

By Jocelyne Hébert, in collaboration with Bernard Cyr, Eng.

SUPERVISING A JUNIOR ENGINEER

A good deed and a responsibility

Each year, the Ordre des ingénieurs du Québec (hereafter the "Ordre") takes the opportunity, during the annual registration period for its members, as is currently the case, to illustrate what it means to supervise junior engineers and engineers-in-training. It verifies who, among them, are to be supervised by an engineer and under what conditions. It also ensures that unsupervised junior engineers are not called upon to carry out engineering acts. Why so many precautionary measures?

Throughout their career, engineers execute work for which they must assume responsibility. Be it for that reason alone, young professionals cannot rely solely on what they learned in school. Like in every profession, they must develop competencies before obtaining the right to practise. Experience will be gained under the direction and supervision of an engineer as this constitutes the best way to learn correctly, without neglecting the employer or the public's protection. This period provides an optimal setting for junior engineers to develop and master their professional skills.

TEACHER AND GUARANTOR, ALL AT ONCE

Supervising an engineer a junior engineer or an engineer-in-training is a duty which must be taken seriously and be carried out very thoroughly. The quality of the junior engineer's work as well as his or her competencies depend on this supervision. In fact, supervision by an engineer is required under the *Regulation respecting other terms and conditions for the issuance of permits by the Ordre des ingénieurs du Québec* that spells out the conditions under which such supervision must be carried out.

Engineers who take on the responsibility of supervising junior engineers must be fully aware of the commitment required by the seriousness of this role. It is said that supervising engineers must provide the guidance that will allow junior engineers to gain experience throughout their work. Consequently, supervisors are responsible for deciding the complexity of the tasks they will assign. The level of complexity will increase as the months go by and according to the pace at which junior engineers develop their autonomy.

What engineer is not familiar with this often quoted section of the Regulation: "junior engineers shall not perform professional activities reserved by law for engineers except under the immediate control and supervision of an engineer"? Supervisors are more than teachers; they remain, during the execution of every task or activity,

engineers who are responsible for their actions as well as those of the person under their supervision. In other words, supervising engineers must be involved throughout the engineering work assigned to junior engineers, not just before or after.

In addition, engineers must keep in mind that assigning engineering work to junior engineers does not release them from their professional liability. Even though junior engineers mature as professionals, supervising engineers

Supervising engineers play a crucial role by encouraging junior engineers to complete their training period without delay or interruption.

will still be held professionally liable for the acts carried out and the documents produced by the junior engineer. Plans and specifications, results from engineering calculations and other engineering documents, whether they are intended for an employer or an external client, remain the supervising engineer's responsibility.

A STEP THAT CANNOT BE IGNORED

Some junior engineers wait years before completing or even beginning their internship under an engineer's supervision. There have been cases where employers or superiors have asked junior engineers to circumvent their rights and intervene as engineers. Are these cases based on a lack of concern, complacency or simply a growing and gradual confidence in those junior engineers? Regardless, junior engineers cannot, under any circumstances, carry out actions they are not legally qualified to execute. Doing otherwise is illegal and could endanger the public's safety. This is the main reason that should motivate junior engineers who wish to practise the profession to pursue their internship without delay.

Again, supervising engineers play a crucial role by encouraging junior engineers to complete their training

period without delay or interruption. For example, they can incite junior engineers to prepare for the professional exam as soon as possible and support their efforts until they succeed. They should also provide guidance with respect to their ethical concerns and encourage them to participate in activities offered by various industrial, technical and professional organizations.

A supervisor's efforts will all be beneficial as they will help in training a future engineer.

“Immediate control and supervision”: what does this mean?

With respect to supervising engineering activities and providing guidance to junior engineers, the Ordre uses an expression found many times in its regulations: “immediate control and supervision”. In essence, this means that engineers who supervise junior engineers must play an ongoing role throughout the engineering projects, not just before or after.

Based on each project's particulars, immediate control and supervision can include the following steps:

- the engineer assigns work to a junior engineer, and gives him instructions throughout the execution of the work;
- the engineer follows up as much as he or she deems necessary and intervenes at important points during the course of the project in order to verify the progress, quality and compliance of the work;
- the engineer is available throughout the project to answer the junior engineer's questions in order to provide the necessary advice and required direction;
- the engineer ensures that the junior engineer complies with trade practices during every phase of the work;
- the engineer authenticates the documents pursuant to applicable rules.