

ENGINEER SAFETY ON CONSTRUCTION PROJECTS

Consultants who carry out construction reviews should be aware of the safety training, certification and coverage requirements before stepping onto a construction site. Here's what you need to know.

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AN ENGINEERING OR CONSULTING FIRM, like any other company in Ontario that hires employees, is deemed an “employer” under the *Occupational Health and Safety Act* (OHSA). The act outlines the responsibilities of the various workplace parties, including professional engineers.

As an employer, an engineering/consulting firm has responsibilities under section 25(1) and (2) of the OHSA. Among the responsibilities outlined, as an employer, you need to:

- ensure that equipment, materials and protective devices as prescribed by regulations are provided, maintained in good condition and used as prescribed;
- provide information, instruction and supervision to a worker to protect the health or safety of the worker;
- acquaint a worker or person in authority over the worker with any hazard in the work;
- take every precaution reasonable in the circumstances for the protection of the worker; and
- when appointing a supervisor, appoint a competent person.

In practical terms, when sending out an engineer to a construction project, the engineer must be made aware of the hazards he or she may face on the project, as well as the means of eliminating or controlling the risk. One challenge you will find in doing so is the ever-changing condition of a construction project. The hazards encountered today may be different the next time an engineer visits the same project.

CONSTRUCTION HAZARDS

An important aspect of your responsibility as an employer is to ensure your engineers are made aware of such typical hazards encountered at various stages of a project as:

- **being struck by moving equipment**—working around excavating and compaction equipment, vehicular traffic when testing for compaction, material properties, etc.;
- **falling from heights**—working near deep trenches, around caissons, vaults, from roofs, on formwork, as well as accessing various levels of a project using access scaffolding, ladders or other means;
- **being struck by material**—material is being constantly moved on a site, whether it's hoisted using tower cranes, mobile cranes or moved by heavy equipment, such as a loader, fork trucks or others; and
- **exposure to hazardous gases, fumes, chemicals**—naturally occurring chemicals in the ground, in confined spaces, where equipment is in use (either indoors or in areas of poor ventilation).

To control the risks encountered:

1. Ensure the engineer is provided with an orientation of the project, including:
 - a. contact names and numbers of the constructor;
 - b. emergency information, including first aid providers, stations and reporting policies; and
 - c. project stage, scope and related hazards.
2. Provide training in fall protection and working at heights as required by the construction regulations (section 26), so the engineer will be able to:
 - a. recognize fall hazards, including areas with inadequate guardrails, floor opening covers, poor ladder setup for access, and where personal fall protection equipment will be required;
 - b. inspect, don and use appropriate required personal fall protection equipment; and
 - c. identify appropriate anchor points for personal fall protection equipment.
3. Provide awareness training with respect to heavy equipment movement:
 - a. typical blind spots of heavy equipment;
 - b. procedures to separate and protect workers on foot from heavy equipment; and
 - c. requirements for the use of high visibility safety apparel.
4. Provide other training as required, including:
 - a. confined space entry, including the definition and recognition of a confined space, and means of control to ensure safe entry;
 - b. trench safety in order to recognize when safe entry is permitted;
 - c. traffic safety, which means ensuring protection from vehicular traffic, including where to park, use of high visibility clothing and how to travel safely within a work zone;
 - d. elevating work platform use; and
 - e. suspended access platforms or scaffolding for occupants.

DUTIES OF A SUPERVISOR

Oversight and supervision of staff is critical in keeping everyone safe. Ensure you appoint a supervisor with the appropriate qualifications who, in accordance with the act, is a “competent person” who is qualified because of knowledge, training and experience to organize the work and its performance; familiar with the act and regulations that apply to the work; and has knowledge of any potential or actual danger to health or safety in the workplace.

Section 27 of the OHSA outlines the duties of supervisor, including:

- ensuring a worker works in the manner and with the prescribed protective devices, measures and procedures;
- ensuring workers use or wear the equipment, protective devices or clothing that their employer requires to be used or worn;
- advising a worker of the existence of any potential or actual danger to the worker’s health or safety that the supervisor is aware of;
- where required, providing a worker with written instructions as to the measures and procedures to be taken for protection; and
- taking every reasonable precaution in the circumstances to protect the worker.

WORKER RESPONSIBILITIES

We cannot forget that the actions of individuals also contribute significantly to personal health and safety. Let your staff of engineers know that as individuals attending a construction project, they also have obligations under the OHSA. Among the responsibilities under section 28 of the act, workers need to:

- use or wear the equipment, protective devices or clothing the employer requires to be used;
- report to the employer or supervisor any absence or defect in any equipment or device that the worker is aware of that may create a hazard to the worker or anyone else; and
- report to the employer or supervisor any contravention of the act or regulations or the existence of a hazard he or she knows.

In addition, a worker should not:

- remove or make ineffective any protective devices required by regulation or by the employer without providing an adequate temporary protective device; and
- use or operate any equipment, machine or device in a manner that may endanger the worker or others.

Section 31(2) of the act specifically addresses architects and engineers: An architect as defined in the *Architects Act* and a professional engineer as defined in the *Professional Engineers Act* contravene the OHSA if, as a result of their negligent advice or required certification under the act, a worker is endangered.

MANDATORY WSIB COVERAGE

Effective January 1, 2013, mandatory Workplace Safety and Insurance Board (WSIB) coverage is required for nearly everyone working in the construction industry. Construction employers are currently required to have WSIB coverage for their employees. Under the new law, most independent operators, sole proprietors, partners in a partnership and executive officers in a corporation working in construction will also

need to have WSIB coverage. Executive officers and partners whose businesses are already registered with the WSIB also must begin to report their own earnings and pay premiums starting in January 2013.

Mandatory coverage does not apply for engineering employers whose business activities are not in construction. As engineering is a business activity that is compulsory under the *Workplace Safety and Insurance Act*, WSIB requirements for registering, reporting and obtaining clearances remain the same.

However, mandatory coverage rules apply if an engineering firm takes on a contract(s) that includes:

- building the construction project;
- direct hiring or supervision of the contractors or subcontractors;
- directing the day-to-day operations of the construction project normally carried out by the general contractor or trade contractors; or
- direct responsibility for ensuring the construction work gets completed within the overall project plan and schedule.

They would now be considered to be doing construction work and the appropriate classification(s) would need to be added to the account.

COVERAGE EXEMPTIONS

While most of the industry will now need WSIB coverage, there are exemptions for those who work exclusively in home renovation and for one designated executive officer or partner of a company who doesn’t perform construction work.

CLEARANCE CERTIFICATES

WSIB clearance certificates are mandatory (some exemptions apply) starting January 2013. No coverage means no clearance, which means no work. Both the principal and the contractor/subcontractor will have obligations for clearances:

- Principals must get a clearance before contractors/subcontractors can begin construction work;
- Contractors must have WSIB coverage and report and pay their premiums on time so they are eligible for a clearance.

Detailed information about WSIB mandatory coverage is available at www.BeRegisteredBeReady.ca. 

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