



Telecom Decision CRTC 2017-388

PDF version

Reference: Telecom Notice of Consultation 2017-66

Ottawa, 27 October 2017

File number: 1011-NOC2017-0066

Clause 13(b) of the Municipal Access Agreement between the City of Hamilton and Bell Canada regarding the vertical location of underground facilities

The Commission determines that the City of Hamilton (Hamilton) may request further information on the location of Bell Canada's underground facilities from the company, for pre-design purposes, when such information is reasonably necessary. Bell Canada and Hamilton are to discuss and to try to resolve any potential design and/or construction conflicts. Should the matter not be resolved through discussions, Bell Canada is to provide markups of drawings to indicate the location of its existing underground facilities. As a last resort, Bell Canada is to undertake field investigations to verify the horizontal and vertical location of its underground facilities. Each of Bell Canada and Hamilton are to pay 50% of the costs associated with the field investigations.

Background

1. In Telecom Decision 2016-51, the Commission established provisions of a Municipal Access Agreement (MAA)¹ between the City of Hamilton (Hamilton or the city) and Bell Canada (the MAA).
2. However, Hamilton and Bell Canada disagreed on the interpretation of clause 13(b) of the MAA. Clause 13(b), as established by the Commission in Telecom Decision 2016-51, reads as follows:

13(b) The locates provided by the Company to the Municipality for pre-design shall contain sufficient design information and survey detail as reasonably required by the Commissioner, such as line and elevation of the Equipment within the alignments, but excluding information on depth. If the Company is unable to provide either the line or elevation information within an agreeable time frame, the Municipality may invoice the Company for any costs reasonably incurred by the Municipality in determining the line or elevation of the Equipment within the alignments.

¹ An MAA sets out the terms and conditions of a carrier's access to highways and other public places under a municipality's jurisdiction that is required to provide telecommunications services, including broadcasting distribution services, to the public.

3. On 10 March 2017, the Commission issued Telecom Notice of Consultation 2017-66, in which it stated that it would be appropriate to review the obligations set out in clause 13(b) of the MAA regarding the vertical location of underground facilities. The proceeding was initiated as a result of correspondence between the parties and the Commission, including Commission staff, in which it was questioned whether Hamilton could, under clause 13(b), require Bell Canada to provide the city with the vertical coordinates of the company's underground facilities expressed in terms of elevation relative to sea level.
4. The Commission received interventions from the City of Calgary (Calgary), Hamilton, the Federation of Canadian Municipalities (FCM), the Independent Telecommunications Providers Association (ITPA), and one individual. The Commission also received joint and individual interventions from Cogeco Communications Inc., on behalf of Cogeco Connexion Inc.; Quebecor Media Inc., on behalf of Videotron G.P.; Rogers Communications Canada Inc.; Shaw Communications Inc.; TELUS Communications Company; and Zayo Canada Inc. (collectively, the Carriers). The public record of this proceeding, which closed on 27 June 2017, is available on the Commission's website at www.crtc.gc.ca or by using the file number provided above.

Issues

5. The Commission has identified the following issues to be addressed in this decision:
 - Should Bell Canada, pursuant to clause 13(b) of its MAA with Hamilton, be required to provide the vertical coordinates of its underground facilities to Hamilton for pre-design purposes upon request?
 - If yes, under what terms and conditions should the coordinates be provided?

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Positions of parties

6. Hamilton submitted that the proliferation of underground facilities in rights of way (ROWs)² leads to situations in which it is critical that the city be able to properly locate the placement of existing facilities when it engages in pre-design. It submitted that having such information serves to reduce costs and delays in the planning and execution of underground work while also providing safety benefits.
7. Hamilton submitted that the coordinates should be provided in metres above sea level (MASL), not in terms of depth of cover, since once placed in ROWs, underground facilities do not move, even if the surface changes.

² A right of way is a section of land where access is open to anyone who may need to travel through it. In a municipal context, this includes roads, sidewalks, and public parks.

8. Hamilton argued that providing it with the means to require the provision of vertical coordinates of underground facilities would align with industry standards, and that there is great value in having Bell Canada conform to such standards. Hamilton referred to standards from the Canadian Standards Association, the American Society of Civil Engineers, and the Transportation Association of Canada. Hamilton claimed that adhering to any of these standards would promote predictability, safety, and certainty for all ROW users. Conversely, it argued that not adhering to them, as has been the case in the past with Bell Canada, may result in parties disagreeing on the level of detail to be provided on the location of installed facilities. This could lead to project delays and additional workaround costs, which are ultimately borne by taxpayers.
9. Hamilton argued that obtaining vertical coordinates should be a cost-neutral exercise for the city. It submitted that the costs associated with locating Bell Canada's underground facilities are causal to the presence of these facilities and, therefore, Bell Canada should bear these costs, not taxpayers.
10. Hamilton indicated that requests for vertical coordinates for pre-design purposes are relatively rare since such requests are made only when the information is reasonably needed, such as when facilities lie within a complicated ROW where multiple facilities converge upon one another. It noted that in the past three years, only 14 out of 120 jobs involving subsurface work, or 11.6%, involved requests for vertical coordinates. Hamilton indicated that while vertical coordinates are not required for every Bell Canada installation, the city needs to be able to ensure that new facilities placed in the subsurface will not interfere with what is already in the ground. According to Hamilton, with no vertical coordinate information, it is impossible to know (i) the distance between facilities as they criss-cross one another, or (ii) how far below grade they are.
11. In response to Commission requests for information, Hamilton submitted that while the clause for pre-designs in its current and past MAAs does not specifically refer to vertical coordinates, the city believes that the language in those MAAs is sufficiently broad to allow it to require such coordinates, when reasonably needed.
12. Hamilton also submitted that when the vertical coordinates of underground facilities are required, the utility provider pays to acquire such information, which is provided in MASL. Hamilton indicated that the price estimates provided by the city (\$5,000) and Bell Canada (\$7,200) represent the reasonable upper ranges associated with obtaining vertical coordinates, but that having such information would result in savings in the long run since it would prevent incidents and delays from occurring during construction.
13. Calgary argued that carriers should be required to provide vertical coordinates in elevation relative to a recognized standard, such as sea level, since modern cities are complex and ROWs must be carefully managed with increasingly sophisticated tools. It also argued that vertical coordinates should be provided for all facilities in cases where the municipality has indicated a need for that information, regardless of when the facilities were installed.

14. Calgary further submitted that vertical coordinates enable municipalities to more efficiently allocate space within ROWs that might appear to be “full” when viewed in two dimensions, but that have free space when vertical space is considered.
15. The FCM submitted that municipalities must have the flexibility to obtain vertical coordinates for specific sites or projects when required for design and planning purposes. Vertical coordinates are (i) critical, since they help with the design of projects in such a way that prevents conflicts between ROW users, and (ii) useful in making early determinations concerning the possible relocation of infrastructure.
16. The FCM also submitted that when a municipality requires this information, carriers should cover the costs of acquiring it. The costs should not be imposed on local taxpayers.
17. Bell Canada argued that the provision of vertical coordinates for underground facilities is not standard practice for telecommunications service providers and other utility providers.
18. Further, Bell Canada argued that providing vertical coordinates in MASL would amount to providing more information than would otherwise be available through a locate request, as currently provided. It noted that no member of Ontario One Call³ is mandated to provide vertical coordinates as part of their findings.
19. In addition, Bell Canada argued that Hamilton made submissions reliant upon non-binding standards that do not support the position that it is industry standard for carriers and utility providers to provide vertical coordinate information upon request.
20. Bell Canada also noted the potential financial impact of having to provide vertical coordinates for underground facilities. Bell Canada submitted that even if vertical coordinates are requested for only 11.6% of all jobs involving subsurface work, as Hamilton claimed, the reality is that at an average cost of \$5,000 to \$7,200 per municipal locate request, the company would be faced with a colossal increase in its yearly costs for municipal locate requests.
21. In response to Commission requests for information, Bell Canada indicated that some of the MAAs to which it is currently a party require that vertical coordinates be provided as part of the “as-built” drawings,⁴ while under other MAAs, vertical coordinates are to be provided if the location of the facilities cannot be identified and there exists a risk of damage or conflict.

³ Ontario One Call is a contact centre that receives excavation locate requests. It notifies infrastructure owners (members) of excavation requests. These members then identify, with markings on the ground, the location of underground facilities and deliver a written document containing information on the location of the underground facilities.

⁴ “As-built” refers to revised sets of drawings submitted upon completion of a project. They reflect all changes made in the specifications and working drawings during the construction process and show the final elements of the work completed.

22. Bell Canada also indicated that on some occasions, it will verify the depth of its facilities in the pre-design stage of projects where it anticipates potential conflict with existing infrastructure, and in cases where doing so could avoid a costlier relocation of its facilities. Bell Canada further indicated that although vertical coordinates could be obtained at the time of construction, these coordinates would be costly to obtain and should not be relied upon in lieu of hand digging to expose facilities prior to conducting work.
23. Bell Canada submitted that one of the challenges in providing vertical coordinates comes from the fact that the majority of its buried projects now involve directional boring, or direct drilling, which is a steerable trenchless method of installing underground conduit, or cables, in a shallow arc along a prescribed bore path using a surface-launched drilling rig. While the directional boring unit can measure the depth and angle at which it is digging, this information is compared to grade, since construction crews do not have the tools or expertise to accurately measure the elevation relative to sea level.
24. Bell Canada noted that because the bore path can be drilled on an angle, and at varying angles below ground, the depth of facilities is not necessarily the same at various points along the bore path. Given that the facilities are not exposed, the company would need to “daylight” the underground facilities (dig holes to expose them) to obtain vertical coordinates in MASL at every point along the bore path. Not only is daylighting significantly more costly than simply indicating the location of the underground facilities with markings on the ground, but it also results in the digging of holes when a technique that was meant to avoid this was used for installation.
25. The Carriers submitted that there is no benefit that outweighs the cost of introducing a requirement to provide vertical coordinates. They argued that field locates (markings on the ground), which confirm the horizontal location of facilities, are sufficient to eliminate conflict with existing underground facilities. Furthermore, the Carriers submitted that it was unclear why a municipality would require vertical coordinates, since depths are already defined in a municipality’s standards and all utilities are required to build to these depths.
26. According to the Carriers, obtaining the vertical coordinates of underground facilities that are already installed is counter-productive, since it would require excavation in the ROW, an activity that municipalities discourage, to produce information that has little to no value. It would also defeat the purpose of directional drilling, which is to minimize excavation. They also argued that the costs would be onerous and excessive. Further, the Carriers indicated that few, if any, of their MAAs with municipalities require the provision of vertical coordinates.
27. The ITPA supported Bell Canada’s submissions. It submitted that mandating carriers to provide vertical coordinates of underground facilities would be a departure from current industry practice and would have significant financial impacts on its members, which are smaller telecommunications service providers.

Commission's analysis and determinations

28. Based on the record of this proceeding, an MAA requirement to provide vertical coordinates for underground facilities appears to be rare. Furthermore, while Hamilton argued that vertical coordinates of underground facilities for pre-design purposes provide a level of detail that may be useful, it also indicated that in over 88% of the jobs involving subsurface work in the past three years, it did not need such information from Bell Canada, indicating that the level of detail Hamilton currently obtains from Bell Canada for pre-design purposes is sufficient in most instances. Hamilton also indicated that vertical coordinates of underground facilities for pre-design purposes are requested only when such information is reasonably necessary.
29. However, the Commission notes the submissions of municipalities that, as the amount and complexity of underground facilities in ROWs increases, municipalities are finding the option to obtain vertical coordinates more desirable. For example, more and more facilities are being installed in narrow spaces, which may result in the facilities being installed one atop another. Accordingly, there may be value, in some instances, to Bell Canada providing the vertical coordinates of its underground facilities to Hamilton for pre-design purposes.
30. In light of the above, the Commission determines that Bell Canada is to provide to Hamilton, upon request and only when the Commissioner deems it reasonably necessary, the vertical coordinates of its underground facilities for pre-design purposes.
31. In Telecom Notice of Consultation 2017-66, the Commission asked whether its findings should apply to underground facilities that are already installed, or only to underground facilities installed after the Commission's decision is issued. Considering that information about the location of underground facilities could be beneficial to Hamilton for the purpose of pre-design, the Commission's determinations will apply to all of Bell Canada's underground facilities installed at the time of Hamilton's request, regardless of whether they were installed prior to the issuance of this decision or subsequently.

Under what terms and conditions should the coordinates be provided?

32. The Commission is of the view that Bell Canada and Hamilton should first discuss and try to resolve any potential design and/or construction conflicts. If the matter cannot be resolved through discussions, Bell Canada should provide markups of drawings to indicate the location of its existing underground facilities in the area of the proposed project associated with the request for information on the location of underground facilities.
33. If the prior methods are not sufficient to resolve the conflicts, the Commission considers that it would be appropriate, as a last resort, for Bell Canada to undertake field investigations to verify the horizontal and vertical location of these facilities.

The vertical coordinates should be provided in the format chosen by Hamilton and within a degree of accuracy agreed upon by Hamilton and Bell Canada.

34. In terms of the costs associated with the field investigations, the Commission considers that a 50/50 cost-sharing option would be reasonable. This would help ensure that Hamilton requests vertical coordinates only when truly reasonably necessary, and should also encourage Bell Canada to keep the most detailed coordinate information possible when installing underground facilities.
35. Further, this approach recognizes that there is a cost to Bell Canada of having its facilities installed in Hamilton's ROWs, while also recognizing that it is appropriate that there be a certain cost to the city for obtaining data that it considers to be necessary. Finally, this approach is consistent with other provisions of the MAA, such as clause 9(d),⁵ under which costs are shared equally.
36. In light of the above, clause 13(b) of the MAA between Hamilton and Bell Canada, as set out in the Appendix to Telecom Decision 2016-51, shall now read as follows:

13(b) The locates provided by the Company to the Municipality for pre-design shall contain sufficient design information and survey detail as reasonably required by the Commissioner, such as line and elevation of the Equipment within the alignments.

If the Company is unable to provide either the line or elevation information within an agreed-upon time frame, the Municipality may invoice the Company for any costs reasonably incurred by the Municipality in determining the line or elevation of the Equipment within the alignments.

With respect to underground facilities, if the Commissioner finds that the locates provided by the Company to the Municipality for pre-design do not contain sufficient design information and survey detail, the Municipality may request further information on the location of these facilities, when such information is reasonably necessary. When a request is made for further information on the location of underground facilities, the Company and the Municipality are to proceed as follows:

- First, the Company and the Municipality are to discuss and try to resolve any potential design and/or construction conflicts.
- Should the matter not be resolved through discussions, the Company is to provide markups of drawings to indicate the location of its existing underground facilities in the area of the proposed project giving rise to the request for information on the location of underground facilities.

⁵ Clause 9(d) states the following: (Conditions of Work) On-going inspections, and/or follow-up monitoring, of the Company's installations and Work, for conformance with the terms and conditions of a Road Occupancy Permit, may be conducted by the Municipality, as the Municipality deems reasonably necessary, at a cost shared equally between the City and the Company.

- As a last resort, if the prior methods are not sufficient to resolve the conflicts, the Company is to undertake field investigations to verify the location of these underground facilities.
 - The vertical coordinates are to be provided in the format chosen by the Municipality (such as depth of cover or metres above sea level) and within a level of accuracy agreed upon by the Municipality and the Company.
 - The Municipality and the Company are to each pay 50% of the costs associated with the field investigations.

Secretary General

Related documents

- *Clause 13(b) of the Municipal Access Agreement between the City of Hamilton and Bell Canada regarding the vertical location of underground facilities, Telecom Notice of Consultation CRTC 2017-66, 10 March 2017*
- *City of Hamilton – Terms and conditions of a Municipal Access Agreement with Bell Canada, Telecom Decision CRTC 2016-51, 10 February 2016*