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Working Session on Municipal Rights-of-Way

Discussion Paper on Municipal Out-of-Pocket Costs Relating to Telecommunications

Principle: *“The use of municipal rights-of-way (ROW) by telecommunications companies must not impose any financial burden on municipal governments and taxpayers.”*

Definition: Out-of-pocket costs are, for purposes of this analysis, defined as: *“Any and all costs incurred by a municipality which are a direct or indirect result of a telecommunications company’s use and occupancy of municipal ROW.”*

A. Background

Historically, telephone and cable television service providers existed within municipalities as monopolistic, sometimes government-owned providers of basic telephone and television services. As such, these companies were often granted ‘preferential’ access to ROW to provide their basic services to the general population under terms and conditions which may or may not have included financial compensation. The existence of these ‘utilities’ was viewed as a basic component of municipal infrastructure. Municipalities accepted certain direct or indirect cost burdens from telecommunications companies. Given recent changes within the telecommunications industry, these arrangements are no longer acceptable. Convergence, privatization and deregulation have blurred or erased obligations which municipal governments may have felt to accommodate these companies by assuming the financial burden associated with their use of ROW.

Convergence [of technologies] and privatization is enabling all sectors of the industry to provide a wide variety of overlapping, non-essential, competitive services. Deregulation has opened up direct competition for equivalent services meaning that consumers no longer must rely on the existence of any one company for the provision of telecommunication services.

Direct and indirect costs arising from the use of municipal ROW that are not recovered by municipalities burden the municipal tax base, resulting in the subsidization of private corporations to the benefit of shareholders. Costs incurred by municipalities that were once acceptable within the municipal tax base must be passed back to telecommunications providers. This will level the playing field amongst telecommunications providers and ensure that users/consumers pay the cost rather than property taxpayers which may have no interest in new services such as Internet

access and video-on-demand.

The historical relationship between municipalities and telecommunications companies has resulted in many of the costs incurred by municipalities not being identified, isolated or monitored. Recently, however, Canadian municipalities have come to understand the need to evaluate costs associated with private sector use of ROW because of increasing demand for access by the expanding telecommunications industry.

Two main categories of “Out-of-Pocket Costs” have been identified. General Administrative Costs include: overhead; keeping and managing records of utility locations; permits and plans; coordinating the location of infrastructure; policing and inspecting construction in ROW; administration of insurance and damage claims; and management costs for coordinating public advertising and signage for detours and road closures.

Physical Costs cover any other direct and indirect expenses incurred by municipalities as a result of a facility’s existence in the municipal ROW. These include: construction delay costs for locating, hand exposing lines; shoring; tunneling; and repair costs when unmarked lines are damaged. Municipalities suffer pavement degradation costs, inconvenience costs for planning and constructing around these facilities and reduced revenues from lost opportunities. The latter include parking revenues lost during construction in the streets. Relocation of telecommunications infrastructure can be required for new municipal works as well as repair and upgrading of older infrastructure. These relocations can require significant planning scheduling and resources, with municipalities often bearing the additional financial burden caused by the presence of private infrastructure in their ROW.

B. How to Determine “Out-of-Pocket Costs”

The difficulty in developing a methodology to quantify out-of-pocket costs is due to the diverse and often unique accounting and cost allocation practices that exist in different municipalities or even different departments within a municipality. Some municipal expenditures may be funded by the general tax levy. These typically include senior management time, systems administration for electronic tracking of infrastructure and clerical administration of agreements, applications and requests for information. Other costs may be tracked and recovered on an ongoing basis, such as permit and utility location costs. Other costs can only be estimated because they are incorporated within larger municipal processes. An example of the latter would be the increase in infrastructure upgrading costs for working in and around telecommunications infrastructure.

It is preferable that each municipality customize an out-of-pocket cost analysis to fit its unique processes and contractual relationships with telecommunications companies. The common element in evaluating these costs is to determine *what are considered*

out-of-pocket costs? One additional consideration in evaluating these costs is whether the costs being estimated are for existing infrastructure or for a new company requesting the use of municipal ROW. For negotiating agreements with new companies, it is important to be able to provide an estimate of out-of-pocket costs or at least an explanation of what costs the municipality is seeking to recover. A number of methodologies have been explored.

C. Types of Out-of-Pocket Costs and Sample Estimation Methods

Through consultation with a number of municipalities across Canada, several types of out-of-pocket costs have been identified. The categories of costs described below are not meant to limit costs which a municipality may attribute to a telecommunications provider's use of the ROW. Sample estimation methods are provided only as illustrations of the costs defined within a category. Nor is the following intended to limit the approach used within a particular municipality.

1) Administrative Costs

These include costs incurred by an administration for staff time, materials and overhead when dealing directly with a company or on a proportional basis when dealing with general ROW policies and processes:

Senior Administration Costs:

Includes management time dedicated to ROW policy administration, council liaison, and negotiations.

Sample estimation methods:

(i) A percentage of per annum cost of scheduled meetings and documented administrative time: e.g. 4 Sr. Officials in 12 scheduled ROW Meetings per year plus attendance at 2 Council meetings per year = $4 \times 18 \text{ hrs (1.5 hrs per month)} + 4 \times 6 \text{ hrs} = 96 \text{ hrs/yr} \times \$75.00/\text{hr} = \$7200/\text{yr}$ divided by 8 companies = $\$900/\text{yr}/\text{company}$.

(ii) Extrapolate administrative time based on actual work history: 15% - 20% of 4 supervisors' time annually = $4 \times \$72,000/\text{year} + 10\% \text{ overheads} = \$48,000 \text{ to } \$63,000$.

Legal Administration Costs:

Includes in-house legal review of agreements, negotiations, renewals, case law review, preparation and consultation on Council approval reports, attendance at Council meetings, etc. Outside legal costs would also be included, where applicable.

Sample estimation methods:

(i) Project 5 year legal costs showing initial negotiation, preparation and approval costs in the first year and any annual administration or review costs as well as review of renewals, negotiations and preparation costs in fifth year. These costs would be averaged into a per annum cost.

(ii) Develop a historical charge-out record on a per company or per project basis.

Other Administrative Costs:

Including evaluation of damage claims, staff time for clerical work, annual renewal letters, filing, record keeping.

Sample estimation methods:

- (i) extrapolate administrative time based on actual work history:
15% - 20% of 4 clerks' time annually x \$38,000/year + 10% overheads = \$25,000 to \$33,000.

Construction Administration:

Includes technical review committees, standards committees, traffic planning, permit administration, mapping, detour planning and scheduling.

Sample estimation methods:

- (i) Using Direct costs: these can be extracted where possible when a municipality has processes or administrative sections which can calculate directly the percentage of annual volume attributed to one company. For example, The On-Street Construction Permit Section issued X Permits to one Company which represents Y% of the total 1,200 permits issued for this Section. Therefore this Company owes Y% of this Section's operating budget which equals \$Z/yr.
- (ii) Using Estimated Costs: the number of hours spent reviewing, circulating and issuing permits to a Company represents X% of Y clerks' time plus X% of one supervisor which equates to \$Z/yr.

2) Physical Costs

Physical costs are hard costs incurred in relation to the physical existence of telecommunications facilities. They may be considered as either direct or indirect costs.

They include:

Inspection Costs:

Municipalities are obligated, as owners and managers of the ROW, to monitor all potential disturbances, especially when there is a disruption or even a potential disruption to traffic flows. There are potential liabilities associated with stopping, re-routing or delaying traffic on municipal streets. Inspections are often required to ensure that construction and maintenance are being carried out in accordance with the rules and procedures that a municipality has prescribed.

Sample estimation methods:

- (i) Use actual logged records of inspectors, charged against each company.
- (ii) Determine average inspection amount based on overall cost of inspectors and assign averages to each telecommunications company based on historical volume of permits.

Hand Exposing of Lines:

When the location of telecommunications lines conflicts with the work to be done by a municipality, often the telecommunications infrastructure must be located by hand during the municipal work.

Sample estimation methods:

- (i) Use actual logged records of location crews.
- (ii) Estimate/calculate the annual cost of exposing lines divided by the total number of permits or utilities in the ROW.

Documentation and Record Keeping of Installed Facilities (direct costs):

There are significant costs associated with storing and maintaining records on infrastructure once permits have been issued. These costs may include database management, drafting or electronic graphic base information updates, storage of paper or digital plans and assigning and recording addresses for power services to electronic amplification equipment.

Sample estimation methods:

- (i) Calculate/estimate as a percentage of clerical and technical municipal staff time per company.
- (ii) Use a billing code or account number to compile detailed costs based on records stored or processed. Overhead costs should also be included.

Relocation Costs:

Recovering the cost of relocating telecommunications facilities is a basic principle as endorsed by FCM. *“Municipal governments must not be responsible for the costs of relocating telecommunications infrastructure if relocation is required for urban planning or for other reasons deemed necessary by the municipal government.”* As telecommunications companies sign agreements respecting this principle, relocations will no longer be considered out-of-pocket costs. It is important, however, to be able to quantify relocation costs to fully understand the impact of these companies on the municipality and for purposes of negotiating new agreements. It is also possible that municipalities will not get 100% acceptance of this principle and may agree to some type of cost-sharing settlement with a company where the municipality may pay some of the costs in certain situations.

Possible calculation/estimation methods:

- (i) Municipalities require telecommunications facilities to be relocated, typically to accommodate new construction or for rehabilitation and maintenance work (including emergencies). Since municipal expenditures for these types of construction vary from year to year, it is recommended that any relocation costs be averaged over a minimum of 5 years in order to dampen the effects of high or low construction years.
- (ii) Relocations can be tracked as separate accounts. This requires coordination between

departments and sections which track costs for maintenance, emergencies and new construction.

Where coordinated billing is not possible, separate estimates may be required from each section. These estimates may involve opening project cost accounts on an individual basis.

Pavement Degradation Costs:

Several approaches are proposed to estimate and recover pavement degradation costs. Canadian and American studies which show that artificially introduced breaks or intrusions in a pavement surface significantly reduce the overall integrity of the structure and thereby pavement life. Some municipalities have implemented thorough pavement restoration specifications for telecom or utility pavement cuts. Where these types of mechanisms exist to repair and restore pavement surfaces to *'better than existing'* condition, there may not be a need to recover pavement degradation costs. Alternatively, municipalities can seek to recover costs on a case by case basis through a permit process or may choose to offset the global impact of these costs through a calculated annual cost allocated to the relevant companies. The actual monitoring of pavement damage on a case by case basis and attributing specific reductions of pavement life to specific pavement cuts is technically impossible given the number of variables involved. A number of generalizations must be made to arrive at a reasonable estimate of accelerated depreciation and associated costs.

Possible calculation/estimation methods:

Each municipality will have different technical and physical considerations regarding the impact of a company on pavement life. Some companies have infrastructure located mostly outside of the pavement structure while others locate within the road, especially in high density areas such as central business districts. Survey and estimation of existing installations may offer a foundation from which to work.

Example: Edmonton estimates that, assuming pavement life is reduced from 40 to 35 years, the reduced value of the design life due to utility installation (assuming good backfill compaction) will be approximately \$3200/km of installation in the roadway.

Toronto, Ottawa-Carleton and Surrey have or are currently reviewing the impacts of utilities on pavement life, as well as developing appropriate cost recovery mechanisms. Many larger cities have ongoing pavement management programs which may assist in assessing these costs.

Inconvenience and Additional Construction Costs:

Municipalities incur significant costs when working around existing facilities. Standard construction practice is to lump these additional costs into the overall cost of installation of new or rehabilitated infrastructure. It is not practical to separate out this cost within contracts because it adds a level of detail that serves no value to estimators or contractors where the bottom line is all that matters. If, for example, utility crossings were separated out in a contract, one bidder might quote them as low (or even \$0.00) and lump the costs into the per

metre pipe costs. Another contractor may bid the utility crossings high with a lower unit price for pipe installation. The contractor has no interest in the accuracy in these numbers as long as he can demonstrate a competitive installation price. For these reasons, inconvenience factors must be estimated through analysis of contracts and from 'expert' estimations of contractors and estimators. Estimates gathered from city departments as well as private contractors in Edmonton and Vancouver range from a low of 1% overall to highs of 20-25%. In establishing rates for high density cities such as Vancouver and Toronto, the estimates would be expected to be at the high end of the scale.

Possible calculation/estimation methods:

(i) One method of quantifying these costs is to decide on an impact percentage of utility crossings and apply this to the overall municipal repair and rehabilitation budgets. For example, if consultants, estimators and contractors agree that they allow at least X% in their underground prices to account for working around, crossing and shoring against telecom/utility lines, then that percentage can be applied to municipal budgets for this type of work to arrive at an estimate of the annual impact on the municipality. The annual impact can be averaged over 5 years if there are significant variations in activity. The amount can then be apportioned to the respective companies based on their relative presence in the ROW.

(ii) The amounts calculated above could be divided by the total metres of construction installation to arrive at a per metre average cost (this could be recovered through permits on a per metre basis).

Lost Opportunity Costs:

Road closures due to installation and maintenance of telecommunications facilities can result in lost revenues as a direct result of the company's actions. These costs could include loss of parking metre revenues on a roadway closed for work being done by a telecommunications company. Temporary road closures may also prevent other licenses or permits from being issued or used, such as vending permits.

Possible calculation/estimation methods:

(i) These costs are unique to specific locations and may need to be calculated on a case by case basis. The municipality may have a standard per day revenue for parking metres that could be applied to a particular alignment.

Traffic Delay Costs:

Transportation is a basic need that the general public and business sectors expect municipalities to fulfill. Disruptions and delays interfere with the basic standards of transportation upon which taxpayers rely. Where these disruptions originate from private companies, municipalities may seek to recover compensation for the negative economic impact of the disruption. Transportation planners and engineers routinely consider these impacts within

the transportation planning process. There are existing procedures to calculate delay costs for traffic disruption, based on delay times and the economic value of imposing these delays on the general public. While not all of these costs are a direct cost to a municipality, there may be a valid economic impact which should not be ignored. Some Canadian municipalities incorporate these values into the overall cost recovery formula used to determine construction permit fees.

There may be valid municipal costs where traffic disruptions due to construction or maintenance of telecommunications lines forces the re-routing and delay of municipal transit or delivery fleets.

Sample estimation methods:

(i) This sample analysis was constructed using numbers from Edmonton and Vancouver's Transportation Departments:

Traffic/Transit Delays

- based on value of daily traffic delay (2 lanes down to one lane)

Daily One-Way Volume	Value Delay/Day
70,000	\$10,000
18,300	\$ 1,430
10,400	\$ 250
6,900	\$ 140

average of 5 days/permit

anticipate 130 to 160 permits will be issued in 1998

0% @ 70,000

10% @ 18,300

10% @ 10,400

15% @ 6,900

65% no delays

D. Conclusions

Based on the above categories, it is recommended that these items be considered and accepted as valid out-of-pocket costs which should be the sole responsibility of any telecommunications provider using and occupying municipal ROW. The classifications outlined above are not intended to exclude other costs which can be attributed to the use and occupation of ROW by any telecommunications company.

It is the responsibility of each municipality to develop an analysis and cost recovery mechanism that fits its unique conditions and processes. Consensus between municipalities and the telecommunications industry as to the general nature of these costs remains important, however, as it will provide an agreed basis for cost recovery.

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