

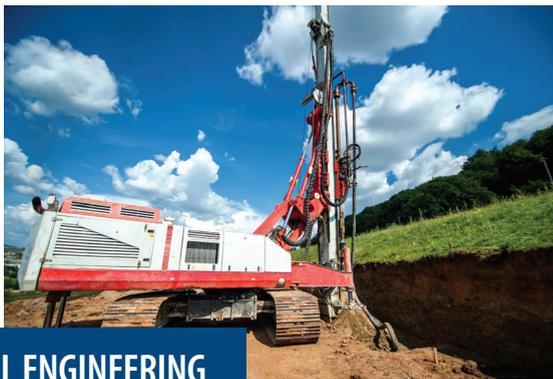
DO YOU KNOW WHAT YOU DON'T KNOW?

Three new profiles answer that question for you!

**Are your engineering acts complete, up to date and compliant?
How do you know?**

The OIQ has several competency profiles available to help you answer that question. Each profile clearly explains all of the tasks requiring professional competencies in a given field of practice.

Recently, two profiles were completely updated and another was added. Here is some advice from some of the seasoned engineers who participated in this work.



GEOTECHNICAL ENGINEERING

Jean Habimana, Eng., is Senior Project Manager – Tunnels for Eastern North America at Hatch. This civil engineer has a master's degree in geotechnical engineering for underground structures and a doctorate in tunnel design. He has nearly 25 years of experience in designing underground structures, from the simplest to the most complex.



Jean Habimana, Eng.

"The geotechnical competency profile will be especially useful to young engineers, students, clients and even the public due to its non-technical language. Personally, I will use the profile with my team so that they know: 'This is what the OIQ expects from us.' I will also use it as a

reference for clients who would like to simplify or adapt their procurement process.

Geotechnical engineering involves many sectors. An engineer who has the necessary competencies for bridges may rightfully question whether he or she is fully qualified for tunnels. The competency profile explains the current process that engineers should follow.

The most important problem is the lack of communication between parties; it has repercussions on establishing the mandate, formalizing the changes made during the mandate, visiting the site, involving other professionals... The profile lists all of the aspects that should not be overlooked.

In the coming years, geotechnical engineers will work much more on old structures that need to be inspected or renovated. Those who want to work on a broader range of structure types will need to keep up with developments in practices. That is yet another reason to consult the competency profile!"



BRIDGES AND TRANSPORTATION STRUCTURES



BUILDING STRUCTURE

Patrick Bourgeois, Eng., Building Structure Principal at Stantec, has taken on many challenges in the last 17 years. For instance, at SNCLavalin, he was responsible for the Building Structure group in the Sainte-Justine Hospital expansion project. He is now participating in the Metropolitan Express Network (REM)



Patrick Bourgeois, Eng.

“There are relatively few experienced building structural engineers. Plus, some clients don’t really understand

the responsibilities involved in the profession. So some educational efforts do need to be made, both with engineers in training and clients.

The building structure competency profile provides a precise list of what engineers must be able to accomplish, and I have occasionally sent it to clients to help them get a sense of our field of expertise.

Building structural engineers have to be constantly on the lookout and make sure that the work being done is of good quality, because mistakes can have major and costly impacts. Depending on their specialty, engineers can search the competency profile for whatever they or the company they represent needs.

I recommend the building structure competency profile to the engineers on all my teams, whether they do metalwork or explosion resistance work, for example, and especially to sponsored engineers. Experienced engineers looking to update their knowledge will also find it useful. The profile helps us take nothing for granted because in engineering, knowledge and rules are constantly changing, and public safety is in our hands.”

Bruno Massicotte, Eng., has taught civil engineering at Polytechnique Montreal since 1990. This bridge expert has been one of the organizers of the symposium on advances in Québec civil engineering structure research (Colloque sur la progression de la recherche québécoise sur les ouvrages d’art) held for the 25th time this year. He was also mandated by the MTQ (Ministère des Transports du Québec) to determine what caused the De la Concorde overpass to collapse.



Bruno Massicotte, Eng.,

“Bridges and transportation structures are a very risky field of practice.

For existing bridges, engineers have to make corrections to structures that have lost capacity and often no longer comply with current standards. Therefore, they need to be fairly experienced to come up with the proper solutions.

Bridge design and construction are just as demanding. A higher quality level is expected, especially because Québec’s structures are subjected to some of the harshest climate conditions. Design and construction errors can become weak points in such structures. That was in fact the case of the De la Concorde overpass.

For all these reasons, the bridge and transportation structure competency profile meets a real need. It has a checklist of the various tasks and responsibilities of bridge engineers: choose the materials and the construction methods, analyze and design, supervise the work, evaluate aging structures. . . The profile helps make engineers aware of the importance of their work and gets them to ask themselves: ‘Am I doing everything that is required?’

In my courses, I explain to future engineers who choose to practice in the field of bridges and transportation structures how the profile can help them acquire the required competencies and keep them up to date.” ◀

**Where can you find the competency profiles?
They have a new address on the OIQ’s Web site:
profilsoiq.qc.ca**