe is often used instead of less expensive materials for water systems, because it can better resist damage from accidental contact.

When sewer systems are constructed or reconstructed, the nature of the system presents many challenges. Storm-sewer pipes are large, heavy and deeply buried. This requires wide trenches, heavy shoring systems and large cumbersome construction machinery. Utilities like gas and telecommunications, which are installed closer to the surface and anywhere in the area of the widened trench, will also affect the ability to access the pipes.

Water systems have to be built on a grid system, which means that existing pipes have to join at most intersections, thus dictating the depth of construction. In addition, due to the pressure in the pipe, thrust blocks and other mechanisms have to be constructed to maintain the integrity of the system. Water systems are pressurized systems and subject to failure. Water main repairs will be ongoing throughout the system.

All this work has to happen below the relatively shallow and fragile telecommunications network. The web of telecommunications facilities at the surface has made this much more difficult in the congested utility environment common in urban areas.

The cost of working around these telecommunications facilities and other utilities to install essential services has become significant. A typical sewer construction crew costs approximately \$10,000 per day. Large excavators require a spotter on the ground to guide the operator to avoid hitting conflicting ducts. All the conflicting ducts and cable have to be located and hand dug in order to avoid damaging the fragile plastic pipes and the fibre they contain. Once the ducts have been located, they have to be supported, because they cannot support their own weight across a wide sewer trench.

Shoring has to be constructed around the conflicting ducts. This often requires custom building instead of cheaper modular shoring. During installation of the deeper sewer and water pipes, care and time have to be taken to thread the pipes underneath the shallow ducts. All of this work takes time, which increases the cost and time required for constructing basic public services.

For more shallow water facilities, the necessity of connecting to intersecting pipes means that extra bends and associated thrust restraint has to be constructed to navigate around, in particular, telecommunications facilities.

Based on documenting a number of sewer and water construction jobs, it is clear that the cost to construct sewer and water facilities has increased by up to 20 per cent due to the necessity of working around shallow and fragile utilities, such as telecommunications services.



The fourth cost category: Relocation and rehabilitation costs

There is a fourth category of causal costs imposed on municipalities: relocation and rehabilitation costs. These costs are not included in this report's calculation of the municipal-telecom funding gap, because they vary widely according to the precise nature and scale of the public projects undertaken within a given community. However, on a project-by-project basis, these costs can impose significant burdens on municipal governments.

There are occasions when utilities in the street need to be relocated for a public purpose. This could occur, for example, because a street needs to be realigned for safety reasons or because a public facility such as a subway needs to be constructed.

A good example of the magnitude of this problem was found recently in Ottawa, Ont., where studies found that the cost of relocating telecommunications equipment to accommodate a new LRT system was an estimated \$40 million dollars.

The small Quebec municipality of Baie Comeau is facing a potential \$2 million bill to relocate privately-owned telephone cables located just below the surface of a local road in need of reconstruction. Although the network was laid in its current location 50 years ago – without the approval of the municipality – the company is seeking to have 75 per cent of relocation costs assigned to the municipality. The case is currently before the CRTC.

Rehabilitation costs, while not as frequently cited, are emerging as another burden for property tax payers. These are the costs of repairing or replacing telecommunications infrastructure that is damaged during the course of a public works project or which, because of its age, will not withstand the rigour of road reconstruction or road work.

While local governments often have a policy of paying a portion of costs for the relocation of telecom infrastructure in direct conflict with new municipal infrastructure, some telecommunications companies are attempting to extend this provision to replace their aging infrastructure at taxpayers' expense. For example, shallow telecommunications plant housed in aged clay tile ducts may not have the structural integrity to withstand the rigours of modern construction. When a municipality goes in to reconstruct a road they are often faced with large costs and time delays to have antiquated telecommunications ducts rebuilt to modern standards, despite the fact that neither relocation nor disruption of the ducts is required for the project to proceed.

MEASURING THE GAP

Methodology

In April 2008, FCM launched the Municipal-Telecom survey. The survey was overseen by the FCM Telecommunications Sub-Committee, a group of elected officials, municipal engineers, and road way managers that has worked on national ROW issues for more than a decade.

The survey was developed following a broad literature review. Participating municipalities' were asked to answer a range of questions regarding:

- local rights-of-way access fees;
- size of local underground telecommunications networks;
- utility/road cut permits issued;
- legal and staff costs associated with ROW negotiations and disputes;
- municipal road construction and maintenance budgets.

Wherever possible the project team asked respondents to provide data for the six-year period (2002-2007) since the *Ledcor* decision. The survey started on May 6, 2008 and ended on June 7, 2008.



The Formula for Full Cost Recovery

For the purposes of the current study, the project team has adopted a cost-recovery formula based on research conducted by the City of Vancouver.⁸

The City of Vancouver has been required to conduct significant research in this area, in part due to its involvement in the *Ledcor* case.

⁷ See list under Annex B

⁸ *Street Degradation Costs*, a study by the Streets Operations Branch of Engineering Services for the City of Vancouver, June 2007. This study examines the ongoing maintenance costs over the lifecycle of an asphalt pavement that are directly attributable to road cuts. These costs include crackfilling around the cut edges and pavement patching treatments required as a result of cut settlement. This study varies from previous studies which have looked primarily at costs related to the reduced pavement life that cuts impose on asphalt pavements. Such studies include *Impact of Utility Trenching and Appurtenances on Pavement Performance in Ottawa*, revised 1999, and the subsequent *Impact of Utility Trenching on Pavement Performance in the City of Ottawa*, 2004.



The overall rate developed for this report includes the following cost-recovery rates for key cost categories:

- \$70 – Pavement Degradation⁹
- \$50 – Lost productivity/work around costs¹⁰
- \$50 – Coordination, review, planning, approval
- \$11 – Construction monitoring and inspection
- **\$181 per metre – total charge for cost recovery on expanded/upgraded telecommunications networks within municipal ROWs.**

Survey Results

FCM surveyed a total of 16 municipalities with populations ranging from less than 20,000 to 2.5 million. Together these municipalities represent about 29 per cent of Canada’s population.

This sample includes 10 of Canada’s largest urban centres with a population range of 174,000 to 2.5 million. The large urban centres in the sample have a combined population of 7,657,753 which represents 64 per cent of all Canadians living in cities within that population range.

While information collected from smaller municipalities confirmed that the occupation of municipal ROWs is an issue with implications for communities of all sizes, the current study focuses on results compiled for larger urban centres. Additional research, and more extensive surveying, is required to develop an estimate of the funding gap in smaller cities and rural areas.

The following charts show the results for larger urban centres both within the sample group and for all cities within the target population range:¹¹

Table A
Telecom Network Expansions/Upgrades

	Total Network Expansion and upgrades (2002-2007)	ROW Access Fees Collected ¹² (2002-2007)	Funding Required to recover costs	Funding Gap (2002-2007)	Funding Gap (Annual)
Sample Group 7,657,753	619,740 m	\$19,899,566	\$112,172,940	\$92,273,374	\$15,378,895
Target Population 11,984,162	903,348 m	\$31,142,245	\$175,547,407	\$144,405,161	\$24,067,526

Table A shows the total fees collected for network expansion and upgrades from 2002 to 2007 both for the sample and target groups. For cities within the target group, which have a collective population of almost 12 million, the gap between fees collected and revenues required to cover costs was \$144,405,161 between 2002 and 2007, for an annual funding gap of \$24,067,526.

In addition to the new costs imposed by network expansions and upgrades, there are ongoing costs to property taxpayers associated with existing networks already operating within ROWs.

⁹ This figure represents the per metre charge the average city would need to collect for a road cut. The actual fee paid would depend in part on the age/remaining life of the pavement and, of course, whether or not access was through the road or through a sidewalk or boulevard.
¹⁰ This fee represents a one-time payment for the present value 30-year workarounds costs of telecommunications networks. It assumes a 20 percent productivity loss. The current study assumes a conservative 13 percent productivity loss.
¹¹ Population 174,000 and higher
¹² Includes fees and charges for ROW access including permit fees, occupancy fees and pavement degradation charges.

Table B
Ongoing Costs of Existing Networks

	Telecom Networks in ROWs ¹³	Workaround Costs (2002-2007)	Workaround Costs (Annual)
Sample Group 7,657,753	32,091 kms	\$320,912,600	\$53,485,433
Target Population 11,984,162	50,221.5 kms	\$502,210,000	\$83,702,478

Table B shows that together municipalities in the target population group have 50,221.5 kilometres of telecommunications networks operating beneath municipal ROWs. For the purposes of the current study, it is assumed that these networks impose an average, ongoing “workaround” cost on municipal infrastructure projects of \$1.66 per metre.

These costs are above and beyond all fees collected by municipalities for telecom-ROW access and, accordingly, represent at least a \$1,666 net cost to property taxpayers per kilometre of telecommunications network. For a target group with 50,221.5 kilometres of network within municipal ROWs, this amounts to \$502,210,000 in costs imposed from 2002 to 2007, or \$83,702,478 annually.

Table C
Total Municipal-Telecom Funding Gap

	Gap for Expansion and Upgrades (2002-2007)	Gap for Existing Networks (2002-2007)	Total Funding Gap (2002-2007)	Total Funding Gap (Annual)
Sample Group 7,657,753	\$92,273,374	\$320,912,600	\$413,185,974	\$68,864,329
Target Population 11,984,162	\$144,405,161	\$502,210,000	\$646,615,161	\$107,769,193

Table C documents the combined total funding gap imposed on municipalities through network expansions and upgrades and ongoing telecommunications operations within municipal ROWs. The total gap for 2002 to 2007 equals \$646,615,161, or \$107,769,193 per year.

¹³ Excluding network expansion/upgrades 02-07



DISCUSSION

The results of the municipal-telecom survey reveal a significant transfer of public wealth to private telecom companies under Canada's current telecommunications policy framework.

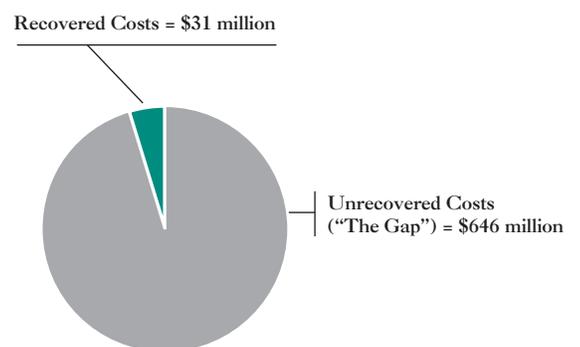
To summarize, the results indicate that the current system has led to the following outcomes:

- In excess of \$646 million in property-tax funded telecom subsidies from 2002 to 2007;
- An average annual property-tax funded telecom subsidy of approximately \$107 million;
- Ongoing annual subsidization of telecommunications works within municipal rights-of-way of \$148 per metre for new permits issued;
- Ongoing annual subsidization of existing telecommunications networks within municipal ROWs of at least \$1,666 per kilometre.

Access by telecommunications companies to municipal streets and roads comes at a significant cost to the public, and new cost-recovery mechanisms are required to balance the ledger. Until today there had been few, if any, attempts to put a price on the national cost to property tax payers. This is in part because measuring the gap presents certain methodological challenges.¹⁴ The current study provides a high-level estimate of the costs imposed by the current system on property tax payers in larger cities, and represents a first step toward establishing the full impact of this problem in communities of all sizes.

Beyond looking at the impacts on smaller cities and communities, additional research must also determine the costs imposed on property tax payers by telecommunications equipment installed on overhead infrastructure. In communities across the country and in eastern Canada in particular, telecommunications services are delivered both overhead and beneath the roadway. The poles on which overhead equipment is installed are frequently located within the municipal ROW and impose their own costs on municipalities. These costs are outside the limits of the current study, but need to be examined in future in order to secure a comprehensive understanding of the scope of the subsidy now paid unwittingly to telecommunications companies by local taxpayers.

Municipal-Telecom Funding Gap (02-07)*



* For larger Canadian cities (pop.: 174,000 plus)

¹⁴ E.g. variations among municipalities in terminology, data collected, fees collected and scarcity of ROW space

Beyond dollars and cents: The public cost of losing local control

While potholes and funding gaps are its most tangible symptoms, Canada's broken telecommunications system also poses a more fundamental threat to the values of local democracy and good government. Not only does the system cost taxpayers hundreds of millions of dollars in corporate subsidies, it also erodes the ability of municipal governments to manage local roads in the public interest.

For example, Wheatland County, Alta., is a community with fewer than 9,000 residents and more than 3,000 kilometres of roads. Wheatland County's local government approved a policy requiring utility companies using municipal rights-of-way to register their lines and equipment. Canadians have seen signs warning of buried cables and the need to check their location before excavating. Anyone who has suffered through a blackout or lost phone service because someone cut a cable can appreciate the Wheatland requirement.

Wheatland specified Alberta One Call, a non-profit organization that notifies the public and contractors where cables are located to prevent damage and promote safety. The county made membership in Alberta One Call a condition of access in its Right-of-Way Access Bylaw and a term of its proposed Municipal Access Agreement (MAA).

However, Shaw Cablesystems Ltd. deemed this requirement unreasonable, maintaining that its own service, DIGSHAW, was just as effective as Alberta One Call. When Wheatland County declined to accept DIGSHAW, Shaw appealed to the Canadian Radio-television and

Telecommunications Commission (CRTC). In its appeal, Shaw raised the issue of Alberta One Call, as well as other concerns, including relocation costs, indemnification, third-party equipment and abandoned equipment.

When negotiations failed to resolve the issue of DIGSHAW vs. Alberta One Call, it was left to the CRTC to decide the issue. In its decision, the CRTC stated that such a condition could only be included in the MAA if both parties agreed to it, effectively giving carriers a veto on any such requirement. The CRTC also said Shaw was free to use its own, privately-owned locate service.

The CRTC went on to grant Shaw access to Wheatland County's highway rights-of-way and public places. The CRTC determined the terms and conditions of the MAA, most of which matched the terms and conditions sought by Shaw.

Wheatland County has spent more than \$65,000 in legal fees defending its right to manage local roads, a basic municipal responsibility. There is no indication that the conditions set by Wheatland County constitute a barrier of any kind to expanded telecommunications services. Indeed, Wheatland County is just the sort of growing community that wants to attract new services for its population. Yet the CRTC saw fit to intervene and overturn a legitimate, local policy in order to impose terms more favourable to a private company.

The question becomes: Why is Canada's telecom system handing control of public roads to private interests?



TOWARD A SOLUTION

Two things must change to correct the current situation. First, the *Telecommunications Act* must be amended to restore municipalities as managers of public roadways and partners in the development of the country's telecommunications networks. Second, a new dispute-resolution mechanism must be put in place that reflects a fairer and more rational balance of perspectives between the telecommunications industry and local government.

Amending the *Telecommunications Act* is needed to respond to the realities created by the deregulation of the telecommunications industry. Guiding principles must be included in the statute by Parliament to redress the current structural imbalance created by the outdated provisions of the Act and the way in which the CRTC has been left to exercise such unfettered powers.

Policy Guidelines

The principles set out below simply restate the conditions that had existed until the *Ledcor* decision. Although a marked departure from the currently unbalanced situation, they are not revolutionary.

1. ACCESS THROUGH NEGOTIATED AGREEMENT

The Act should clearly state that access to municipal property by a telecommunications company must be obtained through a negotiated access agreement. It should include a statement to the effect that negotiations must be conducted in good faith. Any other mechanism designed to obtain access could only be invoked if these negotiations have failed.

2. ADEQUATE COMPENSATION FOR WORKS

The Act should also set out guiding principles relating to compensation payable for the right to enter, break up, use and occupy municipal property. These principles of compensation could include a statement to the effect that the municipal property owner must be "kept whole" at all times for all direct and indirect costs associated with the works undertaken by the telecommunications company so that, as property owner, it is not put in a situation of subsidizing private infrastructure used for profit-making purposes without compensation. A list of examples of such costs could be included to assist in interpreting the provision, and practical, affordable mechanisms for cost recovery must be identified.

3. OCCUPANCY COSTS AND MARKET VALUE

Another principle that should be mandated through legislation is the right of locally elected councils to seek compensation for the value of the land being occupied by a telecommunications company. This becomes even more important if, as recommended by the Telecommunications Policy Review Panel, the right of access is extended to all types of property. The revised Act should include a provision indicating that a municipal property owner shall have the right, enjoyed by all other property owners, to be compensated for the land occupied by another party.

4. CONSULTATION

After years of ignoring the corrosive effect of federal telecommunications policy on municipal government and property tax payers, the Government of Canada, through Industry Canada, must commit to consulting FCM on the reform of the federal treatment of municipal rights-of-way. These consultations must recognize and address all aspects of the current federal telecommunications system that affect cities and communities and should precede any legislative mechanism.

5. DISPUTE RESOLUTION

As it is currently structured, the CRTC cannot provide a neutral forum to resolve disputes between telecommunications companies and municipalities or other public land owners. The commissioners and staff all have extensive expertise in telecommunications, but have not been equipped to weigh the interests of municipalities or property tax payers. Furthermore, the commissioners are not trained or equipped to act as adjudicators between a regulated and a non-regulated party. Therefore, a new mechanism must be designed exclusively to resolve disputes between municipalities and telecommunications companies, a forum in which the interests of both sides will be fully considered.

6. EQUAL ACCESS TO RECOURSES

The current Act does not provide municipalities with equal access to existing dispute resolution mechanisms. This must be corrected.

7. ARBITRATION AND OTHER MECHANISMS

While the use of arbitration, mediation, and other forms of dispute resolution can be beneficial and could be useful in setting out the terms of new access agreements, control over the nomination of arbitrators and mediators must be shared so that the municipal perspective carries the same weight as the one put forward by the industry. These persons should not be appointed strictly by or be part of the CRTC.



CONCLUSION

The federal telecommunications system is failing Canadians and weakening their communities. FCM's municipal-telecom survey has shown that this broken system has cost property tax payers an estimated \$646 million since 2001, when the CRTC's *Ledcor* decision recognized the right of municipalities to recover costs imposed by telecom works in municipal rights-of-way. Property tax payers are losing \$148 per metre in unrecovered costs for expanded or upgraded telecommunications equipment within municipal roadways.

The current system represents a damaging intrusion of the federal government, through the CRTC, into areas of core provincial-territorial and municipal responsibility. This has undermined the ability of locally elected governments to manage community-owned assets effectively on behalf of their residents. Ironically, and contrary to the stated intentions of both the CRTC and the federal *Telecommunications Act*, the system is creating barriers to an open and competitive telecommunications market. It has also saddled local governments and carriers with exorbitant legal costs and prolonged negotiations that result in expensive project delays.

Canadians deserve better than this. The good news is that the Government of Canada can take steps to address all these issues without incurring any significant expense. All that is required is the political resolve to fix a broken system.

For nearly 100 years, municipal governments and telecommunications carriers worked constructively together to make Canada one of the most connected countries in the world. The country has changed, but the tools available to build on that partnership have not. Our technology has evolved, but our national policy framework is stuck in the past. For the good of the industry, local government, and Canada's property tax payers, it's time for that to change.

Recommendations

The Government of Canada should amend the *Telecommunications Act* to:

- a. Ensure that telecommunications companies' access to municipal rights-of-way is gained through negotiated agreement with municipal governments;
- b. Protect municipal governments and taxpayers by ensuring that adequate compensation is provided for all direct and indirect costs associated with works undertaken by telecommunications companies;

c. Give locally elected councils the right to seek fair compensation on behalf of taxpayers for value of public property occupied by a telecommunications company; and

d. Create a new dispute-resolution mechanism that responds to the complexity of the issues and the need to balance perspectives in adjudication.



APPENDIX A – SECTION 43 OF THE *TELECOMMUNICATIONS ACT*

43. (1) In this section and section 44, “distribution undertaking” has the same meaning as in subsection 2(1) of the *Broadcasting Act*.

Entry on public property

(2) Subject to subsections (3) and (4) and section 44, a Canadian carrier or distribution undertaking may enter on and break up any highway or other public place for the purpose of constructing, maintaining or operating its transmission lines and may remain there for as long as is necessary for that purpose, but shall not unduly interfere with the public use and enjoyment of the highway or other public place.

Consent of municipality

(3) No Canadian carrier or distribution undertaking shall construct a transmission line on, over, under or along a highway or other public place without the consent of the municipality or other public authority having jurisdiction over the highway or other public place.

Application by carrier

(4) Where a Canadian carrier or distribution undertaking cannot, on terms acceptable to it, obtain the consent of the municipality or other public authority to construct a transmission line, the carrier or distribution undertaking may apply to the Commission for permission to construct it and the Commission may, having due regard to the use and enjoyment of the highway or other public place by others, grant the permission subject to any conditions that the Commission determines.

Access by others

(5) Where a person who provides services to the public cannot, on terms acceptable to that person, gain access to the supporting structure of a transmission line constructed on a highway or other public place, that person may apply to the Commission for a right of access to the supporting structure for the purpose of providing such services and the Commission may grant the permission subject to any conditions that the Commission determines.

1993, c. 38, s. 43; 1999, c. 31, s. 204(F).

APPENDIX B – MUNICIPAL-TELECOM SURVEY RESPONDENTS

Survey Respondents

LARGER URBAN MUNICIPALITIES

City of Calgary, AB
City of Edmonton, AB
Ville de Gatineau, QC
City of Hamilton, ON
City of Ottawa, ON
Ville de Québec, QC
City of Richmond, BC
City of Toronto, ON
City of Vancouver, BC
City of Winnipeg, MB

SMALLER URBAN AND RURAL MUNICIPALITIES

Ville de Joliette, QC
City of Fredericton, NB
Ville de Baie-Comeau, QC
City of Summerside, PEI

REGIONAL MUNICIPALITIES

Regional Municipality of York, ON
Halton Region, ON

Other Contributors

Halifax Regional Municipality, NS
District of Maple Ridge, BC
City of Regina, SK
Ville de Sherbrooke, QC
City of Saint John, NB
Wheatland County, AB



