

HOW TO HANDLE REMOTE SUPERVISION OF ENGINEERING SITE REVIEWS

By José Vera, P.Eng., MEPP

During this year's COVID-19 pandemic, PEO's practice advisory team has received several questions from practitioners on whether they can still conduct site visits or supervise a competent person to conduct them on their behalf using telephony technology, such as Google Meet, Microsoft Teams, Skype or Zoom. Here we provide a framework with examples for practitioners seeking to address these issues.

REMOTE SITE REVIEW REQUESTS

Andrea, a professional engineer working for YYZ engineering, receives a phone call from Louis, a project manager for YUL Construction, requesting that her firm provide general review of construction for a rooftop solar panel structure installation in a hospital in southwestern Ontario. Louis also informs Andrea that the hospital is not allowing any new visitors to the construction site due to a recent outbreak of COVID-19 in the region. Consequently, the hospital's management is requesting YYZ to provide a site review remotely using telephony technologies in place of an onsite visit. Andrea finds it problematic to perform a review without going onsite, since she knows that not visiting the site could result in legal and safety risks. So, as a compromise, she offers to conduct the site review in person while wearing a hazmat suit. Louis states that hospital management's decision is final, so she cannot visit the site. Andrea asks if the site review could be done later, once new visitors are allowed in the construction site, but Louis says they need the review done promptly, since the construction of the solar structure is being fast-tracked. What should Andrea do?

ENGINEERING SITE REVIEWS AND THE LAW

Andrea decides to consider their request for a remote site review but notifies Louis that she needs to discuss this request with YYZ's management team and legal counsel before a final decision is made. Andrea meets with the management team at YYZ, and she brings up a PEO discipline decision, where: "The panel believed that the lack of a site visit by the member was an important omission that led to several problems" (see Decision and Reasons, *Engineering Dimensions*, May/June 2010, p. 29). Furthermore, Martina, YYZ's legal counsel, refers to three passages from three different engineering law books referenced



A client asks an engineer to provide a site review remotely using telephony (such as FaceTime or Zoom) due to an outbreak of COVID-19 onsite, resulting in a policy of no site visits. The engineer is concerned that providing a review while not physically visiting the site could result in legal and safety risks. What should the engineer do?

in *R. v. Williams Engineering Canada Inc.*, 2014 ABPC 241 (CanLII) (canlii.ca/t/gf6vfv):

- [62] "while not theoretically bound to visit the site personally in the preliminary stages of his engagements, an engineer who does not do so, or check carefully any surveys or site information provided by others against what can be seen and measured on site, will be at considerable risk, since there are many matters affecting a project" (*Hudson's: Building and Engineering Contracts*, p. 307)
- [63] "It is the case that an engineer employed by an owner and working under the standard form contract CCDC-2 cannot rely on information supplied by others as to site conditions, apart from 'specially trained and retained consultants'" (*The Canadian Law of Architecture and Engineering*, p. 122)
- [64] "The engineer cannot rely on others as to evaluation of building site conditions where the conditions require independent engineering expertise" (*Halsbury's Laws of Canada, First Edition*, p. 388)

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Martina further notes that while these references do not specifically mention general review of construction as per the Ontario Building Code, they still make a strong case for physically visiting the site.

REASONABLE SUPERVISION

During the meeting, Rashida, the engineering manager at YYZ, refers to section 12(3)(b) of the *Professional Engineers Act*, which provides an exception to licensure for persons working under the supervision of an engineer assuming responsibility for the work. Furthermore, Rashida notes that the Construction of a Building performance standard cited in the practice guideline *Professional Engineers Providing General Review of Construction as per the Ontario Building Code* states: "The professional engineer may delegate one or more of the functions or requirements...to another person if it is consistent with prudent engineering practice to do so and the functions or requirements are performed under the supervision of the professional engineer."

Andrea adds that the practice guideline *Assuming Responsibility and Supervising Engineering Work* quotes from the book *Engineering Law* the following concept of reasonable supervision: "The engineer must give reasonable supervision to the work. He (or she) is not required to do everything in the way of watching the direction of works under his (or her) charge, but he (or she) is required to give such care and attention to the work while it is in progress as the nature and difficulties of the particular work reasonably demand."

Andrea further adds that although no new visitors are allowed onsite, anyone who was previously onsite is still being allowed to enter and work on the site. Based on this information, Martina and Rashida ask Andrea if she could reasonably supervise a suitable person remotely, preferably an engineer, who has already been onsite and would, therefore, be eligible to provide the site visit. Andrea calls Louis to find out if there is an engineer onsite who would be willing to be supervised by her for the site visit. Louis says no but informs her that Javier, a construction technologist who works for YUL, has been working onsite and would be glad to provide the general review site visit under Andrea's supervision. Although Javier is not a professional engineer, he graduated from civil engineering in Colombia and is the most competent person available onsite for this specific project. Andrea decides that under the circumstances, she can reasonably supervise Javier remotely. Therefore, Martina contacts YUL's legal counsel to collaborate on a mutual agreement for the general review project that delineates the responsibilities of YYZ and YUL.

TECHNOLOGIES FOR REMOTE SITE REVIEWS

Besides supervising Javier, Andrea decides that it is prudent for her to watch live video of the construction site. After doing some research, Andrea finds a helpful article on technologies for remote site reviews from the American Society of Civil Engineers: ascelibrary.org/doi/10.1061/%28ASCE%2

9ME.1943-5479.0000336. Andrea uses the information in this article to develop a system to observe the construction site live, specifically the installation of the solar panel structure, while supervising Javier using telephony.

EMERGENCY STRUCTURAL CONDITION ASSESSMENTS

A few months after completing the general review project, Andrea receives a call from Pierre, who works for YVR, a different client. Pierre informs her there are concerns the structural adequacy of a food processing plant may have been compromised after a forklift collided with some columns. However, Pierre notes that due to a recent COVID-19 outbreak, only the workers are allowed in the plant. So, Pierre proposes that Andrea conduct a remote site review. Andrea disagrees with this proposal and convinces Pierre it would be best for her and her team of engineers to visit the site immediately, due to the urgency. Specifically, Andrea states that she cannot reasonably supervise others remotely to conduct a structural condition assessment because of the difficult nature of this work, so YVR's management needs to allow her and her team to go onsite. Management agrees that a site visit is a must. Before going onsite, Andrea consults with a medical practitioner, who advises that she and her team wear personal protective equipment and follow physical distancing protocols during the site visit to reduce the risk of contagion. Fortunately, Andrea and her team develop an effective repair plan for the columns, and all ends well.

Below is a summary of some of the key points made in this article:

- Law texts and case law make a strong case for onsite visits by engineers;
- However, in specific circumstances, suitable non-engineers reasonably supervised by an engineer may be able to provide site visits;
- Furthermore, some technologies allow engineers to observe construction sites remotely;
- Nonetheless, under certain conditions, it may not be reasonable for engineers to remotely supervise site reviews, and in these cases, a prudent engineer may need to go physically onsite while following the advice of medical professionals to reduce health risks in the event of an outbreak; and
- Because these situations often involve legal risks, practitioners are encouraged to seek the advice of their management, their firm's legal counsel and insurance professionals.

Finally, PEO's practice advisory team is available by email at practice-standards@peo.on.ca and is glad to hear from practitioners looking for more information on the practice guidelines mentioned in this article.

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